

Lingua franca critical for electronic medical records and health information exchange

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A universal method of identifying medical test results and other clinical measurements is essential for health information exchange, which requires a common terminology to ensure that medical data can be recorded, transferred and ultimately used when and where the patient needs it.

A reference compendium of standardized codes for the 2,000 most frequently reported [laboratory test](#) observations, released by the Regenstrief Institute, enables hospitals, medical laboratories, [physician offices](#) and others to focus on approximately 98 percent of tests as they develop [electronic medical record](#) systems and engage in [health information exchange](#).

Nearly 20 years ago, Regenstrief Institute [investigators](#) created Logical Observation Identifiers Names and Codes, known as LOINC®, a standardized medical terminology system and today it is the most accepted international standard of names and codes for medical measurements. Using LOINC, the results of the same cholesterol level test, or the same clinical observation blood pressure reading, for example, can be compared by different institutions for the purposes of patient care, research, quality assessment or outcomes management. These codes are critical to computerized transmission of medical information.

"Mapping local test names to a universal vocabulary like LOINC is an essential ingredient to connect the [medical data](#) sources that clinicians

crave but that are too often inaccessible to them when and where they need it. The LOINC Mapper's Guide to the Top 2000 Lab Observations makes it much easier for implementers to find the right LOINC code for their highest volume tests," said Regenstrief investigator Daniel Vreeman, PT, DPT, assistant research professor of medicine at the Indiana University School of Medicine. Dr. Vreeman directs LOINC development activities at Regenstrief.

There are more than 14,500 LOINC users in 145 countries, with about 400 new members adopting LOINC each month. In addition to English, LOINC is available in Estonian, French, German, Greek, Italian and Spanish. Catalan, Dutch and Russian versions are under development.

Users of LOINC include U.S. government agencies involved in health care including the National Library of Medicine, the departments of Veterans Affairs and Defense, Indian Health Service, National Cancer Institute and the Centers for Disease Control and Prevention.

LOINC began in the mid-1990s when Regenstrief investigators, using their extensive experience with electronic medical records, developed the Indiana Network for Patient Care, the nation's first citywide [health information](#) exchange. The researcher clinicians found they could receive data from various INPC-member institutions but that the clinical content was difficult to interpret because each used a different code for the same test or observation. A blood sugar result at one institution might be called a blood glucose at another or even something totally different at a third facility. It was like receiving messages in French, Spanish and Italian when all they could understand was English.

Regenstrief investigators saw the need for a lingua franca, and LOINC was born. From the beginning it has been a free and open system, encouraging additions, comments and feedback. Two new versions of LOINC are issued annually, the most recent one this month, with more

than 2,000 new terms for tests or clinical observations per release. These new additions are based on requests from end users.

"With support from the National Library of Medicine, Regenstrief Institute and other organizations, we continue developing LOINC as an open, freely available standard. LOINC's growing worldwide adoption is a testament to both the need for a common language and the success of this open approach," Dr. Vreeman said.

Provided by Indiana University School of Medicine

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