Health&Care Information Model:

nl.zorg.GlasgowComaScale

Final

Managed by:

Better healthcare
through better IT

Nictiz

Content

1. nl.zorg.GlasgowComaScale-v3.0

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	2.16.840.1.113883.2.4.3.11.60.40.3.12.8
DCM::KeywordList	Glascow coma schaal
DCM::LifecycleStatus	Final
DCM::ModelerList	Kerngroep Registratie aan de Bron
DCM::Name	nl.zorg.GlasgowComaScale
DCM::PublicationDate	1-5-2016
DCM::PublicationStatus	Published
DCM::ReviewerList	Projectgroep Generieke Overdrachtsgegevens & Kerngroep Registratie aan de Bron
DCM::RevisionDate	16-7-2015
DCM::Superseeds	nl.nfu.GlasgowComaScale-v1.2.1
DCM::Version	3.0

1.1   Revision History

Publicatieversie 1.0 (15-02-2013)
-

Publicatieversie 1.1 (01-07-2013)
-

Publicatieversie 1.2 (01-04-2015)
Bevat: ZIB-227, ZIB-228, ZIB-229, ZIB-230, ZIB-231, ZIB-232, ZIB-308, ZIB-311, ZIB-361.

Incl. algemene wijzigingsverzoeken:
ZIB-94, ZIB-154, ZIB-200, ZIB-201, ZIB-309, ZIB-324, ZIB-326.

Publicatieversie 1.2.1 (16-07-2015)
Bevat: ZIB-414.

Publicatieversie 3.0 (01-05-2016)
Bevat: ZIB-453

1.2   Concept

Fifteen-point scale for expressing a person's level of consciousness, from fully awake to deep unconsciousness, in a number: the so-called EMV score.
The Glasgow Coma Scale score or EMV (Eye-Motor-Verbal) score is a scale to measure the extent of consciousness, based on eye, verbal and motor responses to specific prescribed sound and pain stimuli.

1.3   Mindmap

1.4   Purpose

The GCS score provides the opportunity to document a clinical observation of a patient's conscious state with a validated instrument which makes use of a patient's responses to stimuli.

1.5   Patient Population

1.6   Evidence Base

The Glasgow Coma Scale is used to evaluate a patient's consciousness by means of three elements:
1.   opening eyes (eye response);
2.   answering questions (verbal response);
3.   motor response.

The three response values are looked at individually and as a whole. The total is referred to as the EMV score. The minimum total score is 3 and the maximum is 15. A slightly altered scale is used for infants (age 0-2) and toddlers (age 2-5).

The EMV score can be expressed as a combination of each of the three individual scores, such as: E3M2V4 (opens eyes when spoken to, arms stretch in response to pain and patient produces incomprehensible sounds).
If one of the EMV elements cannot be evaluated - such as might be the case if a patient is intubated and incapable of verbally responding, or is paralyzed/weak and incapable of fulfilling the motor request, then the individual score is included (score 1), but with an extra comment.
V1T is used for an intubated patient, in which t = 'tube'.
Clinical decisions must be based on each of the specific data of the eyes, motor and verbal responses and, if evaluation is not possible, an explicit explanation.

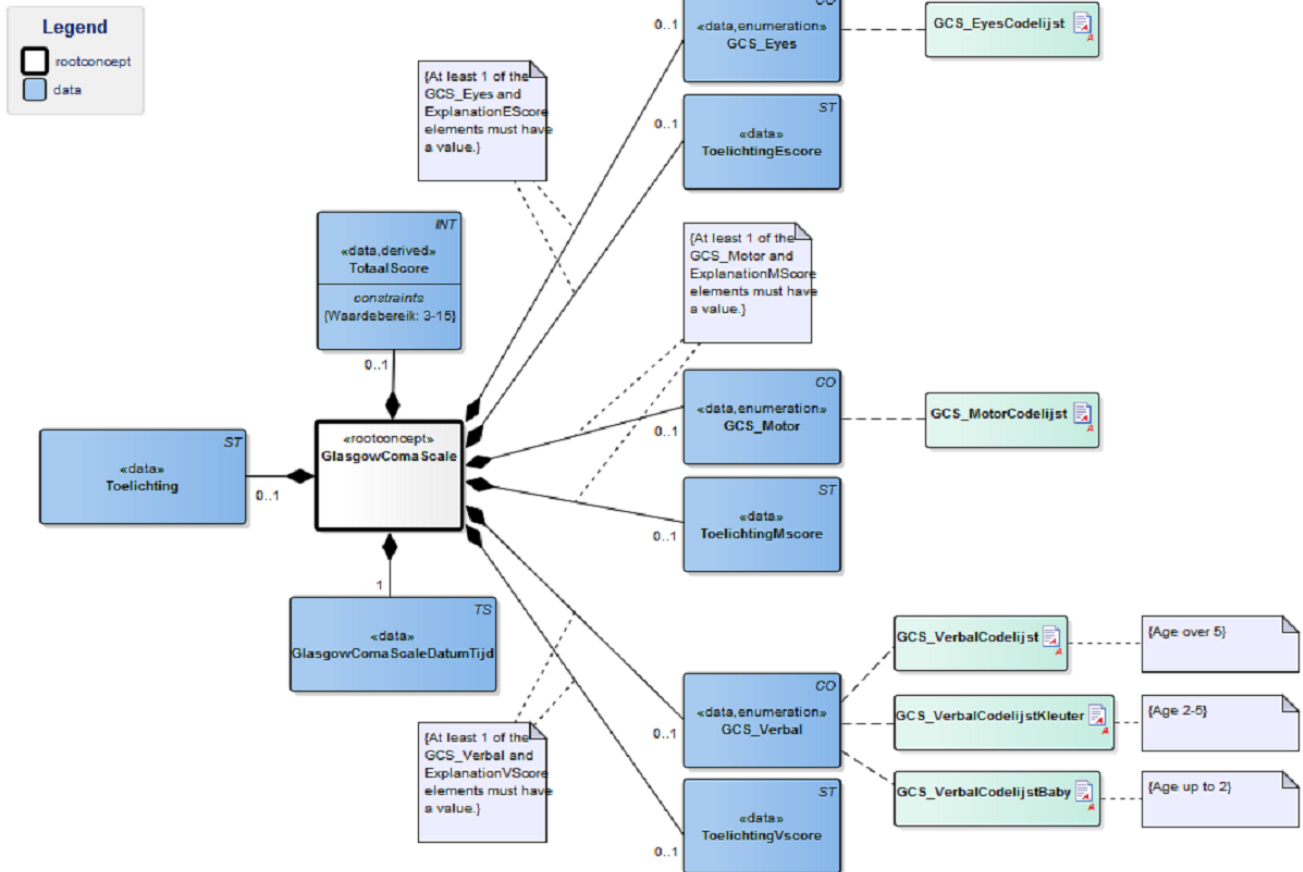Standard values for the total score, depending on age:
0-6 months : 9 and up
6-12 months : 11 and up
1-2 : 12 and up
2-5 : 13 and up
> 5 : 14 and up

1.7   Information Model

«rootconcept»	GlasgowComaScale	
Alias	EN: GlasgowComaScale	
Definition	Root concept of the GlasgowComaScale information model. This root concept contains all data elements of the GlasgowComaScale information model.	
Datatype		
DCM::DefinitionCode	SNOMED CT: 386554004 Glasgow coma scale (assessment scale)	
DCM::DefinitionCode	NL-CM:12.8.1	
Options		

«data»	GlasgowComaScaleDatumTijd	
Alias	EN: GlasgowComaScaleDateTime	
Definition	Time at which the EMV score was determined.	
Datatype	TS	
DCM::DefinitionCode	NL-CM:12.8.8	
Options		

«data»	GCS_Eyes	
Alias	EN: GCS_Eyes	
Definition	Best eye response to a stimulus. The element is mandatory, but does not require a numerical value. If no value is given, the reason for this is to be provided in the ExplanationEScore concept.	
Datatype	CO	

DCM::DefinitionCode	SNOMED CT: 281395000 Glasgow coma score eye opening subscore (observable entity)	
DCM::DefinitionCode	NL-CM:12.8.2	
DCM::ExampleValue	3	
DCM::ValueSet	GCS_EyesCodelijst	OID: 2.16.840.1.113883.2.4.3.11.60.40.2.12.8.1
Options		

«data»	ToelichtingEscore	
Alias	EN: ExplanationEScore	
Definition	Reason why no eye response test could be done. This is to be entered as free text. An often-used notation is the abbreviation c (closed), in the event that the eyes are closed.	
Datatype	ST	
DCM::DefinitionCode	NL-CM:12.8.3	
Options		

«data»	GCS_Motor	
Alias	EN: GCS_Motor	
Definition	Best motor response to a stimulus. The element is mandatory, but does not require a numerical value. If no value is given, the reason for this is to be provided in the ExplanationMScore concept.	
Datatype	CO	
DCM::DefinitionCode	NL-CM:12.8.4	
DCM::DefinitionCode	SNOMED CT: 281396004 Glasgow Coma Score motor response subscore	
DCM::ExampleValue	4	
DCM::ValueSet	GCS_MotorCodelijst	OID: 2.16.840.1.113883.2.4.3.11.60.40.2.12.8.2
Options		

«data»	ToelichtingMscore	
Alias	EN: ExplanationMScore	
Definition	Reason why no motor response test could be done. This is to be entered as free text.	
Datatype	ST	
DCM::DefinitionCode	NL-CM:12.8.5	
DCM::ExampleValue	Spierverslappers	
Options		

«data»	GCS_Verbal	
Alias	EN: GCS_Verbal	
Definition	Best verbal response to a stimulus. The element is mandatory, but does not require a numerical value. If no value is given, the reason for this is to be provided in the ExplanationVScore concept.	
Datatype	CO	
DCM::DefinitionCode	NL-CM:12.8.6	

DCM::DefinitionCode	SNOMED CT: 281397008 Glasgow coma score verbal response subscore (observable entity)	
DCM::ExampleValue	3	
DCM::ValueSet	GCS_VerbalCodelijst	OID: 2.16.840.1.113883.2.4.3.11.60.40.2.12.8.3
DCM::ValueSet	GCS_VerbalCodelijstBaby	OID: 2.16.840.1.113883.2.4.3.11.60.40.2.12.8.5
DCM::ValueSet	GCS_VerbalCodelijstKleuter	OID: 2.16.840.1.113883.2.4.3.11.60.40.2.12.8.4
Options		

«data»	ToelichtingVscore	
Alias	EN: ExplanationVScore	
Definition	Reason why no verbal response test could be done. This is to be entered as free text. An often-used notation is the addition 'Tube' for an intubated patient.	
Datatype	ST	
DCM::DefinitionCode	NL-CM:12.8.7	
DCM::ExampleValue	Vtube	
Options		

«data»	TotaalScore	
Alias	EN: TotalScore	
Definition	The sum of the EMV scores, expressed as a number on a scale from 3-15. The value does not have to be recorded, as it can always be calculated based on the individual scores, and as recording the total is not common for a difficult to determine individual score.	
Datatype	INT	
DCM::DefinitionCode	NL-CM:12.8.10	
DCM::ExampleValue	10	
Options		
Constraint	Waardebereik: 3-15	

«data»	Toelichting	
Alias	EN: Explanation	
Definition	Comment on (the context of) the EMV score measurement, such as any problems or factors that may influence interpretation.	
Datatype	ST	
DCM::DefinitionCode	NL-CM:12.8.9	
DCM::ExampleValue	Patient was direct voor intubatie volkomen helder; reageert nu minder maar is ook onderkoeld (temperatuur rectaal 35°C).	
Options		

«document»	GCS_EyesCodelijst
Alias	
Definition	
Datatype	

Options	
GCS_EyesCodelijst	**OID: 2.16.840.1.113883.2.4.3.11.60.40.2.12.8.1**

Concept Name	Value	Concept Code	Coding Syst. Name	Coding System OID	Description
Spontaneous	4	E4	GCS_Eyes	2.16.840.1.113883.2.4.3.11.60.40.4.2.1	Spontaan [De ogen worden spontaan geopend]
To verbal stimuli, command, speech	3	E3	GCS_Eyes	2.16.840.1.113883.2.4.3.11.60.40.4.2.1	Bij aanspreken of aanroepen [De ogen worden pas geopend op aanspreken van de patiënt]
To pain only	2	E2	GCS_Eyes	2.16.840.1.113883.2.4.3.11.60.40.4.2.1	Bij pijn [De ogen worden pas geopend bij een pijnprikkel]
No response	1	E1	GCS_Eyes	2.16.840.1.113883.2.4.3.11.60.40.4.2.1	Geen reactie [De ogen blijven gesloten]

«document»	GCS_MotorCodelijst
Alias	
Definition	
Datatype	
Options	

GCS_MotorCodelijst	**OID: 2.16.840.1.113883.2.4.3.11.60.40.2.12.8.2**

Concept Name	Value	Concept Code	Coding Syst. Name	Coding System OID	Description
Obeys	6	M6	GCS_Motor	2.16.840.1.113883.2.4.3.11.60.40.4.2.2	Voert opdracht uit [Een eenvoudig bevel wordt uitgevoerd]
Localises pain	5	M5	GCS_Motor	2.16.840.1.113883.2.4.3.11.60.40.4.2.2	Lokaliseren [In staat zijn de pijn duidelijk te localiseren]
Withdrawal response	4	M4	GCS_Motor	2.16.840.1.113883.2.4.3.11.60.40.4.2.2	Terugtrekken [In staat om een afwerende of wegtrekkende beweging te maken op een pijnprikkel]
Flexor response	3	M3	GCS_Motor	2.16.840.1.113883.2.4.3.11.60.40.4.2.2	Buigreactie [Armen en handen op krampachtige manier geplooid. Meestal benen gestrekt.]
Extensor response	2	M2	GCS_Motor	2.16.840.1.113883.2.4.3.11.60.40.4.2.2	Strekreactie [Armen en handen op krampachtige manier geplooid met naar buitengedraaide hand. Mogelijk alle spieren van het lichaam gespannen]
No response	1	M1	GCS_Motor	2.16.840.1.113883.2.4.3.11.60.40.4.2.2	Geen reactie op pijnprikkel [Geen enkele lichamelijke reactie op een pijnprikkel]

«document»	GCS_VerbalCodelijst
Alias	
Definition	
Datatype	
Options	
GCS_VerbalCodelijst	**OID: 2.16.840.1.113883.2.4.3.11.60.40.2.12.8.3**

Concept Name	Value	Concept Code	Coding Syst. Name	Coding System OID	Description
Oriented	5	V5	GCS_Verbal	2.16.840.1.113883.2.4.3.11.60.40.4.2.3	Georiënteerd [Helder en duidelijk bewust van de situatie]
Confused	4	V4	GCS_Verbal	2.16.840.1.113883.2.4.3.11.60.40.4.2.3	Verward [Verwarde conversatie maar wel in staat om te antwoorden op de vragen]
Inappropriate speech	3	V3	GCS_Verbal	2.16.840.1.113883.2.4.3.11.60.40.4.2.3	Inadequaat [Woorden zijn te verstaan maar vormen geen zinnen]
Incomprehensible sounds	2	V2	GCS_Verbal	2.16.840.1.113883.2.4.3.11.60.40.4.2.3	Onverstaanbaar [De spraak is niet te verstaan]
No response	1	V1	GCS_Verbal	2.16.840.1.113883.2.4.3.11.60.40.4.2.3	Geen reactie [Geen enkel verbale response]

«document»	GCS_VerbalCodelijstKleuter
Alias	
Definition	
Datatype	
Options	

GCS_VerbalCodelijstKleuter			OID: 2.16.840.1.113883.2.4.3.11.60.40.2.12.8.4		
Concept Name	Value	Concept Code	Coding Syst. Name	Coding System OID	Description
Oriented	5	V5	GCS_Verbal	2.16.840.1.113883.2.4.3.11.60.40.4.2.3	Adequate woorden en zinnen [Woorden of kleine zinnen in context van de situatie]
Confused	4	V4	GCS_Verbal	2.16.840.1.113883.2.4.3.11.60.40.4.2.3	Onjuiste woorden [Verwarde woorden]
Inappropriate speech	3	V3	GCS_Verbal	2.16.840.1.113883.2.4.3.11.60.40.4.2.3	Huilen [Aanhoudend huilen of krijsen]
Incomprehensible sounds	2	V2	GCS_Verbal	2.16.840.1.113883.2.4.3.11.60.40.4.2.3	Kreunen [Alleen kreunen]
No response	1	V1	GCS_Verbal	2.16.840.1.113883.2.4.3.11.60.40.4.2.3	Geen reactie [Geen enkel verbale response]

«document»	GCS_VerbalCodelijstBaby
Alias	
Definition	
Datatype	
Options	

GCS_VerbalCodelijstBaby			OID: 2.16.840.1.113883.2.4.3.11.60.40.2.12.8.5		
Concept Name	Value	Concept Code	Coding Syst. Name	Coding System OID	Description
Oriented	5	V5	GCS_Verbal	2.16.840.1.113883.2.4.3.11.60.40.4.2.3	Lachen en huilen [Lacht of huilt zachtjes]
Confused	4	V4	GCS_Verbal	2.16.840.1.113883.2.4.3.11.60.40.4.2.3	Huilen [Huilt en is onpasselijk]
Inappropriate speech	3	V3	GCS_Verbal	2.16.840.1.113883.2.4.3.11.60.40.4.2.3	Niet adequaat huilen [Aanhoudend huilen of krijsen]
Incomprehensible sounds	2	V2	GCS_Verbal	2.16.840.1.113883.2.4.3.11.60.40.4.2.3	Kreunen [Kreunen en onrustig/rusteloos]

No response	1	V1	GCS_Verbal	2.16.840.1.113883.2.4.3.11.60.40.4.2.3	Geen reactie [Geen enkel verbale response]

1.8 Example Instances

GlasgowComa ScaleDatumTijd	GCS_ Eyes	GCS_ Motor	GCS_ Verbal	TotaalScore	Toelichting
08-02-2013 6:43	2	4	5	11	Beste score voor intubatie, kleding stond in brand

GlasgowComa ScaleDatumTijd	GCS_ Eyes	GCS_ Motor	GCS_ Verbal	TotaalScore	Toelichting
07-02-2013 11:34	4	4	1		Lijkt adequaat

GlasgowComa ScaleDatumTijd	GCS_ Eyes	GCS_ Motor	GCS_ Verbal	TotaalScore	Toelichting
07-02-2013 8:00	1	1	1	3	Zonder spierverslappers na 2 uur reanimatie

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

2. Glasgow Coma Schaal [Online] Beschikbaar op:
http://www.tabellenboekje.nl/menselijk-lichaam-tabel-glasgow-coma-schaal.php#glasgow-coma-schaal-volwassen [Geraadpleegd: 23 februari 2015].

1.16 Functional Model

1.17 Traceability to other Standards

1.18 Disclaimer

This Health and Care Information Model (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 this Health and Care Information Model. 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 this 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 information in this Health and Care Information Model without limitations. The copyright provisions in the paragraph concerned apply to copying, distributing and passing on information from this Health and Care Information Model.

1.20 Copyrights

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-NCSA-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/)