# FHIR Project Team

## CompartmentDefinition: Base FHIR compartment definition for Device

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| Name | Base FHIR compartment definition for Device (Base F H I R compartment definition for Device) |
| Description | There is an instance of the practitioner compartment for each Device resource, and the identity of the compartment is the same as the Device. The set of resources associated with a particular device |

## CompartmentDefinition: Base FHIR compartment definition for Encounter

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| Name | Base FHIR compartment definition for Encounter (Base F H I R compartment definition for Encounter) |
| Description | There is an instance of the encounter compartment for each encounter resource, and the identity of the compartment is the same as the encounter. The set of resources associated with a particular encounter |

## CompartmentDefinition: Base FHIR compartment definition for Patient

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| Name | Base FHIR compartment definition for Patient (Base F H I R compartment definition for Patient) |
| Description | There is an instance of the patient compartment for each patient resource, and the identity of the compartment is the same as the patient. When a patient is linked to another patient, all the records associated with the linked patient are in the compartment associated with the target of the link.. The set of resources associated with a particular patient |

## CompartmentDefinition: Base FHIR compartment definition for Practitioner

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| Name | Base FHIR compartment definition for Practitioner (Base F H I R compartment definition for Practitioner) |
| Description | There is an instance of the practitioner compartment for each Practitioner resource, and the identity of the compartment is the same as the Practitioner. The set of resources associated with a particular practitioner |

## CompartmentDefinition: Base FHIR compartment definition for RelatedPerson

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| Name | Base FHIR compartment definition for RelatedPerson (Base F H I R compartment definition for Related Person) |
| Description | There is an instance of the relatedPerson compartment for each relatedPerson resource, and the identity of the compartment is the same as the relatedPerson. The set of resources associated with a particular 'related person' |

# FHIR Project

## Operation: Access a list of profiles, tags, and security labels

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| Name | Access a list of profiles, tags, and security labels (Access a list of profiles, tags, and security labels) |
| Description | This operation retrieves a summary of the profiles, tags, and security labels for the given scope; e.g. for each scope: \* system-wide: a list of all profiles, tags and security labels in use by the system \* resource-type level: A list of all profiles, tags, and security labels for the resource type \* individual resource level: A list of all profiles, tags, and security labels for the current version of the resource. Also, as a special case, this operation (and other meta operations) can be performed on a historical version of a resource) |
| Comment | At the system and type levels, the $meta operation is used to get a summary of all the labels that are in use across the system. The principle use for this operation is to support search e.g. what tags can be searched for. At these levels, the meta will not contain versionId, lastUpdated etc. Systems are not obligated to implement the operation at this level (and should return a 4xx error if they don't). At the resource and historical entry level, the $meta operation returns the same meta as would be returned by accessing the resource directly. This can be used to allow a system to get access to the meta-information for the resource without accessing the resource itself, e.g. for security reasons |
| Parameter return | The meta returned by the operation |

## Operation: Add profiles, tags, and security labels to a resource

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| --- | --- |
| Name | Add profiles, tags, and security labels to a resource (Add profiles, tags, and security labels to a resource) |
| Description | This operation takes a meta, and adds the profiles, tags, and security labels found in it to the nominated resource. This operation can also be used on historical entries - to update them without creating a different historical version |
| Comment | This operation is special in that executing this operation does not cause a new version of the resource to be created. The meta is updated directly. This is because the content in meta does not affect the meaning of the resource, and the security labels (in particular) are used to apply access rules to existing versions of resources |
| Parameter meta | Profiles, tags, and security labels to add to the existing resource. Note that profiles, tags, and security labels are sets, and duplicates are not created. The identity of a tag or security label is the system+code. When matching existing tags during adding, version and display are ignored. For profiles, matching is based on the full URL |
| Parameter return | Resulting meta for the resource |

## Operation: Apply

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| Name | Apply (Apply) |
| Description | The apply operation realizes a definition in a specific context |
| Comment | The result of invoking this operation is a resource of the type specified by the activity definition, with all the definitions resolved as appropriate for the type of resource. Any dynamicValue elements will be evaluated and the resulting value used for the values of the appropriate elements of the returned resource. If the ActivityDefinition includes library references, those libraries will be available to the evaluated expressions. If those libraries have parameters, those parameters will be bound by name to the parameters given to the operation |
| Parameter patient | The patient that is the target of the activity to be applied |
| Parameter encounter | The encounter in context, if any |
| Parameter practitioner | The practitioner in context |
| Parameter organization | The organization in context |
| Parameter userType | The type of user initiating the request, e.g. patient, healthcare provider, or specific type of healthcare provider (physician, nurse, etc.) |
| Parameter userLanguage | Preferred language of the person using the system |
| Parameter userTaskContext | The task the system user is performing, e.g. laboratory results review, medication list review, etc. This information can be used to tailor decision support outputs, such as recommended information resources |
| Parameter setting | The current setting of the request (inpatient, outpatient, etc) |
| Parameter settingContext | Additional detail about the setting of the request, if any |
| Parameter return | The resource that is the result of applying the definition |

## Operation: Apply

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| --- | --- |
| Name | Apply (Apply) |
| Description | The apply operation applies a PlanDefinition to a given context |
| Comment | The result of this operation is a CarePlan resource, with activities for each of the applicable actions based on evaluating the applicability condition in context. For each applicable action, the activitydefinition is applied as described in the $apply operation of the ActivityDefinition resource, and the resulting resource is added as an activity to the CarePlan. If the ActivityDefinition includes library references, those libraries will be available to the evaluated expressions. If those libraries have parameters, those parameters will be bound by name to the parameters given to the operation |
| Parameter patient | The patient that is the target of the plan to be applied |
| Parameter encounter | The encounter in context, if any |
| Parameter practitioner | The practitioner applying the plan definition |
| Parameter organization | The organization applying the plan definition |
| Parameter userType | The type of user initiating the request, e.g. patient, healthcare provider, or specific type of healthcare provider (physician, nurse, etc.) |
| Parameter userLanguage | Preferred language of the person using the system |
| Parameter userTaskContext | The task the system user is performing, e.g. laboratory results review, medication list review, etc. This information can be used to tailor decision support outputs, such as recommended information resources |
| Parameter setting | The current setting of the request (inpatient, outpatient, etc) |
| Parameter settingContext | Additional detail about the setting of the request, if any |
| Parameter return | The CarePlan that is the result of applying the plan definition |

## Operation: Build Questionnaire

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| Name | Build Questionnaire (Build Questionnaire) |
| Description | Generates a [Questionnaire](questionnaire.html) instance based on a specified [StructureDefinition](structuredefinition.html), creating questions for each core element or extension element found in the [StructureDefinition](structuredefinition.html). If the operation is not called at the instance level, one of the \*identifier\*, \*profile\* or \*url\* 'in' parameters must be provided. If more than one is specified, servers may raise an error or may resolve with the parameter of their choice. If called at the instance level, these parameters will be ignored. The response will contain a [Questionnaire](questionnaire.html) instance based on the specified [StructureDefinition](structuredefinition.html) and/or an [OperationOutcome](operationoutcome.html) resource with errors or warnings. Nested groups are used to handle complex structures and data types. If the 'supportedOnly' parameter is set to true, only those elements marked as "must support" will be included. This operation is intended to enable auto-generation of simple interfaces for arbitrary profiles. The 'questionnaire' approach to data entry has limitations that will make it less optimal than custom-defined interfaces. However, this function may be useful for simple applications or for systems that wish to support "non-core" resources with minimal development effort. |
| Comment | \*\*Open Issue\*\*: Ideally, extensions should be populated in the generated [Questionnaire](questionnaire.html) that will support taking [QuestionnaireResponse](questionnaireresponse.html) resources generated from the Questionnaire and turning them back into the appropriate resources. |
| Parameter identifier | A logical profile identifier (i.e. 'StructureDefinition.identifier''). The server must know the profile or be able to retrieve it from other known repositories. |
| Parameter profile | The [StructureDefinition](structuredefinition.html) is provided directly as part of the request. Servers may choose not to accept profiles in this fashion |
| Parameter url | The profile's official URL (i.e. 'StructureDefinition.url'). The server must know the profile or be able to retrieve it from other known repositories. |
| Parameter supportedOnly | If true, the questionnaire will only include those elements marked as "mustSupport='true'" in the StructureDefinition. |
| Parameter return | The questionnaire form generated based on the StructureDefinition. |

## Operation: Closure Table Maintenance

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| Name | Closure Table Maintenance (Closure Table Maintenance) |
| Description | This operation provides support for ongoing maintenance of a client-side [transitive closure table](https://en.wikipedia.org/wiki/Transitive\_closure#In\_graph\_theory) based on server-side terminological logic. For details of how this is used, see [Maintaining a Closure Table](terminology-service.html#closure) |
| Parameter name | The name that defines the particular context for the subsumption based closure table |
| Parameter concept | Concepts to add to the closure table |
| Parameter version | A request to resynchronise - request to send all new entries since the nominated version was sent by the server |
| Parameter return | A list of new entries (code / system --> code/system) that the client should add to its closure table. The only kind of entry mapping equivalences that can be returned are equal, specializes, subsumes and unmatched |

## Operation: Code Composition based on supplied properties

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| Name | Code Composition based on supplied properties (Code Composition based on supplied properties) |
| Description | Given a set of properties, return one or more possible matching codes This operation takes a set of properties, and examines the code system looking for codes in the code system that match a set of known properties. When looking for matches, there are 3 possible types of match: \* a complete match - a code that represents all the provided properties correctly \* a partial match - a code that represents some of the provided properties correctly, and not others \* a possible match - a code that may represent the provided properties closely, but may capture less or more precise informationfor some of the properties The $compose operation can be called in one of 2 modes: \* By a human, looking for the best match for a set of properties. In this mode, the server returns a list of complete, possible or partial matches (possibly with comments), so that the user can choose (or not) the most appropriate code \* By a machine (typically in a system interface performing a transformation). In this mode, the server returns only a list of complete and partial matches, but no possible matches. The machine can choose a code from the list (or not) based on what properties are not coded These modes are differentiated by the 'exact' parameter, so the client can indicate whether it only wants exact matches (including partial matches) or whether potential matches based on text matching are desired The compose operation is still preliminary. The interface can be expected to change as more experience is gained from implementations. |
| Parameter system | The system in which composition is to be performed. This must be provided unless the operation is invoked on a code system instance |
| Parameter version | The version of the system for the inferencing to be performed |
| Parameter property | One or more properties that contain information to be composed into the code |
| Parameter code | Identifies the property provided |
| Parameter value | The value of the property provided |
| Parameter subproperty | Nested Properties (mainly used for SNOMED CT composition, for relationship Groups) |
| Parameter code | Identifies the sub-property provided |
| Parameter value | The value of the sub-property provided |
| Parameter exact | Whether the operation is being used by a human, or a machine. If the operation is being used by a human, the terminology server can return a list of possible matches, with commentary. For a machine, the server returns sure matches, or none at all |
| Parameter compositional | Post-coordinated expressions are allowed to be returned in the matching codes (mainly for SNOMED CT). Default = false |
| Parameter match | Concepts returned by the server as a result of the inferencing operation |
| Parameter code | A code that matches the properties provided |
| Parameter unmatched | One or more properties that contain properties that could not be matched into the code |
| Parameter code | Identifies the property provided |
| Parameter value | The value of the property provided |
| Parameter property | Nested Properties (mainly used for SNOMED CT composition, for relationship Groups) |
| Parameter code | Identifies the sub-property provided |
| Parameter value | The value of the sub-property provided |
| Parameter comment | Information about the quality of the match, if operation is for a human |

## Operation: Concept Look Up & Decomposition

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| Name | Concept Look Up & Decomposition (Concept Look Up & Decomposition) |
| Description | Given a code/system, or a Coding, get additional details about the concept, including definition, status, designations, and properties. One of the products of this operation is a full decomposition of a code from a structure terminology |
| Comment | Note that the $lookup operation is more than just a code system search - the server finds the concept, and gathers the return information from the underlying code system definitions. |
| Parameter code | The code that is to be located. If a code is provided, a system must be provided |
| Parameter system | The system for the code that is to be located |
| Parameter version | The version of the system, if one was provided in the source data |
| Parameter coding | A coding to look up |
| Parameter date | The date for which the information should be returned. Normally, this is the current conditions (which is the default value) but under some circumstances, systems need to acccess this information as it would have been in the past. A typical example of this would be where code selection is constrained to the set of codes that were available when the patient was treated, not when the record is being edited. Note that which date is appropriate is a matter for implementation policy. |
| Parameter displayLanguage | The requested language for display (see ExpansionProfile.displayLanguage) |
| Parameter property | A property that the client wishes to be returned in the output. If no properties are specified, the server chooses what to return. The following properties are defined for all code systems: url, name, version (code system info) and code information: display, definition, designation, parent and child, and for designations, lang.X where X is a designation language code. Some of the properties are returned explicit in named parameters (when the names match), and the rest (except for lang.X) in the property parameter group |
| Parameter name | A display name for the code system |
| Parameter version | The version that these details are based on |
| Parameter display | The preferred display for this concept |
| Parameter designation | Additional representations for this concept |
| Parameter language | The language this designation is defined for |
| Parameter use | A code that details how this designation would be used |
| Parameter value | The text value for this designation |
| Parameter property | One or more properties that contain additional information about the code, including status. For complex terminologies (e.g. SNOMED CT, LOINC, medications), these properties serve to decompose the code |
| Parameter code | Identifies the property returned |
| Parameter value | The value of the property returned |
| Parameter description | Human Readable representation of the property value (e.g. display for a code) |
| Parameter subproperty | Nested Properties (mainly used for SNOMED CT decomposition, for relationship Groups) |
| Parameter code | Identifies the sub-property returned |
| Parameter value | The value of the sub-property returned |
| Parameter description | Human Readable representation of the property value (e.g. display for a code) |

## Operation: Concept Translation

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| Name | Concept Translation (Concept Translation) |
| Description | Translate a code from one value set to another, based on the existing value set and concept maps resources, and/or other additional knowledge available to the server. One (and only one) of the in parameters (code, coding, codeableConcept) must be provided, to identify the code that is to be translated. The operation returns a set of parameters including a 'result' for whether there is an acceptable match, and a list of possible matches. Note that the list of matches may include notes of codes for which mapping is specifically excluded, so implementers have to check the match.equivalence for each match |
| Parameter code | The code that is to be translated. If a code is provided, a system must be provided |
| Parameter system | The system for the code that is to be translated |
| Parameter version | The version of the system, if one was provided in the source data |
| Parameter source | Identifies the value set used when the concept (system/code pair) was chosen. May be a logical id, or an absolute or relative location. The source value set is an optional parameter because in some cases, the client cannot know what the source value set is. However, without a source value set, the server may be unable to safely identify an applicable concept map, and would return an error. For this reason, a source value set SHOULD always be provided. Note that servers may be able to identify an appropriate concept map without a source value set if there is a full mapping for the entire code system in the concept map, or by manual intervention |
| Parameter coding | A coding to translate |
| Parameter codeableConcept | A full codeableConcept to validate. The server can translate any of the coding values (e.g. existing translations) as it chooses |
| Parameter target | Identifies the value set in which a translation is sought. May be a logical id, or an absolute or relative location. If there's no target specified, the server should return all known translations, along with their source |
| Parameter targetsystem | identifies a target code system in which a mapping is sought. This parameter is an alternative to the target parameter - only one is required. Searching for any translation to a target code system irrespective of the context (e.g. target valueset) may lead to unsafe results, and it is at the discretion of the server to decide when to support this operation |
| Parameter dependency | Another element that may help produce the correct mapping |
| Parameter element | The element for this dependency |
| Parameter concept | The value for this dependency |
| Parameter reverse | if this is true, then the operation should return all the codes that might be mapped to this code. This parameter reverses the meaning of the source and target parameters |
| Parameter result | True if the concept could be translated successfully. The value can only be true if at least one returned match has an equivalence which is not unmatched or disjoint |
| Parameter message | Error details, for display to a human. If this is provided when result = true, the message carries hints and warnings (e.g. a note that the matches could be improved by providing additional detail) |
| Parameter match | A concept in the target value set with an equivalence. Note that there may be multiple matches of equal or differing equivalence, and the matches may include equivalence values that mean that there is no match |
| Parameter equivalence | A code indicating the equivalence of the translation, using values from [ConceptMapEquivalence]{concept-map-equivalence.html} |
| Parameter concept | The translation outcome. Note that this would never have userSelected = true, since the process of translations implies that the user is not selecting the code (and only the client could know differently) |
| Parameter product | Another element that is the product of this mapping |
| Parameter element | The element for this product |
| Parameter concept | The value for this product |
| Parameter source | The canonical URI for the concept map from which this mapping comes from |

## Operation: Data Requirements

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| Name | Data Requirements (Data Requirements) |
| Description | The data-requirements operation aggregates and returns the parameters and data requirements for the activity definition and all its dependencies as a single module definition library |
| Comment | The effect of invoking this operation is to determine the aggregate set of data requirements and dependencies for the activity definition. The result is a Library resource with a type of module-definition that contains all the parameter definitions and data requirements of the activity definition and any libraries referenced by it. Implementations SHOULD aggregate data requirements intelligently (i.e. by collapsing overlapping data requirements) |
| Parameter return | The result of the requirements gathering represented as a module-definition Library that describes the aggregate parameters, data requirements, and dependencies of the activity definition |

## Operation: Data Requirements

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| --- | --- |
| Name | Data Requirements (Data Requirements) |
| Description | The data-requirements operation aggregates and returns the parameters and data requirements for a resource and all its dependencies as a single module definition |
| Comment | The effect of invoking this operation is to determine the aggregate set of data requirements and dependencies for a given target resource. The result is a Library resource with a type of module-definition that contains all the parameter definitions and data requirements of the target resource and any libraries referenced by it. Implementations SHOULD aggregate data requirements intelligently (i.e. by collapsing overlapping data requirements) |
| Parameter target | The target of the data requirements operation |
| Parameter return | The result of the requirements gathering |

## Operation: Data Requirements

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| --- | --- |
| Name | Data Requirements (Data Requirements) |
| Description | The data-requirements operation aggregates and returns the parameters and data requirements for the measure and all its dependencies as a single module definition |
| Comment | The effect of invoking this operation is to determine the aggregate set of data requirements and dependencies for the measure. The result is a Library resource with a type of module-definition that contains all the parameter definitions and data requirements of the libraries referenced by the measures. Implementations SHOULD aggregate data requirements intelligently (i.e. by collapsing overlapping data requirements) |
| Parameter periodStart | The start of the measurement period. In keeping with the semantics of the date parameter used in the FHIR search operation, the period will start at the beginning of the period implied by the supplied timestamp. E.g. a value of 2014 would set the period start to be 2014-01-01T00:00:00 inclusive |
| Parameter periodEnd | The end of the measurement period. The period will end at the end of the period implied by the supplied timestamp. E.g. a value of 2014 would set the period end to be 2014-12-31T23:59:59 inclusive |
| Parameter return | The result of the requirements gathering is a module-definition Library that describes the aggregate parameters, data requirements, and dependencies of the measure |

## Operation: Data Requirements

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| --- | --- |
| Name | Data Requirements (Data Requirements) |
| Description | The data-requirements operation aggregates and returns the parameters and data requirements for the plan definition and all its dependencies as a single module definition library |
| Comment | The effect of invoking this operation is to determine the aggregate set of data requirements and dependencies for the plan definition. The result is a Library resource with a type of module-definition that contains all the parameter definitions and data requirements of the plan definition and any libraries referenced by it. Implementations SHOULD aggregate data requirements intelligently (i.e. by collapsing overlapping data requirements) |
| Parameter return | The result of the requirements gathering is a module-definition Library that describes the aggregate parameters, data requirements, and dependencies of the plan definition |

## Operation: Data Requirements

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| --- | --- |
| Name | Data Requirements (Data Requirements) |
| Description | The data-requirements operation aggregates and returns the parameters and data requirements for the service module and all its dependencies as a single module definition library. |
| Comment | The effect of invoking this operation is to determine the aggregate set of data requirements and dependencies for the service module. The result is a Library resource with a type of module-definition that contains all the parameter definitions and data requirements of the service module and any libraries referenced by it. Implementations SHOULD aggregate data requirements intelligently (i.e. by collapsing overlapping data requirements). |
| Parameter evaluateAtDateTime | An optional date and time specifying that the evaluation should be performed as though it was the given date and time. Data requirements returned will use this as the "Now" point for the purposes of determining the data requirements. |
| Parameter return | The result of the requirements gathering is a module-definition Library that describes the aggregate parameters, data requirements, and dependencies of the service. |

## Operation: Delete profiles, tags, and security labels for a resource

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| --- | --- |
| Name | Delete profiles, tags, and security labels for a resource (Delete profiles, tags, and security labels for a resource) |
| Description | This operation takes a meta, and deletes the profiles, tags, and security labels found in it from the nominated resource. This operation can also be used on historical entries |
| Comment | This operation is special in that executing this operation does not cause a new version of the resource to be created. The meta is updated directly. This is because the content in meta does not affect the meaning of the resource, and the security labels (in particular) are used to apply access rules to existing versions of resources |
| Parameter meta | Profiles, tags, and security labels to delete from the existing resource. It is not an error if these tags, profiles, and labels do not exist. The identity of a tag or security label is the system+code. When matching existing tags during deletion, version and display are ignored. For profiles, matching is based on the full URL |
| Parameter return | Resulting meta for the resource |

## Operation: Evaluate

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| Name | Evaluate (Evaluate) |
| Description | The evaluate operation requests clinical decision support guidance based on a specific decision support module |
| Parameter requestId | An optional client-provided identifier to track the request. |
| Parameter evaluateAtDateTime | An optional date and time specifying that the evaluation should be performed as though it was the given date and time. The most direct implication of this is that references to "Now" within the evaluation logic of the module should result in this value. In addition, wherever possible, the data accessed by the module should appear as though it was accessed at this time. The evaluateAtDateTime value may be any time in the past or future, enabling both retrospective and prospective scenarios. If no value is provided, the date and time of the request is assumed. |
| Parameter inputParameters | The input parameters for a request, if any. These parameters are defined by the module that is the target of the evaluation, and typically supply patient-independent information to the module. |
| Parameter inputData | The input data for the request. These data are defined by the data requirements of the module and typically provide patient-dependent information. |
| Parameter patient | The patient in context, if any. |
| Parameter encounter | The encounter in context, if any. |
| Parameter initiatingOrganization | The organization initiating the request. |
| Parameter initiatingPerson | The person initiating the request. |
| Parameter userType | The type of user initiating the request, e.g. patient, healthcare provider, or specific type of healthcare provider (physician, nurse, etc.). |
| Parameter userLanguage | Preferred language of the person using the system. |
| Parameter userTaskContext | The task the system user is performing, e.g. laboratory results review, medication list review, etc. This information can be used to tailor decision support outputs, such as recommended information resources. |
| Parameter receivingOrganization | The organization that will receive the response. |
| Parameter receivingPerson | The person in the receiving organization that will receive the response. |
| Parameter recipientType | The type of individual that will consume the response content. This may be different from the requesting user type (e.g. if a clinician is getting disease management guidance for provision to a patient). E.g. patient, healthcare provider or specific type of healthcare provider (physician, nurse, etc.). |
| Parameter recipientLanguage | Preferred language of the person that will consume the content. |
| Parameter setting | The current setting of the request (inpatient, outpatient, etc). |
| Parameter settingContext | Additional detail about the setting of the request, if any. |
| Parameter return | The result of the request as a GuidanceResponse resource. |

## Operation: Evaluate Measure

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| Name | Evaluate Measure (Evaluate Measure) |
| Description | The evaluate-measure operation is used to invoke an eMeasure and obtain the results |
| Comment | The effect of invoking this operation is to calculate the measure for the given patient, or all patients if no patient is supplied, and return the results as a MeasureReport resource of the appropriate type |
| Parameter periodStart | The start of the measurement period. In keeping with the semantics of the date parameter used in the FHIR search operation, the period will start at the beginning of the period implied by the supplied timestamp. E.g. a value of 2014 would set the period start to be 2014-01-01T00:00:00 inclusive |
| Parameter periodEnd | The end of the measurement period. The period will end at the end of the period implied by the supplied timestamp. E.g. a value of 2014 would set the period end to be 2014-12-31T23:59:59 inclusive |
| Parameter measure | The measure to evaluate. This parameter is only required when the operation is invoked on the resource type, it is not used when invoking the operation on a Measure instance |
| Parameter reportType | The type of measure report, patient, patient-list, or population. If not specified, a default value of patient will be used if the patient parameter is supplied, otherwise, population will be used |
| Parameter patient | Patient to evaluate against. If not specified, the measure will be evaluated for all patients that meet the requirements of the measure. If specified, only the referenced patient will be evaluated |
| Parameter practitioner | Practitioner to evaluate. If specified, the measure will be evaluated only for patients whose primary practitioner is the identified practitioner |
| Parameter lastReceivedOn | The date the results of this measure were last received. This parameter is only valid for patient-level reports and is used to indicate when the last time a result for this patient was received. This information can be used to limit the set of resources returned for a patient-level report |
| Parameter return | The results of the measure calculation. See the MeasureReport resource for a complete description of the output of this operation |

## Operation: Fetch Encounter Record

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| Name | Fetch Encounter Record (Fetch Encounter Record) |
| Description | This operation is used to return all the information related to an encounter described in the resource on which this operation is invoked. The response is a bundle of type "searchset". At a minimum, the encounter resource itself is returned, along with any other resources that the server has available for the given encounter for the user. The server also returns whatever resources are needed to support the records - e.g. linked practitioners, locations, organizations etc. The principle intended use for this operation is to provide a patient with access to their record, or to allow a client to retrieve everything for an encounter for efficient display). The server SHOULD return all resources it has that: \* are included in the encounter compartment for the identified encounter (have a reference to the encounter) \* are referenced by the standard extenstion for associating an encounter (where no reference element exists) http://hl7.org/fhir/StructureDefinition/encounter-associatedEncounter \* the server believes are relevant to the context of the encounter for any other reason (internally defined/decided) \* any resource referenced by the above, including binaries and attachments (to make a more complete package) In the US Realm, at a mimimum, the resources returned SHALL include all the data covered by the meaningful use common data elements (see [DAF](http://hl7.org/fhir/daf) for further guidance). Other applicable implementation guides may make additional rules about the information that is returned. Note that for many resources, the exact nature of the link to encounter can be ambiguous (e.g. for a DiagnosticReport, is it the encounter when it was initiated, or when it was reported?) |
| Comment | The key differences between this operation and simply searching the encounter compartment are: \* unless the client requests otherwise, the server returns the entire result set in a single bundle (rather than using paging) \* the server is responsible for determining what resources to return as included resources (rather than the client specifying which ones) |
| Parameter return | The bundle type is "searchset" |

## Operation: Fetch Patient Record

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| --- | --- |
| Name | Fetch Patient Record (Fetch Patient Record) |
| Description | This operation is used to return all the information related to the patient described in the resource on which this operation is invoked. The response is a bundle of type "searchset". At a minimum, the patient resource itself is returned, along with any other resources that the server has that are related to the patient, and that are available for the given user. The server also returns whatever resources are needed to support the records - e.g. linked practitioners, medications, locations, organizations etc. The principle intended use for this operation is to provide a patient with access to their entire record (e.g. "Blue Button"). The server SHOULD return at least all resources that it has that are in the patient compartment for the identified patient, and any resource referenced from those, including binaries and attachments. In the US Realm, at a mimimum, the resources returned SHALL include all the data covered by the meaningful use common data elements as defined in [DAF](http://hl7.org/fhir/daf). Other applicable implementation guides may make additional rules about how much information that is returned |
| Comment | The key differences between this operation and simply searching the patient compartment are: \* unless the client requests otherwise, the server returns the entire result set in a single bundle (rather than using paging) \* the server is responsible for determining what resources to return as included resources (rather than the client specifying which ones). This frees the client from needing to determine what it could or should ask for It is assumed that the server has identified and secured the context appropriately, and can either associate the authorization context with a single patient, or determine whether the context has the rights to the nominated patient, if there is one. If there is no nominated patient (e.g. the operation is invoked at the system level) and the context is not associated with a single patient record, then the server should return an error. Specifying the relationship between the context, a user and patient records is outside the scope of this specification. |
| Parameter start | The date range relates to care dates, not record currency dates - e.g. all records relating to care provided in a certain date range. If no start date is provided, all records prior to the end date are in scope. |
| Parameter end | The date range relates to care dates, not record currency dates - e.g. all records relating to care provided in a certain date range. If no end date is provided, all records subsequent to the start date are in scope. |
| Parameter return | The bundle type is "searchset" |

## Operation: Fetch a subset of the CapabilityStatement resource

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| --- | --- |
| Name | Fetch a subset of the CapabilityStatement resource (Fetch a subset of the Capability Statement resource) |
| Description | This operation asks the server to return a subset of the CapabilityStatement resource - just the REST parts that relate to a set of nominated resources - the resources that the client is interested in |
| Parameter server | The canonical URL - use this if the subset is not invoked on an instance (or on the /metadata end-point) |
| Parameter resource | A resource that the client would like to include in the return |
| Parameter return | The subsetted CapabilityStatement resource that is returned. This should be tagged with the SUBSETTED code |

## Operation: Find a functional list

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| Name | Find a functional list (Find a functional list) |
| Description | This operation allows a client to find an identified list for a particular function by its function. The operation takes two parameters, the identity of a patient, and the name of a functional list. The list of defined functional lists can be found at [Current Resource Lists](lifecycle.html#lists). Applications are not required to support all the lists, and may define additional lists of their own. If the system is able to locate a list that serves the identified purpose, it returns it as the body of the response with a 200 OK status. If the resource cannot be located, the server returns a 404 not found (optionally with an OperationOutcome resource) |
| Comment | Note that servers may support searching by a functional list, and not support this operation that allows clients to find the list directly |
| Parameter patient | The id of a patient resource located on the server on which this operation is executed |
| Parameter name | The code for the functional list that is being found |

## Operation: Find patient matches using MPI based logic

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| --- | --- |
| Name | Find patient matches using MPI based logic (Find patient matches using M P I based logic) |
| Description | A Master Patient Index ([MPI](http://en.wikipedia.org/wiki/Enterprise\_master\_patient\_index) ) is a service used to manage patient identification in a context where multiple patient databases exist. Healthcare applications and middleware use the MPI to match patients between the databases, and as new patient details are encountered. MPIs are highly specialized applications, often tailored extensively to the institution\'s particular mix of patients. MPIs can also be run on a regional and national basis.\n\nTo ask an MPI to match a patient, clients use the \"$match\" operation, which accepts a patient resource which may be only partially complete. The data provided is interpreted as an MPI input and passed processed by an algorithm of some kind that uses the data to determine the most appropriate matches in the patient set. \n\nNote that different MPI matching algorithms have different required inputs. The generic $match operation does not specify any particular algorithm, nor a minimum set of information that must be provided when asking for an MPI match operation to be performed, but may implementations will have a set of minimum information, which may be declared in their definition of the $match operation by specifying a profile on the resource parameter, indicating which properties are required in the search.\n\nThe patient resource coming into the operation does not have to be complete, nor does it need to pass validation (i.e. Mandatory fields don\'t need to be populated), but it does have to be a valid instance. This is due to the resource being used for reference data to match from, and not being stored. |
| Comment | The response from an "mpi" query is a bundle containing patient records, ordered from most likely to least likely. If there are no patient matches, the MPI SHALL return an empty search set with no error, but may include an operation outcome with further advice regarding patient selection. All patient records SHALL have a search score from 0 to 1, where 1 is the most certain match, along with an extension "[match-grade](extension-match-grade.html)" that indicates the MPI's position on the match quality. |
| Parameter resource | Use this to provide an entire set of patient details for the MPI to match against (e.g. POST a patient record to Patient/$match). If a patient record is not provided, then one or more of the other parameters must be provided |
| Parameter onlyCertainMatches | If there are multiple potential matches, then the match should not return the results with this flag set to true. When false, the server may return multiple results with each result graded accordingly. |
| Parameter count | The maximum number of records to return. If no value is provided, the server decides how many matches to return. Note that clients should be careful when using this, as it may prevent probable - and valid - matches from being returned |
| Parameter return | A bundle contain a set of Patient records that represent possible matches, optionally it may also contain an OperationOutcome with further information about the search results (such as warnings or information messages, such as a count of records that were close but eliminated) If the operation was unsuccessful, then an OperationOutcome may be returned along with a BadRequest status Code (e.g. security issue, or insufficient properties in patient fragment - check against profile) |

## Operation: Generate HTML for Questionnaire

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| Name | Generate HTML for Questionnaire (Generate H T M L for Questionnaire) |
| Description | Generates an HTML page as a [Binary](binary.html) instance based on a specified [Questionnaire](questionnaire.html), filling in answers to questions where possible based on information provided as part of the operation or already known by the server about the subject of the [Questionnaire](questionnaire.html). If the operation is not called at the instance level, one and only one of the identifier, questionnaire or questionnaireRef 'in' parameters must be provided. If called at the instance level, these parameters will be ignored. The response will contain a [Binary](binary.html) instance containing an HTML page for filling in and submitting the specified [Questionnaire](questionnaire.html) and/or an [OperationOutcome](operationoutcome.html) resource with errors or warnings. The generated HTML form instance will be populated with an unanswered set of questions following the group and question structure of the specified [Questionnaire](questionnaire.html). If \*content\* parameters were specified or the \*local\* parameter was set to true, some of the questions may have answers filled in as well. In the case of repeating questions or groups, typically only one repetition will be provided unless answer values exist that would support populating multiple repetitions. Population of the HTML form with appropriate data is dependent on the questions and/or groups in the [Questionnaire](questionnaire.html) having metadata that allows the server to recognize the questions, e.g. through Questionnaire.item.definition or through use of the [ConceptMap](conceptmap.html) resource. Regardless of the mechanism used to link the questions in a questionnaire to a "known" mappable concept, solutions using this operation should ensure that the details of the question and associated linkage element are sufficiently similar as to safely allow auto-population; i.e. the question text and context must be sufficiently the same, the value set for the question must fall within the value set for the mapped element, the data types must be the same or convertible, etc. |
| Comment | While it is theoretically possible for an HTML form to be completely auto-populated and submitted without human review, the intention of this transaction is merely to reduce redundant data entry. The HTML form \*\*SHOULD\*\* ensure that a human submitter has an opportunity to review the auto-populated answers to confirm correctness as well as to complete or expand on information provided by the auto-population process. Complex form designs with conditional logic or tight constraints on cardinalities may be challenging to auto-populate. A server MAY choose to traverse the questionnaire as if it were a human respondent, answering only those questions that are enabled based on previously answered questions. However, doing so may result in minimal population. Alternatively, systems may choose to populate all known answers, independent of dependencies and other constraints. This may cause questions to be answered that should not be answered. The generated HTML form is responsible for pruning the final populated questionnaire once human review has taken place. Invoking this operation with the ''content'' parameter may involve the disclosure of personally identifiable healthcare information to the system which is performing the population process. No such disclosures should be made unless the system on which the operation is being invoked is a "trusted" system and appropriate agreements are in place to protect the confidentiality of any information shared with that system. |
| Parameter identifier | A logical questionnaire identifier (i.e. ''Questionnaire.identifier''). The server must know the questionnaire or be able to retrieve it from other known repositories. |
| Parameter questionnaire | The [Questionnaire](questionnaire.html) is provided directly as part of the request. Servers may choose not to accept questionnaires in this fashion |
| Parameter questionnaireRef | The [Questionnaire](questionnaire.html) is provided as a resource reference. Servers may choose not to accept questionnaires in this fashion or may fail if they cannot resolve or access the referenced questionnaire. |
| Parameter content | Resources containing information to be used to help populate the generated HTML form. These may be FHIR resources or may be binaries containing FHIR documents, CDA documents or other source materials. Servers may not support all possible source materials and may ignore materials they do not recognize. (They MAY provide warnings if ignoring submitted resources.) |
| Parameter local | If specified and set to 'true' (and the server is capable), the server should use what resources and other knowledge it has about the referenced subject when pre-populating answers to questions. |
| Parameter form | The generated HTML page that supports capturing the information defined by questionnaire, possibly partially (or fully)-populated with a set of answers for the specified Questionnaire |
| Parameter issues | A list of hints and warnings about problems encountered while populating the questionnaire. These might be show to the user as an advisory note. Note: if the questionnaire cannot be populated at all, then the operation should fail, and an OperationOutcome is returned directly with the failure, rather than using this parameter |

## Operation: Generate a Document

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| Name | Generate a Document (Generate a Document) |
| Description | A client can ask a server to generate a fully bundled document from a composition resource. The server takes the composition resource, locates all the referenced resources and other additional resources as configured or requested and either returns a full document bundle, or returns an error. Note that since this is a search operation, the document bundle is wrapped inside the search bundle. If some of the resources are located on other servers, it is at the discretion of the server whether to retrieve them or return an error. If the correct version of the document that would be generated already exists, then the server can return the existing one. |
| Comment | Note: this operation definition does not resolve the question how document signatures are created. This is an open issue during the period of trial use, and feedback is requested regarding this question |
| Parameter persist | Whether to store the document at the bundle end-point (/Bundle) or not once it is generated. Value = true or false (default is for the server to decide). If the document is stored, it's location can be inferred from the Bundle.id, but it SHOULD be provided explicitly in the HTTP Location header in the response |

## Operation: Generate a link to a Questionnaire completion webpage

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| --- | --- |
| Name | Generate a link to a Questionnaire completion webpage (Generate a link to a Questionnaire completion webpage) |
| Description | Generates a link to a web page to be used to answer a specified [Questionnaire](questionnaire.html). The form at the specified location will be pre-filled with answers to questions where possible based on information provided as part of the operation or already known by the server about the subject of the [Questionnaire](questionnaire.html). If the operation is not called at the instance level, one and only one of the identifier, questionnaire or questionnaireRef 'in' parameters must be provided. If called at the instance level, these parameters will be ignored. The response will contain a url for the web page to direct the user to. The page will allow the user to complete/verify the questionnaire answers and to submit the form. The specified page will be populated with an unanswered set of questions following the group and question structure of the specified [Questionnaire](questionnaire.html). If \*content\* parameters were specified or the \*local\* parameter was set to true, some of the questions may have answers filled in as well. In the case of repeating questions or groups, typically only one repetition will be provided unless answer values exist that would support populating multiple repetitions. Population of the page with appropriate data is dependent on the questions and/or groups in the [Questionnaire](questionnaire.html) having metadata that allows the server to recognize the questions, e.g. through Questionnaire.item.definition or through use of the [ConceptMap](conceptmap.html) resource. Regardless of the mechanism used to link the questions in a questionnaire to a "known" mappable concept, solutions using this operation should ensure that the details of the question and associated linkage element are sufficiently similar as to safely allow auto-population; i.e. the question text and context must be sufficiently the same, the value set for the question must fall within the value set for the mapped element, the data types must be the same or convertible, etc. |
| Comment | While it is theoretically possible for the questionnaire response to be completely auto-populated and submitted without human review, the intention of this transaction is merely to reduce redundant data entry. The web page \*\*SHOULD\*\* ensure that a human submitter has an opportunity to review the auto-populated answers to confirm correctness as well as to complete or expand on information provided by the auto-population process. Complex form designs with conditional logic or tight constraints on cardinalities may be challenging to auto-populate. A server MAY choose to traverse the questionnaire as if it were a human respondent, answering only those questions that are enabled based on previously answered questions. However, doing so may result in minimal population. Alternatively, systems may choose to populate all known answers, independent of dependencies and other constraints. This may cause questions to be answered that should not be answered. The web form is responsible for pruning the final populated questionnaire once human review has taken place. Invoking this operation with the ''content'' parameter may involve the disclosure of personally identifiable healthcare information to the system which is performing the population process. No such disclosures should be made unless the system on which the operation is being invoked is a "trusted" system and appropriate agreements are in place to protect the confidentiality of any information shared with that system. |
| Parameter identifier | A logical questionnaire identifier (i.e. ''Questionnaire.identifier''). The server must know the questionnaire or be able to retrieve it from other known repositories. |
| Parameter questionnaire | The [Questionnaire](questionnaire.html) is provided directly as part of the request. Servers may choose not to accept questionnaires in this fashion |
| Parameter questionnaireRef | The [Questionnaire](questionnaire.html) is provided as a resource reference. Servers may choose not to accept questionnaires in this fashion or may fail if they cannot resolve or access the referenced questionnaire. |
| Parameter content | Resources containing information to be used to help populate the generated HTML form. These may be FHIR resources or may be binaries containing FHIR documents, CDA documents or other source materials. Servers may not support all possible source materials and may ignore materials they do not recognize. (They MAY provide warnings if ignoring submitted resources.) |
| Parameter local | If specified and set to 'true' (and the server is capable), the server should use what resources and other knowledge it has about the referenced subject when pre-populating answers to questions. |
| Parameter link | The URL for the web form that supports capturing the information defined by questionnaire, possibly partially (or fully)-populated with a set of answers for the specified Questionnaire |
| Parameter issues | A list of hints and warnings about problems encountered while populating the questionnaire. These might be show to the user as an advisory note. Note: if the questionnaire cannot be populated at all, then the operation should fail, and an OperationOutcome is returned directly with the failure, rather than using this parameter |

## Operation: Last N Observations Query

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| --- | --- |
| Name | Last N Observations Query (Last N Observations Query) |
| Description | The \*lastn query\* meets the common need for searching for the most recent or last n=number of observations for a subject. For example, retrieving the last 5 temperatures for a patient to view trends or fetching the most recent laboratory results or vitals signs. To ask a server to return the last n=number of observations, the \*lastn\* queryuses the [normal search parameters](observation.html#search) defined for the Observation resource. However, rather than their normal use, they are interpreted as inputs - i.e.. instead of requiring that the resources literally contain the search parameters, they are passed to a server algorithm of some kind that uses them to determine the most appropriate matches. The response from an lastn query is a set of observations: \* filtered by additional parameters \* 'GROUP BY' `Observation.code` \* sorted from most recent to the oldest \* limited to the number of requested responses per group specified by the optional max query parameter \* If no maximum number is given then only the most recent Observation in each group is returned. The set of returned observations should represent distinct real world observations and not the same observation with changes in status or versions. If there are no matches, the \*lastn\* query SHALL return an empty search set with no error, but may include an operation outcome with further advice. |
| Comment | The key differences between this query operation and simply searching Observation using the combination of `\_count` and `\_sort` parameters are: \* The \*lastn\* query returns \*\*only\*\* the last N resource grouped by code. Using the \_count query method doesn't restrict the the total mathches so you may need to page through several "A" Observations before getting to Observation "B". \* The server is responsible for grouping the observations by codes. This frees the client from needing to determine which codes she should ask for. This operation cannot be performed on observations that the user is not authorized to see. It is assumed that the server has identified and secured the context appropriately, and can either associate the authorization context with a single patient, or determine whether the context has the rights to the nominated patient, if there is one. If there is no nominated patient (e.g. the operation is invoked at the system level) and the context is not associated with a single patient record, then the server should return an error. Specifying the relationship between the context, a user and patient records is outside the scope of this specification. |
| Parameter max | `max` is an optional input parameter to the \*lastn\* query operation. It is used to specify the maximum number of Observations to return from each group. For example for the query "Fetch the last 3 results for all vitals for a patient" `max` = 3. |
| Parameter return | The set of most recent N Observations that match the \*lastn\* query search criteria. |

## Operation: Model Instance Transformation

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| --- | --- |
| Name | Model Instance Transformation (Model Instance Transformation) |
| Description | The definition of a value set is used to create a simple collection of codes suitable for use for data entry or validation. If the operation is not called at the instance level, one of the in parameters identifier, context or valueset must be provided. An expanded value set will be returned, or an OperationOutcome with an error message. |
| Parameter source | A logical value set resource uri |
| Parameter content | The logical content to transform |
| Parameter return | The result of the transform |

## Operation: Observation Statistics

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| Name | Observation Statistics (Observation Statistics) |
| Description | The Statistics operation performs a set of statistical calculations on a set of clinical measurements such as a blood pressure as stored on the server. This operation is focused on [Observation](observation.html) resources with valueQuantity elements that have UCUM unit codes. The set of Observations is defined by 4 parameters: \* the subject of the observations for which the statistics are being generated (`subject`) \* which observations to generate statistics for (`code` and `system`, or `coding`) \* the time period over which to generate statistics `'duration` or `period`) \* the set of statistical analyses to return (`statistic`) Possible statistical analyses (see [StatisticsCode](valueset-observation-statistics.html)): - \*\*average\*\* ("Average"): The [mean](https://en.wikipedia.org/wiki/Arithmetic\_mean) of N measurements over the stated period - \*\*maximum\*\* ("Maximum"): The [maximum](https://en.wikipedia.org/wiki/Maximal\_element) value of N measurements over the stated period - \*\*minimum\*\* ("Minimum"): The [minimum](https://en.wikipedia.org/wiki/Minimal\_element) value of N measurements over the stated period - \*\*count\*\* ("Count"): The [number] of valid measurements over the stated period that contributed to the other statistical outputs - \*\*totalcount\*\* ("Total Count"): The total [number] of valid measurements over the stated period, including observations that were ignored because they did not contain valid result values - \*\*median\*\* ("Median"): The [median](https://en.wikipedia.org/wiki/Median) of N measurements over the stated period - \*\*std-dev\*\* ("Standard Deviation"): The [standard deviation](https://en.wikipedia.org/wiki/Standard\_deviation) of N measurements over the stated period - \*\*sum\*\* ("Sum"): The [sum](https://en.wikipedia.org/wiki/Summation) of N measurements over the stated period - \*\*variance\*\* ("Variance"): The [variance](https://en.wikipedia.org/wiki/Variance) of N measurements over the stated period - \*\*20-percent\*\* ("20th Percentile"): The 20th [Percentile](https://en.wikipedia.org/wiki/Percentile) of N measurements over the stated period - \*\*80-percent\*\* ("80th Percentile"): The 80th [Percentile](https://en.wikipedia.org/wiki/Percentile) of N measurements over the stated period - \*\*4-lower\*\* ("Lower Quartile"): The lower [Quartile](https://en.wikipedia.org/wiki/Quartile) Boundary of N measurements over the stated period - \*\*4-upper\*\* ("Upper Quartile"): The upper [Quartile](https://en.wikipedia.org/wiki/Quartile) Boundary of N measurements over the stated period - \*\*4-dev\*\* ("Quartile Deviation"): The difference between the upper and lower [Quartiles](https://en.wikipedia.org/wiki/Quartile) is called the Interquartile range. (IQR = Q3-Q1) Quartile deviation or Semi-interquartile range is one-half the difference between the first and the third quartiles. - \*\*5-1\*\* ("1st Quintile"): The lowest of four values that divide the N measurementsinto a frequency distribution of five classes with each containing one fifth of the total population - \*\*5-2\*\* ("2nd Quintile"): The second of four values that divide the N measurementsinto a frequency distribution of five classes with each containing one fifth of the total population - \*\*5-3\*\* ("3rd Quintile"): The third of four values that divide the N measurementsinto a frequency distribution of five classes with each containing one fifth of the total population - \*\*5-4\*\* ("4th Quintile"): The fourth of four values that divide the N measurementsinto a frequency distribution of five classes with each containing one fifth of the total population - \*\*skew\*\* ("Skew"): Skewness is a measure of the asymmetry of the probability distribution of a real-valued random variable about its mean. The skewness value can be positive or negative, or even undefined. Source: [Wikipedia](https://en.wikipedia.org/wiki/Skewness) - \*\*kurtosis\*\* ("Kurtosis"): Kurtosis is a measure of the "tailedness" of the probability distribution of a real-valued random variable. Source: [Wikipedia](https://en.wikipedia.org/wiki/Kurtosis) - \*\*regression\*\* ("Regression"): Linear regression is an approach for modeling two-dimensional sample points with one independent variable and one dependent variable (conventionally, the x and y coordinates in a Cartesian coordinate system) and finds a linear function (a non-vertical straight line) that, as accurately as possible, predicts the dependent variable values as a function of the independent variables. Source: [Wikipedia](https://en.wikipedia.org/wiki/Simple\_linear\_regression) This Statistic code will return both a gradient and an intercept value. If successful, the operation returns an Observation resource for each code with the results of the statistical calculations as component value pairs where the component code = the statistical code. The Observation also contains the the input parameters `patient`,`code` and `duration` parameters. If unsuccessful, an [OperationOutcome](operationoutcome.html) with an error message will be returned. The client can request that all the observations on which the statistics are based be returned as well, using the include parameter. If an include parameter is specified, a limit may also be specified; the sources observations are subsetted at the server's discretion if count > limit. This functionality is included with the intent of supporting graphical presentation |
| Comment | This operation cannot be performed on observations that the user is not authorized to see. It is assumed that the server has identified and secured the context appropriately, and can either associate the authorization context with a single patient, or determine whether the context has the rights to the nominated patient, if there is one. If there is no nominated patient (e.g. the operation is invoked at the system level) and the context is not associated with a single patient record, then the server should return an error. Specifying the relationship between the context, a user and patient records is outside the scope of this specification. |
| Parameter subject | The subject of the relevant Observations, which has the value of the Observation.subject.reference. E.g. 'Patient/123'. Reference can be to an absolute URL, but servers only perform stats on their own observations |
| Parameter code | The test code(s) upon which the statistics are being performed. Provide along with a system, or as a coding. For example, the code = "45667-2" will evaluate all relevant Observations with this code in Observation.code. For LOINC codes that are panels, (e.g. 55284-4) this means to include all the individual codes that are part of a panel |
| Parameter system | The system for the code(s). Or provide a coding instead |
| Parameter coding | The test code upon which the statistics are being performed, as a Coding |
| Parameter duration | The time period of interest given as hours. For example, the duration = "1" represents the last hour - the time period from on hour ago to now |
| Parameter period | The time period over which the calculations to be performed, if a duration is not provided |
| Parameter statistic | average|max|min|count The statistical operations to be performed on the relevant operations. Multiple statistics operations can be specified. These codes are defined [here](valueset-observation-statistics.html) |
| Parameter include | Whether to return the observations on which the statistics are based |
| Parameter limit | If an include parameter is specified, a limit may also be specified to limit the number of source Observations returned. If the the include paramter is absent or equal to "false" the limit parameter SHALL be ignored by the server |
| Parameter return | A set of observations, one observation for each code, each containing one component for each statistic. The Observation.component.code contains the statistic, and is relative to the Observation.code and cannot be interpreted independently. The Observation will also contain a subject, effectivePeriod, and code reflecting the input parameters. The status is fixed to `final`. |
| Parameter source | Source observations on which the statistics are based |

## Operation: Populate Questionnaire

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| --- | --- |
| Name | Populate Questionnaire (Populate Questionnaire) |
| Description | Generates a [QuestionnaireResponse](questionnaireresponse.html) instance based on a specified [Questionnaire](questionnaire.html), filling in answers to questions where possible based on information provided as part of the operation or already known by the server about the subject of the [Questionnaire](questionnaire.html). If the operation is not called at the instance level, one and only one of the identifier, questionnaire or questionnaireRef 'in' parameters must be provided. If called at the instance level, these parameters will be ignored. The response will contain a [QuestionnaireResponse](questionnaireresponse.html) instance based on the specified [Questionnaire](questionnaire.html) and/or an [OperationOutcome](operationoutcome.html) resource with errors or warnings. The [QuestionnaireResponse](questionnaireresponse.html) instance will be populated with an unanswered set of questions following the group and question structure of the specified [Questionnaire](questionnaire.html). If \*content\* parameters were specified or the \*local\* parameter was set to true, some of the questions may have answers filled in as well. In the case of repeating questions or groups, typically only one repetition will be provided unless answer values exist that would support populating multiple repetitions. Population of the [QuestionnaireResponse](questionnaireresponse.html) with appropriate data is dependent on the questions and/or groups in the [Questionnaire](questionnaire.html) having metadata that allows the server to recognize the questions, e.g. through Questionnaire.item.definition or through use of the [ConceptMap](conceptmap.html) resource. Regardless of the mechanism used to link the questions in a questionnaire to a "known" mappable concept, solutions using this operation should ensure that the details of the question and associated linkage element are sufficiently similar as to safely allow auto-population; i.e. the question text and context must be sufficiently the same, the value set for the question must fall within the value set for the mapped element, the data types must be the same or convertible, etc. |
| Comment | While it is theoretically possible for a [QuestionnaireResponse](questionnaireresponse.html) instance to be completely auto-populated and submitted without human review, the intention of this transaction is merely to reduce redundant data entry. A client \*\*SHOULD\*\* ensure that a human submitter has an opportunity to review the auto-populated answers to confirm correctness as well as to complete or expand on information provided by the auto-population process. When creating an "empty" questionnaire, the general algorithm is to create a QuestionnaireResponse with one item for every item in the source Questionnaire, including items with "enableWhen", "display" items, etc. If a question has a default, the default answer should be populated. And the QuestionnaireResponse should point back to the originating Questionnaire. Repeating items will typically only include a single repetition. Other extensions and/or elements may also be populated if the system is aware of appropriate values. Complex form designs with conditional logic or tight constraints on cardinalities may be challenging to auto-populate. A server MAY choose to traverse the questionnaire as if it were a human respondent, answering only those questions that are enabled based on previously answered questions. However, doing so may result in minimal population. Alternatively, systems may choose to populate all known answers, independent of dependencies and other constraints. This may cause questions to be answered that should not be answered. It will be up to the client to appropriately prune the final populated questionnaire once human review has taken place. Invoking this operation with the ''content'' parameter may involve the disclosure of personally identifiable healthcare information to the system which is performing the population process. No such disclosures should be made unless the system on which the operation is being invoked is a "trusted" system and appropriate agreements are in place to protect the confidentiality of any information shared with that system. |
| Parameter identifier | A logical questionnaire identifier (i.e. ''Questionnaire.identifier''). The server must know the questionnaire or be able to retrieve it from other known repositories. |
| Parameter questionnaire | The [Questionnaire](questionnaire.html) is provided directly as part of the request. Servers may choose not to accept questionnaires in this fashion |
| Parameter questionnaireRef | The [Questionnaire](questionnaire.html) is provided as a resource reference. Servers may choose not to accept questionnaires in this fashion or may fail if they cannot resolve or access the referenced questionnaire. |
| Parameter subject | The resource that is to be the \*QuestionnaireResponse.subject\*. The [QuestionnaireResponse](questionnaireresponse.html) instance will reference the provided subject. In addition, if the \*local\* parameter is set to true, server information about the specified subject will be used to populate the instance. |
| Parameter content | Resources containing information to be used to help populate the [QuestionnaireResponse](questionnaireresponse.html). These may be FHIR resources or may be binaries containing FHIR documents, CDA documents or other source materials. Servers may not support all possible source materials and may ignore materials they do not recognize. (They MAY provide warnings if ignoring submitted resources.) |
| Parameter local | If specified and set to 'true' (and the server is capable), the server should use what resources and other knowledge it has about the referenced subject when pre-populating answers to questions. |
| Parameter questionnaire | The partially (or fully)-populated set of answers for the specified Questionnaire |
| Parameter issues | A list of hints and warnings about problems encountered while populating the questionnaire. These might be show to the user as an advisory note. Note: if the questionnaire cannot be populated at all, then the operation should fail, and an OperationOutcome is returned directly with the failure, rather than using this parameter |

## Operation: Process Message

|  |  |
| --- | --- |
| Name | Process Message (Process Message) |
| Description | This operation accepts a message, processes it according to the definition of the event in the message header, and returns a one or more response messages. This operation is described in detail [on the messaging page](messaging.html#process) |
| Comment | This operation does not use the parameters resource; the parameters "async" and "response-url" always go in the URL, if they are used, and the message parameter is always the body of the HTTP message |
| Parameter content | The message to process (or, if using asynchronous messaging, it may be a response message to accept) |
| Parameter async | If 'true' the message is processed using the asynchronous messaging pattern |
| Parameter response-url | A URL to submit response messages to, if asynchronous messaging is being used, and if the MessageHeader.source.endpoint is not the appropriate place to submit responses |
| Parameter return | A response message, if synchronous messaging is being used (mandatory in this case). For asynchronous messaging, there is no return value |

## Operation: Subsumption Testing

|  |  |
| --- | --- |
| Name | Subsumption Testing (Subsumption Testing) |
| Description | Test the subsumption relationship between code/Coding A and code/Coding B given the semantics of subsumption in the underlying code system (see hierarchyMeaning) |
| Parameter codeA | The "A" code that is to be tested. If a code is provided, a system must be provided |
| Parameter codeB | The "B" code that is to be tested. If a code is provided, a system must be provided |
| Parameter system | The code system in which subsumption testing is to be performed. This must be provided unless the operation is invoked on a code system instance |
| Parameter version | The version of the code system, if one was provided in the source data |
| Parameter codingA | The "A" Coding that is to be tested. The code system does not have to match the specified subsumption code system, but the relationships between the code systems must be well established |
| Parameter codingB | The "B" Coding that is to be tested. The code system does not have to match the specified subsumption code system, but the relationships between the code systems must be well established |
| Parameter outcome | The subsumption relationship between code/Coding "A" and code/Coding "B". There are 4 possible codes to be returned: equivalent, subsumes, subsumed-by, and not-subsumed. If the server is unable to determine the relationship between the codes/Codings, then it returns an error (i.e. an OperationOutcome) |

## Operation: Test if a server implements a client's required operations

|  |  |
| --- | --- |
| Name | Test if a server implements a client's required operations (Test if a server implements a client's required operations) |
| Description | This operation asks the server to check that it implements all the resources, interactions, search parameters, and operations that the client provides in it's capability statement. The client provides it's capability statement inline, or by referring the server to the canonical URL of it's capability statement |
| Comment | The operation does not perform a full conformance check; in particular it does not check that the profiles align. It merely checks that the behaviors the client wishes to use are provided Technically, this operation is implemented as follows: \* The server's capability statement must have an entry for each resource in the client's capability statement \* The servers' resource support must have matching flags for updateCreate, conditionalCreate, conditionalRead, conditionalUpdate, conditionalDelete, searchInclude, searchRevInclude \* The server capability statement must have a matching interaction for each interaction in the client capability statement (whether or not it is on a resource) \* The server must have a search parameter with matching name and definition for any search parameters in the client capability statement \* The server must have an operation definitions with a matching reference for any operations in the client capability statement If the capability statements match by these rules, then the return value is a 200 OK with an operation outcome that contains no issues with severity >= error. If the capability statement doesn't match, the return value is a 4xx error, with an OperationOutcome with at least one issue with severity >= error |
| Parameter server | The canonical URL for the server capability statement - use this if the implements is not invoked on an instance (or on the /metadata end-point) |
| Parameter client | The canonical URL for the client capability statement - use this if the implements is not invoked on an instance (or on the /metadata end-point) |
| Parameter resource | The client capability statement, provided inline |
| Parameter return | Outcome of the CapabilityStatement test |

## Operation: Test if a server implements a client's required operations

|  |  |
| --- | --- |
| Name | Test if a server implements a client's required operations (Test if a server implements a client's required operations) |
| Description | This operation asks the server to check that it implements all the resources, interactions, search parameters, and operations that the client provides in it's capability statement. The client provides both capability statements by reference, and must ensure that all the referenced resources are available to the conformance server |
| Comment | The operation performs a full comparison of the functionality described by the two capability statements, including the profiles and value sets they reference, and also including concept maps and structure maps. The full execution of this operation is still a matter of research, but it is intended to support comparison of systems to see if they will interoperate If the capability statements can be successfully compared, then the return value is a 200 OK with an OperationOutcome along with intersection and union capability statements. The operation outcome can contain errors relating to differences between the capability statements. If the capability statements cannot be compared, because dependencies cannot be located, the return value is a 4xx error, with an OperationOutcome with at least one issue with severity >= error |
| Parameter left | The canonical URL for the left-hand system's capability statement |
| Parameter right | The canonical URL for the right-hand system's capability statement |
| Parameter mode | What kind of comparison to perform - server to server, or client to server (use the codes 'server/server' or 'client/server') |
| Parameter issues | Outcome of the CapabilityStatement test |
| Parameter union | The intersection of the functionality described by the CapabilityStatement resources |
| Parameter intersection | The union of the functionality described by the CapabilityStatement resources |

## Operation: Validate a resource

|  |  |
| --- | --- |
| Name | Validate a resource (Validate a resource) |
| Description | The validate operation checks whether the attached content would be acceptable either generally, as a create, an update or as a delete to an existing resource. The action the server takes depends on the mode parameter: \* [mode not provided]: The server checks the content of the resource against any schema, constraint rules, and other general terminology rules \* create: The server checks the content, and then checks that the content would be acceptable as a create (e.g. that the content would not violate any uniqueness constraints) \* update: The server checks the content, and then checks that it would accept it as an update against the nominated specific resource (e.g. that there are no changes to immutable fields the server does not allow to change, and checking version integrity if appropriate) \* delete: The server ignores the content, and checks that the nominated resource is allowed to be deleted (e.g. checking referential integrity rules) Modes update and delete can only be used when the operation is invoked at the resource instance level. The return from this operation is an [OperationOutcome](operationoutcome.html) |
| Comment | This operation may be used during design and development to validate application design. It can also be used at run-time. One possible use might be that a client asks the server whether a proposed update is valid as the user is editing a dialog and displays an updated error to the user. The operation can be used as part of a light-weight two phase commit protocol but there is no expectation that the server will hold the content of the resource after this operation is used, or that the server guarantees to successfully perform an actual create, update or delete after the validation operation completes. This operation returns a 200 OK whether or not the resource is valid. A 4xx or 5xx error means that the validation itself could not be performed, and it is unknown whether the resource is valid or not. |
| Parameter resource | Must be present unless the mode is "delete" |
| Parameter mode | Default is 'no action'; (e.g. general validation) |
| Parameter profile | If this is nominated, then the resource is validated against this specific profile. If a profile is nominated, and the server cannot validate against the nominated profile, it SHALL return an error |
| Parameter return | If the operation outcome does not list any errors, and a mode was specified, then this is an indication that the operation would be expected to succeed (excepting for transactional integrity issues, see below) |

## Operation: Value Set Expansion

|  |  |
| --- | --- |
| Name | Value Set Expansion (Value Set Expansion) |
| Description | The definition of a value set is used to create a simple collection of codes suitable for use for data entry or validation. If the operation is not called at the instance level, one of the in parameters identifier, context or valueset must be provided. An expanded value set will be returned, or an OperationOutcome with an error message. |
| Comment | The value set expansion returned by this query should be treated as a transient result that will change over time (whether it does or not depends on how the value set is specified), so applications should repeat the operation each time the value set is used. If the expansion is too large (at the discretion of the server), the server will return an error (OperationOutcome with code too-costly). Clients can work through large flat expansions in a set of pages (partial views of the full expansion) instead of just getting the full expansion in a single exchange by using offset and count parameters. Servers are not obliged to support paging, but if they do, SHALL support both the offset and count parameters. Hierarchical expansions are not subject to paging and servers simply return the entire expansion. Different servers may return different results from expanding a value set for the following reasons: \* The underlying code systems are different (e.g. different versions, possibly with different defined behavior) \* The server optimizes filter includes differently, such as sorting by code frequency \* Servers introduce arbitrary groups to assist a user to navigate the lists based either on extensions in the definition, or additional knowledge available to the server When a server cannot correctly expand a value set because it does not fully understand the code systems (e.g. it has the wrong version, or incomplete definitions) then it SHALL return an error. If the value set itself is unbounded due to the inclusion of post-coordinated value sets (e.g. SNOMED CT, UCUM), then the extension [http://hl7.org/fhir/StructureDefinition/valueset-unclosed](extension-valueset-unclosed.html) can be used to indicate that the expansion is incomplete |
| Parameter identifier | A logical value set identifier (i.e. ValueSet.url). The server must know the value set (e.g. it is defined explicitly in the server's value sets, or it is defined implicitly by some code system known to the server |
| Parameter valueSet | The value set is provided directly as part of the request. Servers may choose not to accept value sets in this fashion |
| Parameter context | The context of the value set, so that the server can resolve this to a value set to expand. The recommended format for this URI is [Structure Definition URL]#[name or path into structure definition] e.g. http://hl7.org/fhir/StructureDefinition/observation-hspc-height-hspcheight#Observation.interpretation. Other forms may be used but are not defined. This form is only useable if the terminology server also has access to the profile registry that the server is using, but can be used to delegate the mapping from an application context to a binding at run-time |
| Parameter filter | A text filter that is applied to restrict the codes that are returned (this is useful in a UI context). The interpretation of this is delegated to the server in order to allow to determine the most optimal search approach for the context |
| Parameter profile | A reference to an external definition that provides additional control information about how the expansion is performed. At this time, there is no agreed format or functionality for the target of this URI. The [VSAC Documentation](http://www.nlm.nih.gov/vsac/support/authorguidelines/updatingvaluesets.html) provides one example of the use of this parameter. Implementers using this element will need to agree on an appropriate mechanism for use within their interoperability community. Known uses for profile include: \* whether to return the value set content logical definition with the expansion \* whether to include inactive concepts |
| Parameter date | The date for which the expansion should be generated. if a date is provided, it means that the server should use the value set / code system definitions as they were on the given date, or return an error if this is not possible. Normally, the date is the current conditions (which is the default value) but under some circumstances, systems need to generate an expansion as it would have been in the past. A typical example of this would be where code selection is constrained to the set of codes that were available when the patient was treated, not when the record is being edited. Note that which date is appropriate is a matter for implementation policy. |
| Parameter offset | Paging support - where to start if a subset is desired (default = 0). Offset is number of records (not number of pages) |
| Parameter count | Paging support - how many codes should be provided in a partial page view. Paging only applies to flat expansions - servers ignore paging if the expansion is not flat. If count = 0, the client is asking how large the expansion is. Servers SHOULD honor this request for hierarchical expansions as well, and simply return the overall count |
| Parameter includeDesignations | Controls whether concept designations are to be included or excluded in value set expansions. Overrides the value in the expansion profile if there is one |
| Parameter includeDefinition | Controls whether the value set definition is included or excluded in value set expansions. Overrides the value in the expansion profile if there is one |
| Parameter activeOnly | Controls whether inactive concepts are included or excluded in value set expansions. Overrides the value in the expansion profile if there is one. Note that if the value set explicitly specifies that inactive codes are included, this parameter can still remove them from a specific expansion, but this parameter cannot include them if the value set excludes them |
| Parameter excludeNested | Controls whether or not the value set expansion nests codes or not (i.e. ValueSet.expansion.contains.contains). Overrides the value in the expansion profile if there is one |
| Parameter excludeNotForUI | Controls whether or not the value set expansion includes codes which cannot be displayed in user interfaces. Overrides the value in the expansion profile if there is one |
| Parameter excludePostCoordinated | Controls whether or not the value set expansion includes post coordinated codes. Overrides the value in the expansion profile if there is one |
| Parameter displayLanguage | Specifies the language to be used for description in the expansions i.e. the language to be used for ValueSet.expansion.contains.display. Overrides the value in the expansion profile if there is one |
| Parameter limitedExpansion | If the value set being expanded is incomplete (because it is too big to expand), return a limited expansion (a subset) with an indicator that expansion is incomplete. Overrides the value in the expansion profile if there is one |
| Parameter return | The result of the expansion |

## Operation: Value Set based Validation

|  |  |
| --- | --- |
| Name | Value Set based Validation (Value Set based Validation) |
| Description | Validate that a coded value is in the set of codes allowed by a value set. If the operation is not called at the instance level, one of the in parameters "identifier" or "valueset" must be provided. One (and only one) of the in parameters (code, coding, codeableConcept) must be provided. The operation returns a result (true / false), an error message, and the recommended display for the code |
| Parameter url | Value set Canonical URL. The server must know the value set (e.g. it is defined explicitly in the server's value sets, or it is defined implicitly by some code system known to the server |
| Parameter context | The context of the value set, so that the server can resolve this to a value set to validate against. The recommended format for this URI is [Structure Definition URL]#[name or path into structure definition] e.g. http://hl7.org/fhir/StructureDefinition/observation-hspc-height-hspcheight#Observation.interpretation. Other forms may be used but are not defined. This form is only useable if the terminology server also has access to the profile registry that the server is using, but can be used to delegate the mapping from an application context to a binding at run-time |
| Parameter valueSet | The value set is provided directly as part of the request. Servers may choose not to accept value sets in this fashion. This parameter is used when the client wants the server to expand a value set that is not stored on the server |
| Parameter code | The code that is to be validated. If a code is provided, a system must be provided |
| Parameter system | The system for the code that is to be validated |
| Parameter version | The version of the system, if one was provided in the source data |
| Parameter display | The display associated with the code, if provided. If a display is provided a code must be provided. If no display is provided, the server cannot validate the display value, but may choose to return a recommended display name in an extension in the outcome. Whether displays are case sensitive is code system dependent |
| Parameter coding | A coding to validate |
| Parameter codeableConcept | A full codeableConcept to validate. The server returns true if one of the coding values is in the value set, and may also validate that the codings are not in conflict with each other if more than one is present |
| Parameter date | The date for which the validation should be checked. Normally, this is the current conditions (which is the default values) but under some circumstances, systems need to validate that a correct code was used at some point in the past. A typical example of this would be where code selection is constrained to the set of codes that were available when the patient was treated, not when the record is being edited. Note that which date is appropriate is a matter for implementation policy. |
| Parameter abstract | if true, then an abstract code is allowed to be used in the context of the code that is being validated. Typically, abstract codes are allowed to be used in value set specifications (e.g. any code that is subsumed by an abstract code). If false (which is the default value), then only concrete codes as defined by the value set are allowed |
| Parameter displayLanguage | Specifies the language to be used for description when validating the display property |
| Parameter result | True if the concept details supplied are valid |
| Parameter message | Error details, if result = false. If this is provided when result = true, the message carries hints and warnings |
| Parameter display | A valid display for the concept if the system wishes to display this to a user |

# Clinical Decision Support

## http://hl7.org/fhir/StructureDefinition/ActivityDefinition

|  |  |
| --- | --- |
| **Description** | Base StructureDefinition for ActivityDefinition Resource |
| **ActivityDefinition** | Activity Definition |
| Short name | The definition of a specific activity to be taken, independent of any particular patient or context |
| Definition | This resource allows for the definition of some activity to be performed, independent of a particular patient, practitioner, or other performance context. |
| **ActivityDefinition.url** |  |
| Short name | Logical uri to reference this activity definition (globally unique) |
| Definition | An absolute URL that is used to identify this activity definition when it is referenced in a specification, model, design or an instance. This SHALL be a URL, SHOULD be globally unique, and SHOULD be an address at which this activity definition is (or will be) published. The URL SHOULD include the major version of the activity definition. For more information see [Technical and Business Versions](resource.html#versions). |
| Comment | Can be a urn:uuid: or a urn:oid:, but real http: addresses are preferred. |
| Requirements | Allows the activity definition to be referenced by a single globally unique identifier. |
| **ActivityDefinition.identifier** |  |
| Short name | Additional identifier for the activity definition |
| Definition | A formal identifier that is used to identify this activity definition when it is represented in other formats, or referenced in a specification, model, design or an instance. |
| Comment | Typically, this is used for identifiers that can go in an HL7 v3 II data type - e.g. to identify this activity definition outside of FHIR, where the logical URL is not possible to use. |
| Requirements | Allows externally provided and/or useable business identifiers to be easily associated with the module. |
| **ActivityDefinition.version** |  |
| Short name | Business version of the activity definition |
| Definition | The identifier that is used to identify this version of the activity definition when it is referenced in a specification, model, design or instance. This is an arbitrary value managed by the activity definition author and is not expected to be globally unique. For example, it might be a timestamp (e.g. yyyymmdd) if a managed version is not available. There is also no expectation that versions are orderable. To provide a version consistent with the Decision Support Service specification, use the format Major.Minor.Revision (e.g. 1.0.0). For more information on versioning knowledge assets, refer to the Decision Support Service specification. Note that a version is required for non-experimental active assets. |
| Comment | There may be multiple different instances of a activity definition that have the same identifier but different versions. |
| **ActivityDefinition.name** |  |
| Short name | Name for this activity definition (Computer friendly) |
| Definition | A natural language name identifying the activity definition. This name should be usable as an identifier for the module by machine processing applications such as code generation. |
| Comment | The name is not expected to be globally unique. The name should be a simple alpha-numeric type name to ensure it is computable friendly. |
| Requirements | Support human navigation & code generation. |
| **ActivityDefinition.title** |  |
| Short name | Name for this activity definition (Human friendly) |
| Definition | A short, descriptive, user-friendly title for the activity definition. |
| **ActivityDefinition.status** |  |
| Definition | The status of this activity definition. Enables tracking the life-cycle of the content. |
| Comment | Allows filtering of activity definition that are appropriate for use vs. not. |
| Binding Description | The lifecycle status of a Value Set or Concept Map. |
| **ActivityDefinition.experimental** |  |
| Short name | If for testing purposes, not real usage |
| Definition | A flag to indicate that this activity definition is authored for testing purposes (or education/evaluation/marketing), and is not intended to be used for genuine usage. |
| Comment | Allows filtering of activity definition that are appropriate for use vs. not. |
| Requirements | Enables experimental content to be developed following the same life-cycle as a production-level activity definition would. |
| **ActivityDefinition.date** |  |
| Short name | Date this was last changed |
| Definition | The date (and optionally time) when the activity definition was published. The date must change when the business version changes, if it does, and it must change if the status code changes. In addition, it should change when the substantive content of the activity definition changes. |
| Comment | Note that this is not the same as the resource last-modified-date, since the resource may be a secondary representation of the activity definition. Additional specific dates may be added as extensions. |
| **ActivityDefinition.publisher** |  |
| Short name | Name of the publisher (Organization or individual) |
| Definition | The name of the individual or organization that published the activity definition. |
| Comment | Usually an organization, but may be an individual. The publisher (or steward) of the activity definition is the organization or individual primarily responsible for the maintenance and upkeep of the activity definition. This is not necessarily the same individual or organization that developed and initially authored the content. The publisher is the primary point of contact for questions or issues with the activity definition. This item SHOULD be populated unless the information is available from context. |
| Requirements | Helps establish the "authority/credibility" of the activity definition. May also allow for contact. |
| **ActivityDefinition.description** |  |
| Short name | Natural language description of the activity definition |
| Definition | A free text natural language description of the activity definition from the consumer's perspective. |
| Comment | This description can be used to capture details such as why the activity definition was built, comments about misuse, instructions for clinical use and interpretation, literature references, examples from the paper world, etc. It is not a rendering of the activity definition as conveyed in the text field of the resource itself. This item SHOULD be populated unless the information is available from context (e.g. the language of the profile is presumed to be the predominant language in the place the profile was created). |
| **ActivityDefinition.purpose** |  |
| Short name | Why this activity definition is defined |
| Definition | Explains why this activity definition is needed and why it has been designed as it has. |
| Comment | This element does not describe the usage of the activity definition (See, e.g, the comments element, or relatedArtifacts), rather it's for traceability of ''why'' the resource is either needed or ''why'' it is defined as it is. This may be used to point to source materials or specifications that drove the structure of this activity definition. |
| **ActivityDefinition.usage** |  |
| Short name | Describes the clinical usage of the asset |
| Definition | A detailed description of how the asset is used from a clinical perspective. |
| **ActivityDefinition.approvalDate** |  |
| Short name | When the activity definition was approved by publisher |
| Definition | The date on which the asset content was approved by the publisher. Approval happens once when the content is officially approved for usage. |
| Comment | The date may be more recent than the approval date because of minor changes / editorial corrections. |
| **ActivityDefinition.lastReviewDate** |  |
| Short name | When the activity definition was last reviewed |
| Definition | The date on which the asset content was last reviewed. Review happens periodically after approval, but doesn't change the original approval date. |
| Comment | If specified, this is usually after the approval date. |
| **ActivityDefinition.effectivePeriod** |  |
| Short name | When the activity definition is effective |
| Definition | The period during which the activity definition content was or is planned to be effective. |
| Comment | The effective period for a activity definition determines when the content is applicable for usage and is independent of publication and review dates. For example, a measure intended to be used for the year 2016 would be published in 2015. |
| **ActivityDefinition.useContext** |  |
| Short name | Content intends to support these contexts |
| Definition | The content was developed with a focus and intent of supporting the contexts that are listed. These terms may be used to assist with indexing and searching of code system definitions. |
| Comment | When multiple usageContexts are specified, there is no expectation for whether all or any of the contexts apply. |
| Requirements | Assist in searching for appropriate content. |
| **ActivityDefinition.jurisdiction** |  |
| Short name | Intended jurisdiction for activity definition (if applicable) |
| Definition | A jurisdiction in which the activity definition is intended to be used. |
| Binding Description | Countries and regions within which this artifact is targeted for use |
| **ActivityDefinition.topic** |  |
| Short name | E.g. Education, Treatment, Assessment, etc |
| Definition | Descriptive topics related to the content of the activity. Topics provide a high-level categorization of the activity that can be useful for filtering and searching. |
| Requirements | Repositories must be able to determine how to categorize the asset so that it can be found by topical searches. |
| Binding Description | High-level categorization of the definition, used for searching, sorting, and filtering |
| **ActivityDefinition.contributor** |  |
| Short name | A content contributor |
| Definition | A contributor to the content of the asset, including authors, editors, reviewers, and endorsers. |
| Requirements | Consumers of the content must be able to quickly determine who contributed to the content of the knowledge asset. |
| **ActivityDefinition.contact** |  |
| Short name | Contact details for the publisher |
| Definition | Contact details to assist a user in finding and communicating with the publisher. |
| Comment | May be a web site, an email address, a telephone number, etc. |
| **ActivityDefinition.copyright** |  |
| Short name | Use and/or publishing restrictions |
| Definition | A copyright statement relating to the activity definition and/or its contents. Copyright statements are generally legal restrictions on the use and publishing of the activity definition. |
| Requirements | Consumers of the library must be able to determine any legal restrictions on the use of the activity definition and/or its content. |
| Synonym | License |
| Synonym | Restrictions |
| **ActivityDefinition.relatedArtifact** |  |
| Short name | Additional documentation, citations, etc |
| Definition | Related artifacts such as additional documentation, justification, or bibliographic references. |
| Comment | Each related artifact is either an attachment, or a reference to another resource, but not both. |
| Requirements | Assets must be able to provide enough information for consumers of the content (and/or interventions or results produced by the content) to be able to determine and understand the justification for and evidence in support of the content. |
| **ActivityDefinition.library** |  |
| Short name | Logic used by the asset |
| Definition | A reference to a Library resource containing any formal logic used by the asset. |
| **ActivityDefinition.kind** |  |
| Short name | Kind of resource |
| Definition | A description of the kind of resource the activity definition is representing. For example, a MedicationRequest, a ProcedureRequest, or a CommunicationRequest. Typically, but not always, this is a Request resource. |
| Comment | May determine what types of extensions are permitted. |
| Binding Description | The kind of activity the definition is describing |
| **ActivityDefinition.code** |  |
| Short name | Detail type of activity |
| Definition | Detailed description of the type of activity; e.g. What lab test, what procedure, what kind of encounter. |
| Comment | Tends to be less relevant for activities involving particular products. |
| Requirements | Allows matching performed to planned as well as validation against protocols. |
| Binding Description | Detailed type of planned activity; e.g. CBC |
| **ActivityDefinition.timing[x]** |  |
| Short name | When activity is to occur |
| Definition | The period, timing or frequency upon which the described activity is to occur. |
| Requirements | Allows prompting for activities and detection of missed planned activities. |
| Binding Description | Code describing the timing of an activity; e.g. BID, QD |
| **ActivityDefinition.location** |  |
| Short name | Where it should happen |
| Definition | Identifies the facility where the activity will occur; e.g. home, hospital, specific clinic, etc. |
| Comment | May reference a specific clinical location or may just identify a type of location. |
| Requirements | Helps in planning of activity. |
| Synonym | facility |
| **ActivityDefinition.participant** |  |
| Short name | Who should participate in the action |
| Definition | Indicates who should participate in performing the action described. |
| **ActivityDefinition.participant.type** |  |
| Definition | The type of participant in the action. |
| Binding Description | The type of participant for an action in the orderset |
| **ActivityDefinition.participant.role** |  |
| Short name | E.g. Nurse, Surgeon, Parent, etc |
| Definition | The role the participant should play in performing the described action. |
| Binding Description | Defines roles played by participants for the action |
| **ActivityDefinition.product[x]** |  |
| Short name | What's administered/supplied |
| Definition | Identifies the food, drug or other product being consumed or supplied in the activity. |
| Binding Description | Code describing the type of substance or medication |
| **ActivityDefinition.quantity** |  |
| Short name | How much is administered/consumed/supplied |
| Definition | Identifies the quantity expected to be consumed at once (per dose, per meal, etc.). |
| Synonym | dose |
| **ActivityDefinition.dosage** |  |
| Short name | Detailed dosage instructions |
| Definition | Provides detailed dosage instructions in the same way that they are described for MedicationRequest resources. |
| Comment | If a dosage instruction is used, the definition should not specify timing or quantity. |
| **ActivityDefinition.bodySite** |  |
| Short name | What part of body to perform on |
| Definition | Indicates the sites on the subject's body where the procedure should be performed (I.e. the target sites). |
| Comment | Only used if not implicit in the code found in ProcedureRequest.type. |
| Requirements | Knowing where the procedure is made is important for tracking if multiple sites are possible. |
| Binding Description | A code that identifies the anatomical location. |
| **ActivityDefinition.transform** |  |
| Short name | Transform to apply the template |
| Definition | A reference to a StructureMap resource that defines a transform that can be executed to produce the intent resource using the ActivityDefinition instance as the input. |
| **ActivityDefinition.dynamicValue** |  |
| Short name | Dynamic aspects of the definition |
| Definition | Dynamic values that will be evaluated to produce values for elements of the resulting resource. For example, if the dosage of a medication must be computed based on the patient's weight, a dynamic value would be used to specify an expression that calculated the weight, and the path on the intent resource that would contain the result. |
| **ActivityDefinition.dynamicValue.description** |  |
| Short name | Natural language description of the dynamic value |
| Definition | A brief, natural language description of the intended semantics of the dynamic value. |
| **ActivityDefinition.dynamicValue.path** |  |
| Short name | The path to the element to be set dynamically |
| Definition | The path to the element to be customized. This is the path on the resource that will hold the result of the calculation defined by the expression. |
| **ActivityDefinition.dynamicValue.language** |  |
| Short name | Language of the expression |
| Definition | The media type of the language for the expression. |
| **ActivityDefinition.dynamicValue.expression** |  |
| Short name | An expression that provides the dynamic value for the customization |
| Definition | An expression specifying the value of the customized element. |
| Comment | The expression may be inlined, or may be a reference to a named expression within a logic library referenced by the library element. |

## http://hl7.org/fhir/StructureDefinition/DetectedIssue

|  |  |
| --- | --- |
| **Description** | Base StructureDefinition for DetectedIssue Resource |
| **DetectedIssue** | Detected Issue |
| Short name | Clinical issue with action |
| Definition | Indicates an actual or potential clinical issue with or between one or more active or proposed clinical actions for a patient; e.g. Drug-drug interaction, Ineffective treatment frequency, Procedure-condition conflict, etc. |
| Synonym | DDI |
| Synonym | drug-drug interaction |
| Synonym | Contraindication |
| Synonym | Alert |
| **DetectedIssue.identifier** |  |
| Short name | Unique id for the detected issue |
| Definition | Business identifier associated with the detected issue record. |
| Requirements | Allows linking instances of the same detected issue found on different servers. |
| **DetectedIssue.status** |  |
| Definition | Indicates the status of the detected issue. |
| Synonym | status |
| Binding Description | Indicates the status of the identified issue |
| **DetectedIssue.category** |  |
| Short name | Issue Category, e.g. drug-drug, duplicate therapy, etc. |
| Definition | Identifies the general type of issue identified. |
| Synonym | type |
| Binding Description | Codes identifying the general type of detected issue; e.g. Drug-drug interaction, Timing issue, Duplicate therapy, etc. |
| **DetectedIssue.severity** |  |
| Definition | Indicates the degree of importance associated with the identified issue based on the potential impact on the patient. |
| Synonym | severity |
| Binding Description | Indicates the potential degree of impact of the identified issue on the patient. |
| **DetectedIssue.patient** |  |
| Short name | Associated patient |
| Definition | Indicates the patient whose record the detected issue is associated with. |
| Requirements | While the subject could be inferred by tracing the subject of the implicated resources, it's useful to have a direct link for query purposes. |
| **DetectedIssue.date** |  |
| Short name | When identified |
| Definition | The date or date-time when the detected issue was initially identified. |
| Requirements | No-one can be responsible for mitigation prior to the issue being identified. |
| **DetectedIssue.author** |  |
| Short name | The provider or device that identified the issue |
| Definition | Individual or device responsible for the issue being raised. For example, a decision support application or a pharmacist conducting a medication review. |
| **DetectedIssue.implicated** |  |
| Short name | Problem resource |
| Definition | Indicates the resource representing the current activity or proposed activity that is potentially problematic. |
| Comment | There's an implicit constraint on the number of implicated resources based on DetectedIssue.type; e.g. For drug-drug, there would be more than one. For timing, there would typically only be one. |
| Synonym | cause |
| **DetectedIssue.detail** |  |
| Short name | Description and context |
| Definition | A textual explanation of the detected issue. |
| Comment | Should focus on information not covered elsewhere as discrete data - no need to duplicate the narrative. |
| **DetectedIssue.reference** |  |
| Short name | Authority for issue |
| Definition | The literature, knowledge-base or similar reference that describes the propensity for the detected issue identified. |
| **DetectedIssue.mitigation** |  |
| Short name | Step taken to address |
| Definition | Indicates an action that has been taken or is committed to to reduce or eliminate the likelihood of the risk identified by the detected issue from manifesting. Can also reflect an observation of known mitigating factors that may reduce/eliminate the need for any action. |
| **DetectedIssue.mitigation.action** |  |
| Short name | What mitigation? |
| Definition | Describes the action that was taken or the observation that was made that reduces/eliminates the risk associated with the identified issue. |
| Comment | The "text" component can be used for detail or when no appropriate code exists. |
| Binding Description | Codes describing steps taken to resolve the issue or other circumstances that mitigate the risk associated with the issue; e.g. 'added concurrent therapy', 'prior therapy documented', etc. |
| **DetectedIssue.mitigation.date** |  |
| Short name | Date committed |
| Definition | Indicates when the mitigating action was documented. |
| Comment | This may not be the same as when the mitigating step was actually taken. |
| **DetectedIssue.mitigation.author** |  |
| Short name | Who is committing? |
| Definition | Identifies the practitioner who determined the mitigation and takes responsibility for the mitigation step occurring. |

## http://hl7.org/fhir/StructureDefinition/GuidanceResponse

|  |  |
| --- | --- |
| **Description** | Base StructureDefinition for GuidanceResponse Resource |
| **GuidanceResponse** | Guidance Response |
| Short name | The formal response to a guidance request |
| Definition | A guidance response is the formal response to a guidance request, including any output parameters returned by the evaluation, as well as the description of any proposed actions to be taken. |
| **GuidanceResponse.requestId** |  |
| Short name | The id of the request associated with this response, if any |
| Definition | The id of the request associated with this response. If an id was given as part of the request, it will be reproduced here to enable the requester to more easily identify the response in a multi-request scenario. |
| **GuidanceResponse.identifier** |  |
| Short name | Business identifier |
| Definition | Allows a service to provide a unique, business identifier for the response. |
| **GuidanceResponse.module** |  |
| Short name | A reference to a knowledge module |
| Definition | A reference to the knowledge module that was invoked. |
| **GuidanceResponse.status** |  |
| Definition | The status of the response. If the evaluation is completed successfully, the status will indicate success. However, in order to complete the evaluation, the engine may require more information. In this case, the status will be data-required, and the response will contain a description of the additional required information. If the evaluation completed successfully, but the engine determines that a potentially more accurate response could be provided if more data was available, the status will be data-requested, and the response will contain a description of the additional requested information. |
| Binding Description | The status of a guidance response |
| **GuidanceResponse.subject** |  |
| Short name | Patient the request was performed for |
| Definition | The patient for which the request was processed. |
| **GuidanceResponse.context** |  |
| Short name | Encounter or Episode during which the response was returned |
| Definition | Allows the context of the guidance response to be provided if available. In a service context, this would likely be unavailable. |
| **GuidanceResponse.occurrenceDateTime** |  |
| Short name | When the guidance response was processed |
| Definition | Indicates when the guidance response was processed. |
| **GuidanceResponse.performer** |  |
| Short name | Device returning the guidance |
| Definition | Provides a reference to the device that performed the guidance. |
| **GuidanceResponse.reason[x]** |  |
| Short name | Reason for the response |
| Definition | Indicates the reason the request was initiated. This is typically provided as a parameter to the evaluation and echoed by the service, although for some use cases, such as subscription- or event-based scenarios, it may provide an indication of the cause for the response. |
| **GuidanceResponse.note** |  |
| Short name | Additional notes about the response |
| Definition | Provides a mechanism to communicate additional information about the response. |
| **GuidanceResponse.evaluationMessage** |  |
| Short name | Messages resulting from the evaluation of the artifact or artifacts |
| Definition | Messages resulting from the evaluation of the artifact or artifacts. As part of evaluating the request, the engine may produce informational or warning messages. These messages will be provided by this element. |
| **GuidanceResponse.outputParameters** |  |
| Short name | The output parameters of the evaluation, if any |
| Definition | The output parameters of the evaluation, if any. Many modules will result in the return of specific resources such as procedure or communication requests that are returned as part of the operation result. However, modules may define specific outputs that would be returned as the result of the evaluation, and these would be returned in this element. |
| **GuidanceResponse.result** |  |
| Short name | Proposed actions, if any |
| Definition | The actions, if any, produced by the evaluation of the artifact. |
| **GuidanceResponse.dataRequirement** |  |
| Short name | Additional required data |
| Definition | If the evaluation could not be completed due to lack of information, or additional information would potentially result in a more accurate response, this element will a description of the data required in order to proceed with the evaluation. A subsequent request to the service should include this data. |

## http://hl7.org/fhir/StructureDefinition/Library

|  |  |
| --- | --- |
| **Description** | Base StructureDefinition for Library Resource |
| **Library** | Library |
| Short name | Represents a library of quality improvement components |
| Definition | The Library resource is a general-purpose container for knowledge asset definitions. It can be used to describe and expose existing knowledge assets such as logic libraries and information model descriptions, as well as to describe a collection of knowledge assets. |
| **Library.url** |  |
| Short name | Logical uri to reference this library (globally unique) |
| Definition | An absolute URL that is used to identify this library when it is referenced in a specification, model, design or an instance. This SHALL be a URL, SHOULD be globally unique, and SHOULD be an address at which this library is (or will be) published. The URL SHOULD include the major version of the library. For more information see [Technical and Business Versions](resource.html#versions). |
| Comment | Can be a urn:uuid: or a urn:oid:, but real http: addresses are preferred. |
| Requirements | Allows the library to be referenced by a single globally unique identifier. |
| **Library.identifier** |  |
| Short name | Additional identifier for the library |
| Definition | A formal identifier that is used to identify this library when it is represented in other formats, or referenced in a specification, model, design or an instance. e.g. CMS or NQF identifiers for a measure artifact. Note that at least one identifier is required for non-experimental active artifacts. |
| Comment | Typically, this is used for identifiers that can go in an HL7 v3 II data type - e.g. to identify this library outside of FHIR, where the logical URL is not possible to use. |
| Requirements | Allows externally provided and/or useable business identifiers to be easily associated with the module. |
| **Library.version** |  |
| Short name | Business version of the library |
| Definition | The identifier that is used to identify this version of the library when it is referenced in a specification, model, design or instance. This is an arbitrary value managed by the library author and is not expected to be globally unique. For example, it might be a timestamp (e.g. yyyymmdd) if a managed version is not available. There is also no expectation that versions are orderable. To provide a version consistent with the Decision Support Service specification, use the format Major.Minor.Revision (e.g. 1.0.0). For more information on versioning knowledge assets, refer to the Decision Support Service specification. Note that a version is required for non-experimental active artifacts. |
| Comment | There may be multiple different instances of a library that have the same identifier but different versions. |
| **Library.name** |  |
| Short name | Name for this library (Computer friendly) |
| Definition | A natural language name identifying the library. This name should be usable as an identifier for the module by machine processing applications such as code generation. |
| Comment | The name is not expected to be globally unique. The name should be a simple alpha-numeric type name to ensure it is computable friendly. |
| Requirements | Support human navigation & code generation. |
| **Library.title** |  |
| Short name | Name for this library (Human friendly) |
| Definition | A short, descriptive, user-friendly title for the library. |
| **Library.status** |  |
| Definition | The status of this library. Enables tracking the life-cycle of the content. |
| Comment | Allows filtering of library that are appropriate for use vs. not. |
| Binding Description | The lifecycle status of a Value Set or Concept Map. |
| **Library.experimental** |  |
| Short name | If for testing purposes, not real usage |
| Definition | A flag to indicate that this library is authored for testing purposes (or education/evaluation/marketing), and is not intended to be used for genuine usage. |
| Comment | Allows filtering of library that are appropriate for use vs. not. |
| Requirements | Enables experimental content to be developed following the same life-cycle as a production-level library would. |
| **Library.type** |  |
| Definition | Identifies the type of library such as a Logic Library, Model Definition, Asset Collection, or Module Definition. |
| Binding Description | The type of knowledge asset this library contains |
| **Library.date** |  |
| Short name | Date this was last changed |
| Definition | The date (and optionally time) when the library was published. The date must change when the business version changes, if it does, and it must change if the status code changes. In addition, it should change when the substantive content of the library changes. |
| Comment | Note that this is not the same as the resource last-modified-date, since the resource may be a secondary representation of the library. Additional specific dates may be added as extensions. |
| **Library.publisher** |  |
| Short name | Name of the publisher (Organization or individual) |
| Definition | The name of the individual or organization that published the library. |
| Comment | Usually an organization, but may be an individual. The publisher (or steward) of the library is the organization or individual primarily responsible for the maintenance and upkeep of the library. This is not necessarily the same individual or organization that developed and initially authored the content. The publisher is the primary point of contact for questions or issues with the library. This item SHOULD be populated unless the information is available from context. |
| Requirements | Helps establish the "authority/credibility" of the library. May also allow for contact. |
| **Library.description** |  |
| Short name | Natural language description of the library |
| Definition | A free text natural language description of the library from the consumer's perspective. |
| Comment | This description can be used to capture details such as why the library was built, comments about misuse, instructions for clinical use and interpretation, literature references, examples from the paper world, etc. It is not a rendering of the library as conveyed in the text field of the resource itself. This item SHOULD be populated unless the information is available from context (e.g. the language of the profile is presumed to be the predominant language in the place the profile was created). |
| **Library.purpose** |  |
| Short name | Why this library is defined |
| Definition | Explains why this library is needed and why it has been designed as it has. |
| Comment | This element does not describe the usage of the library (See, e.g, the comments element, or relatedArtifacts), rather it's for traceability of ''why'' the resource is either needed or ''why'' it is defined as it is. This may be used to point to source materials or specifications that drove the structure of this library. |
| **Library.usage** |  |
| Short name | Describes the clinical usage of the library |
| Definition | A detailed description of how the library is used from a clinical perspective. |
| **Library.approvalDate** |  |
| Short name | When the library was approved by publisher |
| Definition | The date on which the asset content was approved by the publisher. Approval happens once when the content is officially approved for usage. |
| Comment | The date may be more recent than the approval date because of minor changes / editorial corrections. |
| **Library.lastReviewDate** |  |
| Short name | When the library was last reviewed |
| Definition | The date on which the asset content was last reviewed. Review happens periodically after approval, but doesn't change the original approval date. |
| Comment | If specified, this is usually after the approval date. |
| **Library.effectivePeriod** |  |
| Short name | When the library is effective |
| Definition | The period during which the library content was or is planned to be effective. |
| Comment | The effective period for a library determines when the content is applicable for usage and is independent of publication and review dates. For example, a measure intended to be used for the year 2016 would be published in 2015. |
| **Library.useContext** |  |
| Short name | Content intends to support these contexts |
| Definition | The content was developed with a focus and intent of supporting the contexts that are listed. These terms may be used to assist with indexing and searching of code system definitions. |
| Comment | When multiple usageContexts are specified, there is no expectation for whether all or any of the contexts apply. |
| Requirements | Assist in searching for appropriate content. |
| **Library.jurisdiction** |  |
| Short name | Intended jurisdiction for library (if applicable) |
| Definition | A jurisdiction in which the library is intended to be used. |
| Binding Description | Countries and regions within which this artifact is targeted for use |
| **Library.topic** |  |
| Short name | E.g. Education, Treatment, Assessment, etc |
| Definition | Descriptive topics related to the content of the library. Topics provide a high-level categorization of the library that can be useful for filtering and searching. |
| Requirements | Repositories must be able to determine how to categorize the library so that it can be found by topical searches. |
| Binding Description | High-level categorization of the definition, used for searching, sorting, and filtering |
| **Library.contributor** |  |
| Short name | A content contributor |
| Definition | A contributor to the content of the library, including authors, editors, reviewers, and endorsers. |
| Requirements | Consumers of the content must be able to quickly determine who contributed to the content of the library. |
| **Library.contact** |  |
| Short name | Contact details for the publisher |
| Definition | Contact details to assist a user in finding and communicating with the publisher. |
| Comment | May be a web site, an email address, a telephone number, etc. |
| **Library.copyright** |  |
| Short name | Use and/or publishing restrictions |
| Definition | A copyright statement relating to the library and/or its contents. Copyright statements are generally legal restrictions on the use and publishing of the library. |
| Requirements | Consumers of the library must be able to determine any legal restrictions on the use of the library and/or its content. |
| Synonym | License |
| Synonym | Restrictions |
| **Library.relatedArtifact** |  |
| Short name | Additional documentation, citations, etc. |
| Definition | Related artifacts such as additional documentation, justification, or bibliographic references. |
| Comment | Each related artifact is either an attachment, or a reference to another resource, but not both. |
| Requirements | Libraries must be able to provide enough information for consumers of the content (and/or interventions or results produced by the content) to be able to determine and understand the justification for and evidence in support of the content. |
| **Library.parameter** |  |
| Short name | Parameters defined by the library |
| Definition | The parameter element defines parameters used by the library. |
| **Library.dataRequirement** |  |
| Short name | What data is referenced by this library |
| Definition | Describes a set of data that must be provided in order to be able to successfully perform the computations defined by the library. |
| **Library.content** |  |
| Short name | Contents of the library, either embedded or referenced |
| Definition | The content of the library as an Attachment. The content may be a reference to a url, or may be directly embedded as a base-64 string. Either way, the contentType of the attachment determines how to interpret the content. |

## http://hl7.org/fhir/StructureDefinition/PlanDefinition

|  |  |
| --- | --- |
| **Description** | Base StructureDefinition for PlanDefinition Resource |
| **PlanDefinition** | Plan Definition |
| Short name | The definition of a plan for a series of actions, independent of any specific patient or context |
| Definition | This resource allows for the definition of various types of plans as a sharable, consumable, and executable artifact. The resource is general enough to support the description of a broad range of clinical artifacts such as clinical decision support rules, order sets and protocols. |
| **PlanDefinition.url** |  |
| Short name | Logical uri to reference this plan definition (globally unique) |
| Definition | An absolute URL that is used to identify this plan definition when it is referenced in a specification, model, design or an instance. This SHALL be a URL, SHOULD be globally unique, and SHOULD be an address at which this plan definition is (or will be) published. The URL SHOULD include the major version of the plan definition. For more information see [Technical and Business Versions](resource.html#versions). |
| Comment | Can be a urn:uuid: or a urn:oid:, but real http: addresses are preferred. |
| Requirements | Allows the plan definition to be referenced by a single globally unique identifier. |
| **PlanDefinition.identifier** |  |
| Short name | Additional identifier for the plan definition |
| Definition | A formal identifier that is used to identify this plan definition when it is represented in other formats, or referenced in a specification, model, design or an instance. |
| Comment | Typically, this is used for identifiers that can go in an HL7 v3 II data type - e.g. to identify this plan definition outside of FHIR, where the logical URL is not possible to use. |
| Requirements | Allows externally provided and/or useable business identifiers to be easily associated with the module. |
| **PlanDefinition.version** |  |
| Short name | Business version of the plan definition |
| Definition | The identifier that is used to identify this version of the plan definition when it is referenced in a specification, model, design or instance. This is an arbitrary value managed by the plan definition author and is not expected to be globally unique. For example, it might be a timestamp (e.g. yyyymmdd) if a managed version is not available. There is also no expectation that versions are orderable. To provide a version consistent with the Decision Support Service specification, use the format Major.Minor.Revision (e.g. 1.0.0). For more information on versioning knowledge assets, refer to the Decision Support Service specification. Note that a version is required for non-experimental active artifacts. |
| Comment | There may be multiple different instances of a plan definition that have the same identifier but different versions. |
| **PlanDefinition.name** |  |
| Short name | Name for this plan definition (Computer friendly) |
| Definition | A natural language name identifying the plan definition. This name should be usable as an identifier for the module by machine processing applications such as code generation. |
| Comment | The name is not expected to be globally unique. The name should be a simple alpha-numeric type name to ensure it is computable friendly. |
| Requirements | Support human navigation & code generation. |
| **PlanDefinition.title** |  |
| Short name | Name for this plan definition (Human friendly) |
| Definition | A short, descriptive, user-friendly title for the plan definition. |
| **PlanDefinition.type** |  |
| Definition | The type of asset the plan definition represents, e.g. an order set, protocol, or event-condition-action rule. |
| Binding Description | The type of PlanDefinition |
| **PlanDefinition.status** |  |
| Definition | The status of this plan definition. Enables tracking the life-cycle of the content. |
| Comment | Allows filtering of plan definition that are appropriate for use vs. not. |
| Binding Description | The lifecycle status of a Value Set or Concept Map. |
| **PlanDefinition.experimental** |  |
| Short name | If for testing purposes, not real usage |
| Definition | A flag to indicate that this plan definition is authored for testing purposes (or education/evaluation/marketing), and is not intended to be used for genuine usage. |
| Comment | Allows filtering of plan definition that are appropriate for use vs. not. |
| Requirements | Enables experimental content to be developed following the same life-cycle as a production-level plan definition would. |
| **PlanDefinition.date** |  |
| Short name | Date this was last changed |
| Definition | The date (and optionally time) when the plan definition was published. The date must change when the business version changes, if it does, and it must change if the status code changes. In addition, it should change when the substantive content of the plan definition changes. |
| Comment | Note that this is not the same as the resource last-modified-date, since the resource may be a secondary representation of the plan definition. Additional specific dates may be added as extensions. |
| **PlanDefinition.publisher** |  |
| Short name | Name of the publisher (Organization or individual) |
| Definition | The name of the individual or organization that published the plan definition. |
| Comment | Usually an organization, but may be an individual. The publisher (or steward) of the plan definition is the organization or individual primarily responsible for the maintenance and upkeep of the plan definition. This is not necessarily the same individual or organization that developed and initially authored the content. The publisher is the primary point of contact for questions or issues with the plan definition. This item SHOULD be populated unless the information is available from context. |
| Requirements | Helps establish the "authority/credibility" of the plan definition. May also allow for contact. |
| **PlanDefinition.description** |  |
| Short name | Natural language description of the plan definition |
| Definition | A free text natural language description of the plan definition from the consumer's perspective. |
| Comment | This description can be used to capture details such as why the plan definition was built, comments about misuse, instructions for clinical use and interpretation, literature references, examples from the paper world, etc. It is not a rendering of the plan definition as conveyed in the text field of the resource itself. This item SHOULD be populated unless the information is available from context (e.g. the language of the profile is presumed to be the predominant language in the place the profile was created). |
| **PlanDefinition.purpose** |  |
| Short name | Why this plan definition is defined |
| Definition | Explains why this plan definition is needed and why it has been designed as it has. |
| Comment | This element does not describe the usage of the plan definition (See, e.g, the comments element, or relatedArtifacts), rather it's for traceability of ''why'' the resource is either needed or ''why'' it is defined as it is. This may be used to point to source materials or specifications that drove the structure of this plan definition. |
| **PlanDefinition.usage** |  |
| Short name | Describes the clinical usage of the asset |
| Definition | A detailed description of how the asset is used from a clinical perspective. |
| **PlanDefinition.approvalDate** |  |
| Short name | When the plan definition was approved by publisher |
| Definition | The date on which the asset content was approved by the publisher. Approval happens once when the content is officially approved for usage. |
| Comment | The date may be more recent than the approval date because of minor changes / editorial corrections. |
| **PlanDefinition.lastReviewDate** |  |
| Short name | When the plan definition was last reviewed |
| Definition | The date on which the asset content was last reviewed. Review happens periodically after approval, but doesn't change the original approval date. |
| Comment | If specified, this is usually after the approval date. |
| **PlanDefinition.effectivePeriod** |  |
| Short name | When the plan definition is effective |
| Definition | The period during which the plan definition content was or is planned to be effective. |
| Comment | The effective period for a plan definition determines when the content is applicable for usage and is independent of publication and review dates. For example, a measure intended to be used for the year 2016 would be published in 2015. |
| **PlanDefinition.useContext** |  |
| Short name | Content intends to support these contexts |
| Definition | The content was developed with a focus and intent of supporting the contexts that are listed. These terms may be used to assist with indexing and searching of code system definitions. |
| Comment | When multiple usageContexts are specified, there is no expectation for whether all or any of the contexts apply. |
| Requirements | Assist in searching for appropriate content. |
| **PlanDefinition.jurisdiction** |  |
| Short name | Intended jurisdiction for plan definition (if applicable) |
| Definition | A jurisdiction in which the plan definition is intended to be used. |
| Binding Description | Countries and regions within which this artifact is targeted for use |
| **PlanDefinition.topic** |  |
| Short name | E.g. Education, Treatment, Assessment, etc |
| Definition | Descriptive topics related to the content of the plan definition. Topics provide a high-level categorization of the definition that can be useful for filtering and searching. |
| Requirements | Repositories must be able to determine how to categorize the asset so that it can be found by topical searches. |
| Binding Description | High-level categorization of the definition, used for searching, sorting, and filtering |
| **PlanDefinition.contributor** |  |
| Short name | A content contributor |
| Definition | A contributor to the content of the asset, including authors, editors, reviewers, and endorsers. |
| Requirements | Consumers of the content must be able to quickly determine who contributed to the content of the asset. |
| **PlanDefinition.contact** |  |
| Short name | Contact details for the publisher |
| Definition | Contact details to assist a user in finding and communicating with the publisher. |
| Comment | May be a web site, an email address, a telephone number, etc. |
| **PlanDefinition.copyright** |  |
| Short name | Use and/or publishing restrictions |
| Definition | A copyright statement relating to the plan definition and/or its contents. Copyright statements are generally legal restrictions on the use and publishing of the plan definition. |
| Requirements | Consumers of the library must be able to determine any legal restrictions on the use of the plan definition and/or its content. |
| Synonym | License |
| Synonym | Restrictions |
| **PlanDefinition.relatedArtifact** |  |
| Short name | Related artifacts for the asset |
| Definition | Related artifacts such as additional documentation, justification, or bibliographic references. |
| Comment | Each related artifact is either an attachment, or a reference to another resource, but not both. |
| Requirements | Assets must be able to provide enough information for consumers of the content (and/or interventions or results produced by the content) to be able to determine and understand the justification for and evidence in support of the content. |
| **PlanDefinition.library** |  |
| Short name | Logic used by the plan definition |
| Definition | A reference to a Library resource containing any formal logic used by the plan definition. |
| **PlanDefinition.goalDefinition** |  |
| Short name | What the plan is trying to accomplish |
| Definition | Goals that describe what the activities within the plan are intended to achieve. For example, weight loss, restoring an activity of daily living, obtaining herd immunity via immunization, meeting a process improvement objective, etc. |
| Requirements | Goal information needs to be captured for order sets, protocols, and care plan definitions to better describe the objectives of the protocol activities and to guide the creation of specific goals within the derived care plans and orders. |
| **PlanDefinition.goalDefinition.category** |  |
| Short name | E.g. Treatment, dietary, behavioral, etc |
| Definition | Indicates a category the goal falls within. |
| Binding Description | Example codes for grouping goals for filtering or presentation |
| **PlanDefinition.goalDefinition.description** |  |
| Short name | Code or text describing the goal |
| Definition | Human-readable and/or coded description of a specific desired objective of care, such as "control blood pressure" or "negotiate an obstacle course" or "dance with child at wedding". |
| Comment | If no code is available, use CodeableConcept.text. |
| Binding Description | Describes goals that can be achieved |
| **PlanDefinition.goalDefinition.priority** |  |
| Definition | Identifies the expected level of importance associated with reaching/sustaining the defined goal. |
| Binding Description | Indicates the level of importance associated with reaching or sustaining a goal |
| **PlanDefinition.goalDefinition.start** |  |
| Short name | When goal pursuit begins |
| Definition | The event after which the goal should begin being pursued. |
| Binding Description | Identifies the types of events that might trigger the start of a goal |
| **PlanDefinition.goalDefinition.addresses** |  |
| Short name | What does the goal address |
| Definition | Identifies problems, conditions, issues, or concerns the goal is intended to address. |
| Binding Description | Identifies problems, conditions, issues, or concerns that goals may address |
| **PlanDefinition.goalDefinition.documentation** |  |
| Short name | Supporting documentation for the goal |
| Definition | Didactic or other informational resources associated with the goal that provide further supporting information about the goal. Information resources can include inline text commentary and links to web resources. |
| **PlanDefinition.goalDefinition.target** |  |
| Short name | Target outcome for the goal |
| Definition | Indicates what should be done and within what timeframe. |
| **PlanDefinition.goalDefinition.target.measure** |  |
| Short name | The parameter whose value is to be tracked |
| Definition | The parameter whose value is to be tracked, e.g. body weigth, blood pressure, or hemoglobin A1c level. |
| Binding Description | Identifies types of parameters that can be tracked to determine goal achievement |
| **PlanDefinition.goalDefinition.target.detail[x]** |  |
| Short name | The target value to be achieved |
| Definition | The target value of the measure to be achieved to signify fulfillment of the goal, e.g. 150 pounds or 7.0%. Either the high or low or both values of the range can be specified. Whan a low value is missing, it indicates that the goal is achieved at any value at or below the high value. Similarly, if the high value is missing, it indicates that the goal is achieved at any value at or above the low value. |
| **PlanDefinition.goalDefinition.target.due** |  |
| Short name | Reach goal within |
| Definition | Indicates the timeframe after the start of the goal in which the goal should be met. |
| **PlanDefinition.actionDefinition** |  |
| Short name | Action defined by the plan |
| Definition | An action to be taken as part of the plan. |
| **PlanDefinition.actionDefinition.label** |  |
| Short name | User-visible label for the action (e.g. 1. or A.) |
| Definition | A user-visible label for the action. |
| **PlanDefinition.actionDefinition.title** |  |
| Short name | User-visible title |
| Definition | The title of the action displayed to a user. |
| **PlanDefinition.actionDefinition.description** |  |
| Short name | Short description of the action |
| Definition | A short description of the action used to provide a summary to display to the user. |
| **PlanDefinition.actionDefinition.textEquivalent** |  |
| Short name | Static text equivalent of the action, used if the dynamic aspects cannot be interpreted by the receiving system |
| Definition | A text equivalent of the action to be performed. This provides a human-interpretable description of the action when the definition is consumed by a system that may not be capable of interpreting it dynamically. |
| **PlanDefinition.actionDefinition.code** |  |
| Short name | Code representing the meaning of the action or sub-actions |
| Definition | A code that provides meaning for the action or action group. For example, a section may have a LOINC code for a the section of a documentation template. |
| **PlanDefinition.actionDefinition.reason** |  |
| Short name | Why the action should be performed |
| Definition | A description of why this action is necessary or appropriate. |
| Comment | This is different than the clinical evidence documentation, it's an actual business description of the reason for performing the action. |
| **PlanDefinition.actionDefinition.documentation** |  |
| Short name | Supporting documentation for the intended performer of the action |
| Definition | Didactic or other informational resources associated with the action that can be provided to the CDS recipient. Information resources can include inline text commentary and links to web resources. |
| **PlanDefinition.actionDefinition.goalId** |  |
| Short name | What goals this action supports |
| Definition | Identifies goals that this action supports. The reference must be to a goalDefinition element defined within this plan definition. |
| **PlanDefinition.actionDefinition.triggerDefinition** |  |
| Short name | When the action should be triggered |
| Definition | A description of when the action should be triggered. |
| **PlanDefinition.actionDefinition.condition** |  |
| Short name | Whether or not the action is applicable |
| Definition | An expression that describes applicability criteria, or start/stop conditions for the action. |
| **PlanDefinition.actionDefinition.condition.kind** |  |
| Definition | The kind of condition. |
| Comment | Applicability criteria are used to determine immediate applicability when a plan definition is applied to a given context. Start and stop criteria are carried through application and used to describe when enter/exit criteria for an action. |
| Binding Description | Defines the kinds of conditions that can appear on actions |
| **PlanDefinition.actionDefinition.condition.description** |  |
| Short name | Natural language description of the condition |
| Definition | A brief, natural language description of the condition that effectively communicates the intended semantics. |
| **PlanDefinition.actionDefinition.condition.language** |  |
| Short name | Language of the expression |
| Definition | The media type of the language for the expression. |
| **PlanDefinition.actionDefinition.condition.expression** |  |
| Short name | Boolean-valued expression |
| Definition | An expression that returns true or false, indicating whether or not the condition is satisfied. |
| Comment | The expression may be inlined, or may be a reference to a named expression within a logic library referenced by the library element. |
| **PlanDefinition.actionDefinition.input** |  |
| Short name | Input data requirements |
| Definition | Defines input data requirements for the action. |
| **PlanDefinition.actionDefinition.output** |  |
| Short name | Output data definition |
| Definition | Defines the outputs of the action, if any. |
| **PlanDefinition.actionDefinition.relatedAction** |  |
| Short name | Relationship to another action |
| Definition | A relationship to another action such as "before" or "30-60 minutes after start of". |
| Comment | When an action depends on multiple actions, the meaning is that all actions are dependencies, rather than that any of the actions are a dependency. |
| **PlanDefinition.actionDefinition.relatedAction.actionId** |  |
| Short name | What action is this related to |
| Definition | The element id of the related action. |
| **PlanDefinition.actionDefinition.relatedAction.relationship** |  |
| Definition | The relationship of this action to the related action. |
| Binding Description | Defines the types of relationships between actions |
| **PlanDefinition.actionDefinition.relatedAction.offset[x]** |  |
| Short name | Time offset for the relationship |
| Definition | A duration or range of durations to apply to the relationship. For example, 30-60 minutes before. |
| **PlanDefinition.actionDefinition.timing[x]** |  |
| Short name | When the action should take place |
| Definition | An optional value describing when the action should be performed. |
| **PlanDefinition.actionDefinition.participant** |  |
| Short name | Who should participate in the action |
| Definition | Indicates who should participate in performing the action described. |
| **PlanDefinition.actionDefinition.participant.type** |  |
| Definition | The type of participant in the action. |
| Binding Description | The type of participant for the action |
| **PlanDefinition.actionDefinition.participant.role** |  |
| Short name | E.g. Nurse, Surgeon, Parent, etc |
| Definition | The role the participant should play in performing the described action. |
| Binding Description | Defines roles played by participants for the action |
| **PlanDefinition.actionDefinition.type** |  |
| Definition | The type of action to perform (create, update, remove). |
| Binding Description | The type of action to be performed |
| **PlanDefinition.actionDefinition.groupingBehavior** |  |
| Definition | Defines the grouping behavior for the action and its children. |
| Binding Description | Defines organization behavior of a group |
| **PlanDefinition.actionDefinition.selectionBehavior** |  |
| Definition | Defines the selection behavior for the action and its children. |
| Binding Description | Defines selection behavior of a group |
| **PlanDefinition.actionDefinition.requiredBehavior** |  |
| Definition | Defines the requiredness behavior for the action. |
| Binding Description | Defines requiredness behavior for selecting an action or an action group |
| **PlanDefinition.actionDefinition.precheckBehavior** |  |
| Definition | Defines whether the action should usually be preselected. |
| Binding Description | Defines selection frequency behavior for an action or group |
| **PlanDefinition.actionDefinition.cardinalityBehavior** |  |
| Definition | Defines whether the action can be selected multiple times. |
| Binding Description | Defines behavior for an action or a group for how many times that item may be repeated |
| **PlanDefinition.actionDefinition.definition** |  |
| Short name | Description of the activity to be performed |
| Definition | A reference to an ActivityDefinition that describes the action to be taken in detail, or a PlanDefinition that describes a series of actions to be taken. |
| Comment | Note that the definition is optional, and if no definition is specified, a dynamicValue with a root (~) path can be used to define the entire resource dynamically. |
| **PlanDefinition.actionDefinition.transform** |  |
| Short name | Transform to apply the template |
| Definition | A reference to a StructureMap resource that defines a transform that can be executed to produce the intent resource using the ActivityDefinition instance as the input. |
| **PlanDefinition.actionDefinition.dynamicValue** |  |
| Short name | Dynamic aspects of the definition |
| Definition | Customizations that should be applied to the statically defined resource. For example, if the dosage of a medication must be computed based on the patient's weight, a customization would be used to specify an expression that calculated the weight, and the path on the resource that would contain the result. |
| **PlanDefinition.actionDefinition.dynamicValue.description** |  |
| Short name | Natural language description of the dynamic value |
| Definition | A brief, natural language description of the intended semantics of the dynamic value. |
| **PlanDefinition.actionDefinition.dynamicValue.path** |  |
| Short name | The path to the element to be set dynamically |
| Definition | The path to the element to be customized. This is the path on the resource that will hold the result of the calculation defined by the expression. |
| **PlanDefinition.actionDefinition.dynamicValue.language** |  |
| Short name | Language of the expression |
| Definition | The media type of the language for the expression. |
| **PlanDefinition.actionDefinition.dynamicValue.expression** |  |
| Short name | An expression that provides the dynamic value for the customization |
| Definition | An expression specifying the value of the customized element. |
| Comment | The expression may be inlined, or may be a reference to a named expression within a logic library referenced by the library element. |
| **PlanDefinition.actionDefinition.actionDefinition** |  |
| Short name | A sub-action |
| Definition | Sub actions that are contained within the action. The behavior of this action determines the functionality of the sub-actions. For example, a selection behavior of at-most-one indicates that of the sub-actions, at most one may be chosen as part of realizing the action definition. |

## http://hl7.org/fhir/StructureDefinition/RequestGroup

|  |  |
| --- | --- |
| **Description** | Base StructureDefinition for RequestGroup Resource |
| **RequestGroup** | Request Group |
| Short name | A group of related requests |
| Definition | A group of related requests that can be used to capture intended activities that have inter-dependencies such as "give this medication after that one". |
| **RequestGroup.identifier** |  |
| Short name | Business identifier |
| Definition | Allows a service to provide a unique, business identifier for the response. |
| **RequestGroup.subject** |  |
| Short name | Who the request group is about |
| Definition | The subject for which the request group was created. |
| **RequestGroup.context** |  |
| Short name | Encounter or Episode for the request group |
| Definition | Describes the context of the request group, if any. |
| **RequestGroup.occurrenceDateTime** |  |
| Short name | When the request group was authored |
| Definition | Indicates when the request group was created. |
| **RequestGroup.author** |  |
| Short name | Device or practitioner that authored the request group |
| Definition | Provides a reference to the author of the request group. |
| **RequestGroup.reason[x]** |  |
| Short name | Reason for the request group |
| Definition | Indicates the reason the request group was created. This is typically provided as a parameter to the evaluation and echoed by the service, although for some use cases, such as subscription- or event-based scenarios, it may provide an indication of the cause for the response. |
| **RequestGroup.note** |  |
| Short name | Additional notes about the response |
| Definition | Provides a mechanism to communicate additional information about the response. |
| **RequestGroup.action** |  |
| Short name | Proposed actions, if any |
| Definition | The actions, if any, produced by the evaluation of the artifact. |
| Constraint Text | Must have resource or action but not both |
| **RequestGroup.action.label** |  |
| Short name | User-visible label for the action (e.g. 1. or A.) |
| Definition | A user-visible label for the action. |
| **RequestGroup.action.title** |  |
| Short name | User-visible title |
| Definition | The title of the action displayed to a user. |
| **RequestGroup.action.description** |  |
| Short name | Short description of the action |
| Definition | A short description of the action used to provide a summary to display to the user. |
| **RequestGroup.action.textEquivalent** |  |
| Short name | Static text equivalent of the action, used if the dynamic aspects cannot be interpreted by the receiving system |
| Definition | A text equivalent of the action to be performed. This provides a human-interpretable description of the action when the definition is consumed by a system that may not be capable of interpreting it dynamically. |
| **RequestGroup.action.code** |  |
| Short name | Code representing the meaning of the action or sub-actions |
| Definition | A code that provides meaning for the action or action group. For example, a section may have a LOINC code for a the section of a documentation template. |
| **RequestGroup.action.documentation** |  |
| Short name | Supporting documentation for the intended performer of the action |
| Definition | Didactic or other informational resources associated with the action that can be provided to the CDS recipient. Information resources can include inline text commentary and links to web resources. |
| **RequestGroup.action.condition** |  |
| Short name | Whether or not the action is applicable |
| Definition | An expression that describes applicability criteria, or start/stop conditions for the action. |
| **RequestGroup.action.condition.kind** |  |
| Definition | The kind of condition. |
| Comment | Applicability criteria are used to determine immediate applicability when a plan definition is applied to a given context. Start and stop criteria are carried through application and used to describe when enter/exit criteria for an action. |
| Binding Description | The kind of condition for the action |
| **RequestGroup.action.condition.description** |  |
| Short name | Natural language description of the condition |
| Definition | A brief, natural language description of the condition that effectively communicates the intended semantics. |
| **RequestGroup.action.condition.language** |  |
| Short name | Language of the expression |
| Definition | The media type of the language for the expression. |
| **RequestGroup.action.condition.expression** |  |
| Short name | Boolean-valued expression |
| Definition | An expression that returns true or false, indicating whether or not the condition is satisfied. |
| Comment | The expression may be inlined, or may be a reference to a named expression within a logic library referenced by the library element. |
| **RequestGroup.action.relatedAction** |  |
| Short name | Relationship to another action |
| Definition | A relationship to another action such as "before" or "30-60 minutes after start of". |
| **RequestGroup.action.relatedAction.actionId** |  |
| Short name | What action this is related to |
| Definition | The element id of the action this is related to. |
| **RequestGroup.action.relatedAction.relationship** |  |
| Definition | The relationship of this action to the related action. |
| Binding Description | Defines the types of relationships between actions |
| **RequestGroup.action.relatedAction.offset[x]** |  |
| Short name | Time offset for the relationship |
| Definition | A duration or range of durations to apply to the relationship. For example, 30-60 minutes before. |
| **RequestGroup.action.timing[x]** |  |
| Short name | When the action should take place |
| Definition | An optional value describing when the action should be performed. |
| **RequestGroup.action.participant** |  |
| Short name | Who should perform the action |
| Definition | The participant that should perform or be responsible for this action. |
| **RequestGroup.action.type** |  |
| Definition | The type of action to perform (create, update, remove). |
| Binding Description | The type of action to be performed |
| **RequestGroup.action.groupingBehavior** |  |
| Definition | Defines the grouping behavior for the action and its children. |
| Binding Description | Defines organization behavior of a group |
| **RequestGroup.action.selectionBehavior** |  |
| Definition | Defines the selection behavior for the action and its children. |
| Binding Description | Defines selection behavior of a group |
| **RequestGroup.action.requiredBehavior** |  |
| Definition | Defines the requiredness behavior for the action. |
| Binding Description | Defines requiredness behavior for selecting an action or an action group |
| **RequestGroup.action.precheckBehavior** |  |
| Definition | Defines whether the action should usually be preselected. |
| Binding Description | Defines selection frequency behavior for an action or group |
| **RequestGroup.action.cardinalityBehavior** |  |
| Definition | Defines whether the action can be selected multiple times. |
| Binding Description | Defines behavior for an action or a group for how many times that item may be repeated |
| **RequestGroup.action.resource** |  |
| Short name | The target of the action |
| Definition | The resource that is the target of the action (e.g. CommunicationRequest). |
| Comment | The target resource SHALL be a [Request](request.html) resource with a Request.intent set to "option". |
| **RequestGroup.action.action** |  |
| Short name | Sub action |
| Definition | Sub actions. |

## http://hl7.org/fhir/StructureDefinition/RiskAssessment

|  |  |
| --- | --- |
| **Description** | Base StructureDefinition for RiskAssessment Resource |
| **RiskAssessment** | Risk Assessment |
| Short name | Potential outcomes for a subject with likelihood |
| Definition | An assessment of the likely outcome(s) for a patient or other subject as well as the likelihood of each outcome. |
| Synonym | Prognosis |
| **RiskAssessment.identifier** |  |
| Short name | Unique identifier for the assessment |
| Definition | Business identifier assigned to the risk assessment. |
| **RiskAssessment.basedOn** |  |
| Short name | Request fulfilled by this assessment |
| Definition | A reference to the request that is fulfilled by this risk assessment. |
| **RiskAssessment.parent** |  |
| Short name | Part of this occurrence |
| Definition | A reference to a resource that this risk assessment is part of, such as a Procedure. |
| **RiskAssessment.status** |  |
| Definition | The status of the RiskAssessment, using the same statuses as an Observation. |
| Binding Description | The status of the risk assessment; e.g. preliminary, final, amended, etc. |
| **RiskAssessment.method** |  |
| Short name | Evaluation mechanism |
| Definition | The algorithm, process or mechanism used to evaluate the risk. |
| Requirements | The method can influence the results of the assessment. |
| Binding Description | The mechanism or algorithm used to make the assessment; e.g. TIMI, PRISM, Cardiff Type 2 diabetes, etc. |
| **RiskAssessment.code** |  |
| Short name | Type of assessment |
| Definition | The type of the risk assessment performed. |
| **RiskAssessment.subject** |  |
| Short name | Who/what does assessment apply to? |
| Definition | The patient or group the risk assessment applies to. |
| **RiskAssessment.context** |  |
| Short name | Where was assessment performed? |
| Definition | The encounter where the assessment was performed. |
| **RiskAssessment.occurrence[x]** |  |
| Short name | When was assessment made? |
| Definition | The date (and possibly time) the risk assessment was performed. |
| Requirements | The assessment results lose validity the more time elapses from when they are first made. |
| **RiskAssessment.condition** |  |
| Short name | Condition assessed |
| Definition | For assessments or prognosis specific to a particular condition, indicates the condition being assessed. |
| **RiskAssessment.performer** |  |
| Short name | Who did assessment? |
| Definition | The provider or software application that performed the assessment. |
| **RiskAssessment.reason[x]** |  |
| Short name | Why the assessment was necessary? |
| Definition | The reason the risk assessment was performed. |
| **RiskAssessment.basis** |  |
| Short name | Information used in assessment |
| Definition | Indicates the source data considered as part of the assessment (FamilyHistory, Observations, Procedures, Conditions, etc.). |
| **RiskAssessment.prediction** |  |
| Short name | Outcome predicted |
| Definition | Describes the expected outcome for the subject. |
| Comment | Multiple repetitions can be used to identify the same type of outcome in different timeframes as well as different types of outcomes. |
| Constraint Text | Must be <= 100 |
| **RiskAssessment.prediction.outcome** |  |
| Short name | Possible outcome for the subject |
| Definition | One of the potential outcomes for the patient (e.g. remission, death, a particular condition). |
| Binding Description | The condition or other outcome; e.g. death, remission, amputation, infection, etc. |
| **RiskAssessment.prediction.probability[x]** |  |
| Short name | Likelihood of specified outcome |
| Definition | How likely is the outcome (in the specified timeframe). |
| Comment | If range is used, it represents the lower and upper bounds of certainty; e.g. 40-60% Decimal values are expressed as percentages as well (max = 100). |
| Constraint Text | low and high must be percentages, if present |
| **RiskAssessment.prediction.qualitativeRisk** |  |
| Short name | Likelihood of specified outcome as a qualitative value |
| Definition | How likely is the outcome (in the specified timeframe), expressed as a qualitative value (e.g. low, medium, high). |
| Binding Description | The likelihood of the occurrence of a specified outcome |
| **RiskAssessment.prediction.relativeRisk** |  |
| Short name | Relative likelihood |
| Definition | Indicates the risk for this particular subject (with their specific characteristics) divided by the risk of the population in general. (Numbers greater than 1 = higher risk than the population, numbers less than 1 = lower risk.). |
| Requirements | Absolute risk is less meaningful than relative risk. |
| **RiskAssessment.prediction.when[x]** |  |
| Short name | Timeframe or age range |
| Definition | Indicates the period of time or age range of the subject to which the specified probability applies. |
| Comment | If not specified, the risk applies "over the subject's lifespan". |
| **RiskAssessment.prediction.rationale** |  |
| Short name | Explanation of prediction |
| Definition | Additional information explaining the basis for the prediction. |
| **RiskAssessment.mitigation** |  |
| Short name | How to reduce risk |
| Definition | A description of the steps that might be taken to reduce the identified risk(s). |
| Requirements | One of the main reasons for assessing risks is to identify whether interventional steps are needed to reduce risk. |
| **RiskAssessment.note** |  |
| Short name | Comments on the risk assessment |
| Definition | Additional comments about the risk assessment. |

## http://hl7.org/fhir/StructureDefinition/ServiceDefinition

|  |  |
| --- | --- |
| **Description** | Base StructureDefinition for ServiceDefinition Resource |
| **ServiceDefinition** | Service Definition |
| Short name | A description of decision support service functionality |
| Definition | The ServiceDefinition describes a unit of decision support functionality that is made available as a service, such as immunization modules or drug-drug interaction checking. |
| **ServiceDefinition.url** |  |
| Short name | Logical uri to reference this service definition (globally unique) |
| Definition | An absolute URL that is used to identify this service definition when it is referenced in a specification, model, design or an instance. This SHALL be a URL, SHOULD be globally unique, and SHOULD be an address at which this service definition is (or will be) published. The URL SHOULD include the major version of the service definition. For more information see [Technical and Business Versions](resource.html#versions). |
| Comment | Can be a urn:uuid: or a urn:oid:, but real http: addresses are preferred. |
| Requirements | Allows the service definition to be referenced by a single globally unique identifier. |
| **ServiceDefinition.identifier** |  |
| Short name | Additional identifier for the service definition |
| Definition | A formal identifier that is used to identify this service definition when it is represented in other formats, or referenced in a specification, model, design or an instance. This is used for CMS or NQF identifiers for a measure artifact. Note that at least one identifier is required for non-experimental active artifacts. |
| Comment | Typically, this is used for identifiers that can go in an HL7 v3 II data type - e.g. to identify this service definition outside of FHIR, where the logical URL is not possible to use. |
| Requirements | Allows externally provided and/or useable business identifiers to be easily associated with the module. |
| **ServiceDefinition.version** |  |
| Short name | Business version of the service definition |
| Definition | The identifier that is used to identify this version of the service definition when it is referenced in a specification, model, design or instance. This is an arbitrary value managed by the service definition author and is not expected to be globally unique. For example, it might be a timestamp (e.g. yyyymmdd) if a managed version is not available. There is also no expectation that versions are orderable. |
| Comment | There may be multiple different instances of a service definition that have the same identifier but different versions. |
| **ServiceDefinition.name** |  |
| Short name | Name for this service definition (Computer friendly) |
| Definition | A natural language name identifying the service definition. This name should be usable as an identifier for the module by machine processing applications such as code generation. |
| Comment | The name is not expected to be globally unique. The name should be a simple alpha-numeric type name to ensure it is computable friendly. |
| Requirements | Support human navigation & code generation. |
| **ServiceDefinition.title** |  |
| Short name | Name for this service definition (Human friendly) |
| Definition | A short, descriptive, user-friendly title for the service definition. |
| **ServiceDefinition.status** |  |
| Definition | The status of this service definition. Enables tracking the life-cycle of the content. |
| Comment | Allows filtering of service definition that are appropriate for use vs. not. |
| Binding Description | The lifecycle status of a Value Set or Concept Map. |
| **ServiceDefinition.experimental** |  |
| Short name | If for testing purposes, not real usage |
| Definition | A flag to indicate that this service definition is authored for testing purposes (or education/evaluation/marketing), and is not intended to be used for genuine usage. |
| Comment | Allows filtering of service definition that are appropriate for use vs. not. |
| Requirements | Enables experimental content to be developed following the same life-cycle as a production-level service definition would. |
| **ServiceDefinition.date** |  |
| Short name | Date this was last changed |
| Definition | The date (and optionally time) when the service definition was published. The date must change when the business version changes, if it does, and it must change if the status code changes. In addition, it should change when the substantive content of the service definition changes. |
| Comment | Note that this is not the same as the resource last-modified-date, since the resource may be a secondary representation of the service definition. Additional specific dates may be added as extensions. |
| **ServiceDefinition.publisher** |  |
| Short name | Name of the publisher (Organization or individual) |
| Definition | The name of the individual or organization that published the service definition. |
| Comment | Usually an organization, but may be an individual. The publisher (or steward) of the service definition is the organization or individual primarily responsible for the maintenance and upkeep of the service definition. This is not necessarily the same individual or organization that developed and initially authored the content. The publisher is the primary point of contact for questions or issues with the service definition. This item SHOULD be populated unless the information is available from context. |
| Requirements | Helps establish the "authority/credibility" of the service definition. May also allow for contact. |
| **ServiceDefinition.description** |  |
| Short name | Natural language description of the service definition |
| Definition | A free text natural language description of the service definition from the consumer's perspective. |
| Comment | This description can be used to capture details such as why the service definition was built, comments about misuse, instructions for clinical use and interpretation, literature references, examples from the paper world, etc. It is not a rendering of the service definition as conveyed in the text field of the resource itself. This item SHOULD be populated unless the information is available from context (e.g. the language of the profile is presumed to be the predominant language in the place the profile was created). |
| **ServiceDefinition.purpose** |  |
| Short name | Why this service definition is defined |
| Definition | Explains why this service definition is needed and why it has been designed as it has. |
| Comment | This element does not describe the usage of the service definition (See, e.g, the comments element, or relatedArtifacts), rather it's for traceability of ''why'' the resource is either needed or ''why'' it is defined as it is. This may be used to point to source materials or specifications that drove the structure of this service definition. |
| **ServiceDefinition.usage** |  |
| Short name | Describes the clinical usage of the module |
| Definition | A detailed description of how the module is used from a clinical perspective. |
| **ServiceDefinition.approvalDate** |  |
| Short name | When the service definition was approved by publisher |
| Definition | The date on which the asset content was approved by the publisher. Approval happens once when the content is officially approved for usage. |
| Comment | The date may be more recent than the approval date because of minor changes / editorial corrections. |
| **ServiceDefinition.lastReviewDate** |  |
| Short name | When the service definition was last reviewed |
| Definition | The date on which the asset content was last reviewed. Review happens periodically after approval, but doesn't change the original approval date. |
| Comment | If specified, this is usually after the approval date. |
| **ServiceDefinition.effectivePeriod** |  |
| Short name | When the service definition is effective |
| Definition | The period during which the service definition content was or is planned to be effective. |
| Comment | The effective period for a service definition determines when the content is applicable for usage and is independent of publication and review dates. For example, a measure intended to be used for the year 2016 would be published in 2015. |
| **ServiceDefinition.useContext** |  |
| Short name | Content intends to support these contexts |
| Definition | The content was developed with a focus and intent of supporting the contexts that are listed. These terms may be used to assist with indexing and searching of code system definitions. |
| Comment | When multiple usageContexts are specified, there is no expectation for whether all or any of the contexts apply. |
| Requirements | Assist in searching for appropriate content. |
| **ServiceDefinition.jurisdiction** |  |
| Short name | Intended jurisdiction for service definition (if applicable) |
| Definition | A jurisdiction in which the service definition is intended to be used. |
| Binding Description | Countries and regions within which this artifact is targeted for use |
| **ServiceDefinition.topic** |  |
| Short name | E.g. Education, Treatment, Assessment, etc |
| Definition | Descriptive topics related to the module. Topics provide a high-level categorization of the module that can be useful for filtering and searching. |
| Requirements | Repositories must be able to determine how to categorize the module so that it can be found by topical searches. |
| Binding Description | High-level categorization of the definition, used for searching, sorting, and filtering |
| **ServiceDefinition.contributor** |  |
| Short name | A content contributor |
| Definition | A contributor to the content of the module, including authors, editors, reviewers, and endorsers. |
| Requirements | Consumers of the content must be able to quickly determine who contributed to the content of the knowledge module. |
| **ServiceDefinition.contact** |  |
| Short name | Contact details for the publisher |
| Definition | Contact details to assist a user in finding and communicating with the publisher. |
| Comment | May be a web site, an email address, a telephone number, etc. |
| **ServiceDefinition.copyright** |  |
| Short name | Use and/or publishing restrictions |
| Definition | A copyright statement relating to the service definition and/or its contents. Copyright statements are generally legal restrictions on the use and publishing of the service definition. |
| Requirements | Consumers of the library must be able to determine any legal restrictions on the use of the service definition and/or its content. |
| Synonym | License |
| Synonym | Restrictions |
| **ServiceDefinition.relatedArtifact** |  |
| Short name | Additional documentation, citations, etc |
| Definition | Related resources such as additional documentation, justification, or bibliographic references. |
| Comment | Each related resource is either an attachment, or a reference to another resource, but not both. |
| Requirements | Modules must be able to provide enough information for consumers of the content (and/or interventions or results produced by the content) to be able to determine and understand the justification for and evidence in support of the content. |
| **ServiceDefinition.trigger** |  |
| Short name | "when" the module should be invoked |
| Definition | The trigger element defines when the rule should be invoked. This information is used by consumers of the rule to determine how to integrate the rule into a specific workflow. |
| **ServiceDefinition.dataRequirement** |  |
| Short name | What data is used by the module |
| Definition | Data requirements are a machine processable description of the data required by the module in order to perform a successful evaluation. |
| **ServiceDefinition.operationDefinition** |  |
| Short name | Operation to invoke |
| Definition | A reference to the operation that is used to invoke this service. |

# Clinical Genomics

## http://hl7.org/fhir/StructureDefinition/Sequence

|  |  |
| --- | --- |
| **Description** | Base StructureDefinition for Sequence Resource |
| **Sequence** | Sequence |
| Short name | Information about a biological sequence |
| Definition | Raw data describing a biological sequence. |
| Constraint Text | Only 0 and 1 are valid for coordinateSystem |
| **Sequence.identifier** |  |
| Short name | Unique ID for this particular sequence. This is a FHIR-defined id |
| Definition | A unique identifier for this particular sequence instance. This is a FHIR-defined id. |
| Requirements | Allows sequences to be distinguished and referenced. |
| **Sequence.type** |  |
| Definition | Amino Acid Sequence/ DNA Sequence / RNA Sequence. |
| Binding Description | Type if a sequence -- DNA, RNA, or amino acid sequence |
| **Sequence.coordinateSystem** |  |
| Short name | Base number of coordinate system (0 for 0-based numbering or coordinates, inclusive start, exclusive end, 1 for 1-based numbering, inclusive start, inclusive end) |
| Definition | Whether the sequence is numbered starting at 0 (0-based numbering or coordinates, inclusive start, exclusive end) or starting at 1 (1-based numbering, inclusive start and inclusive end). |
| **Sequence.patient** |  |
| Short name | Who and/or what this is about |
| Definition | The patient whose sequencing results are described by this resource. |
| **Sequence.specimen** |  |
| Short name | Specimen used for sequencing |
| Definition | Specimen used for sequencing. |
| **Sequence.device** |  |
| Short name | The method for sequencing |
| Definition | The method for sequencing, for example, chip information. |
| **Sequence.performer** |  |
| Short name | Who should be responsible for test result |
| Definition | The organization or lab that should be responsible for this result. |
| **Sequence.quantity** |  |
| Short name | The number of copies of the seqeunce of interest. (RNASeq) |
| Definition | The number of copies of the seqeunce of interest. (RNASeq). |
| **Sequence.referenceSeq** |  |
| Short name | A sequence used as reference |
| Definition | A sequence that is used as a reference to describe variants that are present in a sequence analyzed. |
| Constraint Text | Only +1 and -1 are valid for strand |
| Constraint Text | GenomeBuild and chromosome must be both contained if either one of them is contained |
| Constraint Text | Have and only have one of the following elements in referenceSeq : 1. genomeBuild ; 2 referenceSeqId; 3. referenceSeqPointer; 4. referenceSeqString; |
| **Sequence.referenceSeq.chromosome** |  |
| Short name | Chromosome containing genetic finding |
| Definition | Structural unit composed of a nucleic acid molecule which controls its own replication through the interaction of specific proteins at one or more origins of replication ([SO:0000340](http://www.sequenceontology.org/browser/current\_svn/term/SO:0000340)). |
| Binding Description | Chromosome number for human |
| **Sequence.referenceSeq.genomeBuild** |  |
| Short name | The Genome Build used for reference, following GRCh build versions e.g. 'GRCh 37' |
| Definition | The Genome Build used for reference, following GRCh build versions e.g. 'GRCh 37'. Version number must be included if a versioned release of a primary build was used. |
| **Sequence.referenceSeq.referenceSeqId** |  |
| Short name | Reference identifier |
| Definition | Reference identifier of reference sequence submitted to NCBI. It must match the type in the Sequence.type field. For example, the prefix, â€œNG\_â€ identifies reference sequence for genes, â€œNM\_â€ for messenger RNA transcripts, and â€œNP\_â€ for amino acid sequences. |
| Binding Description | Reference identifier |
| **Sequence.referenceSeq.referenceSeqPointer** |  |
| Short name | A Pointer to another Sequence entity as reference sequence |
| Definition | A Pointer to another Sequence entity as reference sequence. |
| **Sequence.referenceSeq.referenceSeqString** |  |
| Short name | A string to represent reference sequence |
| Definition | A string like "ACGT". |
| **Sequence.referenceSeq.strand** |  |
| Short name | Directionality of DNA ( +1/-1) |
| Definition | Directionality of DNA sequence. Available values are "1" for the plus strand (5' to 3')/Watson/Sense/positive and "-1" for the minus strand(3' to 5')/Crick/Antisense/negative. |
| **Sequence.referenceSeq.windowStart** |  |
| Short name | Start position of the window on the reference sequence |
| Definition | Start position of the window on the reference sequence. If the coordinate system is either 0-based or 1-based, then start position is inclusive. |
| **Sequence.referenceSeq.windowEnd** |  |
| Short name | End position of the window on the reference sequence |
| Definition | End position of the window on the reference sequence. If the coordinate system is 0-based then end is is exclusive and does not include the last position. If the coordinate system is 1-base, then end is inclusive and includes the last position. |
| **Sequence.variant** |  |
| Short name | Variant in sequence |
| Definition | The definition of variant here originates from Sequence ontology ([variant\_of](http://www.sequenceontology.org/browser/current\_svn/term/variant\_of)). This element can represent amino acid or nucleic sequence change(including insertion,deletion,SNP,etc.) It can represent some complex mutation or segment variation with the assist of CIGAR string. |
| **Sequence.variant.start** |  |
| Short name | Start position of the variant on the reference sequence |
| Definition | Start position of the variant on the reference sequence.If the coordinate system is either 0-based or 1-based, then start position is inclusive. |
| **Sequence.variant.end** |  |
| Short name | End position of the variant on the reference sequence |
| Definition | End position of the variant on the reference sequence.If the coordinate system is 0-based then end is is exclusive and does not include the last position. If the coordinate system is 1-base, then end is inclusive and includes the last position. |
| **Sequence.variant.observedAllele** |  |
| Short name | Allele that was observed |
| Definition | An allele is one of a set of coexisting sequence variants of a gene ([SO:0001023](http://www.sequenceontology.org/browser/current\_svn/term/SO:0001023)). Nucleotide(s)/amino acids from start position of sequence to stop position of sequence on the positive (+) strand of the observed sequence. When the sequence type is DNA, it should be the sequence on the positive (+) strand. This will lay in the range between variant.start and variant.end. |
| **Sequence.variant.referenceAllele** |  |
| Short name | Allele in the reference sequence |
| Definition | An allele is one of a set of coexisting sequence variants of a gene ([SO:0001023](http://www.sequenceontology.org/browser/current\_svn/term/SO:0001023)). Nucleotide(s)/amino acids from start position of sequence to stop position of sequence on the positive (+) strand of the reference sequence. When the sequence type is DNA, it should be the sequence on the positive (+) strand. This will lay in the range between variant.start and variant.end. |
| **Sequence.variant.cigar** |  |
| Short name | Extended CIGAR string for aligning the sequence with reference bases |
| Definition | Extended CIGAR string for aligning the sequence with reference bases. See detailed documentation [here](http://support.illumina.com/help/SequencingAnalysisWorkflow/Content/Vault/Informatics/Sequencing\_Analysis/CASAVA/swSEQ\_mCA\_ExtendedCIGARFormat.htm). |
| **Sequence.variant.variantPointer** |  |
| Short name | Pointer to observed variant information |
| Definition | A pointer to an Observation containing variant information. |
| **Sequence.observedSeq** |  |
| Short name | Sequence that was observed |
| Definition | Sequence that was observed. It is the result marked by referenceSeq along with variant records on referenceSeq. This shall starts from referenceSeq.windowStart and end by referenceSeq.windowEnd. |
| **Sequence.quality** |  |
| Short name | An set of value as quality of sequence |
| Definition | An experimental feature attribute that defines the quality of the feature in a quantitative way, such as a phred quality score ([SO:0001686](http://www.sequenceontology.org/browser/current\_svn/term/SO:0001686)). |
| **Sequence.quality.type** |  |
| Definition | INDEL / SNP / Undefined variant. |
| Binding Description | Type for quality report |
| **Sequence.quality.standardSequence** |  |
| Short name | Standard sequence for comparison |
| Definition | Gold standard sequence used for comparing against. |
| Binding Description | Reference identifier of the sequence that used to mark the quality of tested samples. |
| **Sequence.quality.start** |  |
| Short name | Start position of the sequence |
| Definition | Start position of the sequence. If the coordinate system is either 0-based or 1-based, then start position is inclusive. |
| **Sequence.quality.end** |  |
| Short name | End position of the sequence |
| Definition | End position of the sequence.If the coordinate system is 0-based then end is is exclusive and does not include the last position. If the coordinate system is 1-base, then end is inclusive and includes the last position. |
| **Sequence.quality.score** |  |
| Short name | Quality score for the comparison |
| Definition | The score of an experimentally derived feature such as a p-value ([SO:0001685](http://www.sequenceontology.org/browser/current\_svn/term/SO:0001685)). |
| **Sequence.quality.method** |  |
| Short name | Method to get quality |
| Definition | Which method is used to get sequence quality. |
| Binding Description | The method used to evaluate the numerical quality of the observed sequence. |
| **Sequence.quality.truthTP** |  |
| Short name | True positives from the perspective of the truth data |
| Definition | True positives, from the perspective of the truth data, i.e. the number of sites in the Truth Call Set for which there are paths through the Query Call Set that are consistent with all of the alleles at this site, and for which there is an accurate genotype call for the event. |
| **Sequence.quality.queryTP** |  |
| Short name | True positives from the perspective of the query data |
| Definition | True positives, from the perspective of the query data, i.e. the number of sites in the Query Call Set for which there are paths through the Truth Call Set that are consistent with all of the alleles at this site, and for which there is an accurate genotype call for the event. |
| **Sequence.quality.truthFN** |  |
| Short name | False negatives |
| Definition | False negatives, i.e. the number of sites in the Truth Call Set for which there is no path through the Query Call Set that is consistent with all of the alleles at this site, or sites for which there is an inaccurate genotype call for the event. Sites with correct variant but incorrect genotype are counted here. |
| **Sequence.quality.queryFP** |  |
| Short name | False positives |
| Definition | False positives, i.e. the number of sites in the Query Call Set for which there is no path through the Truth Call Set that is consistent with this site. Sites with correct variant but incorrect genotype are counted here. |
| **Sequence.quality.gtFP** |  |
| Short name | False positives where the non-REF alleles in the Truth and Query Call Sets match |
| Definition | The number of false positives where the non-REF alleles in the Truth and Query Call Sets match (i.e. cases where the truth is 1/1 and the query is 0/1 or similar). |
| **Sequence.quality.precision** |  |
| Short name | Precision of comparison |
| Definition | QUERY.TP / (QUERY.TP + QUERY.FP). |
| **Sequence.quality.recall** |  |
| Short name | Recall of comparison |
| Definition | TRUTH.TP / (TRUTH.TP + TRUTH.FN). |
| **Sequence.quality.fScore** |  |
| Short name | F-score |
| Definition | Harmonic mean of Recall and Precision, computed as: 2 \* precision \* recall / (precision + recall). |
| **Sequence.readCoverage** |  |
| Short name | Average number of reads representing a given nucleotide in the reconstructed sequence |
| Definition | Coverage (read depth or depth) is the average number of reads representing a given nucleotide in the reconstructed sequence. |
| **Sequence.repository** |  |
| Short name | External repository which contains detailed report related with observedSeq in this resource |
| Definition | Configurations of the external repository. The repository shall store target's observedSeq or records related with target's observedSeq. |
| **Sequence.repository.type** |  |
| Definition | Click and see / RESTful API / Need login to see / RESTful API with authentication / Other ways to see resource. |
| Binding Description | Type for access of external uri |
| **Sequence.repository.url** |  |
| Short name | URI of the repository |
| Definition | URI of an external repository which contains further details about the genetics data. |
| **Sequence.repository.name** |  |
| Short name | Repository's name |
| Definition | URI of an external repository which contains further details about the genetics data. |
| **Sequence.repository.datasetId** |  |
| Short name | Id of the dataset that used to call for dataset in repository |
| Definition | Id of the variant in this external repository. The server will understand how to use this id to call for more info about datasets in external repository. |
| **Sequence.repository.variantsetId** |  |
| Short name | Id of the variantset that used to call for variantset in repository |
| Definition | Id of the variantset in this external repository. The server will understand how to use this id to call for more info about variantsets in external repository. |
| **Sequence.repository.readsetId** |  |
| Short name | Id of the read |
| Definition | Id of the read in this external repository. |
| **Sequence.pointer** |  |
| Short name | Pointer to next atomic sequence |
| Definition | Pointer to next atomic sequence which at most contains one variant. |

# Clinical Quality Information

## http://hl7.org/fhir/StructureDefinition/Measure

|  |  |
| --- | --- |
| **Description** | Base StructureDefinition for Measure Resource |
| **Measure** | Measure |
| Short name | A quality measure definition |
| Definition | The Measure resource provides the definition of a quality measure. |
| **Measure.url** |  |
| Short name | Logical uri to reference this measure (globally unique) |
| Definition | An absolute URL that is used to identify this measure when it is referenced in a specification, model, design or an instance. This SHALL be a URL, SHOULD be globally unique, and SHOULD be an address at which this measure is (or will be) published. The URL SHOULD include the major version of the measure. For more information see [Technical and Business Versions](resource.html#versions). |
| Comment | Can be a urn:uuid: or a urn:oid:, but real http: addresses are preferred. |
| Requirements | Allows the measure to be referenced by a single globally unique identifier. |
| **Measure.identifier** |  |
| Short name | Additional identifier for the measure |
| Definition | A formal identifier that is used to identify this measure when it is represented in other formats, or referenced in a specification, model, design or an instance. |
| Comment | Typically, this is used for identifiers that can go in an HL7 v3 II data type - e.g. to identify this measure outside of FHIR, where the logical URL is not possible to use. |
| Requirements | Allows externally provided and/or useable business identifiers to be easily associated with the module. |
| **Measure.version** |  |
| Short name | Business version of the measure |
| Definition | The identifier that is used to identify this version of the measure when it is referenced in a specification, model, design or instance. This is an arbitrary value managed by the measure author and is not expected to be globally unique. For example, it might be a timestamp (e.g. yyyymmdd) if a managed version is not available. There is also no expectation that versions are orderable. To provide a version consistent with the Decision Support Service specification, use the format Major.Minor.Revision (e.g. 1.0.0). For more information on versioning knowledge assets, refer to the Decision Support Service specification. Note that a version is required for non-experimental active artifacts. |
| Comment | There may be multiple different instances of a measure that have the same identifier but different versions. |
| **Measure.name** |  |
| Short name | Name for this measure (Computer friendly) |
| Definition | A natural language name identifying the measure. This name should be usable as an identifier for the module by machine processing applications such as code generation. |
| Comment | The name is not expected to be globally unique. The name should be a simple alpha-numeric type name to ensure it is computable friendly. |
| Requirements | Support human navigation & code generation. |
| **Measure.title** |  |
| Short name | Name for this measure (Human friendly) |
| Definition | A short, descriptive, user-friendly title for the measure. |
| **Measure.status** |  |
| Definition | The status of this measure. Enables tracking the life-cycle of the content. |
| Comment | Allows filtering of measure that are appropriate for use vs. not. |
| Binding Description | The lifecycle status of a Value Set or Concept Map. |
| **Measure.experimental** |  |
| Short name | If for testing purposes, not real usage |
| Definition | A flag to indicate that this measure is authored for testing purposes (or education/evaluation/marketing), and is not intended to be used for genuine usage. |
| Comment | Allows filtering of measure that are appropriate for use vs. not. |
| Requirements | Enables experimental content to be developed following the same life-cycle as a production-level measure would. |
| **Measure.date** |  |
| Short name | Date this was last changed |
| Definition | The date (and optionally time) when the measure was published. The date must change when the business version changes, if it does, and it must change if the status code changes. In addition, it should change when the substantive content of the measure changes. |
| Comment | Note that this is not the same as the resource last-modified-date, since the resource may be a secondary representation of the measure. Additional specific dates may be added as extensions. |
| **Measure.publisher** |  |
| Short name | Name of the publisher (Organization or individual) |
| Definition | The name of the individual or organization that published the measure. |
| Comment | Usually an organization, but may be an individual. The publisher (or steward) of the measure is the organization or individual primarily responsible for the maintenance and upkeep of the measure. This is not necessarily the same individual or organization that developed and initially authored the content. The publisher is the primary point of contact for questions or issues with the measure. This item SHOULD be populated unless the information is available from context. |
| Requirements | Helps establish the "authority/credibility" of the measure. May also allow for contact. |
| **Measure.description** |  |
| Short name | Natural language description of the measure |
| Definition | A free text natural language description of the measure from the consumer's perspective. |
| Comment | This description can be used to capture details such as why the measure was built, comments about misuse, instructions for clinical use and interpretation, literature references, examples from the paper world, etc. It is not a rendering of the measure as conveyed in the text field of the resource itself. This item SHOULD be populated unless the information is available from context (e.g. the language of the profile is presumed to be the predominant language in the place the profile was created). |
| **Measure.purpose** |  |
| Short name | Why this measure is defined |
| Definition | Explains why this measure is needed and why it has been designed as it has. |
| Comment | This element does not describe the usage of the measure (See, e.g, the comments element, or relatedArtifacts), rather it's for traceability of ''why'' the resource is either needed or ''why'' it is defined as it is. This may be used to point to source materials or specifications that drove the structure of this measure. |
| **Measure.usage** |  |
| Short name | Describes the clinical usage of the measure |
| Definition | A detailed description of how the measure is used from a clinical perspective. |
| **Measure.approvalDate** |  |
| Short name | When the measure was approved by publisher |
| Definition | The date on which the asset content was approved by the publisher. Approval happens once when the content is officially approved for usage. |
| Comment | The date may be more recent than the approval date because of minor changes / editorial corrections. |
| **Measure.lastReviewDate** |  |
| Short name | When the measure was last reviewed |
| Definition | The date on which the asset content was last reviewed. Review happens periodically after approval, but doesn't change the original approval date. |
| Comment | If specified, this is usually after the approval date. |
| **Measure.effectivePeriod** |  |
| Short name | When the measure is effective |
| Definition | The period during which the measure content was or is planned to be effective. |
| Comment | The effective period for a measure determines when the content is applicable for usage and is independent of publication and review dates. For example, a measure intended to be used for the year 2016 would be published in 2015. |
| **Measure.useContext** |  |
| Short name | Content intends to support these contexts |
| Definition | The content was developed with a focus and intent of supporting the contexts that are listed. These terms may be used to assist with indexing and searching of code system definitions. |
| Comment | When multiple usageContexts are specified, there is no expectation for whether all or any of the contexts apply. |
| Requirements | Assist in searching for appropriate content. |
| **Measure.jurisdiction** |  |
| Short name | Intended jurisdiction for measure (if applicable) |
| Definition | A jurisdiction in which the measure is intended to be used. |
| Binding Description | Countries and regions within which this artifact is targeted for use |
| **Measure.topic** |  |
| Short name | E.g. Education, Treatment, Assessment, etc |
| Definition | Descriptive topics related to the content of the measure. Topics provide a high-level categorization of the type of the measure that can be useful for filtering and searching. |
| Requirements | Repositories must be able to determine how to categorize the measure so that it can be found by topical searches. |
| Binding Description | High-level categorization of the definition, used for searching, sorting, and filtering |
| **Measure.contributor** |  |
| Short name | A content contributor |
| Definition | A contributor to the content of the measure, including authors, editors, reviewers, and endorsers. |
| Requirements | Consumers of the content must be able to quickly determine who contributed to the content of the measure. |
| **Measure.contact** |  |
| Short name | Contact details for the publisher |
| Definition | Contact details to assist a user in finding and communicating with the publisher. |
| Comment | May be a web site, an email address, a telephone number, etc. |
| **Measure.copyright** |  |
| Short name | Use and/or publishing restrictions |
| Definition | A copyright statement relating to the measure and/or its contents. Copyright statements are generally legal restrictions on the use and publishing of the measure. |
| Requirements | Consumers of the library must be able to determine any legal restrictions on the use of the measure and/or its content. |
| Synonym | License |
| Synonym | Restrictions |
| **Measure.relatedArtifact** |  |
| Short name | Additional documentation, citations, etc |
| Definition | Related artifacts such as additional documentation, justification, or bibliographic references. |
| Comment | Each related artifact is either an attachment, or a reference to another resource, but not both. |
| Requirements | Measures must be able to provide enough information for consumers of the content (and/or interventions or results produced by the content) to be able to determine and understand the justification for and evidence in support of the content. |
| **Measure.library** |  |
| Short name | Logic used by the measure |
| Definition | A reference to a Library resource containing the formal logic used by the measure. |
| **Measure.disclaimer** |  |
| Short name | Disclaimer for use of the measure or its referenced content |
| Definition | Notices and disclaimers regarding the use of the measure, or related to intellectual property (such as code systems) referenced by the measure. |
| Requirements | Some organizations require that notices and disclosures be included when publishing measures that reference their intellecutal property. |
| **Measure.scoring** |  |
| Definition | Indicates how the calculation is performed for the measure, including proportion, ratio, continuous variable, and cohort. The value set is extensible, allowing additional measure scoring types to be represented. |
| Binding Description | The scoring type of the measure |
| **Measure.compositeScoring** |  |
| Definition | If this is a composite measure, the scoring method used to combine the component measures to determine the composite score. |
| Binding Description | The composite scoring method of the measure |
| **Measure.type** |  |
| Definition | Indicates whether the measure is used to examine a process, an outcome over time, a patient-reported outcome, or a structure measure such as utilization. |
| Binding Description | The type of measure (includes codes from 2.16.840.1.113883.1.11.20368) |
| **Measure.riskAdjustment** |  |
| Short name | How is risk adjustment applied for this measure |
| Definition | A description of the risk adjustment factors that may impact the resulting score for the measure and how they may be accounted for when computing and reporting measure results. |
| Comment | Describes the method of adjusting for clinical severity and conditions present at the start of care that can influence patient outcomes for making valid comparisons of outcome measures across providers. Indicates whether an eMeasure is subject to the statistical process for reducing, removing, or clarifying the influences of confounding factors to allow more useful comparisons. |
| **Measure.rateAggregation** |  |
| Short name | How is rate aggregation performed for this measure |
| Definition | Describes how to combine the information calculated, based on logic in each of several populations, into one summarized result. |
| Comment | The measure rate for an organization or clinician is based upon the entitiesâ€™ aggregate data and summarizes the performance of the entity over a given time period (e.g., monthly, quarterly, yearly). The aggregated data are derived from the results of a specific measure algorithm and, if appropriate, the application of specific risk adjustment models. Can also be used to describe how to risk adjust the data based on supplemental data elements described in the eMeasure (e.g., pneumonia hospital measures antibiotic selection in the ICU versus non-ICU and then the roll-up of the two). This could be applied to aggregated cohort measure definitions (e.g., CDC's aggregate reporting for TB at the state level). |
| **Measure.rationale** |  |
| Short name | Why does this measure exist |
| Definition | Provides a succint statement of the need for the measure. Usually includes statements pertaining to importance criterion: impact, gap in care, and evidence. |
| **Measure.clinicalRecommendationStatement** |  |
| Short name | Summary of clinical guidelines |
| Definition | Provides a summary of relevant clinical guidelines or other clinical recommendations supporting the measure. |
| **Measure.improvementNotation** |  |
| Short name | Improvement notation for the measure, e.g. higher score indicates better quality |
| Definition | Information on whether an increase or decrease in score is the preferred result (e.g., a higher score indicates better quality OR a lower score indicates better quality OR quality is whthin a range). |
| Requirements | Measure consumers and implementers must be able to determine how to interpret a measure score. |
| **Measure.definition** |  |
| Short name | Defined terms used in the measure documentation |
| Definition | Provides a description of an individual term used within the measure. |
| Requirements | Measure developers must be able to provide precise definitions of terms used within measure descriptions and guidance to help communicate the intent of the measure. |
| **Measure.guidance** |  |
| Short name | Additional guidance for implementers |
| Definition | Additional guidance for the measure including how it can be used in a clinical context, and the intent of the measure. |
| Requirements | Measure developers must be able to provide additional guidance for implementers to understand the intent with greater specificity than that provided in the logic of the measure. |
| **Measure.set** |  |
| Short name | The measure set, e.g. Preventive Care and Screening |
| Definition | The measure set, e.g. Preventive Care and Screening. |
| **Measure.group** |  |
| Short name | Population criteria group |
| Definition | A group of population criteria for the measure. |
| **Measure.group.identifier** |  |
| Short name | Unique identifier |
| Definition | A unique identifier for the group. This identifier will used to report data for the group in the measure report. |
| **Measure.group.name** |  |
| Short name | Short name |
| Definition | Optional name or short description of this group. |
| **Measure.group.description** |  |
| Short name | Summary description |
| Definition | The human readable description of this population group. |
| **Measure.group.population** |  |
| Short name | Population criteria |
| Definition | A population criteria for the measure. |
| **Measure.group.population.identifier** |  |
| Short name | Unique identifier |
| Definition | A unique identifier for the population criteria. This identifier is used to report data against this criteria within the measure report. |
| **Measure.group.population.code** |  |
| Definition | The type of population criteria. |
| Binding Description | The type of population |
| **Measure.group.population.name** |  |
| Short name | Short name |
| Definition | Optional name or short description of this population. |
| **Measure.group.population.description** |  |
| Short name | The human readable description of this population criteria |
| Definition | The human readable description of this population criteria. |
| **Measure.group.population.criteria** |  |
| Short name | The name of a valid referenced CQL expression (may be namespaced) that defines this population criteria |
| Definition | The name of a valid referenced CQL expression (may be namespaced) that defines this population criteria. |
| Comment | In the case of a continuous variable or ratio measure, this may be the name of a function that calculates the value of the individual observation for each patient or event in the population. For these types of measures, individual observations are reported as observation resources included in the evaluatedResources bundle for each patient. See the MeasureReport resource or the Quality Reporting topic for more information. |
| **Measure.group.stratifier** |  |
| Short name | Stratifier criteria for the measure |
| Definition | The stratifier criteria for the measure report, specified as either the name of a valid CQL expression defined within a referenced library, or a valid FHIR Resource Path. |
| **Measure.group.stratifier.identifier** |  |
| Short name | The identifier for the stratifier used to coordinate the reported data back to this stratifier |
| Definition | The identifier for the stratifier used to coordinate the reported data back to this stratifier. |
| **Measure.group.stratifier.criteria** |  |
| Short name | How the measure should be stratified |
| Definition | The criteria for the stratifier. This must be the name of an expression defined within a referenced library. |
| **Measure.group.stratifier.path** |  |
| Short name | Path to the stratifier |
| Definition | The path to an element that defines the stratifier, specified as a valid FHIR resource path. |
| **Measure.supplementalData** |  |
| Short name | What other data should be reported with the measure |
| Definition | The supplemental data criteria for the measure report, specified as either the name of a valid CQL expression within a referenced library, or a valid FHIR Resource Path. |
| Comment | Note that supplemental data are reported as observations for each patient and included in the evaluatedResources bundle. See the MeasureReport resource or the Quality Reporting topic for more information. |
| **Measure.supplementalData.identifier** |  |
| Short name | Identifier, unique within the measure |
| Definition | An identifier for the supplemental data. |
| **Measure.supplementalData.usage** |  |
| Definition | An indicator of the intended usage for the supplemental data element. Supplemental data indicates the data is additional information requested to augment the measure information. Risk adjustment factor indicates the data is additional information used to calculate risk adjustment factors when applying a risk model to the measure calculation. |
| Binding Description | The intended usage for supplemental data elements in the measure |
| **Measure.supplementalData.criteria** |  |
| Short name | Expression describing additional data to be reporrted |
| Definition | The criteria for the supplemental data. This must be the name of a valid expression defined within a referenced library, and defines the data to be returned for this element. |
| **Measure.supplementalData.path** |  |
| Short name | Path to the supplemental data element |
| Definition | The supplemental data to be supplied as part of the measure response, specified as a valid FHIR Resource Path. |

## http://hl7.org/fhir/StructureDefinition/MeasureReport

|  |  |
| --- | --- |
| **Description** | Base StructureDefinition for MeasureReport Resource |
| **MeasureReport** | Measure Report |
| Short name | Results of a measure evaluation |
| Definition | The MeasureReport resource contains the results of evaluating a measure. |
| **MeasureReport.measure** |  |
| Short name | Measure that was evaluated |
| Definition | A reference to the Measure that was evaluated to produce this report. |
| **MeasureReport.type** |  |
| Definition | The type of measure report. This may be an individual report, which provides a single patient's score for the measure, a patient listing, which returns the list of patients that meet the various criteria in the measure, or a summary report, which returns a population count for each criteria in the measure. |
| Binding Description | The type of the measure report |
| **MeasureReport.patient** |  |
| Short name | Optional Patient |
| Definition | Optional Patient if the report was requested for a single patient. |
| **MeasureReport.period** |  |
| Short name | Reporting period |
| Definition | The reporting period for which the report was calculated. |
| **MeasureReport.status** |  |
| Definition | The report status. No data will be available until the report status is complete. |
| Binding Description | The status of the measure report |
| **MeasureReport.date** |  |
| Short name | Date the report was generated |
| Definition | The date this measure report was generated. |
| **MeasureReport.reportingOrganization** |  |
| Short name | Reporting Organization |
| Definition | Reporting Organization. |
| **MeasureReport.group** |  |
| Short name | Measure results for each group |
| Definition | The results of the calculation, one for each population group in the measure. |
| **MeasureReport.group.identifier** |  |
| Short name | Identifier of the population group being reported |
| Definition | The identifier of the population group as defined in the measure definition. |
| **MeasureReport.group.population** |  |
| Short name | The populations in the group |
| Definition | The populations that make up the population group, one for each type of population appropriate for the measure. |
| **MeasureReport.group.population.identifier** |  |
| Short name | Identifier of the population being reported |
| Definition | The identifier of the population being reported, as defined by the population element of the measure. |
| **MeasureReport.group.population.code** |  |
| Definition | The type of the population. |
| Binding Description | The type of population (e.g. initial, numerator, denominator, etc.) |
| **MeasureReport.group.population.count** |  |
| Short name | Size of the population |
| Definition | The number of members of the population. |
| **MeasureReport.group.population.patients** |  |
| Short name | For patient-list reports, the patients in this population |
| Definition | This element refers to a List of patient level MeasureReport resources, one for each patient in this population. |
| **MeasureReport.group.measureScore** |  |
| Short name | The measure score |
| Definition | The measure score. |
| **MeasureReport.group.stratifier** |  |
| Short name | Stratification results |
| Definition | When a measure includes multiple stratifiers, there will be a stratifier group for each stratifier defined by the measure. |
| **MeasureReport.group.stratifier.identifier** |  |
| Short name | Identifier of the stratifier |
| Definition | The identifier of this stratifier, as defined in the measure definition. |
| **MeasureReport.group.stratifier.stratum** |  |
| Short name | Stratum results, one for each unique value in the stratifier |
| Definition | This element contains the results for a single stratum within the stratifier. For example, when stratifying on administrative gender, there will be four strata, one for each possible gender value. |
| **MeasureReport.group.stratifier.stratum.value** |  |
| Short name | The stratum value, e.g. male |
| Definition | The value for this stratum, expressed as a string. When defining stratifiers on complex values, the value must be rendered such that the value for each stratum within the stratifier is unique. |
| **MeasureReport.group.stratifier.stratum.population** |  |
| Short name | Population results in this stratum |
| Definition | The populations that make up the stratum, one for each type of population appropriate to the measure. |
| **MeasureReport.group.stratifier.stratum.population.identifier** |  |
| Short name | Identifier of the population |
| Definition | The identifier of the population being reported, as defined by the population element of the measure. |
| **MeasureReport.group.stratifier.stratum.population.code** |  |
| Definition | The type of the population. |
| Binding Description | The type of population (e.g. initial, numerator, denominator, etc.) |
| **MeasureReport.group.stratifier.stratum.population.count** |  |
| Short name | Size of the population |
| Definition | The number of members of the population in this stratum. |
| **MeasureReport.group.stratifier.stratum.population.patients** |  |
| Short name | For patient-list reports, the patients in this population |
| Definition | This element refers to a List of patient level MeasureReport resources, one for each patient in this population in this stratum. |
| **MeasureReport.group.stratifier.stratum.measureScore** |  |
| Short name | Score for this stratum |
| Definition | The measure score for this stratum. |
| **MeasureReport.evaluatedResources** |  |
| Short name | What data was evaluated to produce the measure score |
| Definition | A reference to a Bundle containing the Resources that were used in the evaluation of this report. |

# Community Based Collaborative Care

## http://hl7.org/fhir/StructureDefinition/Consent

|  |  |
| --- | --- |
| **Description** | Base StructureDefinition for Consent Resource |
| **Consent** | Consent |
| Short name | A healthcare consumerâ€™s policy choices to permits or denies recipients or roles to perform actions for specific purposes and periods of time |
| Definition | A record of a healthcare consumerâ€™s policy choices, which permits or denies identified recipient(s) or recipient role(s) to perform one or more actions within a given policy context, for specific purposes and periods of time. |
| Comment | Broadly, there are 3 key areas of consent for patients: Consent around sharing information (aka Privacy Consent Directive - Authorization to Collect, Use, or Disclose information), consent for specific treatment, or kinds of treatment, and general advance care directives. |
| Constraint Text | Either a Policy or PolicyRule |
| **Consent.identifier** |  |
| Short name | Identifier for this record (external references) |
| Definition | Unique identifier for this copy of the Consent Statement. |
| Comment | This identifier is identifies this copy of the consent. Where this identifier is also used elsewhere as the identifier for a consent record (e.g. a CDA consent document) then the consent details are expected to be the same. |
| Example Label | General |
| **Consent.status** |  |
| Definition | Indicates the current state of this consent. |
| Requirements | The Consent Directive that is pointed to might be in various lifecycle states, e.g., a revoked Consent Directive. |
| Binding Description | Indicates the state of the consent |
| **Consent.category** |  |
| Short name | Classification of the consent statement - for indexing/retrieval |
| Definition | A classification of the type of consents found in the statement. This element supports indexing and retrieval of consent statements. |
| Binding Description | A classification of the type of consents found in a consent statement |
| **Consent.patient** |  |
| Short name | Who the consent applies to |
| Definition | The patient/healthcare consumer to whom this consent applies. |
| Comment | Commonly, the patient the consent pertains to is the author, but for young and old people, it may be some other person. |
| **Consent.period** |  |
| Short name | Period that this consent applies |
| Definition | Relevant time or time-period when this Consent is applicable. |
| Comment | This can be a subset of the period of the original statement. |
| Meaning when missing | all date ranges included |
| **Consent.dateTime** |  |
| Short name | When this Consent was created or indexed |
| Definition | When this Consent was issued / created / indexed. |
| Comment | This is not the time of the original consent, but the time that this statement was made or derived. |
| **Consent.consentingParty** |  |
| Short name | Who is agreeing to the policy and exceptions |
| Definition | Either the Grantor, which is the entity responsible for granting the rights listed in a Consent Directive or the Grantee, which is the entity responsible for complying with the Consent Directive, including any obligations or limitations on authorizations and enforcement of prohibitions. |
| Comment | Commonly, the patient the consent pertains to is the consentor, but particularly for young and old people, it may be some other person - e.g. a legal guardian. |
| Synonym | consentor |
| **Consent.actor** |  |
| Definition | Who or what is controlled by this consent. Use group to identify a set of actors by some property they share (e.g. 'admitting officers'). |
| Meaning when missing | There is no specific actor associated with the consent |
| **Consent.actor.role** |  |
| Short name | How the actor is involved |
| Definition | How the individual is involved in the resources content that is described in the consent. |
| Binding Description | How an actor is involved in the consent considerations |
| **Consent.actor.reference** |  |
| Short name | Resource for the actor (or group, by role) |
| Definition | The resource that identifies the actor. To identify a actors by type, use group to identify a set of actors by some property they share (e.g. 'admitting officers'). |
| **Consent.action** |  |
| Short name | Actions controlled by this consent |
| Definition | Actions controlled by this consent. |
| Comment | Note that this is the direct action (not the grounds for the action covered in the purpose element). At present, the only action in the understood and tested scope of this resource is 'read'. |
| Meaning when missing | all actions |
| Binding Description | Detailed codes for the consent action. |
| **Consent.organization** |  |
| Short name | Custodian of the consent |
| Definition | The organization that manages the consent, and the framework within which it is executed. |
| Synonym | custodian |
| **Consent.source[x]** |  |
| Short name | Source from which this consent is taken |
| Definition | The source on which this consent statement is based. The source might be a scanned original paper form, or a reference to a consent that links back to such a source, a reference to a document repository (e.g. XDS) that stores the original consent document. |
| Comment | The source can be contained inline (Attachment), referenced directly (Consent), referenced in a consent repository (DocumentReference), or simply by an identifier (Identifier), e.g. a CDA document id. |
| **Consent.policy** |  |
| Short name | Policies covered by this consent |
| Definition | The references to the policies that are included in this consent scope. Policies may be organizational, but are often defined jurisdictionally, or in law. |
| **Consent.policy.authority** |  |
| Short name | Authority of policy |
| Definition | Entity or Organization having regulatory jurisdiction or accountability for  enforcing policies pertaining to Consent Directives. |
| **Consent.policy.uri** |  |
| Short name | Specific policy covered by this consent |
| Definition | The references to the policies that are included in this consent scope. Policies may be organizational, but are often defined jurisdictionally, or in law. |
| Comment | This element is for discoverability / documentation, and does not modify or qualify the policy rules. |
| **Consent.policyRule** |  |
| Short name | Policy that this consents to |
| Definition | A referece to the specific computable policy. |
| Comment | If the policy reference is not known, the resource cannot be processed. Where the reference is absent, there is no particular policy other than what is expressed directly in the consent resource. |
| Requirements | Might be a unique identifier of a policy set in XACML, or other rules engine. |
| **Consent.securityLabel** |  |
| Short name | Security Labels that define affected resources |
| Definition | A set of security labels that define which resources are controlled by this consent. If more than one label is specified, all resources must have all the specified labels. |
| Comment | If the consent specifies a security label of "R" then it applies to all resources that are labelled "R" or lower. E.g. for Confidentiality, it's a high water mark. For other kinds of security labels, subsumption logic applies. Not all of the security labels make sense for use in this element (may define a narrower value set?). |
| Binding Description | Security Labels from the Healthcare Privacy and Security Classification System. |
| **Consent.purpose** |  |
| Short name | Context of activities for which the agreement is made |
| Definition | The context of the activities a user is taking - why the user is accessing the data - that are controlled by this consent. |
| Comment | This element is for discoverability / documentation, and does not modify or qualify the policy (e.g. the policy itself describes the purposes for which it applies). |
| Binding Description | What purposes of use are controlled by this exception. If more than one label is specified, operations must have all the specified labels |
| **Consent.dataPeriod** |  |
| Short name | Timeframe for data controlled by this consent |
| Definition | Clinical or Operational Relevant period of time that bounds the data controlled by this consent. |
| Comment | This has a different sense to the Consent.period - that is when the consent agreement holds. This is the time period of the data that is controlled by the agreement. |
| **Consent.data** |  |
| Short name | Data controlled by this consent |
| Definition | The resources controlled by this consent, if specific resources are referenced. |
| Meaning when missing | all data |
| **Consent.data.meaning** |  |
| Definition | How the resource reference is interpreted when testing consent restrictions. |
| Binding Description | How a resource reference is interpreted when testing consent restrictions |
| **Consent.data.reference** |  |
| Short name | The actual data reference |
| Definition | A reference to a specific resource that defines which resources are covered by this consent. |
| **Consent.except** |  |
| Short name | Additional rule - addition or removal of permissions |
| Definition | An exception to the base policy of this consent. An exception can be an addition or removal of access permissions. |
| **Consent.except.type** |  |
| Definition | Action to take - permit or deny - when the exception conditions are met. |
| Binding Description | How an exception is statement is applied, as adding additional consent, or removing consent |
| **Consent.except.period** |  |
| Short name | Timeframe for this exception |
| Definition | The timeframe in this exception is valid. |
| **Consent.except.actor** |  |
| Definition | Who or what is controlled by this Exception. Use group to identify a set of actors by some property they share (e.g. 'admitting officers'). |
| Meaning when missing | There is no specific actor associated with the exception |
| **Consent.except.actor.role** |  |
| Short name | How the actor is involved |
| Definition | How the individual is involved in the resources content that is described in the exception. |
| Binding Description | How an actor is involved in the consent considerations |
| **Consent.except.actor.reference** |  |
| Short name | Resource for the actor (or group, by role) |
| Definition | The resource that identifies the actor. To identify a actors by type, use group to identify a set of actors by some property they share (e.g. 'admitting officers'). |
| **Consent.except.action** |  |
| Short name | Actions controlled by this exception |
| Definition | Actions controlled by this Exception. |
| Comment | Note that this is the direct action (not the grounds for the action covered in the purpose element). At present, the only action in the understood and tested scope of this resource is 'read'. |
| Meaning when missing | all actions |
| Binding Description | Detailed codes for the consent action. |
| **Consent.except.securityLabel** |  |
| Short name | Security Labels that define affected resources |
| Definition | A set of security labels that define which resources are controlled by this exception. If more than one label is specified, all resources must have all the specified labels. |
| Comment | If the consent specifies a security label of "R" then it applies to all resources that are labelled "R" or lower. E.g. for Confidentiality, it's a high water mark. For other kinds of security labels, subsumption logic applies. Not all of the security labels make sense for use in this element (may define a narrower value set?). |
| Binding Description | Security Labels from the Healthcare Privacy and Security Classification System. |
| **Consent.except.purpose** |  |
| Short name | Context of activities covered by this exception |
| Definition | The context of the activities a user is taking - why the user is accessing the data - that are controlled by this exception. |
| Comment | E.g. if the purpose is 'research', then the operational context must be research, in order for the consent to apply. Not all of the security labels make sense for use in this element (may define a narrower value set?). |
| Binding Description | What purposes of use are controlled by this exception. If more than one label is specified, operations must have all the specified labels |
| **Consent.except.class** |  |
| Short name | e.g. Resource Type, Profile, or CDA etc |
| Definition | The class of information covered by this exception. The type can be a FHIR resource type, a profile on a type, or a CDA document, or some other type that indicates what sort of information the consent relates to. |
| Comment | Multiple types are or'ed together. The intention of the contentType element is that the codes refer to profiles or document types defined in a standard or an implementation guide somewhere. |
| Binding Description | The class (type) of information a consent rule covers |
| **Consent.except.code** |  |
| Short name | e.g. LOINC or SNOMED CT code, etc in the content |
| Definition | If this code is found in an instance, then the exception applies. |
| Comment | Typical use of this is a Document code with class = CDA. |
| Binding Description | If this code is found in an instance, then the exception applies |
| **Consent.except.dataPeriod** |  |
| Short name | Timeframe for data controlled by this exception |
| Definition | Clinical or Operational Relevant period of time that bounds the data controlled by this exception. |
| Comment | This has a different sense to the Consent.period - that is when the consent agreement holds. This is the time period of the data that is controlled by the agreement. |
| **Consent.except.data** |  |
| Short name | Data controlled by this exception |
| Definition | The resources controlled by this exception, if specific resources are referenced. |
| Meaning when missing | all data |
| **Consent.except.data.meaning** |  |
| Definition | How the resource reference is interpreted when testing consent restrictions. |
| Binding Description | How a resource reference is interpreted when testing consent restrictions |
| **Consent.except.data.reference** |  |
| Short name | The actual data reference |
| Definition | A reference to a specific resource that defines which resources are covered by this consent. |

# FHIR Infrastructure

## http://hl7.org/fhir/StructureDefinition/Basic

|  |  |
| --- | --- |
| **Description** | Base StructureDefinition for Basic Resource |
| **Purpose** | Need some way to safely (without breaking interoperability) allow implementers to exchange content not supported by the initial set of declared resources. |
| **Basic** | Basic |
| Short name | Resource for non-supported content |
| Definition | Basic is used for handling concepts not yet defined in FHIR, narrative-only resources that don't map to an existing resource, and custom resources not appropriate for inclusion in the FHIR specification. |
| Synonym | Z-resource |
| Synonym | Extension-resource |
| Synonym | Custom-resource |
| **Basic.identifier** |  |
| Short name | Business identifier |
| Definition | Identifier assigned to the resource for business purposes, outside the context of FHIR. |
| **Basic.code** |  |
| Short name | Kind of Resource |
| Definition | Identifies the 'type' of resource - equivalent to the resource name for other resources. |
| Comment | Because resource references will only be able to indicate 'Basic', the type of reference will need to be specified in a Profile identified as part of the resource. Refer to the resource notes section for information on appropriate terminologies for this code. |
| Requirements | Must be able to distinguish different types of "basic" resources. |
| Binding Description | Codes for identifying types of resources not yet defined by FHIR |
| **Basic.subject** |  |
| Short name | Identifies the focus of this resource |
| Definition | Identifies the patient, practitioner, device or any other resource that is the "focus" of this resource. |
| Comment | Optional as not all resources potential resources will have subjects. Resources associated with multiple subjects can handle this via extension. |
| Requirements | Needed for partitioning the resource by Patient. |
| **Basic.created** |  |
| Short name | When created |
| Definition | Identifies when the resource was first created. |
| Requirements | Allows ordering resource instances by time. |
| **Basic.author** |  |
| Short name | Who created |
| Definition | Indicates who was responsible for creating the resource instance. |
| Requirements | Needed for partitioning the resource. |

## http://hl7.org/fhir/StructureDefinition/Binary

|  |  |
| --- | --- |
| **Description** | Base StructureDefinition for Binary Resource |
| **Purpose** | There are situations where it is useful or required to handle pure binary content using the same framework as other resources. |
| **Binary** | Binary |
| Short name | Pure binary content defined by some other format than FHIR |
| Definition | A binary resource can contain any content, whether text, image, pdf, zip archive, etc. |
| Comment | Typically, Binary resources are used for handling content such as: \* CDA Documents (i.e. with XDS) \* PDF Documents \* Images (the Media resource is preferred for handling images, but not possible when the content is already binary - e.g. XDS). |
| **Binary.contentType** |  |
| Short name | MimeType of the binary content |
| Definition | MimeType of the binary content represented as a standard MimeType (BCP 13). |
| Binding Description | The mime type of an attachment. Any valid mime type is allowed. |
| **Binary.securityContext** |  |
| Short name | Access Control Management |
| Definition | Treat this binary as if it was this other resource for access control purposes. |
| **Binary.content** |  |
| Short name | The actual content |
| Definition | The actual content, base64 encoded. |
| Comment | If the content type is itself base64 encoding, then this will be base64 encoded twice - what is created by un-base64ing the content must be the specified content type. |

## http://hl7.org/fhir/StructureDefinition/Bundle

|  |  |
| --- | --- |
| **Description** | Base StructureDefinition for Bundle Resource |
| **Bundle** | Bundle |
| Short name | Contains a collection of resources |
| Definition | A container for a collection of resources. |
| Constraint Text | FullUrl must be unique in a bundle, or else entries with the same fullUrl must have different meta.versionId |
| Constraint Text | A document must have an identifier with a system and a value |
| Constraint Text | entry.request only for some types of bundles |
| Constraint Text | entry.response only for some types of bundles |
| Constraint Text | total only when a search or history |
| Constraint Text | entry.search only when a search |
| **Bundle.identifier** |  |
| Short name | Persistent identifier for the bundle |
| Definition | A persistent identifier for the batch that won't change as a batch is copied from server to server. |
| Comment | Persistent identity generally only matters for batches of type Document, Message, and Collection. It would not normally be populated for search and history results, and servers ignore Bundle.identifier when processing batches and transactions. For Documents, the .identifier SHALL be populated such that the .identifier is globally unique. |
| **Bundle.type** |  |
| Definition | Indicates the purpose of this bundle- how it was intended to be used. |
| Comment | It's possible to use a bundle for other purposes (e.g. a document can be accepted as a transaction). This is primarily defined so that there can be specific rules for some of the bundle types. |
| Binding Description | Indicates the purpose of a bundle - how it was intended to be used. |
| **Bundle.total** |  |
| Short name | If search, the total number of matches |
| Definition | If a set of search matches, this is the total number of matches for the search (as opposed to the number of results in this bundle). |
| Comment | Only used if the bundle is a search result set. The total does not include resources such as OperationOutcome and included resources, only the total number of matching resources. |
| **Bundle.link** |  |
| Short name | Links related to this Bundle |
| Definition | A series of links that provide context to this bundle. |
| **Bundle.link.relation** |  |
| Short name | See http://www.iana.org/assignments/link-relations/link-relations.xhtml#link-relations-1 |
| Definition | A name which details the functional use for this link - see [http://www.iana.org/assignments/link-relations/link-relations.xhtml#link-relations-1](http://www.iana.org/assignments/link-relations/link-relations.xhtml#link-relations-1). |
| **Bundle.link.url** |  |
| Short name | Reference details for the link |
| Definition | The reference details for the link. |
| **Bundle.entry** |  |
| Short name | Entry in the bundle - will have a resource, or information |
| Definition | An entry in a bundle resource - will either contain a resource, or information about a resource (transactions and history only). |
| Constraint Text | fullUrl cannot be a version specific reference |
| Constraint Text | must be a resource unless there's a request or response |
| **Bundle.entry.link** |  |
| Short name | Links related to this entry |
| Definition | A series of links that provide context to this entry. |
| **Bundle.entry.fullUrl** |  |
| Short name | Absolute URL for resource (server address, or UUID/OID) |
| Definition | The Absolute URL for the resource. The fullUrl SHALL not disagree with the id in the resource. The fullUrl is a version independent reference to the resource. The fullUrl element SHALL have a value except that: \* fullUrl can be empty on a POST (although it does not need to when specifying a temporary id for reference in the bundle) \* Results from operations might involve resources that are not identified. |
| Comment | fullUrl may not be [unique in the context of a resource](bundle.html#bundle-unique). Note that since [FHIR resources do not need to be served through the FHIR API](references.html), the absolute URL may not end with the logical id of the resource (Resource.id), but if the fullUrl does look like a RESTful server URL (e.g. meets the [regex](references.html#regex), then it SHALL end with the Resource.id. |
| **Bundle.entry.resource** |  |
| Short name | A resource in the bundle |
| Definition | The Resources for the entry. |
| **Bundle.entry.search** |  |
| Short name | Search related information |
| Definition | Information about the search process that lead to the creation of this entry. |
| **Bundle.entry.search.mode** |  |
| Definition | Why this entry is in the result set - whether it's included as a match or because of an \_include requirement. |
| Comment | There is only one mode. In some corner cases, a resource may be included because it is both a match and an include. In these circumstances, 'match' takes precedence. |
| Binding Description | Why an entry is in the result set - whether it's included as a match or because of an \_include requirement. |
| **Bundle.entry.search.score** |  |
| Short name | Search ranking (between 0 and 1) |
| Definition | When searching, the server's search ranking score for the entry. |
| Comment | Servers are not required to return a ranking score. 1 is most relevant, and 0 is least relevant. Often, search results are sorted by score, but the client may specify a different sort order. |
| **Bundle.entry.request** |  |
| Short name | Transaction Related Information |
| Definition | Additional information about how this entry should be processed as part of a transaction. |
| **Bundle.entry.request.method** |  |
| Definition | The HTTP verb for this entry in either a change history, or a transaction/ transaction response. |
| Binding Description | HTTP verbs (in the HTTP command line). |
| **Bundle.entry.request.url** |  |
| Short name | URL for HTTP equivalent of this entry |
| Definition | The URL for this entry, relative to the root (the address to which the request is posted). |
| Comment | E.g. for a Patient Create, the method would be "POST" and the URL would be "Patient". For a Patient Update, the method would be PUT, and the URL would be "Patient/[id]". |
| **Bundle.entry.request.ifNoneMatch** |  |
| Short name | For managing cache currency |
| Definition | If the ETag values match, return a 304 Not modified status. See the API documentation for ["Conditional Read"](http.html#cread). |
| **Bundle.entry.request.ifModifiedSince** |  |
| Short name | For managing update contention |
| Definition | Only perform the operation if the last updated date matches. See the API documentation for ["Conditional Read"](http.html#cread). |
| **Bundle.entry.request.ifMatch** |  |
| Short name | For managing update contention |
| Definition | Only perform the operation if the Etag value matches. For more information, see the API section ["Managing Resource Contention"](http.html#concurrency). |
| **Bundle.entry.request.ifNoneExist** |  |
| Short name | For conditional creates |
| Definition | Instruct the server not to perform the create if a specified resource already exists. For further information, see the API documentation for ["Conditional Create"](http.html#ccreate). This is just the query portion of the URL - what follows the "?" (not including the "?"). |
| **Bundle.entry.response** |  |
| Short name | Transaction Related Information |
| Definition | Additional information about how this entry should be processed as part of a transaction. |
| **Bundle.entry.response.status** |  |
| Short name | Status response code (text optional) |
| Definition | The status code returned by processing this entry. The status SHALL start with a 3 digit HTTP code (e.g. 404) and may contain the standard HTTP description associated with the status code. |
| **Bundle.entry.response.location** |  |
| Short name | The location, if the operation returns a location |
| Definition | The location header created by processing this operation. |
| **Bundle.entry.response.etag** |  |
| Short name | The etag for the resource (if relevant) |
| Definition | The etag for the resource, it the operation for the entry produced a versioned resource (see [Resource Metadata and Versioning](http.html#versioning) and [Managing Resource Contention](http.html#concurrency)). |
| Comment | Etags match the Resource.meta.versionId. The ETag has to match the version id in the header if a resource is included. |
| **Bundle.entry.response.lastModified** |  |
| Short name | Server's date time modified |
| Definition | The date/time that the resource was modified on the server. |
| Comment | This has to match the same time in the meta header if a resource is included. |
| **Bundle.entry.response.outcome** |  |
| Short name | OperationOutcome with hints and warnings (for batch/transaction) |
| Definition | An OperationOutcome containing hints and warnings produced as part of processing this entry in a batch or transaction. |
| Comment | For a POST/PUT operation, this is the equivalent outcome that would be returned for prefer = oprationoutcome - except that the resource is always returned whether or not the outcome is returned. |
| **Bundle.signature** |  |
| Short name | Digital Signature |
| Definition | Digital Signature - base64 encoded. XML DigSIg or a JWT. |
| Comment | The signature could be created by the "author" of the bundle or by the originating device. Requirements around inclusion of a signature, verification of signatures and treatment of signed/non-signed bundles is implementation-environment specific. |
| Requirements | This element allows capturing signatures on documents. It also allows signatures on messages, transactions or even query responses. It may support content-authentication, non-repudiation or other business cases. This is primarily relevant where the bundle may travel through multiple hops or via other mechanisms where HTTPS non-repudiation is insufficient. |

## http://hl7.org/fhir/StructureDefinition/CapabilityStatement

|  |  |
| --- | --- |
| **Description** | Base StructureDefinition for CapabilityStatement Resource |
| **CapabilityStatement** | Capability Statement |
| Short name | A statement of system Capabilities |
| Definition | A Capability Statement documents a set of capabilities (behaviors) of a FHIR Server that may be used as a statement of actual server functionality or a statement of required or desired server implementation. |
| Constraint Text | There can only be one REST declaration per mode |
| Constraint Text | The set of documents must be unique by the combination of profile & mode |
| Constraint Text | Capability Statements of kind 'instance' do not have implementation elements |
| Constraint Text | Messaging end-point is required (and is only permitted) when statement is for an implementation |
| Constraint Text | Capability Statements of kind 'requirements' do not have software or implementation elements |
| Constraint Text | A Capability Statement SHALL have at least one of description, software, or implementation |
| Constraint Text | A Capability Statement SHALL have at least one of REST, messaging or document |
| **CapabilityStatement.url** |  |
| Short name | Logical uri to reference this capability statement (globally unique) |
| Definition | An absolute URL that is used to identify this capability statement when it is referenced in a specification, model, design or an instance. This SHALL be a URL, SHOULD be globally unique, and SHOULD be an address at which this capability statement is (or will be) published. The URL SHOULD include the major version of the capability statement. For more information see [Technical and Business Versions](resource.html#versions). |
| Comment | Can be a urn:uuid: or a urn:oid:, but real http: addresses are preferred. |
| Requirements | Allows the capability statement to be referenced by a single globally unique identifier. |
| **CapabilityStatement.version** |  |
| Short name | Business version of the capability statement |
| Definition | The identifier that is used to identify this version of the capability statement when it is referenced in a specification, model, design or instance. This is an arbitrary value managed by the capability statement author and is not expected to be globally unique. For example, it might be a timestamp (e.g. yyyymmdd) if a managed version is not available. There is also no expectation that versions are orderable. |
| Comment | There may be multiple different instances of a capability statement that have the same identifier but different versions. |
| **CapabilityStatement.name** |  |
| Short name | Name for this capability statement (Computer friendly) |
| Definition | A natural language name identifying the capability statement. This name should be usable as an identifier for the module by machine processing applications such as code generation. |
| Comment | The name is not expected to be globally unique. The name should be a simple alpha-numeric type name to ensure it is computable friendly. |
| Requirements | Support human navigation & code generation. |
| **CapabilityStatement.title** |  |
| Short name | Name for this capability statement (Human friendly) |
| Definition | A short, descriptive, user-friendly title for the capability statement. |
| **CapabilityStatement.status** |  |
| Definition | The status of this capability statement. Enables tracking the life-cycle of the content. |
| Comment | Allows filtering of capability statement that are appropriate for use vs. not. This is not intended for use with actual capability statements, but where capability statements are used to describe possible or desired systems. |
| Binding Description | The lifecycle status of a Value Set or Concept Map. |
| **CapabilityStatement.experimental** |  |
| Short name | If for testing purposes, not real usage |
| Definition | A flag to indicate that this capability statement is authored for testing purposes (or education/evaluation/marketing), and is not intended to be used for genuine usage. |
| Comment | Allows filtering of capability statement that are appropriate for use vs. not. |
| Requirements | Enables experimental content to be developed following the same life-cycle as a production-level capability statement would. |
| **CapabilityStatement.date** |  |
| Short name | Date this was last changed |
| Definition | The date (and optionally time) when the capability statement was published. The date must change when the business version changes, if it does, and it must change if the status code changes. In addition, it should change when the substantive content of the capability statement changes. |
| Comment | Note that this is not the same as the resource last-modified-date, since the resource may be a secondary representation of the capability statement. Additional specific dates may be added as extensions. |
| **CapabilityStatement.publisher** |  |
| Short name | Name of the publisher (Organization or individual) |
| Definition | The name of the individual or organization that published the capability statement. |
| Comment | Usually an organization, but may be an individual. The publisher (or steward) of the capability statement is the organization or individual primarily responsible for the maintenance and upkeep of the capability statement. This is not necessarily the same individual or organization that developed and initially authored the content. The publisher is the primary point of contact for questions or issues with the capability statement. This item SHOULD be populated unless the information is available from context. |
| Requirements | Helps establish the "authority/credibility" of the capability statement. May also allow for contact. |
| **CapabilityStatement.contact** |  |
| Short name | Contact details for the publisher |
| Definition | Contact details to assist a user in finding and communicating with the publisher. |
| Comment | May be a web site, an email address, a telephone number, etc. |
| **CapabilityStatement.description** |  |
| Short name | Natural language description of the capability statement |
| Definition | A free text natural language description of the capability statement from the consumer's perspective. Typically, this is used when the capability statement describes a desired rather than an actual solution, for example as a formal expression of requirements as part of an RFP. |
| Comment | This description can be used to capture details such as why the capability statement was built, comments about misuse, instructions for clinical use and interpretation, literature references, examples from the paper world, etc. It is not a rendering of the capability statement as conveyed in the text field of the resource itself. This item SHOULD be populated unless the information is available from context (e.g. the language of the profile is presumed to be the predominant language in the place the profile was created). This does not need to be populated if the description is adequately implied by the software or implementation details. |
| **CapabilityStatement.useContext** |  |
| Short name | Content intends to support these contexts |
| Definition | The content was developed with a focus and intent of supporting the contexts that are listed. These terms may be used to assist with indexing and searching of code system definitions. |
| Comment | When multiple usageContexts are specified, there is no expectation for whether all or any of the contexts apply. |
| Requirements | Assist in searching for appropriate content. |
| **CapabilityStatement.jurisdiction** |  |
| Short name | Intended jurisdiction for capability statement (if applicable) |
| Definition | A jurisdiction in which the capability statement is intended to be used. |
| Binding Description | Countries and regions within which this artifact is targeted for use |
| **CapabilityStatement.purpose** |  |
| Short name | Why this capability statement is defined |
| Definition | Explains why this capability statement is needed and why it has been designed as it has. |
| Comment | This element does not describe the usage of the capability statement (See, e.g, the comments element, or relatedArtifacts), rather it's for traceability of ''why'' the resource is either needed or ''why'' it is defined as it is. This may be used to point to source materials or specifications that drove the structure of this capability statement. |
| **CapabilityStatement.copyright** |  |
| Short name | Use and/or publishing restrictions |
| Definition | A copyright statement relating to the capability statement and/or its contents. Copyright statements are generally legal restrictions on the use and publishing of the capability statement. |
| Requirements | Consumers of the library must be able to determine any legal restrictions on the use of the capability statement and/or its content. |
| Synonym | License |
| Synonym | Restrictions |
| **CapabilityStatement.kind** |  |
| Definition | The way that this statement is intended to be used, to describe an actual running instance of software, a particular product (kind not instance of software) or a class of implementation (e.g. a desired purchase). |
| Requirements | Allow searching the 3 modes. |
| Binding Description | How a capability statement is intended to be used. |
| **CapabilityStatement.instantiates** |  |
| Short name | Canonical URL of another capability statement this implements |
| Definition | Reference to a canonical URL of another CapabilityStatement that this software implements or uses. This capability statement is a published API description that corresponds to a business service. The rest of the capability statement does not need to repeat the details of the referenced resource, but can do so. |
| Comment | HL7 defines the following Services: [Terminology Service](terminology-service.html) Many [Implementation Guides](http://fhir.org/guides/registry) define additional services. |
| **CapabilityStatement.software** |  |
| Short name | Software that is covered by this capability statement |
| Definition | Software that is covered by this capability statement. It is used when the capability statement describes the capabilities of a particular software version, independent of an installation. |
| **CapabilityStatement.software.name** |  |
| Short name | A name the software is known by |
| Definition | Name software is known by. |
| **CapabilityStatement.software.version** |  |
| Short name | Version covered by this statement |
| Definition | The version identifier for the software covered by this statement. |
| Comment | If possible, version should be specified, as statements are likely to be different for different versions of software. |
| **CapabilityStatement.software.releaseDate** |  |
| Short name | Date this version released |
| Definition | Date this version of the software released. |
| **CapabilityStatement.implementation** |  |
| Short name | If this describes a specific instance |
| Definition | Identifies a specific implementation instance that is described by the capability statement - i.e. a particular installation, rather than the capabilities of a software program. |
| **CapabilityStatement.implementation.description** |  |
| Short name | Describes this specific instance |
| Definition | Information about the specific installation that this capability statement relates to. |
| **CapabilityStatement.implementation.url** |  |
| Short name | Base URL for the installation |
| Definition | An absolute base URL for the implementation. This forms the base for REST interfaces as well as the mailbox and document interfaces. |
| **CapabilityStatement.fhirVersion** |  |
| Short name | FHIR Version the system uses |
| Definition | The version of the FHIR specification on which this capability statement is based. |
| **CapabilityStatement.acceptUnknown** |  |
| Definition | A code that indicates whether the application accepts unknown elements or extensions when reading resources. |
| Comment | Unknown elements in a resource can only arise as later versions of the specification are published, because this is the only place where such elements can be defined. Hence accepting unknown elements is about inter-version compatibility. Applications are recommended to accept unknown extensions and elements ('both'), but this is not always possible. |
| Binding Description | A code that indicates whether an application accepts unknown elements or extensions when reading resources. |
| **CapabilityStatement.format** |  |
| Definition | A list of the formats supported by this implementation using their content types. |
| Comment | "xml", "json" and "ttl" are allowed, which describe the simple encodings described in the specification (and imply appropriate bundle support). Otherwise, mime types are legal here. |
| Binding Description | The mime type of an attachment. Any valid mime type is allowed. |
| **CapabilityStatement.patchFormat** |  |
| Short name | Patch formats supported |
| Definition | A list of the patch formats supported by this implementation using their content types. |
| Comment | At present, the patch mime types application/json-patch+json and application/xml-patch+xml are legal. Generally, if a server supports PATCH, it would be expected to support the patch formats matching the formats it supports, but this is not always possible or necessary. |
| Binding Description | The mime type of an attachment. Any valid mime type is allowed. |
| **CapabilityStatement.implementationGuide** |  |
| Short name | Implementation Guide supported |
| Definition | A list of implementation guides that the server does (or should) support in their entirety. |
| **CapabilityStatement.profile** |  |
| Short name | Profiles for use cases supported |
| Definition | A list of profiles that represent different use cases supported by the system. For a server, "supported by the system" means the system hosts/produces a set of resources that are conformant to a particular profile, and allows clients that use its services to search using this profile and to find appropriate data. For a client, it means the system will search by this profile and process data according to the guidance implicit in the profile. See further discussion in [Using Profiles](profiling.html#profile-uses). |
| Comment | Supported profiles are different to the profiles that apply to a particular resource in rest.resource.profile. The resource profile is a general statement of what features of the resource are supported overall by the system - the sum total of the facilities it supports. A supported profile is a deeper statement about the functionality of the data and services provided by the server (or used by the client). A typical case is a laboratory system that produces a set of different reports - this is the list of types of data that it publishes. A key aspect of declaring profiles here is the question of how the client converts knowledge that the server publishes this data into working with the data; the client can inspect individual resources to determine whether they conform to a particular profile, but how does it find the ones that does? It does so by searching using the \_profile parameter, so any resources listed here must be valid values for the \_profile resource (using the identifier in the target profile). Typical supported profiles cross resource types to describe a network of related resources, so they are listed here rather than by resource. However, they do not need to describe more than one resource. |
| **CapabilityStatement.rest** |  |
| Short name | If the endpoint is a RESTful one |
| Definition | A definition of the restful capabilities of the solution, if any. |
| Comment | Multiple repetitions allow definition of both client and / or server behaviors or possibly behaviors under different configuration settings (for software or requirements statements). |
| Constraint Text | A given resource can only be described once per RESTful mode |
| **CapabilityStatement.rest.mode** |  |
| Definition | Identifies whether this portion of the statement is describing ability to initiate or receive restful operations. |
| Binding Description | The mode of a RESTful capability statement. |
| **CapabilityStatement.rest.documentation** |  |
| Short name | General description of implementation |
| Definition | Information about the system's restful capabilities that apply across all applications, such as security. |
| **CapabilityStatement.rest.security** |  |
| Short name | Information about security of implementation |
| Definition | Information about security implementation from an interface perspective - what a client needs to know. |
| **CapabilityStatement.rest.security.cors** |  |
| Short name | Adds CORS Headers (http://enable-cors.org/) |
| Definition | Server adds CORS headers when responding to requests - this enables javascript applications to use the server. |
| Comment | The easiest CORS headers to add are Access-Control-Allow-Origin: \* & Access-Control-Request-Method: GET, POST, PUT, DELETE. All servers SHOULD support CORS. |
| **CapabilityStatement.rest.security.service** |  |
| Definition | Types of security services are supported/required by the system. |
| Binding Description | Types of security services used with FHIR. |
| **CapabilityStatement.rest.security.description** |  |
| Short name | General description of how security works |
| Definition | General description of how security works. |
| **CapabilityStatement.rest.security.certificate** |  |
| Short name | Certificates associated with security profiles |
| Definition | Certificates associated with security profiles. |
| **CapabilityStatement.rest.security.certificate.type** |  |
| Short name | Mime type for certificate |
| Definition | Mime type for certificate. |
| Binding Description | The mime type of an attachment. Any valid mime type is allowed. |
| **CapabilityStatement.rest.security.certificate.blob** |  |
| Short name | Actual certificate |
| Definition | Actual certificate. |
| **CapabilityStatement.rest.resource** |  |
| Short name | Resource served on the REST interface |
| Definition | A specification of the restful capabilities of the solution for a specific resource type. |
| Comment | Max of one repetition per resource type. |
| Constraint Text | Search parameter names must be unique in the context of a resource |
| **CapabilityStatement.rest.resource.type** |  |
| Short name | A resource type that is supported |
| Definition | A type of resource exposed via the restful interface. |
| Binding Description | One of the resource types defined as part of FHIR. |
| **CapabilityStatement.rest.resource.profile** |  |
| Short name | Base System profile for all uses of resource |
| Definition | A specification of the profile that describes the solution's overall support for the resource, including any constraints on cardinality, bindings, lengths or other limitations. See further discussion in [Using Profiles]{profiling.html#profile-uses}. |
| Comment | The profile applies to all resources of this type - i.e. it is the superset of what is supported by the system. |
| **CapabilityStatement.rest.resource.documentation** |  |
| Short name | Additional information about the use of the resource type |
| Definition | Additional information about the resource type is used by the system. |
| **CapabilityStatement.rest.resource.interaction** |  |
| Short name | What operations are supported? |
| Definition | Identifies a restful operation supported by the solution. |
| **CapabilityStatement.rest.resource.interaction.code** |  |
| Definition | Coded identifier of the operation, supported by the system resource. |
| Binding Description | Operations supported by REST at the type or instance level. |
| **CapabilityStatement.rest.resource.interaction.documentation** |  |
| Short name | Anything special about operation behavior |
| Definition | Guidance specific to the implementation of this operation, such as 'delete is a logical delete' or 'updates are only allowed with version id' or 'creates permitted from pre-authorized certificates only'. |
| Requirements | REST allows a degree of variability in the implementation of RESTful solutions that is useful for exchange partners to be aware of. |
| **CapabilityStatement.rest.resource.versioning** |  |
| Definition | This field is set to no-version to specify that the system does not support (server) or use (client) versioning for this resource type. If this has some other value, the server must at least correctly track and populate the versionId meta-property on resources. If the value is 'versioned-update', then the server supports all the versioning features, including using e-tags for version integrity in the API. |
| Comment | If a server supports versionIds correctly, it SHOULD support vread too, but is not required to do so. |
| Binding Description | How the system supports versioning for a resource. |
| **CapabilityStatement.rest.resource.readHistory** |  |
| Short name | Whether vRead can return past versions |
| Definition | A flag for whether the server is able to return past versions as part of the vRead operation. |
| Comment | It is useful to support the vRead operation for current operations, even if past versions aren't available. |
| **CapabilityStatement.rest.resource.updateCreate** |  |
| Short name | If update can commit to a new identity |
| Definition | A flag to indicate that the server allows or needs to allow the client to create new identities on the server (e.g. that is, the client PUTs to a location where there is no existing resource). Allowing this operation means that the server allows the client to create new identities on the server. |
| Comment | Allowing the clients to create new identities on the server means that the system administrator needs to have confidence that the clients do not create clashing identities between them. Obviously, if there is only one client, this won't happen. While creating identities on the client means that the clients need to be managed, it's much more convenient for many scenarios if such management can be put in place. |
| **CapabilityStatement.rest.resource.conditionalCreate** |  |
| Short name | If allows/uses conditional create |
| Definition | A flag that indicates that the server supports conditional create. |
| Comment | Conditional Create is mainly appropriate for interface engine scripts converting from other formats, such as v2. |
| **CapabilityStatement.rest.resource.conditionalRead** |  |
| Definition | A code that indicates how the server supports conditional read. |
| Comment | Conditional Read is mainly appropriate for interface engine scripts converting from other formats, such as v2. |
| Binding Description | A code that indicates how the server supports conditional read. |
| **CapabilityStatement.rest.resource.conditionalUpdate** |  |
| Short name | If allows/uses conditional update |
| Definition | A flag that indicates that the server supports conditional update. |
| Comment | Conditional Update is mainly appropriate for interface engine scripts converting from other formats, such as v2. |
| **CapabilityStatement.rest.resource.conditionalDelete** |  |
| Definition | A code that indicates how the server supports conditional delete. |
| Comment | Conditional Delete is mainly appropriate for interface engine scripts converting from other formats, such as v2. |
| Binding Description | A code that indicates how the server supports conditional delete. |
| **CapabilityStatement.rest.resource.referencePolicy** |  |
| Definition | A set of flags that defines how references are supported. |
| Binding Description | A set of flags that defines how references are supported |
| **CapabilityStatement.rest.resource.searchInclude** |  |
| Short name | \_include values supported by the server |
| Definition | A list of \_include values supported by the server. |
| Comment | If this list is empty, the server does not support includes. |
| **CapabilityStatement.rest.resource.searchRevInclude** |  |
| Short name | \_revinclude values supported by the server |
| Definition | A list of \_revinclude (reverse include) values supported by the server. |
| Comment | If this list is empty, the server does not support includes. |
| **CapabilityStatement.rest.resource.searchParam** |  |
| Short name | Search params supported by implementation |
| Definition | Search parameters for implementations to support and/or make use of - either references to ones defined in the specification, or additional ones defined for/by the implementation. |
| **CapabilityStatement.rest.resource.searchParam.name** |  |
| Short name | Name of search parameter |
| Definition | The name of the search parameter used in the interface. |
| Comment | Parameter names cannot overlap with standard parameter names, and standard parameters cannot be redefined. |
| **CapabilityStatement.rest.resource.searchParam.definition** |  |
| Short name | Source of definition for parameter |
| Definition | An absolute URI that is a formal reference to where this parameter was first defined, so that a client can be confident of the meaning of the search parameter (a reference to [SearchParameter.url]()). |
| Comment | This SHOULD be present, and matches refers to a SearchParameter by it's canonical url. If systems wish to document their support for modifiers, comparators, target resource types, and chained parameters, they should do using a search parameter resource. |
| **CapabilityStatement.rest.resource.searchParam.type** |  |
| Definition | The type of value a search parameter refers to, and how the content is interpreted. |
| Comment | While this can be looked up from the definition, it is included here as a convenience for systems that autogenerate a query interface based on the server capability statement. It SHALL be the same as the type in the search parameter definition. |
| Binding Description | Data types allowed to be used for search parameters. |
| **CapabilityStatement.rest.resource.searchParam.documentation** |  |
| Short name | Server-specific usage |
| Definition | This allows documentation of any distinct behaviors about how the search parameter is used. For example, text matching algorithms. |
| **CapabilityStatement.rest.interaction** |  |
| Short name | What operations are supported? |
| Definition | A specification of restful operations supported by the system. |
| **CapabilityStatement.rest.interaction.code** |  |
| Definition | A coded identifier of the operation, supported by the system. |
| Binding Description | Operations supported by REST at the system level. |
| **CapabilityStatement.rest.interaction.documentation** |  |
| Short name | Anything special about operation behavior |
| Definition | Guidance specific to the implementation of this operation, such as limitations on the kind of transactions allowed, or information about system wide search is implemented. |
| **CapabilityStatement.rest.searchParam** |  |
| Short name | Search params for searching all resources |
| Definition | Search parameters that are supported for searching all resources for implementations to support and/or make use of - either references to ones defined in the specification, or additional ones defined for/by the implementation. |
| Comment | Typically, the only search parameters supported for all parameters are search parameters that apply to all resources - tags, profiles, text search etc. |
| **CapabilityStatement.rest.operation** |  |
| Short name | Definition of an operation or a custom query |
| Definition | Definition of an operation or a named query and with its parameters and their meaning and type. |
| **CapabilityStatement.rest.operation.name** |  |
| Short name | Name by which the operation/query is invoked |
| Definition | The name of the operation or query. For an operation, this is the name prefixed with $ and used in the url. For a query, this is the name used in the \_query parameter when the query is called. |
| Comment | The name here SHOULD be the same as the name in the definition, unless there is a name clash and the name cannot be used. The name does not include the "$" portion that is always included in the URL. |
| **CapabilityStatement.rest.operation.definition** |  |
| Short name | The defined operation/query |
| Definition | Where the formal definition can be found. |
| Comment | This can be used to build an HTML form to invoke the operation, for instance. |
| **CapabilityStatement.rest.compartment** |  |
| Short name | Compartments served/used by system |
| Definition | An absolute URI which is a reference to the definition of a compartment that the system supports. The reference is to a CompartmentDefinition resource by it's canonical URL. |
| Comment | At present, the only defined compartments are at [CompartmentDefinition](compartmentdefinition.html). |
| **CapabilityStatement.messaging** |  |
| Short name | If messaging is supported |
| Definition | A description of the messaging capabilities of the solution. |
| Comment | Multiple repetitions allow the documentation of multiple endpoints per solution. |
| Constraint Text | Must have either supportedMessage or event, but not both |
| **CapabilityStatement.messaging.endpoint** |  |
| Short name | Where messages should be sent |
| Definition | An endpoint (network accessible address) to which messages and/or replies are to be sent. |
| Synonym | 3 |
| **CapabilityStatement.messaging.endpoint.protocol** |  |
| Definition | A list of the messaging transport protocol(s) identifiers, supported by this endpoint. |
| Binding Description | The protocol used for message transport. |
| **CapabilityStatement.messaging.endpoint.address** |  |
| Short name | Network address or identifier of the end-point |
| Definition | The network address of the end-point. For solutions that do not use network addresses for routing, it can be just an identifier. |
| **CapabilityStatement.messaging.reliableCache** |  |
| Short name | Reliable Message Cache Length (min) |
| Definition | Length if the receiver's reliable messaging cache in minutes (if a receiver) or how long the cache length on the receiver should be (if a sender). |
| Comment | If this value is missing then the application does not implement (receiver) or depend on (sender) reliable messaging. |
| **CapabilityStatement.messaging.documentation** |  |
| Short name | Messaging interface behavior details |
| Definition | Documentation about the system's messaging capabilities for this endpoint not otherwise documented by the capability statement. For example, process for becoming an authorized messaging exchange partner. |
| **CapabilityStatement.messaging.supportedMessage** |  |
| Short name | Messages supported by this system |
| Definition | References to message definitions for messages this system can send or receive. |
| Comment | This is a proposed alternative to the messaging.event structure. |
| **CapabilityStatement.messaging.supportedMessage.mode** |  |
| Definition | The mode of this event declaration - whether application is sender or receiver. |
| Binding Description | The mode of a message capability statement. |
| **CapabilityStatement.messaging.supportedMessage.definition** |  |
| Short name | Message supported by this system |
| Definition | Points to a message definition that identifies the messaging event, message structure, allowed responses, etc. |
| **CapabilityStatement.messaging.event** |  |
| Short name | Declare support for this event |
| Definition | A description of the solution's support for an event at this end-point. |
| Comment | The same event may be listed up to two times - once as sender and once as receiver. |
| **CapabilityStatement.messaging.event.code** |  |
| Short name | Event type |
| Definition | A coded identifier of a supported messaging event. |
| Binding Description | One of the message events defined as part of FHIR. |
| **CapabilityStatement.messaging.event.category** |  |
| Definition | The impact of the content of the message. |
| Binding Description | The impact of the content of a message. |
| **CapabilityStatement.messaging.event.mode** |  |
| Definition | The mode of this event declaration - whether application is sender or receiver. |
| Binding Description | The mode of a message capability statement. |
| **CapabilityStatement.messaging.event.focus** |  |
| Short name | Resource that's focus of message |
| Definition | A resource associated with the event. This is the resource that defines the event. |
| Comment | This SHALL be provided if the event type supports multiple different resource types. |
| Binding Description | One of the resource types defined as part of FHIR. |
| **CapabilityStatement.messaging.event.request** |  |
| Short name | Profile that describes the request |
| Definition | Information about the request for this event. |
| **CapabilityStatement.messaging.event.response** |  |
| Short name | Profile that describes the response |
| Definition | Information about the response for this event. |
| **CapabilityStatement.messaging.event.documentation** |  |
| Short name | Endpoint-specific event documentation |
| Definition | Guidance on how this event is handled, such as internal system trigger points, business rules, etc. |
| **CapabilityStatement.document** |  |
| Short name | Document definition |
| Definition | A document definition. |
| **CapabilityStatement.document.mode** |  |
| Definition | Mode of this document declaration - whether application is producer or consumer. |
| Binding Description | Whether the application produces or consumes documents. |
| **CapabilityStatement.document.documentation** |  |
| Short name | Description of document support |
| Definition | A description of how the application supports or uses the specified document profile. For example, when are documents created, what action is taken with consumed documents, etc. |
| **CapabilityStatement.document.profile** |  |
| Short name | Constraint on a resource used in the document |
| Definition | A constraint on a resource used in the document. |
| Comment | The first resource is the document resource. |

## http://hl7.org/fhir/StructureDefinition/CompartmentDefinition

|  |  |
| --- | --- |
| **Description** | Base StructureDefinition for CompartmentDefinition Resource |
| **CompartmentDefinition** | Compartment Definition |
| Short name | Compartment Definition for a resource |
| Definition | A compartment definition that defines how resources are accessed on a server. |
| Comment | In FHIR, search is not performed directly on a resource (by XML or JSON path), but on a named parameter that maps into the resource content. |
| **CompartmentDefinition.url** |  |
| Short name | Logical uri to reference this compartment definition (globally unique) |
| Definition | An absolute URL that is used to identify this compartment definition when it is referenced in a specification, model, design or an instance. This SHALL be a URL, SHOULD be globally unique, and SHOULD be an address at which this compartment definition is (or will be) published. The URL SHOULD include the major version of the compartment definition. For more information see [Technical and Business Versions](resource.html#versions). |
| Comment | Can be a urn:uuid: or a urn:oid:, but real http: addresses are preferred. |
| Requirements | Allows the compartment definition to be referenced by a single globally unique identifier. |
| **CompartmentDefinition.name** |  |
| Short name | Name for this compartment definition (Computer friendly) |
| Definition | A natural language name identifying the compartment definition. This name should be usable as an identifier for the module by machine processing applications such as code generation. |
| Comment | The name is not expected to be globally unique. The name should be a simple alpha-numeric type name to ensure it is computable friendly. This is often the same as the code for the parameter, but does not need to be. |
| Requirements | Support human navigation & code generation. |
| **CompartmentDefinition.title** |  |
| Short name | Name for this compartment definition (Human friendly) |
| Definition | A short, descriptive, user-friendly title for the compartment definition. |
| **CompartmentDefinition.status** |  |
| Definition | The status of this compartment definition. Enables tracking the life-cycle of the content. |
| Comment | Allows filtering of compartment definition that are appropriate for use vs. not. |
| Binding Description | The lifecycle status of a Value Set or Concept Map. |
| **CompartmentDefinition.experimental** |  |
| Short name | If for testing purposes, not real usage |
| Definition | A flag to indicate that this compartment definition is authored for testing purposes (or education/evaluation/marketing), and is not intended to be used for genuine usage. |
| Comment | Allows filtering of compartment definition that are appropriate for use vs. not. |
| Requirements | Enables experimental content to be developed following the same life-cycle as a production-level compartment definition would. |
| **CompartmentDefinition.date** |  |
| Short name | Date this was last changed |
| Definition | The date (and optionally time) when the compartment definition was published. The date must change when the business version changes, if it does, and it must change if the status code changes. In addition, it should change when the substantive content of the compartment definition changes. |
| Comment | Note that this is not the same as the resource last-modified-date, since the resource may be a secondary representation of the compartment definition. Additional specific dates may be added as extensions. |
| **CompartmentDefinition.publisher** |  |
| Short name | Name of the publisher (Organization or individual) |
| Definition | The name of the individual or organization that published the compartment definition. |
| Comment | Usually an organization, but may be an individual. The publisher (or steward) of the compartment definition is the organization or individual primarily responsible for the maintenance and upkeep of the compartment definition. This is not necessarily the same individual or organization that developed and initially authored the content. The publisher is the primary point of contact for questions or issues with the compartment definition. This item SHOULD be populated unless the information is available from context. |
| Requirements | Helps establish the "authority/credibility" of the compartment definition. May also allow for contact. |
| **CompartmentDefinition.contact** |  |
| Short name | Contact details for the publisher |
| Definition | Contact details to assist a user in finding and communicating with the publisher. |
| Comment | May be a web site, an email address, a telephone number, etc. |
| **CompartmentDefinition.description** |  |
| Short name | Natural language description of the compartment definition |
| Definition | A free text natural language description of the compartment definition from the consumer's perspective. |
| Comment | This description can be used to capture details such as why the compartment definition was built, comments about misuse, instructions for clinical use and interpretation, literature references, examples from the paper world, etc. It is not a rendering of the compartment definition as conveyed in the text field of the resource itself. This item SHOULD be populated unless the information is available from context (e.g. the language of the profile is presumed to be the predominant language in the place the profile was created). |
| **CompartmentDefinition.purpose** |  |
| Short name | Why this compartment definition is defined |
| Definition | Explains why this compartment definition is needed and why it has been designed as it has. |
| Comment | This element does not describe the usage of the compartment definition (See, e.g, the comments element, or relatedArtifacts), rather it's for traceability of ''why'' the resource is either needed or ''why'' it is defined as it is. This may be used to point to source materials or specifications that drove the structure of this compartment definition. |
| **CompartmentDefinition.useContext** |  |
| Short name | Content intends to support these contexts |
| Definition | The content was developed with a focus and intent of supporting the contexts that are listed. These terms may be used to assist with indexing and searching of code system definitions. |
| Comment | When multiple usageContexts are specified, there is no expectation for whether all or any of the contexts apply. |
| Requirements | Assist in searching for appropriate content. |
| **CompartmentDefinition.jurisdiction** |  |
| Short name | Intended jurisdiction for compartment definition (if applicable) |
| Definition | A jurisdiction in which the compartment definition is intended to be used. |
| Binding Description | Countries and regions within which this artifact is targeted for use |
| **CompartmentDefinition.code** |  |
| Definition | Which compartment this definition describes. |
| Comment | Only the specification can define the compartments that can exist. Servers can choose to support them. |
| Binding Description | Which compartment a compartmnet definition describes |
| **CompartmentDefinition.search** |  |
| Short name | Whether the search syntax is supported |
| Definition | Whether the search syntax is supported. |
| Comment | Servers may define and use compartments to manage logical access without implementing the compoartment related syntax. |
| **CompartmentDefinition.resource** |  |
| Short name | How resource is related to the compartment |
| Definition | Information about how a resource it related to the compartment. |
| **CompartmentDefinition.resource.code** |  |
| Short name | Name of resource type |
| Definition | The name of a resource supported by the server. |
| Binding Description | One of the resource types defined as part of FHIR. |
| **CompartmentDefinition.resource.param** |  |
| Short name | Search Parameter Name, or chained params |
| Definition | The name of a search parameter that represents the link to the compartment. More than one may be listed because a resource may be linked to a compartment more than one way. |
| Comment | If no search parameters are listed, then the resource is not linked to the compartment. |
| **CompartmentDefinition.resource.documentation** |  |
| Short name | Additional doco about the resource and compartment |
| Definition | Additional doco about the resource and compartment. |

## http://hl7.org/fhir/StructureDefinition/DomainResource

|  |  |
| --- | --- |
| **Description** | Base StructureDefinition for DomainResource Resource |
| **DomainResource** | Domain Resource |
| Short name | A resource with narrative, extensions, and contained resources |
| Definition | A resource that includes narrative, extensions, and contained resources. |
| Constraint Text | If the resource is contained in another resource, it SHALL NOT contain nested Resources |
| Constraint Text | If the resource is contained in another resource, it SHALL NOT contain any narrative |
| Constraint Text | If a resource is contained in another resource, it SHALL NOT have a meta.versionId or a meta.lastUpdated |
| Constraint Text | If the resource is contained in another resource, it SHALL be referred to from elsewhere in the resource |
| **DomainResource.text** |  |
| Short name | Text summary of the resource, for human interpretation |
| Definition | A human-readable narrative that contains a summary of the resource, and may be used to represent the content of the resource to a human. The narrative need not encode all the structured data, but is required to contain sufficient detail to make it "clinically safe" for a human to just read the narrative. Resource definitions may define what content should be represented in the narrative to ensure clinical safety. |
| Comment | Contained resources do not have narrative. Resources that are not contained SHOULD have a narrative. In some cases, a resource may only have text with little or no additional discrete data (as long as all minOccurs=1 elements are satisfied). This may be necessary for data from legacy systems where information is captured as a "text blob" or where text is additionally entered raw or narrated and encoded in formation is added later. |
| Synonym | narrative |
| Synonym | html |
| Synonym | xhtml |
| Synonym | display |
| **DomainResource.contained** |  |
| Short name | Contained, inline Resources |
| Definition | These resources do not have an independent existence apart from the resource that contains them - they cannot be identified independently, and nor can they have their own independent transaction scope. |
| Comment | This should never be done when the content can be identified properly, as once identification is lost, it is extremely difficult (and context dependent) to restore it again. |
| Synonym | inline resources |
| Synonym | anonymous resources |
| Synonym | contained resources |
| **DomainResource.extension** |  |
| Short name | Additional Content defined by implementations |
| Definition | May be used to represent additional information that is not part of the basic definition of the resource. In order to make the use of extensions safe and manageable, there is a strict set of governance applied to the definition and use of extensions. Though any implementer is allowed to define an extension, there is a set of requirements that SHALL be met as part of the definition of the extension. |
| Comment | There can be no stigma associated with the use of extensions by any application, project, or standard - regardless of the institution or jurisdiction that uses or defines the extensions. The use of extensions is what allows the FHIR specification to retain a core level of simplicity for everyone. |
| Synonym | extensions |
| Synonym | user content |
| Slicing description | Extensions are always sliced by (at least) urlExtensions are always sliced by (at least) url |
| **DomainResource.modifierExtension** |  |
| Short name | Extensions that cannot be ignored |
| Definition | May be used to represent additional information that is not part of the basic definition of the resource, and that modifies the understanding of the element that contains it. Usually modifier elements provide negation or qualification. In order to make the use of extensions safe and manageable, there is a strict set of governance applied to the definition and use of extensions. Though any implementer is allowed to define an extension, there is a set of requirements that SHALL be met as part of the definition of the extension. Applications processing a resource are required to check for modifier extensions. |
| Comment | There can be no stigma associated with the use of extensions by any application, project, or standard - regardless of the institution or jurisdiction that uses or defines the extensions. The use of extensions is what allows the FHIR specification to retain a core level of simplicity for everyone. |
| Synonym | extensions |
| Synonym | user content |
| Slicing description | Extensions are always sliced by (at least) urlExtensions are always sliced by (at least) url |

## http://hl7.org/fhir/StructureDefinition/GraphDefinition

|  |  |
| --- | --- |
| **Description** | Base StructureDefinition for GraphDefinition Resource |
| **GraphDefinition** | Graph Definition |
| Short name | Definition of an graph of resources |
| Definition | A formal computable definition of a graph of resources - that is, a coherent set of resources that form a graph by following references. The Graph Definition resource defines a set and makes rules about the set. |
| **GraphDefinition.url** |  |
| Short name | Logical uri to reference this graph definition (globally unique) |
| Definition | An absolute URL that is used to identify this graph definition when it is referenced in a specification, model, design or an instance. This SHALL be a URL, SHOULD be globally unique, and SHOULD be an address at which this graph definition is (or will be) published. The URL SHOULD include the major version of the graph definition. For more information see [Technical and Business Versions](resource.html#versions). |
| Comment | Can be a urn:uuid: or a urn:oid:, but real http: addresses are preferred. |
| Requirements | Allows the graph definition to be referenced by a single globally unique identifier. |
| **GraphDefinition.version** |  |
| Short name | Business version of the graph definition |
| Definition | The identifier that is used to identify this version of the graph definition when it is referenced in a specification, model, design or instance. This is an arbitrary value managed by the graph definition author and is not expected to be globally unique. For example, it might be a timestamp (e.g. yyyymmdd) if a managed version is not available. There is also no expectation that versions are orderable. |
| Comment | There may be multiple different instances of a graph definition that have the same identifier but different versions. |
| **GraphDefinition.name** |  |
| Short name | Name for this graph definition (Computer friendly) |
| Definition | A natural language name identifying the graph definition. This name should be usable as an identifier for the module by machine processing applications such as code generation. |
| Comment | The name is not expected to be globally unique. The name should be a simple alpha-numeric type name to ensure it is computable friendly. |
| Requirements | Support human navigation & code generation. |
| **GraphDefinition.status** |  |
| Definition | The status of this graph definition. Enables tracking the life-cycle of the content. |
| Comment | Allows filtering of graph definition that are appropriate for use vs. not. |
| Binding Description | The lifecycle status of a Value Set or Concept Map. |
| **GraphDefinition.experimental** |  |
| Short name | If for testing purposes, not real usage |
| Definition | A flag to indicate that this graph definition is authored for testing purposes (or education/evaluation/marketing), and is not intended to be used for genuine usage. |
| Comment | Allows filtering of graph definition that are appropriate for use vs. not. |
| Requirements | Enables experimental content to be developed following the same life-cycle as a production-level graph definition would. |
| **GraphDefinition.date** |  |
| Short name | Date this was last changed |
| Definition | The date (and optionally time) when the graph definition was published. The date must change when the business version changes, if it does, and it must change if the status code changes. In addition, it should change when the substantive content of the graph definition changes. |
| Comment | Note that this is not the same as the resource last-modified-date, since the resource may be a secondary representation of the graph definition. Additional specific dates may be added as extensions. |
| **GraphDefinition.publisher** |  |
| Short name | Name of the publisher (Organization or individual) |
| Definition | The name of the individual or organization that published the graph definition. |
| Comment | Usually an organization, but may be an individual. The publisher (or steward) of the graph definition is the organization or individual primarily responsible for the maintenance and upkeep of the graph definition. This is not necessarily the same individual or organization that developed and initially authored the content. The publisher is the primary point of contact for questions or issues with the graph definition. This item SHOULD be populated unless the information is available from context. |
| Requirements | Helps establish the "authority/credibility" of the graph definition. May also allow for contact. |
| **GraphDefinition.contact** |  |
| Short name | Contact details for the publisher |
| Definition | Contact details to assist a user in finding and communicating with the publisher. |
| Comment | May be a web site, an email address, a telephone number, etc. |
| **GraphDefinition.description** |  |
| Short name | Natural language description of the graph definition |
| Definition | A free text natural language description of the graph definition from the consumer's perspective. |
| Comment | This description can be used to capture details such as why the graph definition was built, comments about misuse, instructions for clinical use and interpretation, literature references, examples from the paper world, etc. It is not a rendering of the graph definition as conveyed in the text field of the resource itself. This item SHOULD be populated unless the information is available from context (e.g. the language of the profile is presumed to be the predominant language in the place the profile was created). |
| **GraphDefinition.useContext** |  |
| Short name | Content intends to support these contexts |
| Definition | The content was developed with a focus and intent of supporting the contexts that are listed. These terms may be used to assist with indexing and searching of code system definitions. |
| Comment | When multiple usageContexts are specified, there is no expectation for whether all or any of the contexts apply. |
| Requirements | Assist in searching for appropriate content. |
| **GraphDefinition.jurisdiction** |  |
| Short name | Intended jurisdiction for graph definition (if applicable) |
| Definition | A jurisdiction in which the graph definition is intended to be used. |
| Binding Description | Countries and regions within which this artifact is targeted for use |
| **GraphDefinition.purpose** |  |
| Short name | Why this graph definition is defined |
| Definition | Explains why this graph definition is needed and why it has been designed as it has. |
| Comment | This element does not describe the usage of the graph definition (See, e.g, the comments element, or relatedArtifacts), rather it's for traceability of ''why'' the resource is either needed or ''why'' it is defined as it is. This may be used to point to source materials or specifications that drove the structure of this graph definition. |
| **GraphDefinition.start** |  |
| Short name | Type of resource at which the graph starts |
| Definition | The type of FHIR resource at which instances of this graph start. |
| Binding Description | One of the resource types defined as part of FHIR. |
| **GraphDefinition.profile** |  |
| Short name | Profile on base resource |
| Definition | The profile that describes the use of the base resource. |
| Comment | The code does not include the '$' prefix that is always included in the URL when the operation is invoked. |
| **GraphDefinition.link** |  |
| Short name | Links this graph makes rules about |
| Definition | Links this graph makes rules about. |
| **GraphDefinition.link.path** |  |
| Short name | Path in the resource that contains the link |
| Definition | Path in the resource that contains the link. |
| Comment | The path can be a literal path (e.g. Observation.subject), or it can be a query for reverse links (e.g. Provenance?target=[id]). |
| **GraphDefinition.link.sliceName** |  |
| Short name | Which slice (if profiled) |
| Definition | Which slice (if profiled). |
| **GraphDefinition.link.min** |  |
| Short name | Minimum occurences for this link |
| Definition | Minimum occurences for this link. |
| **GraphDefinition.link.max** |  |
| Short name | Maximum occurences for this link |
| Definition | Maximum occurences for this link. |
| **GraphDefinition.link.description** |  |
| Short name | Why this link is specified |
| Definition | Information about why this link is of interest in this graph definition. |
| **GraphDefinition.link.target** |  |
| Short name | Potential target for the link |
| Definition | Potential target for the link. |
| **GraphDefinition.link.target.type** |  |
| Short name | Type of resource this link refers to |
| Definition | Type of resource this link refers to. |
| Binding Description | One of the resource types defined as part of FHIR. |
| **GraphDefinition.link.target.profile** |  |
| Short name | Profile for the target resource |
| Definition | Profile for the target resource. |
| **GraphDefinition.link.target.compartment** |  |
| Short name | Compartment Consistency Rules |
| Definition | Compartment Consistency Rules. |
| **GraphDefinition.link.target.compartment.code** |  |
| Short name | Identifies the compartment |
| Definition | Identifies the compartment. |
| Binding Description | Identifies a compartment |
| **GraphDefinition.link.target.compartment.rule** |  |
| Definition | identical | matching | different | no-rule | custom. |
| Binding Description | How a compartment must be linked |
| **GraphDefinition.link.target.compartment.expression** |  |
| Short name | Custom rule, as a FHIRPath expression |
| Definition | Custom rule, as a FHIRPath expression. |
| **GraphDefinition.link.target.compartment.description** |  |
| Short name | Documentation for FHIRPath expression |
| Definition | Documentation for FHIRPath expression. |
| **GraphDefinition.link.target.link** |  |
| Short name | Additional links from target resource |
| Definition | Additional links from target resource. |

## http://hl7.org/fhir/StructureDefinition/Group

|  |  |
| --- | --- |
| **Description** | Base StructureDefinition for Group Resource |
| **Group** | Group |
| Short name | Group of multiple entities |
| Definition | Represents a defined collection of entities that may be discussed or acted upon collectively but which are not expected to act collectively and are not formally or legally recognized; i.e. a collection of entities that isn't an Organization. |
| Constraint Text | Can only have members if group is "actual" |
| **Group.identifier** |  |
| Short name | Unique id |
| Definition | A unique business identifier for this group. |
| Requirements | Allows the group to be referenced from external specifications. |
| **Group.active** |  |
| Short name | Whether this group's record is in active use |
| Definition | Indicates whether the record for the group is available for use or is merely being retained for historical purposes. |
| Requirements | Need to be able to mark a group record as not to be used because it was created in error or is otherwise no longer available (e.g. a herd that no longer exists). |
| **Group.type** |  |
| Definition | Identifies the broad classification of the kind of resources the group includes. |
| Comment | Group members SHALL be of the appropriate resource type (Patient for person or animal; or Practitioner, Device, Medicaiton or Substance for the other types.). |
| Requirements | Identifies what type of resources the group is made up of. |
| Binding Description | Types of resources that are part of group |
| **Group.actual** |  |
| Short name | Descriptive or actual |
| Definition | If true, indicates that the resource refers to a specific group of real individuals. If false, the group defines a set of intended individuals. |
| Requirements | There are use-cases for groups that define specific collections of individuals, and other groups that define "types" of intended individuals. The requirements for both kinds of groups are similar, so we use a single resource, distinguished by this flag. |
| **Group.code** |  |
| Short name | Kind of Group members |
| Definition | Provides a specific type of resource the group includes; e.g. "cow", "syringe", etc. |
| Comment | This would generally be omitted for Person resources. |
| Binding Description | Kind of particular resource; e.g. cow, syringe, lake, etc. |
| **Group.name** |  |
| Short name | Label for Group |
| Definition | A label assigned to the group for human identification and communication. |
| Requirements | Used to identify the group in human communication. |
| **Group.quantity** |  |
| Short name | Number of members |
| Definition | A count of the number of resource instances that are part of the group. |
| Comment | Note that the quantity may be less than the number of members if some of the members are not active. |
| Requirements | Group size is a common defining characteristic. |
| **Group.characteristic** |  |
| Short name | Trait of group members |
| Definition | Identifies the traits shared by members of the group. |
| Comment | All the identified characteristics must be true for an entity to a member of the group. |
| Requirements | Needs to be a generic mechanism for identifying what individuals can be part of a group. |
| **Group.characteristic.code** |  |
| Short name | Kind of characteristic |
| Definition | A code that identifies the kind of trait being asserted. |
| Requirements | Need a formal way of identifying the characteristic being described. |
| Binding Description | List of characteristics used to describe group members; e.g. gender, age, owner, location, etc. |
| **Group.characteristic.value[x]** |  |
| Short name | Value held by characteristic |
| Definition | The value of the trait that holds (or does not hold - see 'exclude') for members of the group. |
| Comment | For Range, it means members of the group have a value that falls somewhere within the specified range. |
| Requirements | The value of the characteristic is what determines group membership. |
| Binding Description | Value of descriptive member characteristic; e.g. red, male, pneumonia, Caucasian, etc. |
| **Group.characteristic.exclude** |  |
| Short name | Group includes or excludes |
| Definition | If true, indicates the characteristic is one that is NOT held by members of the group. |
| Comment | This is labeled as "Is Modifier" because applications cannot wrongly include excluded members as included or vice versa. |
| Requirements | Sometimes group membership is determined by characteristics not possessed. |
| **Group.characteristic.period** |  |
| Short name | Period over which characteristic is tested |
| Definition | The period over which the characteristic is tested; e.g. the patient had an operation during the month of June. |
| **Group.member** |  |
| Short name | Who or what is in group |
| Definition | Identifies the resource instances that are members of the group. |
| Requirements | Often the only thing of interest about a group is "who's in it". |
| **Group.member.entity** |  |
| Short name | Reference to the group member |
| Definition | A reference to the entity that is a member of the group. Must be consistent with Group.type. |
| **Group.member.period** |  |
| Short name | Period member belonged to the group |
| Definition | The period that the member was in the group, if known. |
| Requirements | Need to track who was in a group at a particular time. |
| Meaning when missing | The member is in the group at this time |
| **Group.member.inactive** |  |
| Short name | If member is no longer in group |
| Definition | A flag to indicate that the member is no longer in the group, but previously may have been a member. |
| Requirements | Sometimes you don't know when someone stopped being in a group, but not when. |

## http://hl7.org/fhir/StructureDefinition/ImplementationGuide

|  |  |
| --- | --- |
| **Description** | Base StructureDefinition for ImplementationGuide Resource |
| **Purpose** | An implementation guide is able to define default profiles that must apply to any use of a resource, so validation services may need to take one or more implementation guide resources when validating. |
| **ImplementationGuide** | Implementation Guide |
| Short name | A set of rules about how FHIR is used |
| Definition | A set of rules or how FHIR is used to solve a particular problem. This resource is used to gather all the parts of an implementation guide into a logical whole, and to publish a computable definition of all the parts. |
| **ImplementationGuide.url** |  |
| Short name | Logical uri to reference this implementation guide (globally unique) |
| Definition | An absolute URL that is used to identify this implementation guide when it is referenced in a specification, model, design or an instance. This SHALL be a URL, SHOULD be globally unique, and SHOULD be an address at which this implementation guide is (or will be) published. The URL SHOULD include the major version of the implementation guide. For more information see [Technical and Business Versions](resource.html#versions). |
| Comment | Can be a urn:uuid: or a urn:oid:, but real http: addresses are preferred. |
| Requirements | Allows the implementation guide to be referenced by a single globally unique identifier. This is required to allow hosting Implementation Guides on multiple different servers, and to allow for the editorial process. |
| Synonym | url |
| Synonym | authoritative-url |
| Synonym | destination |
| Synonym | identity |
| **ImplementationGuide.version** |  |
| Short name | Business version of the implementation guide |
| Definition | The identifier that is used to identify this version of the implementation guide when it is referenced in a specification, model, design or instance. This is an arbitrary value managed by the implementation guide author and is not expected to be globally unique. For example, it might be a timestamp (e.g. yyyymmdd) if a managed version is not available. There is also no expectation that versions are orderable. |
| Comment | There may be multiple different instances of a implementation guide that have the same identifier but different versions. |
| **ImplementationGuide.name** |  |
| Short name | Name for this implementation guide (Computer friendly) |
| Definition | A natural language name identifying the implementation guide. This name should be usable as an identifier for the module by machine processing applications such as code generation. |
| Comment | The name is not expected to be globally unique. The name should be a simple alpha-numeric type name to ensure it is computable friendly. |
| Requirements | Support human navigation & code generation. |
| **ImplementationGuide.status** |  |
| Definition | The status of this implementation guide. Enables tracking the life-cycle of the content. |
| Comment | Allows filtering of implementation guide that are appropriate for use vs. not. |
| Binding Description | The lifecycle status of a Value Set or Concept Map. |
| **ImplementationGuide.experimental** |  |
| Short name | If for testing purposes, not real usage |
| Definition | A flag to indicate that this implementation guide is authored for testing purposes (or education/evaluation/marketing), and is not intended to be used for genuine usage. |
| Comment | Allows filtering of implementation guide that are appropriate for use vs. not. |
| Requirements | Enables experimental content to be developed following the same life-cycle as a production-level implementation guide would. |
| **ImplementationGuide.date** |  |
| Short name | Date this was last changed |
| Definition | The date (and optionally time) when the implementation guide was published. The date must change when the business version changes, if it does, and it must change if the status code changes. In addition, it should change when the substantive content of the implementation guide changes. |
| Comment | Note that this is not the same as the resource last-modified-date, since the resource may be a secondary representation of the implementation guide. Additional specific dates may be added as extensions. |
| **ImplementationGuide.publisher** |  |
| Short name | Name of the publisher (Organization or individual) |
| Definition | The name of the individual or organization that published the implementation guide. |
| Comment | Usually an organization, but may be an individual. The publisher (or steward) of the implementation guide is the organization or individual primarily responsible for the maintenance and upkeep of the implementation guide. This is not necessarily the same individual or organization that developed and initially authored the content. The publisher is the primary point of contact for questions or issues with the implementation guide. This item SHOULD be populated unless the information is available from context. |
| Requirements | Helps establish the "authority/credibility" of the implementation guide. May also allow for contact. |
| **ImplementationGuide.contact** |  |
| Short name | Contact details for the publisher |
| Definition | Contact details to assist a user in finding and communicating with the publisher. |
| Comment | May be a web site, an email address, a telephone number, etc. |
| **ImplementationGuide.description** |  |
| Short name | Natural language description of the implementation guide |
| Definition | A free text natural language description of the implementation guide from the consumer's perspective. |
| Comment | This description can be used to capture details such as why the implementation guide was built, comments about misuse, instructions for clinical use and interpretation, literature references, examples from the paper world, etc. It is not a rendering of the implementation guide as conveyed in the text field of the resource itself. This item SHOULD be populated unless the information is available from context (e.g. the language of the profile is presumed to be the predominant language in the place the profile was created). |
| **ImplementationGuide.useContext** |  |
| Short name | Content intends to support these contexts |
| Definition | The content was developed with a focus and intent of supporting the contexts that are listed. These terms may be used to assist with indexing and searching of code system definitions. |
| Comment | When multiple usageContexts are specified, there is no expectation for whether all or any of the contexts apply. |
| Requirements | Assist in searching for appropriate content. |
| **ImplementationGuide.jurisdiction** |  |
| Short name | Intended jurisdiction for implementation guide (if applicable) |
| Definition | A jurisdiction in which the implementation guide is intended to be used. |
| Binding Description | Countries and regions within which this artifact is targeted for use |
| **ImplementationGuide.copyright** |  |
| Short name | Use and/or publishing restrictions |
| Definition | A copyright statement relating to the implementation guide and/or its contents. Copyright statements are generally legal restrictions on the use and publishing of the implementation guide. |
| Requirements | Consumers of the library must be able to determine any legal restrictions on the use of the implementation guide and/or its content. |
| Synonym | License |
| Synonym | Restrictions |
| **ImplementationGuide.fhirVersion** |  |
| Short name | FHIR Version this Implementation Guide targets |
| Definition | The version of the FHIR specification on which this ImplementationGuide is based - this is the formal version of the specification, without the revision number, e.g. [publication].[major].[minor], which is 1.9.0 for this version. |
| Comment | An Implementation Guide should specify the target it applies to, as ImplementationGuides are rarely valid across multiple versions of FHIR. |
| **ImplementationGuide.dependency** |  |
| Short name | Another Implementation guide this depends on |
| Definition | Another implementation guide that this implementation depends on. Typically, an implementation guide uses value sets, profiles etc.defined in other implementation guides. |
| **ImplementationGuide.dependency.type** |  |
| Definition | How the dependency is represented when the guide is published. |
| Comment | For information about processing included guides, see [Including Guides]{implementationguide.html#include}. |
| Binding Description | How a dependency is represented when the guide is published. |
| **ImplementationGuide.dependency.uri** |  |
| Short name | Where to find dependency |
| Definition | Where the dependency is located. |
| Comment | When a guide is published, and the type is 'include', this will be a relative reference within the guide. |
| **ImplementationGuide.package** |  |
| Short name | Group of resources as used in .page.package |
| Definition | A logical group of resources. Logical groups can be used when building pages. |
| **ImplementationGuide.package.name** |  |
| Short name | Name used .page.package |
| Definition | The name for the group, as used in page.package. |
| **ImplementationGuide.package.description** |  |
| Short name | Human readable text describing the package |
| Definition | Human readable text describing the package. |
| **ImplementationGuide.package.resource** |  |
| Short name | Resource in the implementation guide |
| Definition | A resource that is part of the implementation guide. Conformance resources (value set, structure definition, capability statements etc.) are obvious candidates for inclusion, but any kind of resource can be included as an example resource. |
| **ImplementationGuide.package.resource.example** |  |
| Short name | If not an example, has it's normal meaning |
| Definition | Whether a resource is included in the guide as part of the rules defined by the guide, or just as an example of a resource that conforms to the rules and/or help implementers understand the intent of the guide. |
| Comment | Typically, conformance resources and knowledge resources are directly part of the implementation guide, with their normal meaning, and patient linked resources are usually examples. However this is not always true. |
| **ImplementationGuide.package.resource.name** |  |
| Short name | Human Name for the resource |
| Definition | A human assigned name for the resource. All resources SHOULD have a name, but the name may be extracted from the resource (e.g. ValueSet.name). |
| **ImplementationGuide.package.resource.description** |  |
| Short name | Reason why included in guide |
| Definition | A description of the reason that a resource has been included in the implementation guide. |
| Comment | This is mostly used with examples to explain why it is present (though they can have extensive comments in the examples). |
| **ImplementationGuide.package.resource.acronym** |  |
| Short name | Short code to identify the resource |
| Definition | A short code that may be used to identify the resource throughout the implementation guide. |
| Comment | This is used when generating schematrons from profiles, for example, but has other uses. Publishing tooling may autogenerate this value, but a human assigned value is more useful. This value must be unique within an implementation guide (across included guides as well). |
| **ImplementationGuide.package.resource.source[x]** |  |
| Short name | Location of the resource |
| Definition | Where this resource is found. |
| Comment | Usually this is a relative URL that locates the resource within the implementation guide. If you authoring an implementation guide, and will publish it using the FHIR publication tooling, use a URI that may point to a resource, or to one of various alternative representations (e.g. spreadsheet). The tooling will convert this when it publishes it. |
| **ImplementationGuide.package.resource.exampleFor** |  |
| Short name | Resource this is an example of (if applicable) |
| Definition | Another resource that this resource is an example for. This is mostly used for resources that are included as examples of StructureDefinitions. |
| Comment | Examples: \* StructureDefinition -> Any \* ValueSet -> expansion \* OperationDefinition -> Parameters \* Questionnaire -> QuestionnaireResponse. |
| **ImplementationGuide.global** |  |
| Short name | Profiles that apply globally |
| Definition | A set of profiles that all resources covered by this implementation guide must conform to. |
| Comment | See [Default Profiles](implementationguide.html#default) for a discussion of which resources are 'covered' by an implementation guide. |
| **ImplementationGuide.global.type** |  |
| Short name | Type this profiles applies to |
| Definition | The type of resource that all instances must conform to. |
| Comment | The type must match that of the profile that is referred to, but is made explicit here as a denormalization so that a system processing the implementation guide resource knows which resources the profile applies to even if the profile itself is not available. |
| Binding Description | One of the resource types defined as part of FHIR. |
| **ImplementationGuide.global.profile** |  |
| Short name | Profile that all resources must conform to |
| Definition | A reference to the profile that all instances must conform to. |
| **ImplementationGuide.binary** |  |
| Short name | Image, css, script, etc. |
| Definition | A binary file that is included in the implementation guide when it is published. |
| Comment | This is principally included for the FHIR publishing tool, but may be useful when extracting and reusing content from the implementation guide. |
| **ImplementationGuide.page** |  |
| Short name | Page/Section in the Guide |
| Definition | A page / section in the implementation guide. The root page is the implementation guide home page. |
| Comment | Pages automatically become sections if they have sub-pages. By convention, the home page is called index.html. |
| **ImplementationGuide.page.source** |  |
| Short name | Where to find that page |
| Definition | The source address for the page. |
| Comment | The publishing tool will autogenerate source for list (source = n/a), and inject included implementations for include (source = uri of guide to include). |
| **ImplementationGuide.page.title** |  |
| Short name | Short title shown for navigational assistance |
| Definition | A short title used to represent this page in navigational structures such as table of contents, bread crumbs, etc. |
| **ImplementationGuide.page.kind** |  |
| Definition | The kind of page that this is. Some pages are autogenerated (list, example), and other kinds are of interest so that tools can navigate the user to the page of interest. |
| Binding Description | The kind of an included page. |
| **ImplementationGuide.page.type** |  |
| Short name | Kind of resource to include in the list |
| Definition | For constructed pages, what kind of resources to include in the list. |
| Binding Description | One of the resource types defined as part of FHIR. |
| **ImplementationGuide.page.package** |  |
| Short name | Name of package to include |
| Definition | For constructed pages, a list of packages to include in the page (or else empty for everything). |
| **ImplementationGuide.page.format** |  |
| Short name | Format of the page (e.g. html, markdown, etc.) |
| Definition | The format of the page. |
| Comment | This is primarily for the publishing tool, that will convert all pages to html format. HTML pages are pre-processed, see xxxx. |
| Binding Description | The mime type of an attachment. Any valid mime type is allowed. |
| **ImplementationGuide.page.page** |  |
| Short name | Nested Pages / Sections |
| Definition | Nested Pages/Sections under this page. |
| Comment | The implementation guide breadcrumbs are generated from this structure. |

## http://hl7.org/fhir/StructureDefinition/List

|  |  |
| --- | --- |
| **Description** | Base StructureDefinition for List Resource |
| **List** | List |
| Short name | Information summarized from a list of other resources |
| Definition | A set of information summarized from a list of other resources. |
| Synonym | Collection |
| Synonym | WorkingList |
| Synonym | Organizer |
| Constraint Text | The deleted flag can only be used if the mode of the list is "changes" |
| Constraint Text | A list can only have an emptyReason if it is empty |
| **List.identifier** |  |
| Short name | Business identifier |
| Definition | Identifier for the List assigned for business purposes outside the context of FHIR. |
| **List.status** |  |
| Definition | Indicates the current state of this list. |
| Binding Description | The current state of the list |
| **List.mode** |  |
| Definition | How this list was prepared - whether it is a working list that is suitable for being maintained on an ongoing basis, or if it represents a snapshot of a list of items from another source, or whether it is a prepared list where items may be marked as added, modified or deleted. |
| Requirements | Lists are used in various ways, and it must be known in what way it is safe to use them. |
| Binding Description | The processing mode that applies to this list |
| **List.title** |  |
| Short name | Descriptive name for the list |
| Definition | A label for the list assigned by the author. |
| Requirements | Allows customization beyond just the code identifying the kind of list. |
| Example Label | General |
| **List.code** |  |
| Short name | What the purpose of this list is |
| Definition | This code defines the purpose of the list - why it was created. |
| Comment | If there is no code, the purpose of the list is implied where it is used, such as in a document section using Document.section.code. |
| Requirements | Lists often contain subsets of resources rather than an exhaustive list. The code identifies what type of subset is included. |
| Binding Description | What the purpose of a list is |
| **List.subject** |  |
| Short name | If all resources have the same subject |
| Definition | The common subject (or patient) of the resources that are in the list, if there is one. |
| Comment | Some purely arbitrary lists do not have a common subject, so this is optional. |
| Requirements | The primary purpose of listing the subject explicitly is to help with finding the right list. |
| **List.encounter** |  |
| Short name | Context in which list created |
| Definition | The encounter that is the context in which this list was created. |
| **List.date** |  |
| Short name | When the list was prepared |
| Definition | The date that the list was prepared. |
| Comment | The actual important date is the date of currency of the resources that were summarized, but it is usually assumed that these are current when the preparation occurs. |
| Requirements | Identifies how current the list is which affects relevance. |
| **List.source** |  |
| Short name | Who and/or what defined the list contents (aka Author) |
| Definition | The entity responsible for deciding what the contents of the list were. Where the list was created by a human, this is the same as the author of the list. |
| Comment | The primary source is the entity that made the decisions what items are in the list. This may be software or user. |
| Requirements | Allows follow-up as well as context. |
| Synonym | Author |
| **List.orderedBy** |  |
| Short name | What order the list has |
| Definition | What order applies to the items in the list. |
| Comment | Applications SHOULD render ordered lists in the order provided, but MAY allow users to re-order based on their own preferences as well. If there is no order specified, the order is unknown, though there may still be some order. |
| Requirements | Important for presentation and rendering. Lists may be sorted to place more important information first or to group related entries. |
| Binding Description | What order applies to the items in a list |
| **List.note** |  |
| Short name | Comments about the list |
| Definition | Comments that apply to the overall list. |
| **List.entry** |  |
| Short name | Entries in the list |
| Definition | Entries in this list. |
| Comment | If there are no entries in the list, an emptyReason SHOULD be provided. |
| **List.entry.flag** |  |
| Short name | Status/Workflow information about this item |
| Definition | The flag allows the system constructing the list to indicate the role and significance of the item in the list. |
| Comment | The flag can only be understood in the context of the List.code. If the flag means that the entry has actually been deleted from the list, the deleted element SHALL be true. Deleted can only be used if the List.mode is "changes". |
| Requirements | This field is present to support various clinical uses of lists, such as a discharge summary medication list, where flags specify whether the medication was added, modified, or deleted from the list. |
| Binding Description | Codes that provide further information about the reason and meaning of the item in the list |
| **List.entry.deleted** |  |
| Short name | If this item is actually marked as deleted |
| Definition | True if this item is marked as deleted in the list. |
| Comment | If the flag means that the entry has actually been deleted from the list, the deleted element SHALL be true. Both flag and deleted can only be used if the List.mode is "changes". A deleted entry should be displayed in narrative as deleted. |
| Requirements | The flag element may contain codes that an application processing the list does not understand. However there can be no ambiguity if a list item is actually marked as "deleted". |
| **List.entry.date** |  |
| Short name | When item added to list |
| Definition | When this item was added to the list. |
| Comment | This is only useful and meaningful when the mode is "working". |
| Requirements | The date may be significant for understanding the meaning of items in a working list. |
| **List.entry.item** |  |
| Short name | Actual entry |
| Definition | A reference to the actual resource from which data was derived. |
| **List.emptyReason** |  |
| Short name | Why list is empty |
| Definition | If the list is empty, why the list is empty. |
| Comment | The various reasons for an empty list make a significant interpretation to its interpretation. Note that this code is for use when the entire list has been suppressed, and not for when individual items are omitted - implementers may consider using a text note or a flag on an entry in these cases. |
| Requirements | Allows capturing things like "none exist" or "not asked" which can be important for most lists. |
| Binding Description | If a list is empty, why it is empty |

## http://hl7.org/fhir/StructureDefinition/Media

|  |  |
| --- | --- |
| **Description** | Base StructureDefinition for Media Resource |
| **Media** | Media |
| Short name | A photo, video, or audio recording acquired or used in healthcare. The actual content may be inline or provided by direct reference |
| Definition | A photo, video, or audio recording acquired or used in healthcare. The actual content may be inline or provided by direct reference. |
| Constraint Text | Height can only be used for a photo or video |
| Constraint Text | Width can only be used for a photo or video |
| Constraint Text | Frames can only be used for a photo |
| Constraint Text | Duration can only be used for an audio or a video |
| **Media.identifier** |  |
| Short name | Identifier(s) for the image |
| Definition | Identifiers associated with the image - these may include identifiers for the image itself, identifiers for the context of its collection (e.g. series ids) and context ids such as accession numbers or other workflow identifiers. |
| Comment | The identifier label and use can be used to determine what kind of identifier it is. |
| **Media.basedOn** |  |
| Short name | Procedure that caused this media to be created |
| Definition | A procedure that is fulfilled in whole or in part by the creation of this media. |
| Requirements | Allows tracing of authorization for the event and tracking whether proposals/recommendations were acted upon. |
| Synonym | fufills |
| **Media.type** |  |
| Definition | Whether the media is a photo (still image), an audio recording, or a video recording. |
| Binding Description | Whether the Media is a photo, video, or audio |
| **Media.subtype** |  |
| Short name | The type of acquisition equipment/process |
| Definition | Details of the type of the media - usually, how it was acquired (what type of device). If images sourced from a DICOM system, are wrapped in a Media resource, then this is the modality. |
| Binding Description | Detailed information about the type of the image - its kind, purpose, or the kind of equipment used to generate it |
| **Media.view** |  |
| Short name | Imaging view, e.g. Lateral or Antero-posterior |
| Definition | The name of the imaging view e.g. Lateral or Antero-posterior (AP). |
| Binding Description | Imaging view (projection) used when collecting an image |
| **Media.subject** |  |
| Short name | Who/What this Media is a record of |
| Definition | Who/What this Media is a record of. |
| **Media.context** |  |
| Short name | Encounter / Episode associated with media |
| Definition | The encounter or episode of care that establishes the context for this media. |
| Comment | This will typically be the encounter the media occurred within. |
| Requirements | Links the media to the Encounter context. |
| Synonym | encounter |
| **Media.occurrence[x]** |  |
| Short name | When Media was collected |
| Definition | The date and time(s) at which the media was collected. |
| Synonym | timing |
| **Media.operator** |  |
| Short name | The person who generated the image |
| Definition | The person who administered the collection of the image. |
| **Media.reasonCode** |  |
| Short name | Why was event performed? |
| Definition | Describes why the event occurred in coded or textual form. |
| Comment | Textual reasons can be caprued using reasonCode.text. |
| Binding Description | The reason for the media |
| **Media.bodySite** |  |
| Short name | Body part in media |
| Definition | Indicates the site on the subject's body where the media was collected (i.e. the target site). |
| Comment | If the use case requires BodySite to be handled as a separate resource (e.g. to identify and track separately) then use The standard extension[ body-site-instance](extension-body-site-instance.html). |
| Binding Description | Codes describing anatomical locations. May include laterality. |
| **Media.device** |  |
| Short name | Observing Device |
| Definition | The device used to collect the media. |
| Comment | An extension should be used if further typing of the device is needed. Scondary devices used to support collecting a media can be represented using either extension or through the Observation.related element. |
| **Media.height** |  |
| Short name | Height of the image in pixels (photo/video) |
| Definition | Height of the image in pixels (photo/video). |
| **Media.width** |  |
| Short name | Width of the image in pixels (photo/video) |
| Definition | Width of the image in pixels (photo/video). |
| **Media.frames** |  |
| Short name | Number of frames if > 1 (photo) |
| Definition | The number of frames in a photo. This is used with a multi-page fax, or an imaging acquisition context that takes multiple slices in a single image, or an animated gif. If there is more than one frame, this SHALL have a value in order to alert interface software that a multi-frame capable rendering widget is required. |
| **Media.duration** |  |
| Short name | Length in seconds (audio / video) |
| Definition | The duration of the recording in seconds - for audio and video. |
| Comment | The duration might differ from occurencePeriod if recording was paused. |
| **Media.content** |  |
| Short name | Actual Media - reference or data |
| Definition | The actual content of the media - inline or by direct reference to the media source file. |
| Comment | Recommended content types: image/jpeg, image/png, image/tiff, video/mpeg, audio/mp4, application/dicom. Application/dicom can contain the transfer syntax as a parameter. For an media that covers a period of time (video/sound), the content.creationTime is the end time. Creation time is used for tracking, organizing versions and searching. |
| **Media.note** |  |
| Short name | Comments made about the media |
| Definition | Comments made about the media by the performer, subject or other participants. |

## http://hl7.org/fhir/StructureDefinition/MetadataResource

|  |  |
| --- | --- |
| **Description** | Base StructureDefinition for MetadataResource Resource |
| **MetadataResource** | Metadata Resource |
| Short name | Common Ancestor declaration for definitional resources |
| Definition | Common Ancestor declaration for conformance and knowledge artifact resources. |
| **MetadataResource.url** |  |
| Short name | Logical uri to reference this metadata resource (globally unique) |
| Definition | An absolute URL that is used to identify this metadata resource when it is referenced in a specification, model, design or an instance. This SHALL be a URL, SHOULD be globally unique, and SHOULD be an address at which this metadata resource is (or will be) published. The URL SHOULD include the major version of the metadata resource. For more information see [Technical and Business Versions](resource.html#versions). |
| Comment | Can be a urn:uuid: or a urn:oid:, but real http: addresses are preferred. |
| Requirements | Allows the metadata resource to be referenced by a single globally unique identifier. |
| **MetadataResource.version** |  |
| Short name | Business version of the metadata resource |
| Definition | The identifier that is used to identify this version of the metadata resource when it is referenced in a specification, model, design or instance. This is an arbitrary value managed by the metadata resource author and is not expected to be globally unique. For example, it might be a timestamp (e.g. yyyymmdd) if a managed version is not available. There is also no expectation that versions are orderable. |
| Comment | There may be multiple different instances of a metadata resource that have the same identifier but different versions. |
| **MetadataResource.name** |  |
| Short name | Name for this metadata resource (Computer friendly) |
| Definition | A natural language name identifying the metadata resource. This name should be usable as an identifier for the module by machine processing applications such as code generation. |
| Comment | The name is not expected to be globally unique. The name should be a simple alpha-numeric type name to ensure it is computable friendly. |
| Requirements | Support human navigation & code generation. |
| **MetadataResource.title** |  |
| Short name | Name for this metadata resource (Human friendly) |
| Definition | A short, descriptive, user-friendly title for the metadata resource. |
| **MetadataResource.status** |  |
| Definition | The status of this metadata resource. Enables tracking the life-cycle of the content. |
| Comment | Allows filtering of metadata resource that are appropriate for use vs. not. |
| Binding Description | The lifecycle status of a Value Set or Concept Map. |
| **MetadataResource.experimental** |  |
| Short name | If for testing purposes, not real usage |
| Definition | A flag to indicate that this metadata resource is authored for testing purposes (or education/evaluation/marketing), and is not intended to be used for genuine usage. |
| Comment | Allows filtering of metadata resource that are appropriate for use vs. not. |
| Requirements | Enables experimental content to be developed following the same life-cycle as a production-level metadata resource would. |
| **MetadataResource.date** |  |
| Short name | Date this was last changed |
| Definition | The date (and optionally time) when the metadata resource was published. The date must change when the business version changes, if it does, and it must change if the status code changes. In addition, it should change when the substantive content of the metadata resource changes. |
| Comment | Note that this is not the same as the resource last-modified-date, since the resource may be a secondary representation of the metadata resource. Additional specific dates may be added as extensions. |
| **MetadataResource.publisher** |  |
| Short name | Name of the publisher (Organization or individual) |
| Definition | The name of the individual or organization that published the metadata resource. |
| Comment | Usually an organization, but may be an individual. The publisher (or steward) of the metadata resource is the organization or individual primarily responsible for the maintenance and upkeep of the metadata resource. This is not necessarily the same individual or organization that developed and initially authored the content. The publisher is the primary point of contact for questions or issues with the metadata resource. This item SHOULD be populated unless the information is available from context. |
| Requirements | Helps establish the "authority/credibility" of the metadata resource. May also allow for contact. |
| **MetadataResource.contact** |  |
| Short name | Contact details for the publisher |
| Definition | Contact details to assist a user in finding and communicating with the publisher. |
| Comment | May be a web site, an email address, a telephone number, etc. |
| **MetadataResource.useContext** |  |
| Short name | Content intends to support these contexts |
| Definition | The content was developed with a focus and intent of supporting the contexts that are listed. These terms may be used to assist with indexing and searching of code system definitions. |
| Comment | When multiple usageContexts are specified, there is no expectation for whether all or any of the contexts apply. |
| Requirements | Assist in searching for appropriate content. |
| **MetadataResource.jurisdiction** |  |
| Short name | Intended jurisdiction for metadata resource (if applicable) |
| Definition | A jurisdiction in which the metadata resource is intended to be used. |
| Binding Description | Countries and regions within which this artifact is targeted for use |
| **MetadataResource.description** |  |
| Short name | Natural language description of the metadata resource |
| Definition | A free text natural language description of the metadata resource from the consumer's perspective. |
| Comment | This description can be used to capture details such as why the metadata resource was built, comments about misuse, instructions for clinical use and interpretation, literature references, examples from the paper world, etc. It is not a rendering of the metadata resource as conveyed in the text field of the resource itself. This item SHOULD be populated unless the information is available from context (e.g. the language of the profile is presumed to be the predominant language in the place the profile was created). |

## http://hl7.org/fhir/StructureDefinition/NamingSystem

|  |  |
| --- | --- |
| **Description** | Base StructureDefinition for NamingSystem Resource |
| **NamingSystem** | Naming System |
| Short name | System of unique identification |
| Definition | A curated namespace that issues unique symbols within that namespace for the identification of concepts, people, devices, etc. Represents a "System" used within the Identifier and Coding data types. |
| Constraint Text | Root systems cannot have uuid identifiers |
| Constraint Text | Can only have replacedBy if naming system is retired |
| Constraint Text | Can't have more than one preferred identifier for a type |
| **NamingSystem.name** |  |
| Short name | Name for this naming system (Computer friendly) |
| Definition | A natural language name identifying the naming system. This name should be usable as an identifier for the module by machine processing applications such as code generation. |
| Comment | The name is not expected to be globally unique. The name should be a simple alpha-numeric type name to ensure it is computable friendly. The"symbolic name" for an OID would be captured as an extension. |
| Requirements | Support human navigation & code generation. |
| **NamingSystem.status** |  |
| Definition | The status of this naming system. Enables tracking the life-cycle of the content. |
| Comment | Allows filtering of naming system that are appropriate for use vs. not. |
| Binding Description | The lifecycle status of a Value Set or Concept Map. |
| **NamingSystem.kind** |  |
| Definition | Indicates the purpose for the naming system - what kinds of things does it make unique? |
| Binding Description | Identifies the purpose of the naming system. |
| **NamingSystem.date** |  |
| Short name | Date this was last changed |
| Definition | The date (and optionally time) when the naming system was published. The date must change when the business version changes, if it does, and it must change if the status code changes. In addition, it should change when the substantive content of the naming system changes. |
| Comment | Note that this is not the same as the resource last-modified-date, since the resource may be a secondary representation of the naming system. Additional specific dates may be added as extensions. |
| **NamingSystem.publisher** |  |
| Short name | Name of the publisher (Organization or individual) |
| Definition | The name of the individual or organization that published the naming system. |
| Comment | Usually an organization, but may be an individual. The publisher (or steward) of the naming system is the organization or individual primarily responsible for the maintenance and upkeep of the naming system. This is not necessarily the same individual or organization that developed and initially authored the content. The publisher is the primary point of contact for questions or issues with the naming system. This item SHOULD be populated unless the information is available from context. |
| Requirements | Helps establish the "authority/credibility" of the naming system. May also allow for contact. |
| **NamingSystem.contact** |  |
| Short name | Contact details for the publisher |
| Definition | Contact details to assist a user in finding and communicating with the publisher. |
| Comment | May be a web site, an email address, a telephone number, etc. |
| **NamingSystem.responsible** |  |
| Short name | Who maintains system namespace? |
| Definition | The name of the organization that is responsible for issuing identifiers or codes for this namespace and ensuring their non-collision. |
| Comment | This is the primary organization. Responsibility for some aspects of a namespace may be delegated. |
| **NamingSystem.type** |  |
| Short name | e.g. driver, provider, patient, bank etc. |
| Definition | Categorizes a naming system for easier search by grouping related naming systems. |
| Comment | This will most commonly be used for identifier namespaces, but categories could potentially be useful for code systems and authorities as well. |
| Binding Description | A coded type for an identifier that can be used to determine which identifier to use for a specific purpose. |
| **NamingSystem.description** |  |
| Short name | Natural language description of the naming system |
| Definition | A free text natural language description of the naming system from the consumer's perspective. Details about what the namespace identifies including scope, granularity, version labeling, etc. |
| Comment | This description can be used to capture details such as why the naming system was built, comments about misuse, instructions for clinical use and interpretation, literature references, examples from the paper world, etc. It is not a rendering of the naming system as conveyed in the text field of the resource itself. This item SHOULD be populated unless the information is available from context (e.g. the language of the profile is presumed to be the predominant language in the place the profile was created). |
| **NamingSystem.useContext** |  |
| Short name | Content intends to support these contexts |
| Definition | The content was developed with a focus and intent of supporting the contexts that are listed. These terms may be used to assist with indexing and searching of code system definitions. |
| Comment | When multiple usageContexts are specified, there is no expectation for whether all or any of the contexts apply. |
| Requirements | Assist in searching for appropriate content. |
| **NamingSystem.jurisdiction** |  |
| Short name | Intended jurisdiction for naming system (if applicable) |
| Definition | A jurisdiction in which the naming system is intended to be used. |
| Binding Description | Countries and regions within which this artifact is targeted for use |
| **NamingSystem.usage** |  |
| Short name | How/where is it used |
| Definition | Provides guidance on the use of the namespace, including the handling of formatting characters, use of upper vs. lower case, etc. |
| **NamingSystem.uniqueId** |  |
| Short name | Unique identifiers used for system |
| Definition | Indicates how the system may be identified when referenced in electronic exchange. |
| Comment | Multiple identifiers may exist, either due to duplicate registration, regional rules, needs of different communication technologies, etc. |
| **NamingSystem.uniqueId.type** |  |
| Definition | Identifies the unique identifier scheme used for this particular identifier. |
| Comment | Different identifier types may be used in different types of communications (OIDs for v3, URIs for FHIR, etc.). Other includes RUIDs from v3, standard v2 code name strings, etc. |
| Binding Description | Identifies the style of unique identifier used to identify a namespace. |
| **NamingSystem.uniqueId.value** |  |
| Short name | The unique identifier |
| Definition | The string that should be sent over the wire to identify the code system or identifier system. |
| Comment | If the value is a URI intended for use as FHIR system identifier, the URI should not contain "\" or "?" or "," since this makes escaping very difficult. |
| **NamingSystem.uniqueId.preferred** |  |
| Short name | Is this the id that should be used for this type |
| Definition | Indicates whether this identifier is the "preferred" identifier of this type. |
| Meaning when missing | If there are multiple ids, and one is labelled "preferred", then the assumption is that the others are not preferred. In the absence of any id marked as preferred, no inference can be drawn |
| **NamingSystem.uniqueId.comment** |  |
| Short name | Notes about identifier usage |
| Definition | Notes about the past or intended usage of this identifier. |
| Comment | e.g. "must be used in Germany" or "was initially published in error with this value". |
| **NamingSystem.uniqueId.period** |  |
| Short name | When is identifier valid? |
| Definition | Identifies the period of time over which this identifier is considered appropriate to refer to the naming system. Outside of this window, the identifier might be non-deterministic. |
| Comment | Within a registry, a given identifier should only be "active" for a single namespace at a time. (Ideally, an identifier should only ever be associated with a single namespace across all time). |
| **NamingSystem.replacedBy** |  |
| Short name | Use this instead |
| Definition | For naming systems that are retired, indicates the naming system that should be used in their place (if any). |

## http://hl7.org/fhir/StructureDefinition/OperationDefinition

|  |  |
| --- | --- |
| **Description** | Base StructureDefinition for OperationDefinition Resource |
| **OperationDefinition** | Operation Definition |
| Short name | Definition of an operation or a named query |
| Definition | A formal computable definition of an operation (on the RESTful interface) or a named query (using the search interaction). |
| **OperationDefinition.url** |  |
| Short name | Logical uri to reference this operation definition (globally unique) |
| Definition | An absolute URL that is used to identify this operation definition when it is referenced in a specification, model, design or an instance. This SHALL be a URL, SHOULD be globally unique, and SHOULD be an address at which this operation definition is (or will be) published. The URL SHOULD include the major version of the operation definition. For more information see [Technical and Business Versions](resource.html#versions). |
| Comment | Can be a urn:uuid: or a urn:oid:, but real http: addresses are preferred. |
| Requirements | Allows the operation definition to be referenced by a single globally unique identifier. |
| **OperationDefinition.version** |  |
| Short name | Business version of the operation definition |
| Definition | The identifier that is used to identify this version of the operation definition when it is referenced in a specification, model, design or instance. This is an arbitrary value managed by the operation definition author and is not expected to be globally unique. For example, it might be a timestamp (e.g. yyyymmdd) if a managed version is not available. There is also no expectation that versions are orderable. |
| Comment | There may be multiple different instances of a operation definition that have the same identifier but different versions. |
| **OperationDefinition.name** |  |
| Short name | Name for this operation definition (Computer friendly) |
| Definition | A natural language name identifying the operation definition. This name should be usable as an identifier for the module by machine processing applications such as code generation. |
| Comment | The name is not expected to be globally unique. The name should be a simple alpha-numeric type name to ensure it is computable friendly. |
| Requirements | Support human navigation & code generation. |
| **OperationDefinition.status** |  |
| Definition | The status of this operation definition. Enables tracking the life-cycle of the content. |
| Comment | Allows filtering of operation definition that are appropriate for use vs. not. |
| Binding Description | The lifecycle status of a Value Set or Concept Map. |
| **OperationDefinition.kind** |  |
| Definition | Whether this is an operation or a named query. |
| Comment | Named queries are invoked differently, and have different capabilities. |
| Binding Description | Whether an operation is a normal operation or a query. |
| **OperationDefinition.experimental** |  |
| Short name | If for testing purposes, not real usage |
| Definition | A flag to indicate that this operation definition is authored for testing purposes (or education/evaluation/marketing), and is not intended to be used for genuine usage. |
| Comment | Allows filtering of operation definition that are appropriate for use vs. not. |
| Requirements | Enables experimental content to be developed following the same life-cycle as a production-level operation definition would. |
| **OperationDefinition.date** |  |
| Short name | Date this was last changed |
| Definition | The date (and optionally time) when the operation definition was published. The date must change when the business version changes, if it does, and it must change if the status code changes. In addition, it should change when the substantive content of the operation definition changes. |
| Comment | Note that this is not the same as the resource last-modified-date, since the resource may be a secondary representation of the operation definition. Additional specific dates may be added as extensions. |
| **OperationDefinition.publisher** |  |
| Short name | Name of the publisher (Organization or individual) |
| Definition | The name of the individual or organization that published the operation definition. |
| Comment | Usually an organization, but may be an individual. The publisher (or steward) of the operation definition is the organization or individual primarily responsible for the maintenance and upkeep of the operation definition. This is not necessarily the same individual or organization that developed and initially authored the content. The publisher is the primary point of contact for questions or issues with the operation definition. This item SHOULD be populated unless the information is available from context. |
| Requirements | Helps establish the "authority/credibility" of the operation definition. May also allow for contact. |
| **OperationDefinition.contact** |  |
| Short name | Contact details for the publisher |
| Definition | Contact details to assist a user in finding and communicating with the publisher. |
| Comment | May be a web site, an email address, a telephone number, etc. |
| **OperationDefinition.description** |  |
| Short name | Natural language description of the operation definition |
| Definition | A free text natural language description of the operation definition from the consumer's perspective. |
| Comment | This description can be used to capture details such as why the operation definition was built, comments about misuse, instructions for clinical use and interpretation, literature references, examples from the paper world, etc. It is not a rendering of the operation definition as conveyed in the text field of the resource itself. This item SHOULD be populated unless the information is available from context (e.g. the language of the profile is presumed to be the predominant language in the place the profile was created). |
| **OperationDefinition.useContext** |  |
| Short name | Content intends to support these contexts |
| Definition | The content was developed with a focus and intent of supporting the contexts that are listed. These terms may be used to assist with indexing and searching of code system definitions. |
| Comment | When multiple usageContexts are specified, there is no expectation for whether all or any of the contexts apply. |
| Requirements | Assist in searching for appropriate content. |
| **OperationDefinition.jurisdiction** |  |
| Short name | Intended jurisdiction for operation definition (if applicable) |
| Definition | A jurisdiction in which the operation definition is intended to be used. |
| Binding Description | Countries and regions within which this artifact is targeted for use |
| **OperationDefinition.purpose** |  |
| Short name | Why this operation definition is defined |
| Definition | Explains why this operation definition is needed and why it has been designed as it has. |
| Comment | This element does not describe the usage of the operation definition (See, e.g, the comments element, or relatedArtifacts), rather it's for traceability of ''why'' the resource is either needed or ''why'' it is defined as it is. This may be used to point to source materials or specifications that drove the structure of this operation definition. |
| **OperationDefinition.idempotent** |  |
| Short name | Whether content is unchanged by the operation |
| Definition | Operations that are idempotent (see [HTTP specification definition of idempotent](http://www.w3.org/Protocols/rfc2616/rfc2616-sec9.html)) may be invoked by performing an HTTP GET operation instead of a POST. |
| **OperationDefinition.code** |  |
| Short name | Name used to invoke the operation |
| Definition | The name used to invoke the operation. |
| Comment | The code does not include the '$' prefix that is always included in the URL when the operation is invoked. |
| **OperationDefinition.comment** |  |
| Short name | Additional information about use |
| Definition | Additional information about how to use this operation or named query. |
| **OperationDefinition.base** |  |
| Short name | Marks this as a profile of the base |
| Definition | Indicates that this operation definition is a constraining profile on the base. |
| Comment | A constrained profile can make optional parameters required or not used and clarify documentation. |
| **OperationDefinition.resource** |  |
| Short name | Types this operation applies to |
| Definition | The types on which this operation can be executed. |
| Comment | If the type is an abstract resource ("Resource" or "DomainResource") then the operation can be invoked on any concrete specialization. |
| Binding Description | One of the resource types defined as part of FHIR. |
| **OperationDefinition.system** |  |
| Short name | Invoke at the system level? |
| Definition | Indicates whether this operation or named query can be invoked at the system level (e.g. without needing to choose a resource type for the context). |
| **OperationDefinition.type** |  |
| Short name | Invole at the type level? |
| Definition | Indicates whether this operation or named query can be invoked at the resource type level for any given resource type level (e.g. without needing to choose a specific resource id for the context). |
| **OperationDefinition.instance** |  |
| Short name | Invoke on an instance? |
| Definition | Indicates whether this operation can be invoked on a particular instance of one of the given types. |
| **OperationDefinition.parameter** |  |
| Short name | Parameters for the operation/query |
| Definition | The parameters for the operation/query. |
| Comment | Query Definitions only have one output parameter, named "result". This may not be described, but can be to allow a profile to be defined. |
| Constraint Text | Either a type must be provided, or parts |
| Constraint Text | A search type can only be specified for parameters of type string |
| **OperationDefinition.parameter.name** |  |
| Short name | Name in Parameters.parameter.name or in URL |
| Definition | The name of used to identify the parameter. |
| Comment | This name must be a token (start with a letter in a..z, and only contain letters, numerals, and underscore. Note that for search parameters (type = string, with a search type), the name may be altered by the search modifiers. |
| **OperationDefinition.parameter.use** |  |
| Definition | Whether this is an input or an output parameter. |
| Comment | If a parameter name is used for both an input and an output parameter, the parameter should be defined twice. |
| Binding Description | Whether an operation parameter is an input or an output parameter. |
| **OperationDefinition.parameter.min** |  |
| Short name | Minimum Cardinality |
| Definition | The minimum number of times this parameter SHALL appear in the request or response. |
| **OperationDefinition.parameter.max** |  |
| Short name | Maximum Cardinality (a number or \*) |
| Definition | The maximum number of times this element is permitted to appear in the request or response. |
| **OperationDefinition.parameter.documentation** |  |
| Short name | Description of meaning/use |
| Definition | Describes the meaning or use of this parameter. |
| **OperationDefinition.parameter.type** |  |
| Short name | What type this parameter has |
| Definition | The type for this parameter. |
| Comment | if there is no stated parameter, then the parameter is a multi-part parameter; type and must have at least one part defined. |
| Binding Description | Either an abstract type, a resource or a data type. |
| **OperationDefinition.parameter.searchType** |  |
| Definition | How the parameter is understood as a search parameter. This is only used if the parameter type is 'string'. |
| Binding Description | Data types allowed to be used for search parameters. |
| **OperationDefinition.parameter.profile** |  |
| Short name | Profile on the type |
| Definition | A profile the specifies the rules that this parameter must conform to. |
| **OperationDefinition.parameter.binding** |  |
| Short name | ValueSet details if this is coded |
| Definition | Binds to a value set if this parameter is coded (code, Coding, CodeableConcept). |
| **OperationDefinition.parameter.binding.strength** |  |
| Definition | Indicates the degree of conformance expectations associated with this binding - that is, the degree to which the provided value set must be adhered to in the instances. |
| Comment | For further discussion, see [Using Terminologies](terminologies.html). |
| Synonym | conformance |
| Synonym | extensibility |
| Binding Description | Indication of the degree of conformance expectations associated with a binding. |
| **OperationDefinition.parameter.binding.valueSet[x]** |  |
| Short name | Source of value set |
| Definition | Points to the value set or external definition (e.g. implicit value set) that identifies the set of codes to be used. |
| Comment | For value sets with a referenceResource, the display can contain the value set description. The reference may be version-specific or not. |
| **OperationDefinition.parameter.part** |  |
| Short name | Parts of a nested Parameter |
| Definition | The parts of a nested Parameter. |
| Comment | Query Definitions only have one output parameter, named "result". This may not be described, but can be to allow a profile to be defined. |
| **OperationDefinition.overload** |  |
| Short name | Define overloaded variants for when generating code |
| Definition | Defines an appropriate combination of parameters to use when invoking this operation, to help code generators when generating overloaded parameter sets for this operation. |
| Comment | The combinations are suggestions as to which sets of parameters to use together, but the combinations are not intended to be authoritative. |
| **OperationDefinition.overload.parameterName** |  |
| Short name | Name of parameter to include in overload |
| Definition | Name of parameter to include in overload. |
| **OperationDefinition.overload.comment** |  |
| Short name | Comments to go on overload |
| Definition | Comments to go on overload. |

## http://hl7.org/fhir/StructureDefinition/OperationOutcome

|  |  |
| --- | --- |
| **Description** | Base StructureDefinition for OperationOutcome Resource |
| **OperationOutcome** | Operation Outcome |
| Short name | Information about the success/failure of an action |
| Definition | A collection of error, warning or information messages that result from a system action. |
| Comment | Can result from the failure of a REST call or be part of the response message returned from a request message. If sent with extensions overriding particular issues, might even appear as part of a request message. |
| **OperationOutcome.issue** |  |
| Short name | A single issue associated with the action |
| Definition | An error, warning or information message that results from a system action. |
| **OperationOutcome.issue.severity** |  |
| Definition | Indicates whether the issue indicates a variation from successful processing. |
| Comment | This is labeled as "Is Modifier" because applications should not confuse hints and warnings with errors. |
| Requirements | Indicates how relevant the issue is to the overall success of the action. |
| Binding Description | How the issue affects the success of the action. |
| **OperationOutcome.issue.code** |  |
| Short name | Error or warning code |
| Definition | Describes the type of the issue. The system that creates an OperationOutcome SHALL choose the most applicable code from the IssueType value set, and may additional provide its own code for the error in the details element. |
| Requirements | Expresses the issue in a human and computer-friendly way, allowing the requesting system to behave differently based on the type of issue. |
| Binding Description | A code that describes the type of issue. |
| **OperationOutcome.issue.details** |  |
| Short name | Additional details about the error |
| Definition | Additional details about the error. This may be a text description of the error, or a system code that identifies the error. |
| Comment | A human readable description of the error issue SHOULD be placed in details.text. |
| Binding Description | A code that provides details as the exact issue. |
| **OperationOutcome.issue.diagnostics** |  |
| Short name | Additional diagnostic information about the issue |
| Definition | Additional diagnostic information about the issue. Typically, this may be a description of how a value is erroneous, or a stack dump to help trace the issue. |
| Comment | Typically this field is used to provide troubleshooting information about the error. |
| **OperationOutcome.issue.location** |  |
| Short name | Path of element(s) related to issue |
| Definition | For resource issues, this will be a simple XPath limited to element names, repetition indicators and the default child access that identifies one of the elements in the resource that caused this issue to be raised. For HTTP errors, will be "http." + the parameter name. |
| Comment | The root of the XPath is the resource or bundle that generated OperationOutcome. Each XPath SHALL resolve to a single node. The XPath syntax is used whether the referenced instance is expressed in XML or JSON. Note that expression is being trialed as an alternative to XPath. |
| Requirements | Allows systems to highlight or otherwise guide users to elements implicated in issues to allow them to be fixed more easily. |
| **OperationOutcome.issue.expression** |  |
| Short name | FHIRPath of element(s) related to issue |
| Definition | A simple FHIRPath limited to element names, repetition indicators and the default child access that identifies one of the elements in the resource that caused this issue to be raised. |
| Comment | The root of the FHIRPath is the resource or bundle that generated OperationOutcome. Each FHIRPath SHALL resolve to a single node. |
| Requirements | Allows systems to highlight or otherwise guide users to elements implicated in issues to allow them to be fixed more easily. |

## http://hl7.org/fhir/StructureDefinition/Parameters

|  |  |
| --- | --- |
| **Description** | Base StructureDefinition for Parameters Resource |
| **Parameters** | Parameters |
| Short name | Operation Request or Response |
| Definition | This special resource type is used to represent an operation request and response (operations.html). It has no other use, and there is no RESTful endpoint associated with it. |
| Comment | The parameters that may be used are defined by the OperationDefinition resource. |
| **Parameters.parameter** |  |
| Short name | Operation Parameter |
| Definition | A parameter passed to or received from the operation. |
| Constraint Text | A parameter must have only one of (value, resource, part) |
| **Parameters.parameter.name** |  |
| Short name | Name from the definition |
| Definition | The name of the parameter (reference to the operation definition). |
| **Parameters.parameter.value[x]** |  |
| Short name | If parameter is a data type |
| Definition | If the parameter is a data type. |
| **Parameters.parameter.resource** |  |
| Short name | If parameter is a whole resource |
| Definition | If the parameter is a whole resource. |
| **Parameters.parameter.part** |  |
| Short name | Named part of a multi-part parameter |
| Definition | A named part of a multi-part parameter. |
| Comment | Only one level of nested parameters is allowed. |

## http://hl7.org/fhir/StructureDefinition/Questionnaire

|  |  |
| --- | --- |
| **Description** | Base StructureDefinition for Questionnaire Resource |
| **Purpose** | To support structured, hierarchical registration of data gathered using digital forms and other questionnaires. |
| **Questionnaire** | Questionnaire |
| Short name | A structured set of questions |
| Definition | A structured set of questions intended to guide the collection of answers. The questions are ordered and grouped into coherent subsets, corresponding to the structure of the grouping of the underlying questions. |
| Synonym | Form |
| Synonym | CRF |
| Synonym | Survey |
| Constraint Text | The link ids for groups and questions must be unique within the questionnaire |
| **Questionnaire.url** |  |
| Short name | Globally unique logical identifier for questionnaire |
| Definition | An absolute URL that is used to identify this questionnaire when it is referenced in a specification, model, design or an instance. This SHALL be a URL, SHOULD be globally unique, and SHOULD be an address at which this questionnaire is (or will be) published. |
| **Questionnaire.identifier** |  |
| Short name | External identifiers for this questionnaire |
| Definition | This records identifiers associated with this question set that are defined by business processes and/or used to refer to it when a direct URL reference to the resource itself is not appropriate (e.g. in CDA documents, or in written / printed documentation). |
| Requirements | Need to allow connection to a wider workflow. |
| **Questionnaire.version** |  |
| Short name | Logical identifier for this version of Questionnaire |
| Definition | The version number assigned by the publisher for business reasons. It may remain the same when the resource is updated. |
| Requirements | In some cases, separate resource instances might be created for each version (if an older version can be maintained once a new version exists). |
| Synonym | N/A - MIF rather than RIM level |
| **Questionnaire.status** |  |
| Definition | The lifecycle status of the questionnaire as a whole. |
| Binding Description | Lifecycle status of the questionnaire. |
| **Questionnaire.date** |  |
| Short name | Date this version was authored |
| Definition | The date that this questionnaire was last changed. |
| Comment | Upon creation Questionnaire.date will be the creation date and upon transition to "active", Questionnaire.date will be the publication date. However, the date will change with any significant modification of the Questionnaire, so to reliably find this information, Provenance or extensions must be used. |
| Synonym | Revision Date |
| **Questionnaire.publisher** |  |
| Short name | Organization/individual who designed the questionnaire |
| Definition | Organization or person responsible for developing and maintaining the questionnaire. |
| Requirements | Conveys responsibility for the questions and their organization and also helps evaluate the questionnaire's "authority". |
| **Questionnaire.telecom** |  |
| Short name | Contact information of the publisher |
| Definition | Contact details to assist a user in finding and communicating with the publisher. |
| **Questionnaire.useContext** |  |
| Short name | Questionnaire intends to support these contexts |
| Definition | A code that identifies the questionnaire as falling into a particular group of like questionnaires; e.g. "Pediatric", "Admissions", "Research", "Demographic", "Opinion Survey", etc. |
| Requirements | Allows discovery of questionnaires. Also allows organization of lists of questionnaires into groups for presentation. |
| Binding Description | Indicates the countries, regions, disciplines and other aspects of use within which this artifact is targeted for use. |
| **Questionnaire.title** |  |
| Short name | Name for the questionnaire |
| Definition | The name or label associated with this questionnaire. |
| Requirements | Used for display, searching. |
| **Questionnaire.code** |  |
| Short name | Concept that represents the overall questionnaire |
| Definition | Identifies how this question or group of questions is known in a particular terminology such as LOINC. |
| Requirements | Allows linking of the complete Questionnaire resources to formal terminologies. It's common for "pannels" of questions to be identified by a code. |
| Binding Description | Codes for questionnaires, groups and individual questions |
| **Questionnaire.subjectType** |  |
| Short name | Resource that can be subject of QuestionnaireResponse |
| Definition | Identifies the types of subjects that can be the subject of the questionnaire. |
| Comment | If none are specified, then the subject is unlimited. |
| Binding Description | One of the resource types defined as part of FHIR. |
| **Questionnaire.item** |  |
| Short name | Questions and sections within the Questionnaire |
| Definition | The questions and groupings of questions that make up the questionnaire. |
| Constraint Text | Read-only can't be specified for "display" items |
| Constraint Text | Default values can't be specified for groups or display items |
| Constraint Text | Required and repeat aren't permitted for display items |
| Constraint Text | Only 'choice' items can have options |
| Constraint Text | A question cannot have both option and options |
| Constraint Text | Display items cannot have a "code" asserted |
| Constraint Text | Maximum length can only be declared for simple question types |
| Constraint Text | Group items must have nested items, display items cannot have nested items |
| Constraint Text | Type is required if a definition is not provided |
| **Questionnaire.item.linkId** |  |
| Short name | Unique id for item in questionnaire |
| Definition | An identifier that is unique within the Questionnaire allowing linkage to the equivalent item in a QuestionnaireResponse resource. |
| Comment | This ''can'' be a meaningful identifier (e.g. a LOINC code) but is not intended to have any meaning. GUIDs or sequential numbers are appropriate here. |
| Requirements | [QuestionnaireResponse](questionnaireresponse.html#) does not require omitted items to be included and may have some items that repeat, so linkage based on position alone is not sufficient. |
| **Questionnaire.item.definition** |  |
| Short name | ElementDefinition - details for the item |
| Definition | A reference to an [ElementDefinition](elementdefinition.html) that provides the details for the item. If a definition is provided, then the following element values can be inferred from the definition: \* code (ElementDefinition.code) \* type (ElementDefinition.type) \* required (ElementDefinition.min) \* repeats (ElementDefinition.max) \* maxLength (ElementDefinition.maxLength) \* options (ElementDefinition.binding) Any information provided in these elements on a Questionnaire Item overrides the information from the definition. |
| Comment | The url refers to a an ElementDefinition in either a [StructureDefinition](structuredefinition.html#) or a [DataElement](dataelement.html#), and always starts with the canonical URL for the target resource. When referring to a StructureDefinition, a fragment identifier is used to specify the element definition by it\'s id (Element.id). E.g. http://hl7.org/fhir/StructureDefinition/Observation#Observation.value[x]. In the absence of a fragment identifier, the first/root element definition in the target is the matching element definition. Note that [LOINC codes](loinc.html#dataelements) implicitly define DataElement resources. |
| Requirements | A common pattern is to define a set of data elements, and then build multiple different questionnaires for different circumstances to gather the data. This element provides traceability to the common definition, and allows the content for the question to come from the underlying definition. |
| **Questionnaire.item.code** |  |
| Short name | Corresponding Concept for this item in a terminology |
| Definition | A Terminology code that corresponds to this group or question (e.g. a code from LOINC, which defines many questions and answers). |
| Comment | The code(s) for the "root" group apply to the questionnaire as a whole. Value may come from the ElementDefinition referred to by .definition. |
| Requirements | Allows linking of groups of questions (and complete Questionnaire resources) to formal terminologies. |
| Binding Description | Codes for questionnaires, groups and individual questions |
| **Questionnaire.item.prefix** |  |
| Short name | E.g. "1(a)", "2.5.3" |
| Definition | A short label for a particular group, question or set of display text within the questionnaire. |
| Comment | These are generally unique within a questionnaire, though this is not guaranteed. Some questionnaires may have multiple questions with the same label with logic to control which gets exposed. Typically these won't be used for "text" items, though such use is not prohibited. Systems SHOULD NOT generate their own prefixes if prefixes are defined for any items within a Questionnaire. |
| Requirements | Separating the label from the question text allows improved rendering. Also, instructions will often refer to specific prefixes, so there's a need for the questionnaire design to have control over what labels are used. |
| Synonym | label |
| **Questionnaire.item.text** |  |
| Short name | Primary text for the item |
| Definition | The name of a section, the text of a question or text content for a text item. |
| **Questionnaire.item.type** |  |
| Definition | Identifies the type of questionnaire item this is - whether text for display, a grouping of other items or a particular type of data to be captured (string, integer, coded choice, etc.). |
| Comment | Additional constraints on the type of answer can be conveyed by extensions. Value may come from the ElementDefinition referred to by .definition. |
| Requirements | Defines the format in which the user is to be prompted for the answer. |
| Binding Description | Distinguishes groups from questions and display text and indicates data type for questions |
| **Questionnaire.item.enableWhen** |  |
| Short name | Only allow data when: |
| Definition | If present, indicates that this item should only be enabled (displayed/allow answers to be captured) when the specified condition is true. |
| Comment | If multiple repetitions of this extension are present, the item should be enabled when the condition for \*any\* of the repetitions is true. I.e. Treat "enableWhen"s as being joined by an "or" clause. If enableWhen is present for an item, "required" is ignored unless one of the enableWhen conditions is met. |
| Requirements | Allows questionnaires to adapt based on answers to other questions; e.g. If physical gender is specified as a male, no need to capture pregnancy history. Also allows conditional display of instructions or groups of questions. |
| Constraint Text | enableWhen must contain either a 'answer' or a 'hasAnswer' element |
| **Questionnaire.item.enableWhen.question** |  |
| Short name | Question that determines whether item is enabled |
| Definition | The linkId for the question whose answer (or lack of answer) governs whether this item is enabled. |
| Comment | If multiple question occurrences are present for the same question (same linkId), then this refers to the nearest question occurrence reachable by tracing first the "ancestor" axis and then the "preceding" axis and then the "following" axis. |
| **Questionnaire.item.enableWhen.hasAnswer** |  |
| Short name | Enable when answered or not |
| Definition | If present, indicates that this item should be enabled only if the specified question is answered or not answered. |
| Comment | If answered=false and answer values are also provided, then they are treated as "or". I.e. "Enable if the question is unanswered or the answer is one of the specified values". If answered=true and answers are present, one of the specified answers must be met. (So there's little reason to specify answered=true if answers are present.). |
| **Questionnaire.item.enableWhen.answer[x]** |  |
| Short name | Value question must have |
| Definition | If present, then the answer for the referenced question must match this answer for all components present in the enableWhen.answer. |
| Comment | Components not specified in the answer do not need to match. For example, if enableWhen specifies code + system for a Coding, it's ok if the answer has a "display" element. The dataType of this element must be the same as the data type of the question being referenced. |
| Binding Description | Allowed values to answer questions. |
| **Questionnaire.item.required** |  |
| Short name | Whether the item must be included in data results |
| Definition | If true, indicates that the item must be present in a "completed" QuestionnaireResponse. If false, the item may be skipped when answering the questionnaire. |
| Comment | Questionnaire.item.required only has meaning for elements that are conditionally enabled with enableWhen if the condition evaluates to true. If an item that contains other items is marked as required, that does not automatically make the contained elements required (though required groups must contain at least one child element). Value may come from the ElementDefinition referred to by .definition. |
| **Questionnaire.item.repeats** |  |
| Short name | Whether the item may repeat |
| Definition | Whether the item may occur multiple times in the instance, containing multiple sets of answers. |
| Comment | If a question is marked as repeats=true, then multiple answers can be provided for the question in the corresponding QuestionnaireResponse. When rendering the questionnaire, it is up to the rendering software whether to render the question text for each answer repetition or to simply list each of the answers beneath the question. (Which is most appropriate visually may depend on the type of answer as well as whether there are nested items.). Value may come from the ElementDefinition referred to by .definition. |
| Requirements | Items may be used to create set of (related) questions that can be repeated to give multiple answers to such a set. |
| **Questionnaire.item.readOnly** |  |
| Short name | Don't allow human editing |
| Definition | If true, the value cannot be changed by a human respondent to the Questionnaire. |
| Comment | The value of readOnly elements can be established by asserting extensions for defaultValues, linkages that support pre-population and/or extensions that support calculation based on other answers. |
| Requirements | Allows certain information to be phrased (and rendered) as a question and an answer, while keeping users from changing it. May also be useful for preventing changes to pre-populated portions of a questionnaire, for calculated values, etc. |
| **Questionnaire.item.maxLength** |  |
| Short name | No more than this many characters |
| Definition | The maximum number of characters that are permitted in the answer to be considered a "valid" QuestionnaireResponse. |
| Comment | For base64binary, reflects the number of characters representing the encoded data, not the number of bytes of the binary data. Value may come from the ElementDefinition referred to by .definition. |
| **Questionnaire.item.options** |  |
| Short name | Valueset containing permitted answers |
| Definition | Reference to a value set containing a list of codes representing permitted answers for the question. |
| Comment | LOINC defines many useful value sets for questionnaire response. See [LOINC Answer Lists](loinc.html#alist). Value may come from the ElementDefinition referred to by .definition. |
| **Questionnaire.item.option** |  |
| Short name | Permitted answer |
| Definition | For a "choice" question, identifies one of the permitted answers for the question. |
| **Questionnaire.item.option.value[x]** |  |
| Short name | Answer value |
| Definition | Identifies a specific answer that's allowed as the answer to a question. |
| Binding Description | Allowed values to answer questions. |
| **Questionnaire.item.initial[x]** |  |
| Short name | Default value when item is first rendered |
| Definition | The value that should be defaulted when rendering the questionnaire for user input. |
| Comment | The user is allowed to change the value and override the default (unless marked as read-only). If the user doesn't change the value, then this initial value will be persisted when the QuestionnaireResponse is initially created. |
| Requirements | In some workflows, having defaults saves time. |
| Binding Description | Allowed values to answer questions. |
| **Questionnaire.item.item** |  |
| Short name | Nested questionnaire items |
| Definition | Allows text, questions and other groups to be nested beneath a question or group. |
| Requirements | Reports can consist of complex nested groups. |

## http://hl7.org/fhir/StructureDefinition/QuestionnaireResponse

|  |  |
| --- | --- |
| **Description** | Base StructureDefinition for QuestionnaireResponse Resource |
| **Purpose** | To support structured, hierarchical registration of data gathered using digital forms and other questionnaires. |
| **QuestionnaireResponse** | Questionnaire Response |
| Short name | A structured set of questions and their answers |
| Definition | A structured set of questions and their answers. The questions are ordered and grouped into coherent subsets, corresponding to the structure of the grouping of the underlying questions. |
| Synonym | Form |
| Synonym | QuestionnaireAnswers |
| **QuestionnaireResponse.identifier** |  |
| Short name | Unique id for this set of answers |
| Definition | A business identifier assigned to a particular completed (or partially completed) questionnaire. |
| Requirements | Used for tracking, registration and other business purposes. |
| **QuestionnaireResponse.basedOn** |  |
| Short name | Request fulfilled by this QuestionnaireResponse |
| Definition | Identifies the order, proposal or plan that is fulfilled in whole or in part by this QuestionnaireResponse. |
| Requirements | Supports traceability of authorization and confirmation of action on recommendations. |
| Synonym | order |
| **QuestionnaireResponse.parent** |  |
| Short name | Part of this action |
| Definition | Identifies a procedure or observation that this questionnaire was performed as part of the execution of. |
| Comment | Composition of questionnaire responses will be handled by the parent questionnaire having answers that reference the child questionnaire. For relationships to referrals, and other types of requests, use basedOn. |
| **QuestionnaireResponse.questionnaire** |  |
| Short name | Form being answered |
| Definition | Indicates the Questionnaire resource that defines the form for which answers are being provided. |
| Comment | If a QuestionnaireResponse references a Questionnaire, then the QuestionnaireResponse structure must be consistent with the Questionnaire (i.e. questions must be organized into the same groups, nested questions must still be nested, etc.). |
| Requirements | Needed to allow editing of the questionnaire in a manner that enforces the constraints of the original form. |
| Synonym | Form |
| **QuestionnaireResponse.status** |  |
| Definition | The lifecycle status of the questionnaire response as a whole. |
| Requirements | The information on Questionnaire resources may possibly be gathered during multiple sessions and altered after considered being finished. Questionnaire resources with just questions may serve as template forms, with the applicable publication statuses. |
| Binding Description | Lifecycle status of the questionnaire response. |
| **QuestionnaireResponse.subject** |  |
| Short name | The subject of the questions |
| Definition | The subject of the questionnaire response. This could be a patient, organization, practitioner, device, etc. This is who/what the answers apply to, but is not necessarily the source of information. |
| Comment | If the Questionnaire declared a subjectType, the resource pointed to by this element must be an instance of that type. |
| Requirements | The subject context must be known. |
| Synonym | Patient |
| Synonym | Focus |
| **QuestionnaireResponse.context** |  |
| Short name | Encounter or Episode during which questionnaire was completed |
| Definition | The encounter or episode of care with primary association to the questionnaire. |
| Comment | A questionnaire that was initiated during an encounter but not fully completed during the encounter would still generally be associated with the encounter. |
| **QuestionnaireResponse.authored** |  |
| Short name | Date this version was authored |
| Definition | The date and/or time that this version of the questionnaire response was authored. |
| Comment | May be different from the update time of the resource itself, because that is the status of the collection and authoring. This element is optional to allow for systems that may not know the value, however it SHOULD be populated if possible. |
| Requirements | Clinicians need to be able to check the date that the information in the questionnaire was collected, to derive the context of the answers. |
| Synonym | Date Created |
| Synonym | Date published |
| Synonym | Date Issued |
| Synonym | Date updated |
| **QuestionnaireResponse.author** |  |
| Short name | Person who received and recorded the answers |
| Definition | Person who received the answers to the questions in the QuestionnaireResponse and recorded them in the system. |
| Comment | Mapping a subject's answers to multiple choice options and determining what to put in the textual answer is a matter of interpretation. Authoring by device would indicate that some portion of the questionnaire had been auto-populated. |
| Requirements | Need to know who interpreted the subject's answers to the questions in the questionnaire, and selected the appropriate options for answers. |
| Synonym | Laboratory |
| Synonym | Service |
| Synonym | Practitioner |
| Synonym | Department |
| Synonym | Company |
| Synonym | Performer |
| **QuestionnaireResponse.source** |  |
| Short name | The person who answered the questions |
| Definition | The person who answered the questions about the subject. |
| Comment | If not specified, no inference can be made about who provided the data. |
| Requirements | When answering questions about a subject that is minor, incapable of answering or an animal, another human source is used to answer the questions. |
| **QuestionnaireResponse.item** |  |
| Short name | Groups and questions |
| Definition | Corresponds to a group or question item from the original questionnaire. |
| Comment | Groups cannot have answers and therefore must nest directly within item. When dealing with questions, nesting must occur within each answer because some questions may have multiple answers (and the nesting occurs for each answer). |
| Constraint Text | Nested item can't be beneath both item and answer |
| **QuestionnaireResponse.item.linkId** |  |
| Short name | Pointer to specific item from Questionnaire |
| Definition | Identifies the item from the Questionnaire that corresponds to this item in the QuestionnaireResponse resource. |
| Requirements | Items can repeat in the answers, so a direct 1..1 correspondence may not exist - requiring correspondence by identifier. |
| **QuestionnaireResponse.item.definition** |  |
| Short name | ElementDefinition - details for the item |
| Definition | A reference to an [ElementDefinition](elementdefinition.html) that provides the details for the item. |
| Comment | The ElementDefinition must be in a [StructureDefinition](structuredefinition.html) or a [DataElement](dataelement.html), and must have a fragment identifier that identifies the specific data element by it\'s id (Element.id). E.g. http://hl7.org/fhir/StructureDefinition/Observation#Observation.value[x]. |
| Requirements | A common pattern is to define a set of data elements, and then build multiple different questionnaires for different circumstances to gather the data. This element provides traceability to the common definition. |
| **QuestionnaireResponse.item.text** |  |
| Short name | Name for group or question text |
| Definition | Text that is displayed above the contents of the group or as the text of the question being answered. |
| Requirements | Allows the questionnaire response to be read without access to the questionnaire. |
| **QuestionnaireResponse.item.subject** |  |
| Short name | The subject this group's answers are about |
| Definition | More specific subject this section's answers are about, details the subject given in QuestionnaireResponse. |
| Requirements | Sometimes a group of answers is about a specific participant, artifact or piece of information in the patient's care or record, e.g. a specific Problem, RelatedPerson, Allergy etc. |
| **QuestionnaireResponse.item.answer** |  |
| Short name | The response(s) to the question |
| Definition | The respondent's answer(s) to the question. |
| Comment | The value is nested because we cannot have a repeating structure that has variable type. |
| **QuestionnaireResponse.item.answer.value[x]** |  |
| Short name | Single-valued answer to the question |
| Definition | The answer (or one of the answers) provided by the respondent to the question. |
| Comment | More complex structures (Attachment, Resource and Quantity) will typically be limited to electronic forms that can expose an appropriate user interface to capture the components and enforce the constraints of a complex data type. Additional complex types can be introduced through extensions. |
| Requirements | Ability to retain a single-valued answer to a question. |
| Binding Description | Code indicating the response provided for a question. |
| **QuestionnaireResponse.item.answer.item** |  |
| Short name | Nested groups and questions |
| Definition | Nested groups and/or questions found within this particular answer. |
| Requirements | It is useful to have "sub-questions", questions which normally appear when certain answers are given and which collect additional details. |
| **QuestionnaireResponse.item.item** |  |
| Short name | Nested questionnaire response items |
| Definition | Questions or sub-groups nested beneath a question or group. |
| Requirements | Reports can consist of complex nested groups. |

## http://hl7.org/fhir/StructureDefinition/Resource

|  |  |
| --- | --- |
| **Description** | Base StructureDefinition for Resource Resource |
| **Resource** | Resource |
| Short name | Base Resource |
| Definition | This is the base resource type for everything. |
| **Resource.id** |  |
| Short name | Logical id of this artifact |
| Definition | The logical id of the resource, as used in the URL for the resource. Once assigned, this value never changes. |
| Comment | The only time that a resource does not have an id is when it is being submitted to the server using a create operation. |
| **Resource.meta** |  |
| Short name | Metadata about the resource |
| Definition | The metadata about the resource. This is content that is maintained by the infrastructure. Changes to the content may not always be associated with version changes to the resource. |
| **Resource.implicitRules** |  |
| Short name | A set of rules under which this content was created |
| Definition | A reference to a set of rules that were followed when the resource was constructed, and which must be understood when processing the content. |
| Comment | Asserting this rule set restricts the content to be only understood by a limited set of trading partners. This inherently limits the usefulness of the data in the long term. However, the existing health eco-system is highly fractured, and not yet ready to define, collect, and exchange data in a generally computable sense. Wherever possible, implementers and/or specification writers should avoid using this element as much as possible. |
| **Resource.language** |  |
| Short name | Language of the resource content |
| Definition | The base language in which the resource is written. |
| Comment | Language is provided to support indexing and accessibility (typically, services such as text to speech use the language tag). The html language tag in the narrative applies to the narrative. The language tag on the resource may be used to specify the language of other presentations generated from the data in the resource Not all the content has to be in the base language. The Resource.language should not be assumed to apply to the narrative automatically. If a language is specified, it should it also be specified on the div element in the html (see rules in HTML5 for information about the relationship between xml:lang and the html lang attribute). |
| Binding Description | A human language. |

## http://hl7.org/fhir/StructureDefinition/SearchParameter

|  |  |
| --- | --- |
| **Description** | Base StructureDefinition for SearchParameter Resource |
| **SearchParameter** | Search Parameter |
| Short name | Search Parameter for a resource |
| Definition | A search parameter that defines a named search item that can be used to search/filter on a resource. |
| Comment | In FHIR, search is not performed directly on a resource (by XML or JSON path), but on a named parameter that maps into the resource content. |
| Constraint Text | If an xpath is present, there SHALL be an xpathUsage |
| Constraint Text | Search parameters can only have chain names when the search parameter type is 'reference' |
| **SearchParameter.url** |  |
| Short name | Logical uri to reference this search parameter (globally unique) |
| Definition | An absolute URL that is used to identify this search parameter when it is referenced in a specification, model, design or an instance. This SHALL be a URL, SHOULD be globally unique, and SHOULD be an address at which this search parameter is (or will be) published. The URL SHOULD include the major version of the search parameter. For more information see [Technical and Business Versions](resource.html#versions). |
| Comment | Can be a urn:uuid: or a urn:oid:, but real http: addresses are preferred. |
| Requirements | Allows the search parameter to be referenced by a single globally unique identifier. To allow referencing and reusing search parameter definitions under other names on operational systems (in case of name clash). |
| **SearchParameter.version** |  |
| Short name | Business version of the search parameter |
| Definition | The identifier that is used to identify this version of the search parameter when it is referenced in a specification, model, design or instance. This is an arbitrary value managed by the search parameter author and is not expected to be globally unique. For example, it might be a timestamp (e.g. yyyymmdd) if a managed version is not available. There is also no expectation that versions are orderable. |
| Comment | There may be multiple different instances of a search parameter that have the same identifier but different versions. |
| **SearchParameter.name** |  |
| Short name | Name for this search parameter (Computer friendly) |
| Definition | A natural language name identifying the search parameter. This name should be usable as an identifier for the module by machine processing applications such as code generation. |
| Comment | The name is not expected to be globally unique. The name should be a simple alpha-numeric type name to ensure it is computable friendly. |
| Requirements | Support human navigation & code generation. |
| **SearchParameter.status** |  |
| Definition | The status of this search parameter. Enables tracking the life-cycle of the content. |
| Comment | Allows filtering of search parameter that are appropriate for use vs. not. |
| Binding Description | The lifecycle status of a Value Set or Concept Map. |
| **SearchParameter.experimental** |  |
| Short name | If for testing purposes, not real usage |
| Definition | A flag to indicate that this search parameter is authored for testing purposes (or education/evaluation/marketing), and is not intended to be used for genuine usage. |
| Comment | Allows filtering of search parameter that are appropriate for use vs. not. |
| Requirements | Enables experimental content to be developed following the same life-cycle as a production-level search parameter would. |
| **SearchParameter.date** |  |
| Short name | Date this was last changed |
| Definition | The date (and optionally time) when the search parameter was published. The date must change when the business version changes, if it does, and it must change if the status code changes. In addition, it should change when the substantive content of the search parameter changes. |
| Comment | Note that this is not the same as the resource last-modified-date, since the resource may be a secondary representation of the search parameter. Additional specific dates may be added as extensions. |
| **SearchParameter.publisher** |  |
| Short name | Name of the publisher (Organization or individual) |
| Definition | The name of the individual or organization that published the search parameter. |
| Comment | Usually an organization, but may be an individual. The publisher (or steward) of the search parameter is the organization or individual primarily responsible for the maintenance and upkeep of the search parameter. This is not necessarily the same individual or organization that developed and initially authored the content. The publisher is the primary point of contact for questions or issues with the search parameter. This item SHOULD be populated unless the information is available from context. |
| Requirements | Helps establish the "authority/credibility" of the search parameter. May also allow for contact. |
| **SearchParameter.contact** |  |
| Short name | Contact details for the publisher |
| Definition | Contact details to assist a user in finding and communicating with the publisher. |
| Comment | May be a web site, an email address, a telephone number, etc. |
| **SearchParameter.useContext** |  |
| Short name | Content intends to support these contexts |
| Definition | The content was developed with a focus and intent of supporting the contexts that are listed. These terms may be used to assist with indexing and searching of code system definitions. |
| Comment | When multiple usageContexts are specified, there is no expectation for whether all or any of the contexts apply. |
| Requirements | Assist in searching for appropriate content. |
| **SearchParameter.jurisdiction** |  |
| Short name | Intended jurisdiction for search parameter (if applicable) |
| Definition | A jurisdiction in which the search parameter is intended to be used. |
| Binding Description | Countries and regions within which this artifact is targeted for use |
| **SearchParameter.purpose** |  |
| Short name | Why this search parameter is defined |
| Definition | Explains why this search parameter is needed and why it has been designed as it has. |
| Comment | This element does not describe the usage of the search parameter (See, e.g, the comments element, or relatedArtifacts), rather it's for traceability of ''why'' the resource is either needed or ''why'' it is defined as it is. This may be used to point to source materials or specifications that drove the structure of this search parameter. |
| **SearchParameter.code** |  |
| Short name | Code used in URL |
| Definition | The code used in the URL or the parameter name in a parameters resource for this search parameter. |
| Comment | For maximum compatibility, use only lowercase ASCII characters. |
| **SearchParameter.base** |  |
| Short name | The resource type(s) this search parameter applies to |
| Definition | The base resource type(s) that this search parameter can be used against. |
| Comment | A search parameter must always have at least one type. When search parameters have more than one resource, they can be used against any of the listed resource types, or in a cross-type search (see [Cross Resource Search](http.html#xres-search)). |
| Binding Description | One of the resource types defined as part of FHIR. |
| **SearchParameter.type** |  |
| Definition | The type of value a search parameter refers to, and how the content is interpreted. |
| Binding Description | Data types allowed to be used for search parameters. |
| **SearchParameter.derivedFrom** |  |
| Short name | Original Definition for the search parameter |
| Definition | Where this search parameter is originally defined. If a derivedFrom is provided, then the details in the search parameter must be consistent with the definition from which it is defined. I.e. the parameter should have the same meaning, and (usually) the functionality should be a proper subset of the underlying search parameter. |
| Comment | The intent of this is that a server can designate that it provides support for E.g. the "value-quantity" search parameter defined in the specification itself (http://hl7.org/fhir/SearchParameter/Observation-value-quantity), but detail how it is supported by the server. |
| **SearchParameter.description** |  |
| Short name | Natural language description of the search parameter |
| Definition | A free text natural language description of the search parameter from the consumer's perspective. and how it used. |
| Comment | This description can be used to capture details such as why the search parameter was built, comments about misuse, instructions for clinical use and interpretation, literature references, examples from the paper world, etc. It is not a rendering of the search parameter as conveyed in the text field of the resource itself. This item SHOULD be populated unless the information is available from context (e.g. the language of the profile is presumed to be the predominant language in the place the profile was created). |
| **SearchParameter.expression** |  |
| Short name | FHIRPath expression that extracts the values |
| Definition | A FHIRPath expression that returns a set of elements for the search parameter. |
| Comment | Note that the elements returned by the expression are sometimes complex elements where logic is required to determine quite how to handle them; e.g. CodeableConcepts may contain text and/or multiple codings, where the codings themselves contain a code and a system. For composite search parameters, the outcome of the expression must a collection of base elements from which the composites are derived. |
| **SearchParameter.xpath** |  |
| Short name | XPath that extracts the values |
| Definition | An XPath expression that returns a set of elements for the search parameter. |
| Comment | Note that the elements returned by the XPath are sometimes complex elements where logic is required to determine quite how to handle them; e.g. CodeableConcepts may contain text and/or multiple codings, where the codings themselves contain a code and a system. |
| **SearchParameter.xpathUsage** |  |
| Definition | How the search parameter relates to the set of elements returned by evaluating the xpath query. |
| Binding Description | How a search parameter relates to the set of elements returned by evaluating its xpath query. |
| **SearchParameter.target** |  |
| Short name | Types of resource (if a resource reference) |
| Definition | Types of resource (if a resource is referenced). |
| Binding Description | One of the resource types defined as part of FHIR. |
| **SearchParameter.comparator** |  |
| Definition | Comparators supported for the search parameter. |
| Comment | If no comparators are listed, clients should not expect servers to support any comparators. |
| Binding Description | What Search Comparator Codes are supported in search |
| **SearchParameter.modifier** |  |
| Definition | A modifier supported for the search parameter. |
| Binding Description | A supported modifier for a search parameter. |
| **SearchParameter.chain** |  |
| Short name | Chained names supported |
| Definition | Contains the names of any search parameters which may be chained to the containing search parameter. Chained parameters may be added to search parameters of type reference, and specify that resources will only be returned if they contain a reference to a resource which matches the chained parameter value. Values for this field should be drawn from SearchParameter.code for a parameter on the target resource type. |
| Comment | Systems are not required to list all the chain names they support, but if they don't list them, clients may not know to use them. |
| **SearchParameter.component** |  |
| Short name | For Composite resources to define the parts |
| Definition | Used to define the parts of a composite search parameter. |
| **SearchParameter.component.definition** |  |
| Short name | Defines how the part works |
| Definition | The definition of the search parameter that describes this part. |
| **SearchParameter.component.expression** |  |
| Short name | Subexpression relative to main expression |
| Definition | A sub-expression that defines how to extract values for this component from the output of the main SearchParameter.expression. |
| Comment | This expression overrides the expression in the definition, and extracts the index values from the outcome of the composite expression. |

## http://hl7.org/fhir/StructureDefinition/StructureDefinition

|  |  |
| --- | --- |
| **Description** | Base StructureDefinition for StructureDefinition Resource |
| **StructureDefinition** | Structure Definition |
| Short name | Structural Definition |
| Definition | A definition of a FHIR structure. This resource is used to describe the underlying resources, data types defined in FHIR, and also for describing extensions, and constraints on resources and data types. |
| Synonym | Template |
| Synonym | Profile |
| Constraint Requirements | Because these 3 fields seem to be have overlapping meaning with the ones in the root of StructureDefinition |
| Constraint Text | In any snapshot or differential, no label, code or requirements on the an element without a "." in the path (e.g. the first element) |
| Constraint Requirements | custom types only in logical models |
| Constraint Text | Custom types can only be used in logical models |
| Constraint Requirements | element ids need to be unique |
| Constraint Text | All element definitions must have unique ids (snapshot) |
| Constraint Requirements | contextInvariant |
| Constraint Text | Context Invariants can only be used for extensions |
| Constraint Requirements | element ids need to be unique |
| Constraint Text | All element definitions must have unique ids (diff) |
| Constraint Requirements | Ensure that element.base appears with base or not |
| Constraint Text | element.base cannot appear if there is no base on the structure definition |
| Constraint Requirements | Ensure that the type is not inconsistent with the other information in the structure |
| Constraint Text | If there's a type, its content must match the path name in the first element of a snapshot |
| Constraint Requirements | elements have id |
| Constraint Text | All element definitions must have an id |
| Constraint Text | Element paths must be unique unless the structure is a constraint |
| Constraint Text | If the structure describes a base Resource or Type, the URL has to start with "http://hl7.org/fhir/StructureDefinition/" and the tail must match the id |
| Constraint Text | A structure must have either a differential, or a snapshot (or both) |
| Constraint Text | If the structure defines an extension then the structure must have context information |
| Constraint Requirements | Ensure that the base types are abstract |
| Constraint Text | If the structure is not abstract, then there SHALL be a baseDefinition |
| **StructureDefinition.url** |  |
| Short name | Logical uri to reference this structure definition (globally unique) |
| Definition | An absolute URL that is used to identify this structure definition when it is referenced in a specification, model, design or an instance. This SHALL be a URL, SHOULD be globally unique, and SHOULD be an address at which this structure definition is (or will be) published. The URL SHOULD include the major version of the structure definition. For more information see [Technical and Business Versions](resource.html#versions). |
| Comment | Can be a urn:uuid: or a urn:oid:, but real http: addresses are preferred. |
| Requirements | Allows the structure definition to be referenced by a single globally unique identifier. |
| Synonym | url |
| Synonym | authoritative-url |
| Synonym | destination |
| Synonym | identity |
| **StructureDefinition.identifier** |  |
| Short name | Additional identifier for the structure definition |
| Definition | A formal identifier that is used to identify this structure definition when it is represented in other formats, or referenced in a specification, model, design or an instance. |
| Comment | Typically, this is used for identifiers that can go in an HL7 v3 II data type - e.g. to identify this structure definition outside of FHIR, where the logical URL is not possible to use. |
| Requirements | Allows externally provided and/or useable business identifiers to be easily associated with the module. |
| **StructureDefinition.version** |  |
| Short name | Business version of the structure definition |
| Definition | The identifier that is used to identify this version of the structure definition when it is referenced in a specification, model, design or instance. This is an arbitrary value managed by the structure definition author and is not expected to be globally unique. For example, it might be a timestamp (e.g. yyyymmdd) if a managed version is not available. There is also no expectation that versions are orderable. |
| Comment | There may be multiple different instances of a structure definition that have the same identifier but different versions. |
| **StructureDefinition.name** |  |
| Short name | Name for this structure definition (Computer friendly) |
| Definition | A natural language name identifying the structure definition. This name should be usable as an identifier for the module by machine processing applications such as code generation. |
| Comment | The name is not expected to be globally unique. The name should be a simple alpha-numeric type name to ensure it is computable friendly. |
| Requirements | Support human navigation & code generation. |
| **StructureDefinition.title** |  |
| Short name | Name for this structure definition (Human friendly) |
| Definition | A short, descriptive, user-friendly title for the structure definition. |
| Comment | null Applications don't have to use this name, but can always fall back to it. The title also corresponds to the label for the root element. |
| **StructureDefinition.status** |  |
| Definition | The status of this structure definition. Enables tracking the life-cycle of the content. |
| Comment | Allows filtering of structure definition that are appropriate for use vs. not. |
| Binding Description | The lifecycle status of a Value Set or Concept Map. |
| **StructureDefinition.experimental** |  |
| Short name | If for testing purposes, not real usage |
| Definition | A flag to indicate that this structure definition is authored for testing purposes (or education/evaluation/marketing), and is not intended to be used for genuine usage. |
| Comment | Allows filtering of structure definition that are appropriate for use vs. not. |
| Requirements | Enables experimental content to be developed following the same life-cycle as a production-level structure definition would. |
| **StructureDefinition.date** |  |
| Short name | Date this was last changed |
| Definition | The date (and optionally time) when the structure definition was published. The date must change when the business version changes, if it does, and it must change if the status code changes. In addition, it should change when the substantive content of the structure definition changes. |
| Comment | Note that this is not the same as the resource last-modified-date, since the resource may be a secondary representation of the structure definition. Additional specific dates may be added as extensions. |
| **StructureDefinition.publisher** |  |
| Short name | Name of the publisher (Organization or individual) |
| Definition | The name of the individual or organization that published the structure definition. |
| Comment | Usually an organization, but may be an individual. The publisher (or steward) of the structure definition is the organization or individual primarily responsible for the maintenance and upkeep of the structure definition. This is not necessarily the same individual or organization that developed and initially authored the content. The publisher is the primary point of contact for questions or issues with the structure definition. This item SHOULD be populated unless the information is available from context. |
| Requirements | Helps establish the "authority/credibility" of the structure definition. May also allow for contact. |
| **StructureDefinition.contact** |  |
| Short name | Contact details for the publisher |
| Definition | Contact details to assist a user in finding and communicating with the publisher. |
| Comment | May be a web site, an email address, a telephone number, etc. |
| **StructureDefinition.description** |  |
| Short name | Natural language description of the structure definition |
| Definition | A free text natural language description of the structure definition from the consumer's perspective. |
| Comment | This description can be used to capture details such as why the structure definition was built, comments about misuse, instructions for clinical use and interpretation, literature references, examples from the paper world, etc. It is not a rendering of the structure definition as conveyed in the text field of the resource itself. This item SHOULD be populated unless the information is available from context (e.g. the language of the profile is presumed to be the predominant language in the place the profile was created). |
| **StructureDefinition.useContext** |  |
| Short name | Content intends to support these contexts |
| Definition | The content was developed with a focus and intent of supporting the contexts that are listed. These terms may be used to assist with indexing and searching of code system definitions. |
| Comment | When multiple usageContexts are specified, there is no expectation for whether all or any of the contexts apply. |
| Requirements | Assist in searching for appropriate content. |
| **StructureDefinition.jurisdiction** |  |
| Short name | Intended jurisdiction for structure definition (if applicable) |
| Definition | A jurisdiction in which the structure definition is intended to be used. |
| Binding Description | Countries and regions within which this artifact is targeted for use |
| **StructureDefinition.purpose** |  |
| Short name | Why this structure definition is defined |
| Definition | Explains why this structure definition is needed and why it has been designed as it has. |
| Comment | This element does not describe the usage of the structure definition (See, e.g, the comments element, or relatedArtifacts), rather it's for traceability of ''why'' the resource is either needed or ''why'' it is defined as it is. This may be used to point to source materials or specifications that drove the structure of this structure definition. |
| **StructureDefinition.copyright** |  |
| Short name | Use and/or publishing restrictions |
| Definition | A copyright statement relating to the structure definition and/or its contents. Copyright statements are generally legal restrictions on the use and publishing of the structure definition. |
| Requirements | Consumers of the library must be able to determine any legal restrictions on the use of the structure definition and/or its content. |
| Synonym | License |
| Synonym | Restrictions |
| **StructureDefinition.keyword** |  |
| Short name | Assist with indexing and finding |
| Definition | A set of key words or terms from external terminologies that may be used to assist with indexing and searching of templates. |
| Requirements | Assist in searching for appropriate StructureDefinitions. |
| Binding Description | Codes for the meaning of the defined structure (SNOMED CT and LOINC codes, as an example). |
| **StructureDefinition.fhirVersion** |  |
| Short name | FHIR Version this StructureDefinition targets |
| Definition | The version of the FHIR specification on which this StructureDefinition is based - this is the formal version of the specification, without the revision number, e.g. [publication].[major].[minor], which is 1.9.0 for this version. |
| Comment | A StructureDefinition does not need to specify the target it applies to,as StructureDefinitions will often be valid across multiple versions of FHIR. FHIR tooling can determine whether a StructureDefinition is consistent with a particular StructureDefinition if desired. |
| **StructureDefinition.mapping** |  |
| Short name | External specification that the content is mapped to |
| Definition | An external specification that the content is mapped to. |
| Constraint Text | Must have at least a name or a uri (or both) |
| **StructureDefinition.mapping.identity** |  |
| Short name | Internal id when this mapping is used |
| Definition | An Internal id that is used to identify this mapping set when specific mappings are made. |
| Comment | The specification is described once, with general comments, and then specific mappings are made that reference this declaration. |
| **StructureDefinition.mapping.uri** |  |
| Short name | Identifies what this mapping refers to |
| Definition | An absolute URI that identifies the specification that this mapping is expressed to. |
| Comment | A formal identity for the specification being mapped to helps with identifying maps consistently. |
| **StructureDefinition.mapping.name** |  |
| Short name | Names what this mapping refers to |
| Definition | A name for the specification that is being mapped to. |
| **StructureDefinition.mapping.comment** |  |
| Short name | Versions, Issues, Scope limitations etc. |
| Definition | Comments about this mapping, including version notes, issues, scope limitations, and other important notes for usage. |
| **StructureDefinition.kind** |  |
| Definition | Defines the kind of structure that this definition is describing. |
| Binding Description | Defines the type of structure that a definition is describing. |
| **StructureDefinition.abstract** |  |
| Short name | Whether the structure is abstract |
| Definition | Whether structure this definition describes is abstract or not - that is, whether the structure is not intended to be instantiated. For Resources and Data types, abstract types will never be exchanged between systems. |
| Comment | Abstract Resources cannot be instantiated - a concrete sub-type must be used. Abstract datatypes and extensions cannot be used in an instance. For logical models, the exact implication of "abstract" will rest with the author, depending how the logical model is used. Flagging a constraint structure as abstract conveys design intent but makes no difference to how the structure definition is handled. Note that inline declared elements that are given the type "Element" in the profile, but have children described, are anonymous concrete types that specialise Element. |
| **StructureDefinition.contextType** |  |
| Definition | If this is an extension, Identifies the context within FHIR resources where the extension can be used. |
| Binding Description | How an extension context is interpreted. |
| **StructureDefinition.context** |  |
| Short name | Where the extension can be used in instances |
| Definition | Identifies the types of resource or data type elements to which the extension can be applied. |
| Comment | If the context is an element that can have multiple types, then use (e.g.) value[x] if the extension works on all choice types, or otherwise an enumeration of explicitly named elements if not. Note that a context of "string" doesn't mean that the extension can be used with one of the string patterns such as "id" etc. |
| **StructureDefinition.contextInvariant** |  |
| Short name | FHIRPath invariants - when the extension can be used |
| Definition | A set of rules as Fluent Invariants about when the extension can be used (e.g. co-occurance variants for the extension). |
| Comment | All the rules must be true. When evaluating the invariant, the fluentpath focus is the element that holds the extension, and %extension refers to the extension itself. |
| **StructureDefinition.type** |  |
| Short name | Type defined or constrained by this structure |
| Definition | The type this structure is describes. If the derivation kind is 'specialization' then this is the master definition for a type, and there is always one of these (a data type, an extension, a resource, including abstract ones). Otherwise the structure definition is a constraint on the stated type (and in this case, the type cannot be an abstract type). |
| Comment | Note that in the case of constraints, the type could be determined by chasing through the baseDefinition references until a concrete structure (derivation = specialization) is reached, or by looking at the path of the first element in the snapshot - if present - but providing the type directly makes for simpler tooling and indexing. |
| Binding Description | Either a resource or a data type, including logical model types |
| **StructureDefinition.baseDefinition** |  |
| Short name | Definition that this type is constrained/specialized from |
| Definition | An absolute URI that is the base structure from which this type is derived, either by specialization or constraint. |
| Comment | If differential constraints are specified in this structure, they are applied to the base in a "differential" fashion. If there is no base, then the differential constraints cannot be provided (snapshot only). Differential structures are useful for the editing perspective, and snapshot structures are suitable for operational use. The FHIR Project provides a number of tools/services to populate snapshots from differential constraints. Logical Models have a base of "Element" or another logical model. |
| **StructureDefinition.derivation** |  |
| Definition | How the type relates to the baseDefinition. |
| Comment | If the definition is a specialization, then it adds new elements in the differential, and the snapshot includes the inherited elements. If the definition is a constraint, then it can not define new elements, it can only make new rules about existing content (see [Profiling Resources](profiling.html#resources)). |
| Binding Description | How a type relates to it's baseDefinition. |
| **StructureDefinition.snapshot** |  |
| Short name | Snapshot view of the structure |
| Definition | A snapshot view is expressed in a stand alone form that can be used and interpreted without considering the base StructureDefinition. |
| Constraint Requirements | No Type on the root element (snapshot) |
| Constraint Text | The first element in a snapshot has no type |
| Constraint Text | In any snapshot, all the elements must be in the specified type |
| Constraint Text | Each element definition in a snapshot must have a formal definition and cardinalities |
| **StructureDefinition.snapshot.element** |  |
| Short name | Definition of elements in the resource (if no StructureDefinition) |
| Definition | Captures constraints on each element within the resource. |
| **StructureDefinition.differential** |  |
| Short name | Differential view of the structure |
| Definition | A differential view is expressed relative to the base StructureDefinition - a statement of differences that it applies. |
| Constraint Requirements | No Type on the root element (differential) |
| Constraint Text | If the first element in a differential has no "." in the path, it has no type |
| Constraint Requirements | no slicing on root |
| Constraint Text | No slicing on the root element |
| Constraint Text | In any differential, all the elements must be in the specified type |
| **StructureDefinition.differential.element** |  |
| Short name | Definition of elements in the resource (if no StructureDefinition) |
| Definition | Captures constraints on each element within the resource. |

## http://hl7.org/fhir/StructureDefinition/StructureMap

|  |  |
| --- | --- |
| **Description** | Base StructureDefinition for StructureMap Resource |
| **StructureMap** | Structure Map |
| Short name | A Map of relationships between 2 structures that can be used to transform data |
| Definition | A Map of relationships between 2 structures that can be used to transform data. |
| Synonym | Template |
| Synonym | Profile |
| **StructureMap.url** |  |
| Short name | Logical uri to reference this structure map (globally unique) |
| Definition | An absolute URL that is used to identify this structure map when it is referenced in a specification, model, design or an instance. This SHALL be a URL, SHOULD be globally unique, and SHOULD be an address at which this structure map is (or will be) published. The URL SHOULD include the major version of the structure map. For more information see [Technical and Business Versions](resource.html#versions). |
| Comment | Can be a urn:uuid: or a urn:oid:, but real http: addresses are preferred. |
| Requirements | Allows the structure map to be referenced by a single globally unique identifier. |
| Synonym | url |
| Synonym | authoritative-url |
| Synonym | destination |
| Synonym | identity |
| **StructureMap.identifier** |  |
| Short name | Additional identifier for the structure map |
| Definition | A formal identifier that is used to identify this structure map when it is represented in other formats, or referenced in a specification, model, design or an instance. |
| Comment | Typically, this is used for identifiers that can go in an HL7 v3 II data type - e.g. to identify this structure map outside of FHIR, where the logical URL is not possible to use. |
| Requirements | Allows externally provided and/or useable business identifiers to be easily associated with the module. |
| **StructureMap.version** |  |
| Short name | Business version of the structure map |
| Definition | The identifier that is used to identify this version of the structure map when it is referenced in a specification, model, design or instance. This is an arbitrary value managed by the structure map author and is not expected to be globally unique. For example, it might be a timestamp (e.g. yyyymmdd) if a managed version is not available. There is also no expectation that versions are orderable. |
| Comment | There may be multiple different instances of a structure map that have the same identifier but different versions. |
| **StructureMap.name** |  |
| Short name | Name for this structure map (Computer friendly) |
| Definition | A natural language name identifying the structure map. This name should be usable as an identifier for the module by machine processing applications such as code generation. |
| Comment | The name is not expected to be globally unique. The name should be a simple alpha-numeric type name to ensure it is computable friendly. |
| Requirements | Support human navigation & code generation. |
| **StructureMap.title** |  |
| Short name | Name for this structure map (Human friendly) |
| Definition | A short, descriptive, user-friendly title for the structure map. |
| **StructureMap.status** |  |
| Definition | The status of this structure map. Enables tracking the life-cycle of the content. |
| Comment | Allows filtering of structure map that are appropriate for use vs. not. |
| Binding Description | The lifecycle status of a Value Set or Concept Map. |
| **StructureMap.experimental** |  |
| Short name | If for testing purposes, not real usage |
| Definition | A flag to indicate that this structure map is authored for testing purposes (or education/evaluation/marketing), and is not intended to be used for genuine usage. |
| Comment | Allows filtering of structure map that are appropriate for use vs. not. |
| Requirements | Enables experimental content to be developed following the same life-cycle as a production-level structure map would. |
| **StructureMap.date** |  |
| Short name | Date this was last changed |
| Definition | The date (and optionally time) when the structure map was published. The date must change when the business version changes, if it does, and it must change if the status code changes. In addition, it should change when the substantive content of the structure map changes. |
| Comment | Note that this is not the same as the resource last-modified-date, since the resource may be a secondary representation of the structure map. Additional specific dates may be added as extensions. |
| **StructureMap.publisher** |  |
| Short name | Name of the publisher (Organization or individual) |
| Definition | The name of the individual or organization that published the structure map. |
| Comment | Usually an organization, but may be an individual. The publisher (or steward) of the structure map is the organization or individual primarily responsible for the maintenance and upkeep of the structure map. This is not necessarily the same individual or organization that developed and initially authored the content. The publisher is the primary point of contact for questions or issues with the structure map. This item SHOULD be populated unless the information is available from context. |
| Requirements | Helps establish the "authority/credibility" of the structure map. May also allow for contact. |
| **StructureMap.contact** |  |
| Short name | Contact details for the publisher |
| Definition | Contact details to assist a user in finding and communicating with the publisher. |
| Comment | May be a web site, an email address, a telephone number, etc. |
| **StructureMap.description** |  |
| Short name | Natural language description of the structure map |
| Definition | A free text natural language description of the structure map from the consumer's perspective. |
| Comment | This description can be used to capture details such as why the structure map was built, comments about misuse, instructions for clinical use and interpretation, literature references, examples from the paper world, etc. It is not a rendering of the structure map as conveyed in the text field of the resource itself. This item SHOULD be populated unless the information is available from context (e.g. the language of the profile is presumed to be the predominant language in the place the profile was created). |
| **StructureMap.useContext** |  |
| Short name | Content intends to support these contexts |
| Definition | The content was developed with a focus and intent of supporting the contexts that are listed. These terms may be used to assist with indexing and searching of code system definitions. |
| Comment | When multiple usageContexts are specified, there is no expectation for whether all or any of the contexts apply. |
| Requirements | Assist in searching for appropriate content. |
| **StructureMap.jurisdiction** |  |
| Short name | Intended jurisdiction for structure map (if applicable) |
| Definition | A jurisdiction in which the structure map is intended to be used. |
| Binding Description | Countries and regions within which this artifact is targeted for use |
| **StructureMap.purpose** |  |
| Short name | Why this structure map is defined |
| Definition | Explains why this structure map is needed and why it has been designed as it has. |
| Comment | This element does not describe the usage of the structure map (See, e.g, the comments element, or relatedArtifacts), rather it's for traceability of ''why'' the resource is either needed or ''why'' it is defined as it is. This may be used to point to source materials or specifications that drove the structure of this structure map. |
| **StructureMap.copyright** |  |
| Short name | Use and/or publishing restrictions |
| Definition | A copyright statement relating to the structure map and/or its contents. Copyright statements are generally legal restrictions on the use and publishing of the structure map. |
| Requirements | Consumers of the library must be able to determine any legal restrictions on the use of the structure map and/or its content. |
| Synonym | License |
| Synonym | Restrictions |
| **StructureMap.structure** |  |
| Short name | Structure Definition used by this map |
| Definition | A structure definition used by this map. The structure definition may describe instances that are converted, or the instances that are produced. |
| Comment | It is not necessary for a structure map to identify any dependent structures, though not losting them may restrict it's usefulness. |
| **StructureMap.structure.url** |  |
| Short name | Canonical URL for structure definition |
| Definition | The canonical URL that identifies the structure. |
| **StructureMap.structure.mode** |  |
| Definition | How the referenced structure is used in this mapping. |
| Binding Description | How the referenced structure is used in this mapping |
| **StructureMap.structure.alias** |  |
| Short name | Name for type in this map |
| Definition | The name used for this type in the map. |
| Comment | This is needed if both types have the same name (e.g. version conversion). |
| **StructureMap.structure.documentation** |  |
| Short name | Documentation on use of structure |
| Definition | Documentation that describes how the structure is used in the mapping. |
| **StructureMap.import** |  |
| Short name | Other maps used by this map (canonical URLs) |
| Definition | Other maps used by this map (canonical URLs). |
| **StructureMap.group** |  |
| Short name | Named sections for reader convenience |
| Definition | Named sections for reader convenience. |
| **StructureMap.group.name** |  |
| Short name | Descriptive name for a user |
| Definition | Descriptive name for a user. |
| **StructureMap.group.extends** |  |
| Short name | Another group that this group adds rules to |
| Definition | Another group that this group adds rules to. |
| **StructureMap.group.typeMode** |  |
| Definition | If this is the default rule set to apply for thie source type, or this combination of types. |
| Comment | Not applicable if the underlying model is untyped. There can only be one default mapping for any particular type combination. |
| Binding Description | If this is the default rule set to apply for thie source type, or this combination of types |
| **StructureMap.group.documentation** |  |
| Short name | Documentation for this group |
| Definition | Documentation for this group. |
| **StructureMap.group.input** |  |
| Short name | Named instance provided when invoking the map |
| Definition | A name assigned to an instance of data. The instance must be provided when the mapping is invoked. |
| Comment | If no inputs are named, then the entry mappings are type based. |
| **StructureMap.group.input.name** |  |
| Short name | Name for this instance of data |
| Definition | Name for this instance of data. |
| **StructureMap.group.input.type** |  |
| Short name | Type for this instance of data |
| Definition | Type for this instance of data. |
| **StructureMap.group.input.mode** |  |
| Definition | Mode for this instance of data. |
| Binding Description | Mode for this instance of data |
| **StructureMap.group.input.documentation** |  |
| Short name | Documentation for this instance of data |
| Definition | Documentation for this instance of data. |
| **StructureMap.group.rule** |  |
| Short name | Transform Rule from source to target |
| Definition | Transform Rule from source to target. |
| **StructureMap.group.rule.name** |  |
| Short name | Name of the rule for internal references |
| Definition | Name of the rule for internal references. |
| **StructureMap.group.rule.source** |  |
| Short name | Source inputs to the mapping |
| Definition | Source inputs to the mapping. |
| **StructureMap.group.rule.source.context** |  |
| Short name | Type or variable this rule applies to |
| Definition | Type or variable this rule applies to. |
| **StructureMap.group.rule.source.min** |  |
| Short name | Specified minimum cardinality |
| Definition | Specified minimum cardinality for the element. This is optional; if present, it acts an implicit check on the input content. |
| **StructureMap.group.rule.source.max** |  |
| Short name | Specified maximum cardinality (number or \*) |
| Definition | Specified maximum cardinality for the element - a number or a "\*". This is optional; if present, it acts an implicit check on the input content (\* just serves as documentation; it's the default value). |
| **StructureMap.group.rule.source.type** |  |
| Short name | Type for this source |
| Definition | Specified type for the element. This works as a condition on the mapping - use for polymorphic elements. |
| **StructureMap.group.rule.source.defaultValue[x]** |  |
| Short name | Default value if no value exists |
| Definition | A value to use if there is no existing value in the source object. |
| Comment | If there's a default value on an item that can repeat, it will only be used once. |
| **StructureMap.group.rule.source.element** |  |
| Short name | Optional field for this source |
| Definition | Optional field for this source. |
| **StructureMap.group.rule.source.listMode** |  |
| Definition | How to handle the list mode for this element. |
| Binding Description | If field is a list, how to manage the source |
| **StructureMap.group.rule.source.variable** |  |
| Short name | Named context for field, if a field is specified |
| Definition | Named context for field, if a field is specified. |
| **StructureMap.group.rule.source.condition** |  |
| Short name | FHIRPath expression - must be true or the rule does not apply |
| Definition | FHIRPath expression - must be true or the rule does not apply. |
| **StructureMap.group.rule.source.check** |  |
| Short name | FHIRPath expression - must be true or the mapping engine throws an error instead of completing |
| Definition | FHIRPath expression - must be true or the mapping engine throws an error instead of completing. |
| **StructureMap.group.rule.target** |  |
| Short name | Content to create because of this mapping rule |
| Definition | Content to create because of this mapping rule. |
| Constraint Text | Must have a contextType if you have a context |
| Constraint Text | Can only have a element if you have a context |
| **StructureMap.group.rule.target.context** |  |
| Short name | Type or variable this rule applies to |
| Definition | Type or variable this rule applies to. |
| **StructureMap.group.rule.target.contextType** |  |
| Definition | How to interpret the context. |
| Binding Description | How to interpret the context |
| **StructureMap.group.rule.target.element** |  |
| Short name | Field to create in the context |
| Definition | Field to create in the context. |
| **StructureMap.group.rule.target.variable** |  |
| Short name | Named context for field, if desired, and a field is specified |
| Definition | Named context for field, if desired, and a field is specified. |
| **StructureMap.group.rule.target.listMode** |  |
| Definition | If field is a list, how to manage the list. |
| Binding Description | If field is a list, how to manage the production |
| **StructureMap.group.rule.target.listRuleId** |  |
| Short name | Internal rule reference for shared list items |
| Definition | Internal rule reference for shared list items. |
| **StructureMap.group.rule.target.transform** |  |
| Definition | How the data is copied / created. |
| Binding Description | How data is copied / created |
| **StructureMap.group.rule.target.parameter** |  |
| Short name | Parameters to the transform |
| Definition | Parameters to the transform. |
| **StructureMap.group.rule.target.parameter.value[x]** |  |
| Short name | Parameter value - variable or literal |
| Definition | Parameter value - variable or literal. |
| **StructureMap.group.rule.rule** |  |
| Short name | Rules contained in this rule |
| Definition | Rules contained in this rule. |
| **StructureMap.group.rule.dependent** |  |
| Short name | Which other rules to apply in the context of this rule |
| Definition | Which other rules to apply in the context of this rule. |
| **StructureMap.group.rule.dependent.name** |  |
| Short name | Name of a rule or group to apply |
| Definition | Name of a rule or group to apply. |
| **StructureMap.group.rule.dependent.variable** |  |
| Short name | Variable to pass to the rule or group |
| Definition | Variable to pass to the rule or group. |
| **StructureMap.group.rule.documentation** |  |
| Short name | Documentation for this instance of data |
| Definition | Documentation for this instance of data. |

## http://hl7.org/fhir/StructureDefinition/Subscription

|  |  |
| --- | --- |
| **Description** | Base StructureDefinition for Subscription Resource |
| **Subscription** | Subscription |
| Short name | A server push subscription criteria |
| Definition | The subscription resource is used to define a push based subscription from a server to another system. Once a subscription is registered with the server, the server checks every resource that is created or updated, and if the resource matches the given criteria, it sends a message on the defined "channel" so that another system is able to take an appropriate action. |
| Synonym | WebHook |
| Synonym | Hook |
| Synonym | Routing Rule |
| **Subscription.status** |  |
| Definition | The status of the subscription, which marks the server state for managing the subscription. |
| Comment | A client can only submit subscription resources in the requested or off state. Only the server can move a subscription from requested to active, and then to error. Either the server or the client can turn a subscription off. |
| Binding Description | The status of a subscription. |
| **Subscription.contact** |  |
| Short name | Contact details for source (e.g. troubleshooting) |
| Definition | Contact details for a human to contact about the subscription. The primary use of this for system administrator troubleshooting. |
| **Subscription.end** |  |
| Short name | When to automatically delete the subscription |
| Definition | The time for the server to turn the subscription off. |
| Comment | The server is permitted to deviate from this time, but should observe it. |
| **Subscription.reason** |  |
| Short name | Description of why this subscription was created |
| Definition | A description of why this subscription is defined. |
| **Subscription.criteria** |  |
| Short name | Rule for server push criteria |
| Definition | The rules that the server should use to determine when to generate notifications for this subscription. |
| Comment | The rules are a search criteria (without the [base] part). Like Bundle.entry.request.url, it has no leading "/". |
| **Subscription.error** |  |
| Short name | Latest error note |
| Definition | A record of the last error that occurred when the server processed a notification. |
| **Subscription.channel** |  |
| Short name | The channel on which to report matches to the criteria |
| Definition | Details where to send notifications when resources are received that meet the criteria. |
| **Subscription.channel.type** |  |
| Definition | The type of channel to send notifications on. |
| Binding Description | The type of method used to execute a subscription. |
| **Subscription.channel.endpoint** |  |
| Short name | Where the channel points to |
| Definition | The uri that describes the actual end-point to send messages to. |
| Comment | For rest-hook, and websocket, the end-point must be an http: or https: URL; for email, a mailto: url, for sms, a tel: url, and for message the endpoint can be in any form of url the server understands (usually, http: or mllp:). The URI is allowed to be relative; in which case, it is relative to the server end-point (since their may be more than one, clients should avoid using relative URIs). |
| **Subscription.channel.payload** |  |
| Short name | Mimetype to send, or omit for no payload |
| Definition | The mime type to send the payload in - either application/fhir+xml, or application/fhir+json. If the payload is not present, then there is no payload in the notification, just a notification. |
| Comment | Sending the payload has obvious security implications. The server is responsible for ensuring that the content is appropriately secured. |
| **Subscription.channel.header** |  |
| Short name | Usage depends on the channel type |
| Definition | Additional headers / information to send as part of the notification. |
| Comment | Exactly what these mean depend on the channel type. They can convey additional information to the recipient and/or meet security requirements; for example, support of multiple headers in the outgoing notifications for rest-hook type subscriptions. |
| **Subscription.tag** |  |
| Short name | A tag to add to matching resources |
| Definition | A tag to add to any resource that matches the criteria, after the subscription is processed. |
| Comment | So that other systems can tell which resources have been the subject of a notification. |
| Binding Description | Tags to put on a resource after subscriptions have been sent. |

## http://hl7.org/fhir/StructureDefinition/TestReport

|  |  |
| --- | --- |
| **Description** | Base StructureDefinition for TestReport Resource |
| **TestReport** | Test Report |
| Short name | Describes the results of a TestScript execution |
| Definition | TestReport is a resource that includes summary information on the results of executing a TestScript. |
| **TestReport.identifier** |  |
| Short name | External identifier |
| Definition | Identifier for the TestScript assigned for external purposes outside the context of FHIR. |
| **TestReport.name** |  |
| Short name | Informal name of the executed TestScript |
| Definition | A free text natural language name identifying the executed TestScript. |
| Comment | Not expected to be globally unique. |
| **TestReport.status** |  |
| Definition | The current state of this test report. |
| Comment | The status represents where the execution is currently within the test script execution life cycle. |
| Binding Description | The current status of the test report. |
| **TestReport.testScript** |  |
| Short name | Reference to the version-specific TestScript that was executed to produce this TestReport |
| Definition | Ideally this is an absolute URL that is used to identify the version-specific TestScript that was executed, matching the `TestScript.url`. |
| **TestReport.result** |  |
| Definition | The overall result from the execution of the TestScript. |
| Comment | The pass and fail result represents a completed test script execution. The pending result represents a test script execution that has not yet started or is currently in progress. |
| Binding Description | The reported execution result. |
| **TestReport.score** |  |
| Short name | The final score (percentage of tests passed) resulting from the execution of the TestScript |
| Definition | The final score (percentage of tests passed) resulting from the execution of the TestScript. |
| **TestReport.tester** |  |
| Short name | Name of the tester producing this report (Organization or individual) |
| Definition | Name of the tester producing this report (Organization or individual). |
| Comment | Usually an organization, but may be an individual. This item SHOULD be populated unless the information is available from context. |
| Requirements | Helps establish the "authority/credibility" of the TestReport. May also allow for contact. |
| **TestReport.issued** |  |
| Short name | When the TestScript was executed and this TestReport was generated |
| Definition | When the TestScript was executed and this TestReport was generated. |
| Comment | Additional specific dates may be added as extensions. |
| **TestReport.participant** |  |
| Short name | A participant in the test execution, either the execution engine, a client, or a server |
| Definition | A participant in the test execution, either the execution engine, a client, or a server. |
| **TestReport.participant.type** |  |
| Definition | The type of participant. |
| Binding Description | The type of participant. |
| **TestReport.participant.uri** |  |
| Short name | The uri of the participant. An absolute URL is preferred |
| Definition | The uri of the participant. An absolute URL is preferred. |
| **TestReport.participant.display** |  |
| Short name | The display name of the participant |
| Definition | The display name of the participant. |
| **TestReport.setup** |  |
| Short name | The results of the series of required setup operations before the tests were executed |
| Definition | The results of the series of required setup operations before the tests were executed. |
| **TestReport.setup.action** |  |
| Short name | A setup operation or assert that was executed |
| Definition | Action would contain either an operation or an assertion. |
| Comment | An action should contain either an operation or an assertion but not both. It can contain any number of variables. |
| Constraint Text | Setup action SHALL contain either an operation or assert but not both. |
| **TestReport.setup.action.operation** |  |
| Short name | The operation to perform |
| Definition | The operation performed. |
| **TestReport.setup.action.operation.result** |  |
| Definition | The result of this operation. |
| Binding Description | The results of executing an action. |
| **TestReport.setup.action.operation.message** |  |
| Short name | A message associated with the result |
| Definition | An explanatory message associated with the result. |
| **TestReport.setup.action.operation.detail** |  |
| Short name | A link to further details on the result |
| Definition | A link to further details on the result. |
| **TestReport.setup.action.assert** |  |
| Short name | The assertion to perform |
| Definition | The results of the assertion performed on the previous operations. |
| **TestReport.setup.action.assert.result** |  |
| Definition | The result of this assertion. |
| Binding Description | The results of executing an action. |
| **TestReport.setup.action.assert.message** |  |
| Short name | A message associated with the result |
| Definition | An explanatory message associated with the result. |
| **TestReport.setup.action.assert.detail** |  |
| Short name | A link to further details on the result |
| Definition | A link to further details on the result. |
| **TestReport.test** |  |
| Short name | A test executed from the test script |
| Definition | A test executed from the test script. |
| **TestReport.test.name** |  |
| Short name | Tracking/logging name of this test |
| Definition | The name of this test used for tracking/logging purposes by test engines. |
| **TestReport.test.description** |  |
| Short name | Tracking/reporting short description of the test |
| Definition | A short description of the test used by test engines for tracking and reporting purposes. |
| **TestReport.test.action** |  |
| Short name | A test operation or assert that was performed |
| Definition | Action would contain either an operation or an assertion. |
| Comment | An action should contain either an operation or an assertion but not both. It can contain any number of variables. |
| Constraint Text | Test action SHALL contain either an operation or assert but not both. |
| **TestReport.test.action.operation** |  |
| Short name | The operation performed |
| Definition | An operation would involve a REST request to a server. |
| **TestReport.test.action.assert** |  |
| Short name | The assertion performed |
| Definition | The results of the assertion performed on the previous operations. |
| **TestReport.teardown** |  |
| Short name | The results of running the series of required clean up steps |
| Definition | The results of the series of operations required to clean up after the all the tests were executed (successfully or otherwise). |
| **TestReport.teardown.action** |  |
| Short name | One or more teardown operations performed |
| Definition | The teardown action will only contain an operation. |
| Comment | An action should contain either an operation or an assertion but not both. It can contain any number of variables. |
| **TestReport.teardown.action.operation** |  |
| Short name | The teardown operation performed |
| Definition | An operation would involve a REST request to a server. |

## http://hl7.org/fhir/StructureDefinition/TestScript

|  |  |
| --- | --- |
| **Description** | Base StructureDefinition for TestScript Resource |
| **TestScript** | Test Script |
| Short name | Describes a set of tests |
| Definition | TestScript is a resource that specifies a suite of tests against a FHIR server implementation to determine compliance against the FHIR specification. |
| **TestScript.url** |  |
| Short name | Logical uri to reference this test script (globally unique) |
| Definition | An absolute URL that is used to identify this test script when it is referenced in a specification, model, design or an instance. This SHALL be a URL, SHOULD be globally unique, and SHOULD be an address at which this test script is (or will be) published. The URL SHOULD include the major version of the test script. For more information see [Technical and Business Versions](resource.html#versions). |
| Comment | Can be a urn:uuid: or a urn:oid:, but real http: addresses are preferred. |
| Requirements | Allows the test script to be referenced by a single globally unique identifier. |
| Synonym | url |
| Synonym | authoritative-url |
| Synonym | destination |
| Synonym | identity |
| **TestScript.identifier** |  |
| Short name | Additional identifier for the test script |
| Definition | A formal identifier that is used to identify this test script when it is represented in other formats, or referenced in a specification, model, design or an instance. |
| Comment | Typically, this is used for identifiers that can go in an HL7 v3 II data type - e.g. to identify this test script outside of FHIR, where the logical URL is not possible to use. |
| Requirements | Allows externally provided and/or useable business identifiers to be easily associated with the module. |
| **TestScript.version** |  |
| Short name | Business version of the test script |
| Definition | The identifier that is used to identify this version of the test script when it is referenced in a specification, model, design or instance. This is an arbitrary value managed by the test script author and is not expected to be globally unique. For example, it might be a timestamp (e.g. yyyymmdd) if a managed version is not available. There is also no expectation that versions are orderable. |
| Comment | There may be multiple different instances of a test script that have the same identifier but different versions. |
| **TestScript.name** |  |
| Short name | Name for this test script (Computer friendly) |
| Definition | A natural language name identifying the test script. This name should be usable as an identifier for the module by machine processing applications such as code generation. |
| Comment | The name is not expected to be globally unique. The name should be a simple alpha-numeric type name to ensure it is computable friendly. |
| Requirements | Support human navigation & code generation. |
| **TestScript.title** |  |
| Short name | Name for this test script (Human friendly) |
| Definition | A short, descriptive, user-friendly title for the test script. |
| **TestScript.status** |  |
| Definition | The status of this test script. Enables tracking the life-cycle of the content. |
| Comment | Allows filtering of test script that are appropriate for use vs. not. |
| Binding Description | The lifecycle status of a Value Set or Concept Map. |
| **TestScript.experimental** |  |
| Short name | If for testing purposes, not real usage |
| Definition | A flag to indicate that this test script is authored for testing purposes (or education/evaluation/marketing), and is not intended to be used for genuine usage. |
| Comment | Allows filtering of test script that are appropriate for use vs. not. |
| Requirements | Enables experimental content to be developed following the same life-cycle as a production-level test script would. |
| **TestScript.date** |  |
| Short name | Date this was last changed |
| Definition | The date (and optionally time) when the test script was published. The date must change when the business version changes, if it does, and it must change if the status code changes. In addition, it should change when the substantive content of the test script changes. |
| Comment | Note that this is not the same as the resource last-modified-date, since the resource may be a secondary representation of the test script. Additional specific dates may be added as extensions. |
| **TestScript.publisher** |  |
| Short name | Name of the publisher (Organization or individual) |
| Definition | The name of the individual or organization that published the test script. |
| Comment | Usually an organization, but may be an individual. The publisher (or steward) of the test script is the organization or individual primarily responsible for the maintenance and upkeep of the test script. This is not necessarily the same individual or organization that developed and initially authored the content. The publisher is the primary point of contact for questions or issues with the test script. This item SHOULD be populated unless the information is available from context. |
| Requirements | Helps establish the "authority/credibility" of the test script. May also allow for contact. |
| **TestScript.contact** |  |
| Short name | Contact details for the publisher |
| Definition | Contact details to assist a user in finding and communicating with the publisher. |
| Comment | May be a web site, an email address, a telephone number, etc. |
| **TestScript.description** |  |
| Short name | Natural language description of the test script |
| Definition | A free text natural language description of the test script from the consumer's perspective. |
| Comment | This description can be used to capture details such as why the test script was built, comments about misuse, instructions for clinical use and interpretation, literature references, examples from the paper world, etc. It is not a rendering of the test script as conveyed in the text field of the resource itself. This item SHOULD be populated unless the information is available from context (e.g. the language of the profile is presumed to be the predominant language in the place the profile was created). |
| **TestScript.useContext** |  |
| Short name | Content intends to support these contexts |
| Definition | The content was developed with a focus and intent of supporting the contexts that are listed. These terms may be used to assist with indexing and searching of code system definitions. |
| Comment | When multiple usageContexts are specified, there is no expectation for whether all or any of the contexts apply. |
| Requirements | Assist in searching for appropriate content. |
| **TestScript.jurisdiction** |  |
| Short name | Intended jurisdiction for test script (if applicable) |
| Definition | A jurisdiction in which the test script is intended to be used. |
| Binding Description | Countries and regions within which this artifact is targeted for use |
| **TestScript.purpose** |  |
| Short name | Why this test script is defined |
| Definition | Explains why this test script is needed and why it has been designed as it has. |
| Comment | This element does not describe the usage of the test script (See, e.g, the comments element, or relatedArtifacts), rather it's for traceability of ''why'' the resource is either needed or ''why'' it is defined as it is. This may be used to point to source materials or specifications that drove the structure of this test script. |
| **TestScript.copyright** |  |
| Short name | Use and/or publishing restrictions |
| Definition | A copyright statement relating to the test script and/or its contents. Copyright statements are generally legal restrictions on the use and publishing of the test script. |
| Requirements | Consumers of the library must be able to determine any legal restrictions on the use of the test script and/or its content. |
| Synonym | License |
| Synonym | Restrictions |
| **TestScript.origin** |  |
| Short name | An abstract server representing a client or sender in a message exchange |
| Definition | An abstract server used in operations within this test script in the origin element. |
| Comment | The purpose of this element is to define the profile of an origin element used elsewhere in the script. Test engines could then use the origin-profile mapping to offer a filtered list of test systems that can serve as the sender for the interaction. |
| **TestScript.origin.index** |  |
| Short name | The index of the abstract origin server starting at 1 |
| Definition | Abstract name given to an origin server in this test script. The name is provided as a number starting at 1. |
| Comment | A given origin index (e.g. 1) can appear only once in the list (e.g. Origin 1 cannot be specified twice ... once as FormFiller and and again as FormProcessor within the same script as that could get confusing during test configuration). Different origin indices could play the same actor in the same test script (e.g. You could have two different test systems acting as Form-Filler). The origin indices provided elsewhere in the test script must be one of these origin indices. |
| **TestScript.origin.profile** |  |
| Definition | The type of origin profile the test system supports. |
| Comment | Must be a "sender"/"client" profile. |
| Meaning when missing | FHIR-Client |
| Binding Description | The type of origin profile the test system supports. |
| **TestScript.destination** |  |
| Short name | An abstract server representing a destination or receiver in a message exchange |
| Definition | An abstract server used in operations within this test script in the destination element. |
| Comment | The purpose of this element is to define the profile of an destination element used elsewhere in the script. Test engines could then use the destination-profile mapping to offer a filtered list of test systems that can serve as the receiver for the interaction. |
| **TestScript.destination.index** |  |
| Short name | The index of the abstract destination server starting at 1 |
| Definition | Abstract name given to a destination server in this test script. The name is provided as a number starting at 1. |
| Comment | A given destination index (e.g. 1) can appear only once in the list (e.g. Destination 1 cannot be specified twice ... once as Form-Manager and and again as Form-Processor within the same script as that could get confusing during test configuration). Different destination indices could play the same actor in the same test script (e.g. You could have two different test systems acting as Form-Manager). The destination indices provided elsewhere in the test script must be one of these destination indices. |
| **TestScript.destination.profile** |  |
| Definition | The type of destination profile the test system supports. |
| Comment | Must be a "receiver"/"server" profile. |
| Meaning when missing | FHIR-Server |
| Binding Description | The type of destination profile the test system supports. |
| **TestScript.metadata** |  |
| Short name | Required capability that is assumed to function correctly on the FHIR server being tested |
| Definition | The required capability must exist and are assumed to function correctly on the FHIR server being tested. |
| Constraint Text | TestScript metadata capability SHALL contain required or validated or both. |
| **TestScript.metadata.link** |  |
| Short name | Links to the FHIR specification |
| Definition | A link to the FHIR specification that this test is covering. |
| **TestScript.metadata.link.url** |  |
| Short name | URL to the specification |
| Definition | URL to a particular requirement or feature within the FHIR specification. |
| **TestScript.metadata.link.description** |  |
| Short name | Short description |
| Definition | Short description of the link. |
| **TestScript.metadata.capability** |  |
| Short name | Capabilities that are assumed to function correctly on the FHIR server being tested |
| Definition | Capabilities that must exist and are assumed to function correctly on the FHIR server being tested. |
| Comment | When the metadata capabilities section is defined at TestScript.metadata or at TestScript.setup.metadata, and the server's conformance statement does not contain the elements defined in the minimal conformance statement, then all the tests in the TestScript are skipped. When the metadata capabilities section is defined at TestScript.test.metadata and the server's conformance statement does not contain the elements defined in the minimal conformance statement, then only that test is skipped. The "metadata.capabilities.required" and "metadata.capabilities.validated" elements only indicate whether the capabilities are the primary focus of the test script or not. The do not impact the skipping logic. Capabilities whose "metadata.capabilities.validated" flag is true are the primary focus of the test script. |
| **TestScript.metadata.capability.required** |  |
| Short name | Are the capabilities required? |
| Definition | Whether or not the test execution will require the given capabilities of the server in order for this test script to execute. |
| **TestScript.metadata.capability.validated** |  |
| Short name | Are the capabilities validated? |
| Definition | Whether or not the test execution will validate the given capabilities of the server in order for this test script to execute. |
| **TestScript.metadata.capability.description** |  |
| Short name | The expected capabilities of the server |
| Definition | Description of the capabilities that this test script is requiring the server to support. |
| **TestScript.metadata.capability.origin** |  |
| Short name | Which origin server these requirements apply to |
| Definition | Which origin server these requirements apply to. |
| **TestScript.metadata.capability.destination** |  |
| Short name | Which server these requirements apply to |
| Definition | Which server these requirements apply to. |
| **TestScript.metadata.capability.link** |  |
| Short name | Links to the FHIR specification |
| Definition | Links to the FHIR specification that describes this interaction and the resources involved in more detail. |
| **TestScript.metadata.capability.capabilities** |  |
| Short name | Required Capability Statement |
| Definition | Minimum capabilities required of server for test script to execute successfully. If server does not meet at a minimum the referenced capability statement, then all tests in this script are skipped. |
| Comment | The conformance statement of the server has to contain at a minimum the contents of the reference pointed to by this element. |
| **TestScript.fixture** |  |
| Short name | Fixture in the test script - by reference (uri) |
| Definition | Fixture in the test script - by reference (uri). All fixtures are required for the test script to execute. |
| **TestScript.fixture.autocreate** |  |
| Short name | Whether or not to implicitly create the fixture during setup |
| Definition | Whether or not to implicitly create the fixture during setup. If true, the fixture is automatically created on each server being tested during setup, therefore no create operation is required for this fixture in the TestScript.setup section. |
| **TestScript.fixture.autodelete** |  |
| Short name | Whether or not to implicitly delete the fixture during teardown |
| Definition | Whether or not to implicitly delete the fixture during teardown If true, the fixture is automatically deleted on each server being tested during teardown, therefore no delete operation is required for this fixture in the TestScript.teardown section. |
| **TestScript.fixture.resource** |  |
| Short name | Reference of the resource |
| Definition | Reference to the resource (containing the contents of the resource needed for operations). |
| Comment | See http://build.fhir.org/resourcelist.html for complete list of resource types. |
| **TestScript.profile** |  |
| Short name | Reference of the validation profile |
| Definition | Reference to the profile to be used for validation. |
| Comment | See http://build.fhir.org/resourcelist.html for complete list of resource types. |
| **TestScript.variable** |  |
| Short name | Placeholder for evaluated elements |
| Definition | Variable is set based either on element value in response body or on header field value in the response headers. |
| Comment | Variables would be set based either on XPath/JsonPath expressions against fixtures (static and response), or headerField evaluations against response headers. If variable evaluates to nodelist or anything other than a primitive value, then test engine would report error. Variables would be used to perform clean replacements in "operation.params", "operation.requestHeader.value", and "operation.url" element values during operation calls and in "assert.value" during assertion evaluations. This limits the places that test engines would need to look for placeholders "${}". Variables are scoped to the whole script. They are NOT evaluated at declaration. They are evaluated by test engine when used for substitutions in "operation.params", "operation.requestHeader.value", and "operation.url" element values during operation calls and in "assert.value" during assertion evaluations. See example testscript-search.xml. |
| Constraint Text | Variable can only contain one of expression, headerField or path. |
| **TestScript.variable.name** |  |
| Short name | Descriptive name for this variable |
| Definition | Descriptive name for this variable. |
| Comment | Placeholders would contain the variable name wrapped in ${} in "operation.params", "operation.requestHeader.value", and "operation.url" elements. These placeholders would need to be replaced by the variable value before the operation is executed. |
| **TestScript.variable.defaultValue** |  |
| Short name | Default, hard-coded, or user-defined value for this variable |
| Definition | A default, hard-coded, or user-defined value for this variable. |
| Comment | The purpose of this element is to allow for a pre-defined value that can be used as a default or as an override value. Test engines can optionally use this as a placeholder for user-defined execution time values. |
| **TestScript.variable.description** |  |
| Short name | Natural language description of the variable |
| Definition | A free text natural language description of the variable and its purpose. |
| **TestScript.variable.expression** |  |
| Short name | The fluentpath expression against the fixture body |
| Definition | The fluentpath expression to evaluate against the fixture body. When variables are defined, only one of either expression, headerField or path must be specified. |
| Comment | If headerField is defined, then the variable will be evaluated against the headers that sourceId is pointing to. If expression or path is defined, then the variable will be evaluated against the fixture body that sourceId is pointing to. It is an error to define any combination of expression, headerField and path. |
| **TestScript.variable.headerField** |  |
| Short name | HTTP header field name for source |
| Definition | Will be used to grab the HTTP header field value from the headers that sourceId is pointing to. |
| Comment | If headerField is defined, then the variable will be evaluated against the headers that sourceId is pointing to. If path is defined, then the variable will be evaluated against the fixture body that sourceId is pointing to. It is an error to define both headerField and path. |
| **TestScript.variable.hint** |  |
| Short name | Hint help text for default value to enter |
| Definition | Displayable text string with hint help information to the user when entering a default value. |
| **TestScript.variable.path** |  |
| Short name | XPath or JSONPath against the fixture body |
| Definition | XPath or JSONPath to evaluate against the fixture body. When variables are defined, only one of either expression, headerField or path must be specified. |
| Comment | If headerField is defined, then the variable will be evaluated against the headers that sourceId is pointing to. If expression or path is defined, then the variable will be evaluated against the fixture body that sourceId is pointing to. It is an error to define any combination of expression, headerField and path. |
| **TestScript.variable.sourceId** |  |
| Short name | Fixture Id of source expression or headerField within this variable |
| Definition | Fixture to evaluate the XPath/JSONPath expression or the headerField against within this variable. |
| Comment | This can be a statically defined fixture (at the top of the testscript) or a dynamically set fixture created by responseId of the action.operation element. |
| **TestScript.rule** |  |
| Short name | Assert rule used within the test script |
| Definition | Assert rule to be used in one or more asserts within the test script. |
| Comment | Each rule should be treated by test engines as one assertion regardless of how many assertions are contained within the external rule template. The impact of negative rule evaluation on test script execution is the same as an assertion failure which is descibed elsewhere in the TestScript resource. |
| **TestScript.rule.resource** |  |
| Short name | Assert rule resource reference |
| Definition | Reference to the resource (containing the contents of the rule needed for assertions). |
| **TestScript.rule.param** |  |
| Short name | Rule parameter template |
| Definition | Each rule template can take one or more parameters for rule evaluation. |
| Comment | The parameter value can be dynamic at runtime. |
| **TestScript.rule.param.name** |  |
| Short name | Parameter name matching external assert rule parameter |
| Definition | Descriptive name for this parameter that matches the external assert rule parameter name. |
| Comment | The external rule template would be looking for the parameter by this name. |
| **TestScript.rule.param.value** |  |
| Short name | Parameter value defined either explicitly or dynamically |
| Definition | The explict or dynamic value for the parameter that will be passed on to the external rule template. |
| Comment | This value can be overwritten by the assert.rule.param.value i.e. TestScript.rule.param.value will be used if assert.rule.param.value is not specified. The param value can be a string-representation of a number, string, or boolean that is expected. Test engines do have to look for placeholders (${}) and replace the variable placeholders with the variable values at runtime before supplying this value to the external rule template. |
| **TestScript.ruleset** |  |
| Short name | Assert ruleset used within the test script |
| Definition | Contains one or more rules. Offers a way to group rules so assertions could reference the group of rules and have them all applied. |
| Comment | Each rule within a ruleset should be treated by test engines as one assertion regardless of how many assertions are contained within the external rule template. The impact of negative rule evaluation on test script execution is the same as an assertion failure which is descibed elsewhere in the TestScript resource. |
| **TestScript.ruleset.resource** |  |
| Short name | Assert ruleset resource reference |
| Definition | Reference to the resource (containing the contents of the ruleset needed for assertions). |
| **TestScript.ruleset.rule** |  |
| Short name | The referenced rule within the ruleset |
| Definition | The referenced rule within the external ruleset template. |
| Comment | This qualifies each param name so that a parameter with the same name can be used differently by the different rules with the ruleset. |
| **TestScript.ruleset.rule.ruleId** |  |
| Short name | Id of referenced rule within the ruleset |
| Definition | Id of the referenced rule within the external ruleset template. |
| **TestScript.ruleset.rule.param** |  |
| Short name | Ruleset rule parameter template |
| Definition | Each rule template can take one or more parameters for rule evaluation. |
| Comment | The parameter value can be dynamic at runtime. |
| **TestScript.ruleset.rule.param.name** |  |
| Short name | Parameter name matching external assert ruleset rule parameter |
| Definition | Descriptive name for this parameter that matches the external assert ruleset rule parameter name. |
| Comment | The external rule template would be looking for the parameter by this name. |
| **TestScript.ruleset.rule.param.value** |  |
| Short name | Parameter value defined either explicitly or dynamically |
| Definition | The value for the parameter that will be passed on to the external ruleset rule template. |
| Comment | This value can be overwritten by the assert.ruleset.rule.param.value i.e. TestScript.ruleset.rule.param.value will be used if assert.ruleset.rule.param.value is not specified. The param value can be a string-representation of a number, string, or boolean that is expected. Test engines do have to look for placeholders (${}) and replace the variable placeholders with the variable values at runtime before supplying this value to the external rule template. |
| **TestScript.setup** |  |
| Short name | A series of required setup operations before tests are executed |
| Definition | A series of required setup operations before tests are executed. |
| **TestScript.setup.action** |  |
| Short name | A setup operation or assert to perform |
| Definition | Action would contain either an operation or an assertion. |
| Comment | An action should contain either an operation or an assertion but not both. It can contain any number of variables. |
| Constraint Text | Setup action SHALL contain either an operation or assert but not both. |
| **TestScript.setup.action.operation** |  |
| Short name | The setup operation to perform |
| Definition | The operation to perform. |
| Constraint Text | Setup operation SHALL contain either sourceId or targetId or params or url. |
| **TestScript.setup.action.operation.type** |  |
| Short name | The operation code type that will be executed |
| Definition | Server interaction or operation type. |
| Comment | See http://build.fhir.org/http.html for list of server interactions. |
| Binding Description | The allowable operation code types. |
| **TestScript.setup.action.operation.resource** |  |
| Short name | Resource type |
| Definition | The type of the resource. See http://build.fhir.org/resourcelist.html. |
| Comment | If "url" element is specified, then "targetId", "params", and "resource" elements will be ignored as "url" element will have everything needed for constructing the request url. If "params" element is specified, then "targetId" element is ignored. For FHIR operations that require a resource (e.g. "read" and "vread" operations), the "resource" element must be specified when "params" element is specified. If "url" and "params" elements are absent, then the request url will be constructed from "targetId" fixture if present. For "read" operation, the resource and id values will be extracted from "targetId" fixture and used to construct the url. For "vread" and "history" operations, the versionId value will also be used. |
| Binding Description | Either a resource or a data type. |
| **TestScript.setup.action.operation.label** |  |
| Short name | Tracking/logging operation label |
| Definition | The label would be used for tracking/logging purposes by test engines. |
| Comment | This has no impact on the verification itself. |
| **TestScript.setup.action.operation.description** |  |
| Short name | Tracking/reporting operation description |
| Definition | The description would be used by test engines for tracking and reporting purposes. |
| Comment | This has no impact on the verification itself. |
| **TestScript.setup.action.operation.accept** |  |
| Definition | The content-type or mime-type to use for RESTful operation in the 'Accept' header. |
| Comment | If this is specified, then test engine shall set the 'Accept' header to the corresponding value. If 'xml' is specified, then 'Accept' header of 'application/fhir+xml' will be set. If 'json' is specified, then 'application/fhir+json' will be used. If you'd like to explicitly set the 'Accept' to some other value then use the 'requestHeader' element. |
| Meaning when missing | xml |
| Binding Description | The content or mime type. |
| **TestScript.setup.action.operation.contentType** |  |
| Definition | The content-type or mime-type to use for RESTful operation in the 'Content-Type' header. |
| Comment | If this is specified, then test engine shall set the 'Content-Type' header to the corresponding value. If 'xml' is specified, then 'Content-Type' header of 'application/fhir+xml' will be set. If 'json' is specified, then 'application/fhir+json' will be used. If you'd like to explicitly set the 'Content-Type' to some other value then use the 'requestHeader' element. |
| Meaning when missing | xml |
| Binding Description | The content or mime type. |
| **TestScript.setup.action.operation.destination** |  |
| Short name | Server responding to the request |
| Definition | The server where the request message is destined for. Must be one of the server numbers listed in TestScript.destination section. |
| Comment | If multiple TestScript.destination elements are defined and operation.destination is undefined, test engine will error as it cannot determine what destination to use for the exchange. |
| **TestScript.setup.action.operation.encodeRequestUrl** |  |
| Short name | Whether or not to send the request url in encoded format |
| Definition | Whether or not to implicitly send the request url in encoded format. The default is true to match the standard RESTful client behavior. Set to false when communicating with a server that does not support encoded url paths. |
| **TestScript.setup.action.operation.origin** |  |
| Short name | Server initiating the request |
| Definition | The server where the request message originates from. Must be one of the server numbers listed in TestScript.origin section. |
| Comment | If absent, test engine will send the message. When present, test engine will not send the request message but will wait for the request message to be sent from this origin server. |
| **TestScript.setup.action.operation.params** |  |
| Short name | Explicitly defined path parameters |
| Definition | Path plus parameters after [type]. Used to set parts of the request URL explicitly. |
| Comment | If "url" element is specified, then "targetId", "params", and "resource" elements will be ignored as "url" element will have everything needed for constructing the request url. If "params" element is specified, then "targetId" element is ignored. For FHIR operations that require a resource (e.g. "read" and "vread" operations), the "resource" element must be specified when "params" element is specified. If "url" and "params" elements are absent, then the request url will be constructed from "targetId" fixture if present. For "read" operation, the resource and id values will be extracted from "targetId" fixture and used to construct the url. For "vread" and "history" operations, the versionId value will also be used. Test engines would append whatever is specified for "params" to the URL after the resource type without tampering with the string (beyond encoding the URL for HTTP). The "params" element does not correspond exactly to "search parameters". Nor is it the "path". It corresponds to the part of the URL that comes after the [type] (when "resource" element is specified); e.g. It corresponds to "/[id]/\_history/[vid] {?\_format=[mime-type]}" in the following operation: GET [base]/[type]/[id]/\_history/[vid] {?\_format=[mime-type]} Test engines do have to look for placeholders (${}) and replace the variable placeholders with the variable values at runtime before sending the request. |
| **TestScript.setup.action.operation.requestHeader** |  |
| Short name | Each operation can have one ore more header elements |
| Definition | Header elements would be used to set HTTP headers. |
| Comment | This gives control to test-script writers to set headers explicitly based on test requirements. It will allow for testing using: - "If-Modified-Since" and "If-None-Match" headers. See http://build.fhir.org/http.html#2.1.0.5.1 - "If-Match" header. See http://build.fhir.org/http.html#2.1.0.11 - Conditional Create using "If-None-Exist". See http://build.fhir.org/http.html#2.1.0.13.1 - Invalid "Content-Type" header for negative testing. - etc. |
| **TestScript.setup.action.operation.requestHeader.field** |  |
| Short name | HTTP header field name |
| Definition | The HTTP header field e.g. "Accept". |
| Comment | If header element is specified, then field is required. |
| **TestScript.setup.action.operation.requestHeader.value** |  |
| Short name | HTTP headerfield value |
| Definition | The value of the header e.g. "application/fhir+xml". |
| Comment | If header element is specified, then value is required. No conversions will be done by Test Engine e.g. "xml" to "application/fhir+xml". The values will be set in HTTP headers "as-is". Test engines do have to look for placeholders (${}) and replace the variable placeholders with the variable values at runtime before sending the request. |
| **TestScript.setup.action.operation.requestId** |  |
| Short name | Fixture Id of mapped request |
| Definition | The fixture id (maybe new) to map to the request. |
| Comment | If a requestId is supplied, then the resulting request (both headers and body) is mapped to the fixture ID (which may be entirely new and previously undeclared) designated by "requestId". If requestId is not specified, it is the Test Engine's responsibility to store the request and use it as requestId in subsequent assertions when assertion path and/or headerField is specified and direction is equal to request and requestId is not specified. |
| **TestScript.setup.action.operation.responseId** |  |
| Short name | Fixture Id of mapped response |
| Definition | The fixture id (maybe new) to map to the response. |
| Comment | If a responseId is supplied, and the server responds, then the resulting response (both headers and body) is mapped to the fixture ID (which may be entirely new and previously undeclared) designated by "responseId". If responseId is not specified, it is the Test Engine's responsibility to store the response and use it as sourceId in subsequent assertions when assertion path and/or headerField is specified and sourceId is not specified. |
| **TestScript.setup.action.operation.sourceId** |  |
| Short name | Fixture Id of body for PUT and POST requests |
| Definition | The id of the fixture used as the body of a PUT or POST request. |
| **TestScript.setup.action.operation.targetId** |  |
| Short name | Id of fixture used for extracting the [id], [type], and [vid] for GET requests |
| Definition | Id of fixture used for extracting the [id], [type], and [vid] for GET requests. |
| Comment | If "url" element is specified, then "targetId", "params", and "resource" elements will be ignored as "url" element will have everything needed for constructing the request url. If "params" element is specified, then "targetId" element is ignored. For FHIR operations that require a resource (e.g. "read" and "vread" operations), the "resource" element must be specified when "params" element is specified. If "url" and "params" elements are absent, then the request url will be constructed from "targetId" fixture if present. For "read" operation, the resource and id values will be extracted from "targetId" fixture and used to construct the url. For "vread" and "history" operations, the versionId value will also be used. |
| **TestScript.setup.action.operation.url** |  |
| Short name | Request URL |
| Definition | Complete request URL. |
| Comment | Used to set the request URL explicitly. If "url" element is defined, then "targetId", "resource", and "params" elements will be ignored. Test engines would use whatever is specified in "url" without tampering with the string (beyond encoding the URL for HTTP). Test engines do have to look for placeholders (${}) and replace the variable placeholders with the variable values at runtime before sending the request. |
| **TestScript.setup.action.assert** |  |
| Short name | The assertion to perform |
| Definition | Evaluates the results of previous operations to determine if the server under test behaves appropriately. |
| Comment | In order to evaluate an assertion, the request, response, and results of the most recently executed operation must always be maintained by the test engine. |
| Constraint Text | Only a single assertion SHALL be present within setup action assert element. |
| Constraint Text | Setup action assert SHALL contain either compareToSourceId and compareToSourceExpression, compareToSourceId and compareToSourcePath or neither. |
| Constraint Text | Setup action assert response and response and responseCode SHALL be empty when direction equals request |
| **TestScript.setup.action.assert.label** |  |
| Short name | Tracking/logging assertion label |
| Definition | The label would be used for tracking/logging purposes by test engines. |
| Comment | This has no impact on the verification itself. |
| **TestScript.setup.action.assert.description** |  |
| Short name | Tracking/reporting assertion description |
| Definition | The description would be used by test engines for tracking and reporting purposes. |
| Comment | This has no impact on the verification itself. |
| **TestScript.setup.action.assert.direction** |  |
| Definition | The direction to use for the assertion. |
| Comment | If the direction is specified as "response" (the default), then the processing of this assert is against the received response message. If the direction is specified as "request", then the processing of this assert is against the sent request message. |
| Binding Description | The type of direction to use for assertion. |
| **TestScript.setup.action.assert.compareToSourceId** |  |
| Short name | Id of the source fixture to be evaluated |
| Definition | Id of the source fixture used as the contents to be evaluated by either the "source/expression" or "sourceId/path" definition. |
| **TestScript.setup.action.assert.compareToSourceExpression** |  |
| Short name | The fluentpath expression to evaluate against the source fixture |
| Definition | The fluentpath expression to evaluate against the source fixture. When compareToSourceId is defined, either compareToSourceExpression or compareToSourcePath must be defined, but not both. |
| Comment | Thefhirpath expression to be evaluated against the expected fixture to compare to. Ignored if "assert.value" is used. The evaluation will be done before the assertion is evaluated. |
| **TestScript.setup.action.assert.compareToSourcePath** |  |
| Short name | XPath or JSONPath expression to evaluate against the source fixture |
| Definition | XPath or JSONPath expression to evaluate against the source fixture. When compareToSourceId is defined, either compareToSourceExpression or compareToSourcePath must be defined, but not both. |
| Comment | The XPath or JSONPath expression to be evaluated against the expected fixture to compare to. Ignored if "assert.value" is used. The evaluation will be done before the assertion is evaluated. |
| **TestScript.setup.action.assert.contentType** |  |
| Definition | The content-type or mime-type to use for RESTful operation in the 'Content-Type' header. |
| Comment | If this is specified, then test engine shall confirm that the content-type of the last operation's headers is set to this value. If "assert.sourceId" element is specified, then the evaluation will be done against the headers mapped to that sourceId (and not the last operation's headers). If 'xml' is specified, then 'Content-Type' header of 'application/fhir+xml' will be confirmed. If 'json' is specified, then 'application/fhir+json' will be used. If you'd like to have more control over the string, then use 'assert.headerField' instead. |
| Meaning when missing | xml |
| Binding Description | The content or mime type. |
| **TestScript.setup.action.assert.expression** |  |
| Short name | The fluentpath expression to be evaluated |
| Definition | The fluentpath expression to be evaluated against the request or response message contents - HTTP headers and payload. |
| Comment | If both "expression" and a "fixtureId" are specified, then the expression will be evaluated against the request or response body mapped to the fixtureId. If "expression" is specified and a "fixtureId" is not, then the expression will be evaluated against the response body of the last operation. Test engines are to store the request and response body and headers of the last operation at all times for subsequent assertions. |
| **TestScript.setup.action.assert.headerField** |  |
| Short name | HTTP header field name |
| Definition | The HTTP header field name e.g. 'Location'. |
| Comment | If "headerField" is specified then "value" must be specified. If "sourceId" is not specified, then "headerField" will be evaluated against the last operation's response headers. Test engines are to keep track of the last operation's response body and response headers. |
| **TestScript.setup.action.assert.minimumId** |  |
| Short name | Fixture Id of minimum content resource |
| Definition | The ID of a fixture. Asserts that the response contains at a minimum the fixture specified by minimumId. |
| Comment | Asserts that the response contains all the element/content in another fixture pointed to by minimumId. This can be a statically defined fixture or one that is dynamically set via responseId. |
| **TestScript.setup.action.assert.navigationLinks** |  |
| Short name | Perform validation on navigation links? |
| Definition | Whether or not the test execution performs validation on the bundle navigation links. |
| Comment | Asserts that the Bundle contains first, last, and next links. |
| **TestScript.setup.action.assert.operator** |  |
| Definition | The operator type defines the conditional behavior of the assert. If not defined, the default is equals. |
| Comment | Operators are useful especially for negative testing. If operator is not specified, then the "equals" operator is assumed; e.g. <code> <assert> <operator value="in" /> <responseCode value="200,201,204" /> </assert> <assert> <operator value="notEquals" /> <response value="okay"/> </assert> <assert> <operator value="greaterThan" /> <responseHeader> <field value="Content-Length" /> <value value="0" /> <responseHeader/> </assert> </code>. |
| Binding Description | The type of operator to use for assertion. |
| **TestScript.setup.action.assert.path** |  |
| Short name | XPath or JSONPath expression |
| Definition | The XPath or JSONPath expression to be evaluated against the fixture representing the response received from server. |
| Comment | If both "path" and a "fixtureId" are specified, then the path will be evaluated against the request or response body mapped to the fixtureId. If "path" is specified and a "fixtureId" is not, then the path will be evaluated against the response body of the last operation. Test engines are to store the request and response body and headers of the last operation at all times for subsequent assertions. |
| **TestScript.setup.action.assert.requestMethod** |  |
| Definition | The request method or HTTP operation code to compare against that used by the client system under test. |
| Comment | If "requestMethod" is specified then it will be used in place of "value". The "requestMethod" will evaluate against the last operation's request HTTP operation. |
| Binding Description | The allowable request method or HTTP operation codes. |
| **TestScript.setup.action.assert.requestURL** |  |
| Short name | Request URL comparison value |
| Definition | The value to use in a comparison against the request URL path string. |
| Comment | If "requestURL" is specified then it will be used in place of "value". The "requestURL" will evaluate against the last operation's full request URL path string. |
| **TestScript.setup.action.assert.resource** |  |
| Short name | Resource type |
| Definition | The type of the resource. See http://build.fhir.org/resourcelist.html. |
| Comment | This will be expected resource type in response body e.g. in read, vread, search, etc. See http://build.fhir.org/resourcelist.html for complete list of resource types; e.g. <assert > <resourceType value="Patient" </assert>. |
| Binding Description | Either a resource or a data type. |
| **TestScript.setup.action.assert.response** |  |
| Definition | okay | created | noContent | notModified | bad | forbidden | notFound | methodNotAllowed | conflict | gone | preconditionFailed | unprocessable. |
| Comment | This is a shorter way of achieving similar verifications via "assert.responseCode". If you need more control, then use "assert.responseCode" e.g. <assert> <contentType value="json" /> <response value="okay"/> </assert>. |
| Binding Description | The type of response code to use for assertion. |
| **TestScript.setup.action.assert.responseCode** |  |
| Short name | HTTP response code to test |
| Definition | The value of the HTTP response code to be tested. |
| Comment | To be used with "operator" attribute value. Asserts that the response code equals this value if "operator" is not specified. If the operator is "in" or "notIn" then the responseCode would be a comma-separated list of values e.g. "200,201". Otherwise, it's expected to be a numeric value. If "fixture" is not specified, then the "responseBodyId" value of the last operation is assumed. |
| **TestScript.setup.action.assert.rule** |  |
| Short name | The reference to a TestScript.rule |
| Definition | The TestScript.rule this assert will evaluate. |
| Comment | Each rule should get evaluated by test engines as one assertion regardless of how many assertions are contained within the external rule template. The impact of negative rule evaluation on test script execution is the same as an assertion failure which is descibed elsewhere in the TestScript resource. |
| **TestScript.setup.action.assert.rule.ruleId** |  |
| Short name | Id of the TestScript.rule |
| Definition | The TestScript.rule id value this assert will evaluate. |
| **TestScript.setup.action.assert.rule.param** |  |
| Short name | Rule parameter template |
| Definition | Each rule template can take one or more parameters for rule evaluation. |
| Comment | The parameter value can be dynamic at runtime. |
| **TestScript.setup.action.assert.rule.param.name** |  |
| Short name | Parameter name matching external assert rule parameter |
| Definition | Descriptive name for this parameter that matches the external assert rule parameter name. |
| Comment | The external rule template would be looking for the parameter by this name. |
| **TestScript.setup.action.assert.rule.param.value** |  |
| Short name | Parameter value defined either explicitly or dynamically |
| Definition | The value for the parameter that will be passed on to the external rule template. |
| Comment | This value overwrites the value (if any) specified in TestScript.rule.param.value. The param value can be a string-representation of a number, string, or boolean that is expected. Test engines do have to look for placeholders (${}) and replace the variable placeholders with the variable values at runtime before supplying this value to the external rule template. |
| **TestScript.setup.action.assert.ruleset** |  |
| Short name | The reference to a TestScript.ruleset |
| Definition | The TestScript.ruleset this assert will evaluate. |
| Comment | Each rule within a ruleset should get evaluated by test engines as a separate assertion. The impact of negative rule evaluation on test script execution is the same as an assertion failure which is descibed elsewhere in the TestScript resource. If the first rule within the ruleset results in a failed assertion, then test engines do not have to evaluate the rest of the rules within the ruleset. |
| **TestScript.setup.action.assert.ruleset.rulesetId** |  |
| Short name | Id of the TestScript.ruleset |
| Definition | The TestScript.ruleset id value this assert will evaluate. |
| **TestScript.setup.action.assert.ruleset.rule** |  |
| Short name | The referenced rule within the ruleset |
| Definition | The referenced rule within the external ruleset template. |
| Comment | This qualifies each param name so that a parameter with the same name can be used differently by the different rules with the ruleset. |
| **TestScript.setup.action.assert.ruleset.rule.ruleId** |  |
| Short name | Id of referenced rule within the ruleset |
| Definition | Id of the referenced rule within the external ruleset template. |
| **TestScript.setup.action.assert.ruleset.rule.param** |  |
| Short name | Rule parameter template |
| Definition | Each rule template can take one or more parameters for rule evaluation. |
| Comment | The parameter value can be dynamic at runtime. |
| **TestScript.setup.action.assert.ruleset.rule.param.name** |  |
| Short name | Parameter name matching external assert ruleset rule parameter |
| Definition | Descriptive name for this parameter that matches the external assert ruleset rule parameter name. |
| Comment | The external rule template would be looking for the parameter by this name. |
| **TestScript.setup.action.assert.ruleset.rule.param.value** |  |
| Short name | Parameter value defined either explicitly or dynamically |
| Definition | The value for the parameter that will be passed on to the external ruleset rule template. |
| Comment | This value overwrites the value (if any) specified in TestScript.ruleset.rule.param.value. The param value can be a string-representation of a number, string, or boolean that is expected. Test engines do have to look for placeholders (${}) and replace the variable placeholders with the variable values at runtime before supplying this value to the external rule template. |
| **TestScript.setup.action.assert.sourceId** |  |
| Short name | Fixture Id of source expression or headerField |
| Definition | Fixture to evaluate the XPath/JSONPath expression or the headerField against. |
| Comment | This can be a statically defined fixture (at the top of the testscript) or a dynamically set fixture created by responseId of the action.operation element. |
| **TestScript.setup.action.assert.validateProfileId** |  |
| Short name | Profile Id of validation profile reference |
| Definition | The ID of the Profile to validate against. |
| Comment | The ID of a Profile fixture. Asserts that the response is valid according to the Profile specified by validateProfileId. |
| **TestScript.setup.action.assert.value** |  |
| Short name | The value to compare to |
| Definition | The value to compare to. |
| Comment | The string-representation of a number, string, or boolean that is expected. Test engines do have to look for placeholders (${}) and replace the variable placeholders with the variable values at runtime before comparing this value to the actual value. |
| **TestScript.setup.action.assert.warningOnly** |  |
| Short name | Will this assert produce a warning only on error? |
| Definition | Whether or not the test execution will produce a warning only on error for this assert. |
| Comment | If this element is specified and it is true, then assertion failures can be logged by test engine but should not stop the test script execution from proceeding. There are likely cases where the spec is not clear on what should happen. If the spec says something is optional (maybe a response header for example), but a server doesnâ€™t do it, we could choose to issue a warning. |
| **TestScript.test** |  |
| Short name | A test in this script |
| Definition | A test in this script. |
| **TestScript.test.name** |  |
| Short name | Tracking/logging name of this test |
| Definition | The name of this test used for tracking/logging purposes by test engines. |
| **TestScript.test.description** |  |
| Short name | Tracking/reporting short description of the test |
| Definition | A short description of the test used by test engines for tracking and reporting purposes. |
| **TestScript.test.action** |  |
| Short name | A test operation or assert to perform |
| Definition | Action would contain either an operation or an assertion. |
| Comment | An action should contain either an operation or an assertion but not both. It can contain any number of variables. |
| Constraint Text | Test action SHALL contain either an operation or assert but not both. |
| **TestScript.test.action.operation** |  |
| Short name | The setup operation to perform |
| Definition | An operation would involve a REST request to a server. |
| Constraint Text | Test operation SHALL contain either sourceId or targetId or params or url. |
| **TestScript.test.action.assert** |  |
| Short name | The setup assertion to perform |
| Definition | Evaluates the results of previous operations to determine if the server under test behaves appropriately. |
| Comment | In order to evaluate an assertion, the request, response, and results of the most recently executed operation must always be maintained by the test engine. |
| Constraint Text | Only a single assertion SHALL be present within test action assert element. |
| Constraint Text | Test action assert SHALL contain either compareToSourceId and compareToSourceExpression, compareToSourceId and compareToSourcePath or neither. |
| Constraint Text | Test action assert response and response and responseCode SHALL be empty when direction equals request |
| **TestScript.teardown** |  |
| Short name | A series of required clean up steps |
| Definition | A series of operations required to clean up after the all the tests are executed (successfully or otherwise). |
| **TestScript.teardown.action** |  |
| Short name | One or more teardown operations to perform |
| Definition | The teardown action will only contain an operation. |
| Comment | An action should contain either an operation or an assertion but not both. It can contain any number of variables. |
| **TestScript.teardown.action.operation** |  |
| Short name | The teardown operation to perform |
| Definition | An operation would involve a REST request to a server. |
| Constraint Text | Teardown operation SHALL contain either sourceId or targetId or params or url. |

# Financial Management

## http://hl7.org/fhir/StructureDefinition/Claim

|  |  |
| --- | --- |
| **Description** | Base StructureDefinition for Claim Resource |
| **Claim** | Claim |
| Short name | Claim, Pre-determination or Pre-authorization |
| Definition | A provider issued list of services and products provided, or to be provided, to a patient which is provided to an insurer for payment recovery. |
| **Claim.identifier** |  |
| Short name | Claim number |
| Definition | The business identifier for the instance: claim number, pre-determination or pre-authorization number. |
| **Claim.status** |  |
| Definition | The status of the resource instance. |
| Binding Description | A code specifying the state of the resource instance. |
| **Claim.type** |  |
| Short name | Type or discipline |
| Definition | The category of claim, eg, oral, pharmacy, vision, insitutional, professional. |
| Comment | Affects which fields and value sets are used. |
| Binding Description | The type or discipline-style of the claim |
| **Claim.subType** |  |
| Short name | Finer grained claim type information |
| Definition | A finer grained suite of claim subtype codes which may convey Inpatient vs Outpatient and/or a specialty service. In the US the BillType. |
| Comment | This may contain the local bill type codes such as the US UB-04 bill type code. |
| Binding Description | A more granular claim typecode |
| **Claim.use** |  |
| Definition | Complete (Bill or Claim), Proposed (Pre-Authorization), Exploratory (Pre-determination). |
| Binding Description | Complete, proposed, exploratory, other |
| **Claim.patient** |  |
| Short name | The subject of the Products and Services |
| Definition | Patient Resource. |
| **Claim.billablePeriod** |  |
| Short name | Period for charge submission |
| Definition | The billable period for which charges are being submitted. |
| **Claim.created** |  |
| Short name | Creation date |
| Definition | The date when the enclosed suite of services were performed or completed. |
| **Claim.enterer** |  |
| Short name | Author |
| Definition | Person who created the invoice/claim/pre-determination or pre-authorization. |
| **Claim.insurer** |  |
| Short name | Target |
| Definition | The Insurer who is target of the request. |
| **Claim.provider** |  |
| Short name | Responsible provider |
| Definition | The provider which is responsible for the bill, claim pre-determination, pre-authorization. |
| **Claim.organization** |  |
| Short name | Responsible organization |
| Definition | The organization which is responsible for the bill, claim pre-determination, pre-authorization. |
| **Claim.priority** |  |
| Short name | Desired processing priority |
| Definition | Immediate (STAT), best effort (NORMAL), deferred (DEFER). |
| Binding Description | The timeliness with which processing is required: STAT, normal, Deferred |
| **Claim.fundsReserve** |  |
| Short name | Funds requested to be reserved |
| Definition | In the case of a Pre-Determination/Pre-Authorization the provider may request that funds in the amount of the expected Benefit be reserved ('Patient' or 'Provider') to pay for the Benefits determined on the subsequent claim(s). 'None' explicitly indicates no funds reserving is requested. |
| Binding Description | For whom funds are to be reserved: (Patient, Provider, None). |
| **Claim.related** |  |
| Short name | Related Claims which may be revelant to processing this claimn |
| Definition | Other claims which are related to this claim such as prior claim versions or for related services. |
| **Claim.related.claim** |  |
| Short name | Reference to the related claim |
| Definition | Other claims which are related to this claim such as prior claim versions or for related services. |
| Comment | Do we need a relationship code? |
| **Claim.related.relationship** |  |
| Short name | How the reference claim is related |
| Definition | For example prior or umbrella. |
| Binding Description | Relationship of this claim to a related Claim |
| **Claim.related.reference** |  |
| Short name | Related file or case reference |
| Definition | An alternate organizational reference to the case or file to which this particular claim pertains - eg Property/Casualy insurer claim # or Workers Compensation case # . |
| **Claim.prescription** |  |
| Short name | Prescription authorizing services or products |
| Definition | Prescription to support the dispensing of Pharmacy or Vision products. |
| Comment | Should we create a group to hold multiple prescriptions and add a sequence number and on the line items a link to the sequence. |
| Requirements | For type=Pharmacy and Vision only. |
| **Claim.originalPrescription** |  |
| Short name | Original prescription if superceded by fulfiller |
| Definition | Original prescription which has been superceded by this prescription to support the dispensing of pharmacy services, medications or products. For example, a physician may prescribe a medication which the pharmacy determines is contraindicated, or for which the patient has an intolerance, and therefor issues a new precription for an alternate medication which has the same theraputic intent. The prescription from the pharmacy becomes the 'prescription' and that from the physician becomes the 'original prescription'. |
| Comment | as above. |
| **Claim.payee** |  |
| Short name | Party to be paid any benefits payable |
| Definition | The party to be reimbursed for the services. |
| **Claim.payee.type** |  |
| Short name | Type of party: Subscriber, Provider, other |
| Definition | Type of Party to be reimbursed: Subscriber, provider, other. |
| Binding Description | A code for the party to be reimbursed. |
| **Claim.payee.resourceType** |  |
| Definition | organization | patient | practitioner | relatedperson. |
| Binding Description | The type of Claim payee Resource |
| **Claim.payee.party** |  |
| Short name | Party to receive the payable |
| Definition | Party to be reimbursed: Subscriber, provider, other. |
| **Claim.referral** |  |
| Short name | Treatment Referral |
| Definition | The referral resource which lists the date, practitioner, reason and other supporting information. |
| **Claim.facility** |  |
| Short name | Servicing Facility |
| Definition | Facility where the services were provided. |
| **Claim.careTeam** |  |
| Short name | Members of the care team |
| Definition | The members of the team who provided the overall service as well as their role and whether responsible and qualifications. |
| Requirements | Role and Responsible may not be required when there is only a single provider listed. |
| **Claim.careTeam.sequence** |  |
| Short name | Number to covey order of careTeam |
| Definition | Sequence of the careTeam which serves to order and provide a link. |
| Requirements | Required to maintain order of the careTeam. |
| **Claim.careTeam.provider** |  |
| Short name | Provider individual or organization |
| Definition | Member of the team who provided the overall service. |
| **Claim.careTeam.responsible** |  |
| Short name | Billing provider |
| Definition | The party who is billing and responsible for the claimed good or service rendered to the patient. |
| **Claim.careTeam.role** |  |
| Short name | Role on the team |
| Definition | The lead, assisting or supervising practitioner and their discipline if a multidisiplinary team. |
| Binding Description | The role codes for the care team members. |
| **Claim.careTeam.qualification** |  |
| Short name | Type, classification or Specialization |
| Definition | The qualification which is applicable for this service. |
| Binding Description | Provider professional qualifications |
| **Claim.information** |  |
| Short name | Exceptions, special considerations, the condition, situation, prior or concurrent issues |
| Definition | Additional information codes regarding exceptions, special considerations, the condition, situation, prior or concurrent issues. Often there are mutiple jurisdiction specific valuesets which are required. |
| Requirements | Typically these information codes are required to support the services rendered or the adjudication of the services rendered. |
| **Claim.information.sequence** |  |
| Short name | Information instance identifier |
| Definition | Sequence of the information element which serves to provide a link. |
| Requirements | To provide a reference link. |
| **Claim.information.category** |  |
| Short name | General class of information |
| Definition | The general class of the information supplied: information; exception; accident, employment; onset, etc. |
| Comment | This may contain the local bill type codes such as the US UB-04 bill type code. |
| Binding Description | The valuset used for additional information category codes. |
| **Claim.information.code** |  |
| Short name | Type of information |
| Definition | System and code pertaining to the specific information regarding special conditions relating to the setting, treatment or patient for which care is sought which may influence the adjudication. |
| Comment | This may contain the local bill type codes such as the US UB-04 bill type code. |
| Binding Description | The valuset used for additional information codes. |
| **Claim.information.timing[x]** |  |
| Short name | When it occurred |
| Definition | The date when or period to which this information refers. |
| **Claim.information.value[x]** |  |
| Short name | Additional Data or supporting information |
| Definition | Additional data or information such as resources, documents, images etc. including references to the data or the actual inclusion of the data. |
| **Claim.information.reason** |  |
| Short name | Reason associated with the information |
| Definition | For example, provides the reason for: the additional stay, or missing tooth or any other situation where a reason code is required in addition to the content. |
| Binding Description | Reason codes for the missing teeth |
| **Claim.diagnosis** |  |
| Short name | List of Diagnosis |
| Definition | List of patient diagnosis for which care is sought. |
| **Claim.diagnosis.sequence** |  |
| Short name | Number to covey order of diagnosis |
| Definition | Sequence of diagnosis which serves to provide a link. |
| Requirements | Required to allow line items to reference the diagnoses. |
| **Claim.diagnosis.diagnosis[x]** |  |
| Short name | Patient's diagnosis |
| Definition | The diagnosis. |
| Requirements | Required to adjudicate services rendered to condition presented. |
| Binding Description | ICD10 Diagnostic codes |
| **Claim.diagnosis.type** |  |
| Short name | Timing or nature of the diagnosis |
| Definition | The type of the Diagnosis, for example: admitting, primary, secondary, discharge. |
| Comment | Diagnosis are presented in list order to their expected importance: primary, secondary, etc. |
| Requirements | May be required to adjudicate services rendered. |
| Binding Description | The type of the diagnosis: admitting, principal, discharge |
| **Claim.diagnosis.packageCode** |  |
| Short name | Package billing code |
| Definition | The package billing code, for example DRG, based on the assigned grouping code system. |
| Requirements | May be required to adjudicate services rendered to the mandated grouping system. |
| Binding Description | The DRG codes associated with the diagnosis |
| **Claim.procedure** |  |
| Short name | Procedures performed |
| Definition | Ordered list of patient procedures performed to support the adjudication. |
| **Claim.procedure.sequence** |  |
| Short name | Procedure sequence for reference |
| Definition | Sequence of procedures which serves to order and provide a link. |
| Requirements | Required to maintain order of the procudures. |
| **Claim.procedure.date** |  |
| Short name | When the procedure was performed |
| Definition | Date and optionally time the procedure was performed . |
| Comment | SB DateTime?? |
| Requirements | Required to adjudicate services rendered. |
| **Claim.procedure.procedure[x]** |  |
| Short name | Patient's list of procedures performed |
| Definition | The procedure code. |
| Requirements | Required to adjudicate services rendered. |
| Binding Description | ICD10 Procedure codes |
| **Claim.insurance** |  |
| Short name | Insurance or medical plan |
| Definition | Financial instrument by which payment information for health care. |
| Requirements | Health care programs and insurers are significant payors of health service costs. |
| **Claim.insurance.sequence** |  |
| Short name | Service instance identifier |
| Definition | Sequence of coverage which serves to provide a link and convey coordination of benefit order. |
| Requirements | To maintain order of the coverages. |
| **Claim.insurance.focal** |  |
| Short name | Is the focal Coverage |
| Definition | A flag to indicate that this Coverage is the focus for adjudication. The Coverage against which the claim is to be adjudicated. |
| Requirements | To identify which coverage is being adjudicated. |
| **Claim.insurance.coverage** |  |
| Short name | Insurance information |
| Definition | Reference to the program or plan identification, underwriter or payor. |
| Requirements | Need to identify the issuer to target for processing and for coordination of benefit processing. |
| **Claim.insurance.businessArrangement** |  |
| Short name | Business agreement |
| Definition | The contract number of a business agreement which describes the terms and conditions. |
| **Claim.insurance.preAuthRef** |  |
| Short name | Pre-Authorization/Determination Reference |
| Definition | A list of references from the Insurer to which these services pertain. |
| Requirements | To provide any pre=determination or prior authorization reference. |
| **Claim.insurance.claimResponse** |  |
| Short name | Adjudication results |
| Definition | The Coverages adjudication details. |
| Requirements | Used by downstream payers to determine what balance remains and the net payable. |
| **Claim.accident** |  |
| Short name | Details about an accident |
| Definition | An accident which resulted in the need for healthcare services. |
| **Claim.accident.date** |  |
| Short name | When the accident occurred see information codes see information codes |
| Definition | Date of an accident which these services are addressing. |
| Requirements | Coverage may be dependant on accidents. |
| **Claim.accident.type** |  |
| Short name | The nature of the accident |
| Definition | Type of accident: work, auto, etc. |
| Requirements | Coverage may be dependant on the type of accident. |
| Binding Description | Type of accident: work place, auto, etc. |
| **Claim.accident.location[x]** |  |
| Short name | Accident Place |
| Definition | Accident Place. |
| **Claim.employmentImpacted** |  |
| Short name | Period unable to work |
| Definition | The start and optional end dates of when the patient was precluded from working due to the treatable condition(s). |
| **Claim.hospitalization** |  |
| Short name | Period in hospital |
| Definition | The start and optional end dates of when the patient was confined to a treatment center. |
| **Claim.item** |  |
| Short name | Goods and Services |
| Definition | First tier of goods and services. |
| **Claim.item.sequence** |  |
| Short name | Service instance |
| Definition | A service line number. |
| **Claim.item.careTeamLinkId** |  |
| Short name | Applicable careTeam members |
| Definition | CareTeam applicable for this service or product line. |
| **Claim.item.diagnosisLinkId** |  |
| Short name | Applicable diagnoses |
| Definition | Diagnosis applicable for this service or product line. |
| **Claim.item.procedureLinkId** |  |
| Short name | Applicable procedures |
| Definition | Procedures applicable for this service or product line. |
| **Claim.item.informationLinkId** |  |
| Short name | Applicable exception and supporting information |
| Definition | Exceptions, special conditions and supporting information pplicable for this service or product line. |
| **Claim.item.revenue** |  |
| Short name | Revenue or cost center code |
| Definition | The type of reveneu or cost center providing the product and/or service. |
| Binding Description | Codes for the revenue or cost centers supplying the service and/or products. |
| **Claim.item.category** |  |
| Short name | Type of service or product |
| Definition | Health Care Service Type Codes to identify the classification of service or benefits. |
| Binding Description | Benefit subcategories such as: oral-basic, major, glasses |
| **Claim.item.service** |  |
| Short name | Billing Code |
| Definition | If this is an actual service or product line, ie. not a Group, then use code to indicate the Professional Service or Product supplied (eg. CTP, HCPCS,USCLS,ICD10, NCPDP,DIN,RXNorm,ACHI,CCI). If a grouping item then use a group code to indicate the type of thing being grouped eg. 'glasses' or 'compound'. |
| Binding Description | Allowable service and product codes |
| **Claim.item.modifier** |  |
| Short name | Service/Product billing modifiers |
| Definition | Item typification or modifiers codes, eg for Oral whether the treatment is cosmetic or associated with TMJ, or for medical whether the treatment was outside the clinic or out of office hours. |
| Requirements | May impact on adjudication. |
| Binding Description | Item type or modifiers codes, eg for Oral whether the treatment is cosmetic or associated with TMJ, or an appliance was lost or stolen. |
| **Claim.item.programCode** |  |
| Short name | Program specific reason for item inclusion |
| Definition | For programs which require reason codes for the inclusion or covering of this billed item under the program or sub-program. |
| Binding Description | Program specific reason codes |
| **Claim.item.serviced[x]** |  |
| Short name | Date or dates of Service |
| Definition | The date or dates when the enclosed suite of services were performed or completed. |
| **Claim.item.location[x]** |  |
| Short name | Place of service |
| Definition | Where the service was provided. |
| Binding Description | Place of service: pharmacy,school, prison, etc. |
| **Claim.item.quantity** |  |
| Short name | Count of Products or Services |
| Definition | The number of repetitions of a service or product. |
| **Claim.item.unitPrice** |  |
| Short name | Fee, charge or cost per point |
| Definition | If the item is a node then this is the fee for the product or service, otherwise this is the total of the fees for the children of the group. |
| **Claim.item.factor** |  |
| Short name | Price scaling factor |
| Definition | A real number that represents a multiplier used in determining the overall value of services delivered and/or goods received. The concept of a Factor allows for a discount or surcharge multiplier to be applied to a monetary amount. |
| Requirements | If a fee is present the associated product/service code must be present. |
| **Claim.item.net** |  |
| Short name | Total item cost |
| Definition | The quantity times the unit price for an addittional service or product or charge. For example, the formula: unit Quantity \* unit Price (Cost per Point) \* factor Number \* points = net Amount. Quantity, factor and points are assumed to be 1 if not supplied. |
| Requirements | If a fee is present the associated product/service code must be present. |
| **Claim.item.udi** |  |
| Short name | Unique Device Identifier |
| Definition | List of Unique Device Identifiers associated with this line item. |
| Requirements | The UDI code and issuer if applicable for the supplied product. |
| **Claim.item.bodySite** |  |
| Short name | Service Location |
| Definition | Physical service site on the patient (limb, tooth, etc). |
| Binding Description | The code for the teeth, quadrant, sextant and arch |
| **Claim.item.subSite** |  |
| Short name | Service Sub-location |
| Definition | A region or surface of the site, eg. limb region or tooth surface(s). |
| Binding Description | The code for the tooth surface and surface combinations |
| **Claim.item.encounter** |  |
| Short name | Encounters related to this billed item |
| Definition | A billed item may include goods or services provided in multiple encounters. |
| **Claim.item.detail** |  |
| Short name | Additional items |
| Definition | Second tier of goods and services. |
| **Claim.item.detail.sequence** |  |
| Short name | Service instance |
| Definition | A service line number. |
| **Claim.item.detail.revenue** |  |
| Short name | Revenue or cost center code |
| Definition | The type of reveneu or cost center providing the product and/or service. |
| Binding Description | Codes for the revenue or cost centers supplying the service and/or products. |
| **Claim.item.detail.category** |  |
| Short name | Type of service or product |
| Definition | Health Care Service Type Codes to identify the classification of service or benefits. |
| Binding Description | Benefit subcategories such as: oral-basic, major, glasses |
| **Claim.item.detail.service** |  |
| Short name | Billing Code |
| Definition | If this is an actual service or product line, ie. not a Group, then use code to indicate the Professional Service or Product supplied (eg. CTP, HCPCS,USCLS,ICD10, NCPDP,DIN,ACHI,CCI). If a grouping item then use a group code to indicate the type of thing being grouped eg. 'glasses' or 'compound'. |
| Binding Description | Allowable service and product codes |
| **Claim.item.detail.modifier** |  |
| Short name | Service/Product billing modifiers |
| Definition | Item typification or modifiers codes, eg for Oral whether the treatment is cosmetic or associated with TMJ, or for medical whether the treatment was outside the clinic or out of office hours. |
| Requirements | May impact on adjudication. |
| Binding Description | Item type or modifiers codes, eg for Oral whether the treatment is cosmetic or associated with TMJ, or an appliance was lost or stolen. |
| **Claim.item.detail.programCode** |  |
| Short name | Program specific reason for item inclusion |
| Definition | For programs which require reson codes for the inclusion, covering, of this billed item under the program or sub-program. |
| Binding Description | Program specific reason codes |
| **Claim.item.detail.quantity** |  |
| Short name | Count of Products or Services |
| Definition | The number of repetitions of a service or product. |
| **Claim.item.detail.unitPrice** |  |
| Short name | Fee, charge or cost per point |
| Definition | If the item is a node then this is the fee for the product or service, otherwise this is the total of the fees for the children of the group. |
| Requirements | If a fee is present the associated product/service code must be present. |
| **Claim.item.detail.factor** |  |
| Short name | Price scaling factor |
| Definition | A real number that represents a multiplier used in determining the overall value of services delivered and/or goods received. The concept of a Factor allows for a discount or surcharge multiplier to be applied to a monetary amount. |
| Requirements | If a fee is present the associated product/service code must be present. |
| **Claim.item.detail.net** |  |
| Short name | Total additional item cost |
| Definition | The quantity times the unit price for an addittional service or product or charge. For example, the formula: unit Quantity \* unit Price (Cost per Point) \* factor Number \* points = net Amount. Quantity, factor and points are assumed to be 1 if not supplied. |
| Requirements | If a fee is present the associated product/service code must be present. |
| **Claim.item.detail.udi** |  |
| Short name | Unique Device Identifier |
| Definition | List of Unique Device Identifiers associated with this line item. |
| Requirements | The UDI code and issuer if applicable for the supplied product. |
| **Claim.item.detail.subDetail** |  |
| Short name | Additional items |
| Definition | Third tier of goods and services. |
| **Claim.item.detail.subDetail.sequence** |  |
| Short name | Service instance |
| Definition | A service line number. |
| **Claim.item.detail.subDetail.revenue** |  |
| Short name | Revenue or cost center code |
| Definition | The type of reveneu or cost center providing the product and/or service. |
| Binding Description | Codes for the revenue or cost centers supplying the service and/or products. |
| **Claim.item.detail.subDetail.category** |  |
| Short name | Type of service or product |
| Definition | Health Care Service Type Codes to identify the classification of service or benefits. |
| Binding Description | Benefit subcategories such as: oral-basic, major, glasses |
| **Claim.item.detail.subDetail.service** |  |
| Short name | Billing Code |
| Definition | A code to indicate the Professional Service or Product supplied (eg. CTP, HCPCS,USCLS,ICD10, NCPDP,DIN,ACHI,CCI). |
| Binding Description | Allowable service and product codes |
| **Claim.item.detail.subDetail.modifier** |  |
| Short name | Service/Product billing modifiers |
| Definition | Item typification or modifiers codes, eg for Oral whether the treatment is cosmetic or associated with TMJ, or for medical whether the treatment was outside the clinic or out of office hours. |
| Requirements | May impact on adjudication. |
| Binding Description | Item type or modifiers codes, eg for Oral whether the treatment is cosmetic or associated with TMJ, or an appliance was lost or stolen. |
| **Claim.item.detail.subDetail.programCode** |  |
| Short name | Program specific reason for item inclusion |
| Definition | For programs which require reson codes for the inclusion, covering, of this billed item under the program or sub-program. |
| Binding Description | Program specific reason codes |
| **Claim.item.detail.subDetail.quantity** |  |
| Short name | Count of Products or Services |
| Definition | The number of repetitions of a service or product. |
| **Claim.item.detail.subDetail.unitPrice** |  |
| Short name | Fee, charge or cost per point |
| Definition | The fee for an addittional service or product or charge. |
| Requirements | If a fee is present the associated product/service code must be present. |
| **Claim.item.detail.subDetail.factor** |  |
| Short name | Price scaling factor |
| Definition | A real number that represents a multiplier used in determining the overall value of services delivered and/or goods received. The concept of a Factor allows for a discount or surcharge multiplier to be applied to a monetary amount. |
| Requirements | If a fee is present the associated product/service code must be present. |
| **Claim.item.detail.subDetail.net** |  |
| Short name | Net additional item cost |
| Definition | The quantity times the unit price for an addittional service or product or charge. For example, the formula: unit Quantity \* unit Price (Cost per Point) \* factor Number \* points = net Amount. Quantity, factor and points are assumed to be 1 if not supplied. |
| Requirements | If a fee is present the associated product/service code must be present. |
| **Claim.item.detail.subDetail.udi** |  |
| Short name | Unique Device Identifier |
| Definition | List of Unique Device Identifiers associated with this line item. |
| Requirements | The UDI code and issuer if applicable for the supplied product. |
| **Claim.total** |  |
| Short name | Total claim cost |
| Definition | The total value of the claim. |

## http://hl7.org/fhir/StructureDefinition/ClaimResponse

|  |  |
| --- | --- |
| **Description** | Base StructureDefinition for ClaimResponse Resource |
| **ClaimResponse** | Claim Response |
| Short name | Remittance resource |
| Definition | This resource provides the adjudication details from the processing of a Claim resource. |
| Synonym | Remittance Advice |
| **ClaimResponse.identifier** |  |
| Short name | Response number |
| Definition | The Response business identifier. |
| **ClaimResponse.status** |  |
| Definition | The status of the resource instance. |
| Binding Description | A code specifying the state of the resource instance. |
| **ClaimResponse.patient** |  |
| Short name | The subject of the Products and Services |
| Definition | Patient Resource. |
| **ClaimResponse.created** |  |
| Short name | Creation date |
| Definition | The date when the enclosed suite of services were performed or completed. |
| **ClaimResponse.insurer** |  |
| Short name | Insurance issuing organization |
| Definition | The Insurer who produced this adjudicated response. |
| **ClaimResponse.requestProvider** |  |
| Short name | Responsible practitioner |
| Definition | The practitioner who is responsible for the services rendered to the patient. |
| **ClaimResponse.requestOrganization** |  |
| Short name | Responsible organization |
| Definition | The organization which is responsible for the services rendered to the patient. |
| **ClaimResponse.request** |  |
| Short name | Id of resource triggering adjudication |
| Definition | Original request resource referrence. |
| **ClaimResponse.outcome** |  |
| Definition | Processing outcome errror, partial or complete processing. |
| Binding Description | The result of the claim processing |
| **ClaimResponse.disposition** |  |
| Short name | Disposition Message |
| Definition | A description of the status of the adjudication. |
| **ClaimResponse.payeeType** |  |
| Short name | Party to be paid any benefits payable |
| Definition | Party to be reimbursed: Subscriber, provider, other. |
| Binding Description | A code for the party to be reimbursed. |
| **ClaimResponse.item** |  |
| Short name | Line items |
| Definition | The first tier service adjudications for submitted services. |
| **ClaimResponse.item.sequenceLinkId** |  |
| Short name | Service instance |
| Definition | A service line number. |
| **ClaimResponse.item.noteNumber** |  |
| Short name | List of note numbers which apply |
| Definition | A list of note references to the notes provided below. |
| **ClaimResponse.item.adjudication** |  |
| Short name | Adjudication details |
| Definition | The adjudication results. |
| **ClaimResponse.item.adjudication.category** |  |
| Short name | Adjudication category such as co-pay, eligible, benefit, etc. |
| Definition | Code indicating: Co-Pay, deductible, eligible, benefit, tax, etc. |
| Binding Description | The adjudication codes. |
| **ClaimResponse.item.adjudication.reason** |  |
| Short name | Explanation of Adjudication outcome |
| Definition | Adjudication reason such as limit reached. |
| Binding Description | The adjudication reason codes. |
| **ClaimResponse.item.adjudication.amount** |  |
| Short name | Monetary amount |
| Definition | Monetary amount associated with the code. |
| **ClaimResponse.item.adjudication.value** |  |
| Short name | Non-monetary value |
| Definition | A non-monetary value for example a percentage. Mutually exclusive to the amount element above. |
| **ClaimResponse.item.detail** |  |
| Short name | Detail line items |
| Definition | The second tier service adjudications for submitted services. |
| **ClaimResponse.item.detail.sequenceLinkId** |  |
| Short name | Service instance |
| Definition | A service line number. |
| **ClaimResponse.item.detail.noteNumber** |  |
| Short name | List of note numbers which apply |
| Definition | A list of note references to the notes provided below. |
| **ClaimResponse.item.detail.adjudication** |  |
| Short name | Detail level adjudication details |
| Definition | The adjudications results. |
| **ClaimResponse.item.detail.subDetail** |  |
| Short name | Subdetail line items |
| Definition | The third tier service adjudications for submitted services. |
| **ClaimResponse.item.detail.subDetail.sequenceLinkId** |  |
| Short name | Service instance |
| Definition | A service line number. |
| **ClaimResponse.item.detail.subDetail.noteNumber** |  |
| Short name | List of note numbers which apply |
| Definition | A list of note references to the notes provided below. |
| **ClaimResponse.item.detail.subDetail.adjudication** |  |
| Short name | Subdetail level adjudication details |
| Definition | The adjudications results. |
| **ClaimResponse.addItem** |  |
| Short name | Insurer added line items |
| Definition | The first tier service adjudications for payor added services. |
| **ClaimResponse.addItem.sequenceLinkId** |  |
| Short name | Service instances |
| Definition | List of input service items which this service line is intended to replace. |
| **ClaimResponse.addItem.revenue** |  |
| Short name | Revenue or cost center code |
| Definition | The type of reveneu or cost center providing the product and/or service. |
| Binding Description | Codes for the revenue or cost centers supplying the service and/or products. |
| **ClaimResponse.addItem.category** |  |
| Short name | Type of service or product |
| Definition | Health Care Service Type Codes to identify the classification of service or benefits. |
| Binding Description | Benefit subcategories such as: oral-basic, major, glasses |
| **ClaimResponse.addItem.service** |  |
| Short name | Group, Service or Product |
| Definition | A code to indicate the Professional Service or Product supplied. |
| Binding Description | Allowable service and product codes. |
| **ClaimResponse.addItem.modifier** |  |
| Short name | Service/Product billing modifiers |
| Definition | Item typification or modifiers codes, eg for Oral whether the treatment is cosmetic or associated with TMJ, or for medical whether the treatment was outside the clinic or out of office hours. |
| Requirements | May impact on adjudication. |
| Binding Description | Item type or modifiers codes, eg for Oral whether the treatment is cosmetic or associated with TMJ, or an appliance was lost or stolen. |
| **ClaimResponse.addItem.fee** |  |
| Short name | Professional fee or Product charge |
| Definition | The fee charged for the professional service or product.. |
| **ClaimResponse.addItem.noteNumber** |  |
| Short name | List of note numbers which apply |
| Definition | A list of note references to the notes provided below. |
| **ClaimResponse.addItem.adjudication** |  |
| Short name | Added items adjudication |
| Definition | The adjudications results. |
| **ClaimResponse.addItem.detail** |  |
| Short name | Added items details |
| Definition | The second tier service adjudications for payor added services. |
| **ClaimResponse.addItem.detail.revenue** |  |
| Short name | Revenue or cost center code |
| Definition | The type of reveneu or cost center providing the product and/or service. |
| Binding Description | Codes for the revenue or cost centers supplying the service and/or products. |
| **ClaimResponse.addItem.detail.category** |  |
| Short name | Type of service or product |
| Definition | Health Care Service Type Codes to identify the classification of service or benefits. |
| Binding Description | Benefit subcategories such as: oral-basic, major, glasses |
| **ClaimResponse.addItem.detail.service** |  |
| Short name | Service or Product |
| Definition | A code to indicate the Professional Service or Product supplied. |
| Binding Description | Allowable service and product codes. |
| **ClaimResponse.addItem.detail.modifier** |  |
| Short name | Service/Product billing modifiers |
| Definition | Item typification or modifiers codes, eg for Oral whether the treatment is cosmetic or associated with TMJ, or for medical whether the treatment was outside the clinic or out of office hours. |
| Requirements | May impact on adjudication. |
| Binding Description | Item type or modifiers codes, eg for Oral whether the treatment is cosmetic or associated with TMJ, or an appliance was lost or stolen. |
| **ClaimResponse.addItem.detail.fee** |  |
| Short name | Professional fee or Product charge |
| Definition | The fee charged for the professional service or product.. |
| **ClaimResponse.addItem.detail.noteNumber** |  |
| Short name | List of note numbers which apply |
| Definition | A list of note references to the notes provided below. |
| **ClaimResponse.addItem.detail.adjudication** |  |
| Short name | Added items detail adjudication |
| Definition | The adjudications results. |
| **ClaimResponse.error** |  |
| Short name | Processing errors |
| Definition | Mutually exclusive with Services Provided (Item). |
| **ClaimResponse.error.sequenceLinkId** |  |
| Short name | Item sequence number |
| Definition | The sequence number of the line item submitted which contains the error. This value is omitted when the error is elsewhere. |
| **ClaimResponse.error.detailSequenceLinkId** |  |
| Short name | Detail sequence number |
| Definition | The sequence number of the addition within the line item submitted which contains the error. This value is omitted when the error is not related to an Addition. |
| **ClaimResponse.error.subdetailSequenceLinkId** |  |
| Short name | Subdetail sequence number |
| Definition | The sequence number of the addition within the line item submitted which contains the error. This value is omitted when the error is not related to an Addition. |
| **ClaimResponse.error.code** |  |
| Short name | Error code detailing processing issues |
| Definition | An error code,from a specified code system, which details why the claim could not be adjudicated. |
| Binding Description | The adjudication error codes. |
| **ClaimResponse.totalCost** |  |
| Short name | Total Cost of service from the Claim |
| Definition | The total cost of the services reported. |
| Requirements | This is a check value that the receiver calculates and returns. |
| **ClaimResponse.unallocDeductable** |  |
| Short name | Unallocated deductible |
| Definition | The amount of deductible applied which was not allocated to any particular service line. |
| **ClaimResponse.totalBenefit** |  |
| Short name | Total benefit payable for the Claim |
| Definition | Total amount of benefit payable (Equal to sum of the Benefit amounts from all detail lines and additions less the Unallocated Deductible). |
| **ClaimResponse.payment** |  |
| Short name | Payment details, if paid |
| Definition | Payment details for the claim if the claim has been paid. |
| **ClaimResponse.payment.type** |  |
| Short name | Partial or Complete |
| Definition | Whether this represents partial or complete payment of the claim. |
| Binding Description | The type (partial, complete) of the payment |
| **ClaimResponse.payment.adjustment** |  |
| Short name | Payment adjustment for non-Claim issues |
| Definition | Adjustment to the payment of this transaction which is not related to adjudication of this transaction. |
| **ClaimResponse.payment.adjustmentReason** |  |
| Short name | Explanation for the non-claim adjustment |
| Definition | Reason for the payment adjustment. |
| Binding Description | Payment Adjustment reason codes. |
| **ClaimResponse.payment.date** |  |
| Short name | Expected data of Payment |
| Definition | Estimated payment data. |
| **ClaimResponse.payment.amount** |  |
| Short name | Payable amount after adjustment |
| Definition | Payable less any payment adjustment. |
| **ClaimResponse.payment.identifier** |  |
| Short name | Identifier of the payment instrument |
| Definition | Payment identifier. |
| **ClaimResponse.reserved** |  |
| Short name | Funds reserved status |
| Definition | Status of funds reservation (For provider, for Patient, None). |
| Binding Description | For whom funds are to be reserved: (Patient, Provider, None). |
| **ClaimResponse.form** |  |
| Short name | Printed Form Identifier |
| Definition | The form to be used for printing the content. |
| Binding Description | The forms codes. |
| **ClaimResponse.processNote** |  |
| Short name | Processing notes |
| Definition | Note text. |
| **ClaimResponse.processNote.number** |  |
| Short name | Sequence Number for this note |
| Definition | An integer associated with each note which may be referred to from each service line item. |
| **ClaimResponse.processNote.type** |  |
| Definition | The note purpose: Print/Display. |
| Binding Description | The presentation types of notes. |
| **ClaimResponse.processNote.text** |  |
| Short name | Note explanatory text |
| Definition | The note text. |
| **ClaimResponse.processNote.language** |  |
| Short name | Language if different from the resource |
| Definition | The ISO-639-1 alpha 2 code in lower case for the language, optionally followed by a hyphen and the ISO-3166-1 alpha 2 code for the region in upper case; e.g. "en" for English, or "en-US" for American English versus "en-EN" for England English. |
| Binding Description | A human language. |
| **ClaimResponse.communicationRequest** |  |
| Short name | Request for additional information |
| Definition | Request for additional supporting or authorizing information, such as: documents, images or resources. |
| **ClaimResponse.insurance** |  |
| Short name | Insurance or medical plan |
| Definition | Financial instrument by which payment information for health care. |
| Requirements | Health care programs and insurers are significant payors of health service costs. |
| **ClaimResponse.insurance.sequence** |  |
| Short name | Service instance identifier |
| Definition | A service line item. |
| Requirements | To maintain order of the coverages. |
| **ClaimResponse.insurance.focal** |  |
| Short name | Is the focal Coverage |
| Definition | The instance number of the Coverage which is the focus for adjudication. The Coverage against which the claim is to be adjudicated. |
| Requirements | To identify which coverage is being adjudicated. |
| **ClaimResponse.insurance.coverage** |  |
| Short name | Insurance information |
| Definition | Reference to the program or plan identification, underwriter or payor. |
| Requirements | Need to identify the issuer to target for processing and for coordination of benefit processing. |
| **ClaimResponse.insurance.businessArrangement** |  |
| Short name | Business agreement |
| Definition | The contract number of a business agreement which describes the terms and conditions. |
| **ClaimResponse.insurance.preAuthRef** |  |
| Short name | Pre-Authorization/Determination Reference |
| Definition | A list of references from the Insurer to which these services pertain. |
| Requirements | To provide any pre-determination or prior authorization reference. |
| **ClaimResponse.insurance.claimResponse** |  |
| Short name | Adjudication results |
| Definition | The Coverages adjudication details. |
| Requirements | Used by downstream payers to determine what balance remains and the net payable. |

## http://hl7.org/fhir/StructureDefinition/Contract

|  |  |
| --- | --- |
| **Description** | Base StructureDefinition for Contract Resource |
| **Contract** | Contract |
| Short name | Legal Agreement |
| Definition | A formal agreement between parties regarding the conduct of business, exchange of information or other matters. |
| **Contract.identifier** |  |
| Short name | Contract number |
| Definition | Unique identifier for this Contract. |
| **Contract.status** |  |
| Definition | The status of the resource instance. |
| Binding Description | A code specifying the state of the resource instance. |
| **Contract.issued** |  |
| Short name | When this Contract was issued |
| Definition | When this Contract was issued. |
| **Contract.applies** |  |
| Short name | Effective time |
| Definition | Relevant time or time-period when this Contract is applicable. |
| **Contract.subject** |  |
| Short name | Contract Target Entity |
| Definition | The target entity impacted by or of interest to parties to the agreement. |
| Comment | The Contract.subject is an entity that has some role with respect to the Contract.topic and Contract.topic.term, which is of focal interest to the parties to the contract and likely impacted in a significant way by the Contract.action/Contract.action.reason and the Contract.term.action/Contract.action.reason. In many cases, the Contract.subject is a Contract.signer if the subject is an adult; has a legal interest in the contract; and incompetent to participate in the contract agreement. |
| Requirements | The Contract.subject is an entity that has some role with respect to the Contract.topic and Contract.topic.term, which is of focal interest to the parties to the contract and likely impacted in a significant way by the Contract.action/Contract.action.reason and the Contract.term.action/Contract.action.reason. In many cases, the Contract.subject is a Contract.signer if the subject is an adult; has a legal interest in the contract; and incompetent to participate in the contract agreement. |
| Synonym | Patient |
| **Contract.topic** |  |
| Short name | Context of the Contract |
| Definition | The matter of concern in the context of this agreement. |
| Comment | The Contract.topic may be an application for or offer of a policy or service (e.g., uri to a consent directive form or a health insurance policy), which becomes the Contract once accepted by both the grantor and grantee. The Contract Resource may function simply as the computable representation of the executed contract, which may be the attached to the Contract Resource as the â€œbindingâ€ or as the â€œfriendlyâ€ electronic form. For example, a Contract Resource may be automatically populated with the values expressed in a related QuestionnaireResponse. However, the Contract Resource may be considered the legally binding contract if it is the only â€œexecutedâ€ form of this contract, and includes the signatures as \*The Contract Resource may function as the computable representation of an application or offer in a pre-executed Contract if the grantor has not entered any values. In this case, it is populated with values in a â€œlegalâ€ form of the application or offer or by the values in an associated Questionnaire. If the grantor has filled in the legal form or the associated Questionnaire Response, then these values are used to populate a pre-executed Contract Resource. If the Contract.topic is considered an application or offer, then the policy is often required to be attached as the â€œlegalâ€ basis for the application to ensure â€œinformed consentâ€ to the contract, and that any discrepancy between the application and the policy are interpreted against the policy. Implementers should check organizational and jurisdictional policies to determine the relationship among multiple representations of a contract pre- and post-execution. |
| Requirements | In the context of a contract, the topic is the matter under consideration in regards to which specific rights, privileges, obligations, restrictions, and prohibitions are binding on any grantor and grantee parties upon the execution of the contract. Given the wide range of contract topics, implementers need to be cognizant of the business use case for which they are designing a FHIR Contract, and narrowly specify the topic being represented with respect to the Contract.type and any specializing Contract.subtype. The same topic, e.g., an asset such as a good or service, such as a real property, medical supply, insurance, information, a procedure or employment, or a manner of conduct, such adherence to a privacy, trust, or security policy, may be the topic of multiple types of contracts. One way to determine the Contract.topic is to answer the question: â€œWhat is the object of negotiation?â€ Answer: The Contract.topic, which may be described with more detail in the [0..\*]Contract.valuedItem @ [0..1] Contract.valuedItem.entity[x] Definition: Specific type of Contract Valued Item that may be priced. CodeableConcept|Reference(Any) Contract.topic is â€œthe whatâ€ that a grantor is exchanging with a grantee in return for some benefit. Contract.topic is â€œthe whatâ€ to which any Contract.action is being applied for any stipulated Contract.action.reason. AContract.topic is â€œthe whatâ€ governed by the execution of the contract to which any partyâ€™s rights, privileges, obligations, restrictions, and prohibitions apply. |
| **Contract.authority** |  |
| Short name | Authority under which this Contract has standing |
| Definition | A formally or informally recognized grouping of people, principals, organizations, or jurisdictions formed for the purpose of achieving some form of collective action such as the promulgation, administration and enforcement of contracts and policies. |
| **Contract.domain** |  |
| Short name | Domain in which this Contract applies |
| Definition | Recognized governance framework or system operating with a circumscribed scope in accordance with specified principles, policies, processes or procedures for managing rights, actions, or behaviors of parties or principals relative to resources. |
| Synonym | scope of governance jurisdiction |
| **Contract.type** |  |
| Short name | Type or form |
| Definition | Type of Contract such as an insurance policy, real estate contract, a will, power of attorny, Privacy or Security policy , trust framework agreement, etc. |
| Binding Description | List of overall contract codes. |
| **Contract.subType** |  |
| Short name | Subtype within the context of type |
| Definition | More specific type or specialization of an overarching or more general contract such as auto insurance, home owner insurance, prenupial agreement, Advanced-Directive, or privacy consent. |
| Binding Description | Detailed codes within the above. |
| **Contract.action** |  |
| Short name | Action stipulated by this Contract |
| Definition | Action stipulated by this Contract. |
| Binding Description | Detailed codes for the contract action. |
| **Contract.actionReason** |  |
| Short name | Rationale for the stiplulated action |
| Definition | Reason for action stipulated by this Contract. |
| Binding Description | Detailed codes for the contract action reason. |
| **Contract.decisionType** |  |
| Short name | Decision by Grantor |
| Definition | The type of decision made by a grantor with respect to an offer made by a grantee. |
| Binding Description | The type of decision made by a grantor with respect to an offer made by a grantee. |
| **Contract.contentDerivative** |  |
| Short name | Content derived from the basal information |
| Definition | The minimal content derived from the basal information source at a specific stage in its lifecycle. |
| Binding Description | This is an example set of Content Derivative type codes, which represent the minimal content derived from the basal information source. |
| **Contract.securityLabel** |  |
| Short name | Security Labels that define affected resources |
| Definition | A set of security labels that define which resources are controlled by this consent. If more than one label is specified, all resources must have all the specified labels. |
| Binding Description | Security Labels from the Healthcare Privacy and Security Classification System. |
| **Contract.agent** |  |
| Short name | Entity being ascribed responsibility |
| Definition | An actor taking a role in an activity for which it can be assigned some degree of responsibility for the activity taking place. |
| Comment | Several agents may be associated (i.e. has some responsibility for an activity) with an activity and vice-versa. For example, in cases of actions initiated by one user for other users, or in events that involve more than one user, hardware device, software, or system process. However, only one user may be the initiator/requestor for the event. |
| Requirements | An agent can be a person, an organization, software, device, or other entities that may be ascribed responsibility. |
| **Contract.agent.actor** |  |
| Short name | Contract Agent Type |
| Definition | Who or what parties are assigned roles in this Contract. |
| **Contract.agent.role** |  |
| Short name | Role type of the agent |
| Definition | Role type of agent assigned roles in this Contract. |
| Binding Description | Detailed codes for the contract actor role. |
| **Contract.signer** |  |
| Short name | Contract Signatory |
| Definition | Parties with legal standing in the Contract, including the principal parties, the grantor(s) and grantee(s), which are any person or organization bound by the contract, and any ancillary parties, which facilitate the execution of the contract such as a notary or witness. |
| Comment | Signers who are principal parties to the contract are bound by the Contract.activity related to the Contract.topic, and the Contract.term(s), which either extend or restrict the overall action on the topic by, for example, stipulating specific policies or obligations constraining actions, action reason, or agents with respect to some or all of the topic. For example, specifying how policies or obligations shall constrain actions and action reasons permitted or denied on all or a subset of the Contract.topic (e.g., all or a portion of property being transferred by the contract), agents (e.g., who can resell, assign interests, or alter the property being transferred by the contract), actions, and action reasons; or with respect to Contract.terms, stipulating, extending, or limiting the Contract.period of applicability or valuation of items under consideration. |
| Requirements | The Contract.signer applies a signature to the Contract.binding referenced resource, which is the documentation that is the legal "source of truth". The Contract.signer may delegate, such as a legally recognized personal representative, or have a delegate assigned e.g., by a court of law, to actually sign the Contract, such as a trustee in the case of incompetence. |
| **Contract.signer.type** |  |
| Short name | Contract Signatory Role |
| Definition | Role of this Contract signer, e.g. notary, grantee. |
| Binding Description | List of parties who may be signing. |
| **Contract.signer.party** |  |
| Short name | Contract Signatory Party |
| Definition | Party which is a signator to this Contract. |
| **Contract.signer.signature** |  |
| Short name | Contract Documentation Signature |
| Definition | Legally binding Contract DSIG signature contents in Base64. |
| **Contract.valuedItem** |  |
| Short name | Contract Valued Item List |
| Definition | Contract Valued Item List. |
| **Contract.valuedItem.entity[x]** |  |
| Short name | Contract Valued Item Type |
| Definition | Specific type of Contract Valued Item that may be priced. |
| **Contract.valuedItem.identifier** |  |
| Short name | Contract Valued Item Number |
| Definition | Identifies a Contract Valued Item instance. |
| **Contract.valuedItem.effectiveTime** |  |
| Short name | Contract Valued Item Effective Tiem |
| Definition | Indicates the time during which this Contract ValuedItem information is effective. |
| **Contract.valuedItem.quantity** |  |
| Short name | Count of Contract Valued Items |
| Definition | Specifies the units by which the Contract Valued Item is measured or counted, and quantifies the countable or measurable Contract Valued Item instances. |
| **Contract.valuedItem.unitPrice** |  |
| Short name | Contract Valued Item fee, charge, or cost |
| Definition | A Contract Valued Item unit valuation measure. |
| **Contract.valuedItem.factor** |  |
| Short name | Contract Valued Item Price Scaling Factor |
| Definition | A real number that represents a multiplier used in determining the overall value of the Contract Valued Item delivered. The concept of a Factor allows for a discount or surcharge multiplier to be applied to a monetary amount. |
| **Contract.valuedItem.points** |  |
| Short name | Contract Valued Item Difficulty Scaling Factor |
| Definition | An amount that expresses the weighting (based on difficulty, cost and/or resource intensiveness) associated with the Contract Valued Item delivered. The concept of Points allows for assignment of point values for a Contract Valued Item, such that a monetary amount can be assigned to each point. |
| **Contract.valuedItem.net** |  |
| Short name | Total Contract Valued Item Value |
| Definition | Expresses the product of the Contract Valued Item unitQuantity and the unitPriceAmt. For example, the formula: unit Quantity \* unit Price (Cost per Point) \* factor Number \* points = net Amount. Quantity, factor and points are assumed to be 1 if not supplied. |
| **Contract.term** |  |
| Short name | Contract Term List |
| Definition | One or more Contract Provisions, which may be related and conveyed as a group, and may contain nested groups. |
| **Contract.term.identifier** |  |
| Short name | Contract Term Number |
| Definition | Unique identifier for this particular Contract Provision. |
| **Contract.term.issued** |  |
| Short name | Contract Term Issue Date Time |
| Definition | When this Contract Provision was issued. |
| **Contract.term.applies** |  |
| Short name | Contract Term Effective Time |
| Definition | Relevant time or time-period when this Contract Provision is applicable. |
| **Contract.term.type** |  |
| Short name | Contract Term Type or Form |
| Definition | Type of Contract Provision such as specific requirements, purposes for actions, obligations, prohibitions, e.g. life time maximum benefit. |
| Binding Description | Detailed codes for the types of contract provisions. |
| **Contract.term.subType** |  |
| Short name | Contract Term Type specific classification |
| Definition | Subtype of this Contract Provision, e.g. life time maximum payment for a contract term for specific valued item, e.g. disability payment. |
| Binding Description | Detailed codes for the subtypes of contract provisions. |
| **Contract.term.topic** |  |
| Short name | Context of the Contract term |
| Definition | The matter of concern in the context of this provision of the agrement. |
| Comment | The Contract.term.topic, as a Contract Resource subpart, is handled in the same manner as the Contract Resource as discussed above. |
| Requirements | A contract term topic is typically about a portion of the contract topic which has additional or specialized rights, privileges, obligations, restrictions, and prohibitions that are binding on any grantor and grantee parties upon the execution of the contract. Contract.term.topic may be described in more detail in the [0..\*] Contract.term.valuedItem @[0..1] Contract.term.valuedItem [x] Definition: Specific type of Contract Provision Valued Item that may be priced. CodeableConcept|Reference(Any) [See Contract.topic Requirements for further elaboration on this requirement.]. |
| **Contract.term.action** |  |
| Short name | Contract Term Activity |
| Definition | Action stipulated by this Contract Provision. |
| Binding Description | Detailed codes for the contract action. |
| **Contract.term.actionReason** |  |
| Short name | Purpose for the Contract Term Action |
| Definition | Reason or purpose for the action stipulated by this Contract Provision. |
| Binding Description | Detailed codes for the contract action reason. |
| **Contract.term.securityLabel** |  |
| Short name | Security Labels that define affected terms |
| Definition | A set of security labels that define which terms are controlled by this condition. |
| Binding Description | Security Labels from the Healthcare Privacy and Security Classification System. |
| **Contract.term.agent** |  |
| Short name | Contract Term Agent List |
| Definition | An actor taking a role in an activity for which it can be assigned some degree of responsibility for the activity taking place. |
| Comment | Several agents may be associated (i.e. has some responsibility for an activity) with an activity and vice-versa. For example, in cases of actions initiated by one user for other users, or in events that involve more than one user, hardware device, software, or system process. However, only one user may be the initiator/requestor for the event. |
| Requirements | An agent can be a person, an organization, software, device, or other entities that may be ascribed responsibility. |
| **Contract.term.agent.actor** |  |
| Short name | Contract Term Agent Subject |
| Definition | The agent assigned a role in this Contract Provision. |
| **Contract.term.agent.role** |  |
| Short name | Type of the Contract Term Agent |
| Definition | Role played by the agent assigned this role in the execution of this Contract Provision. |
| Binding Description | Detailed codes for the contract actor role. |
| **Contract.term.text** |  |
| Short name | Human readable Contract term text |
| Definition | Human readable form of this Contract Provision. |
| **Contract.term.valuedItem** |  |
| Short name | Contract Term Valued Item List |
| Definition | Contract Provision Valued Item List. |
| **Contract.term.valuedItem.entity[x]** |  |
| Short name | Contract Term Valued Item Type |
| Definition | Specific type of Contract Provision Valued Item that may be priced. |
| **Contract.term.valuedItem.identifier** |  |
| Short name | Contract Term Valued Item Number |
| Definition | Identifies a Contract Provision Valued Item instance. |
| **Contract.term.valuedItem.effectiveTime** |  |
| Short name | Contract Term Valued Item Effective Tiem |
| Definition | Indicates the time during which this Contract Term ValuedItem information is effective. |
| **Contract.term.valuedItem.quantity** |  |
| Short name | Contract Term Valued Item Count |
| Definition | Specifies the units by which the Contract Provision Valued Item is measured or counted, and quantifies the countable or measurable Contract Term Valued Item instances. |
| **Contract.term.valuedItem.unitPrice** |  |
| Short name | Contract Term Valued Item fee, charge, or cost |
| Definition | A Contract Provision Valued Item unit valuation measure. |
| **Contract.term.valuedItem.factor** |  |
| Short name | Contract Term Valued Item Price Scaling Factor |
| Definition | A real number that represents a multiplier used in determining the overall value of the Contract Provision Valued Item delivered. The concept of a Factor allows for a discount or surcharge multiplier to be applied to a monetary amount. |
| **Contract.term.valuedItem.points** |  |
| Short name | Contract Term Valued Item Difficulty Scaling Factor |
| Definition | An amount that expresses the weighting (based on difficulty, cost and/or resource intensiveness) associated with the Contract Provision Valued Item delivered. The concept of Points allows for assignment of point values for a Contract ProvisionValued Item, such that a monetary amount can be assigned to each point. |
| **Contract.term.valuedItem.net** |  |
| Short name | Total Contract Term Valued Item Value |
| Definition | Expresses the product of the Contract Provision Valued Item unitQuantity and the unitPriceAmt. For example, the formula: unit Quantity \* unit Price (Cost per Point) \* factor Number \* points = net Amount. Quantity, factor and points are assumed to be 1 if not supplied. |
| **Contract.term.group** |  |
| Short name | Nested Contract Term Group |
| Definition | Nested group of Contract Provisions. |
| **Contract.binding[x]** |  |
| Short name | Binding Contract |
| Definition | Legally binding Contract: This is the signed and legally recognized representation of the Contract, which is considered the "source of truth" and which would be the basis for legal action related to enforcement of this Contract. |
| **Contract.friendly** |  |
| Short name | Contract Friendly Language |
| Definition | The "patient friendly language" versionof the Contract in whole or in parts. "Patient friendly language" means the representation of the Contract and Contract Provisions in a manner that is readily accessible and understandable by a layperson in accordance with best practices for communication styles that ensure that those agreeing to or signing the Contract understand the roles, actions, obligations, responsibilities, and implication of the agreement. |
| **Contract.friendly.content[x]** |  |
| Short name | Easily comprehended representation of this Contract |
| Definition | Human readable rendering of this Contract in a format and representation intended to enhance comprehension and ensure understandability. |
| **Contract.legal** |  |
| Short name | Contract Legal Language |
| Definition | List of Legal expressions or representations of this Contract. |
| **Contract.legal.content[x]** |  |
| Short name | Contract Legal Text |
| Definition | Contract legal text in human renderable form. |
| **Contract.rule** |  |
| Short name | Computable Contract Language |
| Definition | List of Computable Policy Rule Language Representations of this Contract. |
| **Contract.rule.content[x]** |  |
| Short name | Computable Contract Rules |
| Definition | Computable Contract conveyed using a policy rule language (e.g. XACML, DKAL, SecPal). |

## http://hl7.org/fhir/StructureDefinition/Coverage

|  |  |
| --- | --- |
| **Description** | Base StructureDefinition for Coverage Resource |
| **Purpose** | Health care programs and insurers are significant payors of health service costs. |
| **Coverage** | Coverage |
| Short name | Insurance or medical plan or a payment agreement |
| Definition | Financial instrument which may be used to reimburse or pay for health care products and services. |
| **Coverage.identifier** |  |
| Short name | The primary coverage ID |
| Definition | The main (and possibly only) identifier for the coverage - often referred to as a Member Id, Certificate number, Personal Health Number or Case ID. May be constructed as the concatination of the Coverage.SubscriberID and the Coverage.dependant. |
| Requirements | This value may uniquely identify the coverage or it may be used in conjunction with the additional identifiers below. |
| **Coverage.status** |  |
| Definition | The status of the resource instance. |
| Binding Description | A code specifying the state of the resource instance. |
| **Coverage.type** |  |
| Short name | Type of coverage such as medical or accident |
| Definition | The type of coverage: social program, medical plan, accident coverage (workers compensation, auto), group health or payment by an individual or organization. |
| Requirements | The order of application of coverages is dependent on the types of coverage. |
| Binding Description | The type of insurance: public health, worker compensation; private accident, auto, private health, etc.) or a direct payment by an individual or organization. |
| **Coverage.policyHolder** |  |
| Short name | Owner of the policy |
| Definition | The party who 'owns' the insurance policy, may be an individual, corporation or the subscriber's employer. |
| **Coverage.subscriber** |  |
| Short name | Subscriber to the policy |
| Definition | The party who has signed-up for or 'owns' the contractual relationship to the policy or to whom the benefit of the policy for services rendered to them or their family is due. |
| **Coverage.subscriberId** |  |
| Short name | ID assigned to the Subscriber |
| Definition | The insurer assigned ID for the Subscriber. |
| **Coverage.beneficiary** |  |
| Short name | Plan Beneficiary |
| Definition | The party who benefits from the insurance coverage., the patient when services are provided. |
| **Coverage.relationship** |  |
| Short name | Beneficiary relationship to the Subscriber |
| Definition | The relationship of beneficiary (patient) to the subscriber. |
| Requirements | To determine relationship between the patient and the subscriber. |
| Binding Description | The relationship between the Policyholder and the Beneficiary (insured/covered party/patient). |
| **Coverage.period** |  |
| Short name | Coverage start and end dates |
| Definition | Time period during which the coverage is in force. A missing start date indicates the start date isn't known, a missing end date means the coverage is continuing to be in force. |
| **Coverage.payor** |  |
| Short name | Identifier for the plan or agreement issuer |
| Definition | The program or plan underwriter or payor including both insurance and non-insurance agreements, such as patient-pay agreements. May provide multiple identifiers such as insurance company identifier or business identifier (BIN number). |
| Requirements | Need to identify the issuer to target for processing and for coordination of benefit processing. |
| **Coverage.grouping** |  |
| Short name | Additional coverage classifications |
| Definition | A suite of underwrite specific classifiers, for example may be used to identify a class of coverage or employer group, Policy, Plan. |
| **Coverage.grouping.group** |  |
| Short name | An identifier for the group |
| Definition | Identifies a style or collective of coverage issued by the underwriter, for example may be used to identify an employer group. May also be referred to as a Policy or Group ID. |
| **Coverage.grouping.groupDisplay** |  |
| Short name | Display text for an identifier for the group |
| Definition | A short description for the group. |
| **Coverage.grouping.subGroup** |  |
| Short name | An identifier for the subsection of the group |
| Definition | Identifies a style or collective of coverage issued by the underwriter, for example may be used to identify a subset of an employer group. |
| **Coverage.grouping.subGroupDisplay** |  |
| Short name | Display text for the subsection of the group |
| Definition | A short description for the subgroup. |
| **Coverage.grouping.plan** |  |
| Short name | An identifier for the plan |
| Definition | Identifies a style or collective of coverage issued by the underwriter, for example may be used to identify a collection of benefits provided to employees. May be referred to as a Section or Division ID. |
| **Coverage.grouping.planDisplay** |  |
| Short name | Display text for the plan |
| Definition | A short description for the plan. |
| **Coverage.grouping.subPlan** |  |
| Short name | An identifier for the subsection of the plan |
| Definition | Identifies a sub-style or sub-collective of coverage issued by the underwriter, for example may be used to identify a subset of a collection of benefits provided to employees. |
| **Coverage.grouping.subPlanDisplay** |  |
| Short name | Display text for the subsection of the plan |
| Definition | A short description for the subplan. |
| **Coverage.grouping.class** |  |
| Short name | An identifier for the class |
| Definition | Identifies a style or collective of coverage issues by the underwriter, for example may be used to identify a class of coverage such as a level of deductables or co-payment. |
| **Coverage.grouping.classDisplay** |  |
| Short name | Display text for the class |
| Definition | A short description for the class. |
| **Coverage.grouping.subClass** |  |
| Short name | An identifier for the subsection of the class |
| Definition | Identifies a sub-style or sub-collective of coverage issues by the underwriter, for example may be used to identify a subclass of coverage such as a sub-level of deductables or co-payment. |
| **Coverage.grouping.subClassDisplay** |  |
| Short name | Display text for the subsection of the subclass |
| Definition | A short description for the subclass. |
| **Coverage.dependent** |  |
| Short name | Dependent number |
| Definition | A unique identifier for a dependent under the coverage. |
| Requirements | For some coverage a single identifier is issued to the Subscriber and a dependent number issued to each beneficiary. |
| **Coverage.sequence** |  |
| Short name | The plan instance or sequence counter |
| Definition | An optional counter for a particular instance of the identified coverage which increments upon each renewal. |
| Requirements | Some coverage, for example social plans, may be offered in short time increments, for example for a week or a month at a time, so while the rest of the plan details and identifiers may remain constant over time, the instance is incremented with each renewal and provided to the covered party on their 'card'. |
| **Coverage.order** |  |
| Short name | Relative order of the coverage |
| Definition | The order of applicability of this coverage relative to other coverages which are currently inforce. Note, there may be gaps in the numbering and this does not imply primary, secondard etc. as the specific positioning of coverages depends upon the episode of care. |
| **Coverage.network** |  |
| Short name | Insurer network |
| Definition | The insurer-specific identifier for the insurer-defined network of providers to which the beneficiary may seek treatment which will be covered at the 'in-network' rate, otherwise 'out of network' terms and conditions apply. |
| **Coverage.contract** |  |
| Short name | Contract details |
| Definition | The policy(s) which constitute this insurance coverage. |

## http://hl7.org/fhir/StructureDefinition/EligibilityRequest

|  |  |
| --- | --- |
| **Description** | Base StructureDefinition for EligibilityRequest Resource |
| **EligibilityRequest** | Eligibility Request |
| Short name | Determine insurance validity and scope of coverage |
| Definition | The EligibilityRequest provides patient and insurance coverage information to an insurer for them to respond, in the form of an EligibilityResponse, with information regarding whether the stated coverage is valid and in-force and optionally to provide the insurance details of the policy. |
| **EligibilityRequest.identifier** |  |
| Short name | Business Identifier |
| Definition | The Response business identifier. |
| **EligibilityRequest.status** |  |
| Definition | The status of the resource instance. |
| Binding Description | A code specifying the state of the resource instance. |
| **EligibilityRequest.priority** |  |
| Short name | Desired processing priority |
| Definition | Immediate (STAT), best effort (NORMAL), deferred (DEFER). |
| Binding Description | The timeliness with which processing is required: STAT, normal, Deferred |
| **EligibilityRequest.patient** |  |
| Short name | The subject of the Products and Services |
| Definition | Patient Resource. |
| Comment | 1..1. |
| **EligibilityRequest.serviced[x]** |  |
| Short name | Estimated date or dates of Service |
| Definition | The date or dates when the enclosed suite of services were performed or completed. |
| **EligibilityRequest.created** |  |
| Short name | Creation date |
| Definition | The date when this resource was created. |
| **EligibilityRequest.enterer** |  |
| Short name | Author |
| Definition | Person who created the invoice/claim/pre-determination or pre-authorization. |
| **EligibilityRequest.provider** |  |
| Short name | Responsible practitioner |
| Definition | The practitioner who is responsible for the services rendered to the patient. |
| **EligibilityRequest.organization** |  |
| Short name | Responsible organization |
| Definition | The organization which is responsible for the services rendered to the patient. |
| **EligibilityRequest.insurer** |  |
| Short name | Target |
| Definition | The Insurer who is target of the request. |
| **EligibilityRequest.facility** |  |
| Short name | Servicing Facility |
| Definition | Facility where the services were provided. |
| **EligibilityRequest.coverage** |  |
| Short name | Insurance or medical plan |
| Definition | Financial instrument by which payment information for health care. |
| Comment | 1..1. |
| Requirements | Need to identify the issuer to target for processing and for coordination of benefit processing. |
| **EligibilityRequest.businessArrangement** |  |
| Short name | Business agreement |
| Definition | The contract number of a business agreement which describes the terms and conditions. |
| **EligibilityRequest.benefitCategory** |  |
| Short name | Type of services covered |
| Definition | Dental, Vision, Medical, Pharmacy, Rehab etc. |
| Binding Description | Benefit categories such as: oral, medical, vision etc. |
| **EligibilityRequest.benefitSubCategory** |  |
| Short name | Detailed services covered within the type |
| Definition | Dental: basic, major, ortho; Vision exam, glasses, contacts; etc. |
| Binding Description | Benefit subcategories such as: oral-basic, major, glasses |

## http://hl7.org/fhir/StructureDefinition/EligibilityResponse

|  |  |
| --- | --- |
| **Description** | Base StructureDefinition for EligibilityResponse Resource |
| **EligibilityResponse** | Eligibility Response |
| Short name | EligibilityResponse resource |
| Definition | This resource provides eligibility and plan details from the processing of an Eligibility resource. |
| **EligibilityResponse.identifier** |  |
| Short name | Business Identifier |
| Definition | The Response business identifier. |
| **EligibilityResponse.status** |  |
| Definition | The status of the resource instance. |
| Binding Description | A code specifying the state of the resource instance. |
| **EligibilityResponse.created** |  |
| Short name | Creation date |
| Definition | The date when the enclosed suite of services were performed or completed. |
| **EligibilityResponse.requestProvider** |  |
| Short name | Responsible practitioner |
| Definition | The practitioner who is responsible for the services rendered to the patient. |
| **EligibilityResponse.requestOrganization** |  |
| Short name | Responsible organization |
| Definition | The organization which is responsible for the services rendered to the patient. |
| **EligibilityResponse.request** |  |
| Short name | Eligibility reference |
| Definition | Original request resource reference. |
| **EligibilityResponse.outcome** |  |
| Definition | Transaction status: error, complete. |
| Binding Description | The outcome of the processing. |
| **EligibilityResponse.disposition** |  |
| Short name | Disposition Message |
| Definition | A description of the status of the adjudication. |
| **EligibilityResponse.insurer** |  |
| Short name | Insurer issuing the coverage |
| Definition | The Insurer who produced this adjudicated response. |
| **EligibilityResponse.inforce** |  |
| Short name | Coverage inforce indicator |
| Definition | Flag indicating if the coverage provided is inforce currently if no service date(s) specified or for the whole duration of the service dates. |
| **EligibilityResponse.insurance** |  |
| Short name | Details by insurance coverage |
| Definition | The insurer may provide both the details for the requested coverage as well as details for additional coverages known to the insurer. |
| **EligibilityResponse.insurance.coverage** |  |
| Short name | Updated Coverage details |
| Definition | A suite of updated or additional Coverages from the Insurer. |
| **EligibilityResponse.insurance.contract** |  |
| Short name | Contract details |
| Definition | The contract resource which may provide more detailed information. |
| **EligibilityResponse.insurance.benefitBalance** |  |
| Short name | Benefits by Category |
| Definition | Benefits and optionally current balances by Category. |
| **EligibilityResponse.insurance.benefitBalance.category** |  |
| Short name | Type of services covered |
| Definition | Dental, Vision, Medical, Pharmacy, Rehab etc. |
| Binding Description | Benefit categories such as: oral, medical, vision etc. |
| **EligibilityResponse.insurance.benefitBalance.subCategory** |  |
| Short name | Detailed services covered within the type |
| Definition | Dental: basic, major, ortho; Vision exam, glasses, contacts; etc. |
| Binding Description | Benefit subcategories such as: oral-basic, major, glasses |
| **EligibilityResponse.insurance.benefitBalance.excluded** |  |
| Short name | Excluded from the plan |
| Definition | True if the indicated class of service is excluded from the plan, missing or False indicated the service is included in the coverage. |
| **EligibilityResponse.insurance.benefitBalance.name** |  |
| Short name | Short name for the benefit |
| Definition | A short name or tag for the benefit, for example MED01, or DENT2. |
| **EligibilityResponse.insurance.benefitBalance.description** |  |
| Short name | Description of the benefit or services covered |
| Definition | A richer description of the benefit, for example 'DENT2 covers 100% of basic, 50% of major but exclused Ortho, Implants and Costmetic services'. |
| **EligibilityResponse.insurance.benefitBalance.network** |  |
| Short name | In or out of network |
| Definition | Network designation. |
| Binding Description | Code to classify in or out of network services |
| **EligibilityResponse.insurance.benefitBalance.unit** |  |
| Short name | Individual or family |
| Definition | Unit designation: individual or family. |
| Binding Description | Unit covered/serviced - individual or family |
| **EligibilityResponse.insurance.benefitBalance.term** |  |
| Short name | Annual or lifetime |
| Definition | The term or period of the values such as 'maximum lifetime benefit' or 'maximum annual vistis'. |
| Binding Description | Coverage unit - annual, lifetime |
| **EligibilityResponse.insurance.benefitBalance.financial** |  |
| Short name | Benefit Summary |
| Definition | Benefits Used to date. |
| **EligibilityResponse.insurance.benefitBalance.financial.type** |  |
| Short name | Deductable, visits, benefit amount |
| Definition | Deductable, visits, benefit amount. |
| Binding Description | Deductable, visits, co-pay, etc. |
| **EligibilityResponse.insurance.benefitBalance.financial.allowed[x]** |  |
| Short name | Benefits allowed |
| Definition | Benefits allowed. |
| **EligibilityResponse.insurance.benefitBalance.financial.used[x]** |  |
| Short name | Benefits used |
| Definition | Benefits used. |
| **EligibilityResponse.form** |  |
| Short name | Printed Form Identifier |
| Definition | The form to be used for printing the content. |
| Binding Description | The forms codes. |
| **EligibilityResponse.error** |  |
| Short name | Processing errors |
| Definition | Mutually exclusive with Services Provided (Item). |
| **EligibilityResponse.error.code** |  |
| Short name | Error code detailing processing issues |
| Definition | An error code,from a specified code system, which details why the eligibility check could not be performed. |
| Binding Description | The error codes for adjudication processing. |

## http://hl7.org/fhir/StructureDefinition/EnrollmentRequest

|  |  |
| --- | --- |
| **Description** | Base StructureDefinition for EnrollmentRequest Resource |
| **EnrollmentRequest** | Enrollment Request |
| Short name | Enrollment request |
| Definition | This resource provides the insurance enrollment details to the insurer regarding a specified coverage. |
| **EnrollmentRequest.identifier** |  |
| Short name | Business Identifier |
| Definition | The Response business identifier. |
| **EnrollmentRequest.status** |  |
| Definition | The status of the resource instance. |
| Binding Description | A code specifying the state of the resource instance. |
| **EnrollmentRequest.created** |  |
| Short name | Creation date |
| Definition | The date when this resource was created. |
| **EnrollmentRequest.insurer** |  |
| Short name | Target |
| Definition | The Insurer who is target of the request. |
| **EnrollmentRequest.provider** |  |
| Short name | Responsible practitioner |
| Definition | The practitioner who is responsible for the services rendered to the patient. |
| **EnrollmentRequest.organization** |  |
| Short name | Responsible organization |
| Definition | The organization which is responsible for the services rendered to the patient. |
| **EnrollmentRequest.subject** |  |
| Short name | The subject of the Products and Services |
| Definition | Patient Resource. |
| **EnrollmentRequest.coverage** |  |
| Short name | Insurance information |
| Definition | Reference to the program or plan identification, underwriter or payor. |
| Requirements | Need to identify the issuer to target for processing and for coordination of benefit processing. |

## http://hl7.org/fhir/StructureDefinition/EnrollmentResponse

|  |  |
| --- | --- |
| **Description** | Base StructureDefinition for EnrollmentResponse Resource |
| **EnrollmentResponse** | Enrollment Response |
| Short name | EnrollmentResponse resource |
| Definition | This resource provides enrollment and plan details from the processing of an Enrollment resource. |
| **EnrollmentResponse.identifier** |  |
| Short name | Business Identifier |
| Definition | The Response business identifier. |
| **EnrollmentResponse.status** |  |
| Definition | The status of the resource instance. |
| Binding Description | A code specifying the state of the resource instance. |
| **EnrollmentResponse.request** |  |
| Short name | Claim reference |
| Definition | Original request resource reference. |
| **EnrollmentResponse.outcome** |  |
| Definition | Processing status: error, complete. |
| Binding Description | The outcome of the processing. |
| **EnrollmentResponse.disposition** |  |
| Short name | Disposition Message |
| Definition | A description of the status of the adjudication. |
| **EnrollmentResponse.created** |  |
| Short name | Creation date |
| Definition | The date when the enclosed suite of services were performed or completed. |
| **EnrollmentResponse.organization** |  |
| Short name | Insurer |
| Definition | The Insurer who produced this adjudicated response. |
| **EnrollmentResponse.requestProvider** |  |
| Short name | Responsible practitioner |
| Definition | The practitioner who is responsible for the services rendered to the patient. |
| **EnrollmentResponse.requestOrganization** |  |
| Short name | Responsible organization |
| Definition | The organization which is responsible for the services rendered to the patient. |

## http://hl7.org/fhir/StructureDefinition/ExplanationOfBenefit

|  |  |
| --- | --- |
| **Description** | Base StructureDefinition for ExplanationOfBenefit Resource |
| **ExplanationOfBenefit** | Explanation Of Benefit |
| Short name | Explanation of Benefit resource |
| Definition | This resource provides: the claim details; adjudication details from the processing of a Claim; and optionally account balance information, for informing the subscriber of the benefits provided. |
| Synonym | EOB |
| **ExplanationOfBenefit.identifier** |  |
| Short name | Business Identifier |
| Definition | The EOB Business Identifier. |
| **ExplanationOfBenefit.status** |  |
| Definition | The status of the resource instance. |
| Binding Description | A code specifying the state of the resource instance. |
| **ExplanationOfBenefit.type** |  |
| Short name | Type or discipline |
| Definition | The category of claim, eg, oral, pharmacy, vision, insitutional, professional. |
| Comment | Affects which fields and value sets are used. |
| Binding Description | The type or discipline-style of the claim |
| **ExplanationOfBenefit.subType** |  |
| Short name | Finer grained claim type information |
| Definition | A finer grained suite of claim subtype codes which may convey Inpatient vs Outpatient and/or a specialty service. In the US the BillType. |
| Comment | This may contain the local bill type codes such as the US UB-04 bill type code. |
| Binding Description | A more granulat claim typecode |
| **ExplanationOfBenefit.patient** |  |
| Short name | The subject of the Products and Services |
| Definition | Patient Resource. |
| **ExplanationOfBenefit.billablePeriod** |  |
| Short name | Period for charge submission |
| Definition | The billable period for which charges are being submitted. |
| **ExplanationOfBenefit.created** |  |
| Short name | Creation date |
| Definition | The date when the EOB was created. |
| **ExplanationOfBenefit.enterer** |  |
| Short name | Author |
| Definition | The person who created the explanation of benefit. |
| **ExplanationOfBenefit.insurer** |  |
| Short name | Insurer responsible for the EOB |
| Definition | The insurer which is responsible for the explanation of benefit. |
| **ExplanationOfBenefit.provider** |  |
| Short name | Responsible provider for the claim |
| Definition | The provider which is responsible for the claim. |
| **ExplanationOfBenefit.organization** |  |
| Short name | Responsible organization for the claim |
| Definition | The provider which is responsible for the claim. |
| **ExplanationOfBenefit.referral** |  |
| Short name | Treatment Referral |
| Definition | The referral resource which lists the date, practitioner, reason and other supporting information. |
| **ExplanationOfBenefit.facility** |  |
| Short name | Servicing Facility |
| Definition | Facility where the services were provided. |
| **ExplanationOfBenefit.claim** |  |
| Short name | Claim reference |
| Definition | The business identifier for the instance: invoice number, claim number, pre-determination or pre-authorization number. |
| **ExplanationOfBenefit.claimResponse** |  |
| Short name | Claim response reference |
| Definition | The business identifier for the instance: invoice number, claim number, pre-determination or pre-authorization number. |
| **ExplanationOfBenefit.outcome** |  |
| Definition | Processing outcome errror, partial or complete processing. |
| Binding Description | The result of the claim processing |
| **ExplanationOfBenefit.disposition** |  |
| Short name | Disposition Message |
| Definition | A description of the status of the adjudication. |
| Comment | Do we need a disposition code? |
| **ExplanationOfBenefit.related** |  |
| Short name | Related Claims which may be revelant to processing this claim |
| Definition | Other claims which are related to this claim such as prior claim versions or for related services. |
| **ExplanationOfBenefit.related.claim** |  |
| Short name | Reference to the related claim |
| Definition | Other claims which are related to this claim such as prior claim versions or for related services. |
| Comment | Do we need a relationship code? |
| **ExplanationOfBenefit.related.relationship** |  |
| Short name | How the reference claim is related |
| Definition | For example prior or umbrella. |
| Binding Description | Relationship of this claim to a related Claim |
| **ExplanationOfBenefit.related.reference** |  |
| Short name | Related file or case reference |
| Definition | An alternate organizational reference to the case or file to which this particular claim pertains - eg Property/Casualy insurer claim # or Workers Compensation case # . |
| **ExplanationOfBenefit.prescription** |  |
| Short name | Prescription authorizing services or products |
| Definition | Prescription to support the dispensing of Pharmacy or Vision products. |
| Requirements | For type=Pharmacy and Vision only. |
| **ExplanationOfBenefit.originalPrescription** |  |
| Short name | Original prescription if superceded by fulfiller |
| Definition | Original prescription which has been superceded by this prescription to support the dispensing of pharmacy services, medications or products. For example, a physician may prescribe a medication which the pharmacy determines is contraindicated, or for which the patient has an intolerance, and therefor issues a new precription for an alternate medication which has the same theraputic intent. The prescription from the pharmacy becomes the 'prescription' and that from the physician becomes the 'original prescription'. |
| **ExplanationOfBenefit.payee** |  |
| Short name | Party to be paid any benefits payable |
| Definition | The party to be reimbursed for the services. |
| **ExplanationOfBenefit.payee.type** |  |
| Short name | Type of party: Subscriber, Provider, other |
| Definition | Type of Party to be reimbursed: Subscriber, provider, other. |
| Binding Description | A code for the party to be reimbursed. |
| **ExplanationOfBenefit.payee.resourceType** |  |
| Definition | organization | patient | practitioner | relatedperson. |
| Binding Description | The type of payee Resource |
| **ExplanationOfBenefit.payee.party** |  |
| Short name | Party to receive the payable |
| Definition | Party to be reimbursed: Subscriber, provider, other. |
| **ExplanationOfBenefit.information** |  |
| Short name | Exceptions, special considerations, the condition, situation, prior or concurrent issues |
| Definition | Additional information codes regarding exceptions, special considerations, the condition, situation, prior or concurrent issues. Often there are mutiple jurisdiction specific valuesets which are required. |
| Requirements | Typically these information codes are required to support the services rendered or the adjudication of the services rendered. |
| **ExplanationOfBenefit.information.sequence** |  |
| Short name | Information instance identifier |
| Definition | Sequence of the information element which serves to provide a link. |
| Requirements | To provide a reference link. |
| **ExplanationOfBenefit.information.category** |  |
| Short name | General class of information |
| Definition | The general class of the information supplied: information; exception; accident, employment; onset, etc. |
| Comment | This may contain the local bill type codes such as the US UB-04 bill type code. |
| Binding Description | The valuset used for additional information category codes. |
| **ExplanationOfBenefit.information.code** |  |
| Short name | Type of information |
| Definition | System and code pertaining to the specific information regarding special conditions relating to the setting, treatment or patient for which care is sought which may influence the adjudication. |
| Comment | This may contain the local bill type codes such as the US UB-04 bill type code. |
| Binding Description | The valuset used for additional information codes. |
| **ExplanationOfBenefit.information.timing[x]** |  |
| Short name | When it occurred |
| Definition | The date when or period to which this information refers. |
| **ExplanationOfBenefit.information.value[x]** |  |
| Short name | Additional Data or supporting information |
| Definition | Additional data or information such as resources, documents, images etc. including references to the data or the actual inclusion of the data. |
| **ExplanationOfBenefit.information.reason** |  |
| Short name | Reason associated with the information |
| Definition | For example, provides the reason for: the additional stay, or missing tooth or any other situation where a reason code is required in addition to the content. |
| Binding Description | Reason codes for the missing teeth |
| **ExplanationOfBenefit.careTeam** |  |
| Short name | Care Team members |
| Definition | The members of the team who provided the overall service as well as their role and whether responsible and qualifications. |
| Requirements | Role and Responsible may not be required when there is only a single provider listed. |
| **ExplanationOfBenefit.careTeam.sequence** |  |
| Short name | Number to covey order of careteam |
| Definition | Sequence of careteam which serves to order and provide a link. |
| Requirements | Required to maintain order of the careteam members. |
| **ExplanationOfBenefit.careTeam.provider** |  |
| Short name | Member of the Care Team |
| Definition | The members of the team who provided the overall service. |
| **ExplanationOfBenefit.careTeam.responsible** |  |
| Short name | Billing practitioner |
| Definition | The practitioner who is billing and responsible for the claimed services rendered to the patient. |
| **ExplanationOfBenefit.careTeam.role** |  |
| Short name | Role on the team |
| Definition | The lead, assisting or supervising practitioner and their discipline if a multidisiplinary team. |
| Binding Description | The role codes for the care team members. |
| **ExplanationOfBenefit.careTeam.qualification** |  |
| Short name | Type, classification or Specialization |
| Definition | The qualification which is applicable for this service. |
| Binding Description | Provider professional qualifications |
| **ExplanationOfBenefit.diagnosis** |  |
| Short name | List of Diagnosis |
| Definition | Ordered list of patient diagnosis for which care is sought. |
| **ExplanationOfBenefit.diagnosis.sequence** |  |
| Short name | Number to covey order of diagnosis |
| Definition | Sequence of diagnosis which serves to provide a link. |
| Requirements | Required to allow line items to reference the diagnoses. |
| **ExplanationOfBenefit.diagnosis.diagnosis[x]** |  |
| Short name | Patient's diagnosis |
| Definition | The diagnosis. |
| Requirements | Required to adjudicate services rendered to condition presented. |
| Binding Description | ICD10 Diagnostic codes |
| **ExplanationOfBenefit.diagnosis.type** |  |
| Short name | Timing or nature of the diagnosis |
| Definition | The type of the Diagnosis, for example: admitting, primary, secondary, discharge. |
| Comment | Diagnosis are presented in list order to their expected importance: primary, secondary, etc. |
| Requirements | Required to adjudicate services rendered to the mandated diagnosis grouping system. |
| Binding Description | The type of the diagnosis: admitting, principal, discharge |
| **ExplanationOfBenefit.diagnosis.packageCode** |  |
| Short name | Package billing code |
| Definition | The package billing code, for example DRG, based on the assigned grouping code system. |
| Requirements | Required to adjudicate services rendered to the mandated grouping system. |
| Binding Description | The DRG codes associated with the diagnosis |
| **ExplanationOfBenefit.procedure** |  |
| Short name | Procedures performed |
| Definition | Ordered list of patient procedures performed to support the adjudication. |
| **ExplanationOfBenefit.procedure.sequence** |  |
| Short name | Procedure sequence for reference |
| Definition | Sequence of procedures which serves to order and provide a link. |
| Requirements | Required to maintain order of the procudures. |
| **ExplanationOfBenefit.procedure.date** |  |
| Short name | When the procedure was performed |
| Definition | Date and optionally time the procedure was performed . |
| Comment | SB DateTime?? |
| Requirements | Required to adjudicate services rendered. |
| **ExplanationOfBenefit.procedure.procedure[x]** |  |
| Short name | Patient's list of procedures performed |
| Definition | The procedure code. |
| Requirements | Required to adjudicate services rendered. |
| Binding Description | ICD10 Procedure codes |
| **ExplanationOfBenefit.precedence** |  |
| Short name | Precedence (primary, secondary, etc.) |
| Definition | Precedence (primary, secondary, etc.). |
| Requirements | Health care programs and insurers are significant payors of health service costs. |
| **ExplanationOfBenefit.insurance** |  |
| Short name | Insurance or medical plan |
| Definition | Financial instrument by which payment information for health care. |
| Requirements | Health care programs and insurers are significant payors of health service costs. |
| **ExplanationOfBenefit.insurance.coverage** |  |
| Short name | Insurance information |
| Definition | Reference to the program or plan identification, underwriter or payor. |
| Requirements | Need to identify the issuer to target for processing and for coordination of benefit processing. |
| **ExplanationOfBenefit.insurance.preAuthRef** |  |
| Short name | Pre-Authorization/Determination Reference |
| Definition | A list of references from the Insurer to which these services pertain. |
| Requirements | To provide any pre=determination or prior authorization reference. |
| **ExplanationOfBenefit.accident** |  |
| Short name | Details of an accident |
| Definition | An accident which resulted in the need for healthcare services. |
| **ExplanationOfBenefit.accident.date** |  |
| Short name | When the accident occurred |
| Definition | Date of an accident which these services are addressing. |
| Requirements | Coverage may be dependant on accidents. |
| **ExplanationOfBenefit.accident.type** |  |
| Short name | The nature of the accident |
| Definition | Type of accident: work, auto, etc. |
| Requirements | Coverage may be dependant on the type of accident. |
| Binding Description | Type of accident: work place, auto, etc. |
| **ExplanationOfBenefit.accident.location[x]** |  |
| Short name | Accident Place |
| Definition | Where the accident occurred. |
| **ExplanationOfBenefit.employmentImpacted** |  |
| Short name | Period unable to work |
| Definition | The start and optional end dates of when the patient was precluded from working due to the treatable condition(s). |
| **ExplanationOfBenefit.hospitalization** |  |
| Short name | Period in hospital |
| Definition | The start and optional end dates of when the patient was confined to a treatment center. |
| **ExplanationOfBenefit.item** |  |
| Short name | Goods and Services |
| Definition | First tier of goods and services. |
| **ExplanationOfBenefit.item.sequence** |  |
| Short name | Service instance |
| Definition | A service line number. |
| **ExplanationOfBenefit.item.careTeamLinkId** |  |
| Short name | Applicable careteam members |
| Definition | Careteam applicable for this service or product line. |
| **ExplanationOfBenefit.item.diagnosisLinkId** |  |
| Short name | Applicable diagnoses |
| Definition | Diagnosis applicable for this service or product line. |
| **ExplanationOfBenefit.item.procedureLinkId** |  |
| Short name | Applicable procedures |
| Definition | Procedures applicable for this service or product line. |
| **ExplanationOfBenefit.item.informationLinkId** |  |
| Short name | Applicable exception and supporting information |
| Definition | Exceptions, special conditions and supporting information pplicable for this service or product line. |
| **ExplanationOfBenefit.item.revenue** |  |
| Short name | Revenue or cost center code |
| Definition | The type of reveneu or cost center providing the product and/or service. |
| Binding Description | Codes for the revenue or cost centers supplying the service and/or products. |
| **ExplanationOfBenefit.item.category** |  |
| Short name | Type of service or product |
| Definition | Health Care Service Type Codes to identify the classification of service or benefits. |
| Binding Description | Benefit subcategories such as: oral-basic, major, glasses |
| **ExplanationOfBenefit.item.service** |  |
| Short name | Billing Code |
| Definition | If this is an actual service or product line, ie. not a Group, then use code to indicate the Professional Service or Product supplied (eg. CTP, HCPCS,USCLS,ICD10, NCPDP,DIN,ACHI,CCI). If a grouping item then use a group code to indicate the type of thing being grouped eg. 'glasses' or 'compound'. |
| Binding Description | Allowable service and product codes |
| **ExplanationOfBenefit.item.modifier** |  |
| Short name | Service/Product billing modifiers |
| Definition | Item typification or modifiers codes, eg for Oral whether the treatment is cosmetic or associated with TMJ, or for medical whether the treatment was outside the clinic or out of office hours. |
| Requirements | May impact on adjudication. |
| Binding Description | Item type or modifiers codes, eg for Oral whether the treatment is cosmetic or associated with TMJ, or an appliance was lost or stolen. |
| **ExplanationOfBenefit.item.programCode** |  |
| Short name | Program specific reason for item inclusion |
| Definition | For programs which require reson codes for the inclusion, covering, of this billed item under the program or sub-program. |
| Binding Description | Program specific reason codes |
| **ExplanationOfBenefit.item.serviced[x]** |  |
| Short name | Date or dates of Service |
| Definition | The date or dates when the enclosed suite of services were performed or completed. |
| **ExplanationOfBenefit.item.location[x]** |  |
| Short name | Place of service |
| Definition | Where the service was provided. |
| Binding Description | Place where the service is rendered |
| **ExplanationOfBenefit.item.quantity** |  |
| Short name | Count of Products or Services |
| Definition | The number of repetitions of a service or product. |
| **ExplanationOfBenefit.item.unitPrice** |  |
| Short name | Fee, charge or cost per point |
| Definition | If the item is a node then this is the fee for the product or service, otherwise this is the total of the fees for the children of the group. |
| **ExplanationOfBenefit.item.factor** |  |
| Short name | Price scaling factor |
| Definition | A real number that represents a multiplier used in determining the overall value of services delivered and/or goods received. The concept of a Factor allows for a discount or surcharge multiplier to be applied to a monetary amount. |
| Requirements | If a fee is present the associated product/service code must be present. |
| **ExplanationOfBenefit.item.net** |  |
| Short name | Total item cost |
| Definition | The quantity times the unit price for an addittional service or product or charge. For example, the formula: unit Quantity \* unit Price (Cost per Point) \* factor Number \* points = net Amount. Quantity, factor and points are assumed to be 1 if not supplied. |
| Requirements | If a fee is present the associated product/service code must be present. |
| **ExplanationOfBenefit.item.udi** |  |
| Short name | Unique Device Identifier |
| Definition | List of Unique Device Identifiers associated with this line item. |
| Requirements | The UDI code and issuer if applicable for the supplied product. |
| **ExplanationOfBenefit.item.bodySite** |  |
| Short name | Service Location |
| Definition | Physical service site on the patient (limb, tooth, etc). |
| Binding Description | The code for the teeth, quadrant, sextant and arch |
| **ExplanationOfBenefit.item.subSite** |  |
| Short name | Service Sub-location |
| Definition | A region or surface of the site, eg. limb region or tooth surface(s). |
| Binding Description | The code for the tooth surface and surface combinations |
| **ExplanationOfBenefit.item.encounter** |  |
| Short name | Encounters related to this billed item |
| Definition | A billed item may include goods or services provided in multiple encounters. |
| **ExplanationOfBenefit.item.noteNumber** |  |
| Short name | List of note numbers which apply |
| Definition | A list of note references to the notes provided below. |
| **ExplanationOfBenefit.item.adjudication** |  |
| Short name | Adjudication details |
| Definition | The adjudications results. |
| **ExplanationOfBenefit.item.adjudication.category** |  |
| Short name | Adjudication category such as co-pay, eligible, benefit, etc. |
| Definition | Code indicating: Co-Pay, deductable, elegible, benefit, tax, etc. |
| Binding Description | The adjudication codes. |
| **ExplanationOfBenefit.item.adjudication.reason** |  |
| Short name | Explanation of Adjudication outcome |
| Definition | Adjudication reason such as limit reached. |
| Binding Description | Adjudication reason codes. |
| **ExplanationOfBenefit.item.adjudication.amount** |  |
| Short name | Monetary amount |
| Definition | Monitory amount associated with the code. |
| **ExplanationOfBenefit.item.adjudication.value** |  |
| Short name | Non-monitory value |
| Definition | A non-monetary value for example a percentage. Mutually exclusive to the amount element above. |
| **ExplanationOfBenefit.item.detail** |  |
| Short name | Additional items |
| Definition | Second tier of goods and services. |
| **ExplanationOfBenefit.item.detail.sequence** |  |
| Short name | Service instance |
| Definition | A service line number. |
| **ExplanationOfBenefit.item.detail.type** |  |
| Short name | Group or type of product or service |
| Definition | The type of product or service. |
| Comment | ItemType. |
| Binding Description | Service, Product, Rx Dispense, Rx Compound etc. |
| **ExplanationOfBenefit.item.detail.revenue** |  |
| Short name | Revenue or cost center code |
| Definition | The type of reveneu or cost center providing the product and/or service. |
| Binding Description | Codes for the revenue or cost centers supplying the service and/or products. |
| **ExplanationOfBenefit.item.detail.category** |  |
| Short name | Type of service or product |
| Definition | Health Care Service Type Codes to identify the classification of service or benefits. |
| Binding Description | Benefit subcategories such as: oral-basic, major, glasses |
| **ExplanationOfBenefit.item.detail.service** |  |
| Short name | Billing Code |
| Definition | If this is an actual service or product line, ie. not a Group, then use code to indicate the Professional Service or Product supplied (eg. CTP, HCPCS,USCLS,ICD10, NCPDP,DIN,ACHI,CCI). If a grouping item then use a group code to indicate the type of thing being grouped eg. 'glasses' or 'compound'. |
| Binding Description | Allowable service and product codes |
| **ExplanationOfBenefit.item.detail.modifier** |  |
| Short name | Service/Product billing modifiers |
| Definition | Item typification or modifiers codes, eg for Oral whether the treatment is cosmetic or associated with TMJ, or for medical whether the treatment was outside the clinic or out of office hours. |
| Requirements | May impact on adjudication. |
| Binding Description | Item type or modifiers codes, eg for Oral whether the treatment is cosmetic or associated with TMJ, or an appliance was lost or stolen. |
| **ExplanationOfBenefit.item.detail.programCode** |  |
| Short name | Program specific reason for item inclusion |
| Definition | For programs which require reson codes for the inclusion, covering, of this billed item under the program or sub-program. |
| Binding Description | Program specific reason codes |
| **ExplanationOfBenefit.item.detail.quantity** |  |
| Short name | Count of Products or Services |
| Definition | The number of repetitions of a service or product. |
| **ExplanationOfBenefit.item.detail.unitPrice** |  |
| Short name | Fee, charge or cost per point |
| Definition | If the item is a node then this is the fee for the product or service, otherwise this is the total of the fees for the children of the group. |
| Requirements | If a fee is present the associated product/service code must be present. |
| **ExplanationOfBenefit.item.detail.factor** |  |
| Short name | Price scaling factor |
| Definition | A real number that represents a multiplier used in determining the overall value of services delivered and/or goods received. The concept of a Factor allows for a discount or surcharge multiplier to be applied to a monetary amount. |
| Requirements | If a fee is present the associated product/service code must be present. |
| **ExplanationOfBenefit.item.detail.net** |  |
| Short name | Total additional item cost |
| Definition | The quantity times the unit price for an addittional service or product or charge. For example, the formula: unit Quantity \* unit Price (Cost per Point) \* factor Number \* points = net Amount. Quantity, factor and points are assumed to be 1 if not supplied. |
| Requirements | If a fee is present the associated product/service code must be present. |
| **ExplanationOfBenefit.item.detail.udi** |  |
| Short name | Unique Device Identifier |
| Definition | List of Unique Device Identifiers associated with this line item. |
| Requirements | The UDI code and issuer if applicable for the supplied product. |
| **ExplanationOfBenefit.item.detail.noteNumber** |  |
| Short name | List of note numbers which apply |
| Definition | A list of note references to the notes provided below. |
| **ExplanationOfBenefit.item.detail.adjudication** |  |
| Short name | Detail level adjudication details |
| Definition | The adjudications results. |
| **ExplanationOfBenefit.item.detail.subDetail** |  |
| Short name | Additional items |
| Definition | Third tier of goods and services. |
| **ExplanationOfBenefit.item.detail.subDetail.sequence** |  |
| Short name | Service instance |
| Definition | A service line number. |
| **ExplanationOfBenefit.item.detail.subDetail.type** |  |
| Short name | Type of product or service |
| Definition | The type of product or service. |
| Binding Description | Service, Product, Rx Dispense, Rx Compound etc. |
| **ExplanationOfBenefit.item.detail.subDetail.revenue** |  |
| Short name | Revenue or cost center code |
| Definition | The type of reveneu or cost center providing the product and/or service. |
| Binding Description | Codes for the revenue or cost centers supplying the service and/or products. |
| **ExplanationOfBenefit.item.detail.subDetail.category** |  |
| Short name | Type of service or product |
| Definition | Health Care Service Type Codes to identify the classification of service or benefits. |
| Binding Description | Benefit subcategories such as: oral-basic, major, glasses |
| **ExplanationOfBenefit.item.detail.subDetail.service** |  |
| Short name | Billing Code |
| Definition | A code to indicate the Professional Service or Product supplied (eg. CTP, HCPCS,USCLS,ICD10, NCPDP,DIN,ACHI,CCI). |
| Binding Description | Allowable service and product codes |
| **ExplanationOfBenefit.item.detail.subDetail.modifier** |  |
| Short name | Service/Product billing modifiers |
| Definition | Item typification or modifiers codes, eg for Oral whether the treatment is cosmetic or associated with TMJ, or for medical whether the treatment was outside the clinic or out of office hours. |
| Requirements | May impact on adjudication. |
| Binding Description | Item type or modifiers codes, eg for Oral whether the treatment is cosmetic or associated with TMJ, or an appliance was lost or stolen. |
| **ExplanationOfBenefit.item.detail.subDetail.programCode** |  |
| Short name | Program specific reason for item inclusion |
| Definition | For programs which require reson codes for the inclusion, covering, of this billed item under the program or sub-program. |
| Binding Description | Program specific reason codes |
| **ExplanationOfBenefit.item.detail.subDetail.quantity** |  |
| Short name | Count of Products or Services |
| Definition | The number of repetitions of a service or product. |
| **ExplanationOfBenefit.item.detail.subDetail.unitPrice** |  |
| Short name | Fee, charge or cost per point |
| Definition | The fee for an addittional service or product or charge. |
| Requirements | If a fee is present the associated product/service code must be present. |
| **ExplanationOfBenefit.item.detail.subDetail.factor** |  |
| Short name | Price scaling factor |
| Definition | A real number that represents a multiplier used in determining the overall value of services delivered and/or goods received. The concept of a Factor allows for a discount or surcharge multiplier to be applied to a monetary amount. |
| Requirements | If a fee is present the associated product/service code must be present. |
| **ExplanationOfBenefit.item.detail.subDetail.net** |  |
| Short name | Net additional item cost |
| Definition | The quantity times the unit price for an addittional service or product or charge. For example, the formula: unit Quantity \* unit Price (Cost per Point) \* factor Number \* points = net Amount. Quantity, factor and points are assumed to be 1 if not supplied. |
| Requirements | If a fee is present the associated product/service code must be present. |
| **ExplanationOfBenefit.item.detail.subDetail.udi** |  |
| Short name | Unique Device Identifier |
| Definition | List of Unique Device Identifiers associated with this line item. |
| Requirements | The UDI code and issuer if applicable for the supplied product. |
| **ExplanationOfBenefit.item.detail.subDetail.noteNumber** |  |
| Short name | List of note numbers which apply |
| Definition | A list of note references to the notes provided below. |
| **ExplanationOfBenefit.item.detail.subDetail.adjudication** |  |
| Short name | Language if different from the resource |
| Definition | The adjudications results. |
| **ExplanationOfBenefit.addItem** |  |
| Short name | Insurer added line items |
| Definition | The first tier service adjudications for payor added services. |
| **ExplanationOfBenefit.addItem.sequenceLinkId** |  |
| Short name | Service instances |
| Definition | List of input service items which this service line is intended to replace. |
| **ExplanationOfBenefit.addItem.revenue** |  |
| Short name | Revenue or cost center code |
| Definition | The type of reveneu or cost center providing the product and/or service. |
| Binding Description | Codes for the revenue or cost centers supplying the service and/or products. |
| **ExplanationOfBenefit.addItem.category** |  |
| Short name | Type of service or product |
| Definition | Health Care Service Type Codes to identify the classification of service or benefits. |
| Binding Description | Benefit subcategories such as: oral-basic, major, glasses |
| **ExplanationOfBenefit.addItem.service** |  |
| Short name | Billing Code |
| Definition | If this is an actual service or product line, ie. not a Group, then use code to indicate the Professional Service or Product supplied (eg. CTP, HCPCS,USCLS,ICD10, NCPDP,DIN,ACHI,CCI). If a grouping item then use a group code to indicate the type of thing being grouped eg. 'glasses' or 'compound'. |
| Binding Description | Allowable service and product codes |
| **ExplanationOfBenefit.addItem.modifier** |  |
| Short name | Service/Product billing modifiers |
| Definition | Item typification or modifiers codes, eg for Oral whether the treatment is cosmetic or associated with TMJ, or for medical whether the treatment was outside the clinic or out of office hours. |
| Requirements | May impact on adjudication. |
| Binding Description | Item type or modifiers codes, eg for Oral whether the treatment is cosmetic or associated with TMJ, or an appliance was lost or stolen. |
| **ExplanationOfBenefit.addItem.fee** |  |
| Short name | Professional fee or Product charge |
| Definition | The fee charged for the professional service or product. |
| **ExplanationOfBenefit.addItem.noteNumber** |  |
| Short name | List of note numbers which apply |
| Definition | A list of note references to the notes provided below. |
| **ExplanationOfBenefit.addItem.adjudication** |  |
| Short name | Added items adjudication |
| Definition | The adjudications results. |
| **ExplanationOfBenefit.addItem.detail** |  |
| Short name | Added items details |
| Definition | The second tier service adjudications for payor added services. |
| **ExplanationOfBenefit.addItem.detail.revenue** |  |
| Short name | Revenue or cost center code |
| Definition | The type of reveneu or cost center providing the product and/or service. |
| Binding Description | Codes for the revenue or cost centers supplying the service and/or products. |
| **ExplanationOfBenefit.addItem.detail.category** |  |
| Short name | Type of service or product |
| Definition | Health Care Service Type Codes to identify the classification of service or benefits. |
| Binding Description | Benefit subcategories such as: oral-basic, major, glasses |
| **ExplanationOfBenefit.addItem.detail.service** |  |
| Short name | Billing Code |
| Definition | A code to indicate the Professional Service or Product supplied (eg. CTP, HCPCS,USCLS,ICD10, NCPDP,DIN,ACHI,CCI). |
| Binding Description | Allowable service and product codes |
| **ExplanationOfBenefit.addItem.detail.modifier** |  |
| Short name | Service/Product billing modifiers |
| Definition | Item typification or modifiers codes, eg for Oral whether the treatment is cosmetic or associated with TMJ, or for medical whether the treatment was outside the clinic or out of office hours. |
| Requirements | May impact on adjudication. |
| Binding Description | Item type or modifiers codes, eg for Oral whether the treatment is cosmetic or associated with TMJ, or an appliance was lost or stolen. |
| **ExplanationOfBenefit.addItem.detail.fee** |  |
| Short name | Professional fee or Product charge |
| Definition | The fee charged for the professional service or product. |
| **ExplanationOfBenefit.addItem.detail.noteNumber** |  |
| Short name | List of note numbers which apply |
| Definition | A list of note references to the notes provided below. |
| **ExplanationOfBenefit.addItem.detail.adjudication** |  |
| Short name | Added items detail adjudication |
| Definition | The adjudications results. |
| **ExplanationOfBenefit.totalCost** |  |
| Short name | Total Cost of service from the Claim |
| Definition | The total cost of the services reported. |
| Requirements | This is a check value that the receiver calculates and returns. |
| **ExplanationOfBenefit.unallocDeductable** |  |
| Short name | Unallocated deductable |
| Definition | The amount of deductable applied which was not allocated to any particular service line. |
| **ExplanationOfBenefit.totalBenefit** |  |
| Short name | Total benefit payable for the Claim |
| Definition | Total amount of benefit payable (Equal to sum of the Benefit amounts from all detail lines and additions less the Unallocated Deductable). |
| **ExplanationOfBenefit.payment** |  |
| Short name | Payment (if paid) |
| Definition | Payment details for the claim if the claim has been paid. |
| **ExplanationOfBenefit.payment.type** |  |
| Short name | Partial or Complete |
| Definition | Whether this represents partial or complete payment of the claim. |
| Binding Description | The type (partial, complete) of the payment |
| **ExplanationOfBenefit.payment.adjustment** |  |
| Short name | Payment adjustment for non-Claim issues |
| Definition | Adjustment to the payment of this transaction which is not related to adjudication of this transaction. |
| **ExplanationOfBenefit.payment.adjustmentReason** |  |
| Short name | Explanation for the non-claim adjustment |
| Definition | Reason for the payment adjustment. |
| Binding Description | Payment Adjustment reason codes. |
| **ExplanationOfBenefit.payment.date** |  |
| Short name | Expected date of Payment |
| Definition | Estimated payment date. |
| **ExplanationOfBenefit.payment.amount** |  |
| Short name | Payable amount after adjustment |
| Definition | Payable less any payment adjustment. |
| **ExplanationOfBenefit.payment.identifier** |  |
| Short name | Identifier of the payment instrument |
| Definition | Payment identifer. |
| **ExplanationOfBenefit.form** |  |
| Short name | Printed Form Identifier |
| Definition | The form to be used for printing the content. |
| Binding Description | The forms codes. |
| **ExplanationOfBenefit.processNote** |  |
| Short name | Processing notes |
| Definition | Note text. |
| **ExplanationOfBenefit.processNote.number** |  |
| Short name | Sequence number for this note |
| Definition | An integer associated with each note which may be referred to from each service line item. |
| **ExplanationOfBenefit.processNote.type** |  |
| Definition | The note purpose: Print/Display. |
| Binding Description | The presentation types of notes. |
| **ExplanationOfBenefit.processNote.text** |  |
| Short name | Note explanitory text |
| Definition | The note text. |
| **ExplanationOfBenefit.processNote.language** |  |
| Short name | Language if different from the resource |
| Definition | The ISO-639-1 alpha 2 code in lower case for the language, optionally followed by a hyphen and the ISO-3166-1 alpha 2 code for the region in upper case; e.g. "en" for English, or "en-US" for American English versus "en-EN" for England English. |
| Binding Description | A human language. |
| **ExplanationOfBenefit.benefitBalance** |  |
| Short name | Balance by Benefit Category |
| Definition | Balance by Benefit Category. |
| **ExplanationOfBenefit.benefitBalance.category** |  |
| Short name | Type of services covered |
| Definition | Dental, Vision, Medical, Pharmacy, Rehab etc. |
| Binding Description | Benefit categories such as: oral, medical, vision etc. |
| **ExplanationOfBenefit.benefitBalance.subCategory** |  |
| Short name | Detailed services covered within the type |
| Definition | Dental: basic, major, ortho; Vision exam, glasses, contacts; etc. |
| Binding Description | Benefit subcategories such as: oral-basic, major, glasses |
| **ExplanationOfBenefit.benefitBalance.excluded** |  |
| Short name | Excluded from the plan |
| Definition | True if the indicated class of service is excluded from the plan, missing or False indicated the service is included in the coverage. |
| **ExplanationOfBenefit.benefitBalance.name** |  |
| Short name | Short name for the benefit |
| Definition | A short name or tag for the benefit, for example MED01, or DENT2. |
| **ExplanationOfBenefit.benefitBalance.description** |  |
| Short name | Description of the benefit or services covered |
| Definition | A richer description of the benefit, for example 'DENT2 covers 100% of basic, 50% of major but exclused Ortho, Implants and Costmetic services'. |
| **ExplanationOfBenefit.benefitBalance.network** |  |
| Short name | In or out of network |
| Definition | Network designation. |
| Binding Description | Code to classify in or out of network services |
| **ExplanationOfBenefit.benefitBalance.unit** |  |
| Short name | Individual or family |
| Definition | Unit designation: individual or family. |
| Binding Description | Unit covered/serviced - individual or family |
| **ExplanationOfBenefit.benefitBalance.term** |  |
| Short name | Annual or lifetime |
| Definition | The term or period of the values such as 'maximum lifetime benefit' or 'maximum annual vistis'. |
| Binding Description | Coverage unit - annual, lifetime |
| **ExplanationOfBenefit.benefitBalance.financial** |  |
| Short name | Benefit Summary |
| Definition | Benefits Used to date. |
| **ExplanationOfBenefit.benefitBalance.financial.type** |  |
| Short name | Deductable, visits, benefit amount |
| Definition | Deductable, visits, benefit amount. |
| Binding Description | Deductable, visits, co-pay, etc. |
| **ExplanationOfBenefit.benefitBalance.financial.allowed[x]** |  |
| Short name | Benefits allowed |
| Definition | Benefits allowed. |
| **ExplanationOfBenefit.benefitBalance.financial.used[x]** |  |
| Short name | Benefits used |
| Definition | Benefits used. |

## http://hl7.org/fhir/StructureDefinition/PaymentNotice

|  |  |
| --- | --- |
| **Description** | Base StructureDefinition for PaymentNotice Resource |
| **PaymentNotice** | Payment Notice |
| Short name | PaymentNotice request |
| Definition | This resource provides the status of the payment for goods and services rendered, and the request and response resource references. |
| **PaymentNotice.identifier** |  |
| Short name | Business Identifier |
| Definition | The notice business identifier. |
| **PaymentNotice.status** |  |
| Definition | The status of the resource instance. |
| Binding Description | A code specifying the state of the resource instance. |
| **PaymentNotice.request** |  |
| Short name | Request reference |
| Definition | Reference of resource for which payment is being made. |
| **PaymentNotice.response** |  |
| Short name | Response reference |
| Definition | Reference of response to resource for which payment is being made. |
| **PaymentNotice.statusDate** |  |
| Short name | Payment or clearing date |
| Definition | The date when the above payment action occurrred. |
| **PaymentNotice.created** |  |
| Short name | Creation date |
| Definition | The date when this resource was created. |
| **PaymentNotice.target** |  |
| Short name | Insurer or Regulatory body |
| Definition | The Insurer who is target of the request. |
| **PaymentNotice.provider** |  |
| Short name | Responsible practitioner |
| Definition | The practitioner who is responsible for the services rendered to the patient. |
| **PaymentNotice.organization** |  |
| Short name | Responsible organization |
| Definition | The organization which is responsible for the services rendered to the patient. |
| **PaymentNotice.paymentStatus** |  |
| Short name | Whether payment has been sent or cleared |
| Definition | The payment status, typically paid: payment sent, cleared: payment received. |
| Binding Description | The payment conveyance status codes |

## http://hl7.org/fhir/StructureDefinition/PaymentReconciliation

|  |  |
| --- | --- |
| **Description** | Base StructureDefinition for PaymentReconciliation Resource |
| **PaymentReconciliation** | Payment Reconciliation |
| Short name | PaymentReconciliation resource |
| Definition | This resource provides payment details and claim references supporting a bulk payment. |
| **PaymentReconciliation.identifier** |  |
| Short name | Business Identifier |
| Definition | The Response business identifier. |
| **PaymentReconciliation.status** |  |
| Definition | The status of the resource instance. |
| Binding Description | A code specifying the state of the resource instance. |
| **PaymentReconciliation.period** |  |
| Short name | Period covered |
| Definition | The period of time for which payments have been gathered into this bulk payment for settlement. |
| **PaymentReconciliation.created** |  |
| Short name | Creation date |
| Definition | The date when the enclosed suite of services were performed or completed. |
| **PaymentReconciliation.organization** |  |
| Short name | Insurer |
| Definition | The Insurer who produced this adjudicated response. |
| **PaymentReconciliation.request** |  |
| Short name | Claim reference |
| Definition | Original request resource reference. |
| **PaymentReconciliation.outcome** |  |
| Definition | Transaction status: error, complete. |
| Binding Description | The outcome of the processing. |
| **PaymentReconciliation.disposition** |  |
| Short name | Disposition Message |
| Definition | A description of the status of the adjudication. |
| **PaymentReconciliation.requestProvider** |  |
| Short name | Responsible practitioner |
| Definition | The practitioner who is responsible for the services rendered to the patient. |
| **PaymentReconciliation.requestOrganization** |  |
| Short name | Responsible organization |
| Definition | The organization which is responsible for the services rendered to the patient. |
| **PaymentReconciliation.detail** |  |
| Short name | List of settlements |
| Definition | List of individual settlement amounts and the corresponding transaction. |
| **PaymentReconciliation.detail.type** |  |
| Short name | Type code |
| Definition | Code to indicate the nature of the payment, adjustment, funds advance, etc. |
| Binding Description | The reason for the amount: payment, adjustment, advance. |
| **PaymentReconciliation.detail.request** |  |
| Short name | Claim |
| Definition | The claim or financial resource. |
| **PaymentReconciliation.detail.response** |  |
| Short name | Claim Response |
| Definition | The claim response resource. |
| **PaymentReconciliation.detail.submitter** |  |
| Short name | Organization which submitted the claim |
| Definition | The Organization which submitted the claim or financial transaction. |
| **PaymentReconciliation.detail.payee** |  |
| Short name | Organization which is receiving the payment |
| Definition | The organization which is receiving the payment. |
| **PaymentReconciliation.detail.date** |  |
| Short name | Invoice date |
| Definition | The date of the invoice or financial resource. |
| **PaymentReconciliation.detail.amount** |  |
| Short name | Amount being paid |
| Definition | Amount paid for this detail. |
| **PaymentReconciliation.form** |  |
| Short name | Printed Form Identifier |
| Definition | The form to be used for printing the content. |
| Binding Description | The forms codes. |
| **PaymentReconciliation.total** |  |
| Short name | Total amount of Payment |
| Definition | Total payment amount. |
| **PaymentReconciliation.processNote** |  |
| Short name | Processing comments |
| Definition | Suite of notes. |
| **PaymentReconciliation.processNote.type** |  |
| Definition | The note purpose: Print/Display. |
| Binding Description | The presentation types of notes. |
| **PaymentReconciliation.processNote.text** |  |
| Short name | Comment on the processing |
| Definition | The note text. |

## http://hl7.org/fhir/StructureDefinition/ProcessRequest

|  |  |
| --- | --- |
| **Description** | Base StructureDefinition for ProcessRequest Resource |
| **ProcessRequest** | Process Request |
| Short name | Request to perform some action on or in regards to an existing resource |
| Definition | This resource provides the target, request and response, and action details for an action to be performed by the target on or about existing resources. |
| **ProcessRequest.identifier** |  |
| Short name | Business Identifier |
| Definition | The ProcessRequest business identifier. |
| **ProcessRequest.status** |  |
| Definition | The status of the resource instance. |
| Binding Description | A code specifying the state of the resource instance. |
| **ProcessRequest.action** |  |
| Definition | The type of processing action being requested, for example Reversal, Readjudication, StatusRequest,PendedRequest. |
| Binding Description | List of allowable action which this resource can request. |
| **ProcessRequest.target** |  |
| Short name | Party which is the target of the request |
| Definition | The organization which is the target of the request. |
| **ProcessRequest.created** |  |
| Short name | Creation date |
| Definition | The date when this resource was created. |
| **ProcessRequest.provider** |  |
| Short name | Responsible practitioner |
| Definition | The practitioner who is responsible for the action specified in this request. |
| **ProcessRequest.organization** |  |
| Short name | Responsible organization |
| Definition | The organization which is responsible for the action speccified in this request. |
| **ProcessRequest.request** |  |
| Short name | Reference to the Request resource |
| Definition | Reference of resource which is the target or subject of this action. |
| **ProcessRequest.response** |  |
| Short name | Reference to the Response resource |
| Definition | Reference of a prior response to resource which is the target or subject of this action. |
| **ProcessRequest.nullify** |  |
| Short name | Remove history |
| Definition | If true remove all history excluding audit. |
| Requirements | Some resources must not simply be reversed in a processing or accounting sense but rather must have all history removed, such as the accidental submission of sensitive and/or wrong information. If the receiver cannot comply with a Nullify request then they must reject the request. |
| **ProcessRequest.reference** |  |
| Short name | Reference number/string |
| Definition | A reference to supply which authenticates the process. |
| **ProcessRequest.item** |  |
| Short name | Items to re-adjudicate |
| Definition | List of top level items to be re-adjudicated, if none specified then the entire submission is re-adjudicated. |
| **ProcessRequest.item.sequenceLinkId** |  |
| Short name | Service instance |
| Definition | A service line number. |
| **ProcessRequest.include** |  |
| Short name | Resource type(s) to include |
| Definition | Names of resource types to include. |
| **ProcessRequest.exclude** |  |
| Short name | Resource type(s) to exclude |
| Definition | Names of resource types to exclude. |
| **ProcessRequest.period** |  |
| Short name | Selection period |
| Definition | A period of time during which the fulfilling resources would have been created. |

## http://hl7.org/fhir/StructureDefinition/ProcessResponse

|  |  |
| --- | --- |
| **Description** | Base StructureDefinition for ProcessResponse Resource |
| **ProcessResponse** | Process Response |
| Short name | ProcessResponse resource |
| Definition | This resource provides processing status, errors and notes from the processing of a resource. |
| **ProcessResponse.identifier** |  |
| Short name | Business Identifier |
| Definition | The Response business identifier. |
| **ProcessResponse.status** |  |
| Definition | The status of the resource instance. |
| Binding Description | A code specifying the state of the resource instance. |
| **ProcessResponse.created** |  |
| Short name | Creation date |
| Definition | The date when the enclosed suite of services were performed or completed. |
| **ProcessResponse.organization** |  |
| Short name | Authoring Organization |
| Definition | The organization who produced this adjudicated response. |
| **ProcessResponse.request** |  |
| Short name | Request reference |
| Definition | Original request resource reference. |
| **ProcessResponse.outcome** |  |
| Short name | Processing outcome |
| Definition | Transaction status: error, complete, held. |
| Binding Description | Local status of outcome codes |
| **ProcessResponse.disposition** |  |
| Short name | Disposition Message |
| Definition | A description of the status of the adjudication or processing. |
| **ProcessResponse.requestProvider** |  |
| Short name | Responsible Practitioner |
| Definition | The practitioner who is responsible for the services rendered to the patient. |
| **ProcessResponse.requestOrganization** |  |
| Short name | Responsible organization |
| Definition | The organization which is responsible for the services rendered to the patient. |
| **ProcessResponse.form** |  |
| Short name | Printed Form Identifier |
| Definition | The form to be used for printing the content. |
| Binding Description | The forms codes. |
| **ProcessResponse.processNote** |  |
| Short name | Processing comments or additional requirements |
| Definition | Suite of processing notes or additional requirements if the processing has been held. |
| **ProcessResponse.processNote.type** |  |
| Definition | The note purpose: Print/Display. |
| Binding Description | The presentation types of notes. |
| **ProcessResponse.processNote.text** |  |
| Short name | Comment on the processing |
| Definition | The note text. |
| **ProcessResponse.error** |  |
| Short name | Error code |
| Definition | Processing errors. |
| Binding Description | The error codes for adjudication processing. |
| **ProcessResponse.communicationRequest** |  |
| Short name | Request for additional information |
| Definition | Request for additional supporting or authorizing information, such as: documents, images or resources. |

## http://hl7.org/fhir/StructureDefinition/VisionPrescription

|  |  |
| --- | --- |
| **Description** | Base StructureDefinition for VisionPrescription Resource |
| **VisionPrescription** | Vision Prescription |
| Short name | Prescription for vision correction products for a patient |
| Definition | An authorization for the supply of glasses and/or contact lenses to a patient. |
| **VisionPrescription.identifier** |  |
| Short name | Business identifier |
| Definition | Business identifier which may be used by other parties to reference or identify the prescription. |
| **VisionPrescription.status** |  |
| Definition | The status of the resource instance. |
| Binding Description | A code specifying the state of the resource instance. |
| **VisionPrescription.patient** |  |
| Short name | Who prescription is for |
| Definition | A link to a resource representing the person to whom the vision products will be supplied. |
| **VisionPrescription.encounter** |  |
| Short name | Created during encounter / admission / stay |
| Definition | A link to a resource that identifies the particular occurrence of contact between patient and health care provider. |
| **VisionPrescription.dateWritten** |  |
| Short name | When prescription was authorized |
| Definition | The date (and perhaps time) when the prescription was written. |
| **VisionPrescription.prescriber** |  |
| Short name | Who authorizes the vision product |
| Definition | The healthcare professional responsible for authorizing the prescription. |
| **VisionPrescription.reason[x]** |  |
| Short name | Reason or indication for writing the prescription |
| Definition | Can be the reason or the indication for writing the prescription. |
| **VisionPrescription.dispense** |  |
| Short name | Vision supply authorization |
| Definition | Deals with details of the dispense part of the supply specification. |
| **VisionPrescription.dispense.product** |  |
| Short name | Product to be supplied |
| Definition | Identifies the type of vision correction product which is required for the patient. |
| Binding Description | A coded concept describing the vision products. |
| **VisionPrescription.dispense.eye** |  |
| Definition | The eye for which the lens applies. |
| Binding Description | A coded concept listing the eye codes. |
| **VisionPrescription.dispense.sphere** |  |
| Short name | Lens sphere |
| Definition | Lens power measured in diopters (0.25 units). |
| **VisionPrescription.dispense.cylinder** |  |
| Short name | Lens cylinder |
| Definition | Power adjustment for astigmatism measured in diopters (0.25 units). |
| **VisionPrescription.dispense.axis** |  |
| Short name | Lens axis |
| Definition | Adjustment for astigmatism measured in integer degrees. |
| **VisionPrescription.dispense.prism** |  |
| Short name | Lens prism |
| Definition | Amount of prism to compensate for eye alignment in fractional units. |
| **VisionPrescription.dispense.base** |  |
| Definition | The relative base, or reference lens edge, for the prism. |
| Binding Description | A coded concept listing the base codes. |
| **VisionPrescription.dispense.add** |  |
| Short name | Lens add |
| Definition | Power adjustment for multifocal lenses measured in diopters (0.25 units). |
| **VisionPrescription.dispense.power** |  |
| Short name | Contact lens power |
| Definition | Contact lens power measured in diopters (0.25 units). |
| **VisionPrescription.dispense.backCurve** |  |
| Short name | Contact lens back curvature |
| Definition | Back curvature measured in millimeters. |
| **VisionPrescription.dispense.diameter** |  |
| Short name | Contact lens diameter |
| Definition | Contact lens diameter measured in millimeters. |
| **VisionPrescription.dispense.duration** |  |
| Short name | Lens wear duration |
| Definition | The recommended maximum wear period for the lens. |
| **VisionPrescription.dispense.color** |  |
| Short name | Color required |
| Definition | Special color or pattern. |
| **VisionPrescription.dispense.brand** |  |
| Short name | Brand required |
| Definition | Brand recommendations or restrictions. |
| **VisionPrescription.dispense.note** |  |
| Short name | Notes for coatings |
| Definition | Notes for special requirements such as coatings and lens materials. |

# Health Care Devices

## http://hl7.org/fhir/StructureDefinition/DeviceComponent

|  |  |
| --- | --- |
| **Description** | Base StructureDefinition for DeviceComponent Resource |
| **DeviceComponent** | Device Component |
| Short name | An instance of a medical-related component of a medical device |
| Definition | Describes the characteristics, operational status and capabilities of a medical-related component of a medical device. |
| Comment | For the initial scope, this DeviceComponent resource is only applicable to describe a single node in the containment tree that is produced by the context scanner in any medical device that implements or derives from the ISO/IEEE 11073 standard and that does not represent a metric. Examples for such a node are MDS, VMD, or Channel. |
| **DeviceComponent.type** |  |
| Short name | What kind of component it is |
| Definition | Describes the specific component type as defined in the object-oriented or metric nomenclature partition. |
| Comment | DeviceComponent.type can be referred to either GDMN (nomenclature system supported by FDA Global UDI Database) or preferable RTMMS coding system. |
| Binding Description | Describes the type of the component. |
| **DeviceComponent.identifier** |  |
| Short name | Instance id assigned by the software stack |
| Definition | Describes the local assigned unique identification by the software. For example: handle ID. |
| **DeviceComponent.lastSystemChange** |  |
| Short name | Recent system change timestamp |
| Definition | Describes the timestamp for the most recent system change which includes device configuration or setting change. |
| **DeviceComponent.source** |  |
| Short name | A source device of this component |
| Definition | Describes the link to the source Device that contains administrative device information such as manufacture, serial number, etc. |
| **DeviceComponent.parent** |  |
| Short name | Parent resource link |
| Definition | Describes the link to the parent resource. For example: Channel is linked to its VMD parent. |
| **DeviceComponent.operationalStatus** |  |
| Short name | Component operational status |
| Definition | Indicates current operational status of the device. For example: On, Off, Standby, etc. |
| Comment | OperationalStatus for the MDS, VMD, or Channel will be bound to a specific ValueSet that is defined in its profile. |
| Binding Description | Codes representing the current status of the device - on, off, suspended, etc. |
| **DeviceComponent.parameterGroup** |  |
| Short name | Current supported parameter group |
| Definition | Describes the parameter group supported by the current device component that is based on some nomenclature, e.g. cardiovascular. |
| Binding Description | Codes identifying groupings of parameters; e.g. Cardiovascular. |
| **DeviceComponent.measurementPrinciple** |  |
| Definition | Describes the physical principle of the measurement. For example: thermal, chemical, acoustical, etc. |
| Binding Description | Different measurement principle supported by the device. |
| **DeviceComponent.productionSpecification** |  |
| Short name | Production specification of the component |
| Definition | Describes the production specification such as component revision, serial number, etc. |
| **DeviceComponent.productionSpecification.specType** |  |
| Short name | Specification type |
| Definition | Describes the specification type, such as, serial number, part number, hardware revision, software revision, etc. |
| Binding Description | Codes for device specification types such as serial number, part number, hardware revision, software revision, etc. |
| **DeviceComponent.productionSpecification.componentId** |  |
| Short name | Internal component unique identification |
| Definition | Describes the internal component unique identification. This is a provision for manufacture specific standard components using a private OID. 11073-10101 has a partition for private OID semantic that the manufacture can make use of. |
| **DeviceComponent.productionSpecification.productionSpec** |  |
| Short name | A printable string defining the component |
| Definition | Describes the printable string defining the component. |
| **DeviceComponent.languageCode** |  |
| Short name | Language code for the human-readable text strings produced by the device |
| Definition | Describes the language code for the human-readable text string produced by the device. This language code will follow the IETF language tag. Example: en-US. |
| Binding Description | A human language. |

## http://hl7.org/fhir/StructureDefinition/DeviceMetric

|  |  |
| --- | --- |
| **Description** | Base StructureDefinition for DeviceMetric Resource |
| **DeviceMetric** | Device Metric |
| Short name | Measurement, calculation or setting capability of a medical device |
| Definition | Describes a measurement, calculation or setting capability of a medical device. |
| Comment | For the initial scope, this DeviceMetric resource is only applicable to describe a single metric node in the containment tree that is produced by the context scanner in any medical device that implements or derives from the ISO/IEEE 11073 standard. |
| **DeviceMetric.type** |  |
| Short name | Type of metric |
| Definition | Describes the type of the metric. For example: Heart Rate, PEEP Setting, etc. |
| Comment | DeviceMetric.type can be referred to either GDMN (nomenclature system supported by FDA Global UDI Database) or preferable RTMMS coding system. |
| Binding Description | Describes the metric type. |
| **DeviceMetric.identifier** |  |
| Short name | Unique identifier of this DeviceMetric |
| Definition | Describes the unique identification of this metric that has been assigned by the device or gateway software. For example: handle ID. It should be noted that in order to make the identifier unique, the system element of the identifier should be set to the unique identifier of the device. |
| **DeviceMetric.unit** |  |
| Short name | Unit of metric |
| Definition | Describes the unit that an observed value determined for this metric will have. For example: Percent, Seconds, etc. |
| Comment | DeviceMetric.unit can be referred to either UCUM or preferable RTMMS coding system. |
| Binding Description | Describes the unit of the metric. |
| **DeviceMetric.source** |  |
| Short name | Describes the link to the source Device |
| Definition | Describes the link to the Device that this DeviceMetric belongs to and that contains administrative device information such as manufacture, serial number, etc. |
| **DeviceMetric.parent** |  |
| Short name | Describes the link to the parent DeviceComponent |
| Definition | Describes the link to the DeviceComponent that this DeviceMetric belongs to and that provide information about the location of this DeviceMetric in the containment structure of the parent Device. An example would be a DeviceComponent that represents a Channel. This reference can be used by a client application to distinguish DeviceMetrics that have the same type, but should be interpreted based on their containment location. |
| **DeviceMetric.operationalStatus** |  |
| Definition | Indicates current operational state of the device. For example: On, Off, Standby, etc. |
| Binding Description | Describes the operational status of the DeviceMetric. |
| **DeviceMetric.color** |  |
| Definition | Describes the color representation for the metric. This is often used to aid clinicians to track and identify parameter types by color. In practice, consider a Patient Monitor that has ECG/HR and Pleth for example; the parameters are displayed in different characteristic colors, such as HR-blue, BP-green, and PR and SpO2- magenta. |
| Binding Description | Describes the typical color of representation. |
| **DeviceMetric.category** |  |
| Definition | Indicates the category of the observation generation process. A DeviceMetric can be for example a setting, measurement, or calculation. |
| Binding Description | Describes the category of the metric. |
| **DeviceMetric.measurementPeriod** |  |
| Short name | Describes the measurement repetition time |
| Definition | Describes the measurement repetition time. This is not necessarily the same as the update period. The measurement repetition time can range from milliseconds up to hours. An example for a measurement repetition time in the range of milliseconds is the sampling rate of an ECG. An example for a measurement repetition time in the range of hours is a NIBP that is triggered automatically every hour. The update period may be different than the measurement repetition time, if the device does not update the published observed value with the same frequency as it was measured. |
| **DeviceMetric.calibration** |  |
| Short name | Describes the calibrations that have been performed or that are required to be performed |
| Definition | Describes the calibrations that have been performed or that are required to be performed. |
| **DeviceMetric.calibration.type** |  |
| Definition | Describes the type of the calibration method. |
| Binding Description | Describes the type of a metric calibration. |
| **DeviceMetric.calibration.state** |  |
| Definition | Describes the state of the calibration. |
| Binding Description | Describes the state of a metric calibration. |
| **DeviceMetric.calibration.time** |  |
| Short name | Describes the time last calibration has been performed |
| Definition | Describes the time last calibration has been performed. |

# Imaging Integration

## http://hl7.org/fhir/StructureDefinition/ImagingManifest

|  |  |
| --- | --- |
| **Description** | Base StructureDefinition for ImagingManifest Resource |
| **ImagingManifest** | Imaging Manifest |
| Short name | Key Object Selection |
| Definition | A text description of the DICOM SOP instances selected in the ImagingManifest; or the reason for, or significance of, the selection. |
| Synonym | Manifest |
| Synonym | XDS-I summary |
| Synonym | Key Images |
| Synonym | (in limited use) Key Object Selection (KOS) |
| **ImagingManifest.identifier** |  |
| Short name | SOP Instance UID |
| Definition | Unique identifier of the the DICOM Key Object Selection (KOS) that this resource represents. |
| Requirements | DICOM SOP Instance is always assigned with a unique identifier (UID). |
| Synonym | SOPInstanceUID |
| **ImagingManifest.patient** |  |
| Short name | Patient of the selected objects |
| Definition | A patient resource reference which is the patient subject of all DICOM SOP Instances in this ImagingManifest. |
| Comment | SOP instances selected in the ImagingManifest can be from different studies, but must be of the same patient. |
| Requirements | SOP Instances in ImagingManifest must be from the same patient. |
| **ImagingManifest.authoringTime** |  |
| Short name | Time when the selection of instances was made |
| Definition | Date and time when the selection of the referenced instances were made. It is (typically) different from the creation date of the selection resource, and from dates associated with the referenced instances (e.g. capture time of the referenced image). |
| Requirements | Date and time when the selection was made can be important to understand the content of selection. |
| Synonym | ObservationDateTime |
| **ImagingManifest.author** |  |
| Short name | Author (human or machine) |
| Definition | Author of ImagingManifest. It can be a human author or a device which made the decision of the SOP instances selected. For example, a radiologist selected a set of imaging SOP instances to attach in a diagnostic report, and a CAD application may author a selection to describe SOP instances it used to generate a detection conclusion. |
| Requirements | Track the selection decision maker. |
| **ImagingManifest.description** |  |
| Short name | Description text |
| Definition | Free text narrative description of the ImagingManifest. The value may be derived from the DICOM Standard Part 16, CID-7010 descriptions (e.g. Best in Set, Complete Study Content). Note that those values cover the wide range of uses of the DICOM Key Object Selection object, several of which are not supported by ImagingManifest. Specifically, there is no expected behavior associated with descriptions that suggest referenced images be removed or not used. |
| Comment | Free text narrative description of the ImagingManifest. |
| Requirements | Need to provide a narrative description of the SOP instances in the selection. |
| Synonym | TextValue |
| **ImagingManifest.study** |  |
| Short name | Study identity of the selected instances |
| Definition | Study identity and locating information of the DICOM SOP instances in the selection. |
| Comment | Study component represents the study level identity and locator information of the DICOM SOP instances in the selection. It is the top level identity of the hierachical identification of the instances. |
| Requirements | DICOM SOP instances are identified through the UIDs of the study - series - instance hierarchy. In addition, the locator at the study level provide a means of retrieving the entire study. |
| **ImagingManifest.study.uid** |  |
| Short name | Study instance UID |
| Definition | Study instance UID of the SOP instances in the selection. |
| Requirements | Study instance UID is required to fully identify the DICOM SOP instances in the selection. |
| Synonym | StudyInstanceUID |
| Synonym | Referenced study instance UID |
| **ImagingManifest.study.imagingStudy** |  |
| Short name | Reference to ImagingStudy |
| Definition | Reference to the Imaging Study in FHIR form. |
| Requirements | Used to retrieve the ImagingStudy that contain the images referenced in the Imaging ObjectSelection.study. |
| **ImagingManifest.study.endpoint** |  |
| Short name | Study access service endpoint |
| Definition | The network service providing access (e.g., query, view, or retrieval) for the study. See implementation notes for information about using DICOM endpoints. A study-level endpoint applies to each series in the study, unless overridden by a series-level endpoint with the same Endpoint.type. |
| Requirements | Access methods for viewing (e.g. IHEâ€™s IID profile) or retrieving (e.g., DICOMâ€™s WADO-URI and WADO-RS) the study or the studyâ€™s series or instances. The study-level baseLocation applies to each series in the study, unless overridden in series by a series-level baseLocation of the same type. |
| **ImagingManifest.study.series** |  |
| Short name | Series identity of the selected instances |
| Definition | Series identity and locating information of the DICOM SOP instances in the selection. |
| Comment | Series component represents the series level identity and locator information of the DICOM SOP instances in the selection. |
| Requirements | DICOM SOP instances are identified through the UIDs of the study - series - instance hierarchy. In addition, the locator at the series level provide a means of retrieving the entire series. |
| **ImagingManifest.study.series.uid** |  |
| Short name | Series instance UID |
| Definition | Series instance UID of the SOP instances in the selection. |
| Requirements | Series instance UID is required to fully identify the DICOM SOP instances in the selection. |
| Synonym | SeriesInstanceUID |
| Synonym | Referenced series instance UID |
| **ImagingManifest.study.series.endpoint** |  |
| Short name | Series access endpoint |
| Definition | The network service providing access (e.g., query, view, or retrieval) for this series. See implementation notes for information about using DICOM endpoints. A series-level endpoint, if present, has precedence over a study-level endpoint with the same Endpoint.type. |
| Requirements | Access methods for retrieving (e.g., DICOMâ€™s WADO-URI and WADO-RS) the series or the seriesâ€™ instances. A baseLocation specified at the series level has precedence over a baseLocation of the same type specified at the study level. |
| **ImagingManifest.study.series.instance** |  |
| Short name | The selected instance |
| Definition | Identity and locating information of the selected DICOM SOP instances. |
| Comment | SOP Instance component identify the instance selected, along with the study and series identities to form the DICOM identity hierachy. |
| Requirements | DICOM SOP instances are identified through the UIDs of the study - series - instance hierarchy. This is the instance level identity of the instance in the selection. |
| **ImagingManifest.study.series.instance.sopClass** |  |
| Short name | SOP class UID of instance |
| Definition | SOP class UID of the selected instance. |
| Comment | SOP class UID identifies the type of the selected instances, e.g. CT image, Gray scale softcopy presentation state, ECG waveform, etc. |
| Requirements | DICOM SOP instances can be an image or other data object. The SOP class UID provide the accurate information about what type the instance is. |
| Synonym | SOPClassUID |
| **ImagingManifest.study.series.instance.uid** |  |
| Short name | Selected instance UID |
| Definition | SOP Instance UID of the selected instance. |
| Comment | SOP instance UID identifies the instance. |
| Requirements | SOP instance UID is required to fully identify the DICOM SOP instance in the selection. |
| Synonym | SOPInstanceUID |
| Synonym | Referenced SOP instance UID |

## http://hl7.org/fhir/StructureDefinition/ImagingStudy

|  |  |
| --- | --- |
| **Description** | Base StructureDefinition for ImagingStudy Resource |
| **ImagingStudy** | Imaging Study |
| Short name | A set of images produced in single study (one or more series of references images) |
| Definition | Representation of the content produced in a DICOM imaging study. A study comprises a set of series, each of which includes a set of Service-Object Pair Instances (SOP Instances - images or other data) acquired or produced in a common context. A series is of only one modality (e.g. X-ray, CT, MR, ultrasound), but a study may have multiple series of different modalities. |
| **ImagingStudy.uid** |  |
| Short name | Formal DICOM identifier for the study |
| Definition | Formal identifier for the study. |
| Synonym | StudyInstanceUID |
| Example Label | General |
| **ImagingStudy.accession** |  |
| Short name | Related workflow identifier ("Accession Number") |
| Definition | Accession Number is an identifier related to some aspect of imaging workflow and data management. Usage may vary across different institutions. See for instance [IHE Radiology Technical Framework Volume 1 Appendix A](http://www.ihe.net/uploadedFiles/Documents/Radiology/IHE\_RAD\_TF\_Rev13.0\_Vol1\_FT\_2014-07-30.pdf). |
| Synonym | AccessionNumber |
| **ImagingStudy.identifier** |  |
| Short name | Other identifiers for the study |
| Definition | Other identifiers for the study. |
| Synonym | StudyID |
| **ImagingStudy.availability** |  |
| Definition | Availability of study (online, offline or nearline). |
| Synonym | InstanceAvailability |
| Binding Description | Availability of the resource |
| **ImagingStudy.modalityList** |  |
| Short name | All series modality if actual acquisition modalities |
| Definition | A list of all the Series.ImageModality values that are actual acquisition modalities, i.e. those in the DICOM Context Group 29 (value set OID 1.2.840.10008.6.1.19). |
| Synonym | ModalitiesInStudy |
| Binding Description | Type of acquired data in the instance |
| **ImagingStudy.patient** |  |
| Short name | Who the images are of |
| Definition | The patient imaged in the study. |
| **ImagingStudy.context** |  |
| Short name | Originating context |
| Definition | The encounter at which the request is initiated. |
| **ImagingStudy.started** |  |
| Short name | When the study was started |
| Definition | Date and Time the study started. |
| Synonym | StudyDate |
| Synonym | StudyTime |
| Example Label | General |
| **ImagingStudy.basedOn** |  |
| Short name | Request fulfilled |
| Definition | A list of the diagnostic requests that resulted in this imaging study being performed. |
| Requirements | To support grouped procedures (one imaging study supporting multiple ordered procedures, e.g. chest/abdomen/pelvis CT). |
| **ImagingStudy.referrer** |  |
| Short name | Referring physician |
| Definition | The requesting/referring physician. |
| Synonym | ReferringPhysiciansName |
| **ImagingStudy.interpreter** |  |
| Short name | Who interpreted images |
| Definition | Who read the study and interpreted the images or other content. |
| Synonym | Name of Physician(s) Reading Study |
| **ImagingStudy.endpoint** |  |
| Short name | Study access endpoint |
| Definition | The network service providing access (e.g., query, view, or retrieval) for the study. See implementation notes for information about using DICOM endpoints. A study-level endpoint applies to each series in the study, unless overridden by a series-level endpoint with the same Endpoint.type. |
| Comment | Typical endpoint types include DICOM WADO-RS, which is used to retrieve DICOM instances in native or rendered (e.g., JPG, PNG), formats using a RESTful API; DICOM WADO-URI, which can similarly retrieve native or rendered instances, except using an HTTP query-based approach; DICOM QIDO-RS, which allows RESTful query for DICOM information without retrieving the actual instances; or IHE Invoke Image Display (IID), which provides standard invokation of an imaging web viewer. |
| Requirements | Access methods for viewing (e.g. IHEâ€™s IID profile) or retrieving (e.g., DICOMâ€™s WADO-URI and WADO-RS) the study or the studyâ€™s series or instances. The study-level baseLocation applies to each series in the study, unless overridden in series by a series-level baseLocation of the same type. |
| **ImagingStudy.numberOfSeries** |  |
| Short name | Number of Study Related Series |
| Definition | Number of Series in the Study. This value given may be larger than the number of series elements this Resource contains due to resource availability, security, or other factors. This element should be present if any series elements are present. |
| Synonym | NumberOfStudyRelatedSeries |
| **ImagingStudy.numberOfInstances** |  |
| Short name | Number of Study Related Instances |
| Definition | Number of SOP Instances in Study. This value given may be larger than the number of instance elements this Resource contains due to resource availability, security, or other factors. This element should be present if any instance elements are present. |
| Synonym | NumberOfStudyRelatedInstances |
| **ImagingStudy.procedureReference** |  |
| Short name | The performed Procedure Reference |
| Definition | A reference to the performed Procedure. |
| **ImagingStudy.procedureCode** |  |
| Short name | The performed procedure code |
| Definition | The code for the performed procedure type. |
| Synonym | ProcedureCodeSequence |
| Binding Description | The performed procedure type |
| **ImagingStudy.reason** |  |
| Short name | Why the study was requested |
| Definition | Description of clinical codition indicating why the ImagingStudy was requested. |
| Binding Description | The reason for the study |
| **ImagingStudy.description** |  |
| Short name | Institution-generated description |
| Definition | Institution-generated description or classification of the Study performed. |
| Synonym | StudyDescription |
| **ImagingStudy.series** |  |
| Short name | Each study has one or more series of instances |
| Definition | Each study has one or more series of images or other content. |
| **ImagingStudy.series.uid** |  |
| Short name | Formal DICOM identifier for this series |
| Definition | Formal identifier for this series. |
| Synonym | SeriesInstanceUID |
| Example Label | General |
| **ImagingStudy.series.number** |  |
| Short name | Numeric identifier of this series |
| Definition | The Numeric identifier of this series in the study. |
| Synonym | SeriesNumber |
| Example Label | General |
| **ImagingStudy.series.modality** |  |
| Short name | The modality of the instances in the series |
| Definition | The modality of this series sequence. |
| Synonym | Modality |
| Binding Description | Type of acquired data in the instance |
| **ImagingStudy.series.description** |  |
| Short name | A short human readable summary of the series |
| Definition | A description of the series. |
| Synonym | SeriesDescription |
| Example Label | General |
| **ImagingStudy.series.numberOfInstances** |  |
| Short name | Number of Series Related Instances |
| Definition | Number of SOP Instances in Study. This value given may be larger than the number of instance elements this Resource contains due to resource availability, security, or other factors. This element should be present if any instance elements are present. |
| Synonym | NumberOfSeriesRelatedInstances |
| **ImagingStudy.series.availability** |  |
| Definition | Availability of series (online, offline or nearline). |
| Synonym | InstanceAvailability |
| Binding Description | Availability of the resource |
| **ImagingStudy.series.endpoint** |  |
| Short name | Series access endpoint |
| Definition | The network service providing access (e.g., query, view, or retrieval) for this series. See implementation notes for information about using DICOM endpoints. A series-level endpoint, if present, has precedence over a study-level endpoint with the same Endpoint.type. |
| Comment | Typical endpoint types include DICOM WADO-RS, which is used to retrieve DICOM instances in native or rendered (e.g., JPG, PNG), formats using a RESTful API; DICOM WADO-URI, which can similarly retrieve native or rendered instances, except using an HTTP query-based approach; and DICOM QIDO-RS, which allows RESTful query for DICOM information without retrieving the actual instances. |
| Requirements | Access methods for retrieving (e.g., DICOMâ€™s WADO-URI and WADO-RS) the series or the seriesâ€™ instances. A baseLocation specified at the series level has precedence over a baseLocation of the same type specified at the study level. |
| **ImagingStudy.series.bodySite** |  |
| Short name | Body part examined |
| Definition | Body part examined. See DICOM Part 16 Annex L for the mapping from DICOM to Snomed CT. |
| Synonym | BodyPartExamined |
| Binding Description | Codes describing anatomical locations. May include laterality. |
| **ImagingStudy.series.laterality** |  |
| Short name | Body part laterality |
| Definition | Laterality if body site is paired anatomic structure and laterality is not pre-coordinated in body site code. |
| Binding Description | Codes describing body site laterality (left, right, etc.). |
| **ImagingStudy.series.started** |  |
| Short name | When the series started |
| Definition | The date and time the series was started. |
| **ImagingStudy.series.performer** |  |
| Short name | Who performed the series |
| Definition | The physician or operator (often the radiology technician) who performed the series. The performer is recorded at the series level, since each series in a study may be performed by a different practitioner, at different times, and using different devices. A series may be performed by multiple practitioners. |
| Synonym | PerformingPysiciansName |
| Synonym | OperatorsName |
| **ImagingStudy.series.instance** |  |
| Short name | A single SOP instance from the series |
| Definition | A single SOP Instance within the series, e.g. an image, or presentation state. |
| **ImagingStudy.series.instance.uid** |  |
| Short name | Formal DICOM identifier for this instance |
| Definition | Formal identifier for this image or other content. |
| Synonym | SOPInstanceUID |
| Example Label | General |
| **ImagingStudy.series.instance.number** |  |
| Short name | The number of this instance in the series |
| Definition | The number of instance in the series. |
| Synonym | InstanceNumber |
| Example Label | General |
| **ImagingStudy.series.instance.sopClass** |  |
| Short name | DICOM class type |
| Definition | DICOM instance type. |
| Synonym | SOPClassUID |
| Example Label | General |
| **ImagingStudy.series.instance.title** |  |
| Short name | Description of instance |
| Definition | The description of the instance. |
| Comment | Particularly for post-acquisition analytic objects, such as SR, presentation states, value mapping, etc. |

# Infrastructure And Messaging

## http://hl7.org/fhir/StructureDefinition/MessageDefinition

|  |  |
| --- | --- |
| **Description** | Base StructureDefinition for MessageDefinition Resource |
| **Purpose** | Allows messages to be defined once and re-used across systems. |
| **MessageDefinition** | Message Definition |
| Short name | A resource that defines a type of message that can be exchanged between systems |
| Definition | Defines the characteristics of a message that can be shared between systems, including the type of event that initiates the message, the content to be transmitted and what response(s), if any, are permitted. |
| Comment | This would be a MIF-level artifact. |
| **MessageDefinition.url** |  |
| Short name | Logical uri to reference this message definition (globally unique) |
| Definition | An absolute URL that is used to identify this message definition when it is referenced in a specification, model, design or an instance. This SHALL be a URL, SHOULD be globally unique, and SHOULD be an address at which this message definition is (or will be) published. The URL SHOULD include the major version of the message definition. For more information see [Technical and Business Versions](resource.html#versions). |
| Comment | Can be a urn:uuid: or a urn:oid:, but real http: addresses are preferred. |
| Requirements | Allows the message definition to be referenced by a single globally unique identifier. |
| **MessageDefinition.identifier** |  |
| Short name | Additional identifier for the message definition |
| Definition | A formal identifier that is used to identify this message definition when it is represented in other formats, or referenced in a specification, model, design or an instance. |
| Comment | Typically, this is used for identifiers that can go in an HL7 v3 II data type - e.g. to identify this message definition outside of FHIR, where the logical URL is not possible to use. |
| Requirements | Allows externally provided and/or useable business identifiers to be easily associated with the module. |
| **MessageDefinition.version** |  |
| Short name | Business version of the message definition |
| Definition | The identifier that is used to identify this version of the message definition when it is referenced in a specification, model, design or instance. This is an arbitrary value managed by the message definition author and is not expected to be globally unique. For example, it might be a timestamp (e.g. yyyymmdd) if a managed version is not available. There is also no expectation that versions are orderable. |
| Comment | There may be multiple different instances of a message definition that have the same identifier but different versions. |
| **MessageDefinition.name** |  |
| Short name | Name for this message definition (Computer friendly) |
| Definition | A natural language name identifying the message definition. This name should be usable as an identifier for the module by machine processing applications such as code generation. |
| Comment | The name is not expected to be globally unique. The name should be a simple alpha-numeric type name to ensure it is computable friendly. |
| Requirements | Support human navigation & code generation. |
| **MessageDefinition.title** |  |
| Short name | Name for this message definition (Human friendly) |
| Definition | A short, descriptive, user-friendly title for the message definition. |
| **MessageDefinition.status** |  |
| Definition | The status of this message definition. Enables tracking the life-cycle of the content. |
| Comment | Allows filtering of message definition that are appropriate for use vs. not. |
| Binding Description | The lifecycle status of a Value Set or Concept Map. |
| **MessageDefinition.experimental** |  |
| Short name | If for testing purposes, not real usage |
| Definition | A flag to indicate that this message definition is authored for testing purposes (or education/evaluation/marketing), and is not intended to be used for genuine usage. |
| Comment | Allows filtering of message definition that are appropriate for use vs. not. |
| Requirements | Enables experimental content to be developed following the same life-cycle as a production-level message definition would. |
| **MessageDefinition.date** |  |
| Short name | Date this was last changed |
| Definition | The date (and optionally time) when the message definition was published. The date must change when the business version changes, if it does, and it must change if the status code changes. In addition, it should change when the substantive content of the message definition changes. |
| Comment | Note that this is not the same as the resource last-modified-date, since the resource may be a secondary representation of the message definition. Additional specific dates may be added as extensions. |
| **MessageDefinition.publisher** |  |
| Short name | Name of the publisher (Organization or individual) |
| Definition | The name of the individual or organization that published the message definition. |
| Comment | Usually an organization, but may be an individual. The publisher (or steward) of the message definition is the organization or individual primarily responsible for the maintenance and upkeep of the message definition. This is not necessarily the same individual or organization that developed and initially authored the content. The publisher is the primary point of contact for questions or issues with the message definition. This item SHOULD be populated unless the information is available from context. |
| Requirements | Helps establish the "authority/credibility" of the message definition. May also allow for contact. |
| **MessageDefinition.contact** |  |
| Short name | Contact details for the publisher |
| Definition | Contact details to assist a user in finding and communicating with the publisher. |
| Comment | May be a web site, an email address, a telephone number, etc. |
| **MessageDefinition.description** |  |
| Short name | Natural language description of the message definition |
| Definition | A free text natural language description of the message definition from the consumer's perspective. |
| Comment | This description can be used to capture details such as why the message definition was built, comments about misuse, instructions for clinical use and interpretation, literature references, examples from the paper world, etc. It is not a rendering of the message definition as conveyed in the text field of the resource itself. This item SHOULD be populated unless the information is available from context (e.g. the language of the profile is presumed to be the predominant language in the place the profile was created). |
| **MessageDefinition.useContext** |  |
| Short name | Content intends to support these contexts |
| Definition | The content was developed with a focus and intent of supporting the contexts that are listed. These terms may be used to assist with indexing and searching of code system definitions. |
| Comment | When multiple usageContexts are specified, there is no expectation for whether all or any of the contexts apply. |
| Requirements | Assist in searching for appropriate content. |
| **MessageDefinition.jurisdiction** |  |
| Short name | Intended jurisdiction for message definition (if applicable) |
| Definition | A jurisdiction in which the message definition is intended to be used. |
| Binding Description | Countries and regions within which this artifact is targeted for use |
| **MessageDefinition.purpose** |  |
| Short name | Why this message definition is defined |
| Definition | Explains why this message definition is needed and why it has been designed as it has. |
| Comment | This element does not describe the usage of the message definition (See, e.g, the comments element, or relatedArtifacts), rather it's for traceability of ''why'' the resource is either needed or ''why'' it is defined as it is. This may be used to point to source materials or specifications that drove the structure of this message definition. |
| **MessageDefinition.copyright** |  |
| Short name | Use and/or publishing restrictions |
| Definition | A copyright statement relating to the message definition and/or its contents. Copyright statements are generally legal restrictions on the use and publishing of the message definition. |
| Requirements | Consumers of the library must be able to determine any legal restrictions on the use of the message definition and/or its content. |
| Synonym | License |
| Synonym | Restrictions |
| **MessageDefinition.base** |  |
| Short name | Definition this one is based on |
| Definition | The MessageDefinition this new definition is a profile of. |
| **MessageDefinition.parent** |  |
| Short name | Protocol/workflow this is part of |
| Definition | Identifies a protocol or workflow that this MessageDefinition represents a step in. |
| **MessageDefinition.replaces** |  |
| Short name | Takes the place of |
| Definition | A MessageDefinition that is superseded by this definition. |
| **MessageDefinition.event** |  |
| Short name | Event type |
| Definition | A coded identifier of a supported messaging event. |
| Binding Description | One of the message events defined as part of FHIR. |
| **MessageDefinition.category** |  |
| Definition | The impact of the content of the message. |
| Binding Description | The impact of the content of a message. |
| **MessageDefinition.focus** |  |
| Short name | Resource(s) that are the subject of the event |
| Definition | Identifies the resource (or resources) that are being addressed by the event. For example, the Encounter for an admit message or two Account records for a merge. |
| Constraint Text | Max must be postive int or \* |
| **MessageDefinition.focus.code** |  |
| Short name | Type of resource |
| Definition | The kind of resource that must be the focus for this message. |
| Comment | Multiple focuses addressing different resources may occasionally occur. E.g. to link or unlink a resource from a particular account or encounter, etc. |
| Binding Description | One of the resource types defined as part of FHIR. |
| **MessageDefinition.focus.profile** |  |
| Short name | Profile that must be adhered to by focus |
| Definition | A profile that reflects constraints for the focal resource (and potentially for related resources). |
| Comment | This should be present for most message definitions. However, if the message focus is only a single resource and there is no need to include referenced resources or otherwise enforce the presence of particular elements, it can be omitted. |
| Requirements | This profile allows setting boundaries for what content must appear within the message bundle vs. outside based on the declared aggregation constraints on referenced resources on this and related profiles. |
| **MessageDefinition.focus.min** |  |
| Short name | Minimum number of focuses of this type |
| Definition | Identifies the minimum number of resources of this type that must be pointed to by a message in order for it to be valid against this MessageDefinition. |
| **MessageDefinition.focus.max** |  |
| Short name | Maximum number of focuses of this type |
| Definition | Identifies the maximum number of resources of this type that must be pointed to by a message in order for it to be valid against this MessageDefinition. |
| **MessageDefinition.responseRequired** |  |
| Short name | Is a response required? |
| Definition | Indicates whether a response is required for this message. |
| **MessageDefinition.allowedResponse** |  |
| Short name | Responses to this message |
| Definition | Indicates what types of messages may be sent as an application-level response to this message. |
| Comment | This indicates an application level response to "close" a transaction implicit in a particular request message. To define a complete workflow scenario, look to the [[PlanDefinition]] resource which allows the definition of complex orchestrations, conditionality, etc. |
| **MessageDefinition.allowedResponse.message** |  |
| Short name | Reference to allowed message definition response |
| Definition | A reference to the message definition that must be adhered to by this supported response. |
| **MessageDefinition.allowedResponse.situation** |  |
| Short name | When should this response be used |
| Definition | Provides a description of the circumstances in which this response should be used (as opposed to one of the alternative responses). |

## http://hl7.org/fhir/StructureDefinition/MessageHeader

|  |  |
| --- | --- |
| **Description** | Base StructureDefinition for MessageHeader Resource |
| **Purpose** | Many implementations are not prepared to use REST and need a messaging based infrastructure. |
| **MessageHeader** | Message Header |
| Short name | A resource that describes a message that is exchanged between systems |
| Definition | The header for a message exchange that is either requesting or responding to an action. The reference(s) that are the subject of the action as well as other information related to the action are typically transmitted in a bundle in which the MessageHeader resource instance is the first resource in the bundle. |
| **MessageHeader.event** |  |
| Short name | Code for the event this message represents |
| Definition | Code that identifies the event this message represents and connects it with its definition. Events defined as part of the FHIR specification have the system value "http://hl7.org/fhir/message-events". |
| Requirements | Drives the behavior associated with this message. |
| Binding Description | One of the message events defined as part of FHIR. |
| **MessageHeader.destination** |  |
| Short name | Message Destination Application(s) |
| Definition | The destination application which the message is intended for. |
| Comment | There SHOULD be at least one destination, but in some circumstances, the source system is unaware of any particular destination system. |
| Requirements | Indicates where message is to be sent for routing purposes. Allows verification of "am I the intended recipient". |
| **MessageHeader.destination.name** |  |
| Short name | Name of system |
| Definition | Human-readable name for the target system. |
| Requirements | May be used for routing of response and/or to support audit. |
| **MessageHeader.destination.target** |  |
| Short name | Particular delivery destination within the destination |
| Definition | Identifies the target end system in situations where the initial message transmission is to an intermediary system. |
| Requirements | Supports multi-hop routing. |
| **MessageHeader.destination.endpoint** |  |
| Short name | Actual destination address or id |
| Definition | Indicates where the message should be routed to. |
| Comment | The id may be a non-resolvable URI for systems that do not use standard network-based addresses. |
| Requirements | Identifies where to route the message. |
| **MessageHeader.receiver** |  |
| Short name | Intended "real-world" recipient for the data |
| Definition | Allows data conveyed by a message to be addressed to a particular person or department when routing to a specific application isn't sufficient. |
| Requirements | Allows routing beyond just the application level. |
| **MessageHeader.sender** |  |
| Short name | Real world sender of the message |
| Definition | Identifies the sending system to allow the use of a trust relationship. |
| Comment | Use case is for where a (trusted) sending system is responsible for multiple organizations, and therefore cannot differentiate based on source endpoint / authentication alone. |
| Requirements | Allows routing beyond just the application level. |
| **MessageHeader.timestamp** |  |
| Short name | Time that the message was sent |
| Definition | The time that the message was sent. |
| Requirements | Allows limited detection of out-of-order and delayed transmission. Also supports audit. |
| **MessageHeader.enterer** |  |
| Short name | The source of the data entry |
| Definition | The person or device that performed the data entry leading to this message. Where there is more than one candidate, pick the most proximal to the message. Can provide other enterers in extensions. |
| Comment | Usually only for the request, but can be used in a response. |
| Requirements | Need to know for audit/traceback requirements and possibly for authorization. |
| **MessageHeader.author** |  |
| Short name | The source of the decision |
| Definition | The logical author of the message - the person or device that decided the described event should happen. Where there is more than one candidate, pick the most proximal to the MessageHeader. Can provide other authors in extensions. |
| Comment | Usually only for the request, but can be used in a response. |
| Requirements | Need to know for audit/traceback requirements and possibly for authorization. |
| **MessageHeader.source** |  |
| Short name | Message Source Application |
| Definition | The source application from which this message originated. |
| Requirements | Allows replies, supports audit. |
| **MessageHeader.source.name** |  |
| Short name | Name of system |
| Definition | Human-readable name for the source system. |
| Requirements | May be used to support audit. |
| **MessageHeader.source.software** |  |
| Short name | Name of software running the system |
| Definition | May include configuration or other information useful in debugging. |
| Requirements | Supports audit and possibly interface engine behavior. |
| **MessageHeader.source.version** |  |
| Short name | Version of software running |
| Definition | Can convey versions of multiple systems in situations where a message passes through multiple hands. |
| Requirements | Supports audit and possibly interface engine behavior. |
| **MessageHeader.source.contact** |  |
| Short name | Human contact for problems |
| Definition | An e-mail, phone, website or other contact point to use to resolve issues with message communications. |
| Requirements | Allows escalation of technical issues. |
| **MessageHeader.source.endpoint** |  |
| Short name | Actual message source address or id |
| Definition | Identifies the routing target to send acknowledgements to. |
| Comment | The id may be a non-resolvable URI for systems that do not use standard network-based addresses. |
| Requirements | Identifies where to send responses, may influence security permissions. |
| **MessageHeader.responsible** |  |
| Short name | Final responsibility for event |
| Definition | The person or organization that accepts overall responsibility for the contents of the message. The implication is that the message event happened under the policies of the responsible party. |
| Comment | Usually only for the request, but can be used in a response. |
| Requirements | Need to know for audit/traceback requirements and possibly for authorization. |
| **MessageHeader.reason** |  |
| Short name | Cause of event |
| Definition | Coded indication of the cause for the event - indicates a reason for the occurrence of the event that is a focus of this message. |
| Requirements | Need to be able to track why resources are being changed and report in the audit log/history of the resource. May affect authorization. |
| Binding Description | Reason for event occurrence |
| **MessageHeader.response** |  |
| Short name | If this is a reply to prior message |
| Definition | Information about the message that this message is a response to. Only present if this message is a response. |
| **MessageHeader.response.identifier** |  |
| Short name | Id of original message |
| Definition | The MessageHeader.id of the message to which this message is a response. |
| Requirements | Allows receiver to know what message is being responded to. |
| **MessageHeader.response.code** |  |
| Definition | Code that identifies the type of response to the message - whether it was successful or not, and whether it should be resent or not. |
| Comment | This is a generic response to the request message. Specific data for the response will be found in MessageHeader.data. |
| Requirements | Allows the sender of the acknowledge message to know if the request was successful or if action is needed. |
| Binding Description | The kind of response to a message |
| **MessageHeader.response.details** |  |
| Short name | Specific list of hints/warnings/errors |
| Definition | Full details of any issues found in the message. |
| Comment | This SHALL be contained in the bundle. If any of the issues are errors, the response code SHALL be an error. |
| Requirements | Allows the sender of the message to determine what the specific issues are. |
| **MessageHeader.focus** |  |
| Short name | The actual content of the message |
| Definition | The actual data of the message - a reference to the root/focus class of the event. |
| Comment | The data is defined where the transaction type is defined. The transaction data is always included in the bundle that is the full message. Only the root resource is specified. The resources it references should be contained in the bundle but are not also listed here. Multiple repetitions are allowed to cater for merges and other situations with multiple focal targets. |
| Requirements | Every message event is about actual data, a single resource, that is identified in the definition of the event, and perhaps some or all linked resources. |

# Orders and Observations

## http://hl7.org/fhir/StructureDefinition/BodySite

|  |  |
| --- | --- |
| **Description** | Base StructureDefinition for BodySite Resource |
| **BodySite** | Body Site |
| Short name | Specific and identified anatomical location |
| Definition | Record details about the anatomical location of a specimen or body part. This resource may be used when a coded concept does not provide the necessary detail needed for the use case. |
| Synonym | anatomical location |
| **BodySite.identifier** |  |
| Short name | Bodysite identifier |
| Definition | Identifier for this instance of the anatomical location. |
| **BodySite.active** |  |
| Short name | Whether this body site record is in active use |
| Definition | Whether this body site is in active use. |
| Requirements | Need to be able to mark a body site entry as not to be used because it was created in error. |
| **BodySite.code** |  |
| Short name | Named anatomical location |
| Definition | Named anatomical location - ideally coded where possible. |
| Binding Description | Codes describing anatomical locations. May include laterality |
| **BodySite.qualifier** |  |
| Short name | Modification to location code |
| Definition | Qualifier to refine the anatomical location. These include qualifiers for laterality, relative location, directionality, number, and plane. |
| Binding Description | Concepts modifying the anatomic location |
| **BodySite.description** |  |
| Short name | The Description of anatomical location |
| Definition | Description of anatomical location. |
| Comment | This Description could include any visual markings used to orientate the viewer e.g. external reference points, special sutures, ink markings. |
| **BodySite.image** |  |
| Short name | Attached images |
| Definition | Image or images used to identify a location. |
| **BodySite.patient** |  |
| Short name | Who this is about |
| Definition | The person to which the body site belongs. |

## http://hl7.org/fhir/StructureDefinition/DataElement

|  |  |
| --- | --- |
| **Description** | Base StructureDefinition for DataElement Resource |
| **DataElement** | Data Element |
| Short name | Resource data element |
| Definition | The formal description of a single piece of information that can be gathered and reported. |
| Comment | Often called a clinical template. |
| Synonym | Master Observation |
| Synonym | Data Element |
| Synonym | CDE |
| **DataElement.url** |  |
| Short name | Logical uri to reference this data element (globally unique) |
| Definition | An absolute URL that is used to identify this data element when it is referenced in a specification, model, design or an instance. This SHALL be a URL, SHOULD be globally unique, and SHOULD be an address at which this data element is (or will be) published. The URL SHOULD include the major version of the data element. For more information see [Technical and Business Versions](resource.html#versions). |
| Comment | Can be a urn:uuid: or a urn:oid:, but real http: addresses are preferred. |
| Requirements | Allows the data element to be referenced by a single globally unique identifier. |
| **DataElement.identifier** |  |
| Short name | Additional identifier for the data element |
| Definition | A formal identifier that is used to identify this data element when it is represented in other formats, or referenced in a specification, model, design or an instance. |
| Comment | Typically, this is used for identifiers that can go in an HL7 v3 II data type - e.g. to identify this data element outside of FHIR, where the logical URL is not possible to use. |
| Requirements | Allows externally provided and/or useable business identifiers to be easily associated with the module. |
| **DataElement.version** |  |
| Short name | Business version of the data element |
| Definition | The identifier that is used to identify this version of the data element when it is referenced in a specification, model, design or instance. This is an arbitrary value managed by the data element author and is not expected to be globally unique. For example, it might be a timestamp (e.g. yyyymmdd) if a managed version is not available. There is also no expectation that versions are orderable. |
| Comment | There may be multiple different instances of a data element that have the same identifier but different versions. |
| **DataElement.status** |  |
| Definition | The status of this data element. Enables tracking the life-cycle of the content. |
| Comment | Allows filtering of data element that are appropriate for use vs. not. |
| Binding Description | The lifecycle status of a Value Set or Concept Map. |
| **DataElement.experimental** |  |
| Short name | If for testing purposes, not real usage |
| Definition | A flag to indicate that this data element is authored for testing purposes (or education/evaluation/marketing), and is not intended to be used for genuine usage. |
| Comment | Allows filtering of data element that are appropriate for use vs. not. |
| Requirements | Enables experimental content to be developed following the same life-cycle as a production-level data element would. |
| **DataElement.date** |  |
| Short name | Date this was last changed |
| Definition | The date (and optionally time) when the data element was published. The date must change when the business version changes, if it does, and it must change if the status code changes. In addition, it should change when the substantive content of the data element changes. |
| Comment | Note that this is not the same as the resource last-modified-date, since the resource may be a secondary representation of the data element. Additional specific dates may be added as extensions. |
| **DataElement.publisher** |  |
| Short name | Name of the publisher (Organization or individual) |
| Definition | The name of the individual or organization that published the data element. |
| Comment | Usually an organization, but may be an individual. The publisher (or steward) of the data element is the organization or individual primarily responsible for the maintenance and upkeep of the data element. This is not necessarily the same individual or organization that developed and initially authored the content. The publisher is the primary point of contact for questions or issues with the data element. This item SHOULD be populated unless the information is available from context. |
| Requirements | Helps establish the "authority/credibility" of the data element. May also allow for contact. |
| **DataElement.name** |  |
| Short name | Name for this data element (Computer friendly) |
| Definition | A natural language name identifying the data element. This name should be usable as an identifier for the module by machine processing applications such as code generation. |
| Comment | The name is not expected to be globally unique. The name should be a simple alpha-numeric type name to ensure it is computable friendly. |
| Requirements | Support human navigation & code generation. |
| **DataElement.title** |  |
| Short name | Name for this data element (Human friendly) |
| Definition | A short, descriptive, user-friendly title for the data element. |
| Comment | null This may be similar to the question used to prompt someone for a data element value, but the purpose is communicating about the data element, not asking the question. (Refer to the 'question' element for the latter.). |
| **DataElement.contact** |  |
| Short name | Contact details for the publisher |
| Definition | Contact details to assist a user in finding and communicating with the publisher. |
| Comment | May be a web site, an email address, a telephone number, etc. |
| **DataElement.useContext** |  |
| Short name | Content intends to support these contexts |
| Definition | The content was developed with a focus and intent of supporting the contexts that are listed. These terms may be used to assist with indexing and searching of code system definitions. |
| Comment | When multiple usageContexts are specified, there is no expectation for whether all or any of the contexts apply. |
| Requirements | Assist in searching for appropriate content. |
| **DataElement.jurisdiction** |  |
| Short name | Intended jurisdiction for data element (if applicable) |
| Definition | A jurisdiction in which the data element is intended to be used. |
| Binding Description | Countries and regions within which this artifact is targeted for use |
| **DataElement.copyright** |  |
| Short name | Use and/or publishing restrictions |
| Definition | A copyright statement relating to the data element and/or its contents. Copyright statements are generally legal restrictions on the use and publishing of the data element. |
| Comment | null The copyright statement does not apply to values for the data element, only to its definition. |
| Requirements | Consumers of the library must be able to determine any legal restrictions on the use of the data element and/or its content. |
| Synonym | License |
| Synonym | Restrictions |
| **DataElement.stringency** |  |
| Definition | Identifies how precise the data element is in its definition. |
| Requirements | Allows determining the degree of comparability of data element instances. Less granular data elements result in data that is less comparable (or at least requires more work to compare). |
| Binding Description | Indicates the degree of precision of the data element definition. |
| **DataElement.mapping** |  |
| Short name | External specification mapped to |
| Definition | Identifies a specification (other than a terminology) that the elements which make up the DataElement have some correspondence with. |
| Constraint Text | At least one of name or uri SHALL be present |
| **DataElement.mapping.identity** |  |
| Short name | Internal id when this mapping is used |
| Definition | An internal id that is used to identify this mapping set when specific mappings are made on a per-element basis. |
| Comment | The specification is described once, with general comments, and then specific mappings are made that reference this declaration. |
| **DataElement.mapping.uri** |  |
| Short name | Identifies what this mapping refers to |
| Definition | An absolute URI that identifies the specification that this mapping is expressed to. |
| Comment | A formal identity for the specification being mapped to helps with identifying maps consistently. |
| **DataElement.mapping.name** |  |
| Short name | Names what this mapping refers to |
| Definition | A name for the specification that is being mapped to. |
| **DataElement.mapping.comment** |  |
| Short name | Versions, Issues, Scope limitations etc. |
| Definition | Comments about this mapping, including version notes, issues, scope limitations, and other important notes for usage. |
| **DataElement.element** |  |
| Short name | Definition of element |
| Definition | Defines the structure, type, allowed values and other constraining characteristics of the data element. |
| Comment | For simple data types there will only be one repetition. For complex data types, multiple repetitions will be present defining a nested structure using the "path" element. |
| Requirements | 1. |
| Constraint Text | No base allowed |
| Constraint Text | No slicing allowed |

## http://hl7.org/fhir/StructureDefinition/Device

|  |  |
| --- | --- |
| **Description** | Base StructureDefinition for Device Resource |
| **Purpose** | Allows institutions to track their devices. |
| **Device** | Device |
| Short name | Item used in healthcare |
| Definition | This resource identifies an instance or a type of a manufactured item that is used in the provision of healthcare without being substantially changed through that activity. The device may be a medical or non-medical device. Medical devices includes durable (reusable) medical equipment, implantable devices, as well as disposable equipment used for diagnostic, treatment, and research for healthcare and public health. Non-medical devices may include items such as a machine, cellphone, computer, application, etc. |
| **Device.identifier** |  |
| Short name | Instance identifier |
| Definition | Unique instance identifiers assigned to a device by manufacturers other organizations or owners. |
| Comment | The barcode string from a barcode present on a device label or package may identify the instance, include names given to the device in local usage, or may identify the type of device. If the identifier identifies the type of device, Device.type element should be used. For [UDI](device.html#5.11.3.2.2), this element corresponds to the variable portion of the UDI that identifies the serial number of a specific device. See [UDI mappings](device-mappings.html#udi) for a complete mapping of UDI parts to Device. |
| Synonym | Serial Number |
| **Device.udi** |  |
| Short name | Unique Device Identifier (UDI) Barcode string |
| Definition | [Unique device identifier (UDI)](device.html#5.11.3.2.2) assigned to device label or package. |
| Comment | UDI may identify an unique instance of a device, or it may only identify the type of the device. See [UDI mappings](device-mappings.html#udi) for a complete mapping of UDI parts to Device. |
| **Device.udi.deviceIdentifier** |  |
| Short name | Mandatory fixed portion of UDI |
| Definition | The device identifier (DI) is a mandatory, fixed portion of a UDI that identifies the labeler and the specific version or model of a device. |
| Synonym | DI |
| **Device.udi.name** |  |
| Short name | Device Name as appears on UDI label |
| Definition | Name of device as used in labeling or catalog. |
| Comment | Use the `Device.type` for a generic type or kind of device name. Note the [GUDID](http://www.fda.gov/medicaldevices/deviceregulationandguidance/uniquedeviceidentification/globaludidatabasegudid/default.htm) lists the name as the 'Brand Name'. |
| Synonym | Brand Name |
| **Device.udi.jurisdiction** |  |
| Short name | Regional UDI authority |
| Definition | The identity of the authoritative source for UDI generation within a jurisdiction. All UDIs are globally unique within a single namespace. with the appropriate repository uri as the system. For example, UDIs of devices managed in the U.S. by the FDA, the value is http://hl7.org/fhir/NamingSystem/fda-udi. |
| Requirements | Allows a recipient of a UDI to know which database will contain the UDI-associated metadata. |
| **Device.udi.carrierHRF** |  |
| Short name | UDI Human Readable Barcode String |
| Definition | The full UDI carrier as the human readable form (HRF) representation of the barcode string as printed on the packaging of the device. |
| Comment | If separate barcodes for DI and PI are present, concatenate the string with DI first and in order of human readable expression on label. |
| Synonym | Human Readable Form |
| **Device.udi.carrierAIDC** |  |
| Short name | UDI Machine Readable Barcode String |
| Definition | The full UDI carrier of the Automatic Identification and Data Capture (AIDC) technology representation of the barcode string as printed on the packaging of the device - E.g a barcode or RFID. Because of limitations on character sets in XML and the need to round-trip JSON data through XML, AIDC Formats \*SHALL\* be base64 encoded. |
| Comment | The AIDC form of UDIs should be scanned or otherwise used for the identification of the device whenever possible to minimize errors in records resulting from manual transcriptions. If separate barcodes for DI and PI are present, concatenate the string with DI first and in order of human readable expression on label. |
| Synonym | Automatic Identification and Data Capture |
| **Device.udi.issuer** |  |
| Short name | UDI Issuing Organization |
| Definition | Organization that is charged with issuing UDIs for devices. For example, the US FDA issuers include : 1) GS1: http://hl7.org/fhir/NamingSystem/gs1-di, 2) HIBCC: http://hl7.org/fhir/NamingSystem/hibcc-dI, 3) ICCBBA for blood containers: http://hl7.org/fhir/NamingSystem/iccbba-blood-di, 4) ICCBA for other devices: http://hl7.org/fhir/NamingSystem/iccbba-other-di. |
| Synonym | Barcode System |
| **Device.udi.entryType** |  |
| Definition | A coded entry to indicate how the data was entered. |
| Requirements | Supports a way to distinguish hand entered from machine read data. |
| Binding Description | Codes to identify how udi data was entered |
| **Device.status** |  |
| Definition | Status of the Device availability. |
| Binding Description | The availability status of the device. |
| **Device.type** |  |
| Short name | What kind of device this is |
| Definition | Code or identifier to identify a kind of device. |
| Binding Description | Codes to identify medical devices |
| **Device.lotNumber** |  |
| Short name | Lot number of manufacture |
| Definition | Lot number assigned by the manufacturer. |
| **Device.manufacturer** |  |
| Short name | Name of device manufacturer |
| Definition | A name of the manufacturer. |
| **Device.manufactureDate** |  |
| Short name | Date when the device was made |
| Definition | The date and time when the device was manufactured. |
| **Device.expirationDate** |  |
| Short name | Date and time of expiry of this device (if applicable) |
| Definition | The date and time beyond which this device is no longer valid or should not be used (if applicable). |
| **Device.model** |  |
| Short name | Model id assigned by the manufacturer |
| Definition | The "model" is an identifier assigned by the manufacturer to identify the product by its type. This number is shared by the all devices sold as the same type. |
| **Device.version** |  |
| Short name | Version number (i.e. software) |
| Definition | The version of the device, if the device has multiple releases under the same model, or if the device is software or carries firmware. |
| **Device.patient** |  |
| Short name | Patient to whom Device is affixed |
| Definition | Patient information, If the device is affixed to a person. |
| Requirements | If the device is implanted in a patient, then need to associate the device to the patient. |
| **Device.owner** |  |
| Short name | Organization responsible for device |
| Definition | An organization that is responsible for the provision and ongoing maintenance of the device. |
| **Device.contact** |  |
| Short name | Details for human/organization for support |
| Definition | Contact details for an organization or a particular human that is responsible for the device. |
| Comment | used for troubleshooting etc. |
| **Device.location** |  |
| Short name | Where the resource is found |
| Definition | The place where the device can be found. |
| Requirements | Device.location can be used to track device location. |
| **Device.url** |  |
| Short name | Network address to contact device |
| Definition | A network address on which the device may be contacted directly. |
| Comment | If the device is running a FHIR server, the network address should be the Base URL from which a conformance statement may be retrieved. |
| **Device.note** |  |
| Short name | Device notes and comments |
| Definition | Descriptive information, usage information or implantation information that is not captured in an existing element. |
| **Device.safety** |  |
| Short name | Safety Characteristics of Device |
| Definition | Provides additional safety characteristics about a medical device. For example devices containing latex. |
| Binding Description | Codes used to identify medical devices safety characterics. These codes are derived in part from the [United States Food and Drug Administration recommendations](http://www.fda.gov/downloads/medicaldevices/deviceregulationandguidance/guidancedocuments/ucm107708.pdf) and are provided here as a suggestive example. |

## http://hl7.org/fhir/StructureDefinition/DeviceRequest

|  |  |
| --- | --- |
| **Description** | Base StructureDefinition for DeviceRequest Resource |
| **DeviceRequest** | Device Request |
| Short name | Medical device request |
| Definition | Represents a request for a patient to employ a medical device. The device may be an implantable device, or an external assistive device, such as a walker. |
| **DeviceRequest.identifier** |  |
| Short name | External Request identifier |
| Definition | Identifiers assigned to this order by the orderer or by the receiver. |
| **DeviceRequest.definition** |  |
| Short name | Protocol or definition |
| Definition | Protocol or definition followed by this request. For example: The proposed act must be performed if the indicated conditions occur, e.g.., shortness of breath, SpO2 less than x%. |
| **DeviceRequest.basedOn** |  |
| Short name | What request fulfills |
| Definition | Plan/proposal/order fulfilled by this request. |
| **DeviceRequest.priorRequest** |  |
| Short name | What request replaces |
| Definition | The request takes the place of the referenced completed or terminated request(s). |
| **DeviceRequest.groupIdentifier** |  |
| Short name | Identifier of composite request |
| Definition | Composite request this is part of. |
| **DeviceRequest.status** |  |
| Definition | The status of the request. |
| Binding Description | Codes representing the status of the request. |
| **DeviceRequest.intent** |  |
| Definition | Whether the request is a proposal, plan, an original order or a reflex order. |
| Binding Description | The kind of diagnostic request |
| **DeviceRequest.priority** |  |
| Short name | Indicates how quickly the {{title}} should be addressed with respect to other requests |
| Definition | Indicates how quickly the {{title}} should be addressed with respect to other requests. |
| Binding Description | Identifies the level of importance to be assigned to actioning the request |
| **DeviceRequest.code[x]** |  |
| Short name | Device requested |
| Definition | The details of the device to be used. |
| Binding Description | Codes for devices that can be requested |
| **DeviceRequest.subject** |  |
| Short name | Focus of request |
| Definition | The patient who will use the device. |
| **DeviceRequest.context** |  |
| Short name | Encounter or Episode motivating request |
| Definition | An encounter that provides additional context in which this request is made. |
| **DeviceRequest.occurrence[x]** |  |
| Short name | Desired time or schedule for use |
| Definition | The timing schedule for the use of the device. The Schedule data type allows many different expressions, for example. "Every 8 hours"; "Three times a day"; "1/2 an hour before breakfast for 10 days from 23-Dec 2011:"; "15 Oct 2013, 17 Oct 2013 and 1 Nov 2013". |
| **DeviceRequest.authoredOn** |  |
| Short name | When recorded |
| Definition | When the request transitioned to being actionable. |
| **DeviceRequest.requester** |  |
| Short name | Who/what is requesting diagnostics |
| Definition | The individual who initiated the request and has responsibility for its activation. |
| **DeviceRequest.requester.agent** |  |
| Short name | Individual making the request |
| Definition | The device, practitioner, etc. who initiated the request. |
| **DeviceRequest.requester.onBehalfOf** |  |
| Short name | Organization agent is acting for |
| Definition | The organization the device or practitioner was acting on behalf of. |
| Requirements | Practitioners and Devices can be associated with multiple organizations. This element indicates which organization they were acting on behalf of when authoring the request. |
| **DeviceRequest.performerType** |  |
| Short name | Fille role |
| Definition | Desired type of performer for doing the diagnostic testing. |
| Binding Description | Indicates specific responsibility of an individual within the care team, such as "Primary physician", "Team coordinator", "Caregiver", etc. |
| **DeviceRequest.performer** |  |
| Short name | Requested Filler |
| Definition | The desired perfomer for doing the diagnostic testing. |
| **DeviceRequest.reasonCode** |  |
| Short name | Coded Reason for request |
| Definition | Reason or justification for the use of this device. |
| Binding Description | Diagnosis or problem codes justifying the reason for requesting the device. |
| **DeviceRequest.reasonReference** |  |
| Short name | Linked Reason for request |
| Definition | Reason or justification for the use of this device. |
| **DeviceRequest.supportingInfo** |  |
| Short name | Additional clinical information |
| Definition | Additional clinical information about the patient that may influence the request fulfilment. For example, this may includes body where on the subject's the device will be used ( i.e. the target site). |
| Requirements | Knowing where the device is targeted is important for tracking if multiple sites are possible. |
| **DeviceRequest.note** |  |
| Short name | Notes or comments |
| Definition | Details about this request that were not represented at all or sufficiently in one of the attributes provided in a class. These may include for example a comment, an instruction, or a note associated with the statement. |
| **DeviceRequest.relevantHistory** |  |
| Short name | Request provenance |
| Definition | Key events in the history of the request. |
| Comment | This may not include provenances for all versions of the request â€“ only those deemed â€œrelevantâ€ or important. This SHALL NOT include the Provenance associated with this current version of the resource. (If that provenance is deemed to be a â€œrelevantâ€ change, it will need to be added as part of a later update. Until then, it can be queried directly as the Provenance that points to this version using \_revinclude All Provenances should have some historical version of this Request as their subject. |

## http://hl7.org/fhir/StructureDefinition/DeviceUseStatement

|  |  |
| --- | --- |
| **Description** | Base StructureDefinition for DeviceUseStatement Resource |
| **DeviceUseStatement** | Device Use Statement |
| Short name | Record of use of a device |
| Definition | A record of a device being used by a patient where the record is the result of a report from the patient or another clinician. |
| **DeviceUseStatement.identifier** |  |
| Short name | External identifier for this record |
| Definition | An external identifier for this statement such as an IRI. |
| **DeviceUseStatement.status** |  |
| Definition | A code representing the patient or other source's judgment about the state of the device used that this statement is about. Generally this will be active or completed. |
| Comment | DeviceUseStatment is a statement at a point in time. The status is only representative at the point when it was asserted. The value set for contains codes that assert the status of the use by the patient (for example, stopped or on hold) as well as codes that assert the status of the resource itself (for example, entered in error). |
| Binding Description | A coded concept indicating the current status of a the Device Usage |
| **DeviceUseStatement.subject** |  |
| Short name | Patient using device |
| Definition | The patient who used the device. |
| **DeviceUseStatement.whenUsed** |  |
| Short name | Period device was used |
| Definition | The time period over which the device was used. |
| **DeviceUseStatement.timing[x]** |  |
| Short name | How often the device was used |
| Definition | How often the device was used. |
| **DeviceUseStatement.recordedOn** |  |
| Short name | When statement was recorded |
| Definition | The time at which the statement was made/recorded. |
| **DeviceUseStatement.source** |  |
| Short name | Who made the statement |
| Definition | Who reported the device was being used by the patient. |
| **DeviceUseStatement.device** |  |
| Short name | Reference to device used |
| Definition | The details of the device used. |
| **DeviceUseStatement.indication** |  |
| Short name | Why device was used |
| Definition | Reason or justification for the use of the device. |
| **DeviceUseStatement.bodySite** |  |
| Short name | Target body site |
| Definition | Indicates the site on the subject's body where the device was used ( i.e. the target site). |
| Requirements | Knowing where the device is targeted is important for tracking if multiple sites are possible. If more information than just a code is required, use the extension [http://hl7.org/fhir/StructureDefinition/body-site-instance](null.html). |
| Binding Description | Codes describing anatomical locations. May include laterality. |
| **DeviceUseStatement.note** |  |
| Short name | Addition details (comments, instructions) |
| Definition | Details about the device statement that were not represented at all or sufficiently in one of the attributes provided in a class. These may include for example a comment, an instruction, or a note associated with the statement. |

## http://hl7.org/fhir/StructureDefinition/DiagnosticReport

|  |  |
| --- | --- |
| **Description** | Base StructureDefinition for DiagnosticReport Resource |
| **Purpose** | To support reporting for any diagnostic report into a clinical data repository. |
| **DiagnosticReport** | Diagnostic Report |
| Short name | A Diagnostic report - a combination of request information, atomic results, images, interpretation, as well as formatted reports |
| Definition | The findings and interpretation of diagnostic tests performed on patients, groups of patients, devices, and locations, and/or specimens derived from these. The report includes clinical context such as requesting and provider information, and some mix of atomic results, images, textual and coded interpretations, and formatted representation of diagnostic reports. |
| Comment | This is intended to capture a single report, and is not suitable for use in displaying summary information that covers multiple reports. For example, this resource has not been designed for laboratory cumulative reporting formats nor detailed structured reports for sequencing. |
| Synonym | Report |
| Synonym | Test |
| Synonym | Result |
| Synonym | Results |
| Synonym | Labs |
| Synonym | Laboratory |
| **DiagnosticReport.identifier** |  |
| Short name | Business Identifer for report |
| Definition | Identifiers assigned to this reprot by the performer or other systems. |
| Comment | Usually assigned by the Information System of the diagnostic service provider (filler id). |
| Requirements | Need to know what identifier to use when making queries about this report from the source laboratory, and for linking to the report outside FHIR context. |
| Synonym | ReportID |
| Synonym | Filler ID |
| Synonym | Placer ID |
| **DiagnosticReport.basedOn** |  |
| Short name | What was requested |
| Definition | Details concerning a test or procedure requested. |
| Comment | Note: Usually there is one test request for each result, however in some circumstances multiple test requests may be represented using a single test result resource. Note that there are also cases where one request leads to multiple reports. |
| Requirements | This allows tracing of authorization for the report and tracking whether proposals/recommendations were acted upon. |
| Synonym | request |
| **DiagnosticReport.status** |  |
| Definition | The status of the diagnostic report as a whole. |
| Comment | This is labeled as "Is Modifier" because applications need to take appropriate action if a report is withdrawn. |
| Requirements | Diagnostic services routinely issue provisional/incomplete reports, and sometimes withdraw previously released reports. |
| Binding Description | The status of the diagnostic report as a whole. |
| **DiagnosticReport.category** |  |
| Short name | Service category |
| Definition | A code that classifies the clinical discipline, department or diagnostic service that created the report (e.g. cardiology, biochemistry, hematology, MRI). This is used for searching, sorting and display purposes. |
| Comment | The level of granularity is defined by the category concepts in the value set. More fine-grained filtering can be performed using the metadata and/or terminology hierarchy in DiagnosticReport.code. |
| Synonym | Department |
| Synonym | Sub-department |
| Synonym | service |
| Synonym | discipline |
| Binding Description | Codes for diagnostic service sections. |
| **DiagnosticReport.code** |  |
| Short name | Name/Code for this diagnostic report |
| Definition | A code or name that describes this diagnostic report. |
| Synonym | type |
| Binding Description | Codes that describe Diagnostic Reports. |
| **DiagnosticReport.subject** |  |
| Short name | The subject of the report, usually, but not always, the patient |
| Definition | The subject of the report. Usually, but not always, this is a patient. However diagnostic services also perform analyses on specimens collected from a variety of other sources. |
| Requirements | SHALL know the subject context. |
| Synonym | Patient |
| **DiagnosticReport.context** |  |
| Short name | Health care event when test ordered |
| Definition | The healthcare event (e.g. a patient and healthcare provider interaction) which this DiagnosticReport per is about. |
| Comment | This will typically be the encounter the event occurred within, but some events may be initiated prior to or after the official completion of an encounter or episode but still be tied to the context of the encounter or episode (e.g. pre-admission lab tests). |
| Requirements | Links the request to the Encounter context. |
| Synonym | encounter |
| **DiagnosticReport.effective[x]** |  |
| Short name | Clinically Relevant time/time-period for report |
| Definition | The time or time-period the observed values are related to. When the subject of the report is a patient, this is usually either the time of the procedure or of specimen collection(s), but very often the source of the date/time is not known, only the date/time itself. |
| Comment | If the diagnostic procedure was performed on the patient, this is the time it was performed. If there are specimens, the diagnostically relevant time can be derived from the specimen collection times, but the specimen information is not always available, and the exact relationship between the specimens and the diagnostically relevant time is not always automatic. |
| Requirements | Need to know where in the patient history to file/present this report. |
| Synonym | Observation time |
| Synonym | Effective Time |
| Synonym | Occurrence |
| **DiagnosticReport.issued** |  |
| Short name | DateTime this version was released |
| Definition | The date and time that this version of the report was released from the source diagnostic service. |
| Comment | May be different from the update time of the resource itself, because that is the status of the record (potentially a secondary copy), not the actual release time of the report. |
| Requirements | Clinicians need to be able to check the date that the report was released. |
| Synonym | Date Created |
| Synonym | Date published |
| Synonym | Date Issued |
| **DiagnosticReport.performer** |  |
| Short name | Participants in producing the report |
| Definition | Indicates who or what participated in producing the report. |
| Synonym | Laboratory |
| Synonym | Service |
| Synonym | Practitioner |
| Synonym | Department |
| Synonym | Company |
| **DiagnosticReport.performer.role** |  |
| Short name | Type of performer |
| Definition | Describes the type of participation (e.g. a responsible party, author, or verifier). |
| Binding Description | Indicate a role of diagnostic report performer |
| **DiagnosticReport.performer.actor** |  |
| Short name | Practitioner or Organization participant |
| Definition | The reference to the practitioner or organization involved in producing the report. For example, the diagnostic service that is responsible for issuing the report. |
| Comment | This is not necessarily the source of the atomic data items. It is the entity that takes responsibility for the clinical report. |
| Requirements | Need to know whom to contact if there are queries about the results. Also may need to track the source of reports for secondary data analysis. |
| **DiagnosticReport.specimen** |  |
| Short name | Specimens this report is based on |
| Definition | Details about the specimens on which this diagnostic report is based. |
| Comment | If the specimen is sufficiently specified with a code in the test result name, then this additional data may be redundant. If there are multiple specimens, these may be represented per Observation or group. |
| Requirements | Need to be able to report information about the collected specimens on which the report is based. |
| **DiagnosticReport.result** |  |
| Short name | Observations - simple, or complex nested groups |
| Definition | Observations that are part of this diagnostic report. Observations can be simple name/value pairs (e.g. "atomic" results), or they can be grouping observations that include references to other members of the group (e.g. "panels"). |
| Requirements | Need to support individual results, or report groups of results, where the result grouping is arbitrary, but meaningful. This structure is recursive - observations can contain observations. |
| Synonym | Data |
| Synonym | Atomic Value |
| Synonym | Result |
| Synonym | Atomic result |
| Synonym | Data |
| Synonym | Test |
| Synonym | Analyte |
| Synonym | Battery |
| Synonym | Organizer |
| **DiagnosticReport.imagingStudy** |  |
| Short name | Reference to full details of imaging associated with the diagnostic report |
| Definition | One or more links to full details of any imaging performed during the diagnostic investigation. Typically, this is imaging performed by DICOM enabled modalities, but this is not required. A fully enabled PACS viewer can use this information to provide views of the source images. |
| Comment | ImagingStudy and ImageManifest and the image element are somewhat overlapping - typically, the list of image references in the image element will also be found in one of the imaging study resources. However each caters to different types of displays for different types of purposes. Neither, either, or both may be provided. |
| **DiagnosticReport.image** |  |
| Short name | Key images associated with this report |
| Definition | A list of key images associated with this report. The images are generally created during the diagnostic process, and may be directly of the patient, or of treated specimens (i.e. slides of interest). |
| Requirements | Many diagnostic services include images in the report as part of their service. |
| Synonym | DICOM |
| Synonym | Slides |
| Synonym | Scans |
| **DiagnosticReport.image.comment** |  |
| Short name | Comment about the image (e.g. explanation) |
| Definition | A comment about the image. Typically, this is used to provide an explanation for why the image is included, or to draw the viewer's attention to important features. |
| Comment | The comment should be displayed with the image. It would be common for the report to include additional discussion of the image contents in other sections such as the conclusion. |
| Requirements | The provider of the report should make a comment about each image included in the report. |
| **DiagnosticReport.image.link** |  |
| Short name | Reference to the image source |
| Definition | Reference to the image source. |
| **DiagnosticReport.conclusion** |  |
| Short name | Clinical Interpretation of test results |
| Definition | Concise and clinically contextualized impression / summary of the diagnostic report. |
| Requirements | Need to be able to provide a conclusion that is not lost among the basic result data. |
| Synonym | Report |
| **DiagnosticReport.codedDiagnosis** |  |
| Short name | Codes for the conclusion |
| Definition | Codes for the conclusion. |
| Binding Description | Diagnoses codes provided as adjuncts to the report. |
| **DiagnosticReport.presentedForm** |  |
| Short name | Entire report as issued |
| Definition | Rich text representation of the entire result as issued by the diagnostic service. Multiple formats are allowed but they SHALL be semantically equivalent. |
| Comment | "application/pdf" is recommended as the most reliable and interoperable in this context. |
| Requirements | Gives Laboratory the ability to provide its own fully formatted report for clinical fidelity. |

## http://hl7.org/fhir/StructureDefinition/NutritionOrder

|  |  |
| --- | --- |
| **Description** | Base StructureDefinition for NutritionOrder Resource |
| **NutritionOrder** | Nutrition Order |
| Short name | Diet, formula or nutritional supplement request |
| Definition | A request to supply a diet, formula feeding (enteral) or oral nutritional supplement to a patient/resident. |
| Comment | Referenced by an Order Request (workflow). |
| Synonym | Nutrition Order |
| Synonym | Diet Order |
| Synonym | Diet |
| Synonym | Nutritional Supplement |
| Synonym | Enteral Nutrition |
| Constraint Text | Nutrition Order SHALL contain either Oral Diet , Supplement, or Enteral Formula class |
| **NutritionOrder.identifier** |  |
| Short name | Identifiers assigned to this order |
| Definition | Identifiers assigned to this order by the order sender or by the order receiver. |
| Comment | The Identifier.type element can be to indicate filler vs placer if needed. This is explained in further detail [here](procedurerequest.html#notes). |
| **NutritionOrder.status** |  |
| Definition | The workflow status of the nutrition order/request. |
| Comment | Typically the system placing the order sets the status to "requested". Thereafter, the order is maintained by the receiver that updates the status as the request is handled. |
| Binding Description | Codes specifying the state of the request. Describes the lifecycle of the nutrition order. |
| **NutritionOrder.patient** |  |
| Short name | The person who requires the diet, formula or nutritional supplement |
| Definition | The person (patient) who needs the nutrition order for an oral diet, nutritional supplement and/or enteral or formula feeding. |
| **NutritionOrder.encounter** |  |
| Short name | The encounter associated with this nutrition order |
| Definition | An encounter that provides additional information about the healthcare context in which this request is made. |
| **NutritionOrder.dateTime** |  |
| Short name | Date and time the nutrition order was requested |
| Definition | The date and time that this nutrition order was requested. |
| **NutritionOrder.orderer** |  |
| Short name | Who ordered the diet, formula or nutritional supplement |
| Definition | The practitioner that holds legal responsibility for ordering the diet, nutritional supplement, or formula feedings. |
| **NutritionOrder.allergyIntolerance** |  |
| Short name | List of the patient's food and nutrition-related allergies and intolerances |
| Definition | A link to a record of allergies or intolerances which should be included in the nutrition order. |
| Comment | Information on a patient's food allergies and intolerances, inform healthcare personnel about the type of foods that the patient should receive or consume. |
| **NutritionOrder.foodPreferenceModifier** |  |
| Short name | Order-specific modifier about the type of food that should be given |
| Definition | This modifier is used to convey order-specific modifiers about the type of food that should be given. These can be derived from patient allergies, intolerances, or preferences such as Halal, Vegan or Kosher. This modifier applies to the entire nutrition order inclusive of the oral diet, nutritional supplements and enteral formula feedings. |
| Comment | Information on a patient's food preferences that inform healthcare personnel about the food that the patient should receive or consume. |
| Binding Description | Medical, cultural or ethical food preferences to help with catering requirements |
| **NutritionOrder.excludeFoodModifier** |  |
| Short name | Order-specific modifier about the type of food that should not be given |
| Definition | This modifier is used to convey order-specific modifiers about the type of food that should NOT be given. These can be derived from patient allergies, intolerances, or preferences such as No Red Meat, No Soy or No Wheat or Gluten-Free. While it should not be necessary to repeat allergy or intolerance information captured in the referenced allergyIntolerance resource in the excludeFoodModifier, this element may be used to convey additional specificity related to foods that should be eliminated from the patientâ€™s diet for any reason. This modifier applies to the entire nutrition order inclusive of the oral diet, nutritional supplements and enteral formula feedings. |
| Comment | Information on a patient's food allergies and intolerances, and preferences inform healthcare personnel about the type of foods that the patient should receive or consume. |
| Binding Description | Codes used to indicate the type of food that should NOT be given to the patient. |
| **NutritionOrder.oralDiet** |  |
| Short name | Oral diet components |
| Definition | Diet given orally in contrast to enteral (tube) feeding. |
| **NutritionOrder.oralDiet.type** |  |
| Short name | Type of oral diet or diet restrictions that describe what can be consumed orally |
| Definition | The kind of diet or dietary restriction such as fiber restricted diet or diabetic diet. |
| Binding Description | Codes used to indicate the type of diet being ordered for a patient. |
| **NutritionOrder.oralDiet.schedule** |  |
| Short name | Scheduled frequency of diet |
| Definition | The time period and frequency at which the diet should be given. The diet should be given for the combination of all schedules if more than one schedule is present. |
| Synonym | frequency |
| **NutritionOrder.oralDiet.nutrient** |  |
| Short name | Required nutrient modifications |
| Definition | Class that defines the quantity and type of nutrient modifications (for example carbohydrate, fiber or sodium) required for the oral diet. |
| **NutritionOrder.oralDiet.nutrient.modifier** |  |
| Short name | Type of nutrient that is being modified |
| Definition | The nutrient that is being modified such as carbohydrate or sodium. |
| Binding Description | Codes for types of nutrient that is being modified such as carbohydrate or sodium. |
| **NutritionOrder.oralDiet.nutrient.amount** |  |
| Short name | Quantity of the specified nutrient |
| Definition | The quantity of the specified nutrient to include in diet. |
| **NutritionOrder.oralDiet.texture** |  |
| Short name | Required texture modifications |
| Definition | Class that describes any texture modifications required for the patient to safely consume various types of solid foods. |
| **NutritionOrder.oralDiet.texture.modifier** |  |
| Short name | Code to indicate how to alter the texture of the foods, e.g. pureed |
| Definition | Any texture modifications (for solid foods) that should be made, e.g. easy to chew, chopped, ground, and pureed. |
| Comment | Coupled with the foodType (Meat). |
| Binding Description | Codes for food consistency types or texture modifications to apply to foods. |
| **NutritionOrder.oralDiet.texture.foodType** |  |
| Short name | Concepts that are used to identify an entity that is ingested for nutritional purposes |
| Definition | The food type(s) (e.g. meats, all foods) that the texture modification applies to. This could be all foods types. |
| Comment | Coupled with the textureModifier; could be (All Foods). |
| Binding Description | Codes for types of foods that are texture modified. |
| **NutritionOrder.oralDiet.fluidConsistencyType** |  |
| Short name | The required consistency of fluids and liquids provided to the patient |
| Definition | The required consistency (e.g. honey-thick, nectar-thick, thin, thickened.) of liquids or fluids served to the patient. |
| Binding Description | Codes used to represent the consistency of fluids and liquids provided to the patient. |
| **NutritionOrder.oralDiet.instruction** |  |
| Short name | Instructions or additional information about the oral diet |
| Definition | Free text or additional instructions or information pertaining to the oral diet. |
| Comment | Free text dosage instructions can be used for cases where the instructions are too complex to code. |
| **NutritionOrder.supplement** |  |
| Short name | Supplement components |
| Definition | Oral nutritional products given in order to add further nutritional value to the patient's diet. |
| **NutritionOrder.supplement.type** |  |
| Short name | Type of supplement product requested |
| Definition | The kind of nutritional supplement product required such as a high protein or pediatric clear liquid supplement. |
| Binding Description | Codes for nutritional supplements to be provided to the patient |
| **NutritionOrder.supplement.productName** |  |
| Short name | Product or brand name of the nutritional supplement |
| Definition | The product or brand name of the nutritional supplement such as "Acme Protein Shake". |
| **NutritionOrder.supplement.schedule** |  |
| Short name | Scheduled frequency of supplement |
| Definition | The time period and frequency at which the supplement(s) should be given. The supplement should be given for the combination of all schedules if more than one schedule is present. |
| Synonym | frequency |
| **NutritionOrder.supplement.quantity** |  |
| Short name | Amount of the nutritional supplement |
| Definition | The amount of the nutritional supplement to be given. |
| **NutritionOrder.supplement.instruction** |  |
| Short name | Instructions or additional information about the oral supplement |
| Definition | Free text or additional instructions or information pertaining to the oral supplement. |
| Comment | Free text dosage instructions can be used for cases where the instructions are too complex to code. |
| **NutritionOrder.enteralFormula** |  |
| Short name | Enteral formula components |
| Definition | Feeding provided through the gastrointestinal tract via a tube, catheter, or stoma that delivers nutrition distal to the oral cavity. |
| **NutritionOrder.enteralFormula.baseFormulaType** |  |
| Short name | Type of enteral or infant formula |
| Definition | The type of enteral or infant formula such as an adult standard formula with fiber or a soy-based infant formula. |
| Binding Description | Codes for type of enteral formula to be administered to patient. |
| **NutritionOrder.enteralFormula.baseFormulaProductName** |  |
| Short name | Product or brand name of the enteral or infant formula |
| Definition | The product or brand name of the enteral or infant formula product such as "ACME Adult Standard Formula". |
| **NutritionOrder.enteralFormula.additiveType** |  |
| Short name | Type of modular component to add to the feeding |
| Definition | Indicates the type of modular component such as protein, carbohydrate, fat or fiber to be provided in addition to or mixed with the base formula. |
| Binding Description | Codes for the type of modular component such as protein, carbohydrate or fiber to be provided in addition to or mixed with the base formula. |
| **NutritionOrder.enteralFormula.additiveProductName** |  |
| Short name | Product or brand name of the modular additive |
| Definition | The product or brand name of the type of modular component to be added to the formula. |
| **NutritionOrder.enteralFormula.caloricDensity** |  |
| Short name | Amount of energy per specified volume that is required |
| Definition | The amount of energy (Calories) that the formula should provide per specified volume, typically per mL or fluid oz. For example, an infant may require a formula that provides 24 Calories per fluid ounce or an adult may require an enteral formula that provides 1.5 Calorie/mL. |
| **NutritionOrder.enteralFormula.routeofAdministration** |  |
| Short name | How the formula should enter the patient's gastrointestinal tract |
| Definition | The route or physiological path of administration into the patient's gastrointestinal tract for purposes of providing the formula feeding, e.g. nasogastric tube. |
| Binding Description | Codes specifying the route of administration of enteral formula. |
| **NutritionOrder.enteralFormula.administration** |  |
| Short name | Formula feeding instruction as structured data |
| Definition | Formula administration instructions as structured data. This repeating structure allows for changing the administration rate or volume over time for both bolus and continuous feeding. An example of this would be an instruction to increase the rate of continuous feeding every 2 hours. |
| Comment | See implementation notes below for further discussion on how to order continuous vs bolus enteral feeding using this resource. |
| **NutritionOrder.enteralFormula.administration.schedule** |  |
| Short name | Scheduled frequency of enteral feeding |
| Definition | The time period and frequency at which the enteral formula should be delivered to the patient. |
| Synonym | frequency |
| **NutritionOrder.enteralFormula.administration.quantity** |  |
| Short name | The volume of formula to provide |
| Definition | The volume of formula to provide to the patient per the specified administration schedule. |
| **NutritionOrder.enteralFormula.administration.rate[x]** |  |
| Short name | Speed with which the formula is provided per period of time |
| Definition | The rate of administration of formula via a feeding pump, e.g. 60 mL per hour, according to the specified schedule. |
| Comment | Ratio is used when the quantity value in the denominator is not "1", otherwise use Quantity. For example, the Ratio datatype is used for "200 mL/4 hrs" versus the Quantity datatype for "50 mL/hr". |
| **NutritionOrder.enteralFormula.maxVolumeToDeliver** |  |
| Short name | Upper limit on formula volume per unit of time |
| Definition | The maximum total quantity of formula that may be administered to a subject over the period of time, e.g. 1440 mL over 24 hours. |
| **NutritionOrder.enteralFormula.administrationInstruction** |  |
| Short name | Formula feeding instructions expressed as text |
| Definition | Free text formula administration, feeding instructions or additional instructions or information. |
| Comment | Free text dosage instructions can be used for cases where the instructions are too complex to code. |

## http://hl7.org/fhir/StructureDefinition/Observation

|  |  |
| --- | --- |
| **Description** | Base StructureDefinition for Observation Resource |
| **Purpose** | Observations are a key aspect of healthcare. This resource is used to capture those that do not require more sophisticated mechanisms. |
| **Observation** | Observation |
| Short name | Measurements and simple assertions |
| Definition | Measurements and simple assertions made about a patient, device or other subject. |
| Comment | Used for simple observations such as device measurements, laboratory atomic results, vital signs, height, weight, smoking status, comments, etc. Other resources are used to provide context for observations such as lab reports, etc. |
| Synonym | Vital Signs |
| Synonym | Measurement |
| Synonym | Results |
| Synonym | Tests |
| Constraint Text | If code is the same as a component code then the value element associated with the code SHALL NOT be present |
| Constraint Text | dataAbsentReason SHALL only be present if Observation.value[x] is not present |
| **Observation.identifier** |  |
| Short name | Business Identifier for observation |
| Definition | A unique identifier assigned to this observation. |
| Requirements | Allows observations to be distinguished and referenced. |
| **Observation.basedOn** |  |
| Short name | Fulfills plan, proposal or order |
| Definition | A plan, proposal or order that is fulfilled in whole or in part by this event. |
| Requirements | Allows tracing of authorization for the event and tracking whether proposals/recommendations were acted upon. |
| Synonym | fufills |
| **Observation.status** |  |
| Definition | The status of the result value. |
| Requirements | Need to track the status of individual results. Some results are finalized before the whole report is finalized. |
| Binding Description | Codes providing the status of an observation. |
| **Observation.category** |  |
| Short name | Classification of type of observation |
| Definition | A code that classifies the general type of observation being made. |
| Comment | In addition to the required category valueset, this element allows various categorization schemes based on the ownerâ€™s definition of the category and effectively multiple categories can be used at once. The level of granularity is defined by the category concepts in the value set. |
| Requirements | Used for filtering what observations are retreived and displayed. |
| Binding Description | Codes for high level observation categories . |
| **Observation.code** |  |
| Short name | Type of observation (code / type) |
| Definition | Describes what was observed. Sometimes this is called the observation "name". |
| Requirements | Knowing what kind of observation is being made is essential to understanding the observation. |
| Synonym | name |
| Binding Description | Codes identifying names of simple observations. |
| **Observation.subject** |  |
| Short name | Who and/or what this is about |
| Definition | The patient, or group of patients, location, or device whose characteristics (direct or indirect) are described by the observation and into whose record the observation is placed. Comments: Indirect characteristics may be those of a specimen, fetus, donor, other observer (for example a relative or EMT), or any observation made about the subject. |
| Comment | One would expect this element to be a cardinality of 1..1. The only circumstance in which the subject can be missing is when the observation is made by a device that does not know the patient. In this case, the observation SHALL be matched to a patient through some context/channel matching technique, and at this point, the observation should be updated. If the target of the observation is different than the subject, the general extension [observation-focal-subject](extension-observation-focal-subject.html). may be used. However, the distinction between the patient's own value for an observation versus that of the fetus, or the donor or blood product unit, etc., are often specified in the observation code. |
| Requirements | Observations have no value if you don't know who or what they're about. |
| **Observation.context** |  |
| Short name | Healthcare event during which this observation is made |
| Definition | The healthcare event (e.g. a patient and healthcare provider interaction) during which this observation is made. |
| Comment | This will typically be the encounter the event occurred within, but some events may be initiated prior to or after the official completion of an encounter or episode but still be tied to the context of the encounter or episode (e.g. pre-admission lab tests). |
| Requirements | For some observations it may be important to know the link between an observation and a particular encounter. |
| Synonym | encounter |
| **Observation.effective[x]** |  |
| Short name | Clinically relevant time/time-period for observation |
| Definition | The time or time-period the observed value is asserted as being true. For biological subjects - e.g. human patients - this is usually called the "physiologically relevant time". This is usually either the time of the procedure or of specimen collection, but very often the source of the date/time is not known, only the date/time itself. |
| Comment | At least a date should be present unless this observation is a historical report. |
| Requirements | Knowing when an observation was deemed true is important to its relevance as well as determining trends. |
| Synonym | occurance |
| **Observation.issued** |  |
| Short name | Date/Time this was made available |
| Definition | The date and time this observation was made available to providers, typically after the results have been reviewed and verified. |
| Comment | Updated when the result is updated. |
| **Observation.performer** |  |
| Short name | Who is responsible for the observation |
| Definition | Who was responsible for asserting the observed value as "true". |
| Requirements | May give a degree of confidence in the observation and also indicates where follow-up questions should be directed. |
| **Observation.value[x]** |  |
| Short name | Actual result |
| Definition | The information determined as a result of making the observation, if the information has a simple value. |
| Comment | Normally, an observation will have either a single value or a set of related observations. A few observations (e.g. Apgar score) may have both a value and related observations (for an Apgar score, the observations from which the measure is derived). If a value is present, the datatype for this element should be determined by Observation.code. This element has a variable name depending on the type as follows: valueQuantity, valueCodeableConcept, valueString, valueBoolean, valueRange, valueRatio, valueSampledData, valueAttachment, valueTime, valueDateTime, or valuePeriod. (The name format is "'value' + the type name" with a capital on the first letter of the type). If the data element is usually coded or if the type associated with the Observation.value defines a coded value, use CodeableConcept instead of string datatype even if the value is uncoded text. A value set is bound to the ValueCodeableConcept element. For further discussion and examples see the [notes section](observation.html#notes) below. |
| Requirements | An observation exists to have a value, though it may not if it is in error, or it represents a group of observations. |
| **Observation.dataAbsentReason** |  |
| Short name | Why the result is missing |
| Definition | Provides a reason why the expected value in the element Observation.value[x] is missing. |
| Comment | Null or exceptional values can be represented two ways in FHIR Observations. One way is to simply include them in the value set and represent the exceptions in the value. For example, measurement values for a serology test could be "detected", "not detected", "inconclusive", or "specimen unsatisfactory". The alternate way is to use the value element for actual observations and use the explicit dataAbsentReason element to record exceptional values. For example, the dataAbsentReason code "error" could be used when the measurement was not completed. Note that an observation may only reported if there are values to report. For example differential cell counts values may be reported only when > 0. Because of these options, use-case agreements are required to interpret general observations for null or exceptional values. |
| Requirements | For many results it is necessary to handle exceptional values in measurements. |
| Binding Description | Codes specifying why the result (Observation.value[x]) is missing. |
| **Observation.interpretation** |  |
| Short name | High, low, normal, etc. |
| Definition | The assessment made based on the result of the observation. Intended as a simple compact code often placed adjacent to the result value in reports and flow sheets to signal the meaning/normalcy status of the result. Otherwise known as abnormal flag. |
| Requirements | For some results, particularly numeric results, an interpretation is necessary to fully understand the significance of a result. |
| Synonym | Abnormal Flag |
| Binding Description | Codes identifying interpretations of observations. |
| **Observation.comment** |  |
| Short name | Comments about result |
| Definition | May include statements about significant, unexpected or unreliable values, or information about the source of the value where this may be relevant to the interpretation of the result. |
| Requirements | Need to be able to provide free text additional information. |
| **Observation.bodySite** |  |
| Short name | Observed body part |
| Definition | Indicates the site on the subject's body where the observation was made (i.e. the target site). |
| Comment | Only used if not implicit in code found in Observation.code. In many systems, this may be represented as a related observation instead of an inline component. If the use case requires BodySite to be handled as a separate resource (e.g. to identify and track separately) then use The standard extension[ body-site-instance](extension-body-site-instance.html). |
| Binding Description | Codes describing anatomical locations. May include laterality. |
| **Observation.method** |  |
| Short name | How it was done |
| Definition | Indicates the mechanism used to perform the observation. |
| Comment | Only used if not implicit in code for Observation.code. |
| Requirements | In some cases, method can impact results and is thus used for determining whether results can be compared or determining significance of results. |
| Binding Description | Methods for simple observations. |
| **Observation.specimen** |  |
| Short name | Specimen used for this observation |
| Definition | The specimen that was used when this observation was made. |
| Comment | Should only be used if not implicit in code found in `Observation.code`. Observations are not made on specimens themselves; they are made on a subject, but in many cases by the means of a specimen. Note that although specimens are often involved, they are not always tracked and reported explicitly. Also note that observation resources may be used in contexts that track the specimen explicitly (e.g. Diagnostic Report). |
| **Observation.device** |  |
| Short name | (Measurement) Device |
| Definition | The device used to generate the observation data. |
| Comment | An extension should be used if further typing of the device is needed. Devices used to support obtaining an observation can be represented using either extension or through the Observation.related element. |
| **Observation.referenceRange** |  |
| Short name | Provides guide for interpretation |
| Definition | Guidance on how to interpret the value by comparison to a normal or recommended range. |
| Comment | Most observations only have one generic reference range. Systems MAY choose to restrict to only supplying the relevant reference range based on knowledge about the patient (e.g. specific to the patient's age, gender, weight and other factors), but this may not be possible or appropriate. Whenever more than one reference range is supplied, the differences between them SHOULD be provided in the reference range and/or age properties. |
| Requirements | Knowing what values are considered "normal" can help evaluate the significance of a particular result. Need to be able to provide multiple reference ranges for different contexts. |
| Constraint Text | Must have at least a low or a high or text |
| **Observation.referenceRange.low** |  |
| Short name | Low Range, if relevant |
| Definition | The value of the low bound of the reference range. The low bound of the reference range endpoint is inclusive of the value (e.g. reference range is >=5 - <=9). If the low bound is omitted, it is assumed to be meaningless (e.g. reference range is <=2.3). |
| **Observation.referenceRange.high** |  |
| Short name | High Range, if relevant |
| Definition | The value of the high bound of the reference range. The high bound of the reference range endpoint is inclusive of the value (e.g. reference range is >=5 - <=9). If the high bound is omitted, it is assumed to be meaningless (e.g. reference range is >= 2.3). |
| **Observation.referenceRange.type** |  |
| Short name | Reference range qualifier |
| Definition | Codes to indicate the what part of targeted reference population it applies to. For example the normal or therapeutic range. |
| Comment | This SHOULD be populated if there is more than one range. If this element is not present then the normal range is assumed. |
| Requirements | Need to be able to say what kind of reference range this is - normal, recommended, therapeutic, etc - for proper interpretation. |
| Binding Description | Code for the meaning of a reference range. |
| **Observation.referenceRange.appliesTo** |  |
| Short name | Reference range population |
| Definition | Codes to indicate the the target population this reference range applies to. For example, a reference range may be based on the normal population or a particular sex or race. |
| Comment | This SHOULD be populated if there is more than one range. If this element is not present then the normal population is assumed. |
| Requirements | Need to be able to identify the target population for proper interpretation. |
| Binding Description | Codes identifying the population the reference range applies to. |
| **Observation.referenceRange.age** |  |
| Short name | Applicable age range, if relevant |
| Definition | The age at which this reference range is applicable. This is a neonatal age (e.g. number of weeks at term) if the meaning says so. |
| Requirements | Some analytes vary greatly over age. |
| **Observation.referenceRange.text** |  |
| Short name | Text based reference range in an observation |
| Definition | Text based reference range in an observation which may be used when a quantitative range is not appropriate for an observation. An example would be a reference value of "Negative" or a list or table of 'normals'. |
| **Observation.related** |  |
| Short name | Resource related to this observation |
| Definition | A reference to another resource (usually another Observation) whose relationship is defined by the relationship type code. |
| Comment | For a discussion on the ways Observations can assembled in groups together see [Notes below](observation.html#4.20.4). |
| Requirements | Normally, an observation will have either a value or a set of related observations. A few observations (e.g. Apgar score) may have both a value and a set of related observations or sometimes QuestionnaireResponse from which the measure is derived. |
| **Observation.related.type** |  |
| Definition | A code specifying the kind of relationship that exists with the target resource. |
| Comment | "derived-from" is only logical choice when referencing QuestionnaireAnswer resource. |
| Requirements | A relationship type SHOULD be provided. |
| Binding Description | Codes specifying how two observations are related. |
| **Observation.related.target** |  |
| Short name | Resource that is related to this one |
| Definition | A reference to the observation or [QuestionnaireResponse](questionnaireresponse.html#) resource that is related to this observation. |
| **Observation.component** |  |
| Short name | Component results |
| Definition | Some observations have multiple component observations. These component observations are expressed as separate code value pairs that share the same attributes. Examples include systolic and diastolic component observations for blood pressure measurement and multiple component observations for genetics observations. |
| Comment | For a discussion on the ways Observations can assembled in groups together see [Notes](observation.html#notes) below. |
| Requirements | Component observations share the same attributes in the Observation resource as the primary observation and are always treated a part of a single observation (they are not separable). However, the reference range for the primary observation value is not inherited by the component values and is required when appropriate for each component observation. |
| **Observation.component.code** |  |
| Short name | Type of component observation (code / type) |
| Definition | Describes what was observed. Sometimes this is called the observation "code". |
| Requirements | Knowing what kind of observation is being made is essential to understanding the observation. |
| Binding Description | Codes identifying names of simple observations. |
| **Observation.component.value[x]** |  |
| Short name | Actual component result |
| Definition | The information determined as a result of making the observation, if the information has a simple value. |
| Comment | Normally, an observation will have either a single value or a set of related observations. A few observations (e.g. Apgar score) may have both a value and related observations (for an Apgar score, the observations from which the measure is derived). If a value is present, the datatype for this element should be determined by Observation.code. A CodeableConcept with just a text would be used instead of a string if the field was usually coded, or if the type associated with the Observation.code defines a coded value. For boolean values use valueCodeableConcept and select codes from <http://hl7.org/fhir/ValueSet/v2-0136> (These "yes/no" concepts can be mapped to the display name "true/false" or other mutually exclusive terms that may be needed"). The element, Observation.value[x], has a variable name depending on the type as follows: valueQuantity, valueCodeableConcept, valueRatio, valueChoice, valuePeriod, valueSampleData, or valueString (The name format is "'value' + the type name" with a capital on the first letter of the type). |
| Requirements | An observation exists to have a value, though it may not if it is in error, or it represents a group of observations. |
| **Observation.component.dataAbsentReason** |  |
| Short name | Why the component result is missing |
| Definition | Provides a reason why the expected value in the element Observation.value[x] is missing. |
| Comment | "Null" or exceptional values can be represented two ways in FHIR Observations. One way is to simply include them in the value set and represent the exceptions in the value. For example, measurement values for a serology test could be "detected", "not detected", "inconclusive", or "test not done". The alternate way is to use the value element for actual observations and use the explicit dataAbsentReason element to record exceptional values. For example, the dataAbsentReason code "error" could be used when the measurement was not completed. Because of these options, use-case agreements are required to interpret general observations for exceptional values. |
| Requirements | For many results it is necessary to handle exceptional values in measurements. |
| Binding Description | Codes specifying why the result (Observation.value[x]) is missing. |
| **Observation.component.interpretation** |  |
| Short name | High, low, normal, etc. |
| Definition | The assessment made based on the result of the observation. Intended as a simple compact code often placed adjacent to the result value in reports and flow sheets to signal the meaning/normalcy status of the result. Otherwise known as abnormal flag. |
| Comment | The component interpretation is applies only to the indivual component value. For an overall interpretation all components together use Observation.interpretation element. |
| Requirements | For some results, particularly numeric results, an interpretation is necessary to fully understand the significance of a result. |
| Synonym | Abnormal Flag |
| Binding Description | Codes identifying interpretations of observations. |
| **Observation.component.referenceRange** |  |
| Short name | Provides guide for interpretation of component result |
| Definition | Guidance on how to interpret the value by comparison to a normal or recommended range. |
| Comment | Most observations only have one generic reference range. Systems MAY choose to restrict to only supplying the relevant reference range based on knowledge about the patient (e.g. specific to the patient's age, gender, weight and other factors), but this may not be possible or appropriate. Whenever more than one reference range is supplied, the differences between them SHOULD be provided in the reference range and/or age properties. |
| Requirements | Knowing what values are considered "normal" can help evaluate the significance of a particular result. Need to be able to provide multiple reference ranges for different contexts. |

## http://hl7.org/fhir/StructureDefinition/ProcedureRequest

|  |  |
| --- | --- |
| **Description** | Base StructureDefinition for ProcedureRequest Resource |
| **ProcedureRequest** | Procedure Request |
| Short name | A request for a procedure or diagnostic to be performed |
| Definition | A record of a request for a diagnostic investigation service to be performed. |
| Synonym | diagnostic request |
| **ProcedureRequest.identifier** |  |
| Short name | Identifiers assigned to this order |
| Definition | Identifiers assigned to this order instance by the orderer and/or the receiver and/or order fulfiller. |
| Comment | The identifier.type element is used to distinguish between the identifiers assigned by the orderer (known as the 'Placer' in HL7 v2) and the producer of the observations in response to the order (known as the 'Filler' in HL7 v2). For further discussion and examples see the resource notes section below. |
| **ProcedureRequest.definition** |  |
| Short name | Protocol or definition |
| Definition | Protocol or definition followed by this request. |
| Synonym | protocol |
| **ProcedureRequest.basedOn** |  |
| Short name | What request fulfills |
| Definition | Plan/proposal/order fulfilled by this request. |
| Synonym | fulfills |
| **ProcedureRequest.replaces** |  |
| Short name | What request replaces |
| Definition | The request takes the place of the referenced completed or terminated request(s). |
| **ProcedureRequest.requisition** |  |
| Short name | Composite Request ID |
| Definition | A shared identifier common to all procedure or diagnostic requests that were authorized more or less simultaneously by a single author, representing the composite or group identifier. |
| Comment | Requests are linked either by a "basedOn" relationship (i.e. one request is fulfilling another) or by having a common requisition. Requests that are part of the same requisition are generally treated independently from the perspective of changing their state or maintaining them after initial creation. |
| Requirements | Some business processes need to know if multiple items were ordered as part of the same "requisition" for billing or other purposes. |
| Synonym | grouperId |
| Synonym | groupIdentifier |
| **ProcedureRequest.status** |  |
| Definition | The status of the order. |
| Comment | The status is generally fully in the control of the requester - they determine whether the order is draft or active and, after it has been activated, competed, cancelled or suspended. States relating to the activities of the performer are reflected on either the corresponding event (see [Event Pattern](event.html) for general discussion) or using the [Task](task.html) resource. |
| Binding Description | The status of a procedure or diagnostic order. |
| **ProcedureRequest.intent** |  |
| Definition | Whether the request is a proposal, plan, an original order or a reflex order. |
| Binding Description | The kind of procedure or diagnostic request |
| **ProcedureRequest.priority** |  |
| Definition | Indicates how quickly the ProcedureRequest should be addressed with respect to other requests. |
| Meaning when missing | If missing, this task should be performed with normal priority |
| Binding Description | Identifies the level of importance to be assigned to actioning the request |
| **ProcedureRequest.doNotPerform** |  |
| Short name | True if procedure should not be performed |
| Definition | Set this to true if the record is saying that the procedure should NOT be performed. |
| Comment | In general, only the code and timeframe will be present, though occasional additional qualifiers such as body site or even performer could be included to narrow the scope of the prohibition. If the ProcedureRequest.code and ProcedureRequest.doNotPerform both contain negation, that will reinforce prohibition and should not have a double negative interpretation. |
| Requirements | Used for do not ambulate, do not elevate head of bed, do not flush NG tube, do not take blood pressure on a certain arm etc. |
| **ProcedureRequest.category** |  |
| Short name | Classification of procedure |
| Definition | A code that classifies the procedure for searching, sorting and display purposes (e.g. "Surgical Procedure"). |
| Comment | There may be multiple axis of categorization depending on the context or use case for retrieving or displaying the resource. The level of granularity is defined by the category concepts in the value set. |
| Requirements | Used for filtering what procedure request are retreived and displayed. |
| Binding Description | Classification of the procedure |
| **ProcedureRequest.code** |  |
| Short name | What is being requested/ordered |
| Definition | A code that identifies a particular procedure, diagnostic investigation, or panel of investigations, that have been requested. |
| Comment | Many laboratory and radiology procedure codes embed the specimen/organ system in the test ordeer name, for example, serum or serum/plasma glucose, or a chest xray. The specimen may not be recorded separately from the test code. |
| Binding Description | Codes for tests/services that can be performed by procedure or diagnostic services. For laboratory, LOINC is (preferred)[http://build.fhir.org/terminologies.html#preferred] and a valueset using LOINC Order codes is available [here](valueset-diagnostic-requests.html). |
| **ProcedureRequest.subject** |  |
| Short name | Individual the service is ordered for |
| Definition | On whom or what the procedure or diagnostic is to be performed. This is usually a human patient, but can also be requested on animals, groups of humans or animals, devices such as dialysis machines, or even locations (typically for environmental scans). |
| **ProcedureRequest.context** |  |
| Short name | Encounter or Episode during which request was created |
| Definition | An encounter or episode of care that provides additional information about the healthcare context in which this request is made. |
| Synonym | encounter |
| **ProcedureRequest.occurrence[x]** |  |
| Short name | When procedure should occur |
| Definition | The date/time at which the diagnostic testing should occur. |
| Synonym | scheduled |
| **ProcedureRequest.asNeeded[x]** |  |
| Short name | Preconditions for procedure or diagnostic |
| Definition | If a CodeableConcept is present, it indicates the pre-condition for performing the procedure. For example "pain", "on flare-up", etc. |
| Binding Description | A coded concept identifying the pre-condition that should hold prior to performing a procedure. For example "pain", "on flare-up", etc. |
| **ProcedureRequest.authoredOn** |  |
| Short name | Date request signed |
| Definition | When the request transitioned to being actionable. |
| Synonym | orderedOn |
| **ProcedureRequest.requester** |  |
| Short name | Who/what is requesting procedure or diagnostic |
| Definition | The individual who initiated the request and has responsibility for its activation. |
| Comment | This not the dispatcher, but rather who is the authorizer. |
| Synonym | author |
| Synonym | orderer |
| **ProcedureRequest.requester.agent** |  |
| Short name | Individual making the request |
| Definition | The device, practitioner or organization. who initiated the request. |
| **ProcedureRequest.requester.onBehalfOf** |  |
| Short name | Organization agent is acting for |
| Definition | The organization the device or practitioner was acting on behalf of. |
| Requirements | Practitioners and Devices can be associated with multiple organizations. This element indicates which organization they were acting on behalf of when authoring the request. |
| **ProcedureRequest.performerType** |  |
| Short name | Performer role |
| Definition | Desired type of performer for doing the diagnostic testing. |
| Comment | this is a role, not a participation type. I.e. doesnâ€™t describe the task, describes the capacity. Examples â€œcompounding pharmacyâ€ or â€œpsychiatristâ€ or â€œinternal referralâ€. |
| Binding Description | Indicates specific responsibility of an individual within the care team, such as "Primary physician", "Team coordinator", "Caregiver", etc. |
| **ProcedureRequest.performer** |  |
| Short name | Requested perfomer |
| Definition | The desired perfomer for doing the diagnostic testing. For example, the surgeon, dermatopathologist, endoscopist, etc. |
| Comment | If needed, use an [extension](extensibility.html) for listing alternative alternative performers and/or roles and/or preference. |
| **ProcedureRequest.reasonCode** |  |
| Short name | Explanation/Justification for test |
| Definition | An explanation or justification for why this diagnostic investigation is being requested in coded or textual form. This is often for billing purposes. May relate to the resources referred to in supportingInformation. |
| Comment | This may be used to decide how the diagnostic investigation will be performed, or even if it will be performed at all. Use CodeableConcept text element if the data is free (uncoded) text as shown in the [CT Scan example](procedurerequest-example-di.html). |
| Binding Description | Diagnosis or problem codes justifying the reason for requesting the procedure or diagnostic investigation. |
| **ProcedureRequest.reasonReference** |  |
| Short name | Explanation/Justification for test |
| Definition | Indicates another resource that provides a justification for why this diagnostic investigation is being requested. May relate to the resources referred to in supportingInformation. |
| Comment | This may be used to decide how the diagnostic investigation will be performed, or even if it will be performed at all. Use CodeableConcept text element if the data is free (uncoded) text as shown in the [CT Scan example](procedurerequest-example-di.html). |
| **ProcedureRequest.supportingInfo** |  |
| Short name | Additional clinical information |
| Definition | Additional clinical information about the patient or specimen that may influence the procedure or diagnostics or their interpretations. This information includes diagnosis, clinical findings and other observations. In laboratory ordering these are typically referred to as "ask at order entry questions (AOEs)". This includes observations explicitly requested by the producer (filler) to provide context or supporting information needed to complete the order. For example, reporting the amount of inspired oxygen for blood gas measurements. |
| Synonym | Ask at order entry question |
| Synonym | AOE |
| **ProcedureRequest.specimen** |  |
| Short name | Procedure Samples |
| Definition | One or more specimens that the laboratory procedure will use. |
| Comment | Many diagnostic procedures need a specimen, but the request itself is not actually about the specimen. This element is for when the diagnostic is requested on already existing specimens and the request points to the specimen it applies to. Conversely, If the request is entered first with an unknown specimen, The [Specimen](specimen.html) resource references to the ProcedureRequest. |
| **ProcedureRequest.bodySite** |  |
| Short name | Location on Body |
| Definition | Anatomic location where the procedure should be performed. This is the target site. |
| Comment | Only used if not implicit in the code found in ProcedureRequest.type. If the use case requires BodySite to be handled as a separate resource instead of an inline coded element (e.g. to identify and track separately) then use the standard extension [procedurerequest-targetBodySite](extension-procedurerequest-targetbodysite.html). |
| Requirements | Knowing where the procedure is made is important for tracking if multiple sites are possible. |
| Synonym | location |
| Binding Description | Codes describing anatomical locations. May include laterality. |
| **ProcedureRequest.note** |  |
| Short name | Comments |
| Definition | Any other notes and comments made about the service request. For example, letting provider know that "patient hates needles" or other provider instructions. |
| **ProcedureRequest.relevantHistory** |  |
| Short name | Request provenance |
| Definition | Key events in the history of the request. |
| Comment | This may not include provenances for all versions of the request â€“ only those deemed â€œrelevantâ€ or important. This SHALL NOT include the Provenance associated with this current version of the resource. (If that provenance is deemed to be a â€œrelevantâ€ change, it will need to be added as part of a later update. Until then, it can be queried directly as the Provenance that points to this version using \_revinclude All Provenances should have some historical version of this Request as their subject. |

## http://hl7.org/fhir/StructureDefinition/Specimen

|  |  |
| --- | --- |
| **Description** | Base StructureDefinition for Specimen Resource |
| **Specimen** | Specimen |
| Short name | Sample for analysis |
| Definition | A sample to be used for analysis. |
| **Specimen.identifier** |  |
| Short name | External Identifier |
| Definition | Id for specimen. |
| **Specimen.accessionIdentifier** |  |
| Short name | Identifier assigned by the lab |
| Definition | The identifier assigned by the lab when accessioning specimen(s). This is not necessarily the same as the specimen identifier, depending on local lab procedures. |
| **Specimen.status** |  |
| Definition | The availability of the specimen. |
| Binding Description | Codes providing the status/availability of a specimen. |
| **Specimen.type** |  |
| Short name | Kind of material that forms the specimen |
| Definition | The kind of material that forms the specimen. |
| Comment | The type can change the way that a specimen is handled, and drives what kind of analyses can properly be performed on the specimen. It is frequently used in diagnostic work flow decision making systems. |
| Binding Description | The type of the specimen. |
| **Specimen.subject** |  |
| Short name | Where the specimen came from. This may be from the patient(s) or from the environment or a device |
| Definition | Where the specimen came from. This may be from the patient(s) or from the environment or a device. |
| Requirements | Must know the subject context. |
| **Specimen.receivedTime** |  |
| Short name | The time when specimen was received for processing |
| Definition | Time when specimen was received for processing or testing. |
| **Specimen.parent** |  |
| Short name | Specimen from which this specimen originated |
| Definition | Reference to the parent (source) specimen which is used when the specimen was either derived from or a component of another specimen. |
| Comment | The parent specimen could be the source from which the current specimen is derived by some processing step (e.g. an aliquot or isolate or extracted nucleic acids from clinical samples) or one of many specimens that were combined to create a pooled sample. |
| **Specimen.request** |  |
| Short name | Why the specimen was collected |
| Definition | Details concerning a test or procedure request that required a specimen to be collected. |
| Comment | The request may be explicit or implied such with a ProcedureRequest that requires a blood draw. |
| **Specimen.collection** |  |
| Short name | Collection details |
| Definition | Details concerning the specimen collection. |
| **Specimen.collection.collector** |  |
| Short name | Who collected the specimen |
| Definition | Person who collected the specimen. |
| **Specimen.collection.collected[x]** |  |
| Short name | Collection time |
| Definition | Time when specimen was collected from subject - the physiologically relevant time. |
| **Specimen.collection.quantity** |  |
| Short name | The quantity of specimen collected |
| Definition | The quantity of specimen collected; for instance the volume of a blood sample, or the physical measurement of an anatomic pathology sample. |
| **Specimen.collection.method** |  |
| Short name | Technique used to perform collection |
| Definition | A coded value specifying the technique that is used to perform the procedure. |
| Binding Description | The technique that is used to perform the procedure |
| **Specimen.collection.bodySite** |  |
| Short name | Anatomical collection site |
| Definition | Anatomical location from which the specimen was collected (if subject is a patient). This is the target site. This element is not used for environmental specimens. |
| Comment | If the use case requires BodySite to be handled as a separate resource instead of an inline coded element (e.g. to identify and track separately) then use the standard extension [body-site-instance](extension-body-site-instance.html). |
| Binding Description | Codes describing anatomical locations. May include laterality. |
| **Specimen.processing** |  |
| Short name | Processing and processing step details |
| Definition | Details concerning processing and processing steps for the specimen. |
| **Specimen.processing.description** |  |
| Short name | Textual description of procedure |
| Definition | Textual description of procedure. |
| **Specimen.processing.procedure** |  |
| Short name | Indicates the treatment step applied to the specimen |
| Definition | A coded value specifying the procedure used to process the specimen. |
| Binding Description | Type indicating the technique used to process the specimen |
| **Specimen.processing.additive** |  |
| Short name | Material used in the processing step |
| Definition | Material used in the processing step. |
| **Specimen.processing.time[x]** |  |
| Short name | Date and time of specimen processing |
| Definition | A record of the time or period when the specimen processing occurred. For example the time of sample fixation or the period of time the sample was in formalin. |
| **Specimen.container** |  |
| Short name | Direct container of specimen (tube/slide, etc.) |
| Definition | The container holding the specimen. The recursive nature of containers; i.e. blood in tube in tray in rack is not addressed here. |
| **Specimen.container.identifier** |  |
| Short name | Id for the container |
| Definition | Id for container. There may be multiple; a manufacturer's bar code, lab assigned identifier, etc. The container ID may differ from the specimen id in some circumstances. |
| **Specimen.container.description** |  |
| Short name | Textual description of the container |
| Definition | Textual description of the container. |
| **Specimen.container.type** |  |
| Short name | Kind of container directly associated with specimen |
| Definition | The type of container associated with the specimen (e.g. slide, aliquot, etc.). |
| Binding Description | Type of specimen container |
| **Specimen.container.capacity** |  |
| Short name | Container volume or size |
| Definition | The capacity (volume or other measure) the container may contain. |
| **Specimen.container.specimenQuantity** |  |
| Short name | Quantity of specimen within container |
| Definition | The quantity of specimen in the container; may be volume, dimensions, or other appropriate measurements, depending on the specimen type. |
| **Specimen.container.additive[x]** |  |
| Short name | Additive associated with container |
| Definition | Introduced substance to preserve, maintain or enhance the specimen. Examples: Formalin, Citrate, EDTA. |
| Binding Description | Substance added to specimen container |
| **Specimen.note** |  |
| Short name | Comments |
| Definition | To communicate any details or issues about the specimen or during the specimen collection. (for example: broken vial, sent with patient, frozen). |

## http://hl7.org/fhir/StructureDefinition/Substance

|  |  |
| --- | --- |
| **Description** | Base StructureDefinition for Substance Resource |
| **Substance** | Substance |
| Short name | A homogeneous material with a definite composition |
| Definition | A homogeneous material with a definite composition. |
| **Substance.identifier** |  |
| Short name | Unique identifier |
| Definition | Unique identifier for the substance. |
| Comment | This identifier is associated with the kind of substance in contrast to the Substance.instance.identifier which is associated with the package/container. |
| **Substance.status** |  |
| Definition | A code to indicate if the substance is actively used. |
| Binding Description | A code to indicate if the substance is actively used |
| **Substance.category** |  |
| Short name | What class/type of substance this is |
| Definition | A code that classifies the general type of substance. This is used for searching, sorting and display purposes. |
| Comment | The level of granularity is defined by the category concepts in the value set. More fine-grained filtering can be performed using the metadata and/or terminology hierarchy in Substance.code. |
| Binding Description | Category or classification of substance |
| **Substance.code** |  |
| Short name | What substance this is |
| Definition | A code (or set of codes) that identify this substance. |
| Comment | This could be a reference to an externally defined code. It could also be a locally assigned code (e.g. a formulary), optionally with translations to the standard drug codes. |
| Binding Description | Substance codes |
| **Substance.description** |  |
| Short name | Textual description of the substance, comments |
| Definition | A description of the substance - its appearance, handling requirements, and other usage notes. |
| **Substance.instance** |  |
| Short name | If this describes a specific package/container of the substance |
| Definition | Substance may be used to describe a kind of substance, or a specific package/container of the substance: an instance. |
| Meaning when missing | If this element is not present, then the substance resource describes a kind of substance |
| **Substance.instance.identifier** |  |
| Short name | Identifier of the package/container |
| Definition | Identifier associated with the package/container (usually a label affixed directly). |
| **Substance.instance.expiry** |  |
| Short name | When no longer valid to use |
| Definition | When the substance is no longer valid to use. For some substances, a single arbitrary date is used for expiry. |
| **Substance.instance.quantity** |  |
| Short name | Amount of substance in the package |
| Definition | The amount of the substance. |
| **Substance.ingredient** |  |
| Short name | Composition information about the substance |
| Definition | A substance can be composed of other substances. |
| **Substance.ingredient.quantity** |  |
| Short name | Optional amount (concentration) |
| Definition | The amount of the ingredient in the substance - a concentration ratio. |
| **Substance.ingredient.substance[x]** |  |
| Short name | A component of the substance |
| Definition | Another substance that is a component of this substance. |
| Binding Description | Substance Ingredient codes |

## http://hl7.org/fhir/StructureDefinition/SupplyDelivery

|  |  |
| --- | --- |
| **Description** | Base StructureDefinition for SupplyDelivery Resource |
| **SupplyDelivery** | Supply Delivery |
| Short name | Delivery of bulk Supplies |
| Definition | Record of delivery of what is supplied. |
| **SupplyDelivery.identifier** |  |
| Short name | External identifier |
| Definition | Identifier assigned by the dispensing facility when the item(s) is dispensed. |
| Comment | This is assigned by the dispenser, and used to refer to this order in other external standards. |
| **SupplyDelivery.basedOn** |  |
| Short name | Fulfills plan, proposal or order |
| Definition | A plan, proposal or order that is fulfilled in whole or in part by this event. |
| Requirements | Allows tracing of authorization for the event and tracking whether proposals/recommendations were acted upon. |
| **SupplyDelivery.partOf** |  |
| Short name | Part of referenced event |
| Definition | A larger event of which this particular event is a component or step. |
| Comment | Not to be used to link an event to an Encounter - use Event.context for that. [The allowed reference resources may be adjusted as appropriate for the event resource]. |
| Requirements | E.g. Drug administration as part of a procedure, procedure as part of observation, etc. |
| **SupplyDelivery.status** |  |
| Definition | A code specifying the state of the dispense event. |
| Binding Description | Status of the supply delivery. |
| **SupplyDelivery.patient** |  |
| Short name | Patient for whom the item is supplied |
| Definition | A link to a resource representing the person whom the delivered item is for. |
| **SupplyDelivery.type** |  |
| Short name | Category of dispense event |
| Definition | Indicates the type of dispensing event that is performed. Examples include: Trial Fill, Completion of Trial, Partial Fill, Emergency Fill, Samples, etc. |
| Binding Description | The type of supply dispense. |
| **SupplyDelivery.suppliedItem** |  |
| Short name | The item that is delivered or supplied |
| Definition | The item that is being delivered or has been supplied. |
| **SupplyDelivery.suppliedItem.quantity** |  |
| Short name | Amount dispensed |
| Definition | The amount of supply that has been dispensed. Includes unit of measure. |
| **SupplyDelivery.suppliedItem.item[x]** |  |
| Short name | Medication, Substance, or Device supplied |
| Definition | Identifies the medication, substance or device being dispensed. This is either a link to a resource representing the details of the item or a code that identifies the item from a known list. |
| Binding Description | The item that was delivered. |
| **SupplyDelivery.occurrence[x]** |  |
| Short name | When event occurred |
| Definition | The date or time(s) the activity occurred. |
| Comment | [The list of types may be constrained as appropriate for the type of event]. |
| **SupplyDelivery.supplier** |  |
| Short name | Dispenser |
| Definition | The individual responsible for dispensing the medication, supplier or device. |
| **SupplyDelivery.destination** |  |
| Short name | Where the Supply was sent |
| Definition | Identification of the facility/location where the Supply was shipped to, as part of the dispense event. |
| **SupplyDelivery.receiver** |  |
| Short name | Who collected the Supply |
| Definition | Identifies the person who picked up the Supply. |

## http://hl7.org/fhir/StructureDefinition/SupplyRequest

|  |  |
| --- | --- |
| **Description** | Base StructureDefinition for SupplyRequest Resource |
| **SupplyRequest** | Supply Request |
| Short name | Request for a medication, substance or device |
| Definition | A record of a request for a medication, substance or device used in the healthcare setting. |
| **SupplyRequest.identifier** |  |
| Short name | Unique identifier |
| Definition | Unique identifier for this supply request. |
| Comment | This is assigned by the requester, and used to refer to this order in other external standards. |
| **SupplyRequest.status** |  |
| Definition | Status of the supply request. |
| Binding Description | Status of the supply request |
| **SupplyRequest.category** |  |
| Short name | The kind of supply (central, non-stock, etc.) |
| Definition | Category of supply, e.g. central, non-stock, etc. This is used to support work flows associated with the supply process. |
| Synonym | kind |
| Binding Description | Category of supply request |
| **SupplyRequest.priority** |  |
| Definition | Indicates how quickly this SupplyRequest should be addressed with respect to other requests. |
| Meaning when missing | If missing, this task should be performed with normal priority |
| Binding Description | Identifies the level of importance to be assigned to actioning the request |
| **SupplyRequest.orderedItem** |  |
| Short name | The item being requested |
| Definition | The item being requested. |
| **SupplyRequest.orderedItem.quantity** |  |
| Short name | The requested amount of the item indicated |
| Definition | The amount that is being ordered of the indicated item. |
| **SupplyRequest.orderedItem.item[x]** |  |
| Short name | Medication, Substance, or Device requested to be supplied |
| Definition | The item that is requested to be supplied. This is either a link to a resource representing the details of the item or a code that identifies the item from a known list. |
| Comment | Note that there's a difference between a prescription - an instruction to take a medication, along with a (sometimes) implicit supply, and an explicit request to supply, with no explicit instructions. |
| Binding Description | The item that was requested |
| **SupplyRequest.occurrence[x]** |  |
| Short name | When the request should be fulfilled |
| Definition | When the request should be fulfilled. |
| Synonym | when |
| Synonym | timing |
| **SupplyRequest.authoredOn** |  |
| Short name | When the request was made |
| Definition | When the request was made. |
| Synonym | date |
| Synonym | createdOn |
| Synonym | signedOn |
| **SupplyRequest.requester** |  |
| Short name | Who/what is requesting service |
| Definition | The individual who initiated the request and has responsibility for its activation. |
| Synonym | author |
| Synonym | source |
| **SupplyRequest.requester.agent** |  |
| Short name | Individual making the request |
| Definition | The device, practitioner, etc. who initiated the request. |
| **SupplyRequest.requester.onBehalfOf** |  |
| Short name | Organization agent is acting for |
| Definition | The organization the device or practitioner was acting on behalf of. |
| Requirements | Practitioners and Devices can be associated with multiple organizations. This element indicates which organization they were acting on behalf of when authoring the request. |
| **SupplyRequest.supplier** |  |
| Short name | Who is intended to fulfill the request |
| Definition | Who is intended to fulfill the request. |
| Synonym | performer |
| **SupplyRequest.reason[x]** |  |
| Short name | Why the supply item was requested |
| Definition | Why the supply item was requested. |
| Binding Description | Why the supply item was requested |
| **SupplyRequest.deliverFrom** |  |
| Short name | The origin of the supply |
| Definition | Where the supply is expected to come from. |
| **SupplyRequest.deliverTo** |  |
| Short name | The destination of the supply |
| Definition | Where the supply is destined to go. |

## http://hl7.org/fhir/StructureDefinition/Task

|  |  |
| --- | --- |
| **Description** | Base StructureDefinition for Task Resource |
| **Task** | Task |
| Short name | A task to be performed |
| Definition | A task to be performed. |
| Constraint Text | Last modified date must be greater than or equal to authored-on date. |
| **Task.identifier** |  |
| Short name | Task Instance Identifier |
| Definition | The business identifier for this task. |
| **Task.definition[x]** |  |
| Short name | Formal definition of task |
| Definition | A reference to a formal or informal definition of the task. For example, a protocol, a step within a defined workflow definition, etc. |
| Requirements | Enables a formal definition of how he task is to be performed (e.g. using BPMN, BPEL, XPDL or other formal notation) to be associated with a task, enabling automation. |
| **Task.basedOn** |  |
| Short name | Request fulfilled by this task |
| Definition | BasedOn refers to a higher-level authorization that triggered the creation of the task. It references a "request" resource such as a ProcedureRequest, MedicationRequest, ProcedureRequest, CarePlan, etc. which is distinct from the "request" resource the task is seeking to fulfil. This latter resource is referenced by FocusOn. For example, based on a ProcedureRequest (= BasedOn), a task is created to fulfil a procedureRequest ( = FocusOn ) to collect a specimen from a patient. |
| **Task.groupIdentifier** |  |
| Short name | Requisition or grouper id |
| Definition | An identifier that links together multiple tasks and other requests that were created in the same context. |
| Requirements | Billing and/or reporting can be linked to whether multiple requests were created as a single unit. |
| **Task.partOf** |  |
| Short name | Composite task |
| Definition | Task that this particular task is part of. |
| Comment | This should usually be 0..1. |
| Requirements | Allows tasks to be broken down into sub-steps (and this division can occur independent of the original task). |
| **Task.status** |  |
| Definition | The current status of the task. |
| Requirements | These states enable coordination of task status with off-the-shelf workflow solutions that support automation of tasks. |
| Binding Description | The current status of the task. |
| **Task.statusReason** |  |
| Short name | Reason for current status |
| Definition | An explanation as to why this task is held, failed, was refused, etc. |
| Comment | This applies to the current status. Look at the history of the task to see reasons for past statuses. |
| Binding Description | Codes to identify the reason for current status. These will typically be specific to a particular workflow. |
| **Task.businessStatus** |  |
| Short name | E.g. "Specimen collected", "IV prepped" |
| Definition | Contains business-specific nuances of the business state. |
| Requirements | There's often a need to track substates of a task - this is often variable by specific workflow implementation. |
| Binding Description | The domain-specific business-contextual sub-state of the task. For example: "Blood drawn", "IV inserted", "Awaiting physician signature", etc. |
| **Task.intent** |  |
| Definition | Indicates the "level" of actionability associated with the Task. I.e. Is this a proposed task, a planned task, an actionable task, etc. |
| Comment | This element is immutable. Proposed tasks, planned tasks, etc. must be distinct instances. In most cases, Tasks will have an intent of "order". |
| Binding Description | Distinguishes whether the task is a proposal, plan or full order |
| **Task.priority** |  |
| Definition | Indicates how quickly the Task should be addressed with respect to other requests. |
| Requirements | Used to identify the service level expected while performing a task. |
| Meaning when missing | If missing, this task should be performed with normal priority |
| Binding Description | The task's priority |
| **Task.code** |  |
| Short name | Task Type |
| Definition | A name or code (or both) briefly describing what the task involves. |
| Comment | The title (eg "My Tasks", "Outstanding Tasks for Patient X") should go into the code. |
| Binding Description | Codes to identify what the task involves. These will typically be specific to a particular workflow. |
| **Task.description** |  |
| Short name | Human-readable explanation of task |
| Definition | A free-text description of what is to be performed. |
| **Task.focus** |  |
| Short name | What task is acting on |
| Definition | The request being actioned or the resource being manipulated by this task. |
| Comment | If multiple resources need to be manipulated, use sub-tasks. (This ensures that status can be tracked independently for each referenced resource.). |
| Requirements | Used to identify the thing to be done. |
| **Task.for** |  |
| Short name | Beneficiary of the Task |
| Definition | The entity who benefits from the performance of the service specified in the task (e.g., the patient). |
| Requirements | Used to track tasks outstanding for a beneficiary. Do not use to track the task owner or creator (see owner and creator respectively). This can also affect access control. |
| Synonym | Patient |
| **Task.context** |  |
| Short name | Healthcare event during which this task originated |
| Definition | The healthcare event (e.g. a patient and healthcare provider interaction) during which this task was created. |
| Requirements | For some tasks it may be important to know the link between the task or episode of care the task originated within. |
| **Task.executionPeriod** |  |
| Short name | Start and end time of execution |
| Definition | Identifies the time action was first taken against the task (start) and/or the time final action was taken against the task prior to marking it as completed (end). |
| **Task.authoredOn** |  |
| Short name | Task Creation Date |
| Definition | The date and time this task was created. |
| Requirements | Most often used along with lastUpdated to track duration of task to supporting monitoring and management. |
| Synonym | Created Date |
| **Task.lastModified** |  |
| Short name | Task Last Modified Date |
| Definition | The date and time of last modification to this task. |
| Requirements | Used along with history to track task activity and time in a particular task state. This enables monitoring and management. |
| Synonym | Update Date |
| **Task.requester** |  |
| Short name | Who is asking for task to be done |
| Definition | The creator of the task. |
| Requirements | Identifies who created this task. May be used by access control mechanisms (e.g., to ensure that only the creator can cancel a task). |
| **Task.requester.agent** |  |
| Short name | Individual asking for task |
| Definition | The device, practitioner, etc. who initiated the task. |
| Synonym | Initiator |
| Synonym | Author |
| **Task.requester.onBehalfOf** |  |
| Short name | Organization individual is acting for |
| Definition | The organization the device or practitioner was acting on behalf of when they initiated the task. |
| Requirements | Practitioners and Devices can be associated with multiple organizations. This element indicates which organization they were acting on behalf of when authoring the request. |
| **Task.performerType** |  |
| Definition | The type of participant that can execute the task. |
| Requirements | Use to distinguish tasks on different activity queues. |
| Binding Description | The type(s) of task performers allowed |
| **Task.owner** |  |
| Short name | Responsible individual |
| Definition | Individual organization or Device currently responsible for task execution. |
| Comment | Tasks may be created with an owner not yet identified. |
| Requirements | Identifies who is expected to perform this task. |
| Synonym | Performer |
| Synonym | Executer |
| **Task.reason** |  |
| Short name | Why task is needed |
| Definition | A description or code indicating why this task needs to be performed. |
| Comment | This should only be included if there is no focus or if it differs from the reason indicated on the focus. |
| Binding Description | Indicates why the task is needed. E.g. Suspended because patient admitted to hospital. |
| **Task.note** |  |
| Short name | Comments made about the task |
| Definition | Free-text information captured about the task as it progresses. |
| **Task.relevantHistory** |  |
| Short name | Key events in history of the Task |
| Definition | Links to Provenance records for past versions of this Task that identify key state transitions or updates that are likely to be relevant to a user looking at the current version of the task. |
| Comment | This element does not point to the Provenance associated with the \*current\* version of the resource - as it would be created after this version existed. The Provenance for the current version can be retrieved with a \_revinclude. |
| Synonym | Status History |
| **Task.restriction** |  |
| Short name | Constraints on fulfillment tasks |
| Definition | If the Task.focus is a request resource and the task is seeking fulfillment (i.e is asking for the request to be actioned), this element identifies any limitations on what parts of the referenced request should be actioned. |
| Requirements | Sometimes when fulfillment is sought, you don't want full fulfillment. |
| **Task.restriction.repetitions** |  |
| Short name | How many times to repeat |
| Definition | Indicates the number of times the requested action should occur. |
| Requirements | E.g. order that requests monthly lab tests, fulfillment is sought for 1. |
| **Task.restriction.period** |  |
| Short name | When fulfillment sought |
| Definition | Over what time-period is fulfillment sought. |
| Comment | Note that period.high is the due date representing the time by which the task should be completed. |
| Requirements | E.g. order that authorizes 1 year's services. Fulfillment is sought for next 3 months. |
| **Task.restriction.recipient** |  |
| Short name | For whom is fulfillment sought? |
| Definition | For requests that are targeted to more than on potential recipient/target, for whom is fulfillment sought? |
| **Task.input** |  |
| Short name | Information used to perform task |
| Definition | Additional information that may be needed in the execution of the task. |
| Requirements | Resources and data used to perform the task. This data is used in the business logic of task execution, and is stored separately because it varies between workflows. |
| Synonym | Supporting Information |
| **Task.input.type** |  |
| Short name | Label for the input |
| Definition | A code or description indicating how the input is intended to be used as part of the task execution. |
| Comment | If referencing a BPMN workflow or Protocol, the "system" is the URL for the workflow definition and the code is the "name" of the required input. |
| Requirements | Inputs are named to enable task automation to bind data and pass it from one task to the next. |
| Synonym | Name |
| Binding Description | Codes to identify types of input parameters. These will typically be specific to a particular workflow. E.g. "Comparison source", "Applicable consent", "Concommitent Medications", etc. |
| **Task.input.value[x]** |  |
| Short name | Content to use in performing the task |
| Definition | The value of the input parameter as a basic type. |
| **Task.output** |  |
| Short name | Information produced as part of task |
| Definition | Outputs produced by the Task. |
| Requirements | Resources and data produced during the execution the task. This data is generated by the business logic of task execution, and is stored separately because it varies between workflows. |
| **Task.output.type** |  |
| Short name | Label for output |
| Definition | The name of the Output parameter. |
| Requirements | Outputs are named to enable task automation to bind data and pass it from one task to the next. |
| Synonym | Name |
| Binding Description | Codes to identify types of input parameters. These will typically be specific to a particular workflow. E.g. "Identified issues", "Preliminary results", "Filler order", "Final results", etc. |
| **Task.output.value[x]** |  |
| Short name | Result of output |
| Definition | The value of the Output parameter as a basic type. |
| Requirements | Task outputs can take any form. |

# Patient Administration

## http://hl7.org/fhir/StructureDefinition/Account

|  |  |
| --- | --- |
| **Description** | Base StructureDefinition for Account Resource |
| **Account** | Account |
| Short name | Tracks balance, charges, for patient or cost center |
| Definition | A financial tool for tracking value accrued for a particular purpose. In the healthcare field, used to track charges for a patient, cost centers, etc. |
| Synonym | Cost center |
| Synonym | Record |
| **Account.identifier** |  |
| Short name | Account number |
| Definition | Unique identifier used to reference the account. May or may not be intended for human use (e.g. credit card number). |
| **Account.status** |  |
| Definition | Indicates whether the account is presently used/useable or not. |
| Binding Description | Indicates whether the account is available to be used. |
| **Account.type** |  |
| Short name | E.g. patient, expense, depreciation |
| Definition | Categorizes the account for reporting and searching purposes. |
| Binding Description | The usage type of this account, permits categorization of accounts. |
| **Account.name** |  |
| Short name | Human-readable label |
| Definition | Name used for the account when displaying it to humans in reports, etc. |
| Synonym | Title |
| **Account.subject** |  |
| Short name | What is account tied to? |
| Definition | Identifies the patient, device, practitioner, location or other object the account is associated with. |
| Comment | Accounts can be applied to non patients for tracking other non patient related activities, such as group services (patients not tracked, and costs charged to another body), or may not be allocated. |
| Synonym | target |
| **Account.period** |  |
| Short name | Transaction window |
| Definition | Identifies the period of time the account applies to; e.g. accounts created per fiscal year, quarter, etc. |
| Comment | It is possible for transactions relevant to a coverage period to be posted to the account before or after the coverage period, however the services that are being charged for must be within this period. |
| **Account.active** |  |
| Short name | Time window that transactions may be posted to this account |
| Definition | Indicates the period of time over which the account is allowed to have transactions posted to it. This period may be different to the coveragePeriod which is the duration of time that services may occur. |
| Requirements | Accounts are able to be active only during a specific period, and the dates to which charges should be able to be applied. |
| **Account.balance** |  |
| Short name | How much is in account? |
| Definition | Represents the sum of all credits less all debits associated with the account. Might be positive, zero or negative. |
| **Account.coverage** |  |
| Short name | The party(s) that are responsible for covering the payment of this account, and what order should they be applied to the account |
| Definition | The party(s) that are responsible for covering the payment of this account, and what order should they be applied to the account. |
| Comment | Typically this may be some form of insurance, internal charges, or self-pay. Local or jurisdicational business rules may determine which coverage covers which types of billable items charged to the account, and in which order. Where the order is important, a local/jurisdicational extension may be defined to specify the order for the type of charge. |
| **Account.coverage.coverage** |  |
| Short name | The party(s) that are responsible for covering the payment of this account |
| Definition | The party(s) that are responsible for payment (or part of) of charges applied to this account (including self-pay). A coverage may only be resposible for specific types of charges, and the sequence of the coverages in the account could be important when processing billing. |
| **Account.coverage.priority** |  |
| Short name | The priority of the coverage in the context of this account |
| Definition | The priority of the coverage in the context of this account. |
| Comment | It is common in some jurisdictions for there to be multiple coverages allocated to an account, and a sequence is required to order the settling of the account (often with insurance claiming). |
| Synonym | coordination of benefit priority |
| **Account.owner** |  |
| Short name | Who is responsible? |
| Definition | Indicates the organization, department, etc. with responsibility for the account. |
| **Account.description** |  |
| Short name | Explanation of purpose/use |
| Definition | Provides additional information about what the account tracks and how it is used. |
| **Account.guarantor** |  |
| Short name | Responsible for the account |
| Definition | Parties financially responsible for the account. |
| **Account.guarantor.party** |  |
| Short name | Responsible entity |
| Definition | The entity who is responsible. |
| **Account.guarantor.onHold** |  |
| Short name | Credit or other hold applied |
| Definition | A guarantor may be placed on credit hold or otherwise have their role temporarily suspended. |
| **Account.guarantor.period** |  |
| Short name | Guarrantee account during |
| Definition | The timeframe during which the guarantor accepts responsibility for the account. |

## http://hl7.org/fhir/StructureDefinition/Appointment

|  |  |
| --- | --- |
| **Description** | Base StructureDefinition for Appointment Resource |
| **Appointment** | Appointment |
| Short name | A booking of a healthcare event among patient(s), practitioner(s), related person(s) and/or device(s) for a specific date/time. This may result in one or more Encounter(s) |
| Definition | A booking of a healthcare event among patient(s), practitioner(s), related person(s) and/or device(s) for a specific date/time. This may result in one or more Encounter(s). |
| Constraint Text | Only proposed or cancelled appointments can be missing start/end dates |
| Constraint Text | Either start and end are specified, or neither |
| **Appointment.identifier** |  |
| Short name | External Ids for this item |
| Definition | This records identifiers associated with this appointment concern that are defined by business processes and/or used to refer to it when a direct URL reference to the resource itself is not appropriate (e.g. in CDA documents, or in written / printed documentation). |
| **Appointment.status** |  |
| Definition | The overall status of the Appointment. Each of the participants has their own participation status which indicates their involvement in the process, however this status indicates the shared status. |
| Comment | If the Appointment's status is "cancelled" then all participants are expected to have their calendars released for the appointment period, and as such any Slots that were marked as BUSY can be re-set to FREE. |
| Binding Description | The free/busy status of an appointment. |
| **Appointment.serviceCategory** |  |
| Short name | A broad categorisation of the service that is to be performed during this appointment |
| Definition | A broad categorisation of the service that is to be performed during this appointment. |
| **Appointment.serviceType** |  |
| Short name | The specific service that is to be performed during this appointment |
| Definition | The specific service that is to be performed during this appointment. |
| **Appointment.specialty** |  |
| Short name | The specialty of a practitioner that would be required to perform the service requested in this appointment |
| Definition | The specialty of a practitioner that would be required to perform the service requested in this appointment. |
| **Appointment.appointmentType** |  |
| Short name | The style of appointment or patient that has been booked in the slot (not service type) |
| Definition | The style of appointment or patient that has been booked in the slot (not service type). |
| **Appointment.reason** |  |
| Short name | Reason this appointment is scheduled |
| Definition | The reason that this appointment is being scheduled. This is more clinical than administrative. |
| Binding Description | The Reason for the appointment to take place. |
| **Appointment.indication** |  |
| Short name | Reason the appointment is to takes place (resource) |
| Definition | Reason the appointment has been scheduled to take place, as specified using information from another resource. When the patient arrives and the encounter begins it may be used as the admission diagnosis. The indication will typically be a Condition (with other resources referenced in the evidence.detail), or a Procedure. |
| **Appointment.priority** |  |
| Short name | Used to make informed decisions if needing to re-prioritize |
| Definition | The priority of the appointment. Can be used to make informed decisions if needing to re-prioritize appointments. (The iCal Standard specifies 0 as undefined, 1 as highest, 9 as lowest priority). |
| Comment | Seeking implementer feedback on this property and how interoperable it is. Using an extension to record a codeableconcept for named values may be tested at a future connectathon. |
| **Appointment.description** |  |
| Short name | Shown on a subject line in a meeting request, or appointment list |
| Definition | The brief description of the appointment as would be shown on a subject line in a meeting request, or appointment list. Detailed or expanded information should be put in the comment field. |
| **Appointment.supportingInformation** |  |
| Short name | Additional information to support the appointment |
| Definition | Additional information to support the appointment provided when making the appointment. |
| **Appointment.start** |  |
| Short name | When appointment is to take place |
| Definition | Date/Time that the appointment is to take place. |
| **Appointment.end** |  |
| Short name | When appointment is to conclude |
| Definition | Date/Time that the appointment is to conclude. |
| **Appointment.minutesDuration** |  |
| Short name | Can be less than start/end (e.g. estimate) |
| Definition | Number of minutes that the appointment is to take. This can be less than the duration between the start and end times (where actual time of appointment is only an estimate or is a planned appointment request). |
| **Appointment.slot** |  |
| Short name | The slots that this appointment is filling |
| Definition | The slots from the participants' schedules that will be filled by the appointment. |
| **Appointment.created** |  |
| Short name | The date that this appointment was initially created |
| Definition | The date that this appointment was initially created. This could be different to the meta.lastModified value on the initial entry, as this could have been before the resource was created on the FHIR server, and should remain unchanged over the lifespan of the appointment. |
| Comment | This property is required for many use cases where the age of an appointment is considered in processing workflows for scheduling and billing of appointments. |
| **Appointment.comment** |  |
| Short name | Additional comments |
| Definition | Additional comments about the appointment. |
| Comment | Additional text to aid in facilitating the appointment. For instance, a comment might be, "patient should proceed immediately to infusion room upon arrival" Where this is a planned appointment and the start/end dates are not set then this field can be used to provide additional guidance on the details of the appointment request, including any restrictions on when to book it. |
| **Appointment.incomingReferral** |  |
| Short name | The ReferralRequest provided as information to allocate to the Encounter |
| Definition | The referral request this appointment is allocated to assess (incoming referral). |
| **Appointment.participant** |  |
| Short name | Participants involved in appointment |
| Definition | List of participants involved in the appointment. |
| Constraint Text | Either the type or actor on the participant MUST be specified |
| **Appointment.participant.type** |  |
| Short name | Role of participant in the appointment |
| Definition | Role of participant in the appointment. |
| Comment | The role of the participant can be used to declare what the actor will be doing in the scope of this appointment. If the actor is not specified, then it is expected that the actor will be filled in at a later stage of planning. This value MUST be the same when creating an AppointmentResponse so that they can be matched, and subsequently update the Appointment. |
| Binding Description | Role of participant in encounter. |
| **Appointment.participant.actor** |  |
| Short name | Person, Location/HealthcareService or Device |
| Definition | A Person, Location/HealthcareService or Device that is participating in the appointment. |
| **Appointment.participant.required** |  |
| Definition | Is this participant required to be present at the meeting. This covers a use-case where 2 doctors need to meet to discuss the results for a specific patient, and the patient is not required to be present. |
| Binding Description | Is the Participant required to attend the appointment. |
| **Appointment.participant.status** |  |
| Definition | Participation status of the Patient. |
| Binding Description | The Participation status of an appointment. |
| **Appointment.requestedPeriod** |  |
| Short name | Potential date/time interval(s) requested to allocate the appointment during |
| Definition | A set of date ranges (potentially including times) that the appointment is preferred to be scheduled. When using these values, the minutes duration should be provided to indicate the length of the appointment to fill and populate the start/end times for the actual allocated time. |
| Comment | This does not introduce a capacity for recurring appointments. |

## http://hl7.org/fhir/StructureDefinition/AppointmentResponse

|  |  |
| --- | --- |
| **Description** | Base StructureDefinition for AppointmentResponse Resource |
| **AppointmentResponse** | Appointment Response |
| Short name | A reply to an appointment request for a patient and/or practitioner(s), such as a confirmation or rejection |
| Definition | A reply to an appointment request for a patient and/or practitioner(s), such as a confirmation or rejection. |
| Constraint Text | Either the participantType or actor must be specified |
| **AppointmentResponse.identifier** |  |
| Short name | External Ids for this item |
| Definition | This records identifiers associated with this appointment response concern that are defined by business processes and/ or used to refer to it when a direct URL reference to the resource itself is not appropriate. |
| **AppointmentResponse.appointment** |  |
| Short name | Appointment this response relates to |
| Definition | Appointment that this response is replying to. |
| **AppointmentResponse.start** |  |
| Short name | Time from appointment, or requested new start time |
| Definition | Date/Time that the appointment is to take place, or requested new start time. |
| Comment | This may be either the same as the appointment request to confirm the details of the appointment, or alternately a new time to request a re-negotiation of the start time. |
| **AppointmentResponse.end** |  |
| Short name | Time from appointment, or requested new end time |
| Definition | This may be either the same as the appointment request to confirm the details of the appointment, or alternately a new time to request a re-negotiation of the end time. |
| **AppointmentResponse.participantType** |  |
| Short name | Role of participant in the appointment |
| Definition | Role of participant in the appointment. |
| Comment | The role of the participant can be used to declare what the actor will be doing in the scope of the referenced appointment. If the actor is not specified, then it is expected that the actor will be filled in at a later stage of planning. This value MUST be the same as specified on the referenced Appointment so that they can be matched, and subsequently updated. |
| Binding Description | Role of participant in encounter. |
| **AppointmentResponse.actor** |  |
| Short name | Person, Location/HealthcareService or Device |
| Definition | A Person, Location/HealthcareService or Device that is participating in the appointment. |
| **AppointmentResponse.participantStatus** |  |
| Definition | Participation status of the participant. When the status is declined or tentative if the start/end times are different to the appointment, then these times should be interpreted as a requested time change. When the status is accepted, the times can either be the time of the appointment (as a confirmation of the time) or can be empty. |
| Binding Description | The Participation status of an appointment. |
| **AppointmentResponse.comment** |  |
| Short name | Additional comments |
| Definition | Additional comments about the appointment. |
| Comment | This comment is particularly important when the responder is declining, tentatively accepting or requesting another time to indicate the reasons why. |

## http://hl7.org/fhir/StructureDefinition/ChargeItem

|  |  |
| --- | --- |
| **Description** | Base StructureDefinition for ChargeItem Resource |
| **ChargeItem** | Charge Item |
| Short name | Item containing charge code(s) associated with the provision of healthcare provider products |
| Definition | The resource ChargeItem describes the provision of healthcare provider products for a certain patient, therefore referring not only to the product, but containing in addition details of the provision, like date, time, amounts and participating organizations and persons. Main Usage of the ChargeItem is to enable the billing process and internal cost allocation. |
| **ChargeItem.identifier** |  |
| Short name | Business Identifer for item |
| Definition | Identifiers assigned to this event performer or other systems. |
| Requirements | Allows identification of the charge Item as it is known by various participating systems and in a way that remains consistent across servers. |
| **ChargeItem.definition** |  |
| Short name | Defining information about the code of this charge item |
| Definition | References the source of pricing information, rules of application for the code this ChargeItem uses. |
| Comment | Target Resource is yet to be defined as a container that holds information about list prices and rules applicable to the charge item code. Once defined, change type back to Reference(Definition Type). |
| **ChargeItem.status** |  |
| Definition | The current state of the ChargeItem. |
| Comment | Unknown does not represent "other" - one of the defined statuses must apply. Unknown is used when the authoring system is not sure what the current status is. |
| Binding Description | Codes identifying the stage lifecycle stage of a ChargeItem |
| **ChargeItem.partOf** |  |
| Short name | Part of referenced ChargeItem |
| Definition | ChargeItems can be grouped to larger ChargeItems covering the whole set. |
| Requirements | E.g. Drug administration as part of a procedure, procedure as part of observation, etc. |
| Synonym | container |
| **ChargeItem.code** |  |
| Short name | A code that identifies the charge, like a billing code |
| Definition | A code that identifies the charge, like a billing code. |
| Synonym | type |
| Binding Description | Example set of codes that can be used for billing purposes |
| **ChargeItem.subject** |  |
| Short name | Individual service was done for/to |
| Definition | The individual or set of individuals the action is being or was performed on. |
| Requirements | Links the event to the Patient context. |
| Synonym | patient |
| **ChargeItem.context** |  |
| Short name | Encounter / Episode associated with event |
| Definition | The encounter or episode of care that establishes the context for this event. |
| Requirements | Links the request to the Encounter context. |
| Synonym | encounter |
| **ChargeItem.occurrence[x]** |  |
| Short name | When the charged service was applied |
| Definition | Date/time(s) or duration when the charged service was applied. |
| Comment | The list of types may be constrained as appropriate for the type of charge item. |
| Synonym | timing |
| **ChargeItem.participant** |  |
| Short name | Who performed charged service |
| Definition | Indicates who or what performed or participated in the charged service. |
| **ChargeItem.participant.role** |  |
| Short name | What type of performance was done |
| Definition | Describes the type of performance or participation(e.g. primary surgeon, anaesthesiologiest, etc.). |
| Binding Description | Codes describing the types of functional roles performers can take on when performing events |
| **ChargeItem.participant.actor** |  |
| Short name | Individual who was performing |
| Definition | The device, practitioner, etc. who performed or participated in the service. |
| **ChargeItem.performingOrganization** |  |
| Short name | Organization providing the charged sevice |
| Definition | The organization requesting the service. |
| Comment | Practitioners and Devices can be associated with multiple organizations. It has to be made clear, on behalf of which Organization the services have been rendered. |
| **ChargeItem.requestingOrganization** |  |
| Short name | Organization requesting the charged service |
| Definition | The organization performing the service. |
| Comment | The rendered Service may not be associated with a Request. It has to be made clear, ob which Organization's Request, the services have been rendered. (In many cases, this may just be the Department associated with the Encounter.location). |
| **ChargeItem.quantity** |  |
| Short name | Quantity of which the charge item has been serviced |
| Definition | Quantity of which the charge item has been serviced. |
| Comment | In many cases this may just be a value, if the underlying units are implicit in the definition of the charge item code. |
| **ChargeItem.bodysite** |  |
| Short name | Anatomical location, if relevant |
| Definition | The anatomical location where the related service has been applied. |
| Comment | Only used if not implicit in code found in Condition.code. If the use case requires attributes from the BodySite resource (e.g. to identify and track separately) then use the standard extension [body-site-instance](extension-body-site-instance.html). May be a summary code, or a reference to a very precise definition of the location, or both. |
| Binding Description | Codes describing anatomical locations. May include laterality. |
| **ChargeItem.factorOverride** |  |
| Short name | Factor overriding the associated rules |
| Definition | Factor overriding the factor determined by the rules associated with the code. |
| Comment | There is no reason to carry the factor in the instance of a ChargeItem unless special circumstances require a manual override. The factors are usually defined by a set of rules in a back catalogue of the billing codes (see ChargeItem.definition). Derived profiles may require a ChargeItem.overrideReason to be provided if either factor or price are manually overriden. |
| **ChargeItem.priceOverride** |  |
| Short name | Price overriding the associated rules |
| Definition | Total price of the charge overriding the list price associated with the code. |
| Comment | There is no reason to carry the price in the instance of a ChargeItem unless circumstances require a manual override. The list prices or are usually defined in a back catalogue of the billing codes (see ChargeItem.definition). Derived profiles may require a ChargeItem.overrideReason to be provided if either factor or price are manually overriden. |
| **ChargeItem.overrideReason** |  |
| Short name | Reason for overriding the list price/factor |
| Definition | If the list price or the rule based factor associated with the code is overridden, this attribute can capture a text to indicate the reason for this action. |
| Comment | Derived Profiles may chose to add invariants requiring this field to be populated if either priceOverride or factorOverride have been filled. |
| **ChargeItem.enterer** |  |
| Short name | Individual who was entering |
| Definition | The device, practitioner, etc. who entered the charge item. |
| Comment | The enterer is also te person considered responsible for factor/priceOverrides if applicable. |
| **ChargeItem.enteredDate** |  |
| Short name | Date the charge item was entered |
| Definition | Date the charge item was entered. |
| Comment | The actual date when the service associated with the charge has been rendered is captured in occurrence[x]. |
| **ChargeItem.reason** |  |
| Short name | Why was the charged service rendered? |
| Definition | Describes why the event occurred in coded or textual form. |
| Comment | If the application of the charge item requires a reason to be given, it can be captured here. Textual reasons can be captured using reasonCode.text. |
| Binding Description | Example binding for reason |
| **ChargeItem.service** |  |
| Short name | Which rendered service is being charged? |
| Definition | Indicated the rendered service that caused this charge. |
| **ChargeItem.account** |  |
| Short name | Account to place this charge |
| Definition | Account into which this ChargeItems belongs. |
| Comment | Systems posting the ChargeItems may not always be able to determine, which accounts the Items need to be places into. It is up to the potprocessing Financial System to apply internal rules to decide based on the Encounter/EpisodeOfCare/Patient/Coverage context and the type of ChargeItem, which Account is appropriate. |
| **ChargeItem.note** |  |
| Short name | Comments made about the ChargeItem |
| Definition | Comments made about the event by the performer, subject or other participants. |
| **ChargeItem.supportingInformation** |  |
| Short name | Further information supporting the this charge |
| Definition | Further information supporting the this charge. |

## http://hl7.org/fhir/StructureDefinition/Encounter

|  |  |
| --- | --- |
| **Description** | Base StructureDefinition for Encounter Resource |
| **Encounter** | Encounter |
| Short name | An interaction during which services are provided to the patient |
| Definition | An interaction between a patient and healthcare provider(s) for the purpose of providing healthcare service(s) or assessing the health status of a patient. |
| Synonym | Visit |
| **Encounter.identifier** |  |
| Short name | Identifier(s) by which this encounter is known |
| Definition | Identifier(s) by which this encounter is known. |
| **Encounter.status** |  |
| Definition | planned | arrived | triaged | in-progress | onleave | finished | cancelled +. |
| Comment | Note that internal business rules will detemine the appropraite transitions that may occur between statuses (and also classes). |
| Binding Description | Current state of the encounter |
| **Encounter.statusHistory** |  |
| Short name | List of past encounter statuses |
| Definition | The status history permits the encounter resource to contain the status history without needing to read through the historical versions of the resource, or even have the server store them. |
| Comment | The current status is always found in the current version of the resource, not the status history. |
| **Encounter.statusHistory.status** |  |
| Definition | planned | arrived | triaged | in-progress | onleave | finished | cancelled +. |
| Binding Description | Current state of the encounter |
| **Encounter.statusHistory.period** |  |
| Short name | The time that the episode was in the specified status |
| Definition | The time that the episode was in the specified status. |
| **Encounter.class** |  |
| Definition | inpatient | outpatient | ambulatory | emergency +. |
| Binding Description | Classification of the encounter |
| **Encounter.classHistory** |  |
| Short name | List of past encounter classes |
| Definition | The class history permits the tracking of the encounters transitions without needing to go through the resource history. This would be used for a case where an admission starts of as an emergency encounter, then transisions into an inpatient scenario. Doing this and not restarting a new encounter ensures that any lab/diagnostic results can more easily follow the patient and not require re-processing and not get lost or cancelled during a kindof discharge from emergency to inpatient. |
| **Encounter.classHistory.class** |  |
| Definition | inpatient | outpatient | ambulatory | emergency +. |
| Binding Description | Classification of the encounter |
| **Encounter.classHistory.period** |  |
| Short name | The time that the episode was in the specified class |
| Definition | The time that the episode was in the specified class. |
| **Encounter.type** |  |
| Short name | Specific type of encounter |
| Definition | Specific type of encounter (e.g. e-mail consultation, surgical day-care, skilled nursing, rehabilitation). |
| Comment | Since there are many ways to further classify encounters, this element is 0..\*. |
| Binding Description | The type of encounter |
| **Encounter.priority** |  |
| Short name | Indicates the urgency of the encounter |
| Definition | Indicates the urgency of the encounter. |
| Binding Description | Indicates the urgency of the encounter. |
| **Encounter.subject** |  |
| Short name | The patient ro group present at the encounter |
| Definition | The patient ro group present at the encounter. |
| Comment | While the encounter is always about the patient, the patient may not actually be known in all contexts of use, and there may be a group of patients that could be anonymous (such as in a group therapy for Alcoholics Anonymous - where the recording of the encounter could be used for billing on the number of people/staff and not important to the context of the specific patients) or alternately in veterinary care a herd of sheep receiving treatment (where the animals are not individually tracked). |
| Synonym | patient |
| **Encounter.episodeOfCare** |  |
| Short name | Episode(s) of care that this encounter should be recorded against |
| Definition | Where a specific encounter should be classified as a part of a specific episode(s) of care this field should be used. This association can facilitate grouping of related encounters together for a specific purpose, such as government reporting, issue tracking, association via a common problem. The association is recorded on the encounter as these are typically created after the episode of care, and grouped on entry rather than editing the episode of care to append another encounter to it (the episode of care could span years). |
| **Encounter.incomingReferral** |  |
| Short name | The ReferralRequest that initiated this encounter |
| Definition | The referral request this encounter satisfies (incoming referral). |
| **Encounter.participant** |  |
| Short name | List of participants involved in the encounter |
| Definition | The list of people responsible for providing the service. |
| **Encounter.participant.type** |  |
| Short name | Role of participant in encounter |
| Definition | Role of participant in encounter. |
| Comment | The participant type indicates how an individual partitipates in an encounter. It includes non-practitioner participants, and for practitioners this is to describe the action type in the context of this encounter (e.g. Admitting Dr, Attending Dr, Translator, Consulting Dr). This is different to the practitioner roles which are functional roles, derived from terms of employment, education, licensing, etc. |
| Binding Description | Role of participant in encounter |
| **Encounter.participant.period** |  |
| Short name | Period of time during the encounter that the participant participated |
| Definition | The period of time that the specified participant participated in the encounter. These can overlap or be sub-sets of the overall encounter's period. |
| **Encounter.participant.individual** |  |
| Short name | Persons involved in the encounter other than the patient |
| Definition | Persons involved in the encounter other than the patient. |
| **Encounter.appointment** |  |
| Short name | The appointment that scheduled this encounter |
| Definition | The appointment that scheduled this encounter. |
| **Encounter.period** |  |
| Short name | The start and end time of the encounter |
| Definition | The start and end time of the encounter. |
| Comment | If not (yet) known, the end of the Period may be omitted. |
| **Encounter.length** |  |
| Short name | Quantity of time the encounter lasted (less time absent) |
| Definition | Quantity of time the encounter lasted. This excludes the time during leaves of absence. |
| Comment | May differ from the time the Encounter.period lasted because of leave of absence. |
| **Encounter.reason** |  |
| Short name | Reason the encounter takes place (code) |
| Definition | Reason the encounter takes place, expressed as a code. For admissions, this can be used for a coded admission diagnosis. |
| Comment | For systems that need to know which was the primary diagnosis, these will be marked with the standard extension primaryDiagnosis (which is a sequence value rather than a flag, 1 = primary diagnosis). |
| Synonym | Indication |
| Synonym | Admission diagnosis |
| Binding Description | Reason why the encounter takes place. |
| **Encounter.diagnosis** |  |
| Short name | The list of diagnosis relevant to this encounter |
| Definition | The list of diagnosis relevant to this encounter. |
| **Encounter.diagnosis.condition** |  |
| Short name | Reason the encounter takes place (resource) |
| Definition | Reason the encounter takes place, as specified using information from another resource. For admissions, this is the admission diagnosis. The indication will typically be a Condition (with other resources referenced in the evidence.detail), or a Procedure. |
| Comment | For systems that need to know which was the primary diagnosis, these will be marked with the standard extension primaryDiagnosis (which is a sequence value rather than a flag, 1 = primary diagnosis). |
| Synonym | Admission diagnosis |
| Synonym | discharge diagnosis |
| Synonym | indication |
| **Encounter.diagnosis.role** |  |
| Short name | Role that this diagnosis has within the encounter (e.g. admission, billing, discharge â€¦) |
| Definition | Role that this diagnosis has within the encounter (e.g. admission, billing, discharge â€¦). |
| Binding Description | The type of diagnosis this condition represents |
| **Encounter.diagnosis.rank** |  |
| Short name | Ranking of the diagnosis (for each role type) |
| Definition | Ranking of the diagnosis (for each role type). |
| **Encounter.account** |  |
| Short name | The set of accounts that may be used for billing for this Encounter |
| Definition | The set of accounts that may be used for billing for this Encounter. |
| Comment | The billing system may choose to allocate billable items associated with the Encounter to different referenced Accounts based on internal business rules. |
| **Encounter.hospitalization** |  |
| Short name | Details about the admission to a healthcare service |
| Definition | Details about the admission to a healthcare service. |
| Comment | An Encounter may cover more than just the inpatient stay. Contexts such as outpatients, community clinics, and aged care facilities are also included. The duration recorded in the period of this encounter covers the entire scope of this hospitalization record. |
| **Encounter.hospitalization.preAdmissionIdentifier** |  |
| Short name | Pre-admission identifier |
| Definition | Pre-admission identifier. |
| **Encounter.hospitalization.origin** |  |
| Short name | The location from which the patient came before admission |
| Definition | The location from which the patient came before admission. |
| **Encounter.hospitalization.admitSource** |  |
| Short name | From where patient was admitted (physician referral, transfer) |
| Definition | From where patient was admitted (physician referral, transfer). |
| Binding Description | From where the patient was admitted. |
| **Encounter.hospitalization.reAdmission** |  |
| Short name | The type of hospital re-admission that has occurred (if any). If the value is absent, then this is not identified as a readmission |
| Definition | Whether this hospitalization is a readmission and why if known. |
| Binding Description | The reason for re-admission of this hospitalization encounter. |
| **Encounter.hospitalization.dietPreference** |  |
| Short name | Diet preferences reported by the patient |
| Definition | Diet preferences reported by the patient. |
| Comment | For example a patient may request both a dairy-free and nut-free diet preference (not mutually exclusive). |
| Requirements | Used to track patient's diet restrictions and/or preference. For a complete description of the nutrition needs of a patient during their stay, one should use the nutritionOrder resource which links to Encounter. |
| Binding Description | Medical, cultural or ethical food preferences to help with catering requirements. |
| **Encounter.hospitalization.specialCourtesy** |  |
| Short name | Special courtesies (VIP, board member) |
| Definition | Special courtesies (VIP, board member). |
| Binding Description | Special courtesies |
| **Encounter.hospitalization.specialArrangement** |  |
| Short name | Wheelchair, translator, stretcher, etc. |
| Definition | Any special requests that have been made for this hospitalization encounter, such as the provision of specific equipment or other things. |
| Binding Description | Special arrangements |
| **Encounter.hospitalization.destination** |  |
| Short name | Location to which the patient is discharged |
| Definition | Location to which the patient is discharged. |
| **Encounter.hospitalization.dischargeDisposition** |  |
| Short name | Category or kind of location after discharge |
| Definition | Category or kind of location after discharge. |
| Binding Description | Discharge Disposition |
| **Encounter.location** |  |
| Short name | List of locations where the patient has been |
| Definition | List of locations where the patient has been during this encounter. |
| Comment | Virtual encounters can be recorded in the Encounter by specifying a location reference to a location of type "kind" such as "client's home" and an encounter.class = "virtual". |
| **Encounter.location.location** |  |
| Short name | Location the encounter takes place |
| Definition | The location where the encounter takes place. |
| **Encounter.location.status** |  |
| Definition | The status of the participants' presence at the specified location during the period specified. If the participant is is no longer at the location, then the period will have an end date/time. |
| Comment | When the patient is no longer active at a location, then the period end date is entered, and the status may be changed to completed. |
| Binding Description | The status of the location. |
| **Encounter.location.period** |  |
| Short name | Time period during which the patient was present at the location |
| Definition | Time period during which the patient was present at the location. |
| **Encounter.serviceProvider** |  |
| Short name | The custodian organization of this Encounter record |
| Definition | An organization that is in charge of maintaining the information of this Encounter (e.g. who maintains the report or the master service catalog item, etc.). This MAY be the same as the organization on the Patient record, however it could be different. This MAY not be not the Service Delivery Location's Organization. |
| **Encounter.partOf** |  |
| Short name | Another Encounter this encounter is part of |
| Definition | Another Encounter of which this encounter is a part of (administratively or in time). |
| Comment | This is also used for associating a child's encounter back to the mother's encounter. Refer to the Notes section in the Patient resource for further details. |

## http://hl7.org/fhir/StructureDefinition/Endpoint

|  |  |
| --- | --- |
| **Description** | Base StructureDefinition for Endpoint Resource |
| **Endpoint** | Endpoint |
| Short name | The technical details of an endpoint that can be used for electronic services |
| Definition | The technical details of an endpoint that can be used for electronic services, such as for web services providing XDS.b or a REST endpoint for another FHIR server. This may include any security context information. |
| **Endpoint.identifier** |  |
| Short name | Identifies this endpoint across multiple systems |
| Definition | Identifier for the organization that is used to identify the endpoint across multiple disparate systems. |
| **Endpoint.status** |  |
| Definition | active | suspended | error | off | test. |
| Binding Description | The status of the endpoint |
| **Endpoint.connectionType** |  |
| Short name | Protocol/Profile/Standard to be used with this endpoint connection |
| Definition | A coded value that represents the technical details of the usage of this endpoint, such as what WSDLs should be used in what way. (e.g. XDS.b/DICOM/cds-hook). |
| Comment | For additional connectivity details for the protocol, extensions will be used at this point, as in the XDS example. |
| **Endpoint.name** |  |
| Short name | A name that this endpoint can be identified by |
| Definition | A friendly name that this endpoint can be referred to with. |
| **Endpoint.managingOrganization** |  |
| Short name | Organization that manages this endpoint (may not be the organization that exposes the endpoint) |
| Definition | The organization that manages this endpoint (even if technically another organisation is hosting this in the cloud, it is the organisation associated with the data). |
| Comment | This property is not typically used when searching for Endpoint resources for usage. The typical usage is via the reference from an aplicable Organization/Location/Practitioner resource, which is where the context is provided. Multiple Locations may reference a single endpoint, and don't have to be within the same organization resource, but most likely within the same organizational heirarchy. |
| **Endpoint.contact** |  |
| Short name | Contact details for source (e.g. troubleshooting) |
| Definition | Contact details for a human to contact about the subscription. The primary use of this for system administrator troubleshooting. |
| **Endpoint.period** |  |
| Short name | Interval the endpoint is expected to be operational |
| Definition | The interval during which the endpoint is expected to be operational. |
| **Endpoint.payloadType** |  |
| Short name | The type of content that may be used at this endpoint (e.g. XDS Discharge summaries) |
| Definition | The payload type describes the acceptable content that can be communicated on the endpoint. |
| Comment | The payloadFormat describes the serialization format of the data, where the payloadType indicates the specific document/schema that is being transferred; e.g. DischargeSummary or CarePlan. |
| **Endpoint.payloadMimeType** |  |
| Short name | Mimetype to send. If not specified, the content could be anything (including no payload, if the connectionType defined this) |
| Definition | The mime type to send the payload in - e.g. application/fhir+xml, application/fhir+json. If the mime type is not specified, then the sender could send any content (including no content depending on the connectionType). |
| Comment | Sending the payload has obvious security consequences. The server is responsible for ensuring that the content is appropriately secured. |
| Binding Description | The mime type of an attachment. Any valid mime type is allowed. |
| **Endpoint.address** |  |
| Short name | The technical base address for connecting to this endpoint |
| Definition | The uri that describes the actual end-point to connect to. |
| Comment | For rest-hook, and websocket, the end-point must be an http: or https: URL; for email, a mailto: url, for sms, a tel: url, and for message the endpoint can be in any form of url the server understands (usually, http: or mllp:). The URI is allowed to be relative; in which case, it is relative to the server end-point (since their may be more than one, clients should avoid using relative URIs) This address will be to the service base, without any parameters, or sub-services or resources tacked on. E.g. for a WADO-RS endpoint, the url should be "https://pacs.hospital.org/wado-rs" and not "https://pacs.hospital.org/wado-rs/studies/1.2.250.1.59.40211.12345678.678910/series/1.2.250.1.59.40211.789001276.14556172.67789/instances/...". |
| **Endpoint.header** |  |
| Short name | Usage depends on the channel type |
| Definition | Additional headers / information to send as part of the notification. |
| Comment | Exactly what these mean depend on the channel type. The can convey additional information to the recipient and/or meet security requirements. |

## http://hl7.org/fhir/StructureDefinition/EpisodeOfCare

|  |  |
| --- | --- |
| **Description** | Base StructureDefinition for EpisodeOfCare Resource |
| **EpisodeOfCare** | Episode Of Care |
| Short name | An association of a Patient with an Organization and Healthcare Provider(s) for a period of time that the Organization assumes some level of responsibility |
| Definition | An association between a patient and an organization / healthcare provider(s) during which time encounters may occur. The managing organization assumes a level of responsibility for the patient during this time. |
| Synonym | Case Program Problem |
| **EpisodeOfCare.identifier** |  |
| Short name | Business Identifier(s) relevant for this EpisodeOfCare |
| Definition | The EpisodeOfCare may be known by different identifiers for different contexts of use, such as when an external agency is tracking the Episode for funding purposes. |
| **EpisodeOfCare.status** |  |
| Definition | planned | waitlist | active | onhold | finished | cancelled. |
| Binding Description | The status of the episode of care. |
| **EpisodeOfCare.statusHistory** |  |
| Short name | Past list of status codes (the current status may be included to cover the start date of the status) |
| Definition | The history of statuses that the EpisodeOfCare has been through (without requiring processing the history of the resource). |
| **EpisodeOfCare.statusHistory.status** |  |
| Definition | planned | waitlist | active | onhold | finished | cancelled. |
| Binding Description | The status of the episode of care. |
| **EpisodeOfCare.statusHistory.period** |  |
| Short name | Duration the EpisodeOfCare was in the specified status |
| Definition | The period during this EpisodeOfCare that the specific status applied. |
| **EpisodeOfCare.type** |  |
| Short name | Type/class - e.g. specialist referral, disease management |
| Definition | A classification of the type of episode of care; e.g. specialist referral, disease management, type of funded care. |
| Comment | The type can be very important in processing as this could be used in determining if the EpisodeOfCare is relevant to specific government reporting, or other types of classifications. |
| Binding Description | The type of the episode of care |
| **EpisodeOfCare.diagnosis** |  |
| Short name | The list of diagnosis relevant to this episode of care |
| Definition | The list of diagnosis relevant to this episode of care. |
| **EpisodeOfCare.diagnosis.condition** |  |
| Short name | Conditions/problems/diagnoses this episode of care is for |
| Definition | A list of conditions/problems/diagnoses that this episode of care is intended to be providing care for. |
| **EpisodeOfCare.diagnosis.role** |  |
| Short name | Role that this diagnosis has within the episode of care (e.g. admission, billing, discharge â€¦) |
| Definition | Role that this diagnosis has within the episode of care (e.g. admission, billing, discharge â€¦). |
| Binding Description | The type of diagnosis this condition represents |
| **EpisodeOfCare.diagnosis.rank** |  |
| Short name | Ranking of the diagnosis (for each role type) |
| Definition | Ranking of the diagnosis (for each role type). |
| **EpisodeOfCare.patient** |  |
| Short name | The patient who is the focus of this episode of care |
| Definition | The patient who is the focus of this episode of care. |
| **EpisodeOfCare.managingOrganization** |  |
| Short name | Organization that assumes care |
| Definition | The organization that has assumed the specific responsibilities for the specified duration. |
| **EpisodeOfCare.period** |  |
| Short name | Interval during responsibility is assumed |
| Definition | The interval during which the managing organization assumes the defined responsibility. |
| **EpisodeOfCare.referralRequest** |  |
| Short name | Originating Referral Request(s) |
| Definition | Referral Request(s) that are fulfilled by this EpisodeOfCare, incoming referrals. |
| **EpisodeOfCare.careManager** |  |
| Short name | Care manager/care co-ordinator for the patient |
| Definition | The practitioner that is the care manager/care co-ordinator for this patient. |
| **EpisodeOfCare.team** |  |
| Short name | Other practitioners facilitating this episode of care |
| Definition | The list of practitioners that may be facilitating this episode of care for specific purposes. |
| Synonym | CareTeam |
| **EpisodeOfCare.account** |  |
| Short name | The set of accounts that may be used for billing for this EpisodeOfCare |
| Definition | The set of accounts that may be used for billing for this EpisodeOfCare. |
| Comment | The billing system may choose to allocate billable items associated with the EpisodeOfCare to different referenced Accounts based on internal business rules. |

## http://hl7.org/fhir/StructureDefinition/HealthcareService

|  |  |
| --- | --- |
| **Description** | Base StructureDefinition for HealthcareService Resource |
| **HealthcareService** | Healthcare Service |
| Short name | The details of a healthcare service available at a location |
| Definition | The details of a healthcare service available at a location. |
| **HealthcareService.identifier** |  |
| Short name | External identifiers for this item |
| Definition | External identifiers for this item. |
| **HealthcareService.active** |  |
| Short name | Whether this healthcareservice is in active use |
| Definition | Whether this healthcareservice record is in active use. |
| **HealthcareService.providedBy** |  |
| Short name | Organization that provides this service |
| Definition | The organization that provides this healthcare service. |
| Comment | This property is recommended to be the same as the Location's managingOrganization, and if not provided should be interpreted as such. If the Location does not have a managing Organization, then this property should be populated. |
| **HealthcareService.category** |  |
| Short name | Broad category of service being performed or delivered |
| Definition | Identifies the broad category of service being performed or delivered. |
| Comment | Selecting a Service Category then determines the list of relevant service types that can be selected in the primary service type. |
| Synonym | service category |
| Binding Description | A category of the service(s) that could be provided. |
| **HealthcareService.type** |  |
| Short name | Type of service that may be delivered or performed |
| Definition | The specific type of service that may be delivered or performed. |
| Synonym | service type |
| Binding Description | Additional details about where the content was created (e.g. clinical specialty). |
| **HealthcareService.specialty** |  |
| Short name | Specialties handled by the HealthcareService |
| Definition | Collection of specialties handled by the service site. This is more of a medical term. |
| Binding Description | A specialty that a healthcare service may provide. |
| **HealthcareService.location** |  |
| Short name | Location(s) where service may be provided |
| Definition | The location(s) where this healthcare service may be provided. |
| **HealthcareService.name** |  |
| Short name | Description of service as presented to a consumer while searching |
| Definition | Further description of the service as it would be presented to a consumer while searching. |
| **HealthcareService.comment** |  |
| Short name | Additional description and/or any specific issues not covered elsewhere |
| Definition | Any additional description of the service and/or any specific issues not covered by the other attributes, which can be displayed as further detail under the serviceName. |
| Comment | Would expect that a user would not see this information on a search results, and it would only be available when viewing the complete details of the service. |
| **HealthcareService.extraDetails** |  |
| Short name | Extra details about the service that can't be placed in the other fields |
| Definition | Extra details about the service that can't be placed in the other fields. |
| **HealthcareService.photo** |  |
| Short name | Facilitates quick identification of the service |
| Definition | If there is a photo/symbol associated with this HealthcareService, it may be included here to facilitate quick identification of the service in a list. |
| **HealthcareService.telecom** |  |
| Short name | Contacts related to the healthcare service |
| Definition | List of contacts related to this specific healthcare service. |
| Comment | If this is empty, then refer to the location's contacts. |
| **HealthcareService.coverageArea** |  |
| Short name | Location(s) service is inteded for/available to |
| Definition | The location(s) that this service is available to (not where the service is provided). |
| Comment | The locations referenced by the coverage area can include both specific locations, including areas, and also conceptual domains too (mode = kind), such as a physical area (tri-state area) and some other attribute (covered by Example Care Organization). These types of Locations are often not managed by any specific organization. This could also include generic locations such as "in-home". |
| **HealthcareService.serviceProvisionCode** |  |
| Short name | Conditions under which service is available/offered |
| Definition | The code(s) that detail the conditions under which the healthcare service is available/offered. |
| Comment | The provision means being commissioned by, contractually obliged or financially sourced. Types of costings that may apply to this healthcare service, such if the service may be available for free, some discounts available, or fees apply. |
| Binding Description | The code(s) that detail the conditions under which the healthcare service is available/offered. |
| **HealthcareService.eligibility** |  |
| Short name | Specific eligibility requirements required to use the service |
| Definition | Does this service have specific eligibility requirements that need to be met in order to use the service? |
| Binding Description | Coded values underwhich a specific service is made available. |
| **HealthcareService.eligibilityNote** |  |
| Short name | Describes the eligibility conditions for the service |
| Definition | Describes the eligibility conditions for the service. |
| Comment | The description of service eligibility should, in general, not exceed one or two paragraphs. It should be sufficient for a prospective consumer to determine if they are likely to be eligible or not. Where eligibility requirements and conditions are complex, it may simply be noted that an eligibility assessment is required. Where eligibility is determined by an outside source, such as an Act of Parliament, this should be noted, preferably with a reference to a commonly available copy of the source document such as a web page. |
| **HealthcareService.programName** |  |
| Short name | Program Names that categorize the service |
| Definition | Program Names that can be used to categorize the service. |
| Comment | Programs are often defined externally to an Organization, commonly by governments; e.g. Home and Community Care Programs, Homeless Program, â€¦. |
| **HealthcareService.characteristic** |  |
| Short name | Collection of characteristics (attributes) |
| Definition | Collection of characteristics (attributes). |
| Comment | These could be such things as is wheelchair accessible. |
| Binding Description | A custom attribute that could be provided at a service (e.g. Wheelchair accessibiliy). |
| **HealthcareService.referralMethod** |  |
| Short name | Ways that the service accepts referrals |
| Definition | Ways that the service accepts referrals, if this is not provided then it is implied that no referral is required. |
| Binding Description | The methods of referral can be used when referring to a specific HealthCareService resource. |
| **HealthcareService.appointmentRequired** |  |
| Short name | If an appointment is required for access to this service |
| Definition | Indicates whether or not a prospective consumer will require an appointment for a particular service at a site to be provided by the Organization. Indicates if an appointment is required for access to this service. |
| **HealthcareService.availableTime** |  |
| Short name | Times the Service Site is available |
| Definition | A collection of times that the Service Site is available. |
| Comment | More detailed availability information may be provided in associated Schedule/Slot resources. |
| **HealthcareService.availableTime.daysOfWeek** |  |
| Definition | Indicates which days of the week are available between the start and end Times. |
| Binding Description | The days of the week. |
| **HealthcareService.availableTime.allDay** |  |
| Short name | Always available? e.g. 24 hour service |
| Definition | Is this always available? (hence times are irrelevant) e.g. 24 hour service. |
| **HealthcareService.availableTime.availableStartTime** |  |
| Short name | Opening time of day (ignored if allDay = true) |
| Definition | The opening time of day. Note: If the AllDay flag is set, then this time is ignored. |
| Comment | The timezone is expected to be for where this HealthcareService is provided at. |
| **HealthcareService.availableTime.availableEndTime** |  |
| Short name | Closing time of day (ignored if allDay = true) |
| Definition | The closing time of day. Note: If the AllDay flag is set, then this time is ignored. |
| Comment | The timezone is expected to be for where this HealthcareService is provided at. |
| **HealthcareService.notAvailable** |  |
| Short name | Not available during this time due to provided reason |
| Definition | The HealthcareService is not available during this period of time due to the provided reason. |
| **HealthcareService.notAvailable.description** |  |
| Short name | Reason presented to the user explaining why time not available |
| Definition | The reason that can be presented to the user as to why this time is not available. |
| **HealthcareService.notAvailable.during** |  |
| Short name | Service not availablefrom this date |
| Definition | Service is not available (seasonally or for a public holiday) from this date. |
| **HealthcareService.availabilityExceptions** |  |
| Short name | Description of availability exceptions |
| Definition | A description of site availability exceptions, e.g. public holiday availability. Succinctly describing all possible exceptions to normal site availability as details in the available Times and not available Times. |
| **HealthcareService.endpoint** |  |
| Short name | Technical endpoints providing access to services operated for the location |
| Definition | Technical endpoints providing access to services operated for the specific healthcare services defined at this resource. |
| Requirements | Organizations may have different systems covering different services at the different locations and need to be able to define the technical connection details for how to connect to them, and for what purpose. |

## http://hl7.org/fhir/StructureDefinition/Location

|  |  |
| --- | --- |
| **Description** | Base StructureDefinition for Location Resource |
| **Location** | Location |
| Short name | Details and position information for a physical place |
| Definition | Details and position information for a physical place where services are provided and resources and participants may be stored, found, contained or accommodated. |
| **Location.identifier** |  |
| Short name | Unique code or number identifying the location to its users |
| Definition | Unique code or number identifying the location to its users. |
| Requirements | Organization label locations in registries, need to keep track of those. |
| **Location.status** |  |
| Definition | The status property covers the general availability of the resource, not the current value which may be covered by the operationStatus, or by a schedule/slots if they are configured for the location. |
| Binding Description | Indicates whether the location is still in use. |
| **Location.operationalStatus** |  |
| Short name | The Operational status of the location (typically only for a bed/room) |
| Definition | The Operational status covers operation values most relevant to beds (but can also apply to rooms/units/chair/etc such as an isolation unit/dialisys chair). This typically covers concepts such as contamination, housekeeping and other activities like maintenance. |
| Binding Description | The operational status if the location (where typically a bed/room) |
| **Location.name** |  |
| Short name | Name of the location as used by humans |
| Definition | Name of the location as used by humans. Does not need to be unique. |
| Comment | If the name of an location changes, consider putting the old name in the alias column so that it can still be located through searches. |
| **Location.alias** |  |
| Short name | A list of alternate names that the location is known as, or was known as in the past |
| Definition | A list of alternate names that the location is known as, or was known as in the past. |
| Comment | There are no dates associated with the alias/historic names, as this is not intended to track when names were used, but to assist in searching so that older names can still result in identifying the location. |
| Requirements | Over time locations and organizations go through many changes and can be known by different names. For searching knowing previous names that the location was known by can be very useful. |
| **Location.description** |  |
| Short name | Additional details about the location that could be displayed as further information to identify the location beyond its name |
| Definition | Description of the Location, which helps in finding or referencing the place. |
| Requirements | Humans need additional information to verify a correct location has been identified. |
| **Location.mode** |  |
| Definition | Indicates whether a resource instance represents a specific location or a class of locations. |
| Requirements | When using a Location resource for scheduling or orders, we need to be able to refer to a class of Locations instead of a specific Location. |
| Binding Description | Indicates whether a resource instance represents a specific location or a class of locations. |
| **Location.type** |  |
| Short name | Type of function performed |
| Definition | Indicates the type of function performed at the location. |
| Binding Description | Indicates the type of function performed at the location. |
| **Location.telecom** |  |
| Short name | Contact details of the location |
| Definition | The contact details of communication devices available at the location. This can include phone numbers, fax numbers, mobile numbers, email addresses and web sites. |
| **Location.address** |  |
| Short name | Physical location |
| Definition | Physical location. |
| Comment | This was kept as 0..1 as there is no use property on the address, so wouldn't be able to identify different address types. |
| Requirements | If locations can be visited, we need to keep track of their address. |
| **Location.physicalType** |  |
| Short name | Physical form of the location |
| Definition | Physical form of the location, e.g. building, room, vehicle, road. |
| Requirements | For purposes of showing relevant locations in queries, we need to categorize locations. |
| Binding Description | Physical form of the location |
| **Location.position** |  |
| Short name | The absolute geographic location |
| Definition | The absolute geographic location of the Location, expressed using the WGS84 datum (This is the same co-ordinate system used in KML). |
| Requirements | For mobile applications and automated route-finding knowing the exact location of the Location is required. |
| **Location.position.longitude** |  |
| Short name | Longitude with WGS84 datum |
| Definition | Longitude. The value domain and the interpretation are the same as for the text of the longitude element in KML (see notes below). |
| **Location.position.latitude** |  |
| Short name | Latitude with WGS84 datum |
| Definition | Latitude. The value domain and the interpretation are the same as for the text of the latitude element in KML (see notes below). |
| **Location.position.altitude** |  |
| Short name | Altitude with WGS84 datum |
| Definition | Altitude. The value domain and the interpretation are the same as for the text of the altitude element in KML (see notes below). |
| **Location.managingOrganization** |  |
| Short name | Organization responsible for provisioning and upkeep |
| Definition | The organization responsible for the provisioning and upkeep of the location. |
| Comment | This can also be used as the part of the organization hierarchy where this location provides services. These services can be defined through the HealthcareService resource. |
| Requirements | Need to know who manages the location. |
| **Location.partOf** |  |
| Short name | Another Location this one is physically part of |
| Definition | Another Location which this Location is physically part of. |
| Requirements | For purposes of location, display and identification, knowing which locations are located within other locations is important. |
| **Location.endpoint** |  |
| Short name | Technical endpoints providing access to services operated for the location |
| Definition | Technical endpoints providing access to services operated for the location. |
| Requirements | Organizations may have different systems at different locations that provide various services and need to be able to define the technical connection details for how to connect to them, and for what purpose. |

## http://hl7.org/fhir/StructureDefinition/Organization

|  |  |
| --- | --- |
| **Description** | Base StructureDefinition for Organization Resource |
| **Organization** | Organization |
| Short name | A grouping of people or organizations with a common purpose |
| Definition | A formally or informally recognized grouping of people or organizations formed for the purpose of achieving some form of collective action. Includes companies, institutions, corporations, departments, community groups, healthcare practice groups, etc. |
| Constraint Text | The organization SHALL at least have a name or an id, and possibly more than one |
| **Organization.identifier** |  |
| Short name | Identifies this organization across multiple systems |
| Definition | Identifier for the organization that is used to identify the organization across multiple disparate systems. |
| Requirements | Organizations are known by a variety of ids. Some institutions maintain several, and most collect identifiers for exchange with other organizations concerning the organization. |
| **Organization.active** |  |
| Short name | Whether the organization's record is still in active use |
| Definition | Whether the organization's record is still in active use. |
| Comment | Default is true. This active flag is not intended to be used to mark an organizations as temporarily closed or under construction. Instead the Location(s) within the Organization should have the suspended status. If further details of the reason for the suspension are required, then an extension on this element should be used. |
| Requirements | Need a flag to indicate a record is no longer to be used and should generally be hidden for the user in the UI. |
| **Organization.type** |  |
| Short name | Kind of organization |
| Definition | The kind(s) of organization that this is. |
| Comment | Organizations can be corporations, wards, sections, clinical teams, government departments, etc. Note that code is generally a classifier of the type of organization; in many applications, codes are used to identity a particular organization (say, ward) as opposed to another of the same type - these are identifiers, not codes When considering if multiple types are appropriate, you should evaluate if child organizations would be a more appropriate use of the concept, as different types likely are in different sub-areas of the organization. This is most likely to be used where type values have orthogonal values, such as a religious, academic and medical center. We expect that some jurisdictions will profile this optionality to be a single cardinality. |
| Requirements | Need to be able to track the kind of organization that this is - different organization types have different uses. |
| Binding Description | Used to categorize the organization |
| **Organization.name** |  |
| Short name | Name used for the organization |
| Definition | A name associated with the organization. |
| Comment | If the name of an organization changes, consider putting the old name in the alias column so that it can still be located through searches. |
| Requirements | Need to use the name as the label of the organization. |
| **Organization.alias** |  |
| Short name | A list of alternate names that the organization is known as, or was known as in the past |
| Definition | A list of alternate names that the organization is known as, or was known as in the past. |
| Comment | There are no dates associated with the alias/historic names, as this is not intended to track when names were used, but to assist in searching so that older names can still result in identifying the organization. |
| Requirements | Over time locations and organizations go through many changes and can be known by different names. For searching knowing previous names that the organization was known by can be very useful. |
| **Organization.telecom** |  |
| Short name | A contact detail for the organization |
| Definition | A contact detail for the organization. |
| Comment | The use code home is not to be used. Note that these contacts are not the contact details of people who are employed by or represent the organization, but official contacts for the organization itself. |
| Requirements | Human contact for the organization. |
| Constraint Text | The telecom of an organization can never be of use 'home' |
| **Organization.address** |  |
| Short name | An address for the organization |
| Definition | An address for the organization. |
| Comment | Organization may have multiple addresses with different uses or applicable periods. The use code home is not to be used. |
| Requirements | May need to keep track of the organization's addresses for contacting, billing or reporting requirements. |
| Constraint Text | An address of an organization can never be of use 'home' |
| **Organization.partOf** |  |
| Short name | The organization of which this organization forms a part |
| Definition | The organization of which this organization forms a part. |
| Requirements | Need to be able to track the hierarchy of organizations within an organization. |
| **Organization.contact** |  |
| Short name | Contact for the organization for a certain purpose |
| Definition | Contact for the organization for a certain purpose. |
| Comment | Where multiple contacts for the same purpose are provided there is a standard extension that can be used to determine which one is the preferred contact to use. |
| Requirements | Need to keep track of assigned contact points within bigger organization. |
| **Organization.contact.purpose** |  |
| Short name | The type of contact |
| Definition | Indicates a purpose for which the contact can be reached. |
| Requirements | Need to distinguish between multiple contact persons. |
| Binding Description | The purpose for which you would contact a contact party |
| **Organization.contact.name** |  |
| Short name | A name associated with the contact |
| Definition | A name associated with the contact. |
| Requirements | Need to be able to track the person by name. |
| **Organization.contact.telecom** |  |
| Short name | Contact details (telephone, email, etc.) for a contact |
| Definition | A contact detail (e.g. a telephone number or an email address) by which the party may be contacted. |
| Requirements | People have (primary) ways to contact them in some way such as phone, email. |
| **Organization.contact.address** |  |
| Short name | Visiting or postal addresses for the contact |
| Definition | Visiting or postal addresses for the contact. |
| Requirements | May need to keep track of a contact party's address for contacting, billing or reporting requirements. |
| **Organization.endpoint** |  |
| Short name | Technical endpoints providing access to services operated for the organization |
| Definition | Technical endpoints providing access to services operated for the organization. |
| Requirements | Organizations have multiple systems that provide various services and need to be able to define the technical connection details for how to connect to them, and for what purpose. |

## http://hl7.org/fhir/StructureDefinition/Patient

|  |  |
| --- | --- |
| **Description** | Base StructureDefinition for Patient Resource |
| **Purpose** | Tracking patient is the center of the healthcare process. |
| **Patient** | Patient |
| Short name | Information about an individual or animal receiving health care services |
| Definition | Demographics and other administrative information about an individual or animal receiving care or other health-related services. |
| Synonym | SubjectOfCare Client Resident |
| **Patient.identifier** |  |
| Short name | An identifier for this patient |
| Definition | An identifier for this patient. |
| Requirements | Patients are almost always assigned specific numerical identifiers. |
| **Patient.active** |  |
| Short name | Whether this patient's record is in active use |
| Definition | Whether this patient record is in active use. |
| Comment | Default is true. If a record is inactive, and linked to an active record, then future patient/record updates should occur on the other patient. |
| Requirements | Need to be able to mark a patient record as not to be used because it was created in error. |
| **Patient.name** |  |
| Short name | A name associated with the patient |
| Definition | A name associated with the individual. |
| Comment | A patient may have multiple names with different uses or applicable periods. For animals, the name is a "HumanName" in the sense that is assigned and used by humans and has the same patterns. |
| Requirements | Need to be able to track the patient by multiple names. Examples are your official name and a partner name. |
| **Patient.telecom** |  |
| Short name | A contact detail for the individual |
| Definition | A contact detail (e.g. a telephone number or an email address) by which the individual may be contacted. |
| Comment | A Patient may have multiple ways to be contacted with different uses or applicable periods. May need to have options for contacting the person urgently and also to help with identification. The address may not go directly to the individual, but may reach another party that is able to proxy for the patient (i.e. home phone, or pet owner's phone). |
| Requirements | People have (primary) ways to contact them in some way such as phone, email. |
| **Patient.gender** |  |
| Definition | Administrative Gender - the gender that the patient is considered to have for administration and record keeping purposes. |
| Comment | The gender may not match the biological sex as determined by genetics, or the individual's preferred identification. Note that for both humans and particularly animals, there are other legitimate possibilities than M and F, though the vast majority of systems and contexts only support M and F. Systems providing decision support or enforcing business rules should ideally do this on the basis of Observations dealing with the specific gender aspect of interest (anatomical, chromosonal, social, etc.) However, because these observations are infrequently recorded, defaulting to the administrative gender is common practice. Where such defaulting occurs, rule enforcement should allow for the variation between administrative and biological, chromosonal and other gender aspects. For example, an alert about a hysterectomy on a male should be handled as a warning or overrideable error, not a "hard" error. |
| Requirements | Needed for identification of the individual, in combination with (at least) name and birth date. Gender of individual drives many clinical processes. |
| Binding Description | The gender of a person used for administrative purposes. |
| **Patient.birthDate** |  |
| Short name | The date of birth for the individual |
| Definition | The date of birth for the individual. |
| Comment | At least an estimated year should be provided as a guess if the real DOB is unknown There is a standard extension "patient-birthTime" available that should be used where Time is required (such as in maternaty/infant care systems). |
| Requirements | Age of the individual drives many clinical processes. |
| **Patient.deceased[x]** |  |
| Short name | Indicates if the individual is deceased or not |
| Definition | Indicates if the individual is deceased or not. |
| Comment | If there's no value in the instance it means there is no statement on whether or not the individual is deceased. Most systems will interpret the absence of a value as a sign of the person being alive. |
| Requirements | The fact that a patient is deceased influences the clinical process. Also, in human communication and relation management it is necessary to know whether the person is alive. |
| **Patient.address** |  |
| Short name | Addresses for the individual |
| Definition | Addresses for the individual. |
| Comment | Patient may have multiple addresses with different uses or applicable periods. |
| Requirements | May need to keep track of patient addresses for contacting, billing or reporting requirements and also to help with identification. |
| **Patient.maritalStatus** |  |
| Short name | Marital (civil) status of a patient |
| Definition | This field contains a patient's most recent marital (civil) status. |
| Requirements | Most, if not all systems capture it. |
| Binding Description | The domestic partnership status of a person. |
| **Patient.multipleBirth[x]** |  |
| Short name | Whether patient is part of a multiple birth |
| Definition | Indicates whether the patient is part of a multiple (bool) or indicates the actual birth order (integer). |
| Comment | Where the valueInteger is provided, the number is the birth number in the sequence. E.g. The middle birth in tripplets would be valueInteger=2 and the third born would have valueInteger=3 If a bool value was provided for this tripplets examle, then all 3 patient records would have valueBool=true (the ordering is not indicated). |
| Requirements | For disambiguation of multiple-birth children, especially relevant where the care provider doesn't meet the patient, such as labs. |
| **Patient.photo** |  |
| Short name | Image of the patient |
| Definition | Image of the patient. |
| Requirements | Many EHR systems have the capability to capture an image of the patient. Fits with newer social media usage too. |
| **Patient.contact** |  |
| Short name | A contact party (e.g. guardian, partner, friend) for the patient |
| Definition | A contact party (e.g. guardian, partner, friend) for the patient. |
| Comment | Contact covers all kinds of contact parties: family members, business contacts, guardians, caregivers. Not applicable to register pedigree and family ties beyond use of having contact. |
| Requirements | Need to track people you can contact about the patient. |
| Constraint Text | SHALL at least contain a contact's details or a reference to an organization |
| **Patient.contact.relationship** |  |
| Short name | The kind of relationship |
| Definition | The nature of the relationship between the patient and the contact person. |
| Requirements | Used to determine which contact person is the most relevant to approach, depending on circumstances. |
| Binding Description | The nature of the relationship between a patient and a contact person for that patient. |
| **Patient.contact.name** |  |
| Short name | A name associated with the contact person |
| Definition | A name associated with the contact person. |
| Requirements | Contact persons need to be identified by name, but it is uncommon to need details about multiple other names for that contact person. |
| **Patient.contact.telecom** |  |
| Short name | A contact detail for the person |
| Definition | A contact detail for the person, e.g. a telephone number or an email address. |
| Comment | Contact may have multiple ways to be contacted with different uses or applicable periods. May need to have options for contacting the person urgently, and also to help with identification. |
| Requirements | People have (primary) ways to contact them in some way such as phone, email. |
| **Patient.contact.address** |  |
| Short name | Address for the contact person |
| Definition | Address for the contact person. |
| Requirements | Need to keep track where the contact person can be contacted per postal mail or visited. |
| **Patient.contact.gender** |  |
| Definition | Administrative Gender - the gender that the contact person is considered to have for administration and record keeping purposes. |
| Requirements | Needed to address the person correctly. |
| Binding Description | The gender of a person used for administrative purposes. |
| **Patient.contact.organization** |  |
| Short name | Organization that is associated with the contact |
| Definition | Organization on behalf of which the contact is acting or for which the contact is working. |
| Requirements | For guardians or business related contacts, the organization is relevant. |
| **Patient.contact.period** |  |
| Short name | The period during which this contact person or organization is valid to be contacted relating to this patient |
| Definition | The period during which this contact person or organization is valid to be contacted relating to this patient. |
| **Patient.animal** |  |
| Short name | This patient is known to be an animal (non-human) |
| Definition | This patient is known to be an animal. |
| Comment | The animal element is labeled "Is Modifier" since patients may be non-human. Systems SHALL either handle patient details appropriately (e.g. inform users patient is not human) or reject declared animal records. The absense of the animal element does not imply that the patient is a human. If a system requires such a positive assertion that the patient is human, an extension will be required. (Do not use a species of homo-sapiens in animal species, as this would incorrectly infer that the patient is an animal). |
| Requirements | Many clinical systems are extended to care for animal patients as well as human. |
| **Patient.animal.species** |  |
| Short name | E.g. Dog, Cow |
| Definition | Identifies the high level taxonomic categorization of the kind of animal. |
| Comment | If the patient is non-human, at least a species SHALL be specified. Species SHALL be a widely recognised taxonomic classification. It may or may not be Linnaean taxonomy and may or may not be at the level of species. If the level is finer than species--such as a breed code--the code system used SHALL allow inference of the species. (The common example is that the word "Hereford" does not allow inference of the species Bos taurus, because there is a Hereford pig breed, but the SNOMED CT code for "Hereford Cattle Breed" does.). |
| Requirements | Need to know what kind of animal. |
| Binding Description | The species of an animal. |
| **Patient.animal.breed** |  |
| Short name | E.g. Poodle, Angus |
| Definition | Identifies the detailed categorization of the kind of animal. |
| Comment | Breed MAY be used to provide further taxonomic or non-taxonomic classification. It may involve local or proprietary designation--such as commercial strain--and/or additional information such as production type. |
| Requirements | May need to know the specific kind within the species. |
| Binding Description | The breed of an animal. |
| **Patient.animal.genderStatus** |  |
| Short name | E.g. Neutered, Intact |
| Definition | Indicates the current state of the animal's reproductive organs. |
| Requirements | Gender status can affect housing and animal behavior. |
| Binding Description | The state of the animal's reproductive organs. |
| **Patient.communication** |  |
| Short name | A list of Languages which may be used to communicate with the patient about his or her health |
| Definition | Languages which may be used to communicate with the patient about his or her health. |
| Comment | If no language is specified, this \*implies\* that the default local language is spoken. If you need to convey proficiency for multiple modes then you need multiple Patient.Communication associations. For animals, language is not a relevant field, and should be absent from the instance. If the Patient does not speak the default local language, then the Interpreter Required Standard can be used to explicitly declare that an interpreter is required. |
| Requirements | If a patient does not speak the local language, interpreters may be required, so languages spoken and proficiency is an important things to keep track of both for patient and other persons of interest. |
| **Patient.communication.language** |  |
| Short name | The language which can be used to communicate with the patient about his or her health |
| Definition | The ISO-639-1 alpha 2 code in lower case for the language, optionally followed by a hyphen and the ISO-3166-1 alpha 2 code for the region in upper case; e.g. "en" for English, or "en-US" for American English versus "en-EN" for England English. |
| Comment | The structure aa-BB with this exact casing is one the most widely used notations for locale. However not all systems actually code this but instead have it as free text. Hence CodeableConcept instead of code as the data type. |
| Requirements | Most systems in multilingual countries will want to convey language. Not all systems actually need the regional dialect. |
| Binding Description | A human language. |
| **Patient.communication.preferred** |  |
| Short name | Language preference indicator |
| Definition | Indicates whether or not the patient prefers this language (over other languages he masters up a certain level). |
| Comment | This language is specifically identified for communicating healthcare information. |
| Requirements | People that master multiple languages up to certain level may prefer one or more, i.e. feel more confident in communicating in a particular language making other languages sort of a fall back method. |
| **Patient.generalPractitioner** |  |
| Short name | Patient's nominated primary care provider |
| Definition | Patient's nominated care provider. |
| Comment | This may be the primary care provider (in a GP context), or it may be a patient nominated care manager in a community/disablity setting, or even organization that will provide people to perform the care provider roles. It is not to be used to record Care Teams, these should be in a CareTeam resource that may be linked to the CarePlan or EpisodeOfCare resources. |
| Synonym | careProvider |
| **Patient.managingOrganization** |  |
| Short name | Organization that is the custodian of the patient record |
| Definition | Organization that is the custodian of the patient record. |
| Comment | There is only one managing organization for a specific patient record. Other organizations will have their own Patient record, and may use the Link property to join the records together (or a Person resource which can include confidence ratings for the association). |
| Requirements | Need to know who recognizes this patient record, manages and updates it. |
| **Patient.link** |  |
| Short name | Link to another patient resource that concerns the same actual person |
| Definition | Link to another patient resource that concerns the same actual patient. |
| Comment | There is no assumption that linked patient records have mutual links. |
| Requirements | There are multiple usecases: \* Duplicate patient records due to the clerical errors associated with the difficulties of identifying humans consistently, and \* Distribution of patient information across multiple servers. |
| **Patient.link.other** |  |
| Short name | The other patient or related person resource that the link refers to |
| Definition | The other patient resource that the link refers to. |
| Comment | Referencing a RelatedPerson here removes the need to use a Person record to associate a Patient and RelatedPerson as the same individual. |
| **Patient.link.type** |  |
| Definition | The type of link between this patient resource and another patient resource. |
| Binding Description | The type of link between this patient resource and another patient resource. |

## http://hl7.org/fhir/StructureDefinition/Person

|  |  |
| --- | --- |
| **Description** | Base StructureDefinition for Person Resource |
| **Purpose** | Need to track persons potentially across multiple roles. |
| **Person** | Person |
| Short name | A generic person record |
| Definition | Demographics and administrative information about a person independent of a specific health-related context. |
| Comment | The Person resource does justice to person registries that keep track of persons regardless of their role. The Person resource is also a primary resource to point to for people acting in a particular role such as SubjectofCare, Practitioner, and Agent. Very few attributes are specific to any role and so Person is kept lean. Most attributes are expected to be tied to the role the Person plays rather than the Person himself. Examples of that are Guardian (SubjectofCare), ContactParty (SubjectOfCare, Practitioner), and multipleBirthInd (SubjectofCare). |
| **Person.identifier** |  |
| Short name | A human identifier for this person |
| Definition | Identifier for a person within a particular scope. |
| Requirements | People are known by a variety of ids. Some institutions maintain several, and most collect identifiers for exchange with other organizations concerning the person. Examples are national person identifier and local identifier. |
| **Person.name** |  |
| Short name | A name associated with the person |
| Definition | A name associated with the person. |
| Comment | Person may have multiple names with different uses or applicable periods. |
| Requirements | Need to be able to track the person by multiple names. Examples are your official name and a partner name. |
| **Person.telecom** |  |
| Short name | A contact detail for the person |
| Definition | A contact detail for the person, e.g. a telephone number or an email address. |
| Comment | Person may have multiple ways to be contacted with different uses or applicable periods. May need to have options for contacting the person urgently, and also to help with identification. |
| Requirements | People have (primary) ways to contact them in some way such as phone, email. |
| **Person.gender** |  |
| Definition | Administrative Gender. |
| Comment | The gender may not match the biological sex as determined by genetics, or the individual's preferred identification. Note that for both humans and particularly animals, there are other legitimate possibilities than M and F, though the vast majority of systems and contexts only support M and F. |
| Requirements | Needed for identification of the person, in combination with (at least) name and birth date. Gender of person drives many clinical processes. |
| Binding Description | The gender of a person used for administrative purposes. |
| **Person.birthDate** |  |
| Short name | The date on which the person was born |
| Definition | The birth date for the person. |
| Comment | At least an estimated year should be provided as a guess if the real DOB is unknown. |
| Requirements | Age of person drives many clinical processes, and is often used in performing identification of the person. Times are not included so as to not confuse things with potential timezone issues. |
| **Person.address** |  |
| Short name | One or more addresses for the person |
| Definition | One or more addresses for the person. |
| Comment | Person may have multiple addresses with different uses or applicable periods. |
| Requirements | May need to keep track of person's addresses for contacting, billing or reporting requirements and also to help with identification. |
| **Person.photo** |  |
| Short name | Image of the person |
| Definition | An image that can be displayed as a thumbnail of the person to enhance the identification of the individual. |
| **Person.managingOrganization** |  |
| Short name | The organization that is the custodian of the person record |
| Definition | The organization that is the custodian of the person record. |
| Requirements | Need to know who recognizes this person record, manages and updates it. |
| **Person.active** |  |
| Short name | This person's record is in active use |
| Definition | Whether this person's record is in active use. |
| Requirements | Need to be able to mark a person record as not to be used because it was created in error. |
| **Person.link** |  |
| Short name | Link to a resource that concerns the same actual person |
| Definition | Link to a resource that concerns the same actual person. |
| **Person.link.target** |  |
| Short name | The resource to which this actual person is associated |
| Definition | The resource to which this actual person is associated. |
| **Person.link.assurance** |  |
| Definition | Level of assurance that this link is actually associated with the target resource. |
| Binding Description | The level of confidence that this link represents the same actual person, based on NIST Authentication Levels. |

## http://hl7.org/fhir/StructureDefinition/Practitioner

|  |  |
| --- | --- |
| **Description** | Base StructureDefinition for Practitioner Resource |
| **Purpose** | Need to track doctors, staff, locums etc. for both healthcare practitioners, funders, etc. |
| **Practitioner** | Practitioner |
| Short name | A person with a formal responsibility in the provisioning of healthcare or related services |
| Definition | A person who is directly or indirectly involved in the provisioning of healthcare. |
| Comment | Note that a cab driver no longer fits the bill. You probably would be interested in the organization rather than the individual? |
| **Practitioner.identifier** |  |
| Short name | A identifier for the person as this agent |
| Definition | An identifier that applies to this person in this role. |
| Requirements | Often, specific identities are assigned for the agent. |
| **Practitioner.active** |  |
| Short name | Whether this practitioner's record is in active use |
| Definition | Whether this practitioner's record is in active use. |
| Comment | Default is true. If the practitioner is not in use by one organization, then it should mark the period on the PractitonerRole with an end date (even if they are active) as they may be active in another role. |
| Requirements | Need to be able to mark a practitioner record as not to be used because it was created in error. |
| **Practitioner.name** |  |
| Short name | The name(s) associated with the practitioner |
| Definition | The name(s) associated with the practitioner. |
| Comment | The selection of the use property should ensure that there is a single usual name specified, and others use the nickname (alias), old, or other values as appropriate. In general select the value to be used in the ResourceReference.display based on this: 1. There is more than 1 name 2. Use = usual 3. Period is current to the date of the usage 4. Use = official 5. Other order as decided by internal business rules. |
| Requirements | The name(s) that a Practitioner is known by. Where there are multiple, the name that the practitioner is usually known as should be used in the display. |
| **Practitioner.telecom** |  |
| Short name | A contact detail for the practitioner (that apply to all roles) |
| Definition | A contact detail for the practitioner, e.g. a telephone number or an email address. |
| Comment | Person may have multiple ways to be contacted with different uses or applicable periods. May need to have options for contacting the person urgently, and also to help with identification These typically will have home numbers, or mobile numbers that are not role specific. |
| Requirements | Need to know how to reach a practitioner independent to any roles the practitioner may have. |
| **Practitioner.address** |  |
| Short name | Address(es) of the practitioner that are not role specific (typically home address) |
| Definition | Address(es) of the practitioner that are not role specific (typically home address). Work addresses are not typically entered in this property as they are usually role dependent. |
| Comment | The PractitionerRole does not have an address value on it, as it is expected that the location property be used for this purpose (which has an address). |
| Requirements | The home/mailing address of the practitioner is often required for employee administration purposes, and also for some rostering services where the start point (practitioners home) can be used in calculations. |
| **Practitioner.gender** |  |
| Definition | Administrative Gender - the gender that the person is considered to have for administration and record keeping purposes. |
| Requirements | Needed to address the person correctly. |
| Binding Description | The gender of a person used for administrative purposes. |
| **Practitioner.birthDate** |  |
| Short name | The date on which the practitioner was born |
| Definition | The date of birth for the practitioner. |
| Requirements | Needed for identification. |
| **Practitioner.photo** |  |
| Short name | Image of the person |
| Definition | Image of the person. |
| Requirements | Many EHR systems have the capability to capture an image of patients and personnel. Fits with newer social media usage too. |
| **Practitioner.qualification** |  |
| Short name | Qualifications obtained by training and certification |
| Definition | Qualifications obtained by training and certification. |
| **Practitioner.qualification.identifier** |  |
| Short name | An identifier for this qualification for the practitioner |
| Definition | An identifier that applies to this person's qualification in this role. |
| Requirements | Often, specific identities are assigned for the qualification. |
| **Practitioner.qualification.code** |  |
| Short name | Coded representation of the qualification |
| Definition | Coded representation of the qualification. |
| Binding Description | Specific qualification the practitioner has to provide a service |
| **Practitioner.qualification.period** |  |
| Short name | Period during which the qualification is valid |
| Definition | Period during which the qualification is valid. |
| Requirements | Qualifications are often for a limited period of time, and can be revoked. |
| **Practitioner.qualification.issuer** |  |
| Short name | Organization that regulates and issues the qualification |
| Definition | Organization that regulates and issues the qualification. |
| **Practitioner.communication** |  |
| Short name | A language the practitioner is able to use in patient communication |
| Definition | A language the practitioner is able to use in patient communication. |
| Comment | The structure aa-BB with this exact casing is one the most widely used notations for locale. However not all systems actually code this but instead have it as free text. Hence CodeableConcept instead of code as the data type. |
| Requirements | Knowing which language a practitioner speaks can help in facilitating communication with patients. |
| Binding Description | A human language. |

## http://hl7.org/fhir/StructureDefinition/PractitionerRole

|  |  |
| --- | --- |
| **Description** | Base StructureDefinition for PractitionerRole Resource |
| **Purpose** | Need to track services that a healthcare provider is able to provide at an organization's location, and the services that they can perform there. |
| **PractitionerRole** | Practitioner Role |
| Short name | Roles/organizations the practitioner is associated with |
| Definition | A specific set of Roles/Locations/specialties/services that a practitioner may perform at an organization for a period of time. |
| **PractitionerRole.identifier** |  |
| Short name | Business Identifiers that are specific to a role/location |
| Definition | Business Identifiers that are specific to a role/location. |
| Requirements | Often, specific identities are assigned for the agent. |
| **PractitionerRole.active** |  |
| Short name | Whether this practitioner's record is in active use |
| Definition | Whether this practitioner's record is in active use. |
| Comment | Default is true. If the practitioner is not in use by one organization, then it should mark the period on the PractitonerRole with an end date (even if they are active) as they may be active in another role. |
| Requirements | Need to be able to mark a practitioner record as not to be used because it was created in error. |
| **PractitionerRole.period** |  |
| Short name | The period during which the practitioner is authorized to perform in these role(s) |
| Definition | The period during which the person is authorized to act as a practitioner in these role(s) for the organization. |
| Requirements | Even after the agencies is revoked, the fact that it existed must still be recorded. |
| **PractitionerRole.practitioner** |  |
| Short name | Practitioner that is able to provide the defined services for the organation |
| Definition | Practitioner that is able to provide the defined services for the organation. |
| **PractitionerRole.organization** |  |
| Short name | Organization where the roles are available |
| Definition | The organization where the Practitioner performs the roles associated. |
| **PractitionerRole.code** |  |
| Short name | Roles which this practitioner may perform |
| Definition | Roles which this practitioner is authorized to perform for the organization. |
| Comment | A person may have more than one role. At least one role is required. |
| Requirements | Need to know what authority the practitioner has - what can they do? |
| Binding Description | The role a person plays representing an organization |
| **PractitionerRole.specialty** |  |
| Short name | Specific specialty of the practitioner |
| Definition | Specific specialty of the practitioner. |
| Binding Description | Specific specialty associated with the agency |
| **PractitionerRole.location** |  |
| Short name | The location(s) at which this practitioner provides care |
| Definition | The location(s) at which this practitioner provides care. |
| **PractitionerRole.healthcareService** |  |
| Short name | The list of healthcare services that this worker provides for this role's Organization/Location(s) |
| Definition | The list of healthcare services that this worker provides for this role's Organization/Location(s). |
| **PractitionerRole.telecom** |  |
| Short name | Contact details that are specific to the role/location/service |
| Definition | Contact details that are specific to the role/location/service. |
| Requirements | Often practitioners have a dedicated line for each location (or service) that they work at, and need to be able to define separate contact details for each of these. |
| **PractitionerRole.availableTime** |  |
| Short name | Times the Service Site is available |
| Definition | A collection of times that the Service Site is available. |
| Comment | More detailed availability information may be provided in associated Schedule/Slot resources. |
| **PractitionerRole.availableTime.daysOfWeek** |  |
| Definition | Indicates which days of the week are available between the start and end Times. |
| Binding Description | The days of the week. |
| **PractitionerRole.availableTime.allDay** |  |
| Short name | Always available? e.g. 24 hour service |
| Definition | Is this always available? (hence times are irrelevant) e.g. 24 hour service. |
| **PractitionerRole.availableTime.availableStartTime** |  |
| Short name | Opening time of day (ignored if allDay = true) |
| Definition | The opening time of day. Note: If the AllDay flag is set, then this time is ignored. |
| Comment | The timezone is expected to be for where this HealthcareService is provided at. |
| **PractitionerRole.availableTime.availableEndTime** |  |
| Short name | Closing time of day (ignored if allDay = true) |
| Definition | The closing time of day. Note: If the AllDay flag is set, then this time is ignored. |
| Comment | The timezone is expected to be for where this HealthcareService is provided at. |
| **PractitionerRole.notAvailable** |  |
| Short name | Not available during this time due to provided reason |
| Definition | The HealthcareService is not available during this period of time due to the provided reason. |
| **PractitionerRole.notAvailable.description** |  |
| Short name | Reason presented to the user explaining why time not available |
| Definition | The reason that can be presented to the user as to why this time is not available. |
| **PractitionerRole.notAvailable.during** |  |
| Short name | Service not availablefrom this date |
| Definition | Service is not available (seasonally or for a public holiday) from this date. |
| **PractitionerRole.availabilityExceptions** |  |
| Short name | Description of availability exceptions |
| Definition | A description of site availability exceptions, e.g. public holiday availability. Succinctly describing all possible exceptions to normal site availability as details in the available Times and not available Times. |
| **PractitionerRole.endpoint** |  |
| Short name | Technical endpoints providing access to services operated for the practitioner with this role |
| Definition | Technical endpoints providing access to services operated for the practitioner with this role. |
| Requirements | Organizations have multiple systems that provide various services and ,ay also be different for practitioners too. So the endpoint satisfies the need to be able to define the technical connection details for how to connect to them, and for what purpose. |

## http://hl7.org/fhir/StructureDefinition/RelatedPerson

|  |  |
| --- | --- |
| **Description** | Base StructureDefinition for RelatedPerson Resource |
| **Purpose** | Need to track persons related to the patient or the healthcare process. |
| **RelatedPerson** | Related Person |
| Short name | An person that is related to a patient, but who is not a direct target of care |
| Definition | Information about a person that is involved in the care for a patient, but who is not the target of healthcare, nor has a formal responsibility in the care process. |
| **RelatedPerson.identifier** |  |
| Short name | A human identifier for this person |
| Definition | Identifier for a person within a particular scope. |
| Requirements | People are known by a variety of ids. Some institutions maintain several, and most collect identifiers for exchange with other organizations concerning the patient. Examples are national person identifier and local identifier. |
| **RelatedPerson.active** |  |
| Short name | Whether this related person's record is in active use |
| Definition | Whether this related person record is in active use. |
| Requirements | Need to be able to mark a related person record as not to be used, such as if it was created in error. |
| **RelatedPerson.patient** |  |
| Short name | The patient this person is related to |
| Definition | The patient this person is related to. |
| Requirements | We need to know which patient this RelatedPerson is related to. |
| **RelatedPerson.relationship** |  |
| Short name | The nature of the relationship |
| Definition | The nature of the relationship between a patient and the related person. |
| Requirements | We need to know the relationship with the patient since it influences the interpretation of the information attributed to this person. |
| Binding Description | The nature of the relationship between a patient and the related person |
| **RelatedPerson.name** |  |
| Short name | A name associated with the person |
| Definition | A name associated with the person. |
| Requirements | Related persons need to be identified by name, but it is uncommon to need details about multiple other names for that person. |
| **RelatedPerson.telecom** |  |
| Short name | A contact detail for the person |
| Definition | A contact detail for the person, e.g. a telephone number or an email address. |
| Comment | Person may have multiple ways to be contacted with different uses or applicable periods. May need to have options for contacting the person urgently, and also to help with identification. |
| Requirements | People have (primary) ways to contact them in some way such as phone, email. |
| **RelatedPerson.gender** |  |
| Definition | Administrative Gender - the gender that the person is considered to have for administration and record keeping purposes. |
| Requirements | Needed for identification of the person, in combination with (at least) name and birth date. |
| Binding Description | The gender of a person used for administrative purposes. |
| **RelatedPerson.birthDate** |  |
| Short name | The date on which the related person was born |
| Definition | The date on which the related person was born. |
| **RelatedPerson.address** |  |
| Short name | Address where the related person can be contacted or visited |
| Definition | Address where the related person can be contacted or visited. |
| Requirements | Need to keep track where the related person can be contacted per postal mail or visited. |
| **RelatedPerson.photo** |  |
| Short name | Image of the person |
| Definition | Image of the person. |
| Requirements | Many EHR systems have the capability to capture an image of persons. Fits with newer social media usage too. |
| **RelatedPerson.period** |  |
| Short name | Period of time that this relationship is considered valid |
| Definition | The period of time that this relationship is considered to be valid. If there are no dates defined, then the interval is unknown. |

## http://hl7.org/fhir/StructureDefinition/Schedule

|  |  |
| --- | --- |
| **Description** | Base StructureDefinition for Schedule Resource |
| **Schedule** | Schedule |
| Short name | A container for slots of time that may be available for booking appointments |
| Definition | A container for slots of time that may be available for booking appointments. |
| Synonym | Availability |
| **Schedule.identifier** |  |
| Short name | External Ids for this item |
| Definition | External Ids for this item. |
| **Schedule.active** |  |
| Short name | Whether this schedule is in active use |
| Definition | Whether this schedule record is in active use, or should not be used (such as was entered in error). |
| **Schedule.serviceCategory** |  |
| Short name | A broad categorisation of the service that is to be performed during this appointment |
| Definition | A broad categorisation of the service that is to be performed during this appointment. |
| **Schedule.serviceType** |  |
| Short name | The specific service that is to be performed during this appointment |
| Definition | The specific service that is to be performed during this appointment. |
| **Schedule.specialty** |  |
| Short name | The specialty of a practitioner that would be required to perform the service requested in this appointment |
| Definition | The specialty of a practitioner that would be required to perform the service requested in this appointment. |
| Binding Description | Additional details about where the content was created (e.g. clinical specialty) |
| **Schedule.actor** |  |
| Short name | The resource this Schedule resource is providing availability information for. These are expected to usually be one of HealthcareService, Location, Practitioner, PractitionerRole, Device, Patient or RelatedPerson |
| Definition | The resource this Schedule resource is providing availability information for. These are expected to usually be one of HealthcareService, Location, Practitioner, PractitionerRole, Device, Patient or RelatedPerson. |
| Comment | The capacity to support multiple referenced resource types should be used in cases where the specific resources themselves cannot be scheduled without the other, and thus only make sense to the system exposing them as a group. Common examples of this are where the combination of a pracitioner and a room(location) are always required by a system. |
| **Schedule.planningHorizon** |  |
| Short name | The period of time that the slots that are attached to this Schedule resource cover (even if none exist). These cover the amount of time that an organization's planning horizon; the interval for which they are currently accepting appointments. This does not define a "template" for planning outside these dates |
| Definition | The period of time that the slots that are attached to this Schedule resource cover (even if none exist). These cover the amount of time that an organization's planning horizon; the interval for which they are currently accepting appointments. This does not define a "template" for planning outside these dates. |
| **Schedule.comment** |  |
| Short name | Comments on the availability to describe any extended information. Such as custom constraints on the slots that may be associated |
| Definition | Comments on the availability to describe any extended information. Such as custom constraints on the slots that may be associated. |

## http://hl7.org/fhir/StructureDefinition/Slot

|  |  |
| --- | --- |
| **Description** | Base StructureDefinition for Slot Resource |
| **Slot** | Slot |
| Short name | A slot of time on a schedule that may be available for booking appointments |
| Definition | A slot of time on a schedule that may be available for booking appointments. |
| **Slot.identifier** |  |
| Short name | External Ids for this item |
| Definition | External Ids for this item. |
| **Slot.serviceCategory** |  |
| Short name | A broad categorisation of the service that is to be performed during this appointment |
| Definition | A broad categorisation of the service that is to be performed during this appointment. |
| **Slot.serviceType** |  |
| Short name | The type of appointments that can be booked into this slot (ideally this would be an identifiable service - which is at a location, rather than the location itself). If provided then this overrides the value provided on the availability resource |
| Definition | The type of appointments that can be booked into this slot (ideally this would be an identifiable service - which is at a location, rather than the location itself). If provided then this overrides the value provided on the availability resource. |
| **Slot.specialty** |  |
| Short name | The specialty of a practitioner that would be required to perform the service requested in this appointment |
| Definition | The specialty of a practitioner that would be required to perform the service requested in this appointment. |
| Binding Description | Additional details about where the content was created (e.g. clinical specialty). |
| **Slot.appointmentType** |  |
| Short name | The style of appointment or patient that may be booked in the slot (not service type) |
| Definition | The style of appointment or patient that may be booked in the slot (not service type). |
| **Slot.schedule** |  |
| Short name | The schedule resource that this slot defines an interval of status information |
| Definition | The schedule resource that this slot defines an interval of status information. |
| **Slot.status** |  |
| Definition | busy | free | busy-unavailable | busy-tentative | entered-in-error. |
| Binding Description | The free/busy status of the slot. |
| **Slot.start** |  |
| Short name | Date/Time that the slot is to begin |
| Definition | Date/Time that the slot is to begin. |
| **Slot.end** |  |
| Short name | Date/Time that the slot is to conclude |
| Definition | Date/Time that the slot is to conclude. |
| **Slot.overbooked** |  |
| Short name | This slot has already been overbooked, appointments are unlikely to be accepted for this time |
| Definition | This slot has already been overbooked, appointments are unlikely to be accepted for this time. |
| Meaning when missing | If overbooked is missing, systems may assume that there are still appointments available |
| **Slot.comment** |  |
| Short name | Comments on the slot to describe any extended information. Such as custom constraints on the slot |
| Definition | Comments on the slot to describe any extended information. Such as custom constraints on the slot. |

# Patient Care

## http://hl7.org/fhir/StructureDefinition/AllergyIntolerance

|  |  |
| --- | --- |
| **Description** | Base StructureDefinition for AllergyIntolerance Resource |
| **Purpose** | To record a clinical assessment of a propensity, or potential risk to an individual, of an adverse reaction upon future exposure to the specified substance, or class of substance. |
| **AllergyIntolerance** | Allergy Intolerance |
| Short name | Allergy or Intolerance (generally: Risk of adverse reaction to a substance) |
| Definition | Risk of harmful or undesirable, physiological response which is unique to an individual and associated with exposure to a substance. |
| Comment | Substances include, but are not limited to: a therapeutic substance administered correctly at an appropriate dosage for the individual; food; material derived from plants or animals; or venom from insect stings. |
| Synonym | Allergy |
| Synonym | Intolerance |
| Synonym | Adverse Reaction |
| Constraint Text | AllergyIntolerance.clinicalStatus SHALL be present if verificationStatus is not entered-in-error. |
| Constraint Text | AllergyIntolerance.clinicalStatus SHALL NOT be present if verification Status is entered-in-error |
| **AllergyIntolerance.identifier** |  |
| Short name | External ids for this item |
| Definition | This records identifiers associated with this allergy/intolerance concern that are defined by business processes and/or used to refer to it when a direct URL reference to the resource itself is not appropriate (e.g. in CDA documents, or in written / printed documentation). |
| **AllergyIntolerance.clinicalStatus** |  |
| Definition | The clinical status of the allergy or intolerance. |
| Binding Description | The clinical status of the allergy or intolerance. |
| **AllergyIntolerance.verificationStatus** |  |
| Definition | Assertion about certainty associated with the propensity, or potential risk, of a reaction to the identified substance (including pharmaceutical product). |
| Comment | Decision support would typically raise alerts for 'confirmed' and 'unconfirmed' and ignore a 'refuted' reaction. In particular, 'refuted' may be useful for reconciliation of the Adverse Reaction List. |
| Binding Description | Assertion about certainty associated with a propensity, or potential risk, of a reaction to the identified substance. |
| **AllergyIntolerance.type** |  |
| Definition | Identification of the underlying physiological mechanism for the reaction risk. |
| Comment | Allergic (typically immune-mediated) reactions have been traditionally regarded as an indicator for potential escalation to significant future risk. Contemporary knowledge suggests that some reactions previously thought to be immune-mediated are, in fact, non-immune, but in some cases can still pose a life threatening risk. It is acknowledged that many clinicians may not be in a position to distinguish the mechanism of a particular reaction. Often the term "allergy" is used rather generically and may overlap with the use of "intolerance" - in practice the boundaries between these two concepts may not be well-defined or understood. This data element is included nevertheless, because many legacy systems have captured this attribute. Immunologic testing may provide supporting evidence for the basis of the reaction and the causative substance, but no tests are 100% sensitive or specific for sensitivity to a particular substance. If, as is commonly the case, it is unclear whether the reaction is due to an allergy or an intolerance, then the type element should be omitted from the resource. |
| Synonym | Category |
| Synonym | Class |
| Binding Description | Identification of the underlying physiological mechanism for a Reaction Risk. |
| **AllergyIntolerance.category** |  |
| Definition | Category of the identified substance. |
| Comment | This data element has been included because it is currently being captured in some clinical systems. This data can be derived from the substance where coding systems are used, and is effectively redundant in that situation. When searching on category, consider the implications of AllergyIntolerance resources without a category. For example, when searching on category = medication, medication allergies that don't have a category valued will not be returned. Refer to [search](search.html) for more information on how to search category with a :missing modifier to get allergies that don't have a category. Additionally, category should be used with caution because category can be subjective based on the sender. |
| Synonym | Category |
| Synonym | Type |
| Synonym | Reaction Type |
| Synonym | Class |
| Binding Description | Category of an identified substance. |
| **AllergyIntolerance.criticality** |  |
| Definition | Estimate of the potential clinical harm, or seriousness, of the reaction to the identified substance. |
| Comment | The default criticality value for any propensity to an adverse reaction should be 'Low Risk', indicating at the very least a relative contraindication to deliberate or voluntary exposure to the substance. 'High Risk' is flagged if the clinician has identified a propensity for a more serious or potentially life-threatening reaction, such as anaphylaxis, and implies an absolute contraindication to deliberate or voluntary exposure to the substance. If this element is missing, the criticality is unknown (though it may be known elsewhere). Systems that capture a severity at the condition level are actually representing the concept of criticality whereas the severity documented at the reaction level is representing the true reaction severity. Existing systems that are capturing both condition criticality and reaction severity may use the term "severity" to represent both. Criticality is the worst it could be in the future (i.e. situation-agnostic) whereas severity is situation-dependent. |
| Synonym | Severity |
| Synonym | Seriousness |
| Synonym | Contra-indication |
| Synonym | Risk |
| Binding Description | Estimate of the potential clinical harm, or seriousness, of a reaction to an identified substance. |
| **AllergyIntolerance.code** |  |
| Short name | Code that identifies the allergy or intolerance |
| Definition | Code for an allergy or intolerance statement (either a positive or a negated/excluded statement). This may be a code for a substance or pharmaceutical product that is considered to be responsible for the adverse reaction risk (e.g., "Latex"), an allergy or intolerance condition (e.g., "Latex allergy"), or a negated/excluded code for a specific substance or class (e.g., "No latex allergy") or a general or categorical negated statement (e.g., "No known allergy", "No known drug allergies"). |
| Comment | It is strongly recommended that this element be populated using a terminology, where possible. For example, some terminologies used include RxNorm, SNOMED CT, DM+D, NDFRT, ICD-9, IDC-10, UNI, ATC and CPT. Plain text should only be used if there is no appropriate terminology available. Additional details can be specified in the text. When a substance or product code is specified for the 'code' element, the "default" semantic context is that this is a positive statement of an allergy or intolerance (depending on the value of the 'type' element, if present) condition to the specified substance/product. In the corresponding SNOMED CT allergy model, the specified substance/product is the target (destination) of the "Causative agent" relationship. The 'substanceExposureRisk' extension is available as a structured and more flexible alternative to the 'code' element for making positive or negative allergy or intolerance statements. This extension provides the capability to make "no known allergy" (or "no risk of adverse reaction") statements regarding any coded substance/product (including cases when a pre-coordinated "no allergy to x" concept for that substance/product does not exist). If the 'substanceExposureRisk' extension is present, the AllergyIntolerance.code element SHALL be omitted. |
| Synonym | Code |
| Binding Description | Type of the substance/product, allergy or intolerance condition, or negation/exclusion codes for reporting no known allergies. |
| **AllergyIntolerance.patient** |  |
| Short name | Who the sensitivity is for |
| Definition | The patient who has the allergy or intolerance. |
| Synonym | Patient |
| **AllergyIntolerance.onset[x]** |  |
| Short name | When allergy or intolerance was identified |
| Definition | Estimated or actual date, date-time, or age when allergy or intolerance was identified. |
| **AllergyIntolerance.assertedDate** |  |
| Short name | Date record was believed accurate |
| Definition | The date on which the existance of the AllergyIntolerance was first asserted or acknowledged. |
| **AllergyIntolerance.recorder** |  |
| Short name | Who recorded the sensitivity |
| Definition | Individual who recorded the record and takes responsibility for its content. |
| Synonym | Author |
| **AllergyIntolerance.asserter** |  |
| Short name | Source of the information about the allergy |
| Definition | The source of the information about the allergy that is recorded. |
| Comment | The recorder takes repsonsibility for the content, but can reference the source from where they got it. |
| Synonym | Source |
| Synonym | Informant |
| **AllergyIntolerance.lastOccurrence** |  |
| Short name | Date(/time) of last known occurrence of a reaction |
| Definition | Represents the date and/or time of the last known occurrence of a reaction event. |
| Comment | This date may be replicated by one of the Onset of Reaction dates. Where a textual representation of the date of last occurrence is required e.g. 'In Childhood, '10 years ago' the Comment element should be used. |
| **AllergyIntolerance.note** |  |
| Short name | Additional text not captured in other fields |
| Definition | Additional narrative about the propensity for the Adverse Reaction, not captured in other fields. |
| Comment | For example: including reason for flagging a seriousness of 'High Risk'; and instructions related to future exposure or administration of the substance, such as administration within an Intensive Care Unit or under corticosteroid cover. The notes should be related to an allergy or intolerance as a condition in general and not related to any particular episode of it. For episode notes and descriptions, use AllergyIntolerance.event.description and AllergyIntolerance.event.notes. |
| **AllergyIntolerance.reaction** |  |
| Short name | Adverse Reaction Events linked to exposure to substance |
| Definition | Details about each adverse reaction event linked to exposure to the identified substance. |
| **AllergyIntolerance.reaction.substance** |  |
| Short name | Specific substance or pharmaceutical product considered to be responsible for event |
| Definition | Identification of the specific substance (or pharmaceutical product) considered to be responsible for the Adverse Reaction event. Note: the substance for a specific reaction may be different from the substance identified as the cause of the risk, but it must be consistent with it. For instance, it may be a more specific substance (e.g. a brand medication) or a composite product that includes the identified substance. It must be clinically safe to only process the 'code' and ignore the 'reaction.substance'. |
| Comment | Coding of the specific substance (or pharmaceutical product) with a terminology capable of triggering decision support should be used wherever possible. The 'code' element allows for the use of a specific substance or pharmaceutical product, or a group or class of substances. In the case of an allergy or intolerance to a class of substances, (for example, "penicillins"), the 'reaction.substance' element could be used to code the specific substance that was identifed as having caused the reaction (for example, "amoxycillin"). Duplication of the value in the 'code' and 'reaction.substance' elements is acceptable when a specific substance has been recorded in 'code'. |
| Binding Description | Codes defining the type of the substance (including pharmaceutical products). |
| **AllergyIntolerance.reaction.manifestation** |  |
| Short name | Clinical symptoms/signs associated with the Event |
| Definition | Clinical symptoms and/or signs that are observed or associated with the adverse reaction event. |
| Comment | Manifestation can be expressed as a single word, phrase or brief description. For example: nausea, rash or no reaction. It is preferable that manifestation should be coded with a terminology, where possible. The values entered here may be used to display on an application screen as part of a list of adverse reactions, as recommended in the UK NHS CUI guidelines. Terminologies commonly used include, but are not limited to, SNOMED CT or ICD10. |
| Synonym | Symptoms |
| Synonym | Signs |
| Binding Description | Clinical symptoms and/or signs that are observed or associated with an Adverse Reaction Event. |
| **AllergyIntolerance.reaction.description** |  |
| Short name | Description of the event as a whole |
| Definition | Text description about the reaction as a whole, including details of the manifestation if required. |
| Comment | Use the description to provide any details of a particular event of the occurred reaction such as circumstances, reaction specifics, what happened before/after. Information, related to the event, but not describing a particular care should be captured in the comment field. For example: at the age of four, the patient was given penicillin for strep throat and subsequently developed severe hives. |
| Synonym | Narrative |
| Synonym | Text |
| **AllergyIntolerance.reaction.onset** |  |
| Short name | Date(/time) when manifestations showed |
| Definition | Record of the date and/or time of the onset of the Reaction. |
| **AllergyIntolerance.reaction.severity** |  |
| Definition | Clinical assessment of the severity of the reaction event as a whole, potentially considering multiple different manifestations. |
| Comment | It is acknowledged that this assessment is very subjective. There may be some some specific practice domains where objective scales have been applied. Objective scales can be included in this model as extensions. |
| Binding Description | Clinical assessment of the severity of a reaction event as a whole, potentially considering multiple different manifestations. |
| **AllergyIntolerance.reaction.exposureRoute** |  |
| Short name | How the subject was exposed to the substance |
| Definition | Identification of the route by which the subject was exposed to the substance. |
| Comment | Coding of the route of exposure with a terminology should be used wherever possible. |
| Binding Description | A coded concept describing the route or physiological path of administration of a therapeutic agent into or onto the body of a subject. |
| **AllergyIntolerance.reaction.note** |  |
| Short name | Text about event not captured in other fields |
| Definition | Additional text about the adverse reaction event not captured in other fields. |
| Comment | Use this field to record information indirectly related to a particular event and not captured in the description. For example: Clinical records are no longer available, recorded based on information provided to the patient by her mother and her mother is deceased. |

## http://hl7.org/fhir/StructureDefinition/CarePlan

|  |  |
| --- | --- |
| **Description** | Base StructureDefinition for CarePlan Resource |
| **CarePlan** | Care Plan |
| Short name | Healthcare plan for patient or group |
| Definition | Describes the intention of how one or more practitioners intend to deliver care for a particular patient, group or community for a period of time, possibly limited to care for a specific condition or set of conditions. |
| Synonym | Care Team |
| **CarePlan.identifier** |  |
| Short name | External Ids for this plan |
| Definition | This records identifiers associated with this care plan that are defined by business processes and/or used to refer to it when a direct URL reference to the resource itself is not appropriate (e.g. in CDA documents, or in written / printed documentation). |
| Requirements | Need to allow connection to a wider workflow. |
| **CarePlan.definition** |  |
| Short name | Protocol or definition |
| Definition | Identifies the protocol, questionnaire, guideline or other specification the care plan should be conducted in accordance with. |
| **CarePlan.basedOn** |  |
| Short name | Fulfills care plan |
| Definition | A care plan that is fulfilled in whole or in part by this care plan. |
| Requirements | Allows tracing of the care plan and tracking whether proposals/recommendations were acted upon. |
| Synonym | fufills |
| **CarePlan.replaces** |  |
| Short name | CarePlan replaced by this CarePlan |
| Definition | Completed or terminated care plan whose function is taken by this new care plan. |
| Comment | The replacement could be because the initial care plan was immediately rejected (due to an issue) or because the previous care plan was completed, but the need for the action described by the care plan remains ongoing. |
| Requirements | Allows tracing the continuation of a therapy or administrative process instantiated through multiple care plans. |
| Synonym | supersedes |
| **CarePlan.partOf** |  |
| Short name | Part of referenced CarePlan |
| Definition | A larger care plan of which this particular care plan is a component or step. |
| Comment | Each care plan is an independent request, such that having a care plan be part of another care plan can cause issues with cascading statuses. As such, this element is still being discussed. |
| **CarePlan.status** |  |
| Definition | Indicates whether the plan is currently being acted upon, represents future intentions or is now a historical record. |
| Comment | The unknown code is not to be used to convey other statuses. The unknown code should be used when one of the statuses applies, but the authoring system doesn't know the current state of the care plan. |
| Requirements | Allows clinicians to determine whether the plan is actionable or not. |
| Binding Description | Indicates whether the plan is currently being acted upon, represents future intentions or is now a historical record. |
| **CarePlan.intent** |  |
| Definition | Indicates the level of authority/intentionality associated with the care plan and where the care plan fits into the workflow chain. |
| Requirements | Proposals/recommendations, plans and orders all use the same structure and can exist in the same fulfillment chain. |
| Binding Description | Codes indicating the degree of authority/intentionality associated with a care plan |
| **CarePlan.category** |  |
| Short name | Type of plan |
| Definition | Identifies what "kind" of plan this is to support differentiation between multiple co-existing plans; e.g. "Home health", "psychiatric", "asthma", "disease management", "wellness plan", etc. |
| Comment | There may be multiple axis of categorization and one plan may serve multiple purposes. In some cases, this may be redundant with references to CarePlan.concern. |
| Requirements | Used for filtering what plan(s) are retrieved and displayed to different types of users. |
| Binding Description | Identifies what "kind" of plan this is to support differentiation between multiple co-existing plans; e.g. "Home health", "psychiatric", "asthma", "disease management", etc. |
| **CarePlan.title** |  |
| Short name | Human-friendly name for the CarePlan |
| Definition | Human-friendly name for the CarePlan. |
| **CarePlan.description** |  |
| Short name | Summary of nature of plan |
| Definition | A description of the scope and nature of the plan. |
| Requirements | Provides more detail than conveyed by category. |
| **CarePlan.subject** |  |
| Short name | Who care plan is for |
| Definition | Identifies the patient or group whose intended care is described by the plan. |
| Synonym | patient |
| **CarePlan.context** |  |
| Short name | Created in context of |
| Definition | Identifies the original context in which this particular CarePlan was created. |
| Comment | Activities conducted as a result of the care plan may well occur as part of other encounters/episodes. |
| Synonym | encounter |
| **CarePlan.period** |  |
| Short name | Time period plan covers |
| Definition | Indicates when the plan did (or is intended to) come into effect and end. |
| Comment | Any activities scheduled as part of the plan should be constrained to the specified period regardless of whether the activities are planned within a single encounter/episode or across multiple encounters/episodes (e.g. the longitudinal management of a chronic condition). |
| Requirements | Allows tracking what plan(s) are in effect at a particular time. |
| Synonym | timing |
| **CarePlan.author** |  |
| Short name | Who is responsible for contents of the plan |
| Definition | Identifies the individual(s) or ogranization who is responsible for the content of the care plan. |
| Comment | Collaborative care plans may have multiple authors. |
| **CarePlan.careTeam** |  |
| Short name | Who's involved in plan? |
| Definition | Identifies all people and organizations who are expected to be involved in the care envisioned by this plan. |
| Requirements | Allows representation of care teams, helps scope care plan. In some cases may be a determiner of access permissions. |
| **CarePlan.addresses** |  |
| Short name | Health issues this plan addresses |
| Definition | Identifies the conditions/problems/concerns/diagnoses/etc. whose management and/or mitigation are handled by this plan. |
| Requirements | Links plan to the conditions it manages. The element can identify risks addressed by the plan as well as active conditions. (The Condition resource can include things like "at risk for hypertension" or "fall risk".) Also scopes plans - multiple plans may exist addressing different concerns. |
| **CarePlan.supportingInfo** |  |
| Short name | Information considered as part of plan |
| Definition | Identifies portions of the patient's record that specifically influenced the formation of the plan. These might include co-morbidities, recent procedures, limitations, recent assessments, etc. |
| Comment | Use "concern" to identify specific conditions addressed by the care plan. |
| Requirements | Identifies barriers and other considerations associated with the care plan. |
| **CarePlan.goal** |  |
| Short name | Desired outcome of plan |
| Definition | Describes the intended objective(s) of carrying out the care plan. |
| Comment | Goal can be achieving a particular change or merely maintaining a current state or even slowing a decline. |
| Requirements | Provides context for plan. Allows plan effectiveness to be evaluated by clinicians. |
| **CarePlan.activity** |  |
| Short name | Action to occur as part of plan |
| Definition | Identifies a planned action to occur as part of the plan. For example, a medication to be used, lab tests to perform, self-monitoring, education, etc. |
| Requirements | Allows systems to prompt for performance of planned activities, and validate plans against best practice. |
| Constraint Text | Provide a reference or detail, not both |
| **CarePlan.activity.outcomeCodeableConcept** |  |
| Short name | Results of the activity |
| Definition | Identifies the outcome at the point when the status of the activity is assessed. For example, the outcome of an education activity could be patient understands (or not). |
| Comment | Note that this should not duplicate the activity status (e.g. completed or in progress). |
| Binding Description | Identifies the results of the activity |
| **CarePlan.activity.outcomeReference** |  |
| Short name | Appointment, Encounter, Procedure, etc. |
| Definition | Details of the outcome or action resulting from the activity. The reference to an "event" resource, such as Procedure or Encounter or Observation, is the result/outcome of the activity itself. The activity can be conveyed using CarePlan.activity.detail OR using the CarePlan.activity.reference (a reference to a â€œrequestâ€ resource). |
| Comment | The activity outcome is independent of the outcome of the related goal(s). For example, if the goal is to achieve a target body weight of 150 lb and an activity is defined to diet, then the activity outcome could be calories consumed whereas the goal outcome is an observation for the actual body weight measured. |
| Requirements | Links plan to resulting actions. |
| **CarePlan.activity.progress** |  |
| Short name | Comments about the activity status/progress |
| Definition | Notes about the adherence/status/progress of the activity. |
| Comment | This element should NOT be used to describe the activity to be performed - that occurs either within the resource pointed to by activity.detail.reference or in activity.detail.description. |
| Requirements | Can be used to capture information about adherence, progress, concerns, etc. |
| **CarePlan.activity.reference** |  |
| Short name | Activity details defined in specific resource |
| Definition | The details of the proposed activity represented in a specific resource. |
| Comment | Standard extension exists ([goal-pertainstogoal](extension-goal-pertainstogoal.html)) that allows goals to be referenced from any of the referenced resources in CarePlan.activity.reference. The goal should be visible when the resource referenced by CarePlan.activity.reference is viewed indepedently from the CarePlan. Requests that are pointed to by a CarePlan using this element should \*not\* point to this CarePlan using the "basedOn" element. i.e. Requests that are part of a CarePlan are not "based on" the CarePlan. |
| Requirements | Details in a form consistent with other applications and contexts of use. |
| **CarePlan.activity.detail** |  |
| Short name | In-line definition of activity |
| Definition | A simple summary of a planned activity suitable for a general care plan system (e.g. form driven) that doesn't know about specific resources such as procedure etc. |
| Requirements | Details in a simple form for generic care plan systems. |
| **CarePlan.activity.detail.category** |  |
| Definition | High-level categorization of the type of activity in a care plan. |
| Requirements | May determine what types of extensions are permitted. |
| Binding Description | High-level categorization of the type of activity in a care plan. |
| **CarePlan.activity.detail.definition** |  |
| Short name | Protocol or definition |
| Definition | Identifies the protocol, questionnaire, guideline or other specification the planned activity should be conducted in accordance with. |
| Requirements | Allows Questionnaires that the patient (or practitioner) should fill in to fulfill the care plan activity. |
| **CarePlan.activity.detail.code** |  |
| Short name | Detail type of activity |
| Definition | Detailed description of the type of planned activity; e.g. What lab test, what procedure, what kind of encounter. |
| Comment | Tends to be less relevant for activities involving particular products. Codes should not convey negation - use "prohibited" instead. |
| Requirements | Allows matching performed to planned as well as validation against protocols. |
| Binding Description | Detailed description of the type of activity; e.g. What lab test, what procedure, what kind of encounter. |
| **CarePlan.activity.detail.reasonCode** |  |
| Short name | Why activity should be done or why activity was prohibited |
| Definition | Provides the rationale that drove the inclusion of this particular activity as part of the plan or the reason why the activity was prohibited. |
| Comment | This could be a diagnosis code. If a full condition record exists or additional detail is needed, use reasonCondition instead. |
| Binding Description | Identifies why a care plan activity is needed. Can include any health condition codes as well as such concepts as "general wellness", prophylaxis, surgical preparation, etc. |
| **CarePlan.activity.detail.reasonReference** |  |
| Short name | Condition triggering need for activity |
| Definition | Provides the health condition(s) that drove the inclusion of this particular activity as part of the plan. |
| Comment | Conditions can be identified at the activity level that are not identified as reasons for the overall plan. |
| **CarePlan.activity.detail.goal** |  |
| Short name | Goals this activity relates to |
| Definition | Internal reference that identifies the goals that this activity is intended to contribute towards meeting. |
| Requirements | So that participants know the link explicitly. |
| **CarePlan.activity.detail.status** |  |
| Definition | Identifies what progress is being made for the specific activity. |
| Comment | Some aspects of status can be inferred based on the resources linked in actionTaken. Note that "status" is only as current as the plan was most recently updated. The unknown code is not to be used to convey other statuses. The unknown code should be used when one of the statuses applies, but the authoring system doesn't know the current state of the activity. |
| Requirements | Indicates progress against the plan, whether the activity is still relevant for the plan. |
| Binding Description | Indicates where the activity is at in its overall life cycle. |
| **CarePlan.activity.detail.statusReason** |  |
| Short name | Reason for current status |
| Definition | Provides reason why the activity isn't yet started, is on hold, was cancelled, etc. |
| Comment | Will generally not be present if status is "complete". Be sure to prompt to update this (or at least remove the existing value) if the status is changed. |
| **CarePlan.activity.detail.prohibited** |  |
| Short name | Do NOT do |
| Definition | If true, indicates that the described activity is one that must NOT be engaged in when following the plan. If false, indicates that the described activity is one that should be engaged in when following the plan. |
| Requirements | Captures intention to not do something that may have been previously typical. |
| **CarePlan.activity.detail.scheduled[x]** |  |
| Short name | When activity is to occur |
| Definition | The period, timing or frequency upon which the described activity is to occur. |
| Requirements | Allows prompting for activities and detection of missed planned activities. |
| **CarePlan.activity.detail.location** |  |
| Short name | Where it should happen |
| Definition | Identifies the facility where the activity will occur; e.g. home, hospital, specific clinic, etc. |
| Comment | May reference a specific clinical location or may identify a type of location. |
| Requirements | Helps in planning of activity. |
| **CarePlan.activity.detail.performer** |  |
| Short name | Who will be responsible? |
| Definition | Identifies who's expected to be involved in the activity. |
| Comment | A performer MAY also be a participant in the care plan. |
| Requirements | Helps in planning of activity. |
| **CarePlan.activity.detail.product[x]** |  |
| Short name | What is to be administered/supplied |
| Definition | Identifies the food, drug or other product to be consumed or supplied in the activity. |
| Binding Description | A product supplied or administered as part of a care plan activity. |
| **CarePlan.activity.detail.dailyAmount** |  |
| Short name | How to consume/day? |
| Definition | Identifies the quantity expected to be consumed in a given day. |
| Requirements | Allows rough dose checking. |
| Synonym | daily dose |
| **CarePlan.activity.detail.quantity** |  |
| Short name | How much to administer/supply/consume |
| Definition | Identifies the quantity expected to be supplied, administered or consumed by the subject. |
| **CarePlan.activity.detail.description** |  |
| Short name | Extra info describing activity to perform |
| Definition | This provides a textual description of constraints on the intended activity occurrence, including relation to other activities. It may also include objectives, pre-conditions and end-conditions. Finally, it may convey specifics about the activity such as body site, method, route, etc. |
| **CarePlan.note** |  |
| Short name | Comments about the plan |
| Definition | General notes about the care plan not covered elsewhere. |
| Requirements | Used to capture information that applies to the plan as a whole that doesn't fit into discrete elements. |

## http://hl7.org/fhir/StructureDefinition/CareTeam

|  |  |
| --- | --- |
| **Description** | Base StructureDefinition for CareTeam Resource |
| **CareTeam** | Care Team |
| Short name | Planned participants in the coordination and delivery of care for a patient or group |
| Definition | The Care Team includes all the people and organizations who plan to participate in the coordination and delivery of care for a patient. |
| **CareTeam.identifier** |  |
| Short name | External Ids for this team |
| Definition | This records identifiers associated with this care team that are defined by business processes and/or used to refer to it when a direct URL reference to the resource itself is not appropriate. |
| **CareTeam.status** |  |
| Definition | Indicates the current state of the care team. |
| Binding Description | Indicates the status of the care team. |
| **CareTeam.category** |  |
| Short name | Type of team |
| Definition | Identifies what kind of team. This is to support differentiation between multiple co-existing teams, such as care plan team, episode of care team, longitudinal care team. |
| Comment | There may be multiple axis of categorization and one team may serve multiple purposes. |
| Requirements | Used for filtering what teams(s) are retrieved and displayed to different types of users. |
| Binding Description | Indicates the type of care team. |
| **CareTeam.name** |  |
| Short name | Name of the team, such as crisis assessment team |
| Definition | A label for human use intended to distinguish like teams. E.g. the "red" vs. "green" trauma teams. |
| Comment | The meaning/purpose of the team is conveyed in CareTeam.category. This element may also convey semantics of the team (e.g. "Red trauma team"), but it's primary purpose is to distinguish between identical teams in a human-friendly way. ("Team 18735" isn't as friendly . ). |
| **CareTeam.subject** |  |
| Short name | Who care team is for |
| Definition | Identifies the patient or group whose intended care is handled by the team. |
| Requirements | Allows the team to care for a group (e.g. marriage) therapy. |
| Synonym | patient |
| **CareTeam.context** |  |
| Short name | Encounter or episode associated with CareTeam |
| Definition | The encounter or episode of care that establishes the context for this care team. |
| Synonym | encounter |
| **CareTeam.period** |  |
| Short name | Time period team covers |
| Definition | Indicates when the team did (or is intended to) come into effect and end. |
| Requirements | Allows tracking what team(s) are in effect at a particular time. |
| **CareTeam.participant** |  |
| Short name | Members of the team |
| Definition | Identifies all people and organizations who are expected to be involved in the care team. |
| Constraint Text | CareTeam.participant.onBehalfOf can only be populated when CareTeam.participant.member is a Practitioner |
| **CareTeam.participant.role** |  |
| Short name | Type of involvement |
| Definition | Indicates specific responsibility of an individual within the care team, such as "Primary care physician", "Trained social worker counselor", "Caregiver", etc. |
| Comment | Roles may sometimes be inferred by type of Practitioner. These are relationships that hold only within the context of the care team. General relationships should be handled as properties of the Patient resource directly. |
| Binding Description | Indicates specific responsibility of an individual within the care team, such as "Primary physician", "Team coordinator", "Caregiver", etc. |
| **CareTeam.participant.member** |  |
| Short name | Who is involved |
| Definition | The specific person or organization who is participating/expected to participate in the care team. |
| Comment | Patient only needs to be listed if they have a role other than "subject of care". Member is optional because some participants may be known only by their role, particularly in draft plans. |
| **CareTeam.participant.onBehalfOf** |  |
| Short name | Organization of the practitioner |
| Definition | The organization of the practitioner. |
| Requirements | Practitioners can be associated with multiple organizations. This element indicates which organization they were acting on behalf of. |
| **CareTeam.participant.period** |  |
| Short name | Time period of participant |
| Definition | Indicates when the specific member or organization did (or is intended to) come into effect and end. |
| **CareTeam.reasonCode** |  |
| Short name | Why the care team exists |
| Definition | Describes why the care team exists. |
| Binding Description | Indicates the reason for the care team. |
| **CareTeam.reasonReference** |  |
| Short name | Why the care team exists |
| Definition | Condition(s) that this care team addresses. |
| **CareTeam.managingOrganization** |  |
| Short name | Organization responsible for the care team |
| Definition | The organization responsible for the care team. |
| Requirements | Allows for multiple organizations to collaboratively manage cross-organizational, longitudinal care plan. |
| **CareTeam.note** |  |
| Short name | Comments made about the CareTeam |
| Definition | Comments made about the CareTeam. |

## http://hl7.org/fhir/StructureDefinition/ClinicalImpression

|  |  |
| --- | --- |
| **Description** | Base StructureDefinition for ClinicalImpression Resource |
| **ClinicalImpression** | Clinical Impression |
| Short name | A clinical assessment performed when planning treatments and management strategies for a patient |
| Definition | A record of a clinical assessment performed to determine what problem(s) may affect the patient and before planning the treatments or management strategies that are best to manage a patient's condition. Assessments are often 1:1 with a clinical consultation / encounter, but this varies greatly depending on the clinical workflow. This resource is called "ClinicalImpression" rather than "ClinicalAssessment" to avoid confusion with the recording of assessment tools such as Apgar score. |
| **ClinicalImpression.identifier** |  |
| Short name | Business identifier |
| Definition | A unique identifier assigned to the clinical impression that remains consistent regardless of what server the impression is stored on. |
| **ClinicalImpression.status** |  |
| Definition | Identifies the workflow status of the assessment. |
| Binding Description | The workflow state of a clinical impression. |
| **ClinicalImpression.code** |  |
| Short name | Kind of assessment performed |
| Definition | Categorizes the type of clinical assessment performed. |
| Comment | This is present as a place-holder only and may be removed based on feedback/work group opinion. |
| Synonym | type |
| Binding Description | Identifies categories of clinical impressions. This is a place-holder only. It may be removed |
| **ClinicalImpression.description** |  |
| Short name | Why/how the assessment was performed |
| Definition | A summary of the context and/or cause of the assessment - why / where was it peformed, and what patient events/status prompted it. |
| **ClinicalImpression.subject** |  |
| Short name | Patient or group assessed |
| Definition | The patient or group of individuals assessed as part of this record. |
| Requirements | Group is typically for veterinary and/or public health purposes. |
| **ClinicalImpression.context** |  |
| Short name | Encounter or Episode created from |
| Definition | The encounter or episode of care this impression was created as part of. |
| Synonym | encounter |
| **ClinicalImpression.effective[x]** |  |
| Short name | Time of assessment |
| Definition | The point in time or period over which the subject was assessed. |
| Comment | This SHOULD be accurate to at least the minute, though some assessments only have a known date. |
| **ClinicalImpression.date** |  |
| Short name | When the assessment was documented |
| Definition | Indicates when the documentation of the assessment was complete. |
| **ClinicalImpression.assessor** |  |
| Short name | The clinician performing the assessment |
| Definition | The clinician performing the assessment. |
| **ClinicalImpression.previous** |  |
| Short name | Reference to last assessment |
| Definition | A reference to the last assesment that was conducted bon this patient. Assessments are often/usually ongoing in nature; a care provider (practitioner or team) will make new assessments on an ongoing basis as new data arises or the patient's conditions changes. |
| Comment | It is always likely that multiple previous assessments exist for a patient. The point of quoting a previous assessment is that this assessment is relative to it (see resolved). |
| **ClinicalImpression.problem** |  |
| Short name | Relevant impressions of patient state |
| Definition | This a list of the relevant problems/conditions for a patient. |
| Comment | e.g. The patient is a pregnant, and cardiac congestive failure, â€ŽAdenocarcinoma, and is allergic to penicillin. |
| **ClinicalImpression.investigation** |  |
| Short name | One or more sets of investigations (signs, symptions, etc.) |
| Definition | One or more sets of investigations (signs, symptions, etc.). The actual grouping of investigations vary greatly depending on the type and context of the assessment. These investigations may include data generated during the assessment process, or data previously generated and recorded that is pertinent to the outcomes. |
| **ClinicalImpression.investigation.code** |  |
| Short name | A name/code for the set |
| Definition | A name/code for the group ("set") of investigations. Typically, this will be something like "signs", "symptoms", "clinical", "diagnostic", but the list is not constrained, and others such groups such as (exposure|family|travel|nutitirional) history may be used. |
| Binding Description | A name/code for a set of investigations. |
| **ClinicalImpression.investigation.item** |  |
| Short name | Record of a specific investigation |
| Definition | A record of a specific investigation that was undertaken. |
| Comment | Most investigations are observations of one kind of or another but some other specific types of data collection resources can also be used. |
| **ClinicalImpression.protocol** |  |
| Short name | Clinical Protocol followed |
| Definition | Reference to a specific published clinical protocol that was followed during this assessment, and/or that provides evidence in support of the diagnosis. |
| **ClinicalImpression.summary** |  |
| Short name | Summary of the assessment |
| Definition | A text summary of the investigations and the diagnosis. |
| **ClinicalImpression.finding** |  |
| Short name | Possible or likely findings and diagnoses |
| Definition | Specific findings or diagnoses that was considered likely or relevant to ongoing treatment. |
| **ClinicalImpression.finding.item[x]** |  |
| Short name | What was found |
| Definition | Specific text, code or reference for finding or diagnosis, which may include ruled-out or resolved conditions. |
| Binding Description | Identification of the Condition or diagnosis. |
| **ClinicalImpression.finding.basis** |  |
| Short name | Which investigations support finding |
| Definition | Which investigations support finding or diagnosis. |
| **ClinicalImpression.prognosisCodeableConcept** |  |
| Short name | Estimate of likely outcome |
| Definition | Estimate of likely outcome. |
| Binding Description | Prognosis or outlook findings |
| **ClinicalImpression.prognosisReference** |  |
| Short name | RiskAssessment expressing likely outcome |
| Definition | RiskAssessment expressing likely outcome. |
| **ClinicalImpression.action** |  |
| Short name | Action taken as part of assessment procedure |
| Definition | Action taken as part of assessment procedure. |
| Comment | Actions recommended as a result of the impression should not be captured using the 'action' element. |
| **ClinicalImpression.note** |  |
| Short name | Comments made about the ClinicalImpression |
| Definition | Commentary about the impression, typically recorded after the impression itself was made, though supplemental notes by the original author could also appear. |
| Comment | Don't use this element for content that should more properly appear as one of the specific elements of the impression. |

## http://hl7.org/fhir/StructureDefinition/Communication

|  |  |
| --- | --- |
| **Description** | Base StructureDefinition for Communication Resource |
| **Communication** | Communication |
| Short name | A record of information transmitted from a sender to a receiver |
| Definition | An occurrence of information being transmitted; e.g. an alert that was sent to a responsible provider, a public health agency was notified about a reportable condition. |
| Constraint Text | Not Done Reason can only be specified if NotDone is "true" |
| **Communication.identifier** |  |
| Short name | Unique identifier |
| Definition | Identifiers associated with this Communication that are defined by business processes and/ or used to refer to it when a direct URL reference to the resource itself is not appropriate (e.g. in CDA documents, or in written / printed documentation). |
| **Communication.definition** |  |
| Short name | Instantiates protocol or definition |
| Definition | A protocol, guideline, or other definition that was adhered to in whole or in part by this communication event. |
| **Communication.basedOn** |  |
| Short name | Request fulfilled by this communication |
| Definition | An order, proposal or plan fulfilled in whole or in part by this Communication. |
| Comment | This must point to some sort of a 'Request' resource, such as CarePlan, CommunicationRequest, ReferralRequest, MedicationRequest, etc. |
| Synonym | fulfills |
| **Communication.partOf** |  |
| Short name | Part of this action |
| Definition | Part of this action. |
| Synonym | container |
| **Communication.status** |  |
| Definition | The status of the transmission. |
| Binding Description | The status of the communication. |
| **Communication.notDone** |  |
| Short name | Communication did not occur |
| Definition | If true, indicates that the described communication event did not actually occur. |
| Comment | The more attributes are populated, the more constrained the negated statement is. |
| Requirements | Creating a Communication where notDone is true is intended for situations where there's a need for a specific statement in the record about something not being done. If the need is merely to indicate that a request wasn't fulfilled, that should be handled using Task. |
| **Communication.notDoneReason** |  |
| Short name | Why communication did not occur |
| Definition | Describes why the communication event did not occur in coded and/or textual form. |
| Binding Description | Codes for the reason why a communication was not done. |
| **Communication.category** |  |
| Short name | Message category |
| Definition | The type of message conveyed such as alert, notification, reminder, instruction, etc. |
| Comment | There may be multiple axes of categorization and one communication may serve multiple purposes. |
| Binding Description | Codes for general categories of communications such as alerts, instruction, etc. |
| **Communication.medium** |  |
| Short name | A channel of communication |
| Definition | A channel that was used for this communication (e.g. email, fax). |
| Binding Description | Codes for communication mediums such as phone, fax, email, in person, etc. |
| **Communication.subject** |  |
| Short name | Focus of message |
| Definition | The patient or group that was the focus of this communication. |
| Synonym | patient |
| **Communication.recipient** |  |
| Short name | Message recipient |
| Definition | The entity (e.g. person, organization, clinical information system, or device) which was the target of the communication. If receipts need to be tracked by individual, a separate resource instance will need to be created for each recipient.  Multiple recipient communications are intended where either a receipt(s) is not tracked (e.g. a mass mail-out) or is captured in aggregate (all emails confirmed received by a particular time). |
| **Communication.topic** |  |
| Short name | Focal resources |
| Definition | The resources which were responsible for or related to producing this communication. |
| **Communication.context** |  |
| Short name | Encounter or episode leading to message |
| Definition | The encounter within which the communication was sent. |
| Synonym | encounter |
| **Communication.sent** |  |
| Short name | When sent |
| Definition | The time when this communication was sent. |
| **Communication.received** |  |
| Short name | When received |
| Definition | The time when this communication arrived at the destination. |
| **Communication.sender** |  |
| Short name | Message sender |
| Definition | The entity (e.g. person, organization, clinical information system, or device) which was the source of the communication. |
| **Communication.reasonCode** |  |
| Short name | Indication for message |
| Definition | The reason or justification for the communication. |
| Comment | Textual reasons can be caprued using reasonCode.text. |
| Binding Description | Codes for describing reasons for the occurrence of a communication. |
| **Communication.reasonReference** |  |
| Short name | Why was communication done? |
| Definition | Indicates another resource whose existence justifies this communication. |
| **Communication.payload** |  |
| Short name | Message payload |
| Definition | Text, attachment(s), or resource(s) that was communicated to the recipient. |
| **Communication.payload.content[x]** |  |
| Short name | Message part content |
| Definition | A communicated content (or for multi-part communications, one portion of the communication). |
| **Communication.note** |  |
| Short name | Comments made about the communication |
| Definition | Additional notes or commentary about the communication by the sender, receiver or other interested parties. |

## http://hl7.org/fhir/StructureDefinition/CommunicationRequest

|  |  |
| --- | --- |
| **Description** | Base StructureDefinition for CommunicationRequest Resource |
| **CommunicationRequest** | Communication Request |
| Short name | A request for information to be sent to a receiver |
| Definition | A request to convey information; e.g. the CDS system proposes that an alert be sent to a responsible provider, the CDS system proposes that the public health agency be notified about a reportable condition. |
| **CommunicationRequest.identifier** |  |
| Short name | Unique identifier |
| Definition | A unique ID of this request for reference purposes. It must be provided if user wants it returned as part of any output, otherwise it will be autogenerated, if needed, by CDS system. Does not need to be the actual ID of the source system. |
| **CommunicationRequest.basedOn** |  |
| Short name | Fulfills plan or proposal |
| Definition | A plan or proposal that is fulfilled in whole or in part by this request. |
| Requirements | Allows tracing of authorization for the request and tracking whether proposals/recommendations were acted upon. |
| Synonym | fufills |
| **CommunicationRequest.replaces** |  |
| Short name | Request(s) replaced by this request |
| Definition | Completed or terminated request(s) whose function is taken by this new request. |
| Comment | The replacement could be because the initial request was immediately rejected (due to an issue) or because the previous request was completed, but the need for the action described by the request remains ongoing. |
| Requirements | Allows tracing the continuation of a therapy or administrative process instantiated through multiple requests. |
| Synonym | supersedes |
| Synonym | prior |
| **CommunicationRequest.groupIdentifier** |  |
| Short name | Composite request this is part of |
| Definition | A shared identifier common to all requests that were authorized more or less simultaneously by a single author, representing the identifier of the requisition, prescription or similar form. |
| Comment | Requests are linked either by a "basedOn" relationship (i.e. one request is fulfilling another) or by having a common requisition. Requests that are part of the same requisition are generally treated independently from the perspective of changing their state or maintaining them after initial creation. |
| Synonym | grouperId |
| **CommunicationRequest.status** |  |
| Definition | The status of the proposal or order. |
| Binding Description | The status of the communication request. |
| **CommunicationRequest.category** |  |
| Short name | Message category |
| Definition | The type of message to be sent such as alert, notification, reminder, instruction, etc. |
| Comment | There may be multiple axes of categorization and one communication request may serve multiple purposes. |
| Binding Description | Codes for general categories of communications such as alerts, instruction, etc. |
| **CommunicationRequest.priority** |  |
| Short name | Message urgency |
| Definition | Characterizes how quickly the proposed act must be initiated. Includes concepts such as stat, urgent, routine. |
| Meaning when missing | If missing, this task should be performed with normal priority |
| Binding Description | Codes indicating the relative importance of a communication request. |
| **CommunicationRequest.medium** |  |
| Short name | A channel of communication |
| Definition | A channel that was used for this communication (e.g. email, fax). |
| Binding Description | Codes for communication mediums such as phone, fax, email, in person, etc. |
| **CommunicationRequest.subject** |  |
| Short name | Focus of message |
| Definition | The patient or group that is the focus of this communication request. |
| Synonym | patient |
| **CommunicationRequest.recipient** |  |
| Short name | Message recipient |
| Definition | The entity (e.g. person, organization, clinical information system, device, group, or care team) which is the intended target of the communication. |
| **CommunicationRequest.topic** |  |
| Short name | Focal resources |
| Definition | The resources which were related to producing this communication request. |
| **CommunicationRequest.context** |  |
| Short name | Encounter or episode leading to message |
| Definition | The encounter or episode of care within which the communication request was created. |
| Synonym | encounter |
| **CommunicationRequest.payload** |  |
| Short name | Message payload |
| Definition | Text, attachment(s), or resource(s) to be communicated to the recipient. |
| **CommunicationRequest.payload.content[x]** |  |
| Short name | Message part content |
| Definition | The communicated content (or for multi-part communications, one portion of the communication). |
| **CommunicationRequest.occurrence[x]** |  |
| Short name | When scheduled |
| Definition | The time when this communication is to occur. |
| Synonym | timing |
| **CommunicationRequest.authoredOn** |  |
| Short name | When request transitioned to being actionable |
| Definition | For draft requests, indicates the date of initial creation. For requests with other statuses, indicates the date of activation. |
| Synonym | createdOn |
| **CommunicationRequest.sender** |  |
| Short name | Message sender |
| Definition | The entity (e.g. person, organization, clinical information system, or device) which is to be the source of the communication. |
| **CommunicationRequest.requester** |  |
| Short name | Who/what is requesting service |
| Definition | The individual who initiated the request and has responsibility for its activation. |
| Synonym | author |
| Constraint Text | onBehalfOf can only be specified if agent is practitioner or device |
| **CommunicationRequest.requester.agent** |  |
| Short name | Individual making the request |
| Definition | The device, practitioner, etc. who initiated the request. |
| **CommunicationRequest.requester.onBehalfOf** |  |
| Short name | Organization agent is acting for |
| Definition | The organization the device or practitioner was acting on behalf of. |
| Requirements | Practitioners and Devices can be associated with multiple organizations. This element indicates which organization they were acting on behalf of when authoring the request. |
| **CommunicationRequest.reasonCode** |  |
| Short name | Why is communication needed? |
| Definition | Describes why the request is being made in coded or textual form. |
| Comment | Textual reasons can be caprued using reasonCode.text. |
| Binding Description | Codes for describing reasons for the occurrence of a communication. |
| **CommunicationRequest.reasonReference** |  |
| Short name | Why is communication needed? |
| Definition | Indicates another resource whose existence justifies this request. |
| **CommunicationRequest.note** |  |
| Short name | Comments made about communication request |
| Definition | Comments made about the request by the requester, sender, recipient, subject or other participants. |

## http://hl7.org/fhir/StructureDefinition/Condition

|  |  |
| --- | --- |
| **Description** | Base StructureDefinition for Condition Resource |
| **Condition** | Condition |
| Short name | Detailed information about conditions, problems or diagnoses |
| Definition | A clinical condition, problem, diagnosis, or other event, situation, issue, or clinical concept that has risen to a level of concern. |
| Constraint Text | If condition is abated, then clinicalStatus must be either inactive, resolved, or remission |
| Constraint Text | Condition.clinicalStatus SHALL be present if verificationStatus is not entered-in-error |
| **Condition.identifier** |  |
| Short name | External Ids for this condition |
| Definition | This records identifiers associated with this condition that are defined by business processes and/or used to refer to it when a direct URL reference to the resource itself is not appropriate (e.g. in CDA documents, or in written / printed documentation). |
| Requirements | Need to allow connection to a wider workflow. |
| **Condition.clinicalStatus** |  |
| Definition | The clinical status of the condition. |
| Binding Description | The clinical status of the condition or diagnosis. |
| **Condition.verificationStatus** |  |
| Definition | The verification status to support the clinical status of the condition. |
| Comment | verificationStatus is not required. For example, when a patient has abdominal pain in the ED, there is not likely going to be a verification status. |
| Binding Description | The verification status to support or decline the clinical status of the condition or diagnosis. |
| **Condition.category** |  |
| Definition | A category assigned to the condition. |
| Comment | The categorization is often highly contextual and may appear poorly differentiated or not very useful in other contexts. |
| Binding Description | A category assigned to the condition. |
| **Condition.severity** |  |
| Short name | Subjective severity of condition |
| Definition | A subjective assessment of the severity of the condition as evaluated by the clinician. |
| Comment | Coding of the severity with a terminology is preferred, where possible. |
| Binding Description | A subjective assessment of the severity of the condition as evaluated by the clinician. |
| **Condition.code** |  |
| Short name | Identification of the condition, problem or diagnosis |
| Definition | Identification of the condition, problem or diagnosis. |
| Requirements | 0..1 to account for primarily narrative only resources. |
| Synonym | type |
| Binding Description | Identification of the condition or diagnosis. |
| **Condition.bodySite** |  |
| Short name | Anatomical location, if relevant |
| Definition | The anatomical location where this condition manifests itself. |
| Comment | Only used if not implicit in code found in Condition.code. If the use case requires attributes from the BodySite resource (e.g. to identify and track separately) then use the standard extension [body-site-instance](extension-body-site-instance.html). May be a summary code, or a reference to a very precise definition of the location, or both. |
| Binding Description | Codes describing anatomical locations. May include laterality. |
| **Condition.subject** |  |
| Short name | Who has the condition? |
| Definition | Indicates the patient or group who the condition record is associated with. |
| Requirements | Group is typically used for veterinary or public health use cases. |
| Synonym | patient |
| **Condition.context** |  |
| Short name | Encounter or episode when condition first asserted |
| Definition | Encounter during which the condition was first asserted. |
| Comment | This record indicates the encounter this particular record is associated with. In the case of a "new" diagnosis reflecting ongoing/revised information about the condition, this might be distinct from the first encounter in which the underlying condition was first "known". |
| Synonym | encounter |
| **Condition.onset[x]** |  |
| Short name | Estimated or actual date, date-time, or age |
| Definition | Estimated or actual date or date-time the condition began, in the opinion of the clinician. |
| Comment | Age is generally used when the patient reports an age at which the Condition began to occur. |
| **Condition.abatement[x]** |  |
| Short name | If/when in resolution/remission |
| Definition | The date or estimated date that the condition resolved or went into remission. This is called "abatement" because of the many overloaded connotations associated with "remission" or "resolution" - Conditions are never really resolved, but they can abate. |
| Comment | There is no explicit distinction between resolution and remission because in many cases the distinction is not clear. Age is generally used when the patient reports an age at which the Condition abated. If there is no abatement element, it is unknown whether the condition has resolved or entered remission; applications and users should generally assume that the condition is still valid. When abatementString exists, it implies the condition is abated. |
| **Condition.assertedDate** |  |
| Short name | Date record was believed accurate |
| Definition | The date on which the existance of the Condition was first asserted or acknowledged. |
| Comment | The assertedDate represents the date when this particular Condition record was created in the EHR, not the date of the most recent update in terms of when severity, abatement, etc. were specified.  The date of the last record modification can be retrieved from the resource metadata. |
| **Condition.asserter** |  |
| Short name | Person who asserts this condition |
| Definition | Individual who is making the condition statement. |
| **Condition.stage** |  |
| Short name | Stage/grade, usually assessed formally |
| Definition | Clinical stage or grade of a condition. May include formal severity assessments. |
| Constraint Text | Stage SHALL have summary or assessment |
| **Condition.stage.summary** |  |
| Short name | Simple summary (disease specific) |
| Definition | A simple summary of the stage such as "Stage 3". The determination of the stage is disease-specific. |
| Binding Description | Codes describing condition stages (e.g. Cancer stages). |
| **Condition.stage.assessment** |  |
| Short name | Formal record of assessment |
| Definition | Reference to a formal record of the evidence on which the staging assessment is based. |
| **Condition.evidence** |  |
| Short name | Supporting evidence |
| Definition | Supporting Evidence / manifestations that are the basis on which this condition is suspected or confirmed. |
| Comment | The evidence may be a simple list of coded symptoms/manifestations, or references to observations or formal assessments, or both. |
| Constraint Text | evidence SHALL have code or details |
| **Condition.evidence.code** |  |
| Short name | Manifestation/symptom |
| Definition | A manifestation or symptom that led to the recording of this condition. |
| Binding Description | Codes that describe the manifestation or symptoms of a condition. |
| **Condition.evidence.detail** |  |
| Short name | Supporting information found elsewhere |
| Definition | Links to other relevant information, including pathology reports. |
| **Condition.note** |  |
| Short name | Additional information about the Condition |
| Definition | Additional information about the Condition. This is a general notes/comments entry for description of the Condition, its diagnosis and prognosis. |

## http://hl7.org/fhir/StructureDefinition/FamilyMemberHistory

|  |  |
| --- | --- |
| **Description** | Base StructureDefinition for FamilyMemberHistory Resource |
| **FamilyMemberHistory** | Family Member History |
| Short name | Information about patient's relatives, relevant for patient |
| Definition | Significant health events and conditions for a person related to the patient relevant in the context of care for the patient. |
| Constraint Text | Can only have estimatedAge if age[x] is present |
| Constraint Text | Not Done Reason can only be specified if NotDone is "true" |
| Constraint Text | Can have age[x] or born[x], but not both |
| **FamilyMemberHistory.identifier** |  |
| Short name | External Id(s) for this record |
| Definition | This records identifiers associated with this family member history record that are defined by business processes and/ or used to refer to it when a direct URL reference to the resource itself is not appropriate (e.g. in CDA documents, or in written / printed documentation). |
| Requirements | Need to allow connection to a wider workflow. |
| **FamilyMemberHistory.definition** |  |
| Short name | Instantiates protocol or definition |
| Definition | A protocol or questionnaire that was adhered to in whole or in part by this event. |
| **FamilyMemberHistory.status** |  |
| Definition | A code specifying the status of the record of the family history of a specific family member. |
| Binding Description | A code that identifies the status of the family history record. |
| **FamilyMemberHistory.notDone** |  |
| Short name | Family member history did not occur |
| Definition | If true, indicates that the family member history did not actually occur. |
| Comment | The more attributes are populated, the more constrained the negated statement is. |
| Requirements | Creating a FamilyMemberHistory where notDone is true is intended for situations where there's a need for a specific statement in the record about something not being done. If the need is merely to indicate that a request wasn't fulfilled, that should be handled using Task. |
| **FamilyMemberHistory.notDoneReason** |  |
| Definition | Describes why the family member history did not occur in coded and/or textual form. |
| Requirements | This is a separate element to allow it to have a distinct binding from reasonCode. |
| Binding Description | Codes describing the reason why a family member history was not done. |
| **FamilyMemberHistory.patient** |  |
| Short name | Patient history is about |
| Definition | The person who this history concerns. |
| Synonym | Proband |
| **FamilyMemberHistory.date** |  |
| Short name | When history was captured/updated |
| Definition | The date (and possibly time) when the family member history was taken. |
| Comment | This should be captured even if the same as the date on the List aggregating the full family history. |
| Requirements | Allows determination of how current the summary is. |
| **FamilyMemberHistory.name** |  |
| Short name | The family member described |
| Definition | This will either be a name or a description; e.g. "Aunt Susan", "my cousin with the red hair". |
| Requirements | Allows greater ease in ensuring the same person is being talked about. |
| **FamilyMemberHistory.relationship** |  |
| Short name | Relationship to the subject |
| Definition | The type of relationship this person has to the patient (father, mother, brother etc.). |
| Binding Description | The nature of the relationship between the patient and the related person being described in the family member history. |
| **FamilyMemberHistory.gender** |  |
| Definition | Administrative Gender - the gender that the relative is considered to have for administration and record keeping purposes. |
| Requirements | Not all relationship codes imply gender and the relative's gender can be relevant for risk assessments. |
| Binding Description | The gender of a person used for administrative purposes. |
| **FamilyMemberHistory.born[x]** |  |
| Short name | (approximate) date of birth |
| Definition | The actual or approximate date of birth of the relative. |
| Requirements | Allows calculation of the relative's age. |
| **FamilyMemberHistory.age[x]** |  |
| Short name | (approximate) age |
| Definition | The age of the relative at the time the family member history is recorded. |
| Comment | use estimatedAge to indicate whether the age is actual or not. |
| Requirements | While age can be calculated from date of birth, sometimes recording age directly is more natureal for clinicians. |
| **FamilyMemberHistory.estimatedAge** |  |
| Short name | Age is estimated? |
| Definition | If true, indicates that the age value specified is an estimated value. |
| Requirements | Clinicians often prefer to specify an estimaged age rather than an age range. |
| Meaning when missing | It is unknown whether the age is an estimate or not |
| **FamilyMemberHistory.deceased[x]** |  |
| Short name | Dead? How old/when? |
| Definition | Deceased flag or the actual or approximate age of the relative at the time of death for the family member history record. |
| **FamilyMemberHistory.reasonCode** |  |
| Short name | Why was family member history performed? |
| Definition | Describes why the family member history occurred in coded or textual form. |
| Comment | Textual reasons can be caprued using reasonCode.text. |
| Binding Description | Codes indicating why the family member history was done. |
| **FamilyMemberHistory.reasonReference** |  |
| Short name | Why was family member history performed? |
| Definition | Indicates a Condition, Observation, AllergyIntolerance, or QuestionnaireResponse that justifies this family member history event. |
| **FamilyMemberHistory.note** |  |
| Short name | General note about related person |
| Definition | This property allows a non condition-specific note to the made about the related person. Ideally, the note would be in the condition property, but this is not always possible. |
| **FamilyMemberHistory.condition** |  |
| Short name | Condition that the related person had |
| Definition | The significant Conditions (or condition) that the family member had. This is a repeating section to allow a system to represent more than one condition per resource, though there is nothing stopping multiple resources - one per condition. |
| Comment | If none of the conditions listed have an outcome of "death" specified, that indicates that none of the specified conditions are known to have been the primary cause of death. |
| **FamilyMemberHistory.condition.code** |  |
| Short name | Condition suffered by relation |
| Definition | The actual condition specified. Could be a coded condition (like MI or Diabetes) or a less specific string like 'cancer' depending on how much is known about the condition and the capabilities of the creating system. |
| Binding Description | Identification of the Condition or diagnosis. |
| **FamilyMemberHistory.condition.outcome** |  |
| Definition | Indicates what happened as a result of this condition. If the condition resulted in death, deceased date is captured on the relation. |
| Binding Description | The result of the condition for the patient; e.g. death, permanent disability, temporary disability, etc. |
| **FamilyMemberHistory.condition.onset[x]** |  |
| Short name | When condition first manifested |
| Definition | Either the age of onset, range of approximate age or descriptive string can be recorded. For conditions with multiple occurrences, this describes the first known occurrence. |
| Requirements | Age of onset of a condition in relatives is predictive of risk for the patient. |
| **FamilyMemberHistory.condition.note** |  |
| Short name | Extra information about condition |
| Definition | An area where general notes can be placed about this specific condition. |

## http://hl7.org/fhir/StructureDefinition/Flag

|  |  |
| --- | --- |
| **Description** | Base StructureDefinition for Flag Resource |
| **Flag** | Flag |
| Short name | Key information to flag to healthcare providers |
| Definition | Prospective warnings of potential issues when providing care to the patient. |
| Synonym | Barriers to Care |
| Synonym | Alert |
| Synonym | Warning |
| **Flag.identifier** |  |
| Short name | Business identifier |
| Definition | Identifier assigned to the flag for external use (outside the FHIR environment). |
| **Flag.status** |  |
| Definition | Supports basic workflow. |
| Binding Description | Indicates whether this flag is active and needs to be displayed to a user, or whether it is no longer needed or entered in error. |
| **Flag.category** |  |
| Short name | Clinical, administrative, etc. |
| Definition | Allows an flag to be divided into different categories like clinical, administrative etc. Intended to be used as a means of filtering which flags are displayed to particular user or in a given context. |
| Binding Description | A general category for flags for filtering/display purposes. |
| **Flag.code** |  |
| Short name | Coded or textual message to display to user |
| Definition | The coded value or textual component of the flag to display to the user. |
| Comment | If non coded, use CodeableConcept.text. This element should always be included in the narrative. |
| Binding Description | Detail codes identifying specific flagged issues. |
| **Flag.subject** |  |
| Short name | Who/What is flag about? |
| Definition | The patient, location, group , organization , or practitioner, etc. this is about record this flag is associated with. |
| **Flag.period** |  |
| Short name | Time period when flag is active |
| Definition | The period of time from the activation of the flag to inactivation of the flag. If the flag is active, the end of the period should be unspecified. |
| **Flag.encounter** |  |
| Short name | Alert relevant during encounter |
| Definition | This alert is only relevant during the encounter. |
| Comment | If both Flag.encounter and Flag.period are valued, then Flag.period.start shall not be before Encounter.period.start and Flag.period.end shall not be after Encounter.period.end. |
| **Flag.author** |  |
| Short name | Flag creator |
| Definition | The person, organization or device that created the flag. |

## http://hl7.org/fhir/StructureDefinition/Goal

|  |  |
| --- | --- |
| **Description** | Base StructureDefinition for Goal Resource |
| **Goal** | Goal |
| Short name | Describes the intended objective(s) for a patient, group or organization |
| Definition | Describes the intended objective(s) for a patient, group or organization care, for example, weight loss, restoring an activity of daily living, obtaining herd immunity via immunization, meeting a process improvement objective, etc. |
| Comment | Goal can be achieving a particular change or merely maintaining a current state or even slowing a decline. |
| **Goal.identifier** |  |
| Short name | External Ids for this goal |
| Definition | This records identifiers associated with this care plan that are defined by business processes and/or used to refer to it when a direct URL reference to the resource itself is not appropriate (e.g. in CDA documents, or in written / printed documentation). |
| Requirements | Need to allow connection to a wider workflow. |
| **Goal.status** |  |
| Definition | Indicates whether the goal has been reached and is still considered relevant. |
| Requirements | Allows measuring outcome and whether goal needs to be further tracked. |
| Binding Description | Indicates whether the goal has been met and is still being targeted |
| **Goal.category** |  |
| Short name | E.g. Treatment, dietary, behavioral, etc. |
| Definition | Indicates a category the goal falls within. |
| Requirements | Allows goals to be filtered and sorted. |
| Binding Description | Codes for grouping and sorting goals |
| **Goal.priority** |  |
| Definition | Identifies the mutually agreed level of importance associated with reaching/sustaining the goal. |
| Comment | Extensions are available to track priorities as established by each participant (i.e. Priority from the patient's perspective, different practitioners' perspectives, family member's perspectives) The ordinal extension on Coding can be used to convey a numerically comparable ranking to priority. (Keep in mind that different coding systems may use a "low value=important". |
| Requirements | Used for sorting and presenting goals. |
| Binding Description | The level of importance associated with a goal |
| **Goal.description** |  |
| Short name | Code or text describing goal |
| Definition | Human-readable and/or coded description of a specific desired objective of care, such as "control blood pressure" or "negotiate an obstacle course" or "dance with child at wedding". |
| Comment | If no code is available, use CodeableConcept.text. |
| Requirements | Without a description of what's trying to be achieved, element has no purpose. |
| Binding Description | Codes providing the details of a particular goal. This will generally be system or implementation guide-specific. In many systems, only the text element will be used. |
| **Goal.subject** |  |
| Short name | Who this goal is intended for |
| Definition | Identifies the patient, group or organization for whom the goal is being established. |
| Requirements | Subject is optional to support annonymized reporting. |
| **Goal.start[x]** |  |
| Short name | When goal pursuit begins |
| Definition | The date or event after which the goal should begin being pursued. |
| Requirements | Goals can be established prior to there being an intention to start pursuing them; e.g. Goals for post-surgical recovery established prior to surgery. |
| Binding Description | Codes describing events that can trigger the initiation of a goal |
| **Goal.target** |  |
| Short name | Target outcome for the goal |
| Definition | Indicates what should be done by when. |
| Requirements | Allows the progress of the goal to be monitored against an observation or due date. |
| Constraint Text | Goal.target.measure is required if Goal.target.detail is populated |
| **Goal.target.measure** |  |
| Short name | The parameter whose value is being tracked |
| Definition | The parameter whose value is being tracked, e.g. body weight, blood pressure, or hemoglobin A1c level. |
| Binding Description | Codes to identify the value being tracked, e.g. body weight, blood pressure, or hemoglobin A1c level. |
| **Goal.target.detail[x]** |  |
| Short name | The target value to be achieved |
| Definition | The target value of the focus to be achieved to signify the fulfillment of the goal, e.g. 150 pounds, 7.0%. Either the high or low or both values of the range can be specified. When a low value is missing, it indicates that the goal is achieved at any focus value at or below the high value. Similarly, if the high value is missing, it indicates that the goal is achieved at any focus value at or above the low value. |
| Binding Description | Codes to identify the target value of the focus to be achieved to signify the fulfillment of the goal. |
| **Goal.target.due[x]** |  |
| Short name | Reach goal on or before |
| Definition | Indicates either the date or the duration after start by which the goal should be met. |
| Requirements | Identifies when the goal should be evaluated. |
| **Goal.statusDate** |  |
| Short name | When goal status took effect |
| Definition | Identifies when the current status. I.e. When initially created, when achieved, when cancelled, etc. |
| Comment | To see the date for past statuses, query history. |
| **Goal.statusReason** |  |
| Short name | Reason for current status |
| Definition | Captures the reason for the current status. |
| Comment | This will typically be captured for statuses such as rejected, on-hold or cancelled, but could be present for others. |
| **Goal.expressedBy** |  |
| Short name | Who's responsible for creating Goal? |
| Definition | Indicates whose goal this is - patient goal, practitioner goal, etc. |
| Comment | This is the individual reponsible for establishing the goal, not necessarily who recorded it. (For that, use the Provenance resource.). |
| **Goal.addresses** |  |
| Short name | Issues addressed by this goal |
| Definition | The identified conditions and other health record elements that are intended to be addressed by the goal. |
| Requirements | Allows specific goals to explicitly linked to the concerns they're dealing with - makes the goal more understandable. |
| **Goal.note** |  |
| Short name | Comments about the goal |
| Definition | Any comments related to the goal. |
| Comment | May be used for progress notes, concerns or other related information that doesn't actually describe the goal itself. |
| Requirements | There's a need to capture information about the goal that doesn't actually describe the goal. |
| **Goal.outcomeCode** |  |
| Short name | What result was achieved regarding the goal? |
| Definition | Identifies the change (or lack of change) at the point when the status of the goal is assessed. |
| Comment | Note that this should not duplicate the goal status. |
| Requirements | Outcome tracking is a key aspect of care planning. |
| Binding Description | The result of the goal; e.g. "25% increase in shoulder mobility", "Anxiety reduced to moderate levels". "15 kg weight loss sustained over 6 months" |
| **Goal.outcomeReference** |  |
| Short name | Observation that resulted from goal |
| Definition | Details of what's changed (or not changed). |
| Comment | The goal outcome is independent of the outcome of the related activities. For example, if the Goal is to achieve a target body weight of 150 lb and a care plan activity is defined to diet, then the care planâ€™s activity outcome could be calories consumed whereas goal outcome is an observation for the actual body weight measured. |
| Requirements | Outcome tracking is a key aspect of care planning. |

## http://hl7.org/fhir/StructureDefinition/Linkage

|  |  |
| --- | --- |
| **Description** | Base StructureDefinition for Linkage Resource |
| **Linkage** | Linkage |
| Short name | Links records for 'same' item |
| Definition | Identifies two or more records (resource instances) that are referring to the same real-world "occurrence". |
| Constraint Text | Must have at least two items |
| **Linkage.active** |  |
| Short name | Whether this linkage assertion is active or not |
| Definition | Indicates whether the asserted set of linkages are considered to be "in effect". |
| Comment | If false, any asserted linkages should not be considered current/relevant/applicable. |
| Requirements | Need to be able to mark a linkage record as not to be used because it was created in error. |
| **Linkage.author** |  |
| Short name | Who is responsible for linkages |
| Definition | Identifies the user or organization responsible for asserting the linkages and who establishes the context for evaluating the nature of each linkage. |
| Requirements | "Primary" for the same set of linked resources may be different from different user's/organization's perspectives. |
| **Linkage.item** |  |
| Short name | Item to be linked |
| Definition | Identifies one of the records that is considered to refer to the same real-world occurrence as well as how the items hould be evaluated within the collection of linked items. |
| **Linkage.item.type** |  |
| Definition | Distinguishes which item is "source of truth" (if any) and which items are no longer considered to be current representations. |
| Binding Description | Used to distinguish different roles a resource can play within a set of linked resources |
| **Linkage.item.resource** |  |
| Short name | Resource being linked |
| Definition | The resource instance being linked as part of the group. |

## http://hl7.org/fhir/StructureDefinition/Procedure

|  |  |
| --- | --- |
| **Description** | Base StructureDefinition for Procedure Resource |
| **Procedure** | Procedure |
| Short name | An action that is being or was performed on a patient |
| Definition | An action that is or was performed on a patient. This can be a physical intervention like an operation, or less invasive like counseling or hypnotherapy. |
| Constraint Text | Reason not done is only permitted if notDone indicator is true |
| **Procedure.identifier** |  |
| Short name | External Identifiers for this procedure |
| Definition | This records identifiers associated with this procedure that are defined by business processes and/or used to refer to it when a direct URL reference to the resource itself is not appropriate (e.g. in CDA documents, or in written / printed documentation). |
| Requirements | Need to allow connection to a wider workflow. |
| **Procedure.definition** |  |
| Short name | Instantiates protocol or definition |
| Definition | A protocol, guideline, orderset or other definition that was adhered to in whole or in part by this procedure. |
| **Procedure.basedOn** |  |
| Short name | A request for this procedure |
| Definition | A reference to a resource that contains details of the request for this procedure. |
| Synonym | fulfills |
| **Procedure.partOf** |  |
| Short name | Part of referenced event |
| Definition | A larger event of which this particular procedure is a component or step. |
| Comment | The MedicationAdministration has a partOf reference to Procedure, but this is not a circular reference. For a surgical procedure, the anesthesia related medicationAdministration is part of the procedure. For an IV medication administration, the procedure to insert the IV port is part of the medication administration. |
| Synonym | container |
| **Procedure.status** |  |
| Definition | A code specifying the state of the procedure. Generally this will be in-progress or completed state. |
| Comment | The unknown code is not to be used to convey other statuses. The unknown code should be used when one of the statuses applies, but the authoring system doesn't know the current state of the procedure. |
| Binding Description | A code specifying the state of the procedure. |
| **Procedure.notDone** |  |
| Short name | True if procedure was not performed as scheduled |
| Definition | Set this to true if the record is saying that the procedure was NOT performed. |
| Comment | If true, it means the procedure did not occur as described. Typically it would be accompanied by attributes describing the type of activity. It might also be accompanied by body site information or time information (i.e. no procedure was done to the left arm or no procedure was done in this 2-year period). Specifying additional information such as performer, outcome, etc. is generally inappropriate. For example, it's not that useful to say "There was no appendectomy done at 12:03pm June 6th by Dr. Smith with a successful outcome" as it implies that there \*could\* have been an appendectomy done at any other time, by any other clinician or with any other outcome. |
| **Procedure.notDoneReason** |  |
| Short name | Reason procedure was not performed |
| Definition | A code indicating why the procedure was not performed. |
| Binding Description | A code that identifies the reason a procedure was not performed. |
| **Procedure.category** |  |
| Short name | Classification of the procedure |
| Definition | A code that classifies the procedure for searching, sorting and display purposes (e.g. "Surgical Procedure"). |
| Binding Description | A code that classifies a procedure for searching, sorting and display purposes. |
| **Procedure.code** |  |
| Short name | Identification of the procedure |
| Definition | The specific procedure that is performed. Use text if the exact nature of the procedure cannot be coded (e.g. "Laparoscopic Appendectomy"). |
| Requirements | 0..1 to account for primarily narrative only resources. |
| Synonym | type |
| Binding Description | A code to identify a specific procedure . |
| **Procedure.subject** |  |
| Short name | Who the procedure was performed on |
| Definition | The person, animal or group on which the procedure was performed. |
| Synonym | patient |
| **Procedure.context** |  |
| Short name | Encounter or episode associated with the procedure |
| Definition | The encounter during which the procedure was performed. |
| Synonym | encounter |
| **Procedure.performed[x]** |  |
| Short name | Date/Period the procedure was performed |
| Definition | The date(time)/period over which the procedure was performed. Allows a period to support complex procedures that span more than one date, and also allows for the length of the procedure to be captured. |
| **Procedure.performer** |  |
| Short name | The people who performed the procedure |
| Definition | Limited to 'real' people rather than equipment. |
| **Procedure.performer.role** |  |
| Short name | The role the actor was in |
| Definition | For example: surgeon, anaethetist, endoscopist. |
| Binding Description | A code that identifies the role of a performer of the procedure. |
| **Procedure.performer.actor** |  |
| Short name | The reference to the practitioner |
| Definition | The practitioner who was involved in the procedure. |
| Requirements | A reference to Device supports use cases, such as pacemakers. |
| **Procedure.performer.onBehalfOf** |  |
| Short name | Organization the device or practitioner was acting for |
| Definition | The organization the device or practitioner was acting on behalf of. |
| Requirements | Practitioners and Devices can be associated with multiple organizations. This element indicates which organization they were acting on behalf of when performing the action. |
| **Procedure.location** |  |
| Short name | Where the procedure happened |
| Definition | The location where the procedure actually happened. E.g. a newborn at home, a tracheostomy at a restaurant. |
| Requirements | Ties a procedure to where the records are likely kept. |
| **Procedure.reasonCode** |  |
| Short name | Coded reason procedure performed |
| Definition | The coded reason why the procedure was performed. This may be coded entity of some type, or may simply be present as text. |
| Binding Description | A code that identifies the reason a procedure is required. |
| **Procedure.reasonReference** |  |
| Short name | Condition that is the reason the procedure performed |
| Definition | The condition that is the reason why the procedure was performed. |
| Comment | e.g. endoscopy for dilatation and biopsy, combination diagnosis and therapeutic. |
| **Procedure.bodySite** |  |
| Short name | Target body sites |
| Definition | Detailed and structured anatomical location information. Multiple locations are allowed - e.g. multiple punch biopsies of a lesion. |
| Binding Description | Codes describing anatomical locations. May include laterality. |
| **Procedure.outcome** |  |
| Short name | The result of procedure |
| Definition | The outcome of the procedure - did it resolve reasons for the procedure being performed? |
| Comment | If outcome contains narrative text only, it can be captured using the CodeableConcept.text. |
| Binding Description | An outcome of a procedure - whether it was resolved or otherwise. |
| **Procedure.report** |  |
| Short name | Any report resulting from the procedure |
| Definition | This could be a histology result, pathology report, surgical report, etc.. |
| Comment | There could potentially be multiple reports - e.g. if this was a procedure which took multiple biopsies resulting in a number of anatomical pathology reports. |
| **Procedure.complication** |  |
| Short name | Complication following the procedure |
| Definition | Any complications that occurred during the procedure, or in the immediate post-performance period. These are generally tracked separately from the notes, which will typically describe the procedure itself rather than any 'post procedure' issues. |
| Comment | If complications are only expressed by the narrative text, they can be captured using the CodeableConcept.text. |
| Binding Description | Codes describing complications that resulted from a procedure. |
| **Procedure.complicationDetail** |  |
| Short name | A condition that is a result of the procedure |
| Definition | Any complications that occurred during the procedure, or in the immediate post-performance period. |
| Requirements | This is used to document a condition that is a result of the procedure, not the condition that was the reason for the procedure. |
| **Procedure.followUp** |  |
| Short name | Instructions for follow up |
| Definition | If the procedure required specific follow up - e.g. removal of sutures. The followup may be represented as a simple note, or could potentially be more complex in which case the CarePlan resource can be used. |
| Binding Description | Specific follow up required for a procedure e.g. removal of sutures. |
| **Procedure.note** |  |
| Short name | Additional information about the procedure |
| Definition | Any other notes about the procedure. E.g. the operative notes. |
| **Procedure.focalDevice** |  |
| Short name | Device changed in procedure |
| Definition | A device that is implanted, removed or otherwise manipulated (calibration, battery replacement, fitting a prosthesis, attaching a wound-vac, etc.) as a focal portion of the Procedure. |
| **Procedure.focalDevice.action** |  |
| Short name | Kind of change to device |
| Definition | The kind of change that happened to the device during the procedure. |
| Binding Description | A kind of change that happened to the device during the procedure. |
| **Procedure.focalDevice.manipulated** |  |
| Short name | Device that was changed |
| Definition | The device that was manipulated (changed) during the procedure. |
| **Procedure.usedReference** |  |
| Short name | Items used during procedure |
| Definition | Identifies medications, devices and any other substance used as part of the procedure. |
| Comment | For devices actually implanted or removed, use Procedure.device. |
| Requirements | Used for tracking contamination, etc. |
| **Procedure.usedCode** |  |
| Short name | Coded items used during the procedure |
| Definition | Identifies coded items that were used as part of the procedure. |
| Comment | For devices actually implanted or removed, use Procedure.device. |
| Binding Description | Codes describing items used during a procedure |

## http://hl7.org/fhir/StructureDefinition/ReferralRequest

|  |  |
| --- | --- |
| **Description** | Base StructureDefinition for ReferralRequest Resource |
| **ReferralRequest** | Referral Request |
| Short name | A request for referral or transfer of care |
| Definition | Used to record and send details about a request for referral service or transfer of a patient to the care of another provider or provider organization. |
| Synonym | ReferralRequest TransferOfCare Request |
| **ReferralRequest.identifier** |  |
| Short name | Business identifier |
| Definition | Business identifier that uniquely identifies the referral/care transfer request instance. |
| **ReferralRequest.definition** |  |
| Short name | Instantiates protocol or definition |
| Definition | A protocol, guideline, orderset or other definition that is adhered to in whole or in part by this request. |
| **ReferralRequest.basedOn** |  |
| Short name | Request fulfilled by this request |
| Definition | Indicates any plans, proposals or orders that this request is intended to satisfy - in whole or in part. |
| Synonym | fulfills |
| **ReferralRequest.replaces** |  |
| Short name | Request(s) replaced by this request |
| Definition | Completed or terminated request(s) whose function is taken by this new request. |
| Comment | The replacement could be because the initial request was immediately rejected (due to an issue) or because the previous request was completed, but the need for the action described by the request remains ongoing. |
| Requirements | Allows tracing the continuation of a therapy or administrative process instantiated through multiple requests. |
| Synonym | supersedes |
| Synonym | prior |
| Synonym | renewed order |
| **ReferralRequest.groupIdentifier** |  |
| Short name | Composite request this is part of |
| Definition | The business identifier of the logical "grouping" request/order that this referral is a part of. |
| Requirements | Allows multiple orders to be collected as part of a single requisition. |
| Synonym | grouperId |
| Synonym | requisition |
| **ReferralRequest.status** |  |
| Definition | The status of the authorization/intention reflected by the referral request record. |
| Requirements | Workflow status is handled by the Task resource. |
| Binding Description | The status of the referral. |
| **ReferralRequest.intent** |  |
| Definition | Distinguishes the "level" of authorization/demand implicit in this request. |
| Requirements | The same resource structure is used when capturing proposals/recommendations, plans and actual requests. |
| Synonym | category |
| Binding Description | Codes identifying the stage lifecycle stage of a request |
| **ReferralRequest.type** |  |
| Short name | Referral/Transition of care request type |
| Definition | An indication of the type of referral (or where applicable the type of transfer of care) request. |
| Binding Description | Codes for types of referral; e.g. consult, transfer, temporary transfer. |
| **ReferralRequest.priority** |  |
| Short name | Urgency of referral / transfer of care request |
| Definition | An indication of the urgency of referral (or where applicable the type of transfer of care) request. |
| Binding Description | Codes indicating the relative priority of the referral. |
| **ReferralRequest.serviceRequested** |  |
| Short name | Actions requested as part of the referral |
| Definition | The service(s) that is/are requested to be provided to the patient. For example: cardiac pacemaker insertion. |
| Binding Description | Codes indicating the types of services that might be requested as part of a referral. |
| **ReferralRequest.subject** |  |
| Short name | Patient referred to care or transfer |
| Definition | The patient who is the subject of a referral or transfer of care request. |
| Comment | Referral of family, group or community is to be catered for by profiles. |
| **ReferralRequest.context** |  |
| Short name | Originating encounter |
| Definition | The encounter at which the request for referral or transfer of care is initiated. |
| Synonym | encounter |
| **ReferralRequest.occurrence[x]** |  |
| Short name | When the service(s) requested in the referral should occur |
| Definition | The period of time within which the services identified in the referral/transfer of care is specified or required to occur. |
| Comment | When the occurrenceDateTime is used, then it is indicating that the requested service must happen before the specified date. |
| Requirements | Use cases: (1) to indicate that the requested service is not to happen before a specified date, and saving the start date in Period.start; (2) to indicate that the requested service must happen before a specified date, and saving the end date in Period.end; (3) to indicate that the requested service must happen during the specified dates ("start" and "end" values). |
| Synonym | timing |
| **ReferralRequest.authoredOn** |  |
| Short name | Date of creation/activation |
| Definition | Date/DateTime of creation for draft requests and date of activation for active requests. |
| Synonym | createdOn |
| **ReferralRequest.requester** |  |
| Short name | Who/what is requesting service |
| Definition | The individual who initiated the request and has responsibility for its activation. |
| Synonym | author |
| Constraint Text | onBehalfOf can only be specified if agent is practitioner or device |
| **ReferralRequest.requester.agent** |  |
| Short name | Individual making the request |
| Definition | The device, practitioner, etc. who initiated the request. |
| **ReferralRequest.requester.onBehalfOf** |  |
| Short name | Organization agent is acting for |
| Definition | The organization the device or practitioner was acting on behalf of. |
| Requirements | Practitioners and Devices can be associated with multiple organizations. This element indicates which organization they were acting on behalf of when authoring the request. |
| **ReferralRequest.specialty** |  |
| Short name | The clinical specialty (discipline) that the referral is requested for |
| Definition | Indication of the clinical domain or discipline to which the referral or transfer of care request is sent. For example: Cardiology Gastroenterology Diabetology. |
| Binding Description | Codes indicating the types of capability the referred to service provider must have. |
| **ReferralRequest.recipient** |  |
| Short name | Receiver of referral / transfer of care request |
| Definition | The healthcare provider(s) or provider organization(s) who/which is to receive the referral/transfer of care request. |
| Comment | There will be a primary receiver. But the request can be received by any number of "copied to" providers or organizations. |
| **ReferralRequest.reasonCode** |  |
| Short name | Reason for referral / transfer of care request |
| Definition | Description of clinical condition indicating why referral/transfer of care is requested. For example: Pathological Anomalies, Disabled (physical or mental), Behavioral Management. |
| Binding Description | Codes indicating why the referral is being requested. |
| **ReferralRequest.reasonReference** |  |
| Short name | Why is service needed? |
| Definition | Indicates another resource whose existence justifies this request. |
| **ReferralRequest.description** |  |
| Short name | A textual description of the referral |
| Definition | The reason element gives a short description of why the referral is being made, the description expands on this to support a more complete clinical summary. |
| **ReferralRequest.supportingInfo** |  |
| Short name | Additonal information to support referral or transfer of care request |
| Definition | Any additional (administrative, financial or clinical) information required to support request for referral or transfer of care. For example: Presenting problems/chief complaints Medical History Family History Alerts Allergy/Intolerance and Adverse Reactions Medications Observations/Assessments (may include cognitive and fundtional assessments) Diagnostic Reports Care Plan. |
| **ReferralRequest.note** |  |
| Short name | Comments made about referral request |
| Definition | Comments made about the referral request by any of the participants. |
| **ReferralRequest.relevantHistory** |  |
| Short name | Key events in history of request |
| Definition | Links to Provenance records for past versions of this resource or fulfilling request or event resources that identify key state transitions or updates that are likely to be relevant to a user looking at the current version of the resource. |
| Comment | This element does not point to the Provenance associated with the \*current\* version of the resource - as it would be created after this version existed. The Provenance for the current version can be retrieved with a \_revinclude. |
| Synonym | eventHistory |

# Pharmacy

## http://hl7.org/fhir/StructureDefinition/Medication

|  |  |
| --- | --- |
| **Description** | Base StructureDefinition for Medication Resource |
| **Medication** | Medication |
| Short name | Definition of a Medication |
| Definition | This resource is primarily used for the identification and definition of a medication. It covers the ingredients and the packaging for a medication. |
| **Medication.code** |  |
| Short name | Codes that identify this medication |
| Definition | A code (or set of codes) that specify this medication, or a textual description if no code is available. Usage note: This could be a standard medication code such as a code from RxNorm, SNOMED CT, IDMP etc. It could also be a national or local formulary code, optionally with translations to other code systems. |
| Comment | Depending on the context of use, the code that was actually selected by the user (prescriber, dispenser, etc.) will have the coding.userSelected set to true. As described in the coding datatype: "A coding may be marked as a "userSelected" if a user selected the particular coded value in a user interface (e.g. the user selects an item in a pick-list). If a user selected coding exists, it is the preferred choice for performing translations etc. |
| Binding Description | A coded concept that defines the type of a medication |
| **Medication.status** |  |
| Definition | A code to indicate if the medication is in active use. |
| Comment | This status is not intended to specify if a medication is part of a formulary. |
| Binding Description | A coded concept defining if the medication is in active use |
| **Medication.isBrand** |  |
| Short name | True if a brand |
| Definition | Set to true if the item is attributable to a specific manufacturer. |
| **Medication.isOverTheCounter** |  |
| Short name | True if medication does not require a prescription |
| Definition | Set to true if the medication can be obtained without an order from a prescriber. |
| **Medication.manufacturer** |  |
| Short name | Manufacturer of the item |
| Definition | Describes the details of the manufacturer of the medication product. This is not intended to represent the distributor of a medication product. |
| **Medication.form** |  |
| Definition | Describes the form of the item. Powder; tablets; capsule. |
| Comment | When Medication is referenced from MedicationRequest, this is the ordered form. When Medication is referenced within MedicationDispense, this is the dispensed form. When Medication is referenced within MedicationAdministration, this is administered form. |
| Binding Description | A coded concept defining the form of a medication |
| **Medication.ingredient** |  |
| Short name | Active or inactive ingredient |
| Definition | Identifies a particular constituent of interest in the product. |
| Comment | The ingredients need not be a complete list. If an ingredient is not specified, this does not indicate whether an ingredient is present or absent. If an ingredient is specified it does not mean that all ingredients are specified. It is possible to specify both inactive and active ingredients. |
| **Medication.ingredient.item[x]** |  |
| Short name | The product contained |
| Definition | The actual ingredient - either a substance (simple ingredient) or another medication. |
| **Medication.ingredient.isActive** |  |
| Short name | Active ingredient indicator |
| Definition | Indication of whether this ingredient affects the therapeutic action of the drug. |
| Requirements | True indicates that the ingredient affects the therapeutic action of the drug (i.e. active). False indicates that the ingredient does not affect the therapeutic action of the drug (i.e. inactive). |
| **Medication.ingredient.amount** |  |
| Short name | Quantity of ingredient present |
| Definition | Specifies how many (or how much) of the items there are in this Medication. For example, 250 mg per tablet. This is expressed as a ratio where the numerator is 250mg and the denominator is 1 tablet. |
| **Medication.package** |  |
| Short name | Details about packaged medications |
| Definition | Information that only applies to packages (not products). |
| **Medication.package.container** |  |
| Short name | E.g. box, vial, blister-pack |
| Definition | The kind of container that this package comes as. |
| Binding Description | A coded concept defining the kind of container a medication package is packaged in |
| **Medication.package.content** |  |
| Short name | What is in the package |
| Definition | A set of components that go to make up the described item. |
| **Medication.package.content.item[x]** |  |
| Short name | The item in the package |
| Definition | Identifies one of the items in the package. |
| **Medication.package.content.amount** |  |
| Short name | Quantity present in the package |
| Definition | The amount of the product that is in the package. |
| **Medication.package.batch** |  |
| Short name | Identifies a single production run |
| Definition | Information about a group of medication produced or packaged from one production run. |
| **Medication.package.batch.lotNumber** |  |
| Short name | Identifier assigned to batch |
| Definition | The assigned lot number of a batch of the specified product. |
| **Medication.package.batch.expirationDate** |  |
| Short name | When batch will expire |
| Definition | When this specific batch of product will expire. |
| **Medication.image** |  |
| Short name | Picture of the medication |
| Definition | Photo(s) or graphic representation(s) of the medication. |
| Requirements | Note that "image" is only applicable when the medication.code represents a physical item (e.g. Amoxil 250 mg capsule) and not an abstract item (e.g. amoxicillin 250 mg). |

## http://hl7.org/fhir/StructureDefinition/MedicationAdministration

|  |  |
| --- | --- |
| **Description** | Base StructureDefinition for MedicationAdministration Resource |
| **MedicationAdministration** | Medication Administration |
| Short name | Administration of medication to a patient |
| Definition | Describes the event of a patient consuming or otherwise being administered a medication. This may be as simple as swallowing a tablet or it may be a long running infusion. Related resources tie this event to the authorizing prescription, and the specific encounter between patient and health care practitioner. |
| Comment | The WG will be updating the MedicationAdministration resource to adjust each affected resource to align with the workflow pattern (see workflow.html). |
| Constraint Text | Reason not given is only permitted if NotGiven is true |
| Constraint Text | Reason given is only permitted if NotGiven is false |
| **MedicationAdministration.identifier** |  |
| Short name | External identifier |
| Definition | External identifier - FHIR will generate its own internal identifiers (probably URLs) which do not need to be explicitly managed by the resource. The identifier here is one that would be used by another non-FHIR system - for example an automated medication pump would provide a record each time it operated; an administration while the patient was off the ward might be made with a different system and entered after the event. Particularly important if these records have to be updated. |
| **MedicationAdministration.definition** |  |
| Short name | Instantiates protocol or definition |
| Definition | A protocol, guideline, orderset or other definition that was adhered to in whole or in part by this event. |
| **MedicationAdministration.partOf** |  |
| Short name | Part of referenced event |
| Definition | A larger event of which this particular event is a component or step. |
| **MedicationAdministration.status** |  |
| Definition | Will generally be set to show that the administration has been completed. For some long running administrations such as infusions it is possible for an administration to be started but not completed or it may be paused while some other process is under way. |
| Binding Description | A set of codes indicating the current status of a MedicationAdministration. |
| **MedicationAdministration.category** |  |
| Short name | Type of medication usage |
| Definition | Indicates the type of medication administration and where the medication is expected to be consumed or administered. |
| Binding Description | A coded concept describing where the medication administered is expected to occur |
| **MedicationAdministration.medication[x]** |  |
| Short name | What was administered |
| Definition | Identifies the medication that was administered. This is either a link to a resource representing the details of the medication or a simple attribute carrying a code that identifies the medication from a known list of medications. |
| Comment | If only a code is specified, then it needs to be a code for a specific product. If more information is required, then the use of the medication resource is recommended.  For example if you require form or lot number, then you must reference the Medication resource. . |
| Binding Description | Codes identifying substance or product that can be administered. |
| **MedicationAdministration.subject** |  |
| Short name | Who received medication |
| Definition | The person or animal or group receiving the medication. |
| **MedicationAdministration.context** |  |
| Short name | Encounter or Episode of Care administered as part of |
| Definition | The visit, admission or other contact between patient and health care provider the medication administration was performed as part of. |
| **MedicationAdministration.supportingInformation** |  |
| Short name | Additional information to support administration |
| Definition | Additional information (for example, patient height and weight) that supports the administration of the medication. |
| **MedicationAdministration.effective[x]** |  |
| Short name | Start and end time of administration |
| Definition | A specific date/time or interval of time during which the administration took place (or did not take place, when the 'notGiven' attribute is true). For many administrations, such as swallowing a tablet the use of dateTime is more appropriate. |
| **MedicationAdministration.performer** |  |
| Short name | Who administered substance |
| Definition | The individual who was responsible for giving the medication to the patient. |
| **MedicationAdministration.performer.actor** |  |
| Short name | Individual who was performing |
| Definition | The device, practitioner, etc. who performed the action. |
| **MedicationAdministration.performer.onBehalfOf** |  |
| Short name | Organization organization was acting for |
| Definition | The organization the device or practitioner was acting on behalf of. |
| **MedicationAdministration.notGiven** |  |
| Short name | True if medication not administered |
| Definition | Set this to true if the record is saying that the medication was NOT administered. |
| Meaning when missing | If this is missing, then the medication was administered |
| **MedicationAdministration.reasonNotGiven** |  |
| Short name | Reason administration not performed |
| Definition | A code indicating why the administration was not performed. |
| Binding Description | A set of codes indicating the reason why the MedicationAdministration is negated. |
| **MedicationAdministration.reasonCode** |  |
| Short name | Reason administration performed |
| Definition | A code indicating why the medication was given. |
| Binding Description | A set of codes indicating the reason why the MedicationAdministration was made. |
| **MedicationAdministration.reasonReference** |  |
| Short name | Condition or Observation that supports why the medication was administered |
| Definition | Condition or observation that supports why the medication was administered. |
| Comment | This is a reference to a condition that is the reason for the medication request. If only a code exists, use reasonCode. |
| **MedicationAdministration.prescription** |  |
| Short name | Request administration performed against |
| Definition | The original request, instruction or authority to perform the administration. |
| **MedicationAdministration.device** |  |
| Short name | Device used to administer |
| Definition | The device used in administering the medication to the patient. For example, a particular infusion pump. |
| **MedicationAdministration.note** |  |
| Short name | Information about the administration |
| Definition | Extra information about the medication administration that is not conveyed by the other attributes. |
| **MedicationAdministration.dosage** |  |
| Short name | Details of how medication was taken |
| Definition | Describes the medication dosage information details e.g. dose, rate, site, route, etc. |
| Constraint Text | SHALL have at least one of dosage.dose or dosage.rate[x] |
| **MedicationAdministration.dosage.text** |  |
| Short name | Free text dosage instructions e.g. SIG |
| Definition | Free text dosage can be used for cases where the dosage administered is too complex to code. When coded dosage is present, the free text dosage may still be present for display to humans. The dosage instructions should reflect the dosage of the medication that was administered. |
| **MedicationAdministration.dosage.site** |  |
| Short name | Body site administered to |
| Definition | A coded specification of the anatomic site where the medication first entered the body. For example, "left arm". |
| Comment | If the use case requires attributes from the BodySite resource (e.g. to identify and track separately) then use the standard extension [body-site-instance](extension-body-site-instance.html). May be a summary code, or a reference to a very precise definition of the location, or both. |
| Binding Description | A coded concept describing the site location the medicine enters into or onto the body. |
| **MedicationAdministration.dosage.route** |  |
| Short name | Path of substance into body |
| Definition | A code specifying the route or physiological path of administration of a therapeutic agent into or onto the patient. For example, topical, intravenous, etc. |
| Binding Description | A coded concept describing the route or physiological path of administration of a therapeutic agent into or onto the body of a subject. |
| **MedicationAdministration.dosage.method** |  |
| Short name | How drug was administered |
| Definition | A coded value indicating the method by which the medication is intended to be or was introduced into or on the body. This attribute will most often NOT be populated. It is most commonly used for injections. For example, Slow Push, Deep IV. |
| Comment | One of the reasons this attribute is not used often, is that the method is often pre-coordinated with the route and/or form of administration. This means the codes used in route or form may pre-coordinate the method in the route code or the form code. The implementation decision about what coding system to use for route or form code will determine how frequently the method code will be populated e.g. if route or form code pre-coordinate method code, then this attribute will not be populated often; if there is no pre-coordination then method code may be used frequently. |
| Binding Description | A coded concept describing the technique by which the medicine is administered. |
| **MedicationAdministration.dosage.dose** |  |
| Short name | Amount of medication per dose |
| Definition | The amount of the medication given at one administration event. Use this value when the administration is essentially an instantaneous event such as a swallowing a tablet or giving an injection. |
| Comment | If the administration is not instantaneous (rate is present), this can be specified to convey the total amount administered over period of time of a single administration. |
| **MedicationAdministration.dosage.rate[x]** |  |
| Short name | Dose quantity per unit of time |
| Definition | Identifies the speed with which the medication was or will be introduced into the patient. Typically the rate for an infusion e.g. 100 ml per 1 hour or 100 ml/hr. May also be expressed as a rate per unit of time e.g. 500 ml per 2 hours. Other examples: 200 mcg/min or 200 mcg/1 minute; 1 liter/8 hours. |
| Comment | If the rate changes over time, and you want to capture this in MedicationAdministration, then each change should be captured as a distinct MedicationAdministration, with a specific MedicationAdministration.dosage.rate, and the date time when the rate change occurred. Typically, the MedicationAdministration.dosage.rate element is not used to convey an average rate. |
| **MedicationAdministration.eventHistory** |  |
| Short name | A list of events of interest in the lifecycle |
| Definition | A summary of the events of interest that have occurred, such as when the administration was verified. |
| Comment | This may not include provenances for all versions of the request â€“ only those deemed â€œrelevantâ€ or important. This SHALL NOT include the Provenance associated with this current version of the resource. (If that provenance is deemed to be a â€œrelevantâ€ change, it will need to be added as part of a later update. Until then, it can be queried directly as the Provenance that points to this version using \_revinclude All Provenances should have some historical version of this Request as their subject. |

## http://hl7.org/fhir/StructureDefinition/MedicationDispense

|  |  |
| --- | --- |
| **Description** | Base StructureDefinition for MedicationDispense Resource |
| **MedicationDispense** | Medication Dispense |
| Short name | Dispensing a medication to a named patient |
| Definition | Indicates that a medication product is to be or has been dispensed for a named person/patient. This includes a description of the medication product (supply) provided and the instructions for administering the medication. The medication dispense is the result of a pharmacy system responding to a medication order. |
| Comment | The WG will be updating the MedicationDispense resource to adjust each affected resource to align with the workflow pattern (see workflow.html). |
| Constraint Text | whenHandedOver cannot be before whenPrepared |
| **MedicationDispense.identifier** |  |
| Short name | External identifier |
| Definition | Identifier assigned by the dispensing facility - this is an identifier assigned outside FHIR. |
| **MedicationDispense.partOf** |  |
| Short name | Event that dispense is part of |
| Definition | The procedure that the dispense is done because of. |
| **MedicationDispense.status** |  |
| Definition | A code specifying the state of the set of dispense events. |
| Binding Description | A coded concept specifying the state of the dispense event. |
| **MedicationDispense.category** |  |
| Short name | Type of medication dispense |
| Definition | Indicates type of medication dispense and where the medication is expected to be consumed or administered. |
| Binding Description | A code describing where the dispensed medication is expected to be consumed or administered |
| **MedicationDispense.medication[x]** |  |
| Short name | What medication was supplied |
| Definition | Identifies the medication being administered. This is either a link to a resource representing the details of the medication or a simple attribute carrying a code that identifies the medication from a known list of medications. |
| Comment | If only a code is specified, then it needs to be a code for a specific product. If more information is required, then the use of the medication resource is recommended.  For example if you require form or lot number, then you must reference the Medication resource. . |
| Binding Description | A coded concept identifying which substance or product can be dispensed |
| **MedicationDispense.subject** |  |
| Short name | Who the dispense is for |
| Definition | A link to a resource representing the person or the group to whom the medication will be given. |
| Comment | SubstanceAdministration->subject->Patient. |
| **MedicationDispense.context** |  |
| Short name | Encounter / Episode associated with event |
| Definition | The encounter or episode of care that establishes the context for this event. |
| **MedicationDispense.supportingInformation** |  |
| Short name | Information that supports the dispensing of the medication |
| Definition | Additional information that supports the medication being dispensed. |
| **MedicationDispense.performer** |  |
| Short name | Who performed event |
| Definition | Indicates who or what performed the event. |
| **MedicationDispense.performer.actor** |  |
| Short name | Individual who was performing |
| Definition | The device, practitioner, etc. who performed the action. |
| **MedicationDispense.performer.onBehalfOf** |  |
| Short name | Organization organization was acting for |
| Definition | The organization the device or practitioner was acting on behalf of. |
| **MedicationDispense.authorizingPrescription** |  |
| Short name | Medication order that authorizes the dispense |
| Definition | Indicates the medication order that is being dispensed against. |
| Comment | Maps to basedOn in Event logical model. |
| **MedicationDispense.type** |  |
| Short name | Trial fill, partial fill, emergency fill, etc. |
| Definition | Indicates the type of dispensing event that is performed. For example, Trial Fill, Completion of Trial, Partial Fill, Emergency Fill, Samples, etc. |
| Binding Description | Indicates the type of dispensing event that is performed. For example, Trial Fill, Completion of Trial, Partial Fill, Emergency Fill, Samples, etc. |
| **MedicationDispense.quantity** |  |
| Short name | Amount dispensed |
| Definition | The amount of medication that has been dispensed. Includes unit of measure. |
| **MedicationDispense.daysSupply** |  |
| Short name | Amount of medication expressed as a timing amount |
| Definition | The amount of medication expressed as a timing amount. |
| **MedicationDispense.whenPrepared** |  |
| Short name | When product was packaged and reviewed |
| Definition | The time when the dispensed product was packaged and reviewed. |
| **MedicationDispense.whenHandedOver** |  |
| Short name | When product was given out |
| Definition | The time the dispensed product was provided to the patient or their representative. |
| **MedicationDispense.destination** |  |
| Short name | Where the medication was sent |
| Definition | Identification of the facility/location where the medication was shipped to, as part of the dispense event. |
| **MedicationDispense.receiver** |  |
| Short name | Who collected the medication |
| Definition | Identifies the person who picked up the medication. This will usually be a patient or their caregiver, but some cases exist where it can be a healthcare professional. |
| **MedicationDispense.note** |  |
| Short name | Information about the dispense |
| Definition | Extra information about the dispense that could not be conveyed in the other attributes. |
| **MedicationDispense.dosageInstruction** |  |
| Short name | How the medication is to be used by the patient or administered by the caregiver |
| Definition | Indicates how the medication is to be used by the patient. |
| Comment | When the dose or rate is intended to change over the entire administration period (e.g. Tapering dose prescriptions), multiple instances of dosage instructions will need to be supplied to convey the different doses/rates. The pharmacist reviews the medication order prior to dispense and updates the dosageInstruction based on the actual product being dispensed. |
| **MedicationDispense.substitution** |  |
| Short name | Whether a substitution was performed on the dispense |
| Definition | Indicates whether or not substitution was made as part of the dispense. In some cases substitution will be expected but does not happen, in other cases substitution is not expected but does happen. This block explains what substitution did or did not happen and why. If nothing is specified, substitution was not done. |
| **MedicationDispense.substitution.wasSubstituted** |  |
| Short name | Whether a substitution was or was not performed on the dispense |
| Definition | True if the dispenser dispensed a different drug or product from what was prescribed. |
| **MedicationDispense.substitution.type** |  |
| Short name | Code signifying whether a different drug was dispensed from what was prescribed |
| Definition | A code signifying whether a different drug was dispensed from what was prescribed. |
| Binding Description | A coded concept describing whether a different medicinal product may be dispensed other than the product as specified exactly in the prescription |
| **MedicationDispense.substitution.reason** |  |
| Short name | Why was substitution made |
| Definition | Indicates the reason for the substitution of (or lack of substitution) from what was prescribed. |
| Binding Description | A coded concept describing the reason that a different medication should (or should not) be substituted from what was prescribed |
| **MedicationDispense.substitution.responsibleParty** |  |
| Short name | Who is responsible for the substitution |
| Definition | The person or organization that has primary responsibility for the substitution. |
| **MedicationDispense.detectedIssue** |  |
| Short name | Clinical Issue with action |
| Definition | Indicates an actual or potential clinical issue with or between one or more active or proposed clinical actions for a patient; e.g. Drug-drug interaction, duplicate therapy, dosage alert etc. |
| Synonym | Contraindication |
| Synonym | Drug Utilization Review (DUR) |
| Synonym | Alert |
| **MedicationDispense.notDone** |  |
| Short name | Whether the dispense was or was not performed |
| Definition | True if the dispense was not peformed for some reason. |
| **MedicationDispense.notDoneReason[x]** |  |
| Short name | Why a dispense was not performed |
| Definition | Indicates the reason why a dispense was not performed. |
| **MedicationDispense.eventHistory** |  |
| Short name | A list of events of interest in the lifecycle |
| Definition | A summary of the events of interest that have occurred, such as when the dispense was verified. |
| Comment | This may not include provenances for all versions of the request â€“ only those deemed â€œrelevantâ€ or important. This SHALL NOT include the Provenance associated with this current version of the resource. (If that provenance is deemed to be a â€œrelevantâ€ change, it will need to be added as part of a later update. Until then, it can be queried directly as the Provenance that points to this version using \_revinclude All Provenances should have some historical version of this Request as their subject. |

## http://hl7.org/fhir/StructureDefinition/MedicationRequest

|  |  |
| --- | --- |
| **Description** | Base StructureDefinition for MedicationRequest Resource |
| **MedicationRequest** | Medication Request |
| Short name | Ordering of medication for patient or group |
| Definition | An order or request for both supply of the medication and the instructions for administration of the medication to a patient. The resource is called "MedicationRequest" rather than "MedicationPrescription" or "MedicationOrder" to generalize the use across inpatient and outpatient settings as well as for care plans, etc and to harmonize with workflow patterns. |
| Synonym | Prescription |
| Synonym | Order |
| **MedicationRequest.identifier** |  |
| Short name | External ids for this request |
| Definition | External identifier - one that would be used by another non-FHIR system - for example a re-imbursement system might issue its own id for each prescription that is created. This is particularly important where FHIR only provides part of an entire workflow process where records have to be tracked through an entire system. |
| **MedicationRequest.definition** |  |
| Short name | Protocol or definition |
| Definition | Protocol or definition followed by this request. |
| **MedicationRequest.basedOn** |  |
| Short name | What request fulfills |
| Definition | A plan or request that is fulfilled in whole or in part by this medication request. |
| **MedicationRequest.groupIdentifier** |  |
| Short name | Composite request this is part of |
| Definition | A shared identifier common to all requests that were authorized more or less simultaneously by a single author, representing the identifer of the requisition or prescription. |
| Requirements | Requests are linked either by a "basedOn" relationship (i.e. one request is fulfilling another) or by having a common requisition. Requests that are part of the same requisition are generally treated independently from the perspective of changing their state or maintaining them after initial creation. |
| **MedicationRequest.status** |  |
| Definition | A code specifying the current state of the order. Generally this will be active or completed state. |
| Binding Description | A coded concept specifying the state of the prescribing event. Describes the lifecycle of the prescription |
| **MedicationRequest.intent** |  |
| Definition | Whether the request is a proposal, plan, or an original order. |
| Comment | It is expected that the type of requester will be restricted for different stages of a MedicationRequest. For example, Proposals can be created by a patient, relatedPerson, Practitioner or Device. Plans can be created by Practitioners, Patients, RelatedPersons and Devices. Original orders can be created by a Practitioner only. An instance-order is an instantiation of a request or order and may be used to populate Medication Administration Records. |
| Binding Description | The kind of medication order |
| **MedicationRequest.category** |  |
| Short name | Type of medication usage |
| Definition | Indicates the type of medication order and where the medication is expected to be consumed or administered. |
| Binding Description | A coded concept identifying where the medication ordered is expected to be consumed or administered |
| **MedicationRequest.priority** |  |
| Definition | Indicates how quickly the Medication Request should be addressed with respect to other requests. |
| Binding Description | Identifies the level of importance to be assigned to actioning the request |
| **MedicationRequest.medication[x]** |  |
| Short name | Medication to be taken |
| Definition | Identifies the medication being administered. This is a link to a resource that represents the medication which may be the details of the medication or simply an attribute carrying a code that identifies the medication from a known list of medications. |
| Comment | If only a code is specified, then it needs to be a code for a specific product. If more information is required, then the use of the medication resource is recommended.  For example if you require form or lot number or if the medication is compounded or extemporaneously prepared, then you must reference the Medication resource. . |
| Binding Description | A coded concept identifying substance or product that can be ordered. |
| **MedicationRequest.subject** |  |
| Short name | Who or group prescription is for |
| Definition | A link to a resource representing the person or set of individuals to whom the medication will be given. |
| Comment | The subject on a medicationRequest is mandatory. For the secondary use case where the actual subject is not provided, there still must be an anonymyzed subject specified. |
| **MedicationRequest.context** |  |
| Short name | Created during encounter/admission/stay |
| Definition | A link to a resource that identifies the particular occurrence or set occurrences of contact between patient and health care provider. |
| Comment | SubstanceAdministration->component->EncounterEvent. |
| **MedicationRequest.supportingInformation** |  |
| Short name | Information to support ordering of the medication |
| Definition | Include additional information (for example, patient height and weight) that supports the ordering of the medication. |
| **MedicationRequest.authoredOn** |  |
| Short name | When request was initially authored |
| Definition | The date (and perhaps time) when the prescription was initially written or authored on. |
| **MedicationRequest.requester** |  |
| Short name | Who/What requested the Request |
| Definition | The individual, organization or device that initiated the request and has responsibility for its activation. |
| Constraint Text | onBehalfOf can only be specified if agent is practitioner or device |
| **MedicationRequest.requester.agent** |  |
| Short name | Who ordered the initial medication(s) |
| Definition | The healthcare professional responsible for authorizing the initial prescription. |
| Comment | It is expected that the type of requester will be restricted for different stages of a MedicationRequest. For example, Proposals can be created by a patient, relatedPerson, Practitioner or Device. Plans can be created by Practitioners, Patients, RelatedPersons and Devices. Original orders can be created by a Practitioner only. |
| **MedicationRequest.requester.onBehalfOf** |  |
| Short name | Organization agent is acting for |
| Definition | The organization the device or practitioner was acting on behalf of. |
| Requirements | Practitioners and Devices can be associated with multiple organizations. This element indicates which organization they were acting on behalf of when authoring the request. |
| **MedicationRequest.recorder** |  |
| Short name | Person who entered the request |
| Definition | The person who entered the order on behalf of another individual for example in the case of a verbal or a telephone order. |
| **MedicationRequest.reasonCode** |  |
| Short name | Reason or indication for writing the prescription |
| Definition | The reason or the indication for ordering the medication. |
| Comment | This could be a diagnosis code. If a full condition record exists or additional detail is needed, use reasonReference. |
| Binding Description | A coded concept indicating why the medication was ordered. |
| **MedicationRequest.reasonReference** |  |
| Short name | Condition or Observation that supports why the prescription is being written |
| Definition | Condition or observation that supports why the medication was ordered. |
| Comment | This is a reference to a condition that is the reason for the medication order. If only a code exists, use reasonCode. |
| **MedicationRequest.note** |  |
| Short name | Information about the prescription |
| Definition | Extra information about the prescription that could not be conveyed by the other attributes. |
| **MedicationRequest.dosageInstruction** |  |
| Short name | How the medication should be taken |
| Definition | Indicates how the medication is to be used by the patient. |
| Comment | There are examples where a medication request may include the option of an oral dose or an Intravenous or Intramuscular dose. For example, "Ondansetron 8mg orally or IV twice a day as needed for nausea" or "CompazineÂ® (prochlorperazine) 5-10mg PO or 25mg PR bid prn nausea or vomiting". In these cases, two medication requests would be created that could be grouped together. The decision on which dose and route of administration to use is based on the patient's condition at the time the dose is needed. |
| **MedicationRequest.dispenseRequest** |  |
| Short name | Medication supply authorization |
| Definition | Indicates the specific details for the dispense or medication supply part of a medication request (also known as a Medication Prescription or Medication Order). Note that this information is NOT always sent with the order. There may be in some settings (e.g. hospitals) institutional or system support for completing the dispense details in the pharmacy department. |
| **MedicationRequest.dispenseRequest.validityPeriod** |  |
| Short name | Time period supply is authorized for |
| Definition | This indicates the validity period of a prescription (stale dating the Prescription). |
| Comment | It reflects the prescribers' perspective for the validity of the prescription. Dispenses must not be made against the prescription outside of this period. The lower-bound of the Dispensing Window signifies the earliest date that the prescription can be filled for the first time. If an upper-bound is not specified then the Prescription is open-ended or will default to a stale-date based on regulations. |
| Requirements | Indicates when the Prescription becomes valid, and when it ceases to be a dispensable Prescription. |
| **MedicationRequest.dispenseRequest.numberOfRepeatsAllowed** |  |
| Short name | Number of refills authorized |
| Definition | An integer indicating the number of times, in addition to the original dispense, (aka refills or repeats) that the patient can receive the prescribed medication. Usage Notes: This integer does NOT include the original order dispense. This means that if an order indicates dispense 30 tablets plus "3 repeats", then the order can be dispensed a total of 4 times and the patient can receive a total of 120 tablets. |
| Comment | If displaying "number of authorized fills", add 1 to this number. |
| **MedicationRequest.dispenseRequest.quantity** |  |
| Short name | Amount of medication to supply per dispense |
| Definition | The amount that is to be dispensed for one fill. |
| **MedicationRequest.dispenseRequest.expectedSupplyDuration** |  |
| Short name | Number of days supply per dispense |
| Definition | Identifies the period time over which the supplied product is expected to be used, or the length of time the dispense is expected to last. |
| Comment | In some situations, this attribute may be used instead of quantity to identify the amount supplied by how long it is expected to last, rather than the physical quantity issued, e.g. 90 days supply of medication (based on an ordered dosage) When possible, it is always better to specify quantity, as this tends to be more precise. expectedSupplyDuration will always be an estimate that can be influenced by external factors. |
| **MedicationRequest.dispenseRequest.performer** |  |
| Short name | Intended dispenser |
| Definition | Indicates the intended dispensing Organization specified by the prescriber. |
| **MedicationRequest.substitution** |  |
| Short name | Any restrictions on medication substitution |
| Definition | Indicates whether or not substitution can or should be part of the dispense. In some cases substitution must happen, in other cases substitution must not happen, and in others it does not matter. This block explains the prescriber's intent. If nothing is specified substitution may be done. |
| **MedicationRequest.substitution.allowed** |  |
| Short name | Whether substitution is allowed or not |
| Definition | True if the prescriber allows a different drug to be dispensed from what was prescribed. |
| **MedicationRequest.substitution.reason** |  |
| Short name | Why should (not) substitution be made |
| Definition | Indicates the reason for the substitution, or why substitution must or must not be performed. |
| Binding Description | A coded concept describing the reason that a different medication should (or should not) be substituted from what was prescribed. |
| **MedicationRequest.priorPrescription** |  |
| Short name | An order/prescription that is being replaced |
| Definition | A link to a resource representing an earlier order related order or prescription. |
| **MedicationRequest.detectedIssue** |  |
| Short name | Clinical Issue with action |
| Definition | Indicates an actual or potential clinical issue with or between one or more active or proposed clinical actions for a patient; e.g. Drug-drug interaction, duplicate therapy, dosage alert etc. |
| Synonym | Contraindication |
| Synonym | Drug Utilization Review (DUR) |
| Synonym | Alert |
| **MedicationRequest.eventHistory** |  |
| Short name | A list of events of interest in the lifecycle |
| Definition | Links to Provenance records for past versions of this resource or fulfilling request or event resources that identify key state transitions or updates that are likely to be relevant to a user looking at the current version of the resource. |
| Comment | This may not include provenances for all versions of the request â€“ only those deemed â€œrelevantâ€ or important. This SHALL NOT include the Provenance associated with this current version of the resource. (If that provenance is deemed to be a â€œrelevantâ€ change, it will need to be added as part of a later update. Until then, it can be queried directly as the Provenance that points to this version using \_revinclude All Provenances should have some historical version of this Request as their subject. |

## http://hl7.org/fhir/StructureDefinition/MedicationStatement

|  |  |
| --- | --- |
| **Description** | Base StructureDefinition for MedicationStatement Resource |
| **MedicationStatement** | Medication Statement |
| Short name | Record of medication being taken by a patient |
| Definition | A record of a medication that is being consumed by a patient. A MedicationStatement may indicate that the patient may be taking the medication now, or has taken the medication in the past or will be taking the medication in the future. The source of this information can be the patient, significant other (such as a family member or spouse), or a clinician. A common scenario where this information is captured is during the history taking process during a patient visit or stay. The medication information may come from e.g. the patient's memory, from a prescription bottle, or from a list of medications the patient, clinician or other party maintains The primary difference between a medication statement and a medication administration is that the medication administration has complete administration information and is based on actual administration information from the person who administered the medication. A medication statement is often, if not always, less specific. There is no required date/time when the medication was administered, in fact we only know that a source has reported the patient is taking this medication, where details such as time, quantity, or rate or even medication product may be incomplete or missing or less precise. As stated earlier, the medication statement information may come from the patient's memory, from a prescription bottle or from a list of medications the patient, clinician or other party maintains. Medication administration is more formal and is not missing detailed information. |
| Comment | When interpreting a medicationStatement, the value of the status and NotTaken needed to be considered: MedicationStatement.status + MedicationStatement.wasNotTaken Status=Active + NotTaken=T = Not currently taking Status=Completed + NotTaken=T = Not taken in the past Status=Intended + NotTaken=T = No intention of taking Status=Active + NotTaken=F = Taking, but not as prescribed Status=Active + NotTaken=F = Taking Status=Intended +NotTaken= F = Will be taking (not started) Status=Completed + NotTaken=F = Taken in past Status=In Error + NotTaken=N/A = In Error. |
| Constraint Text | Reason not taken is only permitted if Taken is No |
| **MedicationStatement.identifier** |  |
| Short name | External identifier |
| Definition | External identifier - FHIR will generate its own internal identifiers (probably URLs) which do not need to be explicitly managed by the resource. The identifier here is one that would be used by another non-FHIR system - for example an automated medication pump would provide a record each time it operated; an administration while the patient was off the ward might be made with a different system and entered after the event. Particularly important if these records have to be updated. |
| **MedicationStatement.basedOn** |  |
| Short name | Fulfils plan, proposal or order |
| Definition | A plan, proposal or order that is fulfilled in whole or in part by this event. |
| Requirements | Allows tracing of authorization for the event and tracking whether proposals/recommendations were acted upon. |
| **MedicationStatement.partOf** |  |
| Short name | Part of referenced event |
| Definition | A larger event of which this particular event is a component or step. |
| Requirements | This should not be used when indicating which resource a MedicationStatement has been derived from. If that is the use case, then MedicationStatement.derivedFrom should be used. |
| **MedicationStatement.context** |  |
| Short name | Encounter / Episode associated with MedicationStatement |
| Definition | The encounter or episode of care that establishes the context for this MedicationStatement. |
| **MedicationStatement.status** |  |
| Definition | A code representing the patient or other source's judgment about the state of the medication used that this statement is about. Generally this will be active or completed. |
| Comment | MedicationStatement is a statement at a point in time. The status is only representative at the point when it was asserted. The value set for MedicationStatement.status contains codes that assert the status of the use of the medication by the patient (for example, stopped or on hold) as well as codes that assert the status of the medication statement itself (for example, entered in error). |
| Binding Description | A coded concept indicating the current status of a MedicationStatement. |
| **MedicationStatement.category** |  |
| Short name | Type of medication usage |
| Definition | Indicates where type of medication statement and where the medication is expected to be consumed or administered. |
| Binding Description | A coded concept identifying where the medication included in the medicationstatement is expected to be consumed or administered |
| **MedicationStatement.medication[x]** |  |
| Short name | What medication was taken |
| Definition | Identifies the medication being administered. This is either a link to a resource representing the details of the medication or a simple attribute carrying a code that identifies the medication from a known list of medications. |
| Comment | If only a code is specified, then it needs to be a code for a specific product. If more information is required, then the use of the medication resource is recommended.  For example if you require form or lot number, then you must reference the Medication resource. . |
| Binding Description | A coded concept identifying the substance or product being taken. |
| **MedicationStatement.effective[x]** |  |
| Short name | The date/time or interval when the medication was taken |
| Definition | The interval of time during which it is being asserted that the patient was taking the medication (or was not taking, when the wasNotGiven element is true). |
| Comment | This attribute reflects the period over which the patient consumed the medication and is expected to be populated on the majority of Medication Statements. If the medication is still being taken at the time the statement is recorded, the "end" date will be omitted. |
| **MedicationStatement.dateAsserted** |  |
| Short name | When the statement was asserted? |
| Definition | The date when the medication statement was asserted by the information source. |
| **MedicationStatement.informationSource** |  |
| Short name | Person or organization that provided the information about the taking of this medication |
| Definition | The person or organization that provided the information about the taking of this medication. Note: Use derivedFrom when a MedicationStatement is derived from other resources, e.g Claim or MedicationRequest. |
| **MedicationStatement.subject** |  |
| Short name | Who is/was taking the medication |
| Definition | The person, animal or group who is/was taking the medication. |
| **MedicationStatement.derivedFrom** |  |
| Short name | Additional supporting information |
| Definition | Allows linking the MedicationStatement to the underlying MedicationRequest, or to other information that supports or is used to derive the MedicationStatement. |
| Comment | Likely references would be to MedicationRequest, MedicationDispense, Claim, Observation or QuestionnaireAnswers. The most common use cases for deriving a MedicationStatement comes from creating a MedicationStatement from a MedicationRequest or from a lab observation or a claim. it should be noted that the amount of information that is available varies from the type resource that you derive the MedicationStatement from. |
| **MedicationStatement.taken** |  |
| Definition | Indicator of the certainty of whether the medication was taken by the patient. |
| Binding Description | A coded concept identifying level of certainty if patient has taken or has not taken the medication |
| **MedicationStatement.reasonNotTaken** |  |
| Short name | True if asserting medication was not given |
| Definition | A code indicating why the medication was not taken. |
| Binding Description | A coded concept indicating the reason why the medication was not taken |
| **MedicationStatement.reasonCode** |  |
| Short name | Reason for why the medication is being/was taken |
| Definition | A reason for why the medication is being/was taken. |
| Comment | This could be a diagnosis code. If a full condition record exists or additional detail is needed, use reasonForUseReference. |
| Binding Description | A coded concept identifying why the medication is being taken. |
| **MedicationStatement.reasonReference** |  |
| Short name | Condition or observation that supports why the medication is being/was taken |
| Definition | Condition or observation that supports why the medication is being/was taken. |
| Comment | This is a reference to a condition that is the reason why the medication is being/was taken. If only a code exists, use reasonForUseCode. |
| **MedicationStatement.note** |  |
| Short name | Further information about the statement |
| Definition | Provides extra information about the medication statement that is not conveyed by the other attributes. |
| **MedicationStatement.dosage** |  |
| Short name | Details of how medication is/was taken or should be taken |
| Definition | Indicates how the medication is/was or should be taken by the patient. |
| Comment | The dates included in the dosage on a Medication Statement reflect the dates for a given dose. For example, "from November 1, 2016 to November 3, 2016, take one tablet daily and from November 4, 2016 to November 7, 2016, take two tablets daily." It is expected that this specificity may only be populated where the patient brings in their labelled container or where the Medication Statement is derived from a MedicationRequest. |

# Public Health and Emergency Response

## http://hl7.org/fhir/StructureDefinition/Immunization

|  |  |
| --- | --- |
| **Description** | Base StructureDefinition for Immunization Resource |
| **Immunization** | Immunization |
| Short name | Immunization event information |
| Definition | Describes the event of a patient being administered a vaccination or a record of a vaccination as reported by a patient, a clinician or another party and may include vaccine reaction information and what vaccination protocol was followed. |
| Constraint Text | If immunization was administered (notGiven=false) then explanation.reasonNotGiven SHALL be absent. |
| Constraint Text | If immunization was not administered (notGiven=true) then there SHALL be no reaction nor explanation.reason present |
| **Immunization.identifier** |  |
| Short name | Business identifier |
| Definition | A unique identifier assigned to this immunization record. |
| **Immunization.status** |  |
| Definition | Indicates the current status of the vaccination event. |
| Comment | Will generally be set to show that the immunization has been completed. |
| Binding Description | A set of codes indicating the current status of an Immunization |
| **Immunization.notGiven** |  |
| Short name | Flag for whether immunization was given |
| Definition | Indicates if the vaccination was or was not given. |
| **Immunization.vaccineCode** |  |
| Short name | Vaccine product administered |
| Definition | Vaccine that was administered or was to be administered. |
| Binding Description | The code for vaccine product administered |
| **Immunization.patient** |  |
| Short name | Who was immunized |
| Definition | The patient who either received or did not receive the immunization. |
| **Immunization.encounter** |  |
| Short name | Encounter administered as part of |
| Definition | The visit or admission or other contact between patient and health care provider the immunization was performed as part of. |
| **Immunization.date** |  |
| Short name | Vaccination administration date |
| Definition | Date vaccine administered or was to be administered. |
| Comment | When immunizations are given a specific date and time should always be known. When immunizations are patient reported, a specific date might not be known.  Although partial dates are allowed, an adult patient might not be able to recall the year a childhood immunization was given. |
| **Immunization.primarySource** |  |
| Short name | Indicates context the data was recorded in |
| Definition | An indication that the content of the record is based on information from the person who administered the vaccine. This reflects the context under which the data was originally recorded. |
| Comment | Reflects the â€œreliabilityâ€ of the content. |
| **Immunization.reportOrigin** |  |
| Short name | Indicates the source of a secondarily reported record |
| Definition | The source of the data when the report of the immunization event is not based on information from the person who administered the vaccine. |
| Comment | Should not be populated if primarySource = True, will not be required even if primarySource = False. |
| Binding Description | The source of the data for a record which is not from a primary source. |
| **Immunization.location** |  |
| Short name | Where vaccination occurred |
| Definition | The service delivery location where the vaccine administration occurred. |
| **Immunization.manufacturer** |  |
| Short name | Vaccine manufacturer |
| Definition | Name of vaccine manufacturer. |
| **Immunization.lotNumber** |  |
| Short name | Vaccine lot number |
| Definition | Lot number of the vaccine product. |
| **Immunization.expirationDate** |  |
| Short name | Vaccine expiration date |
| Definition | Date vaccine batch expires. |
| **Immunization.site** |  |
| Short name | Body site vaccine was administered |
| Definition | Body site where vaccine was administered. |
| Binding Description | The site at which the vaccine was administered |
| **Immunization.route** |  |
| Short name | How vaccine entered body |
| Definition | The path by which the vaccine product is taken into the body. |
| Binding Description | The route by which the vaccine was administered |
| **Immunization.doseQuantity** |  |
| Short name | Amount of vaccine administered |
| Definition | The quantity of vaccine product that was administered. |
| **Immunization.practitioner** |  |
| Short name | Who performed event |
| Definition | Indicates who or what performed the event. |
| **Immunization.practitioner.role** |  |
| Short name | What type of performance was done |
| Definition | Describes the type of performance (e.g. ordering provider, administering provider, etc.). |
| Binding Description | The role a practitioner plays in the immunization event |
| **Immunization.practitioner.actor** |  |
| Short name | Individual who was performing |
| Definition | The device, practitioner, etc. who performed the action. |
| **Immunization.note** |  |
| Short name | Vaccination notes |
| Definition | Extra information about the immunization that is not conveyed by the other attributes. |
| **Immunization.explanation** |  |
| Short name | Administration/non-administration reasons |
| Definition | Reasons why a vaccine was or was not administered. |
| **Immunization.explanation.reason** |  |
| Short name | Why immunization occurred |
| Definition | Reasons why a vaccine was administered. |
| Binding Description | The reason why a vaccine was administered |
| **Immunization.explanation.reasonNotGiven** |  |
| Short name | Why immunization did not occur |
| Definition | Reason why a vaccine was not administered. |
| Binding Description | The reason why a vaccine was not administered |
| **Immunization.reaction** |  |
| Short name | Details of a reaction that follows immunization |
| Definition | Categorical data indicating that an adverse event is associated in time to an immunization. |
| Comment | A reaction may be an indication of an allergy or intolerance and, if this is determined to be the case, it should be recorded as a new [AllergyIntolerance](allergyintolerance.html) resource instance as most systems will not query against past Immunization.reaction elements. |
| **Immunization.reaction.date** |  |
| Short name | When reaction started |
| Definition | Date of reaction to the immunization. |
| **Immunization.reaction.detail** |  |
| Short name | Additional information on reaction |
| Definition | Details of the reaction. |
| **Immunization.reaction.reported** |  |
| Short name | Indicates self-reported reaction |
| Definition | Self-reported indicator. |
| **Immunization.vaccinationProtocol** |  |
| Short name | What protocol was followed |
| Definition | Contains information about the protocol(s) under which the vaccine was administered. |
| **Immunization.vaccinationProtocol.doseSequence** |  |
| Short name | Dose number within series |
| Definition | Nominal position in a series. |
| **Immunization.vaccinationProtocol.description** |  |
| Short name | Details of vaccine protocol |
| Definition | Contains the description about the protocol under which the vaccine was administered. |
| **Immunization.vaccinationProtocol.authority** |  |
| Short name | Who is responsible for protocol |
| Definition | Indicates the authority who published the protocol. E.g. ACIP. |
| **Immunization.vaccinationProtocol.series** |  |
| Short name | Name of vaccine series |
| Definition | One possible path to achieve presumed immunity against a disease - within the context of an authority. |
| **Immunization.vaccinationProtocol.seriesDoses** |  |
| Short name | Recommended number of doses for immunity |
| Definition | The recommended number of doses to achieve immunity. |
| **Immunization.vaccinationProtocol.targetDisease** |  |
| Short name | Disease immunized against |
| Definition | The targeted disease. |
| Binding Description | The disease target of the vaccination protocol |
| **Immunization.vaccinationProtocol.doseStatus** |  |
| Short name | Indicates if dose counts towards immunity |
| Definition | Indicates if the immunization event should "count" against the protocol. |
| Comment | May need to differentiate between status declarations by a provider vs. a CDS engine. |
| Binding Description | The status of the vaccination protocol (i.e. should this count) |
| **Immunization.vaccinationProtocol.doseStatusReason** |  |
| Short name | Why dose does (not) count |
| Definition | Provides an explanation as to why an immunization event should or should not count against the protocol. |
| Binding Description | The reason for the determining if a vaccination should count or why vaccination should not count. |

## http://hl7.org/fhir/StructureDefinition/ImmunizationRecommendation

|  |  |
| --- | --- |
| **Description** | Base StructureDefinition for ImmunizationRecommendation Resource |
| **ImmunizationRecommendation** | Immunization Recommendation |
| Short name | Guidance or advice relating to an immunization |
| Definition | A patient's point-in-time immunization and recommendation (i.e. forecasting a patient's immunization eligibility according to a published schedule) with optional supporting justification. |
| **ImmunizationRecommendation.identifier** |  |
| Short name | Business identifier |
| Definition | A unique identifier assigned to this particular recommendation record. |
| **ImmunizationRecommendation.patient** |  |
| Short name | Who this profile is for |
| Definition | The patient for whom the recommendations are for. |
| **ImmunizationRecommendation.recommendation** |  |
| Short name | Vaccine administration recommendations |
| Definition | Vaccine administration recommendations. |
| Constraint Text | One of vaccineCode or targetDisease SHALL be present |
| **ImmunizationRecommendation.recommendation.date** |  |
| Short name | Date recommendation created |
| Definition | The date the immunization recommendation was created. |
| **ImmunizationRecommendation.recommendation.vaccineCode** |  |
| Short name | Vaccine recommendation applies to |
| Definition | Vaccine that pertains to the recommendation. |
| Binding Description | The type of vaccine administered |
| **ImmunizationRecommendation.recommendation.targetDisease** |  |
| Short name | Disease to be immunized against |
| Definition | The targeted disease for the recommendation. |
| Binding Description | The disease that the recommended vaccination targets |
| **ImmunizationRecommendation.recommendation.doseNumber** |  |
| Short name | Recommended dose number |
| Definition | This indicates the next recommended dose number (e.g. dose 2 is the next recommended dose). |
| Comment | May need other dose concepts such as administered vs. valid. |
| **ImmunizationRecommendation.recommendation.forecastStatus** |  |
| Short name | Vaccine administration status |
| Definition | Vaccine administration status. |
| Binding Description | The patient's status with respect to a vaccination protocol |
| **ImmunizationRecommendation.recommendation.dateCriterion** |  |
| Short name | Dates governing proposed immunization |
| Definition | Vaccine date recommendations. For example, earliest date to administer, latest date to administer, etc. |
| **ImmunizationRecommendation.recommendation.dateCriterion.code** |  |
| Short name | Type of date |
| Definition | Date classification of recommendation. For example, earliest date to give, latest date to give, etc. |
| Binding Description | Classifies date criterion with respect to conveying information about a patient's vaccination status (e.g. due date, latest to give date, etc.) |
| **ImmunizationRecommendation.recommendation.dateCriterion.value** |  |
| Short name | Recommended date |
| Definition | The date whose meaning is specified by dateCriterion.code. |
| **ImmunizationRecommendation.recommendation.protocol** |  |
| Short name | Protocol used by recommendation |
| Definition | Contains information about the protocol under which the vaccine was administered. |
| **ImmunizationRecommendation.recommendation.protocol.doseSequence** |  |
| Short name | Dose number within sequence |
| Definition | Indicates the nominal position in a series of the next dose. This is the recommended dose number as per a specified protocol. |
| **ImmunizationRecommendation.recommendation.protocol.description** |  |
| Short name | Protocol details |
| Definition | Contains the description about the protocol under which the vaccine was administered. |
| **ImmunizationRecommendation.recommendation.protocol.authority** |  |
| Short name | Who is responsible for protocol |
| Definition | Indicates the authority who published the protocol. For example, ACIP. |
| **ImmunizationRecommendation.recommendation.protocol.series** |  |
| Short name | Name of vaccination series |
| Definition | One possible path to achieve presumed immunity against a disease - within the context of an authority. |
| **ImmunizationRecommendation.recommendation.supportingImmunization** |  |
| Short name | Past immunizations supporting recommendation |
| Definition | Immunization event history that supports the status and recommendation. |
| **ImmunizationRecommendation.recommendation.supportingPatientInformation** |  |
| Short name | Patient observations supporting recommendation |
| Definition | Patient Information that supports the status and recommendation. This includes patient observations, adverse reactions and allergy/intolerance information. |

# Regulated Clinical Research Information Management

## http://hl7.org/fhir/StructureDefinition/AdverseEvent

|  |  |
| --- | --- |
| **Description** | Base StructureDefinition for AdverseEvent Resource |
| **AdverseEvent** | Adverse Event |
| Short name | Actual or potential/avoided event causing unintended physical injury resulting from or contributed to by medical care, a research study or other healthcare setting factors that requires additional monitoring, treatment, or hospitalization, or that results in death |
| Definition | Actual or potential/avoided event causing unintended physical injury resulting from or contributed to by medical care, a research study or other healthcare setting factors that requires additional monitoring, treatment, or hospitalization, or that results in death. |
| Synonym | AE |
| **AdverseEvent.identifier** |  |
| Short name | AdverseEvent.identifier |
| Definition | AdverseEvent.identifier. |
| **AdverseEvent.category** |  |
| Definition | The type of event is important to characterize what occurred and caused harm to the subject, or had the potential to cause harm to the subject. |
| Binding Description | Overall categorisation of the event e.g. real or potential |
| **AdverseEvent.type** |  |
| Definition | This element defines the specific type of event that occurred or that was prevented from occuring. |
| Binding Description | Detailed type of event |
| **AdverseEvent.subject** |  |
| Short name | Subject or group impacted by event |
| Definition | This element defined the subject or group impacted by the event. With a prospective adverse event, there will be no subject as the adverse event was prevented. |
| Synonym | patient |
| **AdverseEvent.date** |  |
| Short name | AdverseEvent.date |
| Definition | AdverseEvent.date. |
| **AdverseEvent.reaction** |  |
| Short name | Adverse Reaction Events linked to exposure to substance |
| Definition | Adverse Reaction Events linked to exposure to substance. |
| **AdverseEvent.location** |  |
| Short name | AdverseEvent.location |
| Definition | AdverseEvent.location. |
| **AdverseEvent.seriousness** |  |
| Definition | Mild | Moderate | Severe. |
| Binding Description | Overall seriousness of this event for the patient |
| **AdverseEvent.outcome** |  |
| Definition | resolved | recovering | ongoing | resolvedWithSequelae | fatal | unknown. |
| Binding Description | TODO (and should this be required?) |
| **AdverseEvent.recorder** |  |
| Short name | AdverseEvent.recorder |
| Definition | AdverseEvent.recorder. |
| **AdverseEvent.eventParticipant** |  |
| Short name | Who was involved in the adverse event or the potential adverse event |
| Definition | Parties that may or should contribute or have contributed information to the Act. Such information includes information leading to the decision to perform the Act and how to perform the Act (e.g. consultant), information that the Act itself seeks to reveal (e.g. informant of clinical history), or information about what Act was performed (e.g. informant witness). |
| **AdverseEvent.description** |  |
| Short name | AdverseEvent.description |
| Definition | AdverseEvent.description. |
| **AdverseEvent.suspectEntity** |  |
| Short name | AdverseEvent.suspectEntity |
| Definition | AdverseEvent.suspectEntity. |
| **AdverseEvent.suspectEntity.instance** |  |
| Short name | AdverseEvent.suspectEntity.instance |
| Definition | AdverseEvent.suspectEntity.instance. |
| Synonym | Substance or Medication or Device |
| **AdverseEvent.suspectEntity.causality** |  |
| Definition | causality1 | causality2. |
| Binding Description | TODO |
| **AdverseEvent.suspectEntity.causalityAssessment** |  |
| Definition | assess1 | assess2. |
| Binding Description | TODO |
| **AdverseEvent.suspectEntity.causalityProductRelatedness** |  |
| Short name | AdverseEvent.suspectEntity.causalityProductRelatedness |
| Definition | AdverseEvent.suspectEntity.causalityProductRelatedness. |
| **AdverseEvent.suspectEntity.causalityMethod** |  |
| Definition | method1 | method2. |
| Binding Description | TODO |
| **AdverseEvent.suspectEntity.causalityAuthor** |  |
| Short name | AdverseEvent.suspectEntity.causalityAuthor |
| Definition | AdverseEvent.suspectEntity.causalityAuthor. |
| **AdverseEvent.suspectEntity.causalityResult** |  |
| Definition | result1 | result2. |
| Binding Description | TODO |
| **AdverseEvent.subjectMedicalHistory** |  |
| Short name | AdverseEvent.subjectMedicalHistory |
| Definition | AdverseEvent.subjectMedicalHistory. |
| **AdverseEvent.referenceDocument** |  |
| Short name | AdverseEvent.referenceDocument |
| Definition | AdverseEvent.referenceDocument. |
| **AdverseEvent.study** |  |
| Short name | AdverseEvent.study |
| Definition | AdverseEvent.study. |

## http://hl7.org/fhir/StructureDefinition/ResearchStudy

|  |  |
| --- | --- |
| **Description** | Base StructureDefinition for ResearchStudy Resource |
| **ResearchStudy** | Research Study |
| Short name | Investigation increase healthcare-related patient-independent knowledge |
| Definition | A process where a researcher or organization plans and then executes a series of steps intended to increase the field of healthcare-related knowledge. This includes studies of safety, efficacy, comparative effectiveness and other information about medications, devices, therapies and other interventional and investigative techniques. ResearchStudies involve the gathering of information about human or animal subjects. |
| Comment | Need to make sure we encompass public health studies. |
| Synonym | Clinical Trial |
| Synonym | Study |
| **ResearchStudy.identifier** |  |
| Short name | Business Identifer for study |
| Definition | Identifiers assigned to this research study by the sponsor or other systems. |
| Requirements | Allows identification of the research study as it is known by various participating systems and in a way that remains consistent across servers. |
| **ResearchStudy.title** |  |
| Short name | Name for this study |
| Definition | A short, descriptive user-friendly label for the study. |
| **ResearchStudy.protocol** |  |
| Short name | Steps followed in executing study |
| Definition | The set of steps expected to be performed as part of the execution of the study. |
| **ResearchStudy.partOf** |  |
| Short name | Part of larger study |
| Definition | A larger research study of which this particular study is a component or step. |
| Requirements | Allows breaking a study into components (e.g. by study site) each with their own PI, status, enrollment, etc. |
| Synonym | container |
| **ResearchStudy.status** |  |
| Definition | The current state of the study. |
| Binding Description | Codes that convey the current status of the research study |
| **ResearchStudy.category** |  |
| Short name | Classifications for the study |
| Definition | Codes categorizing the type of study such as investigational vs. observational, type of blinding, type of randomization, safety vs. efficacy, etc. |
| Binding Description | Codes that describe the type of research study. E.g. Study phase, Interventional/Observational, blinding type, etc. |
| **ResearchStudy.focus** |  |
| Short name | Drugs, devices, conditions, etc. under study |
| Definition | The condition(s), medication(s), food(s), therapy(ies), device(s) or other concerns or interventions that the study is seeking to gain more information about. |
| Binding Description | Codes for medications, devices, conditions and other interventions |
| **ResearchStudy.contact** |  |
| Short name | Contact details for the study |
| Definition | Contact details to assist a user in learning more about or engaging with the study. |
| **ResearchStudy.relatedArtifact** |  |
| Short name | References and dependencies |
| Definition | Citations, references and other related documents. |
| **ResearchStudy.keyword** |  |
| Short name | Used to search for the study |
| Definition | Key terms to aid in searching for or filtering the study. |
| Binding Description | Words associated with the study that may be useful in discovery |
| **ResearchStudy.jurisdiction** |  |
| Short name | Geographic region(s) for study |
| Definition | Indicates a country, state or other region where the study is taking place. |
| Binding Description | Countries and regions within which this artifact is targeted for use |
| **ResearchStudy.description** |  |
| Short name | What this is study doing |
| Definition | A full description of how the study is being conducted. |
| **ResearchStudy.enrollment** |  |
| Short name | Inclusion & exclusion criteria |
| Definition | Reference to a Group that defines the criteria for and quantity of subjects participating in the study. E.g. " 200 female Europeans between the ages of 20 and 45 with early onset diabetes". |
| Comment | The Group referenced should not generally enumerate specific subjects. Subjects will be linked to the study using the ResearchSubject resource. |
| Synonym | patient |
| **ResearchStudy.period** |  |
| Short name | When the study began and ended |
| Definition | Identifies the start date and the expected (or actual, depending on status) end date for the study. |
| Requirements | [The list of types may be constrained as appropriate for the type of event]. |
| Synonym | timing |
| **ResearchStudy.sponsor** |  |
| Short name | Organization responsible for the study |
| Definition | The organization responsible for the execution of the study. |
| **ResearchStudy.principalInvestigator** |  |
| Short name | Individual responsible for the study |
| Definition | Indicates the individual who has primary oversite of the execution of the study. |
| **ResearchStudy.site** |  |
| Short name | Location involved in study execution |
| Definition | Clinic, hospital or other healthcare location that is participating in the study. |
| **ResearchStudy.reasonStopped** |  |
| Short name | Reason for terminating study early |
| Definition | A description and/or code explaining the premature termination of the study. |
| **ResearchStudy.note** |  |
| Short name | Comments made about the event |
| Definition | Comments made about the event by the performer, subject or other participants. |
| **ResearchStudy.arm** |  |
| Short name | Defined path through the study for a subject |
| Definition | Describes an expected sequence of events for one of the participants of a study. E.g. Exposure to drug A, wash-out, exposure to drug B, wash-out, follow-up. |
| **ResearchStudy.arm.name** |  |
| Short name | Label for study arm |
| Definition | Unique, human-readable label for this arm of the study. |
| **ResearchStudy.arm.code** |  |
| Short name | Categorization of arm |
| Definition | E.g. Experimental, active comparator, placebo comparator. |
| **ResearchStudy.arm.description** |  |
| Short name | Short explanation of study path |
| Definition | A succinct description of the path through the study that would be followed by a subject adhering to this arm. |

## http://hl7.org/fhir/StructureDefinition/ResearchSubject

|  |  |
| --- | --- |
| **Description** | Base StructureDefinition for ResearchSubject Resource |
| **ResearchSubject** | Research Subject |
| Short name | Investigation increase healthcare-related patient-independent knowledge |
| Definition | A process where a researcher or organization plans and then executes a series of steps intended to increase the field of healthcare-related knowledge. This includes studies of safety, efficacy, comparative effectiveness and other information about medications, devices, therapies and other interventional and investigative techniques. ResearchStudies involve the gathering of information about human or animal subjects. |
| Comment | Need to make sure we encompass public health studies. |
| Synonym | Study Subject |
| **ResearchSubject.identifier** |  |
| Short name | Business Identifer for event |
| Definition | Identifiers assigned to this research study by the sponsor or other systems. |
| Requirements | Allows identification of the research study as it is known by various participating systems and in a way that remains consistent across servers. |
| **ResearchSubject.status** |  |
| Definition | The current state of the event. |
| Binding Description | Indicates the progression of a study subject through a study |
| **ResearchSubject.period** |  |
| Short name | Start and end of participation |
| Definition | The dates the subject began and ended their participation in the study. |
| Synonym | timing |
| **ResearchSubject.study** |  |
| Short name | Study subject is part of |
| Definition | Reference to the study the subject is participating in. |
| **ResearchSubject.individual** |  |
| Short name | Who is part of study |
| Definition | The record of the person or animal who is involved in the study. |
| **ResearchSubject.assignedArm** |  |
| Short name | What path should be followed |
| Definition | The name of the arm in the study the subject is expected to follow as part of this study. |
| **ResearchSubject.actualArm** |  |
| Short name | What path was followed |
| Definition | The name of the arm in the study the subject actually followed as part of this study. |
| **ResearchSubject.consent** |  |
| Short name | Agreement to participate in study |
| Definition | A record of the patient's informed agreement to participate in the study. |

# Security

## http://hl7.org/fhir/StructureDefinition/AuditEvent

|  |  |
| --- | --- |
| **Description** | Base StructureDefinition for AuditEvent Resource |
| **AuditEvent** | Audit Event |
| Short name | Event record kept for security purposes |
| Definition | A record of an event made for purposes of maintaining a security log. Typical uses include detection of intrusion attempts and monitoring for inappropriate usage. |
| Comment | Based on ATNA (RFC 3881). |
| **AuditEvent.type** |  |
| Short name | Type/identifier of event |
| Definition | Identifier for a family of the event. For example, a menu item, program, rule, policy, function code, application name or URL. It identifies the performed function. |
| Requirements | This identifies the performed function. For "Execute" Event Action Code audit records, this identifies the application function performed. |
| Binding Description | Type of event. |
| **AuditEvent.subtype** |  |
| Short name | More specific type/id for the event |
| Definition | Identifier for the category of event. |
| Requirements | This field enables queries of messages by implementation-defined event categories. |
| Binding Description | Sub-type of event. |
| **AuditEvent.action** |  |
| Short name | Type of action performed during the event |
| Definition | Indicator for type of action performed during the event that generated the audit. |
| Requirements | This broadly indicates what kind of action was done on the AuditEvent.entity by the AuditEvent.agent. |
| Binding Description | Indicator for type of action performed during the event that generated the audit. |
| **AuditEvent.recorded** |  |
| Short name | Time when the event occurred on source |
| Definition | The time when the event occurred on the source. |
| Comment | In a distributed system, some sort of common time base (e.g. an NTP [RFC1305] server) is a good implementation tactic. |
| Requirements | This ties an event to a specific date and time. Security audits typically require a consistent time base (e.g. UTC), to eliminate time-zone issues arising from geographical distribution. |
| **AuditEvent.outcome** |  |
| Short name | Whether the event succeeded or failed |
| Definition | Indicates whether the event succeeded or failed. |
| Comment | In some cases a "success" may be partial, for example, an incomplete or interrupted transfer of a radiological study. For the purpose of establishing accountability, these distinctions are not relevant. |
| Binding Description | Indicates whether the event succeeded or failed |
| **AuditEvent.outcomeDesc** |  |
| Short name | Description of the event outcome |
| Definition | A free text description of the outcome of the event. |
| **AuditEvent.purposeOfEvent** |  |
| Short name | The purposeOfUse of the event |
| Definition | The purposeOfUse (reason) that was used during the event being recorded. |
| Comment | Use AuditEvent.agent.purposeOfUse when you know that is specific to the agent, otherwise use AuditEvent.purposeOfEvent. For example, during a machine-to-machine transfer it might not be obvious to the audit system who caused the event, but it does know why. |
| Binding Description | The reason the activity took place. |
| **AuditEvent.agent** |  |
| Short name | Actor involved in the event |
| Definition | An actor taking an active role in the event or activity that is logged. |
| Comment | Several agents may be associated (i.e. have some responsibility for an activity) with an event or activity. For example, an activity may be initiated by one user for other users or involve more than one user. However, only one user may be the initiator/requestor for the activity. |
| Requirements | An agent can be a person, an organization, software, device, or other actors that may be ascribed responsibility. |
| Synonym | ActiveParticipant |
| **AuditEvent.agent.role** |  |
| Short name | Agent role in the event |
| Definition | The security role that the user was acting under, that come from local codes defined by the access control security system (e.g. RBAC, ABAC) used in the local context. |
| Comment | should be roles relevant to the event. Should not be an exhaustive list of roles. |
| Requirements | This value ties an audited event to a user's role(s). It is an optional value that might be used to group events for analysis by user functional role categories. |
| Binding Description | What security role enabled the agent to participate in the event |
| **AuditEvent.agent.reference** |  |
| Short name | Direct reference to resource |
| Definition | Direct reference to a resource that identifies the agent. |
| Requirements | This field ties an audit event to a specific resource. |
| **AuditEvent.agent.userId** |  |
| Short name | Unique identifier for the user |
| Definition | Unique identifier for the user actively participating in the event. |
| Comment | a unique value within the Audit Source ID. For node-based authentication -- where only the system hardware or process, but not a human user, is identified -- User ID would be the node name. |
| Requirements | This field ties an audit event to a specific user. |
| **AuditEvent.agent.altId** |  |
| Short name | Alternative User id e.g. authentication |
| Definition | Alternative agent Identifier. For a human, this should be a user identifier text string from authentication system. This identifier would be one known to a common authentication system (e.g. single sign-on), if available. |
| Requirements | In some situations a human user may authenticate with one identity but, to access a specific application system, may use a synonymous identify. For example, some "single sign on" implementations will do this. The alternative identifier would then be the original identify used for authentication, and the User ID is the one known to and used by the application. |
| **AuditEvent.agent.name** |  |
| Short name | Human-meaningful name for the agent |
| Definition | Human-meaningful name for the agent. |
| Requirements | The User ID and Authorization User ID may be internal or otherwise obscure values. This field assists the auditor in identifying the actual user. |
| **AuditEvent.agent.requestor** |  |
| Short name | Whether user is initiator |
| Definition | Indicator that the user is or is not the requestor, or initiator, for the event being audited. |
| Comment | There can only be one initiator. If the initiator is not clear, then do not choose any one agent as the initiator. |
| Requirements | This value is used to distinguish between requestor-users and recipient-users. For example, one person may initiate a report-output to be sent to another user. |
| **AuditEvent.agent.location** |  |
| Short name | Where |
| Definition | Where the event occurred. |
| **AuditEvent.agent.policy** |  |
| Short name | Policy that authorized event |
| Definition | The policy or plan that authorized the activity being recorded. Typically, a single activity may have multiple applicable policies, such as patient consent, guarantor funding, etc. The policy would also indicate the security token used. |
| Comment | For example: Where an OAuth token authorizes, the unique identifier from the OAuth token is placed into the policy element Where a policy engine (e.g. XACML) holds policy logic, the unique policy identifier is placed into the policy element. |
| Requirements | This value is used retrospectively to determine the authorization policies. |
| **AuditEvent.agent.media** |  |
| Short name | Type of media |
| Definition | Type of media involved. Used when the event is about exporting/importing onto media. |
| Requirements | Usually, this is used instead of specifying a network address. This field is not used for Media Id (i.e. the serial number of a CD). |
| Binding Description | Used when the event is about exporting/importing onto media. |
| **AuditEvent.agent.network** |  |
| Short name | Logical network location for application activity |
| Definition | Logical network location for application activity, if the activity has a network location. |
| **AuditEvent.agent.network.address** |  |
| Short name | Identifier for the network access point of the user device |
| Definition | An identifier for the network access point of the user device for the audit event. |
| Comment | This could be a device id, IP address or some other identifier associated with a device. |
| Requirements | This datum identifies the user's network access point, which may be distinct from the server that performed the action. It is an optional value that may be used to group events recorded on separate servers for analysis of a specific network access point's data access across all servers. |
| **AuditEvent.agent.network.type** |  |
| Short name | The type of network access point |
| Definition | An identifier for the type of network access point that originated the audit event. |
| Requirements | This datum identifies the type of network access point identifier of the user device for the audit event. It is an optional value that may be used to group events recorded on separate servers for analysis of access according to a network access point's type. |
| Binding Description | The type of network access point of this agent in the audit event |
| **AuditEvent.agent.purposeOfUse** |  |
| Short name | Reason given for this user |
| Definition | The reason (purpose of use), specific to this agent, that was used during the event being recorded. |
| Comment | Use AuditEvent.agent.purposeOfUse when you know that is specific to the agent, otherwise use AuditEvent.purposeOfEvent. For example, during a machine-to-machine transfer it might not be obvious to the audit system who caused the event, but it does know why. |
| Binding Description | The reason the activity took place. |
| **AuditEvent.source** |  |
| Short name | Audit Event Reporter |
| Definition | The system that is reporting the event. |
| Comment | Since multi-tier, distributed, or composite applications make source identification ambiguous, this collection of fields may repeat for each application or process actively involved in the event. For example, multiple value-sets can identify participating web servers, application processes, and database server threads in an n-tier distributed application. Passive event participants (e.g. low-level network transports) need not be identified. |
| Requirements | The event is reported by one source. |
| **AuditEvent.source.site** |  |
| Short name | Logical source location within the enterprise |
| Definition | Logical source location within the healthcare enterprise network. For example, a hospital or other provider location within a multi-entity provider group. |
| Requirements | This value differentiates among the sites in a multi-site enterprise health information system. |
| **AuditEvent.source.identifier** |  |
| Short name | The identity of source detecting the event |
| Definition | Identifier of the source where the event was detected. |
| Requirements | This field ties the event to a specific source system. It may be used to group events for analysis according to where the event was detected. |
| **AuditEvent.source.type** |  |
| Short name | The type of source where event originated |
| Definition | Code specifying the type of source where event originated. |
| Requirements | This field indicates which type of source is identified by the Audit Source ID. It is an optional value that may be used to group events for analysis according to the type of source where the event occurred. |
| Binding Description | Code specifying the type of system that detected and recorded the event. |
| **AuditEvent.entity** |  |
| Short name | Data or objects used |
| Definition | Specific instances of data or objects that have been accessed. |
| Comment | Required unless the values for event identification, agent identification, and audit source identification are sufficient to document the entire auditable event. Because events may have more than one entity, this group can be a repeating set of values. |
| Requirements | The event may have other entities involved. |
| Synonym | ParticipantObject |
| Constraint Text | Either a name or a query (NOT both) |
| **AuditEvent.entity.identifier** |  |
| Short name | Specific instance of object |
| Definition | Identifies a specific instance of the entity. The reference should always be version specific. |
| Comment | Identifier detail depends on entity type. |
| **AuditEvent.entity.reference** |  |
| Short name | Specific instance of resource |
| Definition | Identifies a specific instance of the entity. The reference should be version specific. |
| **AuditEvent.entity.type** |  |
| Short name | Type of entity involved |
| Definition | The type of the object that was involved in this audit event. |
| Comment | This value is distinct from the user's role or any user relationship to the entity. |
| Requirements | To describe the object being acted upon. In addition to queries on the subject of the action in an auditable event, it is also important to be able to query on the object type for the action. |
| Binding Description | Code for the entity type involved audited. |
| **AuditEvent.entity.role** |  |
| Short name | What role the entity played |
| Definition | Code representing the role the entity played in the event being audited. |
| Requirements | For some detailed audit analysis it may be necessary to indicate a more granular type of entity, based on the application role it serves. |
| Binding Description | Code representing the role the entity played in the event. |
| **AuditEvent.entity.lifecycle** |  |
| Short name | Life-cycle stage for the entity |
| Definition | Identifier for the data life-cycle stage for the entity. |
| Comment | This can be used to provide an audit trail for data, over time, as it passes through the system. |
| Requirements | Institutional policies for privacy and security may optionally fall under different accountability rules based on data life cycle. This provides a differentiating value for those cases. |
| Binding Description | Identifier for the data life-cycle stage for the entity. |
| **AuditEvent.entity.securityLabel** |  |
| Short name | Security labels on the entity |
| Definition | Denotes security labels for the identified entity. |
| Comment | copied from entity meta security tags. |
| Requirements | This field identifies the security labels for a specific instance of an object, such as a patient, to detect/track privacy and security issues. |
| Binding Description | Security Labels from the Healthcare Privacy and Security Classification System. |
| **AuditEvent.entity.name** |  |
| Short name | Descriptor for entity |
| Definition | A name of the entity in the audit event. |
| Comment | This field may be used in a query/report to identify audit events for a specific person. For example, where multiple synonymous entity identifers (patient number, medical record number, encounter number, etc.) have been used. |
| Requirements | Use only where entity can't be identified with an identifier. |
| **AuditEvent.entity.description** |  |
| Short name | Descriptive text |
| Definition | Text that describes the entity in more detail. |
| Requirements | Use only where entity can't be identified with an identifier. |
| **AuditEvent.entity.query** |  |
| Short name | Query parameters |
| Definition | The query parameters for a query-type entities. |
| Requirements | For query events it may be necessary to capture the actual query input to the query process in order to identify the specific event. Because of differences among query implementations and data encoding for them, this is a base 64 encoded data blob. It may be subsequently decoded or interpreted by downstream audit analysis processing. |
| **AuditEvent.entity.detail** |  |
| Short name | Additional Information about the entity |
| Definition | Additional Information about the entity. |
| **AuditEvent.entity.detail.type** |  |
| Short name | Name of the property |
| Definition | Name of the property. |
| **AuditEvent.entity.detail.value** |  |
| Short name | Property value |
| Definition | Property value. |

## http://hl7.org/fhir/StructureDefinition/Provenance

|  |  |
| --- | --- |
| **Description** | Base StructureDefinition for Provenance Resource |
| **Provenance** | Provenance |
| Short name | Who, What, When for a set of resources |
| Definition | Provenance of a resource is a record that describes entities and processes involved in producing and delivering or otherwise influencing that resource. Provenance provides a critical foundation for assessing authenticity, enabling trust, and allowing reproducibility. Provenance assertions are a form of contextual metadata and can themselves become important records with their own provenance. Provenance statement indicates clinical significance in terms of confidence in authenticity, reliability, and trustworthiness, integrity, and stage in lifecycle (e.g. Document Completion - has the artifact been legally authenticated), all of which may impact security, privacy, and trust policies. |
| Comment | Some parties may be duplicated between the target resource and its provenance. For instance, the prescriber is usually (but not always) the author of the prescription resource. This resource is defined with close consideration for W3C Provenance. |
| Synonym | History |
| Synonym | Event |
| Synonym | Activity |
| **Provenance.target** |  |
| Short name | Target Reference(s) (usually version specific) |
| Definition | The Reference(s) that were generated or updated by the activity described in this resource. A provenance can point to more than one target if multiple resources were created/updated by the same activity. |
| Comment | Target references are usually version specific, but may not be, if a version has not been assigned or if the provenance information is part of the set of resources being maintained (i.e. a document). When using the RESTful API, the identity of the resource may not be known (especially not the version specific one); the client may either submit the resource first, and then the provenance, or it may submit both using a single transaction. See the notes on transaction for further discussion. |
| **Provenance.period** |  |
| Short name | When the activity occurred |
| Definition | The period during which the activity occurred. |
| Comment | The period can be a little arbitrary; where possible, the time should correspond to human assessment of the activity time. |
| **Provenance.recorded** |  |
| Short name | When the activity was recorded / updated |
| Definition | The instant of time at which the activity was recorded. |
| Comment | This can be a little different from the time stamp on the resource if there is a delay between recording the event and updating the provenance and target resource. |
| **Provenance.policy** |  |
| Short name | Policy or plan the activity was defined by |
| Definition | Policy or plan the activity was defined by. Typically, a single activity may have multiple applicable policy documents, such as patient consent, guarantor funding, etc. |
| Comment | For example: Where an OAuth token authorizes, the unique identifier from the OAuth token is placed into the policy element Where a policy engine (e.g. XACML) holds policy logic, the unique policy identifier is placed into the policy element. |
| **Provenance.location** |  |
| Short name | Where the activity occurred, if relevant |
| Definition | Where the activity occurred, if relevant. |
| **Provenance.reason** |  |
| Short name | Reason the activity is occurring |
| Definition | The reason that the activity was taking place. |
| Binding Description | The reason the activity took place. |
| **Provenance.activity** |  |
| Short name | Activity that occurred |
| Definition | An activity is something that occurs over a period of time and acts upon or with entities; it may include consuming, processing, transforming, modifying, relocating, using, or generating entities. |
| Binding Description | The activity that took place. |
| **Provenance.agent** |  |
| Short name | Actor involved |
| Definition | An actor taking a role in an activity for which it can be assigned some degree of responsibility for the activity taking place. |
| Comment | Several agents may be associated (i.e. has some responsibility for an activity) with an activity and vice-versa. |
| Requirements | An agent can be a person, an organization, software, device, or other entities that may be ascribed responsibility. |
| **Provenance.agent.role** |  |
| Short name | What the agents role was |
| Definition | The function of the agent with respect to the activity. The security role enabling the agent with respect to the activity. |
| Comment | For example: author, performer, enterer, attester, doctor, nurse, clerk, etc. |
| Binding Description | The role that a provenance agent played with respect to the activity. |
| **Provenance.agent.who[x]** |  |
| Short name | Who participated |
| Definition | The individual, device or organization that participated in the event. |
| **Provenance.agent.onBehalfOf[x]** |  |
| Short name | Who the agent is representing |
| Definition | The individual, device, or organization for whom the change was made. |
| **Provenance.agent.relatedAgentType** |  |
| Short name | Type of relationship between agents |
| Definition | The type of relationship between agents. |
| Binding Description | Type of relationship between two provenance agents. |
| **Provenance.entity** |  |
| Short name | An entity used in this activity |
| Definition | An entity used in this activity. |
| Comment | Multiple userIds may be associated with the same Practitioner or other individual across various appearances, each with distinct privileges. |
| **Provenance.entity.role** |  |
| Definition | How the entity was used during the activity. |
| Binding Description | How an entity was used in an activity. |
| **Provenance.entity.what[x]** |  |
| Short name | Identity of entity |
| Definition | Identity of the Entity used. May be a logical or physical uri and maybe absolute or relative. |
| Comment | Identity may be a reference to a resource or to something else, depending on the type. |
| **Provenance.entity.agent** |  |
| Short name | Entity is attributed to this agent |
| Definition | The entity is attributed to an agent to express the agent's responsibility for that entity, possibly along with other agents. This description can be understood as shorthand for saying that the agent was responsible for the activity which generated the entity. |
| Comment | A usecase where one Provenance.entity.agent is used where the Entity that was used in the creation/updating of the Target, is not in the context of the same custodianship as the Target, and thus the meaning of Provenance.entity.agent is to say that the entity referenced is managed elsewhere and that this Agent provided access to it. This would be similar to where the Entity being referenced is managed outside FHIR, such as through HL7 v2, v3, or XDS. This might be where the Entity being referenced is managed in another FHIR resource server. Thus it explains the Provenance of that Entity's use in the context of this Provenance activity. |
| **Provenance.signature** |  |
| Short name | Signature on target |
| Definition | A digital signature on the target Reference(s). The signer should match a Provenance.agent. The purpose of the signature is indicated. |

# Structured Documents

## http://hl7.org/fhir/StructureDefinition/Composition

|  |  |
| --- | --- |
| **Description** | Base StructureDefinition for Composition Resource |
| **Purpose** | To support documents, and also to capture the EN13606 notion of an attested commit to the patient EHR, and to allow a set of disparate resources at the information/engineering level to be gathered into a clinical statement. |
| **Composition** | Composition |
| Short name | A set of resources composed into a single coherent clinical statement with clinical attestation |
| Definition | A set of healthcare-related information that is assembled together into a single logical document that provides a single coherent statement of meaning, establishes its own context and that has clinical attestation with regard to who is making the statement. While a Composition defines the structure, it does not actually contain the content: rather the full content of a document is contained in a Bundle, of which the Composition is the first resource contained. |
| Comment | While the focus of this specification is on patient-specific clinical statements, this resource can also apply to other healthcare-related statements such as study protocol designs, healthcare invoices and other activities that are not necessarily patient-specific or clinical. |
| **Composition.identifier** |  |
| Short name | Logical identifier of composition (version-independent) |
| Definition | Logical identifier for the composition, assigned when created. This identifier stays constant as the composition is changed over time. |
| Comment | See discussion in resource definition for how these relate. |
| **Composition.status** |  |
| Definition | The workflow/clinical status of this composition. The status is a marker for the clinical standing of the document. |
| Comment | If a composition is marked as withdrawn, the compositions/documents in the series, or data from the composition or document series, should never be displayed to a user without being clearly marked as untrustworthy. The flag "withdrawn" is why this element is labeled as a modifier of other elements. Some reporting work flows require that the original narrative of a final document never be altered; instead, only new narrative can be added. The composition resource has no explicit status for explicitly noting whether this business rule is in effect. This would be handled by an extension if required. |
| Requirements | Need to be able to mark interim, amended, or withdrawn compositions or documents. |
| Binding Description | The workflow/clinical status of the composition. |
| **Composition.type** |  |
| Short name | Kind of composition (LOINC if possible) |
| Definition | Specifies the particular kind of composition (e.g. History and Physical, Discharge Summary, Progress Note). This usually equates to the purpose of making the composition. |
| Comment | For Composition type, LOINC is ubiquitous and strongly endorsed by HL7. Most implementation guides will require a specific LOINC code, or use LOINC as an extensible binding. |
| Requirements | Key metadata element describing the composition, used in searching/filtering. |
| Binding Description | Type of a composition. |
| **Composition.class** |  |
| Short name | Categorization of Composition |
| Definition | A categorization for the type of the composition - helps for indexing and searching. This may be implied by or derived from the code specified in the Composition Type. |
| Comment | This is a metadata field from [XDS/MHD](http://wiki.ihe.net/index.php?title=Mobile\_access\_to\_Health\_Documents\_(MHD)). |
| Requirements | Helps humans to assess whether the composition is of interest when viewing an index of compositions or documents. |
| Binding Description | High-level kind of a clinical document at a macro level. |
| **Composition.subject** |  |
| Short name | Who and/or what the composition is about |
| Definition | Who or what the composition is about. The composition can be about a person, (patient or healthcare practitioner), a device (e.g. a machine) or even a group of subjects (such as a document about a herd of livestock, or a set of patients that share a common exposure). |
| Comment | For clinical documents, this is usually the patient. |
| Requirements | Essential metadata for searching for the composition. Identifies who and/or what the composition/document is about. |
| **Composition.encounter** |  |
| Short name | Context of the Composition |
| Definition | Describes the clinical encounter or type of care this documentation is associated with. |
| Requirements | Provides context for the composition and supports searching. |
| **Composition.date** |  |
| Short name | Composition editing time |
| Definition | The composition editing time, when the composition was last logically changed by the author. |
| Comment | The Last Modified Date on the composition may be after the date of the document was attested without being changed. |
| Requirements | dateTime is used for tracking, organizing versions and searching. |
| **Composition.author** |  |
| Short name | Who and/or what authored the composition |
| Definition | Identifies who is responsible for the information in the composition, not necessarily who typed it in. |
| Requirements | Identifies who is responsible for the content. |
| **Composition.title** |  |
| Short name | Human Readable name/title |
| Definition | Official human-readable label for the composition. |
| Comment | For many compositions, the title is the same as the text or a display name of Composition.type (e.g. a "consultation" or "progress note"). Note that CDA does not make title mandatory, but there are no known cases where it is useful for title to be omitted, so it is mandatory here. Feedback on this requirement is welcome during the trial use period. |
| **Composition.confidentiality** |  |
| Short name | As defined by affinity domain |
| Definition | The code specifying the level of confidentiality of the Composition. |
| Comment | The exact use of this element, and enforcement and issues related to highly sensitive documents are out of scope for the base specification, and delegated to implementation profiles (see security section). |
| Binding Description | Codes specifying the level of confidentiality of the composition. |
| **Composition.attester** |  |
| Short name | Attests to accuracy of composition |
| Definition | A participant who has attested to the accuracy of the composition/document. |
| Comment | Only list each attester once. |
| Requirements | Identifies responsibility for the accuracy of the composition content. |
| **Composition.attester.mode** |  |
| Definition | The type of attestation the authenticator offers. |
| Comment | Use more than one code where a single attester has more than one mode (professional and legal are often paired). |
| Requirements | Indicates the level of authority of the attestation. |
| Binding Description | The way in which a person authenticated a composition. |
| **Composition.attester.time** |  |
| Short name | When composition attested |
| Definition | When composition was attested by the party. |
| Requirements | Identifies when the information in the composition was deemed accurate. (Things may have changed since then.). |
| **Composition.attester.party** |  |
| Short name | Who attested the composition |
| Definition | Who attested the composition in the specified way. |
| Requirements | Identifies who has taken on the responsibility for accuracy of the composition content. |
| **Composition.custodian** |  |
| Short name | Organization which maintains the composition |
| Definition | Identifies the organization or group who is responsible for ongoing maintenance of and access to the composition/document information. |
| Comment | This is useful when documents are derived from a composition - provides guidance for how to get the latest version of the document. This is optional because this is sometimes not known by the authoring system, and can be inferred by context. However it is important that this information be known when working with a derived document, so providing a custodian is encouraged. |
| Requirements | Identifies where to go to find the current version, where to report issues, etc. |
| **Composition.relatesTo** |  |
| Short name | Relationships to other compositions/documents |
| Definition | Relationships that this composition has with other compositions or documents that already exist. |
| Comment | A document is a version specific composition. |
| **Composition.relatesTo.code** |  |
| Definition | The type of relationship that this composition has with anther composition or document. |
| Comment | If this document appends another document, then the document cannot be fully understood without also accessing the referenced document. |
| Binding Description | The type of relationship between documents. |
| **Composition.relatesTo.target[x]** |  |
| Short name | Target of the relationship |
| Definition | The target composition/document of this relationship. |
| **Composition.event** |  |
| Short name | The clinical service(s) being documented |
| Definition | The clinical service, such as a colonoscopy or an appendectomy, being documented. |
| Comment | The event needs to be consistent with the type element, though can provide further information if desired. |
| Requirements | Provides context for the composition and creates a linkage between a resource describing an event and the composition created describing the event. |
| **Composition.event.code** |  |
| Short name | Code(s) that apply to the event being documented |
| Definition | This list of codes represents the main clinical acts, such as a colonoscopy or an appendectomy, being documented. In some cases, the event is inherent in the typeCode, such as a "History and Physical Report" in which the procedure being documented is necessarily a "History and Physical" act. |
| Comment | An event can further specialize the act inherent in the typeCode, such as where it is simply "Procedure Report" and the procedure was a "colonoscopy". If one or more eventCodes are included, they SHALL NOT conflict with the values inherent in the classCode, practiceSettingCode or typeCode, as such a conflict would create an ambiguous situation. This short list of codes is provided to be used as key words for certain types of queries. |
| Binding Description | This list of codes represents the main clinical acts being documented. |
| **Composition.event.period** |  |
| Short name | The period covered by the documentation |
| Definition | The period of time covered by the documentation. There is no assertion that the documentation is a complete representation for this period, only that it documents events during this time. |
| **Composition.event.detail** |  |
| Short name | The event(s) being documented |
| Definition | The description and/or reference of the event(s) being documented. For example, this could be used to document such a colonoscopy or an appendectomy. |
| **Composition.section** |  |
| Short name | Composition is broken into sections |
| Definition | The root of the sections that make up the composition. |
| Constraint Text | A section must at least one of text, entries, or sub-sections |
| Constraint Text | A section can only have an emptyReason if it is empty |
| **Composition.section.title** |  |
| Short name | Label for section (e.g. for ToC) |
| Definition | The label for this particular section. This will be part of the rendered content for the document, and is often used to build a table of contents. |
| Comment | The title identifies the section for a human reader. The title must be consistent with the narrative of the resource that is the target of the section.content reference. Generally, sections SHOULD have titles, but in some documents it is unnecessary or inappropriate. Typically, this is where a section has subsections that have their own adequately distinguishing title, or documents that only have a single section. Most Implementation Guides will make section title to be a required element. |
| Requirements | Section headings are often standardized for different types of documents. They give guidance to humans on how the document is organized. |
| Synonym | header |
| Synonym | label |
| Synonym | caption |
| **Composition.section.code** |  |
| Short name | Classification of section (recommended) |
| Definition | A code identifying the kind of content contained within the section. This must be consistent with the section title. |
| Comment | The code identifies the section for an automated processor of the document. This is particularly relevant when using profiles to control the structure of the document. If the section has content (instead of sub-sections), the section.code does not change the meaning or interpretation of the resource that is the content of the section in the comments for the section.code. |
| Requirements | Provides computable standardized labels to topics within the document. |
| Binding Description | Classification of a section of a composition/document. |
| **Composition.section.text** |  |
| Short name | Text summary of the section, for human interpretation |
| Definition | A human-readable narrative that contains the attested content of the section, used to represent the content of the resource to a human. The narrative need not encode all the structured data, but is required to contain sufficient detail to make it "clinically safe" for a human to just read the narrative. |
| Comment | Document profiles may define what content should be represented in the narrative to ensure clinical safety. |
| **Composition.section.mode** |  |
| Definition | How the entry list was prepared - whether it is a working list that is suitable for being maintained on an ongoing basis, or if it represents a snapshot of a list of items from another source, or whether it is a prepared list where items may be marked as added, modified or deleted. |
| Requirements | Sections are used in various ways, and it must be known in what way it is safe to use the entries in them. |
| Binding Description | The processing mode that applies to this section. |
| **Composition.section.orderedBy** |  |
| Short name | Order of section entries |
| Definition | Specifies the order applied to the items in the section entries. |
| Comment | Applications SHOULD render ordered lists in the order provided, but MAY allow users to re-order based on their own preferences as well. If there is no order specified, the order is unknown, though there may still be some order. |
| Requirements | Important for presentation and rendering. Lists may be sorted to place more important information first or to group related entries. |
| Binding Description | What order applies to the items in the entry. |
| **Composition.section.entry** |  |
| Short name | A reference to data that supports this section |
| Definition | A reference to the actual resource from which the narrative in the section is derived. |
| Comment | If there are no entries in the list, an emptyReason SHOULD be provided. |
| **Composition.section.emptyReason** |  |
| Short name | Why the section is empty |
| Definition | If the section is empty, why the list is empty. An empty section typically has some text explaining the empty reason. |
| Comment | The various reasons for an empty section make a significant interpretation to its interpretation. Note that this code is for use when the entire section content has been suppressed, and not for when individual items are omitted - implementers may consider using a text note or a flag on an entry in these cases. |
| Requirements | Allows capturing things like "none exist" or "not asked" which can be important for most lists. |
| Binding Description | If a section is empty, why it is empty. |
| **Composition.section.section** |  |
| Short name | Nested Section |
| Definition | A nested sub-section within this section. |
| Comment | Nested sections are primarily used to help human readers navigate to particular portions of the document. |

## http://hl7.org/fhir/StructureDefinition/DocumentManifest

|  |  |
| --- | --- |
| **Description** | Base StructureDefinition for DocumentManifest Resource |
| **DocumentManifest** | Document Manifest |
| Short name | A manifest that defines a set of documents |
| Definition | A manifest that defines a set of documents. |
| **DocumentManifest.masterIdentifier** |  |
| Short name | Unique Identifier for the set of documents |
| Definition | A single identifier that uniquely identifies this manifest. Principally used to refer to the manifest in non-FHIR contexts. |
| **DocumentManifest.identifier** |  |
| Short name | Other identifiers for the manifest |
| Definition | Other identifiers associated with the document manifest, including version independent identifiers. |
| **DocumentManifest.status** |  |
| Definition | The status of this document manifest. |
| Binding Description | The status of the document reference. |
| **DocumentManifest.type** |  |
| Short name | Kind of document set |
| Definition | Specifies the kind of this set of documents (e.g. Patient Summary, Discharge Summary, Prescription, etc.). The type of a set of documents may be the same as one of the documents in it - especially if there is only one - but it may be wider. |
| Binding Description | Precise type of clinical document. |
| **DocumentManifest.subject** |  |
| Short name | The subject of the set of documents |
| Definition | Who or what the set of documents is about. The documents can be about a person, (patient or healthcare practitioner), a device (i.e. machine) or even a group of subjects (such as a document about a herd of farm animals, or a set of patients that share a common exposure). If the documents cross more than one subject, then more than one subject is allowed here (unusual use case). |
| **DocumentManifest.created** |  |
| Short name | When this document manifest created |
| Definition | When the document manifest was created for submission to the server (not necessarily the same thing as the actual resource last modified time, since it may be modified, replicated, etc.). |
| Comment | Creation time is used for tracking, organizing versions and searching. This is the creation time of the document set, not the documents on which it is based. |
| **DocumentManifest.author** |  |
| Short name | Who and/or what authored the manifest |
| Definition | Identifies who is responsible for creating the manifest, and adding documents to it. |
| Comment | Not necessarily who did the actual data entry (i.e. typist) or who was the source (informant). |
| **DocumentManifest.recipient** |  |
| Short name | Intended to get notified about this set of documents |
| Definition | A patient, practitioner, or organization for which this set of documents is intended. |
| Comment | How the recipient receives the document set or is notified of it is up to the implementation. This element is just a statement of intent. If the recipient is a person, and it is not known whether the person is a patient or a practitioner, RelatedPerson would be the default choice. |
| **DocumentManifest.source** |  |
| Short name | The source system/application/software |
| Definition | Identifies the source system, application, or software that produced the document manifest. |
| **DocumentManifest.description** |  |
| Short name | Human-readable description (title) |
| Definition | Human-readable description of the source document. This is sometimes known as the "title". |
| Comment | What the document is about, rather than a terse summary of the document. It is commonly the case that records do not have a title and are collectively referred to by the display name of Record code (e.g. a "consultation" or "progress note"). |
| Requirements | Helps humans to assess whether the document is of interest. |
| **DocumentManifest.content** |  |
| Short name | The items included |
| Definition | The list of Documents included in the manifest. |
| **DocumentManifest.content.p[x]** |  |
| Short name | Contents of this set of documents |
| Definition | The list of references to document content, or Attachment that consist of the parts of this document manifest. Usually, these would be document references, but direct references to Media or Attachments are also allowed. |
| Comment | The intended focus of the DocumentManifest is for the reference to target either DocumentReference or Media Resources, and most implementation guides will restrict to these resources. The reference is to "Any" to support EN 13606 usage, where an extract is DocumentManifest that references List and Composition resources. |
| **DocumentManifest.related** |  |
| Short name | Related things |
| Definition | Related identifiers or resources associated with the DocumentManifest. |
| Comment | May be identifiers or resources that caused the DocumentManifest to be created. |
| **DocumentManifest.related.identifier** |  |
| Short name | Identifiers of things that are related |
| Definition | Related identifier to this DocumentManifest. For example, Order numbers, accession numbers, XDW workflow numbers. |
| Comment | If both identifier and ref elements are present they shall refer to the same thing. |
| **DocumentManifest.related.ref** |  |
| Short name | Related Resource |
| Definition | Related Resource to this DocumentManifest. For example, Order, ProcedureRequest, Procedure, EligibilityRequest, etc. |
| Comment | If both identifier and ref elements are present they shall refer to the same thing. |

## http://hl7.org/fhir/StructureDefinition/DocumentReference

|  |  |
| --- | --- |
| **Description** | Base StructureDefinition for DocumentReference Resource |
| **DocumentReference** | Document Reference |
| Short name | A reference to a document |
| Definition | A reference to a document. |
| Comment | Usually, this is used for documents other than those defined by FHIR. |
| **DocumentReference.masterIdentifier** |  |
| Short name | Master Version Specific Identifier |
| Definition | Document identifier as assigned by the source of the document. This identifier is specific to this version of the document. This unique identifier may be used elsewhere to identify this version of the document. |
| Comment | CDA Document Id extension and root. |
| Requirements | The structure and format of this Id shall be consistent with the specification corresponding to the formatCode attribute. (e.g. for a DICOM standard document a 64 character numeric UID, for an HL7 CDA format a serialization of the CDA Document Id extension and root in the form "oid^extension", where OID is a 64 digits max, and the Id is a 16 UTF-8 char max. If the OID is coded without the extension then the '^' character shall not be included.). |
| **DocumentReference.identifier** |  |
| Short name | Other identifiers for the document |
| Definition | Other identifiers associated with the document, including version independent identifiers. |
| **DocumentReference.status** |  |
| Definition | The status of this document reference. |
| Comment | This is the status of the DocumentReference object, which might be independent from the docStatus element. |
| Binding Description | The status of the document reference. |
| **DocumentReference.docStatus** |  |
| Definition | The status of the underlying document. |
| Comment | The document that is pointed to might be in various lifecycle states. |
| Binding Description | Status of the underlying document. |
| **DocumentReference.type** |  |
| Short name | Kind of document (LOINC if possible) |
| Definition | Specifies the particular kind of document referenced (e.g. History and Physical, Discharge Summary, Progress Note). This usually equates to the purpose of making the document referenced. |
| Comment | Key metadata element describing the document, used in searching/filtering. |
| Binding Description | Precise type of clinical document. |
| **DocumentReference.class** |  |
| Short name | Categorization of document |
| Definition | A categorization for the type of document referenced - helps for indexing and searching. This may be implied by or derived from the code specified in the DocumentReference.type. |
| Comment | This is a metadata field from [XDS/MHD](http://wiki.ihe.net/index.php?title=Mobile\_access\_to\_Health\_Documents\_(MHD)). |
| Requirements | Helps humans to assess whether the document is of interest when viewing a list of documents. |
| Synonym | kind |
| Binding Description | High-level kind of a clinical document at a macro level. |
| **DocumentReference.subject** |  |
| Short name | Who/what is the subject of the document |
| Definition | Who or what the document is about. The document can be about a person, (patient or healthcare practitioner), a device (e.g. a machine) or even a group of subjects (such as a document about a herd of farm animals, or a set of patients that share a common exposure). |
| **DocumentReference.created** |  |
| Short name | Document creation time |
| Definition | When the document was created. |
| Comment | Creation time is used for tracking, organizing versions and searching. This is the creation time of the document, not the source material on which it is based. |
| **DocumentReference.indexed** |  |
| Short name | When this document reference created |
| Definition | When the document reference was created. |
| Comment | Referencing/indexing time is used for tracking, organizing versions and searching. |
| **DocumentReference.author** |  |
| Short name | Who and/or what authored the document |
| Definition | Identifies who is responsible for adding the information to the document. |
| Comment | Not necessarily who did the actual data entry (i.e. typist) it in or who was the source (informant). |
| **DocumentReference.authenticator** |  |
| Short name | Who/what authenticated the document |
| Definition | Which person or organization authenticates that this document is valid. |
| Comment | Represents a participant within the author institution who has legally authenticated or attested the document. Legal authentication implies that a document has been signed manually or electronically by the legal Authenticator. |
| **DocumentReference.custodian** |  |
| Short name | Organization which maintains the document |
| Definition | Identifies the organization or group who is responsible for ongoing maintenance of and access to the document. |
| Comment | Identifies the logical organization to go to find the current version, where to report issues, etc. This is different from the physical location of the document, which is the technical location of the document, which host may be delegated to the management of some other organization. |
| **DocumentReference.relatesTo** |  |
| Short name | Relationships to other documents |
| Definition | Relationships that this document has with other document references that already exist. |
| **DocumentReference.relatesTo.code** |  |
| Definition | The type of relationship that this document has with anther document. |
| Comment | If this document appends another document, then the document cannot be fully understood without also accessing the referenced document. |
| Binding Description | The type of relationship between documents. |
| **DocumentReference.relatesTo.target** |  |
| Short name | Target of the relationship |
| Definition | The target document of this relationship. |
| **DocumentReference.description** |  |
| Short name | Human-readable description (title) |
| Definition | Human-readable description of the source document. This is sometimes known as the "title". |
| Comment | What the document is about, rather than a terse summary of the document. It is commonly the case that records do not have a title and are collectively referred to by the display name of Record code (e.g. a "consultation" or "progress note"). |
| Requirements | Helps humans to assess whether the document is of interest. |
| **DocumentReference.securityLabel** |  |
| Short name | Document security-tags |
| Definition | A set of Security-Tag codes specifying the level of privacy/security of the Document. Note that DocumentReference.meta.security contains the security labels of the "reference" to the document, while DocumentReference.securityLabel contains a snapshot of the security labels on the document the reference refers to. |
| Comment | The confidentiality codes can carry multiple vocabulary items. HL7 has developed an understanding of security and privacy tags that might be desirable in a Document Sharing environment, called HL7 Healthcare Privacy and Security Classification System (HCS). The following specification is recommended but not mandated, as the vocabulary bindings are an administrative domain responsibility. The use of this method is up to the policy domain such as the XDS Affinity Domain or other Trust Domain where all parties including sender and recipients are trusted to appropriately tag and enforce. In the HL7 Healthcare Privacy and Security Classification (HCS) there are code systems specific to Confidentiality, Sensitivity, Integrity, and Handling Caveats. Some values would come from a local vocabulary as they are related to workflow roles and special projects. |
| Requirements | Use of the Health Care Privacy/Security Classification (HCS) system of security-tag use is recommended. |
| Binding Description | Security Labels from the Healthcare Privacy and Security Classification System. |
| **DocumentReference.content** |  |
| Short name | Document referenced |
| Definition | The document and format referenced. There may be multiple content element repetitions, each with a different format. |
| **DocumentReference.content.attachment** |  |
| Short name | Where to access the document |
| Definition | The document or url of the document along with critical metadata to prove content has integrity. |
| **DocumentReference.content.format** |  |
| Short name | Format/content rules for the document |
| Definition | An identifier of the document encoding, structure, and template that the document conforms to beyond the base format indicated in the mimeType. |
| Comment | Note that while IHE mostly issues URNs for format types, not all documents can be identified by a URI. |
| Binding Description | Document Format Codes. |
| **DocumentReference.context** |  |
| Short name | Clinical context of document |
| Definition | The clinical context in which the document was prepared. |
| Comment | These values are primarily added to help with searching for interesting/relevant documents. |
| **DocumentReference.context.encounter** |  |
| Short name | Context of the document content |
| Definition | Describes the clinical encounter or type of care that the document content is associated with. |
| **DocumentReference.context.event** |  |
| Short name | Main Clinical Acts Documented |
| Definition | This list of codes represents the main clinical acts, such as a colonoscopy or an appendectomy, being documented. In some cases, the event is inherent in the typeCode, such as a "History and Physical Report" in which the procedure being documented is necessarily a "History and Physical" act. |
| Comment | An event can further specialize the act inherent in the type, such as where it is simply "Procedure Report" and the procedure was a "colonoscopy". If one or more event codes are included, they shall not conflict with the values inherent in the class or type elements as such a conflict would create an ambiguous situation. |
| Binding Description | This list of codes represents the main clinical acts being documented. |
| **DocumentReference.context.period** |  |
| Short name | Time of service that is being documented |
| Definition | The time period over which the service that is described by the document was provided. |
| **DocumentReference.context.facilityType** |  |
| Short name | Kind of facility where patient was seen |
| Definition | The kind of facility where the patient was seen. |
| Binding Description | XDS Facility Type. |
| **DocumentReference.context.practiceSetting** |  |
| Short name | Additional details about where the content was created (e.g. clinical specialty) |
| Definition | This property may convey specifics about the practice setting where the content was created, often reflecting the clinical specialty. |
| Comment | The value set for this content has an example binding because it is a value set decided by community policy. Other examples exist for consideration: \* HITSP created the table HITSP/C80 Table 2-148 Clinical Specialty Value Set (a value set based upon SNOMED CT which is referenced by Direct (XDR and XDM for Direct Messaging Specification, Version 1), as well as Nationwide Health Information Network (NHIN). Query for Documents, Web Service Interface Specification, V 3.0, 07/27/2011 \* ELGA (Austria) (ELGA CDA Implementie-rungsleitfÃ¤den Registrierung von CDA Dokumenten fÃ¼r ELGA mit IHE Cross-Enterprise Document Sharing: XDS Metadaten (XDSDocumentEntry), [1.2.40.0.34.7.6.3] \* XDS Connect-a-thon practiceSettingCode. |
| Requirements | This is an important piece of metadata that providers often rely upon to quickly sort and/or filter out to find specific content. |
| Binding Description | Additional details about where the content was created (e.g. clinical specialty). |
| **DocumentReference.context.sourcePatientInfo** |  |
| Short name | Patient demographics from source |
| Definition | The Patient Information as known when the document was published. May be a reference to a version specific, or contained. |
| **DocumentReference.context.related** |  |
| Short name | Related identifiers or resources |
| Definition | Related identifiers or resources associated with the DocumentReference. |
| Comment | May be identifiers or resources that caused the DocumentReference or referenced Document to be created. |
| **DocumentReference.context.related.identifier** |  |
| Short name | Identifier of related objects or events |
| Definition | Related identifier to this DocumentReference. If both id and ref are present they shall refer to the same thing. |
| Comment | Order numbers, accession numbers, XDW workflow numbers. |
| **DocumentReference.context.related.ref** |  |
| Short name | Related Resource |
| Definition | Related Resource to this DocumentReference. If both id and ref are present they shall refer to the same thing. |
| Comment | Order, ProcedureRequest, Procedure, EligibilityRequest, etc. |

# Vocabulary

## http://hl7.org/fhir/StructureDefinition/CodeSystem

|  |  |
| --- | --- |
| **Description** | Base StructureDefinition for CodeSystem Resource |
| **CodeSystem** | Code System |
| Short name | A set of codes drawn from one or more code systems |
| Definition | A code system resource specifies a set of codes drawn from one or more code systems. |
| Constraint Text | Within a code system definition, all the codes SHALL be unique |
| **CodeSystem.url** |  |
| Short name | Logical uri to reference this code system (globally unique) (Coding.system) |
| Definition | An absolute URL that is used to identify this code system when it is referenced in a specification, model, design or an instance. This SHALL be a URL, SHOULD be globally unique, and SHOULD be an address at which this code system is (or will be) published. The URL SHOULD include the major version of the code system. For more information see [Technical and Business Versions](resource.html#versions). This is used in [Coding]{datatypes.html#Coding}.system. |
| Comment | Can be a urn:uuid: or a urn:oid:, but real http: addresses are preferred. |
| Requirements | Allows the code system to be referenced by a single globally unique identifier. |
| **CodeSystem.identifier** |  |
| Short name | Additional identifier for the code system |
| Definition | A formal identifier that is used to identify this code system when it is represented in other formats, or referenced in a specification, model, design or an instance. |
| Comment | Typically, this is used for identifiers that can go in an HL7 v3 II data type - e.g. to identify this code system outside of FHIR, where the logical URL is not possible to use. |
| Requirements | Allows externally provided and/or useable business identifiers to be easily associated with the module. |
| **CodeSystem.version** |  |
| Short name | Business version of the code system (Coding.version) |
| Definition | The identifier that is used to identify this version of the code system when it is referenced in a specification, model, design or instance. This is an arbitrary value managed by the code system author and is not expected to be globally unique. For example, it might be a timestamp (e.g. yyyymmdd) if a managed version is not available. There is also no expectation that versions are orderable. This is used in [Coding]{datatypes.html#Coding}.version. |
| Comment | There may be multiple different instances of a code system that have the same identifier but different versions. |
| **CodeSystem.name** |  |
| Short name | Name for this code system (Computer friendly) |
| Definition | A natural language name identifying the code system. This name should be usable as an identifier for the module by machine processing applications such as code generation. |
| Comment | The name is not expected to be globally unique. The name should be a simple alpha-numeric type name to ensure it is computable friendly. |
| Requirements | Support human navigation & code generation. |
| **CodeSystem.title** |  |
| Short name | Name for this code system (Human friendly) |
| Definition | A short, descriptive, user-friendly title for the code system. |
| **CodeSystem.status** |  |
| Definition | The status of this code system. Enables tracking the life-cycle of the content. |
| Comment | Allows filtering of code system that are appropriate for use vs. not. |
| Binding Description | The lifecycle status of a Value Set or Concept Map. |
| **CodeSystem.experimental** |  |
| Short name | If for testing purposes, not real usage |
| Definition | A flag to indicate that this code system is authored for testing purposes (or education/evaluation/marketing), and is not intended to be used for genuine usage. |
| Comment | Allows filtering of code system that are appropriate for use vs. not. |
| Requirements | Enables experimental content to be developed following the same life-cycle as a production-level code system would. |
| **CodeSystem.date** |  |
| Short name | Date this was last changed |
| Definition | The date (and optionally time) when the code system was published. The date must change when the business version changes, if it does, and it must change if the status code changes. In addition, it should change when the substantive content of the code system changes. |
| Comment | Note that this is not the same as the resource last-modified-date, since the resource may be a secondary representation of the code system. Additional specific dates may be added as extensions. |
| **CodeSystem.publisher** |  |
| Short name | Name of the publisher (Organization or individual) |
| Definition | The name of the individual or organization that published the code system. |
| Comment | Usually an organization, but may be an individual. The publisher (or steward) of the code system is the organization or individual primarily responsible for the maintenance and upkeep of the code system. This is not necessarily the same individual or organization that developed and initially authored the content. The publisher is the primary point of contact for questions or issues with the code system. This item SHOULD be populated unless the information is available from context. |
| Requirements | Helps establish the "authority/credibility" of the code system. May also allow for contact. |
| **CodeSystem.contact** |  |
| Short name | Contact details for the publisher |
| Definition | Contact details to assist a user in finding and communicating with the publisher. |
| Comment | May be a web site, an email address, a telephone number, etc. |
| **CodeSystem.description** |  |
| Short name | Natural language description of the code system |
| Definition | A free text natural language description of the code system from the consumer's perspective. |
| Comment | This description can be used to capture details such as why the code system was built, comments about misuse, instructions for clinical use and interpretation, literature references, examples from the paper world, etc. It is not a rendering of the code system as conveyed in the text field of the resource itself. This item SHOULD be populated unless the information is available from context (e.g. the language of the profile is presumed to be the predominant language in the place the profile was created). |
| Synonym | Scope |
| Synonym | Purpose |
| **CodeSystem.useContext** |  |
| Short name | Content intends to support these contexts |
| Definition | The content was developed with a focus and intent of supporting the contexts that are listed. These terms may be used to assist with indexing and searching of code system definitions. |
| Comment | When multiple usageContexts are specified, there is no expectation for whether all or any of the contexts apply. |
| Requirements | Assist in searching for appropriate content. |
| **CodeSystem.jurisdiction** |  |
| Short name | Intended jurisdiction for code system (if applicable) |
| Definition | A jurisdiction in which the code system is intended to be used. |
| Binding Description | Countries and regions within which this artifact is targeted for use |
| **CodeSystem.purpose** |  |
| Short name | Why this code system is defined |
| Definition | Explains why this code system is needed and why it has been designed as it has. |
| Comment | This element does not describe the usage of the code system (See, e.g, the comments element, or relatedArtifacts), rather it's for traceability of ''why'' the resource is either needed or ''why'' it is defined as it is. This may be used to point to source materials or specifications that drove the structure of this code system. |
| **CodeSystem.copyright** |  |
| Short name | Use and/or publishing restrictions |
| Definition | A copyright statement relating to the code system and/or its contents. Copyright statements are generally legal restrictions on the use and publishing of the code system. |
| Comment | null Sometimes, the copyright differs between the code system and the codes that are included. The copyright statement should clearly differentiate between these when required. |
| Requirements | Consumers of the library must be able to determine any legal restrictions on the use of the code system and/or its content. |
| Synonym | License |
| Synonym | Restrictions |
| **CodeSystem.caseSensitive** |  |
| Short name | If code comparison is case sensitive |
| Definition | If code comparison is case sensitive when codes within this system are compared to each other. |
| Comment | If this value is missing, then it is not specified whether a code system is case sensitive or not. When the rule is not known, Postel's law should be followed: produce codes with the correct case, and accept codes in any case. This element is primarily provided to support validation software. |
| **CodeSystem.valueSet** |  |
| Short name | Canonical URL for value set with entire code system |
| Definition | Canonical URL of value set that contains the entire code system. |
| Comment | Thedefinition of the value set SHALL include all codes from this code system, and it SHALL be immutable. |
| **CodeSystem.hierarchyMeaning** |  |
| Definition | The meaning of the heirarchy of concepts. |
| Binding Description | The meaning of the hierarchy of concepts in a code system |
| **CodeSystem.compositional** |  |
| Short name | If code system defines a post-composition grammar |
| Definition | True If code system defines a post-composition grammar. |
| Comment | Note that the code system resource does not define what the compositional grammar is, only whether or not there is one. |
| Synonym | grammar |
| **CodeSystem.versionNeeded** |  |
| Short name | If definitions are not stable |
| Definition | This flag is used to signify that the code system has not (or does not) maintain the definitions, and a version must be specified when referencing this code system. |
| Comment | Best practice is that code systems do not redefine concepts, or that if concepts are redefined, a new code system definition is created. But this is not always possible, so some code systems may be defined as 'versionNeeded'. |
| **CodeSystem.content** |  |
| Definition | How much of the content of the code system - the concepts and codes it defines - are represented in this resource. |
| Binding Description | How much of the content of the code system - the concepts and codes it defines - are represented in a code system resource |
| **CodeSystem.count** |  |
| Short name | Total concepts in the code system |
| Definition | The total number of concepts defined by the code system. Where the code system has a compositional grammar, the count refers to the number of base (primitive) concepts. |
| Comment | The count of concepts defined in this resource cannot be more than this value, but may be less for several reasons - see the content value. |
| **CodeSystem.filter** |  |
| Short name | Filter that can be used in a value set |
| Definition | A filter that can be used in a value set compose statement when selecting concepts using a filter. |
| **CodeSystem.filter.code** |  |
| Short name | Code that identifies the filter |
| Definition | The code that identifies this filter when it is used in the instance. |
| **CodeSystem.filter.description** |  |
| Short name | How or why the filter is used |
| Definition | A description of how or why the filter is used. |
| **CodeSystem.filter.operator** |  |
| Short name | Operators that can be used with filter |
| Definition | A list of operators that can be used with the filter. |
| Binding Description | The kind of operation to perform as a part of a property based filter. |
| **CodeSystem.filter.value** |  |
| Short name | What to use for the value |
| Definition | A description of what the value for the filter should be. |
| **CodeSystem.property** |  |
| Short name | Additional information supplied about each concept |
| Definition | A property defines an additional slot through which additional information can be provided about a concept. |
| **CodeSystem.property.code** |  |
| Short name | Identifies the property on the concepts, and when referred to in operations |
| Definition | A code that is used to identify the property. The code is used internally (in CodeSystem.concept.property.code) and also externally, such as in property filters. |
| **CodeSystem.property.uri** |  |
| Short name | Formal identifier for the property |
| Definition | Reference to the formal meaning of the property. One possible source of meaning is the [Concept Properties](codesystem-concept-properties.html) code system. |
| **CodeSystem.property.description** |  |
| Short name | Why the property is defined, and/or what it conveys |
| Definition | A description of the property- why it is defined, and how it's value might be used. |
| **CodeSystem.property.type** |  |
| Definition | The type of the property value. Properties of type "code" contain a code defined by the code system (e.g. a reference to anotherr defined concept). |
| Binding Description | The type of a property value |
| **CodeSystem.concept** |  |
| Short name | Concepts in the code system |
| Definition | Concepts that are in the code system. The concept definitions are inherently hierarchical, but the definitions must be consulted to determine what the meaning of the hierarchical relationships are. |
| Comment | If this is empty, it means that the code system resource does not represent the content of the code system. |
| **CodeSystem.concept.code** |  |
| Short name | Code that identifies concept |
| Definition | A code - a text symbol - that uniquely identifies the concept within the code system. |
| **CodeSystem.concept.display** |  |
| Short name | Text to display to the user |
| Definition | A human readable string that is the recommended default way to present this concept to a user. |
| **CodeSystem.concept.definition** |  |
| Short name | Formal definition |
| Definition | The formal definition of the concept. The code system resource does not make formal definitions required, because of the prevalence of legacy systems. However, they are highly recommended, as without them there is no formal meaning associated with the concept. |
| **CodeSystem.concept.designation** |  |
| Short name | Additional representations for the concept |
| Definition | Additional representations for the concept - other languages, aliases, specialized purposes, used for particular purposes, etc. |
| Requirements | Many concept definition systems support multiple representations, in multiple languages, and for multiple purposes. |
| **CodeSystem.concept.designation.language** |  |
| Short name | Human language of the designation |
| Definition | The language this designation is defined for. |
| Comment | In the absence of a language, the resource language applies. |
| Binding Description | A human language. |
| **CodeSystem.concept.designation.use** |  |
| Short name | Details how this designation would be used |
| Definition | A code that details how this designation would be used. |
| Comment | If no use is provided, the designation can be assumed to be suitable for general display to a human user. |
| Binding Description | Details of how a designation would be used. |
| **CodeSystem.concept.designation.value** |  |
| Short name | The text value for this designation |
| Definition | The text value for this designation. |
| **CodeSystem.concept.property** |  |
| Short name | Property value for the concept |
| Definition | A property value for this concept. |
| **CodeSystem.concept.property.code** |  |
| Short name | Reference to CodeSystem.property.code |
| Definition | A code that is a reference to CodeSystem.property.code. |
| **CodeSystem.concept.property.value[x]** |  |
| Short name | Value of the property for this concept |
| Definition | The value of this property. |
| **CodeSystem.concept.concept** |  |
| Short name | Child Concepts (is-a/contains/categorizes) |
| Definition | Defines children of a concept to produce a hierarchy of concepts. The nature of the relationships is variable (is-a/contains/categorizes) - see hierarchyMeaning. |

## http://hl7.org/fhir/StructureDefinition/ConceptMap

|  |  |
| --- | --- |
| **Description** | Base StructureDefinition for ConceptMap Resource |
| **ConceptMap** | Concept Map |
| Short name | A map from one set of concepts to one or more other concepts |
| Definition | A statement of relationships from one set of concepts to one or more other concepts - either code systems or data elements, or classes in class models. |
| **ConceptMap.url** |  |
| Short name | Logical uri to reference this concept map (globally unique) |
| Definition | An absolute URL that is used to identify this concept map when it is referenced in a specification, model, design or an instance. This SHALL be a URL, SHOULD be globally unique, and SHOULD be an address at which this concept map is (or will be) published. The URL SHOULD include the major version of the concept map. For more information see [Technical and Business Versions](resource.html#versions). |
| Comment | Can be a urn:uuid: or a urn:oid:, but real http: addresses are preferred. |
| Requirements | Allows the concept map to be referenced by a single globally unique identifier. |
| **ConceptMap.identifier** |  |
| Short name | Additional identifier for the concept map |
| Definition | A formal identifier that is used to identify this concept map when it is represented in other formats, or referenced in a specification, model, design or an instance. |
| Comment | Typically, this is used for identifiers that can go in an HL7 v3 II data type - e.g. to identify this concept map outside of FHIR, where the logical URL is not possible to use. |
| Requirements | Allows externally provided and/or useable business identifiers to be easily associated with the module. |
| **ConceptMap.version** |  |
| Short name | Business version of the concept map |
| Definition | The identifier that is used to identify this version of the concept map when it is referenced in a specification, model, design or instance. This is an arbitrary value managed by the concept map author and is not expected to be globally unique. For example, it might be a timestamp (e.g. yyyymmdd) if a managed version is not available. There is also no expectation that versions are orderable. |
| Comment | There may be multiple different instances of a concept map that have the same identifier but different versions. |
| **ConceptMap.name** |  |
| Short name | Name for this concept map (Computer friendly) |
| Definition | A natural language name identifying the concept map. This name should be usable as an identifier for the module by machine processing applications such as code generation. |
| Comment | The name is not expected to be globally unique. The name should be a simple alpha-numeric type name to ensure it is computable friendly. |
| Requirements | Support human navigation & code generation. |
| **ConceptMap.title** |  |
| Short name | Name for this concept map (Human friendly) |
| Definition | A short, descriptive, user-friendly title for the concept map. |
| **ConceptMap.status** |  |
| Definition | The status of this concept map. Enables tracking the life-cycle of the content. |
| Comment | Allows filtering of concept map that are appropriate for use vs. not. |
| Binding Description | The lifecycle status of a Value Set or Concept Map. |
| **ConceptMap.experimental** |  |
| Short name | If for testing purposes, not real usage |
| Definition | A flag to indicate that this concept map is authored for testing purposes (or education/evaluation/marketing), and is not intended to be used for genuine usage. |
| Comment | Allows filtering of concept map that are appropriate for use vs. not. |
| Requirements | Enables experimental content to be developed following the same life-cycle as a production-level concept map would. |
| **ConceptMap.date** |  |
| Short name | Date this was last changed |
| Definition | The date (and optionally time) when the concept map was published. The date must change when the business version changes, if it does, and it must change if the status code changes. In addition, it should change when the substantive content of the concept map changes. |
| Comment | Note that this is not the same as the resource last-modified-date, since the resource may be a secondary representation of the concept map. Additional specific dates may be added as extensions. |
| **ConceptMap.publisher** |  |
| Short name | Name of the publisher (Organization or individual) |
| Definition | The name of the individual or organization that published the concept map. |
| Comment | Usually an organization, but may be an individual. The publisher (or steward) of the concept map is the organization or individual primarily responsible for the maintenance and upkeep of the concept map. This is not necessarily the same individual or organization that developed and initially authored the content. The publisher is the primary point of contact for questions or issues with the concept map. This item SHOULD be populated unless the information is available from context. |
| Requirements | Helps establish the "authority/credibility" of the concept map. May also allow for contact. |
| **ConceptMap.contact** |  |
| Short name | Contact details for the publisher |
| Definition | Contact details to assist a user in finding and communicating with the publisher. |
| Comment | May be a web site, an email address, a telephone number, etc. |
| **ConceptMap.description** |  |
| Short name | Natural language description of the concept map |
| Definition | A free text natural language description of the concept map from the consumer's perspective. |
| Comment | The description is not intended to describe the semantics of the concept map. The description should capture its intended use, which is needed for ensuring integrity for its use in models across future changes. |
| **ConceptMap.useContext** |  |
| Short name | Content intends to support these contexts |
| Definition | The content was developed with a focus and intent of supporting the contexts that are listed. These terms may be used to assist with indexing and searching of code system definitions. |
| Comment | When multiple usageContexts are specified, there is no expectation for whether all or any of the contexts apply. |
| Requirements | Assist in searching for appropriate content. |
| **ConceptMap.jurisdiction** |  |
| Short name | Intended jurisdiction for concept map (if applicable) |
| Definition | A jurisdiction in which the concept map is intended to be used. |
| Binding Description | Countries and regions within which this artifact is targeted for use |
| **ConceptMap.purpose** |  |
| Short name | Why this concept map is defined |
| Definition | Explains why this concept map is needed and why it has been designed as it has. |
| Comment | This element does not describe the usage of the concept map (See, e.g, the comments element, or relatedArtifacts), rather it's for traceability of ''why'' the resource is either needed or ''why'' it is defined as it is. This may be used to point to source materials or specifications that drove the structure of this concept map. |
| **ConceptMap.copyright** |  |
| Short name | Use and/or publishing restrictions |
| Definition | A copyright statement relating to the concept map and/or its contents. Copyright statements are generally legal restrictions on the use and publishing of the concept map. |
| Comment | null Frequently, the copyright differs between the concept map, and codes that are included. The copyright statement should clearly differentiate between these when required. |
| Requirements | Consumers of the library must be able to determine any legal restrictions on the use of the concept map and/or its content. |
| Synonym | License |
| Synonym | Restrictions |
| **ConceptMap.source[x]** |  |
| Short name | Identifies the source of the concepts which are being mapped |
| Definition | The source value set that specifies the concepts that are being mapped. |
| Comment | Should be a version specific reference. URIs SHOULD be absolute. If there is no source or target value set, the is no specified context for the map. |
| **ConceptMap.target[x]** |  |
| Short name | Provides context to the mappings |
| Definition | The target value set provides context to the mappings. Note that the mapping is made between concepts, not between value sets, but the value set provides important context about how the concept mapping choices are made. |
| Comment | Should be a version specific reference. URIs SHOULD be absolute. If there is no source or target value set, the is no specified context for the map. |
| **ConceptMap.group** |  |
| Short name | Same source and target systems |
| Definition | A group of mappings that all have the same source and target system. |
| **ConceptMap.group.source** |  |
| Short name | Code System (if value set crosses code systems) |
| Definition | An absolute URI that identifies the Code System (if the source is a value set that crosses more than one code system). |
| **ConceptMap.group.sourceVersion** |  |
| Short name | Specific version of the code system |
| Definition | The specific version of the code system, as determined by the code system authority. |
| Comment | The specification of a particular code system version may be required for code systems which lack concept permanence. |
| **ConceptMap.group.target** |  |
| Short name | System of the target (if necessary) |
| Definition | An absolute URI that identifies the code system of the target code (if the target is a value set that cross code systems). |
| Comment | Target may be omitted if all the targget element equivalence values are 'unmatched'. |
| **ConceptMap.group.targetVersion** |  |
| Short name | Specific version of the code system |
| Definition | The specific version of the code system, as determined by the code system authority. |
| Comment | The specification of a particular code system version may be required for code systems which lack concept permanence. |
| **ConceptMap.group.element** |  |
| Short name | Mappings for a concept from the source set |
| Definition | Mappings for an individual concept in the source to one or more concepts in the target. |
| Comment | Generally, the ideal is that there would only be one mapping for each concept in the source value set, but a given concept may be mapped multiple times with different comments or dependencies. |
| Synonym | code |
| Synonym | concept |
| Synonym | item |
| **ConceptMap.group.element.code** |  |
| Short name | Identifies element being mapped |
| Definition | Identity (code or path) or the element/item being mapped. |
| **ConceptMap.group.element.display** |  |
| Short name | Display for the code |
| Definition | The display for the code. The display is only provided to help editors when editing the concept map. |
| Comment | The display is ignored when processing the map. |
| **ConceptMap.group.element.target** |  |
| Short name | Concept in target system for element |
| Definition | A concept from the target value set that this concept maps to. |
| Comment | Ideally there would only be one map, with equal or equivalent mapping. But multiple maps are allowed for several narrower options, or to assert that other concepts are unmatched. |
| Constraint Text | If the map is narrower or inexact, there SHALL be some comments |
| **ConceptMap.group.element.target.code** |  |
| Short name | Code that identifies the target element |
| Definition | Identity (code or path) or the element/item that the map refers to. |
| **ConceptMap.group.element.target.display** |  |
| Short name | Display for the code |
| Definition | The display for the code. The display is only provided to help editors when editing the concept map. |
| Comment | The display is ignored when processing the map. |
| **ConceptMap.group.element.target.equivalence** |  |
| Definition | The equivalence between the source and target concepts (counting for the dependencies and products). The equivalence is read from target to source (e.g. the target is 'wider' than the source). |
| Binding Description | The degree of equivalence between concepts. |
| **ConceptMap.group.element.target.comment** |  |
| Short name | Description of status/issues in mapping |
| Definition | A description of status/issues in mapping that conveys additional information not represented in the structured data. |
| **ConceptMap.group.element.target.dependsOn** |  |
| Short name | Other elements required for this mapping (from context) |
| Definition | A set of additional dependencies for this mapping to hold. This mapping is only applicable if the specified element can be resolved, and it has the specified value. |
| **ConceptMap.group.element.target.dependsOn.property** |  |
| Short name | Reference to property mapping depends on |
| Definition | A reference to an element that holds a coded value that corresponds to a code system property. The idea is that the information model carries an element somwhere that is labelled to correspond with a code system property. |
| **ConceptMap.group.element.target.dependsOn.system** |  |
| Short name | Code System (if necessary) |
| Definition | An absolute URI that identifies the code system of the dependency code (if the source/dependency is a value set that crosses code systems). |
| Meaning when missing | The code is in the source (dependsOn) or target (product) system |
| **ConceptMap.group.element.target.dependsOn.code** |  |
| Short name | Value of the referenced element |
| Definition | Identity (code or path) or the element/item/ValueSet that the map depends on / refers to. |
| **ConceptMap.group.element.target.dependsOndisplay** |  |
| Short name | Display for the code |
| Definition | The display for the code. The display is only provided to help editors when editing the concept map. |
| Comment | The display is ignored when processing the map. |
| **ConceptMap.group.element.target.product** |  |
| Short name | Other concepts that this mapping also produces |
| Definition | A set of additional outcomes from this mapping to other elements. To properly execute this mapping, the specified element must be mapped to some data element or source that is in context. The mapping may still be useful without a place for the additional data elements, but the equivalence cannot be relied on. |
| **ConceptMap.group.unmapped** |  |
| Short name | When no match in the mappings |
| Definition | What to do when there is no match in the mappings in the group. |
| Comment | This only applies if the source code is in the system defined for the group. |
| Constraint Text | If the mode is 'other-map', a code must be provided |
| Constraint Text | If the mode is 'fixed', a code must be provided |
| **ConceptMap.group.unmapped.mode** |  |
| Definition | Defines which action to take if there is no match in the group. One of 3 actions is possible: use the unmapped code (this is useful when doing a mapping between versions, and only a few codes have changed), use a fixed code (a default code), or alternatively, a reference to a different concept map can be provided (by canonical URL). |
| Binding Description | Defines which action to take if there is no match in the group. |
| **ConceptMap.group.unmapped.code** |  |
| Short name | Fixed code when mode = fixed |
| Definition | The fixed code to use when the mode = 'fixed' - all unmapped codes are mapped to a single fixed code. |
| **ConceptMap.group.unmapped.display** |  |
| Short name | Display for the code |
| Definition | The display for the code. The display is only provided to help editors when editing the concept map. |
| Comment | The display is ignored when processing the map. |
| **ConceptMap.group.unmapped.url** |  |
| Short name | Canonical URL for other concept map |
| Definition | The canonical URL of the map to use if this map contains no mapping. |

## http://hl7.org/fhir/StructureDefinition/ExpansionProfile

|  |  |
| --- | --- |
| **Description** | Base StructureDefinition for ExpansionProfile Resource |
| **ExpansionProfile** | Expansion Profile |
| Short name | Defines behaviour and contraints on the ValueSet Expansion operation |
| Definition | Resource to define constraints on the Expansion of a FHIR ValueSet. |
| Synonym | ValueSetExpansionProfile |
| **ExpansionProfile.url** |  |
| Short name | Logical uri to reference this expansion profile (globally unique) |
| Definition | An absolute URL that is used to identify this expansion profile when it is referenced in a specification, model, design or an instance. This SHALL be a URL, SHOULD be globally unique, and SHOULD be an address at which this expansion profile is (or will be) published. The URL SHOULD include the major version of the expansion profile. For more information see [Technical and Business Versions](resource.html#versions). |
| Comment | Can be a urn:uuid: or a urn:oid:, but real http: addresses are preferred. |
| Requirements | Allows the expansion profile to be referenced by a single globally unique identifier. |
| **ExpansionProfile.identifier** |  |
| Short name | Additional identifier for the expansion profile |
| Definition | A formal identifier that is used to identify this expansion profile when it is represented in other formats, or referenced in a specification, model, design or an instance. |
| Comment | Typically, this is used for identifiers that can go in an HL7 v3 II data type - e.g. to identify this expansion profile outside of FHIR, where the logical URL is not possible to use. |
| Requirements | Allows externally provided and/or useable business identifiers to be easily associated with the module. |
| **ExpansionProfile.version** |  |
| Short name | Business version of the expansion profile |
| Definition | The identifier that is used to identify this version of the expansion profile when it is referenced in a specification, model, design or instance. This is an arbitrary value managed by the expansion profile author and is not expected to be globally unique. For example, it might be a timestamp (e.g. yyyymmdd) if a managed version is not available. There is also no expectation that versions are orderable. |
| Comment | There may be multiple different instances of a expansion profile that have the same identifier but different versions. |
| **ExpansionProfile.name** |  |
| Short name | Name for this expansion profile (Computer friendly) |
| Definition | A natural language name identifying the expansion profile. This name should be usable as an identifier for the module by machine processing applications such as code generation. |
| Comment | The name is not expected to be globally unique. The name should be a simple alpha-numeric type name to ensure it is computable friendly. |
| Requirements | Support human navigation & code generation. |
| **ExpansionProfile.status** |  |
| Definition | The status of this expansion profile. Enables tracking the life-cycle of the content. |
| Comment | Allows filtering of expansion profile that are appropriate for use vs. not. |
| Binding Description | The lifecycle status of a Value Set or Concept Map. |
| **ExpansionProfile.experimental** |  |
| Short name | If for testing purposes, not real usage |
| Definition | A flag to indicate that this expansion profile is authored for testing purposes (or education/evaluation/marketing), and is not intended to be used for genuine usage. |
| Comment | Allows filtering of expansion profile that are appropriate for use vs. not. |
| Requirements | Enables experimental content to be developed following the same life-cycle as a production-level expansion profile would. |
| **ExpansionProfile.date** |  |
| Short name | Date this was last changed |
| Definition | The date (and optionally time) when the expansion profile was published. The date must change when the business version changes, if it does, and it must change if the status code changes. In addition, it should change when the substantive content of the expansion profile changes. |
| Comment | Note that this is not the same as the resource last-modified-date, since the resource may be a secondary representation of the expansion profile. Additional specific dates may be added as extensions. |
| **ExpansionProfile.publisher** |  |
| Short name | Name of the publisher (Organization or individual) |
| Definition | The name of the individual or organization that published the expansion profile. |
| Comment | Usually an organization, but may be an individual. The publisher (or steward) of the expansion profile is the organization or individual primarily responsible for the maintenance and upkeep of the expansion profile. This is not necessarily the same individual or organization that developed and initially authored the content. The publisher is the primary point of contact for questions or issues with the expansion profile. This item SHOULD be populated unless the information is available from context. |
| Requirements | Helps establish the "authority/credibility" of the expansion profile. May also allow for contact. |
| **ExpansionProfile.contact** |  |
| Short name | Contact details for the publisher |
| Definition | Contact details to assist a user in finding and communicating with the publisher. |
| Comment | May be a web site, an email address, a telephone number, etc. |
| **ExpansionProfile.description** |  |
| Short name | Natural language description of the expansion profile |
| Definition | A free text natural language description of the expansion profile from the consumer's perspective. |
| Comment | This description can be used to capture details such as why the expansion profile was built, comments about misuse, instructions for clinical use and interpretation, literature references, examples from the paper world, etc. It is not a rendering of the expansion profile as conveyed in the text field of the resource itself. This item SHOULD be populated unless the information is available from context (e.g. the language of the profile is presumed to be the predominant language in the place the profile was created). |
| **ExpansionProfile.useContext** |  |
| Short name | Content intends to support these contexts |
| Definition | The content was developed with a focus and intent of supporting the contexts that are listed. These terms may be used to assist with indexing and searching of code system definitions. |
| Comment | When multiple usageContexts are specified, there is no expectation for whether all or any of the contexts apply. |
| Requirements | Assist in searching for appropriate content. |
| **ExpansionProfile.jurisdiction** |  |
| Short name | Intended jurisdiction for expansion profile (if applicable) |
| Definition | A jurisdiction in which the expansion profile is intended to be used. |
| Binding Description | Countries and regions within which this artifact is targeted for use |
| **ExpansionProfile.fixedVersion** |  |
| Short name | Fix use of a code system to a particular version |
| Definition | Fix use of a particular code system to a particular version. |
| **ExpansionProfile.fixedVersion.system** |  |
| Short name | System to have it's version fixed |
| Definition | The specific system for which to fix the version. |
| Comment | See ''Coding.system'' for further documentation. |
| **ExpansionProfile.fixedVersion.version** |  |
| Short name | Specific version of the code system referred to |
| Definition | The version of the code system from which codes in the expansion should be included. |
| **ExpansionProfile.fixedVersion.mode** |  |
| Definition | How to manage the intersection between a fixed version in a value set, and this fixed version of the system in the expansion profile. |
| Binding Description | How to manage the intersection between a fixed version in a value set, and a fixed version of the system in the expansion profile |
| **ExpansionProfile.excludedSystem** |  |
| Short name | Systems/Versions to be exclude |
| Definition | Code system, or a particular version of a code system to be excluded from value set expansions. |
| Comment | When a system is excluded, and this makes a material difference to the expansion, the exclusion SHALL be noted in the expansion parameters using a parameter 'excluded'. |
| **ExpansionProfile.excludedSystem.system** |  |
| Short name | The specific code system to be excluded |
| Definition | An absolute URI which is the code system to be excluded. |
| Comment | See ''Coding.system'' for further documentation. |
| **ExpansionProfile.excludedSystem.version** |  |
| Short name | Specific version of the code system referred to |
| Definition | The version of the code system from which codes in the expansion should be excluded. |
| Comment | This is used to apply version specifc exclusion contraints. If no version is specified, then all codes from the code system present in the expansion (prior to application of the expansion profile) will be excluded. |
| Meaning when missing | Exclusion is not version specific |
| **ExpansionProfile.includeDesignations** |  |
| Short name | Whether the expansion should include concept designations |
| Definition | Controls whether concept designations are to be included or excluded in value set expansions. |
| Comment | ExpansionProfile.designation.include and ExpansionProfile.designation.exclude are only evaluated if includeDesignations is present and set to "true". If includeDesignations is present with a value of "true" and both ExpansionProfile.designation.include and ExpansionProfile.designation.exclude are absent, then all designations are returned in the expansion. |
| **ExpansionProfile.designation** |  |
| Short name | When the expansion profile imposes designation contraints |
| Definition | A set of criteria that provide the constraints imposed on the value set expansion by including or excluding designations. |
| **ExpansionProfile.designation.include** |  |
| Short name | Designations to be included |
| Definition | Designations to be included. |
| **ExpansionProfile.designation.include.designation** |  |
| Short name | The designation to be included |
| Definition | A data group for each designation to be included. |
| Comment | At least one of designation.language or designation.use must be provided for each include.designation element. |
| Constraint Text | SHALL have at least one of language or use |
| **ExpansionProfile.designation.include.designation.language** |  |
| Short name | Human language of the designation to be included |
| Definition | The language this designation is defined for. |
| Comment | In the absence of a language, all designations are retained which match the designation.use parameter for this include.designation. |
| Binding Description | A human language. |
| **ExpansionProfile.designation.include.designation.use** |  |
| Short name | What kind of Designation to include |
| Definition | Which kinds of designation to include in the expansion. |
| Comment | In the absence of a use, all designations are retained which match the designation.language parameter for this include.designation element. |
| Binding Description | Details of how a designation would be used. |
| **ExpansionProfile.designation.exclude** |  |
| Short name | Designations to be excluded |
| Definition | Designations to be excluded. |
| **ExpansionProfile.designation.exclude.designation** |  |
| Short name | The designation to be excluded |
| Definition | A data group for each designation to be excluded. |
| Comment | At least one of designation.language or designation.use must be provided for each exclude.designation element. |
| Constraint Text | SHALL have at least one of language or use |
| **ExpansionProfile.designation.exclude.designation.language** |  |
| Short name | Human language of the designation to be excluded |
| Definition | The language this designation is defined for. |
| Comment | In the absence of a language, all designations are excluded which match the designation.use parameter for this exclude.designation element. |
| Binding Description | A human language. |
| **ExpansionProfile.designation.exclude.designation.use** |  |
| Short name | Designation use |
| Definition | Designation uses for exclusion in the expansion. |
| Comment | In the absence of a use, all designations are retained which match the designation.language parameter for this exclude.designation element. |
| Binding Description | Details of how a designation would be used. |
| **ExpansionProfile.includeDefinition** |  |
| Short name | Include or exclude the value set definition in the expansion |
| Definition | Controls whether the value set definition is included or excluded in value set expansions. |
| Comment | The ValueSet defintion refers to all fields in the ValueSet definition apart from ValueSet.contains. The definition is only included if includeDefinition is present and has a value of "true". |
| **ExpansionProfile.activeOnly** |  |
| Short name | Include or exclude inactive concepts in the expansion |
| Definition | Controls whether inactive concepts are included or excluded in value set expansions. |
| Comment | Inactive codes are included if activeOnly is present and has a value of "true". Note that if the value set explicitly specifies that inactive codes are included, this property can still remove them from a specific expansion, but this parameter cannot include them if the value set excludes them. |
| **ExpansionProfile.excludeNested** |  |
| Short name | Nested codes in the expansion or not |
| Definition | Controls whether or not the value set expansion nests codes or not (i.e. ValueSet.expansion.contains.contains). |
| Comment | Nesting of codes is excluded if excludeNested is present and has a value of "true". |
| Requirements | Heirahical contains are useful for UI use, but not when validating. Code Generation etc. may depend on context. |
| **ExpansionProfile.excludeNotForUI** |  |
| Short name | Include or exclude codes which cannot be rendered in user interfaces in the value set expansion |
| Definition | Controls whether or not the value set expansion includes codes which cannot be displayed in user interfaces. |
| Comment | Codes which cannot be used in user interfaces will be excluded if excludeNotForUI is present and has a value of "true". |
| **ExpansionProfile.excludePostCoordinated** |  |
| Short name | Include or exclude codes which are post coordinated expressions in the value set expansion |
| Definition | Controls whether or not the value set expansion includes post coordinated codes. |
| Comment | Post coordinated codes are excluded if excludePostCoordinated is present and has a value of "true". |
| **ExpansionProfile.displayLanguage** |  |
| Short name | Specify the language for the display element of codes in the value set expansion |
| Definition | Specifies the language to be used for description in the expansions i.e. the language to be used for ValueSet.expansion.contains.display. |
| Binding Description | A human language. |
| **ExpansionProfile.limitedExpansion** |  |
| Short name | Controls behaviour of the value set expand operation when value sets are too large to be completely expanded |
| Definition | If the value set being expanded is incomplete (because it is too big to expand), return a limited expansion (a subset) with an indicator that expansion is incomplete, using the extension [http://hl7.org/fhir/StructureDefinition/valueset-toocostly](extension-valueset-toocostly.html). |
| Comment | This field overides the default behaviour (which is to return an error). This does not apply to expansions which are unbounded. Clients SHALL process the extension [http://hl7.org/fhir/StructureDefinition/valueset-toocostly](extension-valueset-toocostly.html) correctly if limitedExpansion = true. |

## http://hl7.org/fhir/StructureDefinition/ValueSet

|  |  |
| --- | --- |
| **Description** | Base StructureDefinition for ValueSet Resource |
| **ValueSet** | Value Set |
| Short name | A set of codes drawn from one or more code systems |
| Definition | A value set specifies a set of codes drawn from one or more code systems. |
| Constraint Text | Value set SHALL contain at least one of a a compose, or an expansion element |
| **ValueSet.url** |  |
| Short name | Logical uri to reference this value set (globally unique) |
| Definition | An absolute URL that is used to identify this value set when it is referenced in a specification, model, design or an instance. This SHALL be a URL, SHOULD be globally unique, and SHOULD be an address at which this value set is (or will be) published. The URL SHOULD include the major version of the value set. For more information see [Technical and Business Versions](resource.html#versions). |
| Comment | Can be a urn:uuid: or a urn:oid:, but real http: addresses are preferred. |
| Requirements | Allows the value set to be referenced by a single globally unique identifier. |
| **ValueSet.identifier** |  |
| Short name | Additional identifier for the value set |
| Definition | A formal identifier that is used to identify this value set when it is represented in other formats, or referenced in a specification, model, design or an instance. |
| Comment | Typically, this is used for identifiers that can go in an HL7 v3 II data type - e.g. to identify this value set outside of FHIR, where the logical URL is not possible to use. |
| Requirements | Allows externally provided and/or useable business identifiers to be easily associated with the module. |
| **ValueSet.version** |  |
| Short name | Business version of the value set |
| Definition | The identifier that is used to identify this version of the value set when it is referenced in a specification, model, design or instance. This is an arbitrary value managed by the value set author and is not expected to be globally unique. For example, it might be a timestamp (e.g. yyyymmdd) if a managed version is not available. There is also no expectation that versions are orderable. |
| Comment | There may be multiple different instances of a value set that have the same identifier but different versions. |
| **ValueSet.name** |  |
| Short name | Name for this value set (Computer friendly) |
| Definition | A natural language name identifying the value set. This name should be usable as an identifier for the module by machine processing applications such as code generation. |
| Comment | The name is not expected to be globally unique. The name should be a simple alpha-numeric type name to ensure it is computable friendly. A name should be provided unless the value set is a contained resource (e.g. an anonymous value set in a profile). Most registries will require a name. |
| Requirements | Support human navigation & code generation. |
| **ValueSet.title** |  |
| Short name | Name for this value set (Human friendly) |
| Definition | A short, descriptive, user-friendly title for the value set. |
| **ValueSet.status** |  |
| Definition | The status of this value set. Enables tracking the life-cycle of the content. |
| Comment | Allows filtering of value set that are appropriate for use vs. not. |
| Binding Description | The lifecycle status of a Value Set or Concept Map. |
| **ValueSet.experimental** |  |
| Short name | If for testing purposes, not real usage |
| Definition | A flag to indicate that this value set is authored for testing purposes (or education/evaluation/marketing), and is not intended to be used for genuine usage. |
| Comment | Allows filtering of value set that are appropriate for use vs. not. |
| Requirements | Enables experimental content to be developed following the same life-cycle as a production-level value set would. |
| **ValueSet.date** |  |
| Short name | Date this was last changed |
| Definition | The date (and optionally time) when the value set was published. The date must change when the business version changes, if it does, and it must change if the status code changes. In addition, it should change when the substantive content of the value set changes. (e.g. the 'content logical definition'). |
| Comment | Note that this is not the same as the resource last-modified-date, since the resource may be a secondary representation of the value set. Additional specific dates may be added as extensions. |
| **ValueSet.publisher** |  |
| Short name | Name of the publisher (Organization or individual) |
| Definition | The name of the individual or organization that published the value set. |
| Comment | Usually an organization, but may be an individual. The publisher (or steward) of the value set is the organization or individual primarily responsible for the maintenance and upkeep of the value set. This is not necessarily the same individual or organization that developed and initially authored the content. The publisher is the primary point of contact for questions or issues with the value set. This item SHOULD be populated unless the information is available from context. |
| Requirements | Helps establish the "authority/credibility" of the value set. May also allow for contact. |
| **ValueSet.contact** |  |
| Short name | Contact details for the publisher |
| Definition | Contact details to assist a user in finding and communicating with the publisher. |
| Comment | May be a web site, an email address, a telephone number, etc. |
| **ValueSet.description** |  |
| Short name | Natural language description of the value set |
| Definition | A free text natural language description of the value set from the consumer's perspective. |
| Comment | This description can be used to capture details such as why the value set was built, comments about misuse, instructions for clinical use and interpretation, literature references, examples from the paper world, etc. It is not a rendering of the value set as conveyed in the text field of the resource itself. This item SHOULD be populated unless the information is available from context (e.g. the language of the profile is presumed to be the predominant language in the place the profile was created). The description is not intended to describe the semantics of the Value Set - there are no intrinsic semantics separate from the codes contained in its expansion. The description should capture its intended use, which is needed for ensuring integrity for its use in models across future changes. A description should be provided unless the value set is a contained resource (e.g. an anonymous value set in a profile). Most registries will require a description. |
| Synonym | Scope |
| Synonym | Purpose |
| **ValueSet.useContext** |  |
| Short name | Content intends to support these contexts |
| Definition | The content was developed with a focus and intent of supporting the contexts that are listed. These terms may be used to assist with indexing and searching of code system definitions. |
| Comment | When multiple usageContexts are specified, there is no expectation for whether all or any of the contexts apply. |
| Requirements | Assist in searching for appropriate content. |
| **ValueSet.jurisdiction** |  |
| Short name | Intended jurisdiction for value set (if applicable) |
| Definition | A jurisdiction in which the value set is intended to be used. |
| Binding Description | Countries and regions within which this artifact is targeted for use |
| **ValueSet.immutable** |  |
| Short name | Indicates whether or not any change to the content logical definition may occur |
| Definition | If this is set to 'true', then no new versions of the content logical definition can be created. Note: Other metadata might still change. |
| Comment | Normally immutability is set to 'false', which is the default assumption if it is not populated. Note that the implication is that if this is set to 'true', there may be only one ValueSet version for this definition. Immutability tends to be set to 'true' in one of two cases: - Where the value set, by the nature of its usage, cannot change. For example "All specializations of ACT in ActClassCode" - Where there's no safe way to express the "Purpose" such that someone else could safely make changes to the value set definition. Source workflow control must guarantee that the same URI always yields the same definition. |
| **ValueSet.purpose** |  |
| Short name | Why this value set is defined |
| Definition | Explains why this value set is needed and why it has been designed as it has. |
| Comment | This element does not describe the usage of the value set (See, e.g, the comments element, or relatedArtifacts), rather it's for traceability of ''why'' the resource is either needed or ''why'' it is defined as it is. This may be used to point to source materials or specifications that drove the structure of this value set. |
| **ValueSet.copyright** |  |
| Short name | Use and/or publishing restrictions |
| Definition | A copyright statement relating to the value set and/or its contents. Copyright statements are generally legal restrictions on the use and publishing of the value set. |
| Comment | null Frequently, the copyright differs between the value set and the codes that are included. The copyright statement should clearly differentiate between these when required. |
| Requirements | Consumers of the library must be able to determine any legal restrictions on the use of the value set and/or its content. |
| Synonym | License |
| Synonym | Restrictions |
| **ValueSet.extensible** |  |
| Short name | Whether this is intended to be used with an extensible binding |
| Definition | Whether this is intended to be used with an extensible binding or not. |
| Requirements | It is not required to say whether this intent applies. |
| **ValueSet.compose** |  |
| Short name | Definition of the content of the value set (CLD) |
| Definition | A set of criteria that define the content logical definition of the value set by including or excluding codes from outside this value set. This I also known as the "Content Logical Definition" (CLD). |
| Synonym | Content Logical Definition |
| **ValueSet.compose.lockedDate** |  |
| Short name | Fixed date for version-less references (transitive) |
| Definition | If a locked date is defined, then the Content Logical Definition must be evaluated using the current version as of the locked date for referenced code system(s) and value set instances where ValueSet.compose.include.version is not defined. |
| Comment | With a defined lockedDate the value set is considered "Locked". Otherwise, the value set may have different expansions as underlying code systems and/or value sets evolve. The interpretation of lockedDate is often dependent on the context - e.g. a SNOMED CT derived value set with a lockedDate will have a different expansion in USA than in UK. If a value set specifies a version for include and exclude statements, and also specifies a locked date, the specified versions need to be available that date, or the value set will not be usable. |
| **ValueSet.compose.inactive** |  |
| Short name | Whether inactive codes are in the value set |
| Definition | Whether inactive codes - codes that are not approved for current use - are in the value set. If inactive = true, inactive codes are to be included in the expansion, if inactive = false, the inactive codes will not be included in the expansion. If absent, the behavior is determined by the implementation, or by the applicable ExpansionProfile (but generally, inactive codes would be expected to be included). |
| Comment | Note that in the FHIR terminology framework, "deprecated" does not mean inactive, but in some code systems (e.g. LOINC, deprecated means inactive). Code systems should define what codes are considered to be inactive. If this is not clearly defined (including in the FHIR code system resource), then all codes are assumed to be active. |
| **ValueSet.compose.include** |  |
| Short name | Include one or more codes from a code system or other value set(s) |
| Definition | Include one or more codes from a code system or other value set(s). |
| Comment | All the conditions in an include must be true. If a system is listed, all the codes from the system are listed. If one or more filters are listed, all of the filters must apply. If one or more value sets are listed, the codes must be in all the value sets. E.g. each include is 'include all the codes that meet all these conditions'. |
| Constraint Text | A value set with concepts or filters SHALL include a system |
| Constraint Text | Cannot have both concept and filter |
| Constraint Text | A value set include/exclude SHALL have a value set or a system |
| **ValueSet.compose.include.system** |  |
| Short name | The system the codes come from |
| Definition | An absolute URI which is the code system from which the selected codes come from. |
| Comment | If there are no codes or filters, the entire code system is included. Note that the set of codes that are included may contain abstract codes. See ''Coding.system'' for further documentation about the correct value for the system element. |
| **ValueSet.compose.include.version** |  |
| Short name | Specific version of the code system referred to |
| Definition | The version of the code system that the codes are selected from. |
| Comment | This is used when selecting the descendants of a concept - they may change between versions. If no version is specified, then the exact contents of the value set may not be known until a context of use binds it to a particular version. |
| **ValueSet.compose.include.concept** |  |
| Short name | A concept defined in the system |
| Definition | Specifies a concept to be included or excluded. |
| Comment | The list of concepts is considered ordered, though the order may not have any particular significance. Typically, the order of an expansion follows that defined in the compose element. |
| **ValueSet.compose.include.concept.code** |  |
| Short name | Code or expression from system |
| Definition | Specifies a code for the concept to be included or excluded. |
| Comment | Expressions are allowed if defined by the underlying code system. |
| **ValueSet.compose.include.concept.display** |  |
| Short name | Text to display for this code for this value set in this valueset |
| Definition | The text to display to the user for this concept in the context of this valueset. If no display is provided, then applications using the value set use the display specified for the code by the system. |
| Comment | The value set resource allows for an alternative display to be specified for when this concept is used in this particular value set. See notes in the value set narrative about the correct use of this element. |
| **ValueSet.compose.include.concept.designation** |  |
| Short name | Additional representations for this concept |
| Definition | Additional representations for this concept when used in this value set - other languages, aliases, specialized purposes, used for particular purposes, etc. |
| **ValueSet.compose.include.concept.designation.language** |  |
| Short name | Human language of the designation |
| Definition | The language this designation is defined for. |
| Comment | In the absence of a language, the resource language applies. |
| Binding Description | A human language. |
| **ValueSet.compose.include.concept.designation.use** |  |
| Short name | Details how this designation would be used |
| Definition | A code that details how this designation would be used. |
| Comment | If no use is provided, the designation can be assumed to be suitable for general display to a human user. |
| Binding Description | Details of how a designation would be used. |
| **ValueSet.compose.include.concept.designation.value** |  |
| Short name | The text value for this designation |
| Definition | The text value for this designation. |
| **ValueSet.compose.include.filter** |  |
| Short name | Select codes/concepts by their properties (including relationships) |
| Definition | Select concepts by specify a matching criteria based on the properties (including relationships) defined by the system. If multiple filters are specified, they SHALL all be true. |
| Comment | Selecting codes by specifying filters based on properties is only possible where the underlying code system defines appropriate properties. Note that in some cases, the underlying code system defines the logical concepts but not the literal codes for the concepts. In such cases, the literal definitions may be provided by a third party. |
| **ValueSet.compose.include.filter.property** |  |
| Short name | A property defined by the code system |
| Definition | A code that identifies a property defined in the code system. |
| **ValueSet.compose.include.filter.op** |  |
| Definition | The kind of operation to perform as a part of the filter criteria. |
| Binding Description | The kind of operation to perform as a part of a property based filter. |
| **ValueSet.compose.include.filter.value** |  |
| Short name | Code from the system, or regex criteria, or boolean value for exists |
| Definition | The match value may be either a code defined by the system, or a string value, which is a regex match on the literal string of the property value when the operation is 'regex', or one of the values (true and false), when the operation is 'exists'. |
| Comment | Use regex matching with care - full regex matching on every SNOMED CT term is prohibitive, for example. |
| **ValueSet.compose.include.valueSet** |  |
| Short name | Select only contents included in this value set |
| Definition | Selects concepts found in this value set. This is an absolute URI that is a reference to ValueSet.url. |
| Comment | The value set URI is either a logical reference to a defined value set such as a [SNOMED CT reference set]{snomedct.html#implicit}, or a direct reference to a value set definition using ValueSet.url. The reference may not refer to an actual FHIR ValueSet resource; in this case, whatever is referred to is an implicit definition of a value set that needs to be clear about how versions are resolved. |
| **ValueSet.compose.exclude** |  |
| Short name | Explicitly exclude codes from a code system or other value sets |
| Definition | Exclude one or more codes from the value set based on code system filters and/or other value sets. |
| Comment | Usually this is used to selectively exclude codes that were included by subsumption in the inclusions. Any display names specified for the codes are ignored. |
| **ValueSet.expansion** |  |
| Short name | Used when the value set is "expanded" |
| Definition | A value set can also be "expanded", where the value set is turned into a simple collection of enumerated codes. This element holds the expansion, if it has been performed. |
| Comment | Expansion is performed to produce a collection of codes that are ready to use for data entry or validation. |
| **ValueSet.expansion.identifier** |  |
| Short name | Uniquely identifies this expansion |
| Definition | An identifier that uniquely identifies this expansion of the valueset. Systems may re-use the same identifier as long as the expansion and the definition remain the same, but are not required to do so. |
| Comment | Typically, this uri is a UUID (e.g. urn:uuid:8230ff20-c97a-4167-a59d-dc2cb9df16dd). |
| **ValueSet.expansion.timestamp** |  |
| Short name | Time ValueSet expansion happened |
| Definition | The time at which the expansion was produced by the expanding system. |
| Comment | This SHOULD be a fully populated instant, but in some circumstances, value sets are expanded by hand, and the expansion is published without that precision. |
| **ValueSet.expansion.total** |  |
| Short name | Total number of codes in the expansion |
| Definition | The total number of concepts in the expansion. If the number of concept nodes in this resource is less than the stated number, then the server can return more using the offset parameter. |
| Comment | Paging only applies to flat expansions. |
| **ValueSet.expansion.offset** |  |
| Short name | Offset at which this resource starts |
| Definition | If paging is being used, the offset at which this resource starts. I.e. this resource is a partial view into the expansion. If paging is not being used, this element SHALL not be present. |
| Comment | Paging only applies to flat expansions. If a filter is applied, the count is the number of concepts that matched the filter, not the number of concepts in an unfiltered view of the expansion. |
| Meaning when missing | Paging is not being used |
| **ValueSet.expansion.parameter** |  |
| Short name | Parameter that controlled the expansion process |
| Definition | A parameter that controlled the expansion process. These parameters may be used by users of expanded value sets to check whether the expansion is suitable for a particular purpose, or to pick the correct expansion. |
| Comment | The server decides which parameters to include here, but at a minimum, the list SHOULD include the date, filter, and profile parameters passed to the $expand operation (if any). |
| **ValueSet.expansion.parameter.name** |  |
| Short name | Name as assigned by the server |
| Definition | The name of the parameter. |
| Comment | The names are assigned at the discretion of the server. |
| **ValueSet.expansion.parameter.value[x]** |  |
| Short name | Value of the named parameter |
| Definition | The value of the parameter. |
| **ValueSet.expansion.contains** |  |
| Short name | Codes in the value set |
| Definition | The codes that are contained in the value set expansion. |
| Constraint Text | SHALL have a code or a display |
| Constraint Text | Must have a code if not abstract |
| Constraint Text | Must have a system if a code is present |
| **ValueSet.expansion.contains.system** |  |
| Short name | System value for the code |
| Definition | An absolute URI which is the code system in which the code for this item in the expansion is defined. |
| **ValueSet.expansion.contains.abstract** |  |
| Short name | If user cannot select this entry |
| Definition | If true, this entry is included in the expansion for navigational purposes, and the user cannot select the code directly as a proper value. |
| Comment | This should not be understood to exclude its use for searching (e.g. by subsumption testing). The client should know whether it is appropriate for the user to select an abstract code or not. |
| **ValueSet.expansion.contains.inactive** |  |
| Short name | If concept is inactive in the code system |
| Definition | If the concept is inactive in the code system that defines it. Inactive codes are those that are no longer to be used, but are maintained by the code system for understnading legacy data. |
| Comment | This shoulld only have a value if the concept is inactive. |
| **ValueSet.expansion.contains.version** |  |
| Short name | Version in which this code/display is defined |
| Definition | The version of this code system that defined this code and/or display. This should only be used with code systems that do not enforce concept permanence. |
| Comment | The exact value of the version string is specified by the system from which the code is derived. |
| **ValueSet.expansion.contains.code** |  |
| Short name | Code - if blank, this is not a selectable code |
| Definition | The code for this item in the expansion hierarchy. If this code is missing the entry in the hierarchy is a place holder (abstract) and does not represent a valid code in the value set. |
| **ValueSet.expansion.contains.display** |  |
| Short name | User display for the concept |
| Definition | The recommended display for this item in the expansion. |
| **ValueSet.expansion.contains.designation** |  |
| Short name | Additional representations for this item |
| Definition | Additional representations for this item - other languages, aliases, specialized purposes, used for particular purposes, etc. These are relevant when the conditions of the expansion do not fix to a single correct representation. |
| Comment | The designations provided must be based on the value set and code system definitions. |
| **ValueSet.expansion.contains.contains** |  |
| Short name | Codes contained under this entry |
| Definition | Other codes and entries contained under this entry in the hierarchy. |
| Comment | If the expansion uses this element, there is no implication about the logical relationship between them, and the structure cannot be used for logical inferencing. The structure exists to provide navigational assistance for helping human users to locate codes in the expansion. |