

# Health & Care Information Model:

nl.zorg.Refraction-v2.0

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# Content

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# 1. nl.zorg.Refraction-v2.0

DCM::CoderList	*
DCM::ContactInformation.Address	*
DCM::ContactInformation.Name	*
DCM::ContactInformation.Telecom	*
DCM::ContentAuthorList	*
DCM::CreationDate	17-5-2020
DCM::DeprecatedDate	
DCM::DescriptionLanguage	nl
DCM::EndorsingAuthority.Address	
DCM::EndorsingAuthority.Name	*
DCM::EndorsingAuthority.Telecom	
DCM::Id	2.16.840.1.113883.2.4.3.11.60.40.3.12.20
DCM::KeywordList	
DCM::LifecycleStatus	Final
DCM::ModelerList	*
DCM::Name	nl.zorg.Refractie
DCM::PublicationDate	23-04-2025
DCM::PublicationStatus	Published
DCM::ReviewerList	
DCM::RevisionDate	04-09-2023
DCM::Supersedes	nl.zorg.Refractie-v1.2
DCM::Version	2.0
HCIM::PublicationLanguage	EN

## 1.1 Revision History

Publicatieversie 1.0 (01-09-2020)

Publicatieversie 1.1 (01-12-2021)

Bevat: ZIB-1420, ZIB-1421, ZIB-1442, ZIB-1443, ZIB-1449, ZIB-1522.

Publicatieversie 1.2 (10-06-2022)

Bevat: ZIB-1716.

Publicatieversie 2.0 (15-10-2023)

Bevat: ZIB-1889, ZIB-1868.

## 1.2 Concept

The refraction measurement is a measurement with which the refractive error of the eye is determined. During the refraction measurement, the necessary correction is established: the spherical power (in diopters), the cylindrical power (in diopters), the axis direction (in degrees) for any cylindrical correction, the prism (in prism diopters) and any additional power of the reading area (in diopters), the so-called reading addition

## 1.3 Mindmap

## 1.4 Purpose

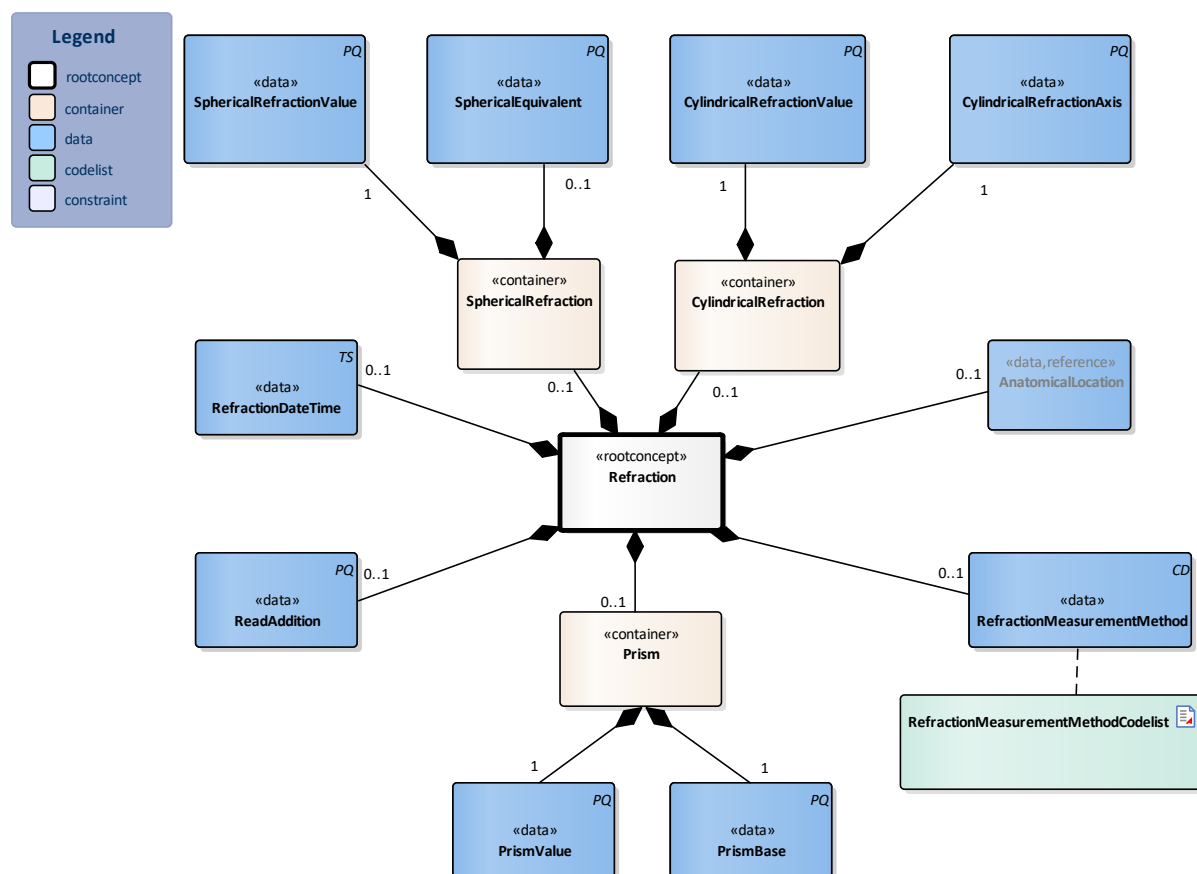
The purpose of a refraction measurement is to determine the correction (through glasses or lenses) with which the patient can see optimally.

## 1.5 Patient Population

Adults and children from the age that they can interpret a picture chart.

## 1.6 Evidence Base

## 1.7 Information Model



«rootconcept»	Refraction	
Definitie	Root concept of the Refraction information model.This root concept contains all data elements of the Refraction information model.	
Datatype		
DCM::ConceptId	NL-CM:12.20.1	
DCM::DefinitionCode	SNOMED CT: 366060000 Refraction measurement - finding	
Opties		

«data»	RefractionMeasurementMethod	
Definitie	The method used to measure the refraction.	
Datatype	CD	
DCM::ConceptId	NL-CM:12.20.4	
DCM::DefinitionCode	SNOMED CT: 252886007 Refraction assessment	
DCM::ValueSet	RefractionMeasurementMethodCodeList	OID: 2.16.840.1.113883.2.4.3.11.60.40.2.12.20.1
Opties		

«data»	RefractionDateTime	
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<b>Definitie</b>	The date and time when the refraction measurement was carried out.	
<b>Datatype</b>	TS	
<b>DCM::ConceptId</b>	NL-CM:12.20.3	
<b>DCM::DefinitionCode</b>	SNOMED CT: 439771001 Date of event	
<b>Opties</b>		

<b>«container»</b>	<b>CylindricalRefraction</b>	
<b>Definitie</b>	Container of the CylindricalRefraction concept.This container contains all data elements of the CylindricalRefraction concept.	
<b>Datatype</b>		
<b>DCM::ConceptId</b>	NL-CM:12.20.12	
<b>Opties</b>		

<b>«data»</b>	<b>CylindricalRefractionValue</b>	
<b>Definitie</b>	The power of the cylinder needed to correct the cylindrical error (astigmatism), expressed in diopters, increasing per 0.25D. When a cylindrical refraction is registered, the axis of the cylinder must also be specified.	
<b>Datatype</b>	PQ	
<b>DCM::ConceptId</b>	NL-CM:12.20.11	
<b>DCM::DefinitionCode</b>	SNOMED CT: 251797004 Power of cylinder	
<b>DCM::ExampleValue</b>	-0.75	
<b>Opties</b>		

<b>«data»</b>	<b>CylindricalRefractionAxis</b>	
<b>Definitie</b>	The axis direction of the cylindrical refraction value expressed in degrees.	
<b>Datatype</b>	PQ	
<b>DCM::ConceptId</b>	NL-CM:12.20.13	
<b>DCM::DefinitionCode</b>	SNOMED CT: 251799001 Axis of cylinder	
<b>DCM::ExampleValue</b>	18 graden	
<b>Opties</b>		

<b>«container»</b>	<b>Prism</b>	
<b>Definitie</b>	Container of the Prism concept.This container contains all data elements of the Prism container.	
<b>Datatype</b>		
<b>DCM::ConceptId</b>	NL-CM:12.20.5	
<b>Opties</b>		

<b>«data»</b>	<b>PrismValue</b>	
<b>Definitie</b>	The power of the prism, expressed in prism diopters.	
<b>Datatype</b>	PQ	
<b>DCM::ConceptId</b>	NL-CM:12.20.6	
<b>DCM::DefinitionCode</b>	SNOMED CT: 251762001 Prism strength	
<b>DCM::ExampleValue</b>	2.00	
<b>Opties</b>		

<b>«data»</b>	<b>PrismBase</b>	
<b>Definitie</b>	The base of the prism, expressed in degrees.	
<b>Datatype</b>	PQ	
<b>DCM::ConceptId</b>	NL-CM:12.20.7	

DCM::DefinitionCode	SNOMED CT: 246223004 Prism base direction	
DCM::ExampleValue	90	
Opties		

«container»	SphericalRefraction	
Definitie	Container of the SphericalRefraction concept. This container contains all data elements of the SphericalRefraction concept.	
Datatype		
DCM::ConceptId	NL-CM:12.20.14	
Opties		

«data»	SphericalRefractionValue	
Definitie	The spherical spectacle strength power needed to correct nearsightedness (myopia) or farsightedness (hyperopia), expressed in diopters, ascending by 0.25D.	
Datatype	PQ	
DCM::ConceptId	NL-CM:12.20.9	
DCM::DefinitionCode	SNOMED CT: 251795007 Power of sphere	
DCM::ExampleValue	+2 diopter	
Opties		

«data»	SphericalEquivalent	
Definitie	The spherical power added to half of the cylindrical power. Expressed in diopters, with two digits after the decimal point. Some equipment automatically calculates the spherical equivalent.	
Datatype	PQ	
DCM::ConceptId	NL-CM:12.20.10	
DCM::DefinitionCode	SNOMED CT: 112881000146107 Spherical equivalent	
Opties		

«data»	ReadAddition	
Definitie	A supplement that is added to the refraction value to determine the strength of the reading glasses, expressed in diopters.	
Datatype	PQ	
DCM::ConceptId	NL-CM:12.20.8	
DCM::DefinitionCode	SNOMED CT: 251796008 Spherical addition	
DCM::ExampleValue	1,25 diopter	
Opties		

«data»	AnatomicalLocation	
Definitie	Indication and the laterality of the eye of which the refraction measurement relates to.	
Datatype		
DCM::ConceptId	NL-CM:12.20.2	
DCM::ExampleValue	Links	
DCM::ReferencedConceptId	NL-CM:20.7.1	This is a reference to the rootconcept of information model AnatomicalLocation.
Opties		

«document»	RefractionMeasurementMethodCodelist	
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Definitie				
Datatype				
DCM::ValueSetBinding	Extensible			
DCM::ValueSetId	2.16.840.1.113883.2.4.3.11.60.40.2.12.20.1			
DCM::ValueSetIncludeOTH	True			
DCM::ValueSetStatus	Active			
HCIM::ValueSetLanguage	--			
Opties				
RefractieMeetMethodeCodelijst		OID: 2.16.840.1.113883.2.4.3.11.60.40.2.12.20.1		
Concept Name	Concept Code	Coding System Name	Coding System OID	Description
Subjective refraction (procedure)	397277005	SNOMED CT	2.16.840.1.113883.6.96	Subjectieve refractie
Objective refraction (procedure)	397276001	SNOMED CT	2.16.840.1.113883.6.96	Objectieve refractie

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

## 1.8 Example Instances

Refractie Datum/Tijd	Refractie Methode	Refractie Lateraltelt	SferischeRefractie		CilindrischeRefractie		Lees additie	Prisma	
			SferischeRefractieWaarde	SferischEquivalent	CilindrischeRefractie Waarde	CilindrischeRefractieAs		PrismaWaarde	PrismaBasis
1-1-2020	Subjectieve refractie	Rechts	+1.00	0.63	-0.75	90	1.00	2.00	90
1-1-2020	Subjectieve refractie	Links	+0.5	0	-1.00	45	1.00	1.50	45
12-1-2020	Objectieve refractie	Rechts	—	—	—	—	—	—	—
12-1-2020	Objectieve refractie	Links	—	—	—	—	—	—	—

## 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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