Integration of Health Information Resources into Electronic Health Records Using HL7

Guilherme Del Fiol, MD, MS  
Department of Biomedical Informatics, University of Utah, Salt Lake City, UT  
Intermountain Healthcare, Salt Lake City, UT

James J. Cimino, MD  
Department of Biomedical Informatics, Columbia University, New York, New York

Saverio M. Maviglia, MD, MSc  
Partners Healthcare, Boston, Massachusetts

The integration between electronic medical record systems and on-line health information resources via infobuttons is useful for helping clinicians better meet their various information needs at the point of care. The HL7 Clinical Decision Support Technical Committee is developing a standard to facilitate the implementation of infobuttons. To validate and demonstrate the usefulness of the standard, Infobutton Manager developers at Intermountain Healthcare, Columbia University, and Partners Healthcare coordinated a pilot implementation integrating their Infobutton Managers with a number of information resource providers using the HL7 draft standard. In this theater-style demonstration, the results of the pilot implementation will be presented and the standard will be discussed in light of the examples used in the demonstration.

The integration between electronic medical record systems (EMRs) and on-line health information resources has been advocated as a sound approach to help clinicians fulfill information needs that arise at the point of care. “Infobuttons” are an example of this type of integration, where context-specific information about the interaction between the clinician and the computer is used to predict the clinician’s information needs [1].

Infobuttons are typically implemented using a configurable software component known as an Infobutton Manager (IM). The employment of such a component significantly facilitates the development and maintenance of infobuttons. Yet, the development and maintenance of an IM could be further simplified if the different pieces of the integration communicated in a standard fashion. Such a standard is being developed at HL7 under the auspices of the Clinical Decision Support Technical Committee. The specification addresses the syntactic, semantic, and terminologic aspects that are typically involved in the implementation of infobuttons [2].

Once the standard was approved, a call was made for different stakeholders to implement the standard, including Infobutton Manager developers and information resource providers. The goals were to validate and demonstrate the usefulness of the standard as well as to promote its adoption. In this theater-style demonstration, the result of these pilot implementations will be presented. More specifically, infobutton requests that are used in this integration pilot will also be presented. Information resource providers that have either committed to participate or expressed a strong interest in participating in the pilot implementation include Wolters Kluwer Health, the American College of Physicians (ACP), Thomson Micromedex, UpToDate, Elsevier (iConsult), Ebsco, and Lexi-Comp. An open invitation has been made to other content providers who wish to participate.

REFERENCES