Freedom of Clinical Expression Vs. Terminology Standardization

We speak the language of healthcare

Derek Baird, Vice President, Provider Solutions
Satisfy Stage 2 Meaningful Use Requirements
- SNOMED CT for problem lists (ICD-9 is no longer an option)
- SNOMED CT for inpatient procedures

Continued Support of ICD-9-CM for Billing

Transition to ICD-10-CM (Oct 1, 2014)
- Discharge or visit diagnosis
- Basis for reimbursement

Plan for ICD-11
Some clinical vendors are not at all familiar with SNOMED CT

Change in clinician workflow, even for veteran EHR users

Gap between ICD/SNOMED and common clinical expressions, search terms

Simultaneously support problems (SNOMED) along with billable diagnoses (ICD-9 today)
The Problems with Problem Lists (cont.)

- ICD-10-CM may change the workflow and approach
- Vocabulary search algorithms are difficult for clinical vendors to develop
- Clients may have specific, unique needs
- Updates and maintenance of various terminologies
Clinicians want to search/document with the words and phrases that they are used to...

- PIH
- Arm Pain
- CVA
- Hip Fracture
- Pituitary Tumor
SNOMED CT + an Interface Terminology can bridge the gap between billing/administrative standards and the language clinicians use to document care.
The Solution: Additional Synonyms (Cake)

PIH SNOMED Code: 198941007
Arm Pain SNOMED Code: 102556003
CVA SNOMED Code: 230690007
Hip Fracture SNOMED Code: 263225007
Pituitary Tumor SNOMED Code: 127024001
“That’s great, but SNOMED-encoded problem lists don’t pay the bills.”
The Solution: Use Mappings (The Middle Layer)

- **CVA**
  - Cerebral infarction, unspecified (I63.9)
  - Cerebral artery occlusion, unspecified (434.91)
  - Cerebrovascular Accident (230690007)

**SNOMED CT term**

**ICD-10-CM term**

**ICD-9-CM term**

- SNOMED $\leftrightarrow$ ICD-10-CM
- SNOMED to ICD-10
- SNOMED $\leftrightarrow$ ICD-9-CM

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But My Physicians Really Like Google (Icing)

Back pain(s)
250.01
Rad frac
Diabetes
You searched XYZ, Did you mean?
“That’s great, but my hospital is different and we need new synonyms, concepts, or subsets.”
Tools for Client-Specific Terminologies (Coffee)

### Orlando Health

<table>
<thead>
<tr>
<th>Term</th>
<th>SCT Concept Id</th>
<th>SCT Display Name</th>
<th>Comments</th>
</tr>
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<tbody>
<tr>
<td>Diarrhea</td>
<td>62315008</td>
<td>Diarrhea</td>
<td></td>
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<tr>
<td>Difficulty chewing</td>
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<td>Difficulty speaking</td>
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<td>Difficulty speaking</td>
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<td>Discharge</td>
<td>297970000</td>
<td>Skin discharge</td>
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<td>Discharge, ear</td>
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<td>Dialysis disequilibrium syndrome</td>
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<td>Dislocations</td>
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<td>Multiple dislocations</td>
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<tr>
<td>Disturbance of smell</td>
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<td></td>
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<td>Diverticulosis</td>
<td>397381000</td>
<td>Diverticular disease</td>
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<tr>
<td>Drooling</td>
<td>58972000</td>
<td>Drooling of urine</td>
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</tbody>
</table>

Reference: SNOMED CT® Clinical Findings Subset

**Search Results for "smell"**

<table>
<thead>
<tr>
<th>Primary Code</th>
<th>Name</th>
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<tbody>
<tr>
<td>275452005</td>
<td>Disorders of smell</td>
</tr>
<tr>
<td>365673009</td>
<td>Urine small - finding</td>
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<tr>
<td>44169009</td>
<td>Loss of sense of smell</td>
</tr>
<tr>
<td>8789003</td>
<td>Abnormal urine odor</td>
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<tr>
<td>167247007</td>
<td>Urine small normal</td>
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<tr>
<td>164095008</td>
<td>O/E - smell abnormal</td>
</tr>
<tr>
<td>164094007</td>
<td>O/E - smell normal</td>
</tr>
<tr>
<td>247321007</td>
<td>Unusual smell in nose</td>
</tr>
<tr>
<td>365236007</td>
<td>Smell of breath - finding</td>
</tr>
<tr>
<td>163177005</td>
<td>O/E - breath smell</td>
</tr>
<tr>
<td>105151004</td>
<td>Finding of sense of smell</td>
</tr>
</tbody>
</table>
The Problem Tomorrow: ICD-10 Granularity

- Initial visit?
- Trimester?
- Fracture type?
- Location?
- Gender?
Support Problems and Diagnoses in Parallel

- Search for problem (SNOMED)
- Ask questions or use patient information to choose ICD-10-CM
Use SNOMED CT as an interface terminology:
- HLI has added synonyms, abbreviations, and colloquial expressions
- Leveraging IHTSDO/NLM SNOMED to ICD-9-CM and ICD-10-CM Maps
- Expand the ICD-10-CM/SNOMED maps to support diagnosis to problem list selection
- Provide tools for customization
- Wrap the synonyms, mappings, and searching algorithms into a web service with sophisticated searching algorithms
A privately held company, Health Language, Inc. (HLI) was founded in 2000 and has offices in the United States, the United Kingdom, and Spain. HLI is headquartered in Denver, CO.

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Abstract

Finding the balance between the anarchy of open expressivity and the rigidity of controlled vocabulary has been a long articulated barrier to adoption amongst the clinical communities of many IHTSDO Member Nations.

Health Language and a multinational EHR vendor partner will demonstrate how the use of a systematically developed set of ‘Clinician Friendly’ descriptions mapped to SNOMED CT (and other globally endorsed controlled vocabularies), dynamically served to the user interface, increases the clinical acceptability of vocabulary standards implementation by preserving domain expressivity without compromising the capture of specifically coded content.