**

Repository Work Group

Meeting Summary

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| **Date** | 12/09/16 |
| **Time** | 3:00 – 5:00 PM EST |

## AGENDA

* **Welcome and Introductions**
* **CDS Connect Project Overview**
* **CDS Repository Work Group Overview**
* **CDS Repository Work Group Planning**
* **CDS Repository Requirements and Strawman Design**

## SUMMARY

**Welcome and Introductions**

CAMH opened the CDS Connect Repository Work Group (WG) kick-off meeting with introductions from the CAMH team and then introductions from the Repository WG members on the call.

**CDS Connect Project Overview**

CAMH presented an overview of CDS Connect, highlighting the overall goals for the project and reinforcing the role of the WG to provide constructive critical feedback from the community to prioritize and guide the repository work.

The project CONOPS diagram triggered some valuable questions and comments from the WG members:

* Considerations about the notion of an “authorized consumer” and the importance of full transparency:
  + Patients should not be disregarded as CDS consumers; patients having information that is not usually in their hands can be “paradigm busters.”
  + The industry is moving to a post-EHR world, need to consider third-party vendors (e.g. SMART apps developers) who are adding value but not directly in EHR products.
  + EHR should be one of several data repositories, and increasingly less prominent.
  + Need to strive for full transparency, but also consider what artifacts mean for the end-user; how do consumers evaluate the artifacts in the repository?
* Reflections on the gap between artifact availability in the repository and artifact use:
  + Will there be a link between the EHR and the repository?
  + Consider the repository not just from the perspective of making CDS artifacts downloadable, but as a live service that can push towards a learning health system. This is especially important in the context of algorithms that change frequently (e.g. Archimedes model), where it’s difficult to keep up to date with static downloads.
* Thoughts about the notion of a CDS artifact and the array of artifacts that should be available in the repository:
  + The WG discussed what constitutes a CDS artifact:
    - CDS rules
    - Value sets and expressions
    - Mathematical models/algorithms

CAMH clarified that the term “CDS artifact” was meant to be inclusive, and represent not just CDS rules, but any piece of information related to CDS that could be reused or repurposed.

CAMH’s artifact page mock-up also elicited a few comments from WG members on how to make artifacts available:

* Consider supporting cascading modifications to an artifact, e.g. modification for a specific application.
* Consider providing artifacts in multiple formats, as end user needs may vary; this has been a lesson learned for the electronic clinical quality measures community.

**CDS Repository Work Group Overview and Planning**

CAMH provided an overview of the WG purpose, expectations, and governance. The WG agreed to keep two hour meetings moving forward, adjusting as necessary. CAMH clarified the expected time commitment for WG members is 2 hours per month for meetings, with minimal offline time commitment for materials review.

CAMH also discussed vehicles for engagement between meetings, including a collaboration tool (Handshake site) and an email distribution list.

**Discuss CDS Repository Requirements and Strawman Design**

CAMH provided an overview of the list of artifact metadata identified by the CAMH, and solicited feedback from WG members on those, as well as repository features, functionalities and use cases. CAMH also clarified AHRQ is the ultimate decision maker on repository functionality and content.

WG members offered extensive feedback, pointing the team to related work and resources, and highlighting important considerations on use cases and use of the repository:

* Feedback and suggestions for artifact metadata:
  + Content creators should include conflict of interest disclosures for any artifacts they provide.
  + Version-related metadata is extremely important, e.g. archived vs current content, release dates.
  + Metadata should address versioning, provenance and scientific evidence context.
  + Consider leveraging prior work on metadata for specific uses cases:
    - [S&I Framework Healthy eDecisions Artifact Sharing Use Case](http://wiki.siframework.org/Health+eDecisions+Use+Case), created by a consortium of vendors for CDS;
    - [Clinical Quality Common Metadata Conceptual Model](http://www.hl7.org/implement/standards/product_brief.cfm?product_id=391), a harmonized set of metadata for clinical decision support and quality measures;
    - FHIR Resource PlanDefinition – Content, current FHIR resource defining metadata for knowledge artifacts.
* Suggested repository functionality:
  + Push notification capabilities: allow for a combination of subscription-based alerts (by agency, topic, artifact) and non-subscription based alerts pushed to a relevant subgroup of repository users for situational awareness related to unpredictable events, such as public health outbreaks.
  + Version management and presentation: users should have a good understanding of the currency of the content they are browsing, as well as the ability to quickly and identify any changes from past versions of artifacts and how these updates impact them.
* Opportunities for collaboration with organizations doing similar/related work:
  + Leverage [MAGIC project](http://magicproject.org/) work on metadata and identify opportunities for interoperability. MAGIC is an international collaborative working to improve the creation, dissemination and dynamic updating of clinical practice guidelines, evidence summaries and decision aids.
  + [Harvard Library of Evidence](http://libraryofevidence.med.harvard.edu/) has interesting ideas around how to score and present strength of evidence.
  + [RSNA’s Radiology Reporting Initiative](https://www.rsna.org/reporting_initiative.aspx) provides a [library of radiology report templates](http://www.radreport.org/).
* Considerations on establishing and maintaining trust in repository content:
  + Steward qualification and community feedback is not enough to ensure persistent high-quality content in the repository. Even “5-star” organizations have been known to publish bad content, and the community/end users are not often vocal.
  + Measures of trust:
    - Consumers/end users should be able to provide ratings for the artifacts.
    - Nutrition labels for CDS artifacts: should strive for a minimum data set about each artifact, including not only supporting scientific evidence and consumer ratings, but also some objective metrics.
      * There are metrics available. Suggest leveraging PCORnet, an initiative looking at the lifecycle of knowledge integration into clinical practice.
      * Objective metrics can be challenging: it is difficult to determine a measure of success for an intervention, and objective measures presume objective truth, i.e. a homogenous population and environment.
* Considerations around emerging regulatory requirements around CDS:
  + Federal regulations are starting to emerge around specific use cases, e.g. CDS for radiology, use of consistent risk adjustment models for Million Hearts initiative.
* Artifact content and terminology:
  + Elsevier’s EMMeT can be leveraged as a universal translator to build code sets for artifacts. CAMH indicated its intended use of NLM’s resources (Metathesaurus, Value Set Authority Center) to support artifact development.

**Next Steps and Close**

* Materials for WG member review:
  + CAMH will distribute an excel spreadsheet with identified metadata to date for WG members to review and provide feedback.
  + CAMH anticipates making a live staging server available for WG members to interact with and provide feedback.

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