

# Health & Care Information Model:

nl.zorg.Burnwound-v3.4

Status: Final

Release: 2020

Release status: Published

Managed by:



# Content

|                                      |          |
|--------------------------------------|----------|
| <b>1. nl.zorg.Burnwound-v3.4</b>     | <b>3</b> |
| 1.1 Revision History                 | 3        |
| 1.2 Concept                          | 3        |
| 1.3 Mindmap                          | 4        |
| 1.4 Purpose                          | 4        |
| 1.5 Patient Population               | 4        |
| 1.6 Evidence Base                    | 4        |
| 1.7 Information Model                | 4        |
| 1.8 Example Instances                | 7        |
| 1.9 Instructions                     | 8        |
| 1.10 Interpretation                  | 9        |
| 1.11 Care Process                    | 9        |
| 1.12 Example of the Instrument       | 9        |
| 1.13 Constraints                     | 9        |
| 1.14 Issues                          | 9        |
| 1.15 References                      | 9        |
| 1.16 Functional Model                | 9        |
| 1.17 Traceability to other Standards | 9        |
| 1.18 Disclaimer                      | 9        |
| 1.19 Terms of Use                    | 10       |
| 1.20 Copyrights                      | 10       |

# 1. nl.zorg.Burnwound-v3.4

|                                 |  |
|---------------------------------|--|
| 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            | 01-09-2020   |
| DCM::PublicationStatus          | Published  |
| DCM::ReviewerList               | Projectgroep RadB Verpleegkundige Gegevens & Kerngroep Registratie aan de Bron |
| DCM::RevisionDate               | 25-08-2020   |
| DCM::Supersedes                 | nl.zorg.Brandwond-v3.3   |
| DCM::Version                    | 3.4  |
| 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.

## 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:

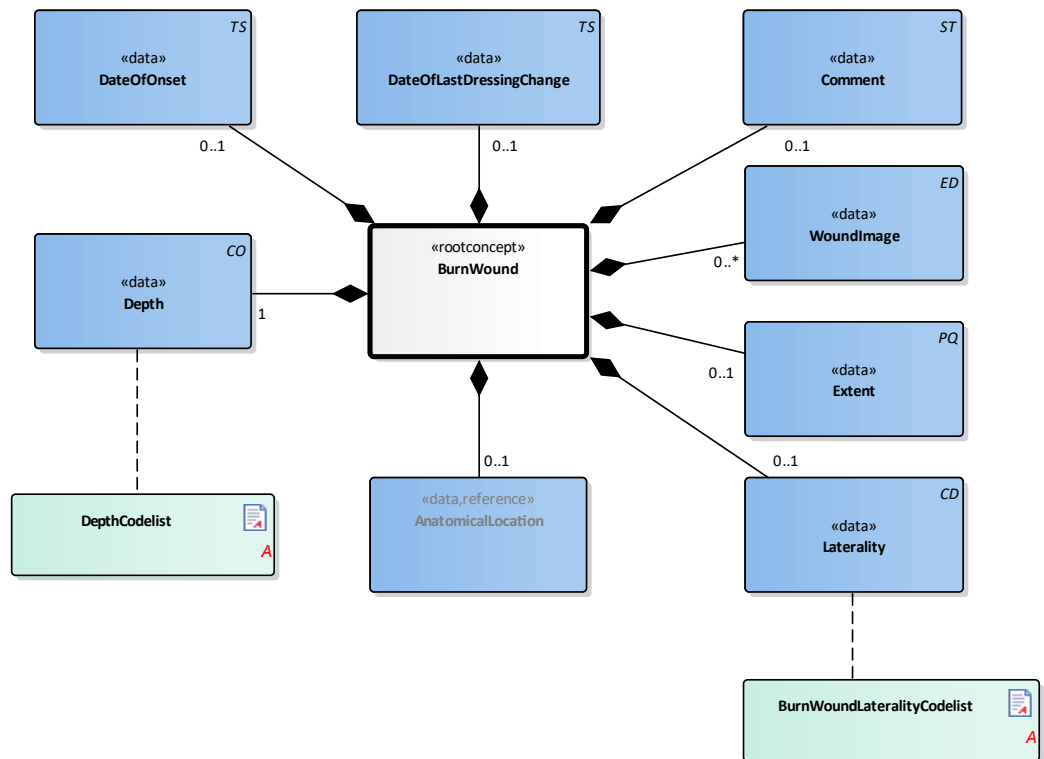
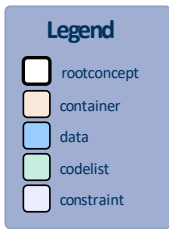
- intact / broken blisters
- pink, matte, not homogenous, damp
- slow capillary refill
- slightly more firm
- painful

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  |           |
|----------------------------|--|-----------|
| <b>Definitie</b>           | Root concept of the BurnWound information model. This concept contains all data elements of the BurnWound information model. |           |
| <b>Datatype</b>            |  |           |
| <b>DCM::ConceptId</b>      | NL-CM:19.4.1   |           |
| <b>DCM::DefinitionCode</b> | SNOMED CT: 125666000   | Brandwond |
| <b>Opties</b>              |  |           |

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

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

| «data»              | Laterality   |   |
|---------------------|--|---|
| Definitie           | Laterality adds information about body side to the anatomic location, <i>e.g.</i> left |   |
| Datatype            | CD   |   |
| DCM::ConceptId      | NL-CM:19.4.10  |   |
| DCM::DefinitionCode | SNOMED CT: 272741003<br>Laterality   |   |
| DCM::ExampleValue   | Links  |   |
| DCM::ValueSet       | BurnWoundLateralityCodeList  | OID:<br>2.16.840.1.113883.2.4.3.11.60.40.2.19.4.4 |
| Opties              |  |   |

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

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

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

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

|                            |                                      |  |
|----------------------------|--------------------------------------|--|
| <b>DCM::DefinitionCode</b> | LOINC: 72170-4<br>Photographic image |  |
| <b>Opties</b>              |                                      |  |

|                             |   |  |
|-----------------------------|---|--|
| <b>«document»</b>           | <b>BurnWoundLateralityCodelist</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.<br>60.40.2.19.4.4 |  |
| <b>Opties</b>               |   |  |

| <b>BrandwondLateraliteitCodelijst</b> |              | <b>OID: 2.16.840.1.113883.2.4.3.11.60.40.2.19.4.4</b> |                        |                 |
|---------------------------------------|--------------|---|------------------------|-----------------|
| Concept Name                          | Concept Code | CodeSys. Name   | CodeSystem OID         | Description     |
| Left                                  | 7771000      | SNOMED CT   | 2.16.840.1.113883.6.96 | Links           |
| Right                                 | 24028007     | SNOMED CT   | 2.16.840.1.113883.6.96 | Rechts          |
| Right and left                        | 51440002     | SNOMED CT   | 2.16.840.1.113883.6.96 | Rechts en links |

|                             |   |  |
|-----------------------------|---|--|
| <b>«document»</b>           | <b>DepthCodelist</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.<br>60.40.2.19.4.1 |  |
| <b>Opties</b>               |   |  |

| <b>DieptegraadCodelijst</b>        |              | <b>OID: 2.16.840.1.113883.2.4.3.11.60.40.2.19.4.1</b> |                        |                                    |
|------------------------------------|--------------|---|------------------------|------------------------------------|
| 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               |

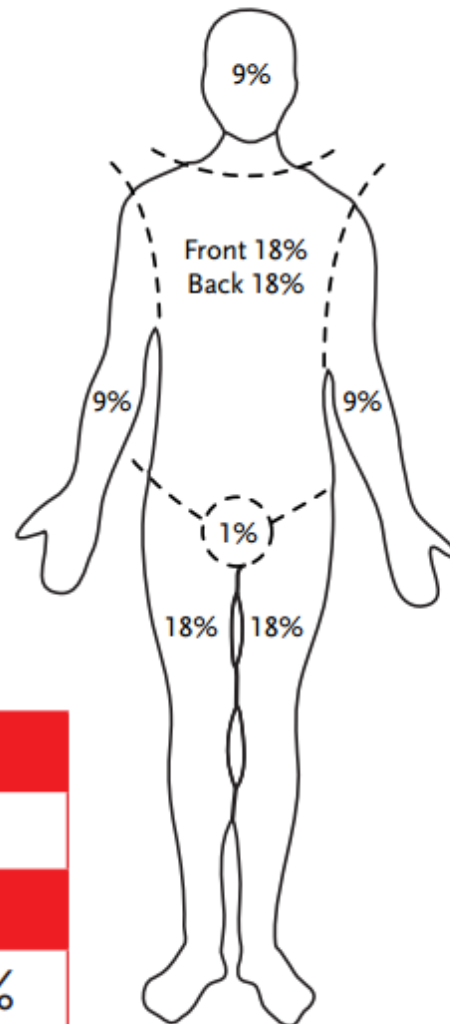
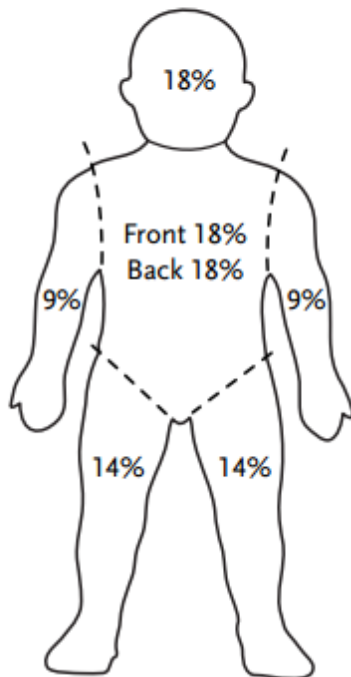
|                  |               |
|------------------|---------------|
|                  | <b>Legend</b> |
| <b>Definitie</b> |               |
| <b>Datatype</b>  |               |
| <b>Opties</b>    |               |

## 1.8 Example Instances

| Brandwond                  |   |
|----------------------------|---|
| Dieptegraad                | 2 <sup>e</sup> graad, oppervlakkig                                    |
| Uitgebreidheid             | 1%  |
| AnatomischeLocatie         | onderarm  |
| 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%

**Per jaar ouder dan 1**

hoofd: - 1% | been: + 1/2%



## 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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