

# Health & Care Information Model:

nl.zorg.MUSTScore-v3.1.1

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# Content

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## 1. nl.zorg.MUSTScore-v3.1.1

DCM::CoderList	Werkgroep RadB Verpleegkundige Gegevens
DCM::ContactInformation.Address	*
DCM::ContactInformation.Name	*
DCM::ContactInformation.Telecom	*
DCM::ContentAuthorList	Werkgroep RadB Verpleegkundige Gegevens
DCM::CreationDate	12-2-2014
DCM::DeprecatedDate	
DCM::DescriptionLanguage	nl
DCM::EndorsingAuthority.Address	
DCM::EndorsingAuthority.Name	PM
DCM::EndorsingAuthority.Telecom	
DCM::Id	2.16.840.1.113883.2.4.3.11.60.40.3.4.5
DCM::KeywordList	Ondervoeding, ondervoedingsscore, MUST, malnutrition
DCM::LifecycleStatus	Final
DCM::ModelerList	Werkgroep RadB Verpleegkundige Gegevens
DCM::Name	nl.zorg.MUSTScore
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DCM::RevisionDate	26-05-2022
DCM::Supersedes	nl.zorg.MUSTScore-v3.1
DCM::Version	3.1.1
HCIM::PublicationLanguage	EN

### 1.1 Revision History

[Publicatieversie 1.0](#) (01-07-2015)

[Publicatieversie 3.0](#) (01-05-2016)

Bevat: ZIB-453.

[Publicatieversie 3.1](#) (31-01-2020)

Bevat: ZIB-922.

[Publicatieversie 3.1.1](#) (10-06-2022)

Bevat: ZIB-1636.

### 1.2 Concept

The Malnutrition Universal Screening Tool (MUST) is a (validated) diagnostic screening tool for determining the extent of a patient's malnutrition.

For this screening tool, every patient's Body Mass Index (BMI) and weight loss percentage is calculated, after which the patient is assigned a disease factor. The MUST helps to recognize and treat malnutrition at an early stage.

(Source: Guidelines for Screening and Treating Malnutrition.)

### 1.3 Mindmap

### 1.4 Purpose

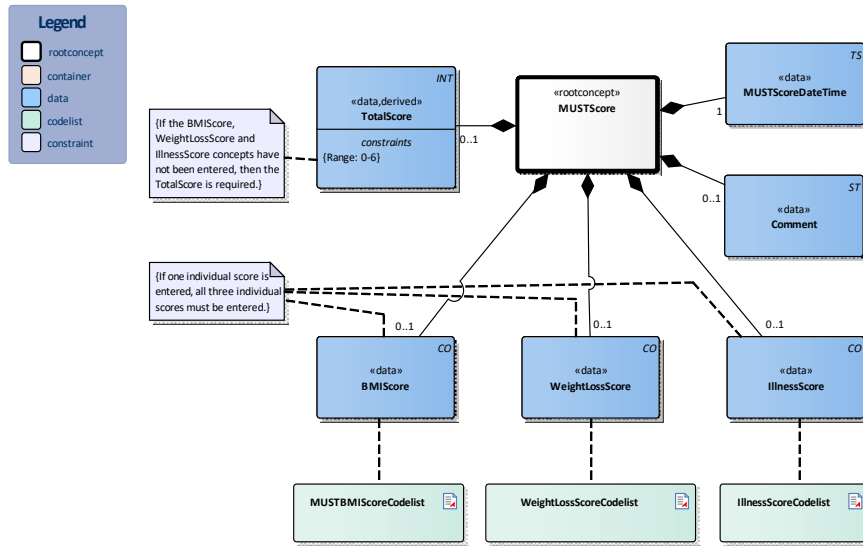
The MUST score is used to determine the extent of malnutrition or the risk of malnutrition. To treat malnutrition quickly and effectively, it is important to identify the malnutrition at an early stage.

### 1.5 Patient Population

The MUST is used for patients aged 18 and older.  
For children, the STRONGkids tool is used.

### 1.6 Evidence Base

### 1.7 Information Model



«rootconcept»	MUSTScore
<b>Definitie</b>	Root concept of the MUSTScore information model. This root concept contains all data elements of the MUSTScore information model.
<b>Datatype</b>	
<b>DCM::ConceptId</b>	NL-CM:4.5.1
<b>DCM::DefinitionCode</b>	SNOMED CT: 414648004 Malnutrition universal screening tool
<b>Opties</b>	

«data»	BMIScore
<b>Definitie</b>	A person’s Body Mass Index (BMI), also known as their Quetelet index (QI), is an index indicating the ratio between a person’s height and weight. This BMI is expressed in kg/m².
<b>Datatype</b>	CO
<b>DCM::ConceptId</b>	NL-CM:4.5.3

DCM::DefinitionCode	ScoreObservaties: 4005003 MUSTScore BMIScore	OID: 2.16.840.1.113883.2.4.3.11.60.40.4.0.1
DCM::ValueSet	MUSTBMIScoreCodelist	OID: 2.16.840.1.113883.2.4.3.11.60.40.2.4.5.1
Opties		

<b>«data»</b>	<b>WeightLossScore</b>	
Definitie	The percentage of undesired weight loss over the past 3-6 months.	
Datatype	CO	
DCM::ConceptId	NL-CM:4.5.4	
DCM::DefinitionCode	ScoreObservaties: 4005004 MUSTScore WeightLossScore	OID: 2.16.840.1.113883.2.4.3.11.60.40.4.0.1
DCM::ValueSet	WeightLossScoreCodelist	OID: 2.16.840.1.113883.2.4.3.11.60.40.2.4.5.2
Opties		

<b>«data»</b>	<b>IllnessScore</b>	
Definitie	Illness can result in reduced food intake, leading to a higher risk of malnutrition. The IllnessScore concept is used to indicate that the patient is seriously ill and that the patient has not eaten for more than 5 days or that there is a chance that the patient has not eaten for more than 5 days.	
Datatype	CO	
DCM::ConceptId	NL-CM:4.5.5	
DCM::DefinitionCode	ScoreObservaties: 4005005 MUSTScore IllnessScore	OID: 2.16.840.1.113883.2.4.3.11.60.40.4.0.1
DCM::ValueSet	IllnessScoreCodelist	OID: 2.16.840.1.113883.2.4.3.11.60.40.2.4.5.3
Opties		

<b>«data»</b>	<b>TotalScore</b>	
Definitie	The total score is the sum of all the individual scores. The total score has a range from 0 - 6.	
Datatype	INT	
DCM::ConceptId	NL-CM:4.5.2	
DCM::DefinitionCode	SNOMED CT: 444297006 Malnutrition universal screening tool score	
Opties		
Constraint	Range: 0-6	Voeg hier de Engelse definitie in

<b>«data»</b>	<b>MUSTScoreDateTime</b>	
Definitie	The date and time at which the MUST score was determined.	
Datatype	TS	
DCM::ConceptId	NL-CM:4.5.6	
Opties		

<b>«data»</b>	<b>Comment</b>	
Definitie	A comment on the circumstances during the measurement.	
Datatype	ST	
DCM::ConceptId	NL-CM:4.5.7	
DCM::DefinitionCode	LOINC: 48767-8 Annotation comment	

Opties	
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<b>«document»</b>	MUSTBMIScoreCodelist	
Definitie		
Datatype		
DCM::ValueSetBinding	Required	
DCM::ValueSetId	2.16.840.1.113883.2.4.3.11.60.40.2.4.5.1	
HCIM::ValueSetLanguage	EN	
Opties		

<b>BMIScoreCodelist</b>			<b>OID: 2.16.840.1.113883.2.4.3.11.60.40.2.4.5.1</b>		
Concept Name	Concept Value	Concept Code	CodeSys. Name	CodeSystem OID	Description
BMIHigh	0	B0	MUST_BMI	2.16.840.1.113883.2.4.3.11.60.40.4.4.1	BMI >20 kg/m <sup>2</sup>
BMIAverage	1	B1	MUST_BMI	2.16.840.1.113883.2.4.3.11.60.40.4.4.1	BMI tussen 18,5-20 kg/m <sup>2</sup>
BMILow	2	B2	MUST_BMI	2.16.840.1.113883.2.4.3.11.60.40.4.4.1	BMI < 18,5 kg/m <sup>2</sup>

<b>«document»</b>	WeightLossScoreCodelist	
Definitie		
Datatype		
DCM::ValueSetBinding	Required	
DCM::ValueSetId	2.16.840.1.113883.2.4.3.11.60.40.2.4.5.2	
HCIM::ValueSetLanguage	EN	
Opties		

<b>GewichtsverliesScoreCodelist</b>			<b>OID: 2.16.840.1.113883.2.4.3.11.60.40.2.4.5.2</b>		
Concept Name	Concept Value	Concept Code	CodeSys. Name	CodeSystem OID	Description
LossLow	0	G0	MUST_Gewichtsverlies	2.16.840.1.113883.2.4.3.11.60.40.4.4.2	Gewichtsverlies <5%
LossAverage	1	G1	MUST_Gewichtsverlies	2.16.840.1.113883.2.4.3.11.60.40.4.4.2	Gewichtsverlies = 5-10%
LossHigh	2	G2	MUST_Gewichtsverlies	2.16.840.1.113883.2.4.3.11.60.40.4.4.2	Gewichtsverlies >10%

<b>«document»</b>	IllnessScoreCodelist	
Definitie		
Datatype		
DCM::ValueSetBinding	Required	
DCM::ValueSetId	2.16.840.1.113883.2.4.3.11.60.40.2.4.5.3	
HCIM::ValueSetLanguage	EN	
Opties		

<b>ZiekteScoreCodelist</b>			<b>OID: 2.16.840.1.113883.2.4.3.11.60.40.2.4.5.3</b>		
Concept Name	Concept Value	Concept Code	CodeSys. Name	CodeSystem OID	Description

NotAcutelyIll	0	Z0	MUST_Ziekte	2.16.840.1.113883.2.4.3.11.60.40.4.4.3	Niet ziek
AcutelyIll	2	Z1	MUST_Ziekte	2.16.840.1.113883.2.4.3.11.60.40.4.4.3	Ziek

Legend	
Definitie	
Datatype	
Opties	

Constraint	
Definitie	If one individual score is entered, all three individual scores must be entered.
Datatype	
Opties	

Constraint	
Definitie	If the BMIScore, WeightLossScore and IllnessScore concepts have not been entered, then the TotalScore is required.
Datatype	
Opties	

## 1.8 Example Instances

MUSTScore	
MUSTScoreDatumTijd	27-01-2013
BMIScore	2 (BMI<18,5 kg/m <sup>2</sup> )
GewichtsverliesScore	1 (Gewichtsverlies 5-10%)
ZiekteScore	0 (Niet ziek)
TotaalScore	3
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. Stuurgroep Ondervoeding [Online] Beschikbaar op: <http://www.stuurgroepondervoeding.nl/> [Geraadpleegd: 13 februari 2015]
2. Bapen [Online] Beschikbaar op: <http://www.bapen.co.uk> [Geraadpleegd: 13 februari 2015]
3. Richtlijn Behandeling en screening ondervoeding. [Online] Beschikbaar op: [http://stuurgroepondervoeding.nl/wp-content/uploads/2015/02/Richtlijn\\_screenen\\_en\\_behandeling\\_van\\_ondervoeding\\_juni\\_2011.pdf](http://stuurgroepondervoeding.nl/wp-content/uploads/2015/02/Richtlijn_screenen_en_behandeling_van_ondervoeding_juni_2011.pdf) [Geraadpleegd: 13 februari 2015]

## 1.16 Functional Model

## 1.17 Traceability to other Standards

## 1.18 Disclaimer

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