SPECIFICATION OF THE GENERAL CDA DOCUMENT HEADER

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V0.1	05.02.2013	Heiko Zimmermann	Initial creation
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eHealthID is described as a synonym for hpdID

Adding CONF-LUXH-TMPL-6 and the description of this templateID cf. Table 31

Correct cardinality of id in table 41

Table 5: Instance Identifier (II) data type corrected to match CDA XSD definition (@root is optional in case of nullFlavor on II element). Simplification of the II description in Table 19, Table 35, Table 41 (and correction of this one), Table 53, |

			Table 69
			Correction of Table 79
			Adaptation of Table 41: ClinicalDocument/setId and versionNumber specification
			Correction of CONF-LUXH-AUTHZ-3
			@value on effectiveTime/low and effectiveTime/high are now R2 instead of M
			Precision on CONF-LUXH-IREC-1
			All @codeSystemName are now [0..1] and R2

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This implementation guideline has been developed by the CDA Workgroups of HL7 Luxembourg together with the Agence eSanté Luxembourg. This implementation guideline can be used publicly and without paying license fees. The intended use of this specification is to support the creation of medical documents for the healthcare sector of Luxembourg.

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INVOLVED PERSONS

The specification is based on the work of experts of the healthcare sector of Luxembourg and has been created during several sessions with the CDA Workgroups initiated by HL7 Luxembourg.

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1. INTRODUCTION

This implementation guide provides the specification of the CDA Header for the Luxembourgish healthcare sector. The specification has been created through a process of several meetings, discussions and reviews together with members of HL7 Luxembourg.

Goal is to provide a consistent specification which can be used by IT-staff of the healthcare sector or by vendors to create compliant CDA documents for the exchange of medical documents in the Luxembourgish healthcare system and with the national eHealth platform in Luxembourg.

The clinical documents that are exchanged or shared within the DSP (Dossier de Santé Partagé) must be conformed to the specifications of the HL7 Clinical Document Architecture release 2.0 (HL7 CDA R2) standard. This standard allows the exchange of clinical documents in xml format compliant with the CDA.xsd and assures the accessibility and readiness, stewardship and the consistency related to the Healthcare professionals responsibilities.

A CDA document (Clinical Document architecture) is divided in two main parts:

- A header where general information needed to the stewardship of the document; it allows the qualification of the document, describes the participants of the document, the relationship between documents and any other information used for its integration in the care process. The information of the header is generally common to all clinical documents that are shared or exchanged in the DSP system;

- A body where clinical information are presented. The clinical information could be unstructured such as a PDF document or an image or could be structured containing xml data.

This document describes **constraints** that apply to the data required for the general CDA Document Header. The header must be used as the default header of different CDA documents defined for general exchange. Nevertheless it is possible to derive specializations of this header for different medical domains. In this case, the specific constraints will be clearly identified (see conventions).

This document is one of a set of documents that will create the Healthcare Interoperability framework of Luxemburg.

It is assumed that readers of the document have a basic knowledge about HL7 and CDA and the purpose of use as a document format for the exchange and sharing of medical information.

1.1. AUDIENCE

This document is intended for software developers, consultants and the national agency staffs responsible for the implementation of the DSP system in Luxemburg and the integration of the clinical software to the DSP system and all local or national health information exchange who wish to create/process clinical documents according to this specification.

1.2. REFERENCE

ISO/HL7 27932 :2008 - HL7 Clinical Document Architecture, Release 2.0 (CDA R2)

1.3. METHODOLOGY

Two CDA workgroups were initiated together with HL7 Luxembourg, one for the laboratory and one for the radiology domain, which has worked on the specification of the general CDA Header described in this document.

Additionally for the development of the implementation guide for the CDA-Header the specifications and experiences gathered in other countries were taken into account.

Excellent specification work has been done in Austria by the ELGA GmbH[1] and in France by ASIP Santé[2]. These Implementation guidelines were taken in to account as well as the HL7 Implementation guide for CDA R2 and the epSOS[3] CDA specifications.

In addition, we reviewed the testing tools called IHE Gazelle Model Based Validation (http://gazelle.ihe.net/content/cda-model-based-validation) where several existing templates are available including the epSOS templates for Patient Summary, ePrescription and eDispensation.
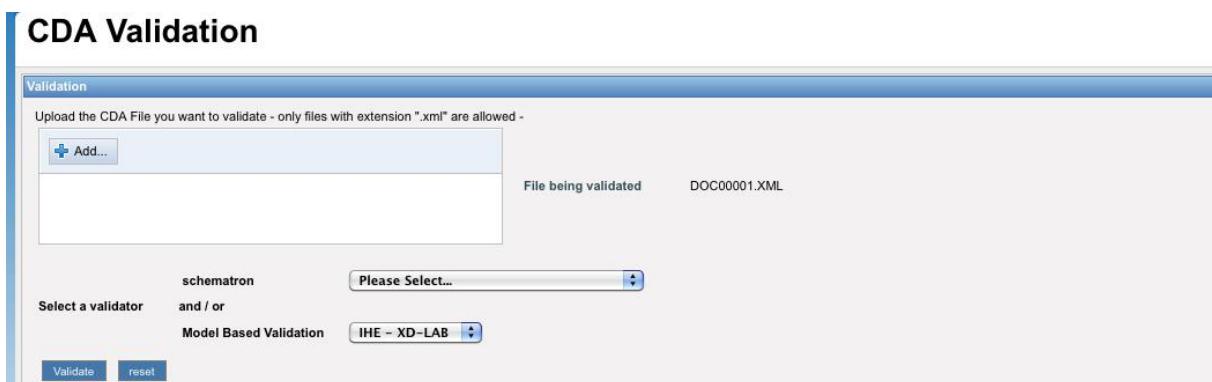
Figure 1: Document upload window for Gazelle CDA Validation

The Agence eSanté Luxembourg provides a test and validation environment for CDA documents[4]. This environment is based on the Gazelle[5] testbed platform tool from IHE Europe and can be used by software developers to check their software compliance. Currently, only the Schematron validators shall be used.

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[1] ELGA GmbH, get more information at http://www.elga.gv.at

[2] See also: http://esante.gouv.fr

[3] epSOS: http://www.epsos.eu

[4] The CDA validatíon environment for Luxembourg can be reached following this link: http://gazelle.agence-esante.lu

[5] The Gazelle tool can be accessed using the following link: http://gazelle.ihe.net

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1.4. USE OF TEMPLATES

Templates are collections of constraints that specify and validate agreed-to requirements for exchange. Collecting individual constraints and assigning a unique template identifier to the collection establishes a shorthand mechanism for the instance creator to assert conformance to those constraints. The template identifier itself carries no semantics. Validation errors against a template must not be construed as anything other than failure to meet the exact requirements of the template, and absence of a template identifier need not be construed as failure to meet the constraints required by the template.

1.5. CONVENTIONS

This document specifies a conformance « profile » the base standard for this specification is the HL7 document Architecture release v2.0 and therefore this specification is a localized profile. Not every aspect of the CDA R2 may be described in this guide. Requirements that have not further constraints to the base standard and which can be validated through CDA.xsd do not have corresponding conformance statements.

1.5.1. Conformance requirements

Conformance requirements for this specification are of two types:

- Those that are collected within a published template of CDA/V3 conformance statements

- Those that are not associated with a published template. Where they are not associated with a published template, they are numbered sequentially and listed with the following format :

    CONF-LU-ex1: *This is an example conformance requirement original to this specification.*

Where conformance requirements from another Implementation Guide are associated with a template, they are included through assertion of that template Identifier and listed in two ways:

CONF-LU-ex2: *All constraints from this section are from the CCD Medications section. See for CCD medications conformance requirements. This section SHALL include the epSOS medication template identifier for the medications section (2.16.840.1.113883.10.20.1.8).*

- In Appendix B, they are listed using the original numbering sequence from the Source Guide:

- Medications (Template ID: 2.16.840.1.113883.10.20.1.8)

- CCD-CONF-299: CCD SHOULD contain exactly one and SHALL NOT contain…

1.5.2. Vocabulary conformance

Value set constraints can be "STATIC," meaning that they are bound to a specified version of a value set, or "DYNAMIC," meaning that they are bound to the most current version of a value set. A simplified constraint is used when binding to a single code.

- Syntax for vocabulary binding to DYNAMIC or STATIC value sets is as follows:

    *The value for ("pathName of coded element") (**SHALL | SHOULD** | MAY) be selected from ValueSet valueSetOID localValueSetName (DYNAMIC | STATIC (valueSetEffectiveDate)).*

    CONF-LU-ex3: *The value for "ClinicalDocument / code" **SHALL** be selected from ValueSet 2.16.840.1.113883.1.11.10870 DocumentType DYNAMIC.*

*CONF-LU-ex4: The value for "ClinicalDocument / code" **SHALL** be selected from ValueSet 2.16.840.1.113883.1.11.10870 DocumentType STATIC 20061017.*

- Syntax for vocabulary binding to a single code is as follows:

*The value for ("pathname of coded element") (**SHALL** | **SHOULD** | MAY) be ("code" ["displayName"] codeSystemOID [codeSystemName] STATIC.*

*CONF-LU-ex5: The value for "ClinicalDocument / code" **SHALL** be "34133-9" "Summarization of episode note" 2.16.840.1.113883.6.1 LOINC STATIC.*

1.5.3. Keywords

The keywords **SHALL**, **SHALL NOT**, **SHOULD**, **SHOULD NOT**, **MAY**, and **NEED NOT** in this document are to be interpreted as described in the HL7 Version 3 Publishing Facilitator's Guide. The table below describes the terminology based on this HL7 Guide:

Meaning	Term	Negation term
Required/Mandatory	SHALL	SHALL NOT
Best Practice/Recommendation/Prefered	SHOULD	SHOULD NOT
Acceptable/Permitted	MAY	NEED NOT

Table 1: Keywords

1.5.4. Cardinality

Cardinality defines how many times an element SHALL/MAY appear in the CDA document. It is represented in minimum and maximum instance counts.

Cardinality	Rule
0..1	Element is optional and non-repeating
0..*	Element is optional and repeating
1..1	Element is mandatory and non-repeating
1..*	Element is mandatory and repeating

Table 2: Cardinality

1.5.5. Optionality

Additionally to the cardinality of elements, the optionality constraints the possible occurrence of an element.

Abbreviation	Term	NullFlavor	Description
M	Mandatory	No	The element SHALL be present and SHALL have a value, nullFlavor SHALL NOT be used.
R	Required	Yes	The element SHALL be present and if no value could be provided the nullFlavor SHALL be used to describe the reason. The possible nullFlavor values will be listed with the element description.
R2	Required if known	No	The element SHOULD be provided if a value is known. If no value exists the element SHALL not

			be provided.
O	Optional	Yes	This element MAY be present. If there is no value, the element SHOULD be omitted or SHALL have a nullFlavor.
NP	Not permitted	No	This element SHALL not be present.
C	Conditional		The conformance of the element depends on other elements, the context or state. The circumstances are specified in detail with the occurrence of such an element in this specification.

Table 3: Optionality usage

1.6. CDA DOCUMENT DEFINITION

All the definitions are originated from HL7 CDA Normative edition.

The HL7 Clinical Document Architecture is a document markup standard that specifies the structure and semantics of clinical documents for the purpose of exchange. A clinical document is a documentation of clinical observations and services with the following characteristics:

- Persistence: a clinical document continues to exist in an unaltered state, for a time period defined by local and regulatory requirements;

- Stewardship: a clinical document is maintained by an organization entrusted with its care;

- Potential for authentication: a clinical document is an assemblage of information that is intended to be legally authenticated;

- Context: a clinical document establishes the default context for its contents;

- Wholeness: authentication of a clinical document applies to the whole and does not apply to portions of the document without the full context of the document;

- Human readability: a clinical document is human readable.

A CDA document is a defined and complete information object that can include text, images, sounds, and other multimedia content.

1.6.1. Concepts of the Clinical Document Architecture

A CDA contains a header and a body. The header provides "administrative" information on authentication, encounter, patient, and other participants involved in the encounter.

The body contains the clinical report and be either an unstructured blob or can be comprised of structured markup. A structured body is divided up into recursively nestable document sections. Each section can contain a single narrative block and any number of CDA entries and external references. The narrative block represents content to be rendered, whereas entries represent structured content provided for computer processing and encodes content

present in the narrative block of the same section. CDA entries can nest and reference external objects.
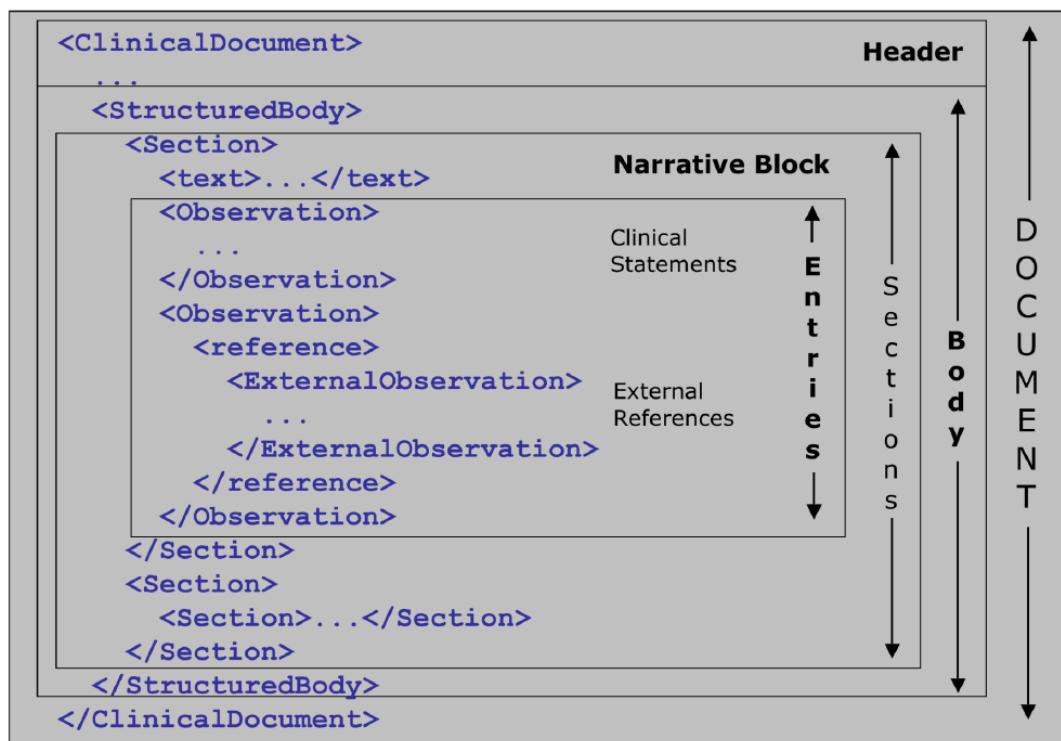
Figure 2: Structured Clinical Document Architecture (CDA)
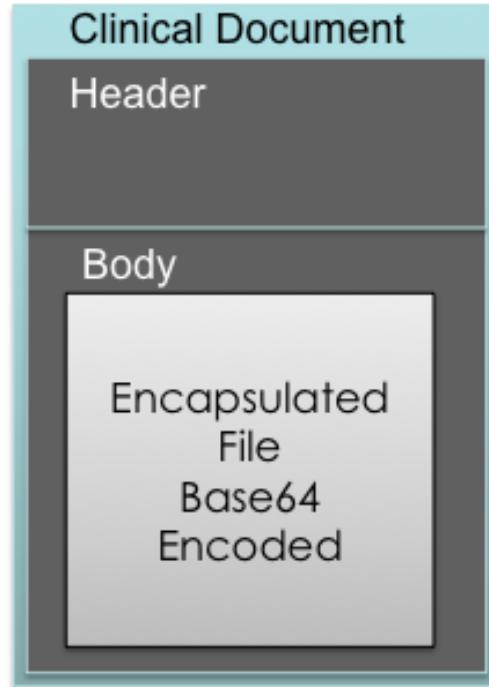
Figure 3: Unstructured Clinical Document Architecture (CDA) including file

1.7. REVISED CYCLE AND EVALUATION

The development and maintenance of the document follows a number of principles to ensure stability of the specifications.

The first of these principles is that extensions and clarifications MUST maintain backward compatibility with previous version of the specifications in order to maintain interoperability with systems that have already implemented CDA documents based on the specifications defined here.

The Agence eSanté will publish annually and/or when necessary the specifications following the process:

- The Agence eSanté develops extensions to support new functionalities identified by the Luxemburgish health community or by the Agence eSanté and issues them for public comment

- The Agence eSanté addresses all comments received during the public comment (PC) period and publishes an updated version of the specification which contains the stable part of the document from the previous version and the new development.

- The new version of the document is used to update the set of testing tools available for testing the implementation performed by the solutions.

- Periodically (e.g. annually), the Agence eSanté considers change proposals of the current version of the specification. After resolution of the issues, the comments are prepared for their integration to the new version of the specification (annually) or if the issues are critical and the resolution has to be immediately operational, the minor version is published.
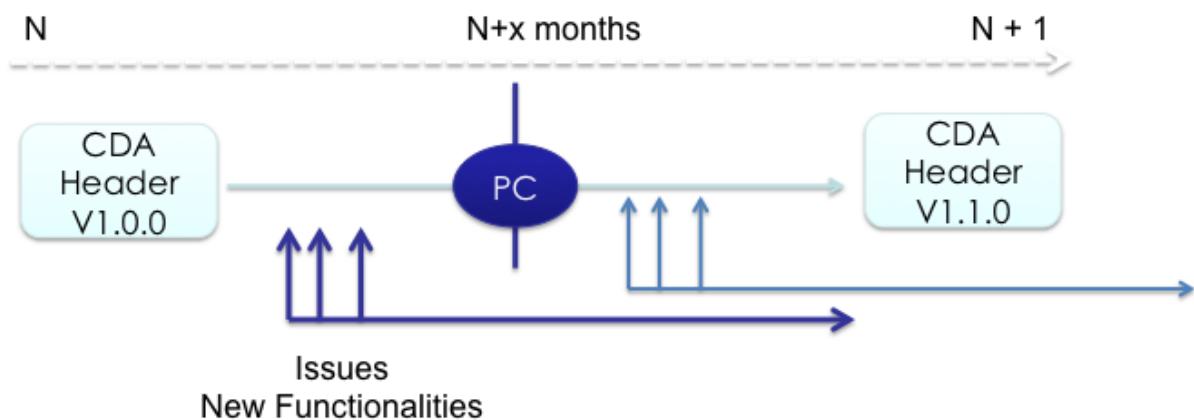
Figure 4: Cycle of maintenance (PC : Public Comment)

2. DATA TYPES AND DEFINITIONS

Through the specification of the details of the CDA document, certain HL7 v3 standard data types are used. The most commonly used ones will be described here for better understanding. Additionally the definition of more complex types defined for the Luxembourgish healthcare sector a specified here also once (e.g. Address, Telecom …).

2.1. ATTRIBUTE NULLFLAVOR

All the classes of the HL7 RIM are derived from the InfrastructureRoot and inherit its attributes. The attribute @nullFlavor is used when the content of the element cannot be filled with an appropriate value. A code value is therefore selected, given the reason why the element is not filled.
The rules for the usage and the kind of the @nullFlavor attribute which could be used related to an element of the CDA, is specified in detail in this implementation guideline.

Follow link for: Constraints on nullFlavor values

Value	Comment	Definition
UNK	Unknown	A proper value is applicable, but not known.
NASK	Not Asked	This information has not been sought (e.g., patient was not asked)
ASKU	Asked but Unknown	Information was sought but not found (e.g., patient was asked but didn't know)
NAV	Temporarily Unavailable	Information is not available at this time but it is expected that it will be available later.
NI	No information	The value is exceptional (missing, omitted, incomplete, improper). No information as to the reason for being an exceptional value is provided. This is the most general exceptional value. It is also the default exceptional value.
MSK	Masked	There is information on this item available but it has not been provided by the sender due to security, privacy or other reasons. There may be an alternate mechanism for gaining access to this information.

Table 4: NullFlavor values

2.2. INSTANCE IDENTIFIER (II) DATA TYPE

The HL7 Instance Identifier data type (II) is used in CDA specifications to identify uniquely different instances of e.g. documents, persons, etc.

The instance identifier data type is a complex data type consisting of the fields described in the table below.

Follow link for: Constraints on II datatype

Complex data type/attributes	DT	Card	Opt	Description
II				Instance identifier
@root	UID	[0..1]	M	Namespace of the identifier, should either be an OID or UUID. 3 possibilities exist : Case 1: The attribute contains the OID of the namespace of identifiers which will be represented in the extension attribute. Case 2: The attribute contains the OID or the UUID of this instance. No value for the extension attribute necessary, the root value identifies this instance uniquely. Case 3 : the II element is nullFlavored, then the attribute shall be omitted.
@extension	ST	[0..1]	C	Unique identifier used in the system/institution/namespace referenced by the value of the @root attribute.
Important: Conditional conformance related to the value of the attribute root. If root attribute is represented as described in:				
Case 1:		[1..1]	M	Extension attribute must contain the unique identifier of this instance from the namespace referenced in the root attribute.
Case 2:		[0..0]	NP	Extension attribute shall be omitted
@assigningAuthorityName	ST	[0..1]	O	Human readable name of the institution/office which provides the id, so e.g. the name linked to the OID.
@displayable	BL	[0..1]	O	Boolean flag to indicate whether the identifier stored is intended to be displayed to humans for data entry.

Table 5: Instance Identifier (II) data type

As shown in the table above, the root attribute must be provided with a unique value which could be either an:

- OID[6]: Sequence of non-negative integers separated by periods, no leading zero, unlimited length. E.g. 2.16.840.1.113883.6.1 for LOINC.

Practical considerations indicate that OID components should be limited to values between 1 and $2^{31} - 1$ (about 2 billion values), because some application libraries are using arrays of integers for storing or comparing the components of an OID. OIDs SHALL be less than 64 characters in length to support exchange in information systems which using other standards like e.g. DICOM.

OIDs which have to be used in the healthcare sector of Luxembourg can be obtained from the Agence eSanté.

Or

- UUID[7]: Appears like XXXXXXXX-XXXX-XXXX-XXXX-XXXXXXXXXXXX where each X is a single hexadecimal digit (in upper case)

OIDs SHALL be used as the preferred identifier scheme in HL7 CDA documents conformant to this specification.

Example

```
<id root="1.3.182.1"  extension="1234567890121"
      assigningAuthorityName="Agence eSanté" />
```

---

[6] Conformant to ISO/IEC 9834-1. For further information on OID usage please consult "HL7 Implementation Guidance for Unique Object Identifiers", at http://www.hl7.org

[7] Conformant to ISO/IEC 9834-8:2005

2.2.1. Unique identifiers for healthcare institutions

Unique identifiers for health professionals and institutions will be provided by the Healthcare Provider Directory (HPD). The identifier, hpdID also known as eHealthID, will be structured[8] in the following way:
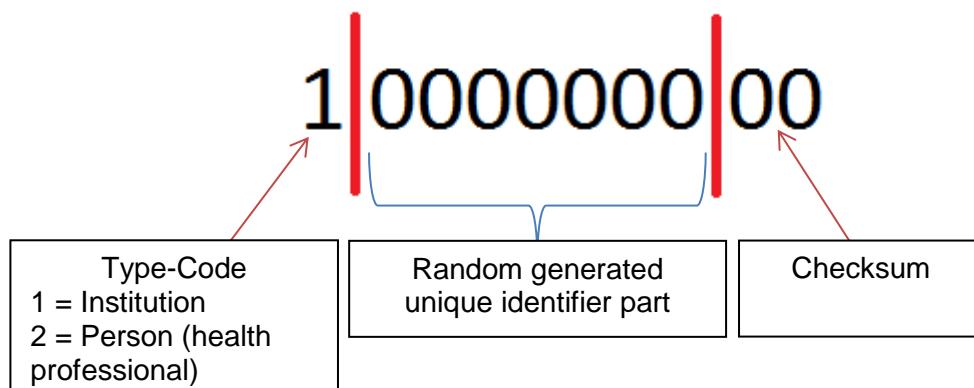
Figure 5: Structure of the healthcare institution identifier

This unique identifier will be useful inside of CDA documents to specify as part of an Instance Identifier @root attribute the namespace e.g. for the ClinicalDocument/id and for other id´s where the namespace of an institution has to be given.

Since the specification of HL7 proposes to use an OID as the preferred representation, the unique identifier given by the HPD will be transformed into an OID and registered in the OID-Registry. Taking the constraints and practical considerations for OIDs into account, the conversion from the hpdID into an OID will be performed the following way:

- The last two digits (checksum) of the hpdID from the HPD will be removed.

- The type-code and the random generated part which remains, will be concatenated to the OID for the instance identifiers of healthcare organizations (1.3.182.3.1.1)

Example:

hpdID 1123123134 for Institution "Better health hospital"

- Remove the two digits of the checksum:

    1123123134 => 11231231

- Concatenate the result to the OID for instance identifiers for healthcare organizations:

    1.3.182.3.1.1.11231231

---

[8] Conformant to the Specification about unique identification of health professionals and institutions – Agence eSanté

Health professionals, represented and identified in the CDA document e.g. as authenticator, legalAuthenticator etc. should be represented as described in the following chapter (2.2.2).

2.2.2. Unique identifier for health professionals

Health professionals shall be identified by the unique identifier provided on the national level (hpdID). They may also be identified related to the domain and namespace of the institution they are working for. In both cases it will be necessary to provide the root and extension elements of the identifier.

The hpdID should be used and the way to represent a health professional uniquely as part of the II data type, is to reference in the root attribute to the identification-mechanism of the hpdID, with the OID 1.3.182.4.1. This specifies that the identifier given in the extension attribute of the II data type is a national healthcare professional identifier given by the HPD.

Example:

```
<id root="1.3.182.4.1" extension="2123123237"
        assigningAuthorityName="HPD Agence eSanté" />
```

If only the local identifier for a health professional can be provided, then the root part shall contain the unique identifier (as an OID) of this institution´s health professional identifier namespace. The extension part shall contain the identifier of the health professional inside the institution (namespace given by the root attribute).

Example:

```
<id root="1.3.182.3.1.1.11231231.3" extension="12-1123123"
        assigningAuthorityName="Better health hospital" />
```

2.2.3. Other identifiers for health professionals

Additionally to the two unique identifiers for health professionals mentioned in the chapter before, additional identifiers can be provided, wherever a list of identifiers can be provided.

The SSN of the health professional and the health professional code from the CNS may be provided additionally, as shown in the example below:

Example

```
<!— SSN of the health professional-->
<id root="1.3.182.4.4" extension="1234567890123" />

<!— Health professional identifier from the CNS -->
<id root="1.3.182.4.6" extension="AB-123456" />
```

Important: The SSN of the health professional allows to uniquely identify the person, whereas the CNS-code doesn´t.

2.2.4. Identifier for other persons

Wherever persons (not in the patient role, see 3.5.1) have to be identified uniquely with an identifier, the following identifier may be used

Element/Attribute		DT	Description
id		II	Identifier of the person from the source system, institution or identification domain
	@root	UID	OID of the identification domain of the identifier (the source system, institution or identification scheme)
	@extension	ST	Value of the identifier

Following this, the person can be identified e.g. by:

```
<!— SSN of the person -->
<id root="1.3.182.4.4" extension="1234567890123" />


<!— Related person with local identifier of institution -->
<id root="1.3.182.3.1.1.14326333.XX.XX" extension="67890123" />
```

2.3. CODED ELEMENTS

HL7 V3 provides several data types for coded elements which are used in the CDA document. These data types are defined to allow different levels of constraints in the expression of coded values, from including just the code, to including several code systems and using qualifiers to change the meaning of the code included.

Data type	Name	Description	V2.x equivalent
CS	Coded Simple	Represents only the code	CNE
CV	Coded Value	Provides information about the code and code system	CWE
CE	Coded with Equivalents	To provide information about the code system, code system version and the original text. Inclusion of translation in other coding systems is also possible.	CWE/CNE
CD	Concept Descriptor	Like CE but additionally allow to provide a list of qualifiers that can change the semantics of the	--------------

		concept, if the coding system allows this.	

Table 6: HL7 V3 coded elements data types

As part of the HL7 CDA specification mostly the CS and CE data types are used for coded elements. The following sub-chapters will describe the requirements in detail for the two types.

2.3.1. CS – Coded Simple

With this data type only the code is provided, no information about the code system and version is explicitly given. This is only useful in cases where the context (specification) fixes the code system and version already.

Element/Attribute	DT	Card	Opt	Description
element	CS / CNE			Code element
@code	cs	[0..1]	O	The code value

Table 7: Coded Simple (CS)

Example:

```
<languageCode code="fr-LU"/>
<signatureCode code="S"/>
```

2.3.2. CE – Coded with Equivalents

The CE (CWE/CNE in HL7 v2) data type allows providing the type version and value data type.

Wherever it is used in this specification and not specified differently, it should be conformant and represent the form described in the specification below.

Follow link for: Constraints on CE datatype

Element/Attribute	DT	Card	Opt	Description
code	CE/CWE/CNE			Code element
@code	ST	[1..1]	M	The code value
@codeSystem	UID	[1..1]	M	The unique identifier (mainly an OID) defining the

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					codesystem used (e.g. 2.16.840.1.113883.6.1 for LOINC)
@codeSystemName		ST	[0..1]	R2	Human readable form, textual representation describing the code system (e.g. LOINC).
@codeSystemVersion		ST	[0..1]	O	Codesystem version e.g. 4.2
@displayName		ST	[1..1]	M	Human readable form/representation of the code value.
originalText		ED	[0..1]	O	The text as seen and/or selected by the user who entered the data which represents the intended meaning of the user. Could be the original text or a reference (from an entry to a narrative block). If an element is coded based on free text written by a physician, the free text would be included here.
	reference	TEL.URL	[0..1]	O	Referenced element, can be given instead of the original text inside the element directly.
	@value	URL	[1..1]	M	Contains the real URL to the referenced element in the narrative block e.g. #dischargesummary-1
translation		SET<CE>	[0..*]	O	Optional set of codes, representing the equivalent coded information in other code systems.

Table 8: Coded with Equivalents (CE)

Examples:

Minimal example containing code, codeSystem and displayName only:

```
<code code="48765-2"
      codeSystem="2.16.840.1.113883.6.1"
      displayName="Glucose [Moles/volume] in Serum or Plasma 1.5
                   hours post dose glucose"/>
```

Example containing optional information and original text:

```
<code code="48765-2"
      codeSystem="2.16.840.1.113883.6.1"
      codeSystemName="LOINC"
      codeSystemVersion="2.42"
      displayName="Glucose [Moles/volume] in Serum or Plasma 1.5
                   hours post dose glucose">
      <originalText>Glycémie 90 min</originalText>
</code>
```

Example containing optional information and a reference to the narrative text section:

```
<code code="48765-2"
      codeSystem="2.16.840.1.113883.6.1"
      codeSystemName="LOINC"
      codeSystemVersion="2.42"
      displayName="Glucose [Moles/volume] in Serum or Plasma 1.5 hours
                   post dose glucose">
      <originalText>
        <reference value="#labtest-1"/>
       </originalText>
</code>
```

Example containing optional information and a fictive translation to another code system:

```
<code code="48765-2"
        codeSystem="2.16.840.1.113883.6.1"
        codeSystemName="LOINC"
        codeSystemVersion="2.42"
        displayName="Glucose [Moles/volume] in Serum or Plasma 1.5 hours
                    post dose glucose">
    <originalText>
       <reference value="#labtest-1"/>
     </originalText>
     <translation>
        codeSystem="1.2.3.4.5.6.7.8"
        codeSystemName="fictive codesystem"
        codeSystemVersion="1"
        <originalText>
            <reference value="#comm-1"/>
        </originalText>
     </translation>
</code>
```

3. CDA Header constraints for Luxemburg

3.1. General Definitions

The encoding shall be UTF-8. And the XML Version 1.0 shall be used with CDA.

Follow link for: Constraints on general definition

Example:

```
<?xml version="1.0" encoding="UTF-8"?>
```

The majority of applications handling non XML documents are using the ISO-8859-1 or ISO-8859-15 encoding. These applications must transcode between the two sets of characters ISO-8859 and UTF-8 for CDA documents.
The encapsulated content in base64 in an unstructured body of a CDA document SHALL keep their initial set of characters.

The root of the ClinicalDocument is from the namespace of HL7 V3 at "urn:hl7-org:v3". In case the document requirements are not met by the standard. It is allowed to include elements from a different namespace than "urn:hl7-org:v3".

Follow link for: Constraints on general definition

Example:

```
<?xml version="1.0" encoding="UTF-8"?>
<ClinicalDocument xmlns="urn:hl7-org:v3" xmlns:voc="urn:hl7-org:v3/voc"
    xmlns:xsi="http://www.w3.org/2001/XMLSchema-instance"
    classCode="DOCCLIN" moodCode="EVN">

    …
</ClinicalDocument>
```

3.1.1. Address

The addr element is used to provide information about the address of persons and organizations. We distinguish between two different representations of the address, one with separate fields for storing the name of the street and the house number and another representation where this information is stored in one field.

The creator of the CDA document can choose between these two possibilities, related to the information which can be provided from the source system.

Follow link for: Constraints on AD datatype

3.1.1.1. Address using separate fields for street name and house number

Element/Attribute	DT	Card	Opt	Description
addr	AD			
@use	set_PostalAddressUse	[1..1]	M	Information about the usage or context of the address information. E.g. home, work, … Possible values shall be from value set: eSanté_AddressUse.. Not mandatory if addr is nullFlavored.
streetName	ADXP	[1..1]	M	Name of the street, without the house number
houseNumber	ADXP	[1..1]	M	House number
postalCode	ADXP	[1..1]	M	ZIP code
city	ADXP	[1..1]	M	Name of the city
state	ADXP	[0..1]	R2	Region
country	ADXP	[1..1]	M	Country code, three letters code from ISO-3166 alpha 3
additionalLocator	ADXP	[0..1]	O	Additional address information to precise the location e.g. station in hospital, room number, floor

Table 9: Address specification using separate fields for street name and house number

Example:

```
<addr use="H">
  <streetName>Rue des Tomains</streetName>
  <houseNumber>1</houseNumber>
  <postalCode>2540</postalCode>
  <city>LUXEMBOURG</city>
  <country>LUX</country>
</addr>
```

3.1.1.2. Address using streetAddressLine

Element/Attribute	DT	Card	Opt	Description
addr	AD			
@use	set_PostalAddressUse	[1..1]	M	Information about the usage or context of the address information. E.g. home, work, … Possible values shall be from value

	streetAddressLine	ADXP	[1..1]	M	Name of the street including the house number
					set: eSanté_AddressUse.
	postalCode	ADXP	[1..1]	M	ZIP code
	city	ADXP	[1..1]	M	Name of the city
	state	ADXP	[0..1]	R2	Region
	country	ADXP	[1..1]	M	Country code, three letters code from ISO-3166 alpha 3
	additionalLocator	ADXP	[0..1]	O	Additional address information to precise the location e.g. station in hospital, room number, floor

Table 10: Address specification using streetAddressLine

Example:

```
<addr use="H">
  <streetAddressLine>Rue des Tomains 1</streetName>
  <postalCode>2540</postalCode>
  <city>LUXEMBOURG</city>
  <country>LUX</country>
</addr>
```

3.1.2. Telecom

The telecom element is used in different classes of the CDA-RMIM to provide contact data of persons and organizations. It is defined by the RFC 2806.

<div align="center">Follow link for: Constraints on TEL datatype</div>

Element/Attribute		DT	Card	Opt	Description
telecom		TEL			Element for the representation of contact information. Allowed nullFlavors are defined and explained in §2.1
	@use	set_TelecommunicationAddressUse	[0..1]	O	Information about the usage or context of the communication information. E.g. home, work, … Possible values shall be from value set: eSanté_TelecomAddressUse.
	@value	ST	[1..1]	R	The real contact data e.g. telephone number, email address. The type of communication is part of the value, as a prefix and shall be from value set: eSanté_URLScheme. For format conventions see chapter: 3.1.2.1

Table 11: Telecom specification

3.1.2.1. Format conventions for telecom values

To be able to distinguish between different types of communications, the @value attribute must contain as a prefix the identifier of the communication scheme, e.g. "tel", "mailto", … followed by an ":" and the communication URL.

If telephone or fax numbers are provided ("tel:" or "fax:"), they should contain the country code for which this number is valid e.g. "+352, +49, +33, …". If the country code is omitted, the number provided is assumed as a number valid for the country related to the realmCode (see 3.3.1), which must be "LU" for documents which are conformant to this specification.

So the general layout is: "<communication_scheme>:<URL>"

The different communication schemes which are supported shall be from value set: eSanté_URLScheme.

Examples:

```
<!-- Telephone number -->
<telecom value="tel:+352-12345" use="H"/>

<!-- E-mail -->
<telecom value="mailto:John.Doe@doe.com"/>

<!-- FTP -->
<telecom value="ftp://serveur/dossiermedicalpartagé/"/>

<!-- Unknown telecom value -->
<telecom nullFlavor="UNK" />
```

3.1.3. Name representation

Similar to the address representation, the specification of the name part in CDA could consist of a collection of different elements. The HL7 specification divides names up into three types: persons, organizations and other identities including e.g. places.

Follow link for: Constraints on name representation

3.1.3.1. Simple name representation

The simple name representation is provided for cases where the structure of a name of a person is not given. When using this representation, all the parts of a name are put together in one field. It is recommended that this representation shall not be used for providing information about the patient. It can be used in exceptional cases where the creator of the CDA document has no detailed information about the structure of the name, e.g. name of guardians.

Follow link for: Constraints on simple name representation

Element/Attribute		DT	Card	Opt	Description
name		PN	[1..1]		Simple name representation in one field
	@use	set_EntityNameUse	[0..1]	O	Describes the usage of the name, e.g. for an artist.
					If @use is omitted then it is the legal name of the person.
					Possible values shall be from value set: eSanté_NameUse

Table 12: Simple name specification

Examples:

```
<name>Mr. John Doe</name>

Or

<name use="A">Mr. John Doe</name>
```

3.1.3.2. Names of a person

Follow link for: Constraints on name of a person

Element/Attribute			DT	Card	Opt	Description
name			PN	[1..1]		Name representation of a person
	@use		set_EntityNameUse	[0..1]	O	Describes the usage of the name, e.g. for an artist. If @use is omitted then it is the legalname of the person. Possible values shall be from value set: eSanté_NameUse
	prefix		EN.PREFIX	[0..*]	O	Set of prefixes for the name of the person. Honorific prefixes have to be used e.g. academic titles. The prefix is **not** meant to be used for salutation e.g. Mr., Mdm.
		@qualifier	set_EntityNamePartQualifier	[0..1]	O	Meaning or type of prefix, e.g. AC for academic title. Possible values shall be from value set: eSanté_NamePartQualifier
	family		EN.FAMILY	[1..*]	M	Sequence of family names. At least one name must be given.
		@qualifier	set_EntityNamePartQualifier	[0..1]	O	Meaning of the value in the family field. E.g. Maiden name (Birthname). Possible values shall be from value set: eSanté_NamePartQualifier
	given		EN.GIVEN	[1..*]	M	Sequence of given names. At least one name must be given. In cases where the given names are separated in the source system, this field can be used several times.
		@qualifier	set_EntityNamePartQualifier	[0..1]	O	Specifies the type of the value of the given name. Possible values shall be from value set: eSanté_NamePartQualifier
	suffix		EN.SUFFIX	[0..*]	O	Suffix related to this name e.g. academic title.
		@qualifier	set_EntityNam	[0..1]	O	Meaning of the suffix.

			ePartQualifier			Possible values shall be from value set: eSanté_NamePartQualifier

Table 13: Names of a person specification

Examples:

Minimal structured name information

```
<name>
   <family>Jordan</family>
   <given>Jean-Paul</given>
</name>
```

More qualified name information

```
<name>
   <prefix qualifier="AC">Dr.</prefix>
   <family>Jordan</family>
   <family qualifier="BR">Johnson</family>
   <given>Jeannette</given>
   <given>Maria</given>
   <suffix qualifier="AC">MBA</suffix>
</name>
```

3.1.3.3. Names of organizations

Element/Attribute	DT	Card	Opt	Description
name	ON	[1..1]		Name representation of organizations

Table 14: Specification of simple name representation for organizations

Example:

```
<name>My-Clinic Inc.</name>
```

Alternative :

Element/Attribute			DT	Card	Opt	Description
name			ON	[1..1]		Name representation of organizations
	@use		set_EntityNameUse	[0..1]	O	Describes the usage of the name. If @use is omitted then it is the legalname of the organization. Possible values shall be from value set: eSanté_NameUse
	prefix		EN.PREFIX	[0..*]	O	Set of prefixes for the name of the organization.
		@qualifier	set_EntityNamePartQualifier	[1..1]	M	Meaning of the prefix. Possible values shall be from

						value set: eSanté_NamePartQualifier
	suffix		EN.SUFFIX	[0..*]	O	Suffixes related to this organization e.g. legal status
		@qualifier	set_EntityNamePartQualifier	[1..1]	M	Meaning of the suffix. Possible values shall be from value set: eSanté_NamePartQualifier

Table 15: Specification of detailed name representation for organizations

Example:

More qualified name information

```
<name>HL7 Luxembourg
  <suffix qualifier='LS'>asbl</suffix>
</name>
```

3.1.4. Date and Time Representation

Date and time values are used in different classes of the CDA R-MIM. Based on the context different representation of date and times are possible, the representations which have to be used in Luxembourg will be specified here.

The HL7 V3 specification provides different data types for the representation of dates.

3.1.4.1. Date

Wherever a date can be provided it shall be in the format:

Format	Element	Description
YYYYMMDD		
	YYYY	The year, e.g. 2013
	MM	The month, e.g. 01
	DD	The day, e.g. 31

Table 16: Simple date specification

Example:

```
<!—- The creation date of the document -->

<effectiveTime value="20130605"/>
```

3.1.4.2. Date and Time

In cases where a certain point of time has to be provided more precise, containing information about the date and time of an event, the timestamp given shall contain information about the timezone (offset from UTC) and shall be in the format:

Format	Element	Description
YYYYMMDDhhmmss[+/-]ZZzz		
	YYYY	The year, e.g. 2013
	MM	The month, e.g. 01
	DD	The day, e.g. 31
	hh	The hour (in 24 hour representation), e.g. 13
	mm	The minute, e.g. 12
	ss	The second, e.g. 23
	+ or -	Positive or negative offset from UTC
	ZZ	The offset in hours
	zz	The offset in minutes

Table 17: Date and time (timestamp) specification

The timezone shall also reflect the clock changes in summertime or wintertime.

Examples:

If we have an event in winter at the 01.01.2013 at 10:00 o'clock local time, it has to be represented as:

```
<!—- The creation date of the document -->

<effectiveTime value="20130101100000+0100"/>
```

If we have an event in summer at the 01.06.2013 at 10:00 o'clock local time, it has to be represented as:

```
<!—- The creation date of the document -->

<effectiveTime value="20130601100000+0200"/>
```

3.1.4.3. Time interval

The IVL_TS data type is specified in HL7 V3 for the representation of time intervals. It is often used to record a time interval over which an event occurred or will occur. Although the IVL_TS data type allows the setting of different representations of an interval, this specification limits the definition of possible intervals and adds common restrictions, to allow only the usage of the lower and upper bound of the interval, using <low> and <high> either alone or together.

<p style="color:red; text-align:center">Follow link for: Constraints on time interval</p>

Element/Attribute			DT	Card	Opt	Description
effectiveTime			IVL_TS			Time interval
	low		TS	[1..1]	R	Lower bound, beginning of the interval. If the lower value is not known nullFlavor="UNK" shall be used.
		@value	TS	[0..1]	R2	Start of the interval.
	high		TS	[1..1]	R	Upper bound, end of the interval. If the end of the interval is not known nullFlavor="UNK" shall be used.
		@value	TS	[0..1]	R2	End of the interval.

Table 18: Time interval specification

If the interval is used to describe a point in time, the low and high attribute SHALL have the same value.

Example:

Interval using IVL_TS data type

```
<effectiveTime>
   <low  value="20130605"/>
   <high value="20130607"/>
</effectiveTime>
```

Representing a point in time using IVL_TS data type

```
<!-- IVL_TS interval data type used to describe a point in time -->

<effectiveTime>
   <low  value="20130605100000+0100"/>
   <high value="20130605100000+0100"/>
</effectiveTime>
```

3.1.5. Organization representation

Figure 6: Organization description

The entity "Organization" is referenced by certain elements in the CDA specification. The specification of the structure to represent an organization in this chapter should be used for all the occurrences.

Follow link for: Constraints on organization representation

Element/Attribute	DT	Card	Opt	Description
organization				
id	II	[0..*]	O	Set of identifiers representing/identifying the organization. Must be compliant to the specification of the II data type in chapter: 2.2 So e.g the national unique identifier for healthcare institutions (hpdID) from the HPD could be used.
name	ON	[1..1]	M	Name representation of the organization shall be compliant to the specification of organization names in chapter: 3.1.3.3
telecom	TEL	[0..*]	O	Communication data of the organization. Information provided shall be compliant to specification of telecom elements in chapter: 3.1.2
addr	AD	[0..*]	O	Address of the organization. Information provided shall be compliant to specification of address elements in chapter: 3.1.1

Table 19: Organization specification

Example:

```
<representedOrganization>
   <id root="1.3.182.3.1.1.12345678"/>
   <name>Better health hospital</name>
   <telecom value="tel:+352-12345"/>
   <telecom value="fax:+352-12345-67"/>
   <addr use="WP">
      <streetAddressLine>Rue des Tomains 1</streetAddressLine >
      <postalCode>2540</postalCode>
      <city>LUXEMBOURG</city>
      <country>LUX</country>
   </addr>
</representedOrganization>
```

In the example above the organization can be identified uniquely by its oid, which is then part of the root attribute.

Alternatively:

In this example, the organization is identified uniquely by the hpdID (in the extension attribute) in the namespace of the HPD identification scheme.

```
<representedOrganization>
   <id root="1.3.182.4.1" extension="1234567890"/>
   <name>Better health hospital</name>
   <telecom value="tel:+352-12345"/>
   <telecom value="fax:+352-12345-67"/>
   <addr use="WP">
      <streetAddressLine>Rue des Tomains 1</streetAddressLine >
      <postalCode>2540</postalCode>
      <city>LUXEMBOURG</city>
      <country>LUX</country>
   </addr>
</representedOrganization>
```

3.1.6. Person representation

Person
classCode*: <= PSN
determinerCode*: <= INSTANCE
name: SET<PN> [0..*]

Figure 7: Person description

The entity "Person" is referenced by certain elements in the CDA specification. The specification of the structure to represent a person in this chapter shall be used for all the occurrences.

Follow link for: Constraints on person representation

Element/Attribute		DT	Card	Opt	Description
person					
	name	PN	[1..*]	M	At least one name for the person shall be provided. The content of the "name" attribute must be valid as specified in chapter: 3.1.3.2

Table 20: Person specification

Example:

```
<relatedPerson>
   <name>
      <prefix qualifier="AC">Dr.</prefix>
      <family>Jordan</family>
      <family qualifier="BR">Johnson</family>
      <given>Jeannette</given>
      <given>Maria</given>
      <suffix qualifier="AC">MBA</suffix>
   </name>
</relatedPerson>
```

3.1.7. AssignedEntity representation
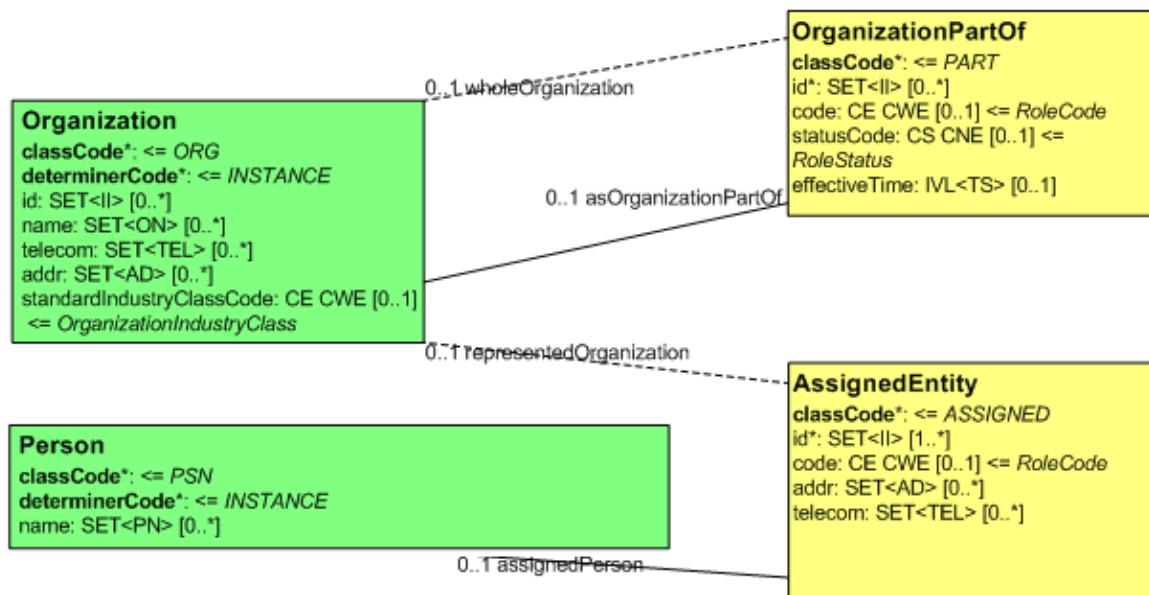
Figure 8: AssignedEntity description

The role "AssignedEntity" is referenced by certain elements in the CDA specification. The player of the role "AssignedEntity" is an assignedPerson, which is a kind of healthcare provider or employee e.g. doctor, nurse, … For the assignedPerson the information about the represented organization, so the organization for which the health professional is working for, can also be given (representedOrganization).

The specification of the structure to represent an "AssignedEntity" in this chapter shall be used for all the occurrences.

Follow link for: Constraints on assignedEntity

Element/Attribute	DT	Card	Opt	Description
assignedEntity	POCD_MT000040. AssignedEntity			
id	II	[1..*]	R	At least one identifier for the assignedEntity shall be given. It is the identifier representing the **assignedPerson**. The identifier must be compliant to the specification of the II data type in chapter: 2.2 Allowed nullFlavors are defined and explained in §2.1
code	CE/CWE	[0..1]	O	If known a code can be provided, otherwise the element may be omitted. Possible values shall be from value set: eSanté_RoleCode. The structure of the information about the code shall be compliant to the specification in chapter: 2.3.2
address	AD	[0..*]	O	Address of the person referenced as the assigned Person. The address information provided shall be conformant to the specification in chapter: 3.1.1
telecom	TEL	[0..*]	O	Communication data of the person referenced as the assigned Person. The communication data provided shall be conformant to the specification in chapter: 3.1.2

Table 21: Assigned Entity specification

Element/Attribute	DT	Card	Opt	Description
assignedPerson	POCD_MT000040. AssignedPerson	[1..1]	M	Person representation as specified in chapter: 3.1.6

Table 22: Assigned Entity / assigned Person element

Element/Attribute	DT	Card	Opt	Description
representedOrganization	POCD_MT000040. Organization	[0..1]	O	Organization representation as specified in chapter: 3.1.5

Table 23: Assigned Entity / represented organization

Example:

```
<dataEnterer>
   <assignedEntity>
      <id root="1.3.182.4.1" extension="2123456789"/>
      <addr use="WP">
         <streetAddressLine>Rue des Tomains 1</streetAddressLine >
         <postalCode>2540</postalCode>
         <city>LUXEMBOURG</city>
         <country>LUX</country>
      </addr>
      <telecom value="tel:+352-12345" use="WP"/>
      <assignedPerson>
         <name>
            <prefix qualifier="AC">Dr.</prefix>
            <family>Jordan</family>
            <family qualifier="BR">Johnson</family>
            <given>Jeannette</given>
            <given>Maria</given>
            <suffix qualifier="AC">MBA</suffix>
         </name>
      </assignedPerson>
   </assignedEntity>
</dataEnterer>
```

3.1.8. RelatedEntity Representation
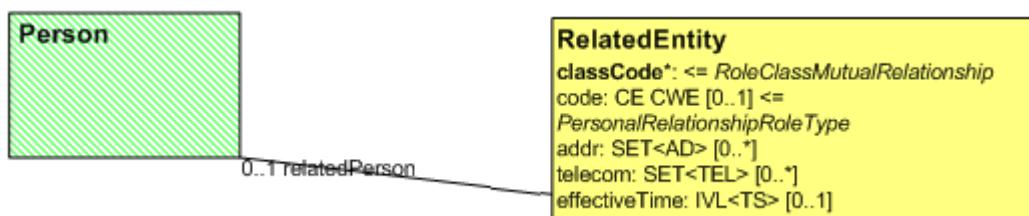
Figure 9: RelatedEntity description

The relatedEntity class is used to provide information about persons who are in a defined relationship with the patient. The type of relationship can be specified by providing the appropriate code

Follow link for: Constraints on relatedEntity

Element/Attribute	DT	Card	Opt	Description
relatedEntity	POCD_MT000040. RelatedEntity			
@classCode	RoleClassMutualRelationship	[1..1]	M	Defines the type of relationship. Possible values shall be from value set: eSanté_RoleClassMutualRelationship
code	CE/CWE	[0..1]	O	This code may be given to further specify the relationship. If given, possible values shall be from value set eSanté_PersonalRelationShipRoleType If known a code may be provided, otherwise the element may be omitted. The structure of the information about the code shall be compliant to the specification in chapter: 2.3.2
address	AD	[0..*]	O	Address of the person referenced as the assigned Person. The address information provided SHALL be conformant to the specification in chapter: 3.1.1
telecom	TEL	[0..*]	O	Communication data of the person referenced as the assigned Person. The communication data provided SHALL be conformant to the specification in chapter: 3.1.2
relatedPerson	POCD_MT000040. Person	[1..1]	M	Information about the related person, SHALL be compliant as specified in chapter: 3.1.6

Table 24: RelatedEntity specification

3.2. CDA HEADER STRUCTURE

The clinical document is made up of three different kinds of elements in the following order

- **RIM Attributes** of the ClinicalDocument class, appear in the CDA Header in that order in which they are appear in the CDA R-MIM

- **Participants** attached to the ClinicalDocument class, are in the context of the creation of the document. This includes people, organizations, medical devices and applications that might be responsible for the creation of the document. Each participation associates the document to a role. The participation association describes the functional role, and the role class describes the structural role.

- **Related acts** attached to the ClinicalDocument class, are related to this CDA document and are part of the CDA Header. Prior (related) documents, specific services performed, the patient encounter to which this document belongs to, orders related to the document and the consent provided by the patient could be stored.

RIM Attributes	Participants	Related acts
id	recordTarget/patientRole	relatedDocument
code	author	documentationOf
title	dataEnterer	inFulfillmentOf
effectiveTime	informant	authorization
confidentialityCode	custodian	componentOf
languageCode	informationRecipient	
setId	legalAuthenticator	
versionNumber	authenticator	
	participant	

Table 25: Overview of CDA-Header elements

The following table lists the items present in the CDA-Header in the order of the schema XML in this general CDA-Header specification for Luxemburg. Lines in grey contain attributes which are not used in the current version of the specification.

Element	Comment	Chapter
realmCode	Localization (Luxemburg)	3.3.1
typeId	CDA document	3.3.2
templateID	Conformity declaration	3.3.3

id	Document Id	3.4.1
code	Type of document (ex: history, patient Summary, discharge Summary,…)	3.4.2
title	Title of the document	3.4.3
effective Time	Document creation time (when the document first came being)	3.4.4
confidentialityCode	Level of confidentiality of the document (see value set)	3.4.5
languageCode	Human language of character data (see value set)	3.4.6
setID	Identifier common across all document revisions.	3.4.7
versionNumber	Version successive replacement documents.	3.4.7
recordTarget	Medical record that this document belongs to (Patient)	3.5.1
author	Human or machines that authored the document	3.5.2
dataEnterer	Participant who has transformed a dictated note into text	3.5.3
Informant	Person who provides relevant information such as the parent of a comatose patient	3.5.4
Custodian	Organization in charge of maintaining the document	3.5.5
Information Recipient	Recipient who receives a copy of the document	3.5.6
legalAuthenticator	Participant who has legally authenticated the document	3.5.7
authenticator	Participant who has attested to the accuracy of the document	3.5.8
participant	Other participant not explicitly mentioned by other classes	3.5.9
relatedDocument	Reference to parent document	3.6.1
inFulfillmentOf	Orders that are fulfilled by this document	3.6.2
documentationOf	Main act(s) being documented	3.6.3
authorization	Consents associated with this document.	3.6.4
componentOf	Setting of the clinical encounter during which the documented act(s) of serviceEvent occurred	3.6.5

Table 26: References to specification chapters

3.3. INFRASTRUCTURE ELEMENTS

The three elements realmCode, typeID, templateID are so called "infrastructure elements" (and not RIM attributes). They can occur in *any* RIM class appearing in the CDA document, not only in the header of a CDA document.

3.3.1. realmCode

Follow link for: Constraints on realmCode

Element/Attribute		DT	Card	Opt	Description
realmCode		CS	[1..1]	M	
	@code	cs	[1..1]	M	Constant value: "LU" (Code from ISO 3166-1-alpha-2)

Table 27: realmCode specifiation

Example:

```
<realmCode code="LU"/>
```

3.3.2. typeId

Follow link for: Constraints on typeId

Element/Attribute		DT	Card	Opt	Description
typeId		II	[1..1]	M	
	@root	UID	[1..1]	M	Constant value : "2.16.840.1.113883.1.3"
	@extension	ST	[1..1]	M	Constant value : "POCD_HD000040"

Table 28: typeId specification

Example:

```
<typeId root="2.16.840.1.113883.1.3" extension="POCD_HD000040"/>
```

3.3.3. templateId

The templateId indicates the declaration of conformity for the clinical document. Depending on the type of the document, one or several templateId(s) may be indicated.

These templateId(s) which have to be used related to the different document types are specified in the implementation guidelines of the relevant document type e.g. laboratory report, discharge summary.

The following list is not exhaustive.

<div align="center" style="color:red">Follow link for: Constraints on templateIds</div>

Element/Attribute		DT	Card	Opt	Description
templateId		II	[1..1]	M	
	@root	UID	[1..1]	M	Constant value: "1.3.182.11.1" General CDA Document Specification for Luxembourg

Table 29: templateId specification

Additionally, other templateIds can be added to confirm the compliance to further specifications like e.g. for laboratory or radiology report. There is no limit in the numbers of templateIds provided.

Example:

```
<templateId root="1.3.182.11.1"/>
```

<div align="center" style="color:red">Follow link for: Constraints on templateIds</div>

Element/Attribute		DT	Card	Opt	Description
templateId		II	[0..1]	O	
	@root	UID	[1..1]	M	'2.16.840.1.113883.10.20.10'

Table 30: CDA Level 1 conformance templateId

Example:

```
<templateId root="2.16.840.1.113883.10.20.10"/>
```

Element/Attribute		DT	Card	Opt	Description
templateId		II	[0..1]	O	
	@root	UID	[1..1]	M	'1.3.182.11.2'

Table 31: CDA Body Level 1 specifications for Luxembourg templateId

Example:

```
<templateId root="1.3.182.11.2"/>
```

Follow link for: Constraints on templateIds

Element/Attribute		DT	Card	Opt	Description
templateId		II	[0..1]	O	
	@root	UID	[1..1]	M	'2.16.840.1.113883.10.20.20'

Table 32: CDA Level 2 conformance templateId

Example:

```
<templateId root="2.16.840.1.113883.10.20.20"/>
```

Follow link for: Constraints on templateIds

Element/Attribute		DT	Card	Opt	Description
templateId		II	[0..1]	O	
	@root	UID	[1..1]	M	'2.16.840.1.113883.10.20.30'

Table 33: CDA Level 3 conformance templateId

Example:

```
<templateId root="2.16.840.1.113883.10.20.30"/>
```

Follow link for: Constraints on templateIds

Element/Attribute		DT	Card	Opt	Description
templateId		II	[0..1]	O	
	@root	UID	[1..1]	M	"1.3.6.1.4.1.19376.1.2.20"

Table 34: IHE XDS-SD conformance templateId

Example:

```
<templateId root="1.3.6.1.4.1.19376.1.2.20"/>
```

Full Example:

```xml
<ClinicalDocument xmlns="urn:hl7-org:v3" xmlns:voc="urn:hl7-org:v3/voc"
    xmlns:xsi="http://www.w3.org/2001/XMLSchema-instance"
    classCode="DOCCLIN" moodCode="EVN">

    <!-- ** CDA Header ** -->
    <realmCode code="LU"/>
    <typeId root="2.16.840.1.113883.1.3" extension="POCD_HD000040"/>
    <templateId root="1.3.182.11.1" />
    …
</ClinicalDocument>
```

3.4. RIM-ATTRIBUTES

3.4.1. id (Document Id)

The ClinicalDocument/id is used to provide a worldwide unique identifier for a CDA document instance. The II (instance identifier) data type is used for the id and is described in chapter 2.2 in detail.

The instance which creates the document SHALL provide this unique identifier, either by providing a unique OID for the document itself (@root) or by providing the OID of the institution (@root) and the unique identifier of the document in the namespace of this institution (@extension).

If several versions of a document are created successively, each document SHALL be identified uniquely and therefore SHALL have a unique ClinicalDocument/id.

Element/Attribute	DT	Card	Opt	Description
id	II	[1..1]	M	Unique identifier for the document instance. II data type as specified in chapter: 2.2
@assigningAuthorityName	ST	[0..1]	O	Human readable name of the institution/office which provides the id, so e.g. the name linked to the OID.
@displayable	BL	[0..1]	O	Boolean flag to indicate whether the identifier stored is intended to be displayed to humans for data entry.

Table 35: ClinicalDocument/id specification

OIDs are limited by this specification to no more than 64 characters in length for compatibility with other standards and Implementation Guides.

Follow link for: Constraints on document id

Example:

```
<id root="1.3.182.3.1.1.1231231.34.1" extension="A7102400008_1"/>
```

3.4.2. code – Document type

The code indicates the type of document. The preferred set of codes for the document type definition in HL7 CDA is based on LOINC. Possible values shall be from value set: eSanté_DocType.

Follow link for: Constraints on document code

Element/Attribute	DT	Card	Opt	Description
code	CE	[1..1]	M	Code specifying the document type. See also chapter: 2.3.2
@code	ST	[1..1]	M	Possible values **SHALL** be from value set: eSanté_DocType.
@codeSystem	UID	[1..1]	M	OID of the nomenclature, e.g. "2.16.840.1.113883.6.1" for LOINC
@displayName	ST	[1..1]	M	Label of the code
@codeSystemName	ST	[0..1]	R2	Name of the nomenclature e.g. "LOINC"

Table 36: ClinicalDocument/code specification

Note:

> The preferred nomenclature which has to be used for the document type, according to HL7, is LOINC.
>
> LOINC classifies documents on four main axes :
> - Type of document
> - Type of service described
> - Kind of author
> - Location of the service provided
>
> It is good practice not to use the detailed codes, the more general instead because the service, author, location are described in the CDA Header already.
> Nevertheless the code chosen must be compliant with the content of the document.
>
> Valid codes according to this specification **SHALL** be from value set: eSanté_DocType.

Example:

```
<code  code="11502-2"
       codeSystem="2.16.840.1.113883.6.1"
       codeSystemName="LOINC"
       displayName="Laboratory Report.Total"/>
```

3.4.3. title

Follow link for: Constraints on document title

Element/Attribute	DT	Card	Opt	Description
title	ST	[1..1]	M	Title of the document. Must be related to the type of the document and should not contain patient identifying data.

Table 37: ClinicalDocument/title specification

Example:

```
<title> Compte rendu d'analyses biologiques </title>
```

3.4.4. effectiveTime

EffectiveTime represents the creation time of the document. If the CDA document is a transformation from an original document in some other format, the ClinicalDocument.effectiveTime is the time the original document has been created. The time when the transformation occurred is not currently represented in CDA.

Follow link for: Constraints on effectiveTime

Element/Attribute		DT	Card	Opt	Description
effectiveTime		TS	[1..1]	M	
	@value	TS	[1..1]	M	Value of the time at the initial creation of the document. Even if the document will be created in more than one step, the first creation time has to be used. Provided information has to be conformant with the specification in chapter: 3.1.4

Table 38: ClinicalDocument/effectiveTime specification

Example: Document created on 01 January 2013 at 09:10:05 in Luxemburg

```
<effectiveTime value="20130101091005+0100"/>
```

3.4.5. confidentialityCode

The confidentiality code is a required contextual component of CDA and expresses the level of confidentiality assigned to the entire document. Unless any use case contradicts the following option, the ClinicalDocument/confidentialityCode will be given the constant value "**Normal"**.

Follow link for: Constraints on confidentialityCode

Element/Attribute		DT	Card	Opt	Description
confidentialityCode		CE	[1..1]	M	
	@code	cs	[1..1]	M	Constant value: "N". If a use case exceptionally requires another code, possible values shall be from value set: eSanté_Confidentiality
	@codeSystem	UID	[1..1]	M	Constant value : "2.16.840.1.113883.5.25"
	@displayName	ST	[1..1]	M	Constant value: "Normal"
	@codeSystemName	ST	[0..1]	R2	Constant value : "HL7:Confidentiality"

Table 39: ClinicalDocument/confidentialityCode specification

Example:

```
<confidentialityCode
      code="N"
      codeSystem="2.16.840.1.113883.5.25"
      displayName="Normal"
      codeSystemName="HL7:Confidentiality" />
```

Note:

The value for the confidentialityCode will be set at the creation time of the document and is for information only. It does not automatically apply security constraints. The rules related to the visibility and access of documents are executed on application level and therefore rely on the implementation of the applications who visualize or provide the document content.

3.4.6. languageCode

The ClinicalDocument/languageCode specifies the language of the content of the CDA document.

The language can be specified on three levels:

- Header level: Specifies the language of the whole document, if not changed on body or section level.

- Body level: Specifies the language of the human readable text in the whole body of the CDA document, if not changed on section level.

- Section level: Allows setting of the language used for each section individually.

The languageCode in the header represents the language used by the author of the document and therefore also the language of the title of the document.

Follow link for: Constraints on languageCode

Element/Attribute	DT	Card	Opt	Description
languageCode	CS	[1..1]	M	
@code	cs	[1..1]	M	Possible values shall be from value set eSanté_LanguageCode

Table 40: ClinicalDocument/languageCode specification

Example:

```
<languageCode code="fr-LU"/>
```

Note:

> Usually, the language provided in the document header will be one of fr-LU or de-LU. For unstructured Body content (e.g. PDF) it could also be "lb-LU" e.g. for notes. If so, this has to be provided as part of the languageCode element in the CDA-Body.

3.4.7. setId and versionNumber

The setId and versionNumber attributes inside of the CDA header can be used to support document identification and versioning. The setId is an identifier for a set of related documents. The original document and related documents (e.g. replacements) share the same setId over different versions of the document.

The versionNumber attribute contains the version number of a document within the set of documents with the same setId.

If the attributes are provided, the initial version of a document must contain a new value for the setId and a versionNumber set to "1". For practical reasons, the ClinicalDocument/id value of the original document could be used as the setId. A replacement of this document must use the same setId, a new versionNumber increased by 1 and has a new ClinicalDocument/id.

Follow link for: Constraints on setId and versionNumber

Element/Attribute	DT	Card	Opt	Description
setId	II	[0..1]	O	
versionNumber	INT	[0..1]	C	Integer number. Initial value is "1", must be increased by "1" for further versions. Must de present if setId is present.

Table 41: ClinicalDocument/setId and versionNumber specification

Example:

```
<ClinicalDocument xmlns="urn:hl7-org:v3" xmlns:voc="urn:hl7-org:v3/voc"
    xmlns:xsi="http://www.w3.org/2001/XMLSchema-instance"
    classCode="DOCCLIN" moodCode="EVN">

    <!-- ** CDA Header ** -->
    <realmCode code="LU"/>
    <typeId root="2.16.840.1.113883.1.3" extension="POCD_HD000040"/>
    <templateId root="1.3.182.11.1" />
    <id root="1.3.182.3.1.1.1231231.34.1" extension="A7102400008_1"/>
    …
    <setId root="1.3.182.3.1.1.1231231.34.2" extension="A7102400008_1"/>
    <versionNumber value="1"/>
    …
</ClinicalDocument>
```

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3.5. PARTICIPANTS

The HL7 CDA Release 2.0 Specification describes various participant scenarios where a single person can participate in several roles. In these cases, the person needs to be listed for each role.
The participants are listed below in the order in which they appear in CDA R2.

3.5.1. recordTarget/patientRole
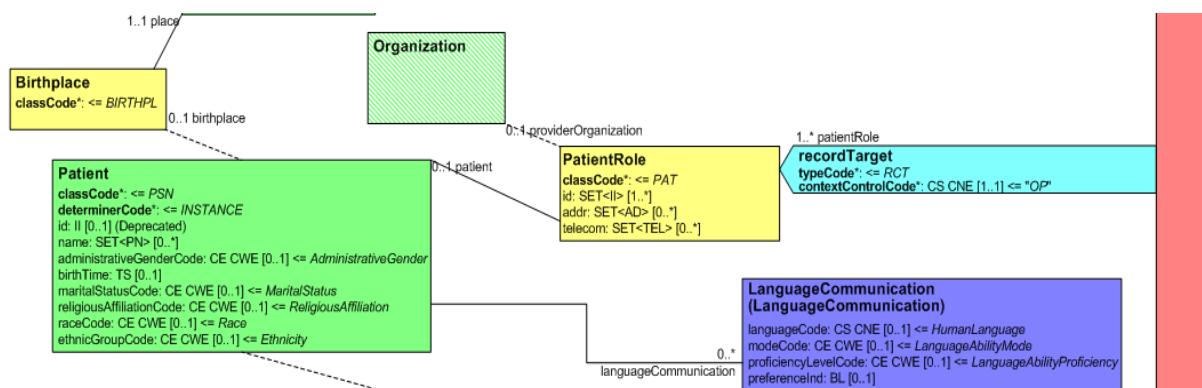
Figure 10: RecordTarget and Patient description

The recordTarget represents the medical record that this document belongs to (the patient or the patients).

Follow link for: Constraints on recordTarget

Element/Attribute	DT	Card	Opt	Description
recordTarget	POCD_MT000040 .RecordTarget	[1..1]	M	
patientRole	POCD_MT000040 .PatientRole	[1..1]	M	Patient related data
providerOrganization	POCD_MT000040 .Organization	[0..1]	O	The organization where this patient is acting as the patientRole. This is most commonly the institution which creates the document and can therefore be omitted.

Table 42: recordTarget specification

Example:

```xml
<recordTarget>
 <patientRole>
  <id root="1.3.182.3.1.1.1231231.34.3" extension="7102400008"/>
  <id root="1.3.182.4.3" extension="19871212134"/>
  <addr use="H">
     <streetName>Rue des Tomains</streetName>
     <houseNumber>1</houseNumber>
     <postalCode>2540</postalCode>
     <city>LUXEMBOURG</city>
     <country>LUX</country>
   </addr>

   <telecom value="tel:+352-12345" use="H"/>

   <patient>

      <name>
         <family>Jordan</family>
         <given>James</given>
      </name>
      <administrativeGenderCode code="M"
codeSystem="2.16.840.1.113883.5.1"
    displayName="masculin" codeSystemName="HL7:AdministrativeGender" />

      <birthTime value="19500522" />
      <birthplace>
         <place>
             <name>LUXEMBOURG</name>
         </place>
      </birthplace>
   </patient>
 </patientRole>
</recordTarget>
```

3.5.1.1. recordTarget/patientRole*/id* – Identifiers

Follow link for: Constraints on patientRole

The id element as part of the PatientRole should be used to provide unique identifiers for the associated patient. The usage of the id field in the Patient entity is deprecated.

There can be more than one identifier for a PatientRole, which is represented by the SET<II> data type of the class.

Element/Attribute	DT	Card	Opt	Description
patientRole	POCD_MT000040.PatientRole	[1..1]	M	Patient related data
id	II	[3..3]	M	Unique patient identifiers. The order of the provided identifiers is described in the table below.

Table 43: recordTarget/patientRole specification

At least one unique identifier for the patient has to be provided. This has to be the local patient identifier of the institution which creates the document.

Since there could be more than one unique identifier for patients, the table below defines the order in which the identifiers must occur.

Element/Attribute		DT	Card	Opt	Description
id[1]		II	[1..1]	M	Local patient identifier of the source system
	@root	UID	[1..1]	M	OID of the assigned authority that delivers the identifier
	@extension	ST	[1..1]	M	Value of the identifier
id[2]		II	[1..1]	R	Social security number (SSN) Allowed nullFlavors are defined and explained in §2.1
	@root	UID	[1..1]	M	OID of the identification mechanism for the social security number. Constant value: 1.3.182.4.4
	@extension	ST	[1..1]	M	SSN (11-digits or 13-digits)
id[3]		II	[1..1]	R	Patient DSP id Allowed nullFlavors are defined and explained in §2.1
	@root	UID	[1..1]	M	OID of the patient identification domain of the DSP, for the DSPID. Constant value: 1.3.182.2.4.2
	@extension	ST	[1..1]	M	DSPID of the patient

Table 44: recordTarget/patientRole/id specification

The order of the given id´s is important and must follow the description in the table above.

Note:

The master patient identifier from the MPI (national master patient index) will not be shared with the primary systems and can therefore not be used as one of these identifiers.

3.5.1.2. recordTarget/patientRole/addr

Follow link for: Constraints on patientRole/addr

Element/Attribute		DT	Card	Opt	Description
patientRole			[1..1]	M	
	addr	AD	[1..*]	R	See section specification in chapter: 3.1.1 Allowed nullFlavors are defined and explained in §2.1

Table 45: recordTarget/patientRole/addr specification

3.5.1.3. recordTarget/patientRole/telecom

Element/Attribute		DT	Card	Opt	Description
patientRole			[1..1]	M	
	telecom	TEL	[0..*]	O	See section specification in chapter: 3.1.2

Table 46: recordTarget/patientRole/telecom specification

3.5.1.4. recordTarget/patientRole*/patient* – Patient

Follow link for: Constraints on patient

Element/Attribute		DT	Card	Opt	Description
patientRole		POCD_MT000040. PatientRole	[1..1]	M	
	patient	POCD_MT000040. Patient	[1..1]	M	Patient must be provided

Table 47: patientRole/patient specification

3.5.1.4.1. patient/name

Element/Attribute	DT	Card	Opt	Description
patient/name	PN	[1..*]	M	Name of the patient must be provided, see chapter 3.1.3.2 for detailed description

Table 48: patient/name specification

3.5.1.4.2. patient/administrativeGenderCode

Follow link for: Constraints on administrativeGenderCode

Element/Attribute		DT	Card	Opt	Description
patient/administrativeGenderCode		CE/CWE	[1..1]	R	The gender of the patient shall be given. If not known the nullFlavor "UNK" shall be used.
	@code	cs	[1..1]	M	Possible values shall be from value set: eSanté_AdminstrativeGender

@displayName	ST	[1..1]	M	
@codeSystem	UID	[1..1]	M	Constant value: "2.16.840.1.113883.5.1"
@codeSystemName	ST	[0..1]	R2	Constant value: "HL7:AdministrativeGender"

Table 49: patient/administrativeGenderCode specification

3.5.1.4.3. patient/birthTime

Follow link for: Constraints on birthTime

Element/Attribute	DT	Card	Opt	Description
patient/birthTime	TS	[1..1]	R	Birthdate of the patient. The format must be as specified in chapter: 3.1.4.1 If the value contains also the time, it must be conformant as specified in chapter: 3.1.4.2 If not known nullFlavor="UNK" SHALL be used.

Table 50: patient/birthTime specification

3.5.1.4.4. patient/maritalStatusCode

Although maybe not necessary in medical documents, the general header specification allows providing the maritalStatusCode. Providing the marital status MAY be given and captures the current marital status of the patient at the creation time of this document.

Follow link for: Constraints on maritalStatusCode

Element/Attribute	DT	Card	Opt	Description
patient/maritalStatusCode	CE/CWE	[0..1]	O	The marital status of the patient MAY be given. If not known the element can be omitted.
@code	cs	[1..1]	M	Possible values shall be from value set: eSanté_MaritalStatus.
@displayName	ST	[1..1]	M	
@codeSystem	UID	[1..1]	M	Constant value: 2.16.840.1.113883.5.2 (HL7)
@codeSystemName	ST	[0..1]	R2	Constant value: "HL7:MaritalStatus"

Table 51: patient/maritalStatusCode specification

3.5.1.4.5. patient/religiousAffiliationCode

Although maybe not necessary in medical documents, the general header specification allows providing the religiousAffiliationCode. The religiousAffiliationCode MAY be given.

Follow link for: Constraints on religiousAffiliationCode

Element/Attribute	DT	Card	Opt	Description
patient/religiousAffiliationCode	CE/CWE	[0..1]	O	The religion of the patient may be given. If not known the element can be omitted.
@code	cs	[1..1]	M	Possible values shall be from value set: eSanté_ReligiousAffiliation.
@displayName	ST	[1..1]	M	
@codeSystem	UID	[1..1]	M	Constant value: 2.16.840.1.113883.5.1076
@codeSystemName	ST	[0..1]	R2	Constant value: "HL7: ReligiousAffiliation"

Table 52: patient/religiousAffiliationCode specification

3.5.1.4.6. patient/raceCode and patient/ethnicGroupCode

The information about the ethnic group and race of a patient SHALL NOT be stored as part of the CDA document.

Follow link for: Constraints on raceCode

Element/Attribute	DT	Card	Opt	Description
patient/raceCode	CE/CWE	[0..0]	NP	The race of the patient shall not be provided.
patient/ethnicGroupCode	CE/CWE	[0..0]	NP	The ethnicGroupCode of the patient shall not be provided.
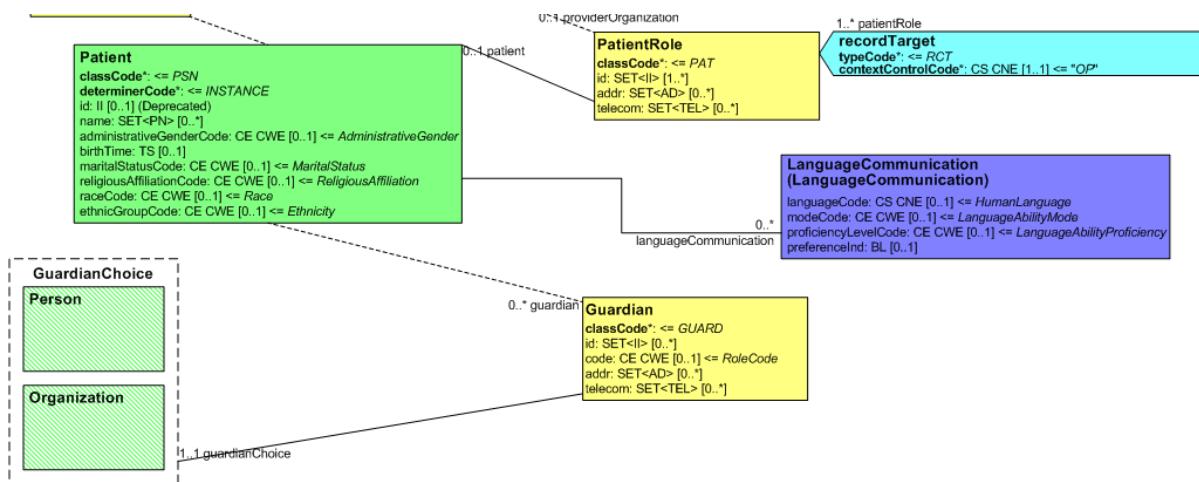
Figure 11: Guardian description

A patient may have one or more guardians who are responsible for the care of the patient. A guardian can either be a person or an organization. Guardian of a patient could be e.g. a legal representative, when patient is a minor child or could be the responsible person/organization acting for a patient which is unable to do so on his own.

An id for the Guardian MAY be given, but the field can also be omitted.

Either a person **or** organization (guardian/person or guardian/organization) SHALL be provided.

Follow link for: Constraints on guardian

Element/Attribute			DT	Card	Opt	Description
patient/guardian			POCD_MT000040.Guardian	[0..*]	O	The guardian of patient
	id		II	[0..*]	O	An id for the guardian may be given. Must be compliant to the specification of the II data type in chapter 2.2
	code		CE/CWE	[0..1]	O	Specify type of guardianship, can be omitted if not known
		@code	cs	[1..1]	M	Possible values shall be from value set: eSanté_GuardianRole.

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		@displayName	ST	[1..1]	M	Name related to the code.
		@codeSystem	UID	[1..1]	M	2.16.840.1.113883. 5.111 (HL7: (RoleCode))
		@codeSystemName	ST	[0..1]	R2	HL7: RoleCode
	address		AD	[0..1]	O	See chapter: 3.1.1
	telecom		TEL	[0..1]	O	See chapter: 3.1.2
	guardianPerson		POCD_MT000040. Person	[0..1]	C	Person must be represented as specified in chapter: 3.1.6
	guardianOrganization		POCD_MT000040. Organization	[0..1]	C	Organization must be represented as specified in chapter: 3.1.5

Important:
Conditional conformance related to guardianPerson and guardianOrganization element:
These elements SHALL be used exclusively. It is only allowed either to use the guardianPerson or the guardianOrganization when representing a guardian.

Table 53: patient/guardian specification

Example:

```
<patient>
   …
   <guardian>
      <id root="1.3.182.4.3" extension="19540317123"/>
      <code code="HUSB" displayName="Husband"
            codeSystem="2.16.840.1.113883.5.111"
            codeSystemName="HL7:RoleCode"/>
      <guardianPerson>
         <name>John Doe</name>
      </guardianPerson>
   </guardian>
   …
</patient>
```

3.5.1.6. patient/birthPlace/place

The optional information about the birthplace of a patient can be provided. The name field can be used to provide the name of the birthplace in one field or/and the full address can be provided in the addr field.

Follow link for: Constraints on birthplace

Element/Attribute	DT	Card	Opt	Description
patient/birthplace/place	POCD_MT000040. Place	[0..1]	O	Birthplace of the patient
name	EN	[0..1]	C	Name of the birthplace.
addr	AD	[0..1]	C	Address has to be conformant to the specification of address element. See chapter: 3.1.1
Important: Conditional conformance related to name and addr element: Either both or at least one of the elements SHALL be provided				

Table 54: patient/birthplace/place specification

3.5.2. Author
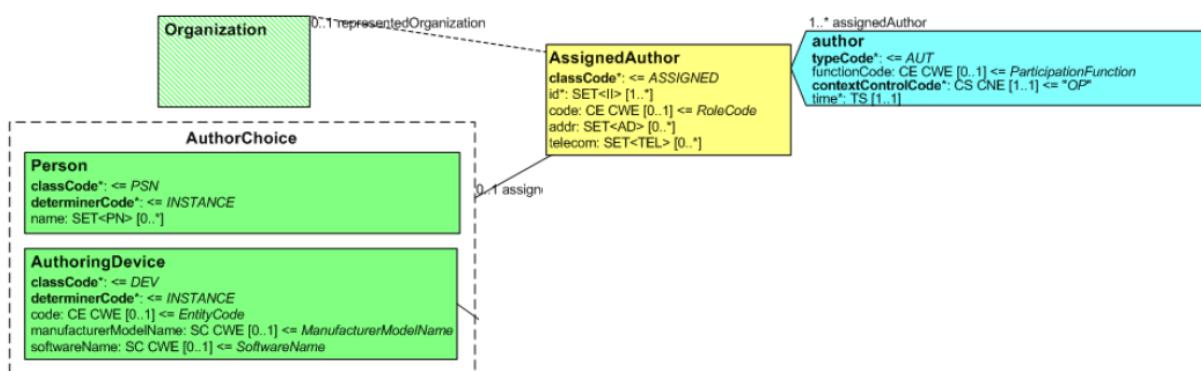
Figure 12: Author description

The Author is the medical content information creator, based on his knowledge e.g. the doctor who dictates the content of a medical report, is the author of the report. The author can either be a person or a device. More than one author could be represented. The specification clearly distinguishes between the author and the dataEnterer of the document. E.g. as current practice in the laboratory domain, the author is also the last person who validates the report.

Follow link for: Constraints on author

In cases where the author is a human being, not a device (authoringDevice), the author element should contain:

Element/Attribute	DT	Card	Opt	Description
author	POCD_MT000040. Author	[1..*]	M	**Human being** as creator of the medical content of the document.
functionCode	CE/CWE	[0..1]	R2	Functional role of the author. Must be represented as described in chapter: 2.3.2

Element/Attribute		DT	Card	Opt	Description
					Possible values shall be from value set: eSanté_AuthorRole.
	time	TS	[1..1]	M	Value of the time when the author participated to the elaboration of the document. Shall be represented as described in chapter: 3.1.4

Table 55: ClinicalDocument/author specification with functionCode

In cases where the author is a device (authoringDevice), the author element should contain the following information (see below). The functionCode shall be omitted in these cases.

Element/Attribute		DT	Card	Opt	Description
author		POCD_MT000040. Author	[1..*]	M	**Device** as the creator of the medical content of the document.
	time	TS	[1..1]	M	Value of the time when the device participated to the elaboration of the document. Must be represented as described in chapter: 3.1.4

Table 56: ClinicalDocument/author specification simple

Example:

```
<author>
    <time value="20130128091915+0100"/>
    <assignedAuthor>
        <id root="1.2.3.2.3.5.21.2" extension="012345678"/>
        <addr nullFlavor="MSK"/>
        <telecom value="tel:+352-227130588"/>
        <assignedPerson>
            <name>
                <given>Jean</given>
                <family>BAPTISTE</family>
                <prefix>Dr.</prefix>
            </name>
        </assignedPerson>
        <representedOrganization>
            <id root="1.3.182.3.1.1.1231231.34"
              assigningAuthorityName="Agence eSanté HPD"/>

            <name>Better health hospital</name>
            <telecom value="tel:+352-12345"/>
            <addr>
                <streetAddressLine>Rue des Tomains 1</streetAddressLine >
                <postalCode>2540</postalCode>
                <city>LUXEMBOURG</city>
                <country>LUX</country>
            </addr>

        </representedOrganization>
    </assignedAuthor>
</author>
```

3.5.2.1. author/assignedAuthor

Follow link for: Constraints on assignedAuthor

In cases where the author of a document is a human being the following rules apply:

Element/Attribute		DT	Card	Opt	Description
author/assignedAuthor			[1..1]		
	id	II	[1..*]	R	Identifier of the author of this document, more than one identifier can be provided. For health professionals the hpdID (root OID = 1.3.182.4.1) from the HPD shall be provided. Additionally, if known, the code prestataire from CNS (UCM) with OID 1.3.182.4.6 may be provided. Identifiers shall be provided as specified in chapter: 2.2.2 and following the specification of the II data type in chapter: 2.2
					When a patient authors a document e.g. his national identifier (root OID

Element/Attribute			DT	Card	Opt	Description
						= 1.3.182.4.4) or the DSPPID (root OID = 1.3.182.2.4.2) can be used. Allowed nullFlavors are defined and explained in §2.1
	code		CE/CWE	[0..1]	R2	Code of the author´s specialty. Possible values shall be from value set: eSanté_AuthorSpecialty Structure of the data type as specified for the representation of coded with equivalents in chapter: 2.3.2
	address		AD	[0..*]	O	Address of the author, see chapter: 3.1.1
	telecom		TEL	[0..*]	O	Contact data of the author, see chapter: 3.1.2

Table 57: author/assignedAuthor specification

In cases where the author of a document is an authoring device the following rules apply:

Element/Attribute			DT	Card	Opt	Description
author/assignedAuthor				[1..1]		
	id		II	[1..*]	R	Id of the device inside the institution if there is one given. Allowed nullFlavors are defined and explained in §2.1 Must be compliant to the specification of the II data type in chapter: 2.2
		@root	UID	[1..1]	M	
		@extension	ST	[0..1]	C	

Table 58: author/assignedAuthor specification for authoring devices

3.5.2.1.1. assignedAuthor/assignedPerson

Follow link for: Constraints on assignedAuthor/assignedPerson

Element/Attribute	DT	Card	Opt	Description
assignedPerson	POCD_MT00 0040.Person	[0..1]	R2	Person as specified in chapter: 3.1.6

Table 59: assignedPerson specification

3.5.2.1.2. assignedAuthor/assignedAuthoringDevice

Follow link for: Constraints on assignedAuthoringDevice

As long as there is no code-set defined for different manufacturers and for the software, the manufacturer and the name of the software can be given as text.

Element/Attribute	DT	Card	Opt	Description
assignedAuthoringDevice		[0..1]		
manufacturerModelName	ST	[0..1]	R2	Name of the manufacturer of the software.
softwareName	ST	[0..1]	R2	Name of the software.

Table 60: assignedAuthoringDevice specification

3.5.2.1.3. assignedAuthor/representedOrganization

Follow link for: Constraints on assignedAuthor/representedOrganization

Element/Attribute	DT	Card	Opt	Description
representedOrganization	POCD_MT000040.Organization	[0..1]	O	Organization which is represented by the author. Organization must be provided as specified in chapter: 3.1.5 It's optional e.g. when the author is the patient

Table 61: representedOrganization specification

3.5.3. dataEnterer
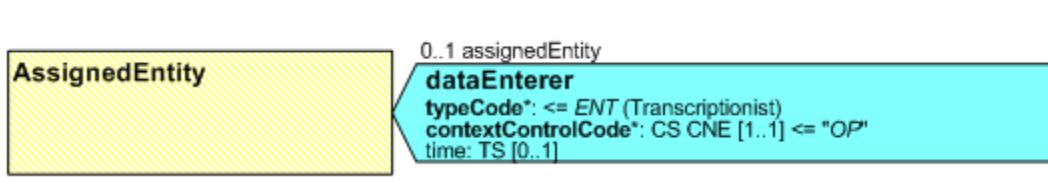
Figure 13: DataEnterer description

The dataEnterer represents the person who enters the information into the clinical document. This could be done by transferring information from other sources or transcriptions e.g. from audio recordings. The dataEnterer e.g. a secretary, does not create new medical information, instead he/she only transfers information from the source medium into the clinical document. The aim for providing such a information is for the support of quality control.

Follow link for: Constraints on dataEnterer

Element/Attribute		DT	Card	Opt	Description
dataEnterer		POCD_MT000040. DataEnterer	[0..1]	O	Person who enters the data into the system, not the author of the information content of the document.
	time	TS	[0..1]	O	Starting time of the data enterer´s participation, the time when the document is written. SHALL be compliant as specified in chapter: 3.1.4

Table 62: ClinicalDocument/dataEnterer specification

Element/Attribute	DT	Card	Opt	Description
assignedEntity	POCD_MT000040. AssignedEntity	[1..1]	M	The assignedEntity as a person in the role dataEnterer of the document. The information SHALL be compliant to the specification in chapter: 3.1.7

Table 63: dataEnterer/assignedEntity specification

Example:

```
<dataEnterer>
    <time value="20130128091915+0100"/>
    <assignedEntity>
        <id root="1.2.3.2.3.5.21.2" extension="012345678"/>
        <addr nullFlavor="MSK"/>
        <telecom value="tel:+352-227130588"/>
        <assignedPerson>
            <name>
                <given>Jean</given>
                <family>BAPTISTE</family>
                <prefix>Dr.</prefix>
            </name>
        </assignedPerson>
    </assignedEntity>
</dataEnterer>
```

3.5.4. Informant
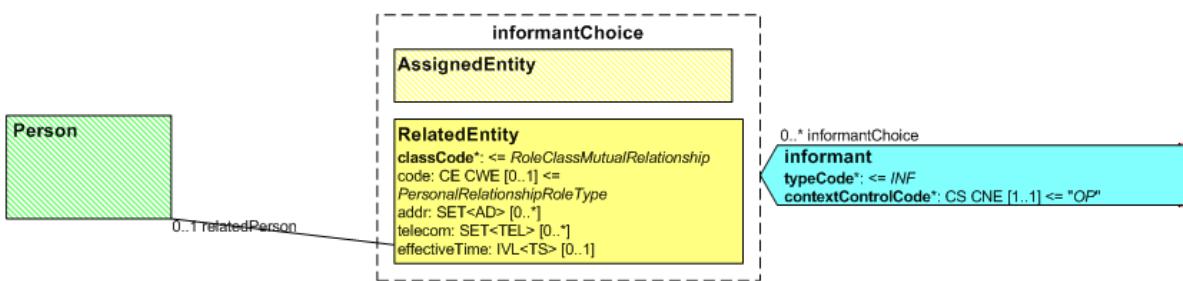
Figure 14: Informant description

The optional information providers are additional sources of information related to the patient. The Informant represents the person (Healthcare Providers with a role such as a nurse or a related person) who gives information that will be used when the clinical document is created. The main purpose is to use this information for follow-up or evaluation of the information which has been provided.

If the person who provides additional information is another healthcare provider or person working in an organization, the ***assignedEntity*** class should be used.

The ***relatedEntity*** class should be used to provide information about persons who are in defined relationship with the patient like e.g. legally authorized persons or informal persons like e.g. family members, caregiver or friends. The *code* element can be used to specify the relationship.

The main purpose is to capture the identity of the person providing the information, and the relationship to the patient.

Follow link for: Constraints on informant

Element/Attribute	DT	Card	Opt	Description
informant	POCD_MT0000 40.Informant12	[0..*]	O	More than one informant can be provided. Each informant can either be an assignedEntity or a relatedEntity.
assignedEntity	POCD_MT0000 40.AssignedEntity	[0..1]	O	Used for an identified informant like health professional providing information about the patient´s treatment which is used in the document. The AssignedEntity representation is defined in chapter: 3.1.7
relatedEntity	POCD_MT0000 40.RelatedEntity	[0..1]	O	Informant with a formal or personal relationship to the patient. The type of relationship can be specified with the classCode and code. The RelatedEntity representation is defined in chapter: 3.1.8

Table 64: ClinicalDocument/informant specification

3.5.4.1. informant/assignedEntity

If the person who provides additional information is another healthcare provider or person working in the organization who provides care, the *assignedEntity* class should be used.

Follow link for: Constraints on informant/assignedEntity

Element/Attribute	DT	Card	Opt	Description
informant/assignedEntity	POCD_MT00004 0.AssignedEntity	[0..1]	O	The assignedEntity SHALL be represented as specified in chapter: 3.1.7
assignedPerson	POCD_MT00004 0.AssignedPerson	[1..1]	M	Person representation as specified in chapter: 3.1.6

Table 65: informant/assignedEntity specification

Example:

```
<informant>
   <assignedEntity>
      <id root="1.3.182.4.1" extension="2123456789"/>
      <addr use="H">
         <streetAddressLine>Rue des Tomains 1</streetAddressLine >
         <postalCode>2540</postalCode>
         <city>LUXEMBOURG</city>
         <country>LUX</country>
      </addr>

      <telecom value="tel:+352-12345" use="WP"/>
      <assignedPerson>
         <name>
            <prefix qualifier="AC">Dr.</prefix>
            <family>Jordan</family>
            <family qualifier="BR">Johnson</family>
            <given>Jeannette</given>
            <given>Maria</given>
            <suffix qualifier="AC">MBA</suffix>
         </name>
      </assignedPerson>
   </assignedEntity>
</informant>
```

3.5.4.2. informant/relatedEntity

When the informant is a personal relation or a caregiver without assigned role, that informant is represented in the *relatedEntity* element. The *relatedEntity* class should be used to provide information about persons who are in defined relationship with the patient like e.g. legally authorized persons or informal persons like e.g. family members, caregiver or friends. The *code* element MAY be used to specify the relationship.

The code element of the *relatedEntity* describes the relationship between the informant and the patient.

Element/Attribute	DT	Card	Opt	Description
informant/relatedEntity	POCD_MT0000 40.RelatedEntity	[0..1]	O	The relatedEntity SHALL be represented as specified in chapter: 3.1.7
relatedPerson	POCD_MT0000 40.Person	[1..1]	M	Information about the related person, SHALL be compliant as specified in chapter: 3.1.6

Table 66: informant/relatedEntity specification

3.5.5. Custodian
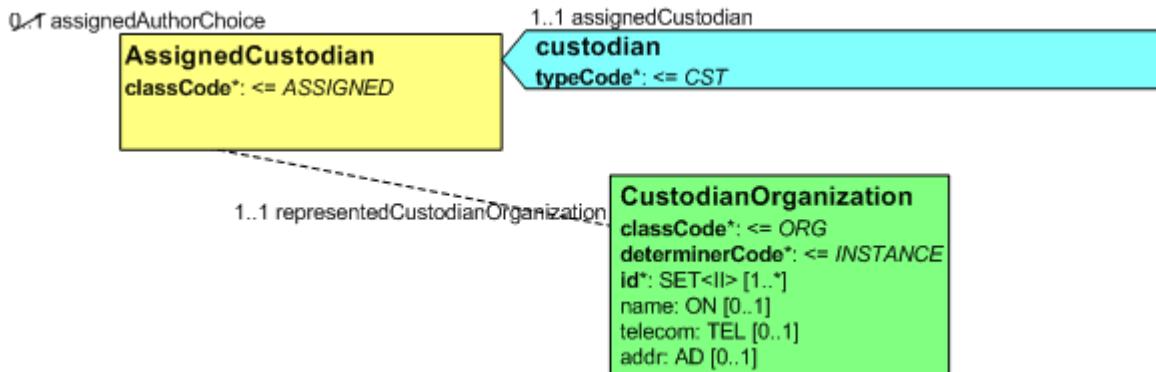
Figure 15: Custodian description

The custodian represents the organization that organizes the stewardship of the clinical document. In most cases this is the same organization as at which the document has been created.

<p style="text-align:center;">Follow link for: Constraints on custodian</p>

Element/Attribute	DT	Card	Opt	Description
custodian	POCD_MT000040.Custodian	[1..1]	M	Steward of the document
assignedCustodian	POCD_MT000040.AssignedCustodian	[1..1]	M	
representedCustodianOrganization	POCD_MT000040.CustodianOrganization	[1..1]	M	
id	II	[1..*]	R	Identifiers of the organization. This should be the identifier given from the healthcare provider directory (HPD). Instance identifier SHALL be conformant as specified in chapter: 2.2 Allowed nullFlavors are defined and explained in §2.1
name	ON	[1..1]	M	Name of the organization SHALL be given and SHALL be conformant to specification in chapter: 3.1.3.3
telecom	TEL	[0..1]	O	Conformant to specification in chapter: 3.1.2

		addr	AD	[0..1]	R2	Conformant to specification in chapter: 3.1.1

Table 67: ClinicalDocument/custodian specification

Example:

```
<custodian>
   <assignedCustodian>
      <representedCustodianOrganization>
         <id root="1.2.300.2.12.5.21.2" extension="24680135"/>
         <name>Hôpital Louis Legrand</name>
         <telecom value="tel:+3555364678" use="WP"/>
         <addr use="WP">
            <streetAddressLine>Rue des Tomains 1</streetAddressLine >
            <postalCode>2540</postalCode>
            <city>LUXEMBOURG</city>
            <country>LUX</country>
         </addr>

      </representedCustodianOrganization>
   </assignedCustodian>
</custodian>
```

3.5.6. informationRecipient
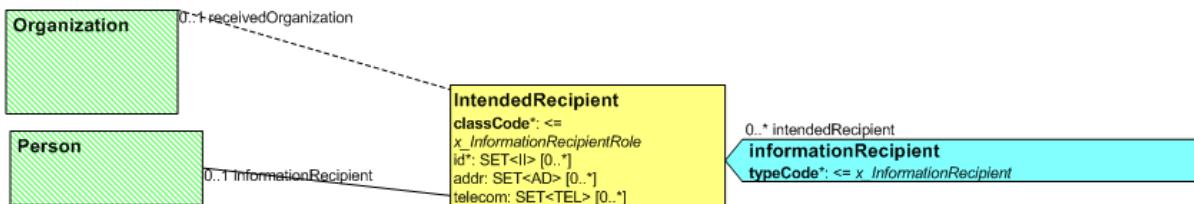
Figure 16: InformationRecipient description

The InformationRecipient represents persons who are recipients of the information. So for example a healthcare provider who will receive a copy of the clinical document (under the control of the patient consent policy).

Element/Attribute	DT	Card	Opt	Description
informationRecipient	POCD_MT00004 0.InformationReci pient	[0..*]	O	
intendedRecipient	POCD_MT00004 0.IntendedRecipie nt	[1..1]	M	

Table 68: ClinicalDocument/informationRecipient specification

The recipient information provided will be with the creation of the document. This is an informal information and delivery to this intended recipients is not ensured by the CDA implementation and must be done at the communication layer. It also does not pretend that the document will be provided, maybe at a later time, to other persons.

3.5.6.1. intendedRecipient

The identifiers given as part of the intendedRecipient SHALL be the identifiers of the informationRecipient (Person) not these of the organization.

Follow link for: Constraints on intendedRecipient

Element/Attribute	DT	Card	Opt	Description
intendedRecipient	POCD_MT00004 0.IntendedRecipie nt	[1..1]	M	
id	II	[1..*]	R	Set of identifiers to identify the informationRecipient uniquely (**Person** as health professional). The instance identifier data type shall be used as specified in chapter: 2.2. The use of the eHealthID as identification scheme is preferred. Allowed nullFlavors are defined and explained in §2.1
addr	AD	[0..*]	O	Address as specified in chapter: 3.1.1
telecom	TEL	[0..*]	O	Connection data as specified in chapter: 3.1.2
informationReci pient	POCD_MT00004 0.Person	[1..1]	M	Personal information about the intended recipient. Shall be compliant to specification described in chapter: 3.1.6
receivedOrganiz ation	POCD_MT00004 0.Organization	[0..1]	O	Organization to which the intended recipient belongs to. Shall be compliant to specification described in chapter: 3.1.5

Table 69: informationRecipient/intendedRecipient specification

Example:

```
<informationRecipient typeCode="PRCP">
   <intendedRecipient>

      <id nullFlavor="UNK"/>
      <telecom value="tel:+352-1234-213"/>
      <informationRecipient>
         <name>
            <family>Doe</family>
            <given>John</given>
         </name>
      </informationRecipient>
      <receivedOrganization>
         <id root="1.3.182.3.1.1.1231231.34"
            assigningAuthorityName="Agence eSanté HPD"/>
         <name>Better health hospital</name>
         <telecom value="tel:+352-12345"/>
         <telecom value="fax:+352-12345-67"/>
         <addr use="WP">
            <streetAddressLine>Rue des Tomains 1</streetAddressLine >
            <postalCode>2540</postalCode>
            <city>LUXEMBOURG</city>
            <country>LUX</country>
         </addr>

      </receivedOrganization>
   </intendedRecipient>
</informationRecipient>
```

3.5.7. legalAuthenticator
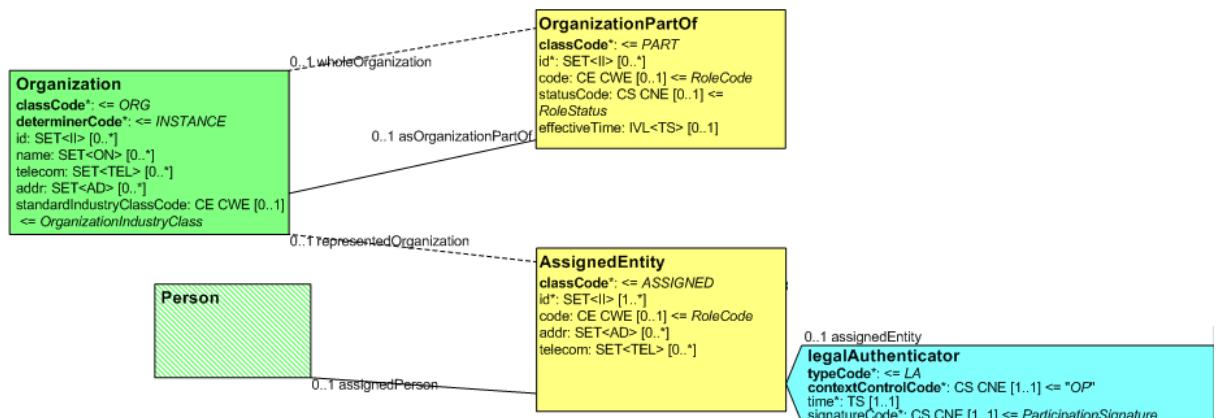
Figure 17: LegalAuthenticator description

The legalAuthenticator represents the legal responsible of the clinical document. In the CDA specification only individuals (e.g. health professionals) can take legal responsibility for the content of the document, on behalf of an organization.

Follow link for: Constraints on legalAuthenticator

Element/Attribute		DT	Card	Opt	Description
legalAuthenticator		POCD_MT000040.LegalAuthenticator	[1..1]	M	
	assignedEntity	POCD_MT000040.AssignedEntity	[1..1]	M	Assigned person and the organization which is represented by this person. AssignedEntity representation must be conformant to the specification in chapter: 3.1.7
	time	TS	[1..1]	M	Time of the creation of the signature. Format shall be conformant to specification in chapter: 3.1.4
	signatureCode	CS	[1..1]	M	
	@code	cs	[1..1]	M	Constant value = "S"

Table 70: ClinicalDocument/legalAuthenticator specification

Note:

If a patient provides medical information e.g. notes or medical information collected with medical devices, as CDA documents, then the patient will be the legalAuthenticator, so the responsible for these data.

Example:

```
<legalAuthenticator>
    <time value="20130407121200+0100"/>
    <signatureCode code="S"/>
    <assignedEntity>
        <id root="1.3.182.4.1" extension="2123456789"/>
        <addr use="WP">
            <streetAddressLine>Rue des Tomains 1</streetAddressLine >
            <postalCode>2540</postalCode>
            <city>LUXEMBOURG</city>
            <country>LUX</country>
        </addr>

        <telecom value="tel:+352-12345" use="WP"/>
        <assignedPerson>
            <name>
                <prefix qualifier="AC">Dr.</prefix>
                <family>Jordan</family>
                <family qualifier="BR">Johnson</family>
                <given>Jeannette</given>
                <given>Maria</given>
            </name>
        </assignedPerson>
    </assignedEntity>
</legalAuthenticator>
```

3.5.8. authenticator

The authenticator identifies the participant who attested to the accuracy of the information in the document. More than one authenticator could be defined in the header.

Follow link for: Constraints on authenticator

Element/Attribute		DT	Card	Opt	Description
authenticator		POCD_MT000040.Authenticator	[0..*]	O	
	assignedEntity	POCD_MT000040.AssignedEntity	[1..1]	M	Assigned person and the organization which is represented by this person. AssignedEntity representation SHALL be conformant to the specification in chapter: 3.1.7
	time	TS	[1..1]	M	Time of the creation of the signature. Format SHALL be conformant

					to specification in chapter: 3.1.4
	signatureCode	CS	[1..1]	M	
		@code	cs	[1..1]	M	Constant value = "S"

Table 71: ClinicalDocument/authenticator specification

Example:

```
<authenticator>
   <time value="20130407121200+0100"/>
   <signatureCode code="S"/>
   <assignedEntity>
      <id root="1.3.182.4.1" extension="2123456789"/>
      <addr use="WP">
         <streetAddressLine>Rue des Tomains 1</streetAddressLine >
         <postalCode>2540</postalCode>
         <city>LUXEMBOURG</city>
         <country>LUX</country>
      </addr>
      <telecom value="tel:+352-123453" use="WP"/>
      <assignedPerson>
         <name>
            <family>John</family>
            <given>Doe</given>
         </name>
      </assignedPerson>
   </assignedEntity>
</authenticator>
```

3.5.9. participant
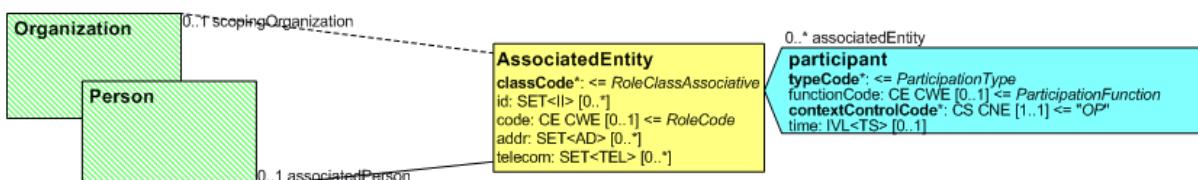
Figure 18: Participant description

The association class "participant" can be used to provide information about other participants related to this document, which are not represented by the other classes of the CDA Header participants section (see chapter: 3.2) So e.g. information about the admitting, attending or referring physicians can be provided here.

When the participating entity is an organization, it can be reflected by the presence of a scopingOrganization without a playing entity (associatedPerson).

To classify the type of participant, mainly the elements typeCode and functionCode of the participant and the classCode of the associatedEntity role are used.

The following table presents the different actors identified as participants, and which code combinations shall be used.

Element / Value set / Actor	participant/typeCode	participant/functionCode	associatedEntity/classCode	associatedEntity/code
	eSanté_ParticipantTypeCode	eSanté_ParticipationFunction	eSanté_AssociatedEntityClassCode	
Medical contact person

Health professional from the document creator which should be contacted for further information (if not the same as the authenticator/author). | CALLBCK | *No element* | PROV | Possible values shall be from value set: eSanté_Medical Specialty |
| Referring physician

Health professional which is the referrer of the patient. | REF | *No element* | PROV | Possible values shall be from value set: eSanté_Medical Specialty |
| Family doctor | IND | PCP | PROV | *No element* |
| Emergency contact

Person who should be contacted in the emergency case of the patient, e.g. a family member. | IND | *No element* | ECON | *No element* |
| Personal contact

E.g. family members or friends, people which are in personal relationship with the patient. | IND | *No element* | PRS | Possible values shall be from value set: eSanté_PersonalRelationshipRoleType |
| Insurance | HLD | *No element* | POLHLD | *No element* |
| Next care providers

Institutions which provide care to the patient after the treatment in this institution (which has created the document). | IND | *No element* | CAREGIVER | Possible values shall be from value set: eSanté_HealthcareFacilityTypeCode |

Table 72 : Different participants as AssociatedEntity

Follow link for: Constraints on participant

Element/Attribute	DT	Card	Opt	Description
participant	POCD_MT0000 40.Participant1	[0..*]	O	
@typeCode	ParticipationTyp e	[1..1]	M	Code to classify the type of participant e.g. "REF" for referrer. Possible values shall be from value set: eSanté_ParticipantTypeCode
functionCode	CE/CWE	[0..1]	R2	Functional role of the participant e.g. "ADMPHYS" for the admitting physician, related to the patient´s treatment documented in this document instance Possible values shall be from value set: eSanté_ParticipationFunction
associatedEntity	POCD_MT0000 40.AssociatedE ntity	[1..1]	M	Assigned person and/or the organization which is represented by this person.
@classCode	RoleClassAssoc iative	[1..1]	M	Specifies the type of the associated person e.g. "PROV" for healthcare provider. Possible values shall be from value set: eSanté_AssociatedEntityClassCo de
id	II	[0..*]	O	If available, the health professional identifier of this participant may be provided. As specified in chapter: 2.2
code	CE/CWE	[0..1]		Code for defining the role or the associatedEntity finer grained. Element is optional, if given the values shall be taken from the value sets as described in the table above, see Table 72 : Different participants as AssociatedEntity.
addr	AD	[0..1]		Address of the participant person. shall be compliant to specification in chapter: 3.1.1
telecom	TEL	[0..*]	O	Communication data of the participant person. Shall be compliant to specification in chapter: 3.1.2

		associatedPerson	POCD_MT0000 40.Person	[0..1]		Information about the person who is a participant being represented here. Information which has to be provided shall be conformant to specification in chapter: 3.1.6
		scopingOrganizati on	POCD_MT0000 40.Organization	[0..1]		Information about the organization to which the associated person belongs. The information provided about the organization shall be compliant as specified in chapter: 3.1.5

Table 73: ClinicalDocument/participant specification

Different representations of participants related to the Luxembourgish healthcare sector will be described in detail after discussion with the workgroup.

3.6. RELATED ACTS

3.6.1. relatedDocument
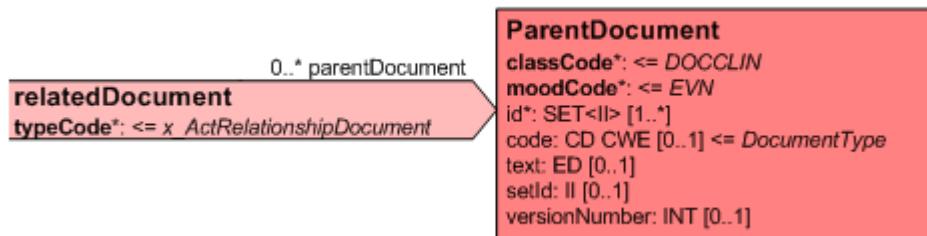
Figure 19: RelatedDocument description

The relatedDocument can be used to report about a predecessor of the current document, which this document is a transformation, addition or replacement.

A clinical document can be replaced by a new document and/or appended with an addendum and/or transforms from some other format (meaning that it has undergone a machine translation from some other format (such as DICOM SR)).

The typeCode attribute of the relatedDocument describes the type of relationship; the following codes are possible as specified by HL7:

typeCode	Text	Description
APND	append	This document is an addendum of the parent document.
RPLC	replace	This document replaces the parent document.
XFRM	transformation	This document is a transformation of the parent document. A transformation is e.g. another representation of the medical content of the parent document. It must not change the content of the original document. So e.g. if a PDF is rendered out of the structured content of the parent CDA document, it could be stored as a transformation of the original document.

Table 74: Allowed typeCodes for related documents

With this specification only the usage of "RPLC" and "XFRM" are allowed.

The following constraints exist:

- A conformant CDA document can **have a single relatedDocument with**:
  - typeCode "RPLC" or "XFRM"

- A conformant CDA document can **have a two relatedDocument entries with**:
  - typeCode "RPLC" and "XFRM"

Follow link for: Constraints on relatedDocument

Element/Attribute		DT	Card	Opt	Description
relatedDocument		POCD_MT000040.RelatedDocument	[0..*]	O	
	@typeCode	x_ActRelationshipDocument	[1..1]	M	Can be one of the types RPLC or XFRM

Table 75: relatedDocument specification

Example:

```
<relatedDocument typeCode="RPLC">
   <parentDocument>
      <id root="1.3.182.3.1.1231232.37.1" extension="23423423"/>
   </parentDocument>
</relatedDocument>
```

3.6.1.1. relatedDocument/parentDocument

Element/Attribute		DT	Card	Opt	Description
parentDocument		POCD_MT000040.ParentDocument	[1..1]	M	
	id	II	[1..1]	M	Identifier of the parent document. It SHALL be conformant to the specification of the II data type in chapter: 2.2

Table 76: relatedDocument/parentDocument specification

The id must be the identifier of the parentDocument. The other parameters of the parentDocument like e.g. setId and versionNumber can be gained when retrieving this parent document. Putting values for attributes of this document creates redundancy, therefore they are omitted.

3.6.2. inFulfillmentOf
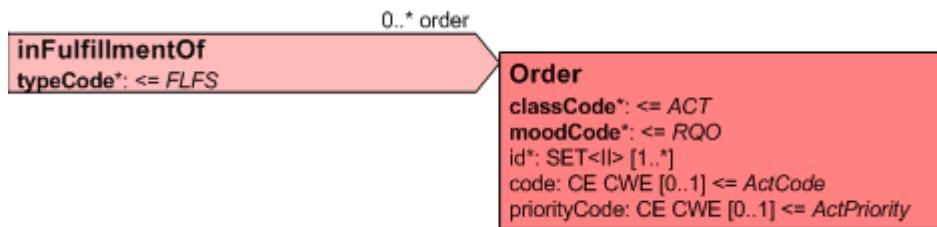
Figure 20: InFulfillmentOf description

The medical content of the CDA document could be produced as the result of a service that was ordered. This element represents the association of the clinical document to an order like e.g. for laboratory tests or an imaging study. Herewith the results can be linked with the original order.

Follow link for: Constraints on inFulfillmentOf

Element/Attribute		DT	Card	Opt	Description
inFulfillmentOf		POCD_MT000040.InFulfillmentOf	[0..*]	O	
	@typeCode	ActRelationshipFullfils	[1..1]	M	Constant value: FLFS

Table 77: inFulfillmentOf specification

3.6.2.1. inFulfillmentOf/order

Element/Attribute		DT	Card	Opt	Description
inFulfillmentOf/order		POCD_MT000040.Order	[1..1]	M	
	id	II	[1..*]	M	Identifier of the order. The identifier SHALL be conformant to the specification in chapter: 2.2

Table 78: inFulfillmentOf/order specification

The code and priorityCode element will not be used.

3.6.2.2. inFulfillmentOf/order/id

Follow link for: Constraints on inFulfillmentOf/order

The identifiers given should be in the following order:

Element/Attribute	DT	Card	Opt	Description
id[1]	II	[1..1]	M	Unique order id from the order-filler system. The identifier SHALL be conformant to the specification in chapter: 2.2
id[2]	II	[1..1]	R	If provided, the order id from the prescriber. The identifier SHALL be conformant to the specification in chapter: 2.2 Allowed nullFlavors are defined and explained in §2.1
id[3]	II	[1..1]	R	If order is based on subcontracting, this field could be used to store the order id of the primary institution. The identifier SHALL be conformant to the specification in chapter: 2.2. Allowed nullFlavors are defined and explained in §2.1

Table 79: order/id specification

Example:

```
<inFulfillmentOf typeCode="FLFS">
   <order classCode="ACT" moodCode="RQO">
      <id root="1.3.182.3.1.1231232.37.5" extension="0338123"/>
   </order>
</inFulfillmentOf>
```

3.6.3. documentationOf
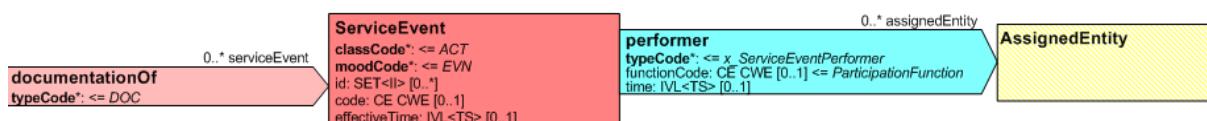
Figure 21: DocumentationOf description

The relationship documentationOf is used to provide information about the medical act (e.g. procedure, diagnostic…) performed for the patient as part of the patient's treatment. The serviceEvent class can be any kind of act that can be represented in the HL7 Act class hierarchy. It is used to give information about the service events which are described in detail in the Body of the CDA document.

The ClinicalDocument/code and the service events which are documented here as documentationOf/serviceEvent must be related and logically complement each other. While the ClinicalDocument/code describes the type of document, e.g. Diagnostic Imaging Report, the service events must be related e.g. X-Ray, Endoscopy…

The timing interval serviceEvent/effectiveTime can be used to describe the duration of this service event, so the time span on which the treatment/care is provided.

Note:

> The information about the service event described in this CDA document, are also used and stored as part of the XDS metadata in the XDS-Registry. This information can be used later to search for the appropriate medical document.

Follow link for: Constraints on documentationOf

Element/Attribute			DT	Card	Opt	Description
documentationOf			POCD_MT000040.Docume ntationOf	[0..*]	O	
	serviceEvent		POCD_MT000040.Service Event	[1..1]	M	
		id	II	[0..1]	O	Optional unique identifier for the service event can be provided, if given by the institution which performs the medical act.
		code	CE/CWE	[1..1]	M	Code of the service event. The codes which can be used here are related to the specific CDA specification for the document type or medical domain e.g. laboratory and radiology domain. The representation of the code must be compliant to the specification in chapter: 2.3.2 If the code is not known the nullFlavor: UNK is allowed.
		effectiveTime	IVL_TS	[0..1]	R2	Value of the time (interval) when the act (service event) was executed. The given time shall be compliant to the specification in chapter: 3.1.4.3 If the effectiveTime

						should be used to describe a point in time, the low and high attribute should have the same value.

Table 80 : ClinicalDocument/documentationOf specification

Note:

The possible codes e.g. LOINC for laboratory analysis, CIM-10 for diagnosis … and the meaning of the effectiveTime interval will be precisely defined in the derived specifications which are related to a specific type of medical document.

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Example:

```
<documentationOf>
   <serviceEvent>
      <id root="1.3.182.3.1.1.1231231.34.6" extension="2011123"/>
      <code code="18719-5" displayName="Biochimie"
               codeSystem="2.16.840.1.113883.6.1"
               codeSystemName="LOINC"/>
      <effectiveTime>
         <!-- Date when got the request and samples -->
         <low value="201307040922+0100"/>
         <!—Date when this medical act (e.g. test) ended -->
         <high value="201307041605+0100"/>
       </effectiveTime>

       <performer typeCode="PRF">
        <assignedEntity>
          <id root="1.3.182.4.1" extension="2123456789"/>
          <addr use="WP">
             <streetAddressLine>Rue des Tomains 1</streetAddressLine >
             <postalCode>2540</postalCode>
             <city>LUXEMBOURG</city>
             <country>LUX</country>
          </addr>

          <telecom value="tel:+352-12345" use="WP"/>
             <assignedPerson>
                <name>
                   <prefix qualifier="AC">Dr.</prefix>
                   <family>Jordan</family>
                   <given>Jeannette</given>
                 </name>
             </assignedPerson>
             <representedOrganization>
                <id root="1.3.182.3.1.1.12312327.27"
                 assigningAuthorityName="Agence eSanté HPD"/>

                <name>Better Laboratory</name>
                <telecom value="tel:+352-12345"/>
                <telecom value="fax:+352-12345-67"/>
                <addr use="WP">
                   <streetAddressLine>Rue des Tomains 1</streetAddressLine
                   <postalCode>2540</postalCode>
                   <city>LUXEMBOURG</city>
                   <country>LUX</country>
                 </addr>

            </representedOrganization>
          </assignedEntity>
         </performer>
    </serviceEvent>
</documentationOf>
```

3.6.3.1. documentationOf/serviceEvent/performer

Service events are performed by zero or more persons, represented as performer in the CDA header. These persons can have different roles (assigned by their organization, e.g. nurse) related to the service event they performed.

Element/Attribute	DT	Card	Opt	Description
performer	POCD_MT000040.Performer1	[0..*]	O	
@typeCode	x_ServiceEventPerformer	[1..1]	M	E.g. "PRF" for performer. Possible values shall be from value set: eSanté_ServiceEventPerformerType.
assignedEntity	POCD_MT000040.AssignedEntity	[1..1]	M	The assigned entity as specified in chapter: 3.1.7

Table 81: serviceEvent/performer specification

3.6.4. authorization
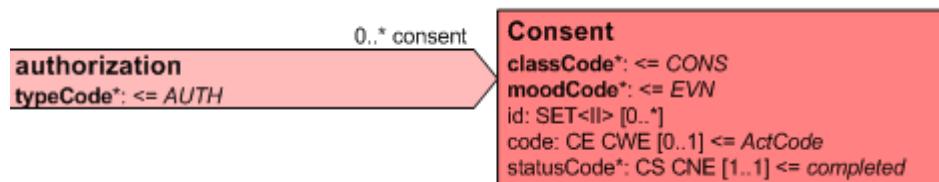
Figure 22: Authorization description

The authorization association can be used with the consent class to link the document with a given consent of a patient.

Since it is not the current practice to provide this information with the medical document of a patient, this information will not need to be provided.

Follow link for: Constraints on authorization

Element/Attribute	DT	Card	Opt	Description
authorization	POCD_MT000040.Authorization	[0..*]	NP	
consent	POCD_MT000040.Consent	[1..1]		
id	II	[0..*]		Could be used e.g. to identify the document containing the signed consent of the patient. If given it must be conformant to the specification of the II data type in chapter:

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						2.2
	code	CE/CWE	[0..1]			This is the code specifying the type of consent precisely. Values shall come from the valueset eSanté_ConsentCode
	statusCode	CS/CNE	[1..1]			constant value: "completed"

Table 82: ClinicalDocument/authorization specification

3.6.5. componentOf
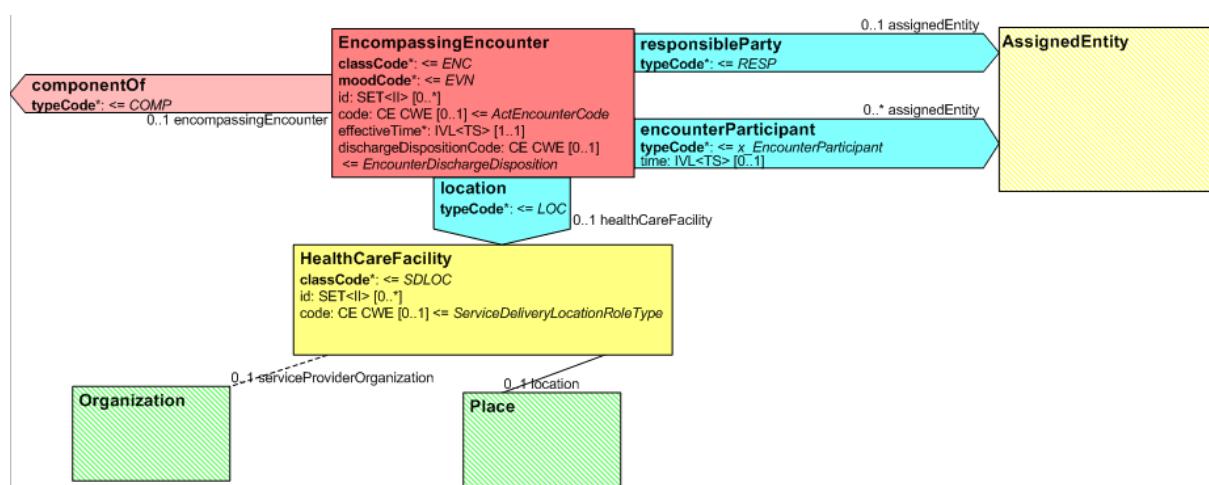
Figure 23: ComponentOf description

The componentOf association represents the link of the clinical document with an encounter. The encompassingEncounter represents the setting of the clinical encounter during which the documented act(s) or service event occurred.

So e.g. if the CDA document is a discharge summary or a transfer letter, this information must be provided. This is specified in the implementation guidelines for the different document types.

Follow link for: Constraints on componentOf

Element/Attribute	DT	Card	Opt	Description
componentOf	POCD_MT00 0040.Compo nent1	[0..1]	O	
encompassingEncounter	POCD_MT00 0040.Encom passingEnco	[1..1]	M	

		unter			

Table 83: ComponentOf specification

Example:

```
<componentOf>
   <encompassingEncounter>
   <id root="1.3.182.3.1.1.1231231.34.7" extension="11000078"
              assigningAuthorityName="Better Health hospital"/>
   <code code="AMB"
         displayName="Ambulatory"
         codeSystem="2.16.840.1.113883.5.4"
         codeSystemName="HL7:ActCode"/>
   <effectiveTime>
      <low value="20130407163500+0100"/>
      <high nullFlavor="UNK"/>
   </effectiveTime>
   <responsibleParty>
      <assignedEntity>
          <id root="1.3.182.4.1" extension="2123456789"/>
          <addr use="WP">
             <streetAddressLine>Rue des Tomains 1</streetAddressLine>
             <postalCode>2540</postalCode>
             <city>LUXEMBOURG</city>
             <country>LUX</country>
          </addr>

          <telecom value="tel:+352-12345" use="WP"/>
          <assignedPerson>
             <name>
                <prefix @qualifier="AC">Dr.</prefix>
                <family>Jordan</family>
                <given>Jeannette</given>
                <given>Maria</given>
              </name>
          </assignedPerson>
       </assignedEntity>
   </responsibleParty>
   <location>
      <healthCareFacility>
         <serviceProviderOrganization>
             <id root="1.3.182.3.1.1.1231231.34"
                 assigningAuthorityName="Agence eSanté HPD"/>

             <name>Better health hospital</name>
             <telecom value="tel:+352-12345"/>
             <telecom value="fax:+352-12345-67"/>
             <addr use="WP">
                <streetAddressLine>Rue des Tomains 1</streetAddressLine >
                <postalCode>2540</postalCode>
                <city>LUXEMBOURG</city>
                <country>LUX</country>
             </addr>

          </serviceProviderOrganization>

       </healthCareFacility>
    </location>
   </encompassingEncounter>
</componentOf>
```

3.6.5.1. componentOf/encompassingEncounter

The necessity to provide information about the patient encounter is related to the type of document and the service events performed. The decision if such the encounter has to be documented is specified in the implementation guidelines for the specific document types.

Follow link for: Constraints on encompassingEncounter

Element/Attribute			DT	Card	Opt	Description
encompassingEncounter			POCD_MT00 0040.Encom passingEnco unter	[1..1]		
	id		II	[1..1]	R	Identifier of this patient encounter. Usage of the II identifier must be compliant to the specification in chapter: 2.2 Allowed nullFlavors are defined and explained in §2.1
		@root	UID	[1..1]	M	OID of the organizations name scheme for encounter identifier
		@extension	ST	[1..1]	M	Local value of the encounter identifier
		@assigningAuthorityName	ST	[0..1]	O	Name of the office/institution which provides the identifier e.g. "XYZ-Clinic"
	code		CE/CWE	[1..1]	M	Code for the type of patient encounter. Usage of CE type must be conformant to specification in chapter: 2.3.2
		@code	ST	[1..1]	M	Possible values shall be from value set:
		@displayName	ST	[1..1]	M	eSanté_ActEncounter Code
		@codeSystem	ST	[1..1]	M	Constant value: "2.16.840.1.113883.5. 4"
		@codeSystemName	ST	[0..1]	R2	Constant value: "HL7:ActCode"

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| effectiveTime | IVL<TS> | [1..1] | M | The duration of the encounter. Shall be conformant as specified in chapter: 3.1.4.3 |
| dischargeDispositionCode | CE/CWE | [0..1] | O | Code describing what happens to the patient after the encounter was completed. Usage of CE type must be conformant to specification in chapter: 2.3.2

Possible values **SHALL** be from value set: eSanté_DischargeDispositionCode. |

Table 84: componentOf/encompassingEncounter specification

3.6.5.2. responsibleParty

Element/Attribute	DT	Card	Opt	Description
responsibleParty	POCD_MT00 0040.Respon sibleParty	[0..1]	O	Person or organization who is primarily responsible for the patient encounter
assignedEntity	POCD_MT00 0040.Assign edEntity	[1..1]	M	Assigned entity as specified in chapter: 3.1.7

Table 85: componentOf/ responsibleParty specification

The requirement to possibly provide the responsible party and the concrete entity which is responsible for the encounter depends on the type of document and is therefore specified in the implementation guidelines of these document types.

3.6.5.3. encounterParticipant

Additionally to the responsibleParty, other persons can be involved in the patient encounter, like e.g. the person admitting or referring the patient for care.

Follow link for: Constraints on encounterParticipant

Element/Attribute	DT	Card	Opt	Description
encounterParticipant	POCD_MT00 0040.Encoun terParticipant	[0..1]	O	Other persons involved in the patient encounter
@typeCode	x_Encounter Participant	[1..1]	M	Type code for the encounter participants. Possible values shall from value set: eSanté_EncounterParticipantType.
assignedEntity	POCD_MT00 0040.Assign edEntity	[1..1]	M	Assigned entity as specified in chapter: 3.1.7

Table 86: componentOf/ encounterParticipant specification

3.6.5.4. location

If the encompassingEncounter has been provided, the location where this event happened shall also be provided.

Follow link for: Constraints on location

Element/Attribute	DT	Card	Opt	Description
location	POCD_MT0000 40.Location	[1..1]	M	
healthCareFacility	POCD_MT0000 40.HealthCareF acility	[1..1]	M	
serviceProviderOrganization	POCD_MT0000 40.Organization	[1..1]	M	Healthcare organization at which the patient encounter has been done. The organization must be used as specified in chapter: 3.1.5

Table 87: componentOf/ location specification

Due to the fact that information about the healthcare facility, like e.g. the type could be dynamically requested by accessing the HPD (Health Provider Directory), this data are more accurate than those stored in the document. Therefore the identifier of the organization (serviceProviderOrganization) can be used to request the HPD, since it identifies the organization uniquely.

4. CONFORMANCE RULES

The conformance rules are now grouped in this table. You can reach the rules related to a topic by the link in the appropriate chapters, following the text: "Follow link for:".

From the constraints you can jump to the related chapter or page by clicking on the chapter or on the page number (e.g. 2.1 or page 16 like in the first row below).

Constraints on nullFlavor values	2.1	16
CONF-LUXH-NF-1	Allowed nullFlavor are: UNK, NASK, ASKU, NAV, NI, MSK	mandatory
Constraints on II datatype	2.2	17
CONF-LUXH-II-1	Value of the identifier/@root attribute shall be a valid OID	mandatory
CONF-LUXH-II-2	OIDs shall be no more than 64 characters in length	preferred
CONF-LUXH-II-3	The value range of each component of an OID should be limited to values between 0 and $2^{31} - 1$	preferred
Constraints on CE datatype	2.3.2	22
CONF-LUXH-CE-1	If originalText/reference is present and not nullFlavored, reference@value shall be present in CE datatypes	mandatory
Constraints on general definition	3.1	26
CONF-LUXH-GD-1	The encoding shall be UTF-8	mandatory
CONF-LUXH-GD-2	XML Version 1.0 shall be used with CDA	mandatory
Constraints on AD datatype	3.1.1	26
CONF-LUXH-AD-1	Adresses if not nullFlavored shall always have a single @use value where values shall come from the value set eSanté_AddressUse.The addr shall have a postalCode, city and country where country is a ISO-3166 code with three letters (alpha 3). If additionalLocator and/or state are provided, only one of each is allowed. The addr shall be an address using separate fields for street name and house number, or an address using streetAddressLine	mandatory
Constraints on TEL datatype	3.1.2	29

CONF-LUXH-TEL-1	Telecom if not nullFlavored may have a single telecom/@use with values from eSanté_TelecomAddressUse. The type of communication is part of the value, as a prefix and shall be from value set eSanté_URLScheme.	mandatory
Constraints on name representation	3.1.3	30
CONF-LUXH-NREP-1	Only one @use is allowed in the name element and the values shall be from value set eSanté_NameUse	mandatory
CONF-LUXH-NREP-2	The name element shall be a simple name presentation, or a name of person, or a name of an organization	mandatory
Constraints on simple name representation	3.1.3.1	30
CONF-LUXH-SNREP-1	In simple name presentation, family/given/prefix and suffix are omitted	mandatory
Constraints on name of a person	3.1.3.2	31
CONF-LUXH-NOFP-1	In name of person presentation, family and given shall be present	mandatory
CONF-LUXH-NOFP-2	The prefix/@qualifier attribute may be present and shall only occur once. If present, the value shall be selected from the value set: eSanté_NamePartQualifier	mandatory
CONF-LUXH-NOFP-3	The suffix/@qualifier attribute may be present and shall only occur once. If present, the value shall be selected from the value set: eSanté_NamePartQualifier	mandatory
CONF-LUXH-NOFP-4	The family/@qualifier attribute may be present and shall only occur once. If present, the value shall be selected from the value set: eSanté_NamePartQualifier	mandatory
CONF-LUXH-NOFP-5	The given/@qualifier attribute may be present and shall only occur once. If present, the value shall be selected from the value set: eSanté_NamePartQualifier	mandatory
Constraints on time interval	3.1.4.3	35
CONF-LUXH-TIVL-1	The IVL_TS/low and IVL_TS /high element shall be provided and have a @value or if unknown, only @nullFlavor='UNK' is allowed.	mandatory

Constraints on organization representation	3.1.5	36
CONF-LUXH-ORP-1	The organization/name shall be present and unique. If name/prefix or name/suffix is given, the @qualifier SHALL be present and unique [1..1] and come from the value set: eSanté_NamePartQualifier	mandatory
Constraints on person representation	3.1.6	37
CONF-LUXH-PR-1	At least one name for the person shall be provided	mandatory
Constraints on assignedEntity	3.1.7	38
CONF-LUXH-ASE-1	If the AssignedEntity role is provided, one person shall be present as assignedPerson. The code element, if present, shall have a value from the value set eSanté_RoleCode	mandatory
Constraints on relatedEntity	3.1.8	40
CONF-LUXH-RELE-1	If the relatedEntity role is provided, one person shall be present as the relatedPerson. relatedEntity@classCode is required and shall be selected from the value set eSanté_RoleClassMutualRelationship and code shall be from the value set eSanté_PersonalRelationShipRoleType	mandatory
Constraints on realmCode	3.3.1	44
CONF-LUXH-REALM-1	The realm code indicates the localization of the clinical document using this specification. The code shall be filled with "LU" (Code from ISO 3166-1-alpha-2) STATIC. Only one realmCode shall be used.	mandatory
Constraints on typeId	3.3.2	44
CONF-LUXH-TYPEID-1	A ClinicalDocument/typeId element shall be present having the following values: @root="2.16.840.1.113883.1.3" @extension=" POCD_HD000040"	mandatory
Constraints on templateIds	3.3.3	45
CONF-LUXH-TMPL-1	To indicate conformance to the general header specifications of the clinical document in Luxemburg defined in this specification document, the ClinicalDocument/templateId shall be present with the following value: @root="1.3.182.11.1"	mandatory

CONF-LUXH-TMPL-2	To indicate conformance to level 1 (which also asserts compliance with all general or non-level specific constraints), ClinicalDocument/templateId elements may be present with the following value: @root="2.16.840.1.113883.10.20.10"	permitted
CONF-LUXH-TMPL-3	To indicate conformance to level 2 features (which also asserts compliance with level 1 requirements and asserts the presence of section codes), ClinicalDocument/templateId elements may be present with the following value: @root="2.16.840.1.113883.10.20.20"	permitted
CONF-LUXH-TMPL-4	To indicate conformance to level 3 features (which also asserts compliance with level 2 requirements and asserts the presence of CDA entries in some sections), ClinicalDocument/templateId elements may be present with the following value: @root="2.16.840.1.113883.10.20.30"	permitted
CONF-LUXH-TMPL-5	For a unstructured document, to indicate conformance to the specifications of the profile IHE XDS-SD published by IHE international in the ITI Technical framework, ClinicalDocument/templateId elements may be present with the following value: @root="1.3.6.1.4.1.19376.1.2.20"	permitted
CONF-LUXH-TMPL-6	To indicate conformance to the CDA Body Level 1 specifications for Luxembourg, a ClinicalDocument/templateId shall be present with the following value @root="1.3.182.11.2"	mandatory
Constraints on document id	3.4.1	48
CONF-LUXH-DOCID-1	The ClinicalDocument/id element shall not have a nullFlavor attribute	mandatory
CONF-LUXH-DOCID-2	If the OID represents a unique identifier for this document, then @extension shall be omitted	mandatory
CONF-LUXH-DOCID-3	If the OID of the institution´s documentId namespace is used, then @extension shall be a unique identifier for the document	mandatory
CONF-LUXH-DOCID-4	@assigningAuthorityName and @displayable may be omitted	permitted
Constraints on document code	3.4.2	48
CONF-LUXH-DOCCOD-1	Values for ClinicalDocument/code@code, @displayName and @codeSystem SHALL come from the Valueset	mandatory

	eSanté_DocType.	
Constraints on document title	3.4.3	49
CONF-LUXH-DOCTTL-1	The ClinicalDocument/title element shall be present and specifies the name used for this document. It shall not be nullFlavored	mandatory
Constraints on effectiveTime	3.4.4	50
CONF-LUXH-EFFT-1	The ClinicalDocument/effectiveTime element not be nullFlavored. It specifies the creation time of the document. All history and physical documents authored by direct input to a computer system should record an effectiveTime that is precise to the second. When authored in other ways, for example, by filling out a paper form that is then transferred into an EHR system, the precision of effectiveTime may be less than to the second	mandatory
CONF-LUXH-EFFT-2	The ClinicalDocument/effectiveTime shall have the format yyyyMMddHHmmss[+/-]HHmm	mandatory
Constraints on confidentialityCode	3.4.5	50
CONF-LUXH-CONFCD-1	The ClinicalDocument/confidentialityCode shall be present with @code="N" @displayName="Normal" @codeSystem="2.16.840.1.113883.5.25"	mandatory
Constraints on languageCode	3.4.6	51
CONF-LUXH-LANGCD-1	The ClinicalDocument/languageCode shall be present and not be nullFlavored	mandatory
CONF-LUXH-LANGCD-2	Possible values for the languageCode@code shall be taken from the value set eSanté_LanguageCode, DYNAMIC. In this value set, the pattern is nn-CC where nn is a legal ISO-639-1 language code in lowercase and CC a legal ISO-3166-2 country code in uppercase	mandatory
Constraints on setId and versionNumber	3.4.7	52
CONF-LUXH-SETVERS-1	ClinicalDocument/setId and ClinicalDocument/versionNumber shall either be given both (and then none shall	mandatory

	have @nullFlavor) ,or both shall be omitted	
Constraints on recordTarget	**3.5.1**	**53**
CONF-LUXH-RECTRG-1	Only one ClinicalDocument/recordTarget shall be present	mandatory
CONF-LUXH-RECTRG-2	The recordTarget/patientRole/providerOrganization element may be present	permitted
Constraints on patientRole	**3.5.1.1**	**54**
CONF-LUXH-PATR-1	The order of the ids in the set shall reflect the order given in the specification Table 44	mandatory
CONF-LUXH-PATR-2	The first id of the set shall represent the local patient identifier of the document providing data source (e.g. hospital)	mandatory
CONF-LUXH-PATR-3	The first id of recordTarget/patientRole shall not be nullFlavored and shall have root and extension attribute, root being a valid OID string	mandatory
CONF-LUXH-PATR-4	The second id of recordTarget/patientRole if not nullFlavored, shall have @root=1.3.182.4.4 and @extension representing the SSN (11-digits or 13-digits)	mandatory
CONF-LUXH-PATR-5	The third id of recordTarget/patientRole if not nullFlavored, shall have @root=1.3.182.2.4.2 and @extension representing the DSPID of the patient	mandatory
Constraints on patientRole/addr	**3.5.1.2**	**55**
CONF-LUXH-PATRAD-1	The recordTarget/patientRole/addr element shall be provided.	mandatory
Constraints on patient	**3.5.1.4**	**56**
CONF-LUXH-PAT-1	The recordTarget/patientRole/patient element shall be provided	mandatory
CONF-LUXH-PAT-2	The recordTarget/patientRole/patient element shall not have a nullFlavor attribute	mandatory
CONF-LUXH-PAT-3	The patient/name element shall not have nullFlavor attribute	mandatory
CONF-LUXH-PAT-4	The patient/name element shall be not a simple name representation, instead be structured as specified in chapter: 3.1.3.2	mandatory
CONF-LUXH-PAT-5	The maiden name may be present	permitted
Constraints on administrativeGenderCode	**3.5.1.4.2**	**56**

CONF-LUXH-AGC-1	patient/administrativeGenderCode element SHALL be present	mandatory
CONF-LUXH-AGC-2	Values for code@code, @displayName and @codeSystem SHALL come from the Valueset eSanté_DocType. Authorized nullFlavor(s) is: UNK	mandatory
Constraints on birthTime	3.5.1.4.3	57
CONF-LUXH-BT-1	A patient/birthTime element SHALL be present and precise at least to the year. If unknown, it SHALL be represented using the nullFlavor="UNK".	mandatory
Constraints on maritalStatusCode	3.5.1.4.4	57
CONF-LUXH-MSCD-1	The maritalStatusCode, may be present. If present, values for maritalStatusCode@code, @displayName and @codeSystem SHALL come from the Valueset eSanté_MaritalStatus.	mandatory
Constraints on religiousAffiliationCode	3.5.1.4.5	58
CONF-LUXH-RACD-1	The religiousAffiliationCode may be present. If present, values for religiousAffiliationCode @code, @displayName and @codeSystem SHALL come from the Valueset eSanté_ReligiousAffiliation.	mandatory
Constraints on raceCode	3.5.1.4.6	58
CONF-LUXH-RCD-1	The raceCode and ethnicGroupCode shall not be present	mandatory
Constraints on guardian	3.5.1.5	59
CONF-LUXH-GUARD-1	The guardian element should be present when the patient is a minor child	mandatory
CONF-LUXH-GUARD-2	If patient/guardian/id is present and has no nullFlavor, it shall contain @root and @extension	mandatory
CONF-LUXH-GUARD-3	If patient/guardian/code is present and has no nullFlavor, values for patient/guardian/code@code, @displayName and @codeSystem SHALL come from the Valueset eSanté_GuardianRole.	mandatory
Constraints on birthplace	3.5.1.6	60
CONF-LUXH-BIRTHPL-1	The birthplace may be present	permitted

CONF-LUXH-BIRTHPL-2	If the birthplace is given either birthplace/place/name or birthplace/place/addr or both shall be present	mandatory
Constraints on author	3.5.2	61
CONF-LUXH-AUTHOR-1	The assignedAuthor element shall not have a nullFlavor attribute	mandatory
CONF-LUXH-AUTHOR-2	The assignedAuthor shall be a person (including the patient) or a system that contribute to the elaboration of the document	mandatory
CONF-LUXH-AUTHOR-3	The author/time represents the start time of the author's participation in the creation of the clinical document. It shall be present and shall be in the format YYYYMMDDhhmmss+/-HHMM	mandatory
CONF-LUXH-AUTHOR-4	If present, author/functionCode shall be from value set eSanté_AuthorRole	mandatory
Constraints on assignedAuthor	3.5.2.1	63
CONF-LUXH-AAUTHOR-1	If present, the author/assignedAuthor/code shall be from eSanté_AuthorSpecialty	mandatory
CONF-LUXH-AAUTHOR-2	For each author/assignedAuthor, id element can have nullFlavor, otherwise it shall have @root and may have an @extension attribute	mandatory
CONF-LUXH-AAUTHOR-3	assignedAuthor/code shall be provided if known	preferred
CONF-LUXH-AAUTHOR-4	assignedAuthor/id/@root attribute may have the values "1.3.182.4.1" for hpdID, "1.3.182.4.4" for SSN, 1.3.182.4.6 for code prestataire from CNS (UCM), "1.3.182.2.4.2" for DSPPID	preferred
Constraints on assignedAuthor/assignedPerson	3.5.2.1.1	64
CONF-LUXH-AAUTHORP-1	The assignedPerson shall be provided if known	preferred
CONF-LUXH-AAUTHORP-2	The name of the assignedPerson shall not use the simple name representation	mandatory
Constraints on assignedAuthoringDevice	3.5.2.1.2	65
CONF-LUXH-AAD-1	The manufacturerModelName shall be present in	preferred

	author/assignedAuthor/assignedAuthoring Device, if known	
CONF-LUXH-AAD-2	The softwareName shall be present in author/assignedAuthor/assignedAuthoring Device, if known	preferred
Constraints on assignedAuthor/representedOrg anization	3.5.2.1.3	65
CONF-LUXH-REPORGA-1	The representedOrganization may be provided	permitted
Constraints on dataEnterer	3.5.3	66
CONF-LUXH-DE-1	The local identifier of the dataEnterer element provided by the primary system shall be present and not nullFlavored	mandatory
Constraints on informant	3.5.4	67
CONF-LUXH-INFORM-1	The informant may be present	permitted
Constraints on informant/assignedEntity	3.5.4.1	68
CONF-LUXH-INFAE-1	When the informant is a healthcare provider, with an assigned role, the informant shall be represented using the assignedEntity element	mandatory
Constraints on custodian	3.5.5	70
CONF-LUXH-CUST-1	The custodian/assignedCustodian/represented CustodianOrganization/addr shall be provided if known.	preferred
Constraints on intendedRecipient	3.5.6.1	72
CONF-LUXH-IREC-1	For each informationRecipient there SHALL be exactly one informationRecipient/intendedRecipient/inf ormationRecipient	mandatory
CONF-LUXH-IREC-2	The intendedRecipient/id shall be provided	mandatory
Constraints on legalAuthenticator	3.5.7	73
CONF-LUXH-LAUTH-1	The legalAuthenticator shall be present	mandatory
CONF-LUXH-LAUTH-2	The value of the signatureCode@code shall be "S"	mandatory
Constraints on authenticator	3.5.8	75
CONF-LUXH-AUTH-1	The authenticator may be present	permitted

CONF-LUXH-AUTH-2	The value of the signatureCode shall be "S"	mandatory
Constraints on participant	3.5.9	76
CONF-LUXH-PART-1	The participant/@typeCode shall be from the value set eSanté_ParticipantTypeCode	mandatory
CONF-LUXH-PART-2	The participant/functionCode shall be from the value set eSanté_ParticipationFunction	mandatory
CONF-LUXH-PART-3	The participant/associatedEntity/@classCode shall be from the value set eSanté_AssociatedEntityClassCode	mandatory
CONF-LUXH-PART-4	In participant/associatedEntity, only one addr is allowed	mandatory
CONF-LUXH-PART-5	Only the combinations described Table 72 are allowed, with the correct valuesets	mandatory
Constraints on relatedDocument	3.6.1	80
CONF-LUXH-RELDOC-1	Only typeCode "RPLC" and "XFRM" shall be used	mandatory
CONF-LUXH-RELDOC-2	A document can have two relatedDocument entries where one shall be of typeCode "RPLC" and the other of typeCode "XFRM"	mandatory
CONF-LUXH-RELDOC-3	If given, the relatedDocument/parentDocument shall have one id	mandatory
CONF-LUXH-RELDOC-4	Other parameters of relatedDocument/parentDocument than the id, shall be omitted	mandatory
Constraints on inFulfillmentOf	3.6.2	82
CONF-LUXH-IFUOF-1	The inFulfillmentOf@typeCode shall have the value "FLFS"	mandatory
Constraints on inFulfillmentOf/order	3.6.2.2	82
CONF-LUXH-IFUOFORD-1	The inFulfillmentOf/order/id shall have the ids provided in the order as described in 3.6.2.2	mandatory
Constraints on documentationOf	3.6.3	83
CONF-LUXH-DOCOF-1	When a documentationOf is present, serviceEvent/effectiveTime low value should be present for the main act. If the high value is not known, the	preferred

	nullFlavor "UNK" is allowed. If the effectiveTime describes a point in time, the low and high attribute should have the same value.	
CONF-LUXH-DOCOF-2	Maximum one id is allowed in documentationOf/serviceEvent	mandatory
CONF-LUXH-DOCOF-3	The serviceEvent/code element is required and unique [1..1]. If unknown, nullFlavor=UNK shall be provided	mandatory
Constraints on serviceEvent	3.6.3.1	86
CONF-LUXH-SERVEVN-1	The serviceEvent/performer/@typeCode shall be from eSanté_ServiceEventPerformerType	mandatory
Constraints on authorization	3.6.4	87
CONF-LUXH-AUTHZ-1	The authorization element need not to be used	permitted
CONF-LUXH-AUTHZ-2	The authorization/consent/statusCode SHALL have the @code='completed'	mandatory
CONF-LUXH-AUTHZ-3	If authorization/consent/code is present and has no nullFlavor, values for code@code, @displayName and @codeSystem SHALL come from the Valueset eSanté_ConsentCode.	mandatory
Constraints on componentOf	3.6.5	88
CONF-LUXH-COMPOF-1	If the date of the beginning or the end of the encounter is not known, only the nullFlavor "UNK" shall be used.	mandatory
Constraints on encompassingEncounter	3.6.5.1	90
CONF-LUXH-ENCENC-1	The encompassingEncounter/id shall be present.	mandatory
CONF-LUXH-ENCENC-2	The encompassingEncounter/code shall be present	mandatory
CONF-LUXH-ENCENC-3	If id is not nullFlavored, the encompassingEncounter/id/@extension shall be present	mandatory
CONF-LUXH-ENCENC-4	Values for encompassingEncounter/code@code, @displayName and @codeSystem SHALL come from the Valueset eSanté_ActEncounterCode.	mandatory

CONF-LUXH-ENCENC-5	Values for encompassingEncounter/dischargeDispositionCode@code, @displayName and @codeSystem SHALL come from the Valueset eSanté_DischargeDispositionCode.	mandatory
Constraints on encounterParticipant	3.6.5.3	91
CONF-LUXH-ENCPART-1	If encounterParticipant is given, the encounterParticipant/@typeCode shall be from the value set eSanté_EncounterParticipantType	mandatory
Constraints on location	3.6.5.4	92
CONF-LUXH-LOCA-1	If componentOf is present, the location/healthCareFacility/serviceProviderOrganization shall be present	mandatory