

Terminology Standards in the Netherlands

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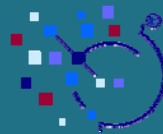


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Affiliations

- ◆ Dept of Medical Informatics, AMC – UvA
 - Advisor to the Netherlands' ICT Institute in Healthcare
 - Member of Dutch/EU/International Standardization Organization for Healthcare Terminology/Semantics
 - Member of IHTSDO Quality Assurance committee
 - Chair of IHTSDO Implementation SIG

But I will speak on my own behalf...



The Netherlands

- ◆ Inhabitants: 17 million
- ◆ Language: Dutch
 - and Frysian
- ◆ Major origins
 - Netherlands
 - Turkey
 - Maroc
 - Dutch Caribbean
 - Suriname



Terminology Standards?

- CvV (procedures)
- DBC / DOT (reimbursement)
- ICD-9 / ICD-10
- ICPC
- LOINC
- NHG (gen practice)
- SNOMED CT

Alphabet soup



Many Standards

=

Many Problems



Is one standard the solution?

Is one standard a solution?

NO!



Terminology – What for?

- ◆ Capturing information
- ◆ Storing information
- ◆ Exchanging information
- ◆ Retrieving information
- ◆ Aggregating information



Terminology – Adjacent areas

- ◆ Information Models
- ◆ Detailed Clinical Models
- ◆ Clinical Guidelines
- ◆ Clinical Performance Indicators
- = Knowledge Representation

Language
Culture



“Dutch approach” – Vision

Information ...

- ◆ **Capture** Easy, close to user, only once
- ◆ **Storage** Persistent, decentralized
- ◆ **Exchange** Secure, journaled, semantics
- ◆ **Retrieval** Varying level of detail
- ◆ **Classification** Based on clinical data



“Dutch approach” – Vision

Information ...

- ◆ **Capture** Easy, close to user, only once
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Types of Terminologies

CvV DBC/DOT ICD-9/ICD-10 ICPC LOINC NHG SNOMED CT

- ◆ **Capture** Interface Terminologies
- ◆ **Exchange & Retrieval** Reference Terminology
- ◆ **Classification** Aggregate Terminologies



Current situation

- ◆ Aggregate Terminologies (ICD, ICPC, ...) are often used as Interface Terminologies
- ◆ Various aggregation purposes requires multiple data entry
- ◆ Communication is hindered by specialty-specific codes (e.g., ICPC)
- ◆ No Reference Terminology in place... YET



One (small) step ...



- ◆ The Netherlands is a charter member of the International Health Terminology Standards Development Organization (IHTSDO)
 - IHTSDO is owner of SNOMED CT
 - Currently, there are 15 member countries
US, CA, AU, NZ, SG
UK, DK, SE, EE, LT, NL, SV, SK, ES, CY
More to come!



Challenge – Phase I

- ◆ Get experienced with SNOMED CT
- ◆ Assess applicability
 - Pilot projects (ENT, Anesthesia, procedures)
- ◆ Use/create mappings to terminologies used
- ◆ Use SNOMED CT for info exchange

“Minimally invasive approach”



Challenge – Phase II

- ◆ Develop Interface Terminologies based on SNOMED CT
 - Adequate level of detail for clinical purposes
 - Using reference sets (subsets, extensions, translations)
- ◆ Aggregate using formal rules, based on SNOMED CT-encoded information
 - Needs substantial work!



The role of SNOMED CT

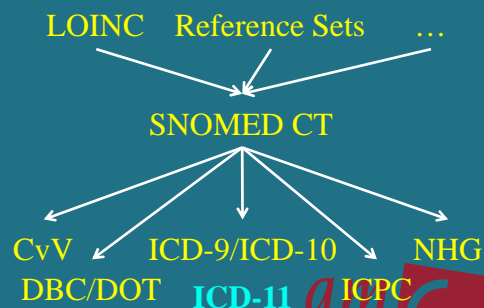
Current situation

- ◆ Aggregate terminologies used for information capture

CvV
DBC/DOT
ICD-9/ICD-10
ICPC
LOINC
NHG

Future situation

- ◆ Interface terminologies that map to SNOMED CT



Why SNOMED CT

- ◆ Such effort can't be done by a single country; we need a global standard
- ◆ SNOMED CT is concept-based
 - As much as possible explicitly defined
 - Based on Description Logic
 - Enables using any of many semantic web tools



Example

38362002 =
Dengue (disorder) =
64572001 :
disease :
370135005 = 41862004,
pathological process = infectious process,
246075003 = 4348001
causative agent = Dengue virus



“Dutch approach” – Culture

- ◆ Stimulate instead of mandate
- ◆ Teach instead of tell
- ◆ Decentralize



“Dutch approach” – Requirements

Information ...

- ◆ **Capture** Reference sets, Dutch terms
- ◆ **Storage** Mapping to SNOMED CT
- ◆ **Exchange** Determine context to include
- ◆ **Retrieval** Support querying
- ◆ **Classification** Implement rules



Current activities – I

- ◆ Free SNOMED CT introductory course
 - Raise awareness
 - Increase knowledge
- ◆ Pilot projects
 - Test feasibility
 - Increase skills
- ◆ Perform mappings to terminologies



Current activities – II

- ◆ Support early adopters
- ◆ Stimulate use of SNOMED CT in
 - Clinical Guidelines
 - Clinical Performance Indicators (Health Care Inspectorate + professional bodies)



Summary

- ◆ Many terminologies exist and are to stay
- ◆ SNOMED CT will be the hub between information capture and storage, exchange, retrieval
- ◆ Classification remains a challenge
- ◆ (Standardized) Terminology is not self-standing, it needs to interact with Information Model and Detailed Clinical Models

