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**Work Group**

**Meeting Summary**

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| **Date** | 10/30/2017 |
| **Time** | 3:30-5:00 PM ET |

Participants:, Julia Afeltra, Andrew Hamilton, Bob McNellis, Ed Lomotan, Chris Moesel, Christi Perkins, Christopher Shanahan, Edna Boone, Frank Sonnenberg, Ira Lubin, Jan Losby, Jeffrey Lin, Joshua Richardson, Julie Gervais, Julie Scherer, Kevin Hennessy, Laura Marcial, Lisa Lang, Marc LaRochelle, Maria Michaels, Matt Pfeffer, Nike Nosal, Nedra Garrett, Noam Arzt, Preston Lee, Rick Shiffman, Rob McCready, Jonathan Teich, Scott Weiner, Sharon Sebastian, Chris Moesel, Shafa Al-Showk, Shruti Gangadhar

1. **Opening remarks and announcements – Jonathan Teich, Maria Michaels**
   1. AMIA CDS Authoring Tool demo November 7 at 1:45pm, CDS Panel November 8 at 10:30am
   2. Ed Lomotan would like Work Group participants to allow their organization’s name to be posted on the AHRQ CDS website – will follow up with email tomorrow
2. **Overview - Rob McCready**
   1. Emphasis for FY18: having additional organizations and individuals directly involved in authoring and submitting of CDS artifacts
   2. Concept of operations updated
   3. Base year (FY17) summary of accomplishments:
      1. Alpha and beta release of CDS Connect Repository
      2. 6 artifacts developed and posted to the repository, in the cholesterol and cardiac risk domain. These are available in structured text and CQL forms in the repository at <https://cds.ahrq.gov/cdsconnect/>
      3. Successful live clinical pilot of active CDS with Alliance Chicago using GE Centricity
   4. FY18 option year focus:
      1. More emphasis on ‘teaching the world to fish’ – encouraging content submissions from outside the core MITRE/AHRQ team
      2. Move new content focus from cholesterol management to opioids and pain management
   5. Questions:
      1. Will CDS Connect artifacts be usable within EHRs?
         1. Intended to do so, although various APIs may be needed in different circumstances
      2. How is the data model organized? How does that facilitate or constrain the CDS that can be used?
         1. MITRE is using FHIR DSTU 2 as the primary model
3. **Authoring Tool - Chris Moesel and Julia Afeltra**
   1. Demonstration of authoring tool
      1. Each author can only edit their own content, to avoid conflicts
      2. Demo of adding logic elements (such as an age range or cholesterol-management related tests, conditions and medications), combining them together with And/Or links
      3. Questions/comments:
         1. Add ability to look deeper into the element definitions (what is “HasDiabetes” – what value sets?) – Chris: the CQL does show that, the development team is also working on a functional improvement around this request
         2. How do you handle calculations, and other non-alert types of CDS? Chris: there are several new types of CDS that the CDS Connect team is looking at adding – see below. The team may also consider importing and using certain pre-existing external CQL libraries
         3. A more compact-form editor with assistive support may be easier to use than the HTML form editor, because it is easier to see the algorithm logic as the author is assembling it. He has tried form-based CQL editors and finds the interface gets too busy very quickly.
   2. Next steps and potential features – not all of these may get done in the next few months; Chris has vetted and maintains a priority list
      1. Expand to support other clinical domains (other than the original cholesterol domain)
      2. Broadening the applicability of the authoring tool:
         1. “Primitive elements” that will allow faster migration to other domains, e.g., by specifying a single lab element that can be used with many specific tests as parameters rather than having to specify each as a separate element
         2. Additional CDS actions and types – mentioned were order sets, calculators, infobuttons
         3. Additional logical constructs and query authoring
         4. Developing FHIR Clinical Reasoning resources
      3. Open source release – pending procedural discussions with AHRQ and further work to make this possible and permissible
      4. Improved user interaction
         1. “Compact” views of artifacts as they are constructed – better visibility into the logic and other fields
         2. Reusable macro expressions (e.g., for concepts higher than value sets that could be reused by other artifacts, such as an aggregate logic module that asserts “high CAD risk” which might be used in many artifacts). Additionally, some of the already-aggregated value sets that are being used to define conditions can be reusable concepts.
4. **Self-service entry of CDS artifacts / governance over the repository – Kevin Hennessy**
   1. Calling for volunteers to try submitting content into the repository
   2. Governance:
      1. For the initial testing stages, no one but you can see the artifacts you are editing
      2. Currently proposed repository governance model includes draft/preliminary/published status, with individuals designated as editors/publishers with decision-making and change-making authority over a defined scope of artifacts
      3. Under consideration: In order to scale the submission process as volume increases, eventually will need a scheme to delegate governance to other organizations (societies, providers, companies, etc.) who complete a vetting process
      4. Comment: suggest looking at the paper by Wright, Middleton, etc. on CDS governance within the CDS Consortium project. Found at <https://academic.oup.com/jamia/article-lookup/doi/10.1136/jamia.2009.002030>
      5. A number of members expressed interest in contributing some client-side libraries for artifact import/export
5. **Content / opioid and pain management focus – Sharon Sebastian**
   1. Environmental scan of resources, CQMs, CPGs, and existing CDS in this domain was performed – not intended to be comprehensive, mainly for the purpose of prioritizing CDS content for MITRE to develop and for prioritizing dictionary and software enhancements that would be necessary to support some of the artifacts researched.
      1. Ideally patient-centered, patient-facing CDS to be favored, as this is a PCOR project
      2. Items classified functionally as:
         1. Pain assessment
         2. Opioid avoidance
         3. Identification of at-risk individuals
         4. Opioid dose reduction
         5. Opioid use disorder treatment
   2. In determining new content that could be added to the CDS Connect repository, other considerations include: data availability, IP issues
   3. Questions/comments:
      1. Make sure to review the NIDA network work (COMPUTE) on developing CDS algorithms in this domain (Gavin Bart is the principal contact – he has already been invited to this workgroup)
      2. Is CDC listed as a source? Sharon: Yes, and MITRE has been having deep conversations with CDC regarding working together to realize the CDC opioid CDS guidelines
      3. MITRE team asked WG members to submit any other suggested content sources and efforts so that they can be added to the scan
      4. Did you look at academic and grey literature? (Sharon – yes.) Are you focusing on a sub-domain, such as cancer vs. noncancer? (Sharon – noncancer pain.)
      5. Look at relevant CDS tools from Washington (state) as well.
      6. PROMIS and PAIN are available electronically. See <https://cde.nlm.nih.gov/formView?tinyId=Qyh0Z9B5G>
6. **Other discussion** 
   1. How to utilize eCQMs within the repository? – so that clinicians who are struggling to fulfill CQMs can be reminded and assisted through related CDS.
      1. Sharon: CMS has identified pain management eCQMs as a priority, but there are very few pain/opioid-related measures right now (only one about back pain imaging). Comment: SAMHSA may have a few.
      2. MITRE did work to convert eCQMs into CDS with cholesterol, so the mechanism to do that conversion has been tested at least to some extent. Also doing some exploration with Rick Shiffman who has long worked on strategies for clearly specifying the guidelines as they are developed.

**ACTION ITEMS**

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| Action Item | Lead | Estimated Due Date | Comments | Completion Date |
| Demo and panel at AMIA: demo November 7 at 1:45pm, panel November 8 at 10:00am | Rob McCready | 11/7 | Posted here as a group reminder |  |
| Ed Lomotan would like Work Group participants to allow their organization’s name to be posted on the AHRQ CDS website – will follow up with email tomorrow | Ed Lomotan | 10/31 | Ed will send email to group tomorrow |  |
| Calling for volunteers to try submitting content into the repository | Kevin Hennessy | -- | Interested persons should contact Kevin or Rob McCready |  |