

INTEROPERABILITY CURRICULUM

SESSION 1

Introduction to Interoperability and FHIR Resources

INSTRUCTIONS

- READ THIS DOCUMENT
- STOP AND EXPLORE CONTENT AT THE EMBEDDED LINKS
- ANSWER THE QUESTIONS

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A. WHAT IS INTEROPERABILITY?

Interoperability has been defined in a number of ways. As examples, consider the following definitions of interoperability:

- The ability of computer systems or software to exchange and make use of information (IGI Global, 2020)
- The ability of different information systems, devices and applications (systems) to access, exchange, integrate and cooperatively use data in a coordinated manner, within and across organizational, regional and national boundaries, to provide timely and seamless portability of information and optimize the health of individuals and populations globally. (HIMSS, 2020)
- The ability of diverse information systems to seamlessly share data and coordinate on tasks involving multiple systems. (Braunstein, 2018)

The bottom line is this. Health IT systems developed by different teams at different times need to be able to communicate with each other. The degree of interoperability between two systems tells us the degree to which those two systems can communicate and coordinate their functions.

B. WHY IS INCREASING HEALTH DATA INTEROPERABILITY IMPORTANT?

Increased health IT interoperability is linked to making gains towards the Triple Aim. The Triple Aim includes work to do these three things at once:

- Improve population health outcomes and decreased health disparities
- Decrease the costs of care and health promotion
- Improve the experience of receiving care

C. WHAT IS THE FAST HEALTH INTEROPERABILITY RESOURCE (FHIR) DATA STANDARD?

- It provides a means for representing and sharing information among clinicians and organizations in a standard way regardless of the ways local EHRs represent or store the data (eCQI)
- It details the exchange of protected health information among healthcare professionals. This includes diagnostic data, clinical health data and any administrative information (Continuum,2020)

D. WHAT ARE EXAMPLES OF SOME KEY FHIR RESOURCES?

- Patient - <https://www.hl7.org/fhir/patient.html>
- Procedure - <https://www.hl7.org/fhir/procedure.html>
- Encounter - <https://www.hl7.org/fhir/encounter.html>
- Appointment - <https://www.hl7.org/fhir/appointment.html>
- Observation - <https://www.hl7.org/fhir/observation.html>
- Condition - <https://www.hl7.org/fhir/condition.html>
- Slot - <https://www.hl7.org/fhir/slot.html>
- Medication - <https://www.hl7.org/fhir/medication.html>
- Location - <https://www.hl7.org/fhir/location.html>
- Immunization - <https://www.hl7.org/fhir/immunization.html>

E. WHAT ARE THE ELEMENTS OF THE FHIR PATIENT RESOURCE IN DETAIL?

To see the elements of the FHIR Patient resource, we can use the HL7 FHIR Resource webpage as a starting point.

Take the following steps to see the elements of the **Patient resource**:

Step 1: Go to <https://www.hl7.org/fhir/resourcelist.html>

Step 2: Click on the "Patient resource" link in the Base section of the Resource List

Step 3: Scroll down to see the following list of the elements in the **Patient** resource:

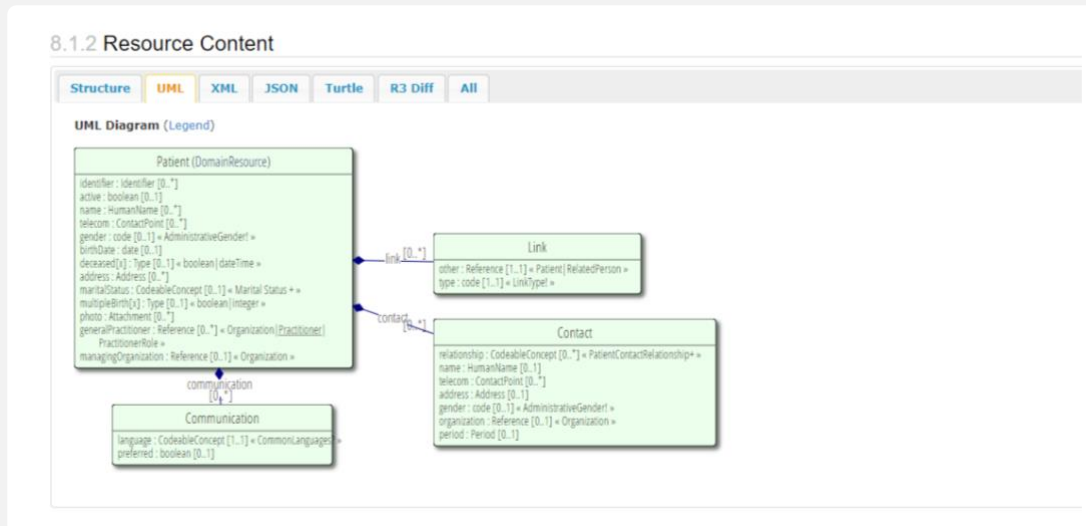
8.1.2 Resource Content

Structure UML XML JSON Turtle R2 Diff All

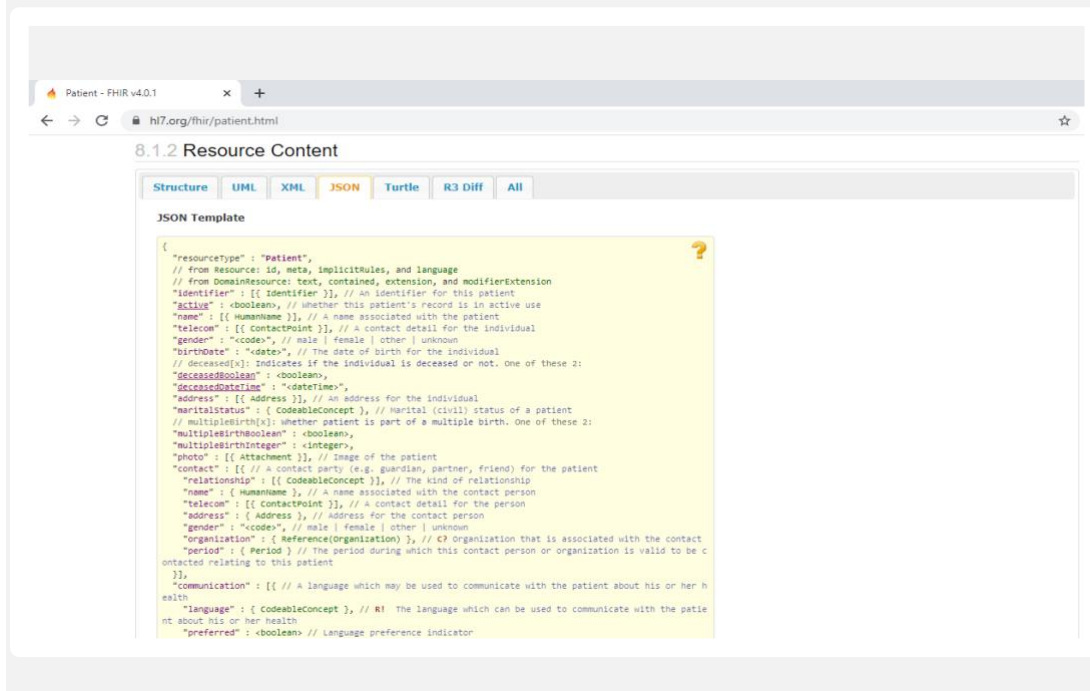
Structure

Name	Flags	Card.	Type	Description & Constraints
Patient			DomainResource	Information about an individual or animal receiving health care services Elements defined in Ancestors: id, meta, implicitRules, language, text, contained, extension, modifierExtension An identifier for this patient
identifier	Σ	0..*	Identifier	Whether this patient's record is in active use
active	? Σ	0..1	boolean	A name associated with the patient
name	Σ	0..*	HumanName	A contact detail for the individual
telecom	Σ	0..*	ContactPoint	male female other unknown AdministrativeGender (Required)
gender	Σ	0..1	code	The date of birth for the individual
birthDate	Σ	0..1	date	Indicates if the individual is deceased or not
deceased[x]	? Σ	0..1		
deceasedBoolean			boolean	
deceasedDateTime			dateTime	
address	Σ	0..*	Address	Addresses for the individual
maritalStatus		0..1	CodeableConcept	Marital (civil) status of a patient Marital Status Codes (Extensible)
multipleBirth[x]		0..1		Whether patient is part of a multiple birth
multipleBirthBoolean			boolean	
multipleBirthInteger			integer	
photo		0..*	Attachment	Image of the patient
contact	I	0..*	BackboneElement	A contact party (e.g. guardian, partner, friend) for the patient = SHALL at least contain a contact's details or a reference to an organization
relationship		0..*	CodeableConcept	The kind of relationship v2 Contact Role (Extensible)
name		0..1	HumanName	A name associated with the contact person
telecom		0..*	ContactPoint	A contact detail for the person
address		0..1	Address	Address for the contact person

Step 4: Click on the UML tab to see the same elements in a Unified Modeling Language (UML) view:



Step 5: Click on the JSON tab to see the same elements for the Patient FHIR resource in JavaScript Object Notation (JSON) format:



F. WHAT ARE THE ELEMENTS OF THE FHIR PROCEDURE RESOURCE IN DETAIL?

To see the elements of the FHIR Procedure resource, we can use the HL7 FHIR Resource webpage as a starting point.

Take the following steps to see the elements of the Procedure resource:

Step 1: Go to <https://www.hl7.org/fhir/resourcelist.html>

Step 2: Click on the Procedure resource link in the Clinical section of the Resource List

Step 3: Scroll down to see the following list of the elements in the Procedure resource:

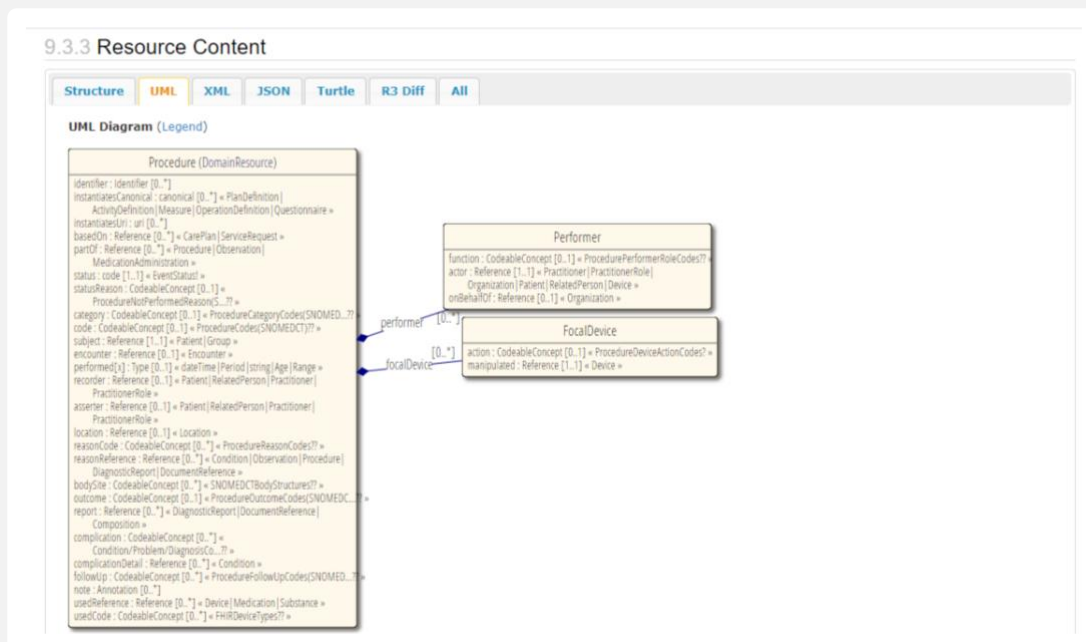
9.3.3 Resource Content

Structure UML XML JSON Turtle R3 Diff All

Structure

Name	Flags	Card.	Type	Description & Constraints
Procedure	TU		DomainResource	An action that is being or was performed on a patient Elements defined in Ancestors: id, meta, implicitRules, language, text, contained, extension, modifierExtension External Identifiers for this procedure
identifier		Σ 0..*	Identifier	
instantiatesCanonical		Σ 0..*	canonical(PlanDefinition ActivityDefinition Measure OperationDefinition Questionnaire)	Instantiates FHIR protocol or definition
instantiatesUri		Σ 0..*	uri	Instantiates external protocol or definition
basedOn		Σ 0..*	Reference(CarePlan ServiceRequest)	A request for this procedure
partOf		Σ 0..*	Reference(Procedure Observation MedicationAdministration)	Part of referenced event
status	71	Σ 1..1	code	preparation in-progress not-done on-hold stopped completed entered-in-error unknown EventStatus (Required)
statusReason		Σ 0..1	CodeableConcept	Reason for current status Procedure Not Performed Reason (SNOMED-CT) (Example)
category		Σ 0..1	CodeableConcept	Classification of the procedure Procedure Category Codes (SNOMED CT) (Example)
code		Σ 0..1	CodeableConcept	Identification of the procedure Procedure Codes (SNOMED CT) (Example)
subject		Σ 1..1	Reference(Patient Group)	Who the procedure was performed on
encounter		Σ 0..1	Reference(Encounter)	Encounter created as part of
performed[x]		Σ 0..1		When the procedure was performed
performedDateTime			dateTime	
performedPeriod			Period	
performedString			string	
performedAge			Age	
performedRange			Range	

Step 4: Click on the UML tab to see the same elements in a Unified Modeling Language (UML) view:



Step 5: Click on the JSON tab to see the same elements for the Procedure FHIR resource in JavaScript Object Notation (JSON) format:

9.3.3 Resource Content

Structure UML XML **JSON** Turtle R3 Diff All

JSON Template

```
{
  "resourceType": "Procedure",
  // from Resource: id, meta, implicitRules, and language
  // from DomainResource: text, contained, extension, and modifierExtension
  "identifier": [ { Identifier } ], // External identifiers for this procedure
  "instantiatesCanonical": [ { canonical(PlanDefinition|ActivityDefinition|
    Measure|OperationDefinition|Questionnaire) } ], // Instantiates FHIR protocol or definition
  "instantiatesUri": [ "<uri>" ], // Instantiates external protocol or definition
  "basedOn": [ { Reference(CarePlan|ServiceRequest) } ], // A request for this procedure
  "partOf": [ { Reference(Procedure|Observation|MedicationAdministration) } ], // Part of referenced event
  "status": "<code>", // R1: preparation | in-progress | not-done | on-hold | stopped | completed | entered-in-error | unknown
  "statusReason": { CodeableConcept }, // Reason for current status
  "category": { CodeableConcept }, // Classification of the procedure
  "code": { CodeableConcept }, // Identification of the procedure
  "subject": { Reference(Patient|Group) }, // R1: who the procedure was performed on
  "encounter": { Reference(Encounter) }, // Encounter created as part of
    // performed[x]: when the procedure was performed. One of these 5:
  "performedDatetime": "<datetime>",
  "performedPeriod": { Period },
  "performedString": "<string>",
  "performedAge": { Age },
  "performedRange": { Range },
  "recorder": { Reference(Patient|RelatedPerson|Practitioner|
    PractitionerRole) }, // who recorded the procedure
  "asserter": { Reference(Patient|RelatedPerson|Practitioner|
    PractitionerRole) }, // Person who asserts this procedure
  "performer": [ { // The people who performed the procedure
    "function": { CodeableConcept }, // Type of performance
    "actor": { Reference(Practitioner|PractitionerRole|Organization|Patient|
      RelatedPerson|Device) }, // R1: The reference to the practitioner
    "onBehalfOf": { Reference(Organization) } // Organization the device or practitioner was acting for
  } ],
  "location": { Reference(Location) }, // Where the procedure happened
}
```

G. WHAT IS AN EXAMPLE OF AN FHIR OBSERVATION RESOURCE?

To see the element details of an instance of the FHIR Observation resource, we can use the HL7 FHIR Resource webpage as a starting point.

Take the following steps to see the element details of an instance of the Observation resource:

Step 1: Go to <https://www.hl7.org/fhir/resourcelist.html>

Step 2: Click on the Observation resource link in the Clinical section of the Resource List

Step 3: Click on the Detailed Descriptions tab to see the following list of the elements on an instance in the Observation resource and scroll down to find the specified element details:

Content
Examples
Detailed Descriptions
Mappings
Profiles & Extensions
Operations
R3 Conversions

10.1.8 Resource Observation - Detailed Descriptions

Orders and Observations < Work Group	Maturity Level: N	Normative (from v4.0.0)	Security Category: Patient	Compartments: Device, Encounter, Patient, Practitioner, RelatedPerson
--------------------------------------	-------------------	-------------------------	----------------------------	---

Detailed Descriptions for the elements in the Observation resource.

Observation

Element Id	Observation		
Definition	Measurements and simple assertions made about a patient, device or other subject.		
Cardinality	0..*		
Type	DomainResource		
Requirements	Observations are a key aspect of healthcare. This resource is used to capture those that do not require more sophisticated mechanisms.		
Alternate Names	Vital Signs; Measurement; Results; Tests		
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 laboratory reports, etc.		
Invariants	Defined on this element obs-6 Rule dataAbsentReason SHALL only be present if Observation.value[x] is not present <code>dataAbsentReason.empty() or value.empty()</code> obs-7 Rule If Observation.code is the same as an Observation.component.code then the value element associated with the code SHALL NOT be present <code>value.empty() or component.code.where(coding.intersect(%resource.code.coding).exists()).empty()</code>		

Observation.identifier

Element Id	Observation.identifier
Definition	A unique identifier assigned to this observation.
Note	This is a business identifier, not a resource identifier (see discussion)
Cardinality	0..*

NEXT . . . for another view of this resource try:

Step 1: Go to <https://www.hl7.org/fhir/resourcelist.html>

Step 2: Click on the Observation resource link in the Clinical section of the Resource List

Step 3: Scroll down to see the following list of the elements in the Observation resource:

10.1.3 Resource Content

Structure UML XML JSON Turtle R3 Diff All

Structure

Name	Flags	Card.	Type	Description & Constraints
Observation	1 N		DomainResource	Measurements and simple assertions + Rule: dataAbsentReason SHALL only be present if Observation.value[x] is not present + Rule: If Observation.code is the same as an Observation.component.code then the value element associated with the code SHALL NOT be present Elements defined in Ancestors: id, meta, implicitRules, language, text, contained, extension, modifierExtension
identifier	1	0..*	Identifier	Business Identifier for observation
basedOn	1	0..*	Reference(CarePlan DeviceRequest ImmunizationRecommendation MedicationRequest NutritionOrder ServiceRequest)	Fulfills plan, proposal or order
partOf	1	0..*	Reference(MedicationAdministration MedicationDispense MedicationStatement Procedure Immunization ImagingStudy)	Part of referenced event
status	1 1	1..1	code	registered preliminary final amended + ObservationStatus (Required)
category	1	0..*	CodeableConcept	Classification of type of observation Observation Category Codes (Preferred)
code	1	1..1	CodeableConcept	Type of observation (code / type) LOINC Codes (Example)
subject	1	0..1	Reference(Patient Group Device Location)	Who and/or what the observation is about
focus	1 TU	0..*	Reference(Any)	What the observation is about, when it is not about the subject of record
encounter	1	0..1	Reference(Encounter)	Healthcare event during which this observation is made
effective[x]	1	0..1		Clinically relevant time/time-period for observation
effectiveDateTime			dateTime	
effectivePeriod			Period	
effectiveTiming			Timing	

Step 4: Double click on the element under review for example code to view the code details:

Observation.code

Element Id	Observation.code
Definition	Describes what was observed. Sometimes this is called the observation "name".
Cardinality	1..1
Terminology Binding	LOINC Codes (Example)
Type	CodeableConcept
Requirements	Knowing what kind of observation is being made is essential to understanding the observation.
Alternate Names	Name
Summary	true
Comments	All code-value and, if present, component.code-component.value pairs need to be taken into account to correctly understand the meaning of the observation.

H. WHAT ARE THE ELEMENTS OF AN INSTANCE IN A FHIR PATIENT RESOURCE?

To see the element details of an instance of the FHIR Patient resource, we can use the HL7 FHIR Resource webpage as a starting point.

Take the following steps to see the element details of an instance of the Patient resource:

Step 1: Go to <https://www.hl7.org/fhir/resourcelist.html>

Step 2: Click on the Patient resource link in the Base section of the Resource List

Step 3: Click on the Detailed Descriptions tab to see the following list of the elements on an instance in the Patient resource and scroll down to find the specified element details:

Content
Examples
Detailed Descriptions
Mappings
Profiles & Extensions
Operations
R3 Conversions

8.1.14 Resource Patient - Detailed Descriptions

Patient Administration Work Group	Maturity Level: N	Normative (from v4.0.0)	Security Category: Patient	Compartments: Patient, Practitioner, RelatedPerson
---	-----------------------------------	-------------------------	----------------------------	--

Detailed Descriptions for the elements in the Patient resource.

Patient

Element Id	Patient
Definition	Demographics and other administrative information about an individual or animal receiving care or other health-related services.
Cardinality	0..*
Type	DomainResource
Requirements	Tracking patient is the center of the healthcare process.
Alternate Names	SubjectOfCare Client Resident

Patient.identifier

Element Id	Patient.identifier
Definition	An identifier for this patient.
Note	This is a business identifier, not a resource identifier (see discussion)
Cardinality	0..*
Type	Identifier
Requirements	Patients are almost always assigned specific numerical identifiers.
Summary	true

Patient.active

Element Id	Patient.active
Definition	Whether this patient record is in active use. Many systems use this property to mark as non-current patients, such as those that have not been seen for a period of time based on an organization's business rules.

NEXT . . . for another view of this resource try:

Step 1: Go to <https://www.hl7.org/fhir/resourcelist.html>

Step 2: Click on the Patient resource link in the Base section of the Resource List

Step 3: Scroll down to see the following list of the elements in the Patient resource:

8.1.2 Resource Content

Structure	UML	XML	JSON	Turtle	R3 Diff	All
Structure						
Name	Flags	Card.	Type	Description & Constraints		
Patient	N		DomainResource	Information about an individual or animal receiving health care services Elements defined in Ancestors: id, meta, implicitRules, language, text, contained, extension, modifierExtension An identifier for this patient		
identifier	I	0..*	Identifier	An identifier for this patient		
active	? I	0..1	boolean	Whether this patient's record is in active use		
name	I	0..*	HumanName	A name associated with the patient		
telecom	I	0..*	ContactPoint	A contact detail for the individual		
gender	I	0..1	code	male female other unknown AdministrativeGender (Required)		
birthDate	I	0..1	date	The date of birth for the individual		
deceased[x]	? I	0..1		Indicates if the individual is deceased or not		
deceasedBoolean			boolean			
deceasedDateTime			dateTime			
address	I	0..*	Address	An address for the individual		
maritalStatus		0..1	CodeableConcept	Marital (civil) status of a patient MaritalStatus (Extensible)		
multipleBirth[x]		0..1		Whether patient is part of a multiple birth		
multipleBirthBoolean			boolean			
multipleBirthInteger			integer			
photo		0..*	Attachment	Image of the patient		
contact	I	0..*	BackboneElement	A contact party (e.g. guardian, partner, friend) for the patient + Rule: SHALL at least contain a contact's details or a reference to an organization		
relationship		0..*	CodeableConcept	The kind of relationship Patient Contact Relationship (Extensible)		
name		0..1	HumanName	A name associated with the contact person		
telecom		0..*	ContactPoint	A contact detail for the person		
address		0..1	Address	Address for the contact person		

Step 5: Double click on the element under review for example patient.name to view the patient.name details:

Patient.name	
Element Id	Patient.name
Definition	A name associated with the individual.
Cardinality	0..*
Type	HumanName
Requirements	Need to be able to track the patient by multiple names. Examples are your official name and a partner name.
Summary	true
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.

I. WHAT ARE THE ELEMENTS OF AN INSTANCE IN A FHIR PROCEDURE RESOURCE?

To see the element details of an instance of the FHIR Procedure resource, we can use the HL7 FHIR Resource webpage as a starting point.

Take the following steps to see the element details of an instance of the Procedure resource:

Step 1: Go to <https://www.hl7.org/fhir/resourcelist.html>

Step 2: Click on the Procedure resource link in the Clinical section of the Resource List

Step 3: Click on the Detailed Descriptions tab to see the following list of the elements on an instance in the Procedure resource and scroll down to find the specified element details:

The screenshot shows the HL7 FHIR Resource webpage with the 'Detailed Descriptions' tab selected. The page title is '9.3.6 Resource Procedure - Detailed Descriptions'. Below the title is a table with the following information:

Patient Care Work Group	Maturity Level: 3	Trial Use	Security Category: Patient	Compartment: Encounter, Patient, Practitioner, RelatedPerson
-------------------------	-------------------	-----------	----------------------------	--

Detailed Descriptions for the elements in the Procedure resource.

Procedure

Element Id	Procedure
Definition	An action that is or was performed on or for a patient. This can be a physical intervention like an operation, or less invasive like long term services, counseling, or hypnotherapy.
Cardinality	0..*
Type	DomainResource

Procedure.identifier

Element Id	Procedure.identifier
Definition	Business identifiers assigned to this procedure by the performer or other systems which remain constant as the resource is updated and is propagated from server to server.
Note	This is a business identifier, not a resource identifier (see discussion)
Cardinality	0..*
Type	Identifier
Requirements	Allows identification of the procedure as it is known by various participating systems and in a way that remains consistent across servers.
Summary	true
Comments	This is a business identifier, not a resource identifier (see discussion). It is best practice for the identifier to only appear on a single resource instance, however business practices may occasionally dictate that multiple resource instances with the same identifier can exist - possibly even with different resource types. For example, multiple Patient and Person resource instances might share the same social insurance number.

Procedure.instantiatesCanonical

Element Id	Procedure.instantiatesCanonical
Definition	The URL pointing to a FHIR-defined protocol, guideline, order set or other definition that is adhered to in whole or in part by this Procedure.
Cardinality	0..*
Type	canonical(PlanDefinition ActivityDefinition Measure OperationDefinition Questionnaire)

NEXT . . . for another view of this resource try:

Step 1: Go to <https://www.hl7.org/fhir/resourcelist.html>

Step 2: Click on the Procedure resource link in the Clinical section of the Resource List

Step 3: Scroll down to see the following list of the elements in the Procedure resource:

9.3.3 Resource Content

Structure UML XML JSON Turtle R3 Diff All

Structure

Name	Flags	Card.	Type	Description & Constraints
Procedure	TU		DomainResource	An action that is being or was performed on a patient Elements defined in Ancestors: id, meta, implicitRules, language, text, contained, extension, modifierExtension External Identifiers for this procedure
identifier		0..*	Identifier	Instantiates PHIR protocol or definition
instantiatesCanonical		0..*	canonical(PlanDefinition ActivityDefinition Measure OperationDefinition Questionnaire)	Instantiates external protocol or definition
instantiatesUri		0..*	uri	A request for this procedure
basedOn		0..*	Reference(CarePlan ServiceRequest)	Part of referenced event
partOf		0..*	Reference(Procedure Observation MedicationAdministration)	code preparation in-progress not-done on-hold stopped completed entered-in-error unknown EventStatus (Required) Reason for current status Procedure Not Performed Reason (SNOMED-CT) (Example)
status		1..1	code	Classification of the procedure Procedure Category Codes (SNOMED CT) (Example)
statusReason		0..1	CodeableConcept	Identification of the procedure Procedure Codes (SNOMED CT) (Example)
category		0..1	CodeableConcept	Who the procedure was performed on
code		0..1	CodeableConcept	Encounter created as part of
subject		1..1	Reference(Patient Group)	When the procedure was performed
encounter		0..1	Reference(Encounter)	
performed[x]		0..1		
performedDateTime			dateTime	
performedPeriod			Period	
performedString			string	
performedAge			Age	
performedRange			Range	

Step 4: Double click on the element under review for example procedure.identifier to view the procedure.identifier details:

Procedure.identifier

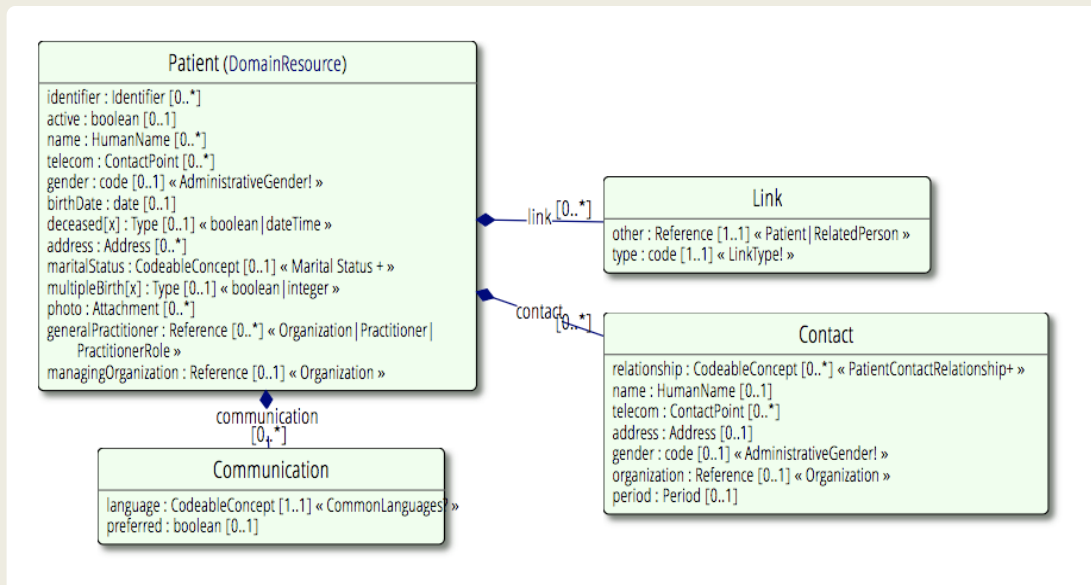
Element Id	Procedure.identifier
Definition	Business identifiers assigned to this procedure by the performer or other systems which remain constant as the resource is updated and is propagated from server to server.
Note	This is a business identifier, not a resource identifier (see discussion)
Cardinality	0..*
Type	Identifier
Requirements	Allows identification of the procedure as it is known by various participating systems and in a way that remains consistent across servers.
Summary	true
Comments	This is a business identifier, not a resource identifier (see discussion). It is best practice for the identifier to only appear on a single resource instance, however business practices may occasionally dictate that multiple resource instances with the same identifier can exist - possibly even with different resource types. For example, multiple Patient and Person resource instances might share the same social insurance number.

J. QUESTIONS TO TEST YOUR KNOWLEDGE

1. How might FHIR resources that standardize the ways different elements of health data are represented IMPROVE interoperability between health IT systems?

Your answer here

2. Consider the content of the Patient FHIR resource. Approximately how many facts about a single person can be included in one FHIR patient domain resource? (See the UML diagram below to help answer this question.)



Your answer here

3. Below on the next two pages is an actual example of a FHIR Patient resource in JSON format (this FHIR resource is for a fictitious patient!). See the FHIR resource below in JSON format and then answer these questions, a-d:

- a. What is the patient's first and last name?

Your answer here

b. What is the patient's mobile phone number?

Your answer here

c. What is the patient's Social Security Number?

Your answer here

d. Do you think that a computer program could be written to extract the first and last name, mobile phone number, and Social Security Number from the FHIR resource below automatically (Yes or No)? Why or why not?

Your answer here

EXAMPLE OF A PATIENT FHIR RESOURCE IN JSON FORMAT:

```

{
  "resourceType": "Patient",
  "id": "4",
  "meta": {
    "versionId": "1",
    "lastUpdated": "2020-01-10T20:38:49.000+00:00"
  },
  {
    "url": "http://hl7.org/fhir/us/core/StructureDefinition/us-core-race",
    "valueCodeableConcept": {
      "coding": [
        {
          "system": "http://hl7.org/fhir/v3/Race",
          "code": "2056-0",
          "display": "Black"
        }
      ]
    }
  },
  {
    "url": "http://hl7.org/fhir/us/core/StructureDefinition/us-core-ethnicity",
    "valueCodeableConcept": {
      "coding": [
        {
          "system": "http://hl7.org/fhir/v3/Ethnicity",
          "code": "2186-5",
          "display": "Not Hispanic or Latino"
        }
      ]
    }
  },
  {
    "url": "http://hl7.org/fhir/us/core/StructureDefinition/us-core-religion",
    "valueCodeableConcept": {
      "coding": [
        {
          "system": "http://hl7.org/fhir/v3/ReligiousAffiliation",
          "code": "1077",
          "display": "Protestant"
        }
      ]
    }
  },
  {
    "url": "http://mihin.org/fhir/extension/reference/master",
    "valueString": "https://~/mihinss/fhir/Patient/3058"
  }
],
"identifier": [
  {
    "use": "official",
    "type": {
      "coding": [
        {
          "system": "http://hl7.org/fhir/identifier-type",
          "code": "SB",
          "display": "Social Beneficiary Identifier"
        }
      ]
    }
  }
],
"system": "http://hl7.org/fhir/sid/us-ssn",
"value": "000002875"
},
{

```



```

        "use": "official",
        "type": {
          "coding": [
            {
              "system": "http://hl7.org/fhir/identifier-type",
              "code": "SB",
              "display": "Social Beneficiary Identifier"
            }
          ]
        },
        "system": "http://mihin.org/fhir/cks",
        "value": "99d0a46be01a431598646b8990ed06ba"
      }
    ],
    "active": true,
    "name": [
      {
        "family": "Vance",
        "given": [
          "Esther",
          "Garrett"
        ]
      }
    ],
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```

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