

**SNOMED**  
International

Expo 2017 Tutorial

# Introduction to SNOMED CT Translation

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14669001  
• ACUTE RENAL FAILURE  
• SÍNDROME DE INSUFICIENCIA RENAL  
• NYRESVIGTSYNDROM



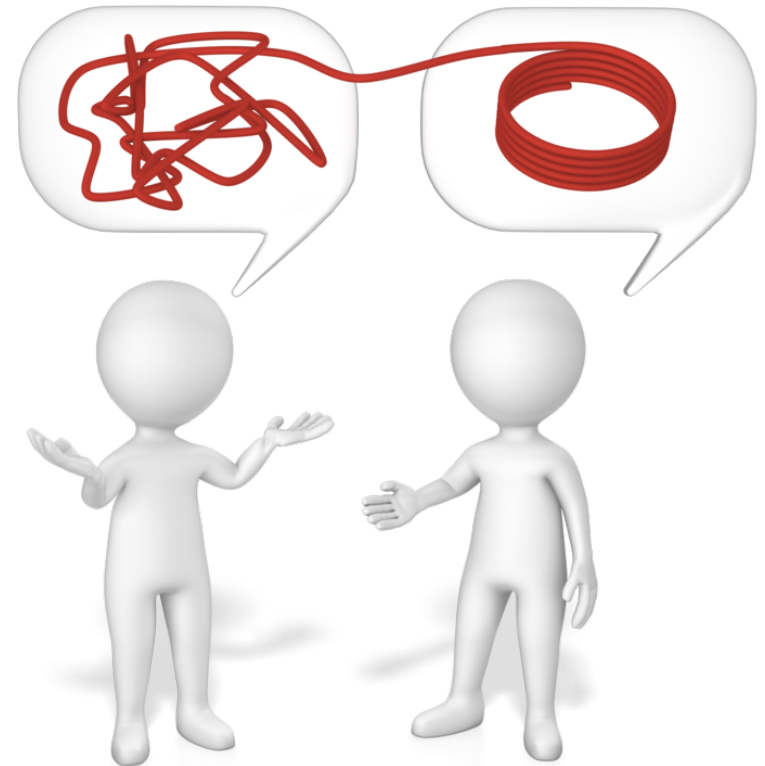
# Overview

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- Introduction to translation
- Translation experiences from the Netherlands
- SNOMED International translation work
- Q/A and ending



# Introduction to Translation



# Overview

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- Why translate?
- How to translate?
- Translation techniques and syntactical issues
- Representing translations



# Why Translate SNOMED CT

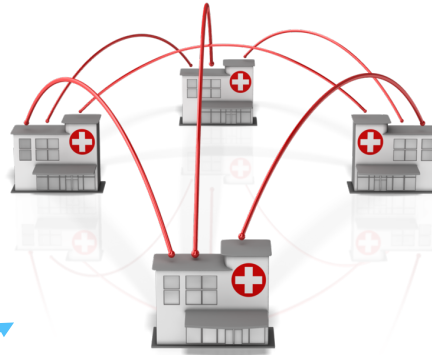


# Why Translate SNOMED CT?

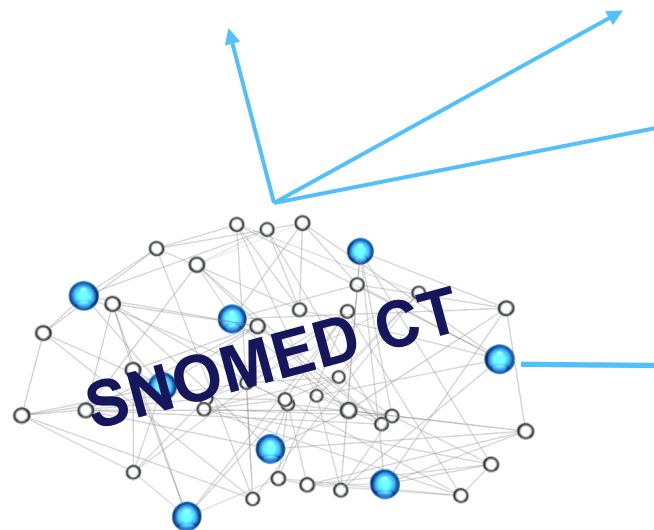
People



Organisations



Countries



Translations must remain faithful to terminological and linguistic principles and at the same time be able to produce national terminologies useful for clinicians in their daily work

# SNOMED CT Translation Heuristics

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Unambiguity (FSN)

Transparency

Psychological  
acceptability

Systematicity and  
consistency



Linguistic correctness

International  
recognizability

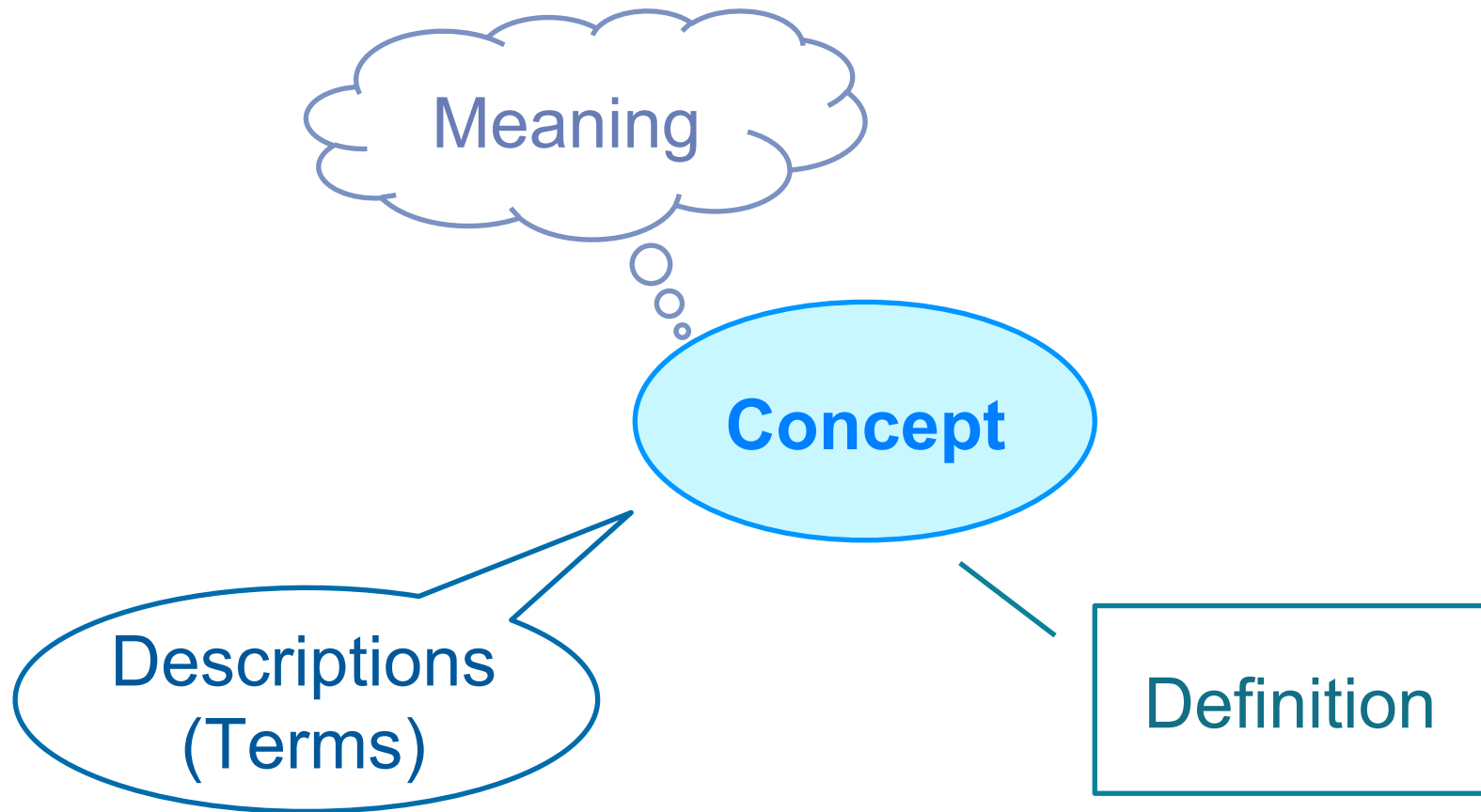
# How to Translate





# Concept-Based Translation

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# Concept and Terms

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## Concept

- SNOMED CT concepts represent clinical ideas/meanings
- Every concept has a unique numeric concept identifier

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## Term

- Terms are human-readable representations of concepts
  - A single term may represent one or more concepts
  - Different terms may represent a single concept

# Concept and Terms

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## Concept:

22298006 | Myocardial infarction (disorder) |

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- “Myocardial infarction”
- “Infarction of heart”
- “Cardiac infarction”
- “Heart attack”



## Term:

”cold”

- Cold sensation quality
- Chronic Obstructive Lung Disease
- Common cold



# Translating Concepts instead of Terms

- Concept equivalence is essential
- Concept translation requires clarifying the underlying meaning of the concept by considering the
  - meaning of the source language term
  - hierarchical position of the concept
  - relationships of the concept to other concepts

| Original term | Actual translation | Correct translation |
|---------------|--------------------|---------------------|
| Sore bottom   | Øm <b>bund</b>     | Ømt sædeparti       |

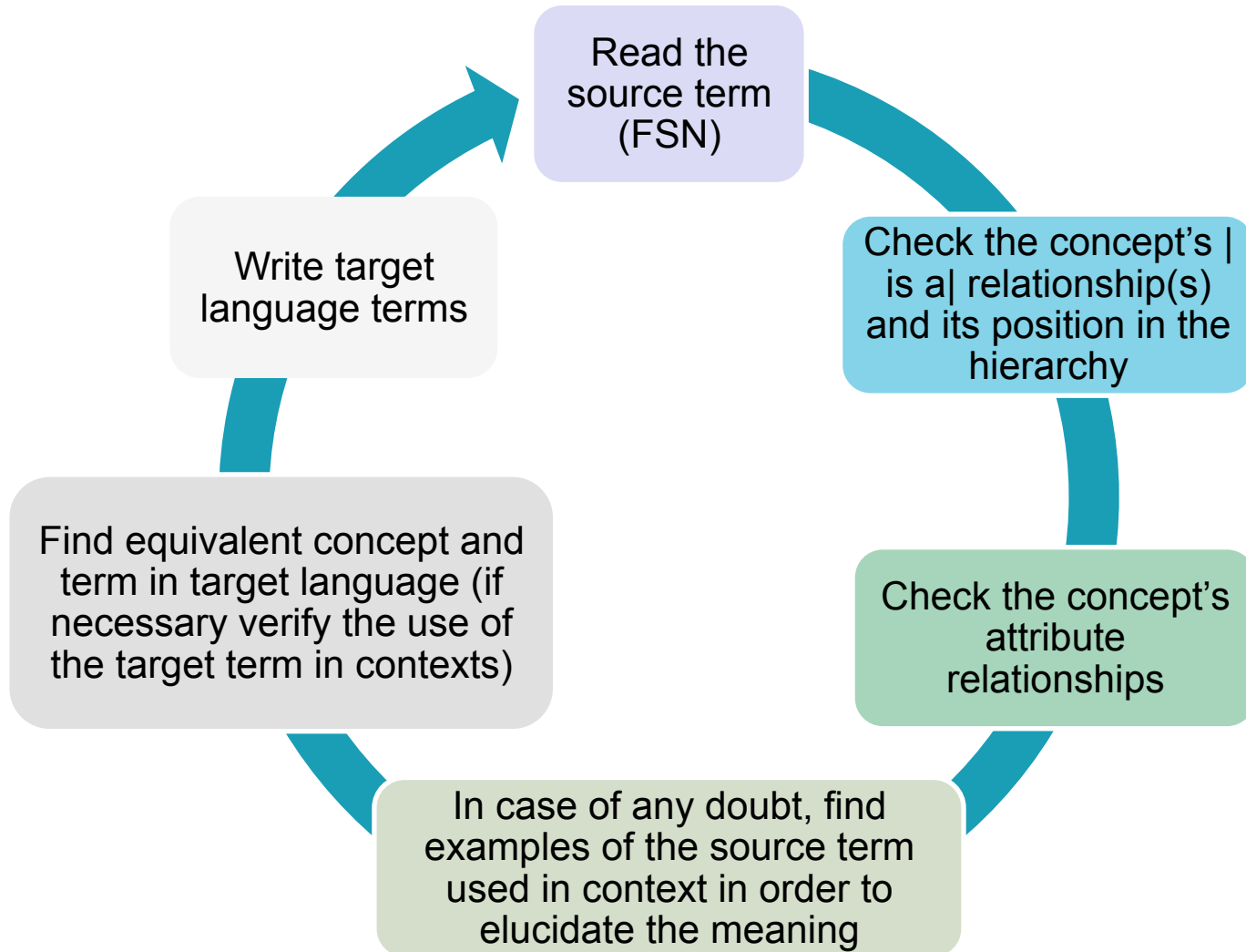


The lowest or deepest part of anything,  
as distinguished from the top



# Process

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# Translation Techniques and Syntactical Issues



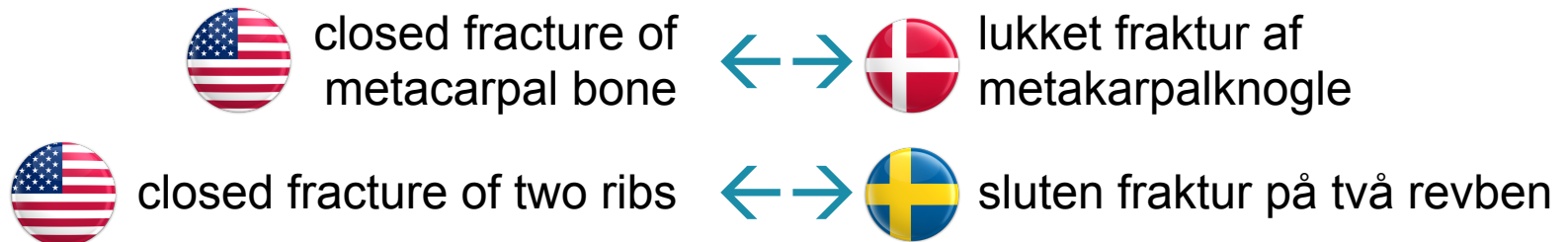
# Translation Techniques and Syntactical Issues

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- Techniques like borrowing or literal translation may be recommended as long as concept equivalence is ensured
  - Borrowing** is a common technique, based on a conscious choice to use the same word in the target as in the source

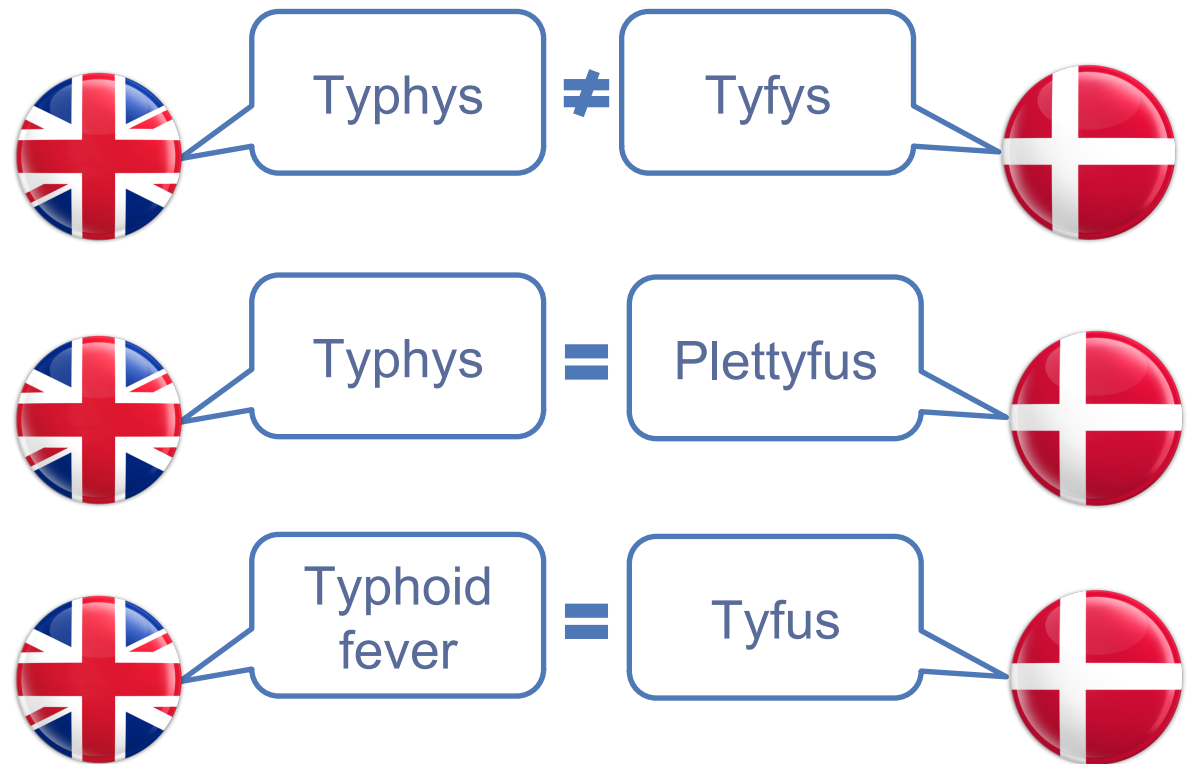


- A **literal translation** is a translation that follows closely the form of the source language. Also known as word-for-word translation



# Concept Equivalence Problems

- False friends (National or cultural variations)
  - Words in two languages that look or sound similar, but differ significantly in meaning.





# Translation Techniques and Syntactical Issues

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- Other translation techniques may be required to achieve concept equivalence and meet national linguistic principles
  - **Transposition** where parts of the terms change sequence
    - Grammatical structures are often different in different languages
    - *He likes swimming* translates as *Er schwimmt gern* in German



disability affecting  
daily living



funktionsnedsættelse der  
påvirker daglig livsførelse



function impairment  
which influences daily  
living

- **Amplification** where the translator adds words in order to express the same meaning



heavy-for-dates



tung i förhållande till  
graviditetstiden



heavy in relation to  
duration of pregnancy

# **Translation Experiences from the Netherlands**



# Translation experiences in the Netherlands

**Feikje Hielkema-Raadsveld**

**19 October 2017**



Better health through better information



**Klik hier om  
de afbeelding  
te wijzigen**



# Content

## **Our translation & mapping activities to date**

### **Key lessons learnt:**

- The importance of review
- Conflicting heuristics
- Concept-based translation: not as easy as it sounds...
- Collaborate!



Elze



Feikje



Natasha



Pim



# Mapping Dutch terms to Snomed

## First translations were derived from mapping projects

|                |                                    |
|----------------|------------------------------------|
| 2014 – 2015    | Optometry                          |
| 2014 – 2015    | Rare neurological disorders        |
| 2014 - present | Disorders registered in hospitals  |
| 2014 - present | Micro-organisms                    |
| 2016 – 2017    | Problem list nursing               |
| 2017 – 2018    | Procedures registered in hospitals |

## Close involvement of healthcare professionals

## Very time-consuming



# Translating branches of Snomed

## Changed perspective to translation

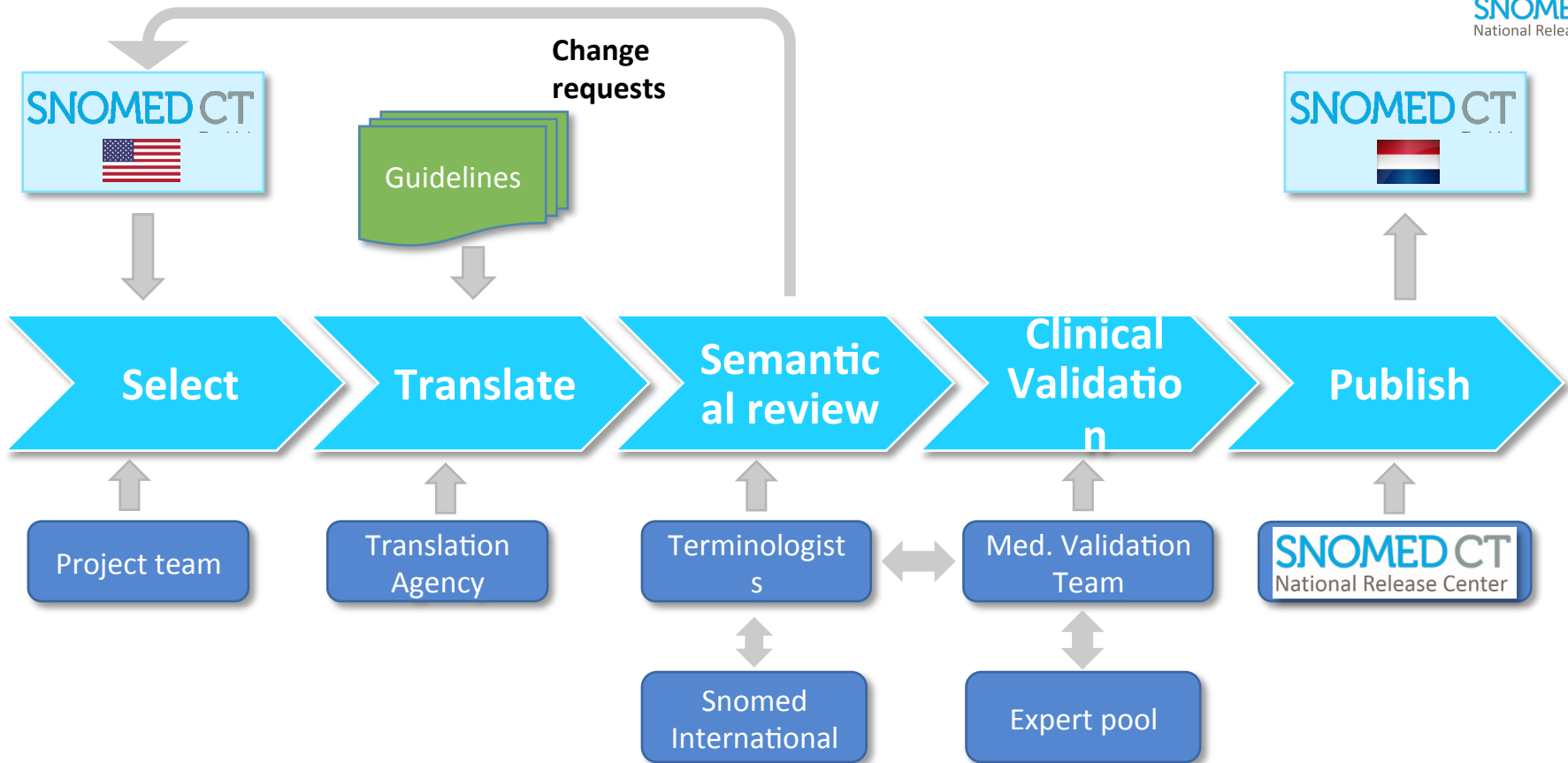
|             |   |
|-------------|---|
| 2016 – 2017 | 9,500 terms for orthopaedics and intensive care |
| 2017 – 2018 | All (relevant) body structures                  |
| 2017 – 2018 | All (relevant) procedures                       |
| 2017 - 2018 | Allergens                                       |

**More efficient**

**Easier to be consistent**

**Harder to involve healthcare professionals**

# Snomed Translation Process





# Knotty dilemma's

## **Conflicting interests**

Consistency vs. recognizability

Faithful translation vs. recognizability

# Consistency vs. recognizability

## **The translation agency ensures consistency...**

- Guidelines
- Translation tools (concordance, similarity results)
- Careful collaboration and quality assurance

## **... and the healthcare professional sweeps chaos back in**

- Natural language is neither logical nor consistent
- Preferred terminology varies across hospitals, universities and disciplines
- No collaboration or discussion among our clinical validators
- Difficult to handle (or even signal) contradicting opinions



# Faithful translation vs. recognizability

## **Fordyce angiokeratoma in females**

English: "Fordyce angiokeratoma of *vulva*"

Dutch: "Fordyce angiokeratoma van *labia majora*"

**SCT: 402841001 |Angiokeratoma of vulva (disorder)|**

Translate literally or use common Dutch term?

# Translation hazards of concept-based translation

## **General problems**

- False friends
- Different languages have different concepts
- Inconsistent source descriptions

## **Snomed-specific problems**

- Duplicate or ambiguous concepts
- Classification concepts
- Obscure, specialistic or obsolete concepts
- FSN does not match definition
- Not-quite-synonymous synonyms



# Different languages have different concepts

## Some concepts are irrelevant in the Netherlands

- 56270008 |Surfer's nodules|
- 295230002 |Etodolac overdose| (unregistered drug in NL)
- 425739008 |Brainerd diarrhoea|

## Some are obsolete

- 11641008 |Miller's asthma|
- 123763000 |Houssay syndrome| (exactly one Dutch reference, dated 1958)

## And some distinctions are unknown in Dutch

- 404640003 |Dizziness|, 404641004 |Giddiness|, 271789005 |Dizziness and giddiness|
- It's all *duizeligheid* to us!

**Out of 9,500 concepts, we decided not to translate > 160 concepts**



# Duplicate or ambiguous concepts

## Examples:

- 308893005 |Pyrexia post procedure (finding)| & 130091000119103 |Post-procedural fever (finding)|
- 70091000|Pseudopancreatic cholera syndrome| & 39998009 | Verner-Morrison syndrome|
- 54181000 |Diabetes-nephrosis syndrome|, 197605007 |Nephrotic syndrome due to diabetes mellitus| & 127013003 |Diabetic renal disease|

## Each concept involves:

- Deciding they are duplicate or ambiguous
- Finding a reliable, *English* source that agrees
- Submitting CRS-request



# Inconsistent source descriptions

## Initial translation based on FSN

So inconsistencies are translated too...

### Examples:

- Poisoning vs. intoxication
- Neoplasm vs. tumor
- Congenital anomaly vs. malformation
- Aphasia vs. dysphasia

## Create detailed guidelines

Keep adding to them

Integrate them with your translation tool



# FSN does not match definition

## Should we translate FSN or definition?

- 24988007 |Mesenteric *vascular* insufficiency|
  - Finding site mesenteric *artery*
- 490008 |Upper respiratory tract hypersensitivity reaction|
  - Child of *Allergic* reaction
- 287119007 |Splinter in leg|
  - Sufficiently defined as lower limb –
  - But leg normally excludes foot

Ask [info@snomed.org](mailto:info@snomed.org) or submit CRS-request

E.g. pick most likely interpretation and request that change





# False friends

## Well-known translation hazard

Words sound similar, but have different meanings

### False friend: artrose

Dutch spelling of the Latin 'arthrosis'

But means 'osteoarthritis'!

### False friends with contamination: hals, nek & keel

Hals = neck – or anterior neck?

Nek = posterior neck – or neck?

Keel = interior of neck (throat?) – or anterior neck?



# Lessons learned

**Review your semantics, spelling & recognisability**

**Keep your guidelines up-to-date**

**Be prepared for conflicting heuristics and prioritise**

Our priorities: 1) correctness 2) recognisability 3) consistency

**Concept-based translation can be quite difficult**

Reporting each problem improves the quality of Snomed International!

# Collaborate!



# Collaboration

## **With Snomed International**

Report duplicate and unnecessary concepts

Report errors in concept definition and descriptions

When in doubt, ask!

## **And other NRC's**

Share translations for common languages

Share your interpretation of obscure concepts

# **SNOMED International Translation Activities**

# Initial Translation Sets

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- How was the set created?
  - Based on usage figures – 6,300 commonly used concepts
  - Usage figures from US, UK and Australia
  - Includes diagnoses, clinical findings, procedures
  - Used available data on the use of SNOMED CT terms
- Languages
  - French
  - German
  - Simplified Chinese
  - Japanese
  - Future translations are yet to be agreed
- Quality Assurance
  - Initial translation by clinicians fluent in the target language
  - Review of translation undertaken by individuals/groups of clinicians

# Implementation

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- Translations are designed to be implemented with a SNOMED CT release. They **cannot** be implemented on their own
- RF2 format – includes ConceptId's and descriptions only (preferred/synonyms).
- Designed to allow clinicians to view SNOMED CT terms in their own language
- Availability
  - Refset/Translation tool - <https://refset.ihtsdotools.org>
  - Refset (beta) – access to starter set, to give sight of the concepts included
  - SNOMED International Translation Project – all translations
    - N.b You must be logged into the Refset/Translation tool to view the translations

# Translation (for more information)

## Translations Home

Created by Juliet Gole Krarup, last modified by Ian Green on 2017-Sep-19

### Welcome to the Translations space!

Here you can find information about translations of IHTSDO products, including SNOMED CT and its derivatives and product support documentation.

The global dissemination of SNOMED CT® increases the need to provide the terminology in many different languages. SNOMED CT® has a built-in framework to manage different languages and dialects. Currently, entire or partial translations of SNOMED CT® are available in US English, UK English, UK Australian, Spanish, Danish, Dutch, Lithuanian, Swedish and Canadian French, translations in other SNOMED International Member countries and elsewhere are also in progress.



### INFORMATION



[Introduction to translation](#)

[Guidelines for Translation of SCT](#)

[Guidelines for the Management of Translations of SCT](#)

[Developing a Methodology and Toolkit for Evaluating SCT Translation Quality \(Background\)](#)

[Developing a Methodology and Toolkit for Evaluating SCT Translation Quality](#)

### SUPPORTING MATERIALS



[SNOMED International Translation Policy](#)

[Refset/Translation tool](#)

[IHTSDO Quality Assurance Framework](#)

[Automated translation](#)

[Useful articles](#)

### RESOURCES



[Initial Translation sets](#)

[Member translations](#)

[Third party translation artefacts](#)

[ICD-11 Translation](#)



**Questions?**



# Links to Further Information

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- SNOMED CT Worldwide
  - <http://www.snomed.org/snomed-ct/snomed-ct-worldwide>
- Translations Home
  - Includes Information sheets, supporting materials and resources
  - <https://confluence.ihtsdotools.org/display/TRAN/>

# SNOMED CT Extensions and Translations

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- Australia
  - SCT AU, National Extension including Australian English
- Canada
  - SCT CA, National Extension including English and French components
- Denmark
  - SCT DK, National Extension including a full Danish translation
- Netherlands
  - SCT NL, National Extension including a Dutch translation
- Spain
  - SCT ES, National Extension including European Spanish
- Sweden
  - SCT SE, National Extension including a full Swedish translation
- United Kingdom
  - SCT UK, National Extension including UK English
- United States
  - SCT US, National Extension