Health & Care Information Model:

nl.zorg.Problem-v4.1.1

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1. nl.zorg.Problem-v4.1.1

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1.1 Revision History

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Bevat: ZIB-400, ZIB-453.

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1.2 Concept

A problem describes a situation with regard to an individual's health and/or welfare. This situation can be described by the person involved (the patient) themselves (in the form of a complaint), or by their healthcare provider (in the form of a diagnosis, for example). The situation can form cause for diagnostic or therapeutic policy.
A problem includes all kinds of medical or nursing information that represents a health problem. A problem can represent various types of health problems:

- A complaint, finding by patient: a subjective, negatively experienced observation of the patient's health. Examples: stomach ache, amnesia
- A symptom: an observation by or about the patient which may indicate a certain disease. Examples: fever, blood in stool, white spots on the roof of the mouth;
- A diagnosis: medical interpretation of complaints and findings. Examples: Diabetes Mellitus type II, pneumonia, hemolytic-uremic syndrome.
- A functional limitation: a reduction of functional options. Examples: reduced mobility, help required for dressing.
- A complication: Every diagnosis seen by the healthcare provider as an unforeseen and undesired result of medical action. Examples: post-operative wound infections, loss of hearing through the use of antibiotics.

1.3 Mindmap

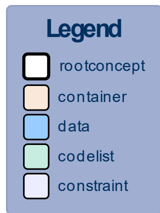
1.4 Purpose

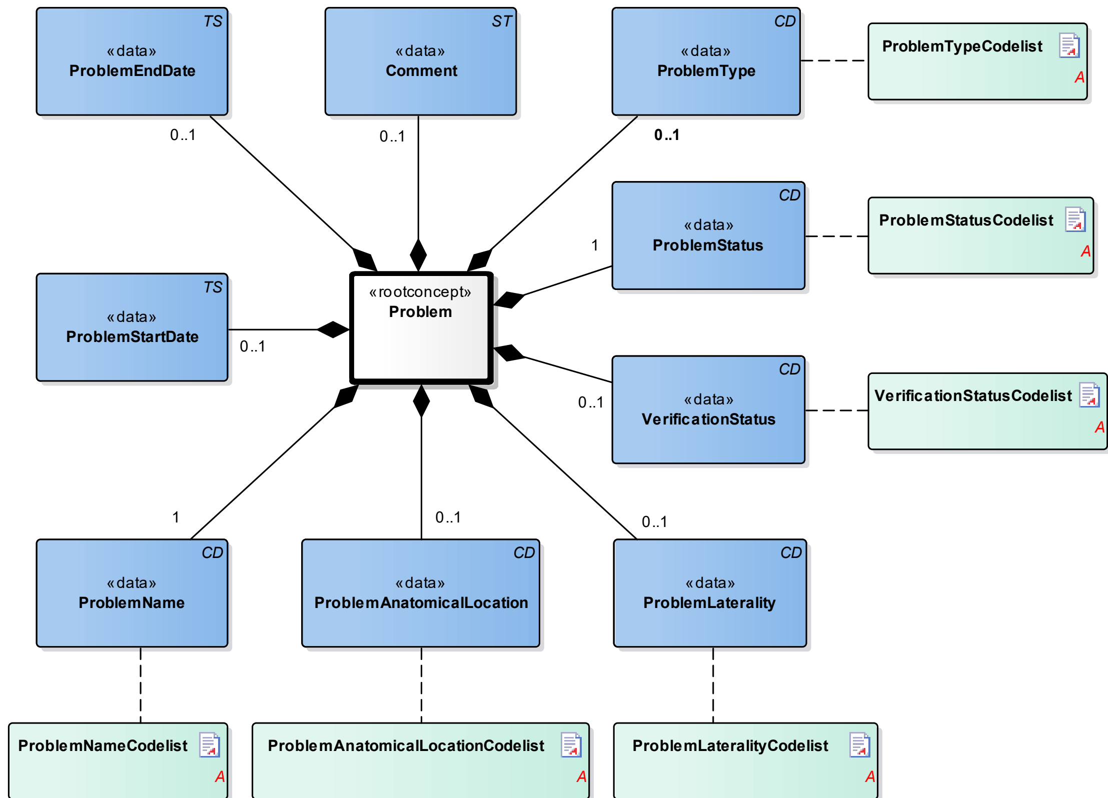
An overview of a patient's health problems has the purpose of informing all healthcare providers involved in the patient's care on the patient's current and past health condition. It provides insight into which problems require medical action, which are under control and which are no longer current. The problem overview also directly provides medical context for medication administered and procedures carried out.
The overview promotes an efficient, targeted continuation of the patient's care.
A complete list of problems is of importance for automated decision support and determining contraindications.

1.5 Patient Population

1.6 Evidence Base

1.7 Information Model





«rootconcept»	Problem	
Definitie	Root concept of the Problem information model. A problem describes a situation with regard to an individual's health and/or welfare. This situation can be described by the patient himselve (in the form of a complaint) or by their healthprofessional (in the form of a diagnosis, for example).	
Datatype		
DCM::ConceptId	NL-CM:5.1.1	
Opties		

«data»	ProblemType	
Definitie	The type of problem; see the concept description.	
Datatype	CD	
DCM::ConceptId	NL-CM:5.1.8	
DCM::ExampleValue	Symptoom	
DCM::ValueSet	ProblemTypeCodelist	OID: 2.16.840.1.113883.2.4.3.11.60.40.2.5.1.1
Opties		

«data»	ProblemName	
Definitie	The problem name defines the problem. Depending on the setting, different code systems can be used. The ProblemNameCodelist provides an overview of the possible code systems.	
Datatype	CD	
DCM::ConceptId	NL-CM:5.1.3	
DCM::ExampleValue	Nausea	

DCM::ValueSet	ProblemNameCodelist	OID: 2.16.840.1.113883.2.4.3.11.60.40.2.5.1.3
Opties		

«data»	ProblemStartDate	
Definitie	Onset of the disorder to which the problem applies. Especially in symptoms in which it takes longer for the final diagnosis, it is important to know not only the date of the diagnosis, but also how long the patient has had the disorder. A 'vague' date, such as only the year or the month and the year, is permitted.	
Datatype	TS	
DCM::ConceptId	NL-CM:5.1.6	
DCM::ExampleValue	12-05-2011	
Opties		

«data»	ProblemEndDate	
Definitie	Date on which the disorder to which the problem applies, is considered not to be present anymore.This datum needs not to be the same as the date of the change in problem status. A 'vague' date, such as only the year or the month and the year, is permitted.	
Datatype	TS	
DCM::ConceptId	NL-CM:5.1.9	
Opties		

«data»	ProblemStatus	
Definitie	The problem status describes the condition of the problem: 1. Active problems are problems of which the patient experiences symptoms or for which evidence exists. 2. Problems with the status 'Inactive' refer to problems that don't affect the patient anymore or that of which there is no evidence of existence anymore.	
Datatype	CD	
DCM::ConceptId	NL-CM:5.1.4	
DCM::ExampleValue	Actueel	
DCM::ValueSet	ProblemStatusCodelist	OID: 2.16.840.1.113883.2.4.3.11.60.40.2.5.1.2
Opties		

«data»	VerificationStatus	
Definitie	Clinical status of the problem or the diagnosis.	
Datatype	CD	
DCM::ConceptId	NL-CM:5.1.10	
DCM::DefinitionCode	SNOMED CT:408729009 Finding context	
DCM::ValueSet	VerificationStatusCodelist	OID: 2.16.840.1.113883.2.4.3.11.60.40.2.5.1.4
Opties		

«data»	ProblemAnatomicalLocation
Definitie	Anatomical location which is the focus of the procedure.

Datatype	CD
DCM::ConceptId	NL-CM:5.1.11	
DCM::DefinitionCode	SNOMED CT: 405813007 Procedure site - Direct	
DCM::ValueSet	ProblemAnatomicalLocation Codelist	OID: 2.16.840.1.113883.2.4.3.11.60.40.2.5.1.5
Opties		

«data»	ProblemLaterality	
Definitie	Laterality adds information about body side to the anatomic location, *e.g.* left	
Datatype	CD	
DCM::ConceptId	NL-CM:5.1.12	
DCM::DefinitionCode	SNOMED CT: 272741003 Laterality	
DCM::ValueSet	ProblemLateralityCodelist	OID: 2.16.840.1.113883.2.4.3.11.60.40.2.5.1.6
Opties		

«data»	Comment	
Definitie	Comment by the one who determined or updated the Problem.	
Datatype	ST	
DCM::ConceptId	NL-CM:5.1.5	
DCM::DefinitionCode	LOINC: 48767-8 Annotation comment	
Opties		

«document»	ProblemAnatomicalLocationCodelist	
Definitie		
Datatype		
DCM::ValueSetBinding	Extensible	
DCM::ValueSetId	2.16.840.1.113883.2.4.3.11.60.40.2.5.1.5	
Opties		

ProbleemAnatomischeLocatieCodelijst		OID: 2.16.840.1.113883.2.4.3.11.60.40.2.5.1.5
Codes	Coding Syst. Name	Coding System OID
SNOMED CT: < 442083009 |Anatomical or acquired body structure|	SNOMED CT	2.16.840.1.113883.6.96

«document»	ProblemLateralityCodelist	
Definitie		
Datatype		
DCM::ValueSetBinding	Extensible	
DCM::ValueSetId	2.16.840.1.113883.2.4.3.11.60.40.2.5.1.6	
Opties		

ProbleemLateraliteitCodelijst		OID: 2.16.840.1.113883.2.4.3.11.60.40.2.5.1.6		
Concept Name	Concept Code	CodeSys.	CodeSystem OID	Description

		Name		
Left	7771000	SNOMED CT	2.16.840.1.113883.6.96	Links
Right	24028007	SNOMED CT	2.16.840.1.113883.6.96	Rechts
Right and left	51440002	SNOMED CT	2.16.840.1.113883.6.96	Rechts en links

«document»	ProblemNameCodelist	
Definitie		
Datatype		
DCM::ValueSetBinding	Extensible	
DCM::ValueSetId	2.16.840.1.113883.2.4.3.11.60.40.2.5.1.3	
Opties		

ProbleemNaamCodelijst		**OID: 2.16.840.1.113883.2.4.3.11.60.40.2.5.1.3**
Codes	Coding Syst. Name	Coding System OID
Alle waarden	Diagnosethesaurus DHD (SNOMED CT)	2.16.840.1.113883.2.4.3.120.5.1
Alle waarden	ICD-10	2.16.840.1.113883.6.90
Alle waarden	Nationale Kernset Patiëntproblemen V&VN (SNOMED CT)	2.16.840.1.113883.2.4.3.11.26.4
Alle waarden	NANDA-I	2.16.840.1.113883.6.20
Alle waarden	Omaha Systems	2.16.840.1.113883.6.98
Alle waarden	ICF	2.16.840.1.113883.6.254
Alle waarden	ICPC-1 NL	2.16.840.1.113883.2.4.4.31.1
Alle waarden	G-Standaard Contra Indicaties (Tabel 40)	2.16.840.1.113883.2.4.4.1.902.40
Alle waarden	DSM-IV	2.16.840.1.113883.6.126
Alle waarden	DSM-V	2.16.840.1.113883.6.344

«document»	VerificationStatusCodelist	
Definitie		
Datatype		
DCM::ValueSetBinding	Extensible	
DCM::ValueSetId	2.16.840.1.113883.2.4.3.11.60.40.2.5.1.4	
Opties		

VerificatieStatusCodelijst			**OID: 2.16.840.1.113883.2.4.3.11.60.40.2.5.1.4**	
Concept Name	**Concept Code**	**Codesystem**	**Codesystem OID**	**Description**
Suspected	415684004	SNOMED CT	2.16.840.1.113883.6.96	Werk
Known possible	410590009	SNOMED CT	2.16.840.1.113883.6.96	Differentiaal
Confirmed present	410605003	SNOMED CT	2.16.840.1.113883.6.96	Bevestigd
Known absent	410516002	SNOMED CT	2.16.840.1.113883.6.96	Uitgesloten
Unknown	UNK	NullFlavor	2.16.840.1.113883.5.1008	Onbekend

«document»	ProblemTypeCodelist	
Definitie		
Datatype		
DCM::ValueSetBinding	Extensible	
DCM::ValueSetId	2.16.840.1.113883.2.4.3.11.60.40.2.5.1.1	
Opties		

ProbleemTypeCodelijst			OID: 2.16.840.1.113883.2.4.3.11.60.40.2.5.1.1	
Concept Name	**Concept Code**	**Codesystem**	**Codesystem OID**	**Description**
Diagnosis	282291009	SNOMED CT	2.16.840.1.113883.6.96	Diagnose
Symptom	418799008	SNOMED CT	2.16.840.1.113883.6.96	Symptoom
Complaint	409586006	SNOMED CT	2.16.840.1.113883.6.96	Klacht
Functional Limitation	248536006	SNOMED CT	2.16.840.1.113883.6.96	Functionele Beperking
Complication	116223007	SNOMED CT	2.16.840.1.113883.6.96	Complicatie

«document»	ProblemStatusCodelist	
Definitie		
Datatype		
DCM::ValueSetBinding	Extensible	
DCM::ValueSetId	2.16.840.1.113883.2.4.3.11.60.40.2.5.1.2	
Opties		

ProbleemStatusCodelijst			OID: 2.16.840.1.113883.2.4.3.11.60.40.2.5.1.2	
Concept Name	**Concept Code**	**Codesystem**	**Codesystem OID**	**Description**
Active	55561003	SNOMED CT	2.16.840.1.113883.6.96	Actueel
Inactive	73425007	SNOMED CT	2.16.840.1.113883.6.96	Niet actueel

1.8 Example Instances

Probleem						
ProbleemType	**ProbleemNaam**	**Probleem BeginDatum**	**ProbleemStatus**	**Probleem EindDatum**	**Verificatie Status**	**Toelichting**
Klacht	Oedeem	10-08-2012	Actueel			Geleidelijk in de loop van dagen erger geworden. Geen roodheid of pijn.
Diagnose	Nefrotisch syndroom	11-2012	Actueel		Werkdiagnose	Membraneuze glomerulopathie.

Probleem						
ProbleemType	**ProbleemNaam**	**Probleem BeginDatum**	**ProbleemStatus**	**Probleem EindDatum**	**Verificatie Status**	**Toelichting**
Diagnose	Anteroseptaal myocardinfarct	24-05-1998	Niet actueel	11-12-1998	Bevestigd	Coronarialijden als complicatie diabetes.
Diagnose	Hartfalen		Actueel		Bevestigd	Opnieuw actief geworden.
Klacht	Kortademigheid	15-11-2012	Niet actueel			
Diagnose	Diabetes mellitus type II	1996	Actueel		Bevestigd	

Probleem						
ProbleemType	**ProbleemNaam**	**Probleem BeginDatum**	**ProbleemStatus**	**Probleem EindDatum**	**Verificatie Status**	**Toelichting**
Diagnose	Polsfractuur links	20-04-2011	Niet actueel	07-06-2011	Bevestigd	Gevallen op kunstijsbaan.

1.9 Instructions

For the nursing domain: When two parties use different coding systems, the Snomed CT-based V&VN Dutch nursing problem list should be used for exchange, so data becomes comparable and exchangeable. A mapping table is available from the V&VN Dutch nursing problem list to Omaha System, NANDA-I and ICF.

1.10 Interpretation

1.11 Care Process

1.12 Example of the Instrument

1.13 Constraints

1.14 Issues

1.15 References

1. openEHR-EHR-EVALUATION.problem.v1 [Online] Beschikbaar op: http://www.openehr.org/knowledge/ [Geraadpleegd: 23 juli 2014].

2. North American Nursing Diagnosis Association [Online] Beschikbaar op: http://www.nanda.org [Geraadpleegd: 23 juli 2014].

3. Diagnosethesaurus. Dutch Hospital Data [Online] Beschikbaar op: http://www.dutchhospitaldata.nl [Geraadpleegd: 23 juli 2014].

4. Health Level Seven International EHR Technical Committee (February 2007) *Electronic Health Record–System Functional Model, Release 1.* Chapter Three: Direct Care Functions.

5. HL7 (April 2007) *HL7 Implementation Guide: CDA Release 2 – Continuity of Care Document (CCD)*

6. Nederlands Huisartsen Genootschap (2013) *HIS-Referentiemodel 2013*

1.16 Functional Model

1.17 Traceability to other Standards

1.18 Disclaimer

The Health and Care Information Models (a.k.a Clinical Building Block) has been made in collaboration with several different parties in healthcare. These parties asked Nictiz to manage good maintenance and development of the information models. Hereafter, these parties and Nictiz are referred to as the collaborating parties. The collaborating parties paid utmost attention to the reliability and topicality of the data in these Health and Care Information Models. Omissions and inaccuracies may however occur. The collaborating parties are not liable for any damages resulting from omissions or inaccuracies in the information provided, nor are they liable for damages resulting from problems caused by or inherent to distributing information on the internet, such as malfunctions, interruptions, errors or delays in information or services provide by the parties to you or by you to the parties via a website or via e-mail, or any other digital means. The collaborating parties will also not accept liability for any damages resulting from the use of data, advice or ideas provided by or on behalf of the parties by means of the Health and Care Information Models. The parties will not accept any liability for the content of information in this Health and Care

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