

# Health & Care Information Model:

nl.zorg.MedicationAdministration2-v1.1.1

Status: Final

Release: 2021

Release status: Prepublished

Managed by:



# Content

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# 1. nl.zorg.MedicationAdministration2-v1.1.1

DCM::CoderList	Projectgroep Medicatieproces
DCM::ContactInformation.Address	
DCM::ContactInformation.Name	*
DCM::ContactInformation.Telecom	
DCM::ContentAuthorList	Projectgroep Medicatieproces
DCM::CreationDate	1-2-2017
DCM::DeprecatedDate	
DCM::DescriptionLanguage	nl
DCM::EndorsingAuthority.Address	
DCM::EndorsingAuthority.Name	PM
DCM::EndorsingAuthority.Telecom	
DCM::Id	2.16.840.1.113883.2.4.3.11.60.40.3.9.13
DCM::KeywordList	Medicatie, Toediening
DCM::LifecycleStatus	Final
DCM::ModelerList	Architectuurgroep Registratie aan de Bron
DCM::Name	nl.zorg.MedicatieToediening2
DCM::PublicationDate	01-12-2021
DCM::PublicationStatus	Prepublished
DCM::ReviewerList	Projectgroep Medicatieproces & Architectuurgroep Registratie aan de Bron
DCM::RevisionDate	15-07-2020
DCM::Supersedes	nl.zorg.MedicatieToediening2-v1.1
DCM::Version	1.1.1
HCIM::PublicationLanguage	EN

## 1.1 Revision History

Publicatieversie 1.0 (04-09-2017)

Publicatieversie 1.0.1 (31-12-2017)

Bevat: ZIB-618.

Publicatieversie 1.1 (31-01-2020)

Bevat: ZIB-812.

Publicatieversie 1.1.1 (01-09-2020)

Bevat: ZIB-911.

## 1.2 Concept

Medication administration is the registration of the individual administrations of the medicine on the patient by the administrator (e.g. a nurse or patient themselves), in relation to the entered agreements.

## 1.3 Mindmap

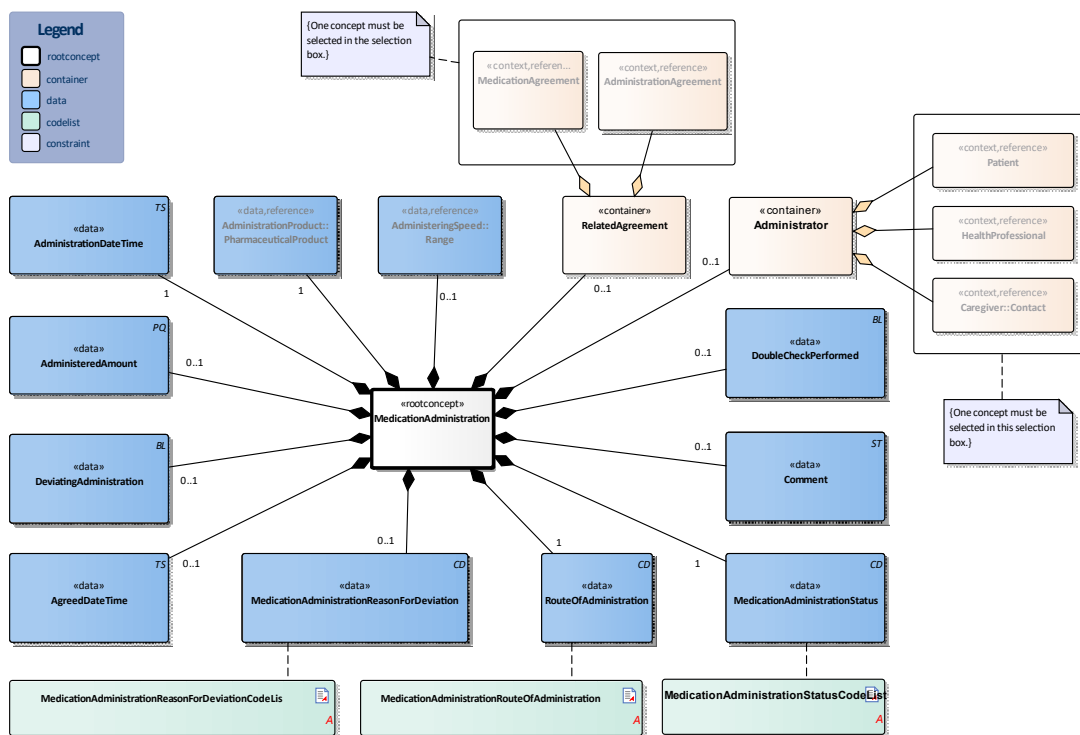
## 1.4 Purpose

The goal of administering the medication is to provide insight into the actual administered products.

## 1.5 Patient Population

## 1.6 Evidence Base

## 1.7 Information Model



«rootconcept»	MedicationAdministration	
<b>Definitie</b>	Root concept of the MedicationAdministration information model. This root concept contains all data elements of the MedicationAdministration information model.	
<b>Datatype</b>		
<b>DCM::ConceptId</b>	NL-CM:9.13.20928	
<b>DCM::DefinitionCode</b>	SNOMED CT: 18629005	Administration of drug or medicament
<b>Opties</b>		

«data»	AdministrationProduct::PharmaceuticalProduct	
<b>Definitie</b>	The product taken or administered. This is usually medication. Food, blood products, aids and bandages do not strictly fall under the category of medication, but can be reported as well.	
	In principle, this will be the prescribed product, but the administrator may substitute it by replacing the product with an equivalent product. For example: two 50mg tablets can be administered instead of one 100mg tablet.	
<b>Datatype</b>		
<b>DCM::ConceptId</b>	NL-CM:9.13.20929	

<b>DCM::ReferencedConceptId</b>	NL-CM:9.7.19926	This is a reference to the rootconcept of information model PharmaceuticalProduct.
<b>Opties</b>		

<b>«data»</b>	<b>AdministeringSpeed::Range</b>	
<b>Definitie</b>	<p>The administering speed is used in slow administration of liquid. 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.</p> <p>For example, with an administering speed of 10ml/hour:</p> <ul style="list-style-type: none"> <li>• amount = 10,</li> <li>• dose unit = ml</li> <li>• time unit = hour</li> </ul> <p>Optionally a translation to NHG table Gebruiksvoorschriften(Table 25) is also allowed.</p>	
<b>Datatype</b>		
<b>DCM::ConceptId</b>	NL-CM:9.13.23159	
<b>DCM::ExampleValue</b>	Aantal= 10 Gebruikseenheid= ml Tijdseenheid= uur	
<b>DCM::ReferencedConceptId</b>	NL-CM:20.1.1	This is a reference to the rootconcept of partial information model Range.
<b>Opties</b>		

<b>«data»</b>	<b>AdministrationDateTime</b>	
<b>Definitie</b>	The date and time at which the medication was administered.	
<b>Datatype</b>		
<b>DCM::ConceptId</b>	NL-CM:9.13.21193	
<b>Opties</b>		

<b>«data»</b>	<b>AgreedDateTime</b>	
<b>Definitie</b>	Date and time in the medication or administration agreement to which this administration pertains. Since multiple times can be indicated in one medication/administration agreement, this can be used to identify the agreed time in the event of e.g. early administration or a late administration.	
<b>Datatype</b>		
<b>DCM::ConceptId</b>	NL-CM:9.13.23171	
<b>Opties</b>		

<b>«data»</b>	<b>AdministeredAmount</b>	
<b>Definitie</b>	Amount of the administered product.	
<b>Datatype</b>		
<b>DCM::ConceptId</b>	NL-CM:9.13.21194	
<b>Opties</b>		

<b>«data»</b>	<b>DeviatingAdministration</b>	
<b>Definitie</b>	In the administration, was there a deviation from the medication or administration agreement? This can be a deviation in product, time, amount, route of administration or administering speed or foregoing administration altogether.	
<b>Datatype</b>		
<b>DCM::ConceptId</b>	NL-CM:9.13.23167	
<b>Opties</b>		

«data»	RouteOfAdministration	
Definitie	The route through which the medication is administered (oral, nasal, intravenous,...).	
Datatype		
DCM::ConceptId	NL-CM:9.13.21195	
DCM::DefinitionCode	SNOMED CT: 410675002 Route of administration	
DCM::ValueSet	MedicationAdministrationRouteOfAdministration	OID: 2.16.840.1.113883.2.4.3.11.60.40.2.9.13.2
Opties		

«data»	DoubleCheckPerformed	
Definitie	Was a double check performed prior to the administration? This is only legally required for certain medication.	
Datatype		
DCM::ConceptId	NL-CM:9.13.23168	
Opties		

«container»	RelatedAgreement	
Definitie	Medication or administration agreement on which this administration is based.	
Datatype		
DCM::ConceptId	NL-CM:9.13.23169	
Opties		

«context»	MedicationAgreement	
Definitie	Medication agreement on which this administration is based.	
Datatype		
DCM::ConceptId	NL-CM:9.13.23170	
DCM::ReferencedConceptId	NL-CM:9.6.9580	This is a reference to the rootconcept of information model MedicationAgreement.
Opties		

«context»	AdministrationAgreement	
Definitie	Administration agreement on which this administration is based.	
Datatype		
DCM::ConceptId	NL-CM:9.13.23237	
DCM::ReferencedConceptId	NL-CM:9.8.20132	This is a reference to the rootconcept of information model AdministrationAgreement.
Opties		

«container»	Administrator	
Definitie	Container of the Administrator concept. This container contains all data elements of the Administrator concept. The concept describes the person who administered the product. This is a professional authorised administrator, the patient themselves or the caregiver, for example.	
Datatype		
DCM::ConceptId	NL-CM:9.13.21196	
Opties		

«context»	Patient	
Definitie	If the patient administered the medication themselves, indicate that here. If the medication is administered by a health professional or	

	caregiver/family member/etc., the health professional is entered in the 'Healthcare provider' element or the caregiver/family member/etc. is entered in the 'Contact' element respectively.	
<b>Datatype</b>		
<b>DCM::ConceptId</b>	NL-CM:9.13.23380	
<b>DCM::ReferencedConceptId</b>	NL-CM:0.1.1	This is a reference to the rootconcept of information model Patient.
<b>Opties</b>		

<b>«context»</b>	<b>HealthProfessional</b>	
<b>Definitie</b>	The concept describes the person who administered the product. This is a professional authorised administrator.	
<b>Datatype</b>		
<b>DCM::ConceptId</b>	NL-CM:9.13.23172	
<b>DCM::ReferencedConceptId</b>	NL-CM:17.1.1	This is a reference to the rootconcept of information model HealthProfessional.
<b>Opties</b>		

<b>«context»</b>	<b>Caregiver::Contact</b>	
<b>Definitie</b>	Information on the patient's personal relative or contact that administered the medication.	
<b>Datatype</b>		
<b>DCM::ConceptId</b>	NL-CM:9.13.23355	
<b>DCM::ReferencedConceptId</b>	NL-CM:3.1.1	This is a reference to the rootconcept of information model ContactPerson.
<b>Opties</b>		

<b>«data»</b>	<b>MedicationAdministrationReasonForDeviation</b>	
<b>Definitie</b>	Reason why the medication was not taken or administered or was taken or administered differently. Here, you can choose to enter text or one of the codes.	
<b>Datatype</b>		
<b>DCM::ConceptId</b>	NL-CM:9.13.23166	
<b>DCM::ValueSet</b>	MedicationAdministrationReasonForDeviationCodeLis	OID: 2.16.840.1.113883.2.4.3.11.60.40.2.9.13.3
<b>Opties</b>		

<b>«data»</b>	<b>MedicationAdministrationStatus</b>	
<b>Definitie</b>	<p>The status of the administration, as a description of the stage within the administering process. Only the status codes 'completed' and 'cancelled' apply to indivisible products (such as tablets or suppositories). For divisible products (such as infusions), doses can also be 'suspended' or 'aborted'.</p> <p>When documenting this, the following interpretations are used:</p> <ul style="list-style-type: none"> <li>• Active: The product is administered.</li> <li>• Interrupted: Use has (temporarily) been interrupted, because of a side effect, for example. Later, the patient and/or doctor can decide whether or not to resume or discontinue use.</li> <li>• Discontinued: Administration has stopped.</li> <li>• Completed: Administration has been completed.</li> <li>• Not started: The product was never administered.</li> </ul>	
<b>Datatype</b>		
<b>DCM::ConceptId</b>	NL-CM:9.13.21191	
<b>DCM::ValueSet</b>	MedicationAdministrationStatusCodeList	OID: 2.16.840.1.113883.2.4.3.11.60.40.2.9.13.1

<b>Opties</b>	
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<b>«data»</b>	<b>Comment</b>
<b>Definitie</b>	Comments on administering the medication.
<b>Datatype</b>	
<b>DCM::ConceptId</b>	NL-CM:9.13.21337
<b>DCM::DefinitionCode</b>	LOINC: 48767-8 Annotation comment
<b>Opties</b>	

<b>«document»</b>	<b>MedicationAdministrationRouteOfAdministration</b>
<b>Definitie</b>	
<b>Datatype</b>	
<b>DCM::ValueSetBinding</b>	Required
<b>DCM::ValueSetId</b>	2.16.840.1.113883.2.4.3.11. 60.40.2.9.13.2
<b>HCIM::ValueSetLanguage</b>	--
<b>Opties</b>	

<b>MedicatieToedieningToedieningsweg Codelijst</b>		<b>OID:</b> <b>2.16.840.1.113883.2.4.3.11.60.40.2.9.13.2</b>
Codes	Coding Syst. Name	Coding System OID
Alle waarden	G-Standaard Toedieningswegen	2.16.840.1.113883.2.4.4.9

<b>«document»</b>	<b>MedicationAdministrationStatusCodeList</b>
<b>Definitie</b>	
<b>Datatype</b>	
<b>DCM::ValueSetBinding</b>	Required
<b>DCM::ValueSetId</b>	2.16.840.1.113883.2.4.3.11. 60.40.2.9.13.1
<b>HCIM::ValueSetLanguage</b>	EN
<b>Opties</b>	

<b>MedicatieToedieningStatusCodeList</b>					<b>OID:</b> <b>2.16.840.1.113883.2.4.3.11.60.40.2.9.13.1</b>
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	
Cancelled	cancelled	ActStatus	2.16.840.1.113883.5.14	Niet gestart	

<b>«document»</b>	<b>MedicationAdministrationReasonForDeviationCodeList</b>
<b>Definitie</b>	
<b>Datatype</b>	



DCM::ValueSetBinding	Required	
DCM::ValueSetId	2.16.840.1.113883.2.4.3.11.60.40.2.9.13.3	
HCIM::ValueSetLanguage	EN	
Opties		

<b>MedicatieToedieningRedenVanAfwijken Codelijst</b>	<b>OID: 2.16.840.1.113883.2.4.3.11.60.40.2.9.13.3</b>
------------------------------------------------------	-------------------------------------------------------

Concept Name	Concept Code	Code System Name	Code System OID	Description
Product discontinued	DISCONT	ActReason	2.16.840.1.113883.5.8	Product niet meer leverbaar
Patient not available	NON-AVAIL	ActReason	2.16.840.1.113883.5.8	Patiënt niet beschikbaar
Patient refuse	PREFUS	ActReason	2.16.840.1.113883.5.8	Patiënt heeft geweigerd
Unable to use	UNABLE	ActReason	2.16.840.1.113883.5.8	Toediening volgens voorschrift niet mogelijk
Order aborted	FOABORT	ActReason	2.16.840.1.113883.5.8	Medicatieafpraak is gestopt
Forgotten to administer	FORGOT	NL-CM-CS	2.16.840.1.113883.2.4.3.11.60.40.4	Vergeeten toe te dienen
Administration performer not available	APNA	NL-CM-CS	2.16.840.1.113883.2.4.3.11.60.40.4	Toediener niet aanwezig
No information	NI	NullFlavor	2.16.840.1.113883.5.1008	Geen informatie

	Constraint
Definitie	One concept must be selected in this selection box.
Datatype	
Opties	

	Constraint
Definitie	One concept must be selected in the selection box.
Datatype	
Opties	

	Legend
Definitie	
Datatype	
Opties	

## 1.8 Example Instances

MedicatieToedieningDatumTijd	Toedieningsproduct	Afwijkende Toediening	MedicatieToedieningStatus	Toedieningsweg	Toegediende Hoeveelheid	Afgesproken DatumTijd	MedicatieToedieningRedenVanAfwijken	MedicatieAfspraak
	ProductCode							Gebruiksaanwijzing   Doseerinstructie   Doosering   Keerdosis
3-6-2014 16:19:07	Pantoprazol mylan tablet msr 20mg	Nee	Gereed	Oraal	1 stuk			
11-9-2012 17:21:00	Bumetanide pch tablet 2 mg	Ja	Afgebroken	Oraal	1 stuk		Patiënt heeft geweigerd	2 stuks
19-9-2014 14:12:11	Novorapid Flexpen Injvist 100e/MI Pen 3ml	Ja	Uitgesteld	Subcutaan	22 eenheden	19-9-2014 9:00:00	Vergeeten toe te dienen	22 elementen

## 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

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