

# **Health & Care Information Model:**

**nl.zorg.Burnwound-v4.0**

Status: Final

Release status: Prepublished

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# 1. nl.zorg.Burnwound-v4.0

DCM::CoderList	Werkgroep RadB Verpleegkundige Gegevens
DCM::ContactInformation.Address	*
DCM::ContactInformation.Name	*
DCM::ContactInformation.Telecom	*
DCM::ContentAuthorList	Werkgroep RadB Verpleegkundige Gegevens
DCM::CreationDate	18-9-2014
DCM::DeprecatedDate	
DCM::DescriptionLanguage	nl
DCM::EndorsingAuthority.Address	
DCM::EndorsingAuthority.Name	PM
DCM::EndorsingAuthority.Telecom	
DCM::Id	2.16.840.1.113883.2.4.3.11.60.40.3.19.4
DCM::KeywordList	Brandwond
DCM::LifecycleStatus	Final
DCM::ModelerList	Werkgroep RadB Verpleegkundige Gegevens
DCM::Name	nl.zorg.Brandwond
DCM::PublicationDate	15-10-2023
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DCM::RevisionDate	17-07-2023
DCM::Supersedes	nl.zorg.Brandwond-v3.5
DCM::Version	4.0
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 (04-09-2017)  
Bevat: ZIB-530, ZIB-532, ZIB-585.

Publicatieversie 3.2 (31-12-2017)  
Bevat: ZIB-646.

Publicatieversie 3.3 (31-01-2020)  
Bevat: ZIB-828.

Publicatieversie 3.4 (01-09-2020)  
Bevat: ZIB-1116.

Publicatieversie 3.5 (01-12-2021)  
Bevat: ZIB-1296.

Publicatieversie 4.0 (15-10-2023)  
Bevat: ZIB-1980, ZIB-1951.

## 1.2 Concept

A burn wound is a wound caused by skin being exposed to heat for a certain time above a certain critical temperature. Heat above this critical temperature (+/- 40°C) will cause damage to the skin. There are different types of burn wounds, which are categorized according to the depth of the burn wound.

The depth of the burn wound depends on:

- the temperature of the impacting heat;
- the duration of the impact of heat on the skin;
- the source of the burn (e.g. fire, fluid).

## 1.3 Mindmap

## 1.4 Purpose

The description of the burn wound is of importance for starting or continuing the best possible wound treatment and to be able to properly monitor the wound healing process.

## 1.5 Patient Population

## 1.6 Evidence Base

Different degrees are used to evaluate the depth of the burn wound:

First-degree burn (no wound):

- redness
- good capillary refill
- supple
- painful

Superficial second-degree burn wound (partial thickness of the skin):

- intact / broken blisters
- pink, shiny, uniform
- good capillary refill
- supple
- painful

Deep second-degree burn wound:

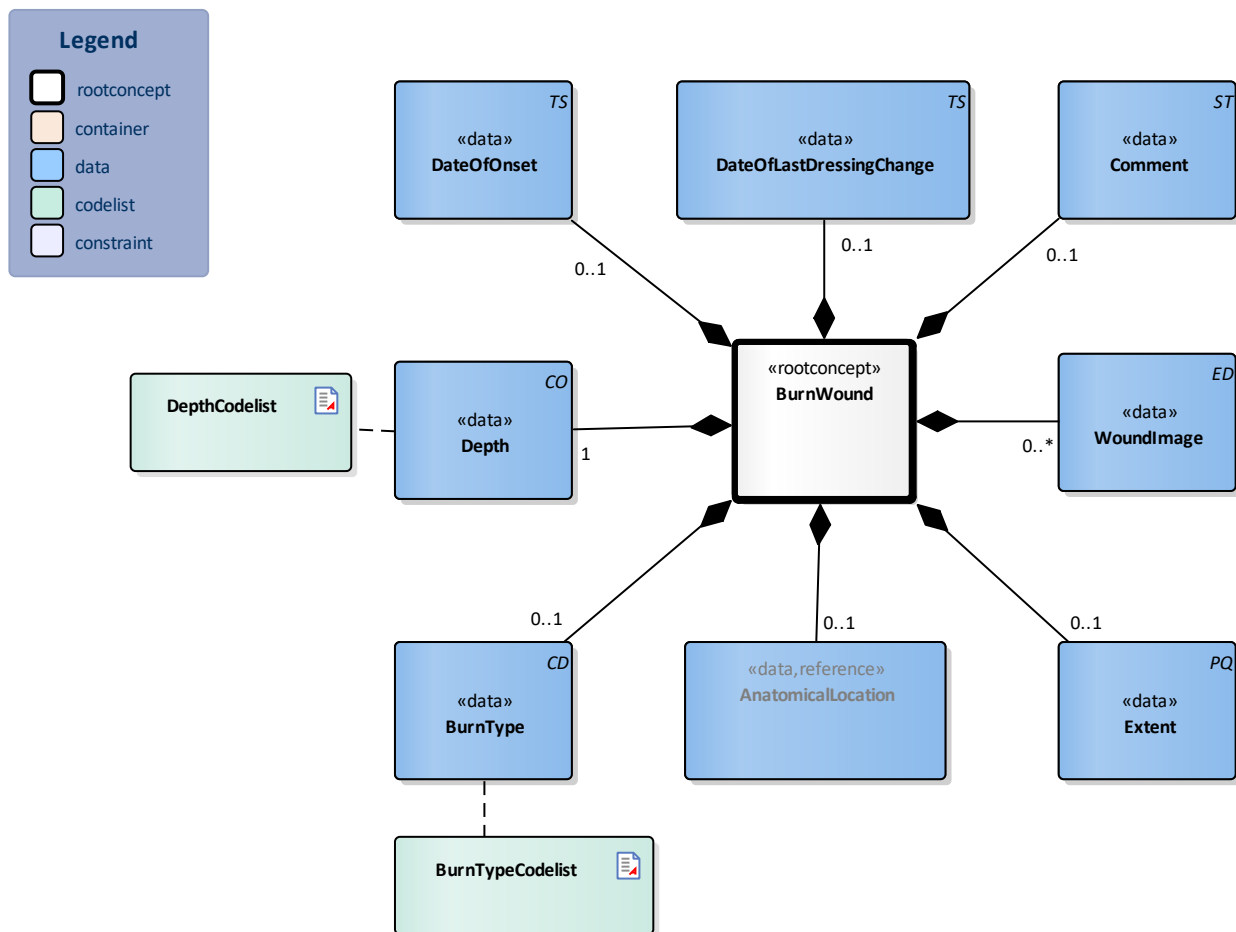
- intact / broken blisters
- pink, matte, not homogenous, damp
- slow capillary refill
- slightly more firm
- painful

Third-degree burn wound

- intact / broken blisters, epidermis stuck to burned dermis
- white, brown, yellow, red (when kept in hot water for a prolonged period of time)
- no capillary refill, non-removable redness
- firm
- less painful than the size of the wound makes it appear

(Source: Brandwondenprotocol 2010, Rode Kruis Brandwondencentrum Beverwijk [2010 Burn wound protocol, Beverwijk Red Cross Burn Wound Center])

## 1.7 Information Model



«rootconcept»	BurnWound	
Definitie	Root concept of the BurnWound information model. This concept contains all data elements of the BurnWound information model.	
Datatype		
DCM::ConceptId	NL-CM:19.4.1	
DCM::DefinitionCode	SNOMED CT: 125666000 Brandwond	
Opties		

«data»	BurnType	
Definitie	Indication of the kind of the burn wound, differentiated into the cause of the injury.	
Datatype	CD	
DCM::ConceptId	NL-CM:19.4.9	
DCM::ValueSet	BurnTypeCodelist	OID: 2.16.840.1.113883.2.4.3.11.60.40.2.19.4.3
Opties		

«data»	DateOfOnset	
Definitie	Date on which the burn wound appeared.	
Datatype	TS	
DCM::ConceptId	NL-CM:19.4.3	
DCM::ExampleValue	01-07-2014	
Opties		

«data»	Extent	
Definitie	The extent of a burn wound is indicated in a percentage of the 'Total Body Surface Area' (TBSA). For adults, the TBSA can be calculated on the basis of	

	the 'rule of nines', in which body parts are expressed in the percentage 9 and multiples of 9. This 'rule of nines' cannot be used for children because a child's body proportions are different from those of an adult. For children, separate tables were developed per age group to determine the extent of burn wounds. Another option is measuring the extent using the patient's hand surface area. The surface area of a patient's hand (including the fingers) equals approximately 1% of their total body surface area. (Source: Brandwonden genezen. Hoe verder? [Healing Burn Wounds. What now?])	
<b>Datatype</b>	PQ	
<b>DCM::ConceptId</b>	NL-CM:19.4.7	
<b>DCM::ExampleValue</b>	27%	
<b>Opties</b>		

«data»	AnatomicalLocation	
<b>Definitie</b>	The location of the burn wound on the body.	
<b>Datatype</b>		
<b>DCM::ConceptId</b>	NL-CM:19.4.12	
<b>DCM::DefinitionCode</b>	SNOMED CT: 363698007 Finding site	
<b>DCM::ExampleValue</b>	Bil	
<b>DCM::ReferencedConceptId</b>	NL-CM:20.7.1	This is a reference to the rootconcept of information model AnatomicalLocation.
<b>Opties</b>		

«data»	Depth	
<b>Definitie</b>	Description of the severity of the burn wound, ranging from degree 1 - 3.	
<b>Datatype</b>	CO	
<b>DCM::ConceptId</b>	NL-CM:19.4.2	
<b>DCM::DefinitionCode</b>	SNOMED CT:116676008 Associated morphology	
<b>DCM::ExampleValue</b>	2e graads, oppervlakkig	
<b>DCM::ValueSet</b>	DepthCodelist	OID: 2.16.840.1.113883.2.4.3.11.60.40.2.19.4.1
<b>Opties</b>		

«data»	Comment	
<b>Definitie</b>	Comment on the burn wound.	
<b>Datatype</b>	ST	
<b>DCM::ConceptId</b>	NL-CM:19.4.5	
<b>DCM::DefinitionCode</b>	LOINC: 48767-8 Annotation comment	
<b>Opties</b>		

«data»	DateOfLastDressingChange	
<b>Definitie</b>	Date on which the dressing was last changed.	
<b>Datatype</b>	TS	
<b>DCM::ConceptId</b>	NL-CM:19.4.8	
<b>DCM::ExampleValue</b>	10-10-2014	
<b>Opties</b>		

«data»	WoundImage	
<b>Definitie</b>	A photo of the wound as visual information.	
<b>Datatype</b>	ED	
<b>DCM::ConceptId</b>	NL-CM:19.4.11	

DCM::DefinitionCode	SNOMED CT: 9561000146103 Medical photograph	
DCM::DefinitionCode	LOINC: 72170-4 Photographic image	
Opties		

«document»	BurnTypeCodelist			
Definitie				
Datatype				
DCM::ValueSetBinding	Extensible			
DCM::ValueSetId	2.16.840.1.113883.2.4.3.11.6 0.40.2.19.4.3			
HCIM::ValueSetLanguage	--			
Opties				
BrandwondSoortCodelijst			OID: 2.16.840.1.113883.2.4.3.11.60.40.2.19.4.3	
Concept Name	Concept Code	Coding Syst. Name	Coding System OID	Description
Chemical burn	26696002	SNOMED CT	2.16.840.1.113883.6.96	Chemische brandwond
Electrical burn	21720007	SNOMED CT	2.16.840.1.113883.6.96	Elektrische brandwond
Thermal burn	105594005	SNOMED CT	2.16.840.1.113883.6.96	Thermische brandwond

«document»	DepthCodelist			
Definitie				
Datatype				
DCM::ValueSetBinding	Required			
DCM::ValueSetId	2.16.840.1.113883.2.4.3.11.6 0.40.2.19.4.1			
HCIM::ValueSetLanguage	--			
Opties				
DieptegraadCodelijst		OID: 2.16.840.1.113883.2.4.3.11.60.40.2.19.4.1		
Concept Name	Concept Code	CodeSys. Name	CodeSystem OID	Description
first degree burn injury	77140003	SNOMED CT	2.16.840.1.113883.6.96	1 <sup>e</sup> graad
superficial partial thickness burn	262587005	SNOMED CT	2.16.840.1.113883.6.96	2 <sup>e</sup> graad, oppervlakkig
deep partial thickness burn	262588000	SNOMED CT	2.16.840.1.113883.6.96	2 <sup>e</sup> graad, diep
third degree burn injury	80247002	SNOMED CT	2.16.840.1.113883.6.96	3 <sup>e</sup> graad

	Legend
Definitie	
Datatype	
Opties	

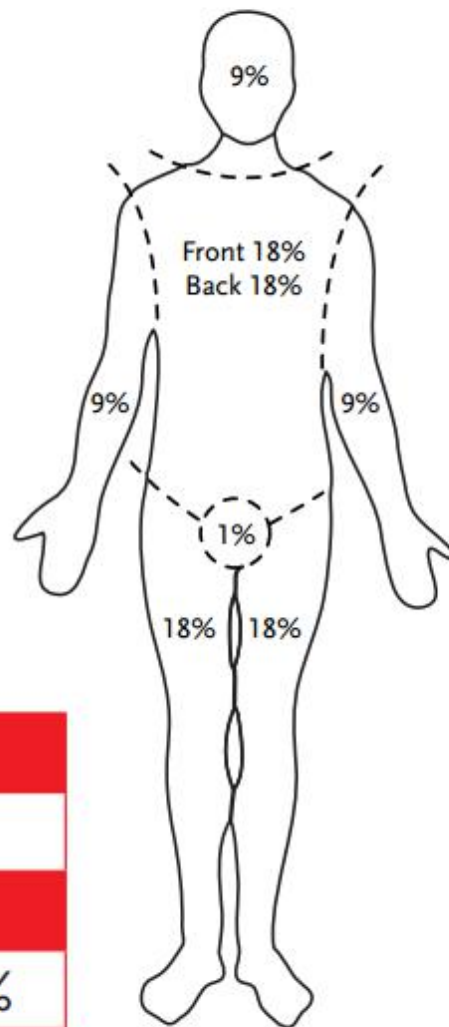
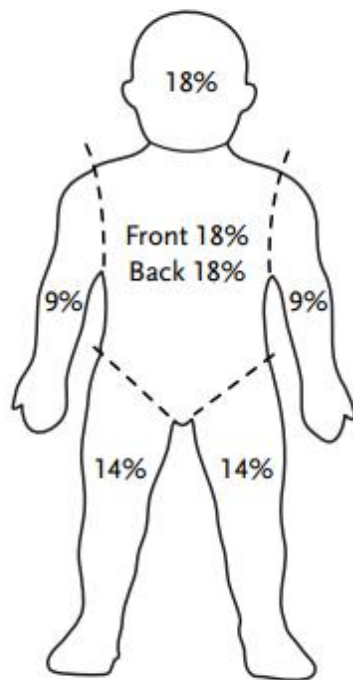
## 1.8 Example Instances

Brandwond	
Dieptegraad	2 <sup>e</sup> graad, oppervlakkig
Uitgebreidheid	1%
AnatomischeLocatie.Locatie	onderarm
AnatomischeLocatie.Lateraliteit	rechts
Soort	thermische brandwond
OntstaansDatum	29-09-2014
DatumLaatste Verbandwissel	10-10-2014
Toelichting	Mevrouw kreeg hete thee over zich heen, wond is ongeveer 10 bij 4 cm.

## 1.9 Instructions



# TVLO kinderen TVLO volwassenen



## 1 jaar oud

hoofd: 18%	been: 14%
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## Per jaar ouder dan 1

hoofd: - 1%	been: + 1/2%
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[www.brandwondenstichting.nl](http://www.brandwondenstichting.nl)

## 1.10 Interpretation

## 1.11 Care Process

## 1.12 Example of the Instrument

## 1.13 Constraints

## 1.14 Issues

Damages to the skin as a result of exposure to intense heat and cold can lead to similar wounds. Nevertheless, we have decided not to expand the information model to become a generic thermal wound information model. The reason for this was the lack of a guideline for treating freeze wounds and insufficient agreement in the field on the applicability of the burn wound classification for freeze wounds. Freeze wounds also rarely occur in the Netherlands, due to the climate.

## 1.15 References

1. Brandwondenprotocol 2010 [Online] Beschikbaar op: [https://www.rkz.nl/brandwondenprotocol\\_online](https://www.rkz.nl/brandwondenprotocol_online) [Geraadpleegd: 13 februari 2015]
2. Brandwonden genezen. Hoe verder? [Online] Beschikbaar op: [http://brandwondenstichting.nl/wp-content/uploads/2013/08/NBS\\_Hoe-verder-huisartsen-2011.pdf](http://brandwondenstichting.nl/wp-content/uploads/2013/08/NBS_Hoe-verder-huisartsen-2011.pdf) [Geraadpleegd: 13 februari 2015]

## 1.16 Functional Model

## 1.17 Traceability to other Standards

## 1.18 Disclaimer

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