Incorporating Maps into Software

Brian Levy MD
Chief Medical Officer and Senior Vice President
Health Language
Outline

• Overview
• Users
• Distribution
• Updating
Co-existence of Multiple Terminologies

Rough estimate of terminology placement according to intended use
Mapping among Terminologies

• Mapping is dependant on the ‘use case’
  – Thus there may be many kinds of maps between two terminologies.

• Maps in one direction are often different than their ‘reverse’ map counterparts
  – *Biventricular CHF* to *CHF, unspecified (428.0)*
  – *CHF, unspecified (428.0)* to CHF

• Most use cases require maps to be manually created by content domain experts
Types of Maps

• Clinical terminology to classification
  – Support billing and reporting
• Classification to clinical terminology
  – Support data analysis and research
• Legacy to terminology
  – Allow migration of non-standard terminologies already in use to adopted standards
Users of Maps

• Governments - National health service level
  – Support creation and distribution of maps nationwide

• Integrators
  – Support access to maps from multiple EHR vendors. E.g. access to Read to SNOMED maps by the LSP’s in England

• EHRs
  – Incorporate maps into software products

• Hospitals
  – Use maps for billing and reporting. Migrate legacy data.
Select Clinical Diagnosis Tab

Previously associated Clinical Diagnoses will be displayed
<table>
<thead>
<tr>
<th>Term</th>
<th>Code</th>
<th>Mapped Type</th>
<th>Terminology Axis</th>
<th>Terminology</th>
</tr>
</thead>
<tbody>
<tr>
<td>ANEMIA, UNSPECIFIED</td>
<td>285.9</td>
<td>One to one SNOMED to ICD-9-CM map</td>
<td>Diseases &amp; injuries</td>
<td>ICD-9-CM</td>
</tr>
</tbody>
</table>
Billable diagnosis code available as charge diagnosis
Distribution of Maps

Terminology Service → National or Regional Level → System Supplier → Hospital or End-User Site → Other Terminologies, maps, localizations
Distribution and Updating Details

Terminology Map → Added to Engine → EMR → EMR Vendor Extends Terminology

Terminology Standard Update → Updated Standard in Engine → Locally Modified EMR Terminology → Updated EMR Terminology with new Standard
Distribution to End-Users

EMR Terminology

EMR Vendor releases to End-User application

End-User Application

End-User Extends Terminology

EMR vendor Updates terminology

EMR Vendor processes update and creates update file

Locally Modified End-User Terminology

Updated End-User Terminology with new Standard
Update Timeline

Jan
- CPT, HCPCS, APC
- SNOMED
- LOINC
- Pharma
- Pharma
- Pharma...

June
- HCPCS, APC
- SNOMED
- SNOMED to ICD...
- ICD-9-CM, DRG
- SNOMED to ICD...
- HCPCS, APC
- LOINC

Dec
Updating Maps

- SNOMED to ICD-9-CM: January and July
- SNOMED to CPT: January 31 and July 31
- Maps need to be updated when both the source and target change

- SNOMED to ICD-9-CM: October
- SNOMED to CPT: January 1 and July 1

• Maps need to be updated when both the source and target change
Conclusion

• Maps are use case driven and thus multiple maps may exist between terminologies

• Maps are incorporated in software applications from the national down to the end-user level

• Software vendors may expose certain maps directly to users

• Distribution and updating of maps will require robust tools and processes
Clinical Vocabulary Mapping Methods Institute
Saturday, October 15, 2005