

MINUTES

Public Laboratory LOINC Committee Meeting

Indianapolis, Indiana

June 10, 2008

❖ General news

➤ Translation process

- French translation – in process
- Chinese translation.
- Building capability to *enter and search* in languages other than English in RELMA.
 - Different strategy for downloading indexes because of their larger size
 - Eventually will be able to pick a language search index to download from the LOINC website for use within RELMA
- Work is under way (and we have some content) from Brazil (Portuguese), Spain (Spanish), Estonia (Estonian).

➤ ISO

- ISO-11595 - Health informatics -- Pharmacovigilance -- Controlled vocabularies for laboratory test units for the reporting of laboratory results.
 - LOINC will likely be part of that effort.
 - Will be provided free of charge.

➤ US HITSP

- Lab reporting message-LOINC is the federal recommended standard within that message.

➤ ELINCS

- lab reporting standard
- The California Health Foundation standard- required for some purposes in California - balloted by HL7.
- Handout- ELINCS appendix regarding LOINC.
- *(Note that the LOINC terms listed in this table are in some cases incorrect for the associated laboratory tests-this is supposed to be fixed in the final ELINCS standard.)*

➤ HL7 CDA – (Bob Dolan)

- Designed to use LOINC inside
- Interest in using CDA to transmit survey instruments/forms that are represented in LOINC
- One ramification of this is that LOINC will have to generate OIDs for the forms.

➤ Other Survey Instrument News

- We are also working with CMS to create a LOINC representation of the new CARE data instrument that is now under development and being piloted. An overview of the Medicare Post Acute Care Payment Reform initiative can be found at:
www.cms.hhs.gov/DemoProjectsEvalRpts/downloads/PACPR_RTI_CMS_A_C_PRD_Overview.pdf
- The CARE data collection tool will function across post-acute care settings (e.g., home health, nursing homes, rehab, etc.). CMS's intent is to eventually replace the individual instruments (MDS, OASIS, IRF-PAI) developed for each of these settings with a single instrument (CARE).

➤ IHTSDO (SNOMED CT) - active discussion-whole agenda item later regarding this issue.

❖ New features of RELMA 3.24 - (Handout and new disc–note do not copy till the final version out in a week.)

➤ Highlights

- Entering one or more LOINC codes returns panels which contain some or all of the requested LOINC codes. The "any of" display includes the number of LOINC codes found in that panel and their LOINC numbers.
- By choosing custom display on the LOINC Details screen, customizes the report by picking a subset of the available sections for reporting.
- Choosing the export function can also be customized. Select custom export on the context display (right click), then pick the fields you want to export menu to Excel spread sheet, email, etc. This feature makes export much easier when sending lists of LOINC to people for discussion.
- When exporting Local Terms to a Delimited File, now the LOINC Component, Property, Time, System, Scale, and Method of mapped terms can be included.
- Truncated versus word wrap feature
 - At start up, the grids will have a more reasonable sizing of columns and will truncate long strings. When the space allocated for the column is

insufficient for the whole string, (truncation is a tad faster than word wrap) strings that have been truncated will be followed by an ellipsis (...).

- A button at the bottom of the display allows the feature to toggle from truncated to word wrap. In word wrap, the column size stays the same but the rows expand to as many lines as needed to show the each string word wrapped.
- Columns can be resized.
- The choices of truncate/word wrap and the column sizing are sticky.
- Sample units appear with each LOINC term on the mapping display and the details displayer to help user understand the terms.
- RELMA now supports searching the LOINC database in languages besides English. An additional huge index is required for each additional language. Since the database is already very large, we will not ship the database with the indexes needed for each language. Instead, we will provide a separate download of individual language indexes from the LOINC web site. Look for an announcement on the LOINC web site about the availability of these indexes.
- The HIPAA HL7 attachments displays have been modified to accommodate the major changes involved in switching to CDA, and to unify the RELMA software. These attachments are now displayed on the "Panels, Forms & Surveys" form. These new displays are draft prototypes of the current HL7 draft documents and will be finalized before the next release.

➤ Other functions (see release notes)

- On the LOINC Details display, externally defined answers are now explicitly shown as externally defined.
- Importing HL7 now switches to the local term file of the HL7 import.
- Switching the preferred language from the User Preferences form now immediately loads that language.
- When appropriate, the context menu now has the "Propose a LOINC" action.
- When you are adding or editing a local term, you can now use the context menu.
- When displaying LOINC/Part Details, you can type a LOINC/Part number into the LOINC/Part number box, hit Enter, and RELMA will display that LOINC/Part, then the LOINC/Part is added to the end of the list of displayed LOINC/Parts.
- RELMA displays temporary row numbers on all search displays (trees and flat displays) to ease referencing of particular lines on reports generated off these displays.
- The Change Submission form now shows more information including, the name of the local term file, the number of local terms in the file, the number of mapped terms, and more, to help you pick the form of interest.
- When you set RELMA to ask for a comment at each mapping, if no comment is supplied for a mapping, then that mapping is not performed.

❖ Updated on new LOINC web server, features and forum (Dan Vreeman)

➤ LOINC Website-News.

- Display of companies and organizations.
- The LOINC website is now hosted on outside server. The URL is the same as it has been, still <http://loinc.org> . (It is also available as a link from the Regenstrief website.)
 - The new platform allows us to do more:
 - User's forum: an open space for LOINC community interaction. RI staff will monitor, but the goal is to connect users and make communication more accessible to the public.
 - Terms in development for next release (periodically updated listing).
 - Registration/User account – Users will need to register to download RELMA.

➤ Future Developments

- A “lab Wikipedia” – i.e., a community-editable dictionary like descriptions for LOINC terms and parts.
 - Within LOINC, we already have descriptions from Wikipedia & MeSH
 - Goal is to provide ability for users to add and/or edit additional descriptive content (wiki-style).
 - Regenstrief will pre-populate with the existing content within LOINC
 - Regenstrief plans to provide links to these web-based editable descriptions from within RELMA (e.g., Details Screen).
 - Discussion: The group expressed general support for this endeavor and willingness to participate. Providing some guidelines/template for descriptions (minimum acceptable content) and the ability to find terms that had no descriptions (prioritize getting content for terms we have none for presently) would be helpful.
- Organizations using LOINC – Regenstrief will be creating an online directory, based on a voluntary submission of an organizational profile (description of how using LOINC, URL, logo, contact info, etc.). This would not be an endorsement or certification, just an information resource and recognition. Regenstrief will review the content before posting on web site.
- Language translators (e.g., from English to French) Translators – may use new website as tool for posting/receiving translation files.

❖ **Report from Lorie Carey – regarding Canada Health Infoway (CHI)**

➤ **Background**

- CHI is a federally-funded, independent, not-for-profit organization whose purpose is to catalyze EHR use across Canada

➤ **Translation**

- Work is continuing on translating LOINC parts to French. The Canada Health Infoway site will post both English and French LOINC terms. They are also planning to translate the LOINC website to French.

➤ **Mapping**

- Currently 7 provinces are involved with CHI and are engaged in mapping to LOINC. CHI is having conferences twice a year to educate users in mapping to LOINC.
- CHI is interested in standard order codes and will be submitting proposals to LOINC for some order codes that might be reported as panels without having to specify the children.
- LOINC can accommodate that approach when needed as long as there is some defining description.
- There was much discussion about the use of the term atypical lymphs and reactive lymphs. And whether these are synonyms Canadians and others feel reactive is a better name. Currently atypical lymph is a synonym for reactive lymph in LOINC. But some do not recognize them as synonyms. Austria reports reactive and atypical lymphs separately.
 - Action: Susan Kretzschmar, MD offered to contact the International Hematology group for assistance.

❖ **Report from Gil Hill on eCHN**

➤ **Gill Hill could not be at the meeting; so he sent a written report that was read at the meeting as follows:**

- I offer a very brief update on the electronic Child Health Network (eCHN): we have recently passed a couple of important milestones - our patient repository now contains over 1,000,000 names, and we have electronic interfaces with over 100 facilities providing care for kids in the province. As an aside, we have virtually no pathology coverage, but for the rest of the lab material, we have used 9205 LOINC codes.

❖ **LOINC to CPT mapping**

- Intermountain Health Care & 3M have funded by NLM to map CPT codes to LOINC.
 - Used a base of people who already had these mappings. High volume tests and radiology were mapped.
 - These mappings are being reviewed by AMA.

- The Phase 1
 - Mappings were posted on the NLM website for public comment. The response has been minimal. This phase include >2000 lab terms, using LOINC 2.15 and CPT 2005.
 - Some problems include:
 - There is not necessarily a one to one mapping (e.g., chromatography would map to numerous LOINCs).
 - By the nature of the difference in purpose and usage, there are terms on both sides that are not needed and/or would not make sense in the other. For example, reimbursement is often based on the work performed not the exact study performed.
 - A suggestion was made to explore using INPC database to map CPT frequency in LOINC.
 - AMA's review is hoped to be complete by fall for public comment at NLM.
 - LOINC is eager to be able to include the mappings in the table it distributes to assist mappings. We would include all of the usual licensing restrictions require by AMA– almost anyone who would want to use CPT to facilitate the mapping of local Lab tests to LOINC will already have a full CPT license.

❖ Report on SNOMED negotiations- (Clem McDonald/Stan Huff) - (Handout)

- A Cover letter and relationship document were distributed.
 - Synopsis of the current discussion document
 - Maintenance of independent, but closely cooperating organizations, not a merger.
 - LOINC would be able to distribute relevant SNOMED codes (e.g., Parts) worldwide as it does now.
 - Both organizations have NLM funding and there is a strong interest in a division of labor to avoid duplicate effort and overlap.
 - The proposal starts first with the laboratory domain, but the discussion document includes provision for expanding to other LOINC subject matter such as perhaps including other measurements, surveys instruments, Apgar scores, etc. without any barriers.

❖ LOINC Participant's Agreement

➤ HL7 & IHTSDO have implemented policy documents that formally describe the nature of an individual's participation with the SDO.

- We (LOINC & Regenstrief) are looking at creating a similar document that would make explicit the understanding about how contributions can be incorporated into LOINC.
- This effort is in part stimulated by the IHTSDO, who wants to be sure that proper agreements underpin the LOINC work.

➤ Discussion and vote

- Committee members expressed no concerns about developing a LOINC participant's agreement that provide clear copyright.
- Moved by Jim Case, seconded by Dan Vreeman that we support the direction that is outlined in the document dated 2/27/2008. Unanimous, with one abstention.

❖ Long Conventional names

➤ Tactics

- Start with lab.
- Keep names unique.
- Not yet included in database - need more work and feedback.
- Rule based conversion of routine name to long common name.
- Use common names for all parts.
- Drop parts that are not defining in a given context.
- Make substitutions –if component contains X the set Property to be blank.
- Properties mostly converted to X/Y definition (mass/volume) units/volume etc.
- ACNC – ORD - rephrased as “presence” for test that give yes/no answer (what to call those with 1+ 2+, 3+ - rank? Grade? (And how to know?))
- Insert strings in front of some parts conditionally
 - “[property]”
 - “by” method
 - “in” specimen (sometimes “on” sometimes “of”)
 - “from” super system – e.g. in blood from Blood product unit
- Many of the sections look pretty good (to our eyes).
 - Terms in the flow cytometry, pathology, and cytology and specimen classes need more work.
- Handout – include first 5 pages of each section
- The version distributed at the meeting is on the LOINC web site at <http://loinc.org/discussion-documents>. We have improved it since then and will replace the current version with the improved version soon.
- We anticipate providing LOINC common names for most laboratory terms on or before the next LOINC release.

❖ Newborn screening and LOINC

- Activity within the personalized Health working group of HITSP
 - Main goal was to define the spectrum of discrete quantitative variables that are generated (whether reported or not) today by NBS testing.
 - Work includes major NBS experts such as Piero Rinaldo and Gil Hill from the LOINC committee and others.
 - Coverage of:
 - Carnitines, amino acids from MSMS studies
 - Congenital endocrine abnormalities
 - Hemoglobinopathies
 - A few other genetic abnormalities (e.g., cystic fibrosis)
 - Hearing disorders
 - Infections (just 2)
 - Handouts:
 - Discussed documents being presented at the June 10th AHIC Personalized Healthcare Workgroup Meeting
 - These documents, including the Draft Newborn Screening Reference Matrix and the meeting minutes, are available at:
http://www.hhs.gov/healthit/ahic/healthcare/phc_archive.html

❖ Clinical genetics reporting effort (HL7, Partners, Utah)

- Uses LOINC form structure to define repeating panels.
- HTSP has included this as a work item to be pushed by NLM.
- Stan Huff - update
 - HL7 Clinical genetics group, IHC & Partners have been working on an implementation guide for reporting genetics information - This is currently (early August) being balloted within HL7 as ***HL7 Version 2 Implementation Guide: Clinical Genomics; Fully LOINC-Qualified Genetic Variation Model, Release 1 (1st Informative Ballot)***
 - This report is defined by a set of LOINC panels (which are used to define repeating loops of HL7 OBR and/or OBX content. The guts of the most nested loop specifies a single genetic variation from a reference standard and provides LOINC codes for reporting the variation, the genomic reference sequence the transcript reference sequence and a number of other attributes related to that observation.

- The HL7v2 Genetic Test Result Message spreadsheet authored by Larry Babb (made available via Stan Huff) has been made available to the LOINC community as a handout on the LOINC website at:
<http://loinc.org/meetings/20080609/7-hl7v2-genetic-test-result-message>

❖ Empiric study of units of measure (McDonald)

➤ Contributors

- We have 26 contributors of LOINC codes connected to reporting units.
- Want more (Kaiser & VA)

➤ Unit variations

- Lots of variant string names for the same units
- Less variation in units meaning
- For common tests like serum sodium and hemoglobin
 - All the same
- Shifts by powers of ten (e.g., mg/dl vs. mg/L) common
 - Percent vs. fraction
- Aim to identify the most commonly selected units per test.
- Still being reviewed.
- Will include a UCUM representation for units we discuss in a final report. Canada will be interested in this report.
- Future – preferred US units, preferred SI units?

❖ Portable hierarchy data structure that can also be represented in LOINC (Stan Huff)

➤ Handout

- Working data model for this structure from John Hook.
- RELMA will have a mode to view any hierarchy provided in this format.
- Freely shared, at some time may be officially blessed.
- Will create parent-child hierarchy.
- “Shareable” use-case specific hierarchies.

❖ Making the process easier

➤ Package Inserts

- Press instrument and kit vendors to specify the LOINC codes.
 - Make public their package inserts.
- Getting package inserts and sample panels “routinely”.
 - Would like to have links from LOINC terms or parts to the package inserts.

- Package inserts – what are the rules? Are they copyright? Can we make them public? Would any labs be willing able to give us package inserts en mass to bootstrap our library?

➤ More detailed and descriptive information about tests, as well as important distinctions among them

- How often do we ask for package inserts from submitters? Would there be problem to asking for more? Any restrictions to making them public?
- Would any labs provide descriptions or definitions that could be tied to LOINC terms or parts? URLs that linked to the lab would be fine.

❖ **HL7 order codes project and meeting**

➤ Focus was on panels.

- And goal was to get top 100 panels and their content defined in LOINC (have gotten only a few responses).

➤ Continuing to research them internally - IRIS urinalysis panels

- Especially interested in:
 - Blood bank panels
 - HLA - (especially challenging) given 4 different methods and different answer codes depending upon method and changing nomenclature.
 - Flow cytometry panels
- With example reports

➤ Canada Health Infoway wants to standardize physician orders and wants more general LOINC codes for ordering of some kinds of tests. The committee discussed whether multiaxial part (LPxx-x) might work for this use case.

❖ **Mapping Common tests as starting point for mapping orderable codes**

➤ Sample report approach

- Start with 99.8% common tests to create orderable codes.
- For some labs, panels constitute 80% of their test volume.
- US order codes to remain methodless and contain component and specimen.

❖ **Misc. questions clarifications**

- Measures of heparin , Xa, Protime C, Protein S
 - Believe standard measure is chromogenic (Yes?)
 - Are these ever measured via a coagulation method?
 - Are there immune assays that measure the protein mass?
 - Can comp fix be reported as titer?

- EIA- Intended to be representative of many immune-chemistry based tests (per Users' guide) (See handout from Abbott)
 - Causing some confusion-Public health lab suggest we change to more general name, e.g., immune assay.
 - Pam Banning will investigate this further
 - There is also a question looming regarding possible large differences in reported values of some hormone tests done by HPLC versus EIA – (HPLC being more consistent and accurate).

- ACNC – ORD
 - ACNC is just filler when the scale is ORD.
 - There is an issue- Yes/no is an ORD, so is 1+, 2+, 3+.
 - In some contexts, we know that the convention is to report yes/no or that the convention is to report 1+, 2+, etc.
 - We can want to make distinction in long common name, at least, but it is impossible to know what folks will send to the computer- it won't matter.
 - For the yes/no – we have a good human understandable phrasing in long common name—presence, but not for the other cases (rank, grade, qualitative amount).
 - Would be inclined to change ACNC to “-” when associated with scale of ordinal (alternative is something like ranked presence, or qualitative amount, or graded presence).
 - Committee decision is that these are types of concentrations, so no change will be made.

- Dialysis adequacy assessments (Pam Banning)
 - We will build a panel for the Kt/V, similar to the Horowitz term.