Contract Name: Map HL7 vocabulary to the CHI Vocabularies

Summary:
Map HL7 V2 and V3 vocabulary to content from vocabularies specified by the CHI (Consolidated Health Initiative). This will determine where there is a direct match to HL7 vocabulary values and where new values need to be created. The goal is to be able to replace HL7 vocabulary content with content from the CHI vocabularies.

Contractor will use the prioritization of tables and value sets resulting from the "Characterize HL7 V2 Vocabulary Tables and V3 Value Sets" sub-contract to prioritize the work.

For each value in each V3 value set or V2 table the contractor will establish best single matching concept from a CHI terminology. For each concept matching that comes from a CHI approved terminology the name of the CHI vocabulary, the code, and the description will be shown. If the concept is in the UMLS Metathesaurus, the CUI will be shown.

Follow-up activities not included in this sub-contract:
1. Send the list of unmatched terms to the external vocabulary body (SNOMED CT, LOINC, etc.).
2. Understand and work towards a process for having unmatched codes added.

Task Deliverables:

1. HL7_VocabMapToCHI table
2. Document detailing implementation process.
3. Contractor will participate in weekly NLM Vocab Conference call, report on the progress of the deliverables and work with steering committee and project manager to assure success of the project.

HL7_VocabMapToCHI table
The replacement table deliverable will be a new table with a one-to-many relationship to tbl_HL7_values (a unique set of all Version 2.5 tables and all Version 3 Ballot 8 value sets). The contractor will produce the following table:

       HL7_VocabMapToCHI table fields:
1. HL7 Table/Value Set ID
2. HL7 Code
3. HL7 Description
4. Match type - Exact, NT (narrower than), BT (broader than), Not Found, Possible Error, CR (Closest related or closely related)
5. UMLS CUI (null if not match or if the vocabulary is not included in the UMLS)
6. CHI source
7. CHI Code

8. CHI description
9. NewCHI – HL7 concept does not exist in the CHI terminology, and the items in 6, 7, and 8 represent an addition to be suggested to the editors of that particular CHI terminology.

Example:

Table/ VS Id	HL7 code	HL7 description	Match type	UMLS CUI	CHI source	CHI code	CHI description	Add CHI
0162	AP	Apply Externally	Exact	C0332237	SCT	359540 000	Topical (qualifier value)	No
0162	B	Buccal	Exact	C0442010	SCT	261062 005	Buccal (qualifier value)	No
0162	DT	Dental	Exact	C1298996	SCT	372457 001	Gingival route (qualifier value)	No
0162	EP	Intrarumenal bolus	Exact	no CUI	SCT	47698-3432	Bolus inserted to animal's rumen	Yes
0162	ET	Endotrachial Tube*	Exact	C1298994	SCT	372452 007	Endotracheopulmonary route (qualifier value)	No

We envision that contractor will use automated methods to find candidate replacement values followed by manual review of the results. Bidders are encouraged to detail how their approach will accomplish these these two steps in an accurate and timely manner.

Document detailing implementation process.
Document impementation steps, version of each CHI vocabulary used, significant questions posed and rationale for decisions, tools used, queries & parameters that could be used to repeat the process, definition of codes in the "matchType" field and explict coding rules.

Notes:
- Contractor will provide a list of the meanings of the abbreviations used in the CHI source column of this table.
- The contractor will consult with the steering committee in deciding that something does not need to be mapped. Possible reasons for not mapping are: deprecate-don't replace, HL7 structural code, and error in HL7 table.

Required Skills:
Expert knowledge of HL7 Version 2 and Version 3 vocabulary tables, knowledge of the UMLS content and identifier structure, Familiarity with UMLS and other semantic toolsets, Knowledge of SQL and XML data structures. Familiarity with HL7 vocabulary TC and HDF processes. Knowledge of additional scripting and/or transformation languages as required.

Estimated start: February 21, 2005
Estimated hours: 250
Expected duration: 10 weeks

Tools, queries, programs, transforms, models and methods used will be explicitly documented. Intellectual property will enter the public domain under the ownership of HL7.

Payment will be dependent on approval of the deliverable and payment by NLM to HL7.

Appendix

Unofficial list of vocabularies designated by CHI:

Code System & Version
Digital Imaging Communications in Medicine DICOM
FDA Established Name for active ingredient
FDA Unique Ingredient Identifier (UNII) codes
FDA/CDER Data Standards Manual
HIPAA Transactions and Code Sets
HL7   2.3.1+
HL7   2.3+
HL7   2.4
HL7   2.4+
HL7   CDA 1.0-2000
Human Gene Nomenclature HUGN
IEEE1073
LOINC
National Cancer Institute NCI Thesaurus
National Council for Prescription Drug Programs NCPDP SCRIPT
NDC
RxNorm
SNOMED CT
Substance Registry System SRS

Additional analysis on the association of HL7 tables and value sets was done by Klein Inc. under the "Characterize HL7 V2 Vocabulary Tables and V3 Value Sets" sub-contract.