

# **Health & Care Information Model:**

**nl.zorg.Problem-v4.6.1**

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# Content

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# 1. nl.zorg.Problem-v4.6.1

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## 1.1 Revision History

### Publicatieversie 1.0 (15-02-2013)

-

### Publicatieversie 1.1 (01-07-2013)

-

### Publicatieversie 1.2 (01-04-2015)

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ZIB-94, ZIB-154, ZIB-200, ZIB-201, ZIB-309, ZIB-324, ZIB-326.

### Publicatieversie 3.0 (01-05-2016)

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Bevat: ZIB-107, ZIB-108, ZIB-446, ZIB-459, ZIB-467, ZIB-549, ZIB-564, ZIB-529, ZIB-576.

### Publicatieversie 4.1 (31-12-2017)

Bevat: ZIB-579, ZIB-646.

### Publicatieversie 4.1.1 (01-10-2018)

Bevat: ZIB-661.

### Publicatieversie 4.2 (26-02-2019)

Bevat: ZIB-624, ZIB-627.

Publicatieversie 4.2.1 (06-07-2019)  
Bevat: ZIB-816.

Publicatieversie 4.3 (31-01-2020)  
Bevat: ZIB-908, ZIB-963, ZIB-987.

Publicatieversie 4.4 (01-09-2020)  
Bevat: ZIB-1116, ZIB-1147, ZIB-1175, ZIB-1202, ZIB-1133.

Publicatieversie 4.5 (01-12-2021)  
Bevat: ZIB-1433, ZIB-1477, ZIB-1575.

Publicatieversie 4.6 (10-06-2022)  
Bevat: ZIB-1571, ZIB-1610.

Publicatieversie 4.6.1 (15-10-2023)  
Bevat: ZIB-1828, ZIB-1974.

## 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.

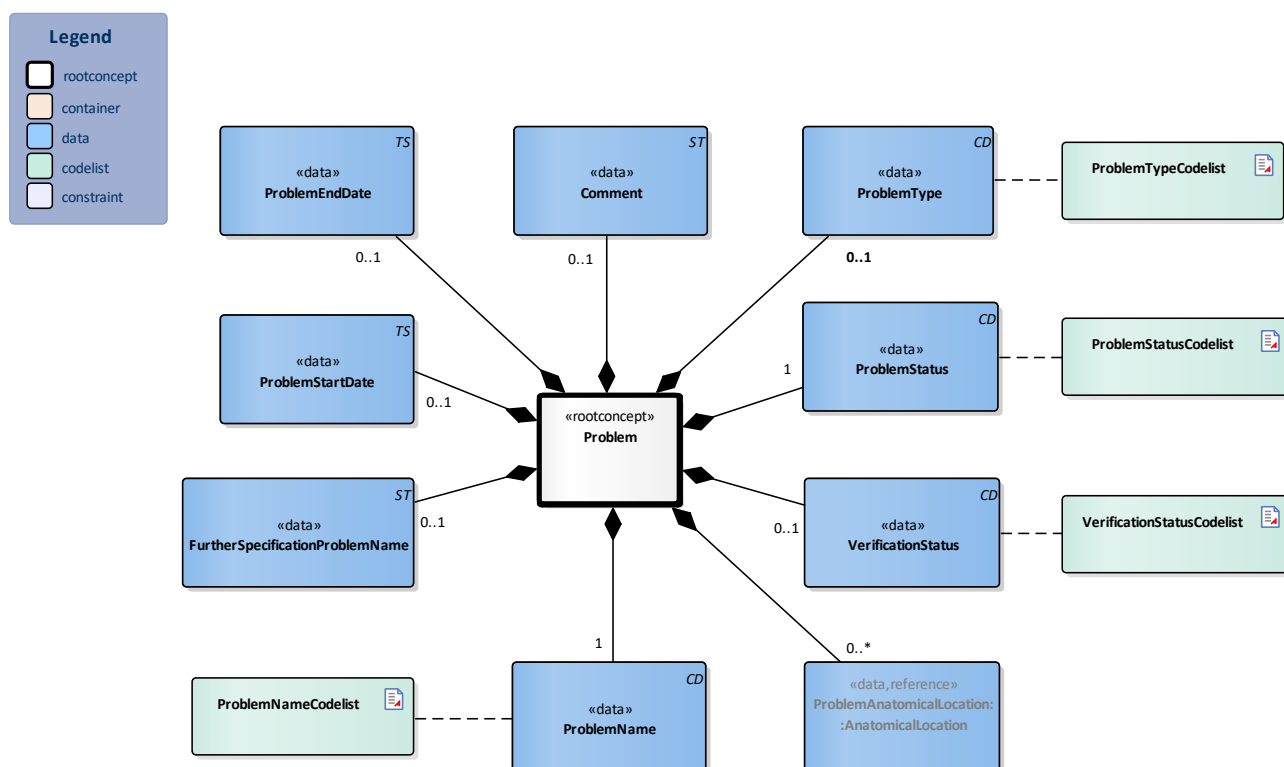
The overview promotes an efficient, targeted continuation of the patient's care.

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
<b>Definitie</b>	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 (in the form of a complaint) or by the health professional (in the form of a diagnosis, for example).
<b>Datatype</b>	
<b>DCM::ConceptId</b>	NL-CM:5.1.1
<b>Opties</b>	

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

«data»	ProblemName
<b>Definitie</b>	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.
<b>Datatype</b>	CD
<b>DCM::ConceptId</b>	NL-CM:5.1.3
<b>DCM::ExampleValue</b>	Nausea
<b>DCM::ValueSet</b>	ProblemNameCodelist OID: 2.16.840.1.113883.2.4.3.11.60.40.2.5.1.3

<b>Opties</b>	
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«data»	FurtherSpecificationProblemName	
<b>Definitie</b>	Further specification of problem name when it is recorded via a thesaurus or code system in which the required level of detail is not (yet) available.	
<b>Datatype</b>	ST	
<b>DCM::ConceptId</b>	NL-CM:5.1.13	
<b>DCM::ExampleValue</b>	veroorzaakt door vossenlintworm	
<b>Opties</b>		

«data»	ProblemAnatomicalLocation::AnatomicalLocation	
<b>Definitie</b>	Anatomical location which is the focus of the problem.	
<b>Datatype</b>		
<b>DCM::ConceptId</b>	NL-CM:5.1.14	
<b>DCM::DefinitionCode</b>	SNOMED CT: 363698007 Finding site	
<b>DCM::ReferencedConceptId</b>	NL-CM:20.7.1	This is a reference to the rootconcept of information model AnatomicalLocation.
<b>Opties</b>		

«data»	ProblemStartDate	
<b>Definitie</b>	Onset of the symptom, complaint, functional limitation, complication or date of diagnosis. A 'vague' date, such as only the year or the month and the year, is permitted.	
<b>Datatype</b>	TS	
<b>DCM::ConceptId</b>	NL-CM:5.1.6	
<b>DCM::ExampleValue</b>	12-05-2011	
<b>Opties</b>		

«data»	ProblemEndDate	
<b>Definitie</b>	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.	
<b>Datatype</b>	TS	
<b>DCM::ConceptId</b>	NL-CM:5.1.9	
<b>Opties</b>		

«data»	ProblemStatus	
<b>Definitie</b>	<p>The problem status describes the condition of the problem:</p> <ol style="list-style-type: none"> <li>Active problems are problems of which the patient experiences symptoms or for which evidence exists.</li> <li>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.</li> </ol>	
<b>Datatype</b>	CD	
<b>DCM::ConceptId</b>	NL-CM:5.1.4	
<b>DCM::ExampleValue</b>	Actueel	
<b>DCM::ValueSet</b>	ProblemStatusCodelist	OID: 2.16.840.1.113883.2.4.3.11.60.40.2.5.1.2
<b>Opties</b>		

«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»	Comment	
Definitie	Comment on the Problem that is determined.	
Datatype	ST	
DCM::ConceptId	NL-CM:5.1.5	
DCM::DefinitionCode	LOINC: 48767-8 Annotation comment	
Opties		

«document»	ProblemNameCodelist	
Definitie		
Datatype		
DCM::ValueSetBinding	Required	
DCM::ValueSetId	2.16.840.1.113883.2.4.3.11.6 0.40.2.5.1.3	
HCIM::ValueSetLanguage	--	
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	DHD Diagnosethesaurus	2.16.840.1.113883.2.4.3.120.5.1
Alle waarden	ICD-10, dutch translation	2.16.840.1.113883.6.3.2
SNOMED CT: ^11721000146100   Dutch nursing problem simple reference set	SNOMED CT	2.16.840.1.113883.6.96
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	DSM-IV	2.16.840.1.113883.6.126
Alle waarden	DSM-5	2.16.840.1.113883.6.344
Alle waarden	GGZ Diagnoselijst	2.16.840.1.113883.3.3210.14.2.2.35

«document»	VerificationStatusCodelist			
Definitie				
Datatype				
DCM::ValueSetBinding	Required			
DCM::ValueSetId	2.16.840.1.113883.2.4.3.11.6 0.40.2.5.1.4			
HCIM::ValueSetLanguage	--			
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	2.16.840.1.113883.2.4.3.11.6 0.40.2.5.1.1			
HCIM::ValueSetLanguage	--			
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
Finding	404684003	SNOMED CT	2.16.840.1.113883.6.96	Bevinding
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		Required		
DCM::ValueSetId		2.16.840.1.113883.2.4.3.11.6 0.40.2.5.1.2		
HCIM::ValueSetLanguage		--		
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

		Legend		
Definitie				
Datatype				
Opties				

## 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	Coronariaalijden 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. For the mental health domain, if the GGZ diagnosis list is used then the description of the relevant diagnosis from the DSM-5 or DSM-IV must be entered in the 'comments' of this HCIM.

## 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**

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