

Health & Care Information Model:

nl.zorg.ComfortScale-v1.2

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1. nl.zorg.ComfortScale-v1.2

DCM::CoderList	Werkgroep RadB Verpleegkundige Gegevens
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DCM::ContentAuthorList	Werkgroep RadB Verpleegkundige Gegevens
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HCIM::PublicationLanguage	EN

1.1 Revision History

Publicatieversie [1.0](#) (04-09-2017)

Publicatieversie [1.1](#) (31-01-2020)

Bevat: ZIB-925.

Publicatieversie [1.2](#) (15-10-2023)

Bevat: ZIB1838, ZIB-1839.

1.2 Concept

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

The Comfort Behaviour scale has 7 observation points that need to be addressed. For each observation a 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

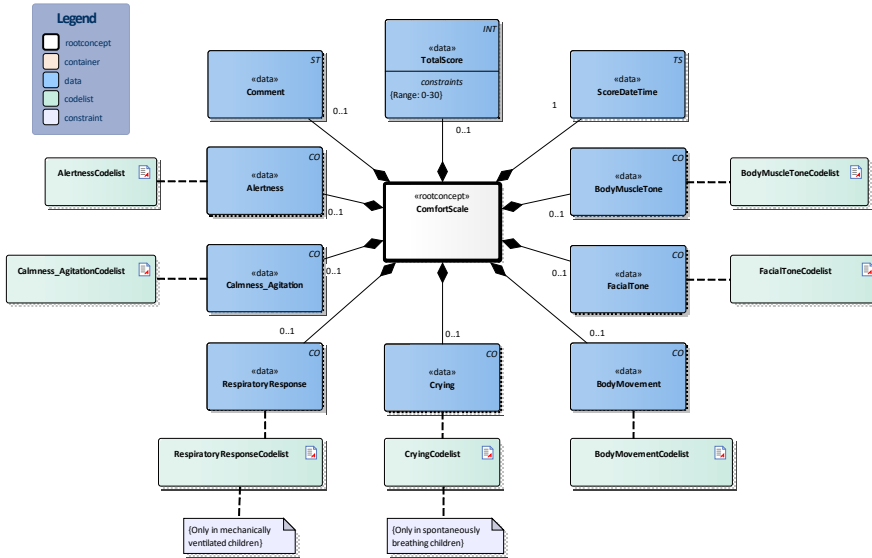
The COMFORT assessment scale is validated for young children up to the age of 4.
 The COMFORT and COMFORTneo assessment score is validated for preterm neonates

1.6 Evidence Base

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

- CPB
- Comfort Behaviour scale/ComfortNeo scale
- FLACC

1.7 Information Model



«rootconcept»	ComfortScale
Definitie	Root concept of the ComfortScale information model. This root concept contains all data elements of the ComfortScale information model.
Datatype	
DCM::ConceptId	NL-CM:12.12.1
DCM::DefinitionCode	SNOMED CT: 108301000146109 COMFORT scale
Opties	

«data»	TotalScore
Definitie	The total score is the sum of all the individual scores. The total score has a range from 0 - 30.
Datatype	INT
DCM::ConceptId	NL-CM:12.12.2

DCM::DefinitionCode	SNOMED CT: 48961000146108 COMFORT behavior scale score	
Opties		
Constraint	Range: 0-30	

«data»	Alertness	
Definitie	Observation Alertness	
Datatype	CO	
DCM::ConceptId	NL-CM:12.12.3	
DCM::DefinitionCode	ScoreObservaties: 12012003 ComfortScale Alertness	OID: 2.16.840.1.113883.2.4.3.11.60.40.4.0.1
DCM::ValueSet	AlertnessCodelist	OID: 2.16.840.1.113883.2.4.3.11.60.40.2.12.12.1
Opties		

«data»	Calmness_Agitation	
Definitie	Observation Calmness/Agitation	
Datatype	CO	
DCM::ConceptId	NL-CM:12.12.4	
DCM::DefinitionCode	ScoreObservaties: 12012004 ComfortScale Calmness_Agitation	OID: 2.16.840.1.113883.2.4.3.11.60.40.4.0.1
DCM::ValueSet	Calmness_AgitationCodelist	OID: 2.16.840.1.113883.2.4.3.11.60.40.2.12.12.2
Opties		

«data»	RespiratoryResponse	
Definitie	Observation Respiratory response (only in mechanically ventilated children)	
Datatype	CO	
DCM::ConceptId	NL-CM:12.12.5	
DCM::DefinitionCode	ScoreObservaties: 12012005 ComfortScale RespiratoryResponse	OID: 2.16.840.1.113883.2.4.3.11.60.40.4.0.1
DCM::ValueSet	RespiratoryResponseCodelist	OID: 2.16.840.1.113883.2.4.3.11.60.40.2.12.12.3
Opties		

«data»	Crying	
Definitie	Observation Crying (only in spontaneously breathing children)	
Datatype	CO	
DCM::ConceptId	NL-CM:12.12.6	
DCM::DefinitionCode	ScoreObservaties: 12012006 ComfortScale Crying	OID: 2.16.840.1.113883.2.4.3.11.60.40.4.0.1
DCM::ValueSet	CryingCodelist	OID: 2.16.840.1.113883.2.4.3.11.60.40.2.12.12.4
Opties		

«data»	BodyMovement	
Definitie	Observation Physical movement	
Datatype	CO	
DCM::ConceptId	NL-CM:12.12.8	

DCM::DefinitionCode	ScoreObservaties: 12012008 ComfortScale BodyMovement	OID: 2.16.840.1.113883.2.4.3.11.60.40.4.0.1
DCM::ValueSet	BodyMovementCodelist	OID: 2.16.840.1.113883.2.4.3.11.60.40.2.12.12.5
Opties		

«data»	FacialTone	
Definitie	Observation Facial tension	
Datatype	CO	
DCM::ConceptId	NL-CM:12.12.9	
DCM::DefinitionCode	ScoreObservaties: 12012009 ComfortScale FacialTone	OID: 2.16.840.1.113883.2.4.3.11.60.40.4.0.1
DCM::ValueSet	FacialToneCodelist	OID: 2.16.840.1.113883.2.4.3.11.60.40.2.12.12.6
Opties		

«data»	BodyMuscleTone	
Definitie	Observation Muscle tone	
Datatype	CO	
DCM::ConceptId	NL-CM:12.12.10	
DCM::DefinitionCode	ScoreObservaties: 12012010 ComfortScale BodyMuscleTone	OID: 2.16.840.1.113883.2.4.3.11.60.40.4.0.1
DCM::ValueSet	BodyMuscleToneCodelist	OID: 2.16.840.1.113883.2.4.3.11.60.40.2.12.12.7
Opties		

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

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

«document»	RespiratoryResponseCodelist
Definitie	
Datatype	
DCM::ValueSetBinding	Required
DCM::ValueSetId	2.16.840.1.113883.2.4.3.11. 60.40.2.12.12.3
HCIM::ValueSetLanguage	EN
Opties	

AdemhalingsreactieCodelijst		OID: 2.16.840.1.113883.2.4.3.11.60.40.2.12.12.3			
Concept Name	Concept	Concept	CodeSys.	CodeSystem OID	Description

	Code	Value	Name		
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_Ademhalingsreactie	2.16.840.1.113883.2.4.3.11.60.40.4.20.3	Vecht tegen de beademing

«document»		AlertnessCodelist	
Definitie			
Datatype			
DCM::ValueSetBinding	Required		
DCM::ValueSetId	2.16.840.1.113883.2.4.3.11.60.40.2.12.12.1		
HCIM::ValueSetLanguage	EN		
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		
HCIM::ValueSetLanguage	EN		
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_Gezichtssp anning	2.16.840.1.113883.2. 4.3.11.60.40.4.20.6	Gezichtsspieren volkomen ontspannen
Normal facial tone	Face2	2	CN_Gezichtssp anning	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_Gezichtssp anning	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_Gezichtssp anning	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_Gezichtssp anning	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		
HCIM::ValueSetLanguage	EN		
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_Ag itatie	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_Ag itatie	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_Ag itatie	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_Ag itatie	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_Ag itatie	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		
HCIM::ValueSetLanguage	EN		

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	Spiere 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			
DCM::ValueSetBinding	Required		
DCM::ValueSetId	2.16.840.1.113883.2.4.3.11.60.40.2.12.12.4		
HCIM::ValueSetLanguage	EN		
Opties			

HuilenCodelijst			OID: 2.16.840.1.113883.2.4.3.11.60.40.2.12.12.4		
Concept Name	Concept Code	Concept Value	CodeSys. Name	CodeSystem OID	Description
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	Schreeuwen of krijsen

«document»		BodyMovementCodelist	
Definitie			
Datatype			
DCM::ValueSetBinding	Required		
DCM::ValueSetId	2.16.840.1.113883.2.4.3.11.60.40.2.12.12.5		
HCIM::ValueSetLanguage	EN		
Opties			

LichaamsbewegingCodelijst			OID: 2.16.840.1.113883.2.4.3.11.60.40.2.12.12.5		
Concept Name	Concept Code	Concept Value	CodeSys.	CodeSystem OID	Description

	Code	Value	Name		
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

Legend	
Definitie	
Datatype	
Opties	

Constraint	
Definitie	Only in mechanically ventilated children
Datatype	
Opties	

Constraint	
Definitie	Only in spontaneously breathing children
Datatype	
Opties	

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: <https://www.nvk.nl/Kwaliteit/Richtlijnenoverzicht/Details/tabid/1558/articleType/ArticleView/articleId/760>

1.16 Functional Model

1.17 Traceability to other Standards

1.18 Disclaimer

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