# FHIR Project Team

# 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) |
| Notes | 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 either 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 |
| Notes | 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: Build Questionnaire

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| Name | Build Questionnaire (Build Questionnaire) |
| Description | Generates a [[[Questionnaire]]] instance based on a specified [[[StructureDefinition]]], creating questions for each core element or extension element found in the StructureDefinition. If the operation is not called at the instance level, one of the \*identifier\*, \*profile\* or \*url\* 'in' parameters must be provided. (If called at the instance level, these parameters will be ignored. If more than one is specified, servers may raise an error or may resolve with the parameter of their choice.) The response will contain a [[[Questionnaire]]] instance based on the specified [[[StructureDefinition]]] and/or an [[[OperationOutcome]]] 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. |
| Notes | \*\*Open Issue\*\*: Ideally, extensions should be populated in the generated [[[Questionnaire]]] that will support taking [[[QuestionnaireResponse]]] 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]]] 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 closure table 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, narrower, wider, and unmatched |

## Operation: Concept Look Up

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| Name | Concept Look Up (Concept Look Up) |
| Description | Given a code/system, or a Coding, get additional details about the concept |
| Notes | Note that the $lookup operation is more than just a value set search - the server finds the concept, and gathers the return information from the value set and the underlying code system definitions. |
| 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 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 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 abstract | Whether this code is an abstract concept |
| Parameter designation | Additional representations for this concept |

## 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 valueSet | Identifies the value set used when the concept (system/code pair) was chosen. May be a logical id, or an absolute or relative location |
| 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 |
| Parameter dependency | Another element that may help produce the correct mapping |
| 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 |

## 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 either deletes the profiles, tags, and security labels found in it from the nominated resource. This operation can also be used on historical entries |
| Notes | 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 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: 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 rhis 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 that it has that are in the encounter compartment for the identified encounter, 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 (ref to be provided). 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?) |
| Notes | 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 rhis 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]{daf/daf.html}. Other applicable implementation guides may make additional rules about how much information that is returned |
| Notes | 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. Speciying 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 date is provided, all records 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 date is provided, all records are in scope. |
| Parameter return | The bundle type is "searchset" |

## 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) |
| Notes | 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: 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. |
| Notes | Note: this operation definition does not resolve the question how document signatures are created. This is an open issue during the period of trail use, and feedback is requested regarding this question |
| Parameter persist | Whether to store the document at the binary end-point (/Binary) or not once it is generated. Value = true or false (default is for the server to decide) |

## Operation: Populate Questionnaire

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| Name | Populate Questionnaire (Populate Questionnaire) |
| Description | Generates a [[[QuestionnaireResponse]]] instance based on a specified [[[Questionnaire]]], 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]]]. 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]]] instance based on the specified [[[Questionnaire]]] and/or an [[[OperationOutcome]]] resource with errors or warnings. The [[[QuestionnaireResponse]]] instance will be populated with an unanswered set of questions following the group and question structure of the specified [[[Questionnaire]]]. 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]]] with appropriate data is dependent on the questions and/or groups in the [[[Questionnaire]]] having metadata that allows the server to recognize the questions. This might be through \*Questionnaire.group.question.code\*, through extensions such as the [[[http://hl7.org/fhir/StructureDefinition/questionnaire-deReference]]] extension or through us of the [[[ConceptMap]]] resource. Regardless of the mechanism used to link the questions in a questionnaire to a "known" mapable 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 convertable, etc. |
| Notes | While it is theoretically possible for a [[[QuestionnaireResponse]]] 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. 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 respondant, 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]]] is provided directly as part of the request. Servers may choose not to accept questionnaires in this fashion |
| Parameter questionnaireRef | The [[[Questionnaire]]] 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]]] 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]]]. 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 return | The partially (or fully)-populated set of answers for the specified Questionnaire |

## Operation: Process Message

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| Name | Process Message (Process Message) |
| Description | This operation that accept a messages, 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) |
| Notes | 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: Validate a resource

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| Name | Validate a resource (Validate a resource) |
| Description | The validate interaction checks whether the attached content would be acceptable either generally, or as a create, or an update or 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 |
| Notes | 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 succesfully perform an actual create, update or delete after the validation operation completes. |
| 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

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| 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. |
| Notes | 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. 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 so, SHALL support both the offset and count parameters. Heirarchical 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 behaviour) \* The server optimises 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 |
| Parameter identifier | A logical value set identifier (i.e. ValueSet.identifier). 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 to 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 funtionality 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) |
| Parameter count | Paging support - how many codes in a a partial 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 honour this request for heirarchical expansions as well, and simply return the overall count |
| Parameter return | The result of the expansion |

## Operation: Value Set based Validation

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| 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 identifier | A logical value set id (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 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 to 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 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 |

## Operation: guidance

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| Name | guidance (guidance) |
| Description | The guidance operation requests clinical decision support guidance based on a specific knowledge module |
| Parameter request | The input guidance request information |
| Parameter inputResource | Input data for the request(s) |
| Parameter response | The results of the request(s) |
| Parameter outputResource | Any output resources of the request(s) |

## Operation: guidanceRequirements

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| Name | guidanceRequirements (guidance Requirements) |
| Description | The guidance requirements operation determines the data requirements for a given module or set of modules |
| Parameter moduleIdentifier | The identifiers of the modules for which data requirements should be retrieved |
| Parameter result | The aggregated data requirements for the requested modules |

# Clinical Decision Support

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

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| **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.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.category** |  |
| Short name | 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.implicated** |  |
| Short name | Problem resource |
| Definition | Indicates the resource representing the current activity or proposed activity that is potentially problematic. |
| Comments | 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. |
| Comments | Should focus on information not covered elsewhere as discrete data - no need to duplicate the narrative. |
| **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.identifier** |  |
| Short name | Unique id for the detected issue |
| Definition | Business identifier associated with the detected issuerecord. |
| Requirements | Allows linking instances of the same detected issue found on different servers. |
| **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. |
| Comments | 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. |
| Comments | 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/DeviceUseRequest

|  |  |
| --- | --- |
| **DeviceUseRequest** | Device Use Request |
| Short name | A request for a patient to use or be given a medical device |
| 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. |
| **DeviceUseRequest.bodySite[x]** |  |
| Short name | Target body site |
| Definition | Indicates the site on the subject's body where the device should be used ( i.e. the target site). |
| Requirements | Knowing where the device is targeted is important for tracking if multiple sites are possible. |
| **DeviceUseRequest.status** |  |
| Definition | The status of the request. |
| Binding Description | Codes representing the status of the request |
| **DeviceUseRequest.device** |  |
| Short name | Device requested |
| Definition | The details of the device to be used. |
| **DeviceUseRequest.encounter** |  |
| Short name | Encounter motivating request |
| Definition | An encounter that provides additional context in which this request is made. |
| **DeviceUseRequest.identifier** |  |
| Short name | Request identifier |
| Definition | Identifiers assigned to this order by the orderer or by the receiver. |
| **DeviceUseRequest.indication** |  |
| Short name | Reason for request |
| Definition | Reason or justification for the use of this device. |
| **DeviceUseRequest.notes** |  |
| 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. |
| **DeviceUseRequest.prnReason** |  |
| Short name | PRN |
| Definition | The proposed act must be performed if the indicated conditions occur, e.g.., shortness of breath, SpO2 less than x%. |
| **DeviceUseRequest.orderedOn** |  |
| Short name | When ordered |
| Definition | The time when the request was made. |
| **DeviceUseRequest.recordedOn** |  |
| Short name | When recorded |
| Definition | The time at which the request was made/recorded. |
| **DeviceUseRequest.subject** |  |
| Short name | Focus of request |
| Definition | The patient who will use the device. |
| **DeviceUseRequest.timing[x]** |  |
| Short name | 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". |
| **DeviceUseRequest.priority** |  |
| Definition | Characterizes how quickly the use of device must be initiated. Includes concepts such as stat, urgent, routine. |
| Binding Description | Codes representing the priority of the request |

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

|  |  |
| --- | --- |
| **DeviceUseStatement** | Device Use Statement |
| 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.bodySite[x]** |  |
| 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. |
| **DeviceUseStatement.whenUsed** |  |
| Definition | The time period over which the device was used. |
| **DeviceUseStatement.device** |  |
| Definition | The details of the device used. |
| **DeviceUseStatement.identifier** |  |
| Definition | An external identifier for this statement such as an IRI. |
| **DeviceUseStatement.indication** |  |
| Definition | Reason or justification for the use of the device. |
| **DeviceUseStatement.notes** |  |
| 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. |
| **DeviceUseStatement.recordedOn** |  |
| Definition | The time at which the statement was made/recorded. |
| **DeviceUseStatement.subject** |  |
| Definition | The patient who used the device. |
| **DeviceUseStatement.timing[x]** |  |
| Definition | How often the device was used. |

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

|  |  |
| --- | --- |
| **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.subject** |  |
| Short name | Who/what does assessment apply to? |
| Definition | The patient or group the risk assessment applies to. |
| **RiskAssessment.date** |  |
| 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.encounter** |  |
| Short name | Where was assessment performed? |
| Definition | The encounter where the assessement was performed. |
| **RiskAssessment.performer** |  |
| Short name | Who did assessment? |
| Definition | The provider or software application that performed the assessment. |
| **RiskAssessment.identifier** |  |
| Short name | Unique identifier for the assessment |
| Definition | Business identifier assigned to the risk assessment. |
| **RiskAssessment.method** |  |
| Short name | Evaluation mechanism |
| Definition | The algorithm, processs 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.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. |
| Comments | Multiple repetitions can be used to identify the same type of outcome in different timeframes as well as different types of outcomes. |
| **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). |
| Comments | 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 |
| Constraint Text | Must be <= 100 |
| 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. |
| Comments | 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. |

# FHIR Infrastructure

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

|  |  |
| --- | --- |
| **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. |
| Comments | 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 resoruce. |
| Comments | 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.author** |  |
| Short name | Who created |
| Definition | Indicates who was responsible for creating the resource instance. |
| Requirements | Needed for partitioning the resource. |
| **Basic.created** |  |
| Short name | When created |
| Definition | Identifies when the resource was first created. |
| Requirements | Allows ordering resource instances by time. |

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

|  |  |
| --- | --- |
| **Binary** | Binary |
| Short name | Pure binary content defined by sime other format than FHIR |
| Definition | A binary resource can contain any content, whether text, image, pdf, zip archive, etc. |
| Comments | 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.content** |  |
| Short name | The actual content |
| Definition | The actual content, base64 encoded. |
| Comments | 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

|  |  |
| --- | --- |
| **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 | entry.transaction when (and only when) a transaction |
| Constraint Text | entry.transactionResponse when (and only when) a transaction-response |
| Constraint Text | total only when a search or history |
| Constraint Text | entry.search only when a search |
| **Bundle.type** |  |
| Definition | Indicates the purpose of this bundle- how it was intended to be used. |
| Comments | 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). |
| Comments | Only used if the bundle is a search result set. |
| **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 | http://www.iana.org/assignments/link-relations/link-relations.xhtml |
| Definition | A name which details the functional use for this link - see [[http://www.iana.org/assignments/link-relations/link-relations.xhtml]]. |
| **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 | must be a resource unless there's a transaction or transaction response |
| Constraint Text | The fullUrl element must be present when a resource is present, and not present otherwise |
| **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. This must be provided for all resources. The fullUrl SHALL not disagree with the id in the resource. The fullUrl is a version independent reference to the resource. |
| Comments | 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. |
| Comments | 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. |
| Comments | 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 update 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). |
| Comments | 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 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 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 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 return code for entry |
| Definition | The status code returned by processing this entry. |
| **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. |
| Comments | This 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. |
| Comments | This has to match the same time in the meta header if a resource is included. |
| **Bundle.signature** |  |
| Short name | Digital Signature |
| Definition | Digital Signature - base64 encoded. XML DigSIg or a JWT. |
| Comments | 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/Conformance

|  |  |
| --- | --- |
| **Conformance** | Conformance |
| Short name | A conformance statement |
| Definition | A conformance statement is a set of capabilities 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 | A Conformance statement SHALL have at least one of description, software, or implementation |
| Constraint Text | Messaging end point is required (and is only permitted) when statement is for an implementation |
| Constraint Text | A Conformance statement SHALL have at least one of rest, messaging or document |
| Constraint Text | Conformance statements of kind 'requirements' do not have software or implementation elements |
| Constraint Text | Conformance statements of kind 'software' do not have implementation elements |
| **Conformance.url** |  |
| Short name | Logical uri to reference this statement |
| Definition | An absolute URL that is used to identify this conformance 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 conformance statement is (or will be) published. |
| **Conformance.version** |  |
| Short name | Logical id for this version of the statement |
| Definition | The identifier that is used to identify this version of the conformance statement when it is referenced in a specification, model, design or instance. This is an arbitrary value managed by the profile author manually and the value should be a timestamp. |
| Comments | There may be multiple different instances of a conformance statement that have the same identifier but different versions. |
| **Conformance.name** |  |
| Short name | Informal name for this conformance statement |
| Definition | A free text natural language name identifying the conformance statement. |
| Comments | The name is not expected to be globally unique. |
| **Conformance.status** |  |
| Definition | The status of this conformance statement. |
| Comments | This is not intended for use with actual conformance statements, but where conformance statements are used to describe possible or desired systems. |
| Binding Description | The lifecycle status of a Value Set or Concept Map |
| **Conformance.experimental** |  |
| Short name | If for testing purposes, not real usage |
| Definition | A flag to indicate that this conformance statement is authored for testing purposes (or education/evaluation/marketing), and is not intended to be used for genuine usage. |
| Comments | Allows filtering of conformance statements that are appropriate for use vs. not. |
| **Conformance.publisher** |  |
| Short name | Name of the publisher (Organization or individual) |
| Definition | The name of the individual or organization that published the conformance. |
| Comments | 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 conformance. May also allow for contact. |
| **Conformance.contact** |  |
| Short name | Contact details of the publisher |
| Definition | Contacts to assist a user in finding and communicating with the publisher. |
| Comments | May be a web site, an email address, a telephone number (tel:), etc. |
| **Conformance.contact.name** |  |
| Short name | Name of a individual to contact |
| Definition | The name of an individual to contact regarding the conformance. |
| Comments | If there is no named individual, the telecom is for the organization as a whole. |
| **Conformance.contact.telecom** |  |
| Short name | Contact details for individual or publisher |
| Definition | Contact details for individual (if a name was provided) or the publisher. |
| **Conformance.date** |  |
| Short name | Publication Date(/time) |
| Definition | The date (and optionally time) when the conformance 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 substantiative content of the conformance statement changes. |
| Comments | Additional specific dates may be added as extensions. |
| **Conformance.description** |  |
| Short name | Human description of the conformance statement |
| Definition | A free text natural language description of the conformance statement and its use. Typically, this is used when the conformance statement describes a desired rather than an actual solution, for example as a formal expression of requirements as part of an RFP. |
| Comments | This field cmay include the purpose of this conformance statement, comments about its context etc. This does not need to be populated if the description is adequately implied by the software or implementation details. |
| **Conformance.requirements** |  |
| Short name | Why is this needed? |
| Definition | Explains why this conformance statement is needed and why it's been constrained as it has. |
| Comments | This element does not describe the usage of the conformance statement (that's done in comments), rather it's for traceability of \*why\* the element is either needed or why the constraints exist as they do. This may be used to point to source materials or specifications that drove the structure of this data element. |
| **Conformance.copyright** |  |
| Short name | Use and/or Publishing restrictions |
| Definition | A copyright statement relating to the conformamce statement and/or its contents. Copyright statements are generally legal restrictions on the use and publishing of the details of the system described by the conformance statement. |
| Synonym | License |
| Synonym | Restrictions |
| **Conformance.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 conformance statement is intended to be used |
| **Conformance.software** |  |
| Short name | Software that is covered by this conformance statement |
| Definition | Software that is covered by this conformance statement. It is used when the conformance statement describes the capabilities of a particular software version, independent of an installation. |
| **Conformance.software.name** |  |
| Short name | A name the software is known by |
| Definition | Name software is known by. |
| **Conformance.software.version** |  |
| Short name | Version covered by this statement |
| Definition | The version identifier for the software covered by this statement. |
| Comments | If possible, version should be specified, as statements are likely to be different for different versions of software. |
| **Conformance.software.releaseDate** |  |
| Short name | Date this version released |
| Definition | Date this version of the software released. |
| **Conformance.implementation** |  |
| Short name | If this describes a specific instance |
| Definition | Identifies a specific implementation instance that is described by the conformance statement - i.e. a particular installation, rather than the capabilities of a software program. |
| **Conformance.implementation.description** |  |
| Short name | Describes this specific instance |
| Definition | Information about the specific installation that this conformance statement relates to. |
| **Conformance.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. |
| **Conformance.fhirVersion** |  |
| Short name | FHIR Version the system uses |
| Definition | The version of the FHIR specification on which this conformance statement is based. |
| **Conformance.acceptUnknown** |  |
| Definition | A code that indicates whether the application accepts unknown elements or extensions when reading resources. |
| Comments | 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 |
| **Conformance.format** |  |
| Definition | A list of the formats supported by this implementation using their content types. |
| Comments | "xml" or "json" 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 |
| **Conformance.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}. |
| Comments | 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. |
| **Conformance.rest** |  |
| Short name | If the endpoint is a RESTful one |
| Definition | A definition of the restful capabilities of the solution, if any. |
| Comments | 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 |
| Constraint Text | A given query can only be described once per RESTful mode |
| **Conformance.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 conformance statement |
| **Conformance.rest.documentation** |  |
| Short name | General description of implementation |
| Definition | Information about the system's restful capabilities that apply across all applications, such as security. |
| **Conformance.rest.security** |  |
| Short name | Information about security of implementation |
| Definition | Information about security implementation from an interface perspective - what a client needs to know. |
| **Conformance.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. |
| Comments | The easiest CORS headers to add are Access-Control-Allow-Origin: \* & Access-Control-Request-Method: GET, POST, PUT, DELETE. All servers SHOULD support CORS. |
| **Conformance.rest.security.service** |  |
| Definition | Types of security services are supported/required by the system. |
| Binding Description | Types of security services used with FHIR |
| **Conformance.rest.security.description** |  |
| Short name | General description of how security works |
| Definition | General description of how security works. |
| **Conformance.rest.security.certificate** |  |
| Short name | Certificates associated with security profiles |
| Definition | Certificates associated with security profiles. |
| **Conformance.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 |
| **Conformance.rest.security.certificate.blob** |  |
| Short name | Actual certificate |
| Definition | Actual certificate. |
| **Conformance.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. |
| Comments | Max of one repetition per resource type. |
| Constraint Text | Operation codes must be unique in the context of a resource |
| Constraint Text | Search parameter names must be unique in the context of a resource |
| **Conformance.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 |
| **Conformance.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}. |
| Comments | The profile applies to all resources of this type - i.e. it is the superset of what is supported by the system. |
| **Conformance.rest.resource.interaction** |  |
| Short name | What operations are supported? |
| Definition | Identifies a restful operation supported by the solution. |
| **Conformance.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 |
| **Conformance.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. |
| **Conformance.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. |
| Comments | 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 |
| **Conformance.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. |
| Comments | It is useful to support the vRead operation for current operations, even if past versions aren't available. |
| **Conformance.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. |
| Comments | 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. |
| **Conformance.rest.resource.conditionalCreate** |  |
| Short name | If allows/uses conditional create |
| Definition | A flag that indicates that the server supports conditional create. |
| Comments | Conditional Create is mainly appropriate for interface engine scripts converting from other formats, such as v2. |
| **Conformance.rest.resource.conditionalUpdate** |  |
| Short name | If allows/uses conditional update |
| Definition | A flag that indicates that the server supports conditional update. |
| Comments | Conditional Update is mainly appropriate for interface engine scripts converting from other formats, such as v2. |
| **Conformance.rest.resource.conditionalDelete** |  |
| Definition | A code that indicates how the server supports conditional delete. |
| Comments | 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 |
| **Conformance.rest.resource.searchInclude** |  |
| Short name | \_include values supported by the server |
| Definition | A list of \_include values supported by the server. |
| Comments | If this list is empty, the server does not support includes. |
| **Conformance.rest.resource.searchRevInclude** |  |
| Short name | \_revinclude values supported by the server |
| Definition | A list of \_revinclude (reverse include) values supported by the server. |
| Comments | If this list is empty, the server does not support includes. |
| **Conformance.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. |
| Constraint Text | Search parameters can only have chain names when the search parameter type is 'reference' |
| **Conformance.rest.resource.searchParam.name** |  |
| Short name | Name of search parameter |
| Definition | The name of the search parameter used in the interface. |
| Comments | Parameter names cannot overlap with standard parameter names, and standard parameters cannot be redefined. |
| **Conformance.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]]]). |
| Comments | This SHOULD be present, and matches SearchParameter.url. |
| **Conformance.rest.resource.searchParam.type** |  |
| Definition | The type of value a search parameter refers to, and how the content is interpreted. |
| Comments | While this can be looked up from the definition, it is included here as a convenience for systems that auto-generate a query interface based on the server conformance 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 |
| **Conformance.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. |
| **Conformance.rest.resource.searchParam.target** |  |
| Short name | Types of resource (if a resource reference) |
| Definition | Types of resource (if a resource is referenced). |
| Comments | This SHALL be the same as or a proper subset of the resources listed in the search parameter definition. |
| Binding Description | One of the resource types defined as part of FHIR |
| **Conformance.rest.resource.searchParam.modifier** |  |
| Definition | A modifier supported for the search parameter. |
| Binding Description | A supported modifier for a search parameter |
| **Conformance.rest.resource.searchParam.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 Conformance.rest.resource.searchParam.name on the target resource type. |
| Comments | Sstesm 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. |
| **Conformance.rest.interaction** |  |
| Short name | What operations are supported? |
| Definition | A specification of restful operations supported by the system. |
| **Conformance.rest.interaction.code** |  |
| Definition | A coded identifier of the operation, supported by the system. |
| Binding Description | Operations supported by REST at the system level |
| **Conformance.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. |
| **Conformance.rest.transactionMode** |  |
| Definition | A code that indicates how transactions are supported. |
| Binding Description | A code that indicates how transactions are supported |
| **Conformance.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. |
| Comments | Typically, the only search parameters supported for all parameters are search parameters that apply to all resources - tags, profiles, text search etc. |
| **Conformance.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. |
| **Conformance.rest.operation.name** |  |
| Short name | Name by which the operation/query is invoked |
| Definition | The name of a query, which is used in the \_query parameter when the query is called. |
| Comments | 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. |
| **Conformance.rest.operation.definition** |  |
| Short name | The defined operation/query |
| Definition | Where the formal definition can be found. |
| Comments | This can be used to build ah HTML form to invoke the operation, for instance. |
| **Conformance.rest.compartment** |  |
| Short name | Compartments served/used by system |
| Definition | An absolute URI which is a reference to the definition of a compartment hosted by the system. |
| Comments | At present, the only defined compartments are at [[compartments.html]]. |
| **Conformance.messaging** |  |
| Short name | If messaging is supported |
| Definition | A description of the messaging capabilities of the solution. |
| Comments | Multiple repetitions allow the documentation of multiple endpoints per solution. |
| **Conformance.messaging.endpoint** |  |
| Short name | A messaging service end point |
| Definition | An endpoint (network accessible address) to which messages and/or replies are to be sent. |
| Synonym | 3 |
| **Conformance.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 |
| **Conformance.messaging.endpoint.address** |  |
| Short name | Address of 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. |
| **Conformance.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). |
| Comments | If this value is missing then the application does not implement (receiver) or depend on (sender) reliable messaging. |
| **Conformance.messaging.documentation** |  |
| Short name | Messaging interface behavior details |
| Definition | Documentation about the system's messaging capabilities for this endpoint not otherwise documented by the conformance statement. For example, process for becoming an authorized messaging exchange partner. |
| **Conformance.messaging.event** |  |
| Short name | Declare support for this event |
| Definition | A description of the solution's support for an event at this end point. |
| Comments | The same event may be listed up to two times - once as sender and once as receiver. |
| **Conformance.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 |
| **Conformance.messaging.event.category** |  |
| Definition | The impact of the content of the message. |
| Binding Description | The impact of the content of a message |
| **Conformance.messaging.event.mode** |  |
| Definition | The mode of this event declaration - whether application is sender or receiver. |
| Binding Description | The mode of a message conformance statement |
| **Conformance.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. |
| Comments | 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 |
| **Conformance.messaging.event.request** |  |
| Short name | Profile that describes the request |
| Definition | Information about the request for this event. |
| **Conformance.messaging.event.response** |  |
| Short name | Profile that describes the response |
| Definition | Information about the response for this event. |
| **Conformance.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. |
| **Conformance.document** |  |
| Short name | Document definition |
| Definition | A document definition. |
| **Conformance.document.mode** |  |
| Definition | Mode of this document declaration - whether application is producer or consumer. |
| Binding Description | Whether the application produces or consumes documents |
| **Conformance.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. |
| **Conformance.document.profile** |  |
| Short name | Constraint on a resource used in the document |
| Definition | A constraint on a resource used in the document. |
| Comments | The first resource is the document resource. |

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

|  |  |
| --- | --- |
| **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. |
| Comments | Contained resources do not have narrative. Resources that are not contained SHOULD have a narrative. |
| 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. |
| Comments | 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. |
| Comments | 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 |
| **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. |
| Comments | 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 |

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

|  |  |
| --- | --- |
| **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.type** |  |
| Definition | Identifies the broad classification of the kind of resources the group includes. |
| Comments | 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. |
| Comments | 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. |
| Comments | 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. |
| Comments | 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. |
| Comments | 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. |
| Comments | 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

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| --- | --- |
| **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 | Literal URL used to reference this Implementation Guide |
| 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. |
| Requirements | 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 | Logical id for this 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 manually. |
| Requirements | There may be multiple resource versions of the Implementation Guide that have this same identifier. The resource version id will change for technical reasons, whereas the stated version number needs to be under the author's control. |
| **ImplementationGuide.name** |  |
| Short name | Informal name for this Implementation Guide |
| Definition | A free text natural language name identifying the Implementation Guide. |
| Comments | Not expected to be globally unique. |
| **ImplementationGuide.status** |  |
| Definition | The status of the Implementation Guide. |
| Requirements | Allows filtering of Implementation Guides 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 | This Implementation Guide was authored for testing purposes (or education/evaluation/marketing), and is not intended to be used for genuine usage. |
| Requirements | Allows filtering of Implementation Guides that are appropriate for use vs. not. |
| **ImplementationGuide.publisher** |  |
| Short name | Name of the publisher (Organization or individual) |
| Definition | The name of the individual or organization that published the implementation guide. |
| Comments | 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 implementation guide. May also allow for contact. |
| **ImplementationGuide.contact** |  |
| Short name | Contact details of the publisher |
| Definition | Contacts to assist a user in finding and communicating with the publisher. |
| Comments | May be a web site, an email address, a telephone number (tel:), etc. |
| **ImplementationGuide.contact.name** |  |
| Short name | Name of a individual to contact |
| Definition | The name of an individual to contact regarding the implementation guide. |
| Comments | If there is no named individual, the telecom is for the organization as a whole. |
| **ImplementationGuide.contact.telecom** |  |
| Short name | Contact details for individual or publisher |
| Definition | Contact details for individual (if a name was provided) or the publisher. |
| **ImplementationGuide.date** |  |
| Short name | Date for this version of the Implementation Guide |
| Definition | The date that this version of 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 substantiative content of the implementation guide changes. |
| Comments | Additional specific dates may be added as extensions. |
| **ImplementationGuide.description** |  |
| Short name | Natural language description of the Implementation Guide |
| Definition | A free text natural language description of the Implementation Guide and its use. |
| Comments | This field can be used for things such as why the Implementation Guide was written, 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 Implementation Guide.text. This item SHOULD be populated unless the information is available from context. |
| **ImplementationGuide.useContext** |  |
| Short name | The implementation guide is intended 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 implementation guides. The most common use of this element is to represent the country / jurisdication for which this implementation guide was defined. |
| Requirements | Assist in searching for appropriate implementation guide. |
| Binding Description | Indicates the countries, regions, disciplines and other aspects of use this artifact is targeted for use within |
| **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 details of the constraints and mappings. |
| 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 1.0.0 for this version. |
| Comments | A 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. |
| Comments | 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 dependncy is located. |
| Comments | 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 logial 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, conformance statements etc) are obvious candidates for inclusion, but any kind of resource can be included as an example resource. |
| **ImplementationGuide.package.resource.purpose** |  |
| Definition | Why the resource is included in the guide. |
| Comments | The purpose alters the way that a resource is handled when a guide is built. At present, only value set and concept map resources are allowed for terminology resources, and only StructureDefinition, SearchPerameter, and OperationDefinition for profile. Dictionaries must be bundles of DataElement or Medication at this time. |
| Requirements | This element is provided so that implementation guide tooling does not have to guess the purpose of including a resource in the implementation guide based on the type or context. |
| Binding Description | Why a resource is included in the guide |
| **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. |
| Comments | 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. |
| Comments | 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. |
| Comments | 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. |
| Comments | 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. |
| Comments | See (reference) 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. |
| Comments | 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. |
| Comments | 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. |
| Comments | 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. |
| Comments | The publishing tool will auto-generate source for list (source = n/a), and inject included implementations for include (source = uri of guide to include). |
| **ImplementationGuide.page.name** |  |
| Short name | Short name shown for navigational assistance |
| Definition | A short name used to represent this page in navigational sturctures 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 othe 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. |
| Comments | This is primarily for the pubishing 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. |
| Comments | The implementation guide breadcrumbs are generated from this structure. |

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

|  |  |
| --- | --- |
| **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.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. |
| **List.code** |  |
| Short name | What the purpose of this list is |
| Definition | This code defines the purpose of the list - why it was created. |
| Comments | 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. |
| Comments | Some purely aribitrary 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.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. |
| Comments | 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.encounter** |  |
| Short name | Context in which list created |
| Definition | The encounter that is the context in which this list was created. |
| **List.status** |  |
| Definition | Indicates the current state of this list. |
| Binding Description | The current state of the list |
| **List.date** |  |
| Short name | When the list was prepared |
| Definition | The date that the list was prepared. |
| Comments | 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.orderedBy** |  |
| Short name | What order the list has |
| Definition | What order applies to the items in the list. |
| Comments | 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.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.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. |
| Comments | 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. |
| Comments | 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. |
| Comments | 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. |
| Comments | 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. |
| Comments | 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

|  |  |
| --- | --- |
| **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 | Length can only be used for an audio or a video |
| **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.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. |
| Comments | The identifier label and use can be used to determine what kind of identifier it is. |
| **Media.subject** |  |
| Short name | Who/What this Media is a record of |
| Definition | Who/What this Media is a record of. |
| **Media.operator** |  |
| Short name | The person who generated the image |
| Definition | The person who administered the collection of the image. |
| **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.deviceName** |  |
| Short name | Name of the device/manufacturer |
| Definition | The name of the device / manufacturer of the device that was used to make the recording. |
| **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. |
| **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. |
| Comments | 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. |

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

|  |  |
| --- | --- |
| **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.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.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.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 id of the message that this message is a response to. |
| 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. |
| Comments | 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. |
| Comments | 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.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. |
| Comments | 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.destination** |  |
| Short name | Message Destination Application(s) |
| Definition | The destination application which the message is intended for. |
| Comments | 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 to 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. |
| Comments | 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.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. |
| Comments | 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. |
| Comments | 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.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.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. |
| Comments | 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 occurance 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.data** |  |
| 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. |
| Comments | 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. |

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

|  |  |
| --- | --- |
| **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 or sid identifiers |
| Constraint Text | Can only have replacedBy if namingsystem is retired |
| Constraint Text | Can't have more than one preferred identifier for a type |
| **NamingSystem.name** |  |
| Short name | Human-readable label |
| Definition | The descriptive name of this particular identifier type or code system. |
| Comments | The"symbolic name" for an OID would be captured as an extension. |
| **NamingSystem.status** |  |
| Definition | Indicates whether the namingsystem is "ready for use" or not. |
| Binding Description | The lifecycle status of a Value Set or Concept Map |
| **NamingSystem.kind** |  |
| Definition | Indicates the purpose for the namingsystem - what kinds of things does it make unique? |
| Binding Description | Identifies the purpose of the namingsystem |
| **NamingSystem.publisher** |  |
| Short name | Name of the publisher (Organization or individual) |
| Definition | The name of the individual or organization that published the naming system. |
| Comments | 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 naming system. May also allow for contact. |
| **NamingSystem.contact** |  |
| Short name | Contact details of the publisher |
| Definition | Contacts to assist a user in finding and communicating with the publisher. |
| Comments | May be a web site, an email address, a telephone number (tel:), etc. |
| **NamingSystem.contact.name** |  |
| Short name | Name of a individual to contact |
| Definition | The name of an individual to contact regarding the naming system. |
| Comments | If there is no named individual, the telecom is for the organization as a whole. |
| **NamingSystem.contact.telecom** |  |
| Short name | Contact details for individual or publisher |
| Definition | Contact details for individual (if a name was provided) or the publisher. |
| **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. |
| Comments | This is the primary organization. Responsibility for some aspects of a namespace may be delegated. |
| **NamingSystem.date** |  |
| Short name | Publication Date(/time) |
| Definition | The date (and optionally time) when the system was registered or 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 substantiative content of the registration changes. |
| Comments | Additional specific dates may be added as extensions. |
| **NamingSystem.type** |  |
| Short name | e.g. driver, provider, patient, bank etc |
| Definition | Categorizes a namingsystem for easier search by grouping related namingsystems. |
| Comments | 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 | What does namingsystem identify? |
| Definition | Details about what the namespace identifies including scope, granularity, version labeling, etc. |
| **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 naming systems. |
| Requirements | Assist in searching for appropriate content. |
| Binding Description | Indicates the countries, regions, disciplines and other aspects of use this artifact is targeted for use within |
| **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. |
| Comments | 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. |
| Comments | 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 namepace |
| **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. |
| Comments | 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.period** |  |
| Short name | When is identifier valid? |
| Definition | Identifies the period of time over which this identifier is considered appropriate to refer to the namingsystem. Outside of this window, the identifier might be non-deterministic. |
| Comments | 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 namingsystems that are retired, indicates the namingsystem that should be used in their place (if any). |

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

|  |  |
| --- | --- |
| **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 url to reference this operation definition |
| 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. |
| Comments | Can be a urn:uuid: or a urn:oid:. |
| **OperationDefinition.version** |  |
| Short name | Logical id for this version of the operation definition |
| Definition | The identifier that is used to identify this version of the profile when it is referenced in a specification, model, design or instance. This is an arbitrary value managed by the profile author manually and the value should be a timestamp. |
| Requirements | There may be multiple resource versions of the profile that have this same identifier. The resource version id will change for technical reasons, whereas the stated version number needs to be under the author's control. |
| **OperationDefinition.name** |  |
| Short name | Informal name for this operation |
| Definition | A free text natural language name identifying the operation. |
| Comments | Not expected to be globally unique. |
| **OperationDefinition.status** |  |
| Definition | The status of the profile. |
| Requirements | Allows filtering of profiles 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 operation or named query. |
| Comments | 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 | This profile was authored for testing purposes (or education/evaluation/marketing), and is not intended to be used for genuine usage. |
| Requirements | Allows filtering of profiles that are appropriate for use vs. not. |
| **OperationDefinition.publisher** |  |
| Short name | Name of the publisher (Organization or individual) |
| Definition | The name of the individual or organization that published the operation definition. |
| Comments | 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 operation definition. May also allow for contact. |
| **OperationDefinition.contact** |  |
| Short name | Contact details of the publisher |
| Definition | Contacts to assist a user in finding and communicating with the publisher. |
| Comments | May be a web site, an email address, a telephone number (tel:), etc. |
| **OperationDefinition.contact.name** |  |
| Short name | Name of a individual to contact |
| Definition | The name of an individual to contact regarding the operation definition. |
| Comments | If there is no named individual, the telecom is for the organization as a whole. |
| **OperationDefinition.contact.telecom** |  |
| Short name | Contact details for individual or publisher |
| Definition | Contact details for individual (if a name was provided) or the publisher. |
| **OperationDefinition.date** |  |
| Short name | Date for this version of the operation definition |
| Definition | The date that this version of the 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 substantiative content of the Operation Definition changes. |
| Comments | Additional specific dates may be added as extensions. |
| **OperationDefinition.description** |  |
| Short name | Natural language description of the operation |
| Definition | A free text natural language description of the profile and its use. |
| Comments | This field can be used for things such as why the profile was written, comments about misuse, instructions for clinical use and interpretation, literature references, examples from the paper world, etc. It is \*not\* a rendering of the profile as conveyed in Profile.text. This item SHOULD be populated unless the information is available from context. |
| **OperationDefinition.requirements** |  |
| Short name | Why is this needed? |
| Definition | Explains why this operation definition is needed and why it's been constrained as it has. |
| Comments | This element does not describe the usage of the operation definition (that's done in comments), rather it's for traceability of \*why\* the element is either needed or why the constraints exist as they do. This may be used to point to source materials or specifications that drove the structure of this data element. |
| **OperationDefinition.idempotent** |  |
| Short name | Whether content is unchanged by 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. |
| **OperationDefinition.notes** |  |
| 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. |
| Comments | A constrained profile can make optional parameters required or not used and clarify documentation. |
| **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 | Invoke at resource level for these type |
| 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 resource type for the context). |
| Binding Description | One of the resource types defined as part of FHIR |
| **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. |
| Comments | 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 |
| **OperationDefinition.parameter.name** |  |
| Short name | Name in Parameters.parameter.name or in URL |
| Definition | The name of used to identify the parameter. |
| Comments | This name must be a token (start with a letter in a..z, and only contain letters, numerals, and underscore. |
| **OperationDefinition.parameter.use** |  |
| Definition | Whether this is an input or an output parameter. |
| Comments | 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. |
| Comments | if there is no stated parameter, then the parameter is a "Tuple" type and must have at least one part defined. |
| Binding Description | The type of a parameter |
| **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. |
| Comments | For further discussion, see [[[Using Terminologies]]]. |
| 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. |
| Comments | For value sets,the 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 Tuple Parameter |
| Definition | The parts of a Tuple Parameter. |
| Comments | Query Definitions only have one output parameter, named "result". This may not be described, but can be to allow a profile to be defined. |

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

|  |  |
| --- | --- |
| **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. |
| Comments | 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. |
| Comments | 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. |
| Comments | 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. |
| Comments | typically this field is used to provide troubleshooting information about the error. |
| **OperationOutcome.issue.location** |  |
| Short name | XPath of element(s) related to issue |
| Definition | 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. |
| Comments | 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. |
| 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

|  |  |
| --- | --- |
| **Parameters** | Parameters |
| Short name | Operation Request or Response |
| Definition | This special resource type is used to represent [operation](operations.html] request and response. It has no other use, and there is no RESTful end=point associated with it. |
| Comments | 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 a value or a resource, but not both |
| **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 parameter (e.g. Tuple) |
| Definition | A named part of a parameter. In many implementation context, a set of named parts is known as a "Tuple". |
| Comments | Only one level of tuples is allowed. |
| Constraint Text | A part must have a value or a resource, but not both |

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

|  |  |
| --- | --- |
| **Resource** | Resource |
| Short name | Base Resource |
| Definition | Base Resource 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. |
| Comments | The only time that a resource does not have an id is when it is being submitted to the server using a create operation. Bundles always have an id, though it is usually a generated UUID. |
| **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. |
| Comments | 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. |
| Comments | 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

|  |  |
| --- | --- |
| **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. |
| Comments | 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 be an xpathUsage |
| **SearchParameter.url** |  |
| Short name | Literal URL used to reference this search parameter |
| 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. |
| Requirements | To allow referencing and reusing search parameter definitions under other names on operational systems (in case of name clash). |
| **SearchParameter.name** |  |
| Short name | Informal name for this search parameter |
| Definition | A free text natural language name identifying the search parameter. |
| Comments | This is often the same as the code for the parameter, but does not need to be. |
| **SearchParameter.status** |  |
| Definition | The status of this search parameter definition. |
| Comments | This is not intended for use with actual conformance statements, but where conformance statements are used to describe possible or desired systems. |
| 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 definition is authored for testing purposes (or education/evaluation/marketing), and is not intended to be used for genuine usage. |
| Comments | Allows filtering of search parameter definitions that are appropriate for use vs. not. |
| **SearchParameter.publisher** |  |
| Short name | Name of the publisher (Organization or individual) |
| Definition | The name of the individual or organization that published the search parameter. |
| Comments | 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 search parameter. May also allow for contact. |
| **SearchParameter.contact** |  |
| Short name | Contact details of the publisher |
| Definition | Contacts to assist a user in finding and communicating with the publisher. |
| Comments | May be a web site, an email address, a telephone number (tel:), etc. |
| **SearchParameter.contact.name** |  |
| Short name | Name of a individual to contact |
| Definition | The name of an individual to contact regarding the search parameter. |
| Comments | If there is no named individual, the telecom is for the organization as a whole. |
| **SearchParameter.contact.telecom** |  |
| Short name | Contact details for individual or publisher |
| Definition | Contact details for individual (if a name was provided) or the publisher. |
| **SearchParameter.date** |  |
| Short name | Publication Date(/time) |
| Definition | The date (and optionally time) when the search parameter 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 substantiative content of the search parameter changes. |
| Comments | Additional specific dates may be added as extensions. |
| **SearchParameter.requirements** |  |
| Short name | Why this search parameter is defined |
| Definition | The Scope and Usage that this search parameter was created to meet. |
| **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. |
| Comments | For maximum compatibility, use only lowercase ASCII characters. |
| **SearchParameter.base** |  |
| Short name | The resource type this search parameter applies to |
| Definition | The base resource type that this search parameter refers to. |
| 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.description** |  |
| Short name | Documentation for search parameter |
| Definition | A description of the search parameters and how it used. |
| **SearchParameter.xpath** |  |
| Short name | XPath that extracts the values |
| Definition | An XPath expression that returns a set of elements for the search parameter. |
| Comments | 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 the 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 |

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

|  |  |
| --- | --- |
| **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 Text | In any snapshot or differential, all the elements except the first have to have a path that starts with the path of the first + "." |
| Constraint Requirements | Ensure that element.base appears with base or not |
| Constraint Text | element.base cannot appear if theres's no base on the structure definition |
| Constraint Requirements | Ensure that the constrainedType is not inconsistent with the other information in the structure |
| Constraint Text | If there's a constrained type, its content must match the path name in the first element of a snapshot |
| Constraint Requirements | Ensure that element.base appears if there's a constrained type on the structure definition |
| Constraint Text | element.base must appear if theres's a base on the structure definition |
| Constraint Requirements | Ensure that there's a base unless the type is abstract and there's no constrainedType |
| Constraint Text | If the structure is not abstract, or there's a constrained type, then there SHALL be a base |
| 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 name |
| 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 Text | A structure must have a base unless abstract = true |
| **StructureDefinition.url** |  |
| Short name | Literal URL used to reference this StructureDefinition |
| 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. |
| Requirements | So you can say, in a StructureDefinition, what the full extension URLs should be. This is required to allow hosting StructureDefinitions on multiple different servers, and to allow for the editorial process. |
| Synonym | url |
| Synonym | authoritative-url |
| Synonym | destination |
| Synonym | identity |
| **StructureDefinition.identifier** |  |
| Short name | Other identifiers for the StructureDefinition |
| Definition | Formal identifier that is used to identify this StructureDefinition when it is represented in other formats, or referenced in a specification, model, design or an instance (should be globally unique OID, UUID, or URI), (if it's not possible to use the literal URI). |
| **StructureDefinition.version** |  |
| Short name | Logical id for this version of the StructureDefinition |
| Definition | The identifier that is used to identify this version of the StructureDefinition when it is referenced in a specification, model, design or instance. This is an arbitrary value managed by the StructureDefinition author manually. |
| Requirements | There may be multiple resource versions of the StructureDefinition that have this same identifier. The resource version id will change for technical reasons, whereas the stated version number needs to be under the author's control. |
| **StructureDefinition.name** |  |
| Short name | Informal name for this StructureDefinition |
| Definition | A free text natural language name identifying the StructureDefinition. |
| Comments | Not expected to be globally unique. |
| **StructureDefinition.display** |  |
| Short name | Use this name when displaying the value |
| Definition | Defined so that applications can use this name when displaying the value of the extension to the user. |
| Comments | Applications don't have to use this name, but can always fall back to it. In the absence of a value for this element, use the name. |
| **StructureDefinition.status** |  |
| Definition | The status of the StructureDefinition. |
| Requirements | Allows filtering of StructureDefinitions 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 | This StructureDefinition was authored for testing purposes (or education/evaluation/marketing), and is not intended to be used for genuine usage. |
| Requirements | Allows filtering of StructureDefinitions that are appropriate for use vs. not. |
| **StructureDefinition.publisher** |  |
| Short name | Name of the publisher (Organization or individual) |
| Definition | The name of the individual or organization that published the structure definition. |
| Comments | 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 structure definition. May also allow for contact. |
| **StructureDefinition.contact** |  |
| Short name | Contact details of the publisher |
| Definition | Contacts to assist a user in finding and communicating with the publisher. |
| Comments | May be a web site, an email address, a telephone number (tel:), etc. |
| **StructureDefinition.contact.name** |  |
| Short name | Name of a individual to contact |
| Definition | The name of an individual to contact regarding the structure definition. |
| Comments | If there is no named individual, the telecom is for the organization as a whole. |
| **StructureDefinition.contact.telecom** |  |
| Short name | Contact details for individual or publisher |
| Definition | Contact details for individual (if a name was provided) or the publisher. |
| **StructureDefinition.date** |  |
| Short name | Date for this version of the StructureDefinition |
| Definition | The date that this version of the StructureDefinition 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 substantiative content of the structure definition changes. |
| Comments | Additional specific dates may be added as extensions. |
| **StructureDefinition.description** |  |
| Short name | Natural language description of the StructureDefinition |
| Definition | A free text natural language description of the StructureDefinition and its use. |
| Comments | This field can be used for things such as why the StructureDefinition was written, comments about misuse, instructions for clinical use and interpretation, literature references, examples from the paper world, etc. It is \*not\* a rendering of the StructureDefinition as conveyed in StructureDefinition.text. This item SHOULD be populated unless the information is available from context. |
| **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 structure definitions. |
| Requirements | Assist in searching for appropriate content. |
| Binding Description | Indicates the countries, regions, disciplines and other aspects of use this artifact is targeted for use within |
| **StructureDefinition.requirements** |  |
| Short name | Scope and Usage this structure definition is for |
| Definition | Explains why this structure definition is needed and why it's been constrained as it has. |
| Comments | This element does not describe the usage of the structure definition (that's done in comments), rather it's for traceability of \*why\* the element is either needed or why the constraints exist as they do. This may be used to point to source materials or specifications that drove the structure of this data element. |
| **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 details of the constraints and mappings. |
| Synonym | License |
| Synonym | Restrictions |
| **StructureDefinition.code** |  |
| Short name | Assist with indexing and finding |
| Definition | A set of 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 1.0.0 for this version. |
| Comments | 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 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. |
| Comments | 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. |
| Comments | 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.comments** |  |
| 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.constrainedType** |  |
| Short name | Any datatype or resource, including abstract ones |
| Definition | The type of type that is being constrained - a data type, an extension, a resource, including abstract ones. If this field is present, it indicates that the structure definition is a constraint. If it is not present, then the structure definition is the definition of a base structure. |
| Comments | if a constrained type is present, then there SHALL be a base resource as well. Note that the constrained type could be determined by chasing through the base references until the base definition is reached, or by looking at the path of the first element in the snapshot - if present - but providing the constrainedType directly makes for simpler tooling and indexing. |
| Binding Description | Either a resource or a data type |
| **StructureDefinition.abstract** |  |
| Short name | Whether the structure is abstract |
| Definition | Whether structure this definition describes is abstract or not - that is, whether an actual exchanged item can ever be of this type. |
| Comments | Abstract Resources cannot be instantiated - a concrete sub-type must be used. Abstract datatypes and extensions cannot be used in an instance. 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. Abstract is not relevant for logical models. |
| **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. |
| Comments | 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.base** |  |
| Short name | Structure that this set of constraints applies to |
| Definition | An absolute URI that is the base structure from which this set of constraints is derived. |
| Comments | 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 snaphots from differential constraints. Logical Models have a base of "Element" or another logical model. |
| **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 Text | If a structure is a snapshot, then each element definition must have a formal definition, and cardinalities |
| Constraint Text | Element paths must be unique - or not (LM) |
| **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. |
| **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/Subscription

|  |  |
| --- | --- |
| **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.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. |
| Comments | The rules are a search criteria (without the [base] part). Like Bundle.entry.request.url, it has no leading "/". |
| **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.reason** |  |
| Short name | Description of why this subscription was created |
| Definition | A description of why this subscription is defined. |
| **Subscription.status** |  |
| Definition | The status of the subscription, which marks the server state for managing the subscription. |
| Comments | 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.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 notififcations 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 tha actual end point to send messages to. |
| Comments | 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 blank for no payload |
| Definition | The mime type to send the payload in - either application/xml+fhir, or application/json+fhir. If the mime type is blank, then there is no payload in the notification, just a notification. |
| Comments | Sending the payload has obvious security consequences. 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. |
| Comments | Exactly what these mean depend on the channel type. The can convey additional information to the recipient and/or meet security requirements. |
| **Subscription.end** |  |
| Short name | When to automatically delete the subscription |
| Definition | The time for the server to turn the subscription off. |
| Comments | The server is permitted to deviate from this time, but should observe it. |
| **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. |
| Comments | 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 sent |

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

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| --- | --- |
| **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. |
| Constraint Text | Assertions SHALL be present in TestScript.setup.action and TestScript.test.action only. |
| Constraint Text | Operations SHALL be present in TestScript.setup.action, TestScript.test.action and TestScript.teardown.action only. |
| **TestScript.url** |  |
| Short name | Literal URL used to reference this TestScript |
| Definition | An absolute URL that is used to identify this Test Script. This SHALL be a URL, SHOULD be globally unique, and SHOULD be an address at which this Test Script is (or will be) published. |
| Synonym | url |
| Synonym | authoritative-url |
| Synonym | destination |
| Synonym | identity |
| **TestScript.version** |  |
| Short name | Logical id for this version of the TestScript |
| Definition | The identifier that is used to identify this version of the TestScript. This is an arbitrary value managed by the TestScript author manually. |
| Requirements | There may be multiple resource versions of the TestScript that have this same identifier. The resource version id will change for technical reasons, whereas the stated version number needs to be under the author's control. |
| **TestScript.name** |  |
| Short name | Informal name for this TestScript |
| Definition | A free text natural language name identifying the TestScript. |
| Comments | Not expected to be globally unique. |
| **TestScript.status** |  |
| Definition | The status of the TestScript. |
| Requirements | Allows filtering of TestScripts that are appropriate for use vs. not. |
| Binding Description | The lifecycle status of a Value Set or Concept Map |
| **TestScript.identifier** |  |
| Short name | External identifier |
| Definition | Identifier for the TestScript assigned for external purposes outside the context of FHIR. |
| **TestScript.experimental** |  |
| Short name | If for testing purposes, not real usage |
| Definition | This TestScript was authored for testing purposes (or education/evaluation/marketing), and is not intended to be used for genuine usage. |
| Requirements | Allows filtering of TestScripts that are appropriate for use vs. not. |
| **TestScript.publisher** |  |
| Short name | Name of the publisher (Organization or individual) |
| Definition | The name of the individual or organization that published the Test Script. |
| Comments | 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 Test Script. May also allow for contact. |
| **TestScript.contact** |  |
| Short name | Contact details of the publisher |
| Definition | Contacts to assist a user in finding and communicating with the publisher. |
| Comments | May be a web site, an email address, a telephone number (tel:), etc. |
| **TestScript.contact.name** |  |
| Short name | Name of a individual to contact |
| Definition | The name of an individual to contact regarding the Test Script. |
| Comments | If there is no named individual, the telecom is for the organization as a whole. |
| **TestScript.contact.telecom** |  |
| Short name | Contact details for individual or publisher |
| Definition | Contact details for individual (if a name was provided) or the publisher. |
| **TestScript.date** |  |
| Short name | Date for this version of the TestScript |
| Definition | The date that this version of the TestScript 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 substantiative content of the test cases change. |
| Comments | Additional specific dates may be added as extensions. |
| **TestScript.description** |  |
| Short name | Natural language description of the TestScript |
| Definition | A free text natural language description of the TestScript and its use. |
| Comments | This field can be used for things such as why the TestScript was written, comments about misuse, instructions for clinical use and interpretation, literature references, examples from the paper world, etc. It is \*not\* a rendering of the TestScript as conveyed in TestScript.text. This item SHOULD be populated unless the information is available from context. |
| **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 Test Scripts. |
| Requirements | Assist in searching for appropriate content. |
| Binding Description | Indicates the countries, regions, disciplines and other aspects of use this artifact is targeted for use within |
| **TestScript.requirements** |  |
| Short name | Scope and Usage this Test Script is for |
| Definition | Explains why this Test Script is needed and why it's been constrained as it has. |
| Comments | This element does not describe the usage of the Test Script (that's done in comments), rather it's for traceability of \*why\* the element is either needed or why the constraints exist as they do. This may be used to point to source materials or specifications that drove the structure of this data element. |
| **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 details of the constraints and mappings. |
| Synonym | License |
| Synonym | Restrictions |
| **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 is 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 | Capabiltities that are assumed to function correctly on the FHIR server being tested |
| Definition | Capabilties that must exist and is assumed to function correctly on the FHIR server being tested. |
| Comments | When the metadata capabiltiies 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 capabiltiies 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.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.conformance** |  |
| Short name | Required Conformance |
| Definition | Minimum conformance required of server for test script to execute successfully. If server does not meet at a minimum the reference conformance definition, then all tests in this script are skipped. |
| Comments | The conformance statement of the server has to contain at a mininum the contents of the reference pointed to by this element. |
| **TestScript.multiserver** |  |
| Short name | Whether or not the tests apply to more than one FHIR server |
| Definition | If the tests apply to more than one FHIR server (e.g. cross-server interoperability tests) then multiserver=true. Defaults to false if value is unspecified. |
| Meaning when missing | False |
| **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. |
| Meaning when missing | False |
| **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. |
| Meaning when missing | False |
| **TestScript.fixture.resource** |  |
| Short name | Reference of the resource |
| Definition | Reference to the resource (containing the contents of the resource needed for operations). |
| Comments | See http://hl7-fhir.github.io/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. |
| Comments | See http://hl7-fhir.github.io/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. |
| Comments | 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 cannot contain both headerField and path. |
| **TestScript.variable.name** |  |
| Short name | Descriptive name for this variable |
| Definition | Descriptive name for this variable. |
| Comments | 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.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. |
| Comments | 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.path** |  |
| Short name | XPath or JSONPath against the fixture body |
| Definition | XPath or JSONPath against the fixture body. When variables are defined, either headerField must be specified or path, but not both. |
| Comments | 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.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. |
| Comments | 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** |  |
| 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.metadata** |  |
| Short name | Capabiltities that are assumed to function correctly on the FHIR server being tested |
| Definition | Capabilties that must exist and is assumed to function correctly on the FHIR server being tested. |
| Constraint Text | Setup metadata capability SHALL contain required or validated or both. |
| **TestScript.setup.action** |  |
| Short name | A setup operation or assert to perform |
| Definition | Action would contain either an operation or an assertion. |
| Comments | 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 setup operation type that will be executed |
| Definition | Server interaction or operation type. |
| Comments | See http://hl7-fhir.github.io/http.html for list of server interactions. |
| Binding Description | The allowable operation types. |
| **TestScript.setup.action.operation.resource** |  |
| Short name | Resource type |
| Definition | The type of the resource. See http://hl7-fhir.github.io/resourcelist.html. |
| Comments | 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. |
| Comments | 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. |
| Comments | 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. |
| Comments | 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/xml+fhir' will be set. If 'json' is specified, then 'application/json+fhir' 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. |
| Comments | 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/xml+fhir' will be set. If 'json' is specified, then 'application/json+fhir' 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 | Which server to perform the operation on |
| Definition | Which server to perform the operation on. |
| **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.params** |  |
| Short name | Explicitly defined path parameters |
| Definition | Path plus parameters after [type]. Used to set parts of the request URL explicitly. |
| Comments | 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. |
| Comments | 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://hl7-fhir.github.io/http.html#2.1.0.5.1 - "If-Match" header. See http://hl7-fhir.github.io/http.html#2.1.0.11 - Conditional Create using "If-None-Exist". See http://hl7-fhir.github.io/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". |
| Comments | 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/xml". |
| Comments | If header element is specified, then value is required. No conversions will be done by Test Engine e.g. "xml" to "application/xml+fhir". 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.responseId** |  |
| Short name | Fixture Id of mapped response |
| Definition | The fixture id (maybe new) to map to the response. |
| Comments | 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. |
| Comments | 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. |
| Comments | 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. |
| Comments | 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 both compareToSourceId and compareToSourcePath or neither. |
| **TestScript.setup.action.assert.label** |  |
| Short name | Tracking/logging assertion label |
| Definition | The label would be used for tracking/logging purposes by test engines. |
| Comments | 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. |
| Comments | This has no impact on the verification itself. |
| **TestScript.setup.action.assert.direction** |  |
| Definition | The direction to use for the assertion. |
| Binding Description | The type of direction to use for assertion. |
| **TestScript.setup.action.assert.compareToSourceId** |  |
| Short name | Id of fixture used to compare the "sourceId/path" evaluations to |
| Definition | Id of fixture used to compare the "sourceId/path" evaluations to. |
| Comments | The id of the fixture used to make comparisons to. |
| **TestScript.setup.action.assert.compareToSourcePath** |  |
| Short name | XPath or JSONPath expression against fixture used to compare the "sourceId/path" evaluations to |
| Definition | XPath or JSONPath expression against fixture used to compare the "sourceId/path" evaluations to. |
| Comments | 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. |
| Comments | 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/xml+fhir' will be confirmed. If 'json' is specified, then 'application/json+fhir' 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.headerField** |  |
| Short name | HTTP header field name |
| Definition | The HTTP header field name e.g. 'Location'. |
| Comments | 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 minimumId the fixture specified by minimumId. |
| Comments | 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. |
| Comments | Asserts that the Bundle contains first, last, and next links. |
| **TestScript.setup.action.assert.operator** |  |
| Definition | The operator type. |
| Comments | Operators come handy 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. |
| Comments | If both "path" and "fixtureId" are specified, then the path will be evaluated against the responseBody mapped to the fixtureId. If "path" is specified and "fixtureId" is not, then the path will be evaluated against the responseBody of the last operation. Test engines are to store the response body and headers of the last operation at all times for subsequent assertions. |
| **TestScript.setup.action.assert.resource** |  |
| Short name | Resource type |
| Definition | The type of the resource. See http://hl7-fhir.github.io/resourcelist.html. |
| Comments | This will be expected resource type in response body e.g. in read, vread, search, etc. See http://hl7-fhir.github.io/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. |
| Comments | 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. |
| Comments | 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.sourceId** |  |
| Short name | Fixture Id of source expression or headerField |
| Definition | Fixture to evaluate the XPath/JSONPath expression or the headerField against. |
| Comments | 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. |
| Comments | 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. |
| Comments | 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. |
| Comments | 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 testused 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.metadata** |  |
| Short name | Capabiltities that are expected to function correctly on the FHIR server being tested |
| Definition | Capabilties that must exist and is assumed to function correctly on the FHIR server being tested. |
| Constraint Text | Test metadata capability SHALL contain required or validated or both. |
| **TestScript.test.action** |  |
| Short name | A test operation or assert to perform |
| Definition | Action would contain either an operation or an assertion. |
| Comments | 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. |
| Comments | 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 both compareToSourceId and compareToSourcePath or neither. |
| **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. |
| Comments | An action should contain either an operation or an assertion but not both. It can contain any number of variables. |
| Constraint Text | Teardown action SHALL contain an operation. |
| **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

|  |  |
| --- | --- |
| **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.type** |  |
| Definition | The category of claim this is. |
| Comments | Affects which fields and value sets are used. |
| Binding Description | The type or discipline-style of the claim |
| **Claim.identifier** |  |
| Short name | Claim number |
| Definition | The business identifier for the instance: invoice number, claim number, pre-determination or pre-authorization number. |
| **Claim.ruleset** |  |
| Short name | Current specification followed |
| Definition | The version of the specification on which this instance relies. |
| Synonym | BusinessVersion |
| Binding Description | The static and dynamic model to which contents conform, may be business version or standard and version. |
| **Claim.originalRuleset** |  |
| Short name | Original specification followed |
| Definition | The version of the specification from which the original instance was created. |
| Synonym | OriginalBusinessVersion |
| Binding Description | The static and dynamic model to which contents conform, may be business version or standard and version. |
| **Claim.created** |  |
| Short name | Creation date |
| Definition | The date when the enclosed suite of services were performed or completed. |
| **Claim.target** |  |
| Short name | Insurer |
| Definition | Insurer Identifier, typical BIN number (6 digit). |
| **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.use** |  |
| Definition | Complete (Bill or Claim), Proposed (Pre-Authorization), Exploratory (Pre-determination). |
| Binding Description | Complete, proposed, exploratory, other |
| **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.enterer** |  |
| Short name | Author |
| Definition | Person who created the invoice/claim/pre-determination or pre-authorization. |
| **Claim.facility** |  |
| Short name | Servicing Facility |
| Definition | Facility where the services were provided. |
| **Claim.prescription** |  |
| Short name | Prescription |
| Definition | Prescription to support the dispensing of Pharmacy or Vision products. |
| Requirements | For type=Pharmacy and Vision only. |
| **Claim.originalPrescription** |  |
| Short name | Original Prescription |
| Definition | Original prescription to support the dispensing of pharmacy services, medications or products. |
| **Claim.payee** |  |
| Short name | Payee |
| Definition | The party to be reimbursed for the services. |
| **Claim.payee.type** |  |
| 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. |
| **Claim.payee.provider** |  |
| Short name | Provider who is the payee |
| Definition | The provider who is to be reimbursed for the claim (the party to whom any benefit is assigned). |
| **Claim.payee.organization** |  |
| Short name | Organization who is the payee |
| Definition | The organization who is to be reimbursed for the claim (the party to whom any benefit is assigned). |
| **Claim.payee.person** |  |
| Short name | Other person who is the payee |
| Definition | The person other than the subscriber who is to be reimbursed for the claim (the party to whom any benefit is assigned). |
| **Claim.referral** |  |
| Short name | Treatment Referral |
| Definition | The referral resource which lists the date, practitioner, reason and other supporting information. |
| **Claim.diagnosis** |  |
| Short name | Diagnosis |
| Definition | Ordered list of patient diagnosis for which care is sought. |
| **Claim.diagnosis.sequence** |  |
| Short name | Sequence of diagnosis |
| Definition | Sequence of diagnosis which serves to order and provide a link. |
| Requirements | Required to maintain order of the diagnoses. |
| **Claim.diagnosis.diagnosis** |  |
| Short name | Patient's list of diagnosis |
| Definition | The diagnosis. |
| Requirements | Required to adjudicate services rendered to condition presented. |
| Binding Description | ICD10 Diagnostic codes |
| **Claim.condition** |  |
| Short name | List of presenting Conditions |
| Definition | List of patient conditions for which care is sought. |
| Binding Description | Patient conditions and symptoms |
| **Claim.patient** |  |
| Short name | The subject of the Products and Services |
| Definition | Patient Resource. |
| **Claim.coverage** |  |
| 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.coverage.sequence** |  |
| Short name | Service instance identifier |
| Definition | A service line item. |
| Requirements | To maintain order of the coverages. |
| **Claim.coverage.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. |
| **Claim.coverage.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.coverage.businessArrangement** |  |
| Short name | Business agreement |
| Definition | The contract number of a business agreement which describes the terms and conditions. |
| **Claim.coverage.relationship** |  |
| Short name | Patient relationship to subscriber |
| Definition | The relationship of the patient to the subscriber. |
| Requirements | To determine relationship between the patient and the subscriber. |
| Binding Description | The code for the relationship of the patient to the subscriber |
| **Claim.coverage.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.coverage.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.coverage.originalRuleset** |  |
| Short name | Original version |
| Definition | The style (standard) and version of the original material which was converted into this resource. |
| Requirements | Knowledge of the original version can inform the processing of this instance so that information which is processable by the originating system may be generated. |
| Binding Description | The static and dynamic model to which contents conform, may be business version or standard and version. |
| **Claim.exception** |  |
| Short name | Eligibility exceptions |
| Definition | Factors which may influence the applicability of coverage. |
| Requirements | To determine extenuating circumstances for coverage. |
| Binding Description | The eligibility exception codes. |
| **Claim.school** |  |
| Short name | Name of School |
| Definition | Name of school for over-aged dependants. |
| Requirements | Often required for over-age dependents. |
| **Claim.accident** |  |
| Short name | Accident Date |
| Definition | Date of an accident which these services are addressing. |
| Requirements | Coverage may be dependant on accidents. |
| **Claim.accidentType** |  |
| Short name | Accident Type |
| 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.interventionException** |  |
| Short name | Intervention and exception code (Pharma) |
| Definition | A list of intervention and exception codes which may influence the adjudication of the claim. |
| Requirements | Coverage may be modified based on exception information provided. |
| Binding Description | Intervention and exception codes (Pharm) |
| **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.type** |  |
| Short name | Group or type of product or service |
| Definition | The type of product or service. |
| Binding Description | Service, Product, Rx Dispense, Rx Compound etc. |
| **Claim.item.provider** |  |
| Short name | Responsible practitioner |
| Definition | The practitioner who is responsible for the services rendered to the patient. |
| **Claim.item.diagnosisLinkId** |  |
| Short name | Diagnosis Link |
| Definition | Diagnosis applicable for this service or product line. |
| **Claim.item.service** |  |
| Short name | Item Code |
| Definition | If a grouping item then 'GROUP' otherwise it is a node therefore a code to indicate the Professional Service or Product supplied. |
| Binding Description | Allowable service and product codes |
| **Claim.item.serviceDate** |  |
| Short name | Date of Service |
| Definition | The date when the enclosed suite of services were performed or completed. |
| **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.points** |  |
| Short name | Difficulty scaling factor |
| Definition | An amount that expresses the weighting (based on difficulty, cost and/or resource intensiveness) associated with the good or service delivered. The concept of Points allows for assignment of point values for services and/or goods, such that a monetary amount can be assigned to each point. |
| 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. |
| Binding Description | The FDA, or other, UDI repository. |
| **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.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 an appliance was lost or stolen. |
| 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** |  |
| 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.type** |  |
| Short name | Group or type of product or service |
| Definition | The type of product or service. |
| Binding Description | Service, Product, Rx Dispense, Rx Compound etc. |
| **Claim.item.detail.service** |  |
| Short name | Additional item codes |
| Definition | If a grouping item then 'GROUP' otherwise it is a node therefore a code to indicate the Professional Service or Product supplied. |
| Binding Description | Allowable service and product 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.points** |  |
| Short name | Difficulty scaling factor |
| Definition | An amount that expresses the weighting (based on difficulty, cost and/or resource intensiveness) associated with the good or service delivered. The concept of Points allows for assignment of point values for services and/or goods, such that a monetary amount can be assigned to each point. |
| 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. |
| Binding Description | The FDA, or other, UDI repository. |
| **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.type** |  |
| Short name | Type of product or service |
| Definition | The type of product or service. |
| Binding Description | Service, Product, Rx Dispense, Rx Compound etc. |
| **Claim.item.detail.subDetail.service** |  |
| Short name | Additional item codes |
| Definition | The fee for an addittional service or product or charge. |
| Binding Description | Allowable service and product 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.points** |  |
| Short name | Difficulty scaling factor |
| Definition | An amount that expresses the weighting (based on difficulty, cost and/or resource intensiveness) associated with the good or service delivered. The concept of Points allows for assignment of point values for services and/or goods, such that a monetary amount can be assigned to each point. |
| 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. |
| Binding Description | The FDA, or other, UDI repository. |
| **Claim.item.prosthesis** |  |
| Short name | Prosthetic details |
| Definition | The materials and placement date of prior fixed prosthesis. |
| **Claim.item.prosthesis.initial** |  |
| Short name | Is this the initial service |
| Definition | Indicates whether this is the initial placement of a fixed prosthesis. |
| Requirements | May impact on adjudication. |
| **Claim.item.prosthesis.priorDate** |  |
| Short name | Initial service Date |
| Definition | Date of the initial placement. |
| Requirements | May impact on adjudication. |
| **Claim.item.prosthesis.priorMaterial** |  |
| Short name | Prosthetic Material |
| Definition | Material of the prior denture or bridge prosthesis. (Oral). |
| Requirements | May impact on adjudication. |
| Binding Description | Material of the prior denture or bridge prosthesis. (Oral) |
| **Claim.additionalMaterials** |  |
| Short name | Additional materials, documents, etc. |
| Definition | Code to indicate that Xrays, images, emails, documents, models or attachments are being sent in support of this submission. |
| Binding Description | Code to indicate that Xrays, images, emails, documents, models or attachments are being sent in support of this submission. |
| **Claim.missingTeeth** |  |
| Short name | Only if type = oral |
| Definition | A list of teeth which would be expected but are not found due to having been previously extracted or for other reasons. |
| Requirements | The list of missing teeth may influence the adjudication of services for example with Bridges. |
| **Claim.missingTeeth.tooth** |  |
| Short name | Tooth Code |
| Definition | The code identifying which tooth is missing. |
| Requirements | Provides the tooth number of the missing tooth. |
| Binding Description | The codes for the teeth, subset of OralSites |
| **Claim.missingTeeth.reason** |  |
| Short name | Reason for missing |
| Definition | Missing reason may be: E-extraction, O-other. |
| Requirements | Provides the reason for the missing tooth. |
| Binding Description | Reason codes for the missing teeth |
| **Claim.missingTeeth.extractionDate** |  |
| Short name | Date of Extraction |
| Definition | The date of the extraction either known from records or patient reported estimate. |
| Requirements | Some services and adjudications require this information. |

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

|  |  |  |
| --- | --- | --- |
| **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.request** | |  |
| Short name | | Id of resource triggering adjudication |
| Definition | | Original request resource referrence. |
| **ClaimResponse.ruleset** | |  |
| Short name | | Resource version |
| Definition | | The version of the style of resource contents. This should be mapped to the allowable profiles for this and supporting resources. |
| Binding Description | | The static and dynamic model to which contents conform, may be business version or standard and version. |
| **ClaimResponse.originalRuleset** | |  |
| Short name | | Original version |
| Definition | | The style (standard) and version of the original material which was converted into this resource. |
| Requirements | | Knowledge of the original version can inform the processing of this instance so that information which is processable by the originating system may be generated. |
| Binding Description | | The static and dynamic model to which contents conform, may be business version or standard and version. |
| **ClaimResponse.created** | |  |
| Short name | | Creation date |
| Definition | | The date when the enclosed suite of services were performed or completed. |
| **ClaimResponse.organization** | |  |
| Short name | | Insurer |
| 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.outcome** | |  |
| Definition | | Transaction status: error, complete. |
| Binding Description | | The outcome of the 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 adjudications results. |
| **ClaimResponse.item.adjudication.code** | |  |
| 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 |
| **ClaimResponse.item.adjudication.amount** | |  |
| Short name | | Monetary amount |
| Definition | | Monitory amount associated with the code. |
| **ClaimResponse.item.adjudication.value** | |  |
| Short name | | Non-monitory 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.adjudication** | |  |
| Short name | | Detail adjudication |
| Definition | | The adjudications results. |
| **ClaimResponse.item.detail.adjudication.code** | |  |
| 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 |
| **ClaimResponse.item.detail.adjudication.amount** | |  |
| Short name | | Monetary amount |
| Definition | | Monitory amount associated with the code. |
| **ClaimResponse.item.detail.adjudication.value** | |  |
| Short name | | Non-monitory value |
| Definition | | A non-monetary value for example a percentage. Mutually exclusive to the amount element above. |
| **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.adjudication** | |  |
| Short name | | Subdetail adjudication |
| Definition | | The adjudications results. |
| **ClaimResponse.item.detail.subDetail.adjudication.code** | |  |
| 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 |
| **ClaimResponse.item.detail.subDetail.adjudication.amount** | |  |
| Short name | | Monetary amount |
| Definition | | Monitory amount associated with the code. |
| **ClaimResponse.item.detail.subDetail.adjudication.value** | |  |
| Short name | | Non-monetary value |
| Definition | | A non-monetary value for example a percentage. Mutually exclusive to the amount element above. |
| **ClaimResponse.addItem** | |  |
| Short name | | Insurer added line items |
| Definition | | The first tier service adjudications for payer 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.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.fee** | |  |
| Short name | | Professional fee or product charge |
| Definition | | The fee charged for the professional service or product. |
| **ClaimResponse.addItem.noteNumberLinkId** | |  |
| 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.adjudication.code** | |  |
| Short name | | Adjudication category such as co-pay, eligibility, benefit, etc. |
| Definition | | Code indicating: co-pay, deductible, eligibility, benefit, tax, etc. |
| Binding Description | | The adjudication codes |
| **ClaimResponse.addItem.adjudication.amount** | |  |
| Short name | | Monetary amount |
| Definition | Monetary amount associated with the code. | |
| **ClaimResponse.addItem.adjudication.value** |  | |
| Short name | Non-monetary value | |
| Definition | A non-monetary value for example a percentage. Mutually exclusive to the amount element above. | |
| **ClaimResponse.addItem.detail** |  | |
| Short name | Added items details | |
| Definition | The second tier service adjudications for payer added services. | |
| **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.fee** |  | |
| Short name | Professional fee or product charge | |
| Definition | The fee charged for the professional service or product. | |
| **ClaimResponse.addItem.detail.adjudication** |  | |
| Short name | Added items detail adjudication | |
| Definition | The adjudications results. | |
| **ClaimResponse.addItem.detail.adjudication.code** |  | |
| Short name | Adjudication category such as co-pay, eligibility, benefit, etc. | |
| Definition | Code indicating: co-pay, deductible, eligibility, benefit, tax, etc. | |
| Binding Description | The adjudication codes. | |
| **ClaimResponse.addItem.detail.adjudication.amount** |  | |
| Short name | Monetary amount | |
| Definition | Monetary amount associated with the code. | |
| **ClaimResponse.addItem.detail.adjudication.value** |  | |
| Short name | Non-monetary value | |
| Definition | A non-monetary value for example a percentage. Mutually exclusive to the amount element above. | |
| **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 | Sub-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.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 error codes for adjudication processing. | |
| **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 the receiver calculates and returns. | |
| **ClaimResponse.unallocDeductible** |  | |
| 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.paymentAdjustment** |  | |
| 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.paymentAdjustmentReason** |  | |
| Short name | Reason for payment adjustment | |
| Definition | Reason for the payment adjustment. | |
| Binding Description | Adjustment reason codes | |
| **ClaimResponse.paymentDate** |  | |
| Short name | Expected data of payment | |
| Definition | Estimated payment data. | |
| **ClaimResponse.paymentAmount** |  | |
| Short name | Payment amount | |
| Definition | Payable less any payment adjustment. | |
| **ClaimResponse.paymentRef** |  | |
| Short name | Payment identifier | |
| 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.note** |  | |
| Short name | Processing notes | |
| Definition | Note text. | |
| **ClaimResponse.note.number** |  | |
| Short name | Note number for this note | |
| Definition | An integer associated with each note which may be referred to from each service line item. | |
| **ClaimResponse.note.type** |  | |
| Definition | The note purpose: Print/Display. | |
| Binding Description | The presentation types of notes | |
| **ClaimResponse.note.text** |  | |
| Short name | Note explanatory text | |
| Definition | The note text. | |
| **ClaimResponse.coverage** |  | |
| Short name | Insurance or medical plan | |
| Definition | Financial instrument by which payment information for health care. | |
| Requirements | Health care programs and insurers are significant payers of health service costs. | |
| **ClaimResponse.coverage.sequence** |  | |
| Short name | Service instance identifier | |
| Definition | A service line item. | |
| Requirements | To maintain order of the coverages. | |
| **ClaimResponse.coverage.focal** |  | |
| Short name | 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.coverage.coverage** |  | |
| Short name | Insurance information | |
| Definition | Reference to the program or plan identification, underwriter or payer. | |
| Requirements | Need to identify the issuer to target for processing and for coordination of benefit processing. | |
| **ClaimResponse.coverage.businessArrangement** |  | |
| Short name | Business agreement | |
| Definition | The contract number of a business agreement which describes the terms and conditions. | |
| **ClaimResponse.coverage.relationship** |  | |
| Short name | Patient relationship to subscriber | |
| Definition | The relationship of the patient to the subscriber. | |
| Requirements | To determine the relationship between patient and subscriber. | |
| Binding Description | The code for the relationship of the patient to the subscriber | |
| **ClaimResponse.coverage.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.coverage.claimResponse** |  | |
| Short name | Adjudication results | |
| Definition | The coverages adjudication details. | |
| Requirements | Used by downstream payers to determine remaining balance and the net payable. | |
| **ClaimResponse.coverage.originalRuleset** |  | |
| Short name | Original version | |
| Definition | The style (standard) and version of the original material which was converted into this resource. | |
| Requirements | Knowledge of the original version can inform the processing of this instance so that information which is able to be processed by the originating system can be generated. | |
| Binding Description | The static and dynamic model to which contents conform, may be business version or standard and version. | |

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

|  |  |
| --- | --- |
| **Contract** | Contract |
| Short name | Contract |
| Definition | A formal agreement between parties regarding the conduct of business, exchange of information or other matters. |
| **Contract.identifier** |  |
| Short name | Contract identifier |
| Definition | Unique identifier for this contract. |
| **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 | Subject of this contract |
| Definition | Who and/or what this contract is about: typically a patient, organization, or valued items such as goods and services. |
| **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 | Contract type |
| Definition | Type of contract such as an insurance policy, real estate contract, a will, power of attorney, privacy or security policy, trust framework agreement, etc. |
| Binding Description | List of overall contract codes |
| **Contract.subType** |  |
| Short name | Contract subtype |
| Definition | More specific type or specialization of an overarching or more general contract such as auto insurance, home owner insurance, prenuptial agreement, advance directive, or privacy consent. |
| Binding Description | Detailed codes within the above |
| **Contract.action** |  |
| Short name | Contract action |
| Definition | Action stipulated by this contract. |
| Binding Description | Detailed codes for the contract action |
| **Contract.actionReason** |  |
| Short name | Contract action reason |
| Definition | Reason for action stipulated by this contract. |
| Binding Description | Detailed codes for the contract action reason |
| **Contract.actor** |  |
| Short name | Contract actor |
| Definition | List of contract actors. |
| **Contract.actor.entity** |  |
| Short name | Contract actor type |
| Definition | Who or what actors are assigned roles in this contract. |
| **Contract.actor.role** |  |
| Short name | Contract actor role |
| Definition | Role type of actors assigned roles in this contract. |
| Binding Description | Detailed codes for the contract actor role |
| **Contract.valuedItem** |  |
| Short name | Contract valued item |
| 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 identifier |
| Definition | Identifies a contract valued item instance. |
| **Contract.valuedItem.effectiveTime** |  |
| Short name | Contract valued item effective time |
| Definition | Indicates the time during which this contract valued item 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 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 unit quantity and the unit price amount. 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.signer** |  |
| Short name | Contract signer |
| Definition | Party signing this contract. |
| **Contract.signer.type** |  |
| Short name | Contract signer type |
| 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 signatory to this contract. |
| **Contract.signer.signature** |  |
| Short name | Contract documentation signature |
| Definition | Legally binding contract DSIG signature contents in Base64. |
| **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 identifier |
| 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 |
| 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 subtype |
| Definition | Subtype of this contract provision, e.g., life time maximum payment for a contract term for specific valued item, disability payment. |
| Binding Description | Detailed codes for the subtypes of contract provisions |
| **Contract.term.subject** |  |
| Short name | Subject of this contract term |
| Definition | Who or what this contract provision is about. |
| **Contract.term.action** |  |
| Short name | Contract term action |
| Definition | Action stipulated by this contract provision. |
| Binding Description | Detailed codes for the contract action. |
| **Contract.term.actionReason** |  |
| Short name | Contract term action reason |
| Definition | Reason or purpose for the action stipulated by this contract provision. |
| Binding Description | Detailed codes for the contract action reason. |
| **Contract.term.actor** |  |
| Short name | Contract term actor list |
| Definition | List of actors participating in this contract provision. |
| **Contract.term.actor.entity** |  |
| Short name | Contract term actor |
| Definition | The actor assigned a role in this contract provision. |
| **Contract.term.actor.role** |  |
| Short name | Contract term actor role |
| Definition | Role played by the actor assigned this role in 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 |
| 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 identifier |
| Definition | Identifies a contract provision valued item instance. |
| **Contract.term.valuedItem.effectiveTime** |  |
| Short name | Contract term valued item effective time |
| Definition | Indicates the time during which this contract term valued item 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 provision valued 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 unit quantity and the unit price amount. 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 | 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" version of the contract in whole or in parts. "Patient friendly language" is a representation of the contract and contract provisions that is readily accessible and understandable by a layperson in accordance with best practices for communication styles that ensure 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 ensure comprehension. |
| **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 readable 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

|  |  |
| --- | --- |
| **Coverage** | Coverage |
| Short name | Insurance or medical plan |
| Definition | Financial instrument which may be used to pay for or reimburse for health care products and services. |
| **Coverage.issuer** |  |
| Short name | An identifier for the plan issuer |
| Definition | The program or plan underwriter or payer. |
| Requirements | Need to identify the issuer to target for processing and for coordination of benefit processing. |
| **Coverage.bin** |  |
| Short name | BIN number |
| Definition | Business Identification Number (BIN number) used to identify the routing of e-claims if the insurer themselves don't have a BIN number for all of their business. |
| **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.type** |  |
| Short name | Type of coverage |
| Definition | The type of coverage: social program, medical plan, accident coverage (workers compensation, auto), group health. |
| Requirements | The order of application of coverages is dependent on the types of coverage. |
| Binding Description | The type of insurance: public health, worker compensation, accident, auto, private health, etc. |
| **Coverage.subscriberId** |  |
| Short name | Subscriber ID |
| Definition | The identifier issued to the subscriber. |
| **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, subscriber ID, certificate number,personal health number or case ID. |
| Requirements | This value may uniquely identify the coverage or it may be used in conjunction with the additional identifiers below. |
| **Coverage.group** |  |
| Short name | An identifier for the group |
| Definition | Identifies a style or collective of coverage issues by the underwriter, for example may be used to identify a class of coverage or employer group. May also be referred to as a policy or group ID. |
| **Coverage.plan** |  |
| Short name | An identifier for the plan |
| Definition | Identifies a style or collective of coverage issues by the underwriter, for example may be used to identify a class of coverage or employer group. May also be referred to as a policy or group ID. |
| **Coverage.subPlan** |  |
| Short name | An identifier for the subsection of the plan |
| Definition | Identifies a sub-style or sub-collective of coverage issues by the underwriter. For example, it may be used to identify a specific employer group within a class of employers. May be referred to as a section or division ID. |
| **Coverage.dependent** |  |
| Short name | The dependent number |
| Definition | A unique identifier for a dependent under the coverage. |
| Requirements | For some coverage, a single identifier is issued to the policy holder and a dependent number is issued to each of their dependents to track and manage the plan. |
| **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, such as a week or a month at a time. 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.subscriber** |  |
| Short name | Plan holder information |
| Definition | The party who owns the insurance contractual relationship to the policy or to whom the benefit of the policy is due. |
| **Coverage.network** |  |
| Short name | Insurer network |
| Definition | The identifier for a community of providers. |
| **Coverage.contract** |  |
| Short name | Contract details |
| Definition | The policy(s) which constitute this insurance coverage. |

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

|  |  |
| --- | --- |
| **EligibilityRequest** | Eligibility Request |
| Short name | Eligibility request |
| Definition | This resource provides the insurance eligibility details from the insurer regarding a specified coverage and optionally some class of service. |
| **EligibilityRequest.identifier** |  |
| Short name | Business Identifier |
| Definition | The response business identifier. |
| **EligibilityRequest.ruleset** |  |
| Short name | Resource version |
| Definition | The version of the style of resource contents. This should be mapped to the allowable profiles for this and supporting resources. |
| Binding Description | The static and dynamic model to which contents conform. The resource version may be a business or standard version. |
| **EligibilityRequest.originalRuleset** |  |
| Short name | Original version |
| Definition | The style (standard) and version of the original material which was converted into this resource. |
| Requirements | Knowledge of the original version can inform the processing of this instance so that information which is able to be processed by the originating system can be generated. |
| Binding Description | The static and dynamic model to which contents conform. The original version may be a business or standard and version. |
| **EligibilityRequest.created** |  |
| Short name | Creation date |
| Definition | The date when this resource was created. |
| **EligibilityRequest.target** |  |
| Short name | Insurer |
| Definition | The Insurer who is the target of the request. |
| **EligibilityRequest.provider** |  |
| Short name | Responsible practitioner |
| Definition | The practitioner responsible for the services rendered to the patient. |
| **EligibilityRequest.organization** |  |
| Short name | Responsible organization |
| Definition | The organization responsible for the services rendered to the patient. |

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

|  |  |
| --- | --- |
| **EligibilityResponse** | Eligibility Response |
| Short name | Eligibility response 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.request** |  |
| Short name | Claim 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.ruleset** |  |
| Short name | Resource version |
| Definition | The version of the style of resource contents. This should be mapped to the allowable profiles for this and supporting resources. |
| Binding Description | The static and dynamic model to which contents conform. The resource version may be a business or a standard version. |
| **EligibilityResponse.originalRuleset** |  |
| Short name | Original version |
| Definition | The style (standard) and version of the original material which was converted into this resource. |
| Requirements | Knowledge of the original version can inform the processing of this instance so that information which is able to be processed by the originating system can be generated. |
| Binding Description | The static and dynamic model to which contents conform. The original version may be a business or a standard version. |
| **EligibilityResponse.created** |  |
| Short name | Creation date |
| Definition | The date when the enclosed suite of services were performed or completed. |
| **EligibilityResponse.organization** |  |
| Short name | Insurer |
| Definition | The insurer who produced this adjudicated response. |
| **EligibilityResponse.requestProvider** |  |
| Short name | Responsible practitioner |
| Definition | The practitioner responsible for the services rendered to the patient. |
| **EligibilityResponse.requestOrganization** |  |
| Short name | Responsible organization |
| Definition | The organization responsible for the services rendered to the patient. |

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

|  |  |
| --- | --- |
| **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.ruleset** |  |
| Short name | Resource version |
| Definition | The version of the style of resource contents. This should be mapped to the allowable profiles for this and supporting resources. |
| Binding Description | The static and dynamic model to which contents conform. The resource version may be a business or standard version. |
| **EnrollmentRequest.originalRuleset** |  |
| Short name | Original version |
| Definition | The style (standard) and version of the original material which was converted into this resource. |
| Requirements | Knowledge of the original version can inform the processing of this instance so that information which is able to be processed by the originating system can be generated. |
| Binding Description | The static and dynamic model to which contents conform. The original version may be a business or standard version. |
| **EnrollmentRequest.created** |  |
| Short name | Creation date |
| Definition | The date when this resource was created. |
| **EnrollmentRequest.target** |  |
| Short name | Insurer |
| Definition | The Insurer who is the target of the request. |
| **EnrollmentRequest.provider** |  |
| Short name | Responsible practitioner |
| Definition | The practitioner responsible for the services rendered to the patient. |
| **EnrollmentRequest.organization** |  |
| Short name | Responsible organization |
| Definition | The organization 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 payer. |
| Requirements | Need to identify the issuer to target for processing and for coordination of benefit processing. |
| **EnrollmentRequest.relationship** |  |
| Short name | Patient relationship to subscriber |
| Definition | The relationship of the patient to the subscriber. |
| Requirements | To determine relationship between the patient and the subscriber. |
| Binding Description | The code for the relationship of the patient to the subscriber |

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

|  |  |
| --- | --- |
| **EnrollmentResponse** | Enrollment Response |
| Short name | Enrollment response 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.request** |  |
| Short name | Claim reference |
| Definition | Original request resource reference. |
| **EnrollmentResponse.outcome** |  |
| Definition | Transaction 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.ruleset** |  |
| Short name | Resource version |
| Definition | The version of the style of resource contents. This should be mapped to the allowable profiles for this and supporting resources. |
| Binding Description | The static and dynamic model to which contents conform. The resource version may be a business or standard version. |
| **EnrollmentResponse.originalRuleset** |  |
| Short name | Original version |
| Definition | The style (standard) and version of the original material which was converted into this resource. |
| Requirements | Knowledge of the original version can inform the processing of this instance so that information which is able to be processed by the originating system can be generated. |
| Binding Description | The static and dynamic model to which contents conform. The original version may be a business or standard version. |
| **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 responsible for the services rendered to the patient. |
| **EnrollmentResponse.requestOrganization** |  |
| Short name | Responsible organization |
| Definition | The organization responsible for the services rendered to the patient. |

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

|  |  |
| --- | --- |
| **ExplanationOfBenefit** | Explanation Of Benefit |
| Short name | Remittance resource |
| Definition | This resource informs the subscriber of the benefits provided which includes the claim details, adjudication details from the processing of a claim and optionally account balance information., |
| Synonym | EOB |
| **ExplanationOfBenefit.identifier** |  |
| Short name | Business identifier |
| Definition | The response business identifier. |
| **ExplanationOfBenefit.request** |  |
| Short name | Claim reference |
| Definition | Original request resource reference. |
| **ExplanationOfBenefit.outcome** |  |
| Definition | Transaction status: error, complete. |
| Binding Description | The outcome of the processing. |
| **ExplanationOfBenefit.disposition** |  |
| Short name | Disposition Message |
| Definition | A description of the status of the adjudication. |
| **ExplanationOfBenefit.ruleset** |  |
| Short name | Resource version |
| Definition | The version of the style of resource contents. This should be mapped to the allowable profiles for this and supporting resources. |
| Binding Description | The static and dynamic model to which contents conform. The resource version may be a business or standard version. |
| **ExplanationOfBenefit.originalRuleset** |  |
| Short name | Original version |
| Definition | The style (standard) and version of the original material which was converted into this resource. |
| Requirements | Knowledge of the original version can inform the processing of this instance so that information which is able to be processed by the originating system can be generated. |
| Binding Description | The static and dynamic model to which contents conform. The original version may be a business or standard version. |
| **ExplanationOfBenefit.created** |  |
| Short name | Creation date |
| Definition | The date when the enclosed suite of services were performed or completed. |
| **ExplanationOfBenefit.organization** |  |
| Short name | Insurer |
| Definition | The insurer who produced this adjudicated response. |
| **ExplanationOfBenefit.requestProvider** |  |
| Short name | Responsible practitioner |
| Definition | The practitioner responsible for the services rendered to the patient. |
| **ExplanationOfBenefit.requestOrganization** |  |
| Short name | Responsible organization |
| Definition | The organization responsible for the services rendered to the patient. |

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

|  |  |
| --- | --- |
| **PaymentNotice** | Payment Notice |
| Short name | Payment notice 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 response business identifier. |
| **PaymentNotice.ruleset** |  |
| Short name | Resource version |
| Definition | The version of the style of resource contents. This should be mapped to the allowable profiles for this and supporting resources. |
| Binding Description | The static and dynamic model to which contents conform. The resource version may be a business or standard version. |
| **PaymentNotice.originalRuleset** |  |
| Short name | Original version |
| Definition | The style (standard) and version of the original material which was converted into this resource. |
| Requirements | Knowledge of the original version can inform the processing of this instance so that information which is able to be processed by the originating system can be generated. |
| Binding Description | The static and dynamic model to which contents conform. The original version may be a business or standard version. |
| **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 the target of the request. |
| **PaymentNotice.provider** |  |
| Short name | Responsible practitioner |
| Definition | The practitioner responsible for the services rendered to the patient. |
| **PaymentNotice.organization** |  |
| Short name | Responsible organization |
| Definition | The organization responsible for the services rendered to the patient. |
| **PaymentNotice.request** |  |
| Short name | Request reference |
| Definition | Reference of resource to reverse. |
| **PaymentNotice.response** |  |
| Short name | Response reference |
| Definition | Reference of response to reverse. |
| **PaymentNotice.paymentStatus** |  |
| Short name | Status of the payment |
| Definition | The payment status. Typically paid,payment sent, cleared or payment received. |
| Binding Description | The payment conveyance status codes. |

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

|  |  |
| --- | --- |
| **PaymentReconciliation** | Payment Reconciliation |
| Short name | Payment reconciliation 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.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.ruleset** |  |
| Short name | Resource version |
| Definition | The version of the style of resource contents. This should be mapped to the allowable profiles for this and supporting resources. |
| Binding Description | The static and dynamic model to which contents conform. The resource version may be a business or standard version. |
| **PaymentReconciliation.originalRuleset** |  |
| Short name | Original version |
| Definition | The style (standard) and version of the original material which was converted into this resource. |
| Requirements | Knowledge of the original version can inform the processing of this instance so that information which is able to be processed by the originating system can be generated. |
| Binding Description | The static and dynamic model to which contents conform. The original version may be a business version or a standard and version. |
| **PaymentReconciliation.created** |  |
| Short name | Creation date |
| Definition | The date when the enclosed suite of services were performed or completed. |
| **PaymentReconciliation.period** |  |
| Short name | Period covered |
| Definition | The period of time for which payments have been gathered into this bulk payment for settlement. |
| **PaymentReconciliation.organization** |  |
| Short name | Insurer |
| Definition | The insurer who produced this adjudicated response. |
| **PaymentReconciliation.requestProvider** |  |
| Short name | Responsible practitioner |
| Definition | The practitioner responsible for the services rendered to the patient. |
| **PaymentReconciliation.requestOrganization** |  |
| Short name | Responsible organization |
| Definition | The organization responsible for the services rendered to the patient. |
| **PaymentReconciliation.detail** |  |
| Short name | Details |
| 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.responce** |  |
| Short name | Claim response |
| Definition | The claim response resource. |
| **PaymentReconciliation.detail.submitter** |  |
| Short name | Submitter |
| Definition | The organization that submitted the invoice or financial transaction. |
| **PaymentReconciliation.detail.payee** |  |
| Short name | Payee |
| Definition | The organization receiving the payment. |
| **PaymentReconciliation.detail.date** |  |
| Short name | Invoice date |
| Definition | The date of the invoice or financial resource. |
| **PaymentReconciliation.detail.amount** |  |
| Short name | Detail amount |
| 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.note** |  |
| Short name | Note text |
| Definition | Suite of notes. |
| **PaymentReconciliation.note.type** |  |
| Definition | The note purpose: Print/Display. |
| Binding Description | The presentation types of notes |
| **PaymentReconciliation.note.text** |  |
| Short name | Notes text |
| Definition | The note text. |

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

|  |  |
| --- | --- |
| **ProcessRequest** | Process Request |
| Short name | Process request |
| 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.action** |  |
| Definition | The type of processing action being requested, for example, reversal, readjudication, status request, pended request. |
| Binding Description | List of allowable actions this resource can request. |
| **ProcessRequest.identifier** |  |
| Short name | Business Identifier |
| Definition | The process request business identifier. |
| **ProcessRequest.ruleset** |  |
| Short name | Resource version |
| Definition | The version of the style of resource contents. This should be mapped to the allowable profiles for this and supporting resources. |
| Binding Description | The static and dynamic model to which contents conform. The resource version may be a business or standard version. |
| **ProcessRequest.originalRuleset** |  |
| Short name | Original version |
| Definition | The style (standard) and version of the original material which was converted into this resource. |
| Requirements | Knowledge of the original version can inform the processing of this instance so that information which is able to be processed by the originating system can be generated. |
| Binding Description | The static and dynamic model to which contents conform. The original version may be a business or standard version. |
| **ProcessRequest.created** |  |
| Short name | Creation date |
| Definition | The date when this resource was created. |
| **ProcessRequest.target** |  |
| Short name | Target of the request |
| Definition | The organization which is the target of the request. |
| **ProcessRequest.provider** |  |
| Short name | Responsible practitioner |
| Definition | The practitioner responsible for the action specified in this request. |
| **ProcessRequest.organization** |  |
| Short name | Responsible organization |
| Definition | The organization responsible for the action specified in this request. |
| **ProcessRequest.request** |  |
| Short name | Request reference |
| Definition | Reference of resource which is the target or subject of this action. |
| **ProcessRequest.response** |  |
| Short name | Response reference |
| Definition | Reference of a prior response to resource which is the target or subject of this action. |
| **ProcessRequest.nullify** |  |
| Short name | Nullify |
| Definition | If true remove all history excluding audit. |
| Requirements | Some resources must have all history removed. For example, an accidental submission of sensitive and/or wrong information would warrant a nullification. If the receiver cannot comply with a nullify request 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 no items are 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 | Period |
| Definition | A period of time during which the fulfilling resources would have been created. |

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

|  |  |
| --- | --- |
| **ProcessResponse** | Process Response |
| Short name | Process response 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.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.ruleset** |  |
| Short name | Resource version |
| Definition | The version of the style of resource contents. This should be mapped to the allowable profiles for this and supporting resources. |
| Binding Description | The static and dynamic model to which contents conform. The resource version may be a business or standard version. |
| **ProcessResponse.originalRuleset** |  |
| Short name | Original version |
| Definition | The style (standard) and version of the original material which was converted into this resource. |
| Requirements | Knowledge of the original version can inform the processing of this instance so that information which is able to be processed by the originating system can be generated. |
| Binding Description | The static and dynamic model to which contents conform.The original version may be a business or standard version. |
| **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 that produced this adjudicated response. |
| **ProcessResponse.requestProvider** |  |
| Short name | Responsible Practitioner |
| Definition | The practitioner responsible for the services rendered to the patient. |
| **ProcessResponse.requestOrganization** |  |
| Short name | Responsible organization |
| Definition | The organization 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.notes** |  |
| Short name | Notes |
| Definition | Suite of processing note or additional requirements is the processing has been held. |
| **ProcessResponse.notes.type** |  |
| Definition | The note purpose: Print/Display. |
| Binding Description | The presentation types of notes |
| **ProcessResponse.notes.text** |  |
| Short name | Notes text |
| Definition | The note text. |
| **ProcessResponse.error** |  |
| Short name | Error code |
| Definition | Processing errors. |
| Binding Description | The error codes for adjudication processing |

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

|  |  |
| --- | --- |
| **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.dateWritten** |  |
| Short name | When prescription was authorized |
| Definition | The date (and perhaps time) when the prescription was written. |
| **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.prescriber** |  |
| Short name | Who authorizes the vision product |
| Definition | The healthcare professional responsible for authorizing the prescription. |
| **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.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 | Lens add |
| Definition | Special color or pattern. |
| **VisionPrescription.dispense.brand** |  |
| Short name | Lens add |
| Definition | Brand recommendations or restrictions. |
| **VisionPrescription.dispense.notes** |  |
| Short name | Notes for coatings |
| Definition | Notes for special requirements such as coatings and lens materials. |
| Synonym | 0..1 |

# Health Care Devices

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

|  |  |
| --- | --- |
| **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. |
| Comments | 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. |
| Comments | 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. |
| Comments | Operational status for the MDS, VMD, or channel will be bound to a specific value set that is defined in its profile. |
| **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. |
| **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. |
| **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. |

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

|  |  |
| --- | --- |
| **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. |
| Comments | 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. |
| Comments | DeviceMetric.type can refer to either GDMN (nomenclature system supported by FDA Global UDI Database) or RTMMS coding system (preferable). |
| Binding Description | Describes the metric type |
| **DeviceMetric.identifier** |  |
| Short name | Unique identifier of this device metric |
| 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. |
| Comments | DeviceMetric.unit can refer to either UCUM or RTMMS coding system (preferable). |
| 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 and provides information about the location in the containment structure of the parent device. An example of a DeviceMetric.parent is a DeviceComponent that represents a channel. This reference can be used by a client application to distinguish device metrics 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 device metric |
| **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. For example, a patient monitor that measures HR, BP, PR and SpO2 might have the parameters 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. Examples of device metric categories are 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/ImagingObjectSelection

|  |  |
| --- | --- |
| **ImagingObjectSelection** | Imaging Object Selection |
| Short name | Key Object Selection |
| Definition | A manifest of a set of DICOM Service-Object Pair Instances (SOP Instances). The referenced SOP Instances (images or other content) are for a single patient, and may be from one or more studies. The referenced SOP Instances have been selected for a purpose, such as quality assurance, conference, or consult. Reflecting that range of purposes, typical ImagingObjectSelection resources may include all SOP Instances in a study (perhaps for sharing through a Health Information Exchange); key images from multiple studies (for reference by a referring or treating physician); a multi-frame ultrasound instance ("cine" video clip) and a set of measurements taken from that instance (for inclusion in a teaching file); and so on. |
| Synonym | Manifest |
| Synonym | XDS-I summary |
| Synonym | Key Images |
| Synonym | KOS |
| **ImagingObjectSelection.uid** |  |
| Short name | Instance UID |
| Definition | Instance UID of the DICOM KOS SOP Instances represented in this resource. |
| Requirements | DICOM SOP Instance is always assigned with a unique identifier (UID). |
| Synonym | SOPInstanceUID |
| **ImagingObjectSelection.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 ImagingObjectSelection. |
| Comments | SOP instances selected in the ImagingObjectSelection can be from different studies, but must be of the same patient. |
| Requirements | SOP Instances in ImagingObjectSelection must be from the same patient. |
| **ImagingObjectSelection.title** |  |
| Short name | Reason for selection |
| Definition | The reason for, or significance of, the selection of objects referenced in the resource. |
| Comments | Coded concept of kind of the ImagingObjectSelection. Value set is defined in the DICOM standard Part 16, CID-7010. |
| Requirements | Need to represent the application purpose that the SOP instances in ImagingObjectSelection are selected for. |
| Binding Description | The document title code of key object selection |
| **ImagingObjectSelection.description** |  |
| Short name | Description text |
| Definition | Text description of the DICOM SOP instances selected in the ImagingObjectSelection. This should be aligned with the content of the title element, and can provide further explanation of the SOP instances in the selection. |
| Comments | Free text narrative description of the ImagingObjectSelection. |
| Requirements | Need to provide a narrative description of the SOP instances in the selection. |
| Synonym | TextValue |
| **ImagingObjectSelection.author** |  |
| Short name | Author (human or machine) |
| Definition | Author of ImagingObjectSelection. 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. |
| **ImagingObjectSelection.authoringTime** |  |
| Short name | Authoring time of the selection |
| 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 |
| **ImagingObjectSelection.study** |  |
| Short name | Study identity of the selected instances |
| Definition | Study identity and locating information of the DICOM SOP instances in the selection. |
| Comments | 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 hierarchical 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. |
| **ImagingObjectSelection.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 |
| **ImagingObjectSelection.study.url** |  |
| Short name | Retrieve study URL |
| Definition | WADO-RS URL to retrieve the study. Note that this URL retrieves all SOP instances of the study, not only those in the selection. |
| Comments | Study level locator information is optional. If provided, this is the URL to retrieve the entire study with WADO-RS interaction, though only a subset of these are selected in the selection. |
| Requirements | WADO-RS URL enables retrieval of the entire study using DICOM WADO-RS API. |
| Synonym | RetrieveURL |
| **ImagingObjectSelection.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. |
| **ImagingObjectSelection.study.series** |  |
| Short name | Series identity of the selected instances |
| Definition | Series identity and locating information of the DICOM SOP instances in the selection. |
| Comments | 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. |
| **ImagingObjectSelection.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 |
| **ImagingObjectSelection.study.series.url** |  |
| Short name | Retrieve series URL |
| Definition | WADO-RS URL to retrieve the series. Note that this URL retrieves all SOP instances of the series not only those in the selection. |
| Comments | Series level locator information is optional. If provided, this is the URL to retrieve the entire series with WADO-RS interaction, though only a subset of these are selected in the selection. |
| Requirements | WADO-RS URL enables retrieval of the entire series using DICOM WADO-RS API. |
| Synonym | RetrieveURL |
| **ImagingObjectSelection.study.series.instance** |  |
| Short name | The selected instance |
| Definition | Identity and locating information of the selected DICOM SOP instances. |
| Comments | SOP instance component identify the instance selected, along with the study and series identities to form the DICOM identity hierarchy. |
| 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. |
| **ImagingObjectSelection.study.series.instance.sopClass** |  |
| Short name | SOP class UID of instance |
| Definition | SOP class UID of the selected instance. |
| Comments | 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 |
| **ImagingObjectSelection.study.series.instance.uid** |  |
| Short name | Selected instance UID |
| Definition | SOP Instance UID of the selected instance. |
| Comments | 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 |
| **ImagingObjectSelection.study.series.instance.url** |  |
| Short name | Retrieve instance URL |
| Definition | WADO-RS URL to retrieve the DICOM SOP Instance. |
| Comments | Instance level locator information is required. |
| Requirements | WADO-RS URL enables retrieval of the SOP instance using DICOM WADO-RS API. |
| Synonym | RetrieveURL |
| **ImagingObjectSelection.study.series.instance.frames** |  |
| Short name | The frame set |
| Definition | Identity and location information of the frames in the selected instance. |
| Comments | This component may be used if the referenced image SOP instance is a multi-frame image. |
| Requirements | The specific set of frames referenced in this imaging object selection. The URL retrieves the pixel data, and is encapsulated in a multipart MIME response. |
| **ImagingObjectSelection.study.series.instance.frames.frameNumbers** |  |
| Short name | Frame numbers |
| Definition | The frame numbers in the frame set. |
| Requirements | One or more non-duplicate frame numbers in the selected instance. |
| **ImagingObjectSelection.study.series.instance.frames.url** |  |
| Short name | Retrieve frame URL |
| Definition | WADO-RS URL to retrieve the DICOM frames. |
| Comments | Frame level locator information is required. |
| Requirements | WADO-RS URL enables retrieval of the frames using DICOM WADO-RS API. |

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

|  |  |
| --- | --- |
| **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.started** |  |
| Short name | When the study was started |
| Definition | Date and Time the study started. Time zone offset from UTC. |
| Synonym | StudyDate |
| Synonym | StudyTime |
| **ImagingStudy.patient** |  |
| Short name | Who the images are of |
| Definition | The patient imaged in the study. |
| **ImagingStudy.uid** |  |
| Short name | Formal identifier for the study |
| Definition | Formal identifier for the study. |
| Synonym | StudyInstanceUID |
| **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.order** |  |
| Short name | Order(s) that caused this study to be performed |
| Definition | A list of the diagnostic orders 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.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.referrer** |  |
| Short name | Referring physician (0008,0090) |
| Definition | The requesting/referring physician. |
| Synonym | ReferringPhysiciansName |
| **ImagingStudy.availability** |  |
| Definition | Availability of study (online, offline or nearline). |
| Synonym | InstanceAvailability |
| Binding Description | Availability of the resource |
| **ImagingStudy.url** |  |
| Short name | Retrieve URI |
| Definition | WADO-RS resource where Study is available. |
| Synonym | RetrieveURI |
| **ImagingStudy.numberOfSeries** |  |
| Short name | Number of study related series |
| Definition | Number of series in study. |
| Synonym | NumberOfStudyRelatedSeries |
| **ImagingStudy.numberOfInstances** |  |
| Short name | Number of study related instances |
| Definition | Number of SOP instances in study. |
| Synonym | NumberOfStudyRelatedInstances |
| **ImagingStudy.procedure** |  |
| Short name | Type of procedure performed |
| Definition | Type of procedure performed. |
| Comments | For the Procedure.code, LOINC radiology orderables would be a good value set to use. |
| Synonym | ProcedureCodeSequence |
| **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.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.number** |  |
| Short name | Numeric identifier of this series |
| Definition | The Numeric identifier of this series in the study. |
| Synonym | SeriesNumber |
| **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.uid** |  |
| Short name | Formal identifier for this series |
| Definition | Formal identifier for this series. |
| Synonym | SeriesInstanceUID |
| **ImagingStudy.series.description** |  |
| Short name | A description of the series |
| Definition | A description of the series. |
| Synonym | SeriesDescription |
| **ImagingStudy.series.numberOfInstances** |  |
| Short name | Number of series related instances |
| Definition | Number of SOP instances in series. |
| Synonym | NumberOfSeriesRelatedInstances |
| **ImagingStudy.series.availability** |  |
| Definition | Availability of series (online, offline or nearline). |
| Synonym | InstanceAvailability |
| Binding Description | Availability of the resource |
| **ImagingStudy.series.url** |  |
| Short name | Location of the referenced instance(s) |
| Definition | URI/URL specifying the location of the referenced series using WADO-RS. |
| Synonym | RetrieveURI |
| **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. |
| 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 a paired anatomic structure and laterality is not pre-coordinated in bodySite code. |
| **ImagingStudy.series.started** |  |
| Short name | When the series started |
| Definition | The date and time the series was started. |
| **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.number** |  |
| Short name | The number of this instance in the series |
| Definition | The number of instance in the series. |
| Synonym | InstanceNumber |
| **ImagingStudy.series.instance.uid** |  |
| Short name | Formal identifier for this instance |
| Definition | Formal identifier for this image or other content. |
| Synonym | SOPInstanceUID |
| **ImagingStudy.series.instance.sopClass** |  |
| Short name | DICOM class type |
| Definition | DICOM instance type. |
| Synonym | SOPClassUID |
| **ImagingStudy.series.instance.type** |  |
| Short name | Type of instance (image etc.) |
| Definition | A human-friendly SOP Class name. |
| Comments | E.g., 'CT image', 'MR multi-frame', 'blending presentation'. |
| **ImagingStudy.series.instance.title** |  |
| Short name | Description of instance |
| Definition | The description of the instance. |
| Comments | Particularly for post-acquisition analytic objects, such as SR, presentation states, value mapping, etc. |
| **ImagingStudy.series.instance.content** |  |
| Short name | Content of the instance |
| Definition | Content of the instance or a rendering thereof (e.g., a JPEG of an image, or an XML of a structured report). May be represented for example by inline encoding; by a URL reference to a WADO-RS service that makes the instance available; or to a FHIR Resource (e.g., Media, Document, etc.). Multiple content attachments may be used for alternate representations of the instance. |
| Comments | Use of Attachment.data is discouraged. |

# Orders and Observations

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

|  |  |
| --- | --- |
| **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.patient** |  |
| Short name | Patient |
| Definition | The person to which the body site belongs. |
| **BodySite.identifier** |  |
| Short name | Body site identifier |
| Definition | Identifier for this instance of the anatomical location. |
| **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.modifier** |  |
| Short name | Modification to location code |
| Definition | Modifier to refine the anatomical location. These include modifiers 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. |
| Comments | 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. |

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

|  |  |
| --- | --- |
| **DataElement** | Data Element |
| Short name | Resource data element |
| Definition | The formal description of a single piece of information that can be gathered and reported. |
| Comments | Often called a clinical template. |
| Synonym | Master Observation |
| Synonym | Data Element |
| Synonym | CDE |
| **DataElement.url** |  |
| Short name | Globally unique logical id for data element |
| 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. |
| **DataElement.identifier** |  |
| Short name | Logical id to reference this data element |
| Definition | 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. |
| Comments | Typically this is used for values that can go in a v3 II data type. |
| **DataElement.version** |  |
| Short name | Logical id for this 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 StructureDefinition, Questionnaire or instance. This is an arbitrary value managed by the definition author manually. |
| Comments | N/A. |
| Requirements | There may be multiple resource versions of the data element that have this same identifier. The resource version id will change for technical reasons, whereas the stated version number needs to be under the author's control. |
| **DataElement.name** |  |
| Short name | Descriptive label for this element definition |
| Definition | The term used by humans to refer to the data element. Should ideally be unique within the context in which the data element is expected to be used. |
| Comments | 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.status** |  |
| Definition | The status of the data element. |
| Requirements | Allows filtering of data elements that are appropriate for use. |
| 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 search data element definition is authored for testing purposes (or education/evaluation/marketing), and is not intended to be used for genuine usage. |
| Comments | Allows filtering of search data element definitions that are appropriate for use. |
| **DataElement.publisher** |  |
| Short name | Name of the publisher (organization or individual) |
| Definition | The name of the individual or organization that published the data element. |
| Comments | 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 data element. May also allow for contact. |
| **DataElement.contact** |  |
| Short name | Contact details of the publisher |
| Definition | Contacts to assist a user in finding and communicating with the publisher. |
| Comments | May be a web site, an email address, a telephone number (tel:), etc. |
| **DataElement.contact.name** |  |
| Short name | Name of a individual to contact |
| Definition | The name of an individual to contact regarding the data element. |
| Comments | If there is no named individual, the telecom is for the organization as a whole. |
| **DataElement.contact.telecom** |  |
| Short name | Contact details for individual or publisher |
| Definition | Contact details for individual (if a name was provided) or the publisher. |
| **DataElement.date** |  |
| Short name | Date for this version of the data element |
| Definition | The date this version of the data element was published. The date must change when the business version changes, , and it must change if the status code changes. In addition, it should change when the substantive content of the data element changes. |
| Comments | This refers to the "business" version, the DataElement.version which changes based on business processes. It does not refer to the date of the RESTful version which is part of the resource metadata. Additional specific dates may be added as extensions. |
| **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 data element definitions. |
| Binding Description | Indicates the countries, regions, disciplines and other aspects of use this artifact is targeted for use within |
| **DataElement.copyright** |  |
| Short name | Use and/or publishing restrictions |
| Definition | A copyright statement relating to the definition of the data element. Copyright statements are generally legal restrictions on the use and publishing of the details of the definition of the data element. |
| Comments | The copyright statement does not apply to values for the data element, only to its definition. |
| 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. |
| **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. |
| Comments | 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. |
| Comments | 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.comments** |  |
| 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. |
| Comments | 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

|  |  |
| --- | --- |
| **Device** | Device |
| Short name | An instance of a manufactured thing that is used in the provision of healthcare |
| Definition | This resource identifies an instance 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, an application, etc. |
| **Device.identifier** |  |
| Short name | Instance id from manufacturer, owner, and others |
| Definition | Unique instance identifiers assigned to a device by organizations like manufacturers or owners. If the identifier identifies the type of device, Device.type should be used. |
| Comments | Often fixed to the device as a barcode and may include names given to the device in local usage. Note that some of the barcodes affixed to the device identify its type, not its instance. For the FDA mandated Unique Device Identifier (UDI) use the Device.udi element. |
| **Device.type** |  |
| Short name | What kind of device this is |
| Definition | Code or identifier to identify a kind of device. |
| Comments | For the FDA mandated Unique Device Identifier (UDI) use the Device.udi element. |
| Binding Description | Defines the nature of the device and the kind of functionality/services/behavior that may be expected from it |
| **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.status** |  |
| Definition | Status of the device availability. |
| Binding Description | The availability status of the device |
| **Device.manufacturer** |  |
| Short name | Name of device manufacturer |
| Definition | A name of the manufacturer. |
| **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.manufactureDate** |  |
| Short name | Manufacture date |
| Definition | The date and time when the device was manufactured. |
| **Device.expiry** |  |
| 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.udi** |  |
| Short name | FDA Mandated Unique Device Identifier |
| Definition | United States Food and Drug Administration mandated Unique Device Identifier (UDI). Use the human readable information (the content that the user sees, which is sometimes different to the exact syntax represented in the barcode) - see http://www.fda.gov/MedicalDevices/DeviceRegulationandGuidance/UniqueDeviceIdentification/default.htm. |
| Comments | The unique identifier may identify an instance of a device uniquely, or it may only identify the type of the device. A portion of the UDI, the DI part, can be extracted from the UDI when required, and used to look up information about the device through the GUDID. |
| **Device.lotNumber** |  |
| Short name | Lot number of manufacture |
| Definition | Lot number assigned by the manufacturer. |
| Comments | Alphanumeric Maximum 20. |
| **Device.owner** |  |
| Short name | Organization responsible for device |
| Definition | An organization that is responsible for the provision and ongoing maintenance of the device. |
| **Device.location** |  |
| Short name | Where the resource is found |
| Definition | The place where the device can be found. |
| **Device.patient** |  |
| Short name | If the resource is affixed to a person |
| Definition | Patient information, if the resource is affixed to a person. |
| **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. |
| Comments | used for troubleshooting etc. |
| **Device.url** |  |
| Short name | Network address to contact device |
| Definition | A network address on which the device may be contacted directly. |
| Comments | If the device is running a FHIR server, the network address should be the root URL from which a conformance statement may be retrieved. |

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

|  |  |
| --- | --- |
| **DiagnosticOrder** | Diagnostic Order |
| Short name | A request for a diagnostic service |
| Definition | A record of a request for a diagnostic investigation service to be performed. |
| **DiagnosticOrder.subject** |  |
| Short name | Who and/or what test is about |
| Definition | Who or what the investigation is to be performed on. This is usually a human patient, but diagnostic tests can also be requested on animals, groups of humans or animals, devices such as dialysis machines, or even locations (typically for environmental scans). |
| **DiagnosticOrder.orderer** |  |
| Short name | Who ordered the test |
| Definition | The practitioner that holds legal responsibility for ordering the investigation. |
| **DiagnosticOrder.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. |
| Comments | 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 the 'Filler' in HL7 v2). For further discussion and examples see the [notes section] (diagnosticorder.html#4.22.4) below. |
| **DiagnosticOrder.encounter** |  |
| Short name | The encounter that this diagnostic order is associated with |
| Definition | An encounter that provides additional information about the healthcare context in which this request is made. |
| **DiagnosticOrder.reason** |  |
| Short name | Explanation/Justification for test |
| Definition | An explanation or justification for why this diagnostic investigation is being requested. This is often for billing purposes. May relate to the resources referred to in supportingInformation. |
| Comments | 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] (diagnosticorder-example-di.html). |
| Binding Description | Diagnosis or problem codes justifying the reason for requesting the diagnostic investigation |
| **DiagnosticOrder.supportingInformation** |  |
| Short name | Additional clinical information |
| Definition | Additional clinical information about the patient or specimen that may influence test interpretations. This includes observations explicitly requested by the producer (filler) to provide context or supporting information needed to complete the order. |
| Comments | This information includes diagnosis, clinical findings and other observations. In laboratory ordering these are typically referred to as "ask at order entry questions (AOEs)". Examples include reporting the amount of inspired oxygen for blood gasses, the point in the menstrual cycle for cervical pap tests, and other conditions that influence test interpretations. |
| Synonym | Ask at order entry question |
| Synonym | AOE |
| **DiagnosticOrder.specimen** |  |
| Short name | If the whole order relates to specific specimens |
| Definition | One or more specimens that the diagnostic investigation is about. |
| Comments | Many investigation requests will create a need for specimens, but the request itself is not actually about the specimens. This is provided for when the diagnostic investigation is requested on already existing specimens. |
| **DiagnosticOrder.status** |  |
| Definition | The status of the order. |
| Comments | 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 | The status of a diagnostic order |
| **DiagnosticOrder.priority** |  |
| Definition | The clinical priority associated with this order. |
| Comments | The Order resource also has a priority. Generally, these should be the samebut they can be different. For instance, a clinician indicates the order is urgent, but the subsequent workflow process overrules the priority for some reason. The effective default value is "normal". |
| Binding Description | The clinical priority of a diagnostic order |
| **DiagnosticOrder.event** |  |
| Short name | A list of events of interest in the lifecycle |
| Definition | A summary of the events of interest that have occurred as the request is processed. E.g. when the order was made, various processing steps (specimens received), when it was completed. |
| Comments | This is not the same as an audit trail. It is a view of the important things that happened in the past. Typically, there would only be one entry for any given status, and systems may not record all the status events. |
| **DiagnosticOrder.event.status** |  |
| Definition | The status for the event. |
| Binding Description | The status of a diagnostic order |
| **DiagnosticOrder.event.description** |  |
| Short name | More information about the event and its context |
| Definition | Additional information about the event that occurred - e.g. if the status remained unchanged. |
| Binding Description | Additional information about an event that occurred to a diagnostic order - e.g. if the status remained unchanged |
| **DiagnosticOrder.event.dateTime** |  |
| Short name | The date at which the event happened |
| Definition | The date/time at which the event occurred. |
| **DiagnosticOrder.event.actor** |  |
| Short name | Who recorded or did this |
| Definition | The person responsible for performing or recording the action. |
| **DiagnosticOrder.item** |  |
| Short name | The items the orderer requested |
| Definition | The specific diagnostic investigations that are requested as part of this request. Sometimes, there can only be one item per request, but in most contexts, more than one investigation can be requested. |
| Comments | There would always be at least one item in normal usage, but this is optional so that a workflow can quote order details without having to list the items. |
| **DiagnosticOrder.item.code** |  |
| Short name | Code to indicate the item (test or panel) being ordered |
| Definition | A code that identifies a particular diagnostic investigation, or panel of investigations, that have been requested. |
| Comments | Many laboratory tests and radiology tests embed the specimen/organ system in the test 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 diagnostic services |
| **DiagnosticOrder.item.specimen** |  |
| Short name | If this item relates to specific specimens |
| Definition | If the item is related to a specific specimen. |
| Comments | A single specimen should not appear in both DiagnosticOrder.specimen and DiagnosticOrder.item.specimen. |
| **DiagnosticOrder.item.bodySite** |  |
| Short name | Location of requested test (if applicable) |
| Definition | Anatomical location where the request test should be performed. This is the target site. |
| Comments | 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). |
| Synonym | location |
| Binding Description | Codes describing anatomical locations. May include laterality |
| **DiagnosticOrder.item.status** |  |
| Definition | The status of this individual item within the order. |
| Comments | If the request has multiple items that have their own life cycles, then the items will have their own status while the overall diagnostic order is (usually) "in-progress". |
| Binding Description | The status of a diagnostic order |
| **DiagnosticOrder.item.event** |  |
| Short name | Events specific to this item |
| Definition | A summary of the events of interest that have occurred as this item of the request is processed. |
| **DiagnosticOrder.note** |  |
| Short name | Other notes and comments |
| Definition | Any other notes associated with this patient,specimen or order (e.g. "patient hates needles"). |

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

|  |  |
| --- | --- |
| **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 interpretation, and formatted representation of diagnostic reports. |
| Comments | 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 | Id for external references to this report |
| Definition | The local ID assigned to the report by the order filler, usually by the information system of the diagnostic service provider. |
| 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 |
| **DiagnosticReport.status** |  |
| Definition | The status of the diagnostic report as a whole. |
| Comments | 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. |
| Comments | 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. |
| 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.encounter** |  |
| Short name | Health care event when test ordered |
| Definition | The link to the health care event (encounter) when the order was made. |
| **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. |
| Comments | 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 |
| **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. |
| Comments | 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 | Responsible diagnostic service |
| Definition | The diagnostic service that is responsible for issuing the report. |
| Comments | 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. |
| Synonym | Laboratory |
| Synonym | Service |
| Synonym | Practitioner |
| Synonym | Department |
| Synonym | Company |
| **DiagnosticReport.request** |  |
| Short name | What was requested |
| Definition | Details concerning a test or procedure requested. |
| Comments | 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 | Need to be able to track completion of requests based on reports issued and also to report what diagnostic tests were requested (not always the same as what is delivered). |
| **DiagnosticReport.specimen** |  |
| Short name | Specimens this report is based on |
| Definition | Details about the specimens on which this diagnostic report is based. |
| Comments | 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. |
| Comments | ImagingStudy and ImageObjectStudy 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. |
| Comments | 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 narrative interpretation of the diagnostic report. |
| Comments | Typically, a report is either [all data, no narrative (e.g. Core lab)] or [a mix of data with some concluding narrative (e.g. Structured Pathology Report, Bone Density)], or [all narrative (e.g. typical imaging report, histopathology)]. In all of these cases, the narrative goes in "text". |
| Requirements | Need to be able to provide a conclusion that is not lost amongst 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. |
| Comments | 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

|  |  |
| --- | --- |
| **NutritionOrder** | Nutrition Order |
| Short name | A request for a diet, formula or nutritional supplement |
| Definition | A request to supply a diet, formula feeding (enteral) or oral nutritional supplement to a patient/resident. |
| Comments | Referenced by an Order Request (workflow). |
| 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.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.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.identifier** |  |
| Short name | Identifiers assigned to this order |
| Definition | Identifiers assigned to this order by the order sender or by the order receiver. |
| **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.status** |  |
| Definition | The workflow status of the nutrition order/request. |
| Comments | 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.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. |
| Comments | 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. |
| Comments | Information on a patient's food preferences 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 patients™ diet for any reason. This modifier applies to the entire nutrition order inclusive of the oral diet, nutritional supplements and enteral formula feedings. |
| Comments | 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. |
| Synonym | frequency |
| **NutritionOrder.oralDiet.nutrient** |  |
| Short name | Required nutrient modifications |
| Definition | Class that defines the quantity and type of nutrient modifications 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. |
| Comments | 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. |
| Comments | 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. |
| Comments | 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. |
| 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. |
| Comments | 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. |
| Comments | 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. |
| Comments | 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. |
| Comments | Free text dosage instructions can be used for cases where the instructions are too complex to code. |

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

|  |  |
| --- | --- |
| **Observation** | Observation |
| Short name | Measurements and simple assertions |
| Definition | Measurements and simple assertions made about a patient, device or other subject. |
| Comments | 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 | Component code SHALL not be same as observation code |
| Constraint Text | SHALL only be present if Observation.value[x] is not present |
| **Observation.identifier** |  |
| Short name | Unique Id for this particular observation |
| Definition | A unique identifier for the simple observation instance. |
| Requirements | Allows observations to be distinguished and referenced. |
| **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. This is used for searching, sorting and display purposes. |
| Comments | 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 Observation.code. |
| 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. |
| 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. |
| Comments | 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.encounter** |  |
| 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. |
| Requirements | For some observations it may be important to know the link between an observation and a particular 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. |
| Comments | 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. |
| **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. |
| Comments | 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. |
| Comments | 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 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, 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 boolean values use valueCodeableConcept and select codes from [HL7 Version 2 Table 0136](v2/0136/index.html). These "yes/no" concepts can be mapped to the display name "true/false" or other mutually exclusive terms that may be needed. For further discussion and examples see the [notes section] (observation.html#4.20.4) 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. |
| Comments | 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. 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.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.comments** |  |
| 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). |
| Comments | Only used if not implicit in code found in Observation.code. 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). |
| Requirements | Knowing where the observation is made is important for tracking if multiple sites are possible. |
| 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. |
| Comments | 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. |
| Comments | Observations are not made on specimens themselves; they are made on a subject, but usually 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. |
| Comments | 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. |
| Comments | 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.meaning** |  |
| Short name | Indicates the meaning/use of this range of this range |
| Definition | Code for the meaning of the reference range. |
| Comments | This SHOULD be populated if there is more than one range. |
| Requirements | Need to be able to say what kind of reference range this is - normal, recommended, therapeutic, or perhaps what state this reference range applies to (i.e. age, hormonal cycles, etc.). |
| Binding Description | Code for the meaning of a reference range |
| **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 (usally another Observation but could also be a QuestionnaireAnswer) whose relationship is defined by the relationship type code. |
| Comments | 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. |
| Comments | "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 questionnaire answer 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. |
| Comments | For a discussion on the ways Observations can assembled in groups together see [Notes below] (observation.html#4.20.4). |
| 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. |
| Comments | 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 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. |
| Comments | "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.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. |
| Comments | 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/Order

|  |  |
| --- | --- |
| **Order** | Order |
| Short name | A request to perform an action |
| Definition | A request to perform an action. |
| Synonym | Request |
| **Order.identifier** |  |
| Short name | Identifiers assigned to this order by the orderer or by the receiver |
| Definition | Identifiers assigned to this order by the orderer or by the receiver. |
| **Order.date** |  |
| Short name | When the order was made |
| Definition | When the order was made. |
| **Order.subject** |  |
| Short name | Patient this order is about |
| Definition | Patient this order is about. |
| Comments | May be left blank if the request reference identifies the patient, or if the request is not associated with a patient. |
| Synonym | Patient |
| **Order.source** |  |
| Short name | Who initiated the order |
| Definition | Who initiated the order. |
| Synonym | Author |
| Synonym | Practitioner |
| **Order.target** |  |
| Short name | Who is intended to fulfill the order |
| Definition | Who is intended to fulfill the order. |
| **Order.reason[x]** |  |
| Short name | Text - why the order was made |
| Definition | Text - why the order was made. |
| **Order.when** |  |
| Short name | When order should be fulfilled |
| Definition | When order should be fulfilled. |
| Constraint Text | Provide a code or a schedule, but not both |
| **Order.when.code** |  |
| Short name | Code specifies when request should be done. The code may simply be a priority code |
| Definition | Code specifies when request should be done. The code may simply be a priority code. |
| Comments | This is usually a local code agreed in the context of the ordering workflow. |
| Binding Description | When a requested action should be performed (e.g. STAT, daily, evenings, etc.) |
| **Order.when.schedule** |  |
| Short name | A formal schedule |
| Definition | A formal schedule. |
| **Order.detail** |  |
| Short name | What action is being ordered |
| Definition | What action is being ordered. |

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

|  |  |
| --- | --- |
| **OrderResponse** | Order Response |
| Short name | A response to an order |
| Definition | A response to an order. |
| Comments | There might be more than one response to an order. |
| **OrderResponse.identifier** |  |
| Short name | Identifiers assigned to this order by the orderer or by the receiver |
| Definition | Identifiers assigned to this order. The identifiers are usually assigned by the system responding to the order, but they may be provided or added to by other systems. |
| **OrderResponse.request** |  |
| Short name | The order that this is a response to |
| Definition | A reference to the order that this is in response to. |
| **OrderResponse.date** |  |
| Short name | When the response was made |
| Definition | The date and time at which this order response was made (created/posted). |
| **OrderResponse.who** |  |
| Short name | Who made the response |
| Definition | The person, organization, or device credited with making the response. |
| **OrderResponse.orderStatus** |  |
| Definition | What this response says about the status of the original order. |
| Binding Description | The status of the response to an order |
| **OrderResponse.description** |  |
| Short name | Additional description of the response |
| Definition | Additional description about the response - e.g. a text description provided by a human user when making decisions about the order. |
| **OrderResponse.fulfillment** |  |
| Short name | Details of the outcome of performing the order |
| Definition | Links to resources that provide details of the outcome of performing the order. E.g. Diagnostic Reports in a response that is made to an order that referenced a diagnostic order. |

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

|  |  |
| --- | --- |
| **Specimen** | Specimen |
| Short name | Sample for analysis |
| Definition | Sample for analysis. |
| **Specimen.identifier** |  |
| Short name | External Identifier |
| Definition | Id for specimen. |
| **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. |
| Comments | 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.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. |
| Comments | 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.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.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.receivedTime** |  |
| Short name | The time when specimen was received for processing |
| Definition | Time when specimen was received for processing or testing. |
| **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.comment** |  |
| Short name | Collector comments |
| Definition | To communicate any details or issues encountered during the specimen collection procedure. |
| **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. |
| Comments | 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.treatment** |  |
| Short name | Treatment and processing step details |
| Definition | Details concerning treatment and processing steps for the specimen. |
| **Specimen.treatment.description** |  |
| Short name | Textual description of procedure |
| Definition | Textual description of procedure. |
| **Specimen.treatment.procedure** |  |
| Short name | Indicates the treatment or processing 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.treatment.additive** |  |
| Short name | Material used in the processing step |
| Definition | Material used in the processing step. |
| **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 |

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

|  |  |
| --- | --- |
| **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. |
| Comments | This identifier is associated with the kind of substance in contrast to the Substance.instance.identifier which is associated with the package/container. |
| **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. |
| Comments | 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. |
| Comments | 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** |  |
| Short name | A component of the substance |
| Definition | Another substance that is a component of this substance. |

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

|  |  |
| --- | --- |
| **SupplyDelivery** | Supply Delivery |
| Short name | Delivery of Supply |
| Definition | Record of delivery of the supply. |
| **SupplyDelivery.identifier** |  |
| Short name | External identifier |
| Definition | Identifier assigned by the dispensing facility when the item(s) is dispensed. |
| Comments | This is assigned by the dispenser, and used to refer to this order in other external standards. |
| **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.quantity** |  |
| Short name | Amount dispensed |
| Definition | The amount of supply that has been dispensed. Includes unit of measure. |
| **SupplyDelivery.suppliedItem** |  |
| 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 simple attribute carrying a code that identifies the item from a known list. |
| **SupplyDelivery.supplier** |  |
| Short name | Dispenser |
| Definition | The individual responsible for dispensing the medication, supplier or device. |
| **SupplyDelivery.whenPrepared** |  |
| Short name | Dispensing time |
| Definition | The time the dispense event occurred. |
| **SupplyDelivery.time** |  |
| Short name | Handover time |
| Definition | The time the dispensed item was sent or handed to the patient (or agent). |
| **SupplyDelivery.destination** |  |
| Short name | Where the supply was sent |
| Definition | Identification of the facility/location where the supply was shipped, 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

|  |  |
| --- | --- |
| **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.patient** |  |
| Short name | Patient for whom the item is supplied |
| Definition | A link to a resource representing the person whom the ordered item is for. |
| **SupplyRequest.source** |  |
| Short name | Who initiated this order |
| Definition | The practitioner, organization or patient who initiated this order for the supply. |
| **SupplyRequest.date** |  |
| Short name | When the request was made |
| Definition | When the request was made. |
| **SupplyRequest.identifier** |  |
| Short name | Unique identifier |
| Definition | Unique identifier for this supply request. |
| Comments | This is assigned by the orderer, 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.kind** |  |
| 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. |
| Binding Description | Category of supply request |
| **SupplyRequest.orderedItem** |  |
| Short name | Medication, substance, or device requested to be supplied |
| Definition | The item that is requested to be supplied. |
| Comments | 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. |
| **SupplyRequest.supplier** |  |
| Short name | Who is intended to fulfill the request |
| Definition | Who is intended to fulfill the request. |
| **SupplyRequest.reason[x]** |  |
| Short name | Why the supply item was requested |
| Definition | Why the supply item was requested. |
| **SupplyRequest.when** |  |
| Short name | When the request should be fulfilled |
| Definition | When the request should be fulfilled. |
| **SupplyRequest.when.code** |  |
| Short name | Fulfilment code |
| Definition | Fulfilment code. |
| Comments | Code may simply be a priority code. |
| **SupplyRequest.when.schedule** |  |
| Short name | Formal fulfillment schedule |
| Definition | Formal fulfillment schedule. |

# Patient Administration

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

|  |  |
| --- | --- |
| **Account** | Account |
| 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.name** |  |
| Short name | Human-readable label |
| Definition | Name used for the account when displaying it to humans in reports, etc. |
| Synonym | Title |
| **Account.type** |  |
| Short name | E.g. patient, expense, depreciation |
| Definition | Categorizes the account for reporting and searching purposes. |
| **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.activePeriod** |  |
| Short name | Valid from..to |
| Definition | Indicates the period of time over which the account is allowed. |
| Comments | Transactions cannot typically be posted to account outside of its "active" period. |
| **Account.currency** |  |
| Short name | Base currency in which balance is tracked |
| Definition | Identifies the currency to which transactions must be converted when crediting or debiting the account. |
| Comments | Tracked separately from balance because currency might be known when balance is not. In some cases, balance might be expressed in a currency other than the base currency for the account. |
| **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.coveragePeriod** |  |
| Short name | Transaction window |
| Definition | Identifies the period of time the account applies to. E.g. accounts created per fiscal year, quarter, etc. |
| Comments | It is possible for transactions relevant to a coverage period to be posted to the account before or after the coverage period. |
| **Account.subject** |  |
| Short name | What is account tied to? |
| Definition | Identifies the patient, device, practitioner, location or other object the account is associated with. |
| Synonym | target |
| **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. |

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

|  |  |
| --- | --- |
| **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 processed 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. |
| Comments | 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 slot's that were marked as BUSY can be re-set to FREE. |
| Binding Description | The free/busy status of an appointment |
| **Appointment.type** |  |
| Short name | The type of appointment that is being booked |
| Definition | The type of appointment that is being booked (This may also be associated with participants for location, and/or a healthcare service). |
| Binding Description | Additional details about where the content was created (e.g. clinical specialty) |
| **Appointment.reason** |  |
| Short name | The reason that this appointment is being scheduled. This is more clinical than administrative |
| 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.priority** |  |
| Short name | 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) |
| 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). |
| Comments | 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 | 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 |
| 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.start** |  |
| Short name | Date/Time that the appointment is to take place |
| Definition | Date/Time that the appointment is to take place. |
| **Appointment.end** |  |
| Short name | Date/Time that the appointment is to conclude |
| Definition | Date/Time that the appointment is to conclude. |
| **Appointment.minutesDuration** |  |
| Short name | 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) |
| 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 slot that this appointment is filling. If provided then the schedule will not be provided as slots are not recursive, and the start/end values MUST be the same as from the slot |
| Definition | The slot that this appointment is filling. If provided then the schedule will not be provided as slots are not recursive, and the start/end values MUST be the same as from the slot. |
| **Appointment.comment** |  |
| Short name | Additional comments about the appointment |
| Definition | Additional comments about the appointment. |
| Comments | 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.participant** |  |
| Short name | List of participants involved in the 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. |
| Comments | 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 | A Person, Location/HealthcareService or Device that is participating in the appointment |
| 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 |

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

|  |  |
| --- | --- |
| **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 type or actor on the participant should 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 | Parent appointment that this response is replying to |
| Definition | Parent appointment that this response is replying to. |
| **AppointmentResponse.start** |  |
| Short name | Date/Time that the appointment is to take place, or requested new start 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 start time. |
| **AppointmentResponse.end** |  |
| Short name | Date/Time that the appointment is to conclude, 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. |
| Comments | 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 | A Person, Location/HealthcareService or Device that is participating in the appointment |
| 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 about the appointment |
| Definition | 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/Encounter

|  |  |
| --- | --- |
| **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 | in-progress | onleave | finished | cancelled. |
| Binding Description | Current state of the encounter |
| **Encounter.statusHistory** |  |
| Short name | List of encounter statuses |
| Definition | The current status is always found in the current version of the resource. This 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. |
| **Encounter.statusHistory.status** |  |
| Definition | planned | arrived | 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.type** |  |
| Short name | Specific type of encounter |
| Definition | Specific type of encounter (e.g. e-mail consultation, surgical day-care, skilled nursing, rehabilitation). |
| Comments | 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.patient** |  |
| Short name | The patient present at the encounter |
| Definition | The patient present at the encounter. |
| Comments | While the encounter is always about the patient, the patient may not actually be known in all contexts of use. |
| 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 referral 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. |
| Comments | The participant type indicates how an individual participates 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 from 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 participant was present |
| Definition | The period of time that the specified participant was present during the encounter. These can overlap or be sub-sets of the overall encounters 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. |
| Comments | 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. |
| Comments | 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. |
| Comments | 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.indication** |  |
| 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. |
| Comments | 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 |
| **Encounter.hospitalization** |  |
| Short name | Details about the admission to a healthcare service |
| Definition | Details about the admission to a healthcare service. |
| Comments | This admission includes contexts other than inpatient., Contexts such as outpatient, community clinics, and potentially 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.admittingDiagnosis** |  |
| Short name | The admitting diagnosis as reported by admitting practitioner |
| Definition | The admitting diagnosis field is used to record the diagnosis codes as reported by admitting practitioner. This could be different or in addition to the conditions reported as reason-condition(s) for the encounter. |
| **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. |
| **Encounter.hospitalization.dietPreference** |  |
| Short name | Diet preferences reported by the patient |
| Definition | Diet preferences reported by the patient. |
| Comments | 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 | Wheelchair, translator, stretcher, etc. |
| 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.hospitalization.dischargeDiagnosis** |  |
| Short name | The final diagnosis given a patient before release from the hospital after all testing, surgery, and workup are complete |
| Definition | The final diagnosis given a patient before release from the hospital after all testing, surgery, and workup are complete. |
| **Encounter.location** |  |
| Short name | List of locations where the patient has been |
| Definition | List of locations where the patient has been during this encounter. |
| Comments | 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 no longer at the location, then the period will have an end date/time. |
| Comments | 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). |

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

|  |  |
| --- | --- |
| **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 | Identifier(s) by which this episode of care is known |
| Definition | Identifier(s) by which this episode of care is known. |
| **EpisodeOfCare.status** |  |
| Definition | planned | waitlist | active | onhold | finished | cancelled. |
| Binding Description | The status of the encounter |
| **EpisodeOfCare.statusHistory** |  |
| Short name | The history of statuses that the episode of care has been through (without requiring processing the history of the resource) |
| Definition | The history of statuses that the episode of care 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 encounter |
| **EpisodeOfCare.statusHistory.period** |  |
| Short name | The period during this episode of care that the specific status applied |
| Definition | The period during this episode of care that the specific status applied. |
| **EpisodeOfCare.type** |  |
| Short name | Specific type of episode of care |
| Definition | The type can be very important in processing as this could be used in determining if the episode of care is relevant to specific government reporting, or other types of classifications. |
| **EpisodeOfCare.condition** |  |
| Short name | A list of conditions/problems/diagnoses that this episode of care is intended to be providing care for |
| Definition | A list of conditions/problems/diagnoses that this episode of care is intended to be providing care for. |
| **EpisodeOfCare.patient** |  |
| Short name | The patient that this episode of care applies to |
| Definition | The patient that this episode of care applies to. |
| **EpisodeOfCare.managingOrganization** |  |
| Short name | The organization that has assumed the specific responsibilities for the specified duration |
| Definition | The organization that has assumed the specific responsibilities for the specified duration. |
| **EpisodeOfCare.period** |  |
| Short name | The interval during which the managing organization assumes the defined responsibility |
| Definition | The interval during which the managing organization assumes the defined responsibility. |
| **EpisodeOfCare.referralRequest** |  |
| Short name | Referral request(s) that this episode of care manages activities within |
| Definition | Referral request(s) that are fulfilled by this episode of care, incoming referrals. |
| **EpisodeOfCare.careManager** |  |
| Short name | The practitioner that is the care manager/care coordinator for this patient |
| Definition | The practitioner that is the care manager/care coordinator for this patient. |
| **EpisodeOfCare.careTeam** |  |
| Short name | The list of practitioners that may be facilitating this episode of care for specific purposes |
| Definition | The list of practitioners that may be facilitating this episode of care for specific purposes. |
| **EpisodeOfCare.careTeam.role** |  |
| Short name | The role this team member is taking within this episode of care |
| Definition | The role this team member is taking within this episode of care. |
| Binding Description | Type of participation expected by a team member |
| **EpisodeOfCare.careTeam.period** |  |
| Short name | The period of time this practitioner is performing some role within the episode of care |
| Definition | The period of time this practitioner is performing some role within the episode of care. |
| **EpisodeOfCare.careTeam.member** |  |
| Short name | The practitioner or organization within the team |
| Definition | The practitioner or organization within the team. |
| Comments | Where an organization is included in the CareTeam, it is really providing some form of services to the episode of care (e.g. Jim's Mowing Services) the details of the services would be included on a CarePlan. |

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

|  |  |
| --- | --- |
| **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.providedBy** |  |
| Short name | The organization that provides this healthcare Service |
| Definition | The organization that provides this healthcare Service. |
| Comments | This property is recommended to be the same as the location's managing organization, 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.serviceCategory** |  |
| Short name | Identifies the broad category of service being performed or delivered. Selecting a service category determines the list of relevant service types that can be selected in the primary service type |
| Definition | Identifies the broad category of service being performed or delivered. Selecting a service category determines the list of relevant service types that can be selected in the primary service type. |
| **HealthcareService.serviceType** |  |
| Short name | A specific type of service that may be delivered or performed |
| Definition | A specific type of service that may be delivered or performed. |
| **HealthcareService.serviceType.type** |  |
| Short name | The specific type of service being delivered or performed |
| Definition | The specific type of service being delivered or performed. |
| Comments | Change to serviceType? |
| Binding Description | Additional details about where the content was created (e.g. clinical specialty) |
| **HealthcareService.serviceType.specialty** |  |
| Short name | Collection of specialties handled by the service site. This is more of a medical term |
| Definition | collection of specialties handled by the service site. This is more of a medical term. |
| **HealthcareService.location** |  |
| Short name | The location where this healthcare service may be provided |
| Definition | The location where this healthcare service may be provided. |
| **HealthcareService.serviceName** |  |
| Short name | Further description of the service as it would be 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 | 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 |
| 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. |
| Comments | 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 | If there is a photo/symbol associated with this healthcare service, it may be included here to facilitate quick identification of the service in a list |
| Definition | If there is a photo/symbol associated with this healthcare service, it may be included here to facilitate quick identification of the service in a list. |
| **HealthcareService.telecom** |  |
| Short name | List of contacts related to this specific healthcare service. If this is empty, then refer to the location's contacts |
| Definition | List of contacts related to this specific healthcare service. If this is empty, then refer to the location's contacts. |
| **HealthcareService.coverageArea** |  |
| Short name | The location(s) where this service is available (not where the service is provided) |
| Definition | The location(s) where this service is available (not where the service is provided). |
| Comments | 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 | The code(s) that detail the conditions under which the healthcare service is available/offered |
| Definition | The code(s) that detail the conditions under which the healthcare service is available/offered. |
| Comments | The provision means being commissioned by, contractually obliged, and 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 | Does this service have specific eligibility requirements that need to be met in order to use the service |
| Definition | Does this service have specific eligibility requirements that need to be met in order to use the service? |
| **HealthcareService.eligibilityNote** |  |
| Short name | Describes the eligibility conditions for the service |
| Definition | 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 can be used to categorize the service |
| Definition | Program names that can be used to categorize the service. |
| Comments | 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). |
| Comments | These could be such things as wheelchair accessible. |
| **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.publicKey** |  |
| Short name | The public part of the 'keys' allocated to an organization by an accredited body to support secure exchange of data over the internet. To be provided by the organization, where available |
| Definition | The public part of the 'keys' allocated to an organization by an accredited body to support secure exchange of data over the internet. To be provided by the organization, where available. |
| Comments | Note: This is a base64 encoded digital certificate. |
| **HealthcareService.appointmentRequired** |  |
| Short name | Indicates 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 | A collection of times that the service site is available |
| Definition | A collection of times that the service site is available. |
| Comments | 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 dtart and end times. |
| Binding Description | The days of the week |
| **HealthcareService.availableTime.allDay** |  |
| Short name | Is this always available? (hence times are irrelevant) e.g. 24 hour service |
| Definition | Is this always available? (hence times are irrelevant) e.g. 24 hour service. |
| **HealthcareService.availableTime.availableStartTime** |  |
| Short name | The opening time of day. Note: If the AllDay flag is set, then this time is ignored |
| Definition | The opening time of day. Note: If the AllDay flag is set, then this time is ignored. |
| Comments | The timezone is expected to be the location where this healthcare service is provided. |
| **HealthcareService.availableTime.availableEndTime** |  |
| Short name | The closing time of day. Note: If the AllDay flag is set, then this time is ignored |
| Definition | The closing time of day. Note: If the AllDay flag is set, then this time is ignored. |
| Comments | The timezone is expected to be the location where this healthcare service is provided. |
| **HealthcareService.notAvailable** |  |
| Short name | The healthcare service is not available during this period of time due to the provided reason |
| Definition | The healthcare service is not available during this period of time due to the provided reason. |
| **HealthcareService.notAvailable.description** |  |
| Short name | The reason that can be presented to the user as to why this time is 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 is not available (seasonally or for a public holiday) from this date |
| Definition | Service is not available (seasonally or for a public holiday) from this date. |
| **HealthcareService.availabilityExceptions** |  |
| Short name | 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 |
| 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. |
| Comments | (May contain HTML formatted text). |

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

|  |  |
| --- | --- |
| **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 | active | suspended | inactive. |
| Binding Description | Indicates whether the location is still in use |
| **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. |
| **Location.description** |  |
| Short name | Description of the location, which helps in finding or referencing the place |
| 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 | Indicates the type of function performed at the location |
| 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. |
| Comments | 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 with 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 | The organization responsible for the provisioning and upkeep of the location |
| Definition | The organization responsible for the provisioning and upkeep of the location. |
| Comments | This can also be used as the part of the organization hierarchy where this location provides services. These services can be defined through the healthcare service resource. |
| Requirements | Need to know who manages the location. |
| **Location.partOf** |  |
| Short name | Another location which this location 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. |

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

|  |  |
| --- | --- |
| **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. |
| Comments | Default is true. |
| 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 of organization that this is. |
| Comments | 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. |
| 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. |
| Requirements | Need to use the name as the label of the organization. |
| **Organization.telecom** |  |
| Short name | A contact detail for the organization |
| Definition | A contact detail for the organization. |
| Comments | 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. |
| Comments | 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. |
| Comments | 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. |

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

|  |  |
| --- | --- |
| **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. |
| Comments | 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. |
| Comments | 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. |
| Comments | 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. |
| Comments | 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. |
| Comments | 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. |
| Comments | 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. |
| Comments | 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 or indicates the actual birth order. |
| 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. |
| Comments | 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. |
| Comments | 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. |
| Comments | 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. |
| Comments | 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 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. |
| Comments | 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. |
| Comments | 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. |
| Comments | 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). |
| Comments | 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.careProvider** |  |
| Short name | Patient's nominated primary care provider |
| Definition | Patient's nominated care provider. |
| Comments | 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. This is not to be used to record Care Teams, these should be recorded on either the CarePlan or EpisodeOfCare resources. |
| **Patient.managingOrganization** |  |
| Short name | Organization that is the custodian of the patient record |
| Definition | Organization that is the custodian of the patient record. |
| Comments | 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. |
| Comments | 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 resource that the link refers to |
| Definition | The other patient resource that the link refers to. |
| **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

|  |  |
| --- | --- |
| **Person** | Person |
| Short name | A generic person record |
| Definition | Demographics and administrative information about a person independent of a specific health-related context. |
| Comments | 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. |
| Comments | 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. |
| Comments | 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. |
| Comments | 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. |
| Comments | 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. |
| Comments | 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

|  |  |
| --- | --- |
| **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. |
| Comments | 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. |
| Comments | 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 | A name associated with the person |
| Definition | A name associated with the person. |
| Requirements | Contact persons need to be identified by name, but it is uncommon to need details about multiple other names for that person. |
| **Practitioner.telecom** |  |
| Short name | A contact detail for the practitioner |
| Definition | A contact detail for the practitioner, e.g. a telephone number or an email address. |
| Comments | 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 | Need to know how to reach a practitioner. |
| **Practitioner.address** |  |
| Short name | Where practitioner can be found/visited |
| Definition | The postal address where the practitioner can be found or visited or to which mail can be delivered. |
| Requirements | Need to keep track where the practitioner can found during work or for directing mail. |
| **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.practitionerRole** |  |
| Short name | The list of roles/organizations the practitioner is associated with |
| Definition | The list of roles/organizations the practitioner is associated with. |
| **Practitioner.practitionerRole.managingOrganization** |  |
| Short name | The organization where the practitioner performs the roles associated |
| Definition | The organization where the practitioner performs the roles associated. |
| **Practitioner.practitionerRole.role** |  |
| Short name | Roles which this practitioner may perform |
| Definition | Roles which this practitioner is authorized to perform for the organization. |
| Comments | 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 |
| **Practitioner.practitionerRole.specialty** |  |
| Short name | Specific specialty of the practitioner |
| Definition | Specific specialty of the practitioner. |
| Binding Description | Specific specialty associated with the agency |
| **Practitioner.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. |
| **Practitioner.practitionerRole.location** |  |
| Short name | The location(s) at which this practitioner provides care |
| Definition | The location(s) at which this practitioner provides care. |
| **Practitioner.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). |
| **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. |
| Comments | 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/RelatedPerson

|  |  |
| --- | --- |
| **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.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. |
| Comments | 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

|  |  |
| --- | --- |
| **Schedule** | Schedule |
| Short name | A container for slot(s) of time that may be available for booking appointments |
| Definition | A container for slot(s) 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.type** |  |
| Short name | The schedule type can be used for the categorization of healthcare services or other appointment types |
| Definition | The schedule type can be used for the categorization of healthcare services or other appointment types. |
| 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, 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, Device, Patient or RelatedPerson. |
| **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 slot(s) that may be associated |
| Definition | Comments on the availability to describe any extended information. Such as custom constraints on the slot(s) that may be associated. |

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

|  |  |
| --- | --- |
| **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.type** |  |
| 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. |
| Binding Description | Additional details about where the content was created (e.g. clinical specialty) |
| **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.freeBusyType** |  |
| Definition | busy | free | busy-unavailable | busy-tentative. |
| Binding Description | The free/busy status of a 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

|  |  |
| --- | --- |
| **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. |
| Comments | 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 |
| **AllergyIntolerance.identifier** |  |
| Short name | External Ids for this item |
| Definition | This records identifiers associated with this allergy/intolerance 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.onset** |  |
| Short name | Date(/time) when manifestations showed |
| Definition | Record of the date and/or time of the onset of the allergy or intolerance. |
| **AllergyIntolerance.recordedDate** |  |
| Short name | When recorded |
| Definition | Date when the sensitivity was recorded. |
| **AllergyIntolerance.recorder** |  |
| Short name | Who recorded the sensitivity |
| Definition | Individual who recorded the record and takes responsibility for its content. |
| Synonym | Author |
| **AllergyIntolerance.patient** |  |
| Short name | Who the sensitivity is for |
| Definition | The patient who has the allergy or intolerance. |
| Synonym | Patient |
| **AllergyIntolerance.reporter** |  |
| Short name | Source of the information about the allergy |
| Definition | The source of the information about the allergy that is recorded. |
| Comments | The recorder takes repsonsibility for the content, but can reference the source from where they got it. |
| Synonym | Source |
| Synonym | Informant |
| **AllergyIntolerance.substance** |  |
| Short name | Substance or class considered to be responsible for risk |
| Definition | Identification of a substance, or a class of substances, that is considered to be responsible for the adverse reaction risk. |
| Comments | It is strongly recommended that substance be coded with 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 about a substance can be specified in the text. |
| Synonym | Agent |
| Binding Description | Type of the substance and negation codes for reporting No Known Allergies |
| **AllergyIntolerance.status** |  |
| Definition | Assertion about certainty associated with the propensity, or potential risk, of a reaction to the identified substance. |
| Comments | Decision support would typically raise alerts for 'Unconfirmed', 'Confirmed', and 'Resolved' and ignore a 'Refuted' reaction. In particular, 'Refuted' may be useful for reconciliation of the Adverse Reaction List. Some implementations may choose to make this field mandatory. |
| Synonym | State |
| Binding Description | Assertion about certainty associated with a propensity, or potential risk, of a reaction to the identified substance |
| **AllergyIntolerance.criticality** |  |
| Definition | Estimate of the potential clinical harm, or seriousness, of the reaction to the identified substance. |
| Comments | 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). |
| 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.type** |  |
| Definition | Identification of the underlying physiological mechanism for the reaction risk. |
| Comments | Allergic (immune-mediated) responses have been traditionally regarded as an indicator for potential escalation to significant future risk. Contemporary knowledge suggests that some reactions previously thought to be allergic (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. Immunological testing may provide supporting evidence for the basis and 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 an allergy or an intolerance, then the type element should be omitted. |
| Synonym | Category |
| Synonym | Class |
| Binding Description | Identification of the underlying physiological mechanism for a reaction risk |
| **AllergyIntolerance.category** |  |
| Definition | Category of the identified substance. |
| Comments | 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. |
| Synonym | Category |
| Synonym | Type |
| Synonym | Reaction Type |
| Synonym | Class |
| Binding Description | Category of an identified substance |
| **AllergyIntolerance.lastOccurence** |  |
| Short name | Date(/time) of last known occurence of a reaction |
| Definition | Represents the date and/or time of the last known occurence of a reaction event. |
| Comments | This date may be replicated by one of the Onset of Reaction dates. Where a textual representation of the date of last occurence 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. |
| Comments | 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 Eevent linked to exposure to the identified substance. |
| **AllergyIntolerance.reaction.substance** |  |
| Short name | Specific substance considered to be responsible for event |
| Definition | Identification of the specific substance considered to be responsible for the Adverse Reaction event. Note: the substance for a specific reaction may be different to the substance identified as the cause of the risk, but must be consistent with it. For instance, it may be a more specific substance (e.g. a brand medication) or a composite substance that includes the identified substance. It must be clinically safe to only process the AllergyIntolerance.substance and ignore the AllergyIntolerance.event.substance. |
| Comments | Coding of the specific substance with a terminology capable of triggering decision support should be used wherever possible. The substance field allows for the use of a specific substance or a group or class of substances, for example "Penicillins". The specific substance field could be used for Amoxicillin. Duplication is acceptable when a specific substance has been recorded in the substance field. |
| Binding Description | Type of the substance |
| **AllergyIntolerance.reaction.certainty** |  |
| Definition | Statement about the degree of clinical certainty that the specific substance was the cause of the manifestation in this reaction event. |
| Synonym | Cause |
| Binding Description | Statement about the degree of clinical certainty that a specific substance was the cause of the manifestation in an reaction event |
| **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. |
| Comments | 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. |
| Comments | 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. |
| Comments | 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. |
| Comments | 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. |
| Comments | 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

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| --- | --- |
| **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.subject** |  |
| Short name | Who care plan is for |
| Definition | Identifies the patient or group whose intended care is described by the plan. |
| **CarePlan.status** |  |
| Definition | Indicates whether the plan is currently being acted upon, represents future intentions or is a historical record. |
| 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 a historical record. |
| **CarePlan.context** |  |
| Short name | Created in context of |
| Definition | Identifies the context in which this particular CarePlan is defined. |
| Comments | Activities conducted as a result of the care plan may well occur as part of other encounters/episodes. |
| **CarePlan.period** |  |
| Short name | Time period plan covers |
| Definition | Indicates when the plan did (or is intended to) come into effect and end. |
| Comments | Any activities scheduled as part of the plan should be constrained to the specified period. |
| Requirements | Allows tracking what plan(s) are in effect at a particular time. |
| **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. |
| Comments | Collaborative care plans may have multiple authors. |
| **CarePlan.modified** |  |
| Short name | When last updated |
| Definition | Identifies the most recent date on which the plan has been revised. |
| Requirements | Indicates how current the plan is. |
| **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. |
| Comments | 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.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.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. Also scopes plans - multiple plans may exist addressing different concerns. |
| **CarePlan.support** |  |
| 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. |
| Comments | Use "concern" to identify specific conditions addressed by the care plan. |
| Requirements | Identifies barriers and other considerations associated with the care plan. |
| **CarePlan.relatedPlan** |  |
| Short name | Plans related to this one |
| Definition | Identifies CarePlans with some sort of formal relationship to the current plan. |
| Comments | Relationships are uni-directional with the "newer" plan pointing to the older one. |
| **CarePlan.relatedPlan.code** |  |
| Definition | Identifies the type of relationship this plan has to the target plan. |
| Comments | Read the relationship as "this plan" [relatedPlan.code] "relatedPlan.plan". E.g. This plan includes Plan B. Additional relationship types can be proposed for future releases or handled as extensions. |
| Binding Description | Codes identifying the types of relationships between two plans. |
| **CarePlan.relatedPlan.plan** |  |
| Short name | Plan relationship exists with |
| Definition | A reference to the plan to which a relationship is asserted. |
| **CarePlan.participant** |  |
| 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. |
| Synonym | Care Team |
| **CarePlan.participant.role** |  |
| Short name | Type of involvement |
| Definition | Indicates specific responsibility of an individual within the care plan. E.g. "Primary physician", "Team coordinator", "Caregiver", etc. |
| Comments | Roles may sometimes be inferred by type of practitioner. These are relationships that hold only within the context of the care plan. General relationships should be handled as properties of the Patient resource directly. |
| Binding Description | Indicates specific responsibility of an individual within the care plan. E.g. "Primary physician", "Team coordinator", "Caregiver", etc. |
| **CarePlan.participant.member** |  |
| Short name | Who is involved |
| Definition | The specific person or organization who is participating/expected to participate in the care plan. |
| Comments | 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. |
| **CarePlan.goal** |  |
| Short name | Desired outcome of plan |
| Definition | Describes the intended objective(s) of carrying out the care plan. |
| Comments | 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. |
| **CarePlan.activity.actionResulting** |  |
| Short name | Appointments, orders, etc. |
| Definition | Resources that describe follow-on actions resulting from the plan, such as drug prescriptions, encounter records, appointments, etc. |
| 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. |
| Comments | 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. |
| 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. |
| Constraint Text | Only provide a detail reference, or a simple detail summary |
| **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.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. |
| Comments | 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 |
| Definition | Provides the rationale that drove the inclusion of this particular activity as part of the plan. |
| Comments | 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. |
| Comments | 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. |
| Comments | 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. |
| 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. |
| Comments | 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. |
| Binding Description | Describes why the current activity has the status it does. E.g. "Recovering from injury" as a reason for non-started or on-hold, "Patient does not enjoy activity" as a reason for cancelling a planned activity |
| **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. |
| 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. |
| Comments | 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. |
| Comments | 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/ClinicalImpression

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| **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.patient** |  |
| Short name | The patient being assessed |
| Definition | The patient being assessed. |
| **ClinicalImpression.assessor** |  |
| Short name | The clinician performing the assessment |
| Definition | The clinician performing the assessment. |
| **ClinicalImpression.status** |  |
| Definition | Identifies the workflow status of the assessment. |
| Binding Description | The workflow state of a clinical impression |
| **ClinicalImpression.date** |  |
| Short name | When the assessment occurred |
| Definition | The point in time at which the assessment was concluded (not when it was recorded). |
| Comments | This SHOULD be accurate to at least the minute, though some assessments only have a known date. |
| **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/sstatus prompted it. |
| **ClinicalImpression.previous** |  |
| Short name | Reference to last assessment |
| Definition | A reference to the last assesment that was conducted on this patient. Assessments are 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. |
| Comments | It is 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 | General assessment of patient state |
| Definition | This a list of the general problems/conditions for a patient. |
| Comments | E.g. The patient is pregnant, with cardiac congestive failure, Adenocarcinoma, and is allergic to penicillin. |
| **ClinicalImpression.trigger[x]** |  |
| Short name | Request or event that necessitated this assessment |
| Definition | The request or event that necessitated this assessment. This may be a diagnosis, a care plan, a request referral, or some other resource. |
| Binding Description | Clinical Findings that may cause an clinical evaluation |
| **ClinicalImpression.investigations** |  |
| Short name | One or more sets of investigations (signs, symptoms, etc.) |
| Definition | One or more sets of investigations (signs, symptoms, 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.investigations.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 groups such as (exposure|family|travel|nutitirional) history may be used. |
| Binding Description | A name/code for a set of investigations |
| **ClinicalImpression.investigations.item** |  |
| Short name | Record of a specific investigation |
| Definition | A record of a specific investigation that was undertaken. |
| Comments | Most investigations are observations of one kind or another but 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 were considered likely or relevant to ongoing treatment. |
| **ClinicalImpression.finding.item** |  |
| Short name | Specific text or code for finding |
| Definition | Specific text of code for finding or diagnosis. |
| Binding Description | Identification of the condition or diagnosis. |
| **ClinicalImpression.finding.cause** |  |
| Short name | Which investigations support finding |
| Definition | Which investigations support finding or diagnosis. |
| **ClinicalImpression.resolved** |  |
| Short name | Diagnoses/Conditions resolved since previous assessment |
| Definition | Diagnoses/Conditions resolved since the last assessment. |
| Binding Description | Identification of the condition or diagnosis. |
| **ClinicalImpression.ruledOut** |  |
| Short name | Diagnosis considered not possible |
| Definition | Diagnosis considered not possible. |
| **ClinicalImpression.ruledOut.item** |  |
| Short name | Specific text of code for diagnosis |
| Definition | Specific text of code for diagnosis. |
| Binding Description | Identification of the Condition or diagnosis. |
| **ClinicalImpression.ruledOut.reason** |  |
| Short name | Grounds for elimination |
| Definition | Grounds for elimination. |
| **ClinicalImpression.prognosis** |  |
| Short name | Estimate of likely outcome |
| Definition | Estimate of likely outcome. |
| **ClinicalImpression.plan** |  |
| Short name | Plan of action after assessment |
| Definition | Plan of action after assessment. |
| **ClinicalImpression.action** |  |
| Short name | Actions taken during assessment |
| Definition | Actions taken during assessment. |

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

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| --- | --- |
| **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. |
| **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.category** |  |
| Short name | Message category |
| Definition | The type of message conveyed such as alert, notification, reminder, instruction, etc. |
| **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.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.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.medium** |  |
| Short name | A channel of communication |
| Definition | A channel that was used for this communication (e.g. email, fax). |
| **Communication.status** |  |
| Definition | The status of the transmission. |
| Binding Description | The status of the communication |
| **Communication.encounter** |  |
| Short name | Encounter leading to message |
| Definition | The encounter within which the communication was sent. |
| **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.reason** |  |
| Short name | Indication for message |
| Definition | The reason or justification for the communication. |
| **Communication.subject** |  |
| Short name | Focus of message |
| Definition | The patient who was the focus of this communication. |
| **Communication.requestDetail** |  |
| Short name | CommunicationRequest producing this message |
| Definition | The communication request that was responsible for producing this communication. |

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

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| --- | --- |
| **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 auto-generated, if needed, by CDS system. Does not need to be the actual ID of the source system. |
| **CommunicationRequest.category** |  |
| Short name | Message category |
| Definition | The type of message to be sent such as alert, notification, reminder, instruction, etc. |
| **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.recipient** |  |
| Short name | Message recipient |
| Definition | The entity (e.g., person, organization, clinical information system, or device) which is the intended target of the communication. |
| **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.medium** |  |
| Short name | A channel of communication |
| Definition | A channel that was used for this communication (e.g. email, fax). |
| **CommunicationRequest.requester** |  |
| Short name | An individual who requested a communication |
| Definition | The responsible person who authorizes this order, e.g., physician. This may be different than the author of the order statement, e.g., clerk, who may have entered the statement into the order entry application. |
| **CommunicationRequest.status** |  |
| Definition | The status of the proposal or order. |
| Binding Description | The status of the communication |
| **CommunicationRequest.encounter** |  |
| Short name | Encounter leading to message |
| Definition | The encounter within which the communication request was created. |
| **CommunicationRequest.scheduled[x]** |  |
| Short name | When scheduled |
| Definition | The time when this communication is to occur. |
| **CommunicationRequest.reason** |  |
| Short name | Indication for message |
| Definition | The reason or justification for the communication request. |
| **CommunicationRequest.requestedOn** |  |
| Short name | When ordered or proposed |
| Definition | The time when the request was made. |
| **CommunicationRequest.subject** |  |
| Short name | Focus of message |
| Definition | The patient who is the focus of this communication request. |
| **CommunicationRequest.priority** |  |
| Short name | Message urgency |
| Definition | Characterizes how quickly the proposed act must be initiated. Includes concepts such as stat, urgent, routine. |

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

|  |  |
| --- | --- |
| **Condition** | Condition |
| Short name | Detailed information about conditions, problems or diagnoses |
| Definition | Use to record detailed information about conditions, problems or diagnoses recognized by a clinician. There are many uses including: recording a diagnosis during an encounter; populating a problem list or a summary statement, such as a discharge summary. |
| **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.patient** |  |
| Short name | Who has the condition? |
| Definition | Indicates the patient who the condition record is associated with. |
| **Condition.encounter** |  |
| Short name | Encounter when condition first asserted |
| Definition | Encounter during which the condition was first asserted. |
| Comments | 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". |
| **Condition.asserter** |  |
| Short name | Person who asserts this condition |
| Definition | Individual who is making the condition statement. |
| **Condition.dateRecorded** |  |
| Short name | When first entered |
| Definition | A date, when the condition statement was documented. |
| Comments | The date recorded 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.code** |  |
| Short name | Identification of the condition, problem or diagnosis |
| Definition | Identification of the condition, problem or diagnosis. |
| Binding Description | Identification of the condition or diagnosis. |
| **Condition.category** |  |
| Definition | A category assigned to the condition. |
| Comments | 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.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. |
| Binding Description | The verification status to support or decline the clinical status of the condition or diagnosis. |
| **Condition.severity** |  |
| Short name | Subjective severity of condition |
| Definition | A subjective assessment of the severity of the condition as evaluated by the clinician. |
| Comments | 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.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. |
| Comments | 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. |
| Comments | 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. |
| **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. |
| Comments | 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.bodySite** |  |
| Short name | Anatomical location, if relevant |
| Definition | The anatomical location where this condition manifests itself. |
| Comments | 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.notes** |  |
| 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

|  |  |
| --- | --- |
| **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 have age[x] or birth[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.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. |
| Comments | 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.status** |  |
| Definition | A code specifying a state of a family member history record. |
| Binding Description | A code that identifies the status of the family history record |
| **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 actual or approximate age of the relative at the time the family member history is recorded. |
| Requirements | While age can be calculated from date of birth, sometimes recording age directly is more natural for clinicians. |
| **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.note** |  |
| Short name | General note about related person |
| Definition | This property allows a non condition-specific note to be 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. |
| Comments | 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

|  |  |
| --- | --- |
| **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.category** |  |
| Short name | Clinical, administrative, etc. |
| Definition | Allows a 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.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.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.subject** |  |
| Short name | Who/What is flag about? |
| Definition | The patient, location, group, organization, or practitioner this flag is associated with. |
| **Flag.encounter** |  |
| Short name | Alert relevant during encounter |
| Definition | This alert is only relevant during the encounter. |
| **Flag.author** |  |
| Short name | Flag creator |
| Definition | The person, organization or device that created the flag. |
| **Flag.code** |  |
| Short name | Partially deaf, Requires easy open caps, No permanent address, etc. |
| Definition | The coded value or textual component of the flag to display to the user. |
| Binding Description | Detail codes identifying specific flagged issues |

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

|  |  |
| --- | --- |
| **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. |
| Comments | 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.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 anonymized 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[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.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.description** |  |
| Short name | What's the desired outcome? |
| Definition | Human-readable description of a specific desired objective of care. |
| Requirements | Without a description of what's trying to be achieved theelement has no purpose. |
| **Goal.status** |  |
| Definition | Indicates whether the goal has been reached and is still considered relevant. |
| Requirements | Allows measuring outcome and whether the goal needs to be further tracked. |
| Binding Description | Indicates whether the goal has been met and is still being targeted |
| **Goal.statusDate** |  |
| Short name | When goal status took effect |
| Definition | Identifies the current status took effect. E.g. When initially created, when achieved, when cancelled, etc. |
| Comments | 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. |
| Comments | This will typically be captured for statuses such as rejected, on-hold or cancelled, but could be present for others. |
| Binding Description | Codes to identify the reason for a goal's current status |
| **Goal.author** |  |
| Short name | Who's responsible for creating Goal? |
| Definition | Indicates whose goal this is - patient goal, practitioner goal, etc. |
| Comments | This is the individual reponsible for establishing the goal, not necessarily who recorded it. (For that, use the Provenance resource.). |
| **Goal.priority** |  |
| Definition | Identifies the mutually agreed level of importance associated with reaching/sustaining the goal. |
| Comments | Extensions are available to track priorities as established by each participant (E.g. 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.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 be linked explicitly 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. |
| Comments | 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.outcome** |  |
| Short name | What was end result of goal? |
| Definition | Identifies the change (or lack of change) at the point where the goal was deemed to be cancelled or achieved. |
| Comments | Note that this should not duplicate the goal status. |
| Requirements | Outcome tracking is a key aspect of care planning. |
| **Goal.outcome.result[x]** |  |
| Short name | Code or observation that resulted from goal |
| Definition | Details of what's changed (or not changed). |
| 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" |

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

|  |  |
| --- | --- |
| **Procedure** | Procedure |
| Short name | An action that was or is currently being performed on a patient |
| Definition | An action that is or was performed on a patient. This can be a physical 'thing' like an operation, or less invasive like counseling or hypnotherapy. |
| **Procedure.identifier** |  |
| Short name | External Ids for this procedure |
| Definition | This records identifiers associated with this procedure that are defined by business processed 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.subject** |  |
| Short name | Who procedure was performed on |
| Definition | The person on whom the procedure was performed. |
| **Procedure.status** |  |
| Definition | A code specifying the state of the procedure record. Generally this will be in-progress or completed state. |
| Binding Description | A code specifying the state of the procedure record |
| **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 can't be coded (e.g. "Laparoscopic Appendectomy"). |
| Binding Description | A code to identify a specific procedure |
| **Procedure.notPerformed** |  |
| 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. |
| Meaning when missing | If this is missing, then the procedure was performed |
| **Procedure.reasonNotPerformed** |  |
| Short name | Reason procedure not performed |
| Definition | A code indicating why the procedure was not performed. |
| Constraint Text | Reason not performed is only permitted if notPerformed indicator is true |
| Binding Description | A code that explains a reason why a procedure was not performed |
| **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.reason[x]** |  |
| Short name | Reason procedure performed |
| Definition | The reason why the procedure was performed. This may be due to a Condition, may be coded entity of some type, or may simply be present as text. |
| Comments | e.g. endoscopy for dilatation and biopsy, combination diagnosis and therapuetic. |
| Binding Description | A code that explains a reason why a procedure is required. |
| **Procedure.performer** |  |
| Short name | The people who performed the procedure |
| Definition | Limited to 'real' people rather than equipment. |
| **Procedure.performer.actor** |  |
| Short name | The reference to the practitioner |
| Definition | The practitioner who was involved in the procedure. |
| **Procedure.performer.role** |  |
| Short name | The role the actor was in |
| Definition | E.g. surgeon, anaethetist, endoscopist. |
| Binding Description | A code that identifies a role of a performer in a procedure process |
| **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.encounter** |  |
| Short name | The encounter when procedure performed |
| Definition | The encounter during which the procedure was performed. |
| **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. |
| Comments | Ties a procedure to where the records are kept. |
| **Procedure.outcome** |  |
| Short name | What was result of procedure? |
| Definition | What was the outcome of the procedure - did it resolve reasons why the procedure was performed? |
| Comments | If outcome contains the narrative text only, it can be captured using the CodeableConcept.text. |
| Binding Description | An outcome of a procedure - whether it resolveed the reasons why the procedure was performed |
| **Procedure.report** |  |
| Short name | Any report that results from the procedure |
| Definition | This could be a histology result. There could potentially be multiple reports - e.g. if this was a procedure that made multiple biopsies. |
| **Procedure.complication** |  |
| Short name | Complication following the procedure |
| Definition | Any complications that occurred during the procedure, or in the immediate post-operative period. These are generally tracked separately from the notes, which typically will describe the procedure itself rather than any 'post procedure' issues. |
| Comments | If complications are only expressed by the narrative text, it can be captured using the CodeableConcept.text. |
| **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 potentially could 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.request** |  |
| Short name | A request for this procedure |
| Definition | A reference to a resource that contains about this procedure's request. |
| **Procedure.notes** |  |
| Short name | Additional information about 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.used** |  |
| Short name | Items used during procedure |
| Definition | Identifies medications, devices and other substance used as part of the procedure. |
| Comments | For devices actually implanted or removed, use Procedure.device. |
| Requirements | Used for tracking contamination, etc. |

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

|  |  |
| --- | --- |
| **ProcedureRequest** | Procedure Request |
| Short name | A request for a procedure to be performed |
| Definition | A request for a procedure to be performed. May be a proposal or an order. |
| **ProcedureRequest.identifier** |  |
| Short name | Identifier |
| Definition | Identifiers assigned to this order by the order or by the receiver. |
| **ProcedureRequest.subject** |  |
| Short name | Subject |
| Definition | The patient who will receive the procedure or a group of subjects. |
| **ProcedureRequest.code** |  |
| Short name | Procedure Code |
| Definition | The specific procedure that is ordered. Use text if the exact nature of the procedure can't be coded. |
| Binding Description | A code to identify a specific procedure |
| **ProcedureRequest.bodySite** |  |
| Short name | Target body sites |
| Definition | Indicates the sites on the subject's body where the procedure should be performed ( i.e. the target sites). |
| Comments | Only used if not implicit in 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 anatomical location |
| **ProcedureRequest.reason[x]** |  |
| Short name | Indication |
| Definition | The reason why the procedure is proposed or ordered. This procedure request may be motivated by a Condition for instance. |
| Binding Description | A code that explains a reason why a procedure is required. |
| **ProcedureRequest.scheduled[x]** |  |
| Short name | Procedure timing schedule |
| Definition | The timing schedule for the proposed or ordered procedure. 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". |
| **ProcedureRequest.encounter** |  |
| Short name | Encounter |
| Definition | The encounter within which the procedure proposal or request was created. |
| **ProcedureRequest.performer** |  |
| Short name | Performer |
| Definition | E.g. surgeon, anaethetist, endoscopist. |
| **ProcedureRequest.status** |  |
| Definition | The status of the order. |
| Binding Description | The status of the request |
| **ProcedureRequest.notes** |  |
| Short name | Notes |
| Definition | Any other notes associated with this proposal or order - e.g., provider instructions. |
| **ProcedureRequest.asNeeded[x]** |  |
| Short name | PRN |
| Definition | If a CodeableConcept is present, it indicates the pre-condition for performing the procedure. |
| 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.orderedOn** |  |
| Short name | When Requested |
| Definition | The time when the request was made. |
| **ProcedureRequest.orderer** |  |
| Short name | Ordering Party |
| Definition | The healthcare professional responsible for proposing or ordering the procedure. |
| **ProcedureRequest.priority** |  |
| Definition | The clinical priority associated with this order. |
| Binding Description | The priority of the request |

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

|  |  |
| --- | --- |
| **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 | If root group must be "required" |
| Constraint Text | The link ids for groups and questions must be unique within the questionnaire |
| **Questionnaire.identifier** |  |
| Short name | External Ids for this questionnaire |
| Definition | This records identifiers associated with this question set that are defined by business processed 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 id 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. |
| Synonym | Date Created |
| Synonym | Date published |
| Synonym | Date Issued |
| Synonym | Date updated |
| **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.subjectType** |  |
| Short name | Resource that can be subject of QuestionnaireResponse |
| Definition | Identifies the types of subjects that can be the subject of the questionnaire. |
| Comments | If none are specified, then the subject is unlimited. |
| Binding Description | One of the resource types defined as part of FHIR |
| **Questionnaire.group** |  |
| Short name | Grouped questions |
| Definition | A collection of related questions (or further groupings of questions). |
| Comments | The Questionnaire itself has one "root" group with the actual contents of the Questionnaire. Information on this root group applies to the questionnaire as a whole. |
| Requirements | Need to be able to logically group answers to grouped questions. |
| Synonym | Section |
| Constraint Text | Groups may either contain questions or groups but not both |
| **Questionnaire.group.linkId** |  |
| Short name | To link questionnaire with questionnaire response |
| Definition | An identifier that is unique within the questionnaire allowing linkage to the equivalent group in a QuestionnaireResponse resource. |
| Comments | May be omitted if there is no expectation to link answers back to a questionnaire. This \*can\* be a meaningful id (e.g. a LOINC code) but is not intended to have any meaning. GUIDs or sequential numbers are appropriate here. |
| Requirements | [[[QuestionnaireResponse]]] does not require omitted groups to be included and may have some groups that repeat, so linkage based on position alone is not sufficient. |
| **Questionnaire.group.title** |  |
| Short name | Name to be displayed for group |
| Definition | The human-readable name for this section of the questionnaire. |
| Comments | The title of the "root" group is the title for the questionnaire. |
| Requirements | When including text for the questionnaire with the answers, sections may have a section header. |
| **Questionnaire.group.concept** |  |
| Short name | Concept that represents this section on a questionnaire |
| Definition | Identifies a how this group of questions is known in a particular terminology such as LOINC. |
| Comments | The code(s) for the "root" group apply to the questionnaire as a whole. |
| Requirements | Allows linking of groups of questions (and complete questionnaires) to formal terminologies. |
| Binding Description | Codes for groupings of questionnaire questions |
| **Questionnaire.group.text** |  |
| Short name | Additional text for the group |
| Definition | Additional text for the group, used for display purposes. |
| Comments | Common extensions are defined for more specialized types of display text. |
| Requirements | When including text for the questionnaire, each section may contain additional explanations are background text. |
| **Questionnaire.group.required** |  |
| Short name | Must group be included in data results? |
| Definition | If true, indicates that the group must be present and have required questions within it answered. If false, the group may be skipped when answering the questionnaire. |
| **Questionnaire.group.repeats** |  |
| Short name | Whether the group may repeat |
| Definition | Whether the group may occur multiple times in the instance, containing multiple sets of answers. |
| Requirements | Groups may be used to create set of (related) questions that can be repeated to give multiple answers to such a set. |
| **Questionnaire.group.group** |  |
| Short name | Nested questionnaire group |
| Definition | A sub-group within a group. The ordering of groups within this group is relevant. |
| Requirements | Reports can consist of complex nested groups. |
| **Questionnaire.group.question** |  |
| Short name | Questions in this group |
| Definition | Set of questions within this group. The order of questions within the group is relevant. |
| Requirements | Must register answers to questions. |
| Synonym | Responses |
| Synonym | Contents |
| Constraint Text | A question must use either option or options, not both |
| **Questionnaire.group.question.linkId** |  |
| Short name | To link questionnaire with questionnaire response |
| Definition | An identifier that is unique within the questionnaire allowing linkage to the equivalent group in a [[[QuestionnaireResponse]]] resource. |
| Comments | May be omitted if there is no expectation to link answers back to a questionnaire. This \*can\* be a meaningful id (e.g. a LOINC code) but is not intended to have any meaning. GUIDs or sequential numbers are appropriate here. |
| Requirements | [[[QuestionnaireResponse]]] does not require omitted groups to be included and may have some groups that repeat, so linkage based on position alone is not sufficient. |
| **Questionnaire.group.question.concept** |  |
| Short name | Concept that represents this question on a questionnaire |
| Definition | Identifies a how this question is known in a particular terminology such as LOINC. |
| Requirements | Allows linking of questions (and their answers) to formal terminologies. |
| Binding Description | Codes corresponding to individual questions |
| **Questionnaire.group.question.text** |  |
| Short name | Text of the question as it is shown to the user |
| Definition | The actual question as shown to the user to prompt them for an answer. |
| Comments | Common extensions are defined for more specialized types of display text. |
| Requirements | When including text for the questionnaire, each question may contain its actual question display text. |
| Synonym | Question |
| **Questionnaire.group.question.type** |  |
| Definition | The expected format of the answer, e.g. the type of input (string, integer) or whether a (multiple) choice is expected. |
| Comments | Additional constraints on the type of answer can be conveyed by extensions. |
| Requirements | Defines the format in which the user is to be prompted for the answer. |
| Binding Description | The expected format of an answer |
| **Questionnaire.group.question.required** |  |
| Short name | Must question be answered in data results? |
| Definition | If true, indicates that the question must be answered and have required groups within it also present. If false, the question and any contained groups may be skipped when answering the questionnaire. |
| **Questionnaire.group.question.repeats** |  |
| Short name | Can question have multiple answers? |
| Definition | If true, the question may have more than one answer. |
| Comments | Whether the question itself will be displayed for each answer is a rendering choice typically based on whether there are nested groups. |
| Requirements | Used for "check all that apply" types of questions or "list your top 3", etc. |
| **Questionnaire.group.question.options** |  |
| Short name | Valueset containing permitted answers |
| Definition | Reference to a valueset containing the list of codes representing permitted answers for the question. |
| Comments | LOINC defines many useful value sets for questionnaire response. See [LOINC Answer Lists] (loinc.html#alist). |
| **Questionnaire.group.question.option** |  |
| Short name | Permitted answer |
| Definition | For a "choice" question, identifies one of the permitted answers for the question. |
| Binding Description | Allowed values to answer questions |
| **Questionnaire.group.question.group** |  |
| Short name | Nested questionnaire group |
| Definition | Nested group, containing nested question for this question. The order of groups within the question is relevant. |
| Requirements | It is useful to have "sub-questions", questions which normally appear when certain answers are given and which collect additional details. |

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

|  |  |
| --- | --- |
| **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 |
| **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.questionnaire** |  |
| Short name | Form being answered |
| Definition | Indicates the Questionnaire resource that defines the form for which answers are being provided. |
| 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 questionnaires may possibly be gathered during multiple sessions and altered after considered being finished. Questionnaires 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. |
| Requirements | Must know the subject context. |
| Synonym | Patient |
| Synonym | Focus |
| **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. |
| Comments | 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 |
| **QuestionnaireResponse.authored** |  |
| Short name | Date this version was authored |
| Definition | The date and/or time that this version of the questionnaire response was authored. |
| Comments | 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.source** |  |
| Short name | The person who answered the questions |
| Definition | The person who answered the questions about the subject. |
| Comments | 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.encounter** |  |
| Short name | Primary encounter during which the answers were collected |
| Definition | Encounter during which this set of questionnaire response were collected. When there were multiple encounters, this is the one considered most relevant to the context of the answers. |
| Requirements | Some institutions track questionnaires under a specific encounter. |
| **QuestionnaireResponse.group** |  |
| Short name | Grouped questions |
| Definition | A group of questions to a possibly similarly grouped set of questions in the questionnaire response. |
| Comments | The Questionnaire itself has one "root" group with the actual contents of the Questionnaire. |
| Requirements | Need to be able to logically group answers to grouped questions. |
| Constraint Text | Groups may either contain questions or groups but not both |
| **QuestionnaireResponse.group.linkId** |  |
| Short name | Corresponding group within Questionnaire |
| Definition | Identifies the group from the Questionnaire that corresponds to this group in the QuestionnaireResponse resource. |
| Requirements | Groups can repeat in the answers, so a direct 1..1 correspondence may not exist - requiring correspondence by id. |
| **QuestionnaireResponse.group.title** |  |
| Short name | Name for this group |
| Definition | Text that is displayed above the contents of the group. |
| Comments | On the root group, this is the title of the questionnaire. |
| Requirements | When including text for the questionnaire with the answers, sections may have a section header. |
| **QuestionnaireResponse.group.text** |  |
| Short name | Additional text for the group |
| Definition | Additional text for the group, used for display purposes. |
| Requirements | When including text for the questionnaire, each section may contain additional explanations are background text. |
| **QuestionnaireResponse.group.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.group.group** |  |
| Short name | Nested questionnaire response group |
| Definition | A sub-group within a group. The ordering of groups within this group is relevant. |
| Requirements | Reports can consist of complex nested groups. |
| **QuestionnaireResponse.group.question** |  |
| Short name | Questions in this group |
| Definition | Set of questions within this group. The order of questions within the group is relevant. |
| Requirements | Must register answers to questions. |
| Synonym | Responses |
| Synonym | Contents |
| **QuestionnaireResponse.group.question.linkId** |  |
| Short name | Corresponding question within Questionnaire |
| Definition | Identifies the question from the Questionnaire that corresponds to this question in the QuestionnaireResponse resource. |
| Requirements | Groups can repeat in the answers, so a direct 1..1 correspondence may not exist - requiring correspondence by id. |
| **QuestionnaireResponse.group.question.text** |  |
| Short name | Text of the question as it is shown to the user |
| Definition | The actual question as shown to the user to prompt them for an answer. |
| Requirements | When including text for the questionnaire, each question may contain its actual question display text. |
| **QuestionnaireResponse.group.question.answer** |  |
| Short name | The response(s) to the question |
| Definition | The respondent's answer(s) to the question. |
| Comments | We nest the value because we can't have a repeating structure that has variable type. |
| **QuestionnaireResponse.group.question.answer.value[x]** |  |
| Short name | Single-valued answer to the question |
| Definition | The answer (or one of the answers) provided by the respondant to the question. |
| Comments | 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 | Need to be able to retain a single-valued answer to a question. |
| **QuestionnaireResponse.group.question.answer.group** |  |
| Short name | Nested questionnaire group |
| Definition | Nested group, containing nested question for this question. The order of groups within the question is relevant. |
| Requirements | It is useful to have "sub-questions", questions which normally appear when certain answers are given and which collect additional details. |

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

|  |  |
| --- | --- |
| **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 organisation. |
| Synonym | ReferralRequest TransferOfCare Request |
| **ReferralRequest.status** |  |
| Definition | The workflow status of the referral or transfer of care request. |
| Binding Description | The status of the referral |
| **ReferralRequest.identifier** |  |
| Short name | Business Identifier |
| Definition | Business Id that uniquely identifies the referral/care transfer request instance. |
| **ReferralRequest.date** |  |
| Short name | Date of creation/activation |
| Definition | Date/DateTime of creation for draft requests and date of activation for active requests. |
| **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. |
| Comments | Examples of referral type: - consultation; second opinion; third opinion - Assume management - Request for procedure(s) HL7 v2.8 Example - Table 0336: S = second opinion p = patient preference o = provider ordered w = work load. |
| **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. |
| Comments | Examples: Cardiology Gastroenterology Diabetology. |
| **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. |
| **ReferralRequest.patient** |  |
| Short name | Patient referred to care or transfer |
| Definition | The patient who is the subject of a referral or transfer of care request. |
| Comments | Referral of family, group or community is to be catered for by profiles. |
| **ReferralRequest.requester** |  |
| Short name | Requester of referral / transfer of care |
| Definition | The healthcare provider or provider organization who/which initaited the referral/transfer of care request. Can also be Patient (a self referral). |
| **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. |
| Comments | There will be a primary receiver. But the request can be received by any number of "copied to" providers or organisations. |
| **ReferralRequest.encounter** |  |
| Short name | Originating encounter |
| Definition | The encounter at which the request for referral or transfer of care is initiated. |
| **ReferralRequest.dateSent** |  |
| Short name | Date referral/transfer of care request is sent |
| Definition | Date/DateTime the request for referral or transfer of care is sent by the author. |
| **ReferralRequest.reason** |  |
| Short name | Reason for referral / Transfer of care request |
| Definition | Description of clinical condition indicating why referral/transfer of care is requested. |
| Comments | Examples: "2nd degree AV block" Oral Health example ReferralReasonCode: 01 = Pathological Anomalies 02 = Disabled (physical or mental) 03 = Complexity of Treatment 04 = Seizure Disorders 05 = Extensive Surgery 06 = Surgical Complexity 07 = Rampant decay 08 = Medical History (to provide details upon request) 09 = Temporal Mandibular Joint Anomalies 10 = Accidental Injury 11 = Anaesthesia complications (local or general) 12 = Developmental Anomalies 13 = Behavioral Management. |
| **ReferralRequest.description** |  |
| Short name | A textual description of the referral |
| Definition | The reason gives a short description of why the referral is being made, the description expands on this to support a more complete clinical summary. |
| Comments | This would be a good candidate for a 'markdown' data type. |
| **ReferralRequest.serviceRequested** |  |
| Short name | What actions are requested as part of referral? |
| Definition | The service(s) that is/are requested to be provided to the patient. |
| Comments | Examples: "cardiac pacemaker insertion" HL7 v3 Concept domain - ReferralReasonCode examples: - Specialized medical assistance - Other care requirement. |
| **ReferralRequest.supportingInformation** |  |
| 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. |
| Comments | Examples include: 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.fulfillmentTime** |  |
| Short name | Requested service(s) fulfillment time |
| Definition | The period of time within which the services identified in the referral/transfer of care is specified or required to occur. |
| 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 | EffectiveTime |

# Pharmacy

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

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| --- | --- |
| **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. |
| Comments | Depending on the context of use, the code that was actually selected by the user (prescriber, dispenser, etc.) should be marked as â€œprimaryâ€. Other codes can only be literal translations to alternative code systems, or codes at a lower level of granularity (e.g. a generic code for a vendor-specific primary one). |
| Binding Description | A code that defines the type of a medication |
| **Medication.isBrand** |  |
| Short name | True if a brand |
| Definition | Set to true if the item is attributable to a specific manufacturer. |
| **Medication.manufacturer** |  |
| Short name | Manufacturer of the item |
| Definition | Describes the details of the manufacturer. |
| **Medication.product** |  |
| Short name | Administrable medication details |
| Definition | Information that only applies to products (not packages). |
| **Medication.product.form** |  |
| Definition | Describes the form of the item. Powder; tablets; carton. |
| Binding Description | The form of a medication |
| **Medication.product.ingredient** |  |
| Short name | Active or inactive ingredient |
| Definition | Identifies a particular constituent of interest in the product. |
| Comments | The ingredients need not be a complete list; usually only active ingredients are listed. |
| **Medication.product.ingredient.item** |  |
| Short name | The product contained |
| Definition | The actual ingredient - either a substance (simple ingredient) or another medication. |
| **Medication.product.ingredient.amount** |  |
| Short name | How much ingredient in product |
| Definition | Specifies how many (or how much) of the items there are in this Medication. E.g. 250 mg per tablet. |
| **Medication.product.batch** |  |
| Definition | Information about a group of medication produced or packaged from one production run. |
| **Medication.product.batch.lotNumber** |  |
| Definition | The assigned lot number of a batch of the specified product. |
| **Medication.product.batch.expirationDate** |  |
| Definition | When this specific batch of product will expire. |
| **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 | 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** |  |
| Short name | A product in the package |
| Definition | Identifies one of the items in the package. |
| **Medication.package.content.amount** |  |
| Short name | How many are in the package? |
| Definition | The amount of the product that is in the package. |

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

|  |  |
| --- | --- |
| **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. |
| **MedicationAdministration.identifier** |  |
| Short name | External identifier |
| Definition | External identifier - FHIR will generate its own internal IDs (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.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.patient** |  |
| Short name | Who received medication? |
| Definition | The person or animal to whom the medication was given. |
| **MedicationAdministration.practitioner** |  |
| Short name | Who administered substance? |
| Definition | The individual who was responsible for giving the medication to the patient. |
| **MedicationAdministration.encounter** |  |
| Short name | Encounter administered as part of |
| Definition | The visit or admission the or other contact between patient and health care provider the medication administration was performed as part of. |
| **MedicationAdministration.prescription** |  |
| Short name | Order administration performed against |
| Definition | The original request, instruction or authority to perform the administration. |
| **MedicationAdministration.wasNotGiven** |  |
| 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. |
| Constraint Text | Reason not given is only permitted if wasNotGiven is true |
| Binding Description | A set of codes indicating the reason why the MedicationAdministration is negated. |
| **MedicationAdministration.reasonGiven** |  |
| Short name | Reason administration performed |
| Definition | A code indicating why the medication was given. |
| Constraint Text | Reason given is only permitted if wasNotGiven is false |
| Binding Description | A set of codes indicating the reason why the MedicationAdministration was made. |
| **MedicationAdministration.effectiveTime[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.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. |
| Comments | 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. Note: do not use Medication.name to describe the administered medication. When the only available information is a text description of the medication, Medication.code.text should be used. |
| **MedicationAdministration.device** |  |
| Short name | Device used to administer |
| Definition | The device used in administering the medication to the patient. E.g. 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.quantity and dosage.rate |
| **MedicationAdministration.dosage.text** |  |
| Short name | Dosage Instructions |
| Definition | Free text dosage instructions can be used for cases where the instructions are too complex to code. When coded instructions are present, the free text instructions may still be present for display to humans taking or administering the medication. |
| **MedicationAdministration.dosage.site[x]** |  |
| Short name | Body site administered to |
| Definition | A coded specification of the anatomic site where the medication first entered the body. E.g. "left arm". |
| 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. E.g. 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. Examples: Slow Push, Deep IV. 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.quantity** |  |
| Short name | Amount administered in one 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. |
| Comments | If the administration is not instantaneous (rate is present or timing has a duration), this can be specified to convey the total amount administered over period of time of a single administration (as indicated by schedule). |
| **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. Currently we do not specify a default of '1' in the denominator, but this is being discussed. Other examples: 200 mcg/min or 200 mcg/1 minute; 1 liter/8 hours. |
| Comments | If the rate changes over time, and you want to capture this in Medication Administration, then each change should be captured as a distinct Medication Administration, 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. |

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

|  |  |
| --- | --- |
| **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. |
| 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.status** |  |
| Definition | A code specifying the state of the set of dispense events. |
| Binding Description | A code specifying the state of the dispense event. |
| **MedicationDispense.patient** |  |
| Short name | Who the dispense is for |
| Definition | A link to a resource representing the person to whom the medication will be given. |
| Comments | SubstanceAdministration->subject->Patient. |
| **MedicationDispense.dispenser** |  |
| Short name | Practitioner responsible for dispensing medication |
| Definition | The individual responsible for dispensing the medication. |
| **MedicationDispense.authorizingPrescription** |  |
| Short name | Medication order that authorizes the dispense |
| Definition | Indicates the medication order that is being dispensed against. |
| **MedicationDispense.type** |  |
| Short name | Trial fill, partial fill, emergency fill, etc. |
| 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 | Indicates the type of dispensing event that is performed. Examples include: 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 | Days Supply |
| Definition | The amount of medication expressed as a timing amount. |
| **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. |
| Comments | 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. Note: do not use Medication.name to describe the dispensed medication. When the only available information is a text description of the medication, Medication.code.text should be used. |
| **MedicationDispense.whenPrepared** |  |
| Short name | Dispense processing time |
| Definition | The time when the dispensed product was packaged and reviewed. |
| **MedicationDispense.whenHandedOver** |  |
| Short name | Handover time |
| 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 carer, 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 | Medicine administration instructions to the patient/carer |
| Definition | Indicates how the medication is to be used by the patient. |
| Comments | When the dose or rate is intended to change over the entire administration period, eg. Tapering dose prescriptions, multiple instances of dosage instructions will need to be supplied to convey the different doses/rates. |
| **MedicationDispense.dosageInstruction.text** |  |
| Short name | Dosage Instructions |
| Definition | Free text dosage instructions can be used for cases where the instructions are too complex to code. When coded instructions are present, the free text instructions may still be present for display to humans taking or administering the medication. |
| **MedicationDispense.dosageInstruction.additionalInstructions** |  |
| Short name | E.g. "Take with food" |
| Definition | Additional instructions such as "Swallow with plenty of water" which may or may not be coded. |
| **MedicationDispense.dosageInstruction.timing** |  |
| Short name | When medication should be administered |
| Definition | The timing schedule for giving the medication to the patient. 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". |
| **MedicationDispense.dosageInstruction.asNeeded[x]** |  |
| Short name | Take "as needed" f(or x) |
| Definition | Indicates whether the Medication is only taken when needed within a specific dosing schedule (Boolean option), or it indicates the precondition for taking the Medication (CodeableConcept). Specifically if 'boolean' datatype is selected, then the following logic applies: If set to True, this indicates that the medication is only taken when needed, within the specified schedule. |
| Binding Description | A coded concept identifying the precondition that should be met or evaluated prior to consuming or administering a medication dose. For example "pain", "30 minutes prior to sexual intercourse", "on flare-up" etc. |
| **MedicationDispense.dosageInstruction.site[x]** |  |
| Short name | Body site to administer to |
| Definition | A coded specification of the anatomic site where the medication first enters the body. |
| Binding Description | A coded concept describing the site location the medicine enters into or onto the body |
| **MedicationDispense.dosageInstruction.route** |  |
| Short name | How drug should enter body |
| Definition | A code specifying the route or physiological path of administration of a therapeutic agent into or onto a subject. |
| 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 |
| **MedicationDispense.dosageInstruction.method** |  |
| Short name | Technique for administering medication |
| 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. Examples: Slow Push, Deep IV. 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 |
| **MedicationDispense.dosageInstruction.dose[x]** |  |
| Short name | Amount of medication per dose |
| Definition | The amount of therapeutic or other substance given at one administration event. |
| Comments | Note that this specifies the quantity of the specified medication, not the quantity of active ingredient(s). The prescribed strength can be calculated by multiplying the doseQuantity by the strength of each active ingredient in the prescribed Medication. If the administration is not intended to be instantaneous (rate is present or timing has a duration), this can be specified to convey the total amount to be administered over the period of time as indicated by the schedule. |
| **MedicationDispense.dosageInstruction.rate[x]** |  |
| Short name | Amount of medication 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. Currently we do not specify a default of '1' in the denominator, but this is being discussed. Other examples: 200 mcg/min or 200 mcg/1 minute; 1 liter/8 hours. |
| **MedicationDispense.dosageInstruction.maxDosePerPeriod** |  |
| Short name | Upper limit on medication per unit of time |
| Definition | The maximum total quantity of a therapeutic substance that may be administered to a subject over the period of time, e.g. 1000mg in 24 hours. |
| **MedicationDispense.substitution** |  |
| Short name | Deals with substitution of one medicine for another |
| Definition | Indicates whether or not substitution was made as part of the dispense. In some cases substitution will be expected but doesn't happen, in other cases substitution is not expected but does happen. This block explains what substitition did or did not happen and why. |
| **MedicationDispense.substitution.type** |  |
| Short name | Type of substitiution |
| 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. |
| Comments | rename. |

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

|  |  |
| --- | --- |
| **MedicationOrder** | Medication Order |
| Short name | Prescription of medication to for patient |
| Definition | An order for both supply of the medication and the instructions for administration of the medication to a patient. The resource is called "MedicationOrder" rather than "MedicationPrescription" to generalize the use across inpatient and outpatient settings as well as for care plans, etc. |
| Synonym | Prescription |
| **MedicationOrder.identifier** |  |
| Short name | External identifier |
| 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 erntire workflow process where records have to be tracked through an entire system. |
| **MedicationOrder.dateWritten** |  |
| Short name | When prescription was authorized |
| Definition | The date (and perhaps time) when the prescription was written. |
| **MedicationOrder.status** |  |
| Definition | A code specifying the state of the order. Generally this will be active or completed state. |
| Binding Description | A code specifying the state of the prescribing event. Describes the lifecycle of the prescription. |
| **MedicationOrder.dateEnded** |  |
| Short name | When prescription was stopped |
| Definition | The date (and perhaps time) when the prescription was stopped. |
| **MedicationOrder.reasonEnded** |  |
| Short name | Why prescription was stopped |
| Definition | The reason why the prescription was stopped, if it was. |
| **MedicationOrder.patient** |  |
| Short name | Who prescription is for |
| Definition | A link to a resource representing the person to whom the medication will be given. |
| Comments | SubstanceAdministration->subject->Patient. |
| **MedicationOrder.prescriber** |  |
| Short name | Who ordered the medication(s) |
| Definition | The healthcare professional responsible for authorizing the prescription. |
| **MedicationOrder.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. |
| Comments | SubstanceAdministration->component->EncounterEvent. |
| **MedicationOrder.reason[x]** |  |
| Short name | Reason or indication for writing the prescription |
| Definition | Can be the reason or the indication for writing the prescription. |
| **MedicationOrder.note** |  |
| Short name | Information about the prescription |
| Definition | Extra information about the prescription that could not be conveyed by the other attributes. |
| **MedicationOrder.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. |
| Comments | 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. Note: do not use Medication.name to describe the prescribed medication. When the only available information is a text description of the medication, Medication.code.text should be used. |
| **MedicationOrder.dosageInstruction** |  |
| Short name | How medication should be taken |
| Definition | Indicates how the medication is to be used by the patient. |
| Comments | When the dose or rate is intended to change over the entire administration period, eg. Tapering dose prescriptions, multiple instances of dosage instructions will need to be supplied to convey the different doses/rates. Another common example in institutional settings is 'titration' of an IV medication dose to maintain a specific stated hemodynamic value or range e.g. durg x to be administered to maintain AM (arterial mean) greater than 65. |
| **MedicationOrder.dosageInstruction.text** |  |
| Short name | Dosage instructions expressed as text |
| Definition | Free text dosage instructions can be used for cases where the instructions are too complex to code. The content of this attribute does not include the name or description of the medication. When coded instructions are present, the free text instructions may still be present for display to humans taking or administering the medication. It is expected that the text instructions will always be populated. If the dosage.timing attribute is also populated, then the dosage.text should reflect the same information as the timing. |
| **MedicationOrder.dosageInstruction.additionalInstructions** |  |
| Short name | Supplemental instructions - e.g. "with meals" |
| Definition | Additional instructions such as "Swallow with plenty of water" which may or may not be coded. |
| **MedicationOrder.dosageInstruction.timing** |  |
| Short name | When medication should be administered |
| Definition | The timing schedule for giving the medication to the patient. 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". This attribute may not always be populated while the DosageInstruction.text is expected to be populated. If both are populated, then the DosageInstruction.text should reflect the content of the Dosage.timing. |
| **MedicationOrder.dosageInstruction.asNeeded[x]** |  |
| Short name | Take "as needed" (for x) |
| Definition | Indicates whether the Medication is only taken when needed within a specific dosing schedule (Boolean option), or it indicates the precondition for taking the Medication (CodeableConcept). Specifically if 'boolean' datatype is selected, then the following logic applies: If set to True, this indicates that the medication is only taken when needed, within the specified schedule. |
| Binding Description | A coded concept identifying the precondition that should be met or evaluated prior to consuming or administering a medication dose. For example "pain", "30 minutes prior to sexual intercourse", "on flare-up" etc. |
| **MedicationOrder.dosageInstruction.site[x]** |  |
| Short name | Body site to administer to |
| Definition | A coded specification of the anatomic site where the medication first enters the body. |
| Binding Description | A coded concept describing the site location the medicine enters into or onto the body |
| **MedicationOrder.dosageInstruction.route** |  |
| Short name | How drug should enter body |
| Definition | A code specifying the route or physiological path of administration of a therapeutic agent into or onto a patient. |
| 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. |
| **MedicationOrder.dosageInstruction.method** |  |
| Short name | Technique for administering medication |
| Definition | A coded value indicating the method by which the medication is introduced into or onto the body. Most commonly used for injections. Examples: Slow Push; Deep IV. Terminologies used often pre-coordinate this term with the route and or form of administration. |
| Binding Description | A coded concept describing the technique by which the medicine is administered |
| **MedicationOrder.dosageInstruction.dose[x]** |  |
| Short name | Amount of medication per dose |
| Definition | The amount of therapeutic or other substance given at one administration event. |
| Comments | Note that this specifies the quantity of the specified medication, not the quantity for each active ingredient(s). Each ingredient amount can be communicated in the Medication resource. For example, if one wants to communicate that a tablet was 375 mg, where the dose was one tablet, you can use the Medication resource to document that the tablet was comprised of 375 mg of drug xyz. Alternatively if the dose was 375 mg, then you may only need to use the Medication resource to indicate this was a tablet. If the example were an IV such as dopamine and you wanted to communicate that 400mg of dopamine was mixed in 500 ml of some IV solution, then this would all be communicated in the Medication resource. If the administration is not intended to be instantaneous (rate is present or timing has a duration), this can be specified to convey the total amount to be administered over the period of time as indicated by the schedule e.g. 500 ml in dose, with timing used to convey that this should be done over 4 hours. |
| **MedicationOrder.dosageInstruction.rate[x]** |  |
| Short name | Amount of medication 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. Currently we do not specify a default of '1' in the denominator, but this is being discussed. Other examples: 200 mcg/min or 200 mcg/1 minute; 1 liter/8 hours. |
| Comments | It is possible to supply both a rate and a doseQuantity to provide full details about how the medication is to be administered and supplied. If the rate is intended to change over time, depending on local rules/regulations, each change should be captured as a new version of the MedicationOrder with an updated rate, or captured with a new MedicationOrder with the new rate. |
| **MedicationOrder.dosageInstruction.maxDosePerPeriod** |  |
| Short name | Upper limit on medication per unit of time |
| Definition | The maximum total quantity of a therapeutic substance that may be administered to a subject over the period of time. E.g. 1000mg in 24 hours. |
| Comments | This is intended for use as an adjunct to the dosage when there is an upper cap. For example "2 tablets every 4 hours to a maximum of 8/day". |
| **MedicationOrder.dispenseRequest** |  |
| Short name | Medication supply authorization |
| Definition | Indicates the specific details for the dispense or medication supply part of a medication order (also known as a Medication Prescription). 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. |
| **MedicationOrder.dispenseRequest.medication[x]** |  |
| Short name | Product to be supplied |
| 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. |
| Comments | 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. |
| **MedicationOrder.dispenseRequest.validityPeriod** |  |
| Short name | Time period supply is authorized for |
| Definition | Design Comments: This indicates the validity period of a prescription (stale dating the Prescription) It reflects the prescriber 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. Rationale: Indicates when the Prescription becomes valid, and when it ceases to be a dispensable Prescription. |
| **MedicationOrder.dispenseRequest.numberOfRepeatsAllowed** |  |
| Short name | # of refills authorized |
| Definition | An integer indicating the number of additional times (aka refills or repeats) 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. |
| Comments | If displaying "number of authorized refills", subtract 1 from this number. |
| **MedicationOrder.dispenseRequest.quantity** |  |
| Short name | Amount of medication to supply per dispense |
| Definition | The amount that is to be dispensed for one fill. |
| **MedicationOrder.dispenseRequest.expectedSupplyDuration** |  |
| Short name | 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. 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. |
| **MedicationOrder.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. |
| **MedicationOrder.substitution.type** |  |
| Definition | A code signifying whether a different drug should be 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 |
| **MedicationOrder.substitution.reason** |  |
| Short name | Why should substitution (not) 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. |
| **MedicationOrder.priorPrescription** |  |
| Short name | An order/prescription that this supersedes |
| Definition | A link to a resource representing an earlier order or prescription that this order supersedes. |

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

|  |  |
| --- | --- |
| **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 medication statements 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 patientsâ€™ 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 patientâ€™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. |
| Constraint Text | Reason not taken is only permitted if wasNotTaken is true |
| Constraint Text | Reason for use is only permitted if wasNotTaken is false |
| **MedicationStatement.identifier** |  |
| Short name | External Identifier |
| Definition | External identifier - FHIR will generate its own internal IDs (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.patient** |  |
| Short name | Who was/is taking medication |
| Definition | The person or animal who is /was taking the medication. |
| **MedicationStatement.informationSource** |  |
| Definition | The person who provided the information about the taking of this medication. |
| **MedicationStatement.dateAsserted** |  |
| Short name | When the statement was asserted? |
| Definition | The date when the medication statement was asserted by the information source. |
| **MedicationStatement.status** |  |
| Definition | A code representing the patient or other sourceâ€™s judgment about the state of the medication used that this statement is about. Generally this will be active or completed. |
| Binding Description | A set of codes indicating the current status of a MedicationStatement |
| **MedicationStatement.wasNotTaken** |  |
| Short name | True if medication is/was not being taken |
| Definition | Set this to true if the record is saying that the medication was NOT taken. |
| Meaning when missing | If this is missing, then the medication was taken |
| **MedicationStatement.reasonNotTaken** |  |
| Short name | True if asserting medication was not given |
| Definition | A code indicating why the medication was not taken. |
| Binding Description | A set of codes indicating the reason why the MedicationAdministration is negated |
| **MedicationStatement.reasonForUse[x]** |  |
| Definition | A reason for why the medication is being/was taken. |
| **MedicationStatement.effective[x]** |  |
| Short name | Over what period was medication consumed? |
| 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' attribute is true). |
| Comments | If the medication is still being taken at the time the statement is recorded, the "end" date will be omitted. |
| **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.supportingInformation** |  |
| Short name | Additional supporting information |
| Definition | Allows linking the MedicationStatement to the underlying MedicationOrder, or to other information that supports the MedicationStatement. |
| Comments | Likely references would be to MedicationOrder, MedicationDispense, Claim, Observation or QuestionnaireAnswers. |
| **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. |
| Comments | 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. Note: do not use Medication.name to describe the medication this statement concerns. When the only available information is a text description of the medication, Medication.code.text should be used. |
| **MedicationStatement.dosage** |  |
| Short name | Details of how medication was taken |
| Definition | Indicates how the medication is/was used by the patient. |
| **MedicationStatement.dosage.text** |  |
| Short name | Reported dosage information |
| Definition | Free text dosage information as reported about a patient's medication use. When coded dosage information is present, the free text may still be present for display to humans. |
| **MedicationStatement.dosage.timing** |  |
| Short name | When/how often was medication taken? |
| Definition | The timing schedule for giving the medication to the patient. 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". |
| **MedicationStatement.dosage.asNeeded[x]** |  |
| Short name | Take "as needed" f(or x) |
| Definition | Indicates whether the Medication is only taken when needed within a specific dosing schedule (Boolean option), or it indicates the precondition for taking the Medication (CodeableConcept). Specifically if 'boolean' datatype is selected, then the following logic applies: If set to True, this indicates that the medication is only taken when needed, within the specified schedule. |
| Binding Description | A coded concept identifying the precondition that should be met or evaluated prior to consuming or administering a medication dose. For example "pain", "30 minutes prior to sexual intercourse", "on flare-up" etc. |
| **MedicationStatement.dosage.site[x]** |  |
| Short name | Where on body was medication administered? |
| Definition | A coded specification of or a reference to the anatomic site where the medication first enters the body. |
| Binding Description | A coded concept describing the site location the medicine enters into or onto the body |
| **MedicationStatement.dosage.route** |  |
| Short name | How did the medication enter the body? |
| Definition | A code specifying the route or physiological path of administration of a therapeutic agent into or onto a subject. |
| 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 |
| **MedicationStatement.dosage.method** |  |
| Short name | Technique used to administer medication |
| 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. Examples: Slow Push, Deep IV. 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 |
| **MedicationStatement.dosage.quantity[x]** |  |
| Short name | Amount administered in one dose |
| Definition | The amount of therapeutic or other substance given at one administration event. |
| **MedicationStatement.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. Currently we do not specify a default of '1' in the denominator, but this is being discussed. Other examples: 200 mcg/min or 200 mcg/1 minute; 1 liter/8 hours. |
| **MedicationStatement.dosage.maxDosePerPeriod** |  |
| Short name | Maximum dose that was consumed per unit of time |
| Definition | The maximum total quantity of a therapeutic substance that may be administered to a subject over the period of time. E.g. 1000mg in 24 hours. |

# Public Health and Emergency Response

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

|  |  |
| --- | --- |
| **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. |
| **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. |
| Comments | Will generally be set to show that the immunizationhas been completed. |
| Binding Description | A set of codes indicating the current status of an Immunization |
| **Immunization.date** |  |
| Short name | Vaccination administration date |
| Definition | Date vaccine administered or was to be administered. |
| Comments | 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.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.wasNotGiven** |  |
| Short name | Flag for whether immunization was given |
| Definition | Indicates if the vaccination was or was not given. |
| Constraint Text | If immunization was administered (wasNotGiven=false) then explanation.reasonNotGiven SHALL be absent. |
| Constraint Text | If immunization was not administred (wasNotGiven=true) then there SHALL be no reaction nor explanation.reason present |
| **Immunization.reported** |  |
| Short name | Is this a self-reported record? |
| Definition | True if this administration was reported rather than directly administered. |
| Comments | May need source of reported info (e.g. parent), but leave out for now. |
| **Immunization.performer** |  |
| Short name | Who administered vaccine? |
| Definition | Clinician who administered the vaccine. |
| **Immunization.requester** |  |
| Short name | Who ordered vaccination? |
| Definition | Clinician who ordered the vaccination. |
| Comments | Other participants - delegate to Provenance resource. |
| **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.manufacturer** |  |
| Short name | Vaccine manufacturer |
| Definition | Name of vaccine manufacturer. |
| **Immunization.location** |  |
| Short name | Where did vaccination occur? |
| Definition | The service delivery location where the vaccine administration occurred. |
| **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.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. |
| Comments | 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 won't query against past Immunization.reaction elements. |
| **Immunization.reaction.date** |  |
| Short name | When did reaction start? |
| 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 | Was reaction self-reported? |
| 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 | What 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 | Does dose count towards immunity? |
| Definition | Indicates if the immunization event should "count" against the protocol. |
| Comments | 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 does does count/not count? |
| Definition | Provides an explanation as to why a 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

|  |  |
| --- | --- |
| **ImmunizationRecommendation** | Immunization Recommendation |
| Short name | Guidance or advice relating to an immunization |
| Definition | A patientâ€™s point-in-time immunization and recommendation (i.e. forecasting a patientâ€™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. |
| **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.doseNumber** |  |
| Short name | Recommended dose number |
| Definition | This indicates the next recommended dose number (e.g. dose 2 is the next recommended dose). |
| Comments | 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 - e.g. earliest date to administer, latest date to administer, etc. |
| **ImmunizationRecommendation.recommendation.dateCriterion.code** |  |
| Short name | Type of date |
| Definition | Date classification of recommendation - e.g. 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 | Date recommendation. |
| **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 | Number of dose 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? E.g. 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. |

# Security

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

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| --- | --- |
| **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. |
| Comments | Based on ATNA (RFC 3881). |
| **AuditEvent.event** |  |
| Short name | What was done |
| Definition | Identifies the name, action type, time, and disposition of the audited event. |
| Requirements | The event must be identified. |
| **AuditEvent.event.type** |  |
| Short name | Type/identifier of event |
| Definition | Identifier for a family of the event. |
| Comments | e.g., 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.event.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.event.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 Participant Object. |
| Binding Description | Indicator for type of action performed during the event that generated the audit. |
| **AuditEvent.event.dateTime** |  |
| Short name | Time when the event occurred on source |
| Definition | The time when the event occurred on the source. |
| Comments | 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.event.outcome** |  |
| Short name | Whether the event succeeded or failed |
| Definition | Indicates whether the event succeeded or failed. |
| Comments | 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.event.outcomeDesc** |  |
| Short name | Description of the event outcome |
| Definition | A free text description of the outcome of the event. |
| **AuditEvent.event.purposeOfEvent** |  |
| Short name | The purposeOfUse of the event |
| Definition | The purposeOfUse (reason) that was used during the event being recorded. |
| Comments | Use participant.purposeOfUse when you know that is specific to the participant, otherwise use event.purposeOfEvent. (e.g. 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.participant** |  |
| Short name | A person, a hardware device or software process |
| Definition | A person, a hardware device or software process. |
| Comments | There may be more than one user per event, for example, in cases of actions initiated by one user for other users, or in events that involve more than one user, hardware device, or system process. However, only one user may be the initiator/requestor for the event. |
| Requirements | The event has one or more active participants. |
| **AuditEvent.participant.role** |  |
| Short name | User roles (e.g. local RBAC codes) |
| Definition | Specification of the role(s) the user plays when performing the event. Usually the codes used in this element are local codes defined by the role-based access control security system used in the local context. |
| 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 | Role(s) the user plays (from RBAC) |
| **AuditEvent.participant.reference** |  |
| Short name | Direct reference to resource |
| Definition | Direct reference to a resource that identifies the participant. |
| Requirements | This field ties an audit event to a specific resource. |
| **AuditEvent.participant.userId** |  |
| Short name | Unique identifier for the user |
| Definition | Unique identifier for the user actively participating in the event. |
| Comments | 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.participant.altId** |  |
| Short name | Alternative User id e.g. authentication |
| Definition | Alternative Participant 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.participant.name** |  |
| Short name | Human-meaningful name for the user |
| Definition | Human-meaningful name for the user. |
| 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.participant.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. |
| Comments | There can only be one initiator. If the initiator is not clear, then do not choose any one participant 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.participant.location** |  |
| Short name | Where |
| Definition | Where the event occurred. |
| **AuditEvent.participant.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. |
| Comments | 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.participant.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.participant.network** |  |
| Short name | Logical network location for application activity |
| Definition | Logical network location for application activity, if the activity has a network location. |
| **AuditEvent.participant.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. |
| Comments | 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.participant.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 participant in the audit event |
| **AuditEvent.participant.purposeOfUse** |  |
| Short name | Reason given for this user |
| Definition | The reason (purpose of use), specific to this participant, that was used during the event being recorded. |
| Comments | Use participant.purposeOfUse when you know that is specific to the participant, otherwise use event.purposeOfEvent. (e.g. 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 | Application systems and processes |
| Definition | Application systems and processes. |
| Comments | 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. |
| Comments | 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.object** |  |
| Short name | Specific instances of data or objects that have been accessed |
| Definition | Specific instances of data or objects that have been accessed. |
| Comments | required unless the values for Event Identification, Active Participant Identification, and Audit Source Identification are sufficient to document the entire auditable event. Because events may have more than one participant object, this group can be a repeating set of values. |
| Requirements | The event may have other objects involved. |
| Constraint Text | Either a name or a query (NOT both) |
| **AuditEvent.object.identifier** |  |
| Short name | Specific instance of object (e.g. versioned) |
| Definition | Identifies a specific instance of the participant object. The reference should always be version specific. |
| Comments | Identifier details depends on object type. |
| **AuditEvent.object.reference** |  |
| Short name | Specific instance of resource (e.g. versioned) |
| Definition | Identifies a specific instance of the participant object. The reference should always be version specific. |
| **AuditEvent.object.type** |  |
| Short name | Type of object involved |
| Definition | The type of the object that was involved in this audit event. |
| Comments | This value is distinct from the user's role or any user relationship to the participant object. |
| 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 object type involved audited |
| **AuditEvent.object.role** |  |
| Short name | What role the Object played |
| Definition | Code representing the functional application role of Participant Object being audited. |
| Comments | See RFC 3881 for rules concerning matches between role and type. |
| Requirements | For some detailed audit analysis it may be necessary to indicate a more granular type of participant, based on the application role it serves. |
| Binding Description | Code representing the role the Object played in the event |
| **AuditEvent.object.lifecycle** |  |
| Short name | Life-cycle stage for the object |
| Definition | Identifier for the data life-cycle stage for the participant object. |
| Comments | 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 object |
| **AuditEvent.object.securityLabel** |  |
| Short name | Security labels applied to the object |
| Definition | Denotes security labels for the identified object. |
| Requirements | This field identifies the security lables 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.object.name** |  |
| Short name | Instance-specific descriptor for Object |
| Definition | An instance-specific descriptor of the Participant Object ID audited, such as a person's name. |
| Comments | This field may be used in a query/report to identify audit events for a specific person, e.g., where multiple synonymous Participant Object IDs (patient number, medical record number, encounter number, etc.) have been used. |
| **AuditEvent.object.description** |  |
| Short name | Descriptive text |
| Definition | Text that describes the object in more detail. |
| **AuditEvent.object.query** |  |
| Short name | Actual query for object |
| Definition | The actual query for a query-type participant object. |
| 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.object.detail** |  |
| Short name | Additional Information about the Object |
| Definition | Additional Information about the Object. |
| **AuditEvent.object.detail.type** |  |
| Short name | Name of the property |
| Definition | Name of the property. |
| **AuditEvent.object.detail.value** |  |
| Short name | Property value |
| Definition | Property value. |

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

|  |  |
| --- | --- |
| **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. |
| Comments | 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. |
| Comments | 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. |
| Comments | 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. |
| Comments | 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.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 took place. |
| **Provenance.location** |  |
| Short name | Where the activity occurred, if relevant |
| Definition | Where the activity occurred, if relevant. |
| **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. |
| Comments | 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.agent** |  |
| Short name | Agents involved in creating resource |
| Definition | An agent takes a role in an activity such that the agent can be assigned some degree of responsibility for the activity taking place. An agent can be a person, an organization, software, or other entities that may be ascribed responsibility. |
| Comments | Several agents may be associated (i.e. has some responsibility for an activity) with an activity and vice-versa. |
| **Provenance.agent.role** |  |
| Short name | What the agents involvement was |
| Definition | The function of the agent with respect to the activity. |
| Comments | e.g. author | performer | enterer | attester: +. |
| Binding Description | The role that a provenance agent played with respect to the activity |
| **Provenance.agent.actor** |  |
| Short name | Individual, device or organization playing role |
| Definition | The individual, device or organization that participated in the event. |
| **Provenance.agent.userId** |  |
| Short name | Authorization-system identifier for the agent |
| Definition | The identify of the agent as known by the authorization system. |
| **Provenance.agent.relatedAgent** |  |
| Short name | Track delegation between agents |
| Definition | A relationship between two the agents referenced in this resource. This is defined to allow for explicit description of the delegation between agents - e.g. this human author used this device, or one person acted on another's behest. |
| **Provenance.agent.relatedAgent.type** |  |
| Short name | Type of relationship between agents |
| Definition | The type of relationship between agents. |
| Binding Description | Type of relationship between two provenance agents |
| **Provenance.agent.relatedAgent.target** |  |
| Short name | Reference to other agent in this resource by id |
| Definition | An internal reference to another agent listed in this provenance by it's id. |
| Comments | The uri has the form #[id] where id is on another Provenance.agent in this same resource. |
| **Provenance.entity** |  |
| Short name | An entity used in this activity |
| Definition | An entity used in this activity. |
| Comments | 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.type** |  |
| Short name | The type of resource in this entity |
| Definition | The type of the entity. If the entity is a resource, then this is a resource type. |
| Requirements | If the type is "resource" then the resource itself was the participant. If the type is a type of resource, then the entity identified by the resource is the participant. |
| Binding Description | The type of an entity used in an activity |
| **Provenance.entity.reference** |  |
| Short name | Identity of entity |
| Definition | Identity of the Entity used. May be a logical or physical uri and maybe absolute or relative. |
| Comments | identity may be a reference to a resource or to something else, depending on the type. |
| **Provenance.entity.display** |  |
| Short name | Human description of entity |
| Definition | Human-readable description of the entity. |
| **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. |
| **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

|  |  |
| --- | --- |
| **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. |
| Comments | 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. |
| Comments | See discussion in resource definition for how these relate. |
| **Composition.date** |  |
| Short name | Composition editing time |
| Definition | The composition editing time, when the composition was last logically changed by the author. |
| Comments | 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.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. |
| Comments | For Composition type, LOINC is ubiquitious and strongly endorsed by the 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. |
| Comments | 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.title** |  |
| Short name | Human Readable name/title |
| Definition | Official human-readable label for the composition. |
| Comments | 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.status** |  |
| Definition | The workflow/clinical status of this composition. The status is a marker for the clinical standing of the document. |
| Comments | 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 reporting this business rule hass been . 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.confidentiality** |  |
| Short name | As defined by affinity domain |
| Definition | The code specifying the level of confidentiality of the Composition. |
| Comments | 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.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 (I.e. 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). |
| Comments | 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.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.attester** |  |
| Short name | Attests to accuracy of composition |
| Definition | A participant who has attested to the accuracy of the composition/document. |
| Comments | 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. |
| Comments | 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 officialness 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 | Org which maintains the composition |
| Definition | Identifies the organization or group who is responsible for ongoing maintenance of and access to the composition/document information. |
| Comments | 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 knowing this is sometimes not known by the authoring system, and can be inferred by context. However it's 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.event** |  |
| Short name | The clinical service(s) being documented |
| Definition | The clinical service, such as a colonoscopy or an appendectomy, being documented. |
| Comments | 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. |
| Comments | 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.encounter** |  |
| Short name | Context of the conposition |
| Definition | Describes the clinical encounter or type of care this documentation is associated with. |
| Requirements | Provides context for the composition and supports searching. |
| **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. |
| Comments | 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. |
| Comments | 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. |
| Comments | 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 | What order the section entries are in |
| Definition | What order applies to the items in the section entries. |
| Comments | 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. |
| Comments | 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. |
| Comments | 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. |
| Comments | Nested sections are primarily used to help human readers navigate to particular portions of the document. |

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

|  |  |
| --- | --- |
| **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.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.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. |
| Comments | 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 itâ€™s not known whether the person is a patient or a practitioner, RelatedPerson would be the default choice. |
| **DocumentManifest.type** |  |
| Short name | What kind of document set this is |
| 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 | Precice type of clinical document |
| **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. |
| Comments | Not necessarily who did the actual data entry (i.e. typist) or who was the source (informant). |
| **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). |
| Comments | 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.source** |  |
| Short name | The source system/application/software |
| Definition | Identifies the source system, application, or software that produced the document manifest. |
| **DocumentManifest.status** |  |
| Definition | The status of this document manifest. |
| Binding Description | The status of the document reference |
| **DocumentManifest.description** |  |
| Short name | Human-readable description (title) |
| Definition | Human-readable description of the source document. This is sometimes known as the "title". |
| Comments | 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. |
| Comments | 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. |
| Comments | 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. If both id and ref are present they shall refer to the same thing. |
| Comments | Order numbers, accession numbers, XDW workflow numbers. |
| **DocumentManifest.related.ref** |  |
| Short name | Related Resource |
| Definition | Related Resource to this DocumentManifest. If both id and ref are present they shall refer to the same thing. |
| Comments | Order, DiagnosticOrder, Procedure, EligibilityRequest, etc. |

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

|  |  |
| --- | --- |
| **DocumentReference** | Document Reference |
| Short name | A reference to a document |
| Definition | A reference to a document. |
| Comments | 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. |
| Comments | 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.subject** |  |
| Definition | Who or what the document is about. The document 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). |
| **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. |
| Comments | Key metadata element describing the document, used in searching/filtering. |
| Binding Description | Precice 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. |
| Comments | 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 an list of documents. |
| Synonym | kind |
| Binding Description | High-level kind of a clinical document at a macro level |
| **DocumentReference.author** |  |
| Short name | Who and/or what authored the document |
| Definition | Identifies who is responsible for adding the information to the document. |
| Comments | Not necessarily who did the actual data entry (i.e. typist) it in or who was the source (informant). |
| **DocumentReference.custodian** |  |
| Short name | Org which maintains the document |
| Definition | Identifies the organization or group who is responsible for ongoing maintenance of and access to the document. |
| Comments | 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.authenticator** |  |
| Short name | Who/What authenticated the document |
| Definition | Which person or organization authenticates that this document is valid. |
| Comments | 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.created** |  |
| Short name | Document creation time |
| Definition | When the document was created. |
| Comments | 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. |
| Comments | Referencing/indexing time is used for tracking, organizing versions and searching. |
| **DocumentReference.status** |  |
| Definition | The status of this document reference. |
| Comments | This is the status of the DocumentReference object, which might be independent from the docStatus. |
| Binding Description | The status of the document reference |
| **DocumentReference.docStatus** |  |
| Definition | The status of the underlying document. |
| Comments | The document that is pointed to might be in various lifecycle states. |
| Binding Description | Status of the underlying document |
| **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. |
| Comments | 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". |
| Comments | 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 is the security labels of the reference to the document, while DocumentReference.securityLabel is the security labels on the document it refers to. |
| Comments | 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. â€¢ [1â€¦1] Confidentiality Security Classification Label Field â€¢ [0â€¦\*] Sensitivity Security Category Label Field â€¢ [0â€¦\*] Compartment Security Category Label Field â€¢ [0â€¦\*] Integrity Security Category Label Field â€¢ [0â€¦\*] Handling Caveat Security Category Field In the HL7 Healthcare Privacy and Security Classification System 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. May be multiple content each with a different format. |
| **DocumentReference.content.attachment** |  |
| Short name | Where to access the document |
| Definition | The document or url to 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. |
| Comments | Note that while IHE mostly issues URNs for format types, not all documents can be identified as URIs. |
| Binding Description | Document Format Codes |
| **DocumentReference.context** |  |
| Short name | Clinical context of document |
| Definition | The clinical context in which the document was prepared. |
| Comments | 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. |
| Comments | 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. |
| Comments | 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. |
| Comments | May be identifiers or resources that caused the DocumentReference or referenced Document to be created. |
| **DocumentReference.context.related.identifier** |  |
| Short name | Identifer 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. |
| Comments | 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. |
| Comments | Order, DiagnosticOrder, Procedure, EligibilityRequest, etc. |

# Vocabulary

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

|  |  |
| --- | --- |
| **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 | Globally unique logical id for concept map |
| 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. |
| **ConceptMap.identifier** |  |
| Short name | Additional identifier for the concept map |
| Definition | 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. |
| Comments | Typically, this is used for values that can go in a v3 II data type. |
| **ConceptMap.version** |  |
| Short name | Logical id for this 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 profile author manually and the value should be a timestamp. |
| Comments | There may be multiple resource versions of the concept map that have this same identifier. |
| **ConceptMap.name** |  |
| Short name | Informal name for this concept map |
| Definition | A free text natural language name describing the concept map. |
| Comments | Not expected to be unique. |
| Requirements | Support human navigation. |
| **ConceptMap.status** |  |
| Definition | The status of the concept map. |
| Comments | Allows filtering of ConceptMaps that are appropriate for use. |
| Requirements | Identify when/if the concept map should be used. |
| Binding Description | The lifecycle status of a Value Set or Concept Map |
| **ConceptMap.experimental** |  |
| Short name | If for testing purposes, not real usage |
| Definition | This ConceptMap was authored for testing purposes (or education/evaluation/marketing), and is not intended to be used for genuine usage. |
| Comments | Allows filtering of ConceptMaps that are appropriate for use. |
| **ConceptMap.publisher** |  |
| Short name | Name of the publisher (Organization or individual) |
| Definition | The name of the individual or organization that published the concept map. |
| Comments | 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 concept map. May also allow for contact. |
| **ConceptMap.contact** |  |
| Short name | Contact details of the publisher |
| Definition | Contacts to assist a user in finding and communicating with the publisher. |
| Comments | May be a web site, an email address, a telephone number (tel:), etc. |
| **ConceptMap.contact.name** |  |
| Short name | Name of a individual to contact |
| Definition | The name of an individual to contact regarding the concept map. |
| Comments | If there is no named individual, the telecom is for the organization as a whole. |
| **ConceptMap.contact.telecom** |  |
| Short name | Contact details for individual or publisher |
| Definition | Contact details for individual (if a name was provided) or the publisher. |
| **ConceptMap.date** |  |
| Short name | Date for given status |
| Definition | The date that this version of 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 substantiative content of the concept map changes. |
| Comments | 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. |
| Requirements | Need to know when a concept map was first legal for use or became withdrawn or replaced. |
| **ConceptMap.description** |  |
| Short name | Human language description of the concept map |
| Definition | A free text natural language description of the use of the concept map - reason for definition, conditions of use, etc. |
| Comments | 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. |
| Requirements | Human understandability. |
| **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 concept maps. |
| Requirements | Assist in searching for appropriate concept maps. |
| Binding Description | Indicates the countries, regions, disciplines and other aspects of use this artifact is targeted for use within |
| **ConceptMap.requirements** |  |
| Short name | Why is this needed? |
| Definition | Explains why this concept map is needed and why it's been constrained as it has. |
| Comments | This element does not describe the usage of the concept map (that's done in comments), rather it's for traceability of \*why\* the element is either needed or why the constraints exist as they do. This may be used to point to source materials or specifications that drove the structure of this data element. |
| **ConceptMap.copyright** |  |
| Short name | Use and/or Publishing restrictions |
| Definition | A copyright statement relating to the concept map and/or its contents. |
| Comments | Frequently, the copyright differs between the concept map, and codes that are included. The copyright statement should clearly differentiate between these when required. |
| **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. |
| Comments | Should be a version specific reference. URIs SHOULD be absolute. |
| **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. |
| Comments | Should be a version specific reference. URIs SHOULD be absolute. |
| **ConceptMap.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. |
| Comments | 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 mutliple times with different comments or dependencies. |
| Synonym | code |
| Synonym | concept |
| Synonym | item |
| **ConceptMap.element.codeSystem** |  |
| 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.element.code** |  |
| Short name | Identifies element being mapped |
| Definition | Identity (code or path) or the element/item being mapped. |
| **ConceptMap.element.target** |  |
| Short name | Concept in target system for element |
| Definition | A concept from the target value set that this concept maps to. |
| Comments | 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.element.target.codeSystem** |  |
| 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). |
| Comments | Should be a version specific reference. |
| **ConceptMap.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.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.element.target.comments** |  |
| 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.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.element.target.dependsOn.element** |  |
| Short name | Reference to element/field/valueset mapping depends on |
| Definition | A reference to a specific concept that holds a coded value. This can be an element in a FHIR resource, or a specific reference to a data element in a different specification (e.g. v2) or a general reference to a kind of data field, or a reference to a value set with an appropriately narrow definition. |
| **ConceptMap.element.target.dependsOn.codeSystem** |  |
| 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). |
| **ConceptMap.element.target.dependsOn.code** |  |
| Short name | Value of the referenced element |
| Definition | Identity (code or path) or the element/item that the map depends on / refers to. |
| **ConceptMap.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. |

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

|  |  |
| --- | --- |
| **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 | A defined code system (if present) SHALL have a different identifier to the value set itself |
| Constraint Text | A value set with only one import SHALL also have an include and/or an exclude unless the value set includes and inline code system |
| Constraint Text | Value set SHALL contain at least one of a codeSystem, a compose, or an expansion element |
| **ValueSet.url** |  |
| Short name | Globally unique logical id for value set |
| 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. |
| **ValueSet.identifier** |  |
| Short name | Additional identifier for the value set (v2 / CDA) |
| Definition | 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. |
| Comments | Typically, this is used for values that can go in a v3 II data type. |
| **ValueSet.version** |  |
| Short name | Logical id for this version of the value set |
| Definition | 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 profile author manually and the value should be a timestamp. |
| Comments | There may be multiple resource versions of the value set that have the same identifier. |
| **ValueSet.name** |  |
| Short name | Informal name for this value set |
| Definition | A free text natural language name describing the value set. |
| Comments | The name is not expected to be unique. 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. |
| **ValueSet.status** |  |
| Definition | The status of the value set. |
| Comments | Allows filtering of value sets that are appropriate for use vs. not. |
| Requirements | Identify when/if the value set should be used. |
| Binding Description | The lifecycle status of a Value Set or Concept Map |
| **ValueSet.experimental** |  |
| Short name | If for testing purposes, not real usage |
| Definition | This valueset was authored for testing purposes (or education/evaluation/marketing), and is not intended to be used for genuine usage. |
| Comments | Allows filtering of value sets that are appropriate for use vs. not. |
| **ValueSet.publisher** |  |
| Short name | Name of the publisher (Organization or individual) |
| Definition | The name of the individual or organization that published the value set. |
| Comments | 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 value set. May also allow for contact. |
| **ValueSet.contact** |  |
| Short name | Contact details of the publisher |
| Definition | Contacts to assist a user in finding and communicating with the publisher. |
| Comments | May be a web site, an email address, a telephone number (tel:), etc. |
| **ValueSet.contact.name** |  |
| Short name | Name of a individual to contact |
| Definition | The name of an individual to contact regarding the value set. |
| Comments | If there is no named individual, the telecom is for the organization as a whole. |
| **ValueSet.contact.telecom** |  |
| Short name | Contact details for individual or publisher |
| Definition | Contact details for individual (if a name was provided) or the publisher. |
| **ValueSet.date** |  |
| Short name | Date for given status |
| Definition | The date that the value set status was last changed. 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 substantiative content of the implementation guide changes (e.g. the 'content logical definition'). |
| Comments | 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. |
| Requirements | Need to know when a value set was first legal for use or became withdrawn or replaced. |
| **ValueSet.lockedDate** |  |
| Short name | Fixed date for all referenced code systems and value sets |
| Definition | If a Locked Date is defined, then the Content Logical Definition must be evaluated using the current version of all referenced code system(s) and value sets as of the Locked Date. |
| Comments | With a defined Locked Date 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.description** |  |
| Short name | Human language description of the value set |
| Definition | A free text natural language description of the use of the value set - reason for definition, "the semantic space" to be included in the value set, conditions of use, etc. The description may include a list of expected usages for the value set and can also describe the approach taken to build the value set. |
| Comments | 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. |
| Requirements | Human understandability. |
| 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 value set definitions. |
| Requirements | Assist in searching for appropriate content. |
| Binding Description | Indicates the countries, regions, disciplines and other aspects of use this artifact is targeted for use within |
| **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. |
| Comments | 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 Value Set 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.requirements** |  |
| Short name | Why is this needed? |
| Definition | Explains why this value set is needed and why it's been constrained as it has. |
| Comments | This element does not describe the usage of the value set (that's done in comments), rather it's for traceability of \*why\* the element is either needed or why the constraints exist as they do. This may be used to point to source materials or specifications that drove the structure of this data element. |
| **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. |
| Comments | Frequently, the copyright differs between the value set, and codes that are included. The copyright statement should clearly differentiate between these when required. |
| 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.codeSystem** |  |
| Short name | An inline code system - part of this value set |
| Definition | A definition of an code system, inlined into the value set (as a packaging convenience). Note that the inline code system may be used from other value sets by referring to it's (codeSystem.system) directly. |
| Comments | All code systems defined as part of a FHIR value set have an implicit valueset that includes all the code in the code system - the value set in which they are defined. |
| Constraint Text | Codes must be unique |
| Constraint Text | Within a code system definition, all the codes SHALL be unique |
| **ValueSet.codeSystem.system** |  |
| Short name | URI to identify the code system (e.g. in Coding.system) |
| Definition | An absolute URI that is used to reference this code system, including in [Coding]{datatypes.html#Coding}.system. |
| Comments | The reference is not required to point to any specific kind of definition, but the more information that can be provided, the more useful it is for implementers. Best practice is to resolve to a computable definition of the code system (either a value set, or some other format). Terminology Servers MAY validate this reference (e.g. when accepting PUT/POST), and MAY make additional rules about what kind of content it refers to. |
| **ValueSet.codeSystem.version** |  |
| Short name | Version (for use in Coding.version) |
| Definition | The version of this code system that defines the codes. Note that the version is optional because a well maintained code system does not suffer from versioning, and therefore the version does not need to be maintained. However many code systems are not well maintained, and the version needs to be defined and tracked. |
| **ValueSet.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. |
| Comments | 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. |
| **ValueSet.codeSystem.concept** |  |
| Short name | Concepts in the code system |
| Definition | Concepts that are in the code system. The concept definitions are inherently heirarchical, but the definitions must be consulted to determine what the meaning of the heirachical relationships are. |
| **ValueSet.codeSystem.concept.code** |  |
| Short name | Code that identifies concept |
| Definition | A code - a text symbol - that uniquely identifies the concept within the code system. |
| **ValueSet.codeSystem.concept.abstract** |  |
| Short name | If this code is not for use as a real concept |
| Definition | If this code is not for use as a real concept. |
| **ValueSet.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. |
| **ValueSet.codeSystem.concept.definition** |  |
| Short name | Formal Definition |
| Definition | The formal definition of the concept. The value set resource does not make formal definitions required, because of the prevalence of legacy systems. However, but they are highly recommended, as without them there is no formal meaning associated with the concept. |
| **ValueSet.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 mltiple representations, in multiple languages, and for mltiple purposes. |
| **ValueSet.codeSystem.concept.designation.language** |  |
| Short name | Human language of the designation |
| Definition | The language this designation is defined for. |
| Comments | In the absense of a language, the resource language applies. |
| Binding Description | A human language |
| **ValueSet.codeSystem.concept.designation.use** |  |
| Short name | Details how this designation would be used |
| Definition | A code that details how this designation would be used. |
| Comments | 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.codeSystem.concept.designation.value** |  |
| Short name | The text value for this designation |
| Definition | The text value for this designation. |
| **ValueSet.codeSystem.concept.concept** |  |
| Short name | Child Concepts (is-a / contains / categorises) |
| Definition | Child Concepts - a heirarchy of concepts. The nature of the relationships is variable (is-a / contains / categorises) and can only be determined by examining the definitions of the concepts. |
| **ValueSet.compose** |  |
| Short name | When value set includes codes from elsewhere |
| Definition | A set of criteria that provide the content logical definition of the value set by including or excluding codes from outside this value set. |
| Constraint Text | A value set composition SHALL have an include or an import |
| **ValueSet.compose.import** |  |
| Short name | Import the contents of another value set |
| Definition | Includes the contents of the referenced value set as a part of the contents of this value set. This is an absolute URI that is a reference to ValueSet.uri. |
| Comments | 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 also not reference a actual FHIR value set resource; in this case, whatever is referenced is an implicit definition of a value set that needs to be clear about how versions are resolved. |
| **ValueSet.compose.include** |  |
| Short name | Include one or more codes from a code system |
| Definition | Include one or more codes from a code system. |
| Comments | If there are no codes or filters, the entire code system is included. Note that the set of codes hat are included may contain abstract codes. |
| Constraint Text | Cannot have both concept and filter |
| **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. |
| Comments | See \*Coding.system\* for further documentation. |
| **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. |
| Comments | This is used when selecting the descendents 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. |
| Comments | The list of concepts is considered ordered, though the order may not have any particular significance. Typically, the order an an expansion follows that defined in the compose. |
| **ValueSet.compose.include.concept.code** |  |
| Short name | Code or expression from system |
| Definition | Specifies a code for the concept to be included or excluded. |
| Comments | Expressions are allowed if defined by the underlying code system. |
| **ValueSet.compose.include.concept.display** |  |
| Short name | Test to display for this code for this value set |
| 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. |
| Comments | 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 valueset |
| 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.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. |
| Comments | 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 |
| Definition | The match value may be either a code defined by the system, or a string value which is used a regex match on the literal string of the property value. |
| Comments | Use regex matching with care - full regex matching on every SNOMED CT term is prohibitive, for example. |
| **ValueSet.compose.exclude** |  |
| Short name | Explicitly exclude codes |
| Definition | Exclude one or more codes from the value set. |
| Comments | 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. |
| Comments | 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. |
| Comments | 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. |
| Comments | This SHOULD have be a fully populated instant, but in some circumstances, value sets are expanded by hand, of the expansion is published without that precision. |
| **ValueSet.expansion.total** |  |
| Short name | Total number of codes in the expansion |
| Definition | The total nober 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. |
| Comments | 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 - e.g. this resource is a partial view into the expansion. If paging is not being used, this element SHALL not be present. |
| Comments | 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. |
| Comments | The server decides which parameters to include here, but as 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 server |
| Definition | The name of the parameter. |
| Comments | 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. |
| Comments | This shouldn't be understood to exclude its use for searchig (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.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. |
| Comments | 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 choosable code |
| Definition | The code for this item in the expansion heirarchy. If this code is missing the entry in the heirarchy is a place holder (abstract) and doesn't 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.contains** |  |
| Short name | Codes contained under this entry |
| Definition | Other codes and entries contained under this entry in the heirarchy. |
| Comments | 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. |