Health & Care Information Model:

nl.zorg.MedicationPrescription-v3.0

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1. nl.zorg.MedicationPrescription-v3.0

DCM::CoderList	Kerngroep Registratie aan de Bron
DCM::ContactInformation.Address	
DCM::ContactInformation.Name	*
DCM::ContactInformation.Telecom	
DCM::ContentAuthorList	Projectgroep Generieke Overdrachtsgegevens & Kerngroep Registratie aan de Bron
DCM::CreationDate	19-12-2013
DCM::DeprecatedDate	
DCM::DescriptionLanguage	nl
DCM::EndorsingAuthority.Address	
DCM::EndorsingAuthority.Name	PM
DCM::EndorsingAuthority.Telecom	
DCM::Id	2.16.840.1.113883.2.4.3.11.60.40.3.9.5
DCM::KeywordList	Medicatie, Voorschrift
DCM::LifecycleStatus	Final
DCM::ModelerList	Kerngroep Registratie aan de Bron
DCM::Name	nl.zorg.MedicatieVoorschrift
DCM::PublicationDate	1-5-2016
DCM::PublicationStatus	Published
DCM::ReviewerList	Projectgroep Generieke Overdrachtsgegevens & Kerngroep Registratie aan de Bron
DCM::RevisionDate	22-5-2015
DCM::Superseeds	nl.nfu.MedicatieVoorschrift-v1.0.1
DCM::Version	3.0
HCIM::PublicationLanguage	EN

1.1 Revision History

Publicatieversie 1.0 (01-04-2015)
Bevat: ZIB-56, ZIB-78, ZIB-80, ZIB-144, ZIB-145, ZIB-308, ZIB-353.

Incl. algemene wijzigingsverzoeken:
ZIB-94, ZIB-154, ZIB-200, ZIB-201, ZIB-309, ZIB-324, ZIB-326.

Publicatieversie 1.0.1 (22-05-2015)
Bevat: ZIB-393, ZIB-390, ZIB-377, ZIB-376, ZIB-372.

Publicatieversie 3.0 (01-05-2016)
Bevat: ZIB-453

1.2 Concept

A medication prescription is an agreement or order for the use of medication in which the following are described: the prescribed product, instructions for use or administration and (optionally) a request for delivery.
The dose information is given for every prescribed product: the start date and time, and if possible stop date and time or total number of administrations, administering schedule (frequency or interval, administering times, link with meals etc.), the number of doses, administering speed or time (for drips), and the route of administration.
An indication can also be included of whether the medication is only to be administered ‘as needed’ and under which conditions the product is to be used, and how high the agreed maximum dose is in a certain period.

If possible, the reason or indication of starting/stopping/changes in use is to be included.
Medication that has been discontinued temporarily can be included as well.
If the prescription also contains the order to provide a product to a patient or to an administerer, it can officially be referred to as a prescription.

1.3 Mindmap

1.4 Purpose

The goal of the medication prescription is to provide insight in the therapeutic intention of the healthcare provider in terms of treatment with medicines. Furthermore, it offers the option to record any requests asking the provider of the medication to provide medication to the patient.

1.5 Patient Population

1.6 Evidence Base

Content-wise, the information model was made to support the national medication transfer guidelines (www.medicatieoverdracht.nl). The appendices to the guidelines describe how the structure can depend on the healthcare providers involved, the local situation and the existing preconditions. The concept guidelines provide sufficient space for this. That means that the collaborating healthcare providers draw up their own protocol, applicable to their specific situation. In other words, information details in transfers within the second line may differ from those in transfers between the first and second line, or between healthcare providers and pharmacies.

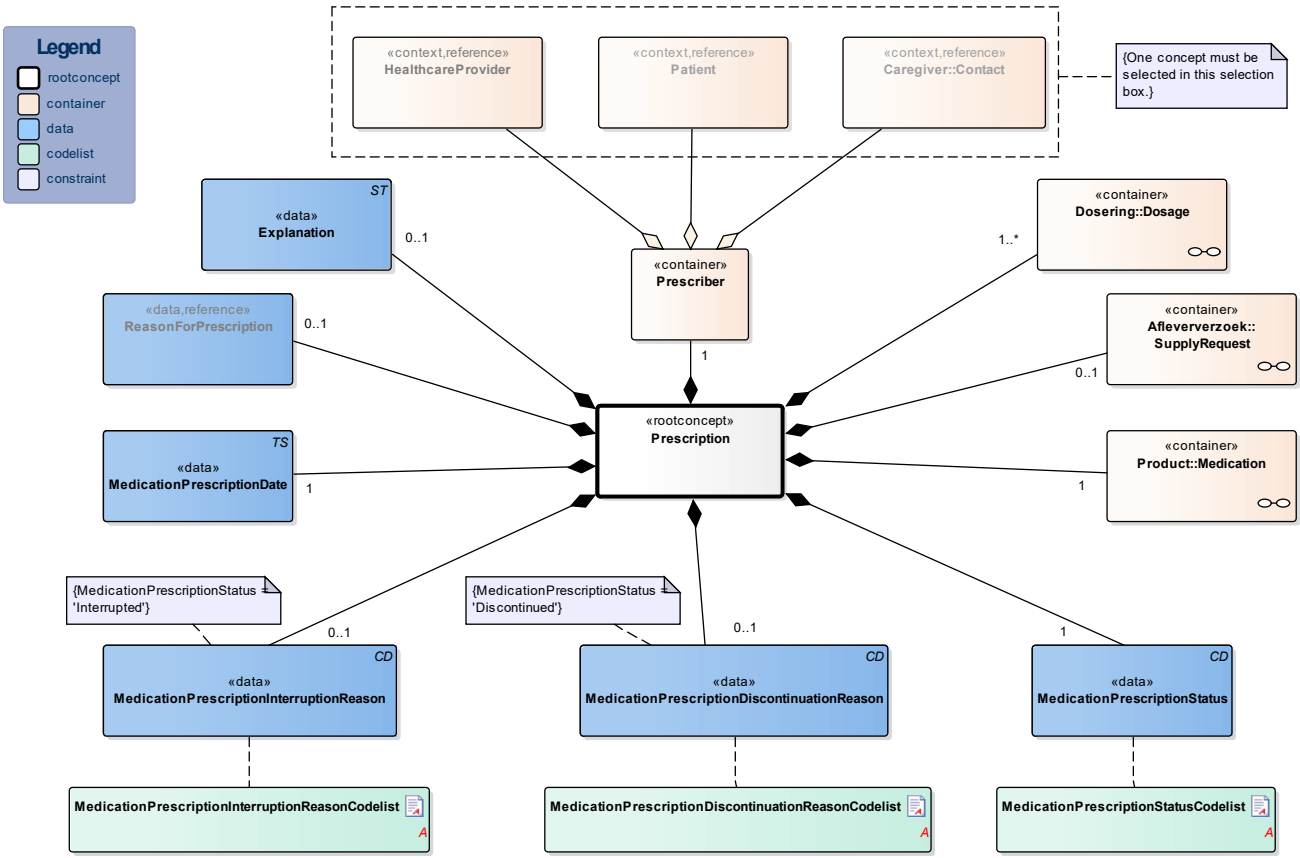
Where possible, coding within the Medication domain is based on the G standard (managed by the firm Z-index). This is because in the Netherlands, almost all software packages for electronic prescriptions, pharmacy management and medication monitoring are based on this standard. The content of the G standard is very precisely updated under the direction of the KNMP in consultation with stakeholders, including the software suppliers.

The following were taken into account in determining restrictions and instructions on information domains (value sets) to be used:
- Implementation Guidelines HL7 v3 medication information
- Data set Medication process

The results of the 'G standard platform' consultations between users and developers of the G standard and content experts were taken into account as well.

The information model for medication is very extensive. In simple implementations, the following are of primary importance:
- the correct product name and coding
- medication use (patient information)
- the instructions, which can take the form of a prescription (with agreements on use and requests to supply the medication) or a medication order (only administering instructions)
- dosage instructions with the route of administration, dose per administration, period of use (start and stop date), dose schedule and other administering instructions
- the reason for prescription (prescriber information) or reason for use (patient information)
- the status (active, interrupted, discontinued or completed)

1.7 Information Model



«rootconcept»	Prescription
Definitie	Root concept of the MedicationPrescription information model. This root concept contains all data elements of the MedicationPrescription information model.
Datatype	
DCM::ConceptId	NL-CM:9.5.1
Opties	

«data»	MedicationPrescriptionStatus
Definitie	The MedicationPrescriptionStatus indicates whether the prescription is actively used, temporarily interrupted, or by now discontinued. The status describes the consecutive stages of the prescription process and is important for the indication of the schedule for use. Interrupting (home) use often occurs in the event of admittance to a healthcare facility, prior to a procedure and in response to monitoring (level determination, effect measurements, etc.). When documenting this, the following interpretations are used: • Active: The product is used. • Interrupted: Use has (temporarily) been interrupted, because of a surgical procedure, for example. Later, the patient and/or doctor can decide whether or not to resume or discontinue use. • Discontinued: There is an assignment or agreement to discontinue use. • Completed: The prescription has now been completed (according to the plan, prescription or agreement).

Datatype	CD	
DCM::ConceptId	NL-CM:9.5.7	
DCM::ExampleValue	Actief	
DCM::ValueSet	MedicationPrescriptionStatusCodelist	OID: 2.16.840.1.113883.2.4.3.11.60.40.2.9.5.1
Opties		

«data»	MedicationPrescriptionDiscontinuationReason	
Definitie	Reason for discontinuing the use of a certain medicine.	
Datatype	CD	
DCM::ConceptId	NL-CM:9.5.8	
DCM::ValueSet	MedicationPrescriptionDiscontinuationReasonCodelist	OID: 2.16.840.1.113883.2.4.3.11.60.40.2.9.5.2
Opties		

«data»	MedicationPrescriptionInterruptionReason	
Definitie	Reason for interrupting the use of a certain medicine.	
Datatype	CD	
DCM::ConceptId	NL-CM:9.5.9	
DCM::ValueSet	MedicationPrescriptionInterruptionReasonCodelist	OID: 2.16.840.1.113883.2.4.3.11.60.40.2.9.5.3
Opties		

«data»	MedicationPrescriptionDate	
Definitie	Date on which the prescription was issued.	
Datatype	TS	
DCM::ConceptId	NL-CM:9.5.10	
Opties		

«data»	ReasonForPrescription	
Definitie	The medical reason for the prescription or for use of the medication. This can be used to enter a medical indication which was the direct cause for prescription or for use of the medication in question. It can concern every type of problem (or condition) of the patient, almost always a diagnosis, complaint or symptom. Please note: The BST401T file of the G standard contains a "special reference" to indicate that "exchange of the reason for prescription is essential".	
Datatype		
DCM::ConceptId	NL-CM:9.5.2	
DCM::ExampleValue	Pneumonia due to Streptococcus pneumoniae	
DCM::ReferencedConceptId	NL-CM:5.1.2	This is a reference to concept Probleem in information model OverdrachtConcern.
Opties		

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

	elements of the Prescriber concept. The person who prescribed the prescription.	
Datatype		
DCM::ConceptId	NL-CM:9.5.41	
Opties		

«context»	HealthcareProvider	
Definitie	The healthcare provider responsible for the prescription.	
Datatype		
DCM::ConceptId	NL-CM:9.5.3	
DCM::ReferencedConceptId	NL-CM:17.1.1	This is a reference to concept Zorgverlener in information model Zorgverlener.
Opties		

«context»	Patient	
Definitie	The patient who prescribed their own product.	
Datatype		
DCM::ConceptId	NL-CM:9.5.42	
DCM::ReferencedConceptId	NL-CM:0.1.1	Dit is een verwijzing naar concept Patiënt in information model Patient.
Opties		

«context»	Caregiver::Contact	
Definitie	The caregiver who prescribed the product.	
Datatype		
DCM::ConceptId	NL-CM:9.5.43	
DCM::ReferencedConceptId	NL-CM:3.1.1	Dit is een verwijzing naar concept Contactpersoon in information model Contactpersoon.
Opties		

«data»	Explanation	
Definitie	Comments on the medication prescription.	
Datatype	ST	
DCM::ConceptId	NL-CM:9.5.44	
Opties		

«document»	MedicationPrescriptionStatusCodelist	
Definitie		
Datatype		
DCM::ValueSetId	2.16.840.1.113883.2.4.3.11.60.40.2.9.5.1	
Opties		

MedicatieVoorschriftStatusCodelijst	**OID: 2.16.840.1.113883.2.4.3.11.60.40.2.9.5.1**

Concept Name	Concept Code	Code System Name	Code System OID	Description
Active	active	ActStatus	2.16.840.1.113883.5.14	Actief
Suspended	suspended	ActStatus	2.16.840.1.113883.5.14	Onderbroken
Aborted	aborted	ActStatus	2.16.840.1.113883.5.14	Afgebroken
Completed	completed	ActStatus	2.16.840.1.113883.5.14	Voltooid

«document»	MedicationPrescriptionDiscontinuationReasonCodelist
Definitie	
Datatype	
DCM::ValueSetId	2.16.840.1.113883.2.4.3.11.60.40.2.9.5.2
Opties	

MedicatieVoorschriftRedenVanStoppenCodelijst	OID: 2.16.840.1.113883.2.4.3.11.60.40.2.9.5.2

Concept Name	Concept Code	Coding Syst. Name	Coding System OID	Description
Intolerance	SINTOL	ActReason	2.16.840.1.113883.5.8	Bijwerking, allergie of intolerantie
Condition alert [Proposed therapy may be inappropriate or contraindicated due to an existing/recent patient condition or diagnosis]	COND	ActCode	2.16.840.1.113883.5.4	Contra-indicatie [comorbiditeit, diagnose]
Drug interacts with another drug	SDDI	ActReason	2.16.840.1.113883.5.8	Interactie [interactie met ander medicament met hogere urgentie]
Dose change	DOSECHG	ActReason	2.16.840.1.113883.5.8	Dosiswijziging
No longer required for treatment	NOREQ	ActReason	2.16.840.1.113883.5.8	Niet langer vereist voor de behandeling [indicatie vervallen]
Ineffective	INEFFECT	ActReason	2.16.840.1.113883.5.8	Niet effectief
Formulary policy	FP	ActReason	2.16.840.1.113883.5.8	Ander voorschrijfbeleid
Product discontinued	DISCONT	ActReason	2.16.840.1.113883.5.8	Product niet meer leverbaar
Not covered	NOTCOVER	ActReason	2.16.840.1.113883.5.8	Product wordt niet vergoed
Patient request	PAT	ActReason	2.16.840.1.113883.5.8	Informatie of wens patiënt

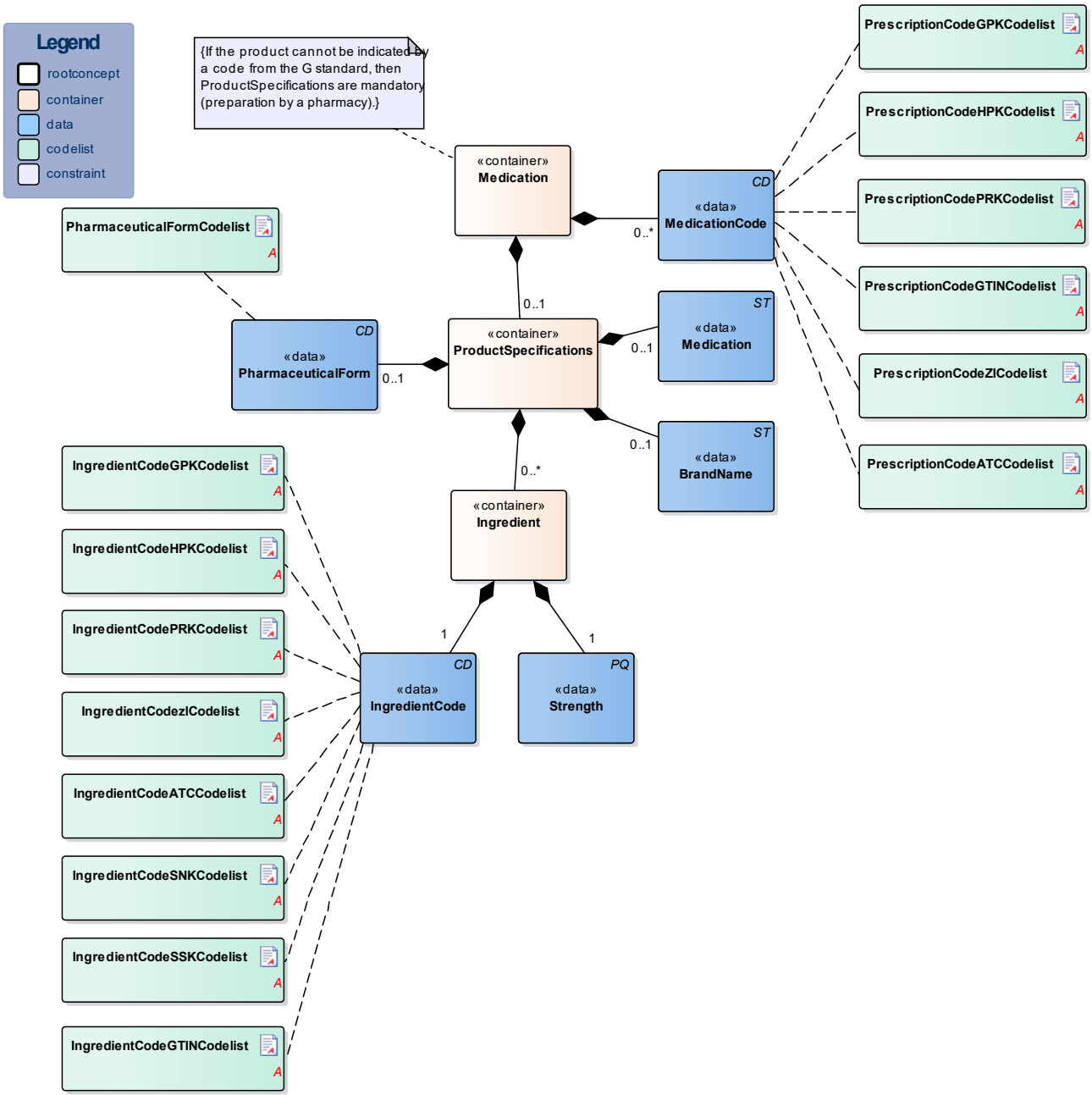
«document»	MedicationPrescriptionInterruptionReasonCodelist
Definitie	
Datatype	

DCM::ValueSetId	2.16.840.1.113883.2.4.3.11.60.40.2.9.5.3	
Opties		

MedicatieVoorschriftRedenVanOnderbrekenCodelijst			OID: 2.16.840.1.113883.2.4.3.11.60.40.2.9.5.3	
Concept Name	**Concept Code**	**Code System Name**	**Code System OID**	**Description**
Drug level too high	DRUGHIGH	ActReason	2.16.840.1.113883.5.8	Te hoge geneesmiddel spiegel
Lab interference issues	LABINT	ActReason	2.16.840.1.113883.5.8	Interferentie met gepland labonderzoek
Parent is pregnant/breastfeeding	PREG	ActReason	2.16.840.1.113883.5.8	Zwangerschap of borstvoeding
Patient not-available	NON-AVAIL	ActReason	2.16.840.1.113883.5.8	Patiënt is tijdelijk afwezig of ondergaat ingreep
Response to monitoring	MONIT	ActReason	2.16.840.1.113883.5.8	Reactie op monitoring
Drug interacts with another drug	SDDI	ActReason	2.16.840.1.113883.5.8	Interactie met ander medicament met hogere urgentie
Duplicate therapy	SDUPTHER	ActReason	2.16.840.1.113883.5.8	Een andere therapie maakt het gebruik tijdelijk overbodig

Patient scheduled for surgery	SURG	ActReason	2.16.840.1.113883.5.8	Geplande ingreep
Waiting for old drug to wash out	WASHOUT	ActReason	2.16.840.1.113883.5.8	Tijdelijk onderbreken tot ander geneesmiddel geen werking meer uitoefent

1.7.1 Product



«container»	Medication
Definitie	Container of the Product concept. This container contains all data elements of the Product concept. The prescribed product is usually a medicine. However, medical aids and bandages can also be prescribed and supplied via the pharmacy. Strictly speaking, food and blood products do not 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) substance(s) of the medication. **Prescriptions to be prepared by the pharmacy** 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.
Datatype	
DCM::ConceptId	NL-CM:9.5.6
Opties	

«data»	MedicationCode
Definitie	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. The coded medication can be expressed as: • GTIN International Article Number • KNMP article number = ATKODE (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) • SNOMED CT code • 90.000.000 number (individual code setting) (or similar from the facility) The GTIN enables identification of the product including its origin with a barcode. The ATKODE is the number with which wholesalers link the article to

	pharmacy systems (e.g. a box with 3 strips of 10 tablets). 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) The PRK codes for the same product as the HPK does, but is not linked to a manufacturer (no brand name, no characteristics such as color, geometrical shape etc.). This code will enable a generic prescription, while still defining which trade product can be taken (e.g. a 200ml bag). The generic product code defines the composition of a product, and is sufficient for recording the prescription, but not the order. The prescription code (PRK) was developed and added to the older generic (GPK) and supplier-specific (HPK, ATKODE) coding to enable a generic product to be entered without listing a specific brand on the one hand, and to enable providing enough information to support the pharmacy supplying it on the other. The GTIN coding is used for the implementation of a barcode scanning standard and to be able to trace the origin of the product. The 90.000.000 number is used in accordance with national agreements.	
Datatype	CD	
DCM::ConceptId	NL-CM:9.5.33	
DCM::ExampleValue	55026 (CARBASALAATCALCIUM TABLET 100MG)	
DCM::ValueSet	PrescriptionCodeATCCodelist	OID: 2.16.840.1.113883.2.4.3.11.60.40.2.9.5.20
DCM::ValueSet	PrescriptionCodeZICodelist	OID: 2.16.840.1.113883.2.4.3.11.60.40.2.9.5.13
DCM::ValueSet	PrescriptionCodeGTINCodelist	OID: 2.16.840.1.113883.2.4.3.11.60.40.2.9.5.11
DCM::ValueSet	PrescriptionCodePRKCodelist	OID: 2.16.840.1.113883.2.4.3.11.60.40.2.9.5.10
DCM::ValueSet	PrescriptionCodeHPKCodelist	OID: 2.16.840.1.113883.2.4.3.11.60.40.2.9.5.9
DCM::ValueSet	PrescriptionCodeGPKCodelist	OID: 2.16.840.1.113883.2.4.3.11.60.40.2.9.5.8
Opties		

«container»	ProductSpecifications	
Definitie	Container of the ProductSpecifications concept. This container contains all data elements of the ProductSpecifications concept. Product specifications are required if the product code is not sufficient to ascertain the active substances and strength.	
Datatype		
DCM::ConceptId	NL-CM:9.5.34	
Opties		

«data»	Medication
Definitie	There is no code for medication entered in free text. In these cases, enter the complete description.
Datatype	ST

DCM::ConceptId	NL-CM:9.5.35	
DCM::ExampleValue	PARACETAMOL 500MG TABLET	
Opties		

«data»	BrandName	
Definitie	If the ProductCode does not contain a brand name, the brand name can be entered in this concept.	
Datatype	ST	
DCM::ConceptId	NL-CM:9.5.36	
DCM::ExampleValue	Lasix	
Opties		

«data»	PharmaceuticalForm	
Definitie	The pharmaceutical form indicates the form of the medication in accordance with the route of administration. Examples include: tablet, suppository, infusion liquid, ointment. If the product has a generic 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:9.5.37	
DCM::ExampleValue	230 (TABLET)	
DCM::ValueSet	PharmaceuticalFormCodelist	OID: 2.16.840.1.113883.2.4.3.11.60.40.2.9.5.7
Opties		

«container»	Ingredient	
Definitie	Container of the Ingredient concept. This container contains all data elements of the Ingredient concept. 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. The active substances play an important role, as they: a) determine the pharmacotherapeutic effect of the medication and b) serve as the basis for the indication of the strength of the medication (e.g. 200mg).	
Datatype		
DCM::ConceptId	NL-CM:9.5.38	
DCM::ExampleValue	captopril	
Opties		

«data»	Strength	
Definitie	The amount of absorbed active substance or addition per unit of product. This could be a concentration if the medication is dissolved in liquid, for example.	
Datatype	PQ	
DCM::ConceptId	NL-CM:9.5.39	

DCM::ExampleValue	25mg	
Opties		

«data»	IngredientCode	
Definitie	Active substance or excipient. 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). • 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) The ATC is an international classification of pharmaceutical substances without a reference to specific products on the market. Therefore, the ATC code of a generic product will not contain a reference to a certain dose, pharmaceutical form or route of administration; it will only contain a reference to the ingredients (not the amount/concentration/strength).	
Datatype	CD	
DCM::ConceptId	NL-CM:9.5.40	
DCM::ExampleValue	ATC C09BA01	CAPTOPRIL
DCM::ValueSet	IngredientCodeGPKCodelist	OID: 2.16.840.1.113883.2.4.3.11.60.40.2.9.5.16
DCM::ValueSet	IngredientCodeHPKCodelist	OID: 2.16.840.1.113883.2.4.3.11.60.40.2.9.5.17
DCM::ValueSet	IngredientCodePRKCodelist	OID: 2.16.840.1.113883.2.4.3.11.60.40.2.9.5.18
DCM::ValueSet	IngredientCodezICodelist	OID: 2.16.840.1.113883.2.4.3.11.60.40.2.9.5.12
DCM::ValueSet	IngredientCodeATCCodelist	OID: 2.16.840.1.113883.2.4.3.11.60.40.2.9.5.14
DCM::ValueSet	IngredientCodeSNKCodelist	OID: 2.16.840.1.113883.2.4.3.11.60.40.2.9.5.15
DCM::ValueSet	IngredientCodeSSKCodelist	OID: 2.16.840.1.113883.2.4.3.11.60.40.2.9.5.19
DCM::ValueSet	IngredientCodeGTINCodelist	OID: 2.16.840.1.113883.2.4.3.11.60.40.2.9.5.21
Opties		

«document»	IngredientCodeATCCodelist	
Definitie		
Datatype		
DCM::ValueSetId	2.16.840.1.113883.2.4.3.11.60.40.2.9.5.14	
Opties		

IngredientCodeATCCodelijst		**OID: 2.16.840.1.113883.2.4.3.11.60.40.2.9.5.14**
Codes	Coding Syst. Name	Coding System OID

Alle waarden	Anatomic Therapeutic Classification (ATC)	2.16.840.1.113883.6.73

«document»	IngredientCodeGPKCodelist	
Definitie		
Datatype		
DCM::ValueSetId	2.16.840.1.113883.2.4.3.11.60.40.2.9.5.16	
Opties		

IngredientCodeGPKCodelijst		**OID: 2.16.840.1.113883.2.4.3.11.60.40.2.9.5.16**
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»	IngredientCodeGTINCodelist	
Definitie		
Datatype		
DCM::ValueSetId	2.16.840.1.113883.2.4.3.11.60.40.2.9.5.21	
Opties		

IngredientCodeGTINCodelijst		**OID: 2.16.840.1.113883.2.4.3.11.60.40.2.9.5.21**
Codes	Coding Syst. Name	Coding System OID
Alle waarden	Global Trade Item Number (GTIN)	1.3.160

«document»	IngredientCodeHPKCodelist	
Definitie		
Datatype		
DCM::ValueSetId	2.16.840.1.113883.2.4.3.11.60.40.2.9.5.17	
Opties		

IngredientCodeHPKCodelijst		**OID: 2.16.840.1.113883.2.4.3.11.60.40.2.9.5.17**
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::ValueSetId	2.16.840.1.113883.2.4.3.11.60.40.2.9.5.18	
Opties		

IngredientCodePRKCodelijst		**OID: 2.16.840.1.113883.2.4.3.11.60.40.2.9.5.18**
Codes	Coding Syst. Name	Coding System OID
Alle waarden	G-Standaard Voorschrijfproducten (PRK)	2.16.840.1.113883.2.4.4.10

«document»	IngredientCodeSNKCodelist
Definitie	
Datatype	

DCM::ValueSetId	2.16.840.1.113883.2.4.3.11.60.40.2.9.5.15	
Opties		

IngredientCodeSNKCodelijst		OID: 2.16.840.1.113883.2.4.3.11.60.40.2.9.5.15
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::ValueSetId	2.16.840.1.113883.2.4.3.11.60.40.2.9.5.19	
Opties		

IngredientCodeSSKCodelijst		OID: 2.16.840.1.113883.2.4.3.11.60.40.2.9.5.19
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»	IngredientCodezICodelist	
Definitie		
Datatype		
DCM::ValueSetId	2.16.840.1.113883.2.4.3.11.60.40.2.9.5.12	
Opties		

IngredientCodeZICodelijst		OID: 2.16.840.1.113883.2.4.3.11.60.40.2.9.5.12
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»	PharmaceuticalFormCodelist	
Definitie		
Datatype		
DCM::ValueSetId	2.16.840.1.113883.2.4.3.11.60.40.2.9.5.7	
Opties		

FarmaceutischeVormCodelijst		OID: 2.16.840.1.113883.2.4.3.11.60.40.2.9.5.7
Codes	Coding Syst. Name	Coding System OID
Alle waarden	G-Standaard Farmaceutische vormen	2.16.840.1.113883.2.4.4.11

«document»	PrescriptionCodeATCCodelist	
Definitie		
Datatype		
DCM::ValueSetId	2.16.840.1.113883.2.4.3.11.60.40.2.9.5.20	
Opties		

VoorschriftProductATCCodelijst		OID: 2.16.840.1.113883.2.4.3.11.60.40.2.9.5.20
Codes	Coding Syst. Name	Coding System OID
Alle waarden	Anatomic Therapeutic Classification (ATC)	2.16.840.1.113883.6.73

«document»	PrescriptionCodeGPKCodelist	
Definitie		
Datatype		
DCM::ValueSetId	2.16.840.1.113883.2.4.3.11.60.40.2.9.5.8	
Opties		

VoorschriftProductGPKCodelijst		OID: 2.16.840.1.113883.2.4.3.11.60.40.2.9.5.8
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»	PrescriptionCodeGTINCodelist	
Definitie		
Datatype		
DCM::ValueSetId	2.16.840.1.113883.2.4.3.11.60.40.2.9.5.11	
Opties		

VoorschriftProductGTINCodelijst		OID: 2.16.840.1.113883.2.4.3.11.60.40.2.9.5.11
Codes	Coding Syst. Name	Coding System OID
Alle waarden	Global Trade Item Number (GTIN)	1.3.160

«document»	PrescriptionCodeHPKCodelist	
Definitie		
Datatype		
DCM::ValueSetId	2.16.840.1.113883.2.4.3.11.60.40.2.9.5.9	
Opties		

VoorschriftProductHPKCodelijst		OID: 2.16.840.1.113883.2.4.3.11.60.40.2.9.5.9
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»	PrescriptionCodePRKCodelist	
Definitie		
Datatype		
DCM::ValueSetId	2.16.840.1.113883.2.4.3.11.60.40.2.9.5.10	
Opties		

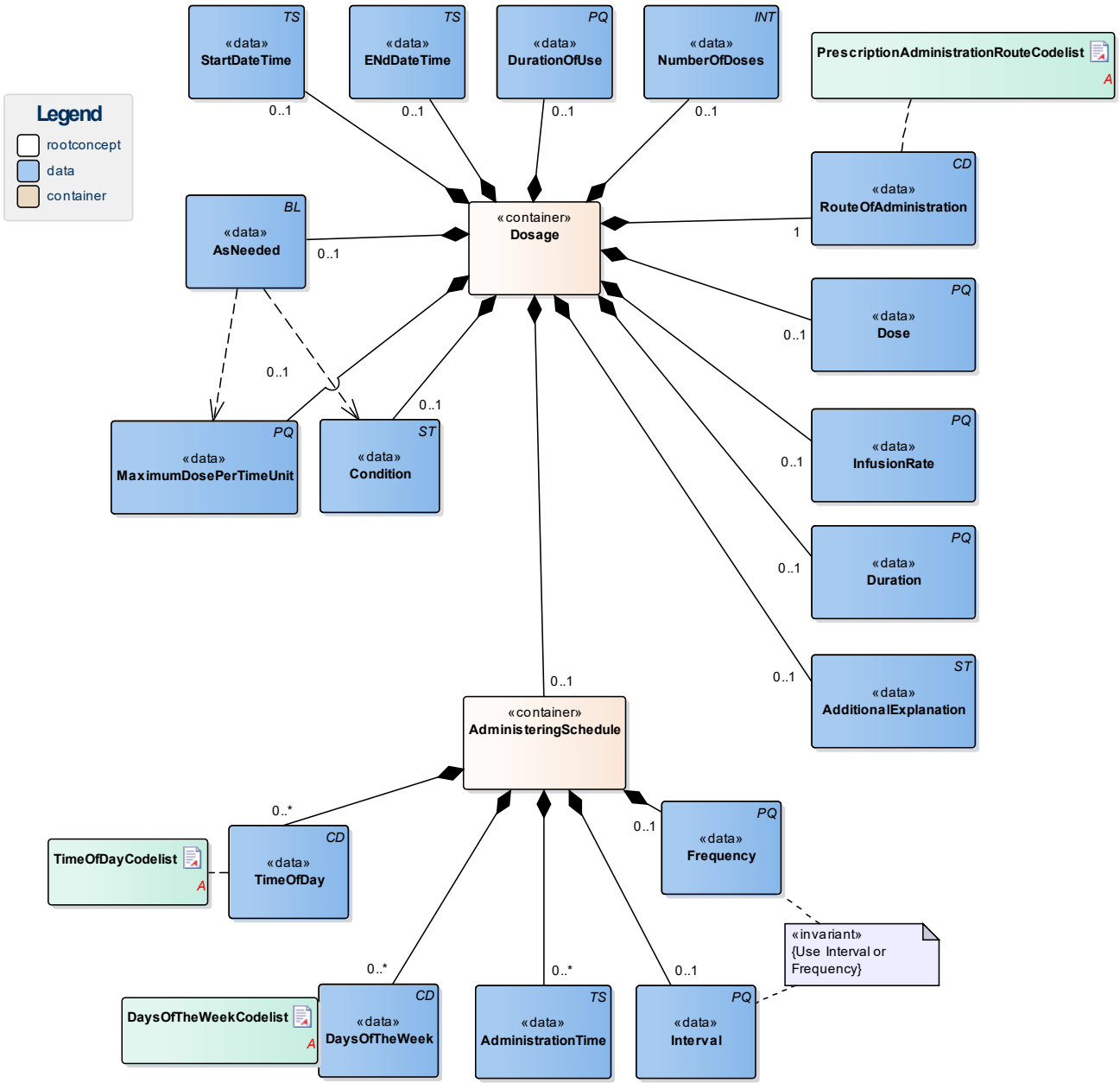
VoorschriftProductPRKCodelijst		OID: 2.16.840.1.113883.2.4.3.11.60.40.2.9.5.10
Codes	Coding Syst. Name	Coding System OID
Alle waarden	G-Standaard Voorschrijfproducten (PRK)	2.16.840.1.113883.2.4.4.10

«document»	PrescriptionCodeZICodelist	
Definitie		
Datatype		
DCM::ValueSetId	2.16.840.1.113883.2.4.3.11.60.40.2.9.5.13	

Opties	

VoorschriftProductZICodelijst		OID: 2.16.840.1.113883.2.4.3.11.60.40.2.9.5.13
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

1.7.2 Dosering



«container»	Dosage
Definitie	Container of the Dosage concept. This container contains all data elements of the Dosage concept. Instructions for the administerer to administer the medication (the patient themselves, a nurse or other aid). When taking stock of medication use, the dosage describes the pattern of use established by the patient. If the dose schedule (distribution of doses over time) and the dose per

	administration have been determined, there will be a single instruction for use. Multiple *parallel* instructions for use can be included in the event of a changing dose within one day and in the event of a variable frequency of use. Multiple *sequential* instructions for use can be included in the event of changing doses within one period and/or in the event of a changing dose schedule.	
Datatype		
DCM::ConceptId	NL-CM:9.5.4	
Opties		

«data»	StartDateTime	
Definitie	The date (and time) at which use of the product started or will start according to the dose information.	
Datatype	TS	
DCM::ConceptId	NL-CM:9.5.11	
DCM::ExampleValue	12-03-2012 16:00	
Opties		

«data»	ENdDateTime	
Definitie	The end date of a dose (specification of use). This can be an agreed date, but also the date on which use of the product was discontinued (stop date, discontinuation date).	
Datatype	TS	
DCM::ConceptId	NL-CM:9.5.12	
DCM::ExampleValue	13-10-2012	
Opties		

«data»	DurationOfUse	
Definitie	In some cases, it may be necessary to indicate the intended duration of use, which cannot be calculated from the start date, end date and/or total number of doses. This could for example be the case with temporary sleep medication to be taken as needed.	
Datatype	PQ	
DCM::ConceptId	NL-CM:9.5.13	
DCM::ExampleValue	3 wk	
Opties		

«data»	NumberOfDoses	
Definitie	In many cases, the total number of doses indicates the desired duration of use.	
Datatype	INT	
DCM::ConceptId	NL-CM:9.5.14	
DCM::ExampleValue	1	
Opties		

«data»	Dose

Definitie	The administration dose indicates the dose amount per administration. The dosage is described in the unit accompanying the product; usually, this is just a number of units or doses. Liquids and other divisible products will usually include a unit of volume (preferably "ml"). In many cases, the prescriber will want to indicate the dose in units of weight of the active substance. If only the substance is included and not the product, the amount of that substance will be given. Paracetamol 1000mg is equivalent to 2 Paracetamol 500mg tablets (or units). The dosage is sometimes given as a calculation, in which the patient's body weight or body surface area is often used as a parameter. The calculation is however no more than an aid in reaching a decision. In the event of constant administration, sometimes the dose per administration (e.g. 20ml in a syringe or 500ml in a bag) is given in addition to the administration speed (rate of infusion), but it is often also omitted. A general dosage recommendation such as 'Use according to protocol' or 'See instructions' can be sufficient. In that case, no dose per administration is given either.	
Datatype	PQ	
DCM::ConceptId	NL-CM:9.5.15	
DCM::ExampleValue	2; 10ML	
Opties		

«data»	RouteOfAdministration	
Definitie	The route through which the medication is to be administered (oral, nasal, intravenous,...).	
Datatype	CD	
DCM::ConceptId	NL-CM:9.5.16	
DCM::ExampleValue	Oraal	
DCM::ValueSet	PrescriptionAdministrationRouteCodelist	OID: 2.16.840.1.113883.2.4.3.11.60.40.2.9.5.6
Opties		

«data»	InfusionRate	
Definitie	The rate of infusion is used in slow administration of liquids. In practice, the measuring unit is almost always ml/hour. Entering an interval (such as 0-10 ml/hour) is also a commonly used option.	
Datatype	PQ	
DCM::ConceptId	NL-CM:9.5.17	
DCM::ExampleValue	150ml/uur	
Opties		

«data»	Duration
Definitie	The duration of administration indicates how long the medication is to be administered and used in the event of slow administration of liquids.
Datatype	PQ

DCM::ConceptId	NL-CM:9.5.18	
DCM::ExampleValue	120 min	
Opties		

«data»	AdditionalExplanation	
Definitie	The additional explanation contains extra information on the use of or considerations for the current prescription. This can also include all instructions for use. The text can come from the original "paper" medication prescription, but can also be generated from the coded information. This concept may contain more information than what is structurally coded in the information below, but may not conflict with it. The instructions may not conflict with other components of the request for administration. The instructions can also refer to an existing protocol. The G standard contains many texts that can support this attribute, in for example G standard table 362, which contains texts from the general practitioners' standard WCIA table 25. If desired, these texts can be used to structure this concept.	
Datatype	ST	
DCM::ConceptId	NL-CM:9.5.19	
DCM::ExampleValue	TIJDENS of vlak NA het eten innemen	
Opties		

«data»	Condition	
Definitie	The condition for administering medication can be: • a physiological measurement value (plasma glucose concentration, body temperature, blood pressure); • a symptom or other circumstance (in the event of a headache, or itch). Such a criterion will be entered in correspondence with the AsNeeded indicator.	
Datatype	ST	
DCM::ConceptId	NL-CM:9.5.20	
DCM::ExampleValue	Plasma glucose > 10 mmol/l.	
Opties		

«data»	MaximumDosePerTimeUnit	
Definitie	The MaximumAmountPerPeriod concept indicates the maximum duration a product can be used with an 'as needed' prescription.	
Datatype	PQ	
DCM::ConceptId	NL-CM:9.5.21	
DCM::ExampleValue	maximaal 4/dag,20/week	
Opties		

«data»	AsNeeded

Definitie	Indicates whether the dose is only to be administered under certain conditions.	
Datatype	BL	
DCM::ConceptId	NL-CM:9.5.22	
DCM::ExampleValue	Ja	
Opties		

«container»	AdministeringSchedule
Definitie	Container of the AdministeringSchedule concept. This container contains all data elements of the AdministeringSchedule concept. Specifications of the times at which the medication is administered/is to be administered. This is indicated as follows: • Time(s) (16:00) or indications ("before meals") at which the medication is to be taken each day. • A specific number of times the medication is to be taken each day ("3x a day"), indicated with the frequency • A time interval between consecutive doses ("Every 2 hours", "every 3 days"), indicated with the word Interval. • Combined periods with an interval and duration ("1 daily for three out of four weeks: the pill schedule") If a certain medication is not to be taken daily, the aforementioned can be combined with daily indications: • One or more days of the week on which the medication is to be administered (e.g. "Monday, Wednesday, Friday") • "3x a week", "2x a month". The specified administration "infinite" will automatically be repeated until: • The end date and time has been reached • The total administration duration has been reached (for 14 days) • A specific amount of administrations has been reached ("20 doses", "one-time only"), to be entered in the NumberOfDoses concept.
Datatype	
DCM::ConceptId	NL-CM:9.5.23
Opties	

«data»	Frequency
Definitie	The frequency indicates the number of dose moments per time unit, usually per day. If this frequency is included, then the Interval will not have been included. In that case, a reasonable distribution throughout the day is expected, but exact times are not given. This is left to the patient. It is the most common type of extramural prescription. In the case of Baxter packs and intramural care, such a prescription is used to draw up a (location-specific) outline for distribution times (logistics).
Datatype	PQ
DCM::ConceptId	NL-CM:9.5.24
DCM::ExampleValue	2x/dag

Opties	

«data»	Interval	
Definitie	Interval indicates the time between dose times. If this is included, the *Frequency* will not have been included. Examples: every 4 hours, every 3 weeks. The times can now be chosen freely, but distribution throughout the day is more precise, and the interval between times is important (e.g. in the case of antibiotics) In the case of Baxter packs and intramural care, such a prescription is used to draw up a (location-specific) outline for distribution times (logistics).	
Datatype	PQ	
DCM::ConceptId	NL-CM:9.5.25	
DCM::ExampleValue	elke 4 uur	
Opties		

«data»	AdministrationTime	
Definitie	The time of administration is a specific time of day (on the clock). This time usually isn't (intended to be) exact. There can be multiple administering times in one day. The intended time of administration can also be entered as a time of day (morning, afternoon, evening, night-time). The administration time is then to be left empty, and the time of day can be entered in the TimeOfDay concept.	
Datatype	TS	
DCM::ConceptId	NL-CM:9.5.26	
DCM::ExampleValue	07:30	
Opties		

«data»	DaysOfTheWeek	
Definitie	DaysOfTheWeek indicates a pattern of doses on fixed days of the week.	
Datatype	CD	
DCM::ConceptId	NL-CM:9.5.27	
DCM::ExampleValue	maandag	
DCM::ValueSet	DaysOfTheWeekCodelist	OID: 2.16.840.1.113883.2.4.3.11.60.40.2.9.5.4
Opties		

«data»	TimeOfDay
Definitie	To make prescriptions easier for the patient and to facilitate transfers between first and second line, it is best to indicate a time of day instead of a set time. To code a time of day in the administering schedule, agreements were made between the first and second line to be able to clearly translate the first-line WCIA 21 code to standard times of day in clinical second-line medication assignments. In this process, the following times of day apply: WCIA Second line

	morning 6:00am - 12:00pm afternoon 12:00pm - 6:00pm evening 6:00pm - 12:00am night-time 12:00am - 6:00am	
Datatype	CD	
DCM::ConceptId	NL-CM:9.5.28	
DCM::ValueSet	TimeOfDayCodelist	OID: 2.16.840.1.113883.2.4.3.11.60.40.2.9.5.5
Opties		

«document»	PrescriptionAdministrationRouteCodelist	
Definitie		
Datatype		
DCM::ValueSetId	2.16.840.1.113883.2.4.3.11. 60.40.2.9.5.6	
Opties		

VoorschriftToedieningswegCodelijst	**OID: 2.16.840.1.113883.2.4.3.11.60.40.2.9.5.6**	
Codes	Coding Syst. Name	Coding System OID
Alle waarden	G-Standaard Toedieningswegen	2.16.840.1.113883.2.4.4.9

«document»	DaysOfTheWeekCodelist	
Definitie		
Datatype		
DCM::ValueSetId	2.16.840.1.113883.2.4.3.11. 60.40.2.9.5.4	
Opties		

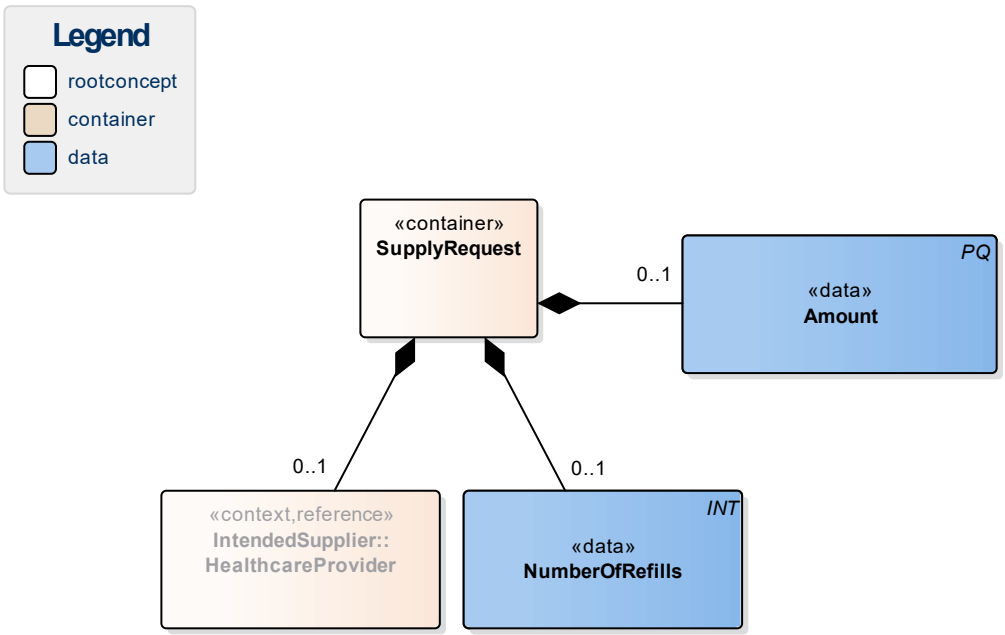
WeekdagenCodelijst	**OID: 2.16.840.1.113883.2.4.3.11.60.40.2.9.5.4**			
Concept Name	**Concept Code**	**Code System Name**	**Code System OID**	**Description**
Monday	307145004	SNOMED CT	2.16.840.1.113883.6.96	maandag
Tuesday	307147007	SNOMED CT	2.16.840.1.113883.6.96	dinsdag
Wednesday	307148002	SNOMED CT	2.16.840.1.113883.6.96	woensdag
Thursday	307149005	SNOMED CT	2.16.840.1.113883.6.96	donderdag
Friday	307150005	SNOMED CT	2.16.840.1.113883.6.96	vrijdag
Saturday	307151009	SNOMED CT	2.16.840.1.113883.6.96	zaterdag
Sunday	307146003	SNOMED CT	2.16.840.1.113883.6.96	zondag

«document»	TimeOfDayCodelist	
Definitie		
Datatype		
DCM::ValueSetId	2.16.840.1.113883.2.4.3.11. 60.40.2.9.5.5	
Opties		

DagdeelCodelijst		**OID: 2.16.840.1.113883.2.4.3.11.60.40.2.9.5.5**		
Concept Name	**Concept Code**	**Coding Syst. Name**	**Coding System OID**	**Description**
During the morning	73775008	SNOMED CT	2.16.840.1.113883.6.96	's ochtends
During the afternoon	255213009	SNOMED CT	2.16.840.1.113883.6.96	's middags

During the evening	3157002	SNOMED CT	2.16.840.1.113883.6.96	's avonds
During the night	2546009	SNOMED CT	2.16.840.1.113883.6.96	's nachts

1.7.3 Afleververzoek



«container»	SupplyRequest	
Definitie	Container of the SupplyRequest concept. This container contains all data elements of the SupplyRequest concept. The supply request is the order placed with the supplier to supply medication. The number of refills can be indicated as well.	
Datatype		
DCM::ConceptId	NL-CM:9.5.5	
Opties		

«data»	Amount	
Definitie	The amount to be supplied defines the number of units of the ordered product that have to be supplied. The amount is given in the unit of the ordered product. The amount to be supplied is always the amount per partial supply. The number of refills indicates how often this amount is allowed to be supplied.	
Datatype	PQ	
DCM::ConceptId	NL-CM:9.5.30	
DCM::ExampleValue	90 st	
Opties		

«data»	NumberOfRefills
Definitie	Maximum number of partial supplies (refills) allowed to be given for this prescription.
Datatype	INT

DCM::ConceptId	NL-CM:9.5.31	
DCM::ExampleValue	4	
Opties		

«context»	IntendedSupplier::HealthcareProvider	
Definitie	In almost all cases, the intended supplier will be a registered pharmacist.	
Datatype		
DCM::ConceptId	NL-CM:9.5.32	
DCM::ReferencedConceptId	NL-CM:17.1.1	This is a reference to concept Zorgverlener in information model Zorgverlener
Opties		

1.8 Example Instances

DatumMedicatie Voorschrift	Product	Dosering				Voorschrijver	Medicatie VoorschriftStatus	MedicatieReden VanOnderbreken
	ProductNaam	StartDatum	Toedieningsschema	Toedienings Weg	Keerdosis	Zorgverlener		
			Frequentie			Naamgegevens		
18-09-2012	Carbasalaatcalcium poeder 100mg	18-09-2012	1x/dag	Oraal	100mg (=1st)	C. Dols	Onderbroken	Geplande ingreep

DatumMedicatie Voorschrift	Product	Dosering				Voorschrijver	Medicatie VoorschriftStatus	RedenVan Voorschrijven
	ProductNaam	StartDatum	Toedieningsschema	Toedienings Weg	Keerdosis	Zorgverlener		ProbleemNaam
			Frequentie | Weekdagen | Toedientijd			Naamgegevens		
01-03-2012	Methotrexaat invlst 25mg/ml amp 2ml	01-03-2012	1x/wk op maandag(14u)	iv	50mg (=2ml)	B. Takken	Actief	Autoimmuunziekte

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. GROOT, E. (2011) *Dataset medicatieproces 2011.* [Online] Den Haag: Nictiz. Beschikbaar op: http://www.nictiz.nl/module/360/590/Dataset_Medicatieproces_2011.xlsx [Geraadpleegd: 23 juli 2014].

2. *HL7v3-implementatiehandleiding medicatieproces versie 6.1.0.0.* [Online] Den Haag: Nictiz. Beschikbaar op: http://www.nictiz.nl/uploaded/FILES/html_cabinet/live/Zorgtoepassing/Medicatieproces/AORTA_Mp_IH_Medicatieproces_HL7.htm [Geraadpleegd: 23 juli 2014].

3. *Dossier Medicatieoverzicht.* [Online] Beschikbaar op: Oria.nl. [Geraadpleegd: 23 juli 2014].

4. *G-standaard documentatie.* [Online] Beschikbaar op: http://www.z-index.nl/ [Geraadpleegd: 23 juli 2014].

1.16 Functional Model

1.17 Traceability to other Standards

1.18 Disclaimer

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