



Sharing is caring: Why collaboration is the key to overcoming decision support content management and development barriers



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Introduction

- The complexity and high cost of knowledge management (KM) for clinical content within healthcare organizations limit widespread adoption of advanced clinical decision support (CDS) systems.
- The CDS Consortium (CDSC) was formed by Partners HealthCare System in collaboration with major healthcare institutions across the nation to assess, define, demonstrate, and evaluate best practices for KM and CDS in healthcare information technology at scale. One of the goals of the CDSC is to investigate methods for minimizing the above-mentioned costs and complexities associated with KM.
- Developing and managing CDS content across institutions via the CDSC KM portal, a searchable, web-based clinical knowledge repository, has revealed many organizational and legal challenges.

Background

- The CDSC formed the Content Governance Committee (CGC) in November 2008 to advise on appropriate governance policies for developing, using, and sharing CDS content within the CDSC KM portal.
- The CGC includes representatives from the following CDSC member institutions: Partners HealthCare System (Boston, MA); Veterans Health Administration (Indianapolis, IN); Regenstrief Institute (Indianapolis, IN); Mid-Valley Independent Physicians Association (Salem, OR); Kaiser Permanente Northwest (Portland, OR); and University of Medicine and Dentistry of New Jersey (New Brunswick, NJ).
- The governance policies typically discussed by the CGC cover a range of topics related to CDS content sharing and collaboration, including: 1) content submission requirements; 2) content ownership, access, and use; and 3) content maintenance and manipulation.
- An example of CDS content being shared is a rule for treatment of diabetes mellitus: "Recommend Hgba1c test every 6 months if controlled (A1c <7%) and therapy/clinical circumstances remain unchanged".

Methods

- Cross-institutional collaboration to develop governance policies has proven difficult for the CGC. The most significant challenges faced by the CGC and the respective approaches taken to address them include the following:
 1. Building a sense of trust amongst representatives and their institutions

Approach: 1) Promoting transparency of all CGC activities through use of detailed minutes; and 2) planning a two-day retreat of all CGC representatives to meet in person
 2. Creating a sense of ownership of CGC activities

Approach: Implementing a rotating meeting host who is responsible for planning the agenda and leading the meeting
 3. Encouraging attendance of representatives at meetings

Approach: 1) Implementing a rotating meeting host; and 2) utilizing remote conferencing tools such as Microsoft LiveMeeting®
 4. Efficiently achieving consensus on issues without the convenience of in-person communication, and fostering involvement in policy-making

ID	Title	Description	Type of policy	Applicable spec level(s)	Status
1	White space in Level 2	Linas pointed out that there is too much white space in the L2 specs Saverio demonstrated on 6/17. Any other formatting comments are welcome	Rendering		draft
2	"Fly over" feature	Suggestion that a "fly over" feature be added to Level 3 specs- this way knowledge engineers/programmers can look at sections in more detail, while other parties can see L3 specs in a less detailed format. Additionally, adding a button that could expand all the "fly over" comments would be useful.	Rendering		
3	Horizontal Screening	Reduce the amount of horizontal screening required in L3 Spec- some column/row headers could be hidden perhaps?	Rendering		
4	Different Viewing Options	Make it easy for developers, clinicians, knowledge engineers, etc. to look at specs in different formats	Rendering		
6	Structured (L3) Template	Current version of L3	Rendering	3	draft
7	SemiStructured (L2) Template	Here is an initial working version of the L2 template; must be viewed using Altova Authentic	Rendering		
8	Acceptable departures	Allow for different implementations (Level 3 and 4) of mild departures from the	Portal		draft

Figure 1: Policy-making using EMC Documentum eRoom®

Approach: Using online collaboration tools to:

- 1) promote policy discussion and decision-making outside of regular meetings;
- 2) serve as a central repository for all CGC-related documents with versioning capabilities

Results

- Despite a dearth of in-person communication, a baseline level of trust has been achieved. Of the six CGC institutions, four have shared their institution's CDS rules for diabetes mellitus, three for coronary artery disease, and three for hypertension.
- Implementation of the rotating meeting host has garnered consistent, active participation from about half of the CGC institutions; remaining institutions mostly contribute in an offline, sporadic manner.
- Since each of the six CGC member institutions employs its own unique set of governance policies, progress on refining the CGC's policies via collaborative meetings and collaboration tools has proven to take much longer than initially expected.
- The CGC now faces significant, unforeseen challenges associated with reaching consensus on and obtaining sign-off for legal documentation associated with publishing content to the CDSC KM portal.

Conclusions

- The CGC will continue to refine its strategies for effective collaboration in achieving consensus on clinical content governance policies for the CDSC KM portal, and will disseminate these "lessons learned" to contribute to the overall effort to reduce the complexities and costs associated with clinical KM.

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