PS Display Guideline - Wave 7

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PS Display Guideline

This chapter show how an eHealth DSI aware display systems needs to visualize the eHealth DSI PS.

Display Guideline

Document Context and global overview

Introduction

Analysis performed put in evidence the need of a very simple view of the context information for the default PS representation: so only a subset of those included in the following table are expected to be shown.

Identification [1]	National Health Care patient ID	National Health Care patient ID	Country ID, unique for the patient in that country. Example: ID for United Kingdom patient	Basic	Yes
Personal information	Full Name	Given name	The Name of the patient (Example: John). This field can contain more than one element	Basic	Yes
		Family name /Surname	This field can contain more than one element. Example: Español Smith	Basic	Yes

	Date of Birth	Date of Birth	This field may contain only the year[2] if day and month are not available. E.g.: 01 /01/2009	Basic	Yes
	Gender	Gender Code	It must contained a recognized valid value for this field	Basic	Pending decision (in some countries 'gender' is needed for univocal identification of the patient)
Contact information	Address[3]	Street	Example: Oxford	Ext	No
		Number of Street	Example: 221	Ext	No
		City	Example: London	Ext	No
		Post Code	Example: W1W 8LG	Ext	No
		State or Province	Example: London	Ext	No
		Country	Example: UK	Ext	No
	Telephone No	Telephone No	Example: +45 20 7025 6161	Ext	No
	E-mail	E-mail	Example: jens@hotmail.com	Ext	No
	Preferred HCP /Legal organization to contact[4]	Name of the HCP /Legal organization	Name of the HCP/name of the legal organization. If it is a HCP, the structure of the name will be the same as described in 'Full name' (Given name, family name /surname)	Basic	No
		Telephone No	Example: +45 20 7025 6161	Basic	No
		E-mail	E mail of the HCP/legal organization	Basic	No
	Contact Person/ legal guardian (if available)	Role of that person	Legal guardian or Contact person	Ext	NO
		Given name	The Name of the Contact Person /guardian (example: Peter. This field can contain more than one element)	Ext	No
		Family name /Surname	This field can contain more than one element. Example: Español Smith	Ext	No
		Telephone No	Example: +45 20 7025 6161	Ext	No
		E-mail		Ext	No
Insurance information	Insurance Number	Insurance Number	Example: QQ 12 34 56 A	Pending decision by WP3.6 of including it in Basic (in some countries 'Insurance Number' is needed for univocal identification of the patient).	Pending decision by WP3.6 of including it in Basic (in some countries 'Insurance Number' is needed for univocal identification of the patient).

Country	Country	Country	Name of country A	Basic	Yes
Patient Summary	Date Created	Date Created	Data on which PS was generated	Basic	No
	Date of Last Update	Date of Last Update	Data on which PS was updated (data of last version)	Basic	Yes
Author /Nature of the patient summary	Author of the patient summary	Author of the patient summary	To highlight if the data is collected manually by an HCP or is collected automatically form different sources (e.g.: hospital doctor repository, GPs…etc) through predetermine clinical rules.	Basic	No
Legal entity	Responsible of the PS data	Responsible of the PS data	At least an author organization (HCPO) shall be listed. In case there is not HCPO identified at least a HCP shall be listed	Basic	No

In practice - by default – just few information like

1. Patient's Name
2. Patient IDs
3. Date of birth
4. Gender
5. Date of document creation
6. Date of the last update

should be displayed above the document content, whose main structure is hereafter defined.

All the other context information (author, contacts, guardian…) should not part of the basic representation and can be displayed only "on request".[5]

After the above mentioned context information the document content (body) shall be displayed following this section order

1. Alerts
2. Diagnostic tests
3. Active problems
4. Medication summary
5. Medical Devices / Implants
6. Procedures
7. History of illness
8. Vaccinations
9. Treatments
10. Autonomy
11. Social History
12. Pregnancy History
13. Physical Findings
14. Other sections…

Section visualization should follow rules defined in this document, for unspecified sections only the section.code@displayName attribute and the non-translated section text will be visualized.

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[1] Data set that enable the univocal identification of the patient. It will be defined in [Identity management Specification]. The variable 'Birth place' (Country of birth and place of birth) needs to be evaluated by [Identity management Specification] as in some countries it is needed for univocal identification of the patient.

[2] To be aligned with prescription minimum dataset (in [eP Functional requirements])

[3] Will be adapted due to the variability of the countries.

[4] A foreign HCP may need a contact (HCP/legal organization) who knows the patient

[5] Is out of the scope of this document specifies how this "on request" will be implemented.

Patient Block

This section defines the information that is expected to be shown – by default – at the beginning of the PS document.

Information to be displayed

Labels	Values
Patient	Family Name
Family Name	Given Name
Given Name	Prefix
Patient	Primary Patient ID
Patient IDs	Secondary Patient Identifier
Date of Birth	Birthdate
Gender	Gender
Creation Date	PS Creation Date
Last Update	Last Update

How to display info

The following is a conceptual representation of default context information.

- All info available

Patient		
Prefix	Family Name	Given Name
	Schuman	Robert
Primary Patient ID 18860629	Secondary Patient ID eHDSI	
Gender Male	Date of Birth 1886-06-29	
▶ See details		

- Field Missing ("secondary ID")

Patient

Prefix	Family Name	Given Name
	Schuman	Robert

Primary Patient ID	18860629		
Gender	Male	Date of Birth	1886-06-29

▶ See details

- Nullflavored Field missing ("Date of Birth")

Patient

Prefix	Family Name	Given Name
	Schuman	Robert

Primary Patient ID	18860629	Secondary Patient ID	eHDSI
Gender	Male	Date of Birth	No information

▶ See details

The value to be shown is derived from the eHDSINullFlavor value set:

CDA Mapping

Labels	Xpath	Translation in CDA	VS
Patient	NO	NO	Y
Prefix	NO	NO	Y
Family Name	NO	NO	Y
Given Name	NO	NO	Y
Primary Patient ID	NO	NO	Y
Secondary Patient ID	NO	NO	Y
Gender	NO	NO	Y
Date of Birth	NO	NO	Y

Values	Xpath
Prefix	/ClinicalDocument/recordTarget/pa
Family Name	/ClinicalDocument/recordTarget/pa
Given Name	/ClinicalDocument/recordTarget/pa
Primary Patient ID	/ClinicalDocument/recordTarget/pa
Secondary Patient ID	/ClinicalDocument/recordTarget/pa
Gender	/ClinicalDocument/recordTarget/pa
Birthdate	/ClinicalDocument/recordTarget/pa

Extended View

All the remaining information may be displayed – on request – as follows.

No assumption has been made on how this "on request" mechanism will be implemented (for example a pop-up including just these data; reload of the whole document with the context section including this additional information; and so on…).

Information to be displayed

Labels
Patient
Preferred HCP/Legal organization to contact
Author (HCP)
Authoring Device
Contact Information
Legal Authenticator
Other Contacts
Guardian
Custodian

Values		
Patient Address	Guardian Address	Legal Authenticator Organization Address
Patient telecom (email, phone)	Guardian telecom (email, phone)	Legal Authenticator Organization telecom (email, phone)
Preferred HCP/Legal organization to contact Name	Human Author Name	Custodian Name
Preferred HCP/Legal organization to contact Address	Authoring Device Name	Custodian Address
Preferred HCP/Legal organization to contact telecom (email, phone)	Healthcare Facility Name	Custodian telecom
Other Contact Name	Healthcare Facility Address	
Other Contact Address	Healthcare Facility telecom (email, phone)	
Other Contact telecom (email, phone)	Legal Authenticator Name	
Guardian Name	Legal Authenticator Organization Name	

How to display info

This is a conceptual representation of the "extended" context information view, where for each additional contact found in the document a new couple of rows (Other Contacts; Contact Information) are added.

▼ See details

Patient

Contact information

155, Avenida da Liberdade
Lisbon 1250-141, PT
Tel (home address): 351211234567
Mail: paciente@gmail.com

Preferred HCP/Legal organization to contact

Contact information

Author (HCP)

Contact information

3, Alameda Santo António dos
CapuchosLisbon 1169-050, PTTel (work place):
351211234568Mail: medico@gmail.com

Represented Organization

Centro Hospitalar de Lisboa Central3, Alameda
Santo António dos Capuchos
Lisbon 1169-050, PT
Mail (work place): hospital@gmail.com

Legal Authenticator

António Pereira , Centro Hospitalar de Lisboa Central

Contact information

3, Alameda Santo António dos Capuchos
Lisbon 1169-050, PT
Tel (work place): 351211234568
Mail: medico@gmail.com

Other Contacts

Vitória Silva   Next of kin

Contact information

Vitória Silva
147, Rua Augusta
Lisbon 1100-049, PT
Mail: paciente@gmail.com
Tel: 351211234570

Guardian

Joaquim Baptista

Contact information

155, Avenida da Liberdade
Lisbon 1250-141, PT
Mail: guardian@gmail.com
Tel: 351211234569

Custodian

Centro Hospitalar de Lisboa Central

Contact information

3, Alameda Santo António dos Capuchos
Lisbon 1169-050, PT
Mail (work place): hospital@gmail.com

3.1.1.3.2.1. CDA Mapping

Labels	Xpath	Translation in CDA	VS
Prescription ID	NO	NO	Y
Date of Prescription	NO	NO	Y

Labels	Xpath	Translation in CDA	VS		Values
Patient	NO	NO	Y		For details please refer to the CDA Implementation Guides
Preferred HCP/Legal organization to contact	NO	NO	Y		

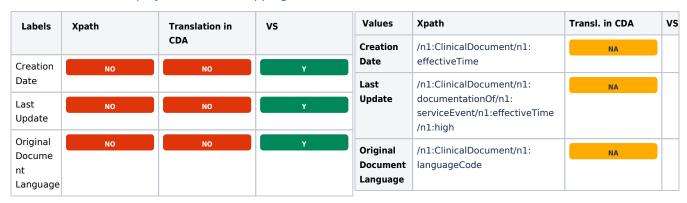|			
Author (HCP)	NO	NO	Y
Authoring Device	NO	NO	Y
Contact Information	NO	NO	Y
Legal Authenticator	NO	NO	Y
Other Contacts	NO	NO	Y
Guardian	NO	NO	Y
Custodian	NO	NO	Y

General information block

This block contains some general information about the patient summary, like the identifier and the creation date.

Conceptually, the block could look like this:

Creation Date	2020-05-25 12:00:00 (+02:00)	Last Update	2020-05-25	Original Document Language	French-FRANCE

Information to be displayed and CDA Mapping

Labels	Xpath	Translation in CDA	VS		Values	Xpath	Transl. in CDA	VS
Creation Date	NO	NO	Y		**Creation Date**	/n1:ClinicalDocument/n1:effectiveTime	NA	
Last Update	NO	NO	Y		**Last Update**	/n1:ClinicalDocument/n1:documentationOf/n1:serviceEvent/n1:effectiveTime/n1:high	NA	
Original Document Language	NO	NO	Y		**Original Document Language**	/n1:ClinicalDocument/n1:languageCode	NA	

Clinical sections

Alerts

Introduction

Data here described are derived by the section Allergies and Other Adverse Reactions (template OID 1.3.6.1.4.1.12559.11.10.1.3.1.2.12 - LOINC code 48765-2).

Labels	Values	Others
Reaction Type	Section Title	The Allergies, adverse reactions, alert section is missing
Clinical Manifestations	Reaction Type	
Agent	Clinical Manifestation	
Duration	Agent ID	
Severity	Agent Description	
Criticality	Duration	
Allergy Status	Severity	
Certainty	Criticality	
	Allergy Status	
	Certainty	

How to display info

- All info available

▼ Allergies, adverse reactions, alerts

▶ Original narrative

▼ Translated coded

Reaction Type	Clinical Manifestation	Agent	Duration	Severity	Criticality	Allergy Status	Certainty
Alergia a substância	Urticária	Latex (111088007)	From 1990-01-10	Ligeiro a moderado	Baixo risco	Inactivo	Confirmado
Alergia a comida	Eczema	Kiwi (260176001)	From 1990-01-10	Ligeiro a moderado	Risco elevado	Activo	Confirmado
Intolerância alimentar	Diarréia	Lactose (226760005)	From 1983-05-05	Ligeiro	Risco elevado	Activo	Confirmado
Alergia a medicamentos	Asma	Ácido acetilsalicílico(50004620)	From 1994 Until 2010	Moderado a severo	Risco elevado	Resolvido	Confirmado

- Field Missing ("Onset Date")

If the value for a given element is missing in the CDA document, nothing is displayed in the field.

- Nullflavored Field missing ("Agent")

The value to be shown is derived from the nullFlavor code.

- Uncoded element [with reference to text] ("Agent")

e.g.

Uncoded Elements

```
<value xsi:type="CD" >
    <originalText>
        <reference value="#allergy-1"/>
    </originalText>
</value>
```

The text is kept from the referred piece of text from the section text.

It is not – and could be never – translated. If the reference is missing we are in the no value case: the cell is left empty.

- Known absence of alerts

○ value has to be defined as follows:

```
<value code="no-known-allergies" displayName="No known allergies" codeSystem="2.16.840.1.113883.5.1150.1" codeSystemName="IPS Absent and Unknown Data" xsi:type="CD"/>
```

○ In this situation, the <participant> structure is omitted (from ART-DECOR IG)
○ In the narrative block of the Section → <text>No known allergies</text>

- No information on availability of alerts

○ value has to be defined as follows:

```
<value code="no-allergy-info" displayName="No information about allergies" codeSystem="2.16.840.1.113883.5.1150.1" codeSystemName="IPS Absent and Unknown Data" xsi:type="CD"/>
```

○ In this situation, the <participant> structure is omitted (from ART-DECOR IG)
○ In the narrative block of the Section → <text>No information about allergies</text>
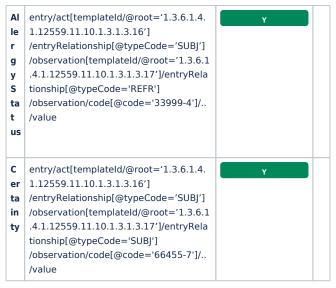
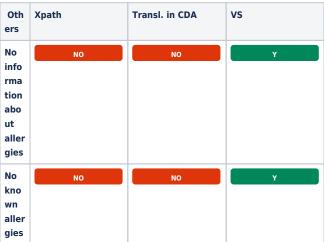Other exceptions to be considered in a „second phase" could be:

- Allergies have the no value code and agent described
- A different no value code is used…
- 3.1.2.1.3. CDA Mapping

Labels	Xpath	Translation in CDA	VS
Reaction Type	NO	NO	Y
Clinical Manifestation	NO	NO	Y
Agent	NO	NO	Y
Duration	NO	NO	Y
Severity	NO	NO	Y
Criticality	NO	NO	Y
Allergy Status	NO	NO	Y
Certainty	NO	NO	Y

Values	Xpath	Transl. in CDA	VS
Section title	section/code[@code='48765-2']/@displayName	Y	
Reaction Type	entry/act[templateId/@root= '1.3.6.1.4.1.12559.11.10.1.3.1.3.16']/entryRelationship[@typeCode='SUBJ']/observation[templateId/@root='1.3.6.1.4.1.12559.11.10.1.3.1.3.17']/code/@code	Y	
Clinical Manifestation	entry/act[templateId/@root='1.3.6.1.4.1.12559.11.10.1.3.1.3.16']/entryRelationship[@typeCode='SUBJ']/observation[templateId/@root='1.3.6.1.4.1.12559.11.10.1.3.1.3.17']/entryRelationship[@typeCode='MFST']/observation[templateId/@root='1.3.6.1.4.1.12559.11.10.1.3.1.3.44']/value/@code	Y	

Agent ID	entry/act[templateId/@root= '1.3.6.1.4.1.12559.11.10.1.3.1.3.16'] /entryRelationship[@typeCode='SUBJ'] /observation[templateId/@root='1.3.6.1.4.1.12559.11.10.1.3.1.3.17'] /participant[@typeCode='CSM'] /participantRole[@classCode='MANU'] /playingEntity[@classCode='MMAT'] /code/@code	Y	
Agent Description	entry/act[templateId/@root= '1.3.6.1.4.1.12559.11.10.1.3.1.3.16'] /entryRelationship[@typeCode='SUBJ'] /observation[templateId/@root='1.3.6.1.4.1.12559.11.10.1.3.1.3.17'] /participant[@typeCode='CSM'] /participantRole[@classCode='MANU'] /playingEntity[@classCode='MMAT'] /name	Y	
Duration	entry/act[templateId/@root= '1.3.6.1.4.1.12559.11.10.1.3.1.3.16'] /entryRelationship[@typeCode='SUBJ'] /observation[templateId/@root='1.3.6.1.4.1.12559.11.10.1.3.1.3.17'] /effectiveTime/low/@value and entry/act[templateId/@root= '1.3.6.1.4.1.12559.11.10.1.3.1.3.16'] /entryRelationship[@typeCode='SUBJ'] /observation[templateId/@root='1.3.6.1.4.1.12559.11.10.1.3.1.3.17'] /effectiveTime/high/@value	NA	
Severity	entry/act/templateId[@root='1.3.6.1.4.1.12559.11.10.1.3.1.3.16'] /entryRelationship[@typeCode='SUBJ']/ observation[templateId /@root='1.3.6.1.4.1.12559.11.10.1.3.1.3.17']/entryRelationship[@typeCode=' MFST']/observation/entryRelationship[@typeCode='SUBJ']/observation[templateId /@root='1.3.6.1.4.1.12559.11.10.1.3.1.3.8']/value/@code	Y	
Criticality	entry/act[templateId/@root= '1.3.6.1.4.1.12559.11.10.1.3.1.3.16'] /entryRelationship[@typeCode='SUBJ'] /observation[templateId/@root='1.3.6.1.4.1.12559.11.10.1.3.1.3.17'] /entryRelationship[@typeCode='SUBJ']/ observation/code[@code='82606-5']/.. /value	Y	

| Allergy Status | entry/act[templateId/@root='1.3.6.1.4.1.12559.11.10.1.3.1.3.16'] /entryRelationship[@typeCode='SUBJ'] /observation[templateId/@root='1.3.6.1.4.1.12559.11.10.1.3.1.3.17']/entryRelationship[@typeCode='REFR'] /observation/code[@code='33999-4']/.. /value | Y | |
| Certainty | entry/act[templateId/@root='1.3.6.1.4.1.12559.11.10.1.3.1.3.16'] /entryRelationship[@typeCode='SUBJ'] /observation[templateId/@root='1.3.6.1.4.1.12559.11.10.1.3.1.3.17']/entryRelationship[@typeCode='SUBJ'] /observation/code[@code='66455-7']/.. /value | Y | |

Others	Xpath	Transl. in CDA	VS
No information about allergies	NO	NO	Y
No known allergies	NO	NO	Y

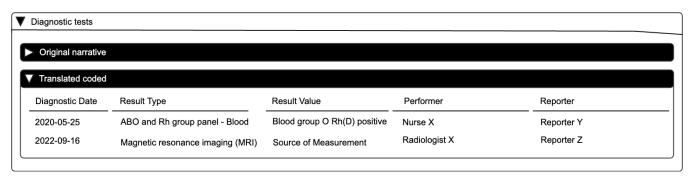For nullFlavored values the translated text to be displayed is derived from the eHealth DSI value set eHDSINullFlavor.

Diagnostic tests

Introduction

Data here described are derived by the section Coded Results Section 1.3.6.1.4.1.19376.1.5.3.1.3.28 (LOINC 30954-2)

How to display info

- All info available

▼ Diagnostic tests

▶ Original narrative

▼ Translated coded

Diagnostic Date	Result Type	Result Value	Performer	Reporter
2020-05-25	ABO and Rh group panel - Blood	Blood group O Rh(D) positive	Nurse X	Reporter Y
2022-09-16	Magnetic resonance imaging (MRI)	Source of Measurement	Radiologist X	Reporter Z

- Field is not displayed.Field Missing ("Date")

- Nullflavored Field Missing ("Date")

  The value to be shown is derived from the nullflavor code

- Section Missing

  Nothing to display

- No info scenario (entry nullflavored)

CDA Mapping

Labels	Xpath	Translation in CDA	VS
Diagnostic Date	NO	NO	Y
Result Type	NO	NO	Y
Result Value	NO	NO	Y
Performer	NO	NO	Y
Reporter	NO	NO	Y

	Xpath	Transl. in CDA	VS
Section Title	section/code[@code='30954-2']/@displayName	Y	
Diagnostic Date	**Blood group**: entry/observation[code/@code='34530-6']/effectiveTime/@value	NA	
	Result: entry/organizer/component/observation/effectiveTime	NA	
Result Type	**Blood group**: entry/observation[code/@code='34530-6']/@displayName	Y	
	Result: entry/organizer/component/observation/code/@displayName	NA	
Result Value	**Blood group**: entry/observation[code/@code="34530-6"]/value/@code	NA	
	Result: entry/organizer/component/observation/value/@code	NA	
Performer	**Result**: entry/organizer/performer	NA	
Reporter	**Result**: entry/organizer/author	NA	

List of Current Problems/Diagnosis

Introduction

The following info for the current problems has been identified:

Problem/diagnosis description	Problems/diagnosis that fit under these conditions: conditions that may have a chronic or relapsing course (e.g.: exacerbations of asthma, irritable bowel syndrome), conditions for which the patient receives repeat medications (e.g.: diabetes mellitus, hypertension) and conditions that are persistent and serious contraindications for classes of medication (e.g.: dyspepsia, migraine and asthma)	Basic
Problem Id (code)	Normalized identifier	Basic
Onset time	Date of problem onset	Basic

Since Wave 7, there is also the possibility that rare diseases are displayed in the problem section. In order to do so, following info has been identified:

Diagnosis Assertion Status	Assertion about the certainty associated with a diagnosis. Diagnostic and/or clinical evidence of condition.	Opti onal
Related Health Professional	Identify the Health Professional who may be specifically related to the problem, as a preferred contact.	Opti onal
Related External Resource	Identify the External Resource which may be specifically related to the problem, for example a link between a rare disease problem and the corresponding guidelines.	Opti onal

As for the Alerts section severity, status and patient status will not be displayed; neither the problem type (complain, reported by the patient, finding…).
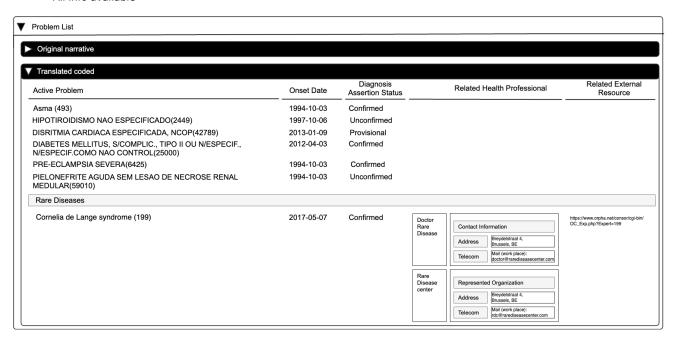
The same general rules defined for the alerts will be followed.

Data here described are derived by the section Active Problems Section 1.3.6.1.4.1.19376.1.5.3.1.3.6 (LOINC code 11450-4).

Information to be displayed

How to display info

- All info available

- Field Missing ("Diagnostic Assertion Status")

  The field is left empty

- Nullflavored Field ("Onset Date")

  The value to be shown is derived from the nullflavor code.

- Uncoded element [with reference to text] ("Problem")

  (e.g. <value xsi:type="CD" > <originalText> <reference value="#link-1"/> </originalText> </value>)

  The text "Textual Problem description" stands for the piece of section text referred by "Link".

It is not – and could be never – translated.

If the reference is missing we are in the no value case : the cell is left empty.

- Section is Missing

(error message to be translated)

The Active Problem section is missing !

- Known absence of active problems
  - value has to be defined as follows:

```
<value code="no-known-problems" displayName="No known problems" codeSystem="
2.16.840.1.113883.5.1150.1" codeSystemName="IPS Absent and Unknown Data" xsi:type="CD"/>
```

  - In the narrative block of the Section → <text>No known problems</text>

- No information on availability of active problems
  - value has to be defined as follows:

```
<value code="no-problem-info" displayName="No information about problems" codeSystem="
2.16.840.1.113883.5.1150.1" codeSystemName="IPS Absent and Unknown Data" xsi:type="CD"/>
```

  - In the narrative block of the Section → <text>No information about problems</text>

Other exceptions to be considered in a „second phase" could be:

1. A different no value code is used...

CDA Mapping

Labels	Xpath	Translation in CDA	VS
Active Problem	NO	NO	Y
Onset Date	NO	NO	Y
Diagnosis Assertion Status	NO	NO	Y (from MVC v7.2.0)
Related Health Professional	NO	NO	Y (from MVC v7.2.0)

Values	Xpath	Transl. in CDA	VS
Section title	section/code[@code='11450-4']/@displayName	Y	
Active Problem	entry/act[templateId/@root='1.3.6.1.4.1.12559.11.10.1.3.1.3.15']/ entryRelationship [@typeCode='SUBJ']/ observation [templateId/@root='1.3.6.1.4.1.12559.11.10.1.3.1.3.7']/value /@displayName	Y	
Active Problem ID	entry/act[templateId/@root='1.3.6.1.4.1.12559.11.10.1.3.1.3.15']/ entryRelationship [@typeCode='SUBJ']/ observation [templateId/@root='1.3.6.1.4.1.12559.11.10.1.3.1.3.7']/value/@code	Y	
Onset Date	entry/act[templateId/@root='1.3.6.1.4.1.12559.11.10.1.3.1.3.15'] /effectiveTime/low/@value	NA	

Related External Resource	NO	NO	Y (from MVC v7.2.0)	Diagnosis Assertion Status	entry/act[templateId/@root='1.3.6.1.4.1.12559.11.10.1.3.1.3.15']/entryRelationship[@typeCode='SUBJ']/observation/templateId[@root='1.3.6.1.4.1.12559.11.10.1.3.1.3.49']/../n1:value		
				Related Health Professional Name	entry/act[templateId/@root='1.3.6.1.4.1.12559.11.10.1.3.1.3.15']/entryRelationship[@typeCode='SUBJ']/observation[templateId/@root='1.3.6.1.4.1.12559.11.10.1.3.1.3.7']/entryRelationship[@typeCode='REFR']/act[@classCode='PCPR']/performer[@typeCode='PRF']/assignedEntity/assignedPerson/name		
				Related Health Professional Address	entry/act[templateId/@root='1.3.6.1.4.1.12559.11.10.1.3.1.3.15']/entryRelationship[@typeCode='SUBJ']/observation[templateId/@root='1.3.6.1.4.1.12559.11.10.1.3.1.3.7']/entryRelationship[@typeCode='REFR']/act[@classCode='PCPR']/performer[@typeCode='PRF']/assignedEntity/addr/		
				Related Health Professional Telecom	entry/act[templateId/@root='1.3.6.1.4.1.12559.11.10.1.3.1.3.15']/entryRelationship[@typeCode='SUBJ']/observation[templateId/@root='1.3.6.1.4.1.12559.11.10.1.3.1.3.7']/entryRelationship[@typeCode='REFR']/act[@classCode='PCPR']/performer[@typeCode='PRF']/assignedEntity/telecom/		
				Related Health Professional Organization Name	entry/act[templateId/@root='1.3.6.1.4.1.12559.11.10.1.3.1.3.15']/entryRelationship[@typeCode='SUBJ']/observation[templateId/@root='1.3.6.1.4.1.12559.11.10.1.3.1.3.7']/entryRelationship[@typeCode='REFR']/act[@classCode='PCPR']/performer[@typeCode='PRF']/assignedEntity/representedOrganization/name/		
				Related Health Professional Organization Address	entry/act[templateId/@root='1.3.6.1.4.1.12559.11.10.1.3.1.3.15']/entryRelationship[@typeCode='SUBJ']/observation[templateId/@root='1.3.6.1.4.1.19376.1.5.3.1.4.5']/entryRelationship[@typeCode='REFR']/act[@classCode='PCPR']/performer[@typeCode='PRF']/assignedEntity/representedOrganization/addr/		

| Related Health Professional Organization Telecom | entry/act[templateId/@root='1.3.6.1.4.1.12559.11.10.1.3.1.3.15']/ entryRelationship [@typeCode='SUBJ']/observation [templateId /@root='1.3.6.1.4.1.19376.1.5.3.1.4.5']/entryRelationship[@typeCode='REFR']/act[@classCode='PCPR'] /performer[@typeCode='PRF'] /assignedEntity /representedOrganization/telecom/ | | |
| Related External Resource | entry/act[templateId/@root='1.3.6.1.4.1.12559.11.10.1.3.1.3.15']/ entryRelationship [@typeCode='SUBJ']/observation [templateId /@root='1.3.6.1.4.1.19376.1.5.3.1.4.5']/reference[@typeCode='REFR'] /externalDocument/test/reference /@value | | |

Others	Xpath	Transl. in CDA	VS
The Active Problem section is missing!	NO	NO	Y

For nullflavored values the translated text to be displayed is derived from the eHealth DSI value set eHDSIDisplayLabel.

Medication Summary

Introduction

Data here described are derived by the section Medications Summary 1.3.6.1.4.1.12559.11.10.1.3.1.2.3 (LOINC code 10160-0).

Information to be displayed

Labels
Medicinal Product
Active ingredient
Strength
Dose form
Units per intake
Frequency of intakes
Route of administration

Values
Section Title
Medicinal Product
Active Ingredient description [just the main one not subingredients]
Active Ingredient id
Strength value
Strength unit

| Duration of treatment |
| Medication Reason |

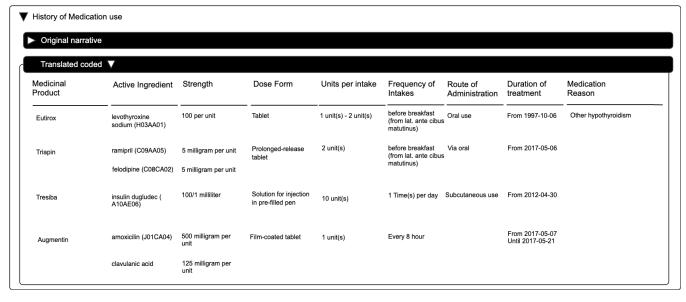| Dose form description |
| Units for intakes |
| Units for intakes unit |
| Frequency of intake |
| Route of administration description |
| Duration of treatment |
| Medication Reason |

| **Others** |
| per unit [used to describe the unit "1"] |
| unit(s) [used to describe the unit "1"] |
| Every [used for period element] |
| for [used for phase.width] |
| at [used for phase.low] |
| The Medication Summary section is missing! |

How to display info

As general rule the same approach defined for the other sections for handling missing, null flavored values, uncoded information have to be applied: in practice if not else specified in case of missing values nothing need to be displayed; if nullflavored the nullflavor description shall be displayed; and so on…

▼ History of Medication use

▶ Original narrative

Translated coded ▼

Medicinal Product	Active Ingredient	Strength	Dose Form	Units per intake	Frequency of Intakes	Route of Administration	Duration of treatment	Medication Reason
Eutirox	levothyroxine sodium (H03AA01)	100 per unit	Tablet	1 unit(s) - 2 unit(s)	before breakfast (from lat. ante cibus matutinus)	Oral use	From 1997-10-06	Other hypothyroidism
Triapin	ramipril (C09AA05)	5 milligram per unit	Prolonged-release tablet	2 unit(s)	before breakfast (from lat. ante cibus matutinus)	Via oral	From 2017-05-06	
	felodipine (C08CA02)	5 milligram per unit						
Tresiba	insulin dugludec (A10AE06)	100/1 milliliter	Solution for injection in pre-filled pen	10 unit(s)	1 Time(s) per day	Subcutaneous use	From 2012-04-30	
Augmentin	amoxicilin (J01CA04)	500 milligram per unit	Film-coated tablet	1 unit(s)	Every 8 hour		From 2017-05-07 Until 2017-05-21	
	clavulanic acid	125 milligram per unit						

- Uncoded element [with reference to text] ("Active Ingredient")

Uncoded element with reference to text ("Active ingredient")

```
<value xsi:type="CD" >
    <originalText>
        <reference value="#link-1"/>
    </originalText>
</value>
```

The text displayed in the Active ingredient field contains the referred piece of text from the section text.

It is not – and could be never – translated. If the reference is missing we are in the no value case: the cell is left empty.

- Section is missing

   Medications Summary non present!

- No info scenario (substanceAdministration.code@code is „182849000" or "408350003 " or "182904002")

   If the substanceAdministration.code@code is „182849000" or "408350003 " or "182904002" only the related displayName shall be displayed.

   Anamnéza užívania liekov

   farmakoterapie neznáma

- Known absence of medication
    - code has to be defined as follows:

```
<code code="no-known-medication" displayName="No known medications" codeSystem="2.16.840.1.113883.5.1150.1"
codeSystemName="IPS Absent and Unknown Data" xsi:type="CD"/>
```

    - In this situation, the <ingredient> structure is omitted (from ART-DECOR IG)
    - In the narrative block of the Section → <text>No known medications</text>

- No information of availability of medication
    - code has to be defined as follows:

```
<code code="no-known-medication" displayName="No known medications" codeSystem="2.16.840.1.113883.5.1150.1"
codeSystemName="IPS Absent and Unknown Data" xsi:type="CD"/>
```

       - In this situation, the <ingredient> structure is omitted (from ART-DECOR IG)
       - In the narrative block of the Section → <text>No information about medications</text>

   Other exceptions to be considered in a „second phase" could be :

   a. More than one medication is described and one of them have the no values code
   b. Medication have the no value code and medicine described
   c. A different no value code is used…

CDA mapping

Lab els	Xpath	Translation in CDA	VS

The path provided does not include the extensions namespace

Values	Xpath	Transl. in CDA	VS

Medicinal Product	NO	NO	Y
Active ingredient	NO	NO	Y
Strength	NO	NO	Y
Dose form	NO	NO	Y
Units per intake	NO	NO	Y
Frequency of intakes	NO	NO	Y
Route of administration	NO	NO	Y
Duration of treatment	NO	NO	Y
Medication Reason	NO	NO	Y

Section title	section/code[@code='10160-0']/@displayName	Y	
Active ingredient description [just the main one not subingredients]	entry/substanceAdministration [templateId/ [@root= '1.3.6.1.4.1.12559.11. 10.1.3.1.3.4']/consumable /manufacturedProduct /manufacturedMaterial /ingredient/ [@classCode='ACTI']/ingredient /code/@displayName	Y	
Active ingredient id	entry/substanceAdministration [templateId/[@root= '1.3.6.1.4.1.12559.11.10.1.3.1. 3.4']/consumable /manufacturedProduct /manufacturedMaterial /ingredient/ [@classCode='ACTI'] /ingredientSubstance/code /@code	NA	
Strength value	entry/substanceAdministration [templateId/ [@root= '1.3.6.1.4.1.12559.11. 10.1.3.1.3.4']/consumable /manufacturedProduct /manufacturedMaterial /ingredient/ [@classCode='ACTI']/quantity /numerator/@value entry/substanceAdministration [templateId/ [@root= '1.3.6.1.4.1.12559.11. 10.1.3.1.3.4']/consumable /manufacturedProduct /manufacturedMaterial /ingredient/ [@classCode='ACTI']/quantity /denominator/@value	NA	
Strength unit	entry/substanceAdministration [templateId/ [@root= '1.3.6.1.4.1.12559.11. 10.1.3.1.3.4']/consumable /manufacturedProduct /manufacturedMaterial /ingredient/ [@classCode='ACTI']/quantity /numerator/@unit entry/substanceAdministration [templateId/ [@root= '1.3.6.1.4.1.12559.11. 10.1.3.1.3.4']/consumable /manufacturedProduct /manufacturedMaterial /ingredient/ [@classCode='ACTI']/quantity /denominator/@unit	Y	

Dose form description	entry/substanceAdministration [templateId/ [@root= '1.3.6.1.4.1.12559.11. 10.1.3.1.3.4']/consumable /manufacturedProduct /manufacturedMaterial /formCode/@code	NO	
Units for intakes	entry/substanceAdministration [templateId/ [@root= '1.3.6.1.4.1.12559.11. 10.1.3.1.3.4']/doseQuantity /low@value entry/substanceAdministration [templateId/ [@root='1.3.6.1.4.1.12559.11.1 0.1.3.1.3.4']/doseQuantity /high@value	NA	
Units for intakes unit	entry/substanceAdministration [templateId/ [@root= '1.3.6.1.4.1.12559.11. 10.1.3.1.3.4']/doseQuantity /low@unit entry/substanceAdministration [templateId/ [@root='1.3.6.1.4.1.12559.11.1 0.1.3.1.3.4']/doseQuantity /high@unit	NA	
Frequency of intake	entry/substanceAdministration [templateId/[@root= '1.3.6.1.4.1.12559.11.10.1.3.1. 3.4']/effectiveTime[2]	See details above	
Route of administration description	entry/substanceAdministration [templateId/ [@root='1.3.6.1.4.1.12559.11.1 0.1.3.1.3.4']/routeCode/@code	Y	
Duration of treatment	entry/substanceAdministration [templateId /@root='1.3.6.1.4.1.12559.11.1 0.1.3.1.3.4']/effectiveTime[1] [@ xsi:type='IVL_TS']	NA	
Medication Reason	entry/substanceAdministration [templateId /@root='1.3.6.1.4.1.12559.11.1 0.1.3.1.3.4']/entryRelationship [@typeCode='RSON']/observati on/value entry/substanceAdministration [templateId /@root='1.3.6.1.4.1.12559.11.1 0.1.3.1.3.4']/entryRelationship [@typeCode='RSON']/act/id	NA	

Others	Xpath	Transl. in CDA	VS

The Medication Summary section is missing !	NO	NO	
per unit [used to describe the unit "1"]	NO	NO	
unit(s) [used to describe the unit "1"]	NO	NO	
Every [used for period element]	NO	NO	
for [used for phase.width]	NO	NO	
at [used for phase.low]	NO	NO	

For nullflavored values the translated text to be displayed is derived from the eHealth DSI value set eHDSIDisplayLabel.

Medical Devices and implants

Introduction

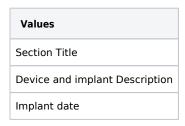The following info for medical devices has been identified:

Medical Devices and implants	Device and implant Description	Describes the patient's implanted and external medical devices and equipment that their health status depends on. Includes devices as cardiac pacemakers, implantable defibrillator, prothesis, ferromagnetic bone implants etc. that are important to know by the HCP	Basic	NO
	Device Id code	Normalized identifier	Basic	NO
	Implant date		Basic	NO

The same general rules defined for the alerts will be followed.

Data here described are derived by the section Medical Devices Coded Section1.3.6.1.4.1.12559.11.10.1.3.1.2.4 (LOINC code 46264-8).

Information to be displayed

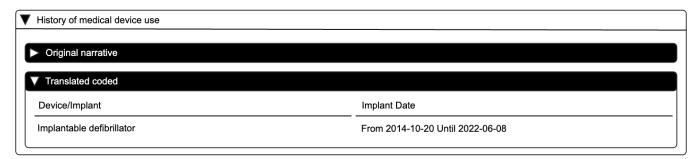| Labels |
|---|
| Device/Implant |
| Implant date |

Values
Section Title
Device and implant Description
Implant date

Others

The Medical Devices and implants section is missing!

How to display info

- All info available

▼ History of medical device use

▶ Original narrative

▼ Translated coded

Device/Implant	Implant Date
Implantable defibrillator	From 2014-10-20 Until 2022-06-08

- Nullflavored Field Missing ("Implant date")

The value to be shown is derived from the nullflavor code

- Uncoded element [with reference to text] ("device")

e.g.

Uncoded element with reference to text ("device")

```
<value xsi:type="CD" >
    <originalText>
        <reference value="#link-1"/>
    </originalText>
</value>
```

The text "Textual device description" stands for the piece of section text referred by "Link"

It is not – and could be never – translated. If the reference is missing we are in the no value case: the cell is left empty.

- Device Section is Missing

This error message needs to be translated.

The Medical Devices and implants section is missing!

- Known absence of medical devices
  - code has to be defined as follows:

```
<code code="no-known-devices" displayName="No known devices in use" codeSystem="2.16.840.1.113883.5.1150.1"
codeSystemName="IPS Absent and Unknown Data"/>
```

  - In the narrative block of the Section → <text>No known devices in use</text>

- No information on availability of medical devices
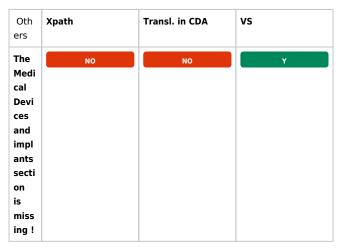 - code has to be defined as follows:

```
<code code="no-device-info" displayName="No information about devices" codeSystem="
2.16.840.1.113883.5.1150.1" codeSystemName="IPS Absent and Unknown Data"/>
```

  - In the narrative block of the Section → <text>No information about devices</text>

CDA Mapping

Labels	Xpath	Translation in CDA	VS
Device /Implant	NO	NO	Y
Implant date	NO	NO	Y

Values	Xpath	Transl. in CDA	VS
Section title	section/code[@code='46264-8'']/@displayName	Y	
Device and implant Description	entry/supply[templateId/@root='1.3.6.1.4.1.12559.11.10.1.3.1.3.5']/participant[@typeCode='DEV']/participantRole/playingDevice/code/@code	Y	
Implant date	entry/supply[templateId/@root='1.3.6.1.4.1.12559.11.10.1.3.1.3.5']/effectiveTime/@value	NA	

Others	Xpath	Transl. in CDA	VS
The Medical Devices and implants section is missing !	NO	NO	Y

For nullflavored values the translated text to be displayed is derived from the eHealth DSI value set eHDSIDisplayLabel.

Surgical Procedures

Introduction

Two different sections for surgical procedures have been identified.

1. Major Surgical Procedures in the past 6 months [1]
2. Surgical Procedures prior to the past six months

The following info for the current problems has been identified:

Major Surgical Procedures in the past 6 months	Procedure description	Describes the type of procedure	Basic	NO
	Procedure Id (code)	Normalized identifier	Basic	NO
	Procedure date	Date when procedure was performed	Basic	NO

Surgical Procedures prior to the past six months	Procedure description	Describes the type of procedure	Ext	NO
	Procedure Id (code)	Normalized identifier	Ext	NO
	Procedure date	Date when procedure was performed	Ext	NO

In the current CDA implementation, all the procedures are instead gathered in a single section.

No objections during the Team Tcons on showing all the procedures under the same section. What is expected is to have the procedures **ordered by date (the last first)**.

We can do the same considerations done for the active problems and alerts.

Data here described are derived by the "Coded List of Surgeries Section" Section 1.3.6.1.4.1.19376.1.5.3.1.3.12 (LOINC code 47519-4).

---

[1] As there is subjectivity in the term 'relevant', the date will be used as the limit to include procedures.

Information to be displayed

Labels
Procedure
Procedure Date

Values
Section Title
Procedure
Procedure Date

Others
The Procedures section is missing!

How to display info

- All info available

▼ History of procedures		
▶ Original narrative		
▼ Translated coded		
Procedure	Body Site	Procedure Date
Implantation of heart assist system	skin structure of shoulder	2014-10-20
Caesarean section		2012-04-14
Thyroidectomy		1997-06-05

- Field Missing ("Procedure" ; "Date")

  If the field is missing nothing is displayed in the column.

- Nullflavored Field Missing ("Date")

  The value to be shown is derived from the nullflavor code
- Uncoded element [with reference to text] ("procedure")

  e.g.

```
<value xsi:type="CD">
    <originalText>
        <reference value="#link1"/>
    </originalText>
</value>
```

The text "Textual Procedure description" stands for the piece of section text referred by the "Link"

It is not – and could be never - translated. If the reference is missing we are in the no value case : the cell is left empty.

- Device section is missing

This error message needs to be translated

The Procedures section is missing!

- Known absence of surgical procedures

  ○ code has to be defined as follows:

```
<code code="no-known-procedure" displayName="No known procedures" codeSystem="
2.16.840.1.113883.5.1150.1" codeSystemName="IPS Absent and Unknown Data"/>
```

  ○ In the narrative block of the Section → <text>No known procedures</text>

- No information on availability of surgical procedures
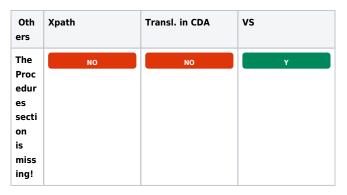
  ○ value has to be defined as follows:

```
<value code="no-problem-info" displayName="No information about problems" codeSystem="
2.16.840.1.113883.5.1150.1" codeSystemName="IPS Absent and Unknown Data" xsi:type="CD"/>
```

  ○ In the narrative block of the Section → <text>No information about past history of procedures</text>

CDA Mapping

Labels	Xpath	Translation in CDA	VS
Procedure	NO	NO	Y
Body Site	NO	NO	Y
Procedure Date	NO	NO	Y

Values	Xpath	Transl. in CDA	VS
Section title	section/code[@code='47519-4']/@displayName	Y	
Procedure	entry/procedure[templateId/@root='1.3.6.1.4.1.12559.11.10.1.3.1.3.26']/code/@code	Y	
Body Site	entry/procedure[templateId/@root='1.3.6.1.4.1.12559.11.10.1.3.1.3.26']/targetSiteCode/@code	Y	
Procedure Date	entry/procedure[templateId/@root='1.3.6.1.4.1.12559.11.10.1.3.1.3.26']/effectiveTime/low/@value OR entry/procedure[templateId/@root='1.3.6.1.4.1.12559.11.10.1.3.1.3.26']/effectiveTime/@value	NA	

Oth ers	Xpath	Transl. in CDA	VS
The Proc edur es secti on is miss ing!	NO	NO	Y

For nullflavored values the translated text to be displayed is derived from the eHealth DSI value set eHDSIDisplayLabel.

History of past illness

Introduction

The following info for the current problems has been identified:

List of Resolved, Closed or Inactive problems	Probl em Desc ripti on	Problems or diagnosis not included under the definition of 'Current problems or diagnosis'. Example: hepatic cyst (the patient has been treated with an hepatic cystectomy that solved the problem and therefore it´s a closed problem)	E xt
	Probl em Id (cod e)	Normalized identifier	E xt
	On set time	Date of problem onset	E xt
	End date	Problem resolution date	E xt
	Reso lutio n Circu msta nces	Describes the reason by which the problem changed the status from current to inactive (e.g. surgical procedure, medical treatment, etc). This field includes 'free text' if the resolution circumstances are not already included in other fields. Example: It can happen that this field is already included in other like Surgical Procedure, medical device etc, eg: hepatic cystectomy (this wil be the 'Resolution Circumstances' for the problem 'hepatic cyst' and will be included in surgical procedures)	E xt

We can apply the same considerations made for the active problems and alerts.

Data here described are derived by the 1.3.6.1.4.1.19376.1.5.3.1.3.8

History of Past Illness Section (LOINC code 11348-0).

Information to be displayed

Labels
Closed/Inactive Problem
Onset Date
End Date

Values
Section Title
Closed Problem
Closed Problem ID

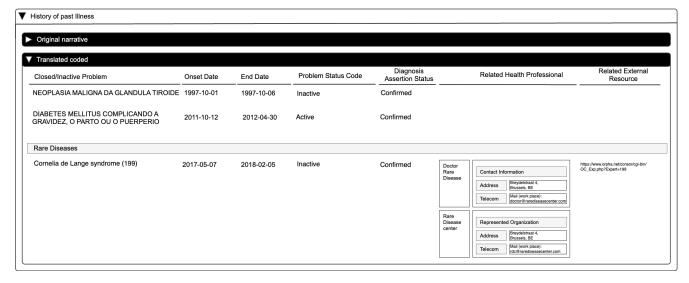| Problem Status Code		Onset Date
		End Date
		Problem Status Code

Since Wave 7, there is also the possibility that rare diseases are displayed in the history of past illness section. In order to do so, following info has been identified:

Diagnosis Assertion Status	Assertion about the certainty associated with a diagnosis. Diagnostic and/or clinical evidence of condition.	Optional
Related Health Professional	Identify the Health Professional who may be specifically related to the problem, as a preferred contact.	Optional
Related External Resource	Identify the External Resource which may be specifically related to the problem, for example a link between a rare disease problem and the corresponding guidelines.	Optional

How to display

- All info available

- Field Missing ("End Date")

  If the field is missing, the column is left blank.

- Nullflavored Field Missing ("End Date"; "Problem")

  The value to be shown is derived from the nullflavor code
- Uncoded element [with reference to text] ("Problem")

  e.g.

```
<value xsi:type="CD">
     <originalText>
          <reference value="#allergy-1"/>
     </originalText>
</value>
```

The text "Textual Problem description" stands for the piece of section text referred by the "Link"

It is not – and could be never – translated. If the reference is missing we are in the no value case : the cell is left empty.

- The section is missing

Nothing is displayed

- No info scenario (observation.value@code is derived from the epsosUnknownInformation value set)

If the observation.value@code is one of those listed in epsosUnknownInformation it is shown just the code designation.

History of past illness

Medical history unknown

- No info scenario (just a nullflavored entry act is present)

This is not consistent with current eHealth DSI specifications; however for the robustness of the solution this use case could be "easily" dealt showing just the nullflavor description.

(this could be reuse for other sections)

History of past illness

Not Applicable

Other exceptions to be considered in a „second phase" could be :

- More than one problem is described and one of them has the no values code
- A different no value code is used…

CDA Mapping

Labels	Xpath	Translation in CDA	VS
Closed /Inactive Problem	NO	NO	Y
Onset Date	NO	NO	Y
End Date	NO	NO	Y

Values	Xpath	Transl. in CDA	VS
Section title	section/code[@code='11348-0'] /@displayName	Y	
Closed Problem	entry/act/templateId[@root='1.3.6.1 .4.1.12559.11.10.1.3.1.3.15'] /entryRelationship [@typeCode='SUBJ']/observation /templateId[@root='1.3.6.1.4.1.125 59.11.10.1.3.1.3.7']/value/@code	Y	
Closed Problem ID	entry/act/templateId[@root='1.3.6.1 .4.1.12559.11.10.1.3.1.3.15'] /entryRelationship [@typeCode='SUBJ']/observation /templateId[@root='1.3.6.1.4.1.125 59.11.10.1.3.1.3.7']/value/@code	NA	

Field			
Problem Status Code	NO	NO	Y
Diagnosis Assertion Status	NO	NO	Y (from MVC v7.2.0)
Related Health Professional	NO	NO	Y (from MVC v7.2.0)
Related External Resource	NO	NO	Y (from MVC v7.2.0)

Field	Path		
Onset Date	entry/act/templateId[@root='1.3.6.1.4.1.12559.11.10.1.3.1.3.15'] /effectiveTime/low/@value	NA	
End Date	entry/act/templateId[@root='1.3.6.1.4.1.12559.11.10.1.3.1.3.15'] /effectiveTime/high/@value	NA	
Problem Status Code	entry/act/templateId[@root='1.3.6.1.4.1.12559.11.10.1.3.1.3.15']/ entryRelationship [@typeCode='SUBJ']/observation /templateId [@root='1.3.6.1.4.1.12559.11.10.1.3.1.3.7']/../entryRelationship [@typeCode='REFR']/observation /templateId[@root='1.3.6.1.4.1.12559.11.10.1.3.1.3.9']/../value		
Diagnosis Assertion Status	entry/act/templateId[@root= '1.3.6.1.4.1.12559.11.10.1.3.1.3.15'] / entryRelationship[@typeCode='SUBJ']/observation/templateId[@root='1.3.6.1.4.1.12559.11.10.1.3.1.3.7']/.. /entryRelationship[@typeCode='SUBJ']/observation/templateId [@root='1.3.6.1.4.1.12559.11.10.1.3.1.3.49']/../value		
Related Health Professional Name	entry/act/templateId[@root='1.3.6.1.4.1.12559.11.10.1.3.1.3.15']/ entryRelationship [@typeCode='SUBJ']/observation /templateId[@root='1.3.6.1.4.1.12559.11.10.1.3.1.3.7'] /entryRelationship[@typeCode='REFR']/act[@classCode='PCPR'] /performer[@typeCode='PRF'] /assignedEntity/assignedPerson /name		
Related Health Professional Address	entry/act/templateId[@root='1.3.6.1.4.1.12559.11.10.1.3.1.3.15']/ entryRelationship [@typeCode='SUBJ']/observation /templateId[@root='1.3.6.1.4.1.12559.11.10.1.3.1.3.7'] /entryRelationship[@typeCode='REFR']/act[@classCode='PCPR'] /performer[@typeCode='PRF'] /assignedEntity/addr/		
Related Health Professional Telecom	entry/act/templateId[@root='1.3.6.1.4.1.12559.11.10.1.3.1.3.15']/ entryRelationship [@typeCode='SUBJ']/observation /templateId[@root='1.3.6.1.4.1.12559.11.10.1.3.1.3.7'] /entryRelationship[@typeCode='REFR']/act[@classCode='PCPR'] /performer[@typeCode='PRF'] /assignedEntity/telecom/		

Related Health Professional Organization Name	entry/act/templateId[@root='1.3.6.1.4.1.12559.11.10.1.3.1.3.15']/ entryRelationship [@typeCode='SUBJ']/observation /templateId[@root='1.3.6.1.4.1.12559.11.10.1.3.1.3.7'] /entryRelationship[@typeCode='REFR']/act[@classCode='PCPR'] /performer[@typeCode='PRF'] /assignedEntity /representedOrganization/name/	
Related Health Professional Organization Address	entry/act/templateId[@root='1.3.6.1.4.1.12559.11.10.1.3.1.3.15']/ entryRelationship [@typeCode='SUBJ']/observation /templateId[@root='1.3.6.1.4.1.12559.11.10.1.3.1.3.7'] /entryRelationship[@typeCode='REFR']/act[@classCode='PCPR'] /performer[@typeCode='PRF'] /assignedEntity /representedOrganization/addr/	
Related Health Professional Organization Telecom	entry/act/templateId[@root='1.3.6.1.4.1.12559.11.10.1.3.1.3.15']/ entryRelationship [@typeCode='SUBJ']/observation /templateId[@root='1.3.6.1.4.1.12559.11.10.1.3.1.3.7'] /entryRelationship[@typeCode='REFR']/act[@classCode='PCPR'] /performer[@typeCode='PRF'] /assignedEntity /representedOrganization/telecom/	
Related External Resource	entry/act/templateId[@root='1.3.6.1.4.1.12559.11.10.1.3.1.3.15']/ entryRelationship [@typeCode='SUBJ']/observation /templateId [@root='1.3.6.1.4.1.19376.1.5.3.1.4.5']/reference[@typeCode='REFR'] /externalDocument/test/reference /@value	

For nullflavored values the translated text to be displayed is derived from the eHealth DSI value set eHDSINullFlavor.

Vaccinations

Introduction

The following info for vaccinations has been identified:

Vaccinations	Vaccinations	Contains each disease against which immunization was given	Ext	No
	Brand name		Ext	No
	Vaccinations id code	Normalized identifier	Ext	No
	Vaccination Date	The date the immunization was received	Ext	No
	Agent			

Marketing Authorization Holder			
Dose number in series			
Administered	The fact that the vaccination was received or not	Ext	No

We can apply the same considerations made for the active problems and alerts.

Data here described are derived by the 1.3.6.1.4.1.19376.1.5.3.1.3.23
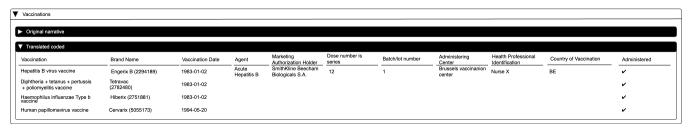
Immunizations Section (LOINC code 11369-6).

Information to be displayed

Labels
Vaccination
Brand name
Vaccination Date
Agent
Marketing Authorization Holder
Dose number in series
Batch/lot number
Administering Center
Health Professional Identification
Country of Vaccination
Administered

Values
Section Title
Vaccinations
Brand name
Vaccination Date
Agent
Marketing Authorization Holder
Dose number in series
Batch/lot number
Administering Center
Health Professional Identification
Country of Vaccination
Administered

How to display info

- All info available

Vaccination	Brand Name	Vaccination Date	Agent	Marketing Authorization Holder	Dose number is series	Batch/lot number	Administering Center	Health Professional Identification	Country of Vaccination	Administered
Hepatitis B virus vaccine	Engerix B (2294189)	1983-01-02	Acute Hepatitis B	SmithKline Beecham Biologicals S.A.	12	1	Brussels vaccinanion center	Nurse X	BE	✔
Diphtheria + tetanus + pertussis + poliomyelitis vaccine	Tetravac (2782480)	1983-01-02								✔
Haemophilus influenzae Type b vaccine	Hiberix (2751881)	1983-01-02								✔
Human papillomavirus vaccine	Cervarix (5055173)	1994-05-20								✔

- Field Missing ("Marketing Authorization Holder")

If the field is missing, nothing is displayed and the column is left empty.

- Nullflavored Field Missing ("Date")

The value to be shown is derived from the nullflavor code

- Uncoded element [with reference to text] ("Vaccine")

e.g.

uncoded element with reference to text

```
<value xsi:type="CD">
     <originalText>
          <reference value="#link1"/>
     </originalText>
</value>
```

The text "Textual Problem description" stands for the piece of section text referred by the "Link"

It is not – and could be never – translated. If the reference is missing we are in the no value case : the cell is left empty.

- Vaccination Section is Missing

Nothing to display

- No info scenario (main entry nullflavored)

It is just shown the nullflavor description under the section header

History of immunization

Unknown

CDA Mapping

Labels	Xpath	Translation in CDA	VS
Vaccination	NO	NO	Y
Brand name	NO	NO	Y
Vaccination Date	NO	NO	Y
Agent	NO	NO	Y
Marketing Authorization Holder	NO	NO	Y

Values	Xpath	Transl. in CDA	VS
Section Title	section/code[@code='11369-6']/@displayName	Y	
Vaccinations	entry/substanceAdministration/consumable/manufacturedProduct/manufacturedMaterial/code/@code	Y	
Brand name	entry/substanceAdministration/consumable/manufacturedProduct/manufacturedMaterial/name[1]	Y	
Vaccination Date	entry/substanceAdministration/effectiveTime/@value	NA	
Agent	entry/substanceAdministration/participant/participantRole/code	Y	
Marketing Authorization Holder	entry/substanceAdministration/consumable/manufacturedProduct/manufacturerOrganization	NA	

Dose number in series	NO	NO	Y
Batch/lot number	NO	NO	Y
Administering Center	NO	NO	Y
Health Professional Identification	NO	NO	Y
Country of Vaccination	NO	NO	Y
Administered	NO	NO	Y

Dose number in series	entry/substanceAdministration/entryRelationship/observation [@classCode='OBS'] [@moodCode='EVN']/code [@codeSystem='2.16.840.1.113883.6.1'][@code ='30973-2']/../value/@value	NA
Batch/lot number	entry/substanceAdministration/consumable/manufacturedProduct/manufacturedMaterial/lotNumberText	NA
Administering Center	entry/substanceAdministration/performer/assignedEntity/representedOrganization/name	NA
Health Professional Identification	entry/substanceAdministration/performer/assignedEntity/assignedPerson/name	NA
Country of Vaccination	entry/substanceAdministration/performer/assignedEntity/representedOrganization/addr	NA
Administered	entry/substanceAdministration/statusCode	NA

For nullflavored values the translated text to be displayed is derived from the eHealth DSI value set epSOSNullFlavor.

[1] Basing on the current specification and the TM/TSAM behaviour the optional Vaccination Brand Name will appear – if present - as one of the nested translation elements. For that reason the implementation needs to use a more specific xpath rule for avoiding the mixing up between the vaccination code translation and the Vaccination Brand Name.

Health Maintenance Care Plan

Introduction

Health Maintenance Care Plan Section 1.3.6.1.4.1.19376.1.5.3.1.1.9.50 (LOINC code 18776-5).

Information to be displayed

Values
Section Title
Section Text

The section header will be kept from the section.code@displayName

The section text will be shown following the format rules defined for this element by the CDA (see narrative block).

The text will be displayed in the country A language.

If this section is missing nothing will be displayed.

CDA Mapping

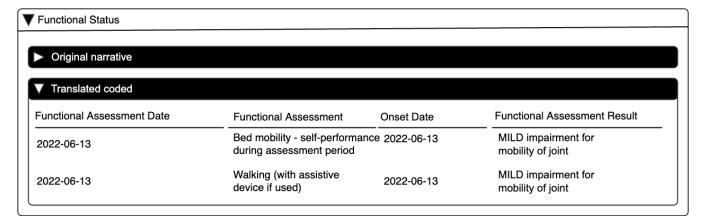| Values	Xpath	Transl. in CDA	VS
Section title	section/code[@code='18776-5']	NA	Y
Section Text	section/code[@code='18776-5']/text		

Functional Status

Introduction

This is a narrative section: 1.3.6.1.4.1.19376.1.5.3.1.3.17 Functional Status Section (LOINC code 47420-5).

Information to be displayed

Values
Section Title
Functional Assessment Date
Functional Assessment
Onset Date
Functional Assessment Result

How to display info

The section header will be kept from the eHDSISection value set using the section.code.

The section text will be shown following the format rules defined for this element by the CDA (see narrative block).

The text will be displayed in the country A language.

If this section is missing nothing will be displayed.

CDA Mapping

Labels	Xpath	Translation in CDA	VS
Section title	NO	NO	Y
Functional Assessment Date	NO	NO	Y
Functional Assessment	NO	NO	Y
Onset Date	NO	NO	Y
Functional Assessment Result	NO	NO	Y

Values	Xpath	Transl. in CDA	VS
Section Title	section/code [@code=' 47420-5']	NA	Y
Functional Assessment Date	entry/organizer /component /observation/../.. /effectiveTime	NA	
Functional Assessment	entry/organizer /component /observation /code /@displayName	NA	
Onset Date	entry/organizer /component /observation /effectiveTime	NA	
Functional Assessment Result	entry/organizer /component /observation /value /@displayName	NA	

Social History

Introduction

Data here described are derived by the section Coded Social History 1.3.6.1.4.1.19376.1.5.3.1.3.16.1 (LOINC 29762-2).

Information to be displayed

Labels
Observation Type
Duration
Observation Value

Values
Section Title
Observation Type
Duration
Observation Value
Observation Value unit

How to display info

The format of the observation value may change depending on the observation type, since the specifications define a specific mapping between observation type and the data type of the observation value (see following table).
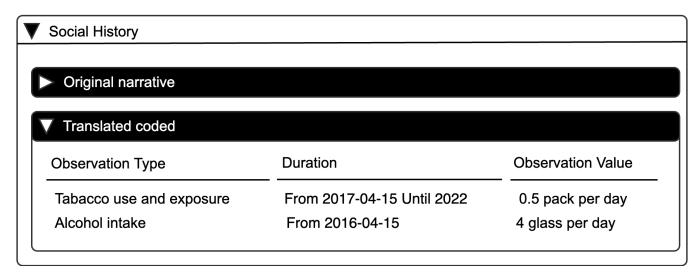
CODE	VALUE

Code	displayName	xsi:type	unit
229819007	Smoking	PQ	{pack}/d or {pack}/wk or {pack}/a
256235009	Exercise		{times}/wk
160573003	ETOH (Alcohol) Use		{drink}/d or {drink}/wk
364393001	Nutritional observable	CD	
364703007	Employment detail		N/A
425400000	Toxic exposure status		
363908000	Details of drug misuse behavior		
228272008	Health-related behavior	ANY	

Three types of observation to be record have been identified: smoke, alcohol and diet.

Since for coded information no value set has been defined neither has been specified how to manage the "Health-related behaviour" information: we assume that these observations are in an "uncoded" form.

Therefore the following use cases will consider the case of a Physical Quantity observation value and the "uncoded" form.

- All info available

▼ Social History

▶ Original narrative

▼ Translated coded

Observation Type	Duration	Observation Value
Tabacco use and exposure	From 2017-04-15 Until 2022	0.5 pack per day
Alcohol intake	From 2016-04-15	4 glass per day

- Field Missing ("Date")

If the field is missing, nothing is displayed and the column is left empty.

- Nullflavored Field Missing ("Value")

The value to be shown is derived from the nullflavor code

- Uncoded element [with reference to text] ("Value")

e.g.

uncoded element with reference to text

```
<value xsi:type="CD">
    <originalText>
        <reference value="#link1"/>
    </originalText>
</value>
```

The text stands for the piece of section text referred by the "Link"

It is not – and could be never – translated. If the reference is missing we are in the no value case : the cell is left empty.

- Section is Missing

Nothing to display

- No info scenario (entry nullflavored)

It is just shown the nullflavor description under the section header

CDA Mapping

Labels	Xpath	Translation in CDA	VS
Observation Type	NO	NO	Y
Duration	NO	NO	Y
Observation Value	NO	NO	Y

Values	Xpath	Transl. in CDA	VS
Section title	section/code [@code=' 29762-2']	NA	Y
Observation Type	entry /observation /code/@code	Y	
Duration	entry /observation /effectiveTime	NA	
Observation Value	entry /observation /value/@value	NA	
Observation value unit	entry /observation /value/@unit	Y	

Pregnancy History

Introduction
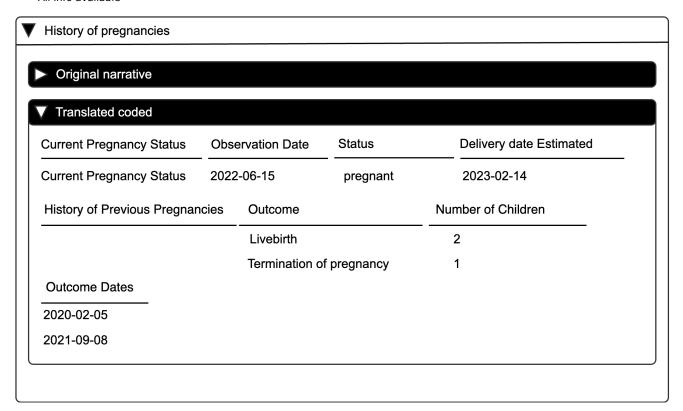
Data here described are derived by the section Pregnancy History 1.3.6.1.4.1.19376.1.5.3.1.1.5.3.4 (LOINC 10162-6).

Information to be displayed

Values
Section Title
Current Pregnancy Status
Observation Date
Status
Delivery date Estimated
History of Previous Pregnancies
Outcome
Number of Children
Outcome Dates

How to display info

- All info available

▼ History of pregnancies

▶ Original narrative

▼ Translated coded

Current Pregnancy Status	Observation Date	Status	Delivery date Estimated
Current Pregnancy Status	2022-06-15	pregnant	2023-02-14

History of Previous Pregnancies	Outcome	Number of Children
	Livebirth	2
	Termination of pregnancy	1

Outcome Dates

2020-02-05

2021-09-08

- Field Missing ("Observation Date")

If the field is missing, nothing is displayed and the column is left empty.

- Nullflavored Field Missing ("Value")

The value to be shown is derived from the nullflavor code

- Section is Missing

Nothing to display

- No info scenario (entry nullflavored)

It is just shown the nullflavor description under the section header

CDA Mapping

Labels	Xpath	Translation in CDA	VS
Current Pregnancy Status	NO	NO	Y
Observation Date	NO	NO	Y
Status	NO	NO	Y

Values	Xpath	Transl. in CDA	VS
Section title	section/code [@code='10162-6']	NA	Y
Observation Date	entry/observation /code [@code='82810-3'] /../effectiveTime	NA	
Status	entry/observation /code [@code='82810-3'] /../value/@code	NA	Y

Delivery date Estimated	NO	NO	Y
History of Previous Pregnancies	NO	NO	Y
Outcome	NO	NO	Y
Number of Children	NO	NO	Y
Outcome Dates	NO	NO	Y

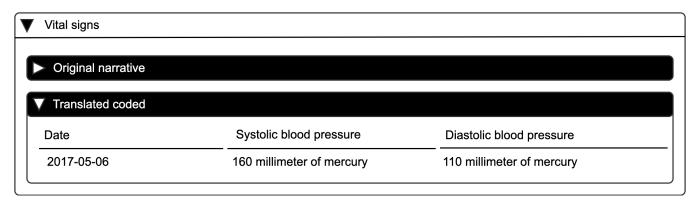| Delivery date Estimated	entry/observation/code[@code='82810-3']/.. /entryRelationship[@typeCode='COMP']/observation/value	NA	
Outcome	entry/observation/code[@code!='93857-1'][@code!='82810-3']/../code	NA	Y
Number of Children	entry/observation/code[@code!='93857-1'][@code!='82810-3']/../value/@value	NA	
Outcome Dates	entry/observation/code[@code='93857-1']/../value	NA	

Physical findings

Introduction

Data here described are derived by the section Coded Vital Signs 1.3.6.1.4.1.19376.1.5.3.1.1.5.3.2 (LOINC 8716-3).

Labels
Date

Values
Section Title
Date
Systolic BP value
Diastolic BP value
Systolic BP unit
Diastolic BP unit

Values used as Labels
Systolic BP
Diastolic BP

How to display info

- All info available

▼ Vital signs

▶ Original narrative

▼ Translated coded

Date	Systolic blood pressure	Diastolic blood pressure
2017-05-06	160 millimeter of mercury	110 millimeter of mercury

- Nullflavored Field ("Systolic BP Value")

The value to be shown is derived from the nullflavor code

- Section is Missing

Nothing to display

- No info scenario (entry nullflavored)

It is just shown the nullflavor description under the section header

CDA Mapping

Labels and Values used as Labels	Xpath	Transl. in CDA	VS
Date	NO	NO	Y
Systolic BP	entry/organizer /templateId [@root='1.3.6.1.4.1. 19376.1.5.3.1.4.13. 1']/component /observation /templateId [@root='1.3.6.1.4.1. 19376.1.5.3.1.4.13. 2']/code [@code='8480-6'] /@displayName	Y	
Diastolic BP	entry/organizer /templateId [@root= '1.3.6.1.4.1 . 19376.1.5.3.1.4.13. 1']/component /observation /templateId [@root='1.3.6.1.4.1. 19376.1.5.3.1.4.13. 2']/code [@code='8462-4'] /@displayName	Y	

Values	Xpath	Transl. in CDA	VS
Section Title	section/code[@code='8716-3'] /@displayName	Y	
Date	entry/organizer/templateId [@root='1.3.6.1.4.1.19376.1.5.3.1.4.1 3.1']/effectiveTime@value	NA	
Systolic BP value	entry/organizer/templateId [@root='1.3.6.1.4.1.19376.1.5.3.1.4.1 3.1']/component/observation /templateId [@root='1.3.6.1.4.1.19376.1.5.3.1.4.1 3.2'][code/@code='8480-6']/value /@value	NA	
Diastolic BP value	entry/organizer/templateId [@root= '1.3.6.1.4.1.19376.1.5.3.1.4. 13.1']/component/observation /templateId [@root='1.3.6.1.4.1.19376.1.5.3.1.4.1 3.2'][code/@code='8462-4']/value /@value	NA	
Systolic BP unit	entry/organizer/templateId [@root='1.3.6.1.4.1.19376.1.5.3.1.4.1 3.1']/component/observation /templateId [@root='1.3.6.1.4.1.19376.1.5.3.1.4.1 3.2'][code/@code='8480-6']/value /@unit	Y	
Diastolic BP unit	entry/organizer/templateId [@root= '1.3.6.1.4.1.19376.1.5.3.1.4. 13.1']/component/observation /templateId [@root='1.3.6.1.4.1.19376.1.5.3.1.4.1 3.2'][code/@code='8462-4']/value /@unit	Y	