

Health & Care Information Model:

nl.zorg.part.PharmaceuticalProduct-v2.2

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1. nl.zorg.part.PharmaceuticalProduct-v2.2

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DCM::Id	2.16.840.1.113883.2.4.3.11.60.40.3.9.7
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DCM::LifecycleStatus	Final
DCM::ModelerList	Architectuurgroep Registratie aan de Bron
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HCIM::PublicationLanguage	EN

1.1 Revision History

Publicatieversie 1.0 (04-09-2017)

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Publicatieversie 2.1 (06-07-2019)

Bevat: ZIB-781, ZIB-788, ZIB- 792, ZIB-795, ZIB-796, ZIB-797.

Publicatieversie 2.1.1 (31-01-2020)

Bevat: ZIB-789.

Publicatieversie 2.1.2 (01-09-2020)

Bevat: ZIB-911.

Publicatieversie 2.1.3 (01-12-2021)

Bevat: ZIB-1452.

Publicatieversie 2.2 (10-06-2022)

Bevat: ZIB-1453, ZIB-1651, ZIB-1726.

1.2 Concept

The prescribed substance is usually medication. However, medical aids and bandages can also be prescribed and supplied via the pharmacy. Food and blood products do not strictly belong in the medication category, but can be prescribed and supplied by a pharmacy as well.

A type of medication can be indicated with a **single code**. That code can be chosen from several possible coding systems (concretely: GPK, PRK, HPK or article numbers). Correct use of these codes in the software systems will sufficiently record the composition of the product used, making a complete product specification unnecessary.

In addition to a primary code, **alternative codes** from other coding systems can also be entered (so that the GPK can be sent along in the event that the patient was registered based on PRK, for example).

Entering multiple ingredients will enable you to display a compound product. If one of the composite parts is liquid, the dosage will be given in milliliters; otherwise it will be given in 'units'.

In that case, the **composition of the medication** can be specified implicitly (with the use of a medication code) or explicitly, for example by listing the (active) ingredient(s) of the medication.

Magistral prescriptions can be entered as well. This can be done by means of the option listed above to enter coded ingredients and/or by entering the composition and preparation method as free text. This is a partial information model

1.3 Mindmap

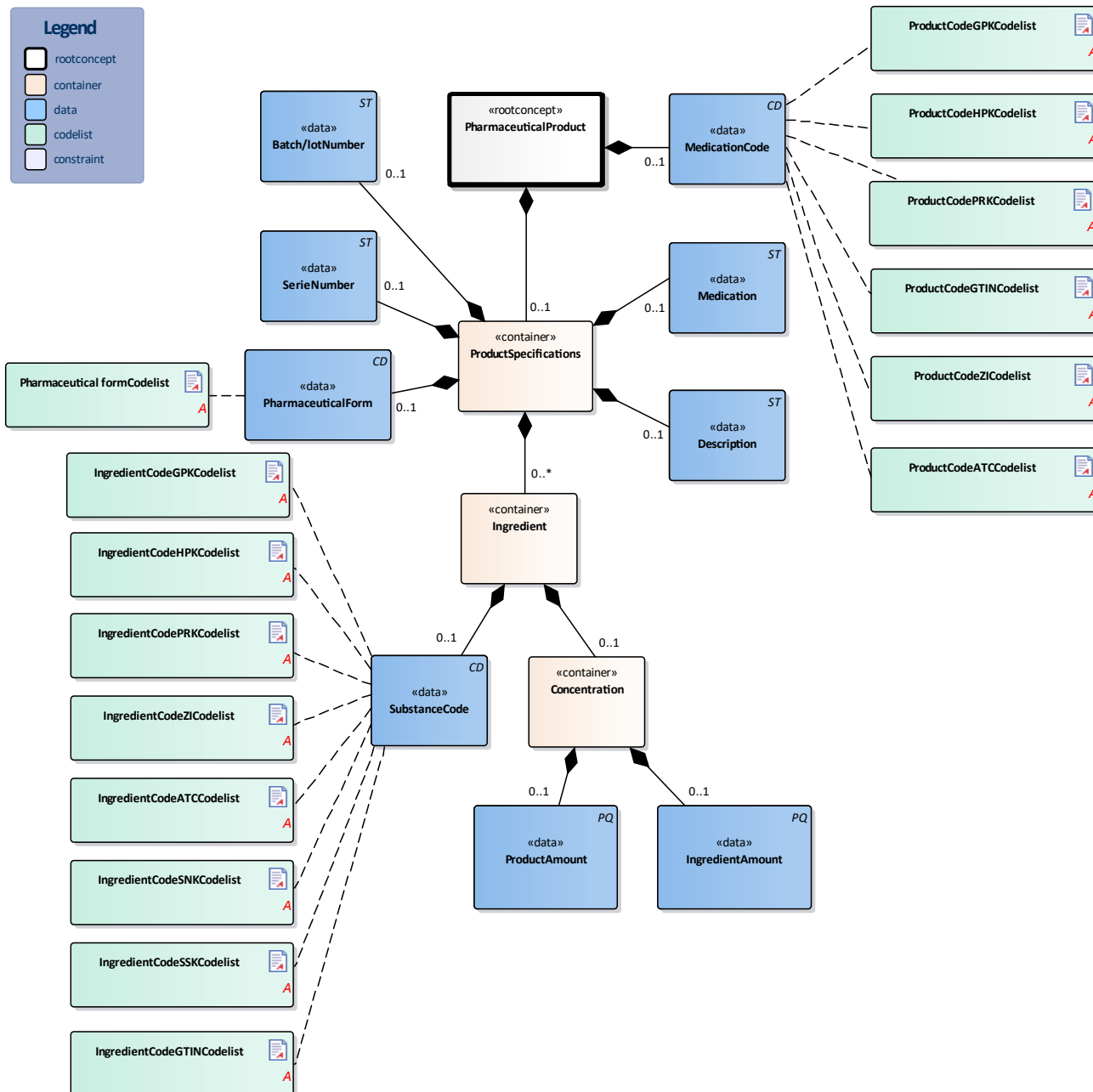
1.4 Purpose

The purpose of Product is to unambiguously describe the medication to be used.

1.5 Patient Population

1.6 Evidence Base

1.7 Information Model



«rootconcept»	PharmaceuticalProduct
Definitie	Root concept of the PharmaceuticalProduct partial information model. This root concept contains all data elements of the PharmaceuticalProduct partial information model.
Datatype	
DCM::ConceptId	NL-CM:9.7.19926
Opties	

«data»	MedicationCode
Definitie	<p>Coding medication in the Netherlands is done on the basis of the G standard (issued by Z-index), which is filled under the direction of KNMP.</p> <p>The coded medication can be expressed as:</p> <ul style="list-style-type: none"> • GTIN International Article Number • ZI-nummer (2.16.840.1.113883.2.4.4.8) • Trade product code (HPK) • Prescription code (PRK) • Generic product code (GPK) • Anatomic Therapeutic Classification code (ATC)

	<ul style="list-style-type: none"> Substance Name Code (SNK) Substance Name Code, in combination with Route of Administration (SSK) SNOMED CT code <p>The GTIN enables identification of the product including its origin with a barcode.</p> <p>The ZI number represents the trade product and the package size.</p> <p>The HPK is the code for the trade product (with the brand name) as used per dose/per time the medication is taken (1 pill, 1 puff, 1ml)</p> <p>The PRK contains als GPK information supplemented with information needed to prescribe the right product. this level is intended to facilitate generic prescription of drugs.</p> <p>The GPK defines the pharmaceutical characteristics of a product: ingredients, strengths, units, pharmaceutical form and route of administration.</p> <p>The Substance Name Code (SNK) is the (active) compound.</p> <p>Further information about the G-Standaard levels see https://www.z-index.nl</p> <p>So called 90.000.000 numbers are used in local IT systems. These numbers shall not be used for external communication. In the this is necessary only the description (not the code) may be included. This is in accordance with national agreements (Nictiz Standard).</p>
Datatype	CD
DCM::ConceptId	NL-CM:9.7.19927
DCM::ExampleValue	PRK 67903 PARACETAMOL TABLET 500MG
DCM::ValueSet	ProductCodeGPKCodelist OID: 2.16.840.1.113883.2.4.3.11.60.40.2.9.7.6
DCM::ValueSet	ProductCodeATCCodelist OID: 2.16.840.1.113883.2.4.3.11.60.40.2.9.7.7
DCM::ValueSet	ProductCodeGTINCodelist OID: 2.16.840.1.113883.2.4.3.11.60.40.2.9.7.2
DCM::ValueSet	ProductCodePRKCodelist OID: 2.16.840.1.113883.2.4.3.11.60.40.2.9.7.3
DCM::ValueSet	ProductCodeHPKCodelist OID: 2.16.840.1.113883.2.4.3.11.60.40.2.9.7.5
DCM::ValueSet	ProductCodeZICodelist OID: 2.16.840.1.113883.2.4.3.11.60.40.2.9.7.1
Opties	

«container»	ProductSpecifications
Definitie	<p>Container of the ProductSpecifications concept. This container contains all data elements of the ProductSpecifications concept.</p> <p>Product specifications are required if the product code is not sufficient to ascertain the active substances and strength.</p>
Datatype	
DCM::ConceptId	NL-CM:9.7.19928
Opties	

«data»	Batch/lotNumber
Definitie	<p>The batch/lot number provides a unique identification of the origin of information such as the production batch or machine number. The number is constructed according to the GS1 standard AI(10).(https://www.gs1.nl/sectorafspraken-over-standaarden/unieke-identificatie</p>

	-en-productdata-gezondheidszorg/gs1-barcodes-2#application-identifiers-ais)
Datatype	ST
DCM::ConceptId	NL-CM:9.7.22279
Opties	

«data»	SerieNumber
Definitie	The serial number uniquely identifies the source of information of the dose itself. The number is constructed according to the GS1 standard AI(21). (https://www.gs1.nl/sectorafspraken-over-standaarden/unieke-identificatie-en-productdata-gezondheidszorg/gs1-barcodes-2#application-identifiers-ais)
Datatype	ST
DCM::ConceptId	NL-CM:9.7.22280
Opties	

«data»	PharmaceuticalForm
Definitie	The pharmaceutical form indicates the form of the medication. Examples include: tablet, suppository, infusion liquid, ointment. If the product has a GPK code in the G standard, the form will be known in the G standard. For products without a code (free text, preparation by the pharmacy), the means of administration can be entered.
Datatype	CD
DCM::ConceptId	NL-CM:9.7.19931
DCM::ExampleValue	230 (TABLET)
DCM::ValueSet	Pharmaceutical formCodelist OID: 2.16.840.1.113883.2.4.3.11.60.40.2.9.7.8
Opties	

«data»	Medication
Definitie	For medication which has no code, enter the complete name of the pharmaceutical product here.
Datatype	ST
DCM::ConceptId	NL-CM:9.7.19929
DCM::ExampleValue	PARACETAMOL 500MG TABLET
Opties	

«data»	Description
Definitie	A textual description of the type of medication (including relevant properties of the composition and preparation method if possible), which is only used if no coded indication from the G Standard is available (historical data regarding magistral preparation which has been entered as free text instead of entering the substance codes).
Datatype	ST
DCM::ConceptId	NL-CM:9.7.19784
Opties	

«container»	Ingredient
Definitie	Container of the Ingredient concept. This container contains all data elements of the Ingredient concept.

	<p>A product contains one or more active substances and excipients. These are usually determined by the product code. For medication prepared or compounded by the local pharmacy, each ingredient must be entered separately.</p> <p>The active substances play an important role, as they:</p> <p>a) determine the pharmacotherapeutic effect of the medication and</p> <p>b) serve as the basis for the indication of the strength of the medication (e.g. 200mg).</p>	
Datatype		
DCM::ConceptId	NL-CM:9.7.19932	
DCM::ExampleValue	captopril	
Opties		

«data»	SubstanceCode	
Definitie	<p>Active substance or excipient.</p> <p>Here, the same codes can be used as for the ProductCode (for dilutions and compounds in particular), but now, the ATC, SSK and SNK codes can also be used to indicate a substance (to list ingredients of local products prepared by the pharmacy).</p> <ul style="list-style-type: none"> • GTIN International Article Number • KNMP article number • Trade product code (HPK) • Prescription code (PRK) • Generic product code (GPK) • ATC (anatomic therapeutic classification) • SSK (substance name code with route of administration) • SNK (substance name code) <p>For further explanation about ATC see https://www.whocc.no/atc/structure_and_principles/</p>	
Datatype	CD	
DCM::ConceptId	NL-CM:9.7.19934	
DCM::ExampleValue	SNK 28045	CAPTOPRIL
DCM::ValueSet	IngredientCodeZICodelist	OID: 2.16.840.1.113883.2.4.3.11.60.40.2.9.7.12
DCM::ValueSet	IngredientCodeSNKCodelist	OID: 2.16.840.1.113883.2.4.3.11.60.40.2.9.7.14
DCM::ValueSet	IngredientCodeGTINCodelist	OID: 2.16.840.1.113883.2.4.3.11.60.40.2.9.7.16
DCM::ValueSet	IngredientCodePRKCodelist	OID: 2.16.840.1.113883.2.4.3.11.60.40.2.9.7.11
DCM::ValueSet	IngredientCodeHPKCodelist	OID: 2.16.840.1.113883.2.4.3.11.60.40.2.9.7.10
DCM::ValueSet	IngredientCodeGPKCodelist	OID: 2.16.840.1.113883.2.4.3.11.60.40.2.9.7.9
DCM::ValueSet	IngredientCodeSSKCodelist	OID: 2.16.840.1.113883.2.4.3.11.60.40.2.9.7.15
DCM::ValueSet	IngredientCodeATCCodelist	OID: 2.16.840.1.113883.2.4.3.11.60.40.2.9.7.13
Opties		

«container»	Concentration
Definitie	<p>The relative amount of this ingredient in this product.</p> <p>Calculation of Concentration = Ingredient Amount ÷ Product Amount.</p> <p>This could be a concentration if the medication is dissolved in liquid, for</p>

	example.
Datatype	
DCM::ConceptId	NL-CM:9.7.19933
DCM::ExampleValue	25mg/stuk of 50IE/ml of 200mg/500ml
Opties	

«data»	IngredientAmount
Definitie	The amount and unit of this ingredient. This is the numerator for the calculation of the concentration. The unit should be selected from the G-Standard (Table 902).
Datatype	PQ
DCM::ConceptId	NL-CM:9.7.22277
DCM::ExampleValue	5 ml 20 mg
Opties	

«data»	ProductAmount
Definitie	Amount of the product. This is the denominator for the calculation of the concentration. Optionally a translation to NHG table Gebruiksvoorschriften(Table 25) is also allowed.
Datatype	PQ
DCM::ConceptId	NL-CM:9.7.22278
DCM::ExampleValue	200 ml 500 mg
Opties	

«document»	ProductCodeZICodelist
Definitie	
Datatype	
DCM::ValueSetBinding	Required
DCM::ValueSetId	2.16.840.1.113883.2.4.3.11. 60.40.2.9.7.1
HCIM::ValueSetLanguage	--
Opties	

ProductCodeZICodelijst		OID: 2.16.840.1.113883.2.4.3.11.60.40.2.9.7.1
Codes	Coding Syst. Name	Coding System OID
Alle waarden	G-Standaard Artikelen (ook KNMP-nummer, ATKODE)	2.16.840.1.113883.2.4.4.8

«document»	ProductCodeGTINCodelist
Definitie	
Datatype	
DCM::ValueSetBinding	Required
DCM::ValueSetId	2.16.840.1.113883.2.4.3.11. 60.40.2.9.7.2
HCIM::ValueSetLanguage	--
Opties	

ProductCodeGTINCodelijst		OID: 2.16.840.1.113883.2.4.3.11.60.40.2.9.7.2
Codes	Coding Syst. Name	Coding System OID
Alle waarden	Global Trade Item Number (GTIN)	1.3.160

«document»		ProductCodePRKCodeList
Definitie		
Datatype		
DCM::ValueSetBinding	Required	
DCM::ValueSetId	2.16.840.1.113883.2.4.3.11.60.40.2.9.7.3	
HCIM::ValueSetLanguage	--	
Opties		
ProductCodePRKCodeLijst		OID: 2.16.840.1.113883.2.4.3.11.60.40.2.9.7.3
Codes	Coding Syst. Name	Coding System OID
Alle waarden	G-Standaard Voorschrijfproducten (PRK)	2.16.840.1.113883.2.4.4.10

«document»		ProductCodeHPKCodeList
Definitie		
Datatype		
DCM::ValueSetBinding	Required	
DCM::ValueSetId	2.16.840.1.113883.2.4.3.11.60.40.2.9.7.5	
HCIM::ValueSetLanguage	--	
Opties		
ProductCodeHPKCodeLijst		OID: 2.16.840.1.113883.2.4.3.11.60.40.2.9.7.5
Codes	Coding Syst. Name	Coding System OID
Alle waarden	G-Standaard Handels Product Kode (HPK)	2.16.840.1.113883.2.4.4.7

«document»		ProductCodeGPKCodeList
Definitie		
Datatype		
DCM::ValueSetBinding	Required	
DCM::ValueSetId	2.16.840.1.113883.2.4.3.11.60.40.2.9.7.6	
HCIM::ValueSetLanguage	--	
Opties		
ProductCodeGPKCodeLijst		OID: 2.16.840.1.113883.2.4.3.11.60.40.2.9.7.6
Codes	Coding Syst. Name	Coding System OID
Alle waarden	G-Standaard Generieke Product Kode (GPK)	2.16.840.1.113883.2.4.4.1

«document»		ProductCodeATCCCodeList
Definitie		
Datatype		
DCM::ValueSetBinding	Required	
DCM::ValueSetId	2.16.840.1.113883.2.4.3.11.60.40.2.9.7.7	
HCIM::ValueSetLanguage	--	
Opties		

ProductCodeATCCodelijst		OID: 2.16.840.1.113883.2.4.3.11.60.40.2.9.7.7
Codes	Coding Syst. Name	Coding System OID
Alle waarden	Anatomic Therapeutic Classification (ATC)	2.16.840.1.113883.6.73

«document»	Pharmaceutical formCodelist	
Definitie		
Datatype		
DCM::ValueSetBinding	Required	
DCM::ValueSetId	2.16.840.1.113883.2.4.3.11.60.40.2.9.7.8	
HCIM::ValueSetLanguage	--	
Opties		

FarmaceutischeVormCodelijst		OID: 2.16.840.1.113883.2.4.3.11.60.40.2.9.7.8
Codes	Coding Syst. Name	Coding System OID
Alle waarden	G-Standaard Farmaceutische vormen	2.16.840.1.113883.2.4.4.11

«document»	IngredientCodeGPKCodelist	
Definitie		
Datatype		
DCM::ValueSetBinding	Required	
DCM::ValueSetId	2.16.840.1.113883.2.4.3.11.60.40.2.9.7.9	
HCIM::ValueSetLanguage	--	
Opties		

IngredientCodeGPKCodelijst		OID: 2.16.840.1.113883.2.4.3.11.60.40.2.9.7.9
Codes	Coding Syst. Name	Coding System OID
Alle waarden	G-Standaard Generieke Product Kode (GPK)	2.16.840.1.113883.2.4.4.1

«document»	IngredientCodeHPKCodelist	
Definitie		
Datatype		
DCM::ValueSetBinding	Required	
DCM::ValueSetId	2.16.840.1.113883.2.4.3.11.60.40.2.9.7.10	
HCIM::ValueSetLanguage	--	
Opties		

IngredientCodeHPKCodelijst		OID: 2.16.840.1.113883.2.4.3.11.60.40.2.9.7.10
Codes	Coding Syst. Name	Coding System OID
Alle waarden	G-Standaard Handels Product Kode (HPK)	2.16.840.1.113883.2.4.4.7

«document»	IngredientCodePRKCodelist	
Definitie		
Datatype		

DCM::ValueSetBinding	Required	
DCM::ValueSetId	2.16.840.1.113883.2.4.3.11.60.40.2.9.7.11	
HCIM::ValueSetLanguage	--	
Opties		

IngredientCodePRKCodelijst		OID: 2.16.840.1.113883.2.4.3.11.60.40.2.9.7.11
Codes	Coding Syst. Name	Coding System OID
Alle waarden	G-Standaard Voorschrijfproducten (PRK)	2.16.840.1.113883.2.4.4.10

«document»	IngredientCodeZICodelist	
Definitie		
Datatype		
DCM::ValueSetBinding	Required	
DCM::ValueSetId	2.16.840.1.113883.2.4.3.11.60.40.2.9.7.12	
HCIM::ValueSetLanguage	--	
Opties		

IngredientCodeZICodelijst		OID: 2.16.840.1.113883.2.4.3.11.60.40.2.9.7.12
Codes	Coding Syst. Name	Coding System OID
Alle waarden	G-Standaard Artikelen (ook KNMP-nummer, ATKODE)	2.16.840.1.113883.2.4.4.8

«document»	IngredientCodeATCCodelist	
Definitie		
Datatype		
DCM::ValueSetBinding	Required	
DCM::ValueSetId	2.16.840.1.113883.2.4.3.11.60.40.2.9.7.13	
HCIM::ValueSetLanguage	--	
Opties		

IngredientCodeATCCodelijst		OID: 2.16.840.1.113883.2.4.3.11.60.40.2.9.7.13
Codes	Coding Syst. Name	Coding System OID
Alle waarden	Anatomic Therapeutic Classification (ATC)	2.16.840.1.113883.6.73

«document»	IngredientCodeSNKCodelist	
Definitie		
Datatype		
DCM::ValueSetBinding	Required	
DCM::ValueSetId	2.16.840.1.113883.2.4.3.11.60.40.2.9.7.14	
HCIM::ValueSetLanguage	--	
Opties		

IngredientCodeSNKCodelijst		OID: 2.16.840.1.113883.2.4.3.11.60.40.2.9.7.14
Codes	Coding Syst. Name	Coding System OID
Alle waarden	G-standaard Stofnaamcode (SNK)	2.16.840.1.113883.2.4.4.1.750

«document»		IngredientCodeSSKCodelist
Definitie		
Datatype		
DCM::ValueSetBinding	Required	
DCM::ValueSetId	2.16.840.1.113883.2.4.3.11.60.40.2.9.7.15	
HCIM::ValueSetLanguage	--	
Opties		
IngredientCodeSSKCodelijst		OID: 2.16.840.1.113883.2.4.3.11.60.40.2.9.7.15
Codes	Coding Syst. Name	Coding System OID
Alle waarden	G-standaard Stofnaamcode i.c.m. toedieningsweg (SSK)	2.16.840.1.113883.2.4.4.1.725

«document»		IngredientCodeGTINCodelist
Definitie		
Datatype		
DCM::ValueSetBinding	Required	
DCM::ValueSetId	2.16.840.1.113883.2.4.3.11.60.40.2.9.7.16	
HCIM::ValueSetLanguage	--	
Opties		
IngredientCodeGTINCodelijst		OID: 2.16.840.1.113883.2.4.3.11.60.40.2.9.7.16
Codes	Coding Syst. Name	Coding System OID
Alle waarden	Global Trade Item Number (GTIN)	1.3.160

Legend	
Definitie	
Datatype	
Opties	

1.8 Example Instances

Afgesproken geneesmiddel
Farmaceutischproduct
Lisinopril tablet 10mg
Methotrexaat injvst 25mg/ml 0,6 ml

1.9 Instructions

1.10 Interpretation

1.11 Care Process

1.12 Example of the Instrument

1.13 Constraints

1.14 Issues

1.15 References

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 Information Model to which or from which a hyperlink is referred. In the event of contradictions in mentioned Health and Care Information Model documents and files, the most recent and highest version of the listed order in the revisions will indicate the priority of the documents in question. If information included in the digital version of a Health and Care Information Model is also distributed in writing, the written version will be leading in case of textual differences. This will apply if both have the same version number and date. A definitive version has priority over a draft version. A revised version has priority over previous versions.

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