

# Health & Care Information Model: nl.zorg.ComfortScale-v1.0

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# Content

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# 1. nl.zorg.ComfortScale-v1.0

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## 1.1 Revision History

Publicatieversie 1.0 (04-09-2017)

## 1.2 Concept

The Comfort Behaviour scale /Comfortneo scale is an assessment tool, that is used to assess the pain behaviour of neonates (new born).

The Comfort Behaviour scale has 7 observation points that that need to be addressed. For each on observation is value is assigned from a 5-point scale, the final score indicates whether the observed child suffers pain and 'how much'. The score is combined with an NRS score that is completed by the nurses on basis of clinical experience.

## 1.3 Mindmap

## 1.4 Purpose

> A pain observation instrument is a tool in determining the intensity of pain and can be useful in order to determine the effectiveness of pain treatment interventions (pharmacological or non-pharmacological). For new born it is nevertheless difficult to differentiate between pain or distress/anxiety. This is relevant in determining the treatment. The score on a pain measurement instrument remains a snapshot in time.

## 1.5 Patient Population

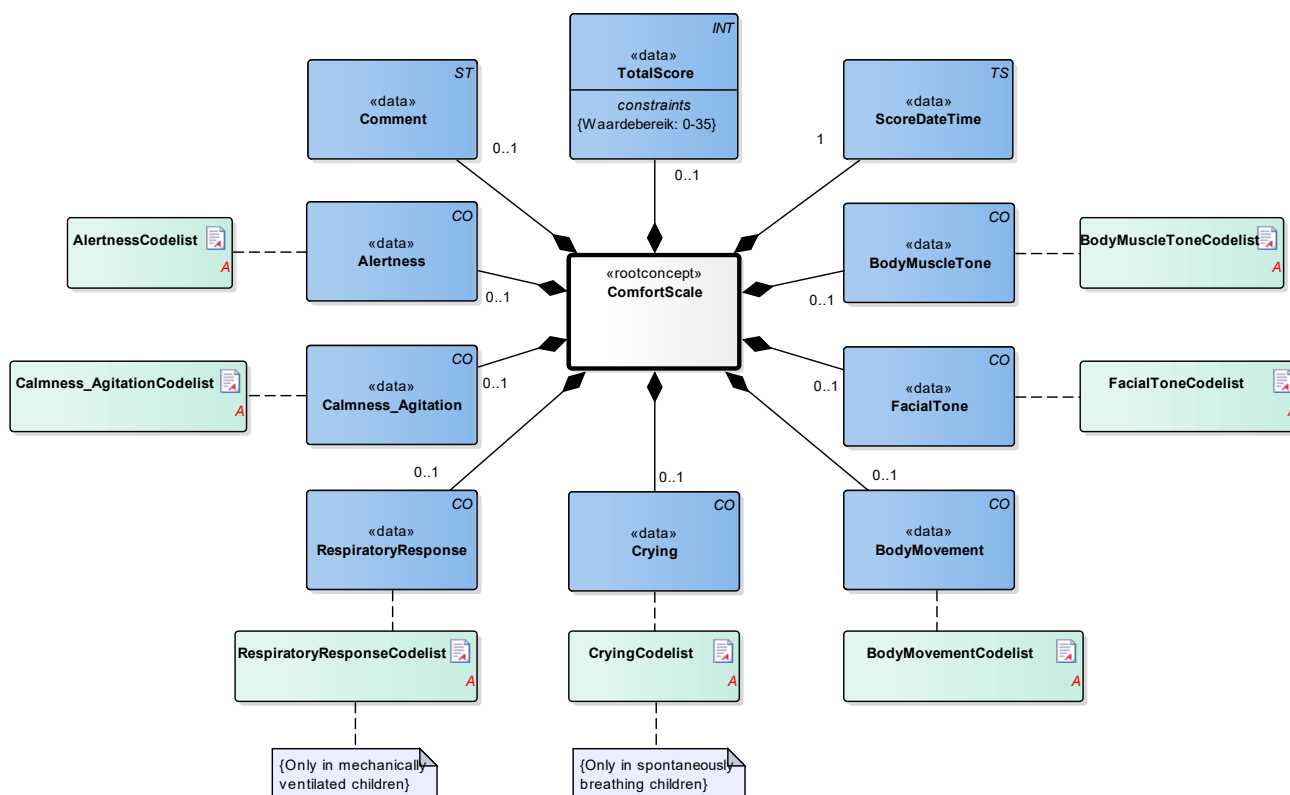
The COMFORT assessment scale is validated for young children up to the age of 4.  
 The COMFORT and COMFORTneo assessment score is validated for preterm neonates

## 1.6 Evidence Base

For determining the degree of pain in children with difficulty expressing themselves there are divers pain observation instruments available

- CPB
- Comfort behaviour scale/ Comfortneo scale
- Flacc

## 1.7 Information Model



«rootconcept»	ComfortScale
<b>Definitie</b>	Rootconcept of the ComfortScale information model. This root concept contains all data elements of the ComfortScale information model.
<b>Datatype</b>	
<b>DCM::ConceptId</b>	NL-CM:12.12.1
<b>Opties</b>	

«data»	TotalScore
<b>Definitie</b>	The total score is the sum of all the individual scores. The total score has a range from 0 - 35.
<b>Datatype</b>	INT
<b>DCM::ConceptId</b>	NL-CM:12.12.2

<b>Opties</b>		
<b>Constraint</b>	Waardebereik: 0-35	Voeg hier de Engelse definitie in

<b>«data»</b>	<b>Alertness</b>	
<b>Definitie</b>	Observation of: Alertness	
<b>Datatype</b>	CO	
<b>DCM::ConceptId</b>	NL-CM:12.12.3	
<b>DCM::ValueSet</b>	AlertnessCodelist	OID: 2.16.840.1.113883.2.4.3.11.60.40.2.12.12.1
<b>Opties</b>		

<b>«data»</b>	<b>Calmness_Agitation</b>	
<b>Definitie</b>	Observation: Calmness/ agitation	
<b>Datatype</b>	CO	
<b>DCM::ConceptId</b>	NL-CM:12.12.4	
<b>DCM::ValueSet</b>	Calmness_AgitationCodelist	OID: 2.16.840.1.113883.2.4.3.11.60.40.2.12.12.2
<b>Opties</b>		

<b>«data»</b>	<b>RespiratoryResponse</b>	
<b>Definitie</b>	Observation Respiratory response (only in mechanically ventilated children)	
<b>Datatype</b>	CO	
<b>DCM::ConceptId</b>	NL-CM:12.12.5	
<b>DCM::ValueSet</b>	RespiratoryResponseCodelist	OID: 2.16.840.1.113883.2.4.3.11.60.40.2.12.12.3
<b>Opties</b>		

<b>«data»</b>	<b>Crying</b>	
<b>Definitie</b>	Observation Crying (only in spontaneously breathing children)	
<b>Datatype</b>	CO	
<b>DCM::ConceptId</b>	NL-CM:12.12.6	
<b>DCM::ValueSet</b>	CryingCodelist	OID: 2.16.840.1.113883.2.4.3.11.60.40.2.12.12.4
<b>Opties</b>		

<b>«data»</b>	<b>BodyMovement</b>	
<b>Definitie</b>	Observation Physical movement	
<b>Datatype</b>	CO	
<b>DCM::ConceptId</b>	NL-CM:12.12.8	
<b>DCM::ValueSet</b>	BodyMovementCodelist	OID: 2.16.840.1.113883.2.4.3.11.60.40.2.12.12.5
<b>Opties</b>		

<b>«data»</b>	<b>FacialTone</b>	
<b>Definitie</b>	Observation Facial tension	
<b>Datatype</b>	CO	

<b>DCM::ConceptId</b>	NL-CM:12.12.9	
<b>DCM::ValueSet</b>	FacialToneCodelist	OID: 2.16.840.1.113883.2.4.3.11.60.40.2.12.12.6
<b>Opties</b>		

<b>«data»</b>	<b>BodyMuscleTone</b>	
<b>Definitie</b>	Observation Muscle tone	
<b>Datatype</b>	CO	
<b>DCM::ConceptId</b>	NL-CM:12.12.10	
<b>DCM::ValueSet</b>	BodyMuscleToneCodelist	OID: 2.16.840.1.113883.2.4.3.11.60.40.2.12.12.7
<b>Opties</b>		

<b>«data»</b>	<b>ScoreDateTime</b>	
<b>Definitie</b>	The date and time at which the Comfort Behaviour scale/ComfortNeo scale was determined.	
<b>Datatype</b>	TS	
<b>DCM::ConceptId</b>	NL-CM:12.12.11	
<b>Opties</b>		

<b>«data»</b>	<b>Comment</b>	
<b>Definitie</b>	A comment on the circumstances during the measurement.	
<b>Datatype</b>	ST	
<b>DCM::ConceptId</b>	NL-CM:12.12.12	
<b>DCM::DefinitionCode</b>	LOINC: 48767-8 Annotation comment	
<b>Opties</b>		

<b>«document»</b>	<b>RespiratoryResponseCodelist</b>	
<b>Definitie</b>		
<b>Datatype</b>		
<b>DCM::ValueSetBinding</b>	Required	
<b>DCM::ValueSetId</b>	2.16.840.1.113883.2.4.3.11.60.40.2.12.12.3	
<b>Opties</b>		

<b>AdemhalingsreactieCodelijst</b>			<b>OID: 2.16.840.1.113883.2.4.3.11.60.40.2.12.12.3</b>		
<b>Concept Name</b>	<b>Concept Code</b>	<b>Concept Value</b>	<b>CodeSys. Name</b>	<b>CodeSystem OID</b>	<b>Description</b>
No spontaneous respiration	Vent1	1	CN_Ademhalingsreactie	2.16.840.1.113883.2.4.3.11.60.40.4.20.3	Geen spontane ademhaling
Spontaneous respiration on ventilator	Vent2	2	CN_Ademhalingsreactie	2.16.840.1.113883.2.4.3.11.60.40.4.20.3	Spontane ademhaling aan de beademing
Unrest or resistance to ventilator	Vent3	3	CN_Ademhalingsreactie	2.16.840.1.113883.2.4.3.11.60.40.4.20.3	Onrust of verzet tegen de beademing
Actively breathes against ventilator or coughs regularly	Vent4	4	CN_Ademhalingsreactie	2.16.840.1.113883.2.4.3.11.60.40.4.20.3	Ademt actief tegen de beademing in of hoest regelmatig
Fights ventilator	Vent5	5	CN_Ademhal	2.16.840.1.113883.2.	Vecht tegen de beademing

			ingsreactie	4.3.11.60.40.4.20.3	
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«document»		AlertnessCodelist			
Definitie					
Datatype					
DCM::ValueSetBinding		Required			
DCM::ValueSetId		2.16.840.1.113883.2.4.3.11.60.40.2.12.12.1			
Opties					
AlertheidCodelijst			OID: 2.16.840.1.113883.2.4.3.11.60.40.2.12.12.1		
Concept Name	Concept Code	Concept Value	CodeSys. Name	CodeSystem OID	Description
Deeply asleep	Alert1	1	CN_Alertheid	2.16.840.1.113883.2.4.3.11.60.40.4.20.1	Diep in slaap (ogen dicht, geen reactie op omgeving)
Lightly asleep	Alert2	2	CN_Alertheid	2.16.840.1.113883.2.4.3.11.60.40.4.20.1	Licht in slaap (ogen grotendeels gesloten, af en toe reactie)
Drowsy	Alert3	3	CN_Alertheid	2.16.840.1.113883.2.4.3.11.60.40.4.20.1	Slaperig (kind sluit vaak zijn ogen, reageert minder op omgeving)
Awake and alert	Alert4	4	CN_Alertheid	2.16.840.1.113883.2.4.3.11.60.40.4.20.1	Wakker en alert (kind reageert op omgeving)
Awake and hyperalert	Alert5	5	CN_Alertheid	2.16.840.1.113883.2.4.3.11.60.40.4.20.1	Wakker en hyper-alert (overdreven reactie op veranderingen)

«document»		FacialToneCodelist			
Definitie					
Datatype					
DCM::ValueSetBinding		Required			
DCM::ValueSetId		2.16.840.1.113883.2.4.3.11.60.40.2.12.12.6			
Opties					
GezichtsspanningCodelijst			OID: 2.16.840.1.113883.2.4.3.11.60.40.2.12.12.6		
Concept Name	Concept Code	Concept Value	CodeSys. Name	CodeSystem OID	Description
Facial muscles totally relaxed	Face1	1	CN_Gezichtsspanning	2.16.840.1.113883.2.4.3.11.60.40.4.20.6	Gezichtsspieren volkomen ontspannen
Normal facial tone	Face2	2	CN_Gezichtsspanning	2.16.840.1.113883.2.4.3.11.60.40.4.20.6	Normale spanning van het gezicht
Tension evident in some facial muscles	Face3	3	CN_Gezichtsspanning	2.16.840.1.113883.2.4.3.11.60.40.4.20.6	Spanning duidelijk in sommige gelaatsspieren (niet aanhoudend)
Tension evident throughout facial muscles	Face4	4	CN_Gezichtsspanning	2.16.840.1.113883.2.4.3.11.60.40.4.20.6	Spanning duidelijk in alle gelaatsspieren (aanhoudend)
Facial muscles contorted and grimacing	Face5	5	CN_Gezichtsspanning	2.16.840.1.113883.2.4.3.11.60.40.4.20.6	Gezichtsspieren verwrongen en in een grimas

«document»		Calmness_AgitationCodelist			
Definitie					
Datatype					
DCM::ValueSetBinding		Required			
DCM::ValueSetId		2.16.840.1.113883.2.4.3.11.60.40.2.12.12.2			
Opties					
Kalmte_AgitatieCodelijst		OID: 2.16.840.1.113883.2.4.3.11.60.40.2.12.12.2			
Concept Name	Concept Code	Concept Waarde	CodeSys. Name	CodeSystem OID	Description
Calm	Calm1	1	CN_Kalmte_Agitatie	2.16.840.1.113883.2.4.3.11.60.40.4.20.2	Kalm (kind helder en rustig)
Slightly anxious	Calm2	2	CN_Kalmte_Agitatie	2.16.840.1.113883.2.4.3.11.60.40.4.20.2	Licht angstig (kind toont lichte onrust)
Anxious	Calm3	3	CN_Kalmte_Agitatie	2.16.840.1.113883.2.4.3.11.60.40.4.20.2	Angstig (kind lijkt onrustig, kan zich beheersen)
Very anxious	Calm4	4	CN_Kalmte_Agitatie	2.16.840.1.113883.2.4.3.11.60.40.4.20.2	Zeer angstig (kind lijkt zeer onrustig, kan zich nog net beheersen)
Panicky	Calm5	5	CN_Kalmte_Agitatie	2.16.840.1.113883.2.4.3.11.60.40.4.20.2	Paniekerig (ernstige onrust met verlies van beheersing)

«document»		BodyMuscleToneCodelist			
Definitie					
Datatype					
DCM::ValueSetBinding		Required			
DCM::ValueSetId		2.16.840.1.113883.2.4.3.11.60.40.2.12.12.7			
Opties					
SpierspanningCodelijst		OID: 2.16.840.1.113883.2.4.3.11.60.40.2.12.12.7			
Concept Name	Concept Code	Concept Value	CodeSys. Name	CodeSystem OID	Description
Muscles fully relaxed	Musc1	1	CN_Spierspanning	2.16.840.1.113883.2.4.3.11.60.40.4.20.7	Spiereen volledig ontspannen; geen spierspanning
Reduced muscle tone	Musc2	2	CN_Spierspanning	2.16.840.1.113883.2.4.3.11.60.40.4.20.7	Verminderde spierspanning; minder weerstand dan normaal
Normal muscle tone	Musc3	3	CN_Spierspanning	2.16.840.1.113883.2.4.3.11.60.40.4.20.7	Normale spierspanning
Increased muscle tone	Musc4	4	CN_Spierspanning	2.16.840.1.113883.2.4.3.11.60.40.4.20.7	Toegenomen spierspanning en buiging van vingers en tenen
Extreme muscle rigidity	Musc5	5	CN_Spierspanning	2.16.840.1.113883.2.4.3.11.60.40.4.20.7	Extreme spierstijfheid en buiging van vingers en tenen

«document»		CryingCodelist	
Definitie			
Datatype			



<b>DCM::ValueSetBinding</b>	Required				
<b>DCM::ValueSetId</b>	2.16.840.1.113883.2.4.3.11.60.40.2.12.12.4				
<b>Opties</b>					
<b>HuilenCodelijst</b>			<b>OID: 2.16.840.1.113883.2.4.3.11.60.40.2.12.12.4</b>		
<b>Concept Name</b>	<b>Concept Code</b>	<b>Concept Value</b>	<b>CodeSys. Name</b>	<b>CodeSystem OID</b>	<b>Description</b>
Quiet breathing	Cry1	1	CN_Huilen	2.16.840.1.113883.2.4.3.11.60.40.4.20.4	Geen huilgeluiden
Occasional sobbing or moaning	Cry2	2	CN_Huilen	2.16.840.1.113883.2.4.3.11.60.40.4.20.4	Af en toe snikken of kreunen (nasnikken)
Whining	Cry3	3	CN_Huilen	2.16.840.1.113883.2.4.3.11.60.40.4.20.4	Jengelen of dreinen (monotoon geluid)
Crying	Cry4	4	CN_Huilen	2.16.840.1.113883.2.4.3.11.60.40.4.20.4	Huilen
Screaming or shrieking	Cry5	5	CN_Huilen	2.16.840.1.113883.2.4.3.11.60.40.4.20.4	Schreuwen of krijsen

<b>«document»</b>	<b>BodyMovementCodelist</b>				
<b>Definitie</b>					
<b>Datatype</b>					
<b>DCM::ValueSetBinding</b>	Required				
<b>DCM::ValueSetId</b>	2.16.840.1.113883.2.4.3.11.60.40.2.12.12.5				
<b>Opties</b>					
<b>LichaamsbewegingCodelijst</b>			<b>OID: 2.16.840.1.113883.2.4.3.11.60.40.2.12.12.5</b>		
<b>Concept Name</b>	<b>Concept Code</b>	<b>Concept Value</b>	<b>CodeSys. Name</b>	<b>CodeSystem OID</b>	<b>Description</b>
No movement	Mov1	1	CN_Lichaams beweging	2.16.840.1.113883.2.4.3.11.60.40.4.20.5	Geen beweging
Occasional, slight movements	Mov2	2	CN_Lichaams beweging	2.16.840.1.113883.2.4.3.11.60.40.4.20.5	Incidentele (3 of minder) kleine bewegingen
Frequent, slight movements	Mov3	3	CN_Lichaams beweging	2.16.840.1.113883.2.4.3.11.60.40.4.20.5	Frequente (3 of meer) kleine bewegingen
Vigorous movements limited to extremities	Mov4	4	CN_Lichaams beweging	2.16.840.1.113883.2.4.3.11.60.40.4.20.5	Heftige bewegingen met armen en benen
Vigorous movements including torso and head	Mov5	5	CN_Lichaams beweging	2.16.840.1.113883.2.4.3.11.60.40.4.20.5	Heftige bewegingen ook met romp en hoofd

## 1.8 Example Instances

ComfortScore	
ScoreDatumTijd	21-12-2016 12:05
Alertheid	4 (wakker en alert)
Kalmte_Agitatie	2 (licht angstig)
Huilen	2 (af en toe snikken of kreunen)
Lichaamsbeweging	2 (incidentele beweging)
Gezichtsspanning	2 (normale spanning van het gelaat)
Spierspanning	2 (verminderde spierspanning)
Totaalscore	14
Toelichting	Controle na verhogen pijnmedicatie.

ComfortNeoScore	
ScoreDatumTijd	21-12-2016 12:05
Alertheid	4 (wakker en alert)
Kalmte_Agitatie	2 (licht angstig)
Ademhalingsreactie	3 (af en toe hoesten of verzet tegen de ventilator)
Lichaamsbeweging	2 (incidentele beweging)
Gezichtsspanning	2 (normale spanning van het gelaat)
Spierspanning	2 (verminderde spierspanning)
Totaalscore	15
Toelichting	Controle na verhogen pijnmedicatie.

## 1.9 Instructions

In the ComfortNeo scale the item crying is replaced by respiratory reaction.  
In the Comfort scale the item respiratory reaction is replaced by crying.

## 1.10 Interpretation

## 1.11 Care Process

## 1.12 Example of the Instrument

## 1.13 Constraints

## 1.14 Issues

## 1.15 References

1. Comfort assessment [Online] Beschikbaar op: <http://www.comfortassessment.nl/> [Geraadpleegd: 2 augustus 2016]
2. Richtlijn Pijnmeting en Behandeling van pijn bij kinderen, NVK, 2007 [Online] Beschikbaar op:

## 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.

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