

Health & Care Information Model:

nl.zorg.Respiration-v3.2

Status: Final

Release: 2026-1

Release status: Prepublished

Managed by:



Content

1. nl.zorg.Respiration-v3.2	3
1.1 Revision History	3
1.2 Concept	3
1.3 Mindmap	4
1.4 Purpose	4
1.5 Patient Population	4
1.6 Evidence Base	4
1.7 Information Model	4
1.8 Example Instances	8
1.9 Instructions	9
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	10
1.19 Terms of Use	10
1.20 Copyrights	10

1. nl.zorg.Respiration-v3.2

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	1-4-2016
DCM::DeprecatedDate	
DCM::DescriptionLanguage	nl
DCM::EndorsingAuthority.Address	
DCM::EndorsingAuthority.Name	PM
DCM::EndorsingAuthority.Telecom	
DCM::Id	2.16.840.1.113883.2.4.3.11.60.40.3.12.5
DCM::KeywordList	Ademhaling
DCM::LifecycleStatus	Final
DCM::ModelerList	Kerngroep Registratie aan de Bron
DCM::Name	nl.zorg.Ademhaling
DCM::PublicationDate	17-04-2026
DCM::PublicationStatus	Prepublished
DCM::ReviewerList	Projectgroep Generieke Overdrachtsgegevens & Kerngroep Registratie aan de Bron
DCM::RevisionDate	31-12-2017
DCM::Supersedes	nl.zorg.Ademhaling-v3.1
DCM::Version	3.2
HCIM::PublicationLanguage	EN

1.1 Revision History

Publicatieversie 1.0 (01-04-2015)

Bevat: ZIB-113, ZIB-308, ZIB-361, ZIB-364, ZIB-365, ZIB-366.

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-407, ZIB-398.

Publicatieversie 1.0.2 (16-07-2015)

Bevat: ZIB-415, ZIB-416.

Publicatieversie 3.0 (01-05-2016)

Bevat: ZIB-453.

Publicatieversie 3.1 (04-09-2017)

Bevat: ZIB-431, ZIB-441, ZIB-549, ZIB-564.

Publicatieversie 3.2 (31-01-2020)

Bevat: ZIB-924.

1.2 Concept

During breathing or respiration, air flows to and from the lungs, where gas exchange occurs, absorbing oxygen from the air into the blood and exhaling carbon dioxide into the air. Observations of spontaneous

breathing, usually registered as part of the observation of vital functions.

1.3 Mindmap

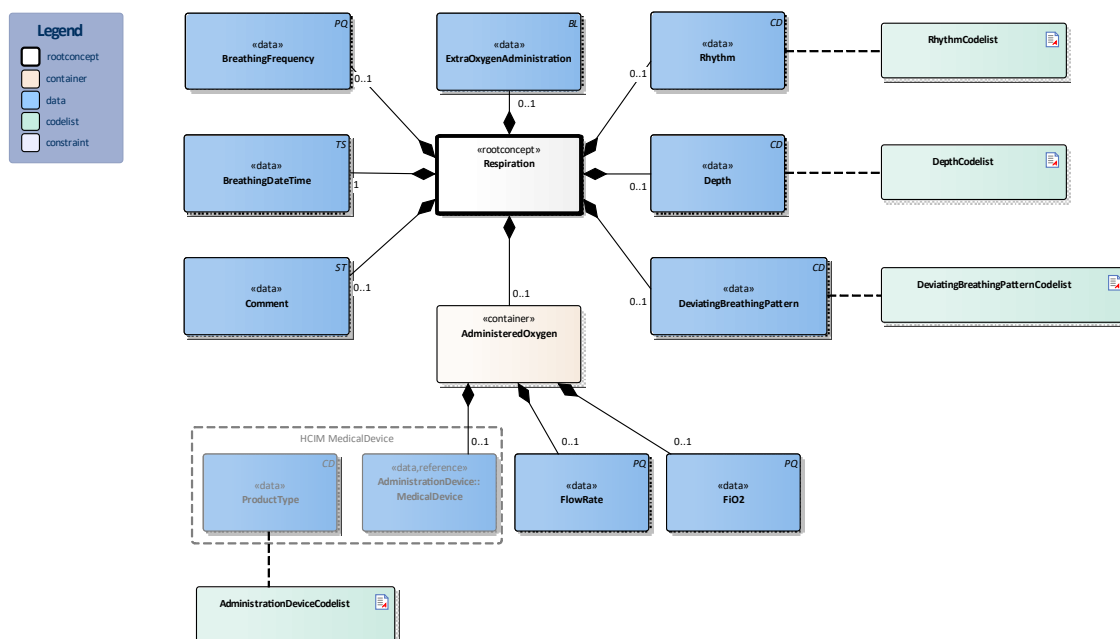
1.4 Purpose

Observing a person's spontaneous breathing, including recording breathing frequency, depth and rhythm, is done to gain an indication of the health condition of the patient's pulmonary system.

1.5 Patient Population

1.6 Evidence Base

1.7 Information Model



«rootconcept»	Respiration	
Definitie	Root concept of the Breathing information model. This root concept contains all data elements of the Breathing information model.	
Datatype		
DCM::ConceptId	NL-CM:12.5.1	
DCM::DefinitionCode	SNOMED CT: 422834003 Respiratory assessment	
Opties		

«data»	BreathingFrequency	
Definitie	The value of the measured breathing frequency. The breathing frequency is the number of breaths per minute.	
Datatype	PQ	

DCM::ConceptId	NL-CM:12.5.2	
DCM::DefinitionCode	LOINC: 9279-1 Respiratory Rate	
DCM::ExampleValue	15/min	
Opties		

«data»	BreathingDateTime	
Definitie	Date and if possible time of measurement.	
Datatype	TS	
DCM::ConceptId	NL-CM:12.5.4	
Opties		

«data»	Rhythm	
Definitie	The rhythm or regularity of breathing.	
Datatype	CD	
DCM::ConceptId	NL-CM:12.5.5	
DCM::DefinitionCode	SNOMED CT: 48064009 Respiratory rhythm	
DCM::ValueSet	RhythmCodelist	OID: 2.16.840.1.113883.2.4.3.11.60.40.2.12.5.1
Opties		

«data»	Depth	
Definitie	The depth of the breaths.	
Datatype	CD	
DCM::ConceptId	NL-CM:12.5.6	
DCM::DefinitionCode	SNOMED CT: 271626009 Depth of respiration	
DCM::ValueSet	DepthCodelist	OID: 2.16.840.1.113883.2.4.3.11.60.40.2.12.5.2
Opties		

«data»	DeviatingBreathingPattern	
Definitie	Specific, abnormal breathing patterns.	
Datatype	CD	
DCM::ConceptId	NL-CM:12.5.7	
DCM::DefinitionCode	SNOMED CT: 278907009 Respiratory pattern	
DCM::ValueSet	DeviatingBreathingPatternCodelist	OID: 2.16.840.1.113883.2.4.3.11.60.40.2.12.5.3
Opties		

«data»	ExtraOxygenAdministration	
Definitie	An indication stating whether the patient is given extra oxygen. In that event, additional information can be recorded in the concepts that are part of the AdministeredOxygen container.	
Datatype	BL	
DCM::ConceptId	NL-CM:12.5.12	
DCM::DefinitionCode	SNOMED CT: 16206004 Oxygen delivery	
Opties		

«data»	Comment	
Definitie	Comment on additional factors that can influence breathing such as the	

	extent of fear, pain, nutrition in the case of infants or a tracheostomy.	
Datatype	ST	
DCM::ConceptId	NL-CM:12.5.3	
DCM::DefinitionCode	LOINC: 48767-8 Annotation comment	
Opties		

«container»	AdministeredOxygen	
Definitie	Container of the AdministeredOxygen concept. This container contains all data elements of the AdministeredOxygen concept.	
Datatype		
DCM::ConceptId	NL-CM:12.5.8	
Opties		

«data»	FlowRate	
Definitie	The amount of administered oxygen. The value is between 0.0 and 50.0 l/min.	
Datatype	PQ	
DCM::ConceptId	NL-CM:12.5.10	
DCM::DefinitionCode	SNOMED CT: 427081008 Delivered oxygen flow rate (observable entity)	
Opties		

«data»	FiO2	
Definitie	The fractional concentration of inspired oxygen. Value is between 0.0 and 1.0, with a normal value of 0.21 (no extra oxygen administered).	
Datatype	PQ	
DCM::ConceptId	NL-CM:12.5.9	
DCM::DefinitionCode	SNOMED CT: 250774007 Inspired oxygen concentration	
Opties		

«data»	AdministrationDevice::MedicalDevice	
Definitie	Device used for administering extra oxygen to the patient.	
Datatype		
DCM::ConceptId	NL-CM:12.5.13	
DCM::ReferencedConceptId	NL-CM:10.1.1	This is a reference to rootconcept of information model MedicalDevice.
Opties		

«data»	ProductType	
Definitie	Type of device used for administering.	
Datatype	CD	
DCM::ConceptId	NL-CM:10.1.3	
DCM::ValueSet	AdministrationDeviceCodeList	OID: 2.16.840.1.113883.2.4.3.11.60.40.2.12.5.4
Opties		

«document»	AdministrationDeviceCodeList	
Definitie		
Datatype		
DCM::ValueSetBinding	Extensible	

DCM::ValueSetId	2.16.840.1.113883.2.4.3.11.60.40.2.12.5.4			
DCM::ValueSetIncludeOTH	True			
DCM::ValueSetStatus	Active			
HCIM::ValueSetLanguage	--			
Opties				
ToedieningHulpmiddelCodelijst			OID: 2.16.840.1.113883.2.4.3.11.60.40.2.12.5.4	
Concept Name	Concept Code	Coding Syst. Name	Coding System OID	Description
Oxygen nasal cannula	336623009	SNOMED CT	2.16.840.1.113883.6.96	Neusbril
Venturi mask	428285009	SNOMED CT	2.16.840.1.113883.6.96	Venturi masker
Nonrebreather oxygen mask	427591007	SNOMED CT	2.16.840.1.113883.6.96	Non-rebreathing masker

«document»	DeviatingBreathingPatternCodelist			
Definitie				
Datatype				
DCM::ValueSetBinding	Extensible			
DCM::ValueSetId	2.16.840.1.113883.2.4.3.11.60.40.2.12.5.3			
DCM::ValueSetIncludeOTH	True			
DCM::ValueSetStatus	Active			
HCIM::ValueSetLanguage	--			
Opties				
AfwijkendAdemhalingspatroonCodelijst		OID: 2.16.840.1.113883.2.4.3.11.60.40.2.12.5.3		
Concept Name	Concept Code	Coding Syst. Name	Coding System OID	Description
Kussmaul's respiration	414563008	SNOMED CT	2.16.840.1.113883.6.96	Ademhaling volgens Kussmaul
Cheyne-Stokes respiration	309155007	SNOMED CT	2.16.840.1.113883.6.96	Ademhaling volgens Cheyne-Stokes
Ataxic respiration	39106000	SNOMED CT	2.16.840.1.113883.6.96	Atactische ademhaling
Apneustic breathing	70185004	SNOMED CT	2.16.840.1.113883.6.96	Apneustische ademhaling
Cluster breathing	7013003	SNOMED CT	2.16.840.1.113883.6.96	Cluster ademhaling
Apnoea	1023001	SNOMED CT	2.16.840.1.113883.6.96	Apneu
Prolonged expiration	248586000	SNOMED CT	2.16.840.1.113883.6.96	Verlengde expiratoire fase
Gasping respiration	23141003	SNOMED CT	2.16.840.1.113883.6.96	Happende ademhaling

«document»	DepthCodelist	
Definitie		
Datatype		
DCM::ValueSetBinding	Extensible	

DCM::ValueSetId	2.16.840.1.113883.2.4.3.11.60.40.2.12.5.2	
DCM::ValueSetIncludeOTH	True	
DCM::ValueSetStatus	Active	
HCIM::ValueSetLanguage	--	
Opties		

DiepteCodelijst		OID: 2.16.840.1.113883.2.4.3.11.60.40.2.12.5.2		
Concept Name	Concept Code	CodeSys. Name	CodeSystem OID	Description
Normal depth of breathing	301284009	SNOMED CT	2.16.840.1.113883.6.96	Normale ademhalingsdiepte
Shallow breathing	386616007	SNOMED CT	2.16.840.1.113883.6.96	Oppervlakkige ademhaling
Deep breathing	289123006	SNOMED CT	2.16.840.1.113883.6.96	Diepe ademhaling
Depth of respiration varies	248587009	SNOMED CT	2.16.840.1.113883.6.96	Ademhalingsdiepte varieert

«document»	RhythmCodelist	
Definitie		
Datatype		
DCM::ValueSetBinding	Extensible	
DCM::ValueSetId	2.16.840.1.113883.2.4.3.11.60.40.2.12.5.1	
DCM::ValueSetIncludeOTH	True	
DCM::ValueSetStatus	Active	
HCIM::ValueSetLanguage	--	
Opties		

RitmeCodelijst		OID: 2.16.840.1.113883.2.4.3.11.60.40.2.12.5.1		
Concept Name	Concept Code	CodeSys. Name	CodeSystem OID	Description
Normal respiratory rhythm	5467003	SNOMED CT	2.16.840.1.113883.6.96	Normaal ademhalingsritme
Abnormal respiratory rhythm	85617008	SNOMED CT	2.16.840.1.113883.6.96	Abnormaal ademhalingsritme

	Legend
Definitie	
Datatype	
Opties	

1.8 Example Instances

Ademhaling	
Ritme	Normaal ademhalingsritme
Diepte	Normale ademhalingsdiepte
AfwijkendAdemhalingspatroon	-
Ademfrequentie	15/min
AdemhalingDatumTijd	11-03-2015 14:47
ExtraZuurstofToediening	Ja
Toelichting	-
ToegediendeZuurstof	
FlowRate	2 l/min
FI02	0,29l
ToedieningHulpmiddel	
ProductType	Neusbril

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 Ademhalingsfrequentie v0.4 [Online] Beschikbaar op: <http://www.nictiz.nl/uploaded/FILES/htmlcontent/dcm/parelsnoer/nl.parelsnoer.Ademhalingsfrequentie.v0.4.pdf> [Geraadpleegd: 23 februari 2015].

2. openEHR-EHR-OBSERVATION.respiration.v1 [Online] Beschikbaar op: <http://www.openehr.org/knowledge/> [Geraadpleegd: 23 februari 2015].

1.16 Functional Model

1.17 Traceability to other Standards

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 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 the Health and Care Information Models. 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 a 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 Health and Care Information Models without limitations. The copyright provisions in the paragraph concerned apply to copying, distributing and passing on the Health and Care Information Models.

1.20 Copyrights

A Health and Care Information Model qualifies as a work within the meaning of Section 10 of the Copyright Act (Auteurswet). Copyrights protect the Health and Care Information Models and these rights are owned by the cooperating parties.

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/>)

This does not apply to information from third parties that sometimes is used and / or referred to in a Health and Care Information Model, for example to an international medical terminology system. Any (copyright) rights that protect this information are not owned by the cooperating parties but by those third parties.

Nictiz is the independent national competence centre for electronic exchange of health and care information. The activities of Nictiz include the targeted development and management of information standards at the request of and in partnership with the stakeholders in healthcare. Nictiz advises these parties on all aspects of information exchange and identifies (future) national and international developments.

Nictiz

P.O. Box 19121
2500 CC Den Haag
Oude Middenweg 55
2491 AC Den Haag

070-3173450
info@nictiz.nl
www.nictiz.nl



