

Health & Care Information Model:

nl.zorg.ApgarScore-v1.2

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Content

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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 | 15-10-2023 |
| DCM::PublicationStatus | Prepublished |
| 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.

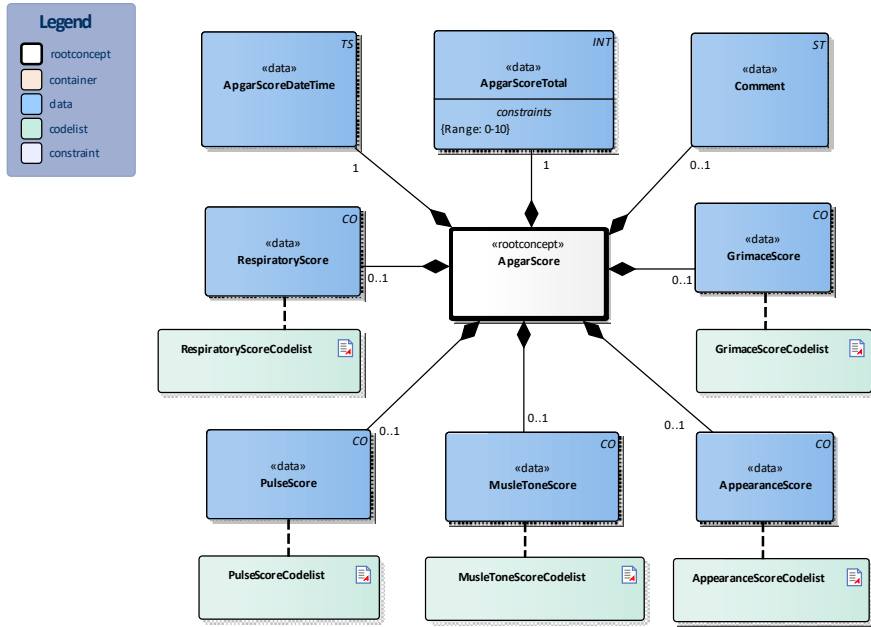
1.5 Patient Population

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 | |

| HCIM::ValueSetLanguage | EN | | | | |
|--|--------------|---------------|--|-----------------------|--|
| Opties | | | | | |
| AdemhalingsScoreCodelijst | | | 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 | | | | |
| 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 | | | | |
| 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 | | | |
| HCIM::ValueSetLanguage | | EN | | | |
| Opties | | | | | |

| ReflexenScoreCodelist | | 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» | | MuscleToneScoreCodelist | | | |
|------------------------|--|--|--|--|--|
| Definitie | | | | | |
| Datatype | | | | | |
| DCM::ValueSetBinding | | Required | | | |
| DCM::ValueSetId | | 2.16.840.1.113883.2.4.3.11.60.40.2.12.16.3 | | | |
| HCIM::ValueSetLanguage | | EN | | | |
| Opties | | | | | |

| SpierspanningScoreCodelist | | 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 | LA6714-5 | 1 | LOINC | 2.16.840.1.113883.6.1 | Weinig bewegingen met |

| | | | | | |
|------------------|----------|---|-------|-----------------------|----------------------------------|
| of arms and legs | | | | 1 | 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

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