

**CDS Connect Work Group**

**Meeting Summary**

**April 26, 2018**

**3:00-4:30 PM EST**

**Attendees**

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| **AHRQ Sponsors** | Shafa Al-Showk |
| **Work Group Members** | Janet Desroche, Maria Michaels, Dana Jones, Dwayne Hoelscher, Beatriz Rocha, Chris Schuler, Dana Jones, Daniel Seltzer, Edna Boone, Frank Sonnenberg, Kavitha Raj, Leo Cook, Maiko Minami, Marc Sainvil, Michael Wittie, Nedra Garrett, Nitu Kashyap, Noam Arzt, Preston Lee, Randolph Barrows, Randy Thompson, Thomas Wicker, Yigal Ron, Jan Losby, Ryan Mullins, Julia Skapik, Stephen, Chris Shanahan |
| **MITRE CDS Connect Project Members** | Sharon Sebastian, Julia Afeltra,Chris Moesel, Sharon Pacchiana, David Winters, Dylan Mahalingam,Noranda Brown, Kevin Hennessey, Steve Bratt, |

*The MITRE Corporation operates the Centers for Medicare & Medicaid Services (CMS) Alliance to Modernize Healthcare (CAMH), a federally funded research and development center (FFRDC) dedicated to strengthening the nation’s health care system. MITRE operates CAMH in partnership with CMS and the Department of Health and Human Services.*

**Agenda**

* Welcome and brief review of the agenda
* Facilitating Ways to Share Pilot Implementation Details
* New Release of the Authoring Tool
* Discussion of FHIR STU3 versus STU2 for the Authoring Tool
* Update on Current Artifact Development and Pilot Efforts
* Open Discussion and Close Out

**Meeting Summary**

**Welcome**

MITRE started the meeting by welcoming participants and reviewing the names of participants. Maria Michaels then reviewed the agenda and facilitated the rest of the discussion.

**Facilitating Ways to Share Pilot Implementation Details, Sharon Sebastian** **(MITRE)**

Sharon Sebastian, the Project Leader for the MITRE CDS Connect team, discussed and asked for feedback on ways to facilitate the sharing of lessons learned during artifact pilot implementations.

Currently Repository format:

* 1. One free text field is located at the end of the metadata fields in the Testing Experience section. It is labeled “pilot experience”.
  2. Concerns: this may be a missed opportunity for viewers to learn/find important information such as lessons learned, insight into potential issues, and knowledge about best practice implementation details. Would additional metadata fields provide a vehicle for additional sharing of information?

Discussion on ways to improve sharing of pilot information for future implementers:

1. Should additional metadata fields be added (e.g., pilot timeline, required resources, implementation checklists, lessons learned)? What types of information would be useful?
2. Comments included:
   * 1. Other resources (e.g., quality measures) capture these details
     2. Implementation checklists are very important and relevant. There are a lot of important elements that aren’t directly captured in the artifact metadata that implementers might like to know.
     3. There are two “types” of information that need to be addressed:
        1. Clinical: evidence-based resources that were used to develop the artifact (e.g., external guidelines, white papers). What is the source of truth? (Note: there is a field for this information in the Repository)
        2. Technical: issues that may be problematic to future implementers of the CDS (e.g., accessibility to code systems, run type requirements, compatibility of metadata statements)
     4. Organizations implementing a lot of artifacts need to have a detailed indexing system, not a cursory one.
     5. Consider providing point of contact information for artifact contributors so individuals implementing the artifact can contact them, if needed.
     6. If including an artifact implementation checklist, should it be a global checklist for any artifact (for any site to use) or a local checklist (e.g., what a specific clinical site did) or a checklist specific to that CDS artifact? Maria Michaels will ask the Adapting Clinical Guidelines for the Digital Age Translation Team to consider developing checklists as their work progresses.

**New Release of the Authoring Tool, Julia Afeltra and Chris Moesel (MITRE)**

Julia and Chris discussed the new release of the Authoring Tool (AT), highlighting additional enhancements.

Enhancements include:

1. Enables broader concept definitions through enhanced integration with the Value Set Authority Center (VSAC)
2. Allows users to choose a specific code (so users don’t have to create a value set for one code)
3. Allows the selection of multiple value sets and codes per data element
4. Provides an expression modifier for coded values in Observations
5. Provides a Unified Code for Unitsof Measure **(**UCUM**)** unit picker for entries such as mg/ml
6. Supports many parameter types. This functionality was suggested during a previous work group (i.e., expand beyond Boolean expressions)
7. Provides real-time clinical quality language (CQL) validation
8. Upgrades to the user interface to be more consistent and clean

The bottom line is that users have more control and options when representing clinical concepts.

**Discussion of FHIR STU3 vs STU2 for the Authoring Tool, Chris Moesel (MITRE)**

Chris discussed Fast Healthcare Interoperability Resources (FHIR) standards supported in the Authoring Tool (AT) at present, and asked what version vendors plan to support in the near future.

1. CQL can be written against many different data models. The AT currently supports FHIR 1.0.2 Standards for Trial Use (STU) 2, released in 2015.
2. FHIR has several versions:
   1. FHIR 3.0.1 (STU3) was released in April 2017. Even though health information technology (HIT) systems can use this newer version, most aren’t.
   2. FHIR 4.0.0 (R4) is due for release in October 2018. It will be more “stable” (i.e., not a pilot/draft).

Chris asked attendees to share their thoughts on potential efforts that the AT could support (i.e., continue with STU2 alignment and build out new capabilities, work towards supporting STU3 also, or target FHIR 4.0.0 (R4)?

1. One concern is that some vendors may skip STU2 and go to FHIR 4.0.0 (R4).
2. Clinical reasoning resources in STU3 can point back to STU2, but the AT doesn’t have this clinical reasoning built into it.
3. The AT might possibly support multiple versions in the future, but this diverts resources away from providing other capabilities. What is the biggest win, given limited resources?
4. Additionally, if it did support different versions, Chris explained that if concepts aren’t shared between the two versions then users would have to pick one over the other. CDS Connect aims to build the tool so the output can be run in any system.
5. A physician from one large vendor indicated his company is building their resources towards STU3.
6. The thoughts of the participants were to “lean forward” toward the future, with the resources available.

**Update on Current Artifact Development and Pilot Efforts,** **Sharon Sebastian** **(MITRE)**

Sharon discussed artifact development, decision points encountered along the way, and provided an update on pilot activities.

1. The artifact supports a broad spectrum of pain management scenarios versus only including patients with chronic pain. At present, it does not intentionally exclude patients receiving palliative care or patients with active cancer since concepts such as historical treatments, risk factors and pain assessments are relevant for *all* patients. This is a conscious decision that moves a step away from alignment for the Centers for Disease Control and Prevention (CDC) guidelines, but clinicians at the pilot organization feel that providing the summary information to a larger group of patients will be helpful and is appropriate.
2. The summary includes Pertinent Medical History, Pain Assessments, Historical Treatments, Risk Factors and Assessments, Additional information (stool softeners and laxatives)
3. Early lessons learned
   1. Patient goals are important, but the concepts are very hard to find in a structured way in electronic health records (EHRs). Supporting structured capture of patient goals is on the roadmap for many organizations and companies, but not yet available. In addition, standard terminologies do not yet represent goal-related concepts. For this reason, patient goals are not included in the CDS.
   2. Including Prescription Drug Monitoring Program (PDMP) data is valuable, but not supported right now in the pilot site’s EHR, so it is not included.
   3. Unfortunately, most pain and risk assessments are not represented by Logical Observation Identifiers Names and Codes (LOINC) codes at present, so there is no standardized way to represent these concepts. Local codes will have to be used.
   4. Pain-related concepts are under-represented by value sets, therefore many new value sets had to be created.
   5. Treatments for pain such as non-pharmacologic treatments (e.g., acupuncture, massage, exercise) are seemingly under-represented in a structured format in EHRs.
   6. Many of the value sets in VASC do not include detailed metadata, making analysis of the codes much harder. Metadata provides context to aid the analysis.

**Open Discussion and Closeout**

There was no time for open discussion. The meeting closed at 4:30 pm. No action items were identified.