

# Health&Care Information Model: nl.zorg.MedicatieToediening

Final

Managed by:

Better healthcare  
through better IT



# Content

|  |          |
|--|----------|
| <b>1. nl.zorg.MedicatieToediening-v3.0</b> ..... | <b>3</b> |
| 1.1 Revision History .....                       | 3        |
| 1.2 Concept .....                                | 3        |
| 1.3 Mindmap .....                                | 3        |
| 1.4 Purpose .....                                | 3        |
| 1.5 Patient Population .....                     | 4        |
| 1.6 Evidence Base .....                          | 4        |
| 1.7 Information Model .....                      | 4        |
| 1.8 Example Instances .....                      | 8        |
| 1.9 Instructions .....                           | 8        |
| 1.10 Interpretation .....                        | 9        |
| 1.11 Care Process .....                          | 9        |
| 1.12 Example of the Instrument .....             | 9        |
| 1.13 Constraints .....                           | 9        |
| 1.14 Issues .....                                | 9        |
| 1.15 References .....                            | 9        |
| 1.16 Functional Model .....                      | 9        |
| 1.17 Traceability to other Standards .....       | 9        |
| 1.18 Disclaimer .....                            | 9        |
| 1.19 Terms of Use .....                          | 10       |
| 1.20 Copyrights .....                            | 10       |

# 1. nl.zorg.MedicatieToediening-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                         | 2.16.840.1.113883.2.4.3.11.60.40.3.9.3   |
| DCM::KeywordList                | Medicatie, Toediening  |
| DCM::LifecycleStatus            | Final  |
| DCM::ModelerList                | Kerngroep Registratie aan de Bron  |
| DCM::Name                       | nl.zorg.MedicatieToediening  |
| DCM::PublicationDate            | 1-5-2016   |
| DCM::PublicationStatus          | Published  |
| DCM::ReviewerList               | Projectgroep Generieke Overdrachtsgegevens & Kerngroep Registratie aan de Bron |
| DCM::RevisionDate               | 1-4-2015   |
| DCM::Superseeds                 | nl.nfu.MedicatieToediening-v1.0  |
| DCM::Version                    | 3.0  |

## 1.1 Revision History

Publicatieversie 1.0 (01-04-2015)

Bevat: ZIB-56, ZIB-308, ZIB-353.

Incl. algemene wijzigingsverzoeken:

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

Publicatieversie 3.0 (01-05-2016)

Bevat: ZIB-453

## 1.2 Concept

Administration of medication describes the actual administration of the medication. This can be simply swallowing a tablet, applying ointment or paste, or an infusion that takes a considerable amount of time. The administration can refer to a medication prescription, but can also refer to home medication.

## 1.3 Mindmap

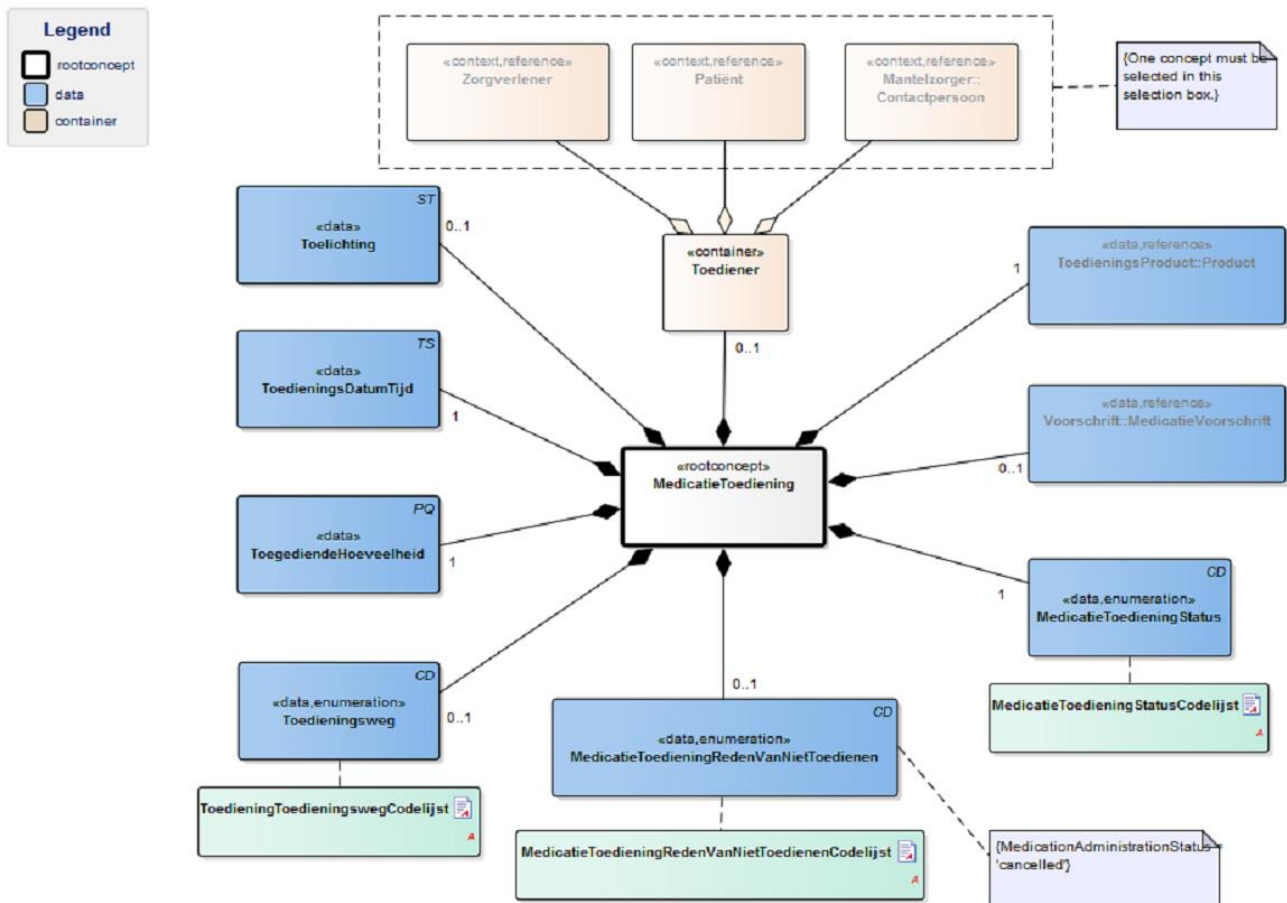
## 1.4 Purpose

To precisely plan the medication to be administered in a chain of collaborating healthcare professionals, it is often best to have information on the most recent administrations of medication, food or blood products.

## 1.5 Patient Population

## 1.6 Evidence Base

## 1.7 Information Model



| «rootconcept»       | MedicatieToediening   |
|---------------------|---|
| Alias               | EN: MedicationAdministration  |
| Definition          | Root concept of the MedicationAdministration information model. This root concept contains all data elements of the MedicationAdministration information model. |
| Datatype            |   |
| DCM::DefinitionCode | NL-CM:9.3.1   |
| Options             |   |

| «data»     | ToedieningsProduct::Product   |
|------------|---|
| Alias      | EN: ProductToBeAdministered::Product  |
| Definition | 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.<br><br>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::DefinitionCode</b>           | NL-CM:9.3.2  |   |
| <b>DCM::ReferencedDefinitionCode</b> | NL-CM:9.5.6  | Dit is een verwijzing naar concept Product in information model MedicatieVoorschrift. |
| <b>Options</b>                       |  |   |

|                                      |  |  |
|--------------------------------------|--|--|
| <b>«data»</b>                        | <b>Voorschrift::MedicatieVoorschrift</b>             |  |
| <b>Alias</b>                         | EN: Prescription::MedicationPrescription             |  |
| <b>Definition</b>                    | The agreement or order mandating the administration. |  |
| <b>Datatype</b>                      |  |  |
| <b>DCM::DefinitionCode</b>           | NL-CM:9.3.3  |  |
| <b>DCM::ReferencedDefinitionCode</b> | NL-CM:9.5.1  | Dit is een verwijzing naar concept MedicatieVoorschrift in information model MedicatieVoorschrift. |
| <b>Options</b>                       |  |  |

|                            |   |  |
|----------------------------|---|--|
| <b>«data»</b>              | <b>MedicatieToedieningStatus</b>  |  |
| <b>Alias</b>               | EN: status  |  |
| <b>Definition</b>          | <p>The status of the administration, as a description of the stage within the administration process. For indivisible products (such as tablets or suppositories) only the status codes 'completed' and 'cancelled' apply. For divisible products (such as infusions), administration 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: The administration has now been completed (according to the plan, prescription or agreement).</li> <li>• Not started: The product was never administered.</li> </ul> |  |
| <b>Datatype</b>            | CD  |  |
| <b>DCM::DefinitionCode</b> | NL-CM:9.3.4   |  |
| <b>DCM::ExampleValue</b>   | Actief  |  |
| <b>DCM::ValueSet</b>       | MedicatieToedieningStatusCodelijst  | OID:<br>2.16.840.1.113883.2.4.3.11.60.40.2.9.3.1 |
| <b>Options</b>             |   |  |

|                            |  |  |
|----------------------------|--|--|
| <b>«data»</b>              | <b>MedicatieToedieningRedenVanNietToedienen</b>  |  |
| <b>Alias</b>               | EN: MedicationAdministrationReasonForNoAdministration  |  |
| <b>Definition</b>          | Reason why the medication was not taken or administered. Here, you can choose to enter text or one of the codes. |  |
| <b>Datatype</b>            | CD   |  |
| <b>DCM::DefinitionCode</b> | NL-CM:9.3.5  |  |
| <b>DCM::ValueSet</b>       | MedicatieToedieningRedenVanNietToedienenCodelijst  | OID:<br>2.16.840.1.113883.2.4.3.11.60.40.2.9.3.2 |

|                |  |
|----------------|--|
| <b>Options</b> |  |
|----------------|--|

|                            |  |  |
|----------------------------|--|--|
| <b>«data»</b>              | <b>ToedieningsDatumTijd</b>  |  |
| <b>Alias</b>               | EN: AdministrationDateTime   |  |
| <b>Definition</b>          | The date and time at which the medication was taken or administered. |  |
| <b>Datatype</b>            | TS   |  |
| <b>DCM::DefinitionCode</b> | NL-CM:9.3.6  |  |
| <b>DCM::ExampleValue</b>   | 09-07-2011 07:50   |  |
| <b>Options</b>             |  |  |

|                            |                                     |  |
|----------------------------|-------------------------------------|--|
| <b>«data»</b>              | <b>ToegediendeHoeveelheid</b>       |  |
| <b>Alias</b>               | EN: AdministeredAmount              |  |
| <b>Definition</b>          | Amount of the administered product. |  |
| <b>Datatype</b>            | PQ                                  |  |
| <b>DCM::DefinitionCode</b> | NL-CM:9.3.7                         |  |
| <b>DCM::ExampleValue</b>   | 2 st                                |  |
| <b>Options</b>             |                                     |  |

|                            |  |  |
|----------------------------|--|--|
| <b>«data»</b>              | <b>Toedieningsweg</b>  |  |
| <b>Alias</b>               | EN: RouteOfAdministration  |  |
| <b>Definition</b>          | The route through which the medication is administered (oral, nasal, intravenous,...). |  |
| <b>Datatype</b>            | CD   |  |
| <b>DCM::DefinitionCode</b> | NL-CM:9.3.8  |  |
| <b>DCM::ExampleValue</b>   | Oraal  |  |
| <b>DCM::ValueSet</b>       | ToedieningToedieningswegC<br>odelijst  | OID:<br>2.16.840.1.113883.2.4.3.11.60.40.2.9.3.3 |
| <b>Options</b>             |  |  |

|                            |  |  |
|----------------------------|--|--|
| <b>«container»</b>         | <b>Toediener</b>   |  |
| <b>Alias</b>               | EN: Administrator  |  |
| <b>Definition</b>          | Container of the Administrator concept. This container contains all data elements of the Administrator concept. The concept describes the person who administered the product. |  |
| <b>Datatype</b>            |  |  |
| <b>DCM::DefinitionCode</b> | NL-CM:9.3.9  |  |
| <b>Options</b>             |  |  |

|                                      |   |  |
|--------------------------------------|---|--|
| <b>«context»</b>                     | <b>Zorgverlener</b>                                   |  |
| <b>Alias</b>                         | EN: HealthcareProvider                                |  |
| <b>Definition</b>                    | The healthcare provider who administered the product. |  |
| <b>Datatype</b>                      |   |  |
| <b>DCM::DefinitionCode</b>           | NL-CM:9.3.10  |  |
| <b>DCM::ReferencedDefinitionCode</b> | NL-CM:17.1.1  | Dit is een verwijzing naar concept Zorgverlener in information model Zorgverlener. |
| <b>Options</b>                       |   |  |

|                  |                |  |
|------------------|----------------|--|
| <b>«context»</b> | <b>Patiënt</b> |  |
|------------------|----------------|--|

|                                      |   |  |
|--------------------------------------|---|--|
| <b>Alias</b>                         | EN: Patient                               |  |
| <b>Definition</b>                    | The patient who administered the product. |  |
| <b>Datatype</b>                      |   |  |
| <b>DCM::DefinitionCode</b>           | NL-CM:9.3.11                              |  |
| <b>DCM::ReferencedDefinitionCode</b> | NL-CM:0.1.1                               | Dit is een verwijzing naar concept Patient in information model Patient. |
| <b>Options</b>                       |   |  |

|                                      |   |  |
|--------------------------------------|---|--|
| <b>«context»</b>                     | <b>Mantelzorgger::Contactpersoon</b>        |  |
| <b>Alias</b>                         | EN: Caregiver::Contact                      |  |
| <b>Definition</b>                    | The caregiver who administered the product. |  |
| <b>Datatype</b>                      |   |  |
| <b>DCM::DefinitionCode</b>           | NL-CM:9.3.12                                |  |
| <b>DCM::ReferencedDefinitionCode</b> | NL-CM:3.1.1                                 | Dit is een verwijzing naar concept Contactpersoon in information model Contactpersoon. |
| <b>Options</b>                       |   |  |

|                            |  |  |
|----------------------------|--|--|
| <b>«data»</b>              | <b>Toelichting</b>                             |  |
| <b>Alias</b>               | EN: Explanation                                |  |
| <b>Definition</b>          | Comments on administering the medication.      |  |
| <b>Datatype</b>            | ST   |  |
| <b>DCM::DefinitionCode</b> | NL-CM:9.3.13                                   |  |
| <b>DCM::ExampleValue</b>   | Toediening onderbroken wegens verstopt infuus. |  |
| <b>Options</b>             |  |  |

|  |  |  |
|--|--|--|
| <b>«document»</b>                        | <b>ToedieningToedieningswegCodelijst</b> |  |
| <b>Alias</b>                             |  |  |
| <b>Definition</b>                        |  |  |
| <b>Datatype</b>                          |  |  |
| <b>Options</b>                           |  |  |
| <b>ToedieningToedieningswegCodelijst</b> |  | <b>OID: 2.16.840.1.113883.2.4.3.11.60.40.2.9.3.3</b> |
| <b>Codes</b>                             | <b>Coding Syst. Name</b>                 | <b>Coding System OID</b>                             |
| Alle waarden                             | G-Standaard<br>Toedieningswegen          | 2.16.840.1.113883.2.4.4.9                            |

|   |   |                         |  |                    |
|---|---|-------------------------|--|--------------------|
| <b>«document»</b>                         | <b>MedicatieToedieningStatusCodelijst</b> |                         |  |                    |
| <b>Alias</b>                              |   |                         |  |                    |
| <b>Definition</b>                         |   |                         |  |                    |
| <b>Datatype</b>                           |   |                         |  |                    |
| <b>Options</b>                            |   |                         |  |                    |
| <b>MedicatieToedieningStatusCodelijst</b> |   |                         | <b>OID: 2.16.840.1.113883.2.4.3.11.60.40.2.9.3.1</b> |                    |
| <b>Concept Name</b>                       | <b>Concept Code</b>                       | <b>Code System Name</b> | <b>Code System OID</b>                               | <b>Description</b> |
| Active                                    | active                                    | ActStatus               | 2.16.840.1.113883.                                   | Actief             |

|           |           |           |                        |              |
|-----------|-----------|-----------|------------------------|--------------|
|           |           |           | 5.14                   |              |
| 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>MedicatieToedieningRedenVanNietToedienenCodelijst</b> |
| <b>Alias</b>      |  |
| <b>Definition</b> |  |
| <b>Datatype</b>   |  |
| <b>Options</b>    |  |

|  |  |
|--|--|
| <b>MedicatieToedieningRedenVanNietToedienenCodelijst</b> | <b>OID: 2.16.840.1.113883.2.4.3.11.60.40.2.9.3.2</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              | Voorschrift is gestopt                       |
| Forgotten to administer                | FORGOT       | NL-CM-CS         | 2.16.840.1.113883.2.4.3.11.60.40.4 | Vergeten 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                              |

## 1.8 Example Instances



| ToedieningsProduct        | Toedieningsweg | Toegediende Hoeveelheid | ToedieningsTijdstip | Medicatie ToedieningStatus      | MedicatieToediening RedenVanNietToedienen | Voorschrift           |
|---------------------------|----------------|-------------------------|---------------------|---------------------------------|---|-----------------------|
| ProductNaam               |                |                         |                     |                                 |   | RedenVanVoorschrijven |
| Paracetamol tablet 500 mg | Oraal          | 1 tablet                | 3-5-2014 10:00      | Het product is niet toegediend. | Patiënt heeft geweigerd                   | Probleem<br>Pijn      |

| ToedieningsProduct                      | Toedieningsweg | Toegediende Hoeveelheid | ToedieningsTijdstip | Medicatie ToedieningStatus | MedicatieToediening RedenVanNietToedienen | Voorschrift              |
|---|----------------|-------------------------|---------------------|----------------------------|---|--------------------------|
| ProductNaam                             |                |                         |                     |                            |   | RedenVanVoorschrijven    |
| Glucose/NaCl 2,5/0,45% infvst zak 500ml | iv             | 500ml                   | 3-5-2014 12:00      | Onderbroken                |   | Probleem<br>Ondervulling |

## 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](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](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](http://www.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

This Health and Care Information Model (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 this Health and Care Information Model. 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 this 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.

## 1.19 Terms of Use

The user may use the information in this Health and Care Information Model without limitations. The copyright provisions in the paragraph concerned apply to copying, distributing and passing on information from this Health and Care Information Model.

## 1.20 Copyrights

The user may copy, distribute and pass on the information in this Health and Care Information Model under the conditions that apply for Creative Commons license Attribution-NonCommercial-ShareAlike 3.0 Netherlands (CC BY-NC-SA-3.0). The content is available under Creative Commons Attribution-NonCommercial-ShareAlike 3.0 (see also <http://creativecommons.org/licenses/by-nc-sa/3.0/nl/>)