

# Health & Care Information Model:

## nl.zorg.BloodPressure-v4.0

Status: Final

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# Content

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# 1. nl.zorg.BloodPressure-v4.0

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	29-11-2012
DCM::DeprecatedDate	
DCM::DescriptionLanguage	nl
DCM::EndorsingAuthority.Address	
DCM::EndorsingAuthority.Name	PM
DCM::EndorsingAuthority.Telecom	
DCM::Id	2.16.840.1.113883.2.4.3.11.60.40.3.12.4
DCM::KeywordList	bloeddruk, diastolische bloeddruk, systolische bloeddruk, tensie
DCM::LifecycleStatus	Final
DCM::ModelerList	Kerngroep Registratie aan de Bron
DCM::Name	nl.zorg.Bloeddruk
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DCM::ReviewerList	Projectgroep Generieke Overdrachtsgegevens & Kerngroep Registratie aan de Bron
DCM::RevisionDate	12-09-2023
DCM::Supersedes	nl.zorg.Bloeddruk-v3.2.1
DCM::Version	4.0
HCIM::PublicationLanguage	EN

## 1.1 Revision History

Publicatieversie 1.0 (15-02-2013)

Publicatieversie 1.1 (01-07-2013)

Publicatieversie 1.2 (01-04-2015)

Bevat: ZIB-135, ZIB-136, ZIB-137, ZIB-148, ZIB-169, ZIB-218, ZIB-219, ZIB-220, ZIB-308, ZIB-315, ZIB-362, ZIB-363.

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.

Publicatieversie 3.1 (04-09-2017)

Bevat: ZIB-431, ZIB-552, ZIB-564, ZIB-571.

Publicatieversie 3.2 (31-01-2020)

Bevat: ZIB-846.

Publicatieversie 3.2.1 (01-09-2020)

Bevat: ZIB-962.

Publicatieversie 4.0 (15-10-2023)

Bevat: ZIB-1731, ZIB-1813

## 1.2 Concept

The blood pressure is a parameter for determining the condition of the blood circulation and is expressed in systolic and diastolic pressure in mmHg.

## 1.3 Mindmap

## 1.4 Purpose

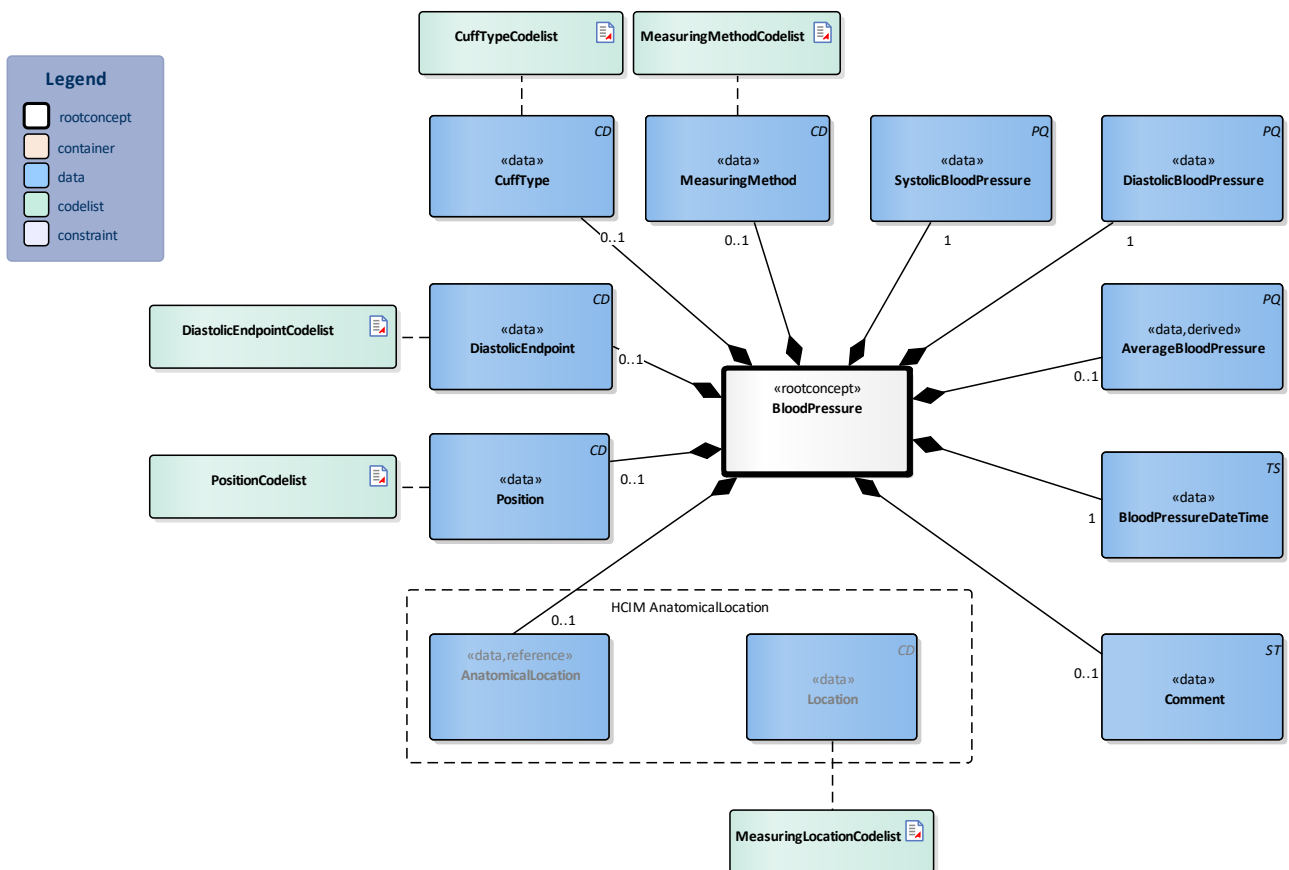
Blood pressure is measured to gain an indication of the health condition of the patient’s cardiovascular system.

## 1.5 Patient Population

## 1.6 Evidence Base

The local measurement of the arterial blood pressure, which acts as a surrogate for the arterial pressure in the systematic circulation. In most cases, the term ‘blood pressure’ refers to the measurement of blood pressure of the arteria brachialis in the upper arm with the cuff using the Riva-Rocci method. The protocol for this measurement comprises many details that are not general knowledge (such as the correct way to interpret Korotkoff sounds) or carried out correctly (adjusting the cuff width to a very large or small diameter of the upper arm, the right rate of descent of the mercury column, cut-off values for cardiac arrhythmias).

## 1.7 Information Model



<b>Definitie</b>	Root concept of the BloodPressure information model. This root concept contains all data elements of the BloodPressure information model.	
<b>Datatype</b>		
<b>DCM::ConceptId</b>	NL-CM:12.4.1	
<b>DCM::DefinitionCode</b>	LOINC: 85354-9 Blood pressure panel	
<b>DCM::DefinitionCode</b>	SNOMED CT: 46973005 Blood pressure taking	
<b>Opties</b>		

<b>«data»</b>	<b>CuffType</b>	
<b>Definitie</b>	The size of the cuff used in the measurement.	
<b>Datatype</b>	CD	
<b>DCM::ConceptId</b>	NL-CM:12.4.9	
<b>DCM::DefinitionCode</b>	SNOMED CT: 70665002 blood pressure cuff	
<b>DCM::ValueSet</b>	CuffTypeCodelist	OID: 2.16.840.1.113883.2.4.3.11.60.40.2.12.4.3
<b>Opties</b>		

<b>«data»</b>	<b>MeasuringMethod</b>	
<b>Definitie</b>	The type of method used to measure blood pressure.	
<b>Datatype</b>	CD	
<b>DCM::ConceptId</b>	NL-CM:12.4.7	
<b>DCM::ValueSet</b>	MeasuringMethodCodelist	OID: 2.16.840.1.113883.2.4.3.11.60.40.2.12.4.1
<b>Opties</b>		

<b>«data»</b>	<b>SystolicBloodPressure</b>	
<b>Definitie</b>	The highest (peak) systematic arterial blood pressure - measured in the contraction stage or systole of the cardiac cycle.	
<b>Datatype</b>	PQ	
<b>DCM::ConceptId</b>	NL-CM:12.4.2	
<b>DCM::DefinitionCode</b>	LOINC: 8480-6 Systolic blood pressure	
<b>DCM::ExampleValue</b>	155 mmHg	
<b>Opties</b>		

<b>«data»</b>	<b>DiastolicBloodPressure</b>	
<b>Definitie</b>	The lowest systematic arterial blood pressure - measured in the relaxation stage or diastole of the cardiac cycle.	
<b>Datatype</b>	PQ	
<b>DCM::ConceptId</b>	NL-CM:12.4.3	
<b>DCM::DefinitionCode</b>	LOINC: 8462-4 Diastolic blood pressure	
<b>DCM::ExampleValue</b>	70 mmHg	
<b>Opties</b>		

<b>«data»</b>	<b>AverageBloodPressure</b>	
<b>Definitie</b>	Average blood pressure during one cycle of the heart contracting and relaxing. Estimated based on systolic and diastolic blood pressure. This estimate is unreliable in cases of circulatory disorders. This value can only be reliably determined when invasive blood pressure is measured.	
<b>Datatype</b>	PQ	

<b>DCM::ConceptId</b>	NL-CM:12.4.4	
<b>DCM::DefinitionCode</b>	SNOMED CT: 6797001 mean arterial pressure	
<b>Opties</b>		

<b>«data»</b>	<b>BloodPressureDateTime</b>	
<b>Definitie</b>	The date and time at which these blood pressure values were measured.	
<b>Datatype</b>	TS	
<b>DCM::ConceptId</b>	NL-CM:12.4.5	
<b>Opties</b>		

<b>«data»</b>	<b>Comment</b>	
<b>Definitie</b>	Comments on the measured blood pressure. Here, an explanation could be given, for example, of circumstances that may have influenced the patient's blood pressure, such as pain, stress, exertion and sleep/wake cycles.	
<b>Datatype</b>	ST	
<b>DCM::ConceptId</b>	NL-CM:12.4.6	
<b>DCM::DefinitionCode</b>	LOINC: 48767-8 Annotation comment	
<b>Opties</b>		

<b>«data»</b>	<b>AnatomicalLocation</b>	
<b>Definitie</b>	Anatomical location where the blood pressure was measured.	
<b>Datatype</b>		
<b>DCM::ConceptId</b>	NL-CM:12.4.12	
<b>DCM::ReferencedConceptId</b>	NL-CM:20.7.1	This is a reference to the rootconcept of information model AnatomicalLocation.
<b>Opties</b>		

<b>«data»</b>	<b>Location</b>	
<b>Definitie</b>	Localisation on/in the body.	
<b>Datatype</b>	CD	
<b>DCM::ConceptId</b>	NL-CM:20.7.4	
<b>DCM::ValueSet</b>	MeasuringLocationCodelist	OID: 2.16.840.1.113883.2.4.3.11.60.40.2.12.4.4
<b>Opties</b>		

<b>«data»</b>	<b>Position</b>	
<b>Definitie</b>	The position of the patient when the blood pressure was measured.	
<b>Datatype</b>	CD	
<b>DCM::ConceptId</b>	NL-CM:12.4.11	
<b>DCM::ExampleValue</b>	Zittend	
<b>DCM::ValueSet</b>	PositionCodelist	OID: 2.16.840.1.113883.2.4.3.11.60.40.2.12.4.5
<b>Opties</b>		

<b>«data»</b>	<b>DiastolicEndpoint</b>	
<b>Definitie</b>	Registration of the Korotkoff sound used to measure diastolic pressure with the auscultatory method.	
<b>Datatype</b>	CD	
<b>DCM::ConceptId</b>	NL-CM:12.4.8	
<b>DCM::DefinitionCode</b>	SNOMED CT: 85549003 Korotkoff sound	

<b>DCM::ValueSet</b>	DiastolicEndpointCodelist	OID: 2.16.840.1.113883.2.4.3.11.60.40.2.12.4.2
<b>Opties</b>		

<b>«document»</b>		<b>DiastolicEndpointCodelist</b>		
<b>Definitie</b>				
<b>Datatype</b>				
<b>DCM::ValueSetBinding</b>	Required			
<b>DCM::ValueSetId</b>	2.16.840.1.113883.2.4.3.11.60.40.2.12.4.2			
<b>HCIM::ValueSetLanguage</b>	--			
<b>Opties</b>				
<b>DiastolischEindpuntCodelijst</b>		<b>OID: 2.16.840.1.113883.2.4.3.11.60.40.2.12.4.2</b>		
<b>Concept Name</b>	<b>Concept Code</b>	<b>Coding Syst. Name</b>	<b>Coding System OID</b>	<b>Description</b>
Phase 4	255271000	SNOMED CT	2.16.840.1.113883.6.96	Fase IV
Phase 5	255272007	SNOMED CT	2.16.840.1.113883.6.96	Fase V

<b>«document»</b>		<b>CuffTypeCodelist</b>		
<b>Definitie</b>				
<b>Datatype</b>				
<b>DCM::ValueSetBinding</b>	Required			
<b>DCM::ValueSetId</b>	2.16.840.1.113883.2.4.3.11.60.40.2.12.4.3			
<b>HCIM::ValueSetLanguage</b>	NL			
<b>Opties</b>				
<b>ManchetTypeCodelijst</b>		<b>OID: 2.16.840.1.113883.2.4.3.11.60.40.2.12.4.3</b>		
<b>Concept Name</b>	<b>Concept Code</b>	<b>Coding Syst. Name</b>	<b>Coding System OID</b>	<b>Description</b>
Standaard	STD	ManchetType	2.16.840.1.113883.2.4.3.11.60.40.4.15.1	Standaard (Standaard manchet voor een volwassene (manchet 16x30 cm))
Groot	L	ManchetType	2.16.840.1.113883.2.4.3.11.60.40.4.15.1	Groot (Een manchet voor een volwassene met een armomtrek van 35 tot 44 cm (manchet 16x36 cm))
Klein	S	ManchetType	2.16.840.1.113883.2.4.3.11.60.40.4.15.1	Klein (Een manchet voor een volwassene met een armomtrek van 22 tot 26 cm (manchet 12x22 cm) )
Extra groot	XL	ManchetType	2.16.840.1.113883.2.4.3.11.60.40.4.15.1	Extra groot (Een manchet voor het dijbeen of arm wanneer de armomtrek 45 tot 52 cm is (manchet 16x42 cm))
Kind	KIND	ManchetType	2.16.840.1.113883.2.4.3.11.60.40.4.15.1	Maat voor kind (Een manchet voor kinderen of voor volwassenen met een dunne arm (manchet ca. 8x21 cm) )

Jong kind	JONGKIND	ManchetType	2.16.840.1.113883.2.4.3.11.60.40.4.15.1	Maat voor jong kind (Een manchet voor jonge kinderen (manchet ca. 5x15 cm))
Neonaat	NEONAAT	ManchetType	2.16.840.1.113883.2.4.3.11.60.40.4.15.1	Maat voor neonaat (Een manchet voor neonaten (manchet ca. 3x6 cm))

«document»		PositionCodelist		
Definitie				
Datatype				
DCM::ValueSetBinding	Extensible			
DCM::ValueSetId	2.16.840.1.113883.2.4.3.11.60.40.2.12.4.5			
HCIM::ValueSetLanguage	--			
Opties				
HoudingCodelijst		OID: 2.16.840.1.113883.2.4.3.11.60.40.2.12.4.5		
Concept Name	Concept Code	Coding Syst. Name	Coding System OID	Description
Orthostatic body position	10904000	SNOMED CT	2.16.840.1.113883.6.96	Staande positie
Recumbent body position	102538003	SNOMED CT	2.16.840.1.113883.6.96	Liggende positie
Sitting position	33586001	SNOMED CT	2.16.840.1.113883.6.96	Zittende positie
Position with tilt	272587006	SNOMED CT	2.16.840.1.113883.6.96	Achteroverleunende positie
Trendelenburg position	34106002	SNOMED CT	2.16.840.1.113883.6.96	Trendelenburgligging

«document»		MeasuringMethodCodelist		
Definitie				
Datatype				
DCM::ValueSetBinding	Extensible			
DCM::ValueSetId	2.16.840.1.113883.2.4.3.11.60.40.2.12.4.1			
HCIM::ValueSetLanguage	--			
Opties				
MeetmethodeCodelijst		OID: 2.16.840.1.113883.2.4.3.11.60.40.2.12.4.1		
Concept Name	Concept Code	Coding Syst. Name	Coding System OID	Description
Non-invasive	22762002	SNOMED CT	2.16.840.1.113883.6.96	Niet-invasief
Measurement of blood pressure using cuff method	371911009	SNOMED CT	2.16.840.1.113883.6.96	Niet-invasief (met manchet)
Bloeddrukmeting met automatische	956910001	SNOMED CT	2.16.840.1.113883.6.96	Niet-invasief (met automatische)



bloeddrukmeter	46106			bloeddrukmeter)
Invasive	10179008	SNOMED CT	2.16.840.1.113883.6.96	Invasief

«document»	MeasuringLocationCodelist		
<b>Definitie</b>			
<b>Datatype</b>			
<b>DCM::ValueSetBinding</b>	Extensible		
<b>DCM::ValueSetId</b>	2.16.840.1.113883.2.4.3.11.6 0.40.2.12.4.4		
<b>HCIM::ValueSetLanguage</b>	--		
<b>Opties</b>			

MeetLocatieCodelijst			OID: 2.16.840.1.113883.2.4.3.11.60.40.2.12.4.4	
Concept Name	Concept Code	Coding Syst. Name	Coding System OID	Description
Upper arm structure	40983000	SNOMED CT	2.16.840.1.113883.6.96	Bovenarm
Right upper arm structure	368209003	SNOMED CT	2.16.840.1.113883.6.96	Rechter bovenarm [DEPRECATED]
Left upper arm structure	368208006	SNOMED CT	2.16.840.1.113883.6.96	Linker bovenarm [DEPRECATED]
Thigh structure	68367000	SNOMED CT	2.16.840.1.113883.6.96	Bovenbeen
Structure of right thigh	11207009	SNOMED CT	2.16.840.1.113883.6.96	Rechter bovenbeen [DEPRECATED]
Structure of left thigh	61396006	SNOMED CT	2.16.840.1.113883.6.96	Linker bovenbeen [DEPRECATED]
Wrist region structure	8205005	SNOMED CT	2.16.840.1.113883.6.96	Pols
Structure of right wrist	9736006	SNOMED CT	2.16.840.1.113883.6.96	Rechterpols [DEPRECATED]
Structure of left wrist	5951000	SNOMED CT	2.16.840.1.113883.6.96	Linkerpols [DEPRECATED]
Finger structure	7569003	SNOMED CT	2.16.840.1.113883.6.96	Vinger [DEPRECATED]
Ankle region structure	344001	SNOMED CT	2.16.840.1.113883.6.96	Enkel
Structure of right ankle	6685009	SNOMED CT	2.16.840.1.113883.6.96	Rechterenkel [DEPRECATED]
Structure of left ankle	51636004	SNOMED CT	2.16.840.1.113883.6.96	Linkerenkel [DEPRECATED]
Digit of hand structure	125685002	SNOMED CT	2.16.840.1.113883.6.96	Vinger (inclusief duim)
Lower leg structure	30021000	SNOMED CT	2.16.840.1.113883.6.96	Onderbeen

Legend	
<b>Definitie</b>	
<b>Datatype</b>	
<b>Opties</b>	

## 1.8 Example Instances

				AnatomischeLocatie		
Bloeddruk	Systolische	Diastolische	Manchet	Laterali	Locatie	Toelichting
DatumTijd	Bloeddruk	Bloeddruk	Houding	Type	iteit	ng
08-02-2013 6:43	125 mmHg	75 mmHg	Liggende positie	standaard	rechts	bovenarm

				AnatomischeLocatie		
Bloeddruk	Systolische	Diastolische	Manchet	Laterali	Locatie	Toelichting
DatumTijd	Bloeddruk	Bloeddruk	Houding	Type	iteit	ng
07-02-2013	108 mmHg	56 mmHg	Zittende positie	groot	links	pols Mv. is zwanger

## 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. Parelsnoer DCM Bloeddruk v0.9 [Online] Beschikbaar op: <http://www.nictiz.nl/uploaded/FILES/htmlcontent/dcm/parelsnoer/Bloeddruk%20v0.9.pdf> [Geraadpleegd: 23 februari 2015].
2. openEHR-EHR-OBSERVATION.blood\_pressure.v1 [Online] Beschikbaar op: <http://www.openehr.org/knowledge/> [Geraadpleegd: 23 februari 2015].

## 1.16 Functional Model

## 1.17 Traceability to other Standards

This health and care information model is in accordance with the information model template Measurement v1.0.

## 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

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