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SNOMED International address to the NCVHS Semantic Standards Harmonization Panel

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What do we mean by semantic harmonization?

In the context of healthcare terminology standards, harmonization is interpreted as the maintenance of fidelity of meaning of data throughout its lifecycle, unaffected by mappings or translation.

- Clinical meaning captured specifically and explicitly
 - Granularity
 - No implied meaning
 - Computable definitions
- Lossless transfer between systems
- Bidirectional equivalence maps
- Compatible with multiple information models
- Meaning maintained when translated to another language

What is the greatest opportunity for harmonizing terminology standards?

- Identification of a subset of high priority, robust, fit-for-purpose standards
 - “The nice thing about standards is that there are so many of them to choose from.” - Andrew S. Tanenbaum
 - Reliably maintained, frequent releases
 - Focus on enhancement (comprehensive coverage)
 - USCDI is a good start (limited scope)
- Collaboration among SDOs (formal agreements)
- Joint Initiative Council for Global Health Informatics Standardization (JIC)



Focus on a small set of “fit-for-purpose” standards. Agreement needed for SDOs to work together

What are the greatest barriers to semantic harmonization?

- Extensive use of local code sets (lack of adoption of standards)
- Different underlying models and editorial policies of terminologies
- Different primary focus of terminology standards
 - clinical, administrative, reimbursement, classification, use-case specificity
- Deeply entrenched implementations
- Reluctance to change/cost of change
- Intellectual property constraints

How do we move the barrier?

- Leverage experiences in other countries
- National strategic plan developed in collaboration with stakeholders
 - vendors
 - healthcare enterprises
 - payers
 - government
 - SDOs
- Demonstration of the benefits
 - Real-World examples



Barriers are long-standing, solutions will take a long time.

What crosswalks are currently available between clinical data standards, administrative standard transactions data and code sets, for mappings of healthcare data?

SNOMED International actively integrates terminologies and maintains clinical crossmaps to other terminologies

International collaboration Products from partnerships

Content Improvement & Additions

- AND NCPT (nutrition) content
- ICNP nursing content
- NANDA-I content
- Periodontal content
- SDoH content

Refsets & Freesets

- DICOM
- Dentistry Diagnoses
- Dentistry Odontogram
- ERA-EDTA
- GP/FP
- HL7 International IPS
- ICNP 2019 (Sept 2021)
- IHE Profiles
- Nursing

Maps

- GMDN
- ICD-10 and ICD-11 MMS
- MedDRA
- Orphanet (INSERM) (Sept 2021)

Other Products & Initiatives

- COVID-19 Coding Guide
- HL7 - SNOMED on FHIR
- Global Patient Set (GPS)
- Global vaccine certificate initiatives
- LOINC expression set
- Translated Education Products
- UNICOM project deliverables

Anticipated Products

- CPT map
- HPO map

Healthcare industry should identify a few relevant, comprehensive, interoperable clinical standards driven by common information models to potentially reduce the need for an extensive number of maps.

The cost of creating and maintaining maps can be significant and grows geometrically as new standards appear.

From a quality perspective, any map poses an opportunity for error.

What additional crosswalks would be beneficial for nationally standardized cross maps?

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In the long term, the creation and maintenance of an extensive number of maps is not sustainable.

What costs, burdens and resource constraints might impede greater harmonization of standards?

- Idiosyncratic implementation of standards
 - “If you’ve seen one, you’ve seen one”
- Technical limitations
 - The proprietary nature of EHRs (no common information model)
- Adoption of standards...or rather the cost of implementation and maintenance of standards
 - Legacy data migration
 - Updating interfaces
- Lack of perceived benefit/motivation

Education on the benefits and appropriate use of terminology standards

Development of a common ontology for clinical terminology

Creation of focused terminology subsets (subontologies)

Encourage a staged implementation strategy (Minimize the pain)

What are the mitigation steps that we can take?

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Building a common terminology and information model will enhance interoperability, provide a platform for specialization

Thank You



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