ISDS

Emerging Health Threats Journal 2011, **4**:s95. **doi:** 10.3134/ehtj.10.095

www.eht-journal.org

ABSTRACT

Reporting nationally notifiable conditions (NNC): vocabulary aspects

S Ganesan[1], N Lipskiy[2], R Merrick[3], and C Vinion

[1]*Northrop Grumman Consultant to CDC, Atlanta GA, USA;* [2]*Office of Surveillance, Epidemiology and Laboratory Science (OSELS), Centers for Disease Control and Prevention (CDC), Atlanta GA, USA; and* [3]*Independent Consultant to CDC, Atlanta GA, USA*
E-mail: dsg3@cdc.gov

Objective
Electronic laboratory reporting (ELR) has a key role in public health case reporting and case notification. This paper will discuss the current status, problems, and solutions in a vocabulary support of nationally notifiable conditions (NNC) reporting.

Introduction
Standard vocabulary facilitates the routing and filtering of laboratory data to various public health programs. In 2008, Council of State and Territorial Epidemiologists (CSTE) developed 67 Technical Implementation Guides (TIGs) that accompany each condition and contain standard codes for NNC reporting. Those TIGs were reviewed by a public health subject matter expert panel (SMEP), in May 2010, consisting of members of the CDC CSTE Laboratory and PHIN Vocabulary and Messaging Communities of Practice Program, and representatives from the Regenstrief Institute and the International Health Terminology Standards Development Organization.

Methods
The SMEP reviewed CSTE position statements for NNC[1] and content of Table 2 of the 67 TIGs that were provided by CSTE. All laboratory criteria that exist in current position statements were compared with a list of general microbiology laboratory methods (that is, microscopy, antigen detection, antibody detection, DNA methods, and so on). Also, a list of existing Logical Observation Identifiers Names and Codes (LOINC) and Systematized Nomenclature of Medicine—Clinical Terms (SNOMED-CT) codes for notifiable conditions were compared with those that were listed in the TIGs. The Regenstrief LOINC Mapping Assistant, RELMA,[2] was used for retrieving LOINC codes sorted by each NNC and laboratory criterion. SNOMED-CT codes, as of May 2010, were used for a comparison with codes that were included in the TIGs.

Results
The SMEP concluded that laboratory vocabulary, after minor updates to current codes, in TIGs is ready to be implemented. The SMEP also suggested to CSTE a change in the format of the CSTE position statements. Specifically, the recommendations are to (1) add a section on 'Microorganisms/Agents' to applicable CSTE position statements,[2] (2) define a CSTE process for new development and maintenance TIG laboratory vocabulary, (3) clarify the use of paired serology tests, (4) add quantitative results in reports, and (5) develop additional value sets (a qualitative laboratory test finding value set based on SNOMED-CT evaluation finding domain and a specimen value set based on SNOMED-CT and HL7 as specified in the ELR v2.5.1 implementation guide).

Conclusions
There is a notable progression in the standardization of vocabulary for NNC reporting. The SMEP found existing problems (development of TIGs, vocabulary gaps, evaluation of laboratory results, and so on.) that may be eliminated by a defined process for collaborative work of public health and standard development organizations.

Acknowledgements
The authors would like to acknowledge the excellent participation of the CSTE Case Report Standardization Workgroup and the PHIN Laboratory Messaging Community of Practice. This paper was presented as a poster at the 2010 International Society for Disease Surveillance Conference, held in Park City, UT, USA, on 1–2 December 2010.

References
1 CSTE. Position Statements at: http://www.cste.org/dnn/AnnualConference/PositionStatements/09PositionStatements/tabid/333/Default.aspx 2009.
2 Regenstrief LOINC Mapping Assistant, RELMA. Available at: http://loinc.org/relma.