

Title: Clinical Decision Support – new framework and a context-aware “infobutton” (page 13847)

Definition:

Integrated access to online health information resources for patient/provider education should be distributed via the HL7-standardized approach.

Benefits:

Standardized approach to integration allows for easier implementation, ease of moving from one content provider to another, and lowers the barriers of implementation for all organizations. A standards-based approach makes good sense.

1. **Issue:** Members in the HL7 committed have expressed that they’d like the criteria to include specific verbiage detailing that the ‘url-based’ specification used in connection with the HL7 standard is acceptable. Most infobutton implementations adopt the URL-based HL7 approach to connect to resources as it realistically offers the simplest implementation path.
Recommendation: Include verbiage that specifically allows for the HL7 URL-based specification (without disallowing an SOA-based approach).
2. **Issue:** There are a list of elements indicated in the document that are stated that need to be ‘infobutton capable’, but the current presentation is a bit cluttered and could lead to some confusion. Specifically, it states: “Enable a user to access the reference information specified in paragraph (a)(8)(ii)(A) of this section relevant to patient context based on the data elements included in **each one or any combination** of the following:
 - *Problem list;*
 - *Medication list;*
 - Medication allergy list;
 - Demographics;
 - *Laboratory tests and values/results; and*
 - Vital signs.

In particular, the questions were raised about why certain of these points were selected, as well as the verbiage that allows for ‘combinations’ of these elements. Some of the elements in the list above seem somewhat arbitrary by themselves (in particular, demographics and vital signs). From a clinical perspective, it seems that these types of integrations (by themselves) would be of low clinical value or even nonsensical (infobutton next to the patient’s gender). Allergy list is a valid domain, but there are questions as to the availability of quality materials from the ‘content provider’ side of the house that could field these types of requests.

Other questions about what types of allergies would be included (medication, exposure, food) and what coded terminologies would be necessary to support them. Finally, the verbiage about ‘combinations’ of the above elements makes some sense, but inevitably leads to concerns about where and when those combinations need to occur.

Recommendations: Winnow the list to specific domains, provide clarity as to what is meant by combinations (and where they would need to be supported), as well as an assessment of whether or not information content providers are prepared to support these types of combinations. If allergy list is to be included, provide guidance as to the specific domains of allergies needing coverage and the corresponding terminology sets that would be necessary for meaningful integration.

3. **Issue:** Regarding the availability of bibliographic information relevant to CDS rules, assess using an infobutton manager framework to support this, but it depends on having the appropriate metadata in place to run those queries.

Recommendation: Better clarity on which specific CDS rules will require bibliographic lookup and an inventory of what metadata is currently available to support retrieval.

General CDS Comments:

The change to "Clinical Decision Support Intervention" vs. "rule" is a good one and provides a much wider, more robust definition that doesn't focus on the technical implementation. Also, the emphasis on the Infobutton standard is an appropriate long-term strategy as it has many benefits for content management, access, standardization, etc.

The recommendation for the "minimum" information necessary to support a CDS recommendation is a bit concerning. The bibliographic citation is probably appropriate and should be easy to include, but it must also be understood that some CDS recommendations are developed in-house and may not be the result of published work (some work may in fact be in the process of publication or ongoing internal research).

Release and Revision Dates for the intervention should be easily obtainable with in-house developed rules, but an organization would have to know how to interpret this for externally provided interventions when the date is not necessarily known (i.e., is it the date it was obtained, the date "validated", etc.). Other requirements for "developer of the intervention", and "funding source" may not be easily obtained, and there is question as to the applicability or necessity of this information. *Would a physician really be in the position to distinguish whether Company A or Funding Source X was any more valid than another, particularly when many of these are third-party, or, internally developed?*

CTS as a terminology update standard for value sets for CDS is too specific and doesn't take into account systems that are more dynamic and actually get their value sets directly from a terminology server, often on-the-fly, versus having hard-coded terminology within the rules themselves.

ONC should focus on a standard for information retrieval (i.e., Infobutton) vs. mandating a standard for terminology access (CTS). These are very different cases. In the case of information retrieval, it is likely an organization could have multiple information sources. Some of these may be located in-house, some will be located "in the cloud". ONC should encourage a standard so that organizations don't have multiple methods to support for their information needs, and information suppliers would not be required to support multiple access methods either or develop proprietary methods.