

HL7 Terminology – Migration to SNOMED CT



Purpose

- Provide considerations for migration to SNOMED CT
- Solicit your input to the migration approach
- Determine how to move forward

Topics

- Background context
- Migration approach considerations
- Canada's example
- Next steps

Background context

- A need has been identified to progress on how to continue handling HL7 code system contents which overlap with SNOMED CT
- There's strong support to do so:
 - Example: <http://lists.hl7.org/read/messages?id=207225> and <http://lists.hl7.org/read/messages?id=207534> (response to former URL)
- Code system change would result in value set definition change

Migration Approach Considerations

- Confirm the need to migrate to a new terminology code system (e.g. there will be adoption to the new code system)
- Use a terminology selection criteria to confirm SNOMED CT is the preferred code system
- Would a mapping be done?
 - Establish a criteria to determine the list of concepts to be mapped (if possible)
 - E.g. what about abstract concepts, leaf concepts?
- Would a value set with just SNOMED CT be created?
- How to handle data captured using concepts to be migrated away from?
- Would code systems supporting structural attributes be out of scope?
- Tooling considerations

Migration Approach – Code System Maintenance Consideration

- ✔ Consider stop accepting new code requests and point to recommended hierarchy in SNOMED CT
 - Would we retire existing concepts?
 - Immediate 'cut over'? Publish both value sets simultaneously for XX time period?
 - Communication strategy – how to inform stakeholders
 - Provide recommendations to existing implementations
 - Outline implications e.g. textual descriptions may be gone
 - Provide recommendations to new implementations
 - What about hybrid implementations? E.g. new implementations integrating to existing implementations?

Migration – Value Set Maintenance considerations

- Value set binding
 - Some value sets binding are Representative – those are OK to move SNOMED CT? (require validation)
- What about where binding is UV?
 - Can the binding remain the same when value set definition changes? OR would we change the binding to Representative (or something else)
 - Tie into Terminology Authority about allowing HL7 value sets drawn from SNOMED CT be used by all HL7 members
 - Should guidance be included into the Binding and Versions guidance (to be created on the wiki)?
- Code system & meta data (e.g. OIDs) – be retired when the concepts within the code system are retired?

Other challenging factors

- SNOMED CT hierarchy re-structuring e.g. drug form, substance
 - How to determine WHEN to migrate??
 - Can we leverage relationship with IHTSDO officers?

Canadian example

- Identified drug forms and routes are required data elements for e-Prescribing capability
- Drug forms are mapped as per value set definition:
 - leaf and specializable concepts under `_DispensableDrugForm`, `Orderable Drug Form` code systems are mapped)
- Drug routes contains routes + methods
 - Implementer identified the “pure routes” (leveraged from HL7) they want to use and those have been mapped
- Mapped only the ones that have been used in collecting active data and/or implementation has been too broad to not map
 - Rationale for specific inclusion:
 - some very difficult concepts may take 3 days to a week to map hence if it's not used, not very useful/efficient to map unused concepts

Canada's example - Stats

- Drug forms: 117 concepts (approx.)
- Drug routes: 89 concepts (approx.)

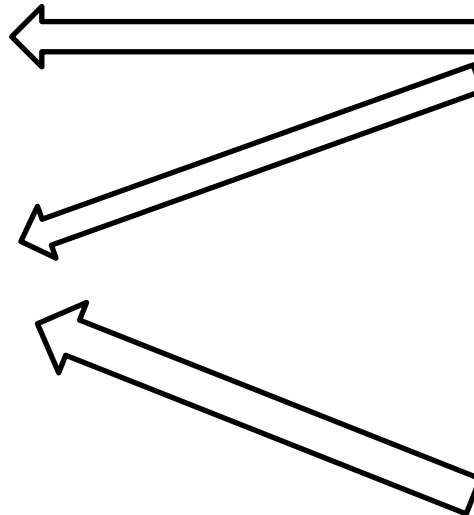
Used an semi-automated tool to perform mapping

- Over 70% are straight forward maps
 - About 20% required some thinking
 - About 10% are the most challenging – understand how implementers have used the concepts
- Estimated amount of time for mapping/verification *10 days (between 3 individuals)
- *total time, not elapsed time.

An option of new value set

Example concept excerpt:

Code	Display Name
SNOMED CT code to assign	chew, oral
26643006	oral route
SNOMED CT code to assign	dissolve, oral
26643006	oral route



From HL7 – assign
SNOMED CT ID for this (for
legacy data retrieval)

Map HL7 codes that have
collected data only

SNOMED CT 'pure route'

Strongly encourage for use
for new data entry and
transmission

Recommendations for Existing Implementations

To minimize the impacts on existing implementations and to facilitate the use of the new value set, here are some general considerations:

- Identify missing concepts: Concepts that are not in the pan-Canadian value set but captured in the jurisdiction database today (regardless of terminology)
 - Submit those concepts for inclusion in the value set following the SNOMED CT Request for Change (RFC) process.
- Identify HL7 concepts being used (if you are) in your jurisdiction
 - This will help efficiently manage the concepts need to be mapped
- Use previous terminology for legacy data retrieval purposes only
 - This will minimize ongoing maintenance of mapping data
- Use the new SNOMED CT codes for new data entry/input where possible
- For data transmission use the new SNOMED CT codes only where possible
- Additional recommendations can be provided by stakeholders.

Recommendation for New System

- Use SNOMED CT concepts directly in the system if possible
 - If not possible, a mapping will be required between the vendor-based concepts and those in SNOMED CT terminology for data transmission
- Do not start using proprietary terminology if possible
- Preferred set used by user can always be a subset of the pan-Canadian value set
- Support all codes from pan-Canadian value set, allow receiving, interpret and display of information that using other forms not usually used by user
- Display of concepts can vary depending on user preference & system configuration
 - Drop down list, “smart word” retrieval

Mapping - roles

Who should do mapping

- Mapping of local or vendor codes – must be done by implementer or vendor (as they know best the underlying meaning of their concepts)
- Mapping from HL7 to SCT can be done (one-time mapping)
 - Map HL7 concepts being used (for retrieval purposes only)
 - Assign one SNOMED CT code for each concept from HL7

Lessons Learned

- Agreeing on the approach is critical
- Need tooling
- Need domain expertise in solving especially difficult concepts



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Thank you