



HL7 CDA® R2 Implementation Guide International Patient Summary STU Release 1 (Universal Realm)

October 2018

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1 Introduction

An International Patient Summary (IPS) document is an electronic health record extract containing essential healthcare information intended for use in the unscheduled, cross-border care scenario, comprising at least the required elements of the IPS dataset. The IPS dataset is *a minimal and non-exhaustive patient summary dataset, specialty-agnostic, condition-independent, but readily usable by clinicians for the cross-border unscheduled care of a patient.*

1.1 Purpose

The goal of this Implementation Guide is to identify the required clinical data, vocabulary and value sets for an international patient summary. The international patient summary is specified as a templated document using HL7 CDA R2. The primary use case is to provide support for cross-border or cross-jurisdictional emergency and unplanned care.

This specification aims to support:

- Cross-jurisdictional patient summaries (through adaptation/extension for multi-language and realm scenarios, including translation).
- Emergency and unplanned care in any country, regardless of language.
- Value sets based on international vocabularies that are usable and understandable in any country.
- Data and metadata for document-level provenance.

1.2 Project Background

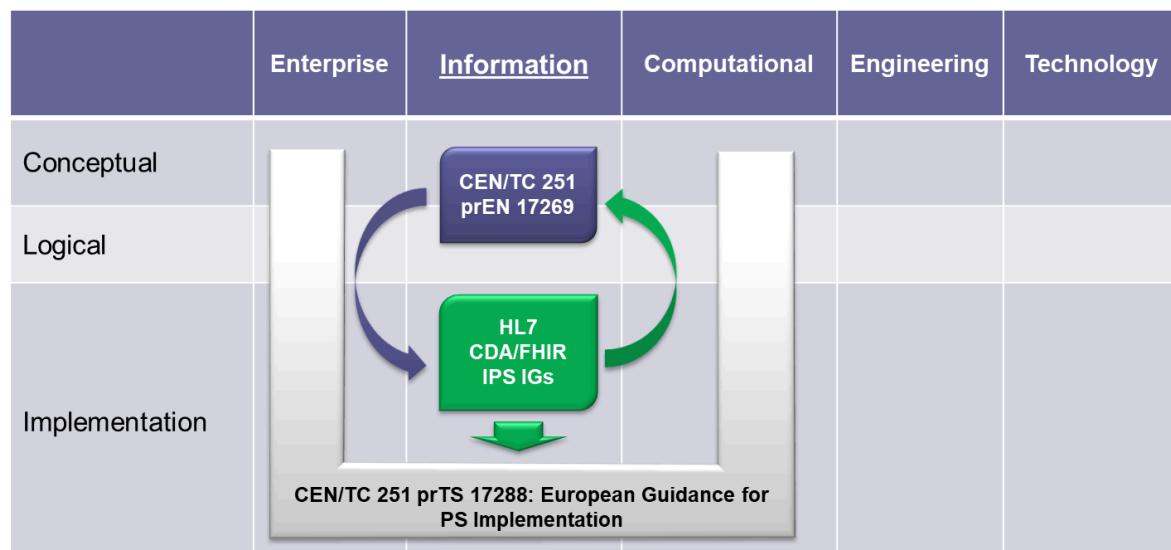
This Implementation Guide has drawn upon the results of multiple previous projects on patient summaries (including but not limited to epSOS^[1], ONC S&I, Trillium Bridge^[2], Sequoia eHealth Exchange^[3]), rules and recommendations for vocabularies and value sets (in multilingual settings) and templates for the implementation of international patient summary documents.

The idea of the International Patient Summary has been one of the main results of the 2010 EU/US Memorandum of Understanding through its two operational arms: the European project Trillium Bridge and the Interoperability of EHR work group formed under the ONC Standards and Interoperability Framework (ONC S&I) EU/US eHealth Cooperation Initiative^[4]. These initiatives identified the need for common templates and vocabularies for the patient summary.

The Joint Initiative Council (JIC) on SDO Global Health Informatics Standardization has initiated the standard sets project with patient summary as its pilot^[5]; and the IPS became one of the main subjects of the new EU / US roadmap , having as a declared goal “to enable a standardized international patient summary (IPS) to be in use by 2020”^[6].

The first standardization activity concerning the IPS was initially promoted in April 2014 by ONC within HL7 International. The project was called “INTernational PAtient Summary (INTERPAS)”. In May 2016, the European Commission granted an Agreement with CEN/ TC 251, recognizing the need to effectively support the leadership and active participation in IPS standardization activities. Thanks to the new boost from the European Commission (EC) and ONC a revision of the HL7 project was started in May 2016, as well as the standardization activities in CEN/TC 251 for the European standards on Patient Summaries. Since the beginning of this new phase, the initiatives were envisaged as a **single common IPS project** supported by different organizations; where the CEN/TC 251 and the HL7 teams worked together, taking in account the inputs of the JIC Standard Sets initiative on Patient Summary, with the common intent of developing coherent set of standards to support the International Patient Summary concept.

To expedite progress it was also agreed to set up an informal collaboration, promoting a continuous alignment process between the two SDO-specific projects, thanks also to a cross-participation in the project teams. Overlaps have thus been minimized: the CEN/TC 251 activities have been focused on the IPS dataset, formalized by the CEN/TC 251 Draft European standard (prEN) 17269:2018: *The Patient Summary for Unscheduled, Cross-border Care*" (the CEN/TC 251 prEN 17269:2018 PS in [Figure 1]); the HL7 ones initially on its implementation based on HL7 CDA R2 - this guide - and next on FHIR (the HL7 IPS IGs in [Figure 1]). The figure shows how the products of these standardization activities are placed in the HL7 SAIF Interoperability Matrix.



[Figure 1] IPS Standards in the HL7 SAIF Interoperability Matrix

A formal agreement between HL7 International and CEN/TC 251 has been finally signed in April 2017 in which these organizations established “*in order to further the care for citizens across the globe <...> to collaborate on a single, common International Patient Summary (IPS) specification*”; and that “*the IPS specification shall focus on a minimal and non-exhaustive Patient Summary dataset, which is specialty-agnostic and condition-independent, but still clinically relevant*.”.

1.3 Scope

As expressed in the introduction, the International Patient Summary is

- a minimal and non-exhaustive patient summary,
- specialty-agnostic,
- condition-independent,
- but readily usable by clinicians for cross-border unscheduled care of a patient.

In this context, *minimal and non-exhaustive* means that an IPS is not intended to reproduce (the entire) content of an Electronic Health Record (EHR).

Specialty-agnostic means that an IPS is not filtered for a specialty. As an example, allergies are not filtered to the specialty of internal medicine, thus may also include food allergies, if considered to be relevant for, e.g. unplanned care.

Condition-independent means that an IPS is not specific to particular conditions, and focuses on the patient current condition(s).

Furthermore the scope of the IPS is global. Although this is a major challenge, this implementation guide takes various experiences and newer developments into account to address global feasibility as far as possible.

1.4 General Principles for this Specification

With the formal agreement signed on April 2017, HL7 International and CEN/TC 251 expressed their intent to collaborate under the following principles for the IPS:



[Figure 2] The IPS Principles

1. The standards specification for the IPS will be implementable
 - Promote (the evolution and convergence of) existing standards
 - Rely on solutions that are already implemented or ready for implementation
 - Consider new or additional solutions as they become available
2. The standards specification for the IPS will be applicable for global use
 - Strive for global accessibility of standards for use at no cost
 - Strive for a core set of globally accessible and usable terminologies and value sets
 - Include free text in addition to the structured codes as needed
 - Do not include local solutions in the core specification that are not available in other jurisdictions
3. The standards specification will be extensible and open to future use cases and solutions
 - The IPS provides common content that can be extended and specialized for other use cases, or localized for specific jurisdictional needs
 - The IPS is open to emerging solutions for unresolved issues or improvements
4. The standards specification and their implementation must be sustainable through:
 - A robust maintenance and update process for the IPS
 - A process to ensure clinical validity of the IPS, meeting:
 - clinical requirements (including workflow)
 - clinical documentation requirements
 - information quality requirements

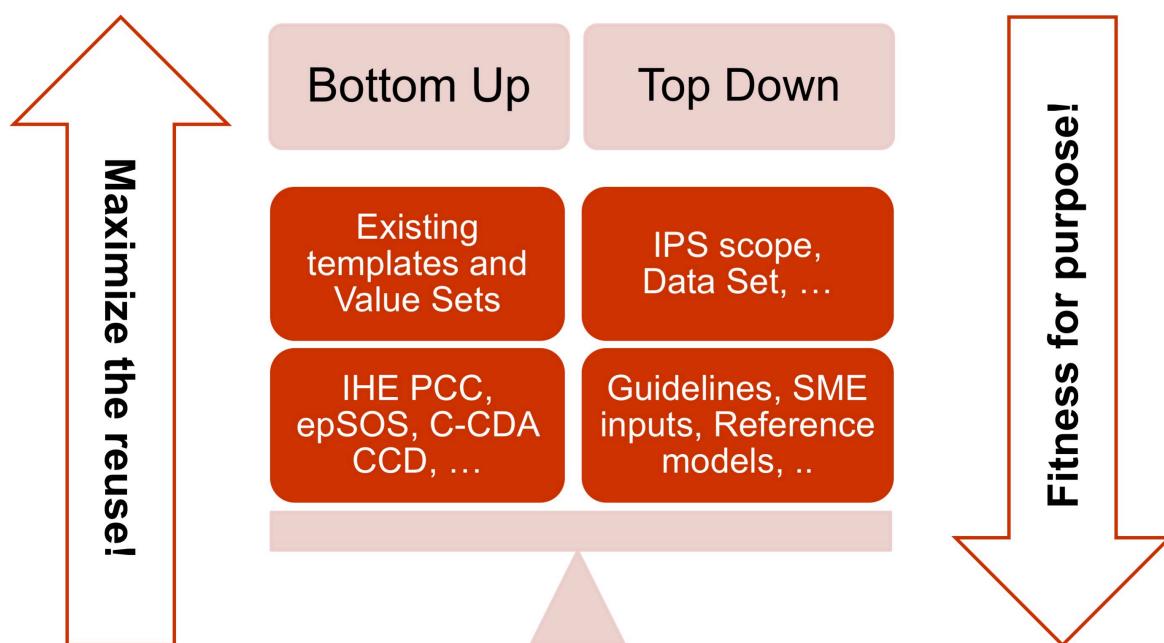
Moreover HL7 International and CEN/TC 251 will manage the expectations of the IPS standards specification among stakeholders, by

- stipulating the role of the IPS as a foundation for others to extend
- justifying the inclusion of items in the IPS within the limited context of cross-border or cross-jurisdiction unscheduled care.

The more relevant consequences of these principles in the template design are:

- The adoption of a meet in the middle approach in the templates design to balance the need of maximizing

the reuse of existing implemented templates (epSOS, C-CDA CCD; IHE PCC...) and facilitate implementation with the need of optimizing the fitness for purpose within the IPS scope. This approach aims to avoid a pure technical exercise of templates harmonization or an academic exercise that does not take in account what is already implemented.



[Figure 3] The IPS meet-in-the-middle approach

- Cooperate with the HL7 Terminology Authority and the organizations that own the used code systems (e.g. SNOMED International) to make the IPS value sets available for global use at no cost for implementation of the IPS.
- When global identifiers are not (or not yet) available, as in the case of the medicinal products, enhance the model proposed for that element with relevant identifying and descriptive attributes that could help with the global identification of that element.
- Select a set of global reference terminologies, with provision for the inclusion of locally used terminologies.
- Avoid solutions (e.g. identifiers, terminologies, standards) that are not yet available for actual global use (even those that are otherwise promising for resolution of well-known issues, such as medicinal product identification). However, the IPS has been already designed, where possible, to be ready to adopt these solutions when they are made available for real use (e.g. the IDMP identifiers) and to already support parts of those solutions that can be used today.
- Within the scope of the IPS and of the “implementable” principle, attempt to be sufficiently generic in the design of the templates so that the IPS templates are extensible for supporting new scenarios, specific specialties or conditions through template specialization or adaptation mechanisms.

1.5 Structuring Choices

The International Patient Summary is specified as a templated document using HL7 CDA R2. The expressiveness of SNOMED CT and other primary terminologies enables this specification to represent the two general categories “condition/activity unknown” and “condition/activity known absent” in a style which is more independent of the underlying syntax (CDA R2 or FHIR (<http://hl7.org/fhir/STU3/index.html>)), as explained in detail in section 4.2.

To be universally exchangeable and understood, a patient summary must rely as much as possible on structured data and multilingual international reference terminologies that are licensed at no cost for global use in the International Patient Summary. In the case of SNOMED CT, it is envisioned that SNOMED International could embrace the idea of a globally accessible open and free specification for the International Patient Summary that references a core set of globally accessible and usable value sets licensed at no-cost with the aim to serve the public good. In this spirit, this version of the International Patient Summary defines SNOMED CT as a primary terminology (the meaning of "primary terminology" is explained in section 4.1) and it is used in many of the value sets. To allow, however, a global and free implementation of the IPS this guide does not impose the usage of these SNOMED CT-based value sets. This choice may be revised in future versions. Other primary terminologies used in this specification are LOINC for observations (e.g., laboratory tests) and document sections, UCUM for units of measure, and EDQM Standard Terms for dose forms and routes. Looking at the availability of other globally usable reference terminologies and toward alignment with a future FHIR version of the IPS, in some selected cases FHIR-defined terminologies are recommended.

This specification adopts ART-DECOR®^[7] as the specification platform for this Implementation Guide and uses the HL7 template exchange format^[8]. This tool and format are increasingly used by several regions, including European countries, and have been adopted by the EU eHealth Digital Service Infrastructure (eHDSI) project for the operational deployment of the EU cross-borders patient summary and ePrescription services. Users of the specification can visit the IPS project page in ART-DECOR® to browse the specifications and review examples. Users may also use the tool to validate their IPS instances.

1.6 Ballot Status of the Document

This Implementation Guide is STU with the intention to go normative.

1.7 Audience

The audience for this Implementation Guide includes:

Public

- Citizens who want to carry or access their healthcare data for emergency or unplanned care purposes.

Regulatory

- Policy makers such as healthcare payers or government agencies.
- Healthcare information governance authorities and regulatory bodies.

Clinical

- Healthcare providers that offer unscheduled and emergency care.
- Healthcare providers that populate regional and national patient summaries.

Technical

- Vendors of EHR systems for unplanned care management, personal health records and mobile health data

- applications.
- System integrators.
- Organizations that manage regional and national patient summaries.

1.8 Relationships with other projects and guidelines

This guide is one of the products of the *International Patient Summary project* (see the Project Background section for details). This project relates to other projects and products as:

- The **European Commission CEN/TC 251 Grant Agreement** “The International Patient Summary Standards Project” (SA/CEN/GROW/EFTA/000/2015-16).

This project has as one of its goal *“to participate in the creation of an International Patient Summary specification, at a global level, and turn this into a European standard, in line with the Guidelines on Minimum/Nonexhaustive Patient Summary Dataset for Electronic Exchange as adopted by the European eHealth Network”*

Under this project two other standard work items have been promoted under CEN/TC 251:

- The **CEN/TC 251 “prEN 17269: The Patient Summary for Unscheduled, Cross-border Care”**.

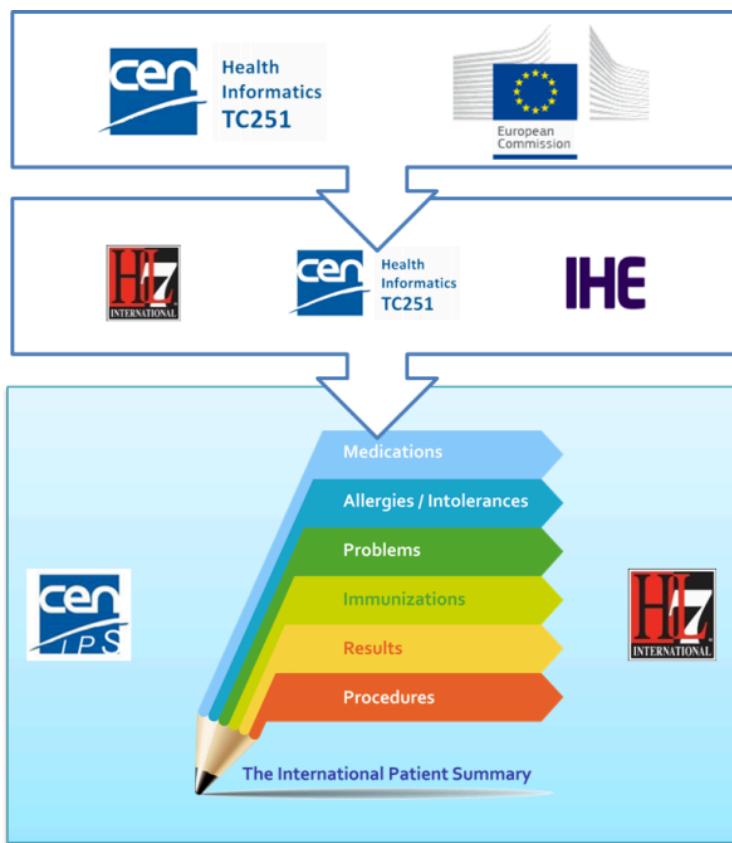
Its goal is to “formalise the dataset required to share information about the medical background and history of a patient It uses the European guidelines (version 2, November 2016) as an official source for the requirements....”

Even if it is a European standard it is designed to be applicable in a wider global context.

- The **CEN/TC 251 “prTS 17288: The International Patient Summary: Guidance for European Implementation Technical Specification”**.

Its goal is to “provide implementation guidance to support the use of the International Patient Summary dataset in a European context”

This document is focused on the European cross-country services.



[Figure 4] The European Commission CEN/TC 251 Grant Agreement

- The **European eHealth Network Guideline on the electronic exchange of health data under Cross-Border Directive 2011/24/EU. Release 2.** [9] This Guideline, together with the general guidelines for the electronic exchange of health data under Cross-Border Directive 2011/24/EU, documents the clauses agreed among the European Countries to support the exchange of Patient Summary data for unscheduled care.

The relationships among these standards are shown in Figure 14 included in the section Conformance clause.

Listed below are other related initiatives:

- The **HL7 Consolidated CDA (C-CDA)** [10] implementation guide was developed and produced through the joint efforts of HL7, two Sub-Work Groups of the Office of the National Coordinator (ONC) Standards and Interoperability (S&I) Framework — Longitudinal Care Plan (LCP) and Long-Term Post-Acute Care (LTPAC) Transition — and through the SMART C-CDA Collaborative hosted by ONC and Harvard Medical School. It provides a library of CDA templates for implementing a set of CDA documents. This is one of the primary sources for this Implementation Guide.
- The **IHE Patient Care Coordination (PCC)** Cross-Enterprise Sharing of Medical Summaries (XDS-MS) [11] – “defines a mechanisms to automate the sharing process between care providers of Medical Summaries, a class of clinical documents that contain the most relevant portions of information about the patient intended for a specific provider or a broad range of potential providers in different settings.” . This is one of the primary sources for this Implementation Guide.
- **eHealth Digital Service Infrastructure (eHDSI) Patient Summary Service** [12]. This European initiative operationalizes the work done by the epSOS and EXPAND projects for the implementation of Euro-

pean Cross-border services for the exchange of patient summaries and ePrescriptions. This is one of the primary sources for this Implementation Guide.

- The Joint Initiative on SDO Global Health Informatics Standardization (**JIC**) **Patient Summary Standards Set** is a set of health informatics standards and related artifacts that can be used to support the implementation of a Patient Summary [13]. The definition of the Patient Summary given by this initiative is a little broader than that adopted by the HL7 and CEN/TC 251 projects, being ““the minimum set of information needed to assure healthcare coordination and the continuity of care” .
- The **Data Provenance** is an ONC S&I initiative addressing the “source data” challenge so that trust in the authenticity of the data can help inform decision making. The HL7 CDA® Release 2 Implementation Guide: Data Provenance, Release 1^[14] is one of the products resulting from the joint efforts of Health Level Seven (HL7) and the Office of the National Coordinator (ONC) Standards and Interoperability Standards and Interoperability Framework-Data Provenance Initiative.

1.9 Reading Publication Artifacts

A reading guide is available that explains the formalism used to express the publication artifacts, i.e. template meta data and template design. For convenience the guide is included in the appendix. (see section 12 How to read the table view for templates)

2 Technical Background

2.1 What is a CDA

CDA R2 is "... a document markup standard that specifies the structure and semantics of *clinical documents* for the purpose of exchange" [CDA R2, Section 1.1]. Clinical documents, according to CDA, have the following characteristics:

- Persistence
- Stewardship
- Potential for authentication
- Context
- Wholeness
- Human readability

CDA defines a header for classification and management and a document body that carries the clinical record. While the header metadata are prescriptive and designed for consistency across all instances, the body is highly generic, leaving the designation of semantic requirements to implementation.

2.2 Templated CDA

CDA R2 can be constrained by mechanisms defined in the "Refinement and Localization" section of the HL7 Version 3 Interoperability Standards. The mechanism most commonly used to constrain CDA is referred to as "templated CDA". This specification created a set of artifacts containing modular CDA templates (and associated value sets) for the purpose of the International Patient Summary, and the templates can be reused across any number of CDA document types.

There are different kinds of templates that might be created. Among them, the most common ones are:

- **CDA Document Level Templates** constrain fields in the Clinical Document Architecture (CDA) header, and define containment relationships to CDA sections.
For example, a History-and-Physical document-level template might require that the patient's name be present, and that the document contain a Physical Exam section.
- **CDA Header Level Templates** constrain fields for parts of the CDA header, like the patient (record target), the author, participations or the service event.
- **CDA Section Level Templates** constrain fields in the CDA section, and define containment relationships to CDA entries.
For example, a Physical-exam section-level template might require that the section/code be fixed to a particular LOINC code, and that the section contain a Systolic Blood Pressure observation.
- **CDA Entry Level Templates** constrain the CDA clinical statement model in accordance with real world observations and acts.
For example, a Systolic-blood-pressure entry-level template defines how the CDA Observation class is constrained (how to populate observation/code, how to populate observation/value, etc.) to represent the notion of a systolic blood pressure.

2.3 Open and Closed Templates

Open templates permit anything to be done in the underlying standard that is not explicitly prohibited. This allows templates to be built up over time that extend and go beyond the original use cases for which they were originally designed.

Closed templates only permit what has been defined in the template, and do not permit anything beyond that. There are good reasons to use closed templates, sometimes having to do with local policy. For example, in communicating information from a healthcare provider to an insurance company, some information may need to be omitted to ensure patient privacy laws are followed. Most templates developed for CDA are of the open sort.

2.4 Template versioning

Template versioning is needed to enable template designs to evolve over time.

Template versioning enables template designers to control and shape the conformance statements that make up a template's design over time tailoring the design to fit the template's intended purpose.

Each template version is associated with a particular template. The template – as a whole – has a mandatory globally unique, non-semantic, identifier. The identifier serves as the identifier of the original intent of the template and as the identifier of the set of versions that represent the template over time.

Template versions have a mandatory timestamp (date and optional time), called the “effective date”. The date can be seen as the point in time when the template version “came into being”, i.e. was recognized as existent by the governance group. Use of the template prior to this date would be considered an invalid use of the template.

For further information on Templates, Template Versions and related topics refer to the HL7 Templates Standard^[8].

2.5 Conformance Verbs

The conformance verb keywords **SHALL**, **SHOULD**, **MAY** and **SHALL NOT** in this document are to be interpreted as described in the HL7 Version 3 Publishing Facilitator's Guide^[15].

- **SHALL**: an absolute requirement
- **SHALL NOT**: an absolute prohibition against inclusion
- **SHOULD**: best practice or recommendation. There may be valid reasons to ignore an item, but the full implications must be understood and carefully weighed before choosing a different course
- **MAY**: truly optional; can be included or omitted as the author decides with no implications

2.6 Identifiers for Templates and Value Sets

This specification uses the following OIDs for the artifacts that are registered at the HL7 OID registry.

- The root OID for templates is 2.16.840.1.113883.10.22
 - Document Level Templates are sub branch **.1**, e.g. 2.16.840.1.113883.10.22.1.1 *International Patient Summary*
 - Header Level Templates are summarized under 2.16.840.1.113883.10.22.2, e.g. 2.16.840.1.113883.10.22.2.1 *IPS CDA recordTarget*
 - Section Level Templates are summarized under 2.16.840.1.113883.10.22.3, e.g. 2.16.840.1.113883.10.22.3.1 *IPS Medication Summary Section*

- Entry Level templates are summarized under 2.16.840.1.113883.10.22.4, e.g.
2.16.840.1.113883.10.22.4.19 *IPS Certainty Observation*
- “other” assistance templates are summarized under 2.16.840.1.113883.10.22.9, e.g.
2.16.840.1.113883.10.22.9.2 *IPS CDA Device*
- The root OID for Value Sets is 2.16.840.1.113883.11

The sub branches for templates follow the recommendations of HL7 International and ISO 13582^[16]

2.7 Terminologies

Note: Much of the description provided in this section is copied and adapted from the §4.2.8 Vocabulary Conformance section of the C-CDA DSTU R2.1 Implementation Guide Volume 1.^[17]

The templates in this document use terms from several code systems. These vocabularies are defined in various supporting specifications and may be maintained by other bodies, as is the case for the LOINC® and SNOMED CT® vocabularies. The primary terminologies identified for this specification are listed in section 4.1.

Note that value set identifiers (e.g., ValueSet 2.16.840.1.113883.1.11.78 *Observation Interpretation (DYNAMIC)*) used in the binding definitions of template conformance statements do not appear in the XML instance of a CDA document. The definition of the template must be referenced to determine or validate the vocabulary conformance requirements of the template.

Value set bindings adhere to HL7 Vocabulary Working Group best practices, and include both an indication of stability and of coding strength for the binding. Value set bindings can be STATIC, meaning that they bind to a specified version of a value set, or DYNAMIC, meaning that they bind to the most current version of the value set. If a STATIC binding is specified, a date SHALL be included to indicate the value set version. If a DYNAMIC binding is specified, the value set authority and link to the base definition of the value set SHALL be included, if available, so implementers can access the current version of the value set. When a vocabulary binding binds to a single code, the stability of the binding is implicitly STATIC.

For example, to convey @code=11450-4, the code’s displayName ‘Problem List’, the OID of the codeSystem from which the code is drawn ‘2.16.840.1.113883.6.1’, and the codeSystemName ‘LOINC’, the tabular view used in this guide is presented as shown below.

hl7:code		1 ... 1	M	
@code		1 ... 1	F	11450-4
@codeSystem	CONF	1 ... 1	F	2.16.840.1.113883.6.1 (LOINC)
@displayName		1 ... 1	F	Problem List

[Figure 5] Binding to a Single Code (tabular view)

HL7 Data Types Release 1 requires the codeSystem attribute unless the underlying data type is “Coded Simple” or “CS”, in which case it is prohibited. The displayName and the codeSystemName are optional, but recommended, in all cases.

The above example would be properly expressed as follows.

```
<code code="11450-4" codeSystem="2.16.840.1.113883.6.1"/>
<!-- or -->
```

```
<code code="11450-4" codeSystem="2.16.840.1.113883.6.1"
      displayName="Problem List" codeSystemName="LOINC"/>
```

[Figure 6] XML Expression of a Single-Code Binding

A full discussion of the representation of vocabulary is outside the scope of this document; for more information, see the HL7 V3 Normative Edition 2010^[18] sections on Abstract Data Types and XML Data Types R1.

There is a discrepancy between the HL7 R1 Data Types and this guide in the implementation of translation code versus the original code. The R1 data type requires the original code in the root. The convention agreed upon for this implementation guide is that a code from the required value set is used in the element and other codes not included in the value set are to be represented in a translation for the element. Note: This discrepancy is resolved in HL7 Data Types R2, but that is not available for use in CDA R2.

In the next example, the conformant code is SNOMED CT code 206525008.

```
<code code="206525008" codeSystem="2.16.840.1.113883.6.96"
      displayName="neonatal necrotizing enterocolitis" codeSystemName="SNOMED CT">
  <translation code="NEC-1" codeSystem="2.16.840.1.113883.19"
    displayName="necrotizing enterocolitis"/>
</code>
```

[Figure 7] Translation Code Example

Value set tables are present below a template, or are referenced if they occur elsewhere in the specification, when there are value set bindings in the template. The value set table provides the value set identifier, a description, and a link to the source of the value set when possible. Ellipses in the last row indicate the value set members shown are examples and the true source must be accessed to see all members.

If a value set binding has a DYNAMIC stability, implementers creating a CDA document must go to the location in the URL to check for the most current version of the value set expansion.

Note: Much of the description provided in the following three sections on value set definitions and expansions and extending value sets is adapted from Core Principles and Properties of HL7 Version 3 Models.^[19]

2.7.1 Value Set Definitions

Two approaches can be used to define the contents of a Value Set:

- **Extensional Definition:** Explicitly enumerating each of the Value Set concepts.
 - An Extensional Definition is an enumeration of all of the concepts within the Value Set. A Value Set defined by extension is composed of explicitly enumerated sets of concept representations (with the Code System in which they are valid). The simplest case is when the Value Set consists of only one concept.
- **Intensional Definition:** Defining an algorithm that, when executed by a machine (or interpreted by a human being), yields an enumeration of all of the concepts within the Value Set, which is called a **Value Set Expansion**.
 - An Intensional Definition is a set of rules that can be expanded (ideally computationally) to an exact set of concept representations at a particular point in time.

Many of the value sets used in the IPS specification are defined intensionally. The source of truth for these value sets and their definitions for IPS is ART-DECOR®^[20].

Code	Intentional Definition	Code System
⊕ Include	descendants of code 419199007 Allergy to substance (disorder)	SNOMED Clinical Terms

[Figure 8] Intensional value set definition.

2.7.2 Value Set Expansions

To obtain a list of enumerated concepts, Value Sets must be expanded. This means that the Value Set Definition must be converted to a list of concept representations at a point in time. This normally is a list of codes that may be used in populating or validating communicated model instances (but it may alternatively be a list of designations). While this is straightforward for extensional Value Set Definitions, an intensional Value Set Definition must be resolved to a Value Set Expansion by processing the rules contained in the Value Set Definition. Value Set Expansion can be done as early as the point of Value Set definition or as late as run time. For intensional Value Sets, the set of concepts contained in the expansion will generally change when the definition is changed (a new version of the Value Set Definition), but also may change with the identical version of the definition if the underlying code systems change, and the changes are part of the Value Set Expansion. This can be controlled if the definition statement refers to specific code system versions, thereby prohibiting the expansion from changing when the code system changes with a new version release. See Core Principles and Properties of HL7 Version 3 Models for additional details.^[19]

In order to implement the IPS specification, the intensionally defined value sets must be expanded (as noted above). ART-DECOR® is expected to provide capabilities for generating the required value set expansions. Other terminology servers are also expected to provide this service.

2.7.3 How to extend Value Sets

For elements with a binding to a value set that allows extensibility (Extensible/CWE), it may at times be necessary to extend the value set in order to support implementation needs. Coded With Extensibility (Extensible/CWE) means that the set of codes resulting from processing the Value Set Definition is not necessarily complete for its intended use-case. There may be some concepts that need to be communicated that cannot be represented within the expansion of the specified value set. In these cases, implementers therefore have permission to send local codes or original text within the coded element if an appropriate code cannot be found within the value set and its current expansion. When this does occur, however, there is an expectation that implementers should feed back these "missing concepts" to the maintainers of the Value Sets or referenced Code System(s) to have the necessary concept added, and then to transition to the new "official" code when one is subsequently added to the value set.

3 Functional requirements and high-level use cases

Several use cases may be identified for the International Patient Summary within its scope (“specialty-agnostic, condition-independent, but readily usable by clinicians for the cross-border unscheduled care”). Section Examples provide a subset of some real world user stories for the cross-border care developed by the Trillium Bridge Project (<http://www.trilliumbridge.eu>) and by the S&I EU-US eHealth Cooperation Initiative (<http://wiki.siframework.org/EU-US+eHealth+Cooperation+Initiative>) in the scope of the EU/US Roadmap initiative.

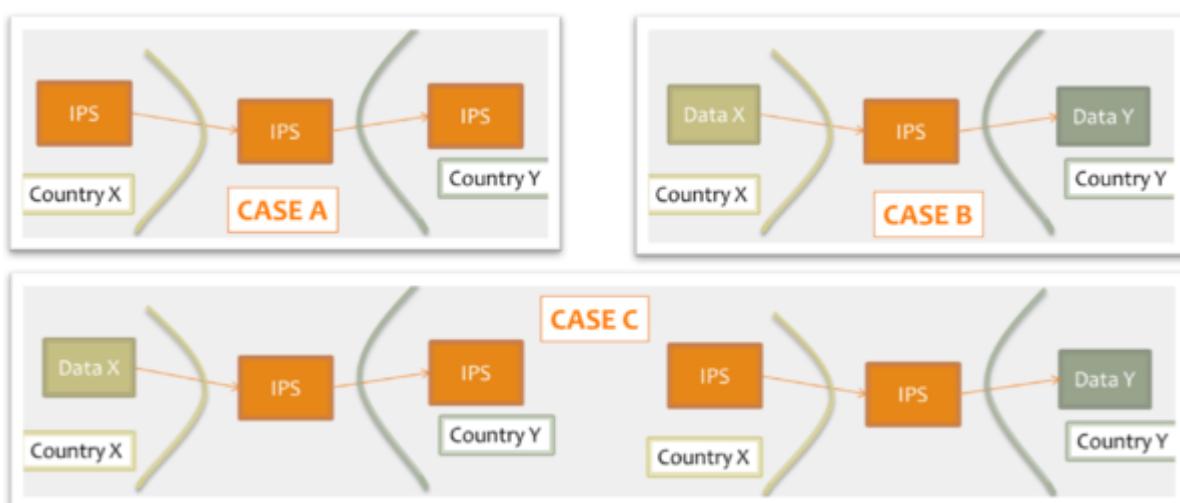
The cross-border care is not however the only expected usage scenario for the IPS. Some European countries have already manifested their interest on the IPS work for their future national Patient Summary for unscheduled care. Patient summary initiatives are currently in various stages of development in other parts of the world.

As shown by the user stories there are several possible options in terms of creation, sharing and usage of an IPS. For example:

1. An IPS can be created when requested and used before, during, or after a care episode; or can be asynchronously generated and made available for future usage (e.g. store and retrieve).
2. The IPS can be retrieved using a document exchange infrastructure; transported by the patient; or shared using cloud-services.
3. The IPS may be subject of a transformation process that may include syntactical conversions, coded concept mappings and coded concept designation or free text translations. This transformation process may be performed in the creation phase, during the transmission, or after the IPS has been received, possibly using an external service.
4. Finally, the received CDA may be used in different ways. For example, displayed using a common CDA stylesheet; display the extracted relevant information; incorporated into the receiver’s EHR. Alternatively, a specialized viewer may be adopted to enable the display of the translated content.

Moreover for cross-jurisdiction exchange, the IPS could be used as:

1. shared format among jurisdictions (case A), where jurisdictions originate and use IPS conforming documents unaltered.
2. pivot document among existing summaries / data formats (case B). For example, the IPS is used as intermediate format between the US C-CDA CCD (please note that the CCD scope differs from that of the IPS) and the European eHDSI Patient Summary for a Transatlantic Patient Summary exchange.
3. mixed mode (Case C), where either the originator or the consumer is expected to use an IPS conforming document.



[Figure 9] Examples of IPS usage

Considering all those possible combinations and additional business requirements agreed by jurisdictions, there are several technical infrastructures and services that may be designed to support these requirements.

It is out of scope of this standard to provide any indication about solutions and strategies for the IPS creation, sharing, syntactical and semantic mapping, translation, and use.

That said, an International Patient Summary may:

1. be the result of automatic assembly (assembled IPS) or of a human summarization act (human curated IPS)
2. have one or more EHR sources
3. document information from a single or multiple jurisdictions/organizations
4. aggregate input from a single or multiple encounters.

A clear determination of such contextual information raises the trustworthiness of the received IPS and helps the appropriate usage of its content by the receiver. Most of these aspects are related to data provenance introduced in section 1.8 and further detailed in section 4.11.

Even if many jurisdictions require that only one active Patient Summary for unscheduled care be made available, this guide does not impose such constraints and leaves them to jurisdictional implementations.

Moreover it is also out of scope of this guide to:

- provide guidance on how to determine the relevance of data for their inclusion in a IPS;
- define selection or composition rules for facing potential inconsistencies from multiple sources in case of automatic collection.

3.1 Code mappings and multilingual support

The capability of managing locally used coded concepts and reference terminologies, and that of providing receiving providers with human readable information in a language that can be understood by them, are critical aspects to be taken in account in the cross-border sharing of documents. This section summarizes some of the requirements related to these aspects, including also additional needs derived from the European cross-border services and some lessons learned by the EU/US Trillium Bridge Project.

The European cross-border services (eHDSI) use a business to business exchange infrastructure based on a network of country gateways that mediate access to the national infrastructures. The eHDSI Patient Summary (eHDSI PS) is used as a “pivot” document for the cross-border exchange. Local PS using data/document formats are in fact remapped into the eHDSI PS. The document exchanged is processed each time it passes through one of these gateway applying the needed syntactical transformation, code mappings, and translation of the code designations. Finally, in the current practice the received PSs are displayed using specialized display tools that build a human readable representation of the PS in the target language using the translated designations reported in the coded entries.

The adoption of translated narratives in the received document has been one of the indications received by the Trillium Bridge Project. This in fact allows extending multilingual support for the cross-border patient summaries to a wider set of potential consumers (EHR-or PHR systems), without requiring specialized viewers as applied in the eHDSI services.

3.1.1 Concept code mapping

In several real world use cases the records used as source for the Patient Summaries may use locally adopted terminologies, which are mapped to the reference value sets when possible, or otherwise used directly to provide uncoded information. This leads to a series of requirements listed below and detailed further in section 4 Design conventions and principles.

- When the original coded concept is mapped to one of the coded concepts included in the reference value sets (called hereafter reference code/coded concept), both the original and the reference codes **SHALL** be reported in the IPS instance.
- When the original coded concept is not mapped to one of the coded concepts included in the reference value sets, the original code **SHALL** be reported in the IPS instance as well as the indication that mapping was not successful.
- When the original record, for a specific coded element, is not able to provide coded but only textual information, this information **SHALL** be reported in the IPS instance.

This guide also accommodates these situations:

- The original record may support multi-coding. The IPS instance should make clear whether the additional codes belong to the original content or are the result of post hoc concept code mapping.
- The original record may include references to the pieces of text the coding was derived from. If present, the IPS instance should preserve this link between the original code and the referred text.
- Distinct original and reference coded concepts may belong to the same code system. This may be the result of a different level of granularity between the original and the reference value sets, or the result of format transformation - e.g. CCD document is used as input for generating an IPS. The requirement of recording both coded concepts applies also to these cases.

3.1.2 Multilingual support

Multilingual support by IPS can be split in two categories of action:

1. The translation of coded concept designations (displayName)
2. The translation of the narrative.

These actions may deal with various choices:

- Translation to the language of the receiving care provider: a foreign provider retrieves a translated copy of

the IPS from the patient's country of affiliation...

- Translation to a commonly agreed language: an English version of the IPS is prepared.
- Predefined set of translations included in the shared IPS.

This guide does not favor any of these solutions. All of them are supported.

3.1.2.1 Translation of Designations

The European Cross-border services requires that for “safety and liability reasons” all of the original coded terms (designations, displayName) shall be recorded in the exchanged documents together with at least the English and the receiving country language terms (designations, displayName) associated with the reference codes. The designations translated in the receiving country language are used to generate the human readable content shown to the receiving provider. No free text translation is applied in this case. In order to accomplish this objective, the IPS should have the capability to record one or more designations, possibly indicating the language used. The solution chosen to fulfill this requirement is specified in section 4.6.

3.1.2.2 Narrative Translation

Narrative translation covers two kinds of operations:

- Translation of the original narrative text, which can be automated (e.g. using translation services) and/or human curated.
- Creation of new narrative for the target language, based on the coded entries.

The level of quality and liability obtained depends on the solution adopted and on the quality of the translation service used. It is out of the scope of this guide to suggest any of these solutions. In all cases, however:

- the language of the narrative should be identifiable
- the original and the translated narrative should be clearly distinguished
- the translation methodology applied (e.g. derived from the coded entries; translated by a generic service;..) should be noted

4 Design conventions and principles

4.1 How to use terminologies (preferred binding)

As stated in section 1.5, to be universally exchangeable the International Patient Summary must rely on international multilingual reference terminologies. To that effect, each codeable element of the international patient summary template is bound to a Value Set built upon an international reference terminology, such as SNOMED CT, LOINC, UCUM or EDQM Standard Terms. In some selected cases, in consideration of the availability of other globally usable reference terminologies and for alignment with a future FHIR version of the IPS, FHIR-defined terminologies have been specified. These terminologies have been selected to provide the preferred bindings for the codeable elements of the patient summary. They are the **primary terminologies** of this specification.

Nevertheless, it is anticipated that in some situations a system producing an instance of patient summary might not support one or the other of these primary terminologies, supporting only a local interface terminology instead. Similarly, it is also anticipated that the receiving system might in some cases not be able to use a code in a patient summary, either because this code belongs to a primary terminology that the receiving system does not support or because this code belongs to an interface terminology specific to the country of the producing system.

In order to maximize the international scope and usability of patient summaries, and also to accommodate the exceptional situations listed above, this specification makes these requirements:

- The Primary Code of a codeable element **SHOULD** be populated.
- If populated, the Primary Code of a codeable element **SHALL** be chosen from the primary terminology assigned to the value set bound to this element; unless exceptions have been agreed.
- The 'displayName' of the Primary Code **SHALL** be populated with a term representing this same code in the terminology used, in the language chosen for the current instance of the patient summary.
- When the primary 'code' element is not populated, an appropriate 'nullFlavor' value **SHALL** be used along with the 'originalText' element (referencing a textual expression in the narrative representing the meaning for the producer) and/or one or more coded 'translation' elements.
- One or more Alternate Codes from a local interface terminology **MAY** be provided, each with its associated 'displayName'.
- In case the primary code is derived from an alternate terminology the alternate code **SHOULD** be provided in the translation element.

4.1.1 Primary Code

In the data type for codeable elements (CD constrained by the CD.IPS template), the Primary Code is represented by the attributes @code, @displayName, @codeSystem, @codeSystemName, @codeSystemVersion.

4.1.2 Alternate Code

In the data type for codeable elements (CD constrained by the CD.IPS template), an Alternate Code is carried in a 'translation' sub-element.

4.1.3 Original Text

In the data type for codeable elements (CD constrained by the CD.IPS template), the Original Text is provided in the 'originalText' sub-element.

4.2 Representing "known absent" and "not known"

In line with the properties of minimalism and non-exhaustiveness for the IPS (see the IPS definition above), and benefiting from the experience acquired with the European cross-border services, this guide explicitly addresses two general situations:

1. condition or activity unknown
2. condition or activity known absent.

Other kinds of negations such as: (a) the negation of an allergy to a specific agent; (b) the absence of a particular disease; or (c) the fact that a specific vaccination has not been performed, have been considered beyond the set of essential data for an IPS.

This specification represents this core set of negations (“general condition/activity unknown” and “general condition/activity/known absent”) using explicit coded elements rather than relying on specific mechanisms of HL7 CDA such as nullFlavor and negationInd attributes or human readable text (possibly not understood by the foreign country receiver).

In contrast to the practice to use negationInd or nullFlavor attributes on a section itself, we prohibit the use of these attributes on section level to express “unknown” or “no information” situations. A section holds the categorized (coded) narrative part of the documented activity and will never carry negationInd or nullFlavor attributes. Instead, we enforce by design, that “unknown” or “no information” expressions always go to the coded entry with a corresponding act code.

The main reasons for this choice are:

- @negationInd in CDA has been superseded in V3 later by two other negation indicators: @actNegationInd and @valueNegationInd.
- To make clinical content representation less dependent on a particular format or syntax, enabling a more practical path to transforming and exchanging data from one standard format (e.g. CDA R2) to another (e.g. FHIR).
- to provide one single method to express the presence or absence of a particular condition (e.g. an allergy) or activity (e.g. an immunization), or the lack of knowledge regarding this kind of condition or activity, resulting in a more robust and easily implementable specification.

For the other kinds of negations, not explicitly mentioned in this guide, it is suggested to apply – where possible – the same approach. Future versions of this guide may extend the number of cases covered and include new coded concepts for supporting them.

When needed, more specific statements such as the absence of a specific condition or activity, although considered as beyond the set of essential data for IPS, can still be expressed by using the native negationInd attribute of CDA R2.

4.3 Uncoded information

An IPS originator may not be able to value a coded element with an appropriate coded concept, but only with textual information. This may happen for two reasons:

1. the originator is not able to express the concept in the reference value sets
2. the originator is not able to express the concept in any known terminology.

The first case, assuming that the coding strength is *Required* (aka CNE, coded, no extensions), is represented in this guide with the following assertion:

```
<code codeSystem="2.16.840.1.113883.6.96" nullFlavor="OTH">
  <originalText>
    <reference value="#ref1"/>
  </originalText>
</code>
```

That is expressing that there are no codes applicable in the referred code system (in the example, SNOMED CT). Please note that according to this guide the text is documented in the section narrative and only referenced by the coded element.

Note: Data Types R1 doesn't allow specifying that there are no codes applicable in the referred value set, as instead is possible with Data Types R2. Future versions of this guide may consider extending the data type to better support this situation.

The second case, that applies both to *Required* (aka CNE, coded no extensions) and *Extensible* (CWE, coded with extensions) coding strengths, is instead here represented valuing the coded element with the most generic nullFlavor "NI" (No Information) and pointing the text in the section narrative:

```
<value xsi:type="CD" nullFlavor="NI">
  <originalText>
    <reference value="#ref1"/>
  </originalText>
</value>
```

Note: The most proper NullFlavor code to be used here would be "UNC" (Uncoded). This code is available in the current and other recent versions of the HL7 RIM, but it is not present in version 2.07 of the RIM on which the CDA R2 standard is based. In the absence of "UNC", the most appropriate NullFlavor code to use for representing that the data is unable to be coded is "NI".

4.4 Unmapped Coded Concepts

In several real world situations the records used as source for the Patient Summaries may use locally adopted terminologies mapped into the reference value sets. When the original coded concept cannot be mapped in one of the coded concepts included in the reference value sets, it is recommended to populate the original code in the IPS instance (in a 'translation' sub-element), with a nullFlavor indicating that the mapping didn't occur. (See also the Concept code mapping in the functional requirements section.). The nullFlavor value depends upon the coding strength of the binding.

Two circumstances are considered here: the case in which the coding strength is Required (CNE) and when it is Extensible (CWE).

In the case of coding strength Required (CNE), use nullFlavor "OTH":

```
<value xsi:type="CD" codeSystem="2.16.840.1.113883.6.96" nullFlavor="OTH">
  [
    <originalText>
      <reference value="#ref1"/>
    </originalText>
  ]
  <translation code="A02.9" codeSystem="2.16.840.1.113883.6.3"
    displayName="Infezioni da Salmonella non specificate"/>
</value>
```

The square brackets [] are used to indicate that the originalText element may or may not be present

Note: It may happen that a mapping would be possible in the target code system, but not in the target value set; Data Types R1 does not allow the specification of this difference, that there are no codes applicable in the reference value set, which is possible with Data Types R2.

Future versions of this guide may consider extending the data type to better support this situation.

In the case of Extensible (CWE) coding strength, this guide recommends representing the original code in the <translation> sub-element and using a nullFlavor for the primary code. This highlights the fact that a mapping to the reference value set was attempted, but no suitable target codes were identified.

```
<value xsi:type="CD" codeSystem="2.16.840.1.113883.6.96" nullFlavor="NI">
  [
    <originalText>
      <reference value="#ref1"/>
    </originalText>
  ]
  <translation code="A02.9" codeSystem="2.16.840.1.113883.6.3"
    displayName="Infezioni da Salmonella non specificate"/>
</value>
```

The square brackets [] are used to indicate that the originalText element may or may not be present.

4.5 Mapped coded concepts

As mentioned above, in several circumstances an original coded concept is mapped into the reference value set. When this occurs, both the original and the reference codes should be reported in the IPS instance.

Functional requirements exposed in section 3.1 (multi-coding, link to original text, mapping between codes of the same code system) are also detailed below.

Case 1: Single local code mapped to primary code from the reference value set.

```
<value xsi:type="CD" code="42338000" codeSystem="2.16.840.1.113883.6.96"
  displayName="Salmonella gastroenteritis">
  [
    <originalText>
      <reference value="#ref1"/>
    </originalText>
  ]
  <translation code="003.0" codeSystem="2.16.840.1.113883.6.103"
    displayName="Gastroenterite da Salmonella"/>
</value>
```

The square brackets [] are used to indicate that the originalText element may or may not be present

Case 2: Multiple local codes mapped together using nested 'translation' elements, and mapped to the primary code from the reference value set.

```
<value xsi:type="CD" code="422479008" codeSystem="2.16.840.1.113883.6.96"
  codeSystemName="SNOMED CT"
  displayName="FEMALE BREAST INFILTRATING DUCTAL CARCINOMA, STAGE 2">
  [
    <originalText>
      <reference value="#problem4name"/>
    </originalText>
  ]
  <translation code="code-example" codeSystem="1.999.999"
    codeSystemName="this is only an example"
    displayName="FEMALE BREAST INFILTRATING DUCTAL CARCINOMA, STAGE 2">
    <translation code="174.9" codeSystem="2.16.840.1.113883.6.103"
      codeSystemName="ICD-9CM"
      displayName="Malignant neoplasm of breast (female), unspecified"/>
  </translation>
</value>
```

```

<translation code="C50.919" codeSystem="2.16.840.1.113883.6.90"
    codeSystemName="ICD-10-CM"
    displayName="Malignant neoplasm of unspecified site of unspecified female breast"/>
</translation>
</value>

```

Case 3: Original and the reference coded concepts belong to the same code system (distinct codes). This may be the result of a different level of granularity between the original term and the reference value sets.

```

<code code="60591-5" codeSystem="2.16.840.1.113883.6.1"
    codeSystemName="LOINC" displayName="Patient Summary">
    <translation code="60592-3" codeSystem="2.16.840.1.113883.6.1"
        displayName="Patient summary unexpected contact"/>
</code>

```

Note: The R1 data type definition identifies the <translation> as “a set of other concept descriptors that translate this concept descriptor into other code systems.” There is however a common understanding that it may be more than one representation in a single code system where code systems allow multiple representations, such as SNOMED CT. Data Types R2 extended the possibility to provide translations also in the same code system.

4.6 Translation of designations

The capability of recording one or more designations, in different languages, for the exchanged Patient Summary is one of the functional requirements requested for “safety and liability reasons” by the European Cross-border services (see Designations’ Translation under the Functional requirements and high-level use cases for more details).

Given that the base CDA R2 standard which uses datatypes R1 does not offer a native way to convey the language translation of 'displayName', this guide introduces an optional 'ips:designation' extension to the CD datatype for that purpose.

Below are examples of usage of this extension.

No code mapping

```

<code code="60591-5" codeSystem="2.16.840.1.113883.6.1"
    codeSystemName="LOINC" displayName="Patient Summary">
    <ips:designation language="it-IT">Profilo Sanitario Sintetico</ips:designation>
    <ips:designation language="fr-FR">Patient Summary</ips:designation>
    <ips:designation language="en">Patient Summary</ips:designation>
</code>

```

Including code mapping

```

<value xsi:type="CD" code="42338000" codeSystem="2.16.840.1.113883.6.96"
    displayName="Salmonella-gastroenteritis">
    <ips:designation language="da-DK">Salmonella-gastroenterit</ips:designation>
    <ips:designation language="en">Salmonella gastroenteritis (disorder)</ips:designation>
    [
        <originalText>
            <reference value="#ref1"/>
        </originalText>
    ]
    <translation code="003.0" codeSystem="2.16.840.1.113883.6.103"
        displayName="Gastroenterite da Salmonella"/>
</value>

```

4.7 Narrative Translations

“Narrative translation” means both the translation of the original narrative text, that can be human curated or automatically performed, and the generation of a translated narrative based on the coded entries.

The functional requirements associated with this process are described in the Designations’ Translation section under Functional requirements and high-level use cases, and can be summarized in two main points : (a) language identification and (b) distinguishable original and translated narratives. Moreover, the methodology applied for the narrative translation (e.g. derived from the coded entries; translated by a generic service;..) should be noted.

Regarding the translation of section narrative <text>, this guide recommends providing this translation on purely textual subordinate sections (one per translation) as specified in the IPS Translation Section (2.16.840.1.113883.10.22.3.15) template.

An example of this is:

```

<section>
  <templateId root="2.16.840.1.113883.3.1937.777.13.10.5"/>
  <id root="...." extension="...."/>
  <code code="48765-2" codeSystem="2.16.840.1.113883.6.1"
    displayName="Allergies and adverse reactions"/>
  <title>Allergies and Intolerances</title>
  <text>No known Allergies</text>
  <!-- omissions -->
  <component>
    <section>
      <!-- subordinate section carrying a translation of the parent section -->
      <title>Allergie ed Intolleranze</title>
      <text>Nessuna Allergia Nota</text>
      <languageCode code="it-IT"/>
    </section>
  </component>
</section>

```

4.8 Determining the Status of Clinical Statement

Note: Most of the description provided in this section is copied from the § 3.3 Determining the Status of Clinical Statement of the C-CDA DSTU R2.1 Implementation Guide Volume 1.^[17]

A recipient must be able to determine whether the status of an entry — which can include a problem, a medication administration, etc. — is active, completed, or in some other state. Determination of the exact status is dependent on the interplay between an act’s various components (such as statusCode and effectiveTime). The following principles apply when representing or interpreting the status of a clinical statement.

- The Act.statusCode of the clinical statement specifies the state of the entry: Per the RIM, the statusCode “reflects the state of the activity. In the case of an Observation, this is the status of the activity of observing, not the status of what is being observed.”
- Act.statusCode and Act.moodCode are inter-related: Generally, an act in EVN (event) mood is a discrete event (a user looks, listens, measures, and records what was done or observed), so generally an act in EVN mood will have a statusCode of “completed.” A prolonged period of observation is an exception, in which a user would potentially have an observation in EVN mood that is “active.” For an Observation in RQO (request) mood, the statusCode generally remains “active” until the request is complete, at which time the statusCode changes to “completed.” For an Observation in GOL (goal) mood, the statusCode generally remains “active” as long as the observation in question is still an active goal for the patient.
- Act.statusCode and Act.effectiveTime are interrelated: Per the RIM, the effectiveTime, also referred to as

the “biologically relevant time,” is the time at which the act holds for the patient. So, whereas the effectiveTime is the biologically relevant time, the statusCode is the state of the activity. For a provider seeing a patient in a clinic and observing a history of heart attack that occurred 5 years ago, the status of the observation is completed, and the effectiveTime is five years ago.

The IPS Problem Concern Entry and the IPS Allergy and Intolerance Concern templates reflect an ongoing concern on behalf of the provider that placed the concern (e.g. a disease, an allergy, or other conditions) on a patient’s problem or allergy list. The purpose of the concern act is that of supporting the tracking of a problem or a condition (e.g. an allergy). A concern act can contain one or more discrete observations related to this concern. Each of them reflects the change in the clinical understanding of a condition over time. For instance, a Concern may initially contain a symptom of “chest pain”, later identified as consequence of a gastroesophageal reflux. The later problem observation will have a more recent author time stamp.

There are different kinds of status that could be of clinical interest for a condition:

- The status of the concern (active, inactive,..)
- The status of the condition (e.g. active, inactive, resolved,..)
- The confirmation status [verification status, certainty] (e.g. confirmed, provisional, refuted,...)

Not all of them can be represented in a CDA using the statusCode elements of the concern (ACT) and observation (condition).

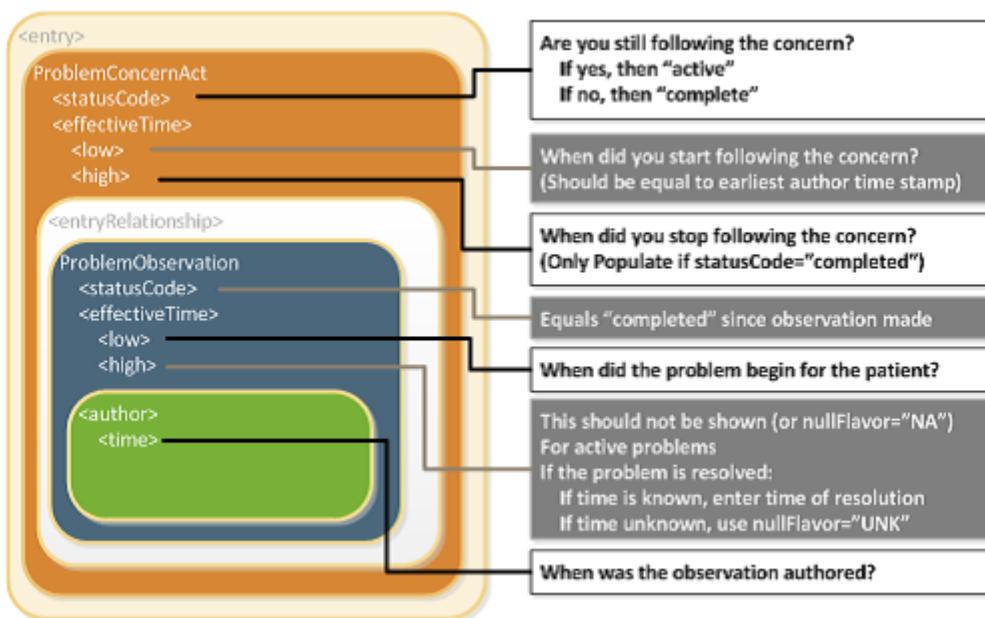
Status of the concern and related times

The statusCode of the Problem Concern Act is the definitive indication of the status of the concern. So long as the provider has an ongoing concern — meaning that the provider is monitoring the condition, whether it includes problems that have been resolved or not — the statusCode of the Concern Act is “active.” When the underlying conditions are no longer an active concern, the statusCode of the Problem Concern Act is set to “completed.”

The Concern Act effectiveTime reflects the time that the underlying condition was considered a concern. It may or may not correspond to the effectiveTime of the condition (e.g., even five years later, the clinician may remain concerned about a prior heart attack). The effectiveTime/low of the Concern Act asserts when the concern became active. This equates to the time the concern was authored in the patient’s chart. (i.e. it should be equal to the earliest author time stamp) The effectiveTime/high asserts when the concern became inactive, and it is present if the statusCode of the concern act is “completed”. If this date is not known, then effectiveTime/high will be present with a nullFlavor of “UNK”.

Status of the condition and related times

Each Observation contained by a Concern Act is a discrete observation of a condition. Its statusCode is always “completed” since it is the “status of the activity of observing, not the status of what is being observed”. The clinical status of a condition (e.g. a disease, an allergy,..) is instead recorded by specialized subordinated observations (IPS Allergy Status Observation; IPS Problem Status Observation), documenting whether it is active, in remission, resolved, et cetera. The effectiveTime, also referred to as the “biologically relevant time”, is the time at which the observation holds for the patient. For a provider seeing a patient in the clinic today, observing a history of penicillin allergy that developed six months ago, the effectiveTime is six months ago. The effectiveTime of the Observation gives an indication of whether or not the underlying condition is resolved, but the current status is documented by a subordinated observation. The effectiveTime/low (a.k.a. “onset date”) asserts when the allergy/intolerance became biologically active. The effectiveTime/high (a.k.a. “resolution date”) asserts when the allergy/intolerance was biologically resolved. If the date of resolution is not known, then effectiveTime/high will be present with a nullFlavor of “UNK”.



[Figure 10] Problem Concern Act (from C-CDA IG DTSU R2.1)^[17]

Confirmation status

The confirmation status, also noted as verification status or certainty, indicates the certainty associated with a condition (e.g. confirmed, provisional, refuted,...) providing information about the potential risk, for example, of a reaction to the identified substance. The confirmation status of a condition (e.g. a disease, an allergy,..) is recorded by a specialized subordinated observation (IPS certainty Observation), documenting whether the condition is confirmed, unconfirmed, provisional, refuted, et cetera.

4.9 The use of medication statements in the summary

A medication list may strongly vary depending on the context of use (e.g. support for prescription or dispensation, drug reconciliation, etc.) and on the type of information reported (e.g. patient-reported medication, prescribed, dispensed or administered medications, active or past medications, etc.).

This is still true also for the medication summary in a Patient Summary. It could be, for instance, a list of "Relevant prescribed medicines whose period of time indicated for the treatment has not yet expired whether it has been dispensed or not" (European guidelines on Patient Summary^[21]); a list of actually dispensed medications; a list of relevant medications for the patient (IHE PCC^[22]); or conversely, it could be a complete history including the full patient's prescription and dispensation history and information about intended drug monitoring (C-CDA^[17]).

Moreover, for the scope of the International Patient Summary, it is important to know what medications are being taken by or have been given to a patient; without necessarily providing all the details about the medication order, supply, administration or monitoring. This information need, in line with the IPS principle of minimum non exhaustive data, is well expressed by the concept of Medication Statement (see <https://www.hl7.org/fhir/medicationstatement.html>).

The IPS medication summary is therefore a list of relevant medication statements, possibly built from either a prescription list or a dispensation list. In fact, in many practical cases data included in a Patient Summary are derived from the list of the medicines prescribed by a GP and recorded in its EHR-S; or extracted from a in regional/national prescribing and/or dispensation systems. In these cases, data obtained from actual dispensation and/or prescription records can be still recorded in the IPS as statements and the original request, supply or administration records referred by the statement if really needed.

4.10 Medicinal Product Identification

The identification of medicinal products is quite easily solved within a single jurisdiction relying on local drug databases. In contrast, it is one of the major open issues for eHealth services across jurisdictions.

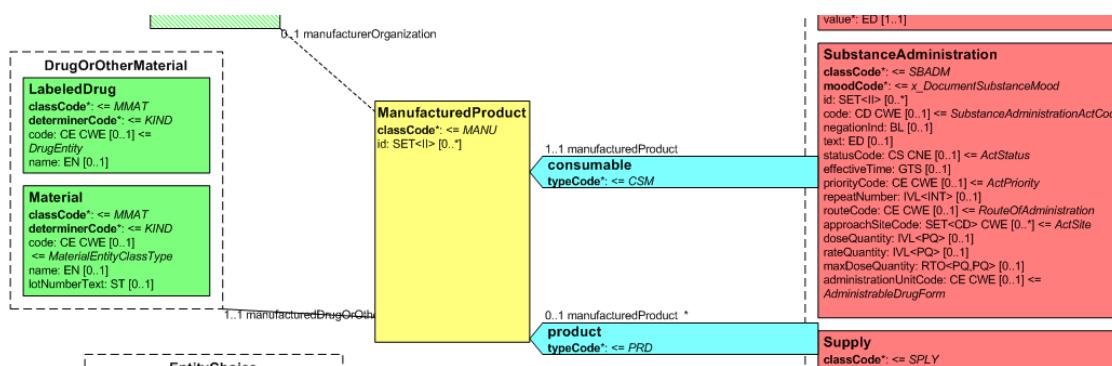
The set of ISO standards called IDMP^[23] - designed initially for the regulatory scope, but hopefully extensible to other domains - are the most promising solution for solving this known issue, as also highlighted by the European project OpenMedicine^[24]. The completion of the IDMP implementation guides, the deployment of the needed supporting services, and the development of some companion standards that will allow the seamless flow of the IDMP identifiers and attributes from the regulatory space to the clinical world (and back) are however still in progress. Additional time is needed before these identifiers and attributes will be available in full for practical use.

Following therefore the IPS principles of "implementability", "openness" and "extensibility", the solution proposed here does not rely on IDMP identifiers. Nonetheless, it takes into account, however, relevant IDMP identifiers and attributes which are already usable in the IPS, namely the Pharmaceutical Product Identifiers (PhPIDs), the Medicinal Product Identifier (MPID), and the Medicinal Product Package Identifier (PCID).

Note: IDMP Medicinal Product (MPID) and Medicinal Product Package (PCID) identifiers depend on the market authorization. The "same" product might therefore have different IDs if different authorizations have been received in different countries, while the Ph-PID should be the same. For the purpose of the IPS, future standards and implementation guides should define global product identifiers that do not depend on the drug registration process (as the Virtual Medicinal Product in SNOMED CT) and relate to IDMP identifiers.

Thus, in the absence of a global identification system for medicinal products, the solution proposed here is based on the approach initially adopted by the European cross-border services (eSOS and currently by the eHDSI project), reused by the IHE Pharmacy templates and more recently adopted (for specific cases) by the HL7 Pharmacy Medication statement templates. The main idea is to integrate local drug identifiers (e.g. product codes) with all the relevant identifying and descriptive attributes that may help the receiver to understand the type of product the sender is referring to, e.g.: active ingredients, administrative dose forms, strength, route of administration and package description.

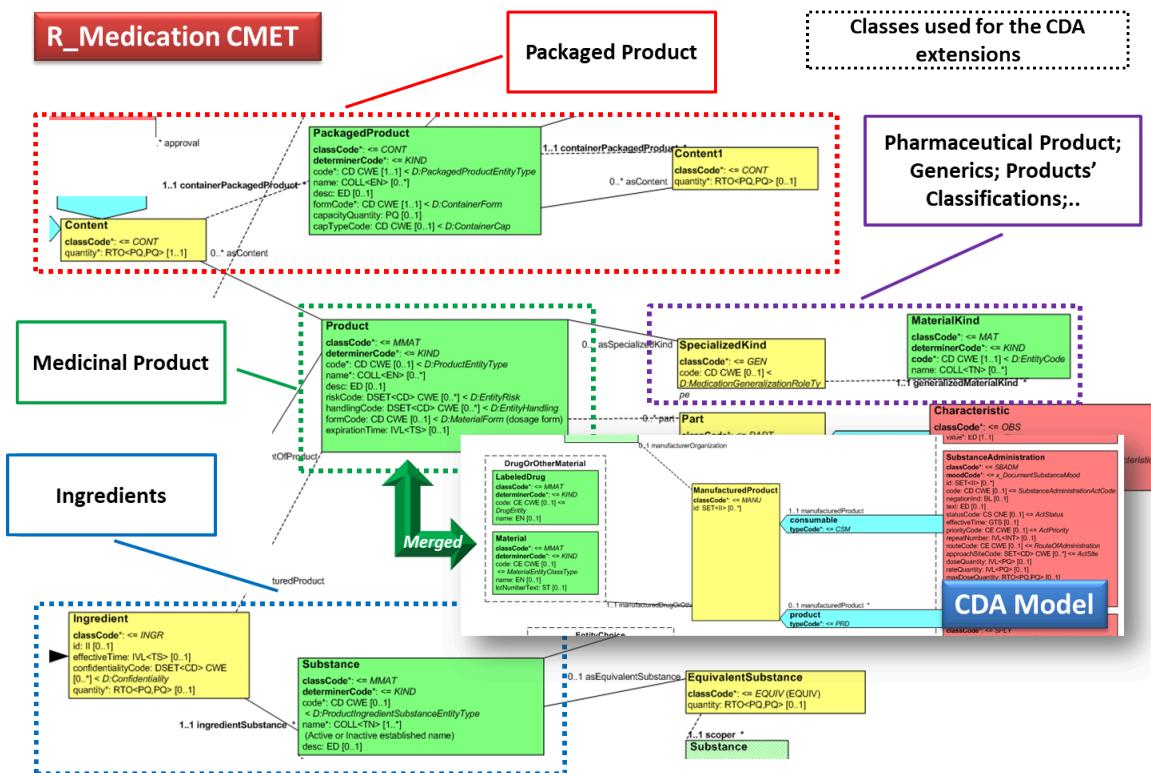
Medication data is usually represented in the CDA Templates using the manufacturedMaterial class, which includes a code and a name to describe any level of the product: packaged product, medicinal product, classes or clusters or products, and so on. This information is not however sufficient for covering the requirements of the IPS.



[Figure 11] Representation of medicines in CDA

Hence, in order to describe these attributes the CDA model has been extended enhancing the Manufactured Material class with attributes and relationships derived from the latest published version of the R_Medication CMET (see HL7 V3 Normative Edition 2017) based on the HL7 Common Product Model ("The common product model is used to improve the alignment between the different representations of products used within the body of HL7 Version 3 models. One goal of this effort is to make it possible to have a single representation, which could then be used as a common message element type (CMET) across those models.").

[Figure 12] shows how the CDA model has been enhanced with the R_Medication CMET.



[Figure 12] Extension of the CDA model from the content of the R_Medication CMET.

4.11 Provenance

In the development of this Implementation Guide, consideration was given to the HL7 CDA® Release 2 Implementation Guide: Data Provenance, Release 1 - US Realm Draft Standard for Trial Use (December 2015). That guide provides a matrix offering a thorough and systematic analysis of provenance characteristics of electronic health records. Given the agreed scope principle that the IPS be minimal and implementable, and the variable maturity and operational methods of existing national patient summaries, the proposal is that this first version should not attempt to require the full detail of that provenance specification.

The approach proposed for this version of the IPS is to:

- Allow optional documentation of section-level provenance.
- Require document-level provenance.
- Define IPS document provenance as one of two types: human-curated or software-assembled, based on the authors recorded in the header.
 - The classification is based on whether the IPS document is constructed by a human or an automated process, regardless of whether the IPS contains some content of both kinds.
- Require the IPS source system to identify the IPS provenance type and author.
 - The author shall be a human, if the IPS provenance type is "human-curated", or a device or system if the IPS provenance type is "software-assembled".
 - In the case of a software-assembled IPS that is then verified by a human, the document provenance type shall be "software-assembled" and the author shall be the device or system that constructed the IPS document, but an additional verifier identity shall name the human who per-

formed this check. For the avoidance of doubt, verifier is not the same as legalAuthenticator (the verifier is represented as a participant with typeCode "VRF"). However, in cases where the verifying person intentionally wishes to sign the document, this shall be recorded as a legalAuthenticator.

- Allow optional section level author, provenance type, verifier, and informant identification, for IPS source systems that can support this.
- Not attempt to implement the US Realm CDA data provenance templates.

Note: Discussions with the EHR work group suggest that a possible future project should be an IPS functional profile, once there is greater clarity and operational experience of using the IPS.

4.12 Representation of Names

This specification requires that any Person Name is represented including at least the given and family components and therefore is never documented as a single string.

Even though it is recognized that there is not in all cultures the same concept of “family name”, no evidence has been collected in analyzing the international context (e.g. Japan, Korea; China) that justifies the retirement of this requirement.

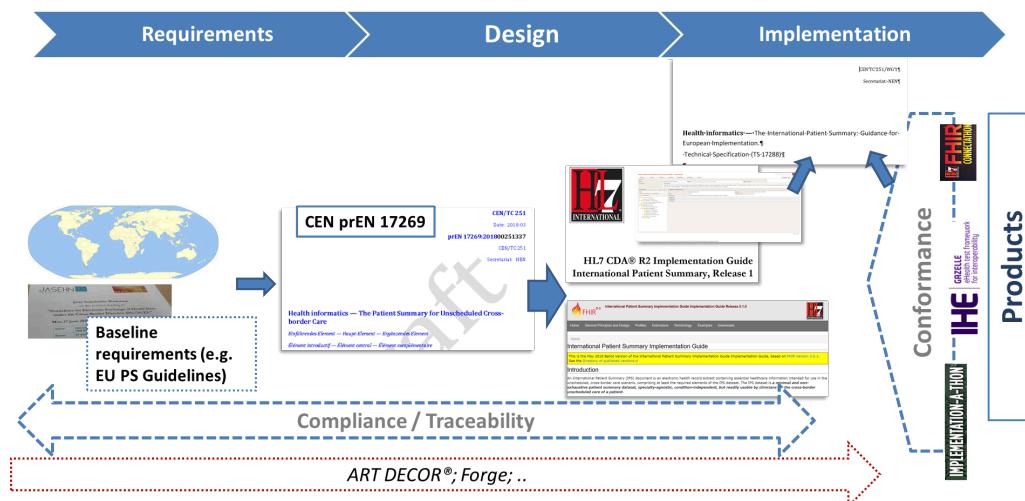
Moreover, due to the global scope of the International Patient Summary, the case of non-alphabetic representations of the names has also been considered.

In this case, to facilitate the global use of the IPS, at least one alphabetic representation of the name SHALL be provided.

5 Conformance clause

This section references the requirements, criteria, or conditions to be satisfied in order that a product (tangible) or a service may claim conformance to this guide, and how other artifacts may claim compliance with it. (Note: The concept of conformance and compliance are used coherently with the HL7 Service-Aware Interoperability Framework: Canonical Definition Specification, Release 2^[25]. The fulfilment of these clauses indirectly assures that a product that is the subject of a “conformity assessment” satisfies the business or the design requirements this specification complies to. It should, however, be clear that compliance with the specified business or design requirements, for example in the future with the CEN prEN 17269 IPS, does not imply that the compliant implementations are technically interoperable. A “conformity assessment” is a process that assesses that any proposition that is true in a given specification is also true in the service or product that implements it. In most real-world cases conformance testing objects are used to technically validate the products. These objects provide a great help in the validation of the instances, even if they are most often not sufficient to guarantee the functional/ semantic conformity: many real-life examples can be made about instances that are technically valid, but not clinically meaningful or correct.

[Figure 13] below depicts how this concept applies to the business requirements, the current and hopefully future IPS projects standards (CEN/TC 251 and HL7) and other related artifacts involved in this assessment chain. (see section Relationships with other projects and guidelines for a description of the standards developed by the CEN/TC 251 IPS project)



[Figure 13] The IPS World

The "rules" and processes for refining the standard through constraint and extension, including which standard artifacts are subject to constraint or extension; the definition of constraint and localization profiles; the criteria for establishing a conformance statement; and the principles guiding who may define extensions to the standards and under what circumstances they apply to the CDA standards are defined in §1.3 CDA Conformance of the CDA and detailed in the HL7 V3 Refinement, Constraint and Localization section (see the CDA R2 Standard^[26]).

This guide does not provide additional requirements regarding the Recipient and the Originator Responsibilities.

The formal representation used in this implementation guide for expressing the conformance statement is described in chapter "How to read the table view for templates" of this guide and makes use of a tabular representation that may include also computable or textual constraints. The template rules are formalized using the computable format defined by the HL7 Templates Standard: Specification and Use of Reusable Information Constraint Templates, Release 1^[8] in order to facilitate also the automatic generation of consistent testing and validation capabilities.

The HL7 Templates Standard: "Specification and Use of Reusable Information Constraint Templates, Release 1" defines also how derived templates may relate to the templates defined in this guide for example:

- Specialization: "A specialized template is a narrower, more explicit, more constrained template based on a "parent" template."
- Adaptation: "The adapted template is "based on" the original template which means it can be an extension or a specialization (restriction) of the original template design."
- Equivalency: "two templates have the same purpose and the same design; however, their governance and/or metadata and/or details of their design may be different."

Based on this the following way to use this guide may be considered :

- IPS as a document: the conformance is asserted at the document level. All the rules defined by this guide, or by a specialized IPS document level template, are fulfilled. Implementers may take advantage of the template openness to better support specific cases - "extended" parts, however, may not be interoperable among them.
- IPS as a library: the conformance is asserted at the section or the entry level. The templates are used as a library to build, for example, new cross-border documents. For example the immunization section may be used to build an electronic implementation of the WHO yellow card for vaccinations; or the IPS section templates are used to communicate to the country of affiliation minimal and non-exhaustive information about the encounter in which the Patient Summary has been used (cross-border encounter report). Implementers may take advantage of the template openness to better support specific cases - "extended" parts, however, may not be interoperable among them.
- IPS as a reference: the implementation is conformant with templates that are an adaptation of or equivalent to those defined by this guide. In this case some of the rules defined by this guide are not fulfilled and the conformance cannot be asserted. However, differences may be limited and the effort required to achieve the harmonization may not be large. Typical examples are templates in which alternatives vocabularies are used.

Jurisdictions may also decide to impose the closure of the template in order to limit the implementation optionality. This should be carefully evaluated in terms of the flexibility of the solution.

6 CDA Document Level Templates

6.1 International Patient Summary

Id	2.16.840.1.113883.10.22.1.1	Effective Date	2017-04-11
Status	 Under pre-publication review	Version Label	STU1
Name	HL7-IPS	Display Name	International Patient Summary

Description

The International Patient Summary is a "Minimal and non-exhaustive Patient Summary, specialty-agnostic, condition-independent, but readily usable by all clinicians for the unscheduled (cross-border) care of a patient."

The IPS templates aim to:

- Serve for both cross-jurisdictional (through adaptation/extension for multi-language and realm scenarios, including translation) and national (through localization) patient summaries.
- Support emergency care and unplanned care in any country (home and foreign), regardless of language
- Define value sets based on international vocabularies that are usable and understandable in any country

Context	Pathname /												
Classification	CDA Document Level Template												
Open/Closed	Open (other than defined elements are allowed)												
Uses 20 templates													
Uses	<table border="1"> <thead> <tr> <th>Uses</th> <th>as</th> <th>Name</th> <th>Version</th> </tr> </thead> <tbody> <tr> <td>2.16.840.1.113883.10.22.2.1</td> <td>Include</td> <td> IPS CDA recordTarget (STU1)</td> <td>DYNAMIC</td> </tr> <tr> <td>2.16.840.1.113883.10.22.2.2</td> <td>Include</td> <td> IPS CDA author (STU1)</td> <td>DYNAMIC</td> </tr> </tbody> </table>	Uses	as	Name	Version	2.16.840.1.113883.10.22.2.1	Include	 IPS CDA recordTarget (STU1)	DYNAMIC	2.16.840.1.113883.10.22.2.2	Include	 IPS CDA author (STU1)	DYNAMIC
Uses	as	Name	Version										
2.16.840.1.113883.10.22.2.1	Include	 IPS CDA recordTarget (STU1)	DYNAMIC										
2.16.840.1.113883.10.22.2.2	Include	 IPS CDA author (STU1)	DYNAMIC										

	2.16.840.1.113883.10.22.2.3	Include	IPS CDA custodian (STU1)	DYNAMIC
	2.16.840.1.113883.10.22.2.4	Include	IPS CDA legalAuthenticator (STU1)	DYNAMIC
	2.16.840.1.113883.10.22.2.5	Include	IPS Patient Contacts (STU1)	DYNAMIC
	2.16.840.1.113883.10.22.2.6	Include	IPS CDA documentationOf (STU1)	DYNAMIC
	2.16.840.1.113883.10.22.2.7	Include	IPS CDA relatedDocument (STU1)	DYNAMIC
	2.16.840.1.113883.10.22.3.1	Containment	IPS Medication Summary Section (STU1)	DYNAMIC
	2.16.840.1.113883.10.22.3.2	Containment	IPS Allergies and Intolerances Section (STU1)	DYNAMIC
	2.16.840.1.113883.10.22.3.3	Containment	IPS Problems Section (STU1)	DYNAMIC
	2.16.840.1.113883.10.22.3.4	Containment	IPS History of Procedures Section (STU1)	DYNAMIC
	2.16.840.1.113883.10.22.3.5	Containment	IPS Immunizations Section (STU1)	DYNAMIC
	2.16.840.1.113883.10.22.3.6	Containment	IPS Medical Devices Section (STU1)	DYNAMIC
	2.16.840.1.113883.10.22.3.14	Containment	IPS Results Section (STU1)	DYNAMIC
	2.16.840.1.113883.10.22.3.7	Containment	IPS History of Past Illness Section (STU1)	DYNAMIC
	2.16.840.1.113883.10.22.3.8	Containment	IPS Functional Status Section (STU1)	DYNAMIC
	2.16.840.1.113883.10.22.3.9	Containment	IPS Plan of Care Section (STU1)	DYNAMIC
	2.16.840.1.113883.10.22.3.10	Containment	IPS Social History Section (STU1)	DYNAMIC
	2.16.840.1.113883.10.22.3.11	Containment	IPS History of Pregnancy Section (STU1)	DYNAMIC
	2.16.840.1.113883.10.22.3.12	Containment	IPS Advance Directives Section (STU1)	DYNAMIC
Relationship	Adaptation: template 1.3.6.1.4.1.12559.11.10.1.3.1.1.3 (2013-12-20) Adaptation: template 2.16.840.1.113883.10.12.1 (2005-09-07)			
Example	<p>Example</p> <pre><ClinicalDocument> <realmCode code="ES"/> <typeId extension="POCD_HD000040" root="2.16.840.1.113883.1.3"/> <templateId root="2.16.840.1.113883.10.22.1.1"/></pre>			

```
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<code displayName="Patient Summary" code="60591-5" codeSystem="2.16.840.1.113883.6.1"/>
<title>Patient Summary</title>
<effectiveTime value="20111113125600+0200"/>
<cconfidenceCode code="" displayName="normal" codeSystem="2.16.840.1.113883.5.25"/>
<languageCode code="es-ES"/>
<ssetId root="2.16.724.4.8.10.200.10" extension="PSCTD0160f274530a031s"/>
<versionNumber value="2"/>
<!-- include template 2.16.840.1.113883.10.22.2.1 'IPS CDA recordTarget' (dynamic) 1..1 M -->
<!-- include template 2.16.840.1.113883.10.22.2.2 'IPS CDA author' (dynamic) 1..* M -->
<!-- include template 2.16.840.1.113883.10.22.2.3 'IPS CDA custodian' (dynamic) 1..1 M -->
<!-- include template 2.16.840.1.113883.10.22.2.4 'IPS CDA legalAuthenticator' (dynamic) 0..1 R -->
<!-- include template 2.16.840.1.113883.10.22.2.5 'IPS Patient Contacts' (dynamic) 0..* O -->
<!-- include template 2.16.840.1.113883.10.22.2.6 'IPS CDA documentationOf' (dynamic) 1..1 M -->
<!-- include template 2.16.840.1.113883.10.22.2.7 'IPS CDA relatedDocument' (dynamic) 0..* R -->
<component>
    <structuredBody classCode="DOCBODY">
        <component>
            <!-- template 2.16.840.1.113883.10.22.3.1 'IPS Medication Summary Section' (dynamic) -->
        </component>
        <component>
            <!-- template 2.16.840.1.113883.10.22.3.2 'IPS Allergies and Intolerances Section' (dynamic) -->
        </component>
        <component>
            <!-- template 2.16.840.1.113883.10.22.3.3 'IPS Problems Section' (dynamic) -->
        </component>
        <component>
            <!-- template 2.16.840.1.113883.10.22.3.4 'IPS History of Procedures Section' (dynamic) -->
        </component>
        <component>
            <!-- template 2.16.840.1.113883.10.22.3.5 'IPS Immunizations Section' (dynamic) -->
        </component>
        <component>
            <!-- template 2.16.840.1.113883.10.22.3.6 'IPS Medical Devices Section' (dynamic) -->
        </component>
        <component>
            <!-- template 2.16.840.1.113883.10.22.3.7 'IPS History of Past Illness Section' (dynamic) -->
        </component>
        <component>
            <!-- template 2.16.840.1.113883.10.22.3.14 'IPS Results Section' (dynamic) -->
        </component>
        <component>
            <!-- template 2.16.840.1.113883.10.22.3.8 'IPS Functional Status Section' (dynamic) -->
        </component>
        <component>
            <!-- template 2.16.840.1.113883.10.22.3.9 'IPS Plan of Treatment Section' (dynamic) -->
        </component>
        <component>
            <!-- template 2.16.840.1.113883.10.22.3.10 'IPS Social History Section' (dynamic) -->
        </component>
        <component>
            <!-- template 2.16.840.1.113883.10.22.3.11 'IPS History of Pregnancy Section' (dynamic) -->
        </component>
        <component>
```

	<!-- template 2.16.840.1.113883.10.22.3.12 'IPS Advance Directives Section' (dynamic) --> </component> </structuredBody> </component> </ClinicalDocument>					
Item	DT	Card	Conf	Description		Label
h17:ClinicalDocument			R	CDA header		(HL7-IPS)
└ h17:realmCode	CS	1 ... 1	R			(HL7-IPS)
└ h17:typeId	II	1 ... 1	M	The clinical document typeId identifies the constraints imposed by CDA R2 on the content, essentially acting as a version identifier.		(HL7-IPS)
└ @root	uid	1 ... 1	F	2.16.840.1.113883.1.3		
└ @extension	st	1 ... 1	F	POCD_HD000040		
	Example		<typeId extension="POCD_HD000040" root="2.16.840.1.113883.1.3"/>			
└ h17:templateId	II	1 ... 1	M			(HL7-IPS)
└ @root	uid	1 ... 1	F	2.16.840.1.113883.10.22.1.1		
└ h17:id	II	1 ... 1	M	Unique identifier of this instance of the Patient Summary.		(HL7-IPS)
└ h17:code	CE.IPS	1 ... 1	M	Determines the document type that is the "Patient Summary" document		(HL7-IPS)
└ @displayName		1 ... 1	R			

<code>└ @code</code>	CONF	1 ... 1	F	60591-5	
<code>└ @codeSystem</code>		1 ... 1	F	2.16.840.1.113883.6.1 (LOINC)	
<code>Example</code>		<code code="60591-5" codeSystem="2.16.840.1.113883.6.1" codeSystemName="LOINC" displayName="Patient Summary"/>			
<code>└ h17:translation</code>	CD.IPS	0 ... *	R	This element can be here used either to provide the originally used document code if this IPS is the result of a transformation.	(HL7-IPS)
<code>└ h17:title</code>	ST	1 ... 1	M	ClinicalDocument/title is used for display purposes.	(HL7-IPS)
<code>Example</code>		<title>Patient Summary</title>			
<code>Example</code>		<title>Profilo Sanitario Sintetico</title>			
<code>└ h17:effectiveTime</code>	TS.IPS.TZ	1 ... 1	M	Time of creation of the Patient Summary	(HL7-IPS)
<code>Example</code>		<effectiveTime value="20111113125600+0200"/>			
<code>└ h17:confidentialityCode</code>	CE.IPS	1 ... 1	R		(HL7-IPS)
<code>CONF</code>		The value of @code shall be drawn from value set 2.16.840.1.113883.1.11.16926 <i>HL7 BasicConfidentialityKind</i> (DYNAMIC)			
<code>Example</code>		<confidentialityCode code="N" codeSystem="2.16.840.1.113883.5.25" displayName="normal"/>			
<code>└ h17:languageCode</code>	CS	1 ... 1	M	Document Language Code	(HL7-IPS)
<code>Constraint</code>		The two characters form SHALL be used when available; otherwise the three characters representation SHALL be adopted			
<code>CONF</code>		The value of @code shall be drawn from value set 2.16.840.1.113883.11.22.19 <i>Language Code</i> (DYNAMIC)			
<code>Example</code>		<languageCode code="en-GB"/>			

				Example	<code><languageCode code="fil-PH"/></code>	
Schematron assert	role	error				
	test	matches(@code,'[a-z]{2,3}-[A-Z]{2,3}')				
	Message	The language code SHALL be in the form nn-CC or nnn-CCC, in accordance with BCP 47 (e.g. nn is the ISO country code; CC is ISO language code)				
└ h17:setId	II	0 ... 1	R	This attribute “represents an identifier that is common across all document revisions”.	In the case the IPS instance is generated as result of one or more transformations (translation/transcoding) the setId is supposed to remain unchanged across all those transformations. Implementers are recommended to use this attribute.	(HL7-IPS)
└ h17:versionNumber		0 ... 1	R			(HL7-IPS)
Included		1 ... 1	M	from 2.16.840.1.113883.10.22.2.1 IPS CDA recordTarget (DYNAMIC)		
└ h17:recordTarget		1 ... 1	M			(HL7-IPS)
└ @typeCode	cs	0 ... 1	F	RCT		
└ @contextControlCode	cs	0 ... 1	F	OP		
	Example				<pre><recordTarget typeCode="RCT" contextControlCode="OP"> <patientRole classCode="PAT"> <id root="1.2.3.999" extension="__example only__"/> <addr> <streetAddressLine>HSE M CASSAR STR</streetAddressLine> <city>ISLA</city> <country>MT</country> </addr> <telecom use="HP" value="tel:+356124567891"/></pre>	

				<pre><telecom use="WP" value="mailto:elif@foo.too.mt"/> <patient> <name> <family>BORG</family> <given>TANIA</given> </name> <administrativeGenderCode code="F" codeSystem="2.16.840.1.113883.5.1" displayName="Female"/> <birthTime value="19430130"/> <!-- Optional guardian information ; see example below--> <!-- Optional languageCommunication information see example below --> </patient> </patientRole> </recordTarget></pre>
└ hl7:patientRole		1 ... 1	M	(HL7-IPS)
└ @classCode	cs	0 ... 1	F	PAT
└ hl7:id	II	1 ... *	R	Patient Identifiers: Primary Patient Identifier (Regional/National Health Id), Secondary Patient Identifier (Social/Insurance Number) (HL7-IPS)
	hl7ips-dataelement-7	Insurance identifier	CEN/TC 251 prEN 17269	
	hl7ips-dataelement-202	Healthcare related Identifiers	CEN/TC 251 prEN 17269	
└ hl7:addr	AD.IPS	1 ... *	R	The patient address. (HL7-IPS)
	hl7ips-dataelement-162	Address	CEN/TC 251 prEN 17269	
	Constraint	When used for cross-border exchange the country address part has to be provided.		
Included				from 2.16.840.1.113883.10.22.11 IPS Address (DYNAMIC)
└ @use	set_cs	0 ... 1		
	CONF	The value of @use shall be drawn from value set 2.16.840.1.113883.1.11.10637 PostalAddressUse (2005-05-01)		

└ @nullFlavor

cs 0 ... 1 F NI

Constraint	SHALL NOT have mixed content except for white space If there is no information, the nullFlavor attribute shall have a value of 'NI' and no address parts shall be present, otherwise there shall be no nullFlavor attribute, and at least one of the address parts listed below shall be present.		
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Schematron assert	role	error	
	test	@nullFlavor or hl7:*	
	Message	If addr is not nullflavored at least one sub element has to be provided	

└ hl7:streetAddressLine	ADXP	0 ... *	C	Subject's or Organization's Street Address Line	(HL7-IPS)
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Schematron assert	role	error	
	test	hl7:streetAddressLine and (hl7:city or hl7:postalCode)	
	Message	If the address line is included either the city or the zip code has to be provided	

└ hl7:city	ADXP	0 ... 1	C	Subject's or Organization's City	(HL7-IPS)
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└ hl7:postalCode	ADXP	0 ... 1	C	Subject's or Organization's Postal Code	(HL7-IPS)
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└ hl7:state	ADXP	0 ... 1	C	Subject's or Organization's State or Province	(HL7-IPS)
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└ hl7:country	ADXP	0 ... 1	C	Subject's Country.	(HL7-IPS)
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Constraint	The content of this element SHALL be selected EITHER from ValueSet ISO Country Alpha-2 urn:oid:2.16.840.1.113883.1.11.20300 DYNAMIC OR MAY be selected from ISO Country Alpha-3 2.16.840.1.113883.1.11.171 DYNAMIC, IF the country is not specified in ValueSet ISO Country Alpha-2 urn:oid:2.16.840.1.113883.1.11.20300.		
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L h17:telecom	TEL	1 ... *	R	Patient's telecom information : e.g. telephone number, e-mail address.	(HL7-IPS)
				⌚ hl7ips-dataelement-100 🟡 Telecoms 🟡 CEN/TC 251 prEN 17269	
L @use	set_cs	0 ... 1			
			CONF	The value of @use shall be drawn from value set 2.16.840.1.113883.1.11.201 <i>TelecommunicationAddressUse</i> (DYNAMIC)	
L @nullFlavor	cs	0 ... 1	F	NI	
			Constraint	If there is no information, the nullFlavor attribute shall have a value of 'NI' and the "value" and "use" attributes shall be omitted, otherwise the nullFlavor attribute shall not be present, and the "value" and "use" attributes shall be present.	
			Example	<telecom use="HP" value="tel:+356124567891"/>	
			Example	<telecom use="WP" value="mailto:elif@foo.too.mt"/>	
			Example	<telecom nullFlavor="NI"/>	
L h17:patient		1 ... 1	M		(HL7-IPS)
L @classCode	cs	0 ... 1	F	PSN	
L @determinerCode	cs	0 ... 1	F	INSTANCE	
			Example	Japanese example (Person Name) <patient> <name use="IDE"> <family>木村</family> <given>通男</given> </name> <name use="SYL"> <family>きむら</family> <given>みちお</given> </name> <name use="ABC">	

					<pre><family>KIMURA</family> <given>MICHIO</given> </name> <administrativeGenderCode code="M" codeSystem="2.16.840.1.113883.5.1" displayName="Male"/> <birthTime nullFlavor="UNK"/> </patient></pre>
└ hl7:name	PN	1 ... *	M	Patient Name	(HL7-IPS)
 hl7ips-dataelement-3		 Patient's Name			 CEN/TC 251 prEN 17269
Constraint		The Alphabetic representation of the name SHALL be always provided			
└ hl7:family		1 ... *	R	Patient's Family Name/Surname	(HL7-IPS)
└ hl7:given		1 ... *	R	Patient's Given Name	(HL7-IPS)
└ hl7:administrativeGenderCode	CE.IPS	1 ... 1	R	Patient's Gender	(HL7-IPS)
 hl7ips-dataelement-4		 Administrative Gender			 CEN/TC 251 prEN 17269
└ @nullFlavor	cs	0 ... 1	F	UNK	
 CONF		The value of @code shall be drawn from value set 2.16.840.1.113883.1.11.1 <i>AdministrativeGender</i> (DYNAMIC)			
Example		<pre><administrativeGenderCode code="F" codeSystem="2.16.840.1.113883.5.1" displayName="Female"> <translation code="2" codeSystem="2.16.840.1.113883.3.129.1.2.21" codeSystemName="Cinsiyet" displayName="Kadin"/> </administrativeGenderCode></pre>			
└ hl7:birthTime	TS	1 ... 1	R	Patient's Date of Birth. The patient date of birth may be a partial date such as only the year.	(HL7-IPS)
 hl7ips-dataelement-5		 Date of Birth			 CEN/TC 251 prEN 17269

<code>└ h17:guardian</code>		0 ... *	R	The guardians of a patient. Other patient contacts are described using the /ClinicalDocument/participant structure. The <associatedEntity> element defines the type of contact.	(HL7-IPS)
<code>└ @classCode</code>	cs	1 ... 1	F	GUARD	
	Example			<pre><guardian classCode="GUARD"> <code code="AUNT" displayName="tante" codeSystem="2.16.840.1.113883.5.111"/> <addr nullFlavor="NI"/> <telecom use="MC" value="tel:+33-12345678"/> <guardianPerson> <name> <family>Curie</family> <given>Marie</given> </name> </guardianPerson> </guardian></pre>	
<code>└ h17:code</code>	CD.IPS	0 ... 1	R	The relationship between the patient and the guardian or other contact may be recorded in the <code>element</code> .	(HL7-IPS)
	CONF			The value of <code>@code</code> shall be drawn from value set 2.16.840.1.113883.1.11.19563 <i>PersonalRelationshipRole-Type</i> (DYNAMIC)	
<code>└ h17:addr</code>	AD.IPS	1 ... *	R		(HL7-IPS)
	Constraint			If there is no information, the <code>nullFlavor</code> attribute shall have a value of 'NI' and no address parts shall be present, otherwise there shall be no <code>nullFlavor</code> attribute, and at least one of the address parts listed below shall be present.	
<i>Included</i>					
<code>└ @use</code>	set_cs	0 ... 1			
	CONF			The value of <code>@use</code> shall be drawn from value set 2.16.840.1.113883.1.11.10637 <i>PostalAddressUse</i> (2005-05-01)	

<code>L @nullFlavor</code>	cs	0 ... 1	F	NI	
	Constraint	SHALL NOT have mixed content except for white space If there is no information, the nullFlavor attribute shall have a value of 'NI' and no address parts shall be present, otherwise there shall be no nullFlavor attribute, and at least one of the address parts listed below shall be present.			
	Schematron assert	role	error		
		test	@nullFlavor or hl7:*		
		Message	If addr is not nullflavored at least one sub element has to be provided		
<code>L hl7:streetAddressLine</code>	ADXP	0 ... *	C	Subject's or Organization's Street Address Line	(HL7-IPS)
		role	error		
	Schematron assert	test	hl7:streetAddressLine and (hl7:city or hl7:postalCode)		
		Message	If the address line is included either the city or the zip code has to be provided		
<code>L hl7:city</code>	ADXP	0 ... 1	C	Subject's or Organization's City	(HL7-IPS)
<code>L hl7:postalCode</code>	ADXP	0 ... 1	C	Subject's or Organization's Postal Code	(HL7-IPS)
<code>L hl7:state</code>	ADXP	0 ... 1	C	Subject's or Organization's State or Province	(HL7-IPS)
<code>L hl7:country</code>	ADXP	0 ... 1	C	Subject's Country.	(HL7-IPS)
	Constraint	The content of this element SHALL be selected EITHER from ValueSet ISO Country Alpha-2 urn:oid:2.16.840.1.113883.1.11.20300 DYNAMIC OR MAY be selected from ISO Country Alpha-3 2.16.840.1.113883.1.11.171 DYNAMIC, IF the country is not specified in ValueSet ISO Country Alpha-2 urn:oid:2.16.840.1.113883.1.11.20300.			

L <code>hl7:telecom</code>	TEL	1 ... *	R	Guardian's telecom information: e.g. telephone number; e-mail address.	(HL7-IPS)
L <code>@use</code>	<code>set_cs</code>	0 ... 1		CONF The value of @use shall be drawn from value set 2.16.840.1.113883.1.11.201 <i>TelecommunicationAddressUse</i> (DYNAMIC)	
L <code>@nullFlavor</code>	<code>cs</code>	0 ... 1	F	NI	
			Constraint	If there is no information, the nullFlavor attribute shall have a value of 'NI' and the "value" and "use" attributes shall be omitted, otherwise the nullFlavor attribute shall not be present, and the "value" and "use" attributes shall be present.	
L <code>hl7:guardianPerson</code>		1 ... 1	R		(HL7-IPS)
L <code>hl7:name</code>	PN	1 ... *	R	Patient Guardian's Name	(HL7-IPS)
L <code>hl7:family</code>	ENXP	1 ... *	R	Patient Guardian's Family Name/Surname	(HL7-IPS)
L <code>hl7:given</code>	ENXP	1 ... *	R	Patient Guardian's Given Name	(HL7-IPS)
L <code>hl7:languageCommunication</code>		0 ... *	R		(HL7-IPS)
L <code>hl7:languageCode</code>	CS	1 ... 1	R	Patient's language	(HL7-IPS)
 hl7ips-dataelement-135 Patient's preferred language CEN/TC 251 prEN 17269					
	CONF	The value of @code shall be drawn from value set 2.16.840.1.113883.11.22.19 <i>Language Code</i> (DYNAMIC)			
	Example	British English <code><languageCode code="en-GB"/></code>			

	Example	Amurdak (Australia) <pre><languageCode code="amg-AU"/></pre>				
Schematron assert	role	error				
	test	matches(@code,'[a-z]{2,3}-[A-Z]{2,3}')				
	Message	The language code SHALL be in the form nn-CC or nnn-CCC, in accordance with BCP 47 (e.g. nn is the ISO country code; CC is ISO language code)				
Included	1 ... *	M	from 2.16.840.1.113883.10.22.2.2 IPS CDA author (DYNAMIC)			
└ h17:author		1 ... *	M			
└ @typeCode	cs	0 ... 1	F	AUT		
└ @contextControlCode	cs	0 ... 1	F	OP		
	Example	<pre><author> <time value="201212290600+0100"/> <assignedAuthor> <id root="2.16.840.1.113883.2.9.4.3.2" extension="RSSMRA00A01F205F" assigningAuthorityName="Ministero Economia e Finanze"/> <addr use="WP"> <streetAddressLine>Viale della Cristallina 3</streetAddressLine> <city>Bologna</city> <state>BO</state> <postalCode>40121</postalCode> <country>IT</country> </addr> <telecom use="WP" value="tel:+39-051-34343434"/> <assignedPerson> <name> <given>Paolo</given> <family>Rossi</family> </name> </assignedPerson> </assignedAuthor> <representedOrganization> <!-- template 'IPS CDA Organization' (dynamic) --> </representedOrganization> </author></pre>				
└ h17:functionCode	CE.IPS	0 ... 1	R			
				(HL7-IPS)		

L h17:time	TS.IPS.TZ	1 ... 1	R	The author/time element represents the start time of the author's participation in the creation of the clinical document.	(HL7-IPS)
	Example	<time value="201212290600+0100"/>			
L h17:assignedAuthor		1 ... 1	R		(HL7-IPS)
L @classCode	cs	0 ... 1	F	ASSIGNED	
L h17:id	II	1 ... *	R	Author Identifier(s)	(HL7-IPS)
L @nullFlavor	cs	0 ... 1			
L h17:code	CE.IPS (extensible)	0 ... 1	R	A code, which identifies the profession/competence/specialty of the author when it is a person.	(HL7-IPS)
	CONF	The value of @code should be drawn from value set 2.16.840.1.113883.11.22.53 IPS Healthcare Professional Roles (DYNAMIC)			
	Example	<code code="221" codeSystem="2.16.840.1.113883.2.9.6.2.7" codeSystemName="ISCO" displayName="Medical doctors"/>			
L h17:addr	AD.IPS	1 ... *	R		(HL7-IPS)
	Example	<addr use="WP"><streetAddressLine>Viale della Cristallina 3</streetAddressLine><city>Bologna</city><state>BO</state><postalCode>40121</postalCode><country>IT</country></addr>			
L h17:telecom	TEL.IPS	1 ... *	R		(HL7-IPS)
L @use	set_cs	0 ... 1			

	CONF	The value of @use shall be drawn from value set 2.16.840.1.113883.1.11.201 <i>TelecommunicationAddressUse</i> (DYNAMIC)							
	@value	st	0 ... 1						
	Example	<telecom use="WP" value="tel:+39-051-34343434"/>							
	Example	<telecom nullFlavor="NI"/>							
<i>Choice</i>	Elements to choose from:								
	<ul style="list-style-type: none"> ▪ hl7:assignedPerson ▪ hl7:assignedAuthoringDevice containing template 2.16.840.1.113883.10.22.9.2 <i>IPS CDA Device</i> (DYNAMIC) 								
	hl7:assignedPerson		0 ... 1	C	(HL7-IPS)				
	@classCode	cs	0 ... 1	F	PSN				
	@determinerCode	cs	0 ... 1	F	INSTANCE				
	hl7:name	PN	1 ... *	R	Name of the person (e.g. the Healthcare Professional) authoring this document (HL7-IPS)				
	Example	<pre><name> <given>John</given> <family>Español Smith</family> </name></pre>							
	hl7:family		1 ... *	R	(HL7-IPS)				
	hl7:given		1 ... *	R	(HL7-IPS)				
	hl7:assignedAuthoringDevice		0 ... 1	C	Contains 2.16.840.1.113883.10.22.9.2 <i>IPS CDA Device</i> (DYNAMIC) (HL7-IPS)				

	Example	<pre><assignedAuthoringDevice classCode="DEV" determinerCode="INSTANCE"> <softwareName displayName="Turriano"/> </assignedAuthoringDevice></pre>																
└ h17:representedOrganization		0 ... 1	R	Contains 2.16.840.1.113883.10.22.9.1 IPS CDA Organization (DYNAMIC)	(HL7-IPS)													
<i>Included</i>																		
└ h17:custodian		1 ... 1	M	from 2.16.840.1.113883.10.22.2.3 IPS CDA custodian (DYNAMIC)	(HL7-IPS)													
<table border="1"> <tr> <td>└ @typeCode</td> <td>cs</td> <td>0 ... 1</td> <td>F</td> <td>CST</td> <td></td> <td></td> </tr> <tr> <td></td><td>Example</td><td colspan="4"> <pre><custodian typeCode="CST"> <assignedCustodian classCode="ASSIGNED"> <representedCustodianOrganization classCode="ORG" determinerCode="INSTANCE"> <!-- template 'IPS CDA Organization' (dynamic) --> </representedCustodianOrganization> </assignedCustodian> </custodian></pre> </td></tr> </table>						└ @typeCode	cs	0 ... 1	F	CST				Example	<pre><custodian typeCode="CST"> <assignedCustodian classCode="ASSIGNED"> <representedCustodianOrganization classCode="ORG" determinerCode="INSTANCE"> <!-- template 'IPS CDA Organization' (dynamic) --> </representedCustodianOrganization> </assignedCustodian> </custodian></pre>			
└ @typeCode	cs	0 ... 1	F	CST														
	Example	<pre><custodian typeCode="CST"> <assignedCustodian classCode="ASSIGNED"> <representedCustodianOrganization classCode="ORG" determinerCode="INSTANCE"> <!-- template 'IPS CDA Organization' (dynamic) --> </representedCustodianOrganization> </assignedCustodian> </custodian></pre>																
└ h17:assignedCustodian		1 ... 1	R		(HL7-IPS)													
└ @classCode	cs	0 ... 1	F	ASSIGNED														
└ h17:representedCustodianOrganization		1 ... 1	R	Contains 2.16.840.1.113883.10.22.9.1 IPS CDA Organization (DYNAMIC)	(HL7-IPS)													
└ @classCode	cs	0 ... 1	F	ORG														
└ @determinerCode	cs	0 ... 1	F	INSTANCE														
<i>Included</i>																		
└ h17:legalAuthenticator		0 ... 1	R	from 2.16.840.1.113883.10.22.2.4 IPS CDA legalAuthenticator (DYNAMIC)	(HL7-IPS)													
	Example	<pre><legalAuthenticator></pre>																

					<pre> <time value="20111013150937-0800"/> <signatureCode code="S"/> <assignedEntity> <id extension="admin" root="2.16.17.710.780.1000.903.1.1.3.3"/> <assignedPerson> <name> <given>John</given> <family>Español Smith</family> </name> </assignedPerson> <representedOrganization> <name>Healthcare Facility's name</name> <addr> <country>NL</country> <streetName>Duinweg</streetName> <houseNumber>23</houseNumber> <postalCode>7364 RX</postalCode> <city>Amsterdam</city> </addr> </representedOrganization> </assignedEntity> </legalAuthenticator> </pre>
└ h17:time	TS.IPS.TZ	1 ... 1	M	Time of signing the document	(HL7-IPS)
└ h17:signatureCode	CS	0 ... 1	R	Signature code	(HL7-IPS)
└ @code	CONF	0 ... 1	F	S	
└ h17:assignedEntity		0 ... 1	R	The entity that is responsible for the legal authentication of the CDA document	(HL7-IPS)
└ h17:id		1 ... *	R	Unique identification of legal authenticator	(HL7-IPS)
└ h17:addr	AD.IPS	1 ... *	R		(HL7-IPS)
└ h17:telecom	TEL.IPS	1 ... *	R		(HL7-IPS)
└ h17:assignedPerson		1 ... 1	R		(HL7-IPS)

L @classCode	cs	0 ... 1	F	PSN	
L @determinerCode	cs	0 ... 1	F	INSTANCE	
L hl7:name	PN	1 ... *	R	Name of the legal authenticator	(HL7-IPS)
	Example	<name><given>John</given><family>Español Smith</family></name>			
L hl7:family		1 ... *	R	HP Family Name/Surname	(HL7-IPS)
L hl7:given		1 ... *	R	HP Given Name	(HL7-IPS)
L hl7:representedOrganization		1 ... 1	M	Organization the legal authenticator is acting for Contains 2.16.840.1.113883.10.22.9.1 IPS CDA Organization (DYNAMIC)	(HL7-IPS)
where [not(@nullFlavor)]					
<i>Included</i>		0 ... *		from 2.16.840.1.113883.10.22.2.5 IPS Patient Contacts (DYNAMIC)	
L hl7:participant		0 ... *	R	Patient contacts or the Preferred Health Professional to contact in case of emergency.	(HL7-IPS)
where [hl7:templateId/@root='2.16.840.1.113883.10.22.2.5']					
<div style="display: flex; justify-content: space-around;"> hl7ips-dataelement-154 Patient's Address Book CEN/TC 251 prEN 17269 </div> <div style="display: flex; justify-content: space-around;"> hl7ips-dataelement-163 Preferred Healthcare providers CEN/TC 251 prEN 17269 </div>					
L @typeCode	cs	1 ... 1	F	IND	
	Example	<participant typeCode="IND"><templateId root="2.16.840.1.113883.10.22.2.5"/><associatedEntity classCode="NOK">			

 h17:code	CV.IPS	0 ... 1	R	This element indicates the relationship between the patient and this participant. (HL7-IPS)
	CONF			<p>The value of @code shall be drawn from value set 2.16.840.1.113883.11.22.54 <i>IPS Personal Relationship (DYNAMIC)</i></p> <p>or</p> <p>The value of @code shall be drawn from value set 2.16.840.1.113883.11.22.53 <i>IPS Healthcare Professional Roles (DYNAMIC)</i></p>
	Example			<code code="AUNT" displayName="Θεία" codeSystem="2.16.840.1.113883.5.111"/>
 h17:addr	AD.IPS	1 ... *	R	Patient Contact's / Preferred HP's Address (HL7-IPS)
	Schematron assert	role	 error	
		test	@nullFlavor or hl7:*	
		Message	If addr is not nullflavored at least one sub element has to be provided	

Included

 @use	set_cs	0 ... 1	
	CONF	The value of @use shall be drawn from value set 2.16.840.1.113883.1.11.10637 <i>PostalAddressUse</i> (2005-05-01)	
 @nullFlavor	cs	0 ... 1	F NI

				present.	
		Schematron assert	role	error	
			test	@nullFlavor or hl7:*	
			Message	If addr is not nullflavored at least one sub element has to be provided	
hl7:streetAddressLine	ADXP	0 ... *	C	Subject's or Organization's Street Address Line	(HL7-IPS)
		Schematron assert	role	error	
			test	hl7:streetAddressLine and (hl7:city or hl7:postalCode)	
			Message	If the address line is included either the city or the zip code has to be provided	
hl7:city	ADXP	0 ... 1	C	Subject's or Organization's City	(HL7-IPS)
hl7:postalCode	ADXP	0 ... 1	C	Subject's or Organization's Postal Code	(HL7-IPS)
hl7:state	ADXP	0 ... 1	C	Subject's or Organization's State or Province	(HL7-IPS)
hl7:country	ADXP	0 ... 1	C	Subject's Country.	(HL7-IPS)
		Constraint	The content of this element SHALL be selected EITHER from ValueSet ISO Country Alpha-2 urn:oid:2.16.840.1.113883.1.11.20300 DYNAMIC OR MAY be selected from ISO Country Alpha-3 2.16.840.1.113883.1.11.171 DYNAMIC, IF the country is not specified in ValueSet ISO Country Alpha-2 urn:oid:2.16.840.1.113883.1.11.20300.		
hl7:telecom	TEL	1 ... *	R	Patient Contact's / Preferred HP's/Legal Organization telephone or e-mail <telecom> element is required.</telecom>	(HL7-IPS)
		hl7ips-dataelement-174 Telecoms CEN/TC 251 prEN 17269 hl7ips-dataelement-169 Telecoms CEN/TC 251 prEN 17269			

L @use	set_cs	0 ... 1		
	CONF	The value of @use shall be drawn from value set 2.16.840.1.113883.1.11.201 TelecommunicationAddressUse (DYNAMIC)		
L @nullFlavor	cs	0 ... 1	F	NI
	Constraint	If there is no information, the nullFlavor attribute shall have a value of 'NI' and the "value" and "use" attributes shall be omitted, otherwise the nullFlavor attribute shall not be present, and the "value" and "use" attributes shall be present		
	Example	<telecom use="WP" value="tel:+45 20 7025 6161"/> <telecom use="HP" value="mailto:jsmith@myprovider.co.uk"/>		
<i>Choice</i>		Elements to choose from: 1 ... 2		
		<ul style="list-style-type: none"> ▪ hl7:associatedPerson ▪ hl7:scopingOrganization 		
L hl7:associatedPerson		0 ... 1	C	Or the associatedPerson, or the scopingOrganization, or both elements shall be provided (HL7-IPS)
	 hl7ips-dataelement-165  Healthcare Provider (person)  CEN/TC 251 prEN 17269			
L hl7:name	PN	1 ... *	R	Patient Contact's Name / Preferred HP's Name (HL7-IPS)
	 hl7ips-dataelement-121  Name  CEN/TC 251 prEN 17269			
	Example	<pre><name> <given>John</given> <family>Español Smith</family> </name></pre>		
L hl7:family		1 ... *	R	Patient Contact's Family Name/Surname / Preferred HP's Family Name/Surname (HL7-IPS)
L hl7:given		1 ... *	R	Patient Contact's Given Name / Preferred HP's Given Name (HL7-IPS)

L <code>hl7:scopingOrganization</code>		0 ... 1	C	Or the associatedPerson, or the scopingOrganization, or both elements shall be provided	(HL7-IPS)
				hl7ips-dataelement-166 Healthcare Provider (organisation) CEN/TC 251 prEN 17269	
L <code>hl7:name</code>	ON	1 ... *	R	Organization's Name	(HL7-IPS)
				hl7ips-dataelement-172 Organisation's Name CEN/TC 251 prEN 17269	
<i>Included</i>		1 ... 1	M	from 2.16.840.1.113883.10.22.2.6 IPS CDA documentationOf (DYNAMIC)	
L <code>hl7:documentationOf</code>		1 ... 1	M	The documentationOf relationship in an International Patient Summary contains the representation of providers who are wholly or partially responsible for the safety and well-being of a subject of care.	(HL7-IPS)
L <code>@typeCode</code>	cs	0 ... 1	F	DOC	
			Example	<pre><documentationOf> <serviceEvent classCode="PCPR"> <effectiveTime> <low nullFlavor="NI"/> <high value="20110308"/> </effectiveTime> <performer typeCode="PRF"> <!-- See example below --> </performer> </serviceEvent> </documentationOf></pre>	
L <code>hl7:serviceEvent</code>		1 ... 1	R	<p>The main activity being described by a IPS is the provision of healthcare over a period of time. This is shown by setting the value of serviceEvent/@classCode to "PCPR" (care provision) and indicating the duration over which care was provided in serviceEvent/effectiveTime. Additional data from outside this duration may also be included if it is relevant to care provided during that time range (e.g., reviewed during the stated time range).</p> <p>For example if the IPS is generated by a GP based on information recorded in his/her EHR-S, then the low value should represent the date when the treatment relationship between the patient and the GP started; and the high value the date of the latest care event.</p>	(HL7-IPS)

L @classCode	cs	1 ... 1	F	PCPR	
L @moodCode	cs	1 ... 1	F	EVN	
L hl7:id	II	0 ... *	R		(HL7-IPS)
L hl7:effectiveTime	IVL_TS	1 ... 1	R		(HL7-IPS)
L hl7:low	TS	1 ... 1	R		(HL7-IPS)
L hl7:high	TS	1 ... 1	R		(HL7-IPS)
L hl7:performer		0 ... *	R	It represents the healthcare providers involved in the current or pertinent historical care of the patient. Preferably, the patient's key healthcare providers would be listed, particularly their primary physician and any active consulting physicians, therapists, and counselors	(HL7-IPS)
L @typeCode	cs	1 ... 1	R		
	CONF	The value of @typeCode shall be drawn from value set 2.16.840.1.113883.1.11.19601 <i>x_ServiceEventPerformer</i> (DYNAMIC)			
	Example	<pre><performer typeCode="PRF"> <assignedEntity> <id assigningAuthorityName="MEF" displayable="false" extension="DVLMGG57R07F205G" root="2.16.840.1.113883.2.9.4.3.2"> <code code="221" codeSystem="2.16.840.1.113883.2.9.6.2.7" codeSystemName="ISO" dis- playName="Medical doctors"> <translation codeSystem="2.16.840.1.113883.2.9.5.1.111" code="MMG" display- Name="Medico di Medicina Generale"/> </code> <addr nullFlavor="NI"/> <telecom nullFlavor="NI"/> <assignedPerson> <name> <family>DVALUNO</family> <given>MMG</given> </name></pre>			

				<pre> </assignedPerson> <representedOrganization> <id assigningAuthorityName="A.S.L. DELLA PROVINCIA DI LECCO" extension="030305" root="2.16.840.1.113883.2.9.4.1.1"> <name>A.S.L. DELLA PROVINCIA DI LECCO</name> <telecom nullFlavor="NI"/> <addr> <state>LECCO</state> <city>LECCO</city> <country>IT</country> <postalCode>23900</postalCode> <streetAddressLine> CORSO CARLO ALBERTO, 120</streetAddressLine> </addr> </representedOrganization> </assignedEntity> </performer> </pre>	
└ h17:functionCode	CE.IPS	0 ... 1	R		(HL7-IPS)
└ h17:time	IVL_TS.IPS.TZ	0 ... 1	R		(HL7-IPS)
└ h17:assignedEntity		1 ... 1	M		(HL7-IPS)
└ h17:id	II	1 ... *	R	Healthcare provider ID number	(HL7-IPS)
└ h17:code	CE.IPS (extensible)	0 ... 1	R	It describes the professional role of the healthcare provider involved in the current or pertinent historical care of the patient.	(HL7-IPS)
	CONF			The value of @code should be drawn from value set 2.16.840.1.113883.11.22.53 <i>IPS Healthcare Professional Roles</i> (DYNAMIC)	
└ h17:addr	AD.IPS	1 ... *	R		(HL7-IPS)
└ h17:telecom	TEL.IPS	1 ... *	R		(HL7-IPS)
└ h17:assignedPerson		0 ... 1		Contains 2.16.840.1.113883.10.22.9.3 <i>IPS CDA Person</i> (DYNAMIC)	(HL7-IPS)

└ h17:representedOrganization		0 ... 1		Contains 2.16.840.1.113883.10.22.9.1 <i>IPS CDA Organization</i> (DYNAMIC)	(HL7-IPS)
<i>Included</i>		0 ... *	R	from 2.16.840.1.113883.10.22.2.7 <i>IPS CDA relatedDocument</i> (DYNAMIC)	
└ h17:relatedDocument		0 ... *	R		(HL7-IPS)
└ @typeCode	cs	1 ... 1	R		
	CONF	The value of @typeCode shall be drawn from value set 2.16.840.1.113883.1.11.11610 <i>x_ActRelationshipDocument</i> (DYNAMIC)			
└ h17:parentDocument		1 ... 1	R		(HL7-IPS)
└ @classCode	cs	0 ... 1	F	DOCCLIN	
└ @moodCode	cs	0 ... 1	F	EVN	
└ h17:id	II	1 ... *	R		(HL7-IPS)
└ h17:code	CD.IPS	0 ... 1	R		(HL7-IPS)
└ @codeSystem	CONF	0 ... 1	F	2.16.840.1.113883.6.1 (LOINC)	
└ h17:text	ED	0 ... 1	R		(HL7-IPS)
└ h17:setId	II	0 ... 1	R		(HL7-IPS)
└ h17:versionNumber	INT	0 ... 1	R		(HL7-IPS)

└ h17:component		1 ... 1	M		(HL7-IPS)
└ h17:structuredBody		1 ... 1	M	Note: the proposed order of the sections hereafter indicated is not mandatory	(HL7-IPS)
└ @classCode	cs	0 ... 1	F	DOCBODY	
└ h17:component		1 ... 1	M	Contains 2.16.840.1.113883.10.22.3.1 <i>IPS Medication Summary Section (DYNAMIC)</i>	(HL7-IPS)
where <i>[hl7:section [hl7:code [(@code = '10160-0' and @codeSystem = '2.16.840.1.113883.6.1)]]]</i>					
└ h17:component		1 ... 1	M	Contains 2.16.840.1.113883.10.22.3.2 <i>IPS Allergies and Intolerances Section (DYNAMIC)</i>	(HL7-IPS)
where <i>[hl7:section [hl7:code [(@code = '48765-2' and @codeSystem = '2.16.840.1.113883.6.1)]]]</i>					
└ h17:component		1 ... 1	M	Contains 2.16.840.1.113883.10.22.3.3 <i>IPS Problems Section (DYNAMIC)</i>	(HL7-IPS)
where <i>[hl7:section [hl7:code [(@code = '11450-4' and @codeSystem = '2.16.840.1.113883.6.1)]]]</i>					
└ h17:component		0 ... 1	R	Contains 2.16.840.1.113883.10.22.3.4 <i>IPS History of Procedures Section (DYNAMIC)</i>	(HL7-IPS)
where <i>[hl7:section [hl7:code [(@code = '47519-4' and @codeSystem = '2.16.840.1.113883.6.1)]]]</i>					
└ h17:component		0 ... 1	R	Contains 2.16.840.1.113883.10.22.3.5 <i>IPS Immunizations Section (DYNAMIC)</i>	(HL7-IPS)
where <i>[hl7:section [hl7:code [(@code = '11369-6' and @codeSystem = '2.16.840.1.113883.6.1)]]]</i>					
└ h17:component		0 ... 1	R	Contains 2.16.840.1.113883.10.22.3.6 <i>IPS Medical Devices Section (DYNAMIC)</i>	(HL7-IPS)

where `[hl7:section [hl7:code [(@code = '46264-8' and @codeSystem = '2.16.840.1.113883.6.1)]]]`

└ hl7:component		0 ... 1	R	Contains 2.16.840.1.113883.10.22.3.14 IPS Results Section (DYNAMIC)	(HL7-IPS)
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where `[hl7:section [hl7:code [(@code = '30954-2' and @codeSystem = '2.16.840.1.113883.6.1)]]]`

└ hl7:component		0 ... 1		Contains 2.16.840.1.113883.10.22.3.7 IPS History of Past Illness Section (DYNAMIC)	(HL7-IPS)
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where `[hl7:section [hl7:code [(@code = '11348-0' and @codeSystem = '2.16.840.1.113883.6.1)]]]`

└ hl7:component		0 ... 1		Contains 2.16.840.1.113883.10.22.3.8 IPS Functional Status Section (DYNAMIC)	(HL7-IPS)
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where `[hl7:section [hl7:code [(@code = '47420-5' and @codeSystem = '2.16.840.1.113883.6.1)]]]`

└ hl7:component		0 ... 1		Contains 2.16.840.1.113883.10.22.3.9 IPS Plan of Care Section (DYNAMIC)	(HL7-IPS)
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where `[hl7:section [hl7:code [(@code = '18776-5' and @codeSystem = '2.16.840.1.113883.6.1)]]]`

└ hl7:component		0 ... 1		Contains 2.16.840.1.113883.10.22.3.10 IPS Social History Section (DYNAMIC)	(HL7-IPS)
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where `[hl7:section [hl7:code [(@code = '29762-2' and @codeSystem = '2.16.840.1.113883.6.1)]]]`

└ hl7:component		0 ... 1		Contains 2.16.840.1.113883.10.22.3.11 IPS History of Pregnancy Section (DYNAMIC)	(HL7-IPS)
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where `[hl7:section [hl7:code [(@code = '10162-6' and @codeSystem = '2.16.840.1.113883.6.1)]]]`

└ hl7:component		0 ... 1		Contains 2.16.840.1.113883.10.22.3.12 IPS Advance Directives Section (DYNAMIC)	(HL7-IPS)
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where *[hl7:section [hl7:code [(@code = '42348-3' and @codeSystem = '2.16.840.1.113883.6.1')]]]*

7 CDA Header Level Templates

7.1 IPS CDA author

Id	2.16.840.1.113883.10.22.2.2	Effective Date	2017-04-11
Status	 Under pre-publication review	Version Label	STU1
Name	IPSCDAAuthor	Display Name	IPS CDA author
Description			

A CDA document shall have at least one author. Authors could be either human (ClinicalDocument/author/assignedAuthor/assignedPerson) either devices (ClinicalDocument/author/assignedAuthor/assignedAuthoringDevice).

For definition “The author element represents the creator of the clinical document. If the role of the actor is the **entry of information from his or her own knowledge or application of skills**, that actor is the author. If one actor provides information to another actor **who filters, reasons, or algorithmically creates new information**, then that second actor **is also an author, having created information from his or her own knowledge or skills.**” [From Implementation Guide for CDA Release 2: Imaging Integration – UV Realm, March 2009].

According to this definition, not any device that generates the electronic document has to be considered as an author:

- a spider collecting and filtering information from different repositories, according to defined rules and policies, for the scope of creating a Patient Summary is definitely a document author (and in some cases the only one);
- an application that transforms a Patient Summary record into this CDA format may not be an author;
- For cross-border exchange purposes, a device, which modifies the concepts conveyed (e.g. applying code system mappings), should appear as one of the authors. In this case (document generated through a transformation process) the authors of the parent (original) patient summary should appear as authors as well.

Further to this, authorship can give information about the nature of Patient Summary :

- if there is a person author only, then the Patient Summary is the result of a practitioner clinical act;
- if there are device authors only, the summary was automatically generated according to well defined rules defined by the responsible organization.

The CDA standard allows to provide detailed information about what was authored by whom in the Patient Summary, allowing the specification of authorship at the whole document level, at the section level and also at the entry level. In any case it is not required to repeat this information for each of the mentioned levels, taking advantage of the context conduction property.

In fact “context that is specified on an outer tag holds true for all nested tags, unless overridden on a nested tag. Context specified on a tag within the CDA body always overrides context propagated from an outer tag. For instance, the specification of authorship at a document section level overrides all authorship propagated from outer tags.” (HL7 CDA R2 Standard).

Classification	CDA Header Level Template												
Open/Closed	Open (other than defined elements are allowed)												
Uses	<p>Uses 2 templates</p> <table border="1"> <thead> <tr> <th>Uses</th> <th>as</th> <th>Name</th> <th>Version</th> </tr> </thead> <tbody> <tr> <td>2.16.840.1.113883.10.22.9.2</td> <td>Containment</td> <td> IPS CDA Device (STU1)</td> <td>DYNAMIC</td> </tr> <tr> <td>2.16.840.1.113883.10.22.9.1</td> <td>Containment</td> <td> IPS CDA Organization (STU1)</td> <td>DYNAMIC</td> </tr> </tbody> </table>	Uses	as	Name	Version	2.16.840.1.113883.10.22.9.2	Containment	 IPS CDA Device (STU1)	DYNAMIC	2.16.840.1.113883.10.22.9.1	Containment	 IPS CDA Organization (STU1)	DYNAMIC
Uses	as	Name	Version										
2.16.840.1.113883.10.22.9.2	Containment	 IPS CDA Device (STU1)	DYNAMIC										
2.16.840.1.113883.10.22.9.1	Containment	 IPS CDA Organization (STU1)	DYNAMIC										
Relationship	Adaptation: template 2.16.840.1.113883.10.12.102 (2005-09-07)												
Example	<p>Human Author</p> <pre> <author> <time value="201212290600+0100"/> <assignedAuthor> <id root="2.16.840.1.113883.2.9.4.3.2" extension="RSSMRA00A01F205F" assigningAuthorityName="Ministero Economia e Finanze"/> <code code="221" codeSystem="2.16.840.1.113883.2.9.6.2.7" codeSystemName="ISCO" displayName="Medico"/> <addr use="WP"> <streetAddressLine>Viale della Cristallina 3</streetAddressLine> <city>Bologna</city> <state>BO</state> <postalCode>40121</postalCode> <country>IT</country> </addr> <telecom use="WP" value="tel:+39-051-34343434"/> <assignedPerson> <name> <given>Paolo</given> <family>Rossi</family> </name> </assignedPerson> <representedOrganization> <!-- template 'IPS CDA Organization' (dynamic) --> </representedOrganization> </assignedAuthor> </author></pre>												

Example	<p>Device Author</p> <pre> <author> <time value="201212290600+0100"/> <assignedAuthor> <id root="1.2.3.999" extension="__example only__"/> <addr use="WP"> <state>Castilla-La Mancha</state> <city>Toledo</city> <precinct>Toledo</precinct> <country>ES</country> <postalCode>45071</postalCode> <streetAddressLine>Av. Río Guadiana, 4</streetAddressLine> </addr> <telecom nullFlavor="NI"/> <assignedAuthoringDevice classCode="DEV" determinerCode="INSTANCE"> <softwareName displayName="Turriano"/> </assignedAuthoringDevice> <representedOrganization classCode="ORG" determinerCode="INSTANCE"> <id root="1.2.3.999" extension="__example only__"/> <name>SESCAM</name> <telecom use="WP" value="tel:+34925274100"/> <addr use="WP"> <state>Castilla-La Mancha</state> <city>Toledo</city> <precinct>Toledo</precinct> <country>ES</country> <postalCode>45071</postalCode> <streetAddressLine>Av. Rio Guadiana, 4</streetAddressLine> </addr> </representedOrganization> </assignedAuthor> </author></pre>
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Item	DT	Card	Conf	Description	Label
hl7:author		1 ... *	R		(IPS...hor)
└ @typeCode	cs	0 ... 1	F	AUT	
└ @contextControlCode	cs	0 ... 1	F	OP	
	Example	<pre> <author> <time value="201212290600+0100"/> <assignedAuthor> <id root="2.16.840.1.113883.2.9.4.3.2" extension="RSSMRA00A01F205F" assigningAuthorityName="Ministero Economia e Finanze"/> </pre>			

					<pre> <addr use="WP"> <streetAddressLine>Viale della Cristallina 3</streetAddressLine> <city>Bologna</city> <state>BO</state> <postalCode>40121</postalCode> <country>IT</country> </addr> <telecom use="WP" value="tel:+39-051-34343434"/> <assignedPerson> <name> <given>Paolo</given> <family>Rossi</family> </name> </assignedPerson> </assignedAuthor> <representedOrganization> <!-- template 'IPS CDA Organization' (dynamic) --> </representedOrganization> </author></pre>
└ h17:functionCode	CE.IPS	0 ... 1	R		(IPS...hor)
└ h17:time	TS.IPS.TZ	1 ... 1	R	The author/time element represents the start time of the author's participation in the creation of the clinical document.	(IPS...hor)
	Example	<time value="201212290600+0100"/>			
└ h17:assignedAuthor		1 ... 1	R		(IPS...hor)
└ @classCode	cs	0 ... 1	F	ASSIGNED	
└ h17:id	II	1 ... *	R	Author Identifier(s)	(IPS...hor)
└ @nullFlavor	cs	0 ... 1			
└ h17:code	CE.IPS (extensible)	0 ... 1	R	A code, which identifies the profession/competence/specialty of the author when it is a person.	(IPS...hor)
	CONF	The value of @code should be drawn from value set 2.16.840.1.113883.11.22.53 IPS Healthcare Professional Roles (DYNAMIC)			

	Example	<code code="221" codeSystem="2.16.840.1.113883.2.9.6.2.7" codeSystemName="ISCO" displayName="Medical doctors"/>					
└ h17:addr	AD.IPS	1 ... *	R	(IPS...hor)			
	Example	<addr use="WP"><streetAddressLine>Viale della Cristallina 3</streetAddressLine><city>Bologna</city><state>BO</state><postalCode>40121</postalCode><country>IT</country></addr>					
└ h17:telecom	TEL.IPS	1 ... *	R	(IPS...hor)			
└ @use	set_cs	0 ... 1					
	CONF	The value of @use shall be drawn from value set 2.16.840.1.113883.1.11.201 TelecommunicationAddressUse (DYNAMIC)					
└ @value	st	0 ... 1					
	Example	<telecom use="WP" value="tel:+39-051-34343434"/>					
	Example	<telecom nullFlavor="NI"/>					
Choice	Elements to choose from:						
	<ul style="list-style-type: none"> ▪ h17:assignedPerson ▪ h17:assignedAuthoringDevice containing template 2.16.840.1.113883.10.22.9.2 IPS CDA Device (DYNAMIC) 						
	1 ... 1						
└ h17:assignedPerson		0 ... 1	C	(IPS...hor)			
└ @classCode	cs	0 ... 1	F	PSN			
└ @determinerCode	cs	0 ... 1	F	INSTANCE			

L h17:name	PN	1 ... *	R	Name of the person (e.g. the Healthcare Professional) authoring this document (IPS...hor)
	Example			<name> <given>John</given> <family>Español Smith</family> </name>
L h17:family		1 ... *	R	
L h17:given		1 ... *	R	
L h17:assignedAuthoringDevice		0 ... 1	C	Contains 2.16.840.1.113883.10.22.9.2 <i>IPS CDA Device</i> (DYNAMIC) (IPS...hor)
L h17:representedOrganization		0 ... 1	R	Contains 2.16.840.1.113883.10.22.9.1 <i>IPS CDA Organization</i> (DYNAMIC) (IPS...hor)

7.2 IPS CDA custodian

Id	2.16.840.1.113883.10.22.2.3	Effective Date	2017-04-11
Status	🟡 Under pre-publication review	Version Label	STU1
Name	IPSCDAcustodian	Display Name	IPS CDA custodian

Description

The custodian element represents the organization that is in charge of maintaining and is entrusted with the care of the document.

This information is required by the CDA R2 standard and shall be recorded in the **ClinicalDocument/custodian/assignedCustodian/ representedCustodianOrganization** element.

There is only one custodian per CDA document. Allowing that a CDA document may not represent the original form of the authenticated document, the custodian represents the steward of the original source document. The custodian may be the document originator, a health information exchange, or other responsible party.

Classification	CDA Header Level Template											
Open/Closed	Open (other than defined elements are allowed)											
	Uses 1 template											
Uses	<table border="1"> <thead> <tr> <th>Uses</th> <th>as</th> <th>Name</th> <th>Version</th> </tr> </thead> <tbody> <tr> <td>2.16.840.1.113883.10.22.9.1</td> <td>Containment</td> <td> IPS CDA Organization (STU1)</td> <td>DYNAMIC</td> </tr> </tbody> </table>				Uses	as	Name	Version	2.16.840.1.113883.10.22.9.1	Containment	 IPS CDA Organization (STU1)	DYNAMIC
Uses	as	Name	Version									
2.16.840.1.113883.10.22.9.1	Containment	 IPS CDA Organization (STU1)	DYNAMIC									
Relationship	Adaptation: template 2.16.840.1.113883.10.12.104 (2005-09-07)											
Example	<p>Example</p> <pre><custodian typeCode="CST"> <assignedCustodian classCode="ASSIGNED"> <representedCustodianOrganization classCode="ORG" determinerCode="INSTANCE"> <!-- template 'IPS CDA Organization' (dynamic) --> </representedCustodianOrganization> </assignedCustodian> </custodian></pre>											
Item	DT	Card	Conf	Description	Label							
hl7:custodian		1 ... 1	R		(IPS...ian)							
└ @typeCode	cs	0 ... 1	F	CST								
	Example	<custodian typeCode="CST">										

				<pre><assignedCustodian classCode="ASSIGNED"> <representedCustodianOrganization classCode="ORG" determinerCode="INSTANCE"> <!-- template 'IPS CDA Organization' (dynamic) --> </representedCustodianOrganization> </assignedCustodian> </custodian></pre>
└ h17:assignedCustodian		1 ... 1	R	(IPS...ian)
└ @classCode	cs	0 ... 1	F	ASSIGNED
└ h17:representedCustodianOrganization		1 ... 1	R	Contains 2.16.840.1.113883.10.22.9.1 IPS CDA Organization (DYNAMIC)
└ @classCode	cs	0 ... 1	F	ORG
└ @determinerCode	cs	0 ... 1	F	INSTANCE

7.3 IPS CDA documentationOf

Id	2.16.840.1.113883.10.22.2.6	Effective Date	2017-04-12
Status	🟡 Under pre-publication review	Version Label	STU1
Name	IPScdocumentationOfPCPR	Display Name	IPS CDA documentationOf

Description

The documentationOf relationship in an International Patient Summary contains the representation of providers who are wholly or partially responsible for the safety and well-being of a subject of care.

The main activity being described by a IPS is the provision of healthcare over a period of time. This is shown by setting the value of serviceEvent/@classCode to “PCPR” (care provision) and indicating the duration over which care was provided in serviceEvent/effectiveTime. Additional data from outside this duration may also be included if it is relevant to care provided during that time range (e.g., reviewed during the stated time range).

For example if the IPS is generated by a GP based on information recorded in his/her EHR-S, then the low value should represent the date when the treatment relationship between the patient and the GP started; and the high value the date of the latest care event.

Classification	CDA Header Level Template			
Open/Closed	Open (other than defined elements are allowed)			
Uses	Uses 2 templates			
	Uses	as	Name	Version
	2.16.840.1.113883.10.22.9.3	Containment	 IPS CDA Person (STU1)	DYNAMIC
	2.16.840.1.113883.10.22.9.1	Containment	 IPS CDA Organization (STU1)	DYNAMIC
Relationship	Adaptation: template 2.16.840.1.113883.10.12.110 (2005-09-07)			
Example	<p>Example</p> <pre><documentationOf typeCode="DOC"> <serviceEvent classCode="PCPR" moodCode="EVN"> <id root="1.2.3.999" extension="__example only__"/> <effectiveTime> <low nullFlavor="UNK"/> <high value="20170613124706"/> </effectiveTime> <performer typeCode="PRF"> <assignedEntity> <id root="1.2.3.999" extension="__example only__"/> <code code="22" displayName="Health professionals" codeSystem="2.16.840.1.113883.2.9.6.2.7"/> <addr nullFlavor="NI"/> <telecom nullFlavor="NI"/> <assignedPerson> <!-- template 'IPS CDA Person' (dynamic) --> </assignedPerson> <representedOrganization> <!-- template 'IPS CDA Organization' (dynamic) --> </representedOrganization> </assignedEntity> </performer> </serviceEvent> </documentationOf></pre>			
	Item	DT	Card	Conf
	Description			Label

h17:documentationOf		0 ... *	R	The documentationOf relationship in an International Patient Summary contains the representation of providers who are wholly or partially responsible for the safety and well-being of a subject of care.	(IPS...CPR)
└ @typeCode	cs	0 ... 1	F	DOC	
	Example			<pre><documentationOf> <serviceEvent classCode="PCPR"> <effectiveTime> <low nullFlavor="NI"/> <high value="20110308"/> </effectiveTime> <performer typeCode="PRF"> <!-- See example below --> </performer> </serviceEvent> </documentationOf></pre>	
└ h17:serviceEvent		1 ... 1	R	<p>The main activity being described by a IPS is the provision of healthcare over a period of time. This is shown by setting the value of serviceEvent/@classCode to "PCPR" (care provision) and indicating the duration over which care was provided in serviceEvent/effectiveTime. Additional data from outside this duration may also be included if it is relevant to care provided during that time range (e.g., reviewed during the stated time range).</p> <p>For example if the IPS is generated by a GP based on information recorded in his/her EHR-S, then the low value should represent the date when the treatment relationship between the patient and the GP started; and the high value the date of the latest care event.</p>	(IPS...CPR)
└ @classCode	cs	1 ... 1	F	PCPR	
└ @moodCode	cs	1 ... 1	F	EVN	
└ h17:id	II	0 ... *	R		(IPS...CPR)
└ h17:effectiveTime	IVL_TS	1 ... 1	R		(IPS...CPR)
└ h17:low	TS	1 ... 1	R		(IPS...CPR)

└ h17:high	TS	1 ... 1	R		(IPS...CPR)
└ h17:performer		0 ... *	R	It represents the healthcare providers involved in the current or pertinent historical care of the patient. Preferably, the patient's key healthcare providers would be listed, particularly their primary physician and any active consulting physicians, therapists, and counselors	(IPS...CPR)
└ @typeCode	cs	1 ... 1	R	<p>CONF</p> <p>The value of @typeCode shall be drawn from value set 2.16.840.1.113883.1.11.19601 x_ServiceEventPerformer (DYNAMIC)</p> <pre><performer typeCode="PRF"> <assignedEntity> <id assigningAuthorityName="MEF" displayable="false" extension="DVLMGG57R07F205G" root="2.16.840.1.113883.2.9.4.3.2"/> <code code="221" codeSystem="2.16.840.1.113883.2.9.6.2.7" codeSystemName="ISCO" displayName="Medical doctors"> <translation codeSystem="2.16.840.1.113883.2.9.5.1.111" code="MMG" displayName="Medico di Medicina Generale"/> </code> <addr nullFlavor="NI"/> <telecom nullFlavor="NI"/> <assignedPerson> <name> <family>DVALUNO</family> <given>MMG</given> </name> </assignedPerson> <representedOrganization> <id assigningAuthorityName="A.S.L. DELLA PROVINCIA DI LECCO" extension="030305" root="2.16.840.1.113883.2.9.4.1.1"/> <name>A.S.L. DELLA PROVINCIA DI LECCO</name> <telecom nullFlavor="NI"/> <addr> <state>LECCO</state> <city>LECCO</city> <country>IT</country> <postalCode>23900</postalCode> <streetAddressLine> CORSO CARLO ALBERTO, 120</streetAddressLine> </addr> </representedOrganization> </assignedEntity> </performer></pre>	

└ h17:functionCode	CE.IPS	0 ... 1	R		(IPS...CPR)
└ h17:time	IVL_TS.IPS.TZ	0 ... 1	R		(IPS...CPR)
└ h17:assignedEntity		1 ... 1	M		(IPS...CPR)
└ h17:id	II	1 ... *	R	Healthcare provider ID number	(IPS...CPR)
└ h17:code	CE.IPS (extensible)	0 ... 1	R	It describes the professional role of the healthcare provider involved in the current or pertinent historical care of the patient.	(IPS...CPR)
	CONF	The value of @code should be drawn from value set 2.16.840.1.113883.11.22.53 <i>IPS Healthcare Professional Roles (DYNAMIC)</i>			
└ h17:addr	AD.IPS	1 ... *	R		(IPS...CPR)
└ h17:telecom	TEL.IPS	1 ... *	R		(IPS...CPR)
└ h17:assignedPerson		0 ... 1		Contains 2.16.840.1.113883.10.22.9.3 <i>IPS CDA Person (DYNAMIC)</i>	(IPS...CPR)
└ h17:representedOrganization		0 ... 1		Contains 2.16.840.1.113883.10.22.9.1 <i>IPS CDA Organization (DYNAMIC)</i>	(IPS...CPR)

7.4 IPS CDA legalAuthenticator

Id	2.16.840.1.113883.10.22.2.4	Effective Date	2017-04-11
Status	 Under pre-publication review	Version Label	STU1

Name	IPSCDAlegalAuthenticator	Display Name	IPS CDA legalAuthenticator
Description	<p>The legalAuthenticator identifies the single person legally responsible for the document and must be present if the document has been legally authenticated. A clinical document that does not contain this element has not been legally authenticated.</p> <p>The act of legal authentication requires a certain privilege be granted to the legal authenticator depending upon local policy. Based on local practice, clinical documents may be released before legal authentication.</p> <p>All clinical documents have the potential for legal authentication, given the appropriate credentials.</p> <p>Local policies MAY choose to delegate the function of legal authentication to a device or system that generates the clinical document. In these cases, the legal authenticator is a person accepting responsibility for the document, not the generating device or system.</p> <p>Note that the legal authenticator, if present, must be a person.</p>		
Uses 1 template			
Classification	CDA Header Level Template		
Open/Closed	Open (other than defined elements are allowed)		
Relationship	Adaptation: template 2.16.840.1.113883.10.12.106 (2005-09-07)		
Example	<p>Example</p> <pre><legalAuthenticator> <time value="20111013150937-0800"/> <signatureCode code="S"/> <assignedEntity> <id extension="admin" root="2.16.17.710.780.1000.903.1.1.3.3"/> <assignedPerson> <name> <given>John</given> <family>Español Smith</family> </name> </assignedPerson> </representedOrganization> <name>Healthcare Facility's name</name> <addr> <country>NL</country></pre>		

	<pre> <streetName>Duinweg</streetName> <houseNumber>23</houseNumber> <postalCode>7364 RX</postalCode> <city>Amsterdam</city> </addr> </representedOrganization> </assignedEntity> </legalAuthenticator></pre>				
Item	DT	Card	Conf	Description	Label
h17:legalAuthenticator		R			(IPS...tor)
	Example	<pre> <legalAuthenticator> <time value="20111013150937-0800"/> <signatureCode code="S"/> <assignedEntity> <id extension="admin" root="2.16.17.710.780.1000.903.1.1.3.3"/> <assignedPerson> <name> <given>John</given> <family>Español Smith</family> </name> </assignedPerson> <representedOrganization> <name>Healthcare Facility's name</name> <addr> <country>NL</country> <streetName>Duinweg</streetName> <houseNumber>23</houseNumber> <postalCode>7364 RX</postalCode> <city>Amsterdam</city> </addr> </representedOrganization> </assignedEntity> </legalAuthenticator></pre>			
└ h17:time	TS.IPS.TZ	1 ... 1	M	Time of signing the document	(IPS...tor)
└ h17:signatureCode	CS	0 ... 1	R	Signature code	(IPS...tor)
└ @code	CONF	0 ... 1	F	S	

└ h17:assignedEntity		0 ... 1	R	The entity that is responsible for the legal authentication of the CDA document	(IPS...tor)
└ h17:id		1 ... *	R	Unique identification of legal authenticator	(IPS...tor)
└ h17:addr	AD.IPS	1 ... *	R		(IPS...tor)
└ h17:telecom	TEL.IPS	1 ... *	R		(IPS...tor)
└ h17:assignedPerson		1 ... 1	R		(IPS...tor)
└ @classCode	cs	0 ... 1	F	PSN	
└ @determinerCode	cs	0 ... 1	F	INSTANCE	
└ h17:name	PN	1 ... *	R	Name of the legal authenticator	(IPS...tor)
	Example	<pre><name> <given>John</given> <family>Español Smith</family> </name></pre>			
└ h17:family		1 ... *	R	HP Family Name/Surname	(IPS...tor)
└ h17:given		1 ... *	R	HP Given Name	(IPS...tor)
└ h17:representedOrganization		1 ... 1	M	Organization the legal authenticator is acting for Contains 2.16.840.1.113883.10.22.9.1 <i>IPS CDA Organization</i> (DYNAMIC)	(IPS...tor)
where [not(@nullFlavor)]					

IPS CDA Organization

Id	2.16.840.1.113883.10.22.9.1	Effective Date	2017-04-11		
Status	🟡 Under pre-publication review	Version Label	STU1		
Name	IPSCDAOrganization	Display Name	IPS CDA Organization		
Description	This is a reusable template providing essential information for describing / identifying an organization.				
Classification	CDA Header Level Template				
Open/Closed	Open (other than defined elements are allowed)				
Uses	Uses 1 template				
	Uses	as	Name		
	2.16.840.1.113883.10.22.11	Include	🟡 IPS Address (STU1)		
Relationship	Adaptation: template 2.16.840.1.113883.3.1937.777.11.10.111 (2013-12-20)				
Example	<p>Example</p> <pre><id root="1.2.3.999" extension="__example only__"/> <name>name</name> <name>SESCAM</name> <telecom use="WP" value="tel:+34925274100"/> <telecom use="WP" value="mailto:best.organization@foo.foo.es"/> <addr use="WP"> <state>Castilla-La Mancha</state> <city>Toledo</city> <precinct>Toledo</precinct> <country>ES</country> <postalCode>45071</postalCode> <streetAddressLine>Av. Rio Guadiana, 4</streetAddressLine> </addr></pre>				
Item	DT	Card	Conf	Description	Label
@classCode	cs	1 ... 1	F	ORG	

@determinerCode	cs	1 ... 1	F	INSTANCE	
hl7:id	II	1 ... *	R		(IPS...ion)
└ @nullFlavor	cs	0 ... 1			
hl7:name	ON	1 ... 1	R		(IPS...ion)
└ @nullFlavor	cs	0 ... 1			
hl7:telecom	TEL	1 ... *	R		(IPS...ion)
└ @use	set_cs	1 ... 1	R		
CONF	The value of @use shall be drawn from value set 2.16.840.1.113883.1.11.201 <i>TelecommunicationAddressUse</i> (DYNAMIC)				
└ @nullFlavor	cs	0 ... 1			
Constraint	If there is no information, the nullFlavor attribute shall have a value of 'NI' and the "value" and "use" attributes shall be omitted, otherwise the nullFlavor attribute shall not be present, and the "value" and "use" attributes shall be present.				
hl7:addr	AD.IPS	1 ... 1	R		(IPS...ion)
<i>Included</i>					
from 2.16.840.1.113883.10.22.11 <i>IPS Address</i> (DYNAMIC)					
└ @use	set_cs	0 ... 1			
CONF	The value of @use shall be drawn from value set 2.16.840.1.113883.1.11.10637 <i>PostalAddressUse</i> (2005-05-01)				
└ @nullFlavor	cs	0 ... 1	F	NI	

				Constraint	SHALL NOT have mixed content except for white space If there is no information, the nullFlavor attribute shall have a value of 'NI' and no address parts shall be present, otherwise there shall be no nullFlavor attribute, and at least one of the address parts listed below shall be present.
 hl7:streetAddressLine	ADXP	0 ... *	C	role	 error
				test	@nullFlavor or hl7:*
				Message	If addr is not nullflavored at least one sub element has to be provided
 hl7:city	ADXP	0 ... 1	C	Subject's or Organization's City	(IPS...ion)
 hl7:postalCode	ADXP	0 ... 1	C	Subject's or Organization's Postal Code	(IPS...ion)
 hl7:state	ADXP	0 ... 1	C	Subject's or Organization's State or Province	(IPS...ion)
 hl7:country	ADXP	0 ... 1	C	Subject's Country.	(IPS...ion)
	Constraint			The content of this element SHALL be selected EITHER from ValueSet ISO Country Alpha-2 urn:oid:2.16.840.1.113883.1.11.20300 DYNAMIC OR MAY be selected from ISO Country Alpha-3 2.16.840.1.113883.1.11.171 DYNAMIC, IF the country is not specified in ValueSet ISO Country Alpha-2 urn:oid:2.16.840.1.113883.1.11.20300.	

IPS CDA Person

Id	2.16.840.1.113883.10.22.9.3	Effective Date	2017-04-12		
Status	🟡 Under pre-publication review	Version Label	STU1		
Name	IPSCDAPerson	Display Name	IPS CDA Person		
Description	Person name				
Classification	CDA Header Level Template				
Open/Closed	Open (other than defined elements are allowed)				
Relationship	Adaptation: template 2.16.840.1.113883.10.12.152 (2005-09-07)				
Item	DT	Card	Conf	Description	Label
@classCode	cs	0 ... 1	F	PSN	
@determinerCode	cs	0 ... 1	F	INSTANCE	
h17:name	PN	1 ... *	R		(IPS...son)

7.5 IPS CDA recordTarget

Id	2.16.840.1.113883.10.22.2.1	Effective Date	2017-04-11
Status	🟡 Under pre-publication review	Version Label	STU1
Name	IPSCDARecordTarget	Display Name	IPS CDA recordTarget
Description			
The recordTarget records the administrative and demographic data of the patient whose health information is described by the clinical document; each recordTarget must contain at least one patient-Role element.			
Classification	CDA Header Level Template		

Open/Closed	Open (other than defined elements are allowed)																														
Associated with 9 concepts																															
	<table border="1"> <thead> <tr> <th>Id</th><th>Name</th><th>Data Set</th></tr> </thead> <tbody> <tr> <td>hl7ips-dataelement-2.1</td><td>Patient Attributes</td><td>CEN/TC 251 prEN 17269</td></tr> <tr> <td>hl7ips-dataelement-3</td><td>Patient's Name</td><td>CEN/TC 251 prEN 17269</td></tr> <tr> <td>hl7ips-dataelement-7</td><td>Insurance identifier</td><td>CEN/TC 251 prEN 17269</td></tr> <tr> <td>hl7ips-dataelement-5</td><td>Date of Birth</td><td>CEN/TC 251 prEN 17269</td></tr> <tr> <td>hl7ips-dataelement-202</td><td>Healthcare related Identifiers</td><td>CEN/TC 251 prEN 17269</td></tr> <tr> <td>hl7ips-dataelement-4</td><td>Administrative Gender</td><td>CEN/TC 251 prEN 17269</td></tr> <tr> <td>hl7ips-dataelement-162</td><td>Address</td><td>CEN/TC 251 prEN 17269</td></tr> <tr> <td>hl7ips-dataelement-100</td><td>Telecoms</td><td>CEN/TC 251 prEN 17269</td></tr> <tr> <td>hl7ips-dataelement-135</td><td>Patient's preferred language</td><td>CEN/TC 251 prEN 17269</td></tr> </tbody> </table>	Id	Name	Data Set	hl7ips-dataelement-2.1	Patient Attributes	CEN/TC 251 prEN 17269	hl7ips-dataelement-3	Patient's Name	CEN/TC 251 prEN 17269	hl7ips-dataelement-7	Insurance identifier	CEN/TC 251 prEN 17269	hl7ips-dataelement-5	Date of Birth	CEN/TC 251 prEN 17269	hl7ips-dataelement-202	Healthcare related Identifiers	CEN/TC 251 prEN 17269	hl7ips-dataelement-4	Administrative Gender	CEN/TC 251 prEN 17269	hl7ips-dataelement-162	Address	CEN/TC 251 prEN 17269	hl7ips-dataelement-100	Telecoms	CEN/TC 251 prEN 17269	hl7ips-dataelement-135	Patient's preferred language	CEN/TC 251 prEN 17269
Id	Name	Data Set																													
hl7ips-dataelement-2.1	Patient Attributes	CEN/TC 251 prEN 17269																													
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hl7ips-dataelement-4	Administrative Gender	CEN/TC 251 prEN 17269																													
hl7ips-dataelement-162	Address	CEN/TC 251 prEN 17269																													
hl7ips-dataelement-100	Telecoms	CEN/TC 251 prEN 17269																													
hl7ips-dataelement-135	Patient's preferred language	CEN/TC 251 prEN 17269																													
Associated with																															
Uses	<p>Uses 1 template</p> <table border="1"> <thead> <tr> <th>Uses</th><th>as</th><th>Name</th><th>Version</th></tr> </thead> <tbody> <tr> <td>2.16.840.1.113883.10.22.11</td><td>Include</td><td>IPS Address (STU1)</td><td>DYNAMIC</td></tr> </tbody> </table>	Uses	as	Name	Version	2.16.840.1.113883.10.22.11	Include	IPS Address (STU1)	DYNAMIC																						
Uses	as	Name	Version																												
2.16.840.1.113883.10.22.11	Include	IPS Address (STU1)	DYNAMIC																												
Relationship	Adaptation: template 2.16.840.1.113883.3.1937.777.11.10.100 (2013-12-20) Adaptation: template 2.16.840.1.113883.10.12.101 (2005-09-07)																														

Example	<p>Example</p> <pre><recordTarget typeCode="RCT" contextControlCode="OP"> <patientRole classCode="PAT"> <id root="1.2.3.999" extension="__example only__"/> <addr> <streetAddressLine>HSE M CASSAR STR</streetAddressLine> <city>ISLA</city> <country>MT</country> </addr> <telecom use="HP" value="tel:+356124567891"/> <telecom use="WP" value="mailto:elif@foo.too.mt"/> <patient> <name> <family>BORG</family> <given>TANIA</given> </name> <administrativeGenderCode code="F" codeSystem="2.16.840.1.113883.5.1" displayName="Female"/> <birthTime value="19430130"/> <!-- Optional guardian information ; see example below--> <!-- Optional languageCommunication information see example below --> </patient> </patientRole> </recordTarget></pre>
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Item	DT	Card	Conf	Description	Label
hl7:recordTarget		1 ... *	R		(IPS...get)
└ @typeCode	cs	0 ... 1	F	RCT	
└ @contextControlCode	cs	0 ... 1	F	OP	
Example				<pre><recordTarget typeCode="RCT" contextControlCode="OP"> <patientRole classCode="PAT"> <id root="1.2.3.999" extension="__example only__"/> <addr> <streetAddressLine>HSE M CASSAR STR</streetAddressLine> <city>ISLA</city> <country>MT</country> </addr> <telecom use="HP" value="tel:+356124567891"/> <telecom use="WP" value="mailto:elif@foo.too.mt"/> <patient> <name> <family>BORG</family> <given>TANIA</given> </name></pre>	

				<pre> </name> <administrativeGenderCode code="F" codeSystem="2.16.840.1.113883.5.1" displayName="Female"/> <birthTime value="19430130"/> <!-- Optional guardian information ; see example below--> <!-- Optional languageCommunication information see example below --> </patient> </patientRole> </recordTarget></pre>
└ hl7:patientRole		1 ... 1	M	(IPS...get)
	hl7ips-dataelement-2.1	Patient Attributes	CEN/TC 251 prEN 17269	
└ @classCode	cs	0 ... 1	F	PAT
└ hl7:id	II	1 ... *	R	Patient Identifiers: Primary Patient Identifier (Regional/National Health Id), Secondary Patient Identifier (Social/Insurance Number) (IPS...get)
	hl7ips-dataelement-7	Insurance identifier	CEN/TC 251 prEN 17269	
	hl7ips-dataelement-202	Healthcare related Identifiers	CEN/TC 251 prEN 17269	
└ hl7:addr	AD.IPS	1 ... *	R	The patient address. (IPS...get)
	hl7ips-dataelement-162	Address	CEN/TC 251 prEN 17269	
	Constraint	When used for cross-border exchange the country address part has to be provided.		
Included	from 2.16.840.1.113883.10.22.11 IPS Address (DYNAMIC)			
└ @use	set_CS	0 ... 1		
	CONF	The value of @use shall be drawn from value set 2.16.840.1.113883.1.11.10637 PostalAddressUse (2005-05-01)		
└ @nullFlavor	cs	0 ... 1	F	NI
	Constraint	SHALL NOT have mixed content except for white space		

				If there is no information, the nullFlavor attribute shall have a value of 'NI' and no address parts shall be present, otherwise there shall be no nullFlavor attribute, and at least one of the address parts listed below shall be present.		
hl7:streetAddressLine	ADXP	0 ... *	role	error		
			test	@nullFlavor or hl7:*		
			Message	If addr is not nullflavored at least one sub element has to be provided		
hl7:streetAddressLine	ADXP	0 ... *	C	Subject's or Organization's Street Address Line		(IPS...get)
hl7:city	ADXP	0 ... 1	role	error		
			test	hl7:streetAddressLine and (hl7:city or hl7:postalCode)		
			Message	If the address line is included either the city or the zip code has to be provided		
hl7:city	ADXP	0 ... 1	C	Subject's or Organization's City		(IPS...get)
hl7:postalCode	ADXP	0 ... 1	C	Subject's or Organization's Postal Code		(IPS...get)
hl7:state	ADXP	0 ... 1	C	Subject's or Organization's State or Province		(IPS...get)
hl7:country	ADXP	0 ... 1	C	Subject's Country.		(IPS...get)
	Constraint		The content of this element SHALL be selected EITHER from ValueSet ISO Country Alpha-2 urn:oid:2.16.840.1.113883.1.11.20300 DYNAMIC OR MAY be selected from ISO Country Alpha-3 2.16.840.1.113883.1.11.171 DYNAMIC, IF the country is not specified in ValueSet ISO Country Alpha-2 urn:oid:2.16.840.1.113883.1.11.20300.			
hl7:telecom	TEL	1 ... *	R	Patient's telecom information : e.g. telephone number, e-mail address.		(IPS...get)
hl7ips-dataelement-100			Telecoms		CEN/TC 251 prEN 17269	

<code>└ @use</code>	set_CS	0 ... 1			
	CONF	The value of @use shall be drawn from value set 2.16.840.1.113883.1.11.201 TelecommunicationAddressUse (DYNAMIC)			
<code>└ @nullFlavor</code>	cs	0 ... 1	F	NI	
	Constraint	If there is no information, the nullFlavor attribute shall have a value of 'NI' and the "value" and "use" attributes shall be omitted, otherwise the nullFlavor attribute shall not be present, and the "value" and "use" attributes shall be present.			
	Example	<telecom use="HP" value="tel:+356124567891"/>			
	Example	<telecom use="WP" value="mailto:elif@foo.too.mt"/>			
	Example	<telecom nullFlavor="NI"/>			
<code>└ h17:patient</code>		1 ... 1	M		(IPS...get)
<code>└ @classCode</code>	cs	0 ... 1	F	PSN	
<code>└ @determinerCode</code>	cs	0 ... 1	F	INSTANCE	
	Example	Japanese example (Person Name) <patient> <name use="IDE"> <family>木村</family> <given>通男</given> </name> <name use="SYL"> <family>きむら</family> <given>みちお</given> </name> <name use="ABC"> <family>KIMURA</family> <given>MICHO</given> </name> <administrativeGenderCode code="M" codeSystem="2.16.840.1.113883.5.1" displayName="Male"/> <birthTime nullFlavor="UNK"/> </patient>			

└ hl7:name	PN	1 ... *	M	Patient Name	(IPS...get)
	hl7ips-dataelement-3		Patient's Name		CEN/TC 251 prEN 17269
	Constraint	The Alphabetic representation of the name SHALL be always provided			
└ hl7:family		1 ... *	R	Patient's Family Name/Surname	(IPS...get)
└ hl7:given		1 ... *	R	Patient's Given Name	(IPS...get)
└ hl7:administrativeGenderCode	CE.IPS	1 ... 1	R	Patient's Gender	(IPS...get)
	hl7ips-dataelement-4		Administrative Gender		CEN/TC 251 prEN 17269
└ @nullFlavor	cs	0 ... 1	F	UNK	
	CONF	The value of @code shall be drawn from value set 2.16.840.1.113883.1.11.1 <i>AdministrativeGender</i> (DYNAMIC)			
	Example	<pre><administrativeGenderCode code="F" codeSystem="2.16.840.1.113883.5.1" displayName="Female"> <translation code="2" codeSystem="2.16.840.1.113883.3.129.1.2.21" codeSystemName="Cinsiyet" displayName="Kadin"/> </administrativeGenderCode></pre>			
└ hl7:birthTime	TS	1 ... 1	R	Patient's Date of Birth. The patient date of birth may be a partial date such as only the year.	(IPS...get)
	hl7ips-dataelement-5		Date of Birth		CEN/TC 251 prEN 17269
└ hl7:guardian		0 ... *	R	The guardians of a patient. Other patient contacts are described using the /ClinicalDocument/participant structure. The <associatedEntity> element defines the type of contact.	(IPS...get)

L @classCode	cs	1 ... 1	F	GUARD	
	Example				<pre><guardian classCode="GUARD"> <code code="AUNT" displayName="tante" codeSystem="2.16.840.1.113883.5.111"/> <addr nullFlavor="NI"/> <telecom use="MC" value="tel:+33-12345678"/> <guardianPerson> <name> <family>Curie</family> <given>Marie</given> </name> </guardianPerson> </guardian></pre>
L h17:code	CD.IPS	0 ... 1	R	The relationship between the patient and the guardian or other contact may be recorded in the element.	(IPS...get)
	CONF			The value of @code shall be drawn from value set 2.16.840.1.113883.1.11.19563 <i>PersonalRelationshipRoleType</i> (DYNAMIC)	
L h17:addr	AD.IPS	1 ... *	R		(IPS...get)
	Constraint			If there is no information, the nullFlavor attribute shall have a value of 'NI' and no address parts shall be present, otherwise there shall be no nullFlavor attribute, and at least one of the address parts listed below shall be present.	
<i>Included</i>					
L @use	set_cs	0 ... 1			from 2.16.840.1.113883.10.22.11 <i>IPS Address</i> (DYNAMIC)
	CONF			The value of @use shall be drawn from value set 2.16.840.1.113883.1.11.10637 <i>PostalAddressUse</i> (2005-05-01)	
L @nullFlavor	cs	0 ... 1	F	NI	
	Constraint			SHALL NOT have mixed content except for white space If there is no information, the nullFlavor attribute shall have a value of 'NI' and no address parts shall be present, otherwise there shall be no nullFlavor attribute, and at least one of the address parts listed below shall be present.	
	Schematron assert			role ● error test @nullFlavor or h17:*	

				Message	If addr is not nullflavored at least one sub element has to be provided
└ hl7:streetAddressLine	ADXP	0 ... *	C	Subject's or Organization's Street Address Line	(IPS...get)
			role	error	
	Schematron assert		test	hl7:streetAddressLine and (hl7:city or hl7:postalCode)	
			Message	If the address line is included either the city or the zip code has to be provided	
└ hl7:city	ADXP	0 ... 1	C	Subject's or Organization's City	(IPS...get)
└ hl7:postalCode	ADXP	0 ... 1	C	Subject's or Organization's Postal Code	(IPS...get)
└ hl7:state	ADXP	0 ... 1	C	Subject's or Organization's State or Province	(IPS...get)
└ hl7:country	ADXP	0 ... 1	C	Subject's Country.	(IPS...get)
	Constraint	The content of this element SHALL be selected EITHER from ValueSet ISO Country Alpha-2 urn:oid:2.16.840.1.113883.1.11.20300 DYNAMIC OR MAY be selected from ISO Country Alpha-3 2.16.840.1.113883.1.11.171 DYNAMIC, IF the country is not specified in ValueSet ISO Country Alpha-2 urn:oid:2.16.840.1.113883.1.11.20300.			
└ hl7:telecom	TEL	1 ... *	R	Guardian's telecom information: e.g. telephone number; e-mail address.	(IPS...get)
└ @use	set_cs	0 ... 1			
	CONF	The value of @use shall be drawn from value set 2.16.840.1.113883.1.11.201 TelecommunicationAddressUse (DYNAMIC)			
└ @nullFlavor	cs	0 ... 1	F	NI	
	Constraint	If there is no information, the nullFlavor attribute shall have a value of 'NI' and the "value" and "use" attributes shall			

		be omitted, otherwise the nullFlavor attribute shall not be present, and the "value" and "use" attributes shall be present.			
└ hl7:guardianPerson		1 ... 1	R		(IPS...get)
└ hl7:name	PN	1 ... *	R	Patient Guardian's Name	(IPS...get)
└ hl7:family	ENXP	1 ... *	R	Patient Guardian's Family Name/Surname	(IPS...get)
└ hl7:given	ENXP	1 ... *	R	Patient Guardian's Given Name	(IPS...get)
└ hl7:languageCommunication		0 ... *	R		(IPS...get)
└ hl7:languageCode	CS	1 ... 1	R	Patient's language	(IPS...get)
⌚ hl7ips-dataelement-135 🟡 Patient's preferred language 🟡 CEN/TC 251 prEN 17269					
CONF	The value of @code shall be drawn from value set 2.16.840.1.113883.11.22.19 <i>Language Code</i> (DYNAMIC)				
Example	British English <code><languageCode code="en-GB"/></code>				
Example	Amurdak (Australia) <code><languageCode code="amg-AU"/></code>				
Schematron assert	role	🔴 error			
	test	matches(@code,'[a-z]{2,3}-[A-Z]{2,3}')			
	Message	The language code SHALL be in the form nn-CC or nnn-CCC, in accordance with BCP 47 (e.g. nn is the ISO country code; CC is ISO language code)			

7.6 IPS CDA relatedDocument

Id	2.16.840.1.113883.10.22.2.7	Effective Date	2017-04-12
Status	Under pre-publication review	Version Label	STU1
Name	IPSCDArelatedDocument	Display Name	IPS CDA relatedDocument
Description			

An IPS may have three types of parent document:

- A superseded version that the present instance of the document wholly replaces (typeCode = RPLC).
- A source document from which the present document is transformed (typeCode = XFRM). An IPS may be created by transformation from an already existing local Patient Summary or an IPS document. An example of this case is the creation of a derived instance in which translations are appended in order to facilitate the cross-border usage of this document; or the case in which a local patient summary is transformed to originate a new IPS instance.
- An original version that the present document integrates (typeCode = APND). Some cross-border legal agreements (e.g. the European Digital Service Infrastructure for eHealth) require the patient summary to be accompanied by a printable representation of the original national data / document this IPS comes from. The relationship between the IPS and this content may be tracked using this relationship.

Note 1: even for countries not dealing with real documents in their National Infrastructures (e.g. data collected from local databases), this mechanism could be useful to identify the collection of data used for generating the epSOS CDAs, facilitating the information backtracking. In that case the ID might be that of the epSOS friendly document or of any other kind of intermediate document used for generating the NCP document input.

Note 2: even if none of the allowable relationships defined by the CDA standard (XFRM, RPLC, APND) fits perfectly with the described case; the APND relationship seems to be the one that fits the better. In fact “An addendum is a separate document that references the parent document, and may extend or alter the observations in the prior document. The parent document remains a current component of the patient record, and the addendum and its parent are both read by report recipients.”

Classification	CDA Header Level Template
Open/Closed	Open (other than defined elements are allowed)
Relationship	Adaptation: template 2.16.840.1.113883.10.12.111 (2005-09-07)
Example	<p>Example of national document identified by its ID</p> <pre><relatedDocument typeCode="XFRM"></pre>

	<pre><!-- the IPS is obtained as transformation of the "aa-bb-cc" document --> <parentDocument> <id root="aa-bb-cc"/> </parentDocument> </relatedDocument></pre>																																										
Example	<p>Reference to the local PS and to supporting documentation</p> <pre><!-- the example starts here --> <relatedDocument typeCode="XFRM"> <!-- the IPS is obtained as trasformation of the "aa-bb-cc" Local Patient Summary --> <parentDocument> <id root="aa-bb-cc"/> </parentDocument> </relatedDocument> <relatedDocument typeCode="APND"> <!-- the IPS is integrated by the information provided by the "aal-bb1-ccl" document --> <parentDocument> <id root="aal-bb1-ccl"/> </parentDocument> </relatedDocument> <!-- the example ends here --></pre>																																										
	<table border="1"> <thead> <tr> <th>Item</th> <th>DT</th> <th>Card</th> <th>Conf</th> <th>Description</th> <th>Label</th> </tr> </thead> <tbody> <tr> <td>h17:relatedDocument</td> <td></td> <td>0 ... *</td> <td>R</td> <td></td> <td>(IPS...ent)</td> </tr> <tr> <td> └ @typeCode</td> <td>cs</td> <td>1 ... 1</td> <td>R</td> <td></td> <td></td> </tr> <tr> <td> CONF</td> <td></td> <td></td> <td></td> <td>The value of @typeCode shall be drawn from value set 2.16.840.1.113883.1.11.11610 x_ActRelationshipDocument (DYNAMIC)</td> <td></td> </tr> <tr> <td> └ h17:parentDocument</td> <td></td> <td>1 ... 1</td> <td>R</td> <td></td> <td>(IPS...ent)</td> </tr> <tr> <td> └ @classCode</td> <td>cs</td> <td>0 ... 1</td> <td>F</td> <td>DOCCLIN</td> <td></td> </tr> <tr> <td> └ @moodCode</td> <td>cs</td> <td>0 ... 1</td> <td>F</td> <td>EVN</td> <td></td> </tr> </tbody> </table>	Item	DT	Card	Conf	Description	Label	h17:relatedDocument		0 ... *	R		(IPS...ent)	└ @typeCode	cs	1 ... 1	R			CONF				The value of @typeCode shall be drawn from value set 2.16.840.1.113883.1.11.11610 x_ActRelationshipDocument (DYNAMIC)		└ h17:parentDocument		1 ... 1	R		(IPS...ent)	└ @classCode	cs	0 ... 1	F	DOCCLIN		└ @moodCode	cs	0 ... 1	F	EVN	
Item	DT	Card	Conf	Description	Label																																						
h17:relatedDocument		0 ... *	R		(IPS...ent)																																						
└ @typeCode	cs	1 ... 1	R																																								
CONF				The value of @typeCode shall be drawn from value set 2.16.840.1.113883.1.11.11610 x_ActRelationshipDocument (DYNAMIC)																																							
└ h17:parentDocument		1 ... 1	R		(IPS...ent)																																						
└ @classCode	cs	0 ... 1	F	DOCCLIN																																							
└ @moodCode	cs	0 ... 1	F	EVN																																							

└ h17:id	II	1 ... *	R		(IPS...ent)
└ h17:code	CD.IPS	0 ... 1	R		(IPS...ent)
└ @codeSystem	CONF	0 ... 1	F	2.16.840.1.113883.6.1 (LOINC)	
└ h17:text	ED	0 ... 1	R		(IPS...ent)
└ h17:setId	II	0 ... 1	R		(IPS...ent)
└ h17:versionNumber	INT	0 ... 1	R		(IPS...ent)

7.7 IPS Patient Contacts

Id	2.16.840.1.113883.10.22.2.5	Effective Date	2017-04-12
Status	 Under pre-publication review	Version Label	STU1
Name	IPSCDAContacts	Display Name	IPS Patient Contacts

Description

The IPS may record several kinds of patient contacts, including parents, relatives, caregivers, and others related in some way to the patient. A patient contact may be an individual or an organization with a relationship to the patient, including health provider (person or organization) to be contacted in case of emergency.

Classification	CDA Header Level Template
Open/Closed	Open (other than defined elements are allowed)

	Associated with 8 concepts		
Associated with	Id	Name	Data Set
	hl7ips-dataelement-154	Patient's Address Book	CEN/TC 251 prEN 17269
	hl7ips-dataelement-174	Telecoms	CEN/TC 251 prEN 17269
	hl7ips-dataelement-163	Preferred Healthcare providers	CEN/TC 251 prEN 17269
	hl7ips-dataelement-165	Healthcare Provider (person)	CEN/TC 251 prEN 17269
	hl7ips-dataelement-166	Healthcare Provider (organisation)	CEN/TC 251 prEN 17269
	hl7ips-dataelement-169	Telecoms	CEN/TC 251 prEN 17269
	hl7ips-dataelement-121	Name	CEN/TC 251 prEN 17269
	hl7ips-dataelement-172	Organisation's Name	CEN/TC 251 prEN 17269
Uses	Uses 1 template		
Relationship	Uses	as	Version
	2.16.840.1.113883.10.22.11	Include	DYNAMIC
Example	Contact person <pre><participant typeCode="IND"> <templateId root="2.16.840.1.113883.10.22.2.5"/> <associatedEntity classCode="NOK"></pre>		

	<pre> <addr> <streetAddressLine>Promenade des Anglais 111</streetAddressLine> <city>Lyon</city> <postalCode>69001</postalCode> <country>FR</country> </addr> <telecom value="tel:(+33) 555-20036" use="WP"/> <associatedPerson> <name> <given>Martha</given> <family>Mum</family> </name> </associatedPerson> </associatedEntity> </participant></pre>
--	--

Example	<p>Preferred Health Professional for emergency contact</p> <pre> <participant typeCode="IND"> <templateId root="2.16.840.1.113883.10.22.2.5"/> <functionCode code="PCP" codeSystem="2.16.840.1.113883.5.88"/> <time value="20070213"/> <associatedEntity classCode="ECON"> <addr> <streetAddressLine>Karl Strasse</streetAddressLine> <city>Freiberg</city> <postalCode>09599</postalCode> <country>DE</country> </addr> <telecom value="tel:(+49) 761-11110000" use="WP"/> <associatedPerson> <name> <given>Arzt</given> <family>Guter</family> </name> </associatedPerson> </associatedEntity> </participant></pre>
---------	---

Item	DT	Card	Conf	Description	Label
hl7:participant			R	Patient contacts or the Preferred Health Professional to contact in case of emergency.	(IPS...cts)
where [bl7:templateId/@root='2.16.840.1.113883.10.22.2.5']					

 hl7ips-dataelement-154

 Patient's Address Book

 CEN/TC 251 prEN 17269

hl7ips-dataelement-163

Preferred Healthcare providers

CEN/TC 251 prEN 17269

└ @typeCode

cs

1 ... 1

F

IND

Example

```
<participant typeCode="IND">
  <templateId root="2.16.840.1.113883.10.22.2.5"/>
  <associatedEntity classCode="NOK">
    <addr>
      <streetAddressLine>Promenade des Anglais 111</streetAddressLine>
      <city>Lyon</city>
      <postalCode>69001</postalCode>
      <country>FR</country>
    </addr>
    <telecom value="tel: (+33) 555-20036" use="WP"/>
    <associatedPerson>
      <name>
        <given>Martha</given>
        <family>Mum</family>
      </name>
    </associatedPerson>
  </associatedEntity>
</participant>
```

└ hl7:templateId

II

1 ... 1

M

(IPS...cts)

└ @root

uid

1 ... 1

F

2.16.840.1.113883.10.22.2.5

└ hl7:functionCode

0 ... 1

C

The <functionCode> element may be used to indicate that this participant is the preferred Health Professional to contact in case of emergency.</functionCode>

(IPS...cts)

└ @code

CONF

0 ... 1

F

PCP

└ @codeSystem

0 ... 1

F

2.16.840.1.113883.5.88 (Participation Function)

└ hl7:associatedEntity

R

The <associatedEntity> element identifies the type of contact. </associatedEntity>

(IPS...cts)

└ @classCode

cs

1 ... 1

R

CONF

The value of @classCode shall be drawn from value set 2.16.840.1.113883.11.20.9.33 INDRoleclassCodes (DYNAMIC)

				Constraint	SHALL NOT have mixed content except for white space If there is no information, the nullFlavor attribute shall have a value of 'NI' and no address parts shall be present, otherwise there shall be no nullFlavor attribute, and at least one of the address parts listed below shall be present.
hl7:streetAddressLine	ADXP	0 ... *	C	role	error
				test	@nullFlavor or hl7:*
				Message	If addr is not nullflavored at least one sub element has to be provided
hl7:streetAddressLine	ADXP	0 ... *	C	Subject's or Organization's Street Address Line	(IPS...cts)
hl7:city	ADXP	0 ... 1	C	role	error
				test	hl7:streetAddressLine and (hl7:city or hl7:postalCode)
				Message	If the address line is included either the city or the zip code has to be provided
hl7:city	ADXP	0 ... 1	C	Subject's or Organization's City	(IPS...cts)
hl7:postalCode	ADXP	0 ... 1	C	Subject's or Organization's Postal Code	(IPS...cts)
hl7:state	ADXP	0 ... 1	C	Subject's or Organization's State or Province	(IPS...cts)
hl7:country	ADXP	0 ... 1	C	Subject's Country.	(IPS...cts)
	Constraint	The content of this element SHALL be selected EITHER from ValueSet ISO Country Alpha-2 urn:oid:2.16.840.1.113883.1.11.20300 DYNAMIC OR MAY be selected from ISO Country Alpha-3 2.16.840.1.113883.1.11.171 DYNAMIC, IF the country is not specified in ValueSet ISO Country Alpha-2 urn:oid:2.16.840.1.113883.1.11.20300.			
hl7:telecom	TEL	1 ... *	R	Patient Contact's / Preferred HP's/Legal Organization telephone or e-mail <telecom> element is required.</telecom>	(IPS...cts)
hl7ips-dataelement-174			Telecoms		CEN/TC 251 prEN 17269

				hl7ips-dataelement-169	Telecoms	CEN/TC 251 prEN 17269		
 @use	set_cs	0 ... 1						
	CONF			The value of @use shall be drawn from value set 2.16.840.1.113883.1.11.201 <i>TelecommunicationAddressUse</i> (DYNAMIC)				
 @nullFlavor	cs	0 ... 1	F	NI				
	Constraint	If there is no information, the nullFlavor attribute shall have a value of 'NI' and the "value" and "use" attributes shall be omitted, otherwise the nullFlavor attribute shall not be present, and the "value" and "use" attributes shall be present						
	Example	<pre><telecom use="WP" value="tel:+45 20 7025 6161"/> <telecom use="HP" value="mailto:jsmith@myprovider.co.uk"/></pre>						
<i>Choice</i>		Elements to choose from:						
		1 ... 2		<ul style="list-style-type: none"> ▪ hl7:associatedPerson ▪ hl7:scopingOrganization 				
 hl7:associatedPerson		0 ... 1	C	Or the associatedPerson, or the scopingOrganization, or both elements shall be provided				
				(IPS...cts)				
		hl7ips-dataelement-165		Healthcare Provider (person)	CEN/TC 251 prEN 17269			
 hl7:name	PN	1 ... *	R	Patient Contact's Name / Preferred HP's Name				
				(IPS...cts)				
		hl7ips-dataelement-121		Name	CEN/TC 251 prEN 17269			
	Example	<pre><name> <given>John</given> <family>Español Smith</family> </name></pre>						
 hl7:family		1 ... *	R	Patient Contact's Family Name/Surname / Preferred HP's Family Name/Surname				
				(IPS...cts)				

hl7:given		1 ... *	R	Patient Contact's Given Name / Preferred HP's Given Name	(IPS...cts)
hl7:scopingOrganization		0 ... 1	C	Or the associatedPerson, or the scopingOrganization, or both elements shall be provided	(IPS...cts)
				hl7ips-dataelement-166 Healthcare Provider (organisation) CEN/TC 251 prEN 17269	
hl7:name	ON	1 ... *	R	Organization's Name	(IPS...cts)
				hl7ips-dataelement-172 Organisation's Name CEN/TC 251 prEN 17269	

8 CDA Section Level Templates

8.1 IPS Advance Directives Section

Id	2.16.840.1.113883.10.22.3.12	Effective Date	2017-04-13
Status	 Under pre-publication review	Version Label	STU1
Name	IPSAdvanceDirectivesSection	Display Name	IPS Advance Directives Section

Description

The advance directive section shall contain a narrative description of patient's advance directive.

The optional author and informant elements are used when necessary to convey the provenance and authoring of the section content in case it is different from what is announced in the CDA header. Entries for references to consent and advance directive documents when known will be specified by future versions of this template.

Context	Parent nodes of template element with id 2.16.840.1.113883.10.22.3.12		
Classification	CDA Section Level Template		
Open/Closed	Open (other than defined elements are allowed)		
Associated with 2 concepts			
Associated with	Id	Name	Data Set
	hl7ips-dataelement-26	 Description	 CEN/TC 251 prEN 17269
	hl7ips-dataelement-8	 Advance Directives	 CEN/TC 251 prEN 17269
Uses 3 templates			
Uses	Uses	as	Name
			Version

	<p>2.16.840.1.113883.10.22.4.14 Containment  IPS Body Author (STU1) DYNAMIC</p> <p>2.16.840.1.113883.10.12.319 Containment  CDA Informant (Body) DYNAMIC</p> <p>2.16.840.1.113883.10.22.3.15 Containment  IPS Translation Section (STU1) DYNAMIC</p>
Relationship	<p>Adaptation: template 1.3.6.1.4.1.19376.1.5.3.1.3.35 (DYNAMIC)</p> <p>Adaptation: template 1.3.6.1.4.1.19376.1.5.3.1.3.34 (DYNAMIC)</p> <p>Adaptation: template 2.16.840.1.113883.10.20.22.2.17 (DYNAMIC)</p>
Example	<p>Example</p> <pre><section classCode="DOCSECT"> <templateId root="2.16.840.1.113883.10.22.3.12"/> <id root="1.2.3.999" extension="_example_only_" /> <code code="42348-3" codeSystem="2.16.840.1.113883.6.1" displayName="Advance directives"/> <title>Advance directives</title> <text>...</text> <author> <!-- template 2.16.840.1.113883.10.22.4.14 'IPS Body Author' (dynamic) --> </author> <informant> <!-- template 2.16.840.1.113883.10.12.319 'CDA Informant (Body)' (dynamic) --> </informant> <component> <!-- template 2.16.840.1.113883.10.22.3.15 'IPS Translation Section' (dynamic) --> </component> </section></pre>

Item	DT	Card	Conf	Description	Label
hl7:section		1 ... 1	M		(IPS...ion)
		 hl7ips-dataelement-8	 Advance Directives	 CEN/TC 251 prEN 17269	
└ @classCode	cs	0 ... 1	F	DOCSECT	
└ hl7:templateId	II	1 ... 1	M		(IPS...ion)

L @root	uid	1 ... 1	F	2.16.840.1.113883.10.22.3.12	
L hl7:id	II	0 ... *	R		(IPS...ion)
L hl7:code	CE.IPS	1 ... 1	M		(IPS...ion)
L @code	CONF	1 ... 1	F	42348-3	
L @codeSystem		1 ... 1	F	2.16.840.1.113883.6.1 (LOINC)	
L hl7:title	ST	1 ... 1	M	Advance directives	(IPS...ion)
L hl7:text	SD.TEXT	1 ... 1	M		(IPS...ion)
@ hl7ips-dataelement-26		Description		CEN/TC 251 prEN 17269	
L hl7:author		0 ... *		Contains 2.16.840.1.113883.10.22.4.14 IPS Body Author (DYNAMIC)	(IPS...ion)
where [hl7:assignedAuthor]					
L hl7:informant		0 ... *		Contains 2.16.840.1.113883.10.12.319 CDA Informant (Body) (DYNAMIC)	(IPS...ion)
L hl7:component		0 ... *		Contains 2.16.840.1.113883.10.22.3.15 IPS Translation Section (DYNAMIC)	(IPS...ion)
where [hl7:section]					

8.2 IPS Allergies and Intolerances Section

Id	2.16.840.1.113883.10.22.3.2	Effective Date	2016-11-11
Status	 Under pre-publication review	Version Label	STU1
Name	IPSSectionAllergiesOrIntolerances	Display Name	IPS Allergies and Intolerances Section

Description

This section documents the relevant allergies or intolerances (conditions) for that patient, describing the kind of reaction (e.g. rash, anaphylaxis,..); preferably the agents that cause it; and optionally the criticality and the certainty of the allergy.

At a minimum, it should list currently active and any relevant historical allergies and adverse reactions.

If no information about allergies is available, or if no allergies are known this should be clearly documented in the section.

The optional author and informant elements are used when necessary to convey the provenance and authoring of the section content in case it is different from what is announced in the CDA header.

Context	Parent nodes of template element with id 2.16.840.1.113883.10.22.3.2		
Classification	CDA Section Level Template		
Open/Closed	Open (other than defined elements are allowed)		
Associated with 3 concepts			
Associated with	Id	Name	Data Set
	hl7ips-dataelement-28	 Allergy or Intolerance list	 CEN/TC 251 prEN 17269
	hl7ips-dataelement-9	 Allergies and Intolerances	 CEN/TC 251 prEN 17269
	hl7ips-dataelement-183	 Description	 CEN/TC 251 prEN 17269
Uses	Uses 4 templates		

	Uses	as	Name	Version
	2.16.840.1.113883.10.22.4.14	Containment	IPS Body Author (STU1)	DYNAMIC
	2.16.840.1.113883.10.12.319	Containment	CDA Informant (Body)	DYNAMIC
	2.16.840.1.113883.10.22.4.5	Containment	IPS Allergy and Intolerance Concern (STU1)	DYNAMIC
	2.16.840.1.113883.10.22.3.15	Containment	IPS Translation Section (STU1)	DYNAMIC
Relationship	Adaptation: template 2.16.840.1.113883.10.12.201 (2005-09-07) Adaptation: template 2.16.840.1.113883.10.20.1.2 (DYNAMIC)			
Example	<p>Example</p> <pre><section classCode="DOCSECT"> <templateId root="2.16.840.1.113883.10.22.3.2"/> <id root="1.2.3.999" extension="_example_only_"/> <code code="48765-2" codeSystem="2.16.840.1.113883.6.1" displayName="Allergies and adverse reactions"/> <title>Allergies and Intolerances</title> <text> <!-- Textual description of the Allergies and Intolerances --> </text> <author> <!-- template 2.16.840.1.113883.10.22.4.14 'IPS Body Author' (dynamic) --> </author> <informant> <!-- template 2.16.840.1.113883.10.12.319 'CDA Informant (Body)' (dynamic) --> </informant> <entry typeCode="COMP" contextConductionInd="true"> <!-- template 2.16.840.1.113883.10.22.4.5 'IPS Allergy and Intolerance Concern' (dynamic) --> </entry> <component> <!-- template 2.16.840.1.113883.10.22.3.15 'IPS Translation Section' (dynamic) --> </component> </section></pre>			
Example	No information available			
	<pre><cda:section> <cda:templateId root="2.16.840.1.113883.10.22.3.2"/> <cda:id root="1.2.3.999" extension="--example only--"/> <cda:code code="48765-2" codeSystem="2.16.840.1.113883.6.1" displayName="Allergies and adverse reactions"/> <cda:title>Allergies and Intolerances</cda:title> <cda:text> <!-- Textual description of the Allergies and Intolerances --> </cda:text></pre>			

	<pre> <cda:entry> <cda:act classCode="ACT" moodCode="EVN"> <cda:templateId root="2.16.840.1.113883.10.22.4.5"/> <cda:id root="1.2.3.999" extension="_example only_"/> <cda:code code="CONC" codeSystem="2.16.840.1.113883.5.6"/> <cda:statusCode code="active"/> <cda:effectiveTime> <cda:low nullFlavor="NA"/> </cda:effectiveTime> <cda:entryRelationship typeCode="SUBJ" inversionInd="false"> <cda:observation classCode="OBS" moodCode="EVN"> <cda:templateId root="2.16.840.1.113883.10.22.4.1"/> <cda:code code="QINT" displayName="Allergy or Intolerance" codeSystem="2.16.840.1.113883.5.4"/> <cda:statusCode code="completed"/> <cda:effectiveTime> <cda:low nullFlavor="NA"/> </cda:effectiveTime> <cda:value code="no-allergy-info" displayName="No information about allergies" codeSystem="2.16.840.1.113883.5.1150.1"/> </cda:observation> </cda:entryRelationship> </cda:act> </cda:entry> </cda:section> </pre>				
Item	DT	Card	Conf	Description	Label
hl7:section		1 ... 1	R		(IPS...ces)
hl7ips-dataelement-9 Allergies and Intolerances CEN/TC 251 prEN 17269					
└ @classCode	cs	0 ... 1	F	DOCSECT	
└ hl7:templateId	II	1 ... 1	M		(IPS...ces)
└ @root	uid	1 ... 1	F	2.16.840.1.113883.10.22.3.2	
└ hl7:id	II	0 ... *	R		(IPS...ces)
└ hl7:code	CE.IPS	1 ... 1	M		(IPS...ces)

<code>l @code</code>	CONF	1 ... 1	F	48765-2	
<code>l @codeSystem</code>		1 ... 1	F	2.16.840.1.113883.6.1 (LOINC)	
<code>l hl7:title</code>	ST	1 ... 1	M		(IPS...ces)
<code>l hl7:text</code>	SD.TEXT	1 ... 1	M	Section text	(IPS...ces)
<code>l hl7:author</code>		0 ... *		Contains 2.16.840.1.113883.10.22.4.14 IPS Body Author (DYNAMIC)	(IPS...ces)
where [hl7:assignedAuthor]					
<code>l hl7:informant</code>		0 ... *		Contains 2.16.840.1.113883.10.12.319 CDA Informant (Body) (DYNAMIC)	(IPS...ces)
<code>l hl7:entry</code>		1 ... *	M	Contains 2.16.840.1.113883.10.22.4.5 IPS Allergy and Intolerance Concern (DYNAMIC)	(IPS...ces)
where [hl7:act [hl7:code [(@code = 'CONC' and @codeSystem = '2.16.840.1.113883.5.6')]]]					
<code>l @typeCode</code>	cs	1 ... 1	R		
	CONF	The value of @typeCode shall be drawn from value set 2.16.840.1.113883.1.11.19446 x_ActRelationshipEntry (DYNAMIC)			
<code>l @contextConductionInd</code>	bl	0 ... 1	F	true	

L	hl7:component		0 ... *	Contains 2.16.840.1.113883.10.22.3.15 <i>IPS Translation Section</i> (DYNAMIC)	(IPS...ces)
where <i>[hl7:section]</i>					

8.3 IPS Functional Status Section

Id	2.16.840.1.113883.10.22.3.8	Effective Date	2017-04-13
Status	🟡 Under pre-publication review	Version Label	STU1
Name	IPSFunctioalStatusSection	Display Name	IPS Functional Status Section

Description

The functional status section shall contain a narrative description of capability of the patient to perform acts of daily living, including possible needs of the patient to be continuously assessed by third parties. The invalidity status may in fact influence decisions about how to administer treatments.

Coded clinical statements will be specified by future versions of this template.

The optional author and informant elements are used when necessary to convey the provenance and authoring of the section content in case it is different from what is announced in the CDA header.

Context	Parent nodes of template element with id 2.16.840.1.113883.10.22.3.8
Classification	CDA Section Level Template
Open/Closed	Open (other than defined elements are allowed)

Associated with 3 concepts

	Id	Name	Data Set
Associated with	hl7ips-dataelement-137	🟡 Description	🟡 CEN/TC 251 prEN 17269
	hl7ips-dataelement-10	🟡 Functional Status	🟡 CEN/TC 251 prEN 17269

	hl7ips-dataelement-197	 Description	 CEN/TC 251 prEN 17269		
	Uses 3 templates				
Uses	Uses	as	Name		
	2.16.840.1.113883.10.22.4.14	Containment	 IPS Body Author (STU1)		
	2.16.840.1.113883.10.12.319	Containment	 CDA Informant (Body)		
	2.16.840.1.113883.10.22.3.15	Containment	 IPS Translation Section (STU1)		
Relationship	Adaptation: template 1.3.6.1.4.1.19376.1.5.3.1.3.17 (DYNAMIC) Adaptation: template 2.16.840.1.113883.10.20.1.5 (DYNAMIC)				
Example	<p>Example</p> <pre><section classCode="DOCSECT"> <templateId root="2.16.840.1.113883.10.22.3.8"/> <id root="1.2.3.999" extension="_example_only_"/> <code code="47420-5" codeSystem="2.16.840.1.113883.6.1" displayName="Functional status assessment note"/> <title>Functional Status Assessment</title> <text>...</text> <author> <!-- template 2.16.840.1.113883.10.22.4.14 'IPS Body Author' (dynamic) --> </author> <informant> <!-- template 2.16.840.1.113883.10.12.319 'CDA Informant (Body)' (dynamic) --> </informant> <component> <!-- template 2.16.840.1.113883.10.22.3.15 'IPS Translation Section' (dynamic) --> </component> </section></pre>				
Item	DT	Card	Conf	Description	Label
hl7:section		1 ... 1	M		(IPS...ion)
 hl7ips-dataelement-10		 Functional Status		 CEN/TC 251 prEN 17269	

<code>└ @classCode</code>	cs	0 ... 1	F	DOCSECT		
<code>└ hl7:templateId</code>	II	1 ... 1	M		(IPS...ion)	
<code>└ @root</code>	uid	1 ... 1	F	2.16.840.1.113883.10.22.3.8		
<code>└ hl7:id</code>	II	0 ... *	R		(IPS...ion)	
<code>└ hl7:code</code>	CE.IPS	1 ... 1	M		(IPS...ion)	
	<code>└ @code</code>	CONF	1 ... 1	F	47420-5	
	<code>└ @codeSystem</code>		1 ... 1	F	2.16.840.1.113883.6.1 (LOINC)	
<code>└ hl7:title</code>	ST	1 ... 1	M	Functional Status Assessment	(IPS...ion)	
<code>└ hl7:text</code>	SD.TEXT	1 ... 1	M		(IPS...ion)	
	hl7ips-dataelement-137 hl7ips-dataelement-197		Description Description		CEN/TC 251 prEN 17269 CEN/TC 251 prEN 17269	
<code>└ hl7:author</code>		0 ... *		Contains 2.16.840.1.113883.10.22.4.14 IPS Body Author (DYNAMIC)	(IPS...ion)	
where <code>[hl7:assignedAuthor]</code>						
<code>└ hl7:informant</code>		0 ... *		Contains 2.16.840.1.113883.10.12.319 CDA Informant (Body) (DYNAMIC)	(IPS...ion)	
<code>└ hl7:component</code>		0 ... *		Contains 2.16.840.1.113883.10.22.3.15 IPS Translation Section (DYNAMIC)	(IPS...ion)	

where [hl7:section]

8.4 IPS History of Past Illness Section

Id	2.16.840.1.113883.10.22.3.7	Effective Date	2017-04-12
Status	Under pre-publication review	Version Label	STU1
Name	IPSHistoryOfPastIllnessSection	Display Name	IPS History of Past Illness Section

Description

The History of Past Illness section contains a narrative description and coded entries of the conditions the patient suffered in the past.

The optional author and informant elements are used when necessary to convey the provenance and authoring of the section content in case it is different from what is announced in the CDA header.

Context	Parent nodes of template element with id 2.16.840.1.113883.10.22.3.7
Classification	CDA Section Level Template
Open/Closed	Open (other than defined elements are allowed)

Associated with 3 concepts

Associated with	Id	Name	Data Set
	hl7ips-dataelement-35	Description	CEN/TC 251 prEN 17269
	hl7ips-dataelement-31	Past health conditions and problems list	CEN/TC 251 prEN 17269
	hl7ips-dataelement-11	History of Past Illness	CEN/TC 251 prEN 17269
Uses	Uses 4 templates		

	Uses	as	Name	Version	
	2.16.840.1.113883.10.22.4.14	Containment	IPS Body Author (STU1)	DYNAMIC	
	2.16.840.1.113883.10.12.319	Containment	CDA Informant (Body)	DYNAMIC	
	2.16.840.1.113883.10.22.4.7	Containment	IPS Problem Concern Entry (STU1)	DYNAMIC	
	2.16.840.1.113883.10.22.3.15	Containment	IPS Translation Section (STU1)	DYNAMIC	
Relationship	Adaptation: template 2.16.840.1.113883.10.12.201 (2005-09-07) Adaptation: template 1.3.6.1.4.1.19376.1.5.3.1.3.8 (2013-12-20) Adaptation: template 1.3.6.1.4.1.19376.1.5.3.1.4.5.1 (DYNAMIC)				
Example	Example <pre><section classCode="DOCSECT"> <templateId root="2.16.840.1.113883.10.22.3.7"/> <id root="1.2.3.999" extension="_example_only_"/> <code code="11348-0" codeSystem="2.16.840.1.113883.6.1" displayName="History of Past illness"/> <title>...</title> <text>...</text> <author> <!-- template 2.16.840.1.113883.10.22.4.14 'IPS Body Author' (dynamic) --> </author> <informant> <!-- template 2.16.840.1.113883.10.12.319 'CDA Informant (Body)' (dynamic) --> </informant> <entry typeCode="COMP" contextConductionInd="true"> <!-- template 2.16.840.1.113883.10.22.4.7 'IPS Problem Concern Entry' (dynamic) --> </entry> <component> <!-- template 2.16.840.1.113883.10.22.3.15 'IPS Translation Section' (dynamic) --> </component> </section></pre>				
Item	DT	Card	Conf	Description	Label
hl7:section		1 ... 1	M		(IPS...ion)
	 hl7ips-dataelement-11		 History of Past Illness		 CEN/TC 251 prEN 17269

└ @classCode	cs	0 ... 1	F	DOCSECT	
└ hl7:templateId	II	1 ... 1	M		(IPS...ion)
└ @root	uid	1 ... 1	F	2.16.840.1.113883.10.22.3.7	
└ hl7:id	II	0 ... *	R		(IPS...ion)
└ hl7:code	CE.IPS	1 ... 1	M		(IPS...ion)
	@code	CONF	1 ... 1	F	11348-0
	@codeSystem		1 ... 1	F	2.16.840.1.113883.6.1 (LOINC)
└ hl7:title	ST	1 ... 1	M	History of Past Illness	(IPS...ion)
└ hl7:text	SD.TEXT	1 ... 1	M		(IPS...ion)
	hl7ips-dataelement-35		Description		CEN/TC 251 prEN 17269
└ hl7:author		0 ... *		Contains 2.16.840.1.113883.10.22.4.14 IPS Body Author (DYNAMIC)	(IPS...ion)
where [hl7:assignedAuthor]					
└ hl7:informant		0 ... *		Contains 2.16.840.1.113883.10.12.319 CDA Informant (Body) (DYNAMIC)	(IPS...ion)
└ hl7:entry		1 ... *	R	Contains 2.16.840.1.113883.10.22.4.7 IPS Problem Concern Entry (DYNAMIC)	(IPS...ion)

where [hl7:act [hl7:code [(@code = 'CONC' and @codeSystem = '2.16.840.1.113883.5.6') or @nullFlavor]]]			
	hl7ips-dataelement-31		Past health conditions and problems list
	CEN/TC 251 prEN 17269		
	@typeCode	cs	0 ... 1 F COMP
	@contextConductionInd	bl	0 ... 1 F true
	hl7:component	0 ... *	Contains 2.16.840.1.113883.10.22.3.15 IPS Translation Section (DYNAMIC) (IPS...ion)
where [hl7:section]			

8.5 IPS History of Pregnancy Section

Id	2.16.840.1.113883.10.22.3.11	Effective Date	2018-09-06 09:46:57 Other versions this id:
Status		Under pre-publication review	<input type="radio"/> IPSHistoryofpregnancysection as of 2017-04-13
Name	IPSHistoryofpregnancysection	Version Label	STU1
Description			

The history of pregnancy section shall contain information about whether the patient is currently pregnant (optional with the Expected Delivery Date) or not.

It may contain addition summarizing information about the outcome of earlier pregnancies.

The optional author and informant elements are used when necessary to convey the provenance and authoring of the section content in case it is different from what is announced in the CDA header.

Context	Parent nodes of template element with id 2.16.840.1.113883.10.22.3.11
Classification	CDA Section Level Template

Open/Closed	Open (other than defined elements are allowed)																								
Associated with	<p>Associated with 5 concepts</p> <table border="1"> <thead> <tr> <th>Id</th><th>Name</th><th>Data Set</th></tr> </thead> <tbody> <tr> <td>hl7ips-dataelement-39</td><td> Previous Pregnancies Description</td><td> CEN/TC 251 prEN 17269</td></tr> <tr> <td>hl7ips-dataelement-12</td><td> History of Pregnancy</td><td> CEN/TC 251 prEN 17269</td></tr> <tr> <td>hl7ips-dataelement-225</td><td> Pregnancy Description</td><td> CEN/TC 251 prEN 17269</td></tr> <tr> <td>hl7ips-dataelement-38</td><td> Previous Pregnancies</td><td> CEN/TC 251 prEN 17269</td></tr> <tr> <td>hl7ips-dataelement-37</td><td> Status of pregnancy</td><td> CEN/TC 251 prEN 17269</td></tr> </tbody> </table>	Id	Name	Data Set	hl7ips-dataelement-39	Previous Pregnancies Description	CEN/TC 251 prEN 17269	hl7ips-dataelement-12	History of Pregnancy	CEN/TC 251 prEN 17269	hl7ips-dataelement-225	Pregnancy Description	CEN/TC 251 prEN 17269	hl7ips-dataelement-38	Previous Pregnancies	CEN/TC 251 prEN 17269	hl7ips-dataelement-37	Status of pregnancy	CEN/TC 251 prEN 17269						
Id	Name	Data Set																							
hl7ips-dataelement-39	Previous Pregnancies Description	CEN/TC 251 prEN 17269																							
hl7ips-dataelement-12	History of Pregnancy	CEN/TC 251 prEN 17269																							
hl7ips-dataelement-225	Pregnancy Description	CEN/TC 251 prEN 17269																							
hl7ips-dataelement-38	Previous Pregnancies	CEN/TC 251 prEN 17269																							
hl7ips-dataelement-37	Status of pregnancy	CEN/TC 251 prEN 17269																							
Uses	<p>Uses 5 templates</p> <table border="1"> <thead> <tr> <th>Uses</th><th>as</th><th>Name</th><th>Version</th></tr> </thead> <tbody> <tr> <td>2.16.840.1.113883.10.22.4.14</td><td>Containment</td><td> IPS Body Author (STU1)</td><td>DYNAMIC</td></tr> <tr> <td>2.16.840.1.113883.10.12.319</td><td>Containment</td><td> CDA Informant (Body)</td><td>DYNAMIC</td></tr> <tr> <td>2.16.840.1.113883.10.22.4.27</td><td>Containment</td><td> IPS Pregnancy Status Observation (STU1)</td><td>DYNAMIC</td></tr> <tr> <td>2.16.840.1.113883.10.22.4.28</td><td>Containment</td><td> IPS Pregnancy Outcome Observation (STU1)</td><td>DYNAMIC</td></tr> <tr> <td>2.16.840.1.113883.10.22.3.15</td><td>Containment</td><td> IPS Translation Section (STU1)</td><td>DYNAMIC</td></tr> </tbody> </table>	Uses	as	Name	Version	2.16.840.1.113883.10.22.4.14	Containment	IPS Body Author (STU1)	DYNAMIC	2.16.840.1.113883.10.12.319	Containment	CDA Informant (Body)	DYNAMIC	2.16.840.1.113883.10.22.4.27	Containment	IPS Pregnancy Status Observation (STU1)	DYNAMIC	2.16.840.1.113883.10.22.4.28	Containment	IPS Pregnancy Outcome Observation (STU1)	DYNAMIC	2.16.840.1.113883.10.22.3.15	Containment	IPS Translation Section (STU1)	DYNAMIC
Uses	as	Name	Version																						
2.16.840.1.113883.10.22.4.14	Containment	IPS Body Author (STU1)	DYNAMIC																						
2.16.840.1.113883.10.12.319	Containment	CDA Informant (Body)	DYNAMIC																						
2.16.840.1.113883.10.22.4.27	Containment	IPS Pregnancy Status Observation (STU1)	DYNAMIC																						
2.16.840.1.113883.10.22.4.28	Containment	IPS Pregnancy Outcome Observation (STU1)	DYNAMIC																						
2.16.840.1.113883.10.22.3.15	Containment	IPS Translation Section (STU1)	DYNAMIC																						
Relationship	<p>Version: template 2.16.840.1.113883.10.22.3.11 (2017-04-13) Adaptation: template 2.16.840.1.113883.10.12.201 (2005-09-07) Adaptation: template 1.3.6.1.4.1.19376.1.5.3.1.1.5.3.4 (DYNAMIC)</p>																								
Example	Example																								

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<section classCode="DOCSECT">
  <templateId root="2.16.840.1.113883.10.22.3.11"/>
  <id root="1.2.3.999" extension="example only"/>
  <code code="82810-3" codeSystem="2.16.840.1.113883.6.1" displayName="History of pregnancies"/>
  <title>...</title>
  <text>...</text>
  <author>
    <!-- template 2.16.840.1.113883.10.22.4.14 'IPS Body Author' (dynamic) -->
  </author>
  <informant>
    <!-- template 2.16.840.1.113883.10.12.319 'CDA Informant (Body)' (dynamic) -->
  </informant>
  <entry typeCode="COMP" contextConductionInd="true">
    <!-- template 2.16.840.1.113883.10.22.4.27 'IPS Pregnancy Status Observation' (dynamic) -->
  </entry>
  <entry typeCode="COMP" contextConductionInd="true">
    <!-- template 2.16.840.1.113883.10.22.4.28 'IPS Pregnancy Outcome Observation' (dynamic) -->
  </entry>
  <component>
    <!-- template 2.16.840.1.113883.10.22.3.15 'IPS Translation Section' (dynamic) -->
  </component>
</section>

```

Item	DT	Card	Conf	Description	Label
hl7:section		1 ... 1	M		(IPS...ion)
⌚ hl7ips-dataelement-12		🟡 History of Pregnancy		🟡 CEN/TC 251 prEN 17269	
└ @classCode	cs	0 ... 1	F	DOCSECT	
└ hl7:templateId	II	1 ... 1	M		(IPS...ion)
└ @root	uid	1 ... 1	F	2.16.840.1.113883.10.22.3.11	
└ hl7:id	II	0 ... *	R		(IPS...ion)
└ hl7:code	CE.IPS	1 ... 1	M		(IPS...ion)

<code>l @code</code>					
	CONF	1 ... 1	F	10162-6	
<code>l @codeSystem</code>					
		1 ... 1	F	2.16.840.1.113883.6.1 (LOINC)	
<code>l hl7:title</code>	ST	1 ... 1	M	History of pregnancies	(IPS...ion)
<code>l hl7:text</code>	SD.TEXT	1 ... 1	M		(IPS...ion)
				⌚ hl7ips-dataelement-39 ⌚ Previous Pregnancies Description ⌚ CEN/TC 251 prEN 17269 hl7ips-dataelement-225 ⌚ Pregnancy Description ⌚ CEN/TC 251 prEN 17269	
<code>l hl7:author</code>			0 ... *	Contains 2.16.840.1.113883.10.22.4.14 IPS Body Author (DYNAMIC)	(IPS...ion)
where [hl7:assignedAuthor]					
<code>l hl7:informant</code>			0 ... *	Contains 2.16.840.1.113883.10.12.319 CDA Informant (Body) (DYNAMIC)	(IPS...ion)
<code>l hl7:entry</code>			0 ... 1	R	Contains 2.16.840.1.113883.10.22.4.27 IPS Pregnancy Status Observation (DYNAMIC)
where [hl7:observation [hl7:code [(@code = '82810-3' and @codeSystem = '2.16.840.1.113883.6.1')]]]					
				⌚ hl7ips-dataelement-37 ⌚ Status of pregnancy ⌚ CEN/TC 251 prEN 17269	
<code>l @typeCode</code>	cs	1 ... 1	R		
	CONF			The value of @typeCode shall be drawn from value set 2.16.840.1.113883.1.11.19446 x_ActRelationshipEntry (DYNAMIC)	
<code>l @contextConductionInd</code>	bl	0 ... 1	F	true	

└ hl7:entry		0 ... *	R	Contains 2.16.840.1.113883.10.22.4.28 IPS Pregnancy Outcome Observation (DYNAMIC) (IPS...ion)	
where [hl7:observation [hl7:code [concat(@code, @codeSystem) = doc('include/voc-2.16.840.1.113883.11.22.21-DYNAMIC.xml')//valueSet [1]/conceptList/concept(concat(@code, @codeSystem))]]]					
	hl7ips-dataelement-38	Previous Pregnancies	CEN/TC 251 prEN 17269		
└ @typeCode	cs	1 ... 1	R		
		The value of @typeCode shall be drawn from value set 2.16.840.1.113883.1.11.19446 x_ActRelationshipEntry (DYNAMIC)			
└ @contextConductionInd	bl	0 ... 1	F	true	
└ hl7:component		0 ... *		Contains 2.16.840.1.113883.10.22.3.15 IPS Translation Section (DYNAMIC) (IPS...ion)	
where [hl7:section]					

8.6 IPS History of Procedures Section

Id	2.16.840.1.113883.10.22.3.4	Effective Date	2017-03-27
Status	Under pre-publication review	Version Label	STU1
Name	IPSHistoryofProceduresSection	Display Name	IPS History of Procedures Section
Description			

The History of Procedures Section contains a description of the patient past procedures that are pertinent to the scope of this document. Procedures may refer for example to:

1. Invasive Diagnostic procedure:e.g. Cardiac catheterization; (the results of these procedure are documented in the results section)

2. Therapeutic procedure: e.g. dialysis;
3. Surgical procedure: e.g. appendectomy

All those are represented in this template as procedures.

The optional author and informant elements are used when necessary to convey the provenance and authoring of the section content in case it is different from what is announced in the CDA header.

Context	Parent nodes of template element with id 2.16.840.1.113883.10.22.3.4		
Classification	CDA Section Level Template		
Open/Closed	Open (other than defined elements are allowed)		
Associated with 3 concepts			
Associated with	Id	Name	Data Set
	hl7ips-dataelement-13	 History of Procedures	 CEN/TC 251 prEN 17269
	hl7ips-dataelement-51	 Procedure description	 CEN/TC 251 prEN 17269
	hl7ips-dataelement-43	 Procedure list	 CEN/TC 251 prEN 17269
Uses 4 templates			
Uses	Uses	as	Name
	2.16.840.1.113883.10.22.4.14	Containment	 IPS Body Author (STU1)
	2.16.840.1.113883.10.12.319	Containment	 CDA Informant (Body)
	2.16.840.1.113883.10.22.4.17	Containment	 IPS Procedure Entry (STU1)
	2.16.840.1.113883.10.22.3.15	Containment	 IPS Translation Section (STU1)
Relationship	Adaptation: template 2.16.840.1.113883.10.12.201 (2005-09-07) Adaptation: template 1.3.6.1.4.1.19376.1.5.3.1.1.16.2.2 (2017-03-24 14:43:08)		

Example	<p>Example</p> <pre><section> <templateId root="2.16.840.1.113883.10.22.3.4"/> <id root="1.2.3.999" extension="example only"/> <code code="47519-4" codeSystem="2.16.840.1.113883.6.1" displayName="History of procedures"/> <title>History of procedures</title> <text>...</text> <author> <!-- template 2.16.840.1.113883.10.22.4.14 'IPS Body Author' (dynamic) --> </author> <informant> <!-- template 2.16.840.1.113883.10.12.319 'CDA Informant (Body)' (dynamic) --> </informant> <entry typeCode="COMP" contextConductionInd="true"> <!-- template 2.16.840.1.113883.10.22.4.17 'IPS Procedure Entry' (dynamic) --> </entry> <component> <!-- template 2.16.840.1.113883.10.22.3.15 'IPS Translation Section' (dynamic) --> </component> </section></pre>
---------	---

Item	DT	Card	Conf	Description	Label
hl7:section					(IPS...ion)
hl7ips-dataelement-13 History of Procedures CEN/TC 251 prEN 17269					
└ hl7:templateId	II	1 ... 1	M		(IPS...ion)
└ @root	uid	1 ... 1	F	2.16.840.1.113883.10.22.3.4	
└ hl7:id	II	0 ... *	R		(IPS...ion)
└ hl7:code	CE.IPS	1 ... 1	M		(IPS...ion)
└ @code	CONF	1 ... 1	F	47519-4	

@codeSystem		1 ... 1	F	2.16.840.1.113883.6.1 (LOINC)	
hl7:title	ST	1 ... 1	M	History of procedures	(IPS...ion)
hl7:text	SD.TEXT	1 ... 1	R		(IPS...ion)
hl7ips-dataelement-51 Procedure description CEN/TC 251 prEN 17269					
hl7:author		0 ... *		Contains 2.16.840.1.113883.10.22.4.14 IPS Body Author (DYNAMIC)	(IPS...ion)
where [hl7:assignedAuthor]					
hl7:informant		0 ... *		Contains 2.16.840.1.113883.10.12.319 CDA Informant (Body) (DYNAMIC)	(IPS...ion)
hl7:entry		1 ... *	R	Contains 2.16.840.1.113883.10.22.4.17 IPS Procedure Entry (DYNAMIC)	(IPS...ion)
hl7ips-dataelement-43 Procedure list CEN/TC 251 prEN 17269					
@typeCode	cs	1 ... 1	R		
		The value of @typeCode shall be drawn from value set 2.16.840.1.113883.1.11.19446 x_ActRelationshipEntry (DYNAMIC)			
@contextConductionInd	bl	0 ... 1	F	true	
hl7:component		0 ... *		Contains 2.16.840.1.113883.10.22.3.15 IPS Translation Section (DYNAMIC)	(IPS...ion)
where [hl7:section]					

8.7 IPS Immunizations Section

Id	2.16.840.1.113883.10.22.3.5	Effective Date	2017-04-05
Status	 Under pre-publication review	Version Label	STU1
Name	IPSImmunizationsSection	Display Name	IPS Immunizations Section

Description

The Immunizations Section defines a patient's current immunization status and pertinent immunization history.

The primary use case for the Immunization Section is to enable communication of a patient's immunization status.

The section includes current immunization status, and may contain the entire immunization history that is relevant to the period of time being summarized.

The optional author and informant elements are used when necessary to convey the provenance and authoring of the section content in case it is different from what is announced in the CDA header.

Context	Parent nodes of template element with id 2.16.840.1.113883.10.22.3.5		
Classification	CDA Section Level Template		
Open/Closed	Open (other than defined elements are allowed)		
Associated with 2 concepts			
Associated with	Id	Name	Data Set
	hl7ips-dataelement-50	 Immunizations list	 CEN/TC 251 prEN 17269
	hl7ips-dataelement-14	 Immunizations	 CEN/TC 251 prEN 17269
Uses 4 templates			
Uses	Uses	as	Version
	2.16.840.1.113883.10.22.4.14	Containment	 IPS Body Author (STU1) DYNAMIC
	2.16.840.1.113883.10.12.319	Containment	 CDA Informant (Body) DYNAMIC

	2.16.840.1.113883.10.22.4.15 Containment  IPS Immunization (STU1)	DYNAMIC																													
	2.16.840.1.113883.10.22.3.15 Containment  IPS Translation Section (STU1)	DYNAMIC																													
Relationship	Adaptation: template 2.16.840.1.113883.10.12.201 (2005-09-07) Adaptation: template 2.16.840.1.113883.10.20.22.2.2.1 (2015-08-01) Adaptation: template 2.16.840.1.113883.10.12.201 (2005-09-07)																														
Example	<p>Example</p> <pre><section classCode="DOCSECT"> <templateId root="2.16.840.1.113883.10.22.3.5"/> <code code="11369-6" codeSystem="2.16.840.1.113883.6.1" displayName="History of Immunization"> <title>History of Immunization</title> <text>...</text> <author> <!-- template 2.16.840.1.113883.10.22.4.14 'IPS Body Author' (dynamic) --> </author> <informant> <!-- template 2.16.840.1.113883.10.12.319 'CDA Informant (Body)' (dynamic) --> </informant> <entry typeCode="COMP" contextConductionInd="true"> <!-- template 2.16.840.1.113883.10.22.4.15 'IPS Immunization' (dynamic) --> </entry> <component> <!-- template 2.16.840.1.113883.10.22.3.15 'IPS Translation Section' (dynamic) --> </component> </section></pre>																														
<table border="1"> <thead> <tr> <th>Item</th> <th>DT</th> <th>Card</th> <th>Conf</th> <th>Description</th> <th>Label</th> </tr> </thead> <tbody> <tr> <td>hl7:section</td> <td></td> <td></td> <td></td> <td></td> <td>(IPS...ion)</td> </tr> <tr> <td colspan="2">  hl7ips-dataelement-14 </td><td colspan="2">  Immunizations </td><td colspan="2">  CEN/TC 251 prEN 17269 </td></tr> <tr> <td colspan="2">  @classCode </td><td>cs</td><td>0 ... 1</td><td>F</td><td>DOCSECT</td></tr> <tr> <td colspan="2">  hl7:templateId </td><td>II</td><td>1 ... 1</td><td>M</td><td>(IPS...ion)</td></tr> </tbody> </table>		Item	DT	Card	Conf	Description	Label	hl7:section					(IPS...ion)	 hl7ips-dataelement-14		 Immunizations		 CEN/TC 251 prEN 17269		 @classCode		cs	0 ... 1	F	DOCSECT	 hl7:templateId		II	1 ... 1	M	(IPS...ion)
Item	DT	Card	Conf	Description	Label																										
hl7:section					(IPS...ion)																										
 hl7ips-dataelement-14		 Immunizations		 CEN/TC 251 prEN 17269																											
 @classCode		cs	0 ... 1	F	DOCSECT																										
 hl7:templateId		II	1 ... 1	M	(IPS...ion)																										

L @root	uid	1 ... 1	F	2.16.840.1.113883.10.22.3.5	
L hl7:id	II	0 ... *	R		(IPS...ion)
L hl7:code	CE.IPS	1 ... 1	M		(IPS...ion)
L @code	CONF	1 ... 1	F	11369-6	
L @codeSystem		1 ... 1	F	2.16.840.1.113883.6.1 (LOINC)	
L hl7:title	ST	1 ... 1	M		(IPS...ion)
L hl7:text	SD.TEXT	1 ... 1	M		(IPS...ion)
L hl7:author		0 ... *		Contains 2.16.840.1.113883.10.22.4.14 IPS Body Author (DYNAMIC)	(IPS...ion)
where [hl7:assignedAuthor]					
L hl7:informant		0 ... *		Contains 2.16.840.1.113883.10.12.319 CDA Informant (Body) (DYNAMIC)	(IPS...ion)
L hl7:entry		1 ... *	M	Contains 2.16.840.1.113883.10.22.4.15 IPS Immunization (DYNAMIC)	(IPS...ion)
where [hl7:substanceAdministration [hl7:code [concat(@code, @codeSystem) = doc('include/voc-2.16.840.1.113883.1.11.19709-DYNAMIC.xml') // valueSet [1] / conceptList / concept / concat(@code, @codeSystem)]]]]					
L @typeCode	cs	1 ... 1	R		

 hl7ips-dataelement-50

 Immunizations list

 CEN/TC 251 prEN 17269

CONF	The value of @typeCode shall be drawn from value set 2.16.840.1.113883.1.11.19446 <i>x_ActRelationshipEntry</i> (DYNAMIC)			
└ @contextConductionInd	bl	0 ... 1	F	true
└ h17:component		0 ... *	Contains 2.16.840.1.113883.10.22.3.15 <i>IPS Translation Section</i> (DYNAMIC)	(IPS...ion)
where [bl7:section]				

8.8 IPS Medical Devices Section

Id	2.16.840.1.113883.10.22.3.6	Effective Date	2017-04-11
Status	🟡 Under pre-publication review	Version Label	STU1
Name	IPSMedicalDevicesSection	Display Name	IPS Medical Devices Section

Description

The medical devices section contains narrative text and coded entries describing the patient history of medical device use.

Medical devices include, but are not limited to, implanted devices and devices for nutrition.

The optional author and informant elements are used when necessary to convey the provenance and authoring of the section content in case it is different from what is announced in the CDA header.

Context	Parent nodes of template element with id 2.16.840.1.113883.10.22.3.6		
Classification	CDA Section Level Template		
Open/Closed	Open (other than defined elements are allowed)		
Associated with	Associated with 2 concepts		
	Id	Name	Data Set

	hl7ips-dataelement-15	 Medical Devices	 CEN/TC 251 prEN 17269
	hl7ips-dataelement-219	 Device List	 CEN/TC 251 prEN 17269
Uses			Uses 4 templates
Uses	2.16.840.1.113883.10.22.4.14	Containment  IPS Body Author (STU1)	DYNAMIC
Relationship			Adaptation: template 2.16.840.1.113883.10.12.201 (2005-09-07) Adaptation: template 1.3.6.1.4.1.12559.11.10.1.3.1.2.4 (2013-12-20) Adaptation: template 2.16.840.1.113883.10.20.1.7 (DYNAMIC) Adaptation: template 1.3.6.1.4.1.19376.1.5.3.1.1.5.3.5 (DYNAMIC)
Example	Example		
	<pre><section classCode="DOCSECT"> <templateId root="2.16.840.1.113883.10.22.3.6"/> <id root="1.2.3.999" extension="__example only__"/> <code code="46264-8" codeSystem="2.16.840.1.113883.6.1" displayName="History of medical device use"/> <title>History of medical device use</title> <text>...</text> <author> <!-- template 2.16.840.1.113883.10.22.4.14 'IPS Body Author' (dynamic) --> </author> <informant> <!-- template 2.16.840.1.113883.10.12.319 'CDA Informant (Body)' (dynamic) --> </informant> <entry typeCode="COMP" contextConductionInd="true"> <!-- template 2.16.840.1.113883.10.22.4.26 'IPS Medical Device' (dynamic) --> </entry> <component> <!-- template 2.16.840.1.113883.10.22.3.15 'IPS Translation Section' (dynamic) --> </component> </section></pre>		

Item	DT	Card	Conf	Description	Label
hl7:section		1 ... 1	M		(IPS...ion)
				 hl7ips-dataelement-15  Medical Devices  CEN/TC 251 prEN 17269	
└ @classCode	cs	0 ... 1	F	DOCSECT	
└ hl7:templateId	II	1 ... 1	M		(IPS...ion)
└ @root	uid	1 ... 1	F	2.16.840.1.113883.10.22.3.6	
└ hl7:id	II	0 ... *	R		(IPS...ion)
└ hl7:code	CE.IPS	1 ... 1	M		(IPS...ion)
└ @code	CONF	1 ... 1	F	46264-8	
└ @codeSystem		1 ... 1	F	2.16.840.1.113883.6.1 (LOINC)	
└ hl7:title	ST	1 ... 1	M	Medical Devices	(IPS...ion)
└ hl7:text	SD.TEXT	1 ... 1	M		(IPS...ion)
└ hl7:author		0 ... *		Contains 2.16.840.1.113883.10.22.4.14 IPS Body Author (DYNAMIC)	(IPS...ion)
where [hl7:assignedAuthor]					
└ hl7:informant		0 ... *		Contains 2.16.840.1.113883.10.12.319 CDA Informant (Body) (DYNAMIC)	(IPS...ion)

└ hl7:entry		1 ... *	R	Contains 2.16.840.1.113883.10.22.4.26 <i>IPS Medical Device</i> (DYNAMIC)	(IPS...ion)
where <i>[hl7:supply]</i>					
	 hl7ips-dataelement-219		 Device List		 CEN/TC 251 prEN 17269
└ @typeCode	cs	1 ... 1	R		
		 CONF	The value of @typeCode shall be drawn from value set 2.16.840.1.113883.1.11.19446 <i>x_ActRelationshipEntry</i> (DYNAMIC)		
└ @contextConductionInd	bl	0 ... 1	F	true	
└ hl7:component		0 ... *		Contains 2.16.840.1.113883.10.22.3.15 <i>IPS Translation Section</i> (DYNAMIC)	(IPS...ion)
where <i>[hl7:section]</i>					

8.9 IPS Medication Summary Section

Id	2.16.840.1.113883.10.22.3.1	Effective Date	2016-11-11
Status	 Under pre-publication review	Version Label	STU1
Name	IPSMedicationSummarySection	Display Name	IPS Medication Summary Section

Description

The medication summary section contains a description of the patient's medications relevant for the scope of the patient summary.

The actual content could depend on the jurisdiction, it could report:

- the currently active medications;

- the current and past medications considered relevant by the authoring GP;
- the patient prescriptions or dispensations automatically extracted by a regional or a national EHR.

In all those cases however medications are documented in the Patient Summary as medication statements.

This section requires either an entry indicating the subject is known not to be on any medications; either an entry indicating that no information is available about medications; or entries summarizing the subject's medications.

The optional author and informant elements are used when necessary to convey the provenance and authoring of the section content in case it is different from what is announced in the CDA header.

Context	Parent nodes of template element with id 2.16.840.1.113883.10.22.3.1		
Classification	CDA Section Level Template		
Open/Closed	Open (other than defined elements are allowed)		
Associated with 2 concepts			
Associated with	Id	Name	Data Set
	hl7ips-dataelement-61	 List of medication	 CEN/TC 251 prEN 17269
	hl7ips-dataelement-16	 Medication Summary	 CEN/TC 251 prEN 17269
Uses 4 templates			
Uses	Uses	as	Name
	2.16.840.1.113883.10.22.4.14	Containment	 IPS Body Author (STU1)
	2.16.840.1.113883.10.12.319	Containment	 CDA Informant (Body)
	2.16.840.1.113883.10.22.4.4	Containment	 IPS Medication Statement (STU1)
	2.16.840.1.113883.10.22.3.15	Containment	 IPS Translation Section (STU1)
Relationship	Adaptation: template 2.16.840.1.113883.10.12.201 (2005-09-07) Adaptation: template 2.16.840.1.113883.10.20.1.8 (DYNAMIC)		

	Adaptation: template 1.3.6.1.4.1.12559.11.10.1.3.1.2.3 (2013-12-20)				
	Example				
Example	<pre><section classCode="DOCSECT"> <templateId root="2.16.840.1.113883.10.22.3.1"/> <id root="1.2.3.999" extension="_example only_"/> <code code="10160-0" codeSystem="2.16.840.1.113883.6.1" displayName="Terapie farmacologiche"/> <title>Terapie farmacologiche</title> <text>...</text> <author> <!-- template 2.16.840.1.113883.10.22.4.14 'IPS Body Author' (dynamic) --> </author> <informant> <!-- template 2.16.840.1.113883.10.12.319 'CDA Informant (Body)' (dynamic) --> </informant> <entry typeCode="COMP" contextConductionInd="true"> <!-- template 2.16.840.1.113883.10.22.4.4 'IPS Medication Entry' (dynamic) --> </entry> <component> <!-- template 2.16.840.1.113883.10.22.3.15 'IPS Translation Section' (dynamic) --> </component> </section></pre>				
Item	DT	Card	Conf	Description	Label
h17:section		1 ... 1	M		(IPS...ion)
hl7ips-dataelement-16 Medication Summary CEN/TC 251 prEN 17269					
└ @classCode	cs	0 ... 1	F	DOCSECT	
└ h17:templateId	II	1 ... 1	M		(IPS...ion)
└ @root	uid	1 ... 1	F	2.16.840.1.113883.10.22.3.1	
└ h17:id	II	0 ... *			(IPS...ion)
└ h17:code	CE.IPS	1 ... 1	M	History of medication use	(IPS...ion)

<code>l @code</code>	CONF	1 ... 1	F	10160-0	
<code>l @codeSystem</code>		1 ... 1	F	2.16.840.1.113883.6.1 (LOINC)	
<code>l hl7:title</code>	ST	1 ... 1	M	Medication Summary	(IPS...ion)
<code>l hl7:text</code>	SD.TEXT	1 ... 1	M	Section text	(IPS...ion)
<code>l hl7:author</code>		0 ... *		Contains 2.16.840.1.113883.10.22.4.14 IPS Body Author (DYNAMIC)	(IPS...ion)
where [hl7:assignedAuthor]					
<code>l hl7:informant</code>		0 ... *		Contains 2.16.840.1.113883.10.12.319 CDA Informant (Body) (DYNAMIC)	(IPS...ion)
<code>l hl7:entry</code>		1 ... *	R	Contains 2.16.840.1.113883.10.22.4.4 IPS Medication Statement (DYNAMIC)	(IPS...ion)
where [hl7:substanceAdministration [hl7:code [concat(@code, @codeSystem) = doc('include/voc-2.16.840.1.113883.11.22.14-DYNAMIC.xml') / valueSet [1] / conceptList / concept / concat(@code, @codeSystem) or concat(@code, @codeSystem) = doc('include/voc-2.16.840.1.113883.11.22.15-DYNAMIC.xml') / valueSet [1] / conceptList / concept / concat(@code, @codeSystem) or @nullFlavor]]]					
⌚ hl7ips-dataelement-61 ⌚ List of medication ⌚ CEN/TC 251 prEN 17269					
<code>l @typeCode</code>	cs	1 ... 1	R		
	CONF	The value of @typeCode shall be drawn from value set 2.16.840.1.113883.1.11.19446 x_ActRelationshipEntry (DYNAMIC)			
<code>l @contextConductionInd</code>	bl	0 ... 1	F	true	
<code>l hl7:component</code>		0 ... *		Contains 2.16.840.1.113883.10.22.3.15 IPS Translation Section (DYNAMIC)	(IPS...ion)

where [hl7:section]

8.10 IPS Plan of Care Section

Id	2.16.840.1.113883.10.22.3.9	Effective Date	2017-04-13
Status	Under pre-publication review	Version Label	STU1
Name	IPSPlanofCareSection	Display Name	IPS Plan of Care Section

Description

The care plan section contains a narrative description of the expectations for care including proposals, goals, and order requests for monitoring, tracking, or improving the condition of the patient. The optional author and informant elements are used when necessary to convey the provenance and authoring of the section content in case it is different from what is announced in the CDA header.

Context	Parent nodes of template element with id 2.16.840.1.113883.10.22.3.9
Classification	CDA Section Level Template
Open/Closed	Open (other than defined elements are allowed)

Associated with 2 concepts

	Id	Name	Data Set
Associated with	hl7ips-dataelement-110	Plan Description	CEN/TC 251 prEN 17269
	hl7ips-dataelement-17	Plan Of Care	CEN/TC 251 prEN 17269

Uses 3 templates

Uses	Uses	as	Name	Version

	<p>2.16.840.1.113883.10.22.4.14 Containment  IPS Body Author (STU1) DYNAMIC</p> <p>2.16.840.1.113883.10.12.319 Containment  CDA Informant (Body) DYNAMIC</p> <p>2.16.840.1.113883.10.22.3.15 Containment  IPS Translation Section (STU1) DYNAMIC</p>
Relationship	<p>Adaptation: template 1.3.6.1.4.1.19376.1.5.3.1.3.31 (DYNAMIC)</p> <p>Adaptation: template 2.16.840.1.113883.10.20.1.10 (DYNAMIC)</p> <p>Adaptation: template 2.16.840.1.113883.10.20.22.2.10 (DYNAMIC)</p>
Example	<p>Example</p> <pre><section classCode="DOCSECT"> <templateId root="2.16.840.1.113883.10.22.3.9"/> <id root="1.2.3.999" extension="_example_only_" /> <code code="18776-5" codeSystem="2.16.840.1.113883.6.1" displayName="Plan of Treatment note"/> <title>Plan of Care</title> <text>...</text> <author> <!-- template 2.16.840.1.113883.10.22.4.14 'IPS Body Author' (dynamic) --> </author> <informant> <!-- template 2.16.840.1.113883.10.12.319 'CDA Informant (Body)' (dynamic) --> </informant> <component> <!-- template 2.16.840.1.113883.10.22.3.15 'IPS Translation Section' (dynamic) --> </component> </section></pre>

Item	DT	Card	Conf	Description	Label
hl7:section		1 ... 1	M		(IPS...ion)
		 hl7ips-dataelement-17		 Plan Of Care	 CEN/TC 251 prEN 17269
└ @classCode	cs	0 ... 1	F	DOCSECT	
└ hl7:templateId	II	1 ... 1	M		(IPS...ion)

L @root	uid	1 ... 1	F	2.16.840.1.113883.10.22.3.9	
L hl7:id	II	0 ... *	R		(IPS...ion)
L hl7:code	CE.IPS	1 ... 1	M		(IPS...ion)
L @code	CONF	1 ... 1	F	18776-5	
L @codeSystem		1 ... 1	F	2.16.840.1.113883.6.1 (LOINC)	
L hl7:title	ST	1 ... 1	M	Plan of Treatment	(IPS...ion)
L hl7:text	SD.TEXT	1 ... 1	M		(IPS...ion)
		 hl7ips-dataelement-110	 Plan Description	 CEN/TC 251 prEN 17269	
L hl7:author		0 ... *		Contains 2.16.840.1.113883.10.22.4.14 IPS Body Author (DYNAMIC)	(IPS...ion)
where [hl7:assignedAuthor]					
L hl7:informant		0 ... *		Contains 2.16.840.1.113883.10.12.319 CDA Informant (Body) (DYNAMIC)	(IPS...ion)
L hl7:component		0 ... *		Contains 2.16.840.1.113883.10.22.3.15 IPS Translation Section (DYNAMIC)	(IPS...ion)
where [hl7:section]					

8.11 IPS Problems Section

Id	2.16.840.1.113883.10.22.3.3	Effective Date	2017-02-15
Status	🟡 Under pre-publication review	Version Label	STU1
Name	IPSProblemList	Display Name	IPS Problems Section

Description

The IPS problem section lists and describes clinical problems or conditions currently being monitored for the patient. This section can record different kinds of problems as, but not limited to, chronic diseases (e.g. COPD, diabetes, hypertension); contagious diseases; nutritional problems (e.g. metabolic diseases); and so on. The optional author and informant elements are used, when necessary, to convey the provenance and authoring of the section content in case it is different from what is announced in the CDA header.

Context	Parent nodes of template element with id 2.16.840.1.113883.10.22.3.3		
Classification	CDA Section Level Template		
Open/Closed	Open (other than defined elements are allowed)		
Associated with 3 concepts			
Associated with	Id	Name	Data Set
	hl7ips-dataelement-130	🟡 Description	🟡 CEN/TC 251 prEN 17269
	hl7ips-dataelement-18	🟡 Problems	🟡 CEN/TC 251 prEN 17269
	hl7ips-dataelement-139	🟡 Problem list	🟡 CEN/TC 251 prEN 17269
Uses 4 templates			
Uses	Uses	as	Version
	2.16.840.1.113883.10.22.4.14	Containment	IPS Body Author (STU1) DYNAMIC

	2.16.840.1.113883.10.12.319 Containment  CDA Informant (Body)	DYNAMIC																														
	2.16.840.1.113883.10.22.4.7 Containment  IPS Problem Concern Entry (STU1)	DYNAMIC																														
	2.16.840.1.113883.10.22.3.15 Containment  IPS Translation Section (STU1)	DYNAMIC																														
Relationship	Specialization: template 2.16.840.1.113883.10.12.201 (2005-09-07) Adaptation: template 2.16.840.1.113883.10.20.1.11 (DYNAMIC) Adaptation: template 1.3.6.1.4.1.19376.1.5.3.1.3.6 (2013-12-20)																															
Example	<p>Example</p> <pre><section classCode="DOCSECT"> <templateId root="2.16.840.1.113883.10.22.3.3"/> <id root="1.2.3.999" extension="_example_only_" /> <code code="11450-4" codeSystem="2.16.840.1.113883.6.1" displayName="Problem List"/> <title>Active Problems</title> <text>Narrative text of the Problem List sections</text> <author> <!-- template 2.16.840.1.113883.10.22.4.14 'IPS Body Author' (dynamic) --> </author> <informant> <!-- template 2.16.840.1.113883.10.12.319 'CDA Informant (Body)' (dynamic) --> </informant> <entry typeCode="COMP" contextConductionInd="true"> <!-- template 2.16.840.1.113883.10.22.4.7 'IPS Problem Concern Entry' (dynamic) --> </entry> <component> <!-- template 2.16.840.1.113883.10.22.3.15 'IPS Translation Section' (dynamic) --> </component> </section></pre>																															
	<table border="1"> <thead> <tr> <th>Item</th><th>DT</th><th>Card</th><th>Conf</th><th>Description</th><th>Label</th></tr> </thead> <tbody> <tr> <td>hl7:section</td><td></td><td>1 ... 1</td><td>M</td><td></td><td>(IPS...ist)</td></tr> <tr> <td></td><td colspan="2">  hl7ips-dataelement-18 </td><td colspan="2">  Problems </td><td>  CEN/TC 251 prEN 17269 </td></tr> <tr> <td> └ @classCode</td><td>cs</td><td>0 ... 1</td><td>F</td><td>DOCSECT</td><td></td></tr> <tr> <td> └ hl7:templateId</td><td>II</td><td>1 ... 1</td><td>M</td><td></td><td>(IPS...ist)</td></tr> </tbody> </table>	Item	DT	Card	Conf	Description	Label	hl7:section		1 ... 1	M		(IPS...ist)		 hl7ips-dataelement-18		 Problems		 CEN/TC 251 prEN 17269	└ @classCode	cs	0 ... 1	F	DOCSECT		└ hl7:templateId	II	1 ... 1	M		(IPS...ist)	
Item	DT	Card	Conf	Description	Label																											
hl7:section		1 ... 1	M		(IPS...ist)																											
	 hl7ips-dataelement-18		 Problems		 CEN/TC 251 prEN 17269																											
└ @classCode	cs	0 ... 1	F	DOCSECT																												
└ hl7:templateId	II	1 ... 1	M		(IPS...ist)																											

L @root	uid	1 ... 1	F	2.16.840.1.113883.10.22.3.3	
L hl7:id	II	0 ... *	R		(IPS...ist)
L hl7:code	CE.IPS	1 ... 1	M		(IPS...ist)
L @code	CONF	1 ... 1	F	11450-4	
L @codeSystem		1 ... 1	F	2.16.840.1.113883.6.1 (LOINC)	
L hl7:title	ST	1 ... 1	M		(IPS...ist)
L hl7:text	SD.TEXT	1 ... 1	M	Section text	(IPS...ist)
			hl7ips-dataelement-130		Description
					CEN/TC 251 prEN 17269
L hl7:author		0 ... *		Contains 2.16.840.1.113883.10.22.4.14 IPS Body Author (DYNAMIC)	(IPS...ist)
where [hl7:assignedAuthor]					
L hl7:informant		0 ... *		Contains 2.16.840.1.113883.10.12.319 CDA Informant (Body) (DYNAMIC)	(IPS...ist)
L hl7:entry		1 ... *	R	Contains 2.16.840.1.113883.10.22.4.7 IPS Problem Concern Entry (DYNAMIC)	(IPS...ist)
where [hl7:act [hl7:code [(@code = 'CONC' and @codeSystem = '2.16.840.1.113883.5.6') or (@nullFlavor)]]]					
			hl7ips-dataelement-139		Problem list
					CEN/TC 251 prEN 17269

L @typeCode	cs	1 ... 1	R	
	CONF	The value of @typeCode shall be drawn from value set 2.16.840.1.113883.1.11.19446 <i>x_ActRelationshipEntry</i> (DYNAMIC)		
L @contextConductionInd	bl	0 ... 1	F	true
L h17:component		0 ... *		Contains 2.16.840.1.113883.10.22.3.15 <i>IPS Translation Section</i> (DYNAMIC) (IPS...ist)
where [h17:section]				

8.12 IPS Results Section

Id	2.16.840.1.113883.10.22.3.14	Effective Date	2017-04-30
Status	Under pre-publication review	Version Label	STU1
Name	IPSResultsSection	Display Name	IPS Results Section

Description

This section assembles relevant observation results collected on the patient or produced on in-vitro biologic specimens collected from the patient. Some of these results may be laboratory results, others may be anatomic pathology results, others, radiology results, and others, clinical results.

The structured, machine-processable content of this section is sorted out between as many Result Organizer entries as needed. One Result Organizer entry groups results, which have a common context of production:

- common specialty (imaging, bacteriology, serology, chemistry, surgical pathology, clinical, radiology ...),
- common overall interpretation, (which interprets the set of results of the Organizer),
- common biologic specimen for in vitro diagnostic observations,
- common associated illustrative image.

The optional author and informant elements of the section are used when necessary to convey the provenance and authoring of the section content in case it is different from what is announced in the CDA header.

In case this section assembles results from multiple authors (e.g.; results authored by a clinical laboratory, and results produced by a radiology center), the authors are listed in the section, and each Result Organizer of the section indicates its own author(s).

Context	Parent nodes of template element with id 2.16.840.1.113883.10.22.3.14																						
Classification	CDA Section Level Template																						
Open/Closed	Open (other than defined elements are allowed)																						
Associated with 3 concepts																							
Associated with	<table border="1"> <thead> <tr> <th>Id</th><th>Name</th><th>Data Set</th></tr> </thead> <tbody> <tr> <td>hl7ips-dataelement-142</td><td>Result Description</td><td>CEN/TC 251 prEN 17269</td></tr> <tr> <td>hl7ips-dataelement-126</td><td>Observations results list</td><td>CEN/TC 251 prEN 17269</td></tr> <tr> <td>hl7ips-dataelement-19</td><td>Results</td><td>CEN/TC 251 prEN 17269</td></tr> </tbody> </table>			Id	Name	Data Set	hl7ips-dataelement-142	Result Description	CEN/TC 251 prEN 17269	hl7ips-dataelement-126	Observations results list	CEN/TC 251 prEN 17269	hl7ips-dataelement-19	Results	CEN/TC 251 prEN 17269								
Id	Name	Data Set																					
hl7ips-dataelement-142	Result Description	CEN/TC 251 prEN 17269																					
hl7ips-dataelement-126	Observations results list	CEN/TC 251 prEN 17269																					
hl7ips-dataelement-19	Results	CEN/TC 251 prEN 17269																					
Uses 4 templates																							
Uses	<table border="1"> <thead> <tr> <th>Uses</th><th>as</th><th>Name</th><th>Version</th></tr> </thead> <tbody> <tr> <td>2.16.840.1.113883.10.22.4.14</td><td>Containment</td><td>IPS Body Author (STU1)</td><td>DYNAMIC</td></tr> <tr> <td>2.16.840.1.113883.10.12.319</td><td>Containment</td><td>CDA Informant (Body)</td><td>DYNAMIC</td></tr> <tr> <td>2.16.840.1.113883.10.22.4.9</td><td>Containment</td><td>IPS Result Organizer (STU1)</td><td>DYNAMIC</td></tr> <tr> <td>2.16.840.1.113883.10.22.3.15</td><td>Containment</td><td>IPS Translation Section (STU1)</td><td>DYNAMIC</td></tr> </tbody> </table>			Uses	as	Name	Version	2.16.840.1.113883.10.22.4.14	Containment	IPS Body Author (STU1)	DYNAMIC	2.16.840.1.113883.10.12.319	Containment	CDA Informant (Body)	DYNAMIC	2.16.840.1.113883.10.22.4.9	Containment	IPS Result Organizer (STU1)	DYNAMIC	2.16.840.1.113883.10.22.3.15	Containment	IPS Translation Section (STU1)	DYNAMIC
Uses	as	Name	Version																				
2.16.840.1.113883.10.22.4.14	Containment	IPS Body Author (STU1)	DYNAMIC																				
2.16.840.1.113883.10.12.319	Containment	CDA Informant (Body)	DYNAMIC																				
2.16.840.1.113883.10.22.4.9	Containment	IPS Result Organizer (STU1)	DYNAMIC																				
2.16.840.1.113883.10.22.3.15	Containment	IPS Translation Section (STU1)	DYNAMIC																				
Relationship	Adaptation: template 2.16.840.1.113883.10.12.201 (2005-09-07)																						
Example	<p>Example</p> <pre><section classCode="DOCSECT" moodCode="EVN"> <templateId root="2.16.840.1.113883.10.22.3.14"/></pre>																						

```
<id root="1.2.3.999" extension="__example only__"/>
<code code="30954-2" codeSystem="2.16.840.1.113883.6.1" displayName="Relevant diagnostic tests/laboratory data Narrative"/>
<title>MOST SIGNIFICANT RESULTS</title>
<text>
  <!-- some clinical laboratory results and some surgical pathology results presented to the human reader -->
</text>
<author>
  <!-- template 2.16.840.1.113883.10.12.318 'CDA Author (Body)' - 1st author: a clinical lab director -->
</author>
<author>
  <!-- template 2.16.840.1.113883.10.12.318 'CDA Author (Body)' - 2nd author: a pathologist -->
</author>
<entry typeCode="COMP" contextConductionInd="true">
  <!-- 1st Organizer: chemistry observations on blood serum specimen produced and interpreted by a clinical laboratory -->
  <organizer classCode="BATTERY" moodCode="EVN">
    <templateId root="2.16.840.1.113883.10.22.4.9"/>
    <code code="18719-5" displayName="Chemistry studies (set)" codeSystemName="LOINC" codeSystem="2.16.840.1.113883.6.1"/>
    <statusCode code="completed"/>
    <author>
      <!-- template 2.16.840.1.113883.10.12.318 'CDA Author (Body)' - 1st author: a clinical lab director -->
    </author>
    <component>
      <!-- template 2.16.840.1.113883.10.22.4.13 'IPS Laboratory Result Observation' -->
    </component>
    <component>
      <!-- template 2.16.840.1.113883.10.22.4.13 'IPS Laboratory Result Observation' -->
    </component>
    <component>
      <!-- template 2.16.840.1.113883.10.22.4.30 'IPS Specimen Collection' - common blood serum specimen -->
    </component>
    <component>
      <!-- template 2.16.840.1.113883.10.22.4.22 'IPS Comment Activity' - interpretation of chemistry results -->
    </component>
  </organizer>
</entry>
<entry>
  <organizer classCode="BATTERY" moodCode="EVN">
    <templateId root="2.16.840.1.113883.10.22.4.9"/>
    <code code="18723-7" displayName="Hematology studies (set)" codeSystemName="LOINC" codeSystem="2.16.840.1.113883.6.1"/>
    <statusCode code="completed"/>
    <author>
      <!-- template 2.16.840.1.113883.10.12.318 'CDA Author (Body)' - 1st author: a clinical lab director -->
    </author>
    <component>
      <!-- template 2.16.840.1.113883.10.22.4.13 'IPS Laboratory Result Observation' -->
    </component>
    <component>
      <!-- template 2.16.840.1.113883.10.22.4.13 'IPS Laboratory Result Observation' -->
    </component>
    <component>
      <!-- template 2.16.840.1.113883.10.22.4.13 'IPS Laboratory Result Observation' -->
    </component>
  </organizer>
</entry>
```

```

<!-- template 2.16.840.1.113883.10.22.4.30 'IPS Specimen Collection' - venous blood total specimen -->
</component>
<component>
  <!-- template 2.16.840.1.113883.10.22.4.22 'IPS Comment Activity' - interpretation of hematology results -->
  </component>
</organizer>
</entry>
<entry>
  <organizer classCode="BATTERY" moodCode="EVN">
    <templateId root="2.16.840.1.113883.10.22.4.9"/>
    <code code="11529-5" displayName="Surgical pathology studies (set)" codeSystemName="LOINC" codeSystemVersion="2.16.840.1.113883.6.1"/>
    <statusCode code="completed"/>
    <author>
      <!-- template 2.16.840.1.113883.10.12.318 'CDA Author (Body)' - 2nd author: a pathologist -->
    </author>
    <component>
      <!-- template 2.16.840.1.113883.10.22.4.11 'IPS Pathology Result Observation' -->
    </component>
    <component>
      <!-- template 2.16.840.1.113883.10.22.4.30 'IPS Specimen Collection' - excised tissue specimen -->
    </component>
    <component>
      <!-- template 2.16.840.1.113883.10.22.4.22 'IPS Comment Activity' - pathologist's interpretation -->
    </component>
    <component>
      <!-- template 2.16.840.1.113883.10.22.4.23 'IPS ObservationMedia' - an illustrative slide image -->
    </component>
  </organizer>
</entry>
</section>

```

Item	DT	Card	Conf	Description	Label
hl7:section					(IPS...ion)
				 hl7ips-dataelement-19  Results  CEN/TC 251 prEN 17269	
└ @classCode	cs	0 ... 1	F	DOCSECT	
└ @moodCode	cs	0 ... 1	F	EVN	
└ hl7:templateId	II	1 ... 1	R		(IPS...ion)

L @root	uid	1 ... 1	F	2.16.840.1.113883.10.22.3.14	
L hl7:id	II	0 ... *	R		(IPS...ion)
L hl7:code	CE.IPS	1 ... 1	M		(IPS...ion)
L @code	CONF	1 ... 1	F	30954-2	
L @codeSystem		1 ... 1	F	2.16.840.1.113883.6.1 (LOINC)	
L hl7:title	ST	1 ... 1	M		(IPS...ion)
L hl7:text	SD.TEXT	1 ... 1	M		(IPS...ion)
		Result Description			
L hl7:author		0 ... *		Contains 2.16.840.1.113883.10.22.4.14 IPS Body Author (DYNAMIC)	(IPS...ion)
where [hl7:assignedAuthor]					
L hl7:informant		0 ... *		Contains 2.16.840.1.113883.10.12.319 CDA Informant (Body) (DYNAMIC)	(IPS...ion)
L hl7:entry		1 ... *	M	Contains 2.16.840.1.113883.10.22.4.9 IPS Result Organizer (DYNAMIC)	(IPS...ion)
where [hl7:organizer [hl7:code [@codeSystem = doc('include/voc-2.16.840.1.113883.11.22.37-DYNAMIC.xml')] / valueSet [1]/completeCodeSystem/@codeSystem or @nullFlavor]]]					
		Observations results list			

L @typeCode	cs	1 ... 1	R	
	CONF	The value of @typeCode shall be drawn from value set 2.16.840.1.113883.1.11.19446 x_ActRelationshipEntry (DYNAMIC)		
L @contextConductionInd	bl	0 ... 1	F	true
L h17:component		0 ... *		Contains 2.16.840.1.113883.10.22.3.15 IPS Translation Section (DYNAMIC) (IPS...ion)
where [h17:section]				

8.13 IPS Social History Section

Id	2.16.840.1.113883.10.22.3.10	Effective Date	2017-04-13
Status	Under pre-publication review	Version Label	STU1
Name	IPSSocialHistorySection	Display Name	IPS Social History Section
Description			

The social history section contains a description of the person's Health related "lifestyle factors" or "lifestyle observations" (e.g. smoke habits; alcohol consumption; diets, risky habits.) The optional author and informant elements are used when necessary to convey the provenance and authoring of the section content in case it is different from what is announced in the CDA header.

Context	Parent nodes of template element with id 2.16.840.1.113883.10.22.3.10
Classification	CDA Section Level Template
Open/Closed	Open (other than defined elements are allowed)
Associated with	Associated with 3 concepts

	Id	Name	Data Set
	hl7ips-dataelement-20	🟡 Social History	🟡 CEN/TC 251 prEN 17269
	hl7ips-dataelement-147	🟡 Life Style Factor list	🟡 CEN/TC 251 prEN 17269
	hl7ips-dataelement-149	🟡 Description	🟡 CEN/TC 251 prEN 17269
Uses			Uses 5 templates
	Uses	as	Name
Uses	2.16.840.1.113883.10.22.4.14	Containment	🟠 IPS Body Author (STU1)
	2.16.840.1.113883.10.12.319	Containment	🟢 CDA Informant (Body)
	2.16.840.1.113883.10.22.4.34	Containment	🟠 IPS Social History Tobacco Use (STU1)
	2.16.840.1.113883.10.22.4.35	Containment	🟠 IPS Social History Alcohol Use (STU1)
	2.16.840.1.113883.10.22.3.15	Containment	🟠 IPS Translation Section (STU1)
Relationship		Adaptation: template 1.3.6.1.4.1.19376.1.5.3.1.3.16 (DYNAMIC) Adaptation: template 2.16.840.1.113883.10.20.1.15 (DYNAMIC) Adaptation: template 2.16.840.1.113883.10.20.22.2.17 (DYNAMIC)	
Example		Example	
		<pre><section classCode="DOCSECT"> <templateId root="2.16.840.1.113883.10.22.3.10"/> <id root="1.2.3.999" extension="_example_only_"/> <code code="29762-2" codeSystem="2.16.840.1.113883.6.1" displayName="Social history Narrative"/> <title>Social History</title> <text> Social History text </text> <author> <!-- template 2.16.840.1.113883.10.22.4.14 'IPS Body Author' (dynamic) --> </author> <informant> <!-- template 2.16.840.1.113883.10.12.319 'CDA Informant (Body)' (dynamic) --> </informant></pre>	

	<pre> <entry typeCode="COMP" contextConductionInd="true"> <!-- template 2.16.840.1.113883.10.22.4.34 'IPS Social History Tobacco Use' (dynamic) --> </entry> <entry typeCode="COMP" contextConductionInd="true"> <!-- template 2.16.840.1.113883.10.22.4.35 'IPS Social History Alcohol Use' (dynamic) --> </entry> <component> <!-- template 2.16.840.1.113883.10.22.3.15 'IPS Translation Section' (dynamic) --> </component> </section> </pre>				
Item	DT	Card	Conf	Description	Label
hl7:section		1 ... 1	M		(IPS...ion)
hl7ips-dataelement-20 Social History CEN/TC 251 prEN 17269					
└ @classCode	cs	0 ... 1	F	DOCSECT	
└ hl7:templateId	II	1 ... 1	M		(IPS...ion)
└ @root	uid	1 ... 1	F	2.16.840.1.113883.10.22.3.10	
└ hl7:id	II	0 ... *	R		(IPS...ion)
└ hl7:code	CE.IPS	1 ... 1	M		(IPS...ion)
└ @code	CONF	1 ... 1	F	29762-2	
└ @codeSystem		1 ... 1	F	2.16.840.1.113883.6.1 (LOINC)	
└ hl7:title	ST	1 ... 1	M	Social History	(IPS...ion)

└ hl7:text	SD.TEXT	1 ... 1	M		(IPS...ion)
	⑩ hl7ips-dataelement-149	🟡 Description		🟡 CEN/TC 251 prEN 17269	
└ hl7:author		0 ... *		Contains 2.16.840.1.113883.10.22.4.14 <i>IPS Body Author</i> (DYNAMIC)	(IPS...ion)
where [hl7:assignedAuthor]					
└ hl7:informant		0 ... *		Contains 2.16.840.1.113883.10.12.319 <i>CDA Informant (Body)</i> (DYNAMIC)	(IPS...ion)
└ hl7:entry		0 ... 1		Contains 2.16.840.1.113883.10.22.4.34 <i>IPS Social History Tobacco Use</i> (DYNAMIC)	(IPS...ion)
where [hl7:observation /hl7:code [(@code = '72166-2' and @codeSystem = '2.16.840.1.113883.6.1')]]]					
	⑩ hl7ips-dataelement-147	🟡 Life Style Factor list		🟡 CEN/TC 251 prEN 17269	
└ @typeCode	cs	1 ... 1	R		
	CONF	The value of @typeCode shall be drawn from value set 2.16.840.1.113883.1.11.19446 <i>x_ActRelationshipEntry</i> (DYNAMIC)			
└ @contextConductionInd	bl	0 ... 1	F	true	
└ hl7:entry		0 ... 1		Contains 2.16.840.1.113883.10.22.4.35 <i>IPS Social History Alcohol Use</i> (DYNAMIC)	(IPS...ion)
where [hl7:observation /hl7:code [(@code = '74013-4' and @codeSystem = '2.16.840.1.113883.6.1') or @nullFlavor]]]					
	⑩ hl7ips-dataelement-147	🟡 Life Style Factor list		🟡 CEN/TC 251 prEN 17269	
└ @typeCode	cs	1 ... 1	R		

CONF	The value of @typeCode shall be drawn from value set 2.16.840.1.113883.1.11.19446 <i>x_ActRelationshipEntry</i> (DYNAMIC)			
└ <code>@contextConductionInd</code>	bl	0 ... 1	F	true
└ <code>h17:component</code>		0 ... *	Contains 2.16.840.1.113883.10.22.3.15 <i>IPS Translation Section</i> (DYNAMIC)	(IPS...ion)
where <code>[bl7:section]</code>				

8.14 IPS Translation Section

Id	2.16.840.1.113883.10.22.3.15	Effective Date	2017-07-12			
Status	🟡 Under pre-publication review	Version Label	STU1			
Name	IPSTranslationSection	Display Name	IPS Translation Section			
Description	Template CDA Section to carry the translations of a Parent Section					
Classification	CDA Section Level Template					
Open/Closed	Open (other than defined elements are allowed)					
Relationship	Specialization: template 2.16.840.1.113883.10.12.201 (2005-09-07)					
Example	<p>Example</p> <pre><section> <title>Translated title</title> <!-- subordinate section carrying a translation of the parent section --> <text>This is an English text</text> <languageCode code="en-US"/> </section></pre>					
	Item	DT	Card	Conf	Description	Label

h17:section					(IPS...ion)
L h17:id	II	0 ... *	R		(IPS...ion)
L h17:title	ST	1 ... 1	R		(IPS...ion)
L h17:text	SD.TEXT	1 ... 1	R		(IPS...ion)
L h17:languageCode	CS	1 ... 1	R		(IPS...ion)
CONF		The value of @code shall be drawn from value set 2.16.840.1.113883.11.22.19 <i>Language Code</i> (2017-04-11)			

9 CDA Entry Level Templates

9.1 IPS Allergy and Intolerance Concern

Id	2.16.840.1.113883.10.22.4.5	Effective Date	2016-11-11
Status	 Under pre-publication review	Version Label	STU1
Name	IPSAffergyAndIntoleranceConcern	Display Name	IPS Allergy and Intolerance Concern

Description

This template reflects an ongoing concern on behalf of the person that placed the allergy on a patient's allergy list.

A concern may refer to one or more allergies or intolerances.

There are different kinds of status that could be related to an allergy, or more in general to a condition:

- The status of the concern (active, inactive,..)
- The status of the condition (e.g. active, inactive, resolved,..)
- The confirmation status [clinical workflow status, certainty] (e.g. confirmed, likely, unlikely,...)

Not all of them can be represented in a CDA using the statusCode elements of the concern (ACT) and observation (condition).

As long as the underlying condition is of concern to the author (i.e., as long as the allergy, whether active or resolved, is of ongoing concern and interest to the author), the statusCode is "active".

In case the clinician deems that there is no longer any need to track the underlying conditions then the concern is inactive and the statusCode is set to "completed".

The effectiveTime/low of the Allergy Concern Act asserts when the concern became active. This equates to the time the concern was authored in the patient's chart.

The effectiveTime/high asserts when the concern became inactive, and it is present if the statusCode of the concern act is "completed"

Context	Parent nodes of template element with id 2.16.840.1.113883.10.22.4.5		
Classification	CDA Entry Level Template		
Open/Closed	Open (other than defined elements are allowed)		
Uses 1 template			
Uses	Uses	as	Name
	2.16.840.1.113883.10.22.4.1	Containment	 IPS Allergy or Intolerance (STU1)
			DYNAMIC

Relationship	Adaptation: template 2.16.840.1.113883.10.12.301 (2005-09-07) Adaptation: template 1.3.6.1.4.1.19376.1.5.3.1.4.5.3 (2013-12-20)				
Example	<p>Example</p> <pre><act classCode="ACT" moodCode="EVN"> <templateId root="2.16.840.1.113883.10.22.4.5"/> <id root="1.2.3.999" extension="example only"/> <code code="CONC" codeSystem="2.16.840.1.113883.5.6"/> <statusCode code="active"/> <effectiveTime> <low value="..."/> <high value="..."/> </effectiveTime> <entryRelationship typeCode="SUBJ" inversionInd="false"> <!-- template 2.16.840.1.113883.10.22.4.1 'IPS Allergy or Intolerance' (dynamic) --> </entryRelationship> </act></pre>				
Item	DT	Card	Conf	Description	Label
h17:act		0 ... *	R		(IPS...ern)
└ @classCode	cs	1 ... 1	F	ACT	
└ @moodCode	cs	1 ... 1	F	EVN	
└ h17:templateId	II	1 ... 1	M		(IPS...ern)
└ @root	uid	1 ... 1	F	2.16.840.1.113883.10.22.4.5	
└ h17:id	II	0 ... *	R		(IPS...ern)
└ h17:code	CD	1 ... 1	M		(IPS...ern)
└ @code	CONF	1 ... 1	F	CONC	

<code>└ @codeSystem</code>		1 ... 1	F	2.16.840.1.113883.5.6 (HL7ActClass)	
<code>└ h17:statusCode</code>	CS	1 ... 1	R	<p>As long as the underlying conditions are of concern to the author (i.e., as long as allergies, whether active or resolved, is of ongoing concern and interest to the author), the statusCode is “active”. The concern is tracked by the author.</p> <p>Only when the underlying allergies are no longer of concern then the statusCode is set to “completed”. The author is no more tracking this concern and no further actions are expected.</p>	(IPS...ern)
	CONF			The value of @code shall be drawn from value set 2.16.840.1.113883.1.11.19890 <i>x_ActStatus.ActiveComplete</i> (DYNAMIC)	
<code>└ h17:effectiveTime</code>	IVL_TS	1 ... 1	R		(IPS...ern)
<code>└ h17:low</code>	IVXB_TS	1 ... 1	R	This element asserts when the concern became active. This equates to the time the concern was authored in the patient's chart and the author started tracking this concern.	(IPS...ern)
<code>└ h17:high</code>	IVXB_TS	0 ... 1	C	This element asserts when the clinician deemed there is no longer any need to track the underlying conditions.	(IPS...ern)
	Constraint			If statusCode/@code="completed" Completed, then effectiveTime *SHALL* contain [1..1] high	
	Schematron assert	role		error	
		test		not(..//h17:statusCode[@code='completed']) or h17:high	
		Message		If statusCode/@code="completed" Completed, then effectiveTime *SHALL* contain [1..1] high	
<code>└ h17:entryRelationship</code>		1 ... *	R	Contains 2.16.840.1.113883.10.22.4.1 <i>IPS Allergy or Intolerance</i> (DYNAMIC)	(IPS...ern)
where <code>[hl7:observation [hl7:code [concat(@code, @codeSystem) = doc('include/voc-2.16.840.1.113883.11.22.2-DYNAMIC.xml')]/valueSet [1]/conceptList/concept(concat(@code, @codeSystem))]]]</code>					
<code>└ @typeCode</code>	cs	1 ... 1	F	SUBJ	

└ @inversionInd

bl

0 ... 1

F

false

9.2 IPS Allergy Certainty Observation

{: 2.16.840.1.113883.10.22.10/dynamic}}

9.3 IPS Allergy or Intolerance

Id	2.16.840.1.113883.10.22.4.1	Effective Date	2016-11-10
Status	Under pre-publication review	Version Label	STU1
Name	IPSEEntryAllergyOrIntolerance	Display Name	IPS Allergy or Intolerance

Description

This template reflects a discrete observation about a patient's allergy or intolerance.

Because it is a discrete observation, it will have a statusCode of "completed".

The effectiveTime, also referred to as the "biologically relevant time" is the time at which the observation holds for the patient.

For a provider seeing a patient in the clinic today, observing a history of penicillin allergy that developed five years ago, the effectiveTime is five years ago.

The effectiveTime of the Allergy - Intolerance Observation gives an indication of whether or not the underlying allergy/intolerance is resolved. If known to be resolved, then an effectiveTime/high would be present.

If the date of resolution is not known, then effectiveTime/high will be present with a nullFlavor of "UNK".

It is recommended that the agent responsible for an allergy or adverse reaction would be used for describing the allergy, however the possibility that pre-coordinate codes (e.g. "allergy to nuts") will be used has been here also considered.

The agent responsible for an allergy or adverse reaction it is not always a manufactured material (for example, food allergies), nor is it necessarily consumed; however the playingEntity classCode = "MMAT" for all agents, manufactured or not is expected to be used. This choice depends on the characteristics of the base CDA R2 specification.

Context	Parent nodes of template element with id 2.16.840.1.113883.10.22.4.1
Classification	CDA Entry Level Template
Open/Closed	Open (other than defined elements are allowed)
Associated with	Associated with 12 concepts

Id	Name	Data Set		
hl7ips-dataelement-188	End Date	 CEN/TC 251 prEN 17269		
hl7ips-dataelement-173	Agent	 CEN/TC 251 prEN 17269		
hl7ips-dataelement-191	Type of propensity	 CEN/TC 251 prEN 17269		
hl7ips-dataelement-196	Agent code	 CEN/TC 251 prEN 17269		
hl7ips-dataelement-189	Criticality	 CEN/TC 251 prEN 17269		
hl7ips-dataelement-182	Allergies/Intolerances Content Status	 CEN/TC 251 prEN 17269		
hl7ips-dataelement-187	Onset date	 CEN/TC 251 prEN 17269		
hl7ips-dataelement-190	Certainty	 CEN/TC 251 prEN 17269		
hl7ips-dataelement-184	Allergy/Intolerance	 CEN/TC 251 prEN 17269		
hl7ips-dataelement-185	Diagnosis	 CEN/TC 251 prEN 17269		
hl7ips-dataelement-186	Clinical Status	 CEN/TC 251 prEN 17269		
hl7ips-dataelement-192	Reaction	 CEN/TC 251 prEN 17269		
Uses 4 templates				
Uses	Uses	as	Name	Version
	2.16.840.1.113883.10.22.4.6	Containment	 IPS Reaction Manifestation (STU1)	DYNAMIC

	<p>2.16.840.1.113883.10.22.4.18 Containment  IPS Criticality Observation (STU1) DYNAMIC</p> <p>2.16.840.1.113883.10.22.10 Containment  IPS Allergy Certainty Observation (STU1) DYNAMIC</p> <p>2.16.840.1.113883.10.22.4.21 Containment  IPS Allergy Status Observation (STU1) DYNAMIC</p>
Relationship	<p>Adaptation: template 2.16.840.1.113883.10.20.1.18 (DYNAMIC)</p> <p>Adaptation: template 1.3.6.1.4.1.19376.1.5.3.1.4.5 (DYNAMIC)</p> <p>Adaptation: template 1.3.6.1.4.1.19376.1.5.3.1.4.6 (DYNAMIC)</p>
Example	<p>Example</p> <pre><observation classCode="OBS" moodCode="EVN"> <templateId root="2.16.840.1.113883.10.22.4.1"/> <id root=" " extension=" "/> <!-- This is the code that shows what kind of allergy or intolerance --> <code code="OINT" displayName="Allergy or Intolerance" codeSystem="2.16.840.1.113883.5.4"/> <text> <reference value="#ref1"/> </text> <statusCode code="completed"/> <effectiveTime> <low value="20170701"/> </effectiveTime> <!-- This is the allergen - the substance that caused the allergy --> <participant typeCode="CSM"> <participantRole classCode="MANU"> <playingEntity classCode="MMAT"> <code code=" " codeSystem=" "> <originalText> <reference value="#substance"/> </originalText> </code> <name>...</name> </playingEntity> </participantRole> </participant> <!-- This is how the allergy manifests itself --> <entryRelationship typeCode="MFST" inversionInd="true"> <!-- template 2.16.840.1.113883.10.22.4.6 'IPS Reaction Manifestation' (dynamic) --> </entryRelationship> <entryRelationship typeCode="SUBJ" inversionInd="true"> <!-- template 2.16.840.1.113883.10.22.4.18 'IPS Criticality Observation' (dynamic) --> </entryRelationship> <entryRelationship typeCode="SUBJ" inversionInd="true"> <!-- template 2.16.840.1.113883.10.22.4.19 'IPS Certainty Observation' (dynamic) --> </entryRelationship> <entryRelationship typeCode="REFR" inversionInd="false"> <!-- template 2.16.840.1.113883.10.22.4.21 'IPS Allergy Status Observation' (dynamic) --> </entryRelationship></pre>

	<pre></entryRelationship> </observation></pre>
Example	<p>No Known Allergies</p> <pre><observation classCode="OBS" moodCode="EVN"> <templateId root="2.16.840.1.113883.10.22.4.1"/> <code code="allergy" displayName="Allergy" codeSystem="2.16.840.1.113883.4.642.1.122"/> <statusCode code="completed"/> <effectiveTime> <low nullFlavor="UNK"/> </effectiveTime> <value code="X-NoKnownAllergy" displayName="No known allergy" codeSystem="2.16.840.1.113883.5.1150.2"/> </observation></pre>
Example	<p>No Information available about allergies or intolerances</p> <pre><observation classCode="OBS" moodCode="EVN"> <templateId root="2.16.840.1.113883.10.22.4.1"/> <code code="OINT" displayName="Allergy or Intolerance" codeSystem="2.16.840.1.113883.5.4"/> <statusCode code="completed"/> <effectiveTime> <low nullFlavor="NA"/> </effectiveTime> <value code="no-allergy-info" displayName="No information about allergies" codeSystem="2.16.840.1.113883.5.1150.1"/> </observation></pre>
Example	<p>Minimum Set (active propensity; agent known)</p> <pre><observation classCode="OBS" moodCode="EVN"> <templateId root="2.16.840.1.113883.10.22.4.1"/> <code code="OINT" displayName="Allergy or Intolerance" codeSystem="2.16.840.1.113883.5.4"/> <statusCode code="completed"/> <effectiveTime> <low nullFlavor="UNK"/> </effectiveTime> <participant typeCode="CSM"> <participantRole classCode="MANU"> <playingEntity classCode="MMAT"> <code code="13577000" codeSystem="2.16.840.1.113883.6.96" displayName="Nut"/> </playingEntity> </participantRole> </participant> </observation></pre>

Item	DT	Card	Conf	Description	Label
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hl7:observation	R			(IPS...nce)
	⌚ hl7ips-dataelement-184	🟡 Allergy/Intolerance	🟡 CEN/TC 251 prEN 17269	
└ @classCode	cs	1 ... 1	F	OBS
└ @moodCode	cs	1 ... 1	F	EVN
└ hl7:templateId	II	1 ... 1	M	(IPS...nce)
└ @root	uid	1 ... 1	F	2.16.840.1.113883.10.22.4.1
└ hl7:id	II	0 ... *	R	(IPS...nce)
└ hl7:code	CD.IPS	1 ... 1	M	This element describes whether this condition refers to an allergy, non-allergy intolerance, or unknown class of intolerance (not known to be allergy or intolerance). (IPS...nce)
	⌚ hl7ips-dataelement-191	🟡 Type of propensity	🟡 CEN/TC 251 prEN 17269	
	CONF	The value of @code shall be drawn from value set 2.16.840.1.113883.11.22.2 <i>Allergy or Intolerance Type</i> (DYNAMIC)		
└ hl7:text	ED	0 ... 1	R	The text element if present points to the text describing the problem being recorded; including any dates, comments, et cetera. The <reference> contains a URI in value attribute. This URI points to the free text description of the problem in the document that is being described.</reference> (IPS...nce)
└ hl7:reference	TEL	1 ... 1	M	(IPS...nce)
└ @value		1 ... 1	R	When used it shall refer to the narrative, typically #{label}-{generated-id}, e.g. #xxx-1
└ hl7:statusCode	CS	1 ... 1	M	A clinical document normally records only those condition observation events that have been completed, not observations that are in any other state. Therefore, the <statusCode> shall always have code='completed'.</statusCode> (IPS...nce)

<code>l @code</code>	cs	1 ... 1	F	completed	
<code>l hl7:effectiveTime</code>	IVL_TS	1 ... 1	M	The effectiveTime, also referred to as the "biologically relevant time" is the time at which the observation holds for the patient. For a provider seeing a patient in the clinic today, observing a history of penicillin allergy that developed five years ago, the effectiveTime is five years ago. The effectiveTime of the Allergy - Intolerance Observation may give an indication of whether or not the underlying allergy/intolerance is resolved. The <low> and <high> values should be no more precise than known, but as precise as possible.	(IPS...nce)
<code>l hl7:low</code>	IVXB_TS	1 ... 1	R	The effectiveTime/low (a.k.a. "onset date") asserts when the allergy/intolerance became biologically active.	(IPS...nce)
<code>l hl7:high</code>	IVXB_TS	0 ... 1	C	The effectiveTime/high (a.k.a. "resolution date") asserts when the allergy/intolerance became biologically resolved. If the date of resolution is not known, then effectiveTime/high will be present with a nullFlavor of "UNK".	(IPS...nce)
Constraint		If this condition is known to be resolved, then the effectiveTime/high would be present.			
Choice		0 ... 1		The coded form of the observation value can be used : <ul style="list-style-type: none">▪ either to indicate known absent conditions (e.g. NKA) or the nonavailability of information;▪ or to provide pre-coordinated codes describing the propensity to specific substances (e.g. allergy to nuts). The choice reflects these options. Elements to choose from: <ul style="list-style-type: none">▪ hl7:value[1]▪ hl7:value[2]	
<code>l hl7:value</code>	CD.IPS (preferred)	0 ... 1			(IPS...nce)

where [1]

	 hl7ips-dataelement-185	 Diagnosis	 CEN/TC 251 prEN 17269	
CONF	The value of @code comes preferably from value set 2.16.840.1.113883.11.22.10 <i>IPS Allergy or Intolerance Conditions</i> (DYNAMIC)			
 h17:value	CD.IPS (required)	0 ... 1	C	When the value is used to describe the absence of information the participant used for indicating the allergy agent shall be omitted. (IPS...nce)

where [2]

	 hl7ips-dataelement-182	 Allergies/Intolerances Content Status	 CEN/TC 251 prEN 17269	
CONF	The value of @code shall be drawn from value set 2.16.840.1.113883.11.22.9 <i>Absent or Unknown Allergies</i> (DYNAMIC)			
 h17:participant		0 ... 1	C	The substance that causes the allergy or intolerance should be specified in the <participant> structure. This is the preferred way an allergy is supposed to be expressed. However it is recognized that in some contexts a controlled vocabulary is used for describing the allergy to a substance; or for asserting known absence or unavailability of information. In this case the <participant> structure shall be omitted. The agent responsible for an allergy or adverse reaction is not always a manufactured material (for example, food allergies), nor is it necessarily consumed. The following constraints reflect limitations in the base CDA R2 specification, and should be used to represent any type of responsible agent, i.e., use playingEntity classCode = "MMAT" for all agents, manufactured or not. (IPS...nce)

	 hl7ips-dataelement-173	 Agent	 CEN/TC 251 prEN 17269
 @typeCode	cs	1 ... 1	F CSM

Constraint

IF the observation/value element is present and valued with a code derived form the 2.16.840.1.113883.11.22.9 Absent or Unknown Allergies value set THEN the observation/participant element used to describe the agent SHALL be omitted.

└ hl7:participantRole		1 ... 1	R		(IPS...nce)
└ @classCode	cs	1 ... 1	F	MANU	
└ hl7:playingEntity		1 ... 1	R		(IPS...nce)
└ @classCode	cs	1 ... 1	F	MMAT	
└ hl7:code	CD.IPS (preferred)	1 ... 1	R	Code for the substance causing the allergy or intolerance.	(IPS...nce)
	⌚ hl7ips-dataelement-196	🟡 Agent code	🟡 CEN/TC 251 prEN 17269		
	CONF	The value of @code comes preferably from value set 2.16.840.1.113883.11.22.11 <i>Adverse Reaction Agents</i> (DYNAMIC)			
└ hl7:entryRelationship		0 ... *	R	The contained entry describes the reactions that are manifestations (type-Code='MFST') of the reported allergy or intolerance. Contains 2.16.840.1.113883.10.22.4.6 <i>IPS Reaction Manifestation</i> (DYNAMIC)	(IPS...nce)
where [hl7:observation [hl7:code [concat(@code, @codeSystem) = doc('include/voc-2.16.840.1.113883.11.22.16-2017-04-07T000000.xml')] / valueSet [1] / conceptList / concept / concat(@code, @codeSystem) or @nullFlavor]]]	⌚ hl7ips-dataelement-192	🟡 Reaction	🟡 CEN/TC 251 prEN 17269		
└ @typeCode	cs	1 ... 1	F	MFST	
└ @inversionInd	cs	1 ... 1	F	true	
└ hl7:entryRelationship		0 ... 1	R	Criticality The contained entry describes the gravity of the potential risk for future life-threatening adverse reactions when exposed to a substance known to cause an adverse reaction in that individual. Contains 2.16.840.1.113883.10.22.4.18 <i>IPS Criticality Observation</i> (DYNAMIC)	(IPS...nce)

where [hl7:observation [hl7:code [(@code = '82606-5' and @codeSystem = '2.16.840.1.113883.6.1')]]]

	hl7ips-dataelement-189		Criticality		CEN/TC 251 prEN 17269
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@typeCode cs 1 ... 1 F SUBJ

@inversionInd cs 1 ... 1 F true

hl7:entryRelationship		0 ... 1	R	Certainty or Verification Status The contained entry describes the certainty associated with a propensity, or potential risk, of a reaction to the identified substance. Contains 2.16.840.1.113883.10.22.10 IPS Allergy Certainty Observation (DYNAMIC)	(IPS...nce)
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where [hl7:observation [hl7:code [(@code = '66455-7' and @codeSystem = '2.16.840.1.113883.6.1')]]]

	hl7ips-dataelement-190		Certainty		CEN/TC 251 prEN 17269
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@typeCode cs 1 ... 1 F SUBJ

@inversionInd cs 1 ... 1 F true

hl7:entryRelationship		0 ... 1	R	Status of the Allergy or Intolerance The contained entry describes the current status of the allergy or intolerance, for example, whether it is active, in remission, resolved, and so on ... Contains 2.16.840.1.113883.10.22.4.21 IPS Allergy Status Observation (DYNAMIC)	(IPS...nce)
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where [hl7:observation [hl7:code [(@code = '33999-4' and @codeSystem = '2.16.840.1.113883.6.1') or @nullFlavor]]]

	hl7ips-dataelement-186		Clinical Status		CEN/TC 251 prEN 17269
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@typeCode cs 1 ... 1 F REFR

@inversionInd cs 1 ... 1 F false

9.4 IPS Allergy Status Observation

Id	2.16.840.1.113883.10.22.4.21	Effective Date	2017-05-24
Status	 Under pre-publication review	Version Label	STU1
Name	IPSAllergyStatusObservation	Display Name	IPS Allergy Status Observation

Description

This subordinated observation used by the allergy observation records information about the current status of an allergy or intolerance, for example, whether it is active, in remission, resolved, et cetera.

Context	Parent nodes of template element with id 2.16.840.1.113883.10.22.4.21						
Classification	CDA Entry Level Template						
Open/Closed	Open (other than defined elements are allowed)						
Associated with	Associated with 1 concept						
	<table border="1"> <thead> <tr> <th>Id</th> <th>Name</th> <th>Data Set</th> </tr> </thead> <tbody> <tr> <td>hl7ips-dataelement-186</td> <td> Clinical Status</td> <td> CEN/TC 251 prEN 17269</td> </tr> </tbody> </table>	Id	Name	Data Set	hl7ips-dataelement-186	 Clinical Status	 CEN/TC 251 prEN 17269
Id	Name	Data Set					
hl7ips-dataelement-186	 Clinical Status	 CEN/TC 251 prEN 17269					
Relationship	Specialization: template 2.16.840.1.113883.10.22.4.20 (DYNAMIC) Adaptation: template 1.3.6.1.4.1.19376.1.5.3.1.4.1.1 (2013-12-20)						
Example	<h3>Example</h3> <pre><observation classCode="OBS" moodCode="EVN"> <templateId root="2.16.840.1.113883.10.22.4.21"/> <templateId root="2.16.840.1.113883.10.22.4.20"/> <code code="33999-4" codeSystem="2.16.840.1.113883.6.1" displayName="Status"/> <text> <reference value="#cstatus-2"/> </text> <statusCode code="completed"/> <value code="active" displayName="Active" codeSystem="2.16.840.1.113883.4.642.3.155"/> </observation></pre>						

Item	DT	Card	Conf	Description	Label
hl7:observation					(IPS...ion)
└ @classCode	cs	0 ... 1	F	OBS	
└ @moodCode	cs	0 ... 1	F	EVN	
└ hl7:templateId	II	1 ... 1	M		(IPS...ion)
└ @root	uid	1 ... 1	F	2.16.840.1.113883.10.22.4.21	
└ hl7:templateId	II	1 ... 1	M		(IPS...ion)
└ @root	uid	1 ... 1	F	2.16.840.1.113883.10.22.4.20	
└ hl7:code	CD	1 ... 1	R	This observation is of clinical status, as indicated by the <code> element. This element must be present.	(IPS...ion)
└ @code	CONF	0 ... 1	F	33999-4	
└ @codeSystem		0 ... 1	F	2.16.840.1.113883.6.1 (LOINC)	
└ hl7:text	ED	0 ... 1	R	The <text> element is required and points to the text describing the problem being recorded; including any dates, comments, et cetera. The <reference> contains a URI in value attribute. This URI points to the free text description of the problem in the document that is being described.	(IPS...ion)
└ hl7:reference	TEL	1 ... 1	M		(IPS...ion)

<code>@value</code>		1 ... 1	R	Reference pointing to the narrative, typically <code>#{label}-{generated-id}</code> , e.g. <code>#xxx-1</code>	
<code>hl7:statusCode</code>	CS	1 ... 1	M	The code attribute of <code><statusCode></code> for all clinical status observations shall be completed. While the <code><statusCode></code> element is required in all acts to record the status of the act, the only sensible value of this element in this context is completed.	(IPS...ion)
<code>@code</code>	CONF	1 ... 1	F	completed	
<code>hl7:value</code>	CE.IPS	1 ... 1	R	The value element contains the clinical status.	(IPS...ion)
hl7ips-dataelement-186		Clinical Status		CEN/TC 251 prEN 17269	
CONF		The value of <code>@code</code> shall be drawn from value set 2.16.840.1.113883.11.22.42 <i>IPS Allergy Status Code (DYNAMIC)</i>			

9.5 IPS Body Author

Id	2.16.840.1.113883.10.22.4.14	Effective Date	2017-03-02
Status	Under pre-publication review	Version Label	STU1
Name	IPSBodyAuthor	Display Name	IPS Body Author

Description

This template represents the Author Participation (including the author timestamp). CDA R2 requires that Author and Author timestamp be asserted in the document header. From there, authorship propagates to contained sections and contained entries, unless explicitly overridden. The Author Participation template was added to those templates in scope for analysis in R2. Although it is not explicitly stated in all templates the Author Participation template can be used in any template.

Classification	CDA Entry Level Template
Open/Closed	Open (other than defined elements are allowed)

	Uses 1 template																															
Uses	Uses 2.16.840.1.113883.10.22.9.2 as Containment Name IPS CDA Device (STU1)	Version DYNAMIC																														
Relationship	Adaptation: template 2.16.840.1.113883.10.12.318 (2005-09-07) Adaptation: template 2.16.840.1.113883.10.20.22.4.119 (2015-08-13)																															
Example	<p>Example</p> <pre><templateId root="2.16.840.1.113883.10.22.4.14"> <time/> <assignedAuthor> <id root="1.2.3.999" extension="__example only__"/> <code code="..." codeSystem="1.2.3.999"/> <!-- choice: 0..1 element hl7:assignedPerson element hl7:assignedAuthoringDevice containing template 2.16.840.1.113883.10.22.9.2 (dynamic) --> <representedOrganization> <id root="1.2.3.999" extension="__example only__"/> <name>...</name> <telecom value="tel:+1-12345678"/> <addr></addr> </representedOrganization> </assignedAuthor></pre>																															
	<table border="1"> <thead> <tr> <th>Item</th><th>DT</th><th>Card</th><th>Conf</th><th>Description</th><th>Label</th></tr> </thead> <tbody> <tr> <td>hl7:templateId</td><td>II</td><td>1 ... 1</td><td>M</td><td></td><td>(IPS...hor)</td></tr> <tr> <td> └ @root</td><td>uid</td><td>1 ... 1</td><td>F</td><td>2.16.840.1.113883.10.22.4.14</td><td></td></tr> <tr> <td> hl7:time</td><td>TS.IPS.TZ</td><td>1 ... 1</td><td>R</td><td></td><td>(IPS...hor)</td></tr> <tr> <td> hl7:assignedAuthor</td><td></td><td>1 ... 1</td><td>M</td><td></td><td>(IPS...hor)</td></tr> </tbody> </table>		Item	DT	Card	Conf	Description	Label	hl7:templateId	II	1 ... 1	M		(IPS...hor)	└ @root	uid	1 ... 1	F	2.16.840.1.113883.10.22.4.14		hl7:time	TS.IPS.TZ	1 ... 1	R		(IPS...hor)	hl7:assignedAuthor		1 ... 1	M		(IPS...hor)
Item	DT	Card	Conf	Description	Label																											
hl7:templateId	II	1 ... 1	M		(IPS...hor)																											
└ @root	uid	1 ... 1	F	2.16.840.1.113883.10.22.4.14																												
hl7:time	TS.IPS.TZ	1 ... 1	R		(IPS...hor)																											
hl7:assignedAuthor		1 ... 1	M		(IPS...hor)																											

└ hl7:id	II	1 ... *	R		(IPS...hor)
└ hl7:code		0 ... 1	R		(IPS...hor)
<i>Choice</i>		0 ... 1		Elements to choose from:	
				<ul style="list-style-type: none"> ▪ hl7:assignedPerson ▪ hl7:assignedAuthoringDevice containing template 2.16.840.1.113883.10.22.9.2 <i>IPS CDA Device (DYNAMIC)</i> 	
└ hl7:assignedPerson		0 ... 1	C		(IPS...hor)
└ @classCode	cs	0 ... 1	F	PSN	
└ @determinerCode	cs	0 ... 1	F	INSTANCE	
└ hl7:name	PN	1 ... *	R	Name of the person (e.g. the Healthcare Professional) authoring this document	(IPS...hor)
	Example			<pre><name> <given>John</given> <family>Español Smith</family> </name></pre>	
└ hl7:family		1 ... *	R		(IPS...hor)
└ hl7:given		1 ... *	R		(IPS...hor)
└ hl7:assignedAuthoringDevice		0 ... 1	C	Contains 2.16.840.1.113883.10.22.9.2 <i>IPS CDA Device (DYNAMIC)</i>	(IPS...hor)
	Example			<pre><assignedAuthoringDevice classCode="DEV" determinerCode="INSTANCE"> <softwareName displayName="Turriano"/> </assignedAuthoringDevice></pre>	

<code>h17:representedOrganization</code>		0 ... 1		(IPS...hor)
<code>h17:id</code>	II	0 ... *		(IPS...hor)
<code>h17:name</code>		0 ... *		(IPS...hor)
<code>h17:telecom</code>	TEL	0 ... *		(IPS...hor)
<code>h17:addr</code>	AD	0 ... *		(IPS...hor)

9.6 IPS CDA Device

Id	2.16.840.1.113883.10.22.9.2	Effective Date	2017-04-12
Status	Under pre-publication review	Version Label	STU1
Name	IPSCDADevice	Display Name	IPS CDA Device
Description	This template provides basic information about a device		
Classification	CDA Entry Level Template		
Open/Closed	Open (other than defined elements are allowed)		
Relationship	Adaptation: template 2.16.840.1.113883.10.12.315 (2005-09-07)		

Item	DT	Card	Conf	Description	Label
<code>@classCode</code>	cs	0 ... 1	F	DEV	

<code>@determinerCode</code>	cs	0 ... 1	F	INSTANCE	
<code>hl7:code</code>	CE	0 ... 1			(IPS...ice)
<code>hl7:manufacturerModelName</code>	SC	0 ... 1			(IPS...ice)
<code>hl7:softwareName</code>	SC	0 ... 1			(IPS...ice)

9.7 IPS Certainty Observation

Id	2.16.840.1.113883.10.22.4.19	Effective Date	2017-03-29
Status	🟡 Under pre-publication review	Version Label	STU1
Name	IPSCertaintyObservation	Display Name	IPS Certainty Observation
Description	This observation represents the verification status to support the clinical status of the condition.		
Context	Parent nodes of template element with id 2.16.840.1.113883.10.22.4.19		
Classification	CDA Entry Level Template		
Open/Closed	Open (other than defined elements are allowed)		
Relationship	Adaptation: template 2.16.840.1.113883.10.20.22.4.145 (2015-08-13) Adaptation: template 2.16.840.1.113883.10.12.303 (2005-09-07)		
Example	<p>Example</p> <pre><observation classCode="OBS" moodCode="EVN"> <templateId root="2.16.840.1.113883.10.22.4.19"/> <code code="66455-7" codeSystem="2.16.840.1.113883.6.1" displayName="Condition status"/> <statusCode code="completed"/> <value code="unconfirmed" displayName="Unconfirmed" codeSystem="2.16.840.1.113883.4.642.3.115"/> </observation></pre>		

Item	DT	Card	Conf	Description	Label
h17:observation					(IPS...ion)
└ @classCode	cs	1 ... 1	F	OBS	
└ @moodCode	cs	1 ... 1	F	EVN	
└ h17:templateId	II	1 ... 1	M		(IPS...ion)
└ @root	uid	1 ... 1	F	2.16.840.1.113883.10.22.4.19	
└ h17:code	CD	1 ... 1	M		(IPS...ion)
└ @code	CONF	1 ... 1	F	66455-7	
└ @codeSystem		1 ... 1	F	2.16.840.1.113883.6.1 (LOINC)	
└ @codeSystemName		1 ... 1	F	LOINC	
└ @displayName		1 ... 1	F	Condition status	
└ h17:statusCode	CS	1 ... 1	M		(IPS...ion)
└ @code	CONF	1 ... 1	F	completed	
└ h17:value	CD.IPS (required)	1 ... 1	M		(IPS...ion)
	CONF	The value of @code shall be drawn from value set 2.16.840.1.113883.11.22.8 IPS Condition Verification Status (DYNAMIC)			

9.8 IPS Comment Activity

Id	2.16.840.1.113883.10.22.4.22	Effective Date	2017-04-05
Status	Under pre-publication review	Version Label	STU1
Name	IPSCommentActivity	Display Name	IPS Comment Activity
Description			

Comments are free text data that cannot otherwise be recorded using data elements already defined by this specification. They are not to be used to record information that can be recorded elsewhere. For example, a free text description of the severity of an allergic reaction would not be recorded in a comment.

Context	Parent nodes of template element with id 2.16.840.1.113883.10.22.4.22
Classification	CDA Entry Level Template
Open/Closed	Open (other than defined elements are allowed)
Relationship	Adaptation: template 2.16.840.1.113883.10.20.22.4.64 (2015-08-13) Adaptation: template 2.16.840.1.113883.10.12.301 (2005-09-07)
Example	<p>Example</p> <pre><act classCode="ACT" moodCode="EVN"> <templateId root="2.16.840.1.113883.10.22.4.22"/> <code code="48767-8" codeSystem="2.16.840.1.113883.6.1"/> <text> <reference value="#example"/> </text> <author> <time/> <assignedAuthor> <id root="1.2.3.999" extension="__example only__"/> <addr>addr</addr> <!-- choice: 1..1 element hl7:assignedPerson element hl7:representedOrganization --> </assignedAuthor> </author> </act></pre>

Item	DT	Card	Conf	Description	Label
h17:act					(IPS...ity)
└ @classCode	cs	1 ... 1	F	ACT	
└ @moodCode	cs	1 ... 1	F	EVN	
	Constraint	Data elements defined elsewhere in the specification SHALL NOT be recorded using the Comment Activity			
└ h17:templateId	II	1 ... 1	M		(IPS...ity)
└ @root	uid	1 ... 1	F	2.16.840.1.113883.10.22.4.22	
└ h17:code	CD.IPS	1 ... 1	M		(IPS...ity)
└ @code		1 ... 1	F	48767-8	
└ @codeSystem	CONF	1 ... 1	F	2.16.840.1.113883.6.1 (LOINC)	
└ h17:text	ED	1 ... 1	M		(IPS...ity)
└ h17:reference		1 ... 1	M		(IPS...ity)
└ @value		1 ... 1	R		
	role	error			
	test	not(@value) or starts-with(@value, '#')			
	Message	This reference/@value SHALL begin with a '#' and SHALL point to its corresponding narrative (using the approach defined in CDA Release 2, section 4.3.5.1)			
Schematron assert					

└ hl7:author		0 ... 1			(IPS...ity)
└ hl7:time	TS.IPS.TZ	1 ... 1	R		(IPS...ity)
└ hl7:assignedAuthor		1 ... 1	M		(IPS...ity)
Constraint		The author, if present, SHALL include assignedPerson/name or representedOrganization/name			
└ hl7:id	II	1 ... 1	R		(IPS...ity)
└ hl7:addr	AD	1 ... *	M		(IPS...ity)
<i>Choice</i>					
		1 ... 1	Elements to choose from:		
			<ul style="list-style-type: none"> ▪ hl7:assignedPerson ▪ hl7:assignedAuthoringDevice 		
└ hl7:assignedPerson		0 ... 1	C		(IPS...ity)
└ hl7:name		0 ... *	R		(IPS...ity)
└ hl7:assignedAuthoringDevice		0 ... 1	C		(IPS...ity)
└ hl7:softwareName		0 ... 1	R		(IPS...ity)

9.9 IPS Criticality Observation

Id	2.16.840.1.113883.10.22.4.18	Effective Date	2017-03-27
Status	Under pre-publication review	Version Label	STU1
Name	IPSCriticalityObservation	Display Name	IPS Criticality Observation

Description

This observation represents the gravity of the potential risk for future life-threatening adverse reactions when exposed to a substance known to cause an adverse reaction in that individual. When the worst case result is assessed to have a life-threatening or organ system threatening potential, it is considered to be of high criticality.

Context	Parent nodes of template element with id 2.16.840.1.113883.10.22.4.18								
Classification	CDA Entry Level Template								
Open/Closed	Open (other than defined elements are allowed)								
Associated with 1 concept									
Associated with	<table border="1" style="width: 100%;"> <thead> <tr> <th style="text-align: left;">Id</th> <th style="text-align: left;">Name</th> <th style="text-align: left;">Data Set</th> </tr> </thead> <tbody> <tr> <td> hl7ips-dataelement-189</td> <td> Criticality</td> <td> CEN/TC 251 prEN 17269</td> </tr> </tbody> </table>			Id	Name	Data Set	hl7ips-dataelement-189	Criticality	CEN/TC 251 prEN 17269
Id	Name	Data Set							
hl7ips-dataelement-189	Criticality	CEN/TC 251 prEN 17269							
Relationship	Adaptation: template 2.16.840.1.113883.10.20.22.4.145 (2015-08-13) Adaptation: template 2.16.840.1.113883.10.12.303 (2005-09-07)								
Example	Example <pre><observation classCode="OBS" moodCode="EVN"> <templateId root="2.16.840.1.113883.10.22.4.18"/> <code code="82606-5" codeSystem="2.16.840.1.113883.6.1"/> <statusCode code="completed"/> <value code="CRITH" displayName="high criticality" codeSystem="2.16.840.1.113883.5.1063"/> </observation></pre>								
	Item	DT	Card						
	Conf	Description	Label						

hl7:observation					(IPS...ion)
└ @classCode	cs	1 ... 1	F	OBS	
└ @moodCode	cs	1 ... 1	F	EVN	
└ hl7:templateId	II	1 ... 1	M		(IPS...ion)
└ @root	uid	1 ... 1	F	2.16.840.1.113883.10.22.4.18	
└ hl7:code	CD	1 ... 1	M		(IPS...ion)
└ @code	CONF	1 ... 1	F	82606-5	
└ @codeSystem		1 ... 1	F	2.16.840.1.113883.6.1 (LOINC)	
└ hl7:statusCode	CS	1 ... 1	M		(IPS...ion)
└ @code	CONF	1 ... 1	F	completed	
└ hl7:value	CD.IPS (required)	1 ... 1	M		(IPS...ion)
⌚ hl7ips-dataelement-189 🟡 Criticality 🟡 CEN/TC 251 prEN 17269					
CONF	The value of @code shall be drawn from value set 2.16.840.1.113883.11.22.60 <i>Allergy-intolerance Criticality (DYNAMIC)</i>				

9.10 IPS Immunization

Id	2.16.840.1.113883.10.22.4.15	Effective Date	2017-03-08
Status	Under pre-publication review	Version Label	STU1
Name	IPSImmunization	Display Name	IPS Immunization
Description	An Immunization entry describes immunization substance administrations that have actually occurred.		
Context	Parent nodes of template element with id 2.16.840.1.113883.10.22.4.15		
Classification	CDA Entry Level Template		
Open/Closed	Open (other than defined elements are allowed)		
Associated with	Associated with 3 concepts		
	Id	Name	Data Set
	hl7ips-dataelement-45	Immunization	CEN/TC 251 prEN 17269
	hl7ips-dataelement-215	Product Administration Process	CEN/TC 251 prEN 17269
Uses	hl7ips-dataelement-53	Date of Immunization	CEN/TC 251 prEN 17269
	Uses 2 templates		
	Uses	as	Name
	2.16.840.1.113883.10.22.4.16	Containment	IPS Immunization Medication Information (STU1) DYNAMIC
	2.16.840.1.113883.10.12.318	Containment	CDA Author (Body) DYNAMIC
Relationship	Adaptation: template 2.16.840.1.113883.10.12.308 (2005-09-07) Adaptation: template 2.16.840.1.113883.10.20.22.4.52 (2015-08-01)		

Example	Example				
Item	DT	Card	Conf	Description	Label
hl7:substanceAdministration					(IPS...ion)
				⌚ hl7ips-dataelement-45 🟡 Immunization 🟡 CEN/TC 251 prEN 17269 ⌚ hl7ips-dataelement-215 🟡 Product Administration Process 🟡 CEN/TC 251 prEN 17269	
└ @classCode	cs	1 ... 1	F	SBADM	
└ @moodCode	cs	1 ... 1	F	EVN	
└ hl7:templateId	II	1 ... 1	M		(IPS...ion)
└ @root	uid	1 ... 1	F	2.16.840.1.113883.10.22.4.15	
└ hl7:id	II	0 ... *			(IPS...ion)
└ hl7:code	CV.IPS	1 ... 1	M		(IPS...ion)
	CONF	The value of @code shall be drawn from value set 2.16.840.1.113883.1.11.19709 ActSubstanceAdministrationImmunization-			

					Code (DYNAMIC)
└ hl7:statusCode	CS	1 ... 1	M		(IPS...ion)
└ @code	CONF	1 ... 1	F	completed	
└ hl7:effectiveTime	TS	1 ... 1			(IPS...ion)
	⌚ hl7ips-dataelement-53	📅 Date of Immunization	🌐 CEN/TC 251 prEN 17269		
	Example	<effectiveTime value="20170322"/>			
└ hl7:consumable		1 ... 1	M	Contains 2.16.840.1.113883.10.22.4.16 IPS Immunization Medication Information (DYNAMIC)	(IPS...ion)
where [not(@nullFlavor)] [hl7:manufacturedProduct]					
└ hl7:author		0 ... *	R	Contains 2.16.840.1.113883.10.12.318 CDA Author (Body) (DYNAMIC)	(IPS...ion)
where [hl7:assignedAuthor]					

9.11 IPS Immunization Medication Information

Id	2.16.840.1.113883.10.22.4.16	Effective Date	2017-03-08
Status	🟡 Under pre-publication review	Version Label	STU1
Name	IPSIImmunizationMedicationInformation	Display Name	IPS Immunization Medication Information
Description			

The Immunization Medication Information represents product information about the immunization substance. The vaccine manufacturer and vaccine lot number are typically recorded in the medical record and should be included if known.

Context	Parent nodes of template element with id 2.16.840.1.113883.10.22.4.16														
Classification	CDA Entry Level Template														
Open/Closed	Open (other than defined elements are allowed)														
Associated with 3 concepts															
Associated with	<table border="1"> <thead> <tr> <th>Id</th><th>Name</th><th>Data Set</th></tr> </thead> <tbody> <tr> <td>hl7ips-dataelement-54</td><td>🟡 Product Administered</td><td>🟡 CEN/TC 251 prEN 17269</td></tr> <tr> <td>hl7ips-dataelement-46</td><td>🟡 Immunizations Content Status</td><td>🟡 CEN/TC 251 prEN 17269</td></tr> <tr> <td>hl7ips-dataelement-52</td><td>🟡 Vaccine for type of disease</td><td>🟡 CEN/TC 251 prEN 17269</td></tr> </tbody> </table>			Id	Name	Data Set	hl7ips-dataelement-54	🟡 Product Administered	🟡 CEN/TC 251 prEN 17269	hl7ips-dataelement-46	🟡 Immunizations Content Status	🟡 CEN/TC 251 prEN 17269	hl7ips-dataelement-52	🟡 Vaccine for type of disease	🟡 CEN/TC 251 prEN 17269
Id	Name	Data Set													
hl7ips-dataelement-54	🟡 Product Administered	🟡 CEN/TC 251 prEN 17269													
hl7ips-dataelement-46	🟡 Immunizations Content Status	🟡 CEN/TC 251 prEN 17269													
hl7ips-dataelement-52	🟡 Vaccine for type of disease	🟡 CEN/TC 251 prEN 17269													
Uses 1 template															
Uses	<table border="1"> <thead> <tr> <th>Uses</th><th>as</th><th>Name</th><th>Version</th></tr> </thead> <tbody> <tr> <td>2.16.840.1.113883.10.22.9.1</td><td>Containment</td><td>🟡 IPS CDA Organization (STU1)</td><td>DYNAMIC</td></tr> </tbody> </table>			Uses	as	Name	Version	2.16.840.1.113883.10.22.9.1	Containment	🟡 IPS CDA Organization (STU1)	DYNAMIC				
Uses	as	Name	Version												
2.16.840.1.113883.10.22.9.1	Containment	🟡 IPS CDA Organization (STU1)	DYNAMIC												
Relationship	Adaptation: template 2.16.840.1.113883.10.12.312 (2005-09-07) Adaptation: template 2.16.840.1.113883.10.20.22.4.54 (2014-06-09)														
Example	<p>No previous immunizations</p> <pre><manufacturedProduct classCode="MANU"> <templateId root="2.16.840.1.113883.10.22.4.16"/> <manufacturedMaterial> <code code="no-known-immunizations" displayName="No known immunizations" codeSystem="2.16.840.1.113883.5.1150.1"/> </manufacturedMaterial> <manufacturerOrganization/> </manufacturedProduct></pre>														

Example	<p>MMR Vaccine</p> <pre><manufacturedProduct classCode="MANU"> <templateId root="2.16.840.1.113883.10.22.4.16"/> <manufacturedMaterial> <code code="61153008" displayName="Measles + Mumps + Rubella vaccine" codeSystem="2.16.840.1.113883.6.96"/> <lotNumberText/> </manufacturedMaterial> <manufacturerOrganization/> </manufacturedProduct></pre>					
Item	DT	Card	Conf	Description	Label	
hl7:manufacturedProduct					(IPS...ion)	
hl7ips-dataelement-54 Product Administered CEN/TC 251 prEN 17269						
└ @classCode		cs	1 ... 1	F	MANU	
└ hl7:templateId				II	1 ... 1	M
└ @root		uid	1 ... 1	F	2.16.840.1.113883.10.22.4.16	
└ hl7:manufacturedMaterial				1 ... 1	M	
└ hl7:code				CD.IPS (preferred)	1 ... 1	R
hl7ips-dataelement-46 Immunizations Content Status CEN/TC 251 prEN 17269 hl7ips-dataelement-52 Vaccine for type of disease CEN/TC 251 prEN 17269					(IPS...ion)	
└ CONF		The value of @code comes preferably from value set 2.16.840.1.113883.11.22.43 <i>Absent or Unknown Immunization</i> (DYNAMIC) or The value of @code comes preferably from value set 2.16.840.1.113883.11.22.44 <i>IPS Vaccines</i> (DYNAMIC)				

L h17:translation	CE	0 ... *		(IPS...ion)
	CONF	shall be drawn from concept domain "Product Code"		
L h17:lotNumberText	ST	0 ... 1		(IPS...ion)
L h17:manufacturerOrganization		0 ... 1	R	Contains 2.16.840.1.113883.10.22.9.1 IPS CDA Organization (DYNAMIC) (IPS...ion)

9.12 IPS Internal Reference

Id	2.16.840.1.113883.10.22.4.31	Effective Date	2017-05-02			
Status	Under pre-publication review	Version Label	STU1			
Name	IPSEntryInternalReference	Display Name	IPS Internal Reference			
Description	This template is used to reference (point to) information contained in other entries within the same document.					
Classification	CDA Entry Level Template					
Open/Closed	Open (other than defined elements are allowed)					
Relationship	Adaptation: template 1.3.6.1.4.1.19376.1.5.3.1.4.4.1 (2013-12-20)					
Example	<p>Reference to an uncoded element</p> <pre><act classCode="ACT" moodCode="cs"> <templateId root="2.16.840.1.113883.10.22.4.31"/> <id root="1.2.3.999" extension="__example only__"/> <code nullFlavor="NA"/> </act></pre>					
	Item	DT	Card	Conf	Description	Label

hl7:act			R		(IPS...nce)
└ @classCode	cs	1 ... 1	F	ACT	
└ @moodCode	cs	1 ... 1	R	The @moodCode of the reference SHALL match the @moodCode of the referenced element	
	Variable let	Name	refMoodCode		
		Value	@moodCode		
	Variable let	Name	refID		
		Value	concat(hl7:id[1]/@root,'#',hl7:id[1]/@extension)		
	Variable let	Name	refCode		
		Value	concat(hl7:code[1]/@code,'#',hl7:code[1]/@codeSystem)		
	Variable let	Name	reffedObject		
		Value	(ancestor::hl7:ClinicalDocument//*:id[concat(@root,'#',@extension)=\$refID][not(preceding-sibling::hl7:templateId/@root='1.3.6.1.4.1.19376.1.5.3.1.4.4.1')]/parent::*)[1]		
		role	error		
	Schematron assert	test	not(exists(\$reffedObject)) or \$reffedObject[@moodCode=\$refMoodCode]		
		Message	The @moodCode of the reference SHALL match the @moodCode of the referenced element		
		role	error		
	Schematron assert	test	exists(\$reffedObject)		
		Message	The root and extension attributes SHALL identify an element defined elsewhere in the same document.		
		role	error		
	Schematron assert	test	not(exists(\$reffedObject)) or (\$reffedObject[not(*:code/@code)] and hl7:code[@nullFlavor='NA']) or \$reffedObject/*:code[concat(@code,'#',@codeSystem)=\$refCode]		

			Message	The code of the reference SHALL match the code of the referenced element	
└ h17:templateId	II	1 ... 1	M		(IPS...nce)
└ @root	uid	1 ... 1	F	2.16.840.1.113883.10.22.4.31	
└ h17:id	II	1 ... 1	R	This element shall be present. The root and extension attributes shall identify an element defined elsewhere in the same document.	(IPS...nce)
└ h17:code	CD	1 ... 1	R	This element shall be present. It shall be valued when the internal reference is to an element that has a <code> element, and shall have the same attributes as the <code> element in the act it references. If the element it references does not have a <code> element, then the nullFlavor attribute should be set to "NA".	(IPS...nce)
└ @nullFlavor	cs	0 ... 1	F	NA	

9.13 IPS Laboratory Result Observation

Id	2.16.840.1.113883.10.22.4.13	Effective Date	2017-03-21
Status	 Under pre-publication review	Version Label	STU1
Name	IPSLaboratoryResultObservation	Display Name	IPS Laboratory Result Observation
Description			

This template constrains the results of a clinical laboratory observation. The result observation includes a statusCode to allow recording the status of an observation. “Pending” results (e.g., a test has been run but results have not been reported yet) should be represented as “active” ActStatus.

Context	Parent nodes of template element with id 2.16.840.1.113883.10.22.4.13
Classification	CDA Entry Level Template
Open/Closed	Open (other than defined elements are allowed)

	Uses 2 templates													
Uses	<table border="1"> <thead> <tr> <th>Uses</th><th>as</th><th>Name</th><th>Version</th></tr> </thead> <tbody> <tr> <td>2.16.840.1.113883.10.22.4.14</td><td>Containment</td><td> IPS Body Author (STU1)</td><td>DYNAMIC</td></tr> <tr> <td>2.16.840.1.113883.10.22.4.22</td><td>Containment</td><td> IPS Comment Activity (STU1)</td><td>DYNAMIC</td></tr> </tbody> </table>	Uses	as	Name	Version	2.16.840.1.113883.10.22.4.14	Containment	 IPS Body Author (STU1)	DYNAMIC	2.16.840.1.113883.10.22.4.22	Containment	 IPS Comment Activity (STU1)	DYNAMIC	
Uses	as	Name	Version											
2.16.840.1.113883.10.22.4.14	Containment	 IPS Body Author (STU1)	DYNAMIC											
2.16.840.1.113883.10.22.4.22	Containment	 IPS Comment Activity (STU1)	DYNAMIC											
Relationship	<p>Adaptation: template 2.16.840.1.113883.10.12.303 (2005-09-07) Adaptation: template 2.16.840.1.113883.10.20.22.4.2 (2015-08-01) Adaptation: template 2.16.840.1.113883.10.22.4.10 (2017-03-02)</p>													
Example	<p>Example</p> <pre> <observation classCode="OBS" moodCode="EVN"> <templateId root="2.16.840.1.113883.10.22.4.13"/> <id root="1.2.3.999" extension="--example only--"/> <code codeSystem="2.16.840.1.113883.6.1" code="41995-2" displayName="Hemoglobin A1c [Mass/volume] in Blood"/> <statusCode code="completed"/> <effectiveTime> <low value="20171113173215"/> </effectiveTime> <value xsi:type="PQ" value="4.8" unit="%"/> <interpretationCode code="H" displayName="High" codeSystem="2.16.840.1.113883.5.83"/> <author> <!-- template 2.16.840.1.113883.10.22.4.14 'IPS Body Author' (dynamic) --> </author> <referenceRange> <observationRange> <value xsi:type="IVL_PQ"> <low value="1.5" unit="%"/> <high value="4.5" unit="%"/> </value> <interpretationCode code="N" codeSystem="2.16.840.1.113883.5.83"/> </observationRange> </referenceRange> <entryRelationship typeCode="COMP"> <!-- template 2.16.840.1.113883.10.22.4.22 'IPS Comment Activity' (dynamic) --> </entryRelationship> </observation></pre>													
	<table border="1"> <thead> <tr> <th>Item</th><th>DT</th><th>Card</th><th>Conf</th><th>Description</th><th>Label</th></tr> </thead> <tbody> <tr> <td>hl7:observation</td><td></td><td></td><td></td><td></td><td>(IPS...ion)</td></tr> </tbody> </table>	Item	DT	Card	Conf	Description	Label	hl7:observation					(IPS...ion)	
Item	DT	Card	Conf	Description	Label									
hl7:observation					(IPS...ion)									

<code>└ @classCode</code>	cs	1 ... 1	F	OBS	
<code>└ @moodCode</code>	cs	1 ... 1	F	EVN	
<code>└ hl7:templateId</code>	II	1 ... 1	M		(IPS...ion)
<code>└ @root</code>	uid	1 ... 1	F	2.16.840.1.113883.10.22.4.13	
<code>└ hl7:id</code>	II	0 ... *	R		(IPS...ion)
<code>└ hl7:code</code>	CD.IPS	1 ... 1	M		(IPS...ion)
	CONF	The value of @code shall be drawn from value set 2.16.840.1.113883.11.22.39 <i>IPS Results Observation Laboratory</i> (DY-NAMIC)			
<code>└ hl7:statusCode</code>	CS	1 ... 1	M		(IPS...ion)
	CONF	The value of @code shall be drawn from value set 2.16.840.1.113883.1.11.19890 <i>x_ActStatusActiveComplete</i> (DY-NAMIC)			
<code>└ hl7:effectiveTime</code>	IVL_TS	1 ... 1	R		(IPS...ion)
<i>Choice</i>					Elements to choose from:
					<ul style="list-style-type: none"> ▪ <code>hl7:value[@xsi:type='CE.IPS']</code> ▪ <code>hl7:value[@xsi:type='PQ']</code> ▪ <code>hl7:value[@xsi:type='IVL_PQ']</code> ▪ <code>hl7:value[@xsi:type='ST']</code> ▪ <code>hl7:value[@xsi:type='TS']</code> ▪ <code>hl7:value[@xsi:type='RTO_QTY_QTY']</code>

└ h17:value	CE.IPS (extensible)	0 ... 1	R	(IPS...ion)
where <code>[@xsi:type='CE.IPS']</code>				
	CONF	The value of @code should be drawn from value set 2.16.840.1.113883.11.22.46 <i>IPS Results Coded Values Laboratory</i> (DYNAMIC)		
	Example	Blood group A+ from SNOMED CT <code><value xsi:type="CE" code="278149003" codeSystem="2.16.840.1.113883.6.96" displayName="Blood group A Rh(D) positive"/></code>		
	Example	Germ susceptible to antimicrobial agent from HL7 vocabulary <code><value xsi:type="CE" code="S" codeSystem="2.16.840.1.113883.11.78" displayName="susceptible"/></code>		
└ h17:value	PQ	0 ... 1	R	(IPS...ion)
where <code>[@xsi:type='PQ']</code>				
	Constraint	If Observation/value is a physical quantity (xsi:type="PQ"), the unit of measure SHALL be selected from ValueSet UnitsOfMeasureCaseSensitive 2.16.840.1.113883.1.11.12839 DYNAMIC		
	Example	Result physical quantity (data type PQ): 136 mmol per liter <code><value xsi:type="PQ" value="136" unit="mmol/L"/></code>		
└ h17:value	IVL_PQ	0 ... 1	R	(IPS...ion)
where <code>[@xsi:type='IVL_PQ']</code>				
	Example	Result interval of physical quantities (data type IVL_PQ): 150 - 400 Billion per 10 exp 9 liter <code><value xsi:type="IVL_PQ"> <low value="150" unit="10+9/1"/> <high value="400" unit="10+9/1"/> </value></code>		
└ h17:value	ST	0 ... 1	R	(IPS...ion)

where `[@xsi:type='ST']`

	Example	Result free text (data type ST) <code><value xsi:type="ST">slight macrocytosis, check on alcohol consumption</value></code>		
<code>└ h17:value</code>	TS	0 ... 1	R	(IPS...ion)

where `[@xsi:type='TS']`

	Example	Result time stamp (data type TS): 6-Aug-2014 <code><value xsi:type="TS" value="20140806"/></code>		
<code>└ h17:value</code>	RTO_QTY_QTY	0 ... 1	R	(IPS...ion)

where `[@xsi:type='RTO_QTY_QTY']`

	Example	Result ratio (data type RTO_QTY_QTY): 1/179 <code><value xsi:type="RTO_QTY_QTY"> <numerator xsi:type="INT" value="1"/> <denominator xsi:type="INT" value="179"/> </value></code>		
<code>└ h17:interpretationCode</code>	CE.IPS	0 ... 1	R	(IPS...ion)
	CONF	The value of @code shall be drawn from value set 2.16.840.1.113883.1.11.78 <i>ObservationInterpretation</i> (DYNAMIC)		

<code>└ h17:author</code>		0 ... *	R	Contains 2.16.840.1.113883.10.22.4.14 <i>IPS Body Author</i> (DYNAMIC)
---------------------------	--	---------	---	--

where `[h17:assignedAuthor]`

<code>└ h17:referenceRange</code>		0 ... 1	R	The referenceRange is constrained to represent the normal range for this observation and this patient.
<code>└ h17:observationRange</code>		1 ... 1	M	(IPS...ion)

└ h17:code	CD		NP		(IPS...ion)
└ h17:value	ANY	1 ... 1	M		(IPS...ion)
└ h17:interpretationCode	CE.IPS	0 ... 1			(IPS...ion)
└ @code	CONF	0 ... 1	F	N	
└ @codeSystem		0 ... 1	F	2.16.840.1.113883.5.83 (Observation Interpretation)	
└ h17:entryRelationship		0 ... *		Contains 2.16.840.1.113883.10.22.4.22 IPS Comment Activity (DYNAMIC)	(IPS...ion)
where [b17:act [b17:code [(@code = '48767-8' and @codeSystem = '2.16.840.1.113883.6.1')]]]					
└ @typeCode	cs	1 ... 1	F	COMP	

9.14 IPS Manufactured Material

Id	2.16.840.1.113883.10.22.4.3	Effective Date	2016-11-10
Status	🟡 Under pre-publication review	Version Label	STU1
Name	IPSMedMaterial	Display Name	IPS Manufactured Material

Description

This entry provides details about the medicinal product.

Due to the current absence of global product identifiers the product is described through a set of identification and descriptive attributes (e.g. active substances, strength, unit of presentation,...) that may be used to integrate jurisdictional product codes.

This shortage will be likely overcome when the ISO IDMP identifiers will be available for concrete usage in the next years, as well as the globally used value sets for products attributes agreed by the

ISO IDMP implementation guides. (e.g. GInAs for substances).

Even though there is a quite common consensus about the attributes that should be provided in order to describe a medicine in the context of the international patient summary (e.g. the list of active substances, the strength(s); the administrable pharmaceutical forms;..), this template doesn't require any of them, recommending, above all for cross-borders services, to provide all the available information that could be helpful for the identification of medications.

Jurisdictions could specialize this template making some ofthese attributes required.

It is also recognized that in many contexts structured information about the product, might not be available, and only textual information for describing products (e.g. the product scientific name "amoxicillin 400mg/5mL suspension") or some of their attributes (e.g. textual strength "875 mg + 125 mg"; "amoxycillin and clavulanic acid") could be used.

This template attempts to provide a solution that takes in account this current complexity being also ready for including the future IDMP-based solution as soon as they will become available for concrete use.

Since the CDA R2.0 model support only a very limited set of information about the products, extensions based on the R_ProductList (Common Product Model) CMET have been used for conveying such information, aiming to align this solution with that that will be likely used for the IDMP implementation Guide.

Classification	CDA Entry Level Template		
Open/Closed	Open (other than defined elements are allowed)		
Associated with 7 concepts			
Id	Name		Data Set
hl7ips-dataelement-133	 Strength		 CEN/TC 251 prEN 17269
hl7ips-dataelement-171	 Product Common Name (and Strength)		 CEN/TC 251 prEN 17269
hl7ips-dataelement-117	 Brand Name		 CEN/TC 251 prEN 17269
Associated with	hl7ips-dataelement-132	 Substance code	 CEN/TC 251 prEN 17269
	hl7ips-dataelement-227	 Pharmaceutical dose form	 CEN/TC 251 prEN 17269
	hl7ips-dataelement-105	 Product Code	 CEN/TC 251 prEN 17269
	hl7ips-dataelement-170	 Active ingredient List	 CEN/TC 251 prEN 17269
Relationship	Adaptation: template 2.16.840.1.113883.10.12.311 (2005-09-07)		

Adaptation: template 2.16.840.1.113883.3.1937.777.11.10.147 (2016-05-10 22:43:03)

Example

```
<manufacturedMaterial>
  <!-- Example with all the IDMP Levels (PhPID, MPID, PCID) and other product attributes (e.g. ingredients, ATC Code, strengths) -->
  <templateId root="2.16.840.1.113883.10.22.4.3"/>
  <code codeSystem="" code="MPID" displayName="" CodeSystemName="MP EMA"/>
  <name>Medicinal Product Name</name>
  <pharm:formCode codeSystem="0.4.0.127.0.16.1.1.2.1" code="10219000" displayName="tablet" CodeSystemName="EDQM"/>
  <pharm:asContent>
    <!-- Packaged Medicinal Product (PC) -->
    <pharm:containerPackagedProduct>
      <!-- PC ID-->
      <pharm:code codeSystem=" " code="PCID" displayName=" " />
      <pharm:name>...</pharm:name>
      <pharm:formCode codeSystem="0.4.0.127.0.16.1.1.2.1" code="" displayName="" CodeSystemName="EDQM"/>
    </pharm:containerPackagedProduct>
  </pharm:asContent>
  <pharm:asSpecializedKind classCode="GRIC">
    <!-- Pharmaceutical Substance (ATC Code)-->
    <pharm:generalizedMaterialKind classCode="MMAT">
      <!-- Pharmaceutical Substance (ATC Code)-->
      <pharm:code code=" " codeSystem="2.16.840.1.113883.6.73" displayName=" " codeSystemName="WHO ATC"/>
    </pharm:generalizedMaterialKind>
  </pharm:asSpecializedKind>
  <pharm:asSpecializedKind>
    <!-- Pharmaceutical Product (PhP) -->
    <pharm:generalizedMaterialKind classCode="MMAT">
      <pharm:code code="PhPID" codeSystem=" " displayName=" " codeSystemName="PhP EMA"/>
      <pharm:name>...</pharm:name>
    </pharm:generalizedMaterialKind>
  </pharm:asSpecializedKind>
  <!-- list of active ingredients -->
  <pharm:ingredient classCode="ACTI" determinerCode="KIND">
    <pharm:quantity>
      <!-- strength -->
      <numerator xsi:type="PQ" value="20" unit="mg"/>
      <denominator xsi:type="PQ" value="1" unit="{tablet}"/>
    </pharm:quantity>
    <pharm:ingredientSubstance>
      <pharm:code codeSystem=" " code="SubstanceID" displayName=" " CodeSystemName="G-SRS"/>
      <pharm:name>...</pharm:name>
    </pharm:ingredientSubstance>
  </pharm:ingredient>
</manufacturedMaterial>
```

Example

Example

```
<manufacturedMaterial classCode="MMAT" determinerCode="KIND">
```

```

<templateId root="2.16.840.1.113883.10.22.4.3"/>
<code code=".." codeSystem="1.2.3.999"/>
<name>name</name>
<pharm:formCode code="10101000" displayName="Oral drops, solution" codeSystem="0.4.0.127.0.16.1.1.2.1"/>
<pharm:asContent classCode="CONT">
  <pharm:containerPackagedProduct classCode="CONT" determinerCode="INSTANCE">
    <pharm:code/>
    <pharm:name/>
    <pharm:formCode code="..." displayName="..." codeSystem="0.4.0.127.0.16.1.1.2.1"/>
    <pharm:capacityQuantity value="..." unit="..."/>
    <pharm:asContent classCode="CONT">
      <pharm:containerPackagedProduct classCode="CONT" determinerCode="INSTANCE">
        <pharm:code/>
        <pharm:name/>
        <pharm:formCode code="..." displayName="..." codeSystem="0.4.0.127.0.16.1.1.2.1"/>
        <pharm:asContent classCode="CONT">
          <pharm:containerPackagedProduct classCode="CONT" determinerCode="INSTANCE">
            <pharm:code/>
            <pharm:name/>
            <pharm:formCode code="..." displayName="..." codeSystem="0.4.0.127.0.16.1.1.2.1"/>
            </pharm:containerPackagedProduct>
          </pharm:asContent>
        </pharm:containerPackagedProduct>
      </pharm:asContent>
    </pharm:containerPackagedProduct>
  </pharm:asContent>
<pharm:asSpecializedKind classCode="GRIC">
  <pharm:generalizedMaterialKind classCode="MMAT">
    <pharm:code code=".." codeSystem="2.16.840.1.113883.6.73"/>
    <pharm:name/>
  </pharm:generalizedMaterialKind>
</pharm:asSpecializedKind>
<pharm:asSpecializedKind classCode="GRIC">
  <pharm:generalizedMaterialKind classCode="MMAT">
    <pharm:code/>
    <pharm:name/>
  </pharm:generalizedMaterialKind>
</pharm:asSpecializedKind>
<pharm:ingredient classCode="ACTI" determinerCode="KIND">
  <pharm:quantity>
    <numerator value="20" unit="mg"/>
    <denominator value="100" unit="mL"/>
  </pharm:quantity>
  <pharm:ingredientSubstance>
    <pharm:code/>
    <pharm:name/>
  </pharm:ingredientSubstance>
</pharm:ingredient>
</manufacturedMaterial>

```

Item	DT	Card	Conf	Description	Label
------	----	------	------	-------------	-------

hl7:manufacturedMaterial		0 ... *	R	(IPS...ial)
└ @classCode	cs	0 ... 1	F	MMAT
└ @determinerCode	cs	0 ... 1	F	KIND
└ hl7:templateId	II	1 ... 1	M	(IPS...ial)
└ @root	oid	1 ... 1	F	2.16.840.1.113883.10.22.4.3
└ hl7:code	CE.IPS	0 ... 1	R	<p>This element is generally used to identify a medicinal product. When the IDMP identifiers will be concretely available for usage this element will be used for conveying the Medicinal Product Identifier (MPID). For the time being, it could be optionally used for conveying jurisdictional or agreed cross jurisdictional medicinal product code.</p> <div style="display: flex; justify-content: space-between;"> ⌚ hl7ips-dataelement-105 🟡 Product Code 🟡 CEN/TC 251 prEN 17269 </div>
└ hl7:name	EN	0 ... 1	R	<p>This element is supposed to be valorized with the complete Medicinal Product Name as approved by the Medicines Regulatory Agency in a jurisdiction. The name may be applicable in one or more country/language combinations.</p> <div style="display: flex; justify-content: space-between;"> ⌚ hl7ips-dataelement-171 🟡 Product Common Name (and Strength) 🟡 CEN/TC 251 prEN 17269 </div> <div style="display: flex; justify-content: space-between;"> ⌚ hl7ips-dataelement-117 🟡 Brand Name 🟡 CEN/TC 251 prEN 17269 </div>
└ pharm:formCode	CE.IPS	0 ... 1	R	<p>Administrable Pharmaceutical Dose Form. This code represents the form of the medication (e.g. tablet, capsule, liquid) Since the EDQM Standards Terms, together with UCUM, is one of the IDMP terminologies actually available for usage, this code system has been selected as reference terminology for representing Pharmaceutical Dose forms; Packages and Route of Administration.</p>

					It is known that also alternative jurisdictional and international terminologies are known to be used for this concept domain, as NCI or SNOMED CT.	
	 hl7ips-dataelement-227		 Pharmaceutical dose form		 CEN/TC 251 prEN 17269	
CONF				The value of @code shall be drawn from value set 2.16.840.1.113883.11.22.25 <i>Medicine Dose-form</i> (DYNAMIC)		
Example				<pre><pharm:formCode code="10211000" codeSystem="0.4.0.127.0.16.1.1.2.1" codeSystemName="EDQM" displayName="Capsule, soft">...</pharm:formCode></pre>		
 pharm:asContent		0 ... *		<p>This structure describes the packaging of the medication. The <code><pharm:formCode></code> element provides the code for the particular package. If the package has a brand name, it can be described in the <code><pharm:name></code> element. The <code><pharm:capacityQuantity></code> element described the capacity of the packaging. For example, to represent 30 tablets, the <code><pharm:formCode></code> element at the <code><manufacturedMaterial></code> level must indicate tablets as the form, value attribute of the <code><pharm:capacityQuantity></code> element must have the value of 30, and the unit attribute can be 1 or <code>{tablet}</code> or omitted. In the cases where the unit attribute is not 1, UCUM units shall be used. The product might have a single (30 pills bottle) or multiple (5 vials 10 ml; box with 2 blisters of 20 tablets) layers of packaging. In the latter case, the most inner (nested) item represents the most outer package item. For example the case</p> <ul style="list-style-type: none"> \--Box \----2 blisters \-----20 tablets <p>is described as "20 tablets" contained by "a blister"; "2 blisters" contained by one box. The most inner package represents the Packaged Medicinal Product. When the IDMP Packaged Medicinal Product ID (PCID) will become actually available for usage, the most inner package <code><code></code> element will be used to convey the IDMP PCID.</p>	(IPS...ial)	
 @classCode	cs	1 ... 1	F	CONT		

		Packaged Medicinal Product with multiple layers packaging <pre><pharm:asContent> <pharm:containerPackagedProduct> <!-- Inner Package --> <pharm:code codeSystem="..." code="..." displayName="..."/> <pharm:asContent> <pharm:containerPackagedProduct> <!-- Intermediate Package --> <pharm:asContent> <pharm:containerPackagedProduct> <!-- Outer Package / Packaged Medicinal Product --> </pharm:containerPackagedProduct> </pharm:asContent> </pharm:containerPackagedProduct> </pharm:asContent> </pharm:containerPackagedProduct> </pharm:asContent></pre>
		Packaged Medicinal Product with formCode <pre><pharm:asContent> <pharm:containerPackagedProduct> <!-- Packaged Medicinal Product --> <pharm:code codeSystem="1.999.999" code="PC_ID" displayName="Packaged Product Name"/> <pharm:name>100 MIRACLE PILLS (TM)</pharm:name> <pharm:formCode codeSystem="0.4.0.127.0.16.1.1.2.1" code="30009000" displayName="Box" CodeSystemName="EDQM"/> </pharm:containerPackagedProduct> </pharm:asContent></pre>
<ul style="list-style-type: none"> └ pharm:quantity 	PQ	0 ... 1
		(IPS...ial)
<ul style="list-style-type: none"> └ @unit 	cs	0 ... 1
	CONF	The value of @unit shall be drawn from value set 2.16.840.1.113883.11.22.28 <i>Quantity Units (DYNAMIC)</i>
<ul style="list-style-type: none"> └ @value 		1 ... 1 R
<ul style="list-style-type: none"> └ pharm:containerPackagedProduct 		1 ... 1 R
		It represents the most inner Package Item or the Packaged Medicinal Product.
<ul style="list-style-type: none"> └ @classCode 	cs	1 ... 1 F
		CONT

	cs	1 ... 1	F	INSTANCE	
└ @determinerCode					
└ pharm:code		0 ... 1		If this is the most inner <pharm:containerPackagedProduct> than the <code> element can be used to convey the (IDMP) Packaged Medicinal Product ID (e.g. the IDMP PCID when it will become actually available for usage). The presence of the PCID indicates that that element represents the "Packaged Medicinal Product".	(IPS...ial)
└ pharm:name	ST	0 ... 1		It represents the Name of the Package Item or of the Packaged Medicinal Product. If this is the most inner <pharm:containerPackagedProduct> than this element can be used for the brand name.	(IPS...ial)
⌚ hl7ips-dataelement-117 🟡 Brand Name 🟡 CEN/TC 251 prEN 17269					
	Example	<pharm:name>AMOXIFEN (R) 20 compresse 20 mg</pharm:name>			
└ pharm:formCode	CE.IPS	0 ... 1	R	This element encodes the type of the most inner package item or of the or the Packaged Medicinal Product. Since the EDQM Standards Terms, together with UCUM, is one of the IDMP terminologies actually available for usage, this code system has been selected as reference terminology for representing Pharmaceutical Dose forms; Packages and Route of Administration.	(IPS...ial)
	CONF	The value of @code shall be drawn from value set 2.16.840.1.113883.11.22.27 Medicine Package (DYNAMIC)			
	Example	<pharm:formCode code="30007000" codeSystem="0.4.0.127.0.16.1.1.2.1" codeSystemName="EDQM" codeSystemVersion="2010" displayName="Blister">...</pharm:formCode>			
└ pharm:capacityQuantity	PQ	0 ... 1	R	It represents the functional capacity of the container: e.g. blister containing 20 tablets or ampule of 10 ml.	(IPS...ial)
└ @unit	cs	0 ... 1			
	CONF	The value of @unit shall be drawn from value set 2.16.840.1.113883.11.22.28 Quantity Units (DY-			

			NAMIC)	
└ @value		1 ... 1	R	
Example	<pharm:capacityQuantity value="20" unit="{tablet}" />			
Example	<pharm:capacityQuantity value="10" unit="mL"/>			
└ pharm:asContent		0 ... *	R	<p>In case of multiple layers of packaging (5 vials 10 ml; box with 2 blisters of 20 tablets) this element can be used for describing the intermediate Packaged Medicinal Product Item or the Packaged Medicinal Product.</p> <p>For example in the case \-Box \----2 blisters \-----20 tablets it describes the "2 blisters"</p> <p>In the case of \-Box \----5 vials it represents the Packaged Medicinal Product.</p>
└ @classCode	cs	1 ... 1	F	CONT
└ pharm:quantity	PQ	0 ... 1		(IPS...ial)
└ @unit	cs	0 ... 1		
	CONF			The value of @unit shall be drawn from value set 2.16.840.1.113883.11.22.28 <i>Quantity Units</i> (DYNAMIC)
└ @value		1 ... 1	R	
└ pharm:containerPackagedProduct		1 ... 1	R	<p>It represents the intermediate Package Item or the Packaged Medicinal Product</p>
└ @classCode	cs	1 ... 1	F	CONT

<code>└ @determinerCode</code>	cs	1 ... 1	F	INSTANCE	
<code>└ pharm:code</code>	CD.IPS	0 ... 1		If this is the most inner <pharm:containerPackagedProduct> than the <code> element can be used to convey the (IDMP) Packaged Medicinal Product ID (e.g. the IDMP PCID when it will become actually available for usage).	(IPS...ial)
<code>└ pharm:name</code>	ST	0 ... 1	R	It represents the Name of the Package Item or of the Packaged Medicinal Product If this is the most inner <pharm:containerPackagedProduct> than this element can be used for the brand name.	(IPS...ial)
	Example	<pharm:name>...</pharm:name>			
<code>└ pharm:formCode</code>	CE.IPS	1 ... 1	R	This element encodes the type of the most inner package item or of the or the Packaged Medicinal Product. Since the EDQM Standards Terms, together with UCUM, is one of the IDMP terminologies actually available for usage, this code system has been selected as reference terminology for representing Pharmaceutical Dose forms; Packages and Route of Administration.	(IPS...ial)
	CONF	The value of @code shall be drawn from value set 2.16.840.1.113883.11.22.27 <i>Medicine Package</i> (DYNAMIC)			
<code>└ pharm:capacityQuantity</code>	PQ	0 ... 1	R	It represents the functional capacity of the container: e.g. blister containing 20 tablets or ampule of 10 ml.	(IPS...ial)
<code>└ @unit</code>	cs	0 ... 1			
	CONF	The value of @unit shall be drawn from value set 2.16.840.1.113883.11.22.28 <i>Quantity Units</i> (DYNAMIC)			
<code>└ @value</code>		1 ... 1	R		

	Example	<pharm:capacityQuantity value="20" unit="{tablet}"/>		
	Example	<pharm:capacityQuantity value="10" unit="mL"/>		
└ pharm:asContent		0 ... *	R	In case of multiple layers of packaging (box with 2 blisters of 20 tablets) this element is used for describing the most outer Packaged Medicinal Product Item or the Packaged Medicinal Product. For example in the case \--Box \----2 blisters \-----20 tablets it describes the Packaged Medicinal Product.
└ @classCode	cs	1 ... 1	F	CONT
└ pharm:quantity	PQ	0 ... 1		(IPS...ial)
└ @unit	cs	0 ... 1		
	CONF	The value of @unit shall be drawn from value set 2.16.840.1.113883.11.22.28 <i>Quantity Units</i> (DYNAMIC)		
└ @value		1 ... 1	R	
└ pharm:containerPackagedProduct		1 ... 1	R	When present, it represents the the Packaged Medicinal Product
└ @classCode	cs	1 ... 1	F	CONT
└ @determinerCode	cs	1 ... 1	F	INSTANCE
└ pharm:code	CD.IPS	0 ... *		When present, it can be used to convey the (IDMP) Packaged Medicinal Product ID (e.g. the IDMP PCID when it will become actually available for usage).
└ pharm:name	ST	0 ... *	R	When present, it can be used for the representing the brand name.

<code>└ pharm:formCode</code>	CE.IPS	1 ... 1	R	When present, it encodes the type of the outer package. Since the EDQM Standards Terms, together with UCUM, is one of the IDMP terminologies actually available for usage, this code system has been selected as reference terminology for representing Pharmaceutical Dose forms; Packages and Route of Administration.	(IPS...ial)
	CONF			The value of @code shall be drawn from value set 2.16.840.1.113883.11.22.27 <i>Medicine Package</i> (DYNAMIC)	
<code>└ pharm:capacityQuantity</code>	PQ	0 ... 1	R	It represents the functional capacity of the container: e.g. blister containing 20 tablets or ampule of 10 ml.	(IPS...ial)
<code>└ @unit</code>	cs	0 ... 1			
	CONF			The value of @unit shall be drawn from value set 2.16.840.1.113883.11.22.28 <i>Quantity Units</i> (DYNAMIC)	
<code>└ @value</code>		1 ... 1	R		
	Example	<pharm:capacityQuantity value="20" unit="{tablet}" />			
	Example	<pharm:capacityQuantity value="10" unit="mL" />			
<code>└ pharm:asSpecializedKind</code>		0 ... 1	R	This module is used for representing the classification of the Substance according to the WHO Anatomical Therapeutic Chemical (ATC) Classification System. The classCode of "GRIC" identifies this structure as the representation of a generic equivalent of the medication described in the current Medicine entry.	(IPS...ial)
where [generalizedMaterialKind/code/@codeSystem='2.16.840.1.113883.6.73']					
<code>└ @classCode</code>	cs	1 ... 1	F	GRIC	
	Example	<pre><pharm:asSpecializedKind classCode="GRIC"> <pharm:generalizedMaterialKind classCode="MMAT"> <!-- Pharmaceutical Substance (ATC Code) --> <pharm:code code=" " codeSystem="2.16.840.1.113883.6.73" displayName=" "</pre>			

				<code>codeSystemName="WHO ATC"/></code> <code></pharm:generalizedMaterialKind></code> <code></pharm:asSpecializedKind></code>	
<code>pharm:generalizedMaterialKind</code>		1 ... 1	M	(IPS...ial)	
<code>@classCode</code>	cs	1 ... 1	F	MMAT	
<code>pharm:code</code>	CD.IPS	1 ... 1	R	The element contains the ATC code of this medicine. (IPS...ial)	
	CONF			The value of @code shall be drawn from value set 2.16.840.1.113883.11.22.29 WHO ATC (DYNAMIC)	
	Example			<code><pharm:code codeSystem="2.16.840.1.113883.6.73" code="" displayName="" codeSystemName="WHO ATC"/></code>	
<code>pharm:name</code>		0 ... 1		(IPS...ial)	
<code>pharm:asSpecializedKind</code>		0 ... *	R	<p>The Medicinal Product can be classified according to various classification systems, which may be jurisdictional or international. The classification system itself is specified using an appropriate identification system; the controlled term and the controlled term identifier shall be specified.</p> <p>When the IDMP Pharmaceutical Product Identifier(s) (PhPID Set) will become actually available for use, the PhPID will be represented by the generalizedMaterialKind/code element.</p>	(IPS...ial)
<code>@classCode</code>	cs	1 ... 1	F	GRIC	
	Example			<code><pharm:asSpecializedKind classCode="GRIC"></code> <code><pharm:generalizedMaterialKind classCode="MMAT"></code> <code><pharm:code code="PhPID_Lvl1" codeSystem="1.999.999" displayName="Pharmaceutical Product Name" codeSystemName="PhPID Level 1"/></code> <code><pharm:name/></code> <code></pharm:generalizedMaterialKind></code> <code></pharm:asSpecializedKind></code>	

└ pharm:generalizedMaterialKind			R		(IPS...ial)
└ @classCode	cs	1 ... 1	F	MMAT	
└ pharm:code	CD.IPS	1 ... 1	R	When the IDMP Pharmaceutical Product Identifier(s) (PhPID Set) will become actually available for use, this element will be used for representing the IDMP PhP Id. The level and the stratum of the PhPID will be distinguished by the OID of the code system.	(IPS...ial)
└ pharm:name		0 ... 1	R		(IPS...ial)
			hl7ips-dataelement-171		Product Common Name (and Strength)
			CEN/TC 251 prEN 17269		
└ pharm:ingredient		0 ... *	R	This module provides the list of the active substances used for this product; one or more substances may be present. The classCode of "ACTI" indicates that this is an active ingredient.	(IPS...ial)
			hl7ips-dataelement-170		Active ingredient List
			CEN/TC 251 prEN 17269		
└ @classCode	cs	1 ... 1	F	ACTI	
└ pharm:quantity		1 ... 1	M	The medication strength is represented as the ratio of the active ingredient(s) to a unit of medication. The <quantity> element contains the numerator and denominator of the strength ratio.</quantity>	(IPS...ial)
			hl7ips-dataelement-133		Strength
			CEN/TC 251 prEN 17269		
└ h17:numerator	PQ	1 ... 1	R		(IPS...ial)
└ @unit	cs	1 ... 1	R		

	CONF	The value of @unit shall be drawn from value set 2.16.840.1.113883.11.22.30 Medicine Strength Numerator (DYNAMIC)		
└ @value		1 ... 1	R	
└ h17:denominator	PQ	1 ... 1	R	(IPS...ial)
└ @unit	cs	1 ... 1	R	
	CONF	The value of @unit shall be drawn from value set 2.16.840.1.113883.11.22.31 Medicine Strength Denominator (DYNAMIC)		
└ @value		1 ... 1	R	
└ pharm:ingredientSubstance		1 ... 1	R	The active substance used for this product. The <code> element contains the coded representation of the ingredient and the <name> element may be used for the plain text representation.
└ @classCode	cs	1 ... 1	F	MMAT
└ @determinerCode	cs	1 ... 1	F	KIND
└ pharm:code	CD.IPS (extensible)	0 ... 1	C	The IDMP ISO 11238 standard addresses the identification and exchange of regulated information on substances. The Global Ingredient Archival System (GInAS) will provide a <u>common global identifier</u> for all of the substances used in medicinal products, providing a definition of substances globally consistent with this standard. Those identifiers however are yet available for concrete usage, therefore in this version of the template, SNOMED CT has been chosen as reference terminology also for the active substances. This choice will be revised based on the availability and the maturity of GInAS.
hl7ips-dataelement-132 Substance code CEN/TC 251 prEN 17269				

	CONF	The value of @code should be drawn from value set 2.16.840.1.113883.11.22.32 Medicine Active Substances (DYNAMIC)			
└ h17:originalText	ED	0 ... *			(IPS...ial)
└ h17:reference	TEL	0 ... *			(IPS...ial)
└ h17:translation	CD	0 ... *		This element can be used to provide alternative identifications for the described substance.	(IPS...ial)
└ pharm:name		0 ... 1	C	Name of the substance	(IPS...ial)
	Schematron assert	role	error		
		test	pharm:code or pharm:name		
		Message	Either the name or the code of the substance (or both) shall be provided		

9.15 IPS Medical Device

Id	2.16.840.1.113883.10.22.4.26	Effective Date	2017-04-11
Status	Under pre-publication review	Version Label	STU1
Name	IPSMedicalDevice	Display Name	IPS Medical Device
Description	The medical devices entry content module describes the kind of device that is, or has been used by the patient		
Context	Parent nodes of template element with id 2.16.840.1.113883.10.22.4.26		
Classification	CDA Entry Level Template		
Open/Closed	Open (other than defined elements are allowed)		

	Associated with 6 concepts		
	Id	Name	Data Set
Associated with	hl7ips-dataelement-57	Device	🟡 CEN/TC 251 prEN 17269
	hl7ips-dataelement-60	Device Identifier	🟡 CEN/TC 251 prEN 17269
	hl7ips-dataelement-218	Device content Status	🟡 CEN/TC 251 prEN 17269
	hl7ips-dataelement-58	Device Type	🟡 CEN/TC 251 prEN 17269
	hl7ips-dataelement-59	Use start date	🟡 CEN/TC 251 prEN 17269
	hl7ips-dataelement-150	Use end date	🟡 CEN/TC 251 prEN 17269
Relationship	Adaptation: template 1.3.6.1.4.1.12559.11.10.1.3.1.3.5 (2013-12-20)		
Example	Example		
Example	<pre><supply moodCode="EVN" classCode="SPLY"> <templateId root="2.16.840.1.113883.10.22.4.26"/> <id root="2.16.840.1.113883.19.811.3"/> <text> <reference value="#dev_1"/> </text> <effectiveTime xsi:type="IVL_TS"> <low value="20070728"/> </effectiveTime> <participant typeCode="DEV"> <participantRole classCode="MANU"> <id/> <playingDevice classCode="DEV" determinerCode="INSTANCE"> <code code="304184000" displayName="Ankle joint implant" codeSystem="2.16.840.1.113883.6.96"/> </playingDevice> </participantRole> </participant> </supply></pre>		

Item	DT	Card	Conf	Description	Label
hl7:supply			R	The <supply> element shall be present. The moodCode attribute shall be EVN to reflect that a medical device has been provided.</supply>	(IPS...ice)
└ @classCode	cs	1 ... 1	F	SPLY	
└ @moodCode	cs	1 ... 1	F	EVN	
└ hl7:templateId	II	1 ... 1	M		(IPS...ice)
└ @root	uid	1 ... 1	F	2.16.840.1.113883.10.22.4.26	
└ hl7:id	II	0 ... *	R	This optional element identifies the provision of the device (e.g. implant procedure)	(IPS...ice)
└ hl7:text	ED	0 ... 1	R		(IPS...ice)
└ hl7:reference	TEL	1 ... 1	M		(IPS...ice)
└ @value		1 ... 1	R	Reference pointing to the narrative, typically #{label}-{generated-id}, e.g. #xxx-1	
└ hl7:effectiveTime	IVL_TS	1 ... 1	R	This element provides the interval of time corresponding to the device usage by/presence in the patient.	(IPS...ice)
└ @xsi:type		1 ... 1	F	IVL_TS	
└ hl7:low	TS	1 ... 1	R	The lower bound of the interval represents the start date/time.	(IPS...ice)
@ hl7ips-dataelement-59		Use start date		CEN/TC 251 prEN 17269	
└ hl7:high	TS	0 ... 1	C	The upper bound represents the end date/time. If it is not present, the device is still used by or present in the patient.	(IPS...ice)

	 hl7ips-dataelement-150	 Use end date	 CEN/TC 251 prEN 17269	
 hl7:participant		1 ... *	R	The device is represented as a participant in the supply structure. The following descriptions apply to the device structure. (IPS...ice)
 hl7ips-dataelement-57	cs	1 ... 1	F	DEV
 @typeCode				
	Example	<pre><participant typeCode="DEV"> <participantRole classCode="MANU"> <id root="1.2.3.999" extension="__example_only__"/> <playingDevice classCode="DEV" determinerCode="INSTANCE"> <code code="" codeSystem="" /> <!-- ... --> </playingDevice> </participantRole> </participant></pre>		
	Example	<p>Presence of implanted device not known (situation)</p> <pre><participant typeCode="DEV"> <participantRole classCode="MANU"> <playingDevice> <code code="000000" codeSystem="2.16.840.1.113883.6.96" displayName="Presence of implanted device not known (situation)"/> </playingDevice> <scopingEntity> <id root="2.16.840.1.113883.3.3719"/> </scopingEntity> </participantRole> </participant></pre>		
	Example	<p>No implant in situ (situation)</p> <pre><participant typeCode="DEV"> <participantRole classCode="MANU"> <playingDevice> <code code="000000" codeSystem="2.16.840.1.113883.6.96" displayName="No implant in situ (situation)"/> </playingDevice> <scopingEntity> <id root="2.16.840.1.113883.3.3719"/> </scopingEntity> </participantRole> </participant></pre>		
 hl7:participantRole		1 ... 1	R	(IPS...ice)

└ @classCode	cs	1 ... 1	F	MANU					
└ hl7:id	II	0 ... *	R	The device ID, e.g. using UDI, is represented by the id element of the participant role. This element is optional, as not all production identifiers (e.g., serial number, lot/batch number, distinct identification number) may be known to the provider or patient.	(IPS...ice)				
Example	UDI GS1: DeviceIdentifier 00844588003288, Serial# 10987654d321, Lot# 7654321D <code><id root="2.16.840.1.113883.3.3719" extension="{01}00844588003288{17}141120{10}7654321D{21}10987654d321"/></code>								
Example	UDI ICCBBA: DeviceIdentifier 00844588003288 <code><id root="2.16.840.1.113883.3.3719" extension="A9999XYZ100T0474"/></code>								
Example	UDI HIBCC: Serial# XYZ456789012345678, Lot# LOT123456789012345 <code><id root="2.16.840.1.113883.3.3719" extension="+H123PART-NO1234567890120/\$\$420020216LOT123456789012345/SXYZ456789012345678/16D20130202C"/></code>								
└ hl7:playingDevice		1 ... 1	R	The playingDevice element describes the device instance.	(IPS...ice)				
└ @classCode	cs	1 ... 1	F	DEV					
└ @determinerCode	cs	1 ... 1	F	INSTANCE					
└ hl7:code	CE.IPS (preferred)	1 ... 1	R	The device code describes the type of device (e.g. arm prosthesis, arterial stent).	(IPS...ice)				
CONF	The value of @code comes preferably from value set 2.16.840.1.113883.11.22.23 <i>IPS Medical Devices</i> (DYNAMIC) or The value of @code comes preferably from value set 2.16.840.1.113883.11.22.61 <i>Absent or Unknown Devices</i> (DYNAMIC)								

9.16 IPS Medication Information (detail)

Id	2.16.840.1.113883.10.22.4.2	Effective Date	2016-11-10
Status	🟡 Under pre-publication review	Version Label	STU1
Name	IPSManufacturedProduct	Display Name	IPS Medication Information (detail)
Description	This entry describes the consumable subject of the medication statement. All the information about the medication is provided in the included IPS Manufactured Material template.		
Classification	CDA Entry Level Template		
Open/Closed	Open (other than defined elements are allowed)		
Associated with	Associated with 1 concept		
	Id	Name	Data Set
	hl7ips-dataelement-2	🟡 Medicinal Product	🟡 CEN/TC 251 prEN 17269
Uses	Uses 1 template		
	Uses	as	Version
	2.16.840.1.113883.10.22.4.3	Include	🟡 IPS Manufactured Material (STU1) DYNAMIC
Relationship	Adaptation: template 2.16.840.1.113883.10.12.312 (2005-09-07) Specialization: template 2.16.840.1.113883.10.21.4.11 (DYNAMIC)		
Example	<p>Example</p> <pre><manufacturedProduct classCode="MANU"> <templateId root="2.16.840.1.113883.10.22.4.2"/> <!-- include template 2.16.840.1.113883.10.22.4.3 'IPS Manufactured Material' (dynamic) 1..1 R --> </manufacturedProduct></pre>		

Item	DT	Card	Conf	Description	Label
hl7:manufacturedProduct		0 ... *	R		(IPS...uct)
				 hl7ips-dataelement-2  Medicinal Product  CEN/TC 251 prEN 17269	
└ @classCode	cs	0 ... 1	F	MANU	
└ hl7:templateId	II	1 ... 1	M		(IPS...uct)
└ @root	uid	1 ... 1	F	2.16.840.1.113883.10.22.4.2	
Included		1 ... 1	R	from 2.16.840.1.113883.10.22.4.3 IPS Manufactured Material (DYNAMIC)	
└ hl7:manufacturedMaterial		1 ... 1	R		(IPS...uct)
└ @classCode	cs	0 ... 1	F	MMAT	
└ @determinerCode	cs	0 ... 1	F	KIND	
└ hl7:templateId	II	1 ... 1	M		(IPS...uct)
└ @root	oid	1 ... 1	F	2.16.840.1.113883.10.22.4.3	
└ hl7:code	CE.IPS	0 ... 1	R	This element is generally used to identify a medicinal product. When the IDMP identifiers will be concretely available for usage this element will be used for conveying the Medicinal Product Identifier (MPID). For the time being, it could be optionally used for conveying jurisdictional or agreed cross jurisdictional medicinal product code.	(IPS...uct)

		 hl7ips-dataelement-105	 Product Code	 CEN/TC 251 prEN 17269	
 hl7:name	EN	0 ... 1	R	This element is supposed to be valorized with the complete Medicinal Product Name as approved by the Medicines Regulatory Agency in a jurisdiction. The name may be applicable in one or more country/language combinations.	(IPS...uct)
	 hl7ips-dataelement-171  hl7ips-dataelement-117	 Product Common Name (and Strength)	 Brand Name	 CEN/TC 251 prEN 17269  CEN/TC 251 prEN 17269	
 pharm:formCode	CE.IPS	0 ... 1	R	Administrable Pharmaceutical Dose Form. This code represents the form of the medication (e.g. tablet, capsule, liquid) Since the EDQM Standards Terms, together with UCUM, is one of the IDMP terminologies actually available for usage, this code system has been selected as reference terminology for representing Pharmaceutical Dose forms; Packages and Route of Administration. It is known that also alternative jurisdictional and international terminologies are known to be used for this concept domain, as NCI or SNOMED CT.	(IPS...uct)
	 hl7ips-dataelement-227	 Pharmaceutical dose form	 CEN/TC 251 prEN 17269		
	CONF			The value of @code shall be drawn from value set 2.16.840.1.113883.11.22.25 <i>Medicine Doseform</i> (DYNAMIC)	
	Example			<pre><pharm:formCode code="10211000" codeSystem="0.4.0.127.0.16.1.1.2.1" codeSystemName="EDQM" displayName="Capsule, soft">...</pharm:formCode></pre>	
 pharm:asContent		0 ... *		This structure describes the packaging of the medication. The <pharm:formCode> element provides the code for the particular package. If the package has a brand name, it can be described in the <pharm:name> element. The <pharm:capacityQuantity> element described the capacity of the packaging. For example, to represent 30 tablets, the <pharm:formCode> element at the <manufacturedMa-	(IPS...uct)

					<p>terial> level must indicate tablets as the form, value attribute of the <pharm:capacityQuantity> element must have the value of 30, and the unit attribute can be 1 or {tablet} or omitted. In the cases where the unit attribute is not 1, UCUM units shall be used.</p> <p>The product might have a single (30 pills bottle) or multiple (5 vials 10 ml; box with 2 blisters of 20 tablets) layers of packaging.</p> <p>In the latter case, the most inner (nested) item represents the most outer package item.</p> <p>For example the case</p> <pre>\--Box \----2 blisters \-----20 tablets</pre> <p>is described as "20 tablets" contained by "a blister"; "2 blisters" contained by one box.</p> <p>The most inner package represents the Packaged Medicinal Product.</p> <p>When the IDMP Packaged Medicinal Product ID (PCID) will become actually available for usage, the most inner package <code> element will be used to convey the IDMP PCID.</p>	
--	--	--	--	--	---	--

└ @classCode

cs

1 ... 1

F

CONT

Example

Packaged Medicinal Product with multiple layers packaging

```
<pharm:asContent>
  <pharm:containerPackagedProduct>
    <!-- Inner Package -->
    <pharm:code codeSystem="..." code="..." displayName="..."/>
  <pharm:asContent>
    <pharm:containerPackagedProduct>
      <!-- Intermediate Package -->
      <pharm:asContent>
        <pharm:containerPackagedProduct>
          <!-- Outer Package / Packaged Medicinal Product -->
          </pharm:containerPackagedProduct>
        </pharm:asContent>
      </pharm:containerPackagedProduct>
    </pharm:asContent>
  </pharm:containerPackagedProduct>
</pharm:asContent>
</pharm:containerPackagedProduct>
</pharm:asContent>
```

Example

Packaged Medicinal Product with formCode

```
<pharm:asContent>
```

					<pre><pharm:containerPackagedProduct> <!-- Packaged Medicinal Product --> <pharm:code codeSystem="1.999.999" code="PC_ID" displayName="Packaged Product Name"/> <pharm:name>100 MIRACLE PILLS (TM)</pharm:name> <pharm:formCode codeSystem="0.4.0.127.0.16.1.1.2.1" code="30009000" dis- playName="Box" CodeSystemName="EDQM"/> </pharm:containerPackagedProduct> </pharm:asContent></pre>
└ pharm:quantity	PQ	0 ... 1			(IPS...uct)
└ @unit	cs	0 ... 1			
	CONF	The value of @unit shall be drawn from value set 2.16.840.1.113883.11.22.28 <i>Quantity Units</i> (DYNAMIC)			
└ @value		1 ... 1	R		
└ pharm:containerPackagedProduct		1 ... 1	R	It represents the most inner Package Item or the Packaged Medicinal Product.	(IPS...uct)
└ @classCode	cs	1 ... 1	F	CONT	
└ @determinerCode	cs	1 ... 1	F	INSTANCE	
└ pharm:code		0 ... 1		If this is the most inner <pharm:containerPackagedProduct> than the <code> element can be used to convey the (IDMP) Packaged Medicinal Product ID (e.g. the IDMP PCID when it will become actually available for usage).	(IPS...uct)
				The presence of the PCID indicates that that element represents the "Packaged Medicinal Product".	
└ pharm:name	ST	0 ... 1		It represents the Name of the Package Item or of the Packaged Medicinal Product. If this is the most inner <pharm:containerPackagedProduct> than this element can be used for the brand name.	(IPS...uct)

 hl7ips-dataelement-117  Brand Name  CEN/TC 251 prEN 17269					
	Example	<pharm:name>AMOXIFEN(R) 20 compresse 20 mg</pharm:name>			
	CE.IPS	0 ... 1	R	This element encodes the type of the most inner package item or of the Packaged Medicinal Product.	(IPS...uct)
		CONF		Since the EDQM Standards Terms, together with UCUM, is one of the IDMP terminologies actually available for usage, this code system has been selected as reference terminology for representing Pharmaceutical Dose forms; Packages and Route of Administration.	
		Example	<p>The value of @code shall be drawn from value set 2.16.840.1.113883.11.22.27 <i>Medicine Package</i> (DYNAMIC)</p> <pre><pharm:formCode code="30007000" codeSystem="0.4.0.127.0.16.1.1.2.1" codeSystemName="EDQM" codeSystemVersion="2010" displayName="Blister">...</pharm:formCode></pre>		
		PQ	0 ... 1	R	It represents the functional capacity of the container: e.g. blister containing 20 tablets or ampule of 10 ml.
		cs	0 ... 1	CONF	
		Example	<p>The value of @unit shall be drawn from value set 2.16.840.1.113883.11.22.28 <i>Quantity Units</i> (DYNAMIC)</p>		
		1 ... 1	R	Example	
		Example	<pre><pharm:capacityQuantity value="20" unit="{tablet}" /></pre> <pre><pharm:capacityQuantity value="10" unit="mL" /></pre>		
		0 ... *	R	In case of multiple layers of packaging (5 vials 10 ml; box with 2 blisters of 20 tablets) this element can be used for describing the intermediate Packaged Medicinal Product Item or the Packaged Medicinal Product. For example in the case \--Box	(IPS...uct)

				\-----2 blisters \-----20 tablets it describes the "2 blisters" In the case of \-Box \-----5 vials it represents the Packaged Medicinal Product.	
└ @classCode	cs	1 ... 1	F	CONT	
└ pharm:quantity	PQ	0 ... 1			(IPS...uct)
└ @unit	cs	0 ... 1			
	CONF			The value of @unit shall be drawn from value set 2.16.840.1.113883.11.22.28 <i>Quantity Units</i> (DYNAMIC)	
└ @value		1 ... 1	R		
└ pharm:containerPackagedProduct		1 ... 1	R	It represents the intermediate Package Item or the Packaged Medicinal Product	(IPS...uct)
└ @classCode	cs	1 ... 1	F	CONT	
└ @determinerCode	cs	1 ... 1	F	INSTANCE	
└ pharm:code	CD.IPS	0 ... 1		If this is the most inner <pharm:containerPackagedProduct> than the <code> element can be used to convey the (IDMP) Packaged Medicinal Product ID (e.g. the IDMP PCID when it will become actually available for usage). The presence of the PCID indicates that that element represents the "Packaged Medicinal Product".	(IPS...uct)
└ pharm:name	ST	0 ... 1	R	It represents the Name of the Package Item or of the Packaged Medicinal Product If this is the most inner <pharm:containerPackagedProd-	(IPS...uct)

				uct> than this element can be used for the brand name.	
	Example			< pharm:name >...</ pharm:name >	
L pharm:formCode	CE.IPS	1 ... 1	R	This element encodes the type of the most inner package item or of the or the Packaged Medicinal Product. Since the EDQM Standards Terms, together with UCUM, is one of the IDMP terminologies actually available for usage, this code system has been selected as reference terminology for representing Pharmaceutical Dose forms; Packages and Route of Administration.	(IPS...uct)
	CONF			The value of @code shall be drawn from value set 2.16.840.1.113883.11.22.27 <i>Medicine Package</i> (DYNAMIC)	
L pharm:capacityQuantity	PQ	0 ... 1	R	It represents the functional capacity of the container: e.g. blister containing 20 tablets or ampule of 10 ml.	(IPS...uct)
L @unit	cs			0 ... 1	
	CONF			The value of @unit shall be drawn from value set 2.16.840.1.113883.11.22.28 <i>Quantity Units</i> (DYNAMIC)	
L @value			1 ... 1	R	
	Example			< pharm:capacityQuantity value="20" unit="{tablet}" >	
	Example			< pharm:capacityQuantity value="10" unit="mL" >	
L pharm:asContent		0 ... *	R	In case of multiple layers of packaging (box with 2 blisters of 20 tablets) this element is used for describing the most outer Packaged Medicinal Product Item or the Packaged Medicinal Product. For example in the case \--Box \----2 blisters \-----20 tablets it describes the Packaged Medicinal Product.	(IPS...uct)

L @classCode	cs	1 ... 1	F	CONT'	
L pharm:quantity	PQ	0 ... 1			(IPS...uct)
L @unit	cs	0 ... 1			
L CONF				The value of @unit shall be drawn from value set 2.16.840.1.113883.11.22.28 <i>Quantity Units</i> (DYNAMIC)	
L @value		1 ... 1	R		
L pharm:containerPackagedProduct		1 ... 1	R	When present, it represents the the Packaged Medicinal Product	(IPS...uct)
L @classCode	cs	1 ... 1	F	CONT'	
L @determinerCode	cs	1 ... 1	F	INSTANCE	
L pharm:code	CD.IPS	0 ... *		When present, it can be used to convey the (IDMP) Packaged Medicinal Product ID (e.g. the IDMP PCID when it will become actually available for usage).	(IPS...uct)
L pharm:name	ST	0 ... *	R	When present, it can be used for the representing the brand name.	(IPS...uct)
L pharm:formCode	CE.IPS	1 ... 1	R	When present, it encodes the type of the outer package. Since the EDQM Standards Terms, together with UCUM, is one of the IDMP terminologies actually available for usage, this code system has been selected as referecne terminology for representing Pharmaceutical Dose forms; Packages and Route of Administration.	(IPS...uct)
L CONF				The value of @code shall be drawn from value set 2.16.840.1.113883.11.22.27 <i>Medicine Package</i> (DYNAMIC)	

<code>└ pharm:capacityQuantity</code>	PQ	0 ... 1	R	It represents the functional capacity of the container: e.g. blister containing 20 tablets or ampule of 10 ml.	(IPS...uct)
<code>└ @unit</code>	cs	0 ... 1			
	CONF			The value of @unit shall be drawn from value set 2.16.840.1.113883.11.22.28 <i>Quantity Units</i> (DYNAMIC)	
<code>└ @value</code>		1 ... 1	R		
	Example			<code><pharm:capacityQuantity value="20" unit="{tablet}" /></code>	
	Example			<code><pharm:capacityQuantity value="10" unit="mL" /></code>	
<code>└ pharm:asSpecializedKind</code>		0 ... 1	R	This module is used for representing the classification of the Substance according to the WHO Anatomical Therapeutic Chemical (ATC) Classification System. The classCode of "GRIC" identifies this structure as the representation of a generic equivalent of the medication described in the current Medicine entry.	(IPS...uct)
where <code>[generalizedMaterialKind/@codeSystem='2.16.840.1.113883.6.73']</code>					
<code>└ @classCode</code>	cs	1 ... 1	F	GRIC	
	Example			<code><pharm:asSpecializedKind classCode="GRIC"> <pharm:generalizedMaterialKind classCode="MMAT"> <!-- Pharmaceutical Substance (ATC Code) --> <pharm:code code="" codeSystem="2.16.840.1.113883.6.73" displayName="" codeSystemName="WHO ATC"/> </pharm:generalizedMaterialKind> </pharm:asSpecializedKind></code>	
<code>└ pharm:generalizedMaterialKind</code>		1 ... 1	M		(IPS...uct)
<code>└ @classCode</code>	cs	1 ... 1	F	MMAT	

<code>└ pharm:code</code>	CD.IPS	1 ... 1	R	The element contains the ATC code of this medicine.	(IPS...uct)
	CONF			The value of @code shall be drawn from value set 2.16.840.1.113883.11.22.29 WHO ATC (DYNAMIC)	
	Example			<code><pharm:code codeSystem="2.16.840.1.113883.6.73" code="" displayName="" codeSystemName="WHO ATC"/></code>	
<code>└ pharm:name</code>		0 ... 1			(IPS...uct)
<code>└ pharm:asSpecializedKind</code>		0 ... *	R	<p>The Medicinal Product can be classified according to various classification systems, which may be jurisdictional or international.</p> <p>The classification system itself is specified using an appropriate identification system; the controlled term and the controlled term identifier shall be specified.</p>	(IPS...uct)
				When the IDMP Pharmaceutical Product Identifier(s) (PhPID Set) will become actually available for use, the PhPID will be represented by the generalizedMaterialKind/code element.	
<code>└ @classCode</code>	cs	1 ... 1	F	GRIC	
	Example			<code><pharm:asSpecializedKind classCode="GRIC"> <pharm:generalizedMaterialKind classCode="MMAT"> <pharm:code code="PhPID_Lv11" codeSystem="1.999.999" displayName="Pharmaceutical Product Name" codeSystemName="PhPID Level 1"/> <pharm:name/> </pharm:generalizedMaterialKind> </pharm:asSpecializedKind></code>	
<code>└ pharm:generalizedMaterialKind</code>			R		(IPS...uct)
<code>└ @classCode</code>	cs	1 ... 1	F	MMAT	
<code>└ pharm:code</code>	CD.IPS	1 ... 1	R	When the IDMP Pharmaceutical Product Identifier(s) (PhPID Set) will become actually available for use, this element will be used for representing the IDMP PhP Id.	(IPS...uct)

				The level and the stratum of the PhPID will be distinguished by the OID of the code system.	
└ pharm:name		0 ... 1	R		(IPS...uct)
	hl7ips-dataelement-171	Product Common Name (and Strength)	CEN/TC 251 prEN 17269		
└ pharm:ingredient		0 ... *	R	This module provides the list of the active substances used for this product; one or more substances may be present. The classCode of "ACTI" indicates that this is an active ingredient.	(IPS...uct)
	hl7ips-dataelement-170	Active ingredient List	CEN/TC 251 prEN 17269		
└ @classCode	cs	1 ... 1	F	ACTI	
└ pharm:quantity		1 ... 1	M	The medication strength is represented as the ratio of the active ingredient(s) to a unit of medication. The <quantity> element contains the numerator and denominator of the strength ratio.</quantity>	(IPS...uct)
	hl7ips-dataelement-133	Strength	CEN/TC 251 prEN 17269		
	Example	<pharm:quantity>...</pharm:quantity>			
└ hl7:numerator	PQ	1 ... 1	R		(IPS...uct)
└ @unit	cs	1 ... 1	R		
	CONF	The value of @unit shall be drawn from value set 2.16.840.1.113883.11.22.30 Medicine Strength Numerator (DYNAMIC)			
└ @value		1 ... 1	R		

<code>└ hl7:denominator</code>	PQ	1 ... 1	R	(IPS...uct)
<code>└ @unit</code>	cs	1 ... 1	R	
	CONF	The value of @unit shall be drawn from value set 2.16.840.1.113883.11.22.31 <i>Medicine Strength Denominator</i> (DYNAMIC)		
<code>└ @value</code>		1 ... 1	R	
<code>└ pharm:ingredientSubstance</code>		1 ... 1	R	The active substance used for this product. The <code> element contains the coded representation of the ingredient and the <name> element may be used for the plain text representation. (IPS...uct)
<code>└ @classCode</code>	cs	1 ... 1	F	MMAT
<code>└ @determinerCode</code>	cs	1 ... 1	F	KIND
<code>└ pharm:code</code>	CD.IPS (extensible)	0 ... 1	C	The IDMP ISO 11238 standard addresses the identification and exchange of regulated information on substances. The Global Ingredient Archival System (GInAS) will provide a <u>common global identifier</u> for all of the substances used in medicinal products, providing a definition of substances globally consistent with this standard. Those identifiers however are yet available for concrete usage, therefore in this version of the template, SNOMED CT has been chosen as reference terminology also for the active substances. This choice will be revised based on the availability and the maturity of GInAS. (IPS...uct)
 hl7ips-dataelement-132 Substance code CEN/TC 251 prEN 17269				
	CONF	The value of @code should be drawn from value set 2.16.840.1.113883.11.22.32 <i>Medicine Active Substances</i> (DYNAMIC)		

<code>└ h17:originalText</code>	ED	0 ... *		(IPS...uct)
<code>└ h17:reference</code>	TEL	0 ... *		(IPS...uct)
<code>└ h17:translation</code>	CD	0 ... *	This element can be used to provide alternative identifications for the described substance.	(IPS...uct)
<code>└ pharm:name</code>		0 ... 1	C	Name of the substance (IPS...uct)
	Schematron assert	role	 error	
		test	pharm:code or pharm:name	
		Message	Either the name or the code of the substance (or both) shall be provided	

9.17 IPS Medication Statement

Id	2.16.840.1.113883.10.22.4.4	Effective Date	2016-11-11
Status	 Under pre-publication review	Version Label	STU1
Name	IPSMedicationStatement	Display Name	IPS Medication Statement

Description

An IPS Medication entry describes a medication statement, that is a substance administration that has actually occurred (e.g., pills ingested or injections given) or are intended to occur (e.g., "take 2 tablets twice a day for the next 10 days"). Medication activities in "INT" mood are reflections of what a clinician intends a patient to be taking. For example, a clinician may intend that a patient to be administered Lisinopril 20 mg PO for blood pressure control. If what was actually administered was Lisinopril 10 mg., then the Medication activities in the "EVN" mood would reflect actual use. 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, but it could be derived from the medications information recorded into a GP's EHR-system, in form of prescribed medication, or administration statements. The medication information may come from sources such as the patient's memory, from a prescription bottle, or from a list of medications the patient, clinician or other party maintains. A medication statement is usually less specific than an a prescription or a medication administration record.

This entry is composed by a main substanceAdministration act and a subordinate substanceAdministration act, unless it is asserted that there are no medications data.

The first conveys information as the product, the period of administration and the route of administration; the latter is used to provide dosage information as the frequency of intakes or the amount of the medication given.

Context	Parent nodes of template element with id 2.16.840.1.113883.10.22.4.4																						
Classification	CDA Entry Level Template																						
Open/Closed	Open (other than defined elements are allowed)																						
Associated with	<p>Associated with 3 concepts</p> <table border="1"> <thead> <tr> <th>Id</th> <th>Name</th> <th>Data Set</th> </tr> </thead> <tbody> <tr> <td>hl7ips-dataelement-102</td> <td>Route of administration</td> <td> CEN/TC 251 prEN 17269</td> </tr> <tr> <td>hl7ips-dataelement-220</td> <td>Medication Summary content status</td> <td> CEN/TC 251 prEN 17269</td> </tr> <tr> <td>hl7ips-dataelement-104</td> <td>Medication</td> <td> CEN/TC 251 prEN 17269</td> </tr> </tbody> </table>			Id	Name	Data Set	hl7ips-dataelement-102	Route of administration	 CEN/TC 251 prEN 17269	hl7ips-dataelement-220	Medication Summary content status	 CEN/TC 251 prEN 17269	hl7ips-dataelement-104	Medication	 CEN/TC 251 prEN 17269								
Id	Name	Data Set																					
hl7ips-dataelement-102	Route of administration	 CEN/TC 251 prEN 17269																					
hl7ips-dataelement-220	Medication Summary content status	 CEN/TC 251 prEN 17269																					
hl7ips-dataelement-104	Medication	 CEN/TC 251 prEN 17269																					
Uses	<p>Uses 4 templates</p> <table border="1"> <thead> <tr> <th>Uses</th> <th>as</th> <th>Name</th> <th>Version</th> </tr> </thead> <tbody> <tr> <td>2.16.840.1.113883.10.21.9.1</td> <td>Include</td> <td> UV Use Period</td> <td>DYNAMIC</td> </tr> <tr> <td>2.16.840.1.113883.10.22.4.2</td> <td>Containment</td> <td> IPS Medication Information (detail) (STU1)</td> <td>DYNAMIC</td> </tr> <tr> <td>2.16.840.1.113883.10.22.4.14</td> <td>Containment</td> <td> IPS Body Author (STU1)</td> <td>DYNAMIC</td> </tr> <tr> <td>2.16.840.1.113883.10.22.4.33</td> <td>Containment</td> <td> IPS Subordinate SubstanceAdministration (STU1)</td> <td>DYNAMIC</td> </tr> </tbody> </table>			Uses	as	Name	Version	2.16.840.1.113883.10.21.9.1	Include	 UV Use Period	DYNAMIC	2.16.840.1.113883.10.22.4.2	Containment	 IPS Medication Information (detail) (STU1)	DYNAMIC	2.16.840.1.113883.10.22.4.14	Containment	 IPS Body Author (STU1)	DYNAMIC	2.16.840.1.113883.10.22.4.33	Containment	 IPS Subordinate SubstanceAdministration (STU1)	DYNAMIC
Uses	as	Name	Version																				
2.16.840.1.113883.10.21.9.1	Include	 UV Use Period	DYNAMIC																				
2.16.840.1.113883.10.22.4.2	Containment	 IPS Medication Information (detail) (STU1)	DYNAMIC																				
2.16.840.1.113883.10.22.4.14	Containment	 IPS Body Author (STU1)	DYNAMIC																				
2.16.840.1.113883.10.22.4.33	Containment	 IPS Subordinate SubstanceAdministration (STU1)	DYNAMIC																				
Relationship	<p>Adaptation: template 1.3.6.1.4.1.12559.11.10.1.3.1.3.4 (2013-12-20) Specialization: template 2.16.840.1.113883.10.21.4.7 (DYNAMIC)</p>																						
Example	Example																						

	<pre> <substanceAdministration classCode="SBADM" moodCode="INT"> <templateId root="2.16.840.1.113883.10.22.4.4"/> <code code="DRUG" codeSystem="2.16.840.1.113883.5.4" displayName="Drug"/> <statusCode code="active"/> <effectiveTime> <width value="2" unit="wk"/> </effectiveTime> <consumable typeCode="CSM"> <!-- template 'IPS ManufacturedProduct' (dynamic) --> </consumable> <entryRelationship typeCode="COMP"> <substanceAdministration classCode="SBADM" moodCode="EVN"> <statusCode code="active"/> <effectiveTime xsi:type="PIVL_TS" institutionSpecified="true"> <period value="12" unit="h"/> </effectiveTime> <doseQuantity value="2" unit="(puff)"/> <consumable> <manufacturedProduct> <manufacturedMaterial nullFlavor="NA"/> </manufacturedProduct> </consumable> </substanceAdministration> </entryRelationship> </substanceAdministration> </pre>				
Example	No medication infos				
	<pre> <substanceAdministration classCode="SBADM" moodCode="INT"> <templateId root="2.16.840.1.113883.10.22.4.4"/> <code code="no-medication-info" codeSystem="2.16.840.1.113883.5.1150.1" displayName="No information about medications"/> <statusCode code="completed"/> <effectiveTime nullFlavor="NA" xsi:type="IVL_TS"/> <consumable> <manufacturedProduct> <manufacturedMaterial nullFlavor="NA"/> </manufacturedProduct> </consumable> </substanceAdministration> </pre>				
(IPS...ent)					
Item	DT	Card	Conf	Description	Label
hl7:substanceAdministration			R		
(IPS...ent)		(IPS...ent)			
 hl7ips-dataelement-104		 Medication		 CEN/TC 251 prEN 17269	

<code>└ @classCode</code>	cs	1 ... 1	F	SBADM	
<code>└ @moodCode</code>	cs	1 ... 1	R	If the statement refers to a prescribed medication then a <substanceAdministration> intent (moodCode='INT') is used; otherwise, to record medications which are stated to have taken, the moodCode shall be set to 'EVN'.	
	CONF	The value of @moodCode shall be drawn from value set 2.16.840.1.113883.11.20.9.18 <i>MoodCodeEvnInt</i> (DYNAMIC)			
<code>└ hl7:templateId</code>	II	1 ... 1	M		(IPS...ent)
<code>└ @root</code>	uid	1 ... 1	F	2.16.840.1.113883.10.22.4.4	
<code>└ hl7:id</code>	II	0 ... *	R		(IPS...ent)
<code>└ hl7:code</code>	CD.IPS	1 ... 1	R	The <code> element is valorized with the Substance Administration ACT code "DRUG" unless it is used for asserting the known absence of medication treatments or no information about them.	(IPS...ent)
		hl7ips-dataelement-220		Medication Summary content status	
	CONF	The value of @code shall be drawn from value set 2.16.840.1.113883.11.22.14 <i>DRUGActCode</i> (DYNAMIC) or The value of @code shall be drawn from value set 2.16.840.1.113883.11.22.15 <i>Absent or Unknown Medication</i> (DYNAMIC)			
<code>└ hl7:text</code>	ED	0 ... 1	R	The URI given in the value attribute of the <reference> element points to an element in the narrative content that contains the complete text describing the medication. In a CDA document, the URI given in the value attribute of the <reference> element points to an element in the narrative content that contains the complete text describing the medication.	(IPS...ent)
<code>└ hl7:reference</code>	TEL	1 ... 1	M		(IPS...ent)
<code>└ @value</code>	1 ... 1	R	Reference pointing to the narrative, typically # {label}-{generated-id}, e.g. #xxx-1		

└ hl7:statusCode	CS	1 ... 1	M	(IPS...ent)	
	CONF	The value of @code shall be drawn from value set 2.16.840.1.113883.11.22.12 ActStatusActiveCompletedAbortedSuspended (DYNAMIC)			
	Example	<code><statusCode code="active"/></code>			
<i>Included</i>	1 ... 1	R	from 2.16.840.1.113883.10.21.9.1 UV Use Period (DYNAMIC)		
<i>Choice</i>	1 ... 1		<p>The <effectiveTime> element encodes the use period of the medication, it is always expressed as an interval of time.</p> <p>It may be expressed using the <low> and <high> OR with the <width> element.</p> <p>The first is used to indicate a specified interval (e.g. from march 15th, 2017); the latter for indicating a 'floating' period (e.g. 2 weeks).</p> <p>Elements to choose from:</p> <ul style="list-style-type: none"> ▪ hl7:effectiveTime[hl7:low hl7:high] ▪ hl7:effectiveTime[hl7:width] 		
└ hl7:effectiveTime	IVL_TS	0 ... 1	C	<p>Case 1: specified interval</p> <p>The <low> and <high> values of the first <effectiveTime> element represent the start and stop times for the medication. The <low> value represents the start time, and the <high> value represents the stop time. If either the <low> or the <high> value is unknown, this shall be recorded by setting the nullFlavor attribute to UNK.</p> <p>In case of unbounded period (continuous therapy) the <high> element will be valued with the nullFlavor attribute to NA.</p> <p>The <high> value records the end of the medication regime according to the information provided in the prescription or order. For example, if the prescription is for enough medication to last 30 days, then the high value should contain a date that is 30 days later than the <low> value. The rationale is that a provider, seeing an un-refilled prescription would normally assume that the medication is no longer being taken, even if the intent of the treatment plan is to continue the medication indefinitely.</p>	(IPS...ent)
where [hl7:low or hl7:high]					
<div style="display: flex; justify-content: space-around;">  hl7ips-dataelement-103  Period of Medication Use  CEN/TC 251 prEN 17269 </div>					

 @nullFlavor	cs	0 ... 1		
	Example	Known Interval <pre><effectiveTime xsi:type="IVL_TS"> <low value="20130321"/> <high value="20140321"/> </effectiveTime></pre>		
	Example	Information not available about the period <pre><effectiveTime xsi:type="IVL_TS" nullFlavor="NI"/></pre>		
	Example	Unknown end date <pre><effectiveTime xsi:type="IVL_TS"> <low value="20130321"/> <high nullFlavor="UNK"/> </effectiveTime></pre>		
	Example	continuous therapy <pre><effectiveTime xsi:type="IVL_TS"> <low value="20130321"/> <high nullFlavor="NA"/> </effectiveTime></pre>		
 h17:low	IVXB_TS	1 ... 1	R	(IPS...ent)
 h17:high	IVXB_TS	0 ... 1	R	(IPS...ent)
 h17:effectiveTime	IVL_TS	0 ... 1	C	<p>Case 2: 'floating' period: The width element is used to specify a period of (actual or intended) administration that is not anchored to any specific date (e.g. a two weeks therapy....)</p>
where [h17:width]				
 hl7ips-dataelement-103		 Period of Medication Use		 CEN/TC 251 prEN 17269
	Example	2 week period <pre><effectiveTime xsi:type="IVL_TS"> <width value="2" unit="w"/> </effectiveTime></pre>		

└ hl7:low			NP		(IPS...ent)
└ hl7:width	PQ	1 ... 1	R		(IPS...ent)
└ @unit	cs	1 ... 1	R		
	CONF	The value of @unit shall be drawn from value set 2.16.840.1.113883.11.21.1 <i>Medication Time Units (UCUM)</i> (DYNAMIC)			
└ hl7:routeCode	CE IPS	0 ... 1	R	The <routeCode> element specifies the route of administration using the EDQM route of administration vocabulary. A code must be specified if the route is known. Since the EDQM Standards Terms, together with UCUM, is one of the IDMP terminologies actually available for usage, this code system has been selected as reference terminology for representing Pharmaceutical Dose forms; Packages and Route of Administration. It is known that also alternative jurisdictional and international terminologies are also used for this concept domain, as NCI or SNOMED CT. Official NCI and EDQM maps for the route of administration are available from the EDQM site.	(IPS...ent)
 hl7ips-dataelement-102 Route of administration CEN/TC 251 prEN 17269					
	CONF	The value of @code shall be drawn from value set 2.16.840.1.113883.11.22.33 <i>Medicine Route of Administration</i> (DYNAMIC)			
└ hl7:doseQuantity	IVL_PQ		NP		(IPS...ent)
└ hl7:rateQuantity	IVL_PQ		NP		(IPS...ent)
└ hl7:administrationUnitCode	CE		NP		(IPS...ent)
└ hl7:consumable		1 ... 1	M	Contains 2.16.840.1.113883.10.22.4.2 <i>IPS Medication Information (detail)</i> (DYNAMIC)	(IPS...ent)

where [not(@nullFlavor)] [/hl7:manufacturedProduct]				
└ @typeCode	cs	1 ... 1	F	CSM
└ hl7:author		0 ... *		Contains 2.16.840.1.113883.10.22.4.14 IPS Body Author (DYNAMIC) (IPS...ent)
where [/hl7:assignedAuthor]				
└ hl7:entryRelationship		0 ... *	C	<p>Subordinate Substance Administration Statement as a component of the overall medication statement.</p> <p>Unless medications are unknown or known absent, at least one subordinated <substanceAdministration> has to be present to convey information about dosages (dose, frequency of intakes,..).</p> <p>Subordinated <substanceAdministration> elements can be also used either to handle split dosing, or to support combination medications.</p> <p>Contains 2.16.840.1.113883.10.22.4.33 IPS Subordinate SubstanceAdministration (DYNAMIC)</p>
where [/hl7:substanceAdministration]				
└ @typeCode	cs	1 ... 1	F	COMP
Constraint	At least one subordinate <substanceAdministration> element SHALL be present unless medications are unknown or known absent.			
	Example	<pre> <cda:entryRelationship typeCode="COMP"> <!-- component: Subordinate Substance Administration Statement. --> <cda:substanceAdministration classCode="SBADM" moodCode="EVN"> <cda:templateId root="2.16.840.1.113883.10.22.4.33"/> <!-- .. --> </cda:substanceAdministration> <cda:sequenceNumber value="1"/> </cda:entryRelationship></pre>		
└ hl7:sequenceNumber	INT	0 ... 1		Sequence number of the Subordinate Substance Administration (IPS...ent)

9.18 IPS ObservationMedia

Id	2.16.840.1.113883.10.22.4.23	Effective Date	2017-04-06
Status	Under pre-publication review	Version Label	STU1
Name	IPSObservationMedia	Display Name	IPS ObservationMedia

Description

Template CDA ObservationMedia for IPS (prototype, directly derived from POCD_RM000040 MIF)

This element is intended to carry a small multimedia content, like an image or a graph to be rendered in the body of the patient summary document.

Context	Parent nodes of template element with id 2.16.840.1.113883.10.22.4.23			
Classification	CDA Entry Level Template			
Open/Closed	Open (other than defined elements are allowed)			
Uses	Uses 2 templates			
	Uses	as	Name	Version
	2.16.840.1.113883.10.12.323	Containment	CDA Performer (Body)	DYNAMIC
	2.16.840.1.113883.10.12.318	Containment	CDA Author (Body)	DYNAMIC
Relationship	Adaptation: template 2.16.840.1.113883.10.12.304 (2005-09-07)			
Example	<p>Example</p> <pre><observationMedia ID="Unique_String" moodCode="EVN" classCode="OBS"> <!-- The rendering of the multimedia object in the body of the CDA document is triggered by a <renderMultiMedia referencedObject="Unique_String"/> in the narrative of the <section> --> <templateId root="2.16.840.1.113883.10.22.4.23"/> <value mediaType="image/png" representation="B64">content encoded in Base 64</value> <performer> <!-- template 2.16.840.1.113883.10.12.323 'CDA Performer (Body)' (dynamic) --> </performer> <author></pre>			

	<!-- template 2.16.840.1.113883.10.12.318 'CDA Author (Body)' (dynamic) --> </author> </observationMedia>					
Item	DT	Card	Conf	Description	Label	
h17:observationMedia				This element must have an ID attribute to be referenced from a <renderMultimedia> element in the narrative of the section	(IPS...dia)	
└ @classCode	cs	0 ... 1	F	OBS		
└ @moodCode	cs	0 ... 1	F	EVN		
└ h17:templateId	II	1 ... 1	M		(IPS...dia)	
└ @root	uid	1 ... 1	F	2.16.840.1.113883.10.22.4.23		
└ h17:languageCode	CS	0 ... 1			(IPS...dia)	
	CONF	The value of @code shall be drawn from value set 2.16.840.1.113883.11.22.19 <i>Language Code</i> (DYNAMIC)				
└ h17:value	ED	1 ... 1	M		(IPS...dia)	
└ @representation	cs	1 ... 1	R			
└ @mediaType	cs	1 ... 1	R			
└ h17:performer		0 ... 1		Contains 2.16.840.1.113883.10.12.323 <i>CDA Performer (Body)</i> (DYNAMIC)	(IPS...dia)	
where [h17:assignedEntity]						

<code>└ h17:author</code>	<code>0 ... *</code>	Contains 2.16.840.1.113883.10.12.318 CDA Author (Body) (DYNAMIC)	(IPS...dia)
where <code>[hl7:assignedAuthor]</code>			

9.19 IPS Pathology Result Observation

Id	2.16.840.1.113883.10.22.4.11	Effective Date	2017-03-21												
Status	Under pre-publication review	Version Label	STU1												
Name	IPSPathologyResultObservation	Display Name	IPS Pathology Result Observation												
Description															
This template constrains the results of an anatomic pathology observation. The result observation includes a statusCode to allow recording the status of an observation. “Pending” results (e.g., a test has been run but results have not been reported yet) should be represented as “active” ActStatus.															
Context	Parent nodes of template element with id 2.16.840.1.113883.10.22.4.11														
Classification	CDA Entry Level Template														
Open/Closed	Open (other than defined elements are allowed)														
Uses	Uses 2 templates <table border="1"> <thead> <tr> <th>Uses</th> <th>as</th> <th>Name</th> <th>Version</th> </tr> </thead> <tbody> <tr> <td>2.16.840.1.113883.10.22.4.14</td> <td>Containment</td> <td> IPS Body Author (STU1)</td> <td>DYNAMIC</td> </tr> <tr> <td>2.16.840.1.113883.10.22.4.22</td> <td>Containment</td> <td> IPS Comment Activity (STU1)</td> <td>DYNAMIC</td> </tr> </tbody> </table>			Uses	as	Name	Version	2.16.840.1.113883.10.22.4.14	Containment	IPS Body Author (STU1)	DYNAMIC	2.16.840.1.113883.10.22.4.22	Containment	IPS Comment Activity (STU1)	DYNAMIC
Uses	as	Name	Version												
2.16.840.1.113883.10.22.4.14	Containment	IPS Body Author (STU1)	DYNAMIC												
2.16.840.1.113883.10.22.4.22	Containment	IPS Comment Activity (STU1)	DYNAMIC												
Relationship	Adaptation: template 2.16.840.1.113883.10.12.303 (2005-09-07) Adaptation: template 2.16.840.1.113883.10.20.22.4.2 (2015-08-01) Adaptation: template 2.16.840.1.113883.10.22.4.10 (2017-03-02)														

Example	Example				
Item	DT	Card	Conf	Description	Label
h17:observation					(IPS...ion)
└ @classCode	cs	1 ... 1	F	OBS	
└ @moodCode	cs	1 ... 1	F	EVN	
└ h17:templateId	II	1 ... 1	M		(IPS...ion)
└ @root	uid	1 ... 1	F	2.16.840.1.113883.10.22.4.11	
└ h17:id	II	0 ... *	R		(IPS...ion)
└ h17:code	CD.IPS	1 ... 1	M		(IPS...ion)
	CONF	The value of @code shall be drawn from value set 2.16.840.1.113883.11.22.41 IPS Results Observation Pathology (DYNAMIC)			
└ h17:statusCode	CS	1 ... 1	M		(IPS...ion)

	CONF	The value of @code shall be drawn from value set 2.16.840.1.113883.1.11.19890 <i>x_ActStatusActiveComplete</i> (DYNAMIC)
└ hl7:effectiveTime	IVL_TS	1 ... 1 R (IPS...ion)
<i>Choice</i>	1 ... 1	Elements to choose from: <ul style="list-style-type: none">▪ hl7:value[@xsi:type='CE.IPS']▪ hl7:value[@xsi:type='PQ']▪ hl7:value[@xsi:type='IVL_PQ']▪ hl7:value[@xsi:type='ST']▪ hl7:value[@xsi:type='TS']▪ hl7:value[@xsi:type='RTO_QTY_QTY']
└ hl7:value	CE.IPS (extensible)	0 ... 1 R (IPS...ion)
where [@xsi:type='CE.IPS']		
	CONF	The value of @code should be drawn from value set 2.16.840.1.113883.11.22.47 <i>IPS Results Coded Values Pathology</i> (DYNAMIC)
	Example	Result code: code '201' from code system 2.16.840.1.113883.2.4.4.30.1045 <code><value xsi:type="CE" code="399935008" displayName="Ductal carcinoma in situ - category (morphologic abnormality)" codeSystem="2.16.840.1.113883.6.96"/></code>
	Example	Result code: code 'POS' from code system 2.16.840.1.113883.5.83 <code><value xsi:type="CE" code="369790002" displayName="Nottingham Combined Grade I: 3-5 points (finding)" codeSystem="2.16.840.1.113883.6.96"/></code>
└ hl7:value	PQ	0 ... 1 R (IPS...ion)
where [@xsi:type='PQ']		
	Constraint	If Observation/value is a physical quantity (xsi:type="PQ"), the unit of measure SHALL be selected from ValueSet UnitsOfMeasureCaseSensitive 2.16.840.1.113883.1.11.12839 DYNAMIC

	Example	Result physical quantity (data type PQ): 136 mmol per liter <value xsi:type="PQ" value="85" unit="%"/>			
└ h17:value	IVL_PQ	0 ... 1	R		(IPS...ion)
where [@xsi:type='IVL_PQ']					
	Example	Result interval of physical quantities (data type IVL_PQ): 150 - 400 Billion per 10 exp 9 liter <value xsi:type="IVL_PQ"> <low value="150" unit="10+9/1"/> <high value="400" unit="10+9/1"/> </value>			
└ h17:value	ST	0 ... 1	R		(IPS...ion)
where [@xsi:type='ST']					
	Example	Result free text (data type ST) <value xsi:type="ST">This is a result as a free text</value>			
└ h17:value	TS	0 ... 1	R		(IPS...ion)
where [@xsi:type='TS']					
	Example	Result time stamp (data type TS): 6-Aug-2014 <value xsi:type="TS" value="20140806"/>			
└ h17:value	RTO_QTY_QTY	0 ... 1	R		(IPS...ion)
where [@xsi:type='RTO_QTY_QTY']					
	Example	Result ratio (data type RTO_QTY_QTY): 1/179 <value xsi:type="RTO_QTY_QTY"> <numerator xsi:type="INT" value="1"/> <denominator xsi:type="INT" value="179"/> </value>			

└ h17:interpretationCode	CE.IPS	0 ... 1	R		(IPS...ion)
	CONF	The value of @code shall be drawn from value set 2.16.840.1.113883.1.11.78 <i>ObservationInterpretation</i> (DYNAMIC)			
└ h17:author		0 ... *	R	Contains 2.16.840.1.113883.10.22.4.14 <i>IPS Body Author</i> (DYNAMIC)	(IPS...ion)
where [bl7:assignedAuthor]					
└ h17:referenceRange		0 ... *	R		(IPS...ion)
└ h17:observationRange		1 ... 1	M		(IPS...ion)
└ h17:code	CD		NP		(IPS...ion)
└ h17:value	ANY	1 ... 1	M		(IPS...ion)
└ h17:interpretationCode	CE	0 ... 1			(IPS...ion)
└ @code	CONF	0 ... 1	F	N	
└ @codeSystem		0 ... 1	F	2.16.840.1.113883.5.83 (Observation Interpretation)	
└ h17:entryRelationship		0 ... *		Contains 2.16.840.1.113883.10.22.4.22 <i>IPS Comment Activity</i> (DYNAMIC)	(IPS...ion)
where [bl7:act [bl7:code [(@code = '48767-8' and @codeSystem = '2.16.840.1.113883.6.1')]]]					
└ @typeCode	cs	1 ... 1	F	COMP	

9.20 IPS Pregnancy Expected Delivery Date Observation

Id	2.16.840.1.113883.10.22.4.29	Effective Date	2017-04-13
Status	🟡 Under pre-publication review	Version Label	STU1
Name	IPSPregnancyExpectedDeliveryDateObservation	Display Name	IPS Pregnancy Expected Delivery Date Observation
Description			

This observation records the Pregnancy Expected Delivery Date for pregnant patients, expressed as a time stamp.
The code reflects the method (operationalisation) of how the date was determined, e.g. clinically estimated, estimated from last menstruation date or last ovulation date.

Context	Parent nodes of template element with id 2.16.840.1.113883.10.22.4.29								
Classification	CDA Entry Level Template								
Open/Closed	Open (other than defined elements are allowed)								
Associated with	Associated with 1 concept <table border="1"> <thead> <tr> <th>Id</th> <th>Name</th> <th>Data Set</th> </tr> </thead> <tbody> <tr> <td>hl7ips-dataelement-213</td> <td>🟡 Expected delivery date</td> <td>🟡 CEN/TC 251 prEN 17269</td> </tr> </tbody> </table>			Id	Name	Data Set	hl7ips-dataelement-213	🟡 Expected delivery date	🟡 CEN/TC 251 prEN 17269
Id	Name	Data Set							
hl7ips-dataelement-213	🟡 Expected delivery date	🟡 CEN/TC 251 prEN 17269							
Relationship	Adaptation: template 1.3.6.1.4.1.19376.1.5.3.1.4.13.5 (2013-12-20) Adaptation: template 2.16.840.1.113883.10.20.1.33 (DYNAMIC)								
Example	Example <pre><observation typeCode="OBS" moodCode="EVN"> <templateId root="2.16.840.1.113883.10.22.4.29"/> <code code="11778-8" codeSystem="2.16.840.1.113883.6.1" displayName="Delivery date estimated (clinical)" codeSystem- Name="LOINC"/> <text> <reference value="#xxx"/> </text></pre>								

	<pre> <statusCode code="completed"/> <effectiveTime value="20160819"/> <value xsi:type="TS" value="20170414"/> </observation> </pre>				
Item	DT	Card	Conf	Description	Label
h17:observation			R		
└ h17:templateId	II	1 ... 1	M		
└ @root	uid	1 ... 1	F	2.16.840.1.113883.10.22.4.29	
└ h17:code	CD.IPS	1 ... 1	M		
	CONF	The value of @code shall be drawn from value set 2.16.840.1.113883.11.22.20 IPS Expected Delivery Date Method (DYNAMIC)			
└ h17:statusCode	CS	1 ... 1	R		
└ @code	CONF	0 ... 1	F	completed	
└ h17:effectiveTime	IVL_TS	0 ... 1	R	The effectiveTime, also referred to as the “biologically relevant time” is the time at which the observation holds for the patient. For a provider seeing a patient in the clinic today, observing a history of heart attack that occurred five years ago, the effectiveTime is five years ago.	(IPSPregnancyExpectedDeliveryDateObservation)
└ h17:value	TS	1 ... 1	R		
 hl7ips-dataelement-213			 Expected delivery date	 CEN/TC 251 prEN 17269	

9.21 IPS Pregnancy Outcome Observation

Id	2.16.840.1.113883.10.22.4.28	Effective Date	2017-04-13				
Status	🟡 Under pre-publication review	Version Label	STU1				
Name	IPSPregnancyOutcomeObservation	Display Name	IPS Pregnancy Outcome Observation				
Description	A pregnancy outcome observation records a summary over all pregnancies.						
Context	Parent nodes of template element with id 2.16.840.1.113883.10.22.4.28						
Classification	CDA Entry Level Template						
Open/Closed	Open (other than defined elements are allowed)						
Associated with	Associated with 1 concept						
	<table border="1"> <thead> <tr> <th>Id</th> <th>Name</th> <th>Data Set</th> </tr> </thead> <tbody> <tr> <td>hl7ips-dataelement-214</td> <td>🟡 Summary Metric</td> <td>🟡 CEN/TC 251 prEN 17269</td> </tr> </tbody> </table>	Id	Name	Data Set	hl7ips-dataelement-214	🟡 Summary Metric	🟡 CEN/TC 251 prEN 17269
Id	Name	Data Set					
hl7ips-dataelement-214	🟡 Summary Metric	🟡 CEN/TC 251 prEN 17269					
Relationship	Adaptation: template 1.3.6.1.4.1.19376.1.5.3.1.4.13.5 (2013-12-20) Adaptation: template 2.16.840.1.113883.10.20.1.33 (DYNAMIC)						
Example	<p>Example</p> <pre><observation> <templateId root="2.16.840.1.113883.10.22.4.28"/> <code code="11636-8" displayName="[#] Births.live" codeSystem="2.16.840.1.113883.6.1"/> <statusCode code="completed"/> <value value="1"/> </observation></pre>						
	<table border="1"> <thead> <tr> <th>Item</th> <th>DT</th> <th>Card</th> <th>Conf</th> <th>Description</th> <th>Label</th> </tr> </thead> </table>	Item	DT	Card	Conf	Description	Label
Item	DT	Card	Conf	Description	Label		

hl7:observation			R		(IPS...ion)
└ hl7:templateId	II	1 ... 1	M		(IPS...ion)
└ @root	uid	1 ... 1	F	2.16.840.1.113883.10.22.4.28	
└ hl7:code	CD.IPS	1 ... 1	M		(IPS...ion)
	CONF	The value of @code shall be drawn from value set 2.16.840.1.113883.11.22.21 IPS Pregnancies Summary (DYNAMIC)			
└ hl7:statusCode	CS	1 ... 1	R		(IPS...ion)
└ @code	CONF	0 ... 1	F	completed	
└ hl7:value	INT	1 ... 1	R		(IPS...ion)
hl7ips-dataelement-214			Summary Metric		CEN/TC 251 prEN 17269

9.22 IPS Pregnancy Status Observation

Id	2.16.840.1.113883.10.22.4.27	Effective Date	2017-04-13
Status	Under pre-publication review	Version Label	STU1
Name	IPSPregnancyStatusObservation		
Description	A pregnancy status observation records whether the patient is currently pregnant or not. If pregnant, an Expected Delivery Date may be specified as an subordinate observation.		
Context	Parent nodes of template element with id 2.16.840.1.113883.10.22.4.27		

Classification	CDA Entry Level Template														
Open/Closed	Open (other than defined elements are allowed)														
Associated with	<p>Associated with 3 concepts</p> <table border="1"> <thead> <tr> <th>Id</th> <th>Name</th> <th>Data Set</th> </tr> </thead> <tbody> <tr> <td>hl7ips-dataelement-213</td> <td>  Expected delivery date </td> <td>  CEN/TC 251 prEN 17269 </td> </tr> <tr> <td>hl7ips-dataelement-211</td> <td>  Date of Observation </td> <td>  CEN/TC 251 prEN 17269 </td> </tr> <tr> <td>hl7ips-dataelement-212</td> <td>  Pregnancy State </td> <td>  CEN/TC 251 prEN 17269 </td> </tr> </tbody> </table>			Id	Name	Data Set	hl7ips-dataelement-213	 Expected delivery date	 CEN/TC 251 prEN 17269	hl7ips-dataelement-211	 Date of Observation	 CEN/TC 251 prEN 17269	hl7ips-dataelement-212	 Pregnancy State	 CEN/TC 251 prEN 17269
Id	Name	Data Set													
hl7ips-dataelement-213	 Expected delivery date	 CEN/TC 251 prEN 17269													
hl7ips-dataelement-211	 Date of Observation	 CEN/TC 251 prEN 17269													
hl7ips-dataelement-212	 Pregnancy State	 CEN/TC 251 prEN 17269													
Uses	<p>Uses 1 template</p> <table border="1"> <thead> <tr> <th>Uses</th> <th>as</th> <th>Name</th> <th>Version</th> </tr> </thead> <tbody> <tr> <td>2.16.840.1.113883.10.22.4.29</td> <td>Containment</td> <td>  IPS Pregnancy Expected Delivery Date Observation (STU1) </td> <td>DYNAMIC</td> </tr> </tbody> </table>			Uses	as	Name	Version	2.16.840.1.113883.10.22.4.29	Containment	 IPS Pregnancy Expected Delivery Date Observation (STU1)	DYNAMIC				
Uses	as	Name	Version												
2.16.840.1.113883.10.22.4.29	Containment	 IPS Pregnancy Expected Delivery Date Observation (STU1)	DYNAMIC												
Relationship	<p>Adaptation: template 1.3.6.1.4.1.19376.1.5.3.1.4.13.5 (2013-12-20) Adaptation: template 2.16.840.1.113883.10.20.1.33 (DYNAMIC)</p>														
Example	<p>Example</p> <pre><observation> <templateId root="2.16.840.1.113883.10.22.4.27"/> <code code="82810-3" codeSystem="2.16.840.1.113883.6.1"/> <statusCode code="completed"/> <value value="false"/> <entryRelationship typeCode="COMP"> <!-- template 2.16.840.1.113883.10.22.4.29 'IPS Pregnancy Expected Delivery Date Observation' (dynamic) --> </entryRelationship> </observation></pre>														
	Item	DT	Card	Conf	Description	Label									

hl7:observation		R		(IPS...ion)
└ hl7:templateId	II	1 ... 1	M	(IPS...ion)
└ @root	uid	1 ... 1	F	2.16.840.1.113883.10.22.4.27
└ hl7:code	CD.IPS (extensible)	1 ... 1	M	(IPS...ion)
└ @code	CONF	1 ... 1	F	82810-3
└ @codeSystem		1 ... 1	F	2.16.840.1.113883.6.1 (LOINC)
└ hl7:statusCode	CS	1 ... 1	R	(IPS...ion)
└ @code	CONF	0 ... 1	F	completed
└ hl7:effectiveTime	IVL_TS	0 ... 1	R	The effectiveTime, also referred to as the “biologically relevant time” is the time at which the observation holds for the patient. For a provider seeing a patient in the clinic today, observing a history of heart attack that occurred five years ago, the effectiveTime is five years ago.
⌚ hl7ips-dataelement-211 🟡 Date of Observation 🟡 CEN/TC 251 prEN 17269				
└ hl7:value	BL	1 ... 1	R	(IPS...ion)
⌚ hl7ips-dataelement-212 🟡 Pregnancy State 🟡 CEN/TC 251 prEN 17269				
└ hl7:entryRelationship		0 ... 1	R	Contains 2.16.840.1.113883.10.22.4.29 IPS Pregnancy Expected Delivery Date Obserration (DYNAMIC)
where [hl7:observation [hl7:code [concat(@code, @codeSystem) = doc('include/voc-2.16.840.1.113883.11.22.20-DYNAMIC.xml')/valueSet [1]/conceptList/concept/concat(@code, @codeSystem)]]]				

	hl7ips-dataelement-213		Expected delivery date		CEN/TC 251 prEN 17269
	@typeCode	cs	1 ... 1 F	COMP	

9.23 IPS Problem Concern Entry

Id	2.16.840.1.113883.10.22.4.7	Effective Date	2017-02-15
Status		Under pre-publication review	STU1
Name	IPSPProblemConcernEntry	Display Name	IPS Problem Concern Entry

Description

This template reflects an ongoing concern on behalf of the provider that placed the concern on a patient's problem list. The purpose of the concern act is that of supporting the tracking of a problem or a condition.

There are different kinds of status that could be related to a condition:

- The status of the concern (active, inactive,..)
- The status of the condition (e.g. active, inactive, resolved,..)
- The confirmation status [clinical workflow status, certainty] (e.g. confirmed, likely, unlikely,...)

Not all of them can be represented in a CDA using the statusCode elements of the concern (ACT) and observation (condition).

So long as the underlying conditions are of concern to the provider (i.e., as long as the condition, whether active or resolved, is of ongoing concern and interest to the provider), the statusCode is “active”.

Only when the underlying conditions are no longer of concern is the statusCode set to “completed”.

The effectiveTime reflects the time that the underlying condition was felt to be a concern; it may or may not correspond to the effectiveTime of the condition (e.g., even five years later, the clinician

may remain concerned about a prior heart attack).

The effectiveTime/low of the Problem Concern Act asserts when the concern became active. This equates to the time the concern was authored in the patient's chart.

The effectiveTime/high asserts when the concern became inactive, and it is present if the statusCode of the concern act is "completed".

A Problem Concern Act can contain many Problem Observations.

The many Problem Observations nested under a Problem Concern Act reflect the change in the clinical understanding of a condition over time. For instance, a Concern may initially contain a Problem Observation of "chest pain":

- Problem Concern 1

- Problem Observation: Chest Pain

Later, a new Problem Observation of "esophagitis" will be added, reflecting a better understanding of the nature of the chest pain. The later problem observation will have a more recent author time stamp.

- Problem Concern 1

- Problem Observation (author/time Jan 3, 2012): Chest Pain

- Problem Observation (author/time Jan 6, 2012): Esophagitis

Many systems display the nested Problem Observation with the most recent author time stamp, and provide a mechanism for viewing prior observations.

Context	Parent nodes of template element with id 2.16.840.1.113883.10.22.4.7		
Classification	CDA Entry Level Template		
Open/Closed	Open (other than defined elements are allowed)		
Uses	Uses 1 template		
	Uses	as	Name
			Version

	2.16.840.1.113883.10.22.4.8 Containment  IPS Problem Entry (STU1)	DYNAMIC			
Relationship	Adaptation: template 1.3.6.1.4.1.19376.1.5.3.1.4.5.1 (DYNAMIC) Adaptation: template 2.16.840.1.113883.10.20.1.27 (DYNAMIC) Adaptation: template 1.3.6.1.4.1.19376.1.5.3.1.4.5.2 (DYNAMIC)				
Example	<p>Active Concern with several conditions</p> <pre><act classCode="ACT" moodCode="EVN"> <templateId root="2.16.840.1.113883.10.22.4.7"/> <id root="1.2.3.999" extension="__example only__"/> <code code="CONC" codeSystem="2.16.840.1.113883.5.6"/> <statusCode code="active"/> <effectiveTime> <low value="20170309"/> </effectiveTime> <entryRelationship typeCode="SUBJ" inversionInd="false"> <!-- template 2.16.840.1.113883.10.22.4.8 'IPS Problem Entry' (dynamic) --> <!-- A condition could be active, inactive,.... --> </entryRelationship> <entryRelationship typeCode="SUBJ" inversionInd="false"> <!-- template 2.16.840.1.113883.10.22.4.8 'IPS Problem Entry' (dynamic) --> </entryRelationship> </act></pre>				
Example	Concern no longer tracked	<pre><act classCode="ACT" moodCode="EVN"> <templateId root="2.16.840.1.113883.10.22.4.7"/> <id root="1.2.3.999" extension="__example only__"/> <code code="CONC" codeSystem="2.16.840.1.113883.5.6"/> <statusCode code="completed"/> <effectiveTime> <low value="20161210"/> <low value="20170309"/> </effectiveTime> <entryRelationship typeCode="SUBJ" inversionInd="false"> <!-- template 2.16.840.1.113883.10.22.4.8 'IPS Problem Entry' (dynamic) --> </entryRelationship> </act></pre>			
Item	DT	Card	Conf	Description	Label
hl7:act			R		(IPS...try)

<code>└ @classCode</code>	cs	1 ... 1	F	ACT	
<code>└ @moodCode</code>	cs	1 ... 1	F	EVN	
<code>└ h17:templateId</code>	II	1 ... 1	M		(IPS...try)
<code>└ @root</code>	uid	1 ... 1	F	2.16.840.1.113883.10.22.4.7	
<code>└ h17:id</code>	II	0 ... *	R		(IPS...try)
<code>└ h17:code</code>	CD	1 ... 1	R		(IPS...try)
<code>└ @code</code>	CONF	0 ... 1	F	CONC	
<code>└ @codeSystem</code>		0 ... 1	F	2.16.840.1.113883.5.6 (HL7ActClass)	
<code>└ h17:statusCode</code>	CS	1 ... 1	R	<p>So long as the underlying conditions are of concern to the provider (i.e., as long as the condition, whether active or resolved, is of ongoing concern and interest to the provider), the statusCode is “active”.</p> <p>Only when the underlying conditions are no longer of concern is the statusCode set to “completed”.</p>	(IPS...try)
	CONF	The value of @code shall be drawn from value set 2.16.840.1.113883.1.11.19890 <i>x_ActStatusActiveComplete</i> (DYNAMIC)			
<code>└ h17:effectiveTime</code>	IVL_TS	1 ... 1	R		(IPS...try)
<code>└ h17:low</code>	IVXB_TS	1 ... 1	R	This element asserts when the concern became active. This equates to the time the concern was authored in the patient's chart and the author started tracking this concern.	(IPS...try)
<code>└ h17:high</code>	IVXB_TS	0 ... 1	C	This element asserts when the clinician deemed there is no longer any need to track the underlying conditions.	(IPS...try)

Constraint					If the statusCode is completed this element is required
h17:entryRelationship		1 ... *	R	Contains 2.16.840.1.113883.10.22.4.8 <i>IPS Problem Entry</i> (DYNAMIC)	(IPS...try)
where [b17:observation [b17:code [concat(@code, @codeSystem) = doc('include/voc-2.16.840.1.113883.11.22.16-DYNAMIC.xml')/valueSet [1]/conceptList/concept(concat(@code, @codeSystem) or @nullFlavor)]]]					
@typeCode	cs	1 ... 1	F	SUBJ	
@inversionInd	bl	0 ... 1	F	false	

9.24 IPS Problem Entry

Id	2.16.840.1.113883.10.22.4.8	Effective Date	2017-02-15
Status	 Under pre-publication review	Version Label	STU1
Name	IPSPProblemEntry	Display Name	IPS Problem Entry
Description			

This template reflects a discrete observation about a patient's problem. Because it is a discrete observation, it will have a statusCode of "completed". The effectiveTime, also referred to as the "biologically relevant time" is the time at which the observation holds for the patient. For a provider seeing a patient in the clinic today, observing a history of heart attack that occurred five years ago, the effectiveTime is five years ago.

The effectiveTime of the Problem Observation is the definitive indication of whether or not the underlying condition is resolved. If the problem is known to be resolved, then an effectiveTime/high would be present. If the date of resolution is not known, then effectiveTime/high will be present with a nullFlavor of "UNK".

Context	Parent nodes of template element with id 2.16.840.1.113883.10.22.4.8
Classification	CDA Entry Level Template

Open/Closed	Open (other than defined elements are allowed)																																							
Associated with 12 concepts																																								
	<table border="1"> <thead> <tr> <th>Id</th><th>Name</th><th>Data Set</th></tr> </thead> <tbody> <tr> <td>hl7ips-dataelement-136</td><td>Severity</td><td> CEN/TC 251 prEN 17269</td></tr> <tr> <td>hl7ips-dataelement-36</td><td>Diagnosis</td><td> CEN/TC 251 prEN 17269</td></tr> <tr> <td>hl7ips-dataelement-115</td><td>Problem content status</td><td> CEN/TC 251 prEN 17269</td></tr> <tr> <td>hl7ips-dataelement-210</td><td>Problem Type</td><td> CEN/TC 251 prEN 17269</td></tr> <tr> <td>hl7ips-dataelement-34</td><td>Date resolved</td><td> CEN/TC 251 prEN 17269</td></tr> <tr> <td>hl7ips-dataelement-131</td><td>Diagnosis</td><td> CEN/TC 251 prEN 17269</td></tr> <tr> <td>hl7ips-dataelement-128</td><td>Severity</td><td> CEN/TC 251 prEN 17269</td></tr> <tr> <td>hl7ips-dataelement-32</td><td>Onset Date</td><td> CEN/TC 251 prEN 17269</td></tr> <tr> <td>hl7ips-dataelement-101</td><td>Problem type</td><td> CEN/TC 251 prEN 17269</td></tr> <tr> <td>hl7ips-dataelement-209</td><td>Health condition / Problem</td><td> CEN/TC 251 prEN 17269</td></tr> <tr> <td>hl7ips-dataelement-140</td><td>Problem</td><td> CEN/TC 251 prEN 17269</td></tr> <tr> <td>hl7ips-dataelement-127</td><td>Onset date</td><td> CEN/TC 251 prEN 17269</td></tr> </tbody> </table>	Id	Name	Data Set	hl7ips-dataelement-136	Severity	 CEN/TC 251 prEN 17269	hl7ips-dataelement-36	Diagnosis	 CEN/TC 251 prEN 17269	hl7ips-dataelement-115	Problem content status	 CEN/TC 251 prEN 17269	hl7ips-dataelement-210	Problem Type	 CEN/TC 251 prEN 17269	hl7ips-dataelement-34	Date resolved	 CEN/TC 251 prEN 17269	hl7ips-dataelement-131	Diagnosis	 CEN/TC 251 prEN 17269	hl7ips-dataelement-128	Severity	 CEN/TC 251 prEN 17269	hl7ips-dataelement-32	Onset Date	 CEN/TC 251 prEN 17269	hl7ips-dataelement-101	Problem type	 CEN/TC 251 prEN 17269	hl7ips-dataelement-209	Health condition / Problem	 CEN/TC 251 prEN 17269	hl7ips-dataelement-140	Problem	 CEN/TC 251 prEN 17269	hl7ips-dataelement-127	Onset date	 CEN/TC 251 prEN 17269
Id	Name	Data Set																																						
hl7ips-dataelement-136	Severity	 CEN/TC 251 prEN 17269																																						
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hl7ips-dataelement-128	Severity	 CEN/TC 251 prEN 17269																																						
hl7ips-dataelement-32	Onset Date	 CEN/TC 251 prEN 17269																																						
hl7ips-dataelement-101	Problem type	 CEN/TC 251 prEN 17269																																						
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hl7ips-dataelement-140	Problem	 CEN/TC 251 prEN 17269																																						
hl7ips-dataelement-127	Onset date	 CEN/TC 251 prEN 17269																																						
Associated with																																								
Uses	Uses 3 templates																																							

	Uses	as	Name	Version
	2.16.840.1.113883.10.22.4.25	Containment	IPS Severity Observation (STU1)	DYNAMIC
	2.16.840.1.113883.10.22.4.19	Containment	IPS Certainty Observation (STU1)	DYNAMIC
	2.16.840.1.113883.10.22.4.20	Containment	IPS Problem Status Observation (STU1)	2017-03-29
Relationship	Adaptation: template 1.3.6.1.4.1.19376.1.5.3.1.4.5 (DYNAMIC)			
Example	<p>Active Problem</p> <pre><observation classCode="OBS" moodCode="EVN"> <templateId root="2.16.840.1.113883.10.22.4.8"/> <id root="1.2.3.999" extension="__example only__"/> <code code="75326-9" codeSystem="2.16.840.1.113883.6.1" displayName="Problem"/> <text> <reference value="#problem-1"/> </text> <statusCode code="completed"/> <effectiveTime> <low value="20100507"/> </effectiveTime> <value code="38341003" displayName="Hypertensive disorder, systemic arterial (disorder)" codeSystem="2.16.840.1.113883.6.96"/> <entryRelationship typeCode="SUBJ" inversionInd="true"> <!-- template 2.16.840.1.113883.10.22.4.25 'IPS Severity Observation' (dynamic) --> </entryRelationship> <entryRelationship typeCode="SUBJ" inversionInd="true"> <!-- template 2.16.840.1.113883.10.22.4.19 'IPS Certainty Observation' (dynamic) --> </entryRelationship> <entryRelationship typeCode="REFR" inversionInd="false"> <!-- template 2.16.840.1.113883.10.22.4.20 'IPS Problem Status Observation' (2017-03-29T00:00:00) --> <!-- this referred observation should report that the condition is still active --> </entryRelationship> </observation></pre>			
Example	<p>Closed Problem (resolution date known)</p> <pre><observation classCode="OBS" moodCode="EVN"> <templateId root="2.16.840.1.113883.10.22.4.8"/> <id root="1.2.3.999" extension="__example only__"/> <code code="75326-9" codeSystem="2.16.840.1.113883.6.1" displayName="Problem"/> <statusCode code="completed"/> <effectiveTime> <low value="2010"/> <high value="2015"/> </effectiveTime> </observation></pre>			

```

</effectiveTime>
<value code="38341003" displayName="Hypertensive disorder, systemic arterial (disorder)" codeSystem="2.16.840.1.113883.6.96"/>
<entryRelationship typeCode="SUBJ" inversionInd="true">
  <!-- template 2.16.840.1.113883.10.22.4.25 'IPS Severity Observation' (dynamic) -->
</entryRelationship>
<entryRelationship typeCode="SUBJ" inversionInd="true">
  <!-- template 2.16.840.1.113883.10.22.4.19 'IPS Certainty Observation' (dynamic) -->
</entryRelationship>
<entryRelationship typeCode="REFR" inversionInd="false">
  <!-- template 2.16.840.1.113883.10.22.4.20 'IPS Problem Status Observation' (2017-03-29T00:00:00) -->
  <!-- this referred observation should report that the condition is resolved -->
</entryRelationship>
</observation>

```

Known absent problems

```

<observation classCode="OBS" moodCode="EVN">
  <templateId root="2.16.840.1.113883.10.22.4.8"/>
  <id root="1.2.3.999" extension="_example only_"/>
  <code code="75326-9" codeSystem="2.16.840.1.113883.6.1" displayName="Problem"/>
  <statusCode code="completed"/>
  <effectiveTime>
    <low nullFlavor="NI"/>
  </effectiveTime>
  <value code="no-known-problems" displayName="No known problems" codeSystem="2.16.840.1.113883.5.1150.1"/>
</observation>

```

Item	DT	Card	Conf	Description	Label
hl7:observation			R		(IPS...try)
				@ hl7ips-dataelement-209 ● Health condition / Problem @ hl7ips-dataelement-140 ● Problem	● CEN/TC 251 prEN 17269 ● CEN/TC 251 prEN 17269
└ @classCode	cs	0 ... 1	F	OBS	
└ @moodCode	cs	1 ... 1	F	EVN	
└ hl7:templateId	II	1 ... 1	M		(IPS...try)

L @root	uid	1 ... 1	F	2.16.840.1.113883.10.22.4.8	
L hl7:id	II	0 ... *	R		(IPS...try)
L hl7:code	CD.IPS	1 ... 1	R	This element describes the type of condition this observation is referring to.	(IPS...try)
	hl7ips-dataelement-210 hl7ips-dataelement-101			Problem Type Problem type	CEN/TC 251 prEN 17269 CEN/TC 251 prEN 17269
	CONF	The value of @code shall be drawn from value set 2.16.840.1.113883.11.22.16 <i>Problem Type</i> (DYNAMIC)			
	Example	<code code="75326-9" codeSystem="2.16.840.1.113883.6.1" displayName="Problem"/>			
L hl7:text	ED	0 ... 1	R	The <text> element if present points to the text describing the problem being recorded; including any dates, comments, et cetera. The <reference> contains a URI in value attribute. This URI points to the free text description of the problem in the document that is being described.</reference></text>	(IPS...try)
	Example	<text> <reference value="#problem-1"/> </text>			
L hl7:reference	TEL	1 ... 1	M		(IPS...try)
L @value		1 ... 1	R	When used it shall refer to the narrative, typically #{label}-{generated-id}, e.g. #xxx-1	
L hl7:statusCode	CS	1 ... 1	M	A clinical document normally records only those condition observation events that have been completed, not observations that are in any other state. Therefore, the <statusCode> shall always have code='completed'.</statusCode>	(IPS...try)
L @code	CONF	1 ... 1	F	completed	
L hl7:effectiveTime	IVL_TS	1 ... 1	M	The effectiveTime, also referred to as the “biologically relevant time” is the time at which the observation holds for the patient. For a provider seeing a patient in the clinic today, observing a history of heart attack that occurred five years ago, the effectiveTime is five years ago.	(IPS...try)

				The <low> and <high> values should be no more precise than known, but as precise as possible.	
	Example			Known onset date (active condition) <effectiveTime> <low value="20100507"/> </effectiveTime>	
	Example			Unknown onset date (active condition) <effectiveTime> <low nullFlavor="UNK"/> </effectiveTime>	
	Example			Unknown resolution date <effectiveTime> <low value="2010"/> <high nullFlavor="UNK"/> </effectiveTime>	
	Example			Known resolution date <effectiveTime> <low value="201007"/> <high value="201703"/> </effectiveTime>	
└ h17:low	IVXB_TS	1 ... 1	R	The effectiveTime/low (a.k.a. "onset date") asserts when the condition became biologically active.	(IPS...try)
		④ hl7ips-dataelement-32	④ Onset Date	④ CEN/TC 251 prEN 17269	
		hl7ips-dataelement-127	④ Onset date	④ CEN/TC 251 prEN 17269	
└ h17:high	IVXB_TS	0 ... 1	C	The effectiveTime/high (a.k.a. "resolution date") asserts when the condition became biologically resolved. If the date of resolution is not known, then effectiveTime/high will be present with a nullFlavor of "UNK".	(IPS...try)
		④ hl7ips-dataelement-34	④ Date resolved	④ CEN/TC 251 prEN 17269	
		Constraint	If this condition is known to be resolved, then the effectiveTime/high would be present.		
└ h17:value	CD.IPS (preferred)	1 ... 1	M	The <value> is the condition that was found. It may a coded or an un-coded string, but its type is always coded. The coded form shall be used also to indicate known absent conditions or the nonavailability of information about them.	(IPS...try)

 hl7ips-dataelement-36	 Diagnosis	 CEN/TC 251 prEN 17269
hl7ips-dataelement-115	 Problem content status	 CEN/TC 251 prEN 17269
hl7ips-dataelement-131	 Diagnosis	 CEN/TC 251 prEN 17269

 @xsi:type

0 ... 1 F CD

CONF	The value of @code comes preferably from value set 2.16.840.1.113883.11.22.5 <i>CORE Problem List Disorders (DY-NAMIC)</i> or The value of @code comes preferably from value set 2.16.840.1.113883.11.22.17 <i>Absent or Unknown Problems (DY-NAMIC)</i>		
Example	Multiple Coding <pre><value code="302231008" displayName="Salmonella infection" codeSystem="2.16.840.1.113883.6.96"> <translate code="A02.9" displayName="Infezioni da Salmonella non specificate" codeSystem="2.16.840.1.113883.6.3"/> </value></pre>		
Example	Local code not mappable in the reference terminology <pre><value nullFlavor="OTH"> <translate code="12345" displayName="Not in the reference value set" codeSystem="1.2.3.999" codeSystemName="--example only--"/> </value></pre>		
Example	Textual Information <pre><value nullFlavor="NI"> <originalText> <reference value="#value_as_text"/> </originalText> </value></pre>		
Example	Known absent problems <pre><value code="160245001" displayName="No current problems or disability" codeSystem="2.16.840.1.113883.6.96"/></pre>		
 hl7:originalText	R	The <originalText> element within the <code> element described above is used as follows: the <value> contains a <reference> to the <originalText> in order to link the coded value to the problem narrative text (minus any dates, comments, et cetera). The <reference> contains a URI in value attribute. This URI points to the free text description of the problem in the document that is being described.	(IPS...try)

└ hl7:reference		0 ... 1	R	The URI given in the value attribute of the <reference> element points to an element in the narrative content that contains the complete text describing the medication. In a CDA document, the URI given in the value attribute of the <reference> element points to an element in the narrative content that contains the complete text describing the medication. </reference></reference>	(IPS...try)
	Example	<reference value="#value_as_text"/>			
└ hl7:translation	CD.IPS	0 ... *		The translation element may be used to transmit a set of other concept descriptors, using for example ICD-10 or other international or jurisdictional code systems.	(IPS...try)
└ hl7:qualifier	CR	0 ... *			(IPS...try)
└ hl7:entryRelationship		0 ... 1	R	<p>Severity The contained entry describes a subjective assessment of the severity of the condition as evaluated by the clinician. Contains 2.16.840.1.113883.10.22.4.25 <i>IPS Severity Observation</i> (DYNAMIC)</p>	(IPS...try)
where [hl7:observation [hl7:code [concat(@code, @codeSystem) = doc('include/voc-2.16.840.1.113883.1.11.20386-DYNAMIC.xml')//valueSet [1]/conceptList/concept(concat(@code, @codeSystem) or @nullFlavor)]]]					
hl7ips-dataelement-136 Severity CEN/TC 251 prEN 17269 hl7ips-dataelement-128 Severity CEN/TC 251 prEN 17269					
└ @typeCode	cs	1 ... 1	F	SUBJ	
└ @inversionInd	bl	1 ... 1	F	true	
└ hl7:entryRelationship		0 ... 1	R	<p>Certainty or Verification Status The contained entry describes the certainty associated with a condition. Contains 2.16.840.1.113883.10.22.4.19 <i>IPS Certainty Observation</i> (DYNAMIC)</p>	(IPS...try)
where [hl7:observation [hl7:code [(@code = '66455-7' and @codeSystem = '2.16.840.1.113883.6.1')]]]					
└ @typeCode	cs	1 ... 1	F	SUBJ	

<code>L @inversionInd</code>	bl	1 ... 1	F	true	
<code>L h17:entryRelationship</code>		0 ... 1	R	<p>Status of the Problem The contained entry describes the current status of the condition, for example, whether it is active, in remission, resolved, and so on ... Contains 2.16.840.1.113883.10.22.4.20 IPS Problem Status Observation (2017-03-29)</p>	(IPS...try)
where <code>[hl7:observation [hl7:code [(@code = '33999-4' and @codeSystem = '2.16.840.1.113883.6.1') or @nullFlavor]]]</code>					
<code>L @typeCode</code>	cs	1 ... 1	F	REFR	
<code>L @inversionInd</code>	bl	0 ... 1	F	false	

9.25 IPS Problem Status Observation

Id	2.16.840.1.113883.10.22.4.20	Effective Date	2017-03-29
Status	Under pre-publication review	Version Label	STU1
Name	IPSPProblemStatusObservation	Display Name	IPS Problem Status Observation
Description	This subordinated observation used by the problem observation records information about the current status of a condition, for example, whether it is active, in remission, resolved, et cetera.		
Context	Parent nodes of template element with id 2.16.840.1.113883.10.22.4.20		
Classification	CDA Entry Level Template		
Open/Closed	Open (other than defined elements are allowed)		
Relationship	Adaptation: template 1.3.6.1.4.1.19376.1.5.3.1.4.1.1 (2013-12-20)		
Example	<p>Example</p> <pre><observation classCode="OBS" moodCode="EVN"></pre>		

	<pre> <templateId root="2.16.840.1.113883.10.22.4.20"/> <code code="33999-4" codeSystem="2.16.840.1.113883.6.1" displayName="Status"/> <text> <reference value="#example"/> </text> <statusCode code="completed"/> <value code="active" displayName="Active" codeSystem="2.16.840.1.113883.4.642.3.155"/> </observation> </pre>				
Item	DT	Card	Conf	Description	Label
h17:observation					(IPS...ion)
└ @classCode	cs	0 ... 1	F	OBS	
└ @moodCode	cs	0 ... 1	F	EVN	
└ h17:templateId	II	1 ... 1	M		(IPS...ion)
└ @root	uid	1 ... 1	F	2.16.840.1.113883.10.22.4.20	
└ h17:code	CD.IPS	1 ... 1	R	This observation is of clinical status, as indicated by the <code> element. This element must be present.	(IPS...ion)
└ @code	CONF	0 ... 1	F	33999-4	
└ @codeSystem		0 ... 1	F	2.16.840.1.113883.6.1 (LOINC)	
└ h17:text	ED	0 ... 1	R	The <text> element is required and points to the text describing the problem being recorded; including any dates, comments, et cetera. The <reference> contains a URI in value attribute. This URI points to the free text description of the problem in the document that is being described.	(IPS...ion)

└ h17:reference	TEL	1 ... 1	M		(IPS...ion)
└ @value		1 ... 1	R	Reference pointing to the narrative, typically # {label}-{generated-id}, e.g. #xxx-1	
└ h17:statusCode	CS	1 ... 1	M	The code attribute of <statusCode> for all clinical status observations shall be completed. While the <statusCode> element is required in all acts to record the status of the act, the only sensible value of this element in this context is completed.	(IPS...ion)
└ @code	CONF	1 ... 1	F	completed	
└ h17:value	CE.IPS	1 ... 1	R	The value element contains the clinical status.	(IPS...ion)
	CONF	The value of @code shall be drawn from value set 2.16.840.1.113883.11.22.24 IPS Condition Status Code (DYNAMIC)			

9.26 IPS Procedure Entry

Id	2.16.840.1.113883.10.22.4.17	Effective Date	2017-03-27
Status	● Under pre-publication review	Version Label	STU1
Name	IPSPprocedureEntry	Display Name	IPS Procedure Entry
Description	The procedure entry is used to record procedures that have occurred, or which are planned for in the future.		
Context	Parent nodes of template element with id 2.16.840.1.113883.10.22.4.17		
Classification	CDA Entry Level Template		
Open/Closed	Open (other than defined elements are allowed)		
Associated with	Associated with 5 concepts		

	Id	Name	Data Set
hl7ips-dataelement-44	🟡 Procedures Content Status	🟡 CEN/TC 251 prEN 17269	
hl7ips-dataelement-49	🟡 Procedure code	🟡 CEN/TC 251 prEN 17269	
hl7ips-dataelement-48	🟡 Procedure date	🟡 CEN/TC 251 prEN 17269	
hl7ips-dataelement-47	🟡 Procedure	🟡 CEN/TC 251 prEN 17269	
hl7ips-dataelement-216	🟡 Body site	🟡 CEN/TC 251 prEN 17269	

Uses	Uses 1 template
Relationship	Adaptation: template 1.3.6.1.4.1.19376.1.5.3.1.4.19 (2016-09-28 10:37:28) Adaptation: template 2.16.840.1.113883.10.12.306 (2005-09-07)
Example	<p>Example</p> <pre><procedure classCode="PROC" moodCode="EVN"> <templateId root="2.16.840.1.113883.10.22.4.17"/> <id root="1.2.3.999" extension="__example only__"/> <code code="..." codeSystem="1.2.3.999"/> <text> <reference value="#example"/> </text> <statusCode code="completed"/> <effectiveTime> <low value="20170721091514"/> </effectiveTime> <methodCode/> <approachSiteCode/> <targetSiteCode/> <entryRelationship typeCode="COMP" inversionInd="true"> <!-- template 2.16.840.1.113883.10.22.4.31 'IPS Internal Reference' (dynamic) --></pre>

	</entryRelationship> </procedure>					
Item	DT	Card	Conf	Description	Label	
hl7:procedure					(IPS...try)	
		hl7ips-dataelement-47		Procedure		CEN/TC 251 prEN 17269
└ @classCode	cs	1 ... 1	F	PROC		
└ @moodCode	cs	1 ... 1	R			
		The value of @moodCode shall be drawn from value set 2.16.840.1.113883.11.20.9.18 MoodCodeEnvInt (DYNAMIC)				
└ hl7:templateId	II	1 ... 1	M		(IPS...try)	
└ @root	uid	1 ... 1	F	2.16.840.1.113883.10.22.4.17		
└ hl7:id	II	0 ... *	R		(IPS...try)	
└ hl7:code	CD.IPS (preferred)	1 ... 1	R		(IPS...try)	
		hl7ips-dataelement-44		Procedures Content Status		CEN/TC 251 prEN 17269
		hl7ips-dataelement-49		Procedure code		CEN/TC 251 prEN 17269
		The value of @code comes preferably from value set 2.16.840.1.113883.11.22.35 IPS Procedures (DYNAMIC) or The value of @code comes preferably from value set 2.16.840.1.113883.11.22.36 Absent or Unknown Procedures (DYNAMIC)				

└ hl7:text	ED	0 ... 1	R	The <text> element if present points to the text describing the data being recorded; including any dates, comments, et cetera. The <reference> contains a URI in value attribute. This URI points to the free text description of the element (problem, procedure,...) in the document that is being described.</reference></text>	(IPS...try)	
└ hl7:reference	TEL	1 ... 1	M		(IPS...try)	
└ @value	st	1 ... 1	R	When used it shall refer to the narrative, typically #{label}-{generated-id}, e.g. #xxx-1		
└ hl7:statusCode	CS	1 ... 1	M		(IPS...try)	
	CONF	The value of @code shall be drawn from value set 2.16.840.1.113883.11.22.22 ActStatus.ActiveCompletedAbortedCancelled (DYNAMIC)				
└ hl7:effectiveTime	IVL_TS	0 ... 1			(IPS...try)	
		hl7ips-dataelement-48		Procedure date		CEN/TC 251 prEN 17269
└ hl7:targetSiteCode	CD.IPS (preferred)	0 ... *			(IPS...try)	
		hl7ips-dataelement-216		Body site		CEN/TC 251 prEN 17269
	CONF	The value of @code comes preferably from value set 2.16.840.1.113883.11.22.55 IPS Target Site (DYNAMIC)				
└ hl7:entryRelationship		0 ... *		Contains 2.16.840.1.113883.10.22.4.31 IPS Internal Reference (DYNAMIC)	(IPS...try)	
where [hl7:act]						
└ @typeCode	cs	1 ... 1	F	COMP		
└ @inversionInd	bl	1 ... 1	F	true		

9.27 IPS Radiology Result Observation

Id	2.16.840.1.113883.10.22.4.12	Effective Date	2017-03-21
Status	Under pre-publication review	Version Label	STU1
Name	IPSRadiologyResultObservation	Display Name	IPS Radiology Result Observation

Description

This template represents an observation produced as one of the results of a radiology or other imaging study performed on a patient.

In most cases, in the context of a patient summary this observation is final and validated, which is recorded with the value "completed" in the statusCode element. Should the observation be not final, the statusCode would indicate "active", instead.

Context	Parent nodes of template element with id 2.16.840.1.113883.10.22.4.12		
Classification	CDA Entry Level Template		
Open/Closed	Open (other than defined elements are allowed)		
Uses 2 templates			
Uses	Uses	as	Name
	2.16.840.1.113883.10.22.4.14	Containment	IPS Body Author (STU1)
	2.16.840.1.113883.10.22.4.22	Containment	IPS Comment Activity (STU1)
Relationship	Adaptation: template 2.16.840.1.113883.10.12.303 (2005-09-07) Adaptation: template 2.16.840.1.113883.10.20.22.4.2 (2015-08-01) Adaptation: template 2.16.840.1.113883.10.22.4.10 (2017-03-02)		
Example	Example <pre><observation classCode="OBS" moodCode="EVN"> <templateId root="2.16.840.1.113883.10.22.4.12"/> <id root="1.2.3.999" extension="__example only__"/> <code code="..." codeSystem="1.2.3.999"/> <statusCode code="active"/> <effectiveTime> <low value="20170721091625"/></pre>		

```

</effectiveTime>
<!-- choice: 1..1
element h17:value
element h17:value
element h17:value
-->
<interpretationCode code="CAR" displayName="Carrier" codeSystem="2.16.840.1.113883.5.83"/>
<methodCode code="..." codeSystem="1.2.3.999"/>
<targetSiteCode>
  <qualifier>
    <name code="272741003" codeSystem="2.16.840.1.113883.6.96" displayName="Laterality"/>
    <value code="..." codeSystem="2.16.840.1.113883.6.96"/>
  </qualifier>
  <qualifier>
    <name code="106233006" codeSystem="2.16.840.1.113883.6.96" displayName="Topographical modifier"/>
    <value code="..." codeSystem="2.16.840.1.113883.6.96"/>
  </qualifier>
</targetSiteCode>
<author>
  <!-- template 2.16.840.1.113883.10.22.4.14 'IPS Body Author' (dynamic) -->
</author>
<referenceRange>
  <observationRange>
    <value xsi:type="ANY"/>
    <interpretationCode code="N" codeSystem="2.16.840.1.113883.5.83" displayName="Normal"/>
  </observationRange>
</referenceRange>
<entryRelationship typeCode="COMP">
  <!-- template 2.16.840.1.113883.10.22.4.22 'IPS Comment Activity' (dynamic) -->
</entryRelationship>
</observation>

```

Item	DT	Card	Conf	Description	Label
h17:observation					(IPS...ion)
└ @classCode	cs	1 ... 1	F	OBS	
└ @moodCode	cs	1 ... 1	F	EVN	
└ h17:templateId	II	1 ... 1	M		(IPS...ion)
└ @root	uid	1 ... 1	F	2.16.840.1.113883.10.22.4.12	

L <code>hl7:id</code>	II	0 ... *	R	(IPS...ion)
L <code>hl7:code</code>	CD.IPS (extensible)	1 ... 1	M	(IPS...ion)
	CONF	The value of @code should be drawn from value set 2.16.840.1.113883.11.22.40 <i>IPS Results Observation Radiology</i> (DYNAMIC)		
L <code>hl7:statusCode</code>	CS	1 ... 1	M	(IPS...ion)
	CONF	The value of @code shall be drawn from value set 2.16.840.1.113883.1.11.19890 <i>x_ActStatus.ActiveComplete</i> (DYNAMIC)		
L <code>hl7:effectiveTime</code>	IVL_TS	1 ... 1	R	(IPS...ion)
<i>Choice</i>		Elements to choose from:		
		<ul style="list-style-type: none"> ▪ <code>hl7:value[@xsi:type='CE.IPS']</code> ▪ <code>hl7:value[@xsi:type='PQ']</code> ▪ <code>hl7:value[@xsi:type='IVL_PQ']</code> ▪ <code>hl7:value[@xsi:type='ST']</code> ▪ <code>hl7:value[@xsi:type='TS']</code> ▪ <code>hl7:value[@xsi:type='RTO_QTY_QTY']</code> 		
L <code>hl7:value</code>	CE.IPS	0 ... 1	R	(IPS...ion)
where <code>[@xsi:type='CE.IPS']</code>				
		Example	Result code: code '201' from code system 2.16.840.1.113883.2.4.4.30.1045 <code><value xsi:type="CE" code="201" codeSystem="2.16.840.1.113883.2.4.4.30.1045" displayName="regular"/></code>	
		Example	Result code: code 'POS' from code system 2.16.840.1.113883.5.83 <code><value xsi:type="CE" code="POS" codeSystem="2.16.840.1.113883.5.83"/></code>	

└ h17:value	PQ	0 ... 1	R	(IPS...ion)
where <code>[@xsi:type='PQ']</code>				
				Constraint If Observation/value is a physical quantity (xsi:type="PQ"), the unit of measure SHALL be selected from ValueSet UnitsOfMeasureCaseSensitive 2.16.840.1.113883.1.11.12839 DYNAMIC
				Example Result physical quantity (data type PQ): 136 mmol per liter <code><value xsi:type="PQ" value="136" unit="mmol/L"/></code>
└ h17:value	IVL_PQ	0 ... 1	R	(IPS...ion)
where <code>[@xsi:type='IVL_PQ']</code>				
				Example Result interval of physical quantities (data type IVL_PQ): 150 - 400 Billion per 10 exp 9 liter <code><value xsi:type="IVL_PQ"><low value="150" unit="10+9/1"/><high value="400" unit="10+9/1"/></value></code>
└ h17:value	ST	0 ... 1	R	(IPS...ion)
where <code>[@xsi:type='ST']</code>				
				Example Result free text (data type ST) <code><value xsi:type="ST">This is a result as a free text</value></code>
└ h17:value	TS	0 ... 1	R	(IPS...ion)
where <code>[@xsi:type='TS']</code>				
				Example Result time stamp (data type TS): 6-Aug-2014 <code><value xsi:type="TS" value="20140806"/></code>
└ h17:value	RTO_QTY_QTY	0 ... 1	R	(IPS...ion)

where `[@xsi:type='RTO_QTY_QTY']`

	Example	Result ratio (data type RTO_QTY_QTY): 1/179 <pre><value xsi:type="RTO_QTY_QTY"> <numerator xsi:type="INT" value="1"/> <denominator xsi:type="INT" value="179"/> </value></pre>			
└ h17:interpretationCode	CE.IPS	0 ... 1	R		(IPS...ion)
	CONF	The value of @code shall be drawn from value set 2.16.840.1.113883.1.11.78 <i>ObservationInterpretation</i> (DYNAMIC)			
└ h17:targetSiteCode	CD.IPS (preferred)	0 ... 1			(IPS...ion)
	Constraint	If the observation site is not preordinated in the observation/code or observation/value it SHALL be specified in the observation/targetSiteCode			
	CONF	The value of @code comes preferably from value set 2.16.840.1.113883.11.22.55 <i>IPS Target Site</i> (DYNAMIC)			
└ h17:qualifier	CR	0 ... 1		Laterality	(IPS...ion)
	Constraint	The qualifier element for laterality SHALL be present if the targetSiteCode represents a paired body part and laterality is not pre-coordinated in the targetSiteCode			
└ h17:name	CV (preferred)	1 ... 1	M		(IPS...ion)
└ @code		1 ... 1	F	272741003	
└ @codeSystem	CONF	1 ... 1	F	2.16.840.1.113883.6.96 (Snomed-CT)	
└ h17:value	CD.IPS (preferred)	1 ... 1	M		(IPS...ion)
	CONF	The value of @code comes preferably from value set 2.16.840.1.113883.11.22.57 <i>Laterality (qualifier)</i> (DYNAMIC)			

L h17:qualifier	CR	0 ... 1		Topographical modifier	(IPS...ion)
L h17:name	CV (preferred)	1 ... 1	M		(IPS...ion)
L @code	CONF	1 ... 1	F	106233006	
L @codeSystem		1 ... 1	F	2.16.840.1.113883.6.96 (Snomed-CT)	
L h17:value	CD.IPS (preferred)	1 ... 1	M		(IPS...ion)
	CONF	The value of @code comes preferably from value set 2.16.840.1.113883.11.22.58 <i>Topographical modifier (qualifier) (DYNAMIC)</i>			
L h17:author		0 ... *	R	Contains 2.16.840.1.113883.10.22.4.14 <i>IPS Body Author (DYNAMIC)</i>	(IPS...ion)
where [h17:assignedAuthor]					
L h17:referenceRange		0 ... *	R		(IPS...ion)
L h17:observationRange		1 ... 1	M		(IPS...ion)
L h17:code	CD		NP		(IPS...ion)
L h17:value	ANY	1 ... 1	M		(IPS...ion)
L h17:interpretationCode	CE	0 ... 1			(IPS...ion)
L @code	CONF	0 ... 1	F	N	

	<code>@codeSystem</code>		0 ... 1 F	2.16.840.1.113883.5.83 (Observation Interpretation)
	<code>hl7:entryRelationship</code>		0 ... *	Contains 2.16.840.1.113883.10.22.4.22 <i>IPS Comment Activity (DYNAMIC)</i> (IPS...ion)
where [bl7:act [bl7:code [(@code = '48767-8' and @codeSystem = '2.16.840.1.113883.6.1')]]]				
	<code>@typeCode</code>	cs	1 ... 1 F	COMP

9.28 IPS Reaction Manifestation

Id	2.16.840.1.113883.10.22.4.6	Effective Date	2016-11-15
Status	Under pre-publication review	Version Label	STU1
Name	IPSAdverseReactionMFST	Display Name	IPS Reaction Manifestation

Description

This clinical statement represents the response to an undesired symptom, finding, etc. due to administered or exposed substance. This reaction may be an undesired symptom, finding, etc. or it could be a desired response to a treatment. A reaction can be defined with respect to its severity, and can have been treated by one or more interventions.

Context	Parent nodes of template element with id 2.16.840.1.113883.10.22.4.6
Classification	CDA Entry Level Template
Open/Closed	Open (other than defined elements are allowed)

Associated with 2 concepts

Associated with	Id	Name	Data Set
	hl7ips-dataelement-193	Manifestation of the reaction	CEN/TC 251 prEN 17269

	hl7ips-dataelement-194	Severity		CEN/TC 251 prEN 17269	
Uses	Uses 1 template				
	Uses	as	Name	Version	
	2.16.840.1.113883.10.22.4.25	Containment	IPS Severity Observation (STU1)	DYNAMIC	
Relationship	Adaptation: template 1.3.6.1.4.1.19376.1.5.3.1.4.5 (DYNAMIC)				
Example	<p>Example</p> <pre><observation classCode="OBS" moodCode="EVN"> <templateId root="2.16.840.1.113883.10.22.4.6"/> <id root="1.2.3.999" extension="_example only_"/> <code code="404684003" displayName="Clinical finding" codeSystem="2.16.840.1.113883.6.96"/> <text> <reference value="#ref1"/> </text> <statusCode code="completed"/> <effectiveTime> <low value="201611"/> </effectiveTime> <value xsi:type="CD" code="1985008" displayName="Vomitus" codeSystem="2.16.840.1.113883.6.96"> <originalText> <reference value="#ref2"/> </originalText> </value> <entryRelationship typeCode="SUBJ" inversionInd="true"> <!-- template 2.16.840.1.113883.10.22.4.25 'IPS Severity Observation' (dynamic) --> </entryRelationship> </observation></pre>				
Item	DT	Card	Conf	Description	Label
hl7:observation	cs	0 ... 1	F	OBS	(IPS...FST)
└ @classCode					

<code>└ @moodCode</code>	cs	1 ... 1	F	EVN	
<code>└ h17:templateId</code>	II	1 ... 1	M		(IPS...FST)
<code>└ @root</code>	uid	1 ... 1	F	2.16.840.1.113883.10.22.4.6	
<code>└ h17:id</code>	II	0 ... *	R		(IPS...FST)
<code>└ h17:code</code>	CD.IPS	1 ... 1	R	This element describes the type of condition this observation is referring to.	(IPS...FST)
	CONF	The value of @code shall be drawn from value set 2.16.840.1.113883.11.22.16 <i>Problem Type</i> (2017-04-07)			
<code>└ h17:text</code>	ED	0 ... 1	R	The <text> element if present points to the text describing the problem being recorded; including any dates, comments, et cetera. The <reference> contains a URI in value attribute. This URI points to the free text description of the problem in the document that is being described.	(IPS...FST)
<code>└ h17:reference</code>	TEL	1 ... 1	M		(IPS...FST)
<code>└ @value</code>		1 ... 1	R	When used it shall refer to the narrative, typically #{label}-{generated-id}, e.g. #xxx-1	
<code>└ h17:statusCode</code>	CS (required)	0 ... 1	R	A clinical document normally records only those condition observation events that have been completed, not observations that are in any other state. Therefore, the <statusCode> shall always have code='completed'.	(IPS...FST)
<code>└ @code</code>	CONF	0 ... 1	F	completed	
<code>└ h17:effectiveTime</code>	IVL_TS	1 ... 1	M	The effectiveTime, also referred to as the “biologically relevant time” is the time at which the observation holds for the patient. For a provider seeing a patient in the clinic today, observing a history of heart attack that occurred five years ago, the effectiveTime is five years ago. The <low> and <high> values should be no more precise than known, but as precise	(IPS...FST)

				as possible.			
└ hl7:low	IVXB_TS	1 ... 1	R	The effectiveTime/low (a.k.a. "onset date") asserts when the condition became biologically active.	(IPS...FST)		
└ hl7:high	IVXB_TS	0 ... 1	C	'The effectiveTime/high (a.k.a. "resolution date") asserts when the condition e became biologically resolved. If the date of resolution is not known, then effectiveTime/high will be present with a nullFlavor of "UNK".	(IPS...FST)		
		Constraint	If this condition is known to be resolved, then the effectiveTime/high would be present.				
└ hl7:value	CD.IPS (preferred)	1 ... 1	R	The <value> is the condition that was found. While the value may be a coded or an un-coded string, the type is always a coded value. If uncoded, it shall contain a <reference> to the <originalText> in the narrative where the reaction is described.	(IPS...FST)		
			© hl7ips-dataelement-193	Manifestation of the reaction	CEN/TC 251 prEN 17269		
└ @xsi:type		1 ... 1	F	CD			
	CONF	The value of @code comes preferably from value set 2.16.840.1.113883.11.22.3 <i>Allergy Reaction</i> (2017-02-23)					
└ hl7:originalText		0 ... 1	R	The <originalText> element within the <code> element described above is used as follows: the <value> contains a <reference> to the <originalText> in order to link the coded value to the problem narrative text (minus any dates, comments, et cetera). The <reference> contains a URI in value attribute. This URI points to the free text description of the problem in the document that is being described.	(IPS...FST)		
└ hl7:reference		0 ... 1	R	The URI given in the value attribute of the <reference> element points to an element in the narrative content that contains the complete text describing the medication. In a CDA document, the URI given in the value attribute of the <reference> element points to an element in the narrative content that contains the complete text describing the medication.	(IPS...FST)		
		Example	<reference value="#AdvReaction_1"/>				

<code>hl7:translation</code>	CD	0 ... *		(IPS...FST)
<code>hl7:entryRelationship</code>		0 ... 1	R	<p>Severity The contained entry describes a subjective assessment of the severity of the condition as evaluated by the clinician. Contains 2.16.840.1.113883.10.22.4.25 IPS Severity Observation (DYNAMIC)</p>
where <code>[hl7:observation [hl7:code [concat(@code, @codeSystem) = doc('include/voc-2.16.840.1.113883.1.11.20386-DYNAMIC.xml')//valueSet [1]/conceptList/concept(concat(@code, @codeSystem) or @nullFlavor)]]]</code>				
				hl7ips-dataelement-194 Severity CEN/TC 251 prEN 17269
<code>@typeCode</code>	cs	1 ... 1	F	SUBJ
<code>@inversionInd</code>	bl	1 ... 1	F	true

9.29 IPS Result Observation

Id	2.16.840.1.113883.10.22.4.10	Effective Date	2017-03-02
Status	Under pre-publication review	Version Label	STU1
Name	IPSResultObservation	Display Name	IPS Result Observation

Description

This generic template is the basic set of constraints, which apply to any kind of observation grouped in a Result Organizer. The IPS Result Observation template is generic. It is further specialized by child templates, which constrain clinical laboratory observations or radiology observations or anatomic pathology observations. The generic IPS Result Observation template is usable in a patient summary for observations, which do not fall within one of the specialized categories.

The result observation includes a statusCode to allow recording the status of an observation. "Pending" results (e.g., a test has been run but results have not been reported yet) should be represented as "active" ActStatus. However, in most cases, observations selected for an international patient summary are results that are final and approved, and thus, have a "completed" statusCode.

The result of the observation may be commented through an entryRelationship introducing an "IPS Comment activity" template.

Context	Parent nodes of template element with id 2.16.840.1.113883.10.22.4.10
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Classification	CDA Entry Level Template																	
Open/Closed	Open (other than defined elements are allowed)																	
	Associated with 4 concepts																	
Associated with	<table border="1"> <thead> <tr> <th>Id</th><th>Name</th><th>Data Set</th></tr> </thead> <tbody> <tr> <td>hl7ips-dataelement-143</td><td>⌚ Date of observation</td><td>⌚ CEN/TC 251 prEN 17269</td></tr> <tr> <td>hl7ips-dataelement-144</td><td>⌚ Observation Type</td><td>⌚ CEN/TC 251 prEN 17269</td></tr> <tr> <td>hl7ips-dataelement-106</td><td>⌚ Observation Result</td><td>⌚ CEN/TC 251 prEN 17269</td></tr> <tr> <td>hl7ips-dataelement-145</td><td>⌚ Value</td><td>⌚ CEN/TC 251 prEN 17269</td></tr> </tbody> </table>			Id	Name	Data Set	hl7ips-dataelement-143	⌚ Date of observation	⌚ CEN/TC 251 prEN 17269	hl7ips-dataelement-144	⌚ Observation Type	⌚ CEN/TC 251 prEN 17269	hl7ips-dataelement-106	⌚ Observation Result	⌚ CEN/TC 251 prEN 17269	hl7ips-dataelement-145	⌚ Value	⌚ CEN/TC 251 prEN 17269
Id	Name	Data Set																
hl7ips-dataelement-143	⌚ Date of observation	⌚ CEN/TC 251 prEN 17269																
hl7ips-dataelement-144	⌚ Observation Type	⌚ CEN/TC 251 prEN 17269																
hl7ips-dataelement-106	⌚ Observation Result	⌚ CEN/TC 251 prEN 17269																
hl7ips-dataelement-145	⌚ Value	⌚ CEN/TC 251 prEN 17269																
Uses	Uses 2 templates																	
Relationship	Adaptation: template 2.16.840.1.113883.10.12.303 (2005-09-07) Adaptation: template 2.16.840.1.113883.10.20.22.4.2 (2015-08-01)																	
Example	<p>Example</p> <pre><observation classCode="OBS" moodCode="EVN"> <templateId root="2.16.840.1.113883.10.22.4.10"/> <id root="1.2.3.999" extension="__example only__"/> <code code="..." codeSystem="1.2.3.999"/> <statusCode/> <effectiveTime> <low value="20170721091742"/> </effectiveTime> <value xsi:type="PQ" value="136" unit="mmol/L"/> <interpretationCode code="..." codeSystem="2.16.840.1.113883.5.83"/></pre>																	

	<pre> <methodCode code="..." codeSystem="1.2.3.999"/> <targetSiteCode code="..." codeSystem="1.2.3.999"/> <author> <!-- template 2.16.840.1.113883.10.22.4.14 'IPS Body Author' (dynamic) --> </author> <referenceRange> <observationRange> <value xsi:type="PQ" value=".." unit=".."/> <interpretationCode code="N" codeSystem="2.16.840.1.113883.5.83" displayName="Normal"/> </observationRange> </referenceRange> <entryRelationship typeCode="COMP"> <!-- template 2.16.840.1.113883.10.22.4.22 'IPS Comment Activity' (dynamic) --> </entryRelationship> </observation> </pre>				
Item	DT	Card	Conf	Description	Label
hl7:observation					(IPS...ion)
⌚ hl7ips-dataelement-106 🟡 Observation Result 🟡 CEN/TC 251 prEN 17269					
└ @classCode	cs	1 ... 1	F	OBS	
└ @moodCode	cs	1 ... 1	F	EVN	
└ hl7:templateId	II	1 ... 1	M		(IPS...ion)
└ @root	uid	1 ... 1	F	2.16.840.1.113883.10.22.4.10	
└ hl7:id	II	0 ... *	R		(IPS...ion)
└ hl7:code	CD.IPS	1 ... 1	M		(IPS...ion)
⌚ hl7ips-dataelement-144 🟡 Observation Type 🟡 CEN/TC 251 prEN 17269					

				CONF	The value of @code shall be drawn from value set 2.16.840.1.113883.11.22.38 IPS Results Observation (DYNAMIC)
└ hl7:statusCode	CS	1 ... 1	M		(IPS...ion)
└ hl7:effectiveTime	IVL_TS	1 ... 1	R		(IPS...ion)
 hl7ips-dataelement-143				 Date of observation	 CEN/TC 251 prEN 17269
<i>Choice</i>				Elements to choose from:	
1 ... 1				<ul style="list-style-type: none"> ▪ hl7:value[@xsi:type='CE.IPS'] ▪ hl7:value[@xsi:type='PQ'] ▪ hl7:value[@xsi:type='IVL_PQ'] ▪ hl7:value[@xsi:type='ST'] ▪ hl7:value[@xsi:type='TS'] ▪ hl7:value[@xsi:type='RTO_QTY_QTY'] 	
└ hl7:value	CE.IPS	0 ... 1	R		(IPS...ion)
where <code>[@xsi:type='CE.IPS']</code>					
 hl7ips-dataelement-145				 Value	 CEN/TC 251 prEN 17269
Example		Result code: code '201' from code system 2.16.840.1.113883.2.4.4.30.1045 <code><value xsi:type="CE" code="201" codeSystem="2.16.840.1.113883.2.4.4.30.1045" displayName="regular"/></code>			
Example		Result code: code 'POS' from code system 2.16.840.1.113883.5.83 <code><value xsi:type="CE" code="POS" codeSystem="2.16.840.1.113883.5.83"/></code>			
└ hl7:value	PQ	0 ... 1	R		(IPS...ion)
where <code>[@xsi:type='PQ']</code>					

	Constraint	If Observation/value is a physical quantity (xsi:type="PQ"), the unit of measure SHALL be selected from ValueSet UnitsOfMeasureCaseSensitive 2.16.840.1.113883.1.11.12839 DYNAMIC			
	Example	Result physical quantity (data type PQ): 136 mmol per liter <value xsi:type="PQ" value="136" unit="mmol/L"/>			
└ h17:value	IVL_PQ	0 ... 1	R		(IPS...ion)
where [@xsi:type='IVL_PQ']					
	Example	Result interval of physical quantities (data type IVL_PQ): 150 - 400 Milliard per 10 exp 9 liter <value xsi:type="IVL_PQ"> <low value="150" unit="10+9/1"/> <high value="400" unit="10+9/1"/> </value>			
└ h17:value	ST	0 ... 1	R		(IPS...ion)
where [@xsi:type='ST']					
	Example	Result free text (data type ST) <value xsi:type="ST">This is a result as a free text</value>			
└ h17:value	TS	0 ... 1	R		(IPS...ion)
where [@xsi:type='TS']					
	Example	Result time stamp (data type TS): 6-Aug-2014 <value xsi:type="TS" value="20140806"/>			
└ h17:value	RTO_QTY_QTY	0 ... 1	R		(IPS...ion)
where [@xsi:type='RTO_QTY_QTY']					
	Example	Result ratio (data type RTO_QTY_QTY): 1/179 <value xsi:type="RTO_QTY_QTY"> <numerator xsi:type="INT" value="1"/>			

			<denominator xsi:type="INT" value="179"/>		
└ h17:interpretationCode	CE.IPS	0 ... 1	R		(IPS...ion)
	CONF			The value of @code shall be drawn from value set 2.16.840.1.113883.1.11.78 ObservationInterpretation (DYNAMIC)	
└ h17:targetSiteCode	CD.IPS (preferred)	0 ... 1			(IPS...ion)
	CONF			The value of @code comes preferably from value set 2.16.840.1.113883.11.22.55 IPS Target Site (DYNAMIC)	
└ h17:author		0 ... *	R	Contains 2.16.840.1.113883.10.22.4.14 IPS Body Author (DYNAMIC)	(IPS...ion)
where [hl7:assignedAuthor]					
└ h17:referenceRange		0 ... *	R		(IPS...ion)
└ h17:observationRange		1 ... 1	M		(IPS...ion)
└ h17:code	CD		NP		(IPS...ion)
└ h17:value	ANY	1 ... 1	M		(IPS...ion)
└ h17:interpretationCode	CE	0 ... 1			(IPS...ion)
└ @code	CONF	0 ... 1	F	N	
└ @codeSystem		0 ... 1	F	2.16.840.1.113883.5.83 (Observation Interpretation)	

L h17:entryRelationship		0 ... *	Contains 2.16.840.1.113883.10.22.4.22 IPS Comment Activity (DYNAMIC)	(IPS...ion)
where [bl7:act [bl7:code [(@code = '48767-8' and @codeSystem = '2.16.840.1.113883.6.1')]]]				
L @typeCode	cs	1 ... 1 F	COMP	

9.30 IPS Result Organizer

Id	2.16.840.1.113883.10.22.4.9	Effective Date	2017-03-02
Status	 Under pre-publication review	Version Label	STU1
Name	IPSResultOrganizer	Display Name	IPS Result Organizer
Description			

This template provides a mechanism for grouping result observations. It contains information applicable to all of the contained result observations. The Result Organizer code categorizes the contained results into one of several commonly accepted values (e.g., "Hematology", "Chemistry", "Nuclear Medicine"). If any Result Observation within the organizer has a statusCode of "active", the Result Organizer must also have a statusCode of "active". However, the results selected for a patient summary are most often final results, with status "completed". So in most cases, the statusCode of the Organizer is "completed".

The result observations contained within the organizer may use either of these templates:

- Laboratory Result Observation
- Radiology Result Observation
- Pathology Result Observation
- Result Observation (most generic template used whenever none of the above is applicable)

One Result Organizer entry groups results, which have a common context of production:

- common specialty (imaging, bacteriology, serology, chemistry, surgical pathology, clinical, radiology ...),
- common overall interpretation, (which interprets the set of results of the Organizer),
- common biologic specimen for in vitro diagnostic observations,

- common associated illustrative image (ObservationMedia).

The ultimate choice for sorting out results between Organizer entries belongs to the authoring person or system of the section.

Context	Parent nodes of template element with id 2.16.840.1.113883.10.22.4.9		
Classification	CDA Entry Level Template		
Open/Closed	Open (other than defined elements are allowed)		
Associated with 6 concepts			
Id	Name	Data Set	
hl7ips-dataelement-106	Observation Result		CEN/TC 251 prEN 17269
hl7ips-dataelement-177	Observer		CEN/TC 251 prEN 17269
hl7ips-dataelement-143	Date of observation		CEN/TC 251 prEN 17269
hl7ips-dataelement-146	Performer		CEN/TC 251 prEN 17269
hl7ips-dataelement-23	Observation Result		CEN/TC 251 prEN 17269
hl7ips-dataelement-144	Observation Type		CEN/TC 251 prEN 17269
Uses 9 templates			
Uses	as	Name	Version
2.16.840.1.113883.10.12.323	Containment	 CDA Performer (Body)	DYNAMIC
2.16.840.1.113883.10.22.4.14	Containment	 IPS Body Author (STU1)	DYNAMIC
2.16.840.1.113883.10.22.4.13	Containment	 IPS Laboratory Result Observation (STU1)	DYNAMIC

	<p>2.16.840.1.113883.10.22.4.12 Containment  IPS Radiology Result Observation (STU1) DYNAMIC</p> <p>2.16.840.1.113883.10.22.4.11 Containment  IPS Pathology Result Observation (STU1) DYNAMIC</p> <p>2.16.840.1.113883.10.22.4.10 Containment  IPS Result Observation (STU1) DYNAMIC</p> <p>2.16.840.1.113883.10.22.4.30 Containment  IPS Specimen Collection (STU1) DYNAMIC</p> <p>2.16.840.1.113883.10.22.4.22 Containment  IPS Comment Activity (STU1) DYNAMIC</p> <p>2.16.840.1.113883.10.22.4.23 Containment  IPS ObservationMedia (STU1) DYNAMIC</p>
Relationship	<p>Adaptation: template 2.16.840.1.113883.10.12.305 (2005-09-07)</p> <p>Adaptation: template 2.16.840.1.113883.10.20.22.4.1 (2015-08-01)</p>
Example	<p>Example</p> <pre><organizer classCode="BATTERY" moodCode="EVN"> <templateId root="2.16.840.1.113883.10.22.4.9"/> <code code="11529-5" displayName="Surgical pathology studies (set)" codeSystemName="LOINC" codeSystem="2.16.840.1.113883.6.1"/> <satusCode code="completed"/> <author> <!-- template 2.16.840.1.113883.10.12.318 'CDA Author (Body)' - a pathologist --> </author> <component> <!-- template 2.16.840.1.113883.10.22.4.11 'IPS Pathology Result Observation' --> </component> <component> <!-- template 2.16.840.1.113883.10.22.4.30 'IPS Specimen Collection' - excised tissue specimen --> </component> <component> <!-- template 2.16.840.1.113883.10.22.4.22 'IPS Comment Activity' - pathologist's interpretation --> </component> <component> <!-- template 2.16.840.1.113883.10.22.4.23 'IPS ObservationMedia' - an illustrative slide image --> </component> </organizer></pre>
Example	<p>Example</p> <pre><organizer classCode="BATTERY" moodCode="EVN"> <templateId root="2.16.840.1.113883.10.22.4.9"/> <code code="18719-5" displayName="Chemistry studies (set)" codeSystemName="LOINC" codeSystem="2.16.840.1.113883.6.1"/> <satusCode code="completed"/> <author></pre>

	<pre> <!-- template 2.16.840.1.113883.10.12.318 'CDA Author (Body)' - a clinical laboratory director --> </author> <component> <!-- template 2.16.840.1.113883.10.22.4.13 'IPS Laboratory Result Observation' --> </component> <component> <!-- template 2.16.840.1.113883.10.22.4.13 'IPS Laboratory Result Observation' --> </component> <component> <!-- template 2.16.840.1.113883.10.22.4.30 'IPS Specimen Collection' - common blood serum specimen --> </component> <component> <!-- template 2.16.840.1.113883.10.22.4.22 'IPS Comment Activity' - interpretation of chemistry results --> </component> </organizer> </pre>
Example	<p>Example</p> <pre> <organizer classCode="BATTERY" moodCode="EVN"> <templateId root="2.16.840.1.113883.10.22.4.9"/> <code code="18748-4" displayName="Diagnostic imaging study" codeSystemName="LOINC" codeSystem="2.16.840.1.113883.6.1"/> <statusCode code="completed"/> <author> <!-- template 2.16.840.1.113883.10.12.318 'CDA Author (Body)' - a radiologist --> </author> <component> <!-- template 2.16.840.1.113883.10.22.4.12 'IPS Radiology Result Observation' --> </component> <component> <!-- template 2.16.840.1.113883.10.22.4.23 'IPS ObservationMedia' - an illustrative image --> </component> <component> <!-- template 2.16.840.1.113883.10.22.4.22 'IPS Comment Activity' - overall interpretation --> </component> </organizer> </pre>

Item	DT	Card	Conf	Description	Label
hl7:organizer					(IPS...zer)
└ @classCode	cs	1 ... 1	R	 hl7ips-dataelement-106  Observation Result  CEN/TC 251 prEN 17269	

<code>└ @moodCode</code>	cs	1 ... 1	F	EVN	
<code>└ h17:templateId</code>	II	1 ... 1	M		(IPS...zer)
<code>└ @root</code>	uid	1 ... 1	F	2.16.840.1.113883.10.22.4.9	
<code>└ h17:id</code>	II	0 ... *			(IPS...zer)
<code>└ h17:code</code>	CD.IPS	1 ... 1	R		(IPS...zer)
⌚ hl7ips-dataelement-144 🟡 Observation Type 🟡 CEN/TC 251 prEN 17269					
CONF		The value of @code shall be drawn from value set 2.16.840.1.113883.11.22.37 IPS Results Organizer (DYNAMIC)			
<code>└ h17:statusCode</code>	CS	1 ... 1	M		(IPS...zer)
CONF		The value of @code shall be drawn from value set 2.16.840.1.113883.1.11.19890 x_ActStatusActiveComplete (DYNAMIC)			
<code>└ h17:effectiveTime</code>	IVL_TS	0 ... 1			(IPS...zer)
⌚ hl7ips-dataelement-143 🟡 Date of observation 🟡 CEN/TC 251 prEN 17269					
<code>└ h17:low</code>	IVXB_TS	0 ... 1			(IPS...zer)
<code>└ h17:high</code>	IVXB_TS	0 ... 1			(IPS...zer)
<code>└ h17:performer</code>		0 ... *	R	When present, this element represents the organization who performed the set of observations grouped under this organizer. Contains 2.16.840.1.113883.10.12.323 CDA Performer (Body) (DYNAMIC)	(IPS...zer)

where [hl7:assignedEntity]

	hl7ips-dataelement-146		Performer		CEN/TC 251 prEN 17269
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hl7:author

0 ... * **R**

Contains 2.16.840.1.113883.10.22.4.14 IPS Body Author (DYNAMIC)

(IPS...zer)

where [hl7:assignedAuthor]

	hl7ips-dataelement-177		Observer		CEN/TC 251 prEN 17269
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Elements to choose from:

- hl7:component containing template 2.16.840.1.113883.10.22.4.13 IPS Laboratory Result Observation (DYNAMIC)
- hl7:component containing template 2.16.840.1.113883.10.22.4.12 IPS Radiology Result Observation (DYNAMIC)
- hl7:component containing template 2.16.840.1.113883.10.22.4.11 IPS Pathology Result Observation (DYNAMIC)
- hl7:component containing template 2.16.840.1.113883.10.22.4.10 IPS Result Observation (DYNAMIC)
- hl7:component containing template 2.16.840.1.113883.10.22.4.30 IPS Specimen Collection (DYNAMIC)
- hl7:component containing template 2.16.840.1.113883.10.22.4.22 IPS Comment Activity (DYNAMIC)
- hl7:component containing template 2.16.840.1.113883.10.22.4.23 IPS ObservationMedia (DYNAMIC)

Choice

1 ... *

hl7:component

0 ... *

Contains 2.16.840.1.113883.10.22.4.13 IPS Laboratory Result Observation (DYNAMIC)

(IPS...zer)

where [hl7:observation [hl7:code [not(@nullFlavor)]]]

└ hl7:component		0 ... *	Contains 2.16.840.1.113883.10.22.4.12 IPS Radiology Result Observation (DYNAMIC)	(IPS...zer)
where [hl7:observation [hl7:code [not(@nullFlavor)]]]				
└ hl7:component		0 ... *	Contains 2.16.840.1.113883.10.22.4.11 IPS Pathology Result Observation (DYNAMIC)	(IPS...zer)
where [hl7:observation [hl7:code [not(@nullFlavor)]]]				
└ hl7:component		0 ... *	Contains 2.16.840.1.113883.10.22.4.10 IPS Result Observation (DYNAMIC)	(IPS...zer)
where [hl7:observation [hl7:code [@codeSystem = doc('include/voc-2.16.840.1.113883.11.22.38-DYNAMIC.xml')]/valueSet [1]/completeCodeSystem/@codeSystem]]]				
 hl7ips-dataelement-23  Observation Result  CEN/TC 251 prEN 17269				
└ hl7:component		0 ... *	Contains 2.16.840.1.113883.10.22.4.30 IPS Specimen Collection (DYNAMIC)	(IPS...zer)
where [hl7:procedure]				
Constraint		An IPS Specimen Collection SHALL be present only if the organizer carries anatomic pathology or microbiology laboratory observations, which need to be associated with the specific anatomic site the specimen was collected from.		
└ hl7:component		0 ... *	Contains 2.16.840.1.113883.10.22.4.22 IPS Comment Activity (DYNAMIC)	(IPS...zer)
where [hl7:act [hl7:code [(@code = '48767-8' and @codeSystem = '2.16.840.1.113883.6.1')]]]				
Constraint		An IPS Comment Activity SHALL contain a general comment applying to the whole set of observations present in the organizer		
└ hl7:component		0 ... *	Contains 2.16.840.1.113883.10.22.4.23 IPS ObservationMedia (DYNAMIC)	(IPS...zer)

where [hl7:observationMedia]

9.31 IPS Severity Observation

Id	2.16.840.1.113883.10.22.4.25	Effective Date	2017-04-07
Status	Under pre-publication review	Version Label	STU1
Name	EntrySeverity	Display Name	IPS Severity Observation

Description

This clinical statement represents the subjective assessment of the severity of the condition as evaluated by the clinician.

The Severity Observation can be associated with a Reaction Observation.

When the Severity Observation is associated with a Reaction Observation it characterizes a reaction. A person may manifest many symptoms in a reaction to a single substance, and each reaction to the substance can be represented. However, each reaction observation can have only one severity observation associated with it. For example, someone may have a rash reaction observation as well as an itching reaction observation, but each can have only one level of severity.

Context	Parent nodes of template element with id 2.16.840.1.113883.10.22.4.25
Classification	CDA Entry Level Template
Open/Closed	Open (other than defined elements are allowed)

Associated with 3 concepts

	Id	Name	Data Set
Associated with	hl7ips-dataelement-128	Severity	CEN/TC 251 prEN 17269
	hl7ips-dataelement-136	Severity	CEN/TC 251 prEN 17269
	hl7ips-dataelement-194	Severity	CEN/TC 251 prEN 17269

17269

Relationship	Adaptation: template 1.3.6.1.4.1.19376.1.5.3.1.4.1 (DYNAMIC)																																														
Example	<p>Example</p> <pre><observation classCode="OBS" moodCode="EVN"> <templateId root="2.16.840.1.113883.10.22.4.25"/> <id root="1.2.3.999" extension="__example only__"/> <code code="SEV" displayName="Severity Observation" codeSystem="2.16.840.1.113883.5.4"/> <text> <reference value="#example"/> </text> <statusCode code="completed"/> <value code="255604002" displayName="Mild" codeSystem="2.16.840.1.113883.6.96"/> </observation></pre>																																														
	<table border="1"> <thead> <tr> <th>Item</th><th>DT</th><th>Card</th><th>Conf</th><th>Description</th><th>Label</th></tr> </thead> <tbody> <tr> <td>hl7:observation</td><td></td><td></td><td>R</td><td></td><td>(Ent...ity)</td></tr> <tr> <td> └ @classCode</td><td>cs</td><td>0 ... 1</td><td>F</td><td>OBS</td><td></td></tr> <tr> <td> └ @moodCode</td><td>cs</td><td>1 ... 1</td><td>F</td><td>EVN</td><td></td></tr> <tr> <td> └ hl7:templateId</td><td>II</td><td>1 ... 1</td><td>M</td><td></td><td>(Ent...ity)</td></tr> <tr> <td> └ @root</td><td>uid</td><td>1 ... 1</td><td>F</td><td>2.16.840.1.113883.10.22.4.25</td><td></td></tr> <tr> <td> └ hl7:id</td><td>II</td><td>0 ... *</td><td>R</td><td></td><td>(Ent...ity)</td></tr> </tbody> </table>					Item	DT	Card	Conf	Description	Label	hl7:observation			R		(Ent...ity)	└ @classCode	cs	0 ... 1	F	OBS		└ @moodCode	cs	1 ... 1	F	EVN		└ hl7:templateId	II	1 ... 1	M		(Ent...ity)	└ @root	uid	1 ... 1	F	2.16.840.1.113883.10.22.4.25		└ hl7:id	II	0 ... *	R		(Ent...ity)
Item	DT	Card	Conf	Description	Label																																										
hl7:observation			R		(Ent...ity)																																										
└ @classCode	cs	0 ... 1	F	OBS																																											
└ @moodCode	cs	1 ... 1	F	EVN																																											
└ hl7:templateId	II	1 ... 1	M		(Ent...ity)																																										
└ @root	uid	1 ... 1	F	2.16.840.1.113883.10.22.4.25																																											
└ hl7:id	II	0 ... *	R		(Ent...ity)																																										

L h17:code	CD	1 ... 1	R		(Ent...ity)
	CONF	The value of @code shall be drawn from value set 2.16.840.1.113883.1.11.20386 <i>SeverityObservationCode</i> (DYNAMIC)			
L h17:text	ED	0 ... 1	R	If present, the <text> element shall contain a <reference> element pointing to the narrative where the severity is recorded</reference></text>	(Ent...ity)
L h17:reference	TEL	1 ... 1	M		(Ent...ity)
L @value		1 ... 1	R	Reference pointing to the narrative, typically #{label}-{generated-id}, e.g. #xxx-1	
L h17:statusCode	CS	1 ... 1	M		(Ent...ity)
L @code	CONF	1 ... 1	F	completed	
L h17:value	CD.IPS (preferred)	1 ... 1	R	The <value> element contains the level of severity.	(Ent...ity)
	 hl7ips-dataelement-136	 Severity	 CEN/TC 251 prEN 17269		
	CONF	The value of @code comes preferably from value set 2.16.840.1.113883.11.22.18 <i>Problem Severity</i> (DYNAMIC)			

9.32 IPS Social History Alcohol Use

Id	2.16.840.1.113883.10.22.4.35	Effective Date	2017-06-29
Status	 Under pre-publication review	Version Label	STU1
Name	IPSSocialHistoryObsAlcoholUse	Display Name	IPS Social History Alcohol Use

Description	This template is a specialization of the Social History Observation that may be used to represent alcohol consumption habits.												
Context	Parent nodes of template element with id 2.16.840.1.113883.10.22.4.35												
Classification	CDA Entry Level Template												
Open/Closed	Open (other than defined elements are allowed)												
	Associated with 2 concepts												
Associated with	<table border="1"> <thead> <tr> <th>Id</th><th>Name</th><th>Data Set</th></tr> </thead> <tbody> <tr> <td>hl7ips-dataelement-176</td><td> Life Style Factor</td><td> CEN/TC 251 prEN 17269</td></tr> <tr> <td>hl7ips-dataelement-151</td><td> Reference date range</td><td> CEN/TC 251 prEN 17269</td></tr> </tbody> </table>				Id	Name	Data Set	hl7ips-dataelement-176	 Life Style Factor	 CEN/TC 251 prEN 17269	hl7ips-dataelement-151	 Reference date range	 CEN/TC 251 prEN 17269
Id	Name	Data Set											
hl7ips-dataelement-176	 Life Style Factor	 CEN/TC 251 prEN 17269											
hl7ips-dataelement-151	 Reference date range	 CEN/TC 251 prEN 17269											
Relationship	Adaptation: template 2.16.840.1.113883.10.20.22.4.38 (2015-08-01) Adaptation: template 2.16.840.1.113883.10.12.303 (2005-09-07)												
Example	<p>Example</p> <pre><observation classCode="OBS" moodCode="EVN"> <templateId root="2.16.840.1.113883.10.22.4.35"/> <id root="1.2.3.999" extension="__example only__"/> <code code="74013-4" codeSystem="2.16.840.1.113883.6.96" displayName="Alcoholic drinks per day"/> <statusCode code="completed"/> <effectiveTime> <low value="20170719113711"/> </effectiveTime> <value xsi:type="PQ" value="1" unit="d"/> </observation></pre>												
Item	DT	Card	Conf	Description	Label								
hl7:observation					(IPS...Use)								
	 hl7ips-dataelement-176	 Life Style Factor		 CEN/TC 251 prEN 17269									

└ @classCode	cs	1 ... 1	F	OBS	
└ @moodCode	cs	1 ... 1	F	EVN	
└ h17:templateId	II	1 ... 1	M		(IPS...Use)
└ @root	uid	1 ... 1	F	2.16.840.1.113883.10.22.4.35	
└ h17:id	II	0 ... *			(IPS...Use)
└ h17:code	CD.IPS (preferred)	1 ... 1	R		(IPS...Use)
└ @code	CONF	0 ... 1	F	74013-4	
└ @codeSystem		0 ... 1	F	2.16.840.1.113883.6.1 (LOINC)	
└ h17:translation		0 ... *	R		(IPS...Use)
└ h17:statusCode	CS	1 ... 1	M		(IPS...Use)
└ @code	CONF	1 ... 1	F	completed	
└ h17:effectiveTime	IVL_TS	1 ... 1	R		(IPS...Use)
⌚ h17ips-dataelement-151 ⌚ Reference date range ⌚ CEN/TC 251 prEN 17269					
└ h17:value	PQ	1 ... 1	R		(IPS...Use)

<code><!-- @xsi:type = cs --></code>	1 ... 1	F	PQ
<code><!-- @unit = /d --></code>	1 ... 1	F	/d

9.33 IPS Social History Tobacco Use

Id	2.16.840.1.113883.10.22.4.34	Effective Date	2017-06-20				
Status	Under pre-publication review	Version Label	STU1				
Name	IPSSocialHistoryObsTobaccoUse	Display Name	IPS Social History Tobacco Use				
Description	This template is a specialization of the Social History Observation that may be used to represent smoking or tobacco habits.						
Context	Parent nodes of template element with id 2.16.840.1.113883.10.22.4.34						
Classification	CDA Entry Level Template						
Open/Closed	Open (other than defined elements are allowed)						
Associated with	Associated with 1 concept						
	<table border="1"> <thead> <tr> <th>Id</th> <th>Name</th> <th>Data Set</th> </tr> </thead> <tbody> <tr> <td>hl7ips-dataelement-176</td> <td> Life Style Factor</td> <td> CEN/TC 251 prEN 17269</td> </tr> </tbody> </table>	Id	Name	Data Set	hl7ips-dataelement-176	Life Style Factor	CEN/TC 251 prEN 17269
Id	Name	Data Set					
hl7ips-dataelement-176	Life Style Factor	CEN/TC 251 prEN 17269					
Relationship	Adaptation: template 2.16.840.1.113883.10.20.22.4.38 (2015-08-01) Adaptation: template 2.16.840.1.113883.10.12.303 (2005-09-07)						
Example	<p>Example</p> <pre><observation> <templateId/> <id root="1.2.3.999" extension="--example only--"/> <code code="72166-2" codeSystem="2.16.840.1.113883.6.1" displayName="Tobacco smoking status NHIS"/></pre>						

	<pre> <statusCode code="completed"/> <effectiveTime> <low value="20171214094510"/> </effectiveTime> <value code="LA18976-3" codeSystem="2.16.840.1.113883.6.1" displayName="Current every day smoker"/> </observation> </pre>				
Item	DT	Card	Conf	Description	Label
hl7:observation					(IPS...Use)
	⌚ hl7ips-dataelement-176 🟡 Life Style Factor 🟡 CEN/TC 251 prEN 17269				
└ @classCode	cs	1 ... 1	F	OBS	
└ @moodCode	cs	1 ... 1	F	EVN	
└ hl7:templateId	II	1 ... 1	M		(IPS...Use)
└ @root	uid	1 ... 1	F	2.16.840.1.113883.10.22.4.34	
└ hl7:id	II	0 ... *			(IPS...Use)
└ hl7:code	CD.IPS	1 ... 1	M		(IPS...Use)
└ @code	CONF	1 ... 1	F	72166-2	
└ @codeSystem		1 ... 1	F	2.16.840.1.113883.6.1 (LOINC)	
└ hl7:translation		0 ... *	R		(IPS...Use)

└ h17:statusCode	CS	1 ... 1	M	(IPS...Use)
└ @code	CONF	1 ... 1	F	completed
└ h17:effectiveTime	IVL_TS	1 ... 1	R	(IPS...Use)
└ h17:value	CD.IPS	1 ... 1	R	(IPS...Use)
└ @xsi:type	cs	1 ... 1	F	CD
	CONF	The value of @code shall be drawn from value set 2.16.840.1.113883.11.22.59 IPS Current Smoking Status (DYNAMIC)		

9.34 IPS Specimen Collection

Id	2.16.840.1.113883.10.22.4.30	Effective Date	2017-04-14
Status	🟡 Under pre-publication review	Version Label	STU1
Name	IPSSpecimenCollection	Display Name	IPS Specimen Collection

Description

Specimen Collection is used when a set of laboratory or pathology observations produced on one or more specimens need to be associated with the minimal characteristics of the specimen(s): specimen source site and type of specimen.

In addition this template enables to convey when the specimen was collected.

In a patient summary there is no need to provide more data than these 4:

- collection method,
- source site,
- type of specimen and

- time of collection.

An occurrence of this template describes one specimen collected, used by the set of observations present in the same Result Organizer.

Context	Parent nodes of template element with id 2.16.840.1.113883.10.22.4.30
Classification	CDA Entry Level Template
Open/Closed	Open (other than defined elements are allowed)
Relationship	Adaptation: template 1.3.6.1.4.1.19376.1.3.1.2 (2008-08-08) Adaptation: template 2.16.840.1.113883.10.12.301 (2005-09-07)
Example	<p>Example</p> <pre><procedure classCode="PROC" moodCode="EVN"> <templateId root="2.16.840.1.113883.10.22.4.30"/> <code code="33882-2" codeSystem="2.16.840.1.113883.6.1" displayName="Collection date of Unspecified specimen"/> <effectiveTime> <low value="20170719123716"/> </effectiveTime> <targetSiteCode/> <participant typeCode="PRD"> <participantRole classCode="SPEC"> <id root="1.2.3.999" extension="__example only__"/> <playingEntity classCode="ENT" determinerCode="INSTANCE"> <code code="122555007" codeSystem="2.16.840.1.113883.6.96" displayName="Venous blood specimen (specimen)"/> </playingEntity> </participantRole> </participant> </procedure></pre>

Item	DT	Card	Conf	Description	Label
h17:procedure					(IPS...ion)
└ @classCode	cs	1 ... 1	F	PROC	
└ @moodCode	cs	1 ... 1	F	EVN	

└ h17:templateId	II	1 ... 1	M		(IPS...ion)
└ @root	uid	1 ... 1	F	2.16.840.1.113883.10.22.4.30	
└ h17:code	CD.IPS	0 ... 1	R	LOINC code representing the act of specimen collection	(IPS...ion)
└ @code	CONF	0 ... 1	F	33882-2	
└ @codeSystem		0 ... 1	F	2.16.840.1.113883.6.1 (LOINC)	
└ h17:effectiveTime	IVL_TS	0 ... 1	R	Date and time of specimen collection	(IPS...ion)
└ h17:targetSiteCode		0 ... 1	R		(IPS...ion)
└ h17:participant		0 ... 1	R	One single participant, which is the product of the procedure (PRD), role of specimen (SPEC) played by the playingEntity, which conveys the type of specimen collected (blood, urine, tissue, ...)	(IPS...ion)
└ @typeCode	cs	1 ... 1	F	PRD	
└ h17:participantRole		1 ... 1	M		(IPS...ion)
└ @classCode	cs	0 ... 1	F	SPEC	
└ h17:id	II	0 ... 1	R		(IPS...ion)
└ h17:playingEntity		1 ... 1	R		(IPS...ion)
└ @determinerCode	cs	0 ... 1	F	INSTANCE	

L @classCode	cs	0 ... 1	F	ENT
L hl7:code	CE (preferred)	1 ... 1	M	(IPS...ion)
CONF	The value of @code comes preferably from value set 2.16.840.1.113883.11.22.56 <i>IPS Specimen Type</i> (DYNAMIC)			

9.35 IPS Subordinate SubstanceAdministration

Id	2.16.840.1.113883.10.22.4.33	Effective Date	2017-06-15			
Status	Under pre-publication review	Version Label	STU1			
Name	IPSSubordinateSubstanceAdministration	Display Name	IPS Subordinate SubstanceAdministration			
Description	This entry is used by a main substanceAdministration act to provide dosage information as the frequency of intakes or the amount of the medication given.					
Context	Parent nodes of template element with id 2.16.840.1.113883.10.22.4.33					
Label	IPSSubordSBADM					
Classification	CDA Entry Level Template					
Open/Closed	Open (other than defined elements are allowed)					
Associated with						
Associated with 3 concepts						
Associated with	Id	Name	Data Set			
	hl7ips-dataelement-224	Frequency of intake	CEN/TC 251 prEN 17269			
	hl7ips-dataelement-223	Number of units per intake	CEN/TC 251 prEN 17269			
	hl7ips-dataelement-119	Dose Instruction	CEN/TC 251 prEN			

17269

Relationship

Specialization: template 2.16.840.1.113883.10.21.4.6 (DYNAMIC)

Example

```

<hl7:substanceAdministration classCode="SBADM" moodCode="EVN">
  <hl7:templateId root="2.16.840.1.113883.10.22.4.33"/>
  <hl7:statusCode code="active"/>
  <!-- choice: 1..1
element hl7:effectiveTime[@value or @nullFlavor]
element hl7:effectiveTime[@xsi:type='PIVL_TS']
element hl7:effectiveTime[@xsi:type='EIVL_TS']
element hl7:effectiveTime[@xsi:type='SXPR_TS'
-->
<hl7:effectiveTime xsi:type="PIVL_TS" institutionSpecified="true">
  <hl7:period value="12" unit="h"/>
</hl7:effectiveTime>
<hl7:doseQuantity xsi:type="IVL_PQ" value="2" unit="{puff}"/>
<hl7:consumable>
  <hl7:manufacturedProduct>
    <hl7:manufacturedMaterial nullFlavor="NA"/>
  </hl7:manufacturedProduct>
</hl7:consumable>
</hl7:substanceAdministration>

```

Item	DT	Card	Conf	Description	Label
hl7:substanceAdministration					IPSS...BADM
				 hl7ips-dataelement-119  Dose Instruction  CEN/TC 251 prEN 17269	
 @classCode	cs	1 ... 1	F	SBADM	
 @moodCode	cs	1 ... 1	R	If the statement refers to a prescribed medication then a <substanceAdministration> intent (moodCode='INT') is used; otherwise, to record medications which are stated to have taken, the moodCode shall be set to 'EVN'.</substanceAdministration>	
	CONF	The value of @moodCode shall be drawn from value set 2.16.840.1.113883.11.20.9.18 MoodCodeEvnInt (DYNAMIC)			
	Constraint	The moodCode of this subordinate <substanceAdministration> SHALL be the same of the parent <substanceAdministration>			

└ hl7:templateId	II	1 ... 1	M			IPSS...BADM
└ @root	uid	1 ... 1	F	2.16.840.1.113883.10.22.4.33		
└ hl7:statusCode	CS	1 ... 1	M			IPSS...BADM
	Constraint	The statusCode of this subordinate <substanceAdministration> SHALL be the same of that of the parent <substanceAdministration>.				
	CONF	The value of @code shall be drawn from value set 2.16.840.1.113883.11.22.12 <i>ActStatusActiveCompletedAbortedSuspended</i> (2017-03-30)				
	Example	<statusCode code="active"/>				
<i>Choice</i>						
	Elements to choose from:					
	<ul style="list-style-type: none"> ▪ hl7:effectiveTime[@value or @nullFlavor] ▪ hl7:effectiveTime[@xsi:type='PIVL_TS'] ▪ hl7:effectiveTime[@xsi:type='EIVL_TS'] ▪ hl7:effectiveTime[@xsi:type='SXPR_TS'] 					
└ hl7:effectiveTime	TS	0 ... 1	C	This required element describes the frequency of intakes. If not known it shall be valued with the nullflavor "UNK"		IPSS...BADM
where <i>[@value or @nullFlavor]</i>						
	⌚ hl7ips-dataelement-224	⌚ Frequency of intake	⌚ CEN/TC 251 prEN 17269			
	Example	Once (known date) <effectiveTime value="20170404"/>				
	Example	Unknown <effectiveTime nullFlavor="UNK"/>				

└ hl7:effectiveTime	PIVL_TS	0 ... 1	C		IPSS...BADM
where <code>[@xsi:type='PIVL_TS']</code>					
	⌚ hl7ips-dataelement-224	⌚ Frequency of intake	⌚ CEN/TC 251 prEN 17269		
Example	<p>Every 4 hours</p> <pre><effectiveTime xsi:type="PIVL_TS" institutionSpecified="false"> <period value="4" unit="h"/> </effectiveTime></pre>				
Example	<p>Twice a day</p> <pre><effectiveTime xsi:type="PIVL_TS" institutionSpecified="true"> <period value="12" unit="h"/> </effectiveTime></pre>				
└ hl7:effectiveTime	EIVL_TS	0 ... 1	C		IPSS...BADM
where <code>[@xsi:type='EIVL_TS']</code>					
	⌚ hl7ips-dataelement-224	⌚ Frequency of intake	⌚ CEN/TC 251 prEN 17269		
Example	<p>After meal</p> <pre><effectiveTime xsi:type="EIVL_TS"> <event code="PC" codeSystem="2.16.840.1.113883.5.139"/> </effectiveTime></pre>				
Example	<p>One hour before breakfast</p> <pre><effectiveTime xsi:type="EIVL_TS"> <event code="ACM" codeSystem="2.16.840.1.113883.5.139"/> <offset> <low value="1" unit="h"/> </offset> </effectiveTime></pre>				
└ hl7:event	EIVL.event	0 ... 1	C		IPSS...BADM
└ @code	cs	0 ... 1			

	CONF	The value of @code shall be drawn from value set 2.16.840.1.113883.1.11.10706 TimingEvent (DYNAMIC)							
└ hl7:effectiveTime	SXPR_TS	0 ... 1	R		IPSS...BADM				
where [@xsi:type='SXPR_TS']									
⌚ hl7ips-dataelement-224 🟡 Frequency of intake 🟡 CEN/TC 251 prEN 17269									
└ hl7:doseQuantity	IVL_PQ	0 ... 1	R	<p>The <doseQuantity> describes the amount of the medication given (the dosage). If a dose range is given (e.g., 1-2 tablets, or 325-750mg), then the <low> and <high> bounds are specified in their respective elements; otherwise only one physical quantity is specified (e.g. 2 drops)</p> <p>The dose can be in some known and measurable unit, such as grams, milligrams, or described in "administration" units (unit of presentation, such as capsules).</p> <p>If the dose is in countable items (tablets, caplets, "eaches"), then the unit could be omitted or valorized using the UCUM annotations for describing the type of countable items (e.g. .{tablet}, {puff}...).</p> <p>The unit attribute – when expresses unit of measures- shall be derived from the UCUM code system.</p> <p>The used elements should contain a <translation> element that provides a <reference> to the <originalText> found in the narrative body of the document.</p>	IPSS...BADM				
⌚ hl7ips-dataelement-223 🟡 Number of units per intake 🟡 CEN/TC 251 prEN 17269									
└ @unit	cs	0 ... 1							
Example	Not pre-coordinated consumable <code><doseQuantity value="25" unit="mg"/></code>								
	Pre-coordinated consumable - Dose Range <code><doseQuantity> <low value="1" unit="{tablet}"/> <high value="2" unit="{tablet}"/> </doseQuantity></code>								

	Example	Pre-coordinated consumable <pre><doseQuantity value="2" unit="{puff}" /></pre>		
	Example	Pre-coordinated consumable with text reference <pre><doseQuantity value="2" unit="{puff}"> <translation> <originalText> <reference value="#text-ref-1"/> </originalText> </translation> </doseQuantity></pre>		
	Example	Textual dosage <pre><doseQuantity nullFlavor="OTH"> <translation> <originalText> <reference value="#text-ref-1"/> </originalText> </translation> </doseQuantity></pre>		
└ h17:rateQuantity	IVL_PQ	0 ... 1		IPSS...BADM
└ h17:consumable		1 ... 1	R	IPSS...BADM
└ h17:manufacturedProduct		1 ... 1	R	IPSS...BADM
└ h17:manufacturedMaterial		1 ... 1	R	IPSS...BADM
└ @nullFlavor	cs	1 ... 1	F	NA

10 HL7 V2/V3 Datatype Level Template

10.1 IPS Address

Id	2.16.840.1.113883.10.22.11	Effective Date	2018-04-04 15:41:36 Other versions this id: <ul style="list-style-type: none"><input type="radio"/> IPSAddress as of 2018-04-04 15:42:34<input type="radio"/> IPSAddress as of 2018-04-04 15:41:43
Status	 Under pre-publication review	Version Label	STU1
Name	IPSAAddress	Display Name	IPS Address
Description	Reusable address template		
Classification	HL7 V2/V3 Datatype Level Template		
Open/Closed	Open (other than defined elements are allowed)		
Relationship	Adaptation: template 2.16.840.1.113883.10.20.22.5.2 (2015-08-13)		
Example	<p>Example</p> <pre><addr use="HP"> <country>TR</country> <city>Ankara</city> <streetAddressLine>Silikon Blok Kat:1</streetAddressLine> </addr></pre>		
Example	<p>Example</p> <pre><addr use="WP"> <state>FI</state> <city>FIRENZE</city> <country>IT</country> <postalCode>50122</postalCode> <streetAddressLine>Palazzo Vecchio, Piazza della Signoria</streetAddressLine> </addr></pre>		

Example	Example										
Item	DT	Card	Conf	Description	Label						
@use	set_cs	0 ... 1		CONF	The value of @use shall be drawn from value set 2.16.840.1.113883.1.11.10637 <i>PostalAddressUse</i> (2005-05-01)						
@nullFlavor	cs	0 ... 1	F	NI	<p>Constraint SHALL NOT have mixed content except for white space If there is no information, the nullFlavor attribute shall have a value of 'NI' and no address parts shall be present, otherwise there shall be no nullFlavor attribute, and at least one of the address parts listed below shall be present.</p> <table> <tr> <td>role</td><td>error</td></tr> <tr> <td>test</td><td>@nullFlavor or hl7:*</td></tr> <tr> <td>Message</td><td>If addr is not nullflavored at least one sub element has to be provided</td></tr> </table>	role	error	test	@nullFlavor or hl7:*	Message	If addr is not nullflavored at least one sub element has to be provided
role	error										
test	@nullFlavor or hl7:*										
Message	If addr is not nullflavored at least one sub element has to be provided										
hl7:streetAddressLine	ADXP	0 ... *	C	Subject's or Organization's Street Address Line	(IPS...ess)						
			role	error							
			test	hl7:streetAddressLine and (hl7:city or hl7:postalCode)							
			Message	If the address line is included either the city or the zip code has to be provided							
hl7:city	ADXP	0 ... 1	C	Subject's or Organization's City	(IPS...ess)						
hl7:postalCode	ADXP	0 ... 1	C	Subject's or Organization's Postal Code	(IPS...ess)						
hl7:state	ADXP	0 ... 1	C	Subject's or Organization's State or Province	(IPS...ess)						

h17:country	ADXP	0 ... 1	C	Subject's Country. <small>(IPS...ess)</small>	
	Constraint	The content of this element SHALL be selected EITHER from ValueSet ISO Country Alpha-2 urn:oid:2.16.840.1.113883.1.11.20300 DYNAMIC OR MAY be selected from ISO Country Alpha-3 2.16.840.1.113883.1.11.171 DYNAMIC, IF the country is not specified in ValueSet ISO Country Alpha-2 urn:oid:2.16.840.1.113883.1.11.20300.			

11 Appendix (Informative)

11.1 Acronyms and abbreviations

- **CCD:** Continuity of Care Document
- **C-CDA:** Consolidated CDA
- **CDA:** Clinical Document Architecture
- **CEN:** Comité Européen de Normalisation (European Committee for Standardization)
- **CEN/TC 251 :** CEN Technical Committee 251
- **DSTU:** Draft Standard for Trial Use
- **EC:** European Commission
- **EDQM:** European Directorate for the Quality of Medicines & Healthcare
- **eHDSI:** Digital Service Infrastructure for eHealth
- **eHN:** eHealth Network
- **EHR:** Electronic Healthcare Record
- **EN:** European Normative [or Standard] (CEN)
- **epSOS:** European Patient Smart Open Services
- **EU:** European; Europe
- **FDA:** Food and Drug Administration (USA)
- **GP:** General Practitioner
- **HL7:** Health Level Seven
- **HP:** Healthcare Professional
- **IDMP:** IDentification of Medicinal Products (ISO Standard)
- **IHE:** Integrating the Healthcare Enterprise
- **INTERPAS:** International Patient Summary (HL7 International Project)
- **IPS:** International Patient Summary
- **ISO:** International Organization for Standardization
- **JAséHN:** Joint Action to Support the eHealth Network
- **JIC:** Joint Initiative Council on SDO Global Health Informatics Standardization
- **LOINC:** Logical Observation Identifiers Names & Codes
- **MOU:** Memorandum of Understanding (on cooperation surrounding health related information and communication technologies, that between EU and US)
- **MPID:** Medicinal Product Identifier
- **ONC:** Office of the National Coordinator for Health Information Technology (USA)
- **PCC:** Patient Care Coordination
- **PCID :** Medicinal Product Package Identifier
- **PhPID(s):** Pharmaceutical Product Identifier(s)
- **prEN:** Draft European Normative [or Standard] (CEN)
- **prTS:** Draft Technical Specifications (CEN)

- **PS:** Patient Summary
- **S&I:** Standards and Interoperability (S&I) Framework (run by ONC)
- **SAIF:** Service Aware Interoperability Framework
- **SDO:** Standards Developing Organization
- **STU:** Standard for Trial Use
- **TS:** Technical Specifications (CEN)
- **UCUM:** Unified Code for Units of Measure
- **WHO:** World Health Organization

11.2 Glossary

- **Compliance.** A standard or specification is compliant with another standard or specification if all propositions that are true in the initial standard are also true in the complying standard. The target artifact is compliant with the source artifact if and only if all conforming implementations of the target are also conforming with the source (RM-ODP). The term compliance is also used to state expectations as to how certain specifications need to satisfy possible legislative or regulatory constraints or requirements.
- **Conformance** relates an implementation to a standard. Any proposition that is true of the specification must be true in its implementation. (ISO, 2010).
- **Conformance Assessment** is a process whereby a given implementation instance is evaluated to determine which of its various Conformance Assertions are valid implementations of a given specification's Conformance Statements.
- **Conformance Statement** is a statement that identifies testable requirements at a specified Conformance Point within a specification, explicitly defining the behavior which must be satisfied at these points. Conformance Statements will only occur in standard which are intended to constrain some feature of a real implementation, so that there exists, in principle, the possibility of testing.
- **Conformance Assertion** is a testable, verifiable statement made about a specific implementation instance against a corresponding Conformance Statement.
- **Conformance Points** are the evaluation of conformance at specific points in the implementation or specification. See Conformance.
- **Electronic Patient Summary:** electronic health record extract containing essential healthcare information intended for specific uses . (EN ISO 13940: 2016)
- **International Patient Summary :** electronic patient summary for use in the unscheduled, cross-border care scenario comprising at least the required elements of the IPS dataset.
- **International Patient Summary dataset:** a minimal and non-exhaustive patient summary dataset, specialty-agnostic, condition-independent, but readily usable by clinicians for the cross-border unscheduled care of a patient.

11.3 Real World User Stories

This section reports a series of real world user stories adapted from the Trillium Bridge project [27] and the eHDSI initiative [28].

11.3.1 IPS Storyboard 1: Martha, a traveling corporate executive

Martha, a 45-year old corporate executive and breast cancer survivor travels frequently on business between the US and EU countries. She carries a clinical summary on her mobile phone and on paper just in case she needs to seek medical care regarding recurring symptoms. Martha's summary includes

- Breast cancer Stage II with no evidence of recurrence following treatment
- hot flashes as problems
- Anastrozole 1 mg. once daily
- Black Cohosh Extract herbal supplement as medications
- the indication of an allergy to Penicillin
- and finally as Plan of Care, to continue hormone medication with Anastrozole for total of 5 years
- and monitor for potential breast cancer recurrence.

During a visit in Austria, Martha walks up a hill and experiences shortness of breath, faints, and wakes up a few minutes later after hitting her head on a stone step. A passerby helps her get to the emergency department of a local hospital. An ambulance is called and she is brought to the emergency ward.

During registration and admission, Martha hands in her patient summary in a USB key. At the hospital, Martha is evaluated by an oncologist and a cardiologist.

Following care provision, Martha receives an encounter report. When back home she hands in the encounter report to her primary physician, who updates her record.

11.3.2 IPS Storyboard 2: Paolo, a retired businessman

Paolo Cerruti is a 67-year-old retired businessman, who normally lives in the outskirts Bergamo, near Lake Como, in Lombardy. He is generally healthy, but has long-standing hypertension. His regular physician changed his medication two weeks ago because of poor blood pressure control on his previous medication. He is on holiday going through New England, US, travelling on his own to enjoy the autumn foliage, and is presently in Boston, MA. He is nearing the end of his holiday, and will be returning to Italy in three days' time. Two days ago he lost his day bag. The bag included his hypertension medication, and he has not been able to take his tablets for two days.

This morning he has woken up feeling dizzy and has blurred vision. The hotel is able to put him in urgent contact with a local general practitioner (GP). Having assessed him, the GP noted a raised blood pressure, but is uncertain about whether to attribute these symptoms to the raised blood pressure or a side effect of the new medication. Now, the GP in Boston needs to know the medication, and the past few blood pressure readings to determine how exceptional the present reading is and manage Paolo appropriately.

Immediate access to his International Patient Summary would be the perfect answer. Paolo may retrieve his online European Patient Summary for emergency access that is retrieved, transformed into an IPS and shown its content translated in English.

The GP notes that visual disturbances are a recognized side effect of this medication. No specific treatment is indicated, and Paolo is reassured that side effects will gradually subside, and his GP can prescribe a suitable antihypertensive medication upon his return to Lake Como.

11.3.3 IPS Storyboard 3: Diana, a pregnant woman

Diana is a 34-year-old pregnant woman from Lisbon with a past medical history of allergic asthma and thyroid cancer during adolescence; for the latter she had a surgical procedure done (thyroidectomy) and, as a consequence, suffers hypothyroidism which requires hormone replacement for life (levothyroxine). At the age of 31 she was diagnosed with a hereditary cardiac disorder – Brugada Syndrome – and had a cardioverter defibrillator implanted to control potentially lethal arrhythmias.

During the pregnancy of her first child (C-section delivery), she suffered gestational diabetes that developed into type 2 diabetes after giving birth and needs now to receive subcutaneous insulin. As chronic treatment she also needs nebulizations three-time per day for her asthma - this condition is aggravated in her case by being a smoker (1 pack per day) as included in the Social History Section.

At this moment, she presents severe pre-eclampsia (hypertension during pregnancy) in treatment with two oral antihypertensive agents (a combination medication). Additionally, she is following a 14-day-course of antibiotic treatment due to an acute pyelonephritis (kidney infection more likely to be develop in pregnant women due to the physiological changes that may interfere with the flow of urine).

Other sections of her Summary include allergies to latex and kiwi (which are very often associated) and to aspirin, and intolerance to lactose; immunizations administered during childhood and adolescence are also present.

Although being real choices for the different diseases and conditions, the selection of the patient's current medication tries to present some easily described medication as well as not so easily ones: e.g. insulin degludec, amoxicillin+clavulanic acid, and the combination of ipratropium bromide+salbutamol for nebulization. For the oral treatment of the pre-eclampsia the agents selected would not be used in real practice during pregnancy.

11.4 Integrated examples

The IPS specification releases are published at hl7intl.art-decor.org the International Patient Summary Project Publication Page [29]. The actual release has a link to the XML materials that the W3C schemas are part of; it also includes example CDA document instances. A set of use cases have been defined and represented in IPS format. Also multiple languages are covered.

It is likely that the publication site will move to hl7.org permanently, and we will inform the community about that process.

11.5 Validation artifacts

You can test your implementation (instances) against the IPS specification. To download materials to your computer for local testing and validation consider...

- ...the W3C schemas (actually valid for any CDA specification) located at the Publication Page^[29]. The actual release has a link to the XML materials as which the W3C schemas are part of; it also includes example CDA document instances.
- ..the ISO schematron, automatically generated by the tool. These are files to do validation locally by associating IPS CDA instances with the main schematron using an XML editor or to use the derived XSLT conversions and apply the according XSLT derivation to your local IPS CDA instance.

For further information you can follow the documentation.

11.6 Operational information

- The IPS project has an official mailing list address [ips\(at\)lists.hl7.org](mailto:ips(at)lists.hl7.org), hosted at the HL7 listserver. Visit your Listserv Subscriptions (<http://www.hl7.org/myhl7/managelistservs.cfm?ref=common>) at hl7.org and subscribe to the **International Patient Summary (IPS)** that is summarised under the Structured Documents Work Group.
- The original specification is hosted on the logical ART-DECOR main server art-decor.org under the *Governance Group HL7 International*, the project is reachable at the Live Project Landing Page (<http://art-decor.org/art-decor/decor-project--hl7ips->).

- Any IPS specification release in HTML format resides at the Publication Page^[29]. It is likely that the publication site will move to hl7.org permanently, we will inform about that process.
- The IPS specification on the wiki is hosted here (international-patient-summary.net). It is likely that the publication site will move to hl7.org permanently, we will inform about that process.

11.7 Licenses

Following is a non-exhaustive list of third-party terminologies that may require a separate license:

- **SNOMED CT**: SNOMED International (formerly known as International Healthcare Terminology Standards Development Organization IHTSDO)^[30] or info@ihtsdo.org
- **Logical Observation Identifiers Names & Codes (LOINC)**: This material contains content from LOINC® (<http://loinc.org>). The LOINC Table, LOINC Table Core, LOINC Panels and Forms File, LOINC Answer File, LOINC Part File, LOINC Group File, LOINC Document Ontology File, LOINC Hierarchies, LOINC Linguistic Variants File, LOINC/RSNA Radiology Playbook, and LOINC/IEEE Medical Device Code Mapping Table are copyright © 1995-2017, Regenstrief Institute, Inc. and the Logical Observation Identifiers Names and Codes (LOINC) Committee and is available at no cost under the license at <http://loinc.org/license>.
- **Unified Code for Units of Measure (UCUM) : Regenstrief Institute, Inc. and the UCUM Organization**
- **EDQM Standard Terms** : European Directorate for the Quality of Medicines & Healthcare (EDQM) [31]

11.8 FAQ's

This is a placeholder for future Frequently Asked Questions about the International Patient Summary.

12 List of all artifacts used in this guide

12.1 CDA Templates

- 2.16.840.1.113883.10.22.1.1 International Patient Summary
- 2.16.840.1.113883.10.22.2.1 IPS CDA recordTarget
- 2.16.840.1.113883.10.22.2.2 IPS CDA author
- 2.16.840.1.113883.10.22.2.3 IPS CDA custodian
- 2.16.840.1.113883.10.22.2.4 IPS CDA legalAuthenticator
- 2.16.840.1.113883.10.22.2.5 IPS Patient Contacts
- 2.16.840.1.113883.10.22.2.6 IPS CDA documentationOf
- 2.16.840.1.113883.10.22.2.7 IPS CDA relatedDocument
- 2.16.840.1.113883.10.22.3.1 IPS Medication Summary Section
- 2.16.840.1.113883.10.22.3.2 IPS Allergies and Intolerances Section
- 2.16.840.1.113883.10.22.3.3 IPS Problems Section
- 2.16.840.1.113883.10.22.3.4 IPS History of Procedures Section
- 2.16.840.1.113883.10.22.3.5 IPS Immunizations Section
- 2.16.840.1.113883.10.22.3.6 IPS Medical Devices Section
- 2.16.840.1.113883.10.22.3.7 IPS History of Past Illness Section
- 2.16.840.1.113883.10.22.3.8 IPS Functional Status Section
- 2.16.840.1.113883.10.22.3.9 IPS Plan of Care Section
- 2.16.840.1.113883.10.22.3.10 IPS Social History Section
- 2.16.840.1.113883.10.22.3.11 IPS History of Pregnancy Section
- 2.16.840.1.113883.10.22.3.12 IPS Advance Directives Section
- 2.16.840.1.113883.10.22.3.14 IPS Results Section
- 2.16.840.1.113883.10.22.3.15 IPS Translation Section
- 2.16.840.1.113883.10.22.4.1 IPS Allergy or Intolerance
- 2.16.840.1.113883.10.22.4.2 IPS ManufacturedProduct
- 2.16.840.1.113883.10.22.4.3 IPS Manufactured Material
- 2.16.840.1.113883.10.22.4.4 IPS Medication Entry
- 2.16.840.1.113883.10.22.4.5 IPS Allergy and Intolerance Concern
- 2.16.840.1.113883.10.22.4.6 IPS Reaction Manifestation
- 2.16.840.1.113883.10.22.4.7 IPS Problem Concern Entry
- 2.16.840.1.113883.10.22.4.8 IPS Problem Entry
- 2.16.840.1.113883.10.22.4.9 IPS Result Organizer
- 2.16.840.1.113883.10.22.4.10 IPS Result Observation
- 2.16.840.1.113883.10.22.4.11 IPS Pathology Result Observation
- 2.16.840.1.113883.10.22.4.12 IPS Radiology Result Observation
- 2.16.840.1.113883.10.22.4.13 IPS Laboratory Result Observation

- 2.16.840.1.113883.10.22.4.14 IPS Body Author
- 2.16.840.1.113883.10.22.4.15 IPS Immunization
- 2.16.840.1.113883.10.22.4.16 IPS Immunization Medication Information
- 2.16.840.1.113883.10.22.4.17 IPS Procedure Entry
- 2.16.840.1.113883.10.22.4.18 IPS Criticality Observation
- 2.16.840.1.113883.10.22.4.19 IPS Certainty Observation
- 2.16.840.1.113883.10.22.4.20 IPS Problem Status Observation
- 2.16.840.1.113883.10.22.4.21 IPS Allergy Status Observation
- 2.16.840.1.113883.10.22.4.22 IPS Comment Activity
- 2.16.840.1.113883.10.22.4.23 IPS ObservationMedia
- 2.16.840.1.113883.10.22.4.25 IPS Severity Observation
- 2.16.840.1.113883.10.22.4.26 IPS Medical Device
- 2.16.840.1.113883.10.22.4.27 IPS Pregnancy Status Observation
- 2.16.840.1.113883.10.22.4.28 IPS Pregnancy Outcome Observation
- 2.16.840.1.113883.10.22.4.29 IPS Pregnancy Expected Delivery Date Observation
- 2.16.840.1.113883.10.22.4.30 IPS Specimen Collection
- 2.16.840.1.113883.10.22.4.31 IPS Internal Reference
- 2.16.840.1.113883.10.22.4.33 IPS Subordinate SubstanceAdministration
- 2.16.840.1.113883.10.22.4.34 IPS Social History Tobacco Use
- 2.16.840.1.113883.10.22.4.35 IPS Social History Alcohol Use
- 2.16.840.1.113883.10.22.9.1 IPS CDA Organization
- 2.16.840.1.113883.10.22.9.2 IPS CDA Device
- 2.16.840.1.113883.10.22.9.3 IPS CDA Person
- 2.16.840.1.113883.10.22.11 IPS Address

12.2 CDA Template References

- 2.16.840.1.113883.10.21.9.1 UV Use Period

12.3 Unconstrained Templates from the original CDA specification

- 2.16.840.1.113883.10.12.151 CDA Organization
- 2.16.840.1.113883.10.12.152 CDA Person
- 2.16.840.1.113883.10.12.153 CDA AssignedEntity
- 2.16.840.1.113883.10.12.318 CDA Author (Body)
- 2.16.840.1.113883.10.12.315 CDA Device
- 2.16.840.1.113883.10.12.319 CDA Informant (Body)
- 2.16.840.1.113883.10.12.323 CDA Performer (Body)
- 2.16.840.1.113883.10.12.313 CDA PlayingEntity
- 2.16.840.1.113883.10.12.316 CDA RelatedEntity

12.4 Value Sets

- 2.16.840.1.113883.11.22.2 Allergy or Intolerance Type
- 2.16.840.1.113883.11.22.3 Allergy Reaction
- 2.16.840.1.113883.11.22.5 CORE Problem List Disorders
- 2.16.840.1.113883.11.22.8 IPS Condition Verification Status
- 2.16.840.1.113883.11.22.9 Absent or Unknown Allergies
- 2.16.840.1.113883.11.22.10 Allergies to substances
- 2.16.840.1.113883.11.22.11 Adverse Reaction Agents
- 2.16.840.1.113883.11.22.12 ActStatusActiveCompletedAbortedSuspended
- 2.16.840.1.113883.11.22.13 Time units (UCUM)
- 2.16.840.1.113883.11.22.14 DRUGActCode
- 2.16.840.1.113883.11.22.15 Absent or Unknown Medication
- 2.16.840.1.113883.11.22.16 Problem Type
- 2.16.840.1.113883.11.22.17 Absent or Unknown Problems
- 2.16.840.1.113883.11.22.18 Problem Severity
- 2.16.840.1.113883.11.22.19 Language Code
- 2.16.840.1.113883.11.22.20 IPS Expected Delivery Date Method
- 2.16.840.1.113883.11.22.21 IPS Pregnancies Summary
- 2.16.840.1.113883.11.22.22 ActStatusActiveCompletedAbortedCancelled
- 2.16.840.1.113883.11.22.23 IPS Medical Devices
- 2.16.840.1.113883.11.22.24 IPS Condition Status Code
- 2.16.840.1.113883.11.22.25 Medicine Doseform
- 2.16.840.1.113883.11.22.27 Medicine Package
- 2.16.840.1.113883.11.22.28 Quantity Units
- 2.16.840.1.113883.11.22.29 WHO ATC
- 2.16.840.1.113883.11.22.30 Medicine Strength Numerator
- 2.16.840.1.113883.11.22.31 Medicine Strength Denominator
- 2.16.840.1.113883.11.22.32 Medicine Active Substances
- 2.16.840.1.113883.11.22.33 Medicine Route of Administration
- 2.16.840.1.113883.11.22.34 IPS No Drug Substances
- 2.16.840.1.113883.11.22.35 IPS Procedures
- 2.16.840.1.113883.11.22.36 Absent or Unknown Procedures
- 2.16.840.1.113883.11.22.37 IPS Results Organizer
- 2.16.840.1.113883.11.22.38 IPS Results Observation
- 2.16.840.1.113883.11.22.39 IPS Results Observation Laboratory
- 2.16.840.1.113883.11.22.40 IPS Results Observation Radiology
- 2.16.840.1.113883.11.22.41 IPS Results Observation Pathology
- 2.16.840.1.113883.11.22.42 IPS Allergy Status Code

- 2.16.840.1.113883.11.22.43 Absent or Unknown Immunization
- 2.16.840.1.113883.11.22.44 IPS Vaccines
- 2.16.840.1.113883.11.22.45 IPS Multingredients Products
- 2.16.840.1.113883.11.22.46 IPS Results Coded Values Laboratory
- 2.16.840.1.113883.11.22.47 IPS Results Coded Values Pathology
- 2.16.840.1.113883.11.22.48 IPS Results Coded Values Radiology
- 2.16.840.1.113883.11.22.49 IPS Results Microorganism
- 2.16.840.1.113883.11.22.50 IPS Results Blood Group phenotypes
- 2.16.840.1.113883.11.22.51 IPS Results ABO+RH GROUP
- 2.16.840.1.113883.11.22.52 IPS Results Presence/Absence
- 2.16.840.1.113883.11.22.53 IPS Healthcare Professional Roles
- 2.16.840.1.113883.11.22.54 IPS Personal Relationship
- 2.16.840.1.113883.11.22.55 IPS Target Site
- 2.16.840.1.113883.11.22.56 IPS Specimen Type
- 2.16.840.1.113883.11.22.57 Laterality (qualifier)
- 2.16.840.1.113883.11.22.58 Topographical modifier (qualifier)
- 2.16.840.1.113883.11.22.59 IPS Current Smoking Status
- 2.16.840.1.113883.11.22.60 Allergy-intolerance Criticality

12.5 Value Sets References

- 2.16.840.1.113883.1.11.1 AdministrativeGender
- 2.16.840.1.113883.1.11.10706 Timing Event
- 2.16.840.1.113883.1.11.11610 x_ActRelationshipDocument
- 2.16.840.1.113883.1.11.15933 ActStatus
- 2.16.840.1.113883.1.11.16926 HL7 BasicConfidentialityKind
- 2.16.840.1.113883.1.11.19446 x_ActRelationshipEntry
- 2.16.840.1.113883.1.11.19563 PersonalRelationshipRoleType
- 2.16.840.1.113883.1.11.19601 x_ServiceEventPerformer
- 2.16.840.1.113883.1.11.19709 ActSubstanceAdministrationImmunizationCode
- 2.16.840.1.113883.1.11.19890 x_ActStatusActiveComplete
- 2.16.840.1.113883.1.11.201 TelecommunicationAddressUse
- 2.16.840.1.113883.1.11.20386 SeverityObservationCode
- 2.16.840.1.113883.1.11.78 Observation Interpretation
- 2.16.840.1.113883.11.20.9.18 MoodCodeEvnInt
- 2.16.840.1.113883.11.20.9.33 INDRoleclassCodes
- 2.16.840.1.113883.3.88.12.80.60 Social History Type

12.6 Data Types

Data types for element definitions used

- AD – Address
- AD.IPS – IPS Address (see [1] (https://art-decor.org/mediawiki/index.php?title=DTri1_AD.IPS))
- ANY – ANY
- BL – Boolean
- CD – Concept Descriptor
- CD.IPS – IPS CD (see [2] (https://art-decor.org/mediawiki/index.php?title=DTri1_CD.IPS))
- CE – Coded with Equivalents
- CE.IPS – IPS CE (see [3] (https://art-decor.org/mediawiki/index.php?title=DTri1_CE.IPS))
- CR – Concept Role
- CS – Coded Simple Value
- CV – Coded Value
- CV.IPS – IPS CV (see [4] (https://art-decor.org/mediawiki/index.php?title=DTri1_CV.IPS))
- ED – Encapsulated Data
- EIVL.event – Event-Related Interval of Time
- EIVL_TS – Event-related time interval
- EN – Entity Name
- ENXP – Entity Name Part
- II – Instance Identifier
- INT – Integer
- IVL_PQ – Interval of Physical Quantity
- IVL_TS – Interval of Time Stamp
- IVL_TS.IPS.TZ – IPS IVL Time Stamp TZ (see [5] (https://art-decor.org/mediawiki/index.php?title=DTri1_IVL_TS.IPS.TZ))
- IVL_TS.IPS.TZ.OPT
- IVXB_TS – Interval Boundary of Time Stamp
- ON – Organization Name
- PIVL_TS – Periodic Interval of Timezone
- PN – Person Name
- PQ – Physical Quantity
- SC – String with Codes
- SD.TEXT – Structured Document Text
- ST – Character String
- SXPR_TS – Parenthetic Set Expression of Time Stamp
- TEL – Telecommunication Address
- TEL.IPS – IPS TEL (see [6] (https://art-decor.org/mediawiki/index.php?title=DTri1_IVL_TS.IPS.TZ.OPT))
- TS – Time Stamp
- TS.IPS.TZ – IPS Time Stamp TZ (see [7] (https://art-decor.org/mediawiki/index.php?title=DTri1_TS.IPS.TZ))

Data types for attributes used

- bl – boolean code
- cs – code
- oid – identifier
- set_cs – code
- st – string
- uid – identifier

12.7 Extensions

12.7.1 Detailed medications information

This specification uses CDA extensions in order to provide details about medications, as further described in the section on the design conventions for Medicinal Product Identification and as used in template 2.16.840.1.113883.10.22.4.3 *IPS Manufactured Material*. The extension uses the namespace `urn:h17-org:pharm`.

This is the list of elements defined for that template.

- `pharm:formCode` (Administrable Pharmaceutical Dose Form)
- `pharm:asContent` (Packaging of the medication)
 - `pharm:quantity`
 - `pharm:containerPackagedMedicine` (Most inner Package Item or the Packaged Medicinal Product)
 - `pharm:code`
 - `pharm:name` (Name of the Package Item or of the Packaged Medicinal Product)
 - `pharm:formCode` (type of the most inner package item or of the or the Packaged Medicinal Product)
 - `pharm:capacityQuantity` (the functional capacity of the container)
 - `pharm:asContent` (Containing package)
 - `pharm:quantity`
 - `pharm:containerPackagedMedicine` (Intermediate Package Item or the Packaged Medicinal Product)
 - `pharm:code`
 - `pharm:name` (Name of the Package Item or of the Packaged Medicinal Product)
 - `pharm:formCode` (type of the intermediate package item or of the or the Packaged Medicinal Product)
 - `pharm:capacityQuantity` (the functional capacity of the container)
 - `pharm:asContent` (Containing package)
 - `pharm:quantity`
 - `pharm:containerPackagedMedicine` (Packaged Medicinal Product)
 - `pharm:code`
 - `pharm:name` (Name of the Packaged Medicinal Product)
 - `pharm:formCode` (type of the Packaged Medicinal Product)

- pharm:capacityQuantity (the functional capacity of the container)
- pharm:asSpecializedKind (used to represent any classification of the product (ATC code, future PhPIDs,..))
 - pharm:generalizedMaterialKind
 - pharm:code
 - pharm:name
- pharm:ingredient (list of active substances used for this product)
 - pharm:quantity (strength)
 - pharm:ingredientSubstance (active substance)
 - pharm:code
 - pharm:name

12.7.2 Translation of designations

This specification recommends the introduction of an optional extension for properly recording multilingual designations, that is further described in the section on the translation of designations

- ips:designation

13 How to read the table view for templates

The template definitions are shown in a table view. It is comprised of *Template Meta data* and the *Template Design*. For further information please refer to the HL7 Templates Standard: Specification and Use of Reusable Information Constraint Templates, Release 1^[8].

Templates may also be included in the hierarchical graph view (often used for CDA), see below.

13.1 Template Meta data

The diagram illustrates a template meta data table with various sections highlighted by numbered callouts:

- 1**: Points to the top row containing the template ID (2.16.840.1.113883.10.22.2.3), status (Draft), and name (IPSCDAcustodian).
- 2**: Points to the rightmost column showing the effective date (valid from 2017-04-11), version label (IPS CDA custodian), and display name (IPS CDA custodian).
- 3**: Points to the description area, which states: "The custodian element represents the organization that is in charge of maintaining and is entrusted with the care of the document. This information is required by the CDA R2 standard and shall be recorded in the ClinicalDocument/custodian/assignedCustodian/representedCustodianOrganization element."
- 4**: Points to the classification section, which lists "CDA Header Level Template".
- 5**: Points to the "Used by / Uses" section, which shows "Used by 0 transactions and 1 template, Uses 1 template".
- 6**: Points to the "Relationship" section, which lists relationships to other templates or models.
- 7**: Points to the "Example" section, which displays an XML fragment illustrating the correct use of the template.

IPS CDA custodian –																		
Id	2.16.840.1.113883.10.22.2.3	Effective Date	valid from 2017-04-11															
Status	Draft	Version Label																
Name	IPSCDAcustodian	Display Name	IPS CDA custodian															
Description																		
<p>The custodian element represents the organization that is in charge of maintaining and is entrusted with the care of the document. This information is required by the CDA R2 standard and shall be recorded in the ClinicalDocument/custodian/assignedCustodian/representedCustodianOrganization element.</p> <p>There is only one custodian per CDA document. Allowing that a CDA document may not represent the original form of the authenticated document, the custodian represents the steward of the original source document. The custodian may be the document originator, a health information exchange, or other responsible party.</p> <p>The representedCustodianOrganization SHALL have:</p> <ul style="list-style-type: none"> • the name, addr and telecom elements (nullFlavor allowed) • the id element from the CDA R2 model 																		
Classification	CDA Header Level Template																	
Open/Closed	Open (other than defined elements are allowed)																	
Used by / Uses	<p>▼ Used by 0 transactions and 1 template, Uses 1 template</p> <table border="1"> <thead> <tr> <th>Used by</th> <th>as</th> <th>Name</th> <th>Version</th> </tr> </thead> <tbody> <tr> <td>2.16.840.1.113883.10.22.1.1</td> <td>Include</td> <td> International Patient Summary</td> <td>2017-04-11</td> </tr> <tr> <td>2.16.840.1.113883.10.22.9.1</td> <td>Containment</td> <td> IPS CDA Organization</td> <td>DYNAMIC</td> </tr> </tbody> </table>						Used by	as	Name	Version	2.16.840.1.113883.10.22.1.1	Include	International Patient Summary	2017-04-11	2.16.840.1.113883.10.22.9.1	Containment	IPS CDA Organization	DYNAMIC
Used by	as	Name	Version															
2.16.840.1.113883.10.22.1.1	Include	International Patient Summary	2017-04-11															
2.16.840.1.113883.10.22.9.1	Containment	IPS CDA Organization	DYNAMIC															
Relationship	Adaptation: template 2.16.840.1.113883.10.12.104 CDA custodian (2005-09-07) ref (from repository: ad1bbrr-)																	
Example	<p>▼ Example</p> <pre><custodian typeCode="CST"> <assignedCustodian classCode="ASSIGNED"> <representedCustodianOrganization classCode="ORG" determinerCode="INSTANCE"> <!-- ... --> </representedCustodianOrganization> </assignedCustodian> </custodian></pre>																	

The upper right part of the template table contains the template meta data. Template id, status and the template name are shown (1). Furthermore the Version (effective date), a possible version label and the display name are shown (2).

The description area (plain or an accordion) contains the template descriptions/purpose (3), followed by classifications and whether the template is defined as open or closed (4).

The usage part (5) may list templates that uses this template or what templates this templates uses. A relationship list (6) may show all relationships to other templates or models.

Examples may show the correct use of the template by an XML fragment (7).

Used by 0 transactions and 3 templates, Uses 4 templates

Used by	as	Name	Version
2.16.840.1.113883.10.22.4.5	Containment	IPS Allergy and Intolerance Concern	2016-11-11
2.16.840.1.113883.10.22.3.2	🔗	IPS Allergies and Intolerances Section	2016-11-11
2.16.840.1.113883.10.22.1.1	🔗	International Patient Summary	2017-04-11
Uses	as	Name	Version
2.16.840.1.113883.10.22.4.6	Containment	IPS Reaction Manifestation	DYNAMIC
2.16.840.1.113883.10.22.4.18	Containment	IPS Criticality Observation	DYNAMIC
2.16.840.1.113883.10.22.4.19	Containment	IPS Certainty Observation	DYNAMIC
2.16.840.1.113883.10.22.4.21	Containment	IPS Allergy Status Observation	2017-05-24

The relationship list shows all relationships to other templates or models for this template. It is divided in the "Used by" part listing templates that make use of this template, and a "Uses" listing all templates that are used by this template, either as inclusion or containment. Indirect relationships like the parent Document Level Template for a Section Level Template are marked with a chain symbol.

The PDF version is rendered in the same way, but maybe with different fonts etc. to fit customized publication requirements.

Id	2.16.840.1.113883.10.22.3.12	Effective Date	valid from 2017-04-13																				
Status	Draft	Version Label																					
Name	IPSAAdvanceDirectivesSection	Display Name	IPS Advance Directives Section																				
Description																							
The advance directive section shall contain a narrative description of patient's advance directive. Entries for references to consent and advance directive documents when known will be specified by future versions of this template.																							
Context	Parent nodes of template element with id 2.16.840.1.113883.10.22.3.12																						
Classification	CDA Section Level Template																						
Open/Closed	Open (other than defined elements are allowed)																						
Used by 0 transactions and 1 template, Uses 2 templates																							
Used by / Uses	<table border="1"> <thead> <tr> <th>Used by</th> <th>as</th> <th>Name</th> <th>Version</th> </tr> </thead> <tbody> <tr> <td>2.16.840.1.113883.10.22.1.1</td> <td>Containment</td> <td>International Patient Summary</td> <td>2017-04-11</td> </tr> <tr> <th>Uses</th> <th>as</th> <th>Name</th> <th>Version</th> </tr> <tr> <td>2.16.840.1.113883.10.22.4.14</td> <td>Containment</td> <td>IPS Body Author</td> <td>2017-03-02</td> </tr> <tr> <td>2.16.840.1.113883.10.12.319</td> <td>Containment</td> <td>CDA Informant (Body)</td> <td>DYNAMIC</td> </tr> </tbody> </table>			Used by	as	Name	Version	2.16.840.1.113883.10.22.1.1	Containment	International Patient Summary	2017-04-11	Uses	as	Name	Version	2.16.840.1.113883.10.22.4.14	Containment	IPS Body Author	2017-03-02	2.16.840.1.113883.10.12.319	Containment	CDA Informant (Body)	DYNAMIC
Used by	as	Name	Version																				
2.16.840.1.113883.10.22.1.1	Containment	International Patient Summary	2017-04-11																				
Uses	as	Name	Version																				
2.16.840.1.113883.10.22.4.14	Containment	IPS Body Author	2017-03-02																				
2.16.840.1.113883.10.12.319	Containment	CDA Informant (Body)	DYNAMIC																				
Relationship	Adaptation: template 1.3.6.1.4.1.19376.1.5.3.1.3.35 (DYNAMIC) Adaptation: template 1.3.6.1.4.1.19376.1.5.3.1.3.34 (DYNAMIC) Adaptation: template 2.16.840.1.113883.10.20.22.2.17 (DYNAMIC)																						

13.2 Table view of Template Design

Item	DT	Card	Conf	Description	Label
▼ hl7:section		0 ... *			Immuniza...
@classCode	cs	0 ... 1	F	DOCSECT	
@moodCode	cs	0 ... 1	F	EVN	
▼ hl7:templateId	II	1 ... 1	M		Immuniza...
@root	uid	1 ... 1	F	2.16.840.1.113883.3.1937.99.61.7.10.900202	
▼ hl7:templateId	II	1 ... 1	R		Immuniza...
@root	uid	1 ... 1	F	2.16.840.1.113883.10.12.201	
▼ hl7:code	CE CNE	0 ... 1		Description in addition	Immuniza...
@code	CONF	1 ... 1	F	11369-6	
@codeSystem		1 ... 1	F	2.16.840.1.113883.6.1	
▼ hl7:title	ST	1 ... 1	M		Immuniza...
	CONF			element content shall be "Vaccinations"	
hl7:text	SD.TEXT	1 ... 1	M		Immuniza...
▼ hl7:entry		0 ... *		Contains 2.16.840.1.113883.3.1937.99.61.7.10.900203 My Immunization Activity (DYNAMIC)	Immuniza...
@typeCode	st	1 ... 1	F	DRIV	

The headings of the table view of a template design are:

Item (1) contains the XML document tree view of all elements and attributes specified in the template design. Elements are denoted by a preceding triangle and attributes by a preceding "@".

DT (2) data types, contains the data type of the item, for more information on valid data types for element and attributes (see [8]).

Card / Conf (3) cardinality (Card) and conformance (Conf) of the item. Cardinality is the usual notion of min and max occurrences of the element. For attributes 0..1 denotes optionality, 1..1 say that the attribute is required and NP denotes prohibited attributes. Conformance may display values as shown in the following table.

Values of the conformance column

Conf	Short	Description
O	optional	Data is truly optional
R	required	If data is present and not masked (e.g. for privacy reasons), it must be provided, otherwise it may be omitted or explicitly null flavored. Sender and receiver must support this element.
M	mandatory	The data must be populated with a valid value from the associated value domain, otherwise the instance is not valid and may not be communicated. Sender and receiver must support this element.
C	conditional	There are conditions when data has to be provided (e.g. co-constraints like "information about pregnancy IF the patient is "female"). Sender and receiver must support this element.
F	fixed	The data has a fixed value.
NP	not present	Data shall not be present

Description (4) contains a textual description of the item, may also contain constraints and values for fixed attributes.

Label (5) is a human readable label that is displayed upon errors, warnings or notes during validation.

13.2.1 Details of the table view

Item	DT	Card	Conf	Description	Label
▼ hl7:section		0 ... *			Immuniza...
@classCode	CS	0 ... 1	F	DOCSECT	
@moodCode	CS	0 ... 1	F	EVN	
▼ hl7:templateId	II	1 ... 1	M		Immuniza...
@root	uid	1 ... 1	F	2.16.840.1.113883.3.1937.99.61.7.10.900202	
▼ hl7:templateId	II	1 ... 1	R		Immuniza...
@root	uid	1 ... 1	F	2.16.840.1.113883.10.12.201	
▼ hl7:code	CE CNE	0 ... 1		Description in addition	Immuniza...
@code	CONF		1 ... 1	F	11369-6
@codeSystem	CONF		1 ... 1	F	2.16.840.1.113883.6.1
▼ hl7:title	ST	1 ... 1	M		Immuniza...
	CONF		element content shall be "Vaccinations"		
hl7:text	SD.TEXT	1 ... 1	M		Immuniza...
▼ hl7:entry		0 ... *		Contains 2.16.840.1.113883.3.1937.99.61.7.10.900203 My Immunization Activity (DYNAMIC)	Immuniza...
@typeCode	ST	1 ... 1	F	DRIV	

The actual template design shows the XML structure in a hierarchical list of elements (items) that are typically prefixed by the namespace "hl7:" or "cda:" (1).

Elements are denoted with a triangle, attributes with an @ sign (2).

Data types are specified according to the list of supported data types (3). They may be simple data types (lower-case), regular data types (uppercase) or flavors thereof. In case of coded elements, the coding strength (Required/CNE, Extensible/CWE, Preferred or Example) can be highlighted near the datatype (e.g. "CD.IPS (Extensible/CWE)") ; the absence of indications about the strength (e.g. "CE.IPS") shall be interpreted as "Required/CNE".

Values of the coding strength column

Strength	Displayed as	Description
Required	Required/CNE	Coded with no exceptions; this element SHALL be from the specified value set
Extensible	Extensible/CWE	Coded with Exceptions; this element SHALL be from the specified value set if any of the codes within the value set can apply to the concept being communicated. If the value set does not cover the concept (based on human review), alternate codings (or, data type allowing, text) may be included instead.
Preferred	Preferred	Instances are encouraged to draw from the specified codes for interoperability purposes but are not required to do so to be considered conformant.
Example	Example	Instances are not expected or even encouraged to draw from the specified value set. The value set merely provides examples of the types of concepts intended to be included.

The cardinality and conformance column is explained above (4).

Fixed values for e.g. attributes are also shown in the "description" column (5), preceded by a "F" in the Conf column.

Conformance statements are shown together with a CONF box, e.g. a @code and a @codeSystem with fixed and required values (6).

An optional label is displayed at the rightmost column (7).

Inclusion or containments of other templates, e.g. an entry within a section, are shown accordingly (8) along with their template id, display name and flexibility/stability indication, i.e. "DYNAMIC" (the most recent version) or a STATIC binding together with a version date.

	Elements to choose from:
<i>Choice</i>	1 ... 1
	<ul style="list-style-type: none"> ▪ hl7:assignedPerson ▪ hl7:representedOrganization

Choices of elements are shown as a choice list with the elements in questions summarised in a bullet point list.

CONF	The value of @code shall be drawn from value set 2.16.840.1.113883.11.22.25 <i>Medicine Dosform</i> (2017-05-03)
------	--

A typical Conformance Statement is the binding of a coded element to a value set. This is expressed in the way shown. The value set is represented with the id, display name and the flexibility/stability of the binding.

Constraint	At least one subordinate <substanceAdministration> element SHALL be present unless medications are unknown or known absent.
------------	---

In case a constraint is expressed in words, a box "Constraint" accompanies the textual expression of the constraint.

Schematron assert	<table border="0"> <tr> <td style="background-color: #e0e0e0; padding: 2px 5px;">role</td><td style="padding: 2px 5px;">error</td></tr> <tr> <td style="background-color: #e0e0e0; padding: 2px 5px;">test</td><td style="padding: 2px 5px;">not(@value) or starts-with(@value, '#')</td></tr> <tr> <td style="background-color: #e0e0e0; padding: 2px 5px;">Message</td><td style="padding: 2px 5px;">This reference/@value SHALL begin with a '#' and SHALL point to its corresponding narrative (using the approach defined in CDA Release 2, section 4.3.5.1)</td></tr> </table>	role	error	test	not(@value) or starts-with(@value, '#')	Message	This reference/@value SHALL begin with a '#' and SHALL point to its corresponding narrative (using the approach defined in CDA Release 2, section 4.3.5.1)
role	error						
test	not(@value) or starts-with(@value, '#')						
Message	This reference/@value SHALL begin with a '#' and SHALL point to its corresponding narrative (using the approach defined in CDA Release 2, section 4.3.5.1)						

In cases where constraints are expressed by formalised rules in ISO Schematron, the rule along with the role (error, warning), the test and the assertion message is shown.

13.3 How to read the Templates hierarchical graph view

Section	IPS Results Section (2.16.840.1.113883.10.22.3.14)
Entry	IPS Result Organizer (2.16.840.1.113883.10.22.4.9)
Entry	IPS Laboratory Result Observation (2.16.840.1.113883.10.22.4.13)

Templates are often included in the hierarchical graph view (often used for CDA). It gives an overview of e.g. section and entries and their nesting/relationships.

*	CDA Person (2.16.840.1.113883.10.12.152)
@	UV Dispense Request (2.16.840.1.113883.10.21.4.2)

In case a template has more than one type (CDA Person for header, section and entry templates), it is denoted with a *, if a recursive definition is detected, this is shown with the symbol @.

13.4 How to read the *where* criteria

Templates sometimes include criteria for identifying distinct elements from a list (e.g. in a choice).

The criteria used to identify the items are shown in square brackets using the assertion *where [criteria]*

Criteria can be:

1. an **xpath expression** as in the example : *where [hl7:low or hl7:high]*
2. or an **integer** indexing the items of the list: e.g, *where [1]; where [2]*

14 References

14.1 Literature

- Whiting-O'Keefe QE, Simborg DW, Epstein WV, Warger A: A computerized summary medical record system can provide more information than the standard medical record. *JAMA*. 1985 Sep 6;254(9):1185-92.
- Boone KW: The CDA Book. Springer 2011, ISBN 978-0-85729-336-7

14.2 Links

1. The epSOS Project <http://epsos.eu/>
2. The Trillium Bridge Project <http://www.trilliumbridge.eu>
3. The Sequoia Project <https://sequoiaproject.org/>
4. Memorandum of Understanding between the United States Department of Health and Human Services and the European Commission on Cooperation Surrounding Health Related Information and Communication Technologies http://ec.europa.eu/newsroom/dae/document.cfm?doc_id=1784
5. http://www.jointinitiativecouncil.org/news/JIC_Standards_Set_development_20160101_v1.00.pdf
6. Transatlantic eHealth/health IT Cooperation Roadmap http://ec.europa.eu/newsroom/dae/document.cfm?doc_id=12123
7. ART-DECOR® art-decor.org
8. HL7 Templates Standard: Specification and Use of Reusable Information Constraint Templates, Release 1 http://www.hl7.org/implement/standards/product_brief.cfm?product_id=377
9. EHN Guideline on the electronic exchange of health data under Cross-Border Directive 2011/24/EU. Release 2. https://ec.europa.eu/health/sites/health/files/ehealth/docs/ev_20161121_co10_en.pdf
10. http://www.hl7.org/implement/standards/product_brief.cfm?product_id=379
11. IHE Patient Care Coordination Technical Framework http://ihe.net/Technical_Frameworks/#pcc
12. <https://ec.europa.eu/cefdigital/wiki/display/EHOPERATIONS/Specifications>
13. JIC <http://www.jointinitiativecouncil.org/index.asp>
14. HL7 CDA® Release 2 Implementation Guide: Data Provenance, Release 1 http://www.hl7.org/implement/standards/product_brief.cfm?product_id=420
15. HL7 Version 3 Publishing Facilitator's Guide <http://www.hl7.org/v3ballot/html/help/pfg/pfg.htm>
16. ISO/TS 13582:2015 Health informatics -- Sharing of OID registry information
17. HL7 C-CDA Implementation Guide DSTU R2.1 http://www.hl7.org/implement/standards/product_brief.cfm?product_id=379
18. HL7 V3 Normative Edition 2010 <http://www.hl7.org/memonly/downloads/v3edition.cfm>
19. Core Principles and Properties of HL7 Version 3 Models http://www.hl7.org/implement/standards/product_brief.cfm?product_id=58
20. IPS Value Sets in ART-DECOR® <https://art-decor.org/art-decor/decor-valuesets--hl7ips->
21. EHN Guideline on the electronic exchange of health data under Cross-Border Directive 2011/24/EU. Release 2. ([https://ec.europa.eu/cefdigital/wiki/display/EHOPERATIONS/Business+Analysis+and+Requirements+Management?preview=/55878732/55878698/\(Adopted\)%20Patient%20Summary](https://ec.europa.eu/cefdigital/wiki/display/EHOPERATIONS/Business+Analysis+and+Requirements+Management?preview=/55878732/55878698/(Adopted)%20Patient%20Summary))

- ry%20Guideline%20cross-border%20exchange%20of%20health%20data%20(release%202).pdf
- 22. IHE Patient Care Coordination Technical Framework http://ihe.net/Technical_Frameworks/#pcc
 - 23. IDMP standards <https://www.idmp1.com/idmp-standards>
 - 24. European project OpenMedicine <http://www.open-medicine.eu/home.html>
 - 25. HL7 Service-Aware Interoperability Framework: Canonical Definition Specification, Release 2 http://www.hl7.org/implement/standards/product_brief.cfm?product_id=3
 - 26. CDA R2 Standard http://www.hl7.org/implement/standards/product_brief.cfm?product_id=7
 - 27. The Trillium Bridge Project <http://www.trilliumbridge.eu>
 - 28. The eHDSI initiative <https://ec.europa.eu/cefdigital/wiki/display/EHOPERATIONS/eHealth+DSI+Operations+Home>
 - 29. International Patient Summary Project Publication Page <http://hl7intl.art-decor.org/index.php?prefix=hl7ips->
 - 30. Get SNOMED CT <http://www.ihtsdo.org/snomed-ct/get-snomed-ct>
 - 31. EDQM Standard Terms <https://standardterms.edqm.eu>

14.3 Figures

- 1. IPS Standards in the HL7 SAIF Interoperability Matrix
- 2. The IPS Principles
- 3. The IPS meet-in-the-middle approach
- 4. The European Commission CEN/TC 251 Grant Agreement
- 5. Binding to a Single Code (tabular view)
- 6. XML Expression of a Single-Code Binding
- 7. Translation Code Example
- 8. Intensional value set definition
- 9. Examples of IPS usage
- 10. Problem Concern Act (from C-CDA IG DTSU R2.1)
- 11. Representation of medicines in CDA
- 12. CDA model has been enhanced with the R_Medication
- 13. The IPS World