

Health & Care Information Model:

nl.zorg.ApgarScore-v1.2

Status: Final

Release: 2024

Release status: Published

Managed by:



Content

1. nl.zorg.ApgarScore-v1.2.....	3
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.....	9
1.9 Instructions.....	9
1.10 Interpretation.....	9
1.11 Care Process	9
1.12 Example of the Instrument	10
1.13 Constraints.....	10
1.14 Issues	10
1.15 References	10
1.16 Functional Model	10
1.17 Traceability to other Standards.....	10
1.18 Disclaimer	10
1.19 Terms of Use	10
1.20 Copyrights	10

1. nl.zorg.ApgarScore-v1.2

DCM::CoderList	Werkgroep RadB Verpleegkundige Gegevens
DCM::ContactInformation.Address	*
DCM::ContactInformation.Name	*
DCM::ContactInformation.Telecom	*
DCM::ContentAuthorList	Werkgroep RadB Verpleegkundige Gegevens
DCM::CreationDate	11-10-2016
DCM::DeprecatedDate	
DCM::DescriptionLanguage	nl
DCM::EndorsingAuthority.Address	
DCM::EndorsingAuthority.Name	
DCM::EndorsingAuthority.Telecom	
DCM::Id	2.16.840.1.113883.2.4.3.11.60.40.3.12.16
DCM::KeywordList	Apgar
DCM::LifecycleStatus	Final
DCM::ModelerList	Werkgroep RadB Verpleegkundige Gegevens
DCM::Name	nl.zorg.ApgarScore
DCM::PublicationDate	23-04-2025
DCM::PublicationStatus	Published
DCM::ReviewerList	Projectgroep RadB Verpleegkundige Gegevens & Kerngroep Registratie aan de Bron
DCM::RevisionDate	05-09-2023
DCM::Supersedes	nl.zorg.ApgarScore-v1.1
DCM::Version	1.2
HCIM::PublicationLanguage	EN

1.1 Revision History

Publicatieversie 1.0 (04-09-2017)

Publicatieversie 1.0.1 (01-09-2020)
Bevat: ZIB-891.

Publicatieversie 1.1 (01-12-2021)
Bevat: ZIB-1408.

Publicatieversie 1.2 (15-10-2023)
Bevat: ZIB-1757, ZIB-1922, ZIB-1945.

1.2 Concept

The Apgar score represents the overall clinical status of a newborn child. This is evaluated one, five and ten minutes after birth based on 5 parameters: Appearance, Pulse, Grimace, Activity, Respiration. If the score measured at 5 minutes is < 8, the Apgar score is measured again at 10, 15, 20 minutes etc. until the score = 8.

1.3 Mindmap

1.4 Purpose

The Apgar score is primarily meant to rapidly determine the clinical condition of the newborn child and whether extra care is required. A low Apgar score can be caused by developmental disorders, prenatal accidents or negative influences during birth. The Apgar score remains a snapshot in time and cannot be used to predict the locomotive or mental development of a child.

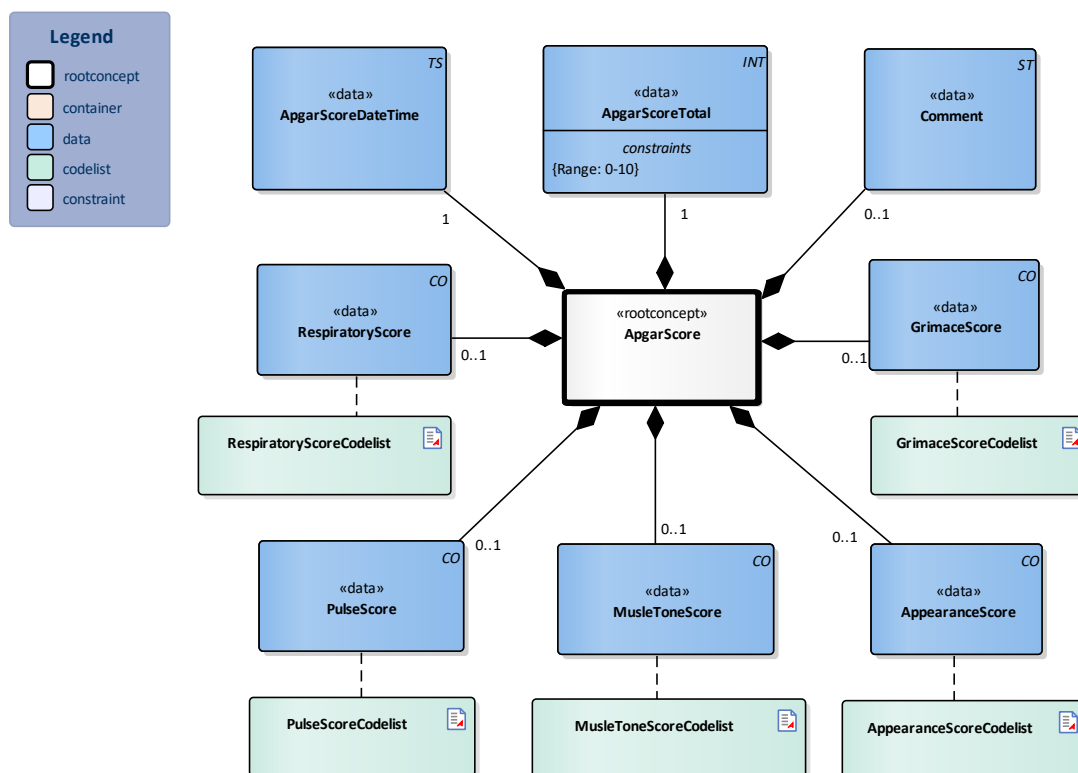
1.5 Patient Population

The ApgarScore information model is meant for children up to the age of 12 month.

1.6 Evidence Base

The definitions of the concepts are based on the Apgar score (as defined in Dutch by the KNOV), the guidelines Fetal Monitoring of the NVOG and Reanimation of Newborn of the NVK.

1.7 Information Model



«rootconcept»	ApgarScore	
Definitie	Root concept of the ApgarScore information model. This root concept contains all data elements of the ApgarScore information model.	
Datatype		
DCM::ConceptId	NL-CM:12.16.1	
DCM::DefinitionCode	SNOMED CT: 302083008	Finding of Apgar score
Opties		

«data»	ApgarScoreDateTime	
Definitie	The day and time at which the Apgar score is registered.	
Datatype	TS	
DCM::ConceptId	NL-CM:12.16.3	
DCM::ExampleValue	09-08-2019 13:15	
Opties		

«data»	ApgarScoreTotal	
Definitie	Total of the Apgar score. The total score has a range from 0 - 10.	
Datatype	INT	
DCM::ConceptId	NL-CM:12.16.2	

DCM::DefinitionCode	LOINC: 9271-8 10 minute Apgar Score	
DCM::DefinitionCode	LOINC: 9274-2 5 minute Apgar Score	
DCM::DefinitionCode	LOINC: 9272-6 1 minute Apgar Score	
Opties		
Constraint	Range: 0-10	

«data»	RespiratoryScore	
Definitie	The Apgar subscore for respiration.	
Datatype	CO	
DCM::ConceptId	NL-CM:12.16.4	
DCM::DefinitionCode	LOINC: 32415-2 5 minute Apgar Respiratory effort	
DCM::DefinitionCode	LOINC: 32405-3 10 minute Apgar Respiratory effort	
DCM::DefinitionCode	LOINC: 32410-3 1 minute Apgar Respiratory effort	
DCM::ExampleValue	2 (Flink huilen en goed doorademen)	
DCM::ValueSet	RespiratoryScoreCodelist	OID: 2.16.840.1.113883.2.4.3.11.60.40.2.12.16.1
Opties		

«data»	AppearanceScore	
Definitie	The Apgar subscore for skin color/appearance.	
Datatype	CO	
DCM::ConceptId	NL-CM:12.16.7	
DCM::DefinitionCode	LOINC: 32411-1 5 minute Apgar Color	
DCM::DefinitionCode	LOINC: 32401-2 10 minute Apgar Color	
DCM::DefinitionCode	LOINC: 32406-1 1 minute Apgar Color	
DCM::ExampleValue	2 (Normale gezonde huidskleur)	
DCM::ValueSet	AppearanceScoreCodelist	OID: 2.16.840.1.113883.2.4.3.11.60.40.2.12.16.4
Opties		

«data»	PulseScore	
Definitie	The Apgar subscore for pulse.	
Datatype	CO	
DCM::ConceptId	NL-CM:12.16.5	
DCM::DefinitionCode	LOINC: 32412-9 5 minute Apgar Heart rate	
DCM::DefinitionCode	LOINC: 32402-0 10 minute Apgar Heart rate	
DCM::DefinitionCode	LOINC: 32407-9 1 minute Apgar Heart rate	
DCM::ExampleValue	1 (Een hartslag van minder dan 100 slagen per minuut)	
DCM::ValueSet	PulseScoreCodelist	OID: 2.16.840.1.113883.2.4.3.11.60.40.2.12.16.2

Opties	
--------	--

«data»	GrimaceScore	
Definitie	The Apgar subscore for grimace.	
Datatype	CO	
DCM::ConceptId	NL-CM:12.16.8	
DCM::DefinitionCode	LOINC: 32414-5 5 minute Apgar Reflex irritability	
DCM::DefinitionCode	LOINC: 32404-6 10 minute Apgar Reflex irritability	
DCM::DefinitionCode	LOINC: 32409-5 1 minute Apgar Reflex irritability	
DCM::ExampleValue	2 (Reageert door te huilen, te hoesten of te niezen)	
DCM::ValueSet	GrimaceScoreCodelist	OID: 2.16.840.1.113883.2.4.3.11.60.40.2.12.16.5
Opties		

«data»	MusleToneScore	
Definitie	The Apgar subscore for activity/muscle tone.	
Datatype	CO	
DCM::ConceptId	NL-CM:12.16.6	
DCM::DefinitionCode	LOINC: 32413-7 5 minute Apgar Muscle tone	
DCM::DefinitionCode	LOINC: 32408-7 1 minute Apgar Muscle tone	
DCM::DefinitionCode	LOINC: 32403-8 10 minute Apgar Muscle tone	
DCM::ExampleValue	2 (Beweegt armpjes en beentjes goed)	
DCM::ValueSet	MusleToneScoreCodelist	OID: 2.16.840.1.113883.2.4.3.11.60.40.2.12.16.3
Opties		

«data»	Comment	
Definitie	Comment on the Apgar score.	
Datatype	ST	
DCM::ConceptId	NL-CM:12.16.9	
DCM::DefinitionCode	LOINC: 48767-8 Annotation comment	
Opties		

«document»	RespiratoryScoreCodelist	
Definitie		
Datatype		
DCM::ExampleValue	Zwak huilen	
DCM::ValueSetBinding	Required	
DCM::ValueSetId	2.16.840.1.113883.2.4.3.11.60.40.2.12.16.1	
DCM::ValueSetIncludeOTH	False	
DCM::ValueSetStatus	Active	
HCIM::ValueSetLanguage	EN	
Opties		

AdemhalingScoreCodelijst			OID: 2.16.840.1.113883.2.4.3.11.60.40.2.12.16.1		
Concept Name	Concept Code	Concept Value	CodeSys. Name	CodeSystem OID	Description
Not breathing	LA6725-1	0	LOINC	2.16.840.1.113883.6.1	Niet op eigen kracht ademen
Weak cry; may sound like whimpering, slow or irregular breathing	LA6726-9	1	LOINC	2.16.840.1.113883.6.1	Zwak, onregelmatig of hijgerig ademhalen
Good, strong cry; normal rate and effort of breathing	LA6727-7	2	LOINC	2.16.840.1.113883.6.1	Flink huilen en goed doorademen

«document»	AppearanceScoreCodelist		
Definitie			
Datatype			
DCM::ValueSetBinding	Required		
DCM::ValueSetId	2.16.840.1.113883.2.4.3.11.60.40.2.12.16.4		
DCM::ValueSetInclude OTH	False		
DCM::ValueSetStatus	Active		
HCIM::ValueSetLanguage	EN		
Opties			

HuidskleurScoreCodelijst			OID: 2.16.840.1.113883.2.4.3.11.60.40.2.12.16.4		
Concept Name	Concept Code	Concept Value	CodeSys. Name	CodeSystem OID	Description
The baby's whole body is completely bluish-gray or pale	LA6722-8	0	LOINC	2.16.840.1.113883.6.1	Een bleke of blauwe huidskleur
Good color in body with bluish hands or feet	LA6723-6	1	LOINC	2.16.840.1.113883.6.1	Normale huidskleur lijfje, maar blauwachtige armen en benen
Good color all over	LA6724-4	2	LOINC	2.16.840.1.113883.6.1	Normale gezonde huidskleur

«document»	PulseScoreCodelist		
Definitie			
Datatype			
DCM::ValueSetBinding	Required		
DCM::ValueSetId	2.16.840.1.113883.2.4.3.11.60.40.2.12.16.2		
DCM::ValueSetInclude OTH	False		
DCM::ValueSetStatus	Active		

HCIM::ValueSetLanguage	EN				
Opties					
HartslagScoreCodelijst			OID: 2.16.840.1.113883.2.4.3.11.60.40.2.12.16.2		
Concept Name	Concept Code	Concept Value	CodeSys. Name	CodeSystem OID	Description
No heart rate	LA6716-0	0	LOINC	2.16.840.1.113883.6.1	Geen hartslag, of een onhoorbare hartslag
Fewer than 100 beats per minute	LA6717-8	1	LOINC	2.16.840.1.113883.6.1	Een hartslag van minder dan 100 slagen per minuut
At least 100 beats per minute	LA6718-6	2	LOINC	2.16.840.1.113883.6.1	Een hartslag van meer dan 100 slagen per minuut

«document»	GrimaceScoreCodelist				
Definitie					
Datatype					
DCM::ValueSetBinding	Required				
DCM::ValueSetId	2.16.840.1.113883.2.4.3.11.60.40.2.12.16.5				
DCM::ValueSetIncludeOTH	False				
DCM::ValueSetStatus	Active				
HCIM::ValueSetLanguage	EN				
Opties					
ReflexenScoreCodelijst			OID: 2.16.840.1.113883.2.4.3.11.60.40.2.12.16.5		
Concept Name	Concept Code	Concept Value	CodeSys. Name	CodeSystem OID	Description
No response to airways being suctioned	LA6719-4	0	LOINC	2.16.840.1.113883.6.1	Reageert niet op prikkels/Geen reactie
Grimace during suctioning	LA6720-2	1	LOINC	2.16.840.1.113883.6.1	Reageert met kleine jammergeluidjes en zwakke bewegingen
Grimace and pulling away, cough, or sneeze during suctioning	LA6721-0	2	LOINC	2.16.840.1.113883.6.1	Reageert door te huilen, te hoesten of te niezen

«document»	MusleToneScoreCodelist				
Definitie					
Datatype					
DCM::ValueSetBinding	Required				
DCM::ValueSetId	2.16.840.1.113883.2.4.3.11.60.40.2.12.16.3				
DCM::ValueSetIncludeOTH	False				

DCM::ValueSetStatus		Active			
HCIM::ValueSetLanguage		EN			
Opties					
SpierspanningScoreCodelijst			OID: 2.16.840.1.113883.2.4.3.11.60.40.2.12.16.3		
Concept Name	Concept Code	Concept Value	CodeSys. Name	CodeSystem OID	Description
Limp; no movement	LA6713-7	0	LOINC	2.16.840.1.113883.6.1	Geen spierspanning aanwezig/slap
Some flexion of arms and legs	LA6714-5	1	LOINC	2.16.840.1.113883.6.1	Weinig bewegingen met armpjes en beentjes
Active motion	LA6715-2	2	LOINC	2.16.840.1.113883.6.1	Beweegt armpjes en beentjes goed

	Legend
Definitie	
Datatype	
Opties	

1.8 Example Instances

ApgarScore	
AdemhalingsScore	2 (Flink huilen en goed doorademen)
HartslagScore	1 (Een hartslag van minder dan 100 slagen per minuut)
SpierspanningScore	2 (Beweegt armpjes en beentjes goed)
HuidskleurScore	1 (Roze lijfje, maar blauwachtige armen en benen)
ReflexenScore	2 (Reageert door te huilen, te hoesten of te niezen)
ApgarScoreTotaal	8
ApgarScoreDatumTijd	19-12-2016 9:00
Toelichting	-

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

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

