CDS (Clinical Decision Support) Connect Work Group
Meeting Summary
January 16, 2020

3:00-4:30 pm ET

Attendees: 41 people including 6 phone dial-ins

Organization	Attendee Names
AHRQ Members	**Ed Lomotan, Roland Gamache, Shafa Al-Showk**
Work Group (WG) Members	**Maria Michaels, Danny van Leeuwen, Ryan Mullins, Mustafa Ozkaynak, Preston Lee, Randolph Barrows, Rebecca Rasky, Marc Sainvil, Joe Bormel, Michael Wittie, Sandra Zelman Lewis, Daryl Chertcoff, Joshua Richardson, Majid Afshar, Maysoun Freij, Prashila Dullabh, Kevin Larson, Anthony (sic.), Christopher W. Shanahan, Steve Johnson, Syed Sameemuddin, Greg Gorman**
MITRE CDS Connect Members	**John Boiney, Eileen Chang, Matt Coarr, Lacy Fabian, Susan Haas, Lisa Ide, Chris Moesel, Noranda Brown, David Winters, Tom Read**

MEETING OBJECTIVES

- Share new features and resources available for CDS Connect
- Discuss opportunities and challenges for CDS Connect and CPG-on-FHIR
- Share lessons learned for use of the CDS Connect Authoring Tool in Academia
- Discuss topics of interest to members relating to opportunities for CDS Connect
- Closing

ACTION ITEMS

- Work Group (WG) members may email the MITRE CDS Connect team with ideas on presenters or presentation topics for upcoming Work Group meetings.

MEETING SUMMARY

What's New with CDS Connect

The MITRE team shared information about updates and new features of CDS Connect available now, including:
- A new develop-facing CQL (Clinical Quality Language) testing framework to support writing test cases using any FHIR DSTU2/STU3 resource.
- A new version of CQL services which aligns with CDS Hooks v1.0.
- Updated implementation guide, evidence, metadata, and value sets for the Statin Therapy for the Prevention and Treatment of Cardiovascular Disease Electronic Clinical Quality Measure artifact.

Questions from Work Group (WG) Members
There were no questions from WG Members

FHIR Clinical Guidelines and CDS Connect: Intersections and Opportunities

The MITRE team shared an overview of the Fast Healthcare Interoperability Resources (FHIR) international standard for the electronic exchange of healthcare information and the implementation guide for applying the FHIR standard to clinical guidelines (aka CPG-on-FHIR). The team reviewed CPG-on-FHIR as it pertains to CDS and provided the team's observations on ways the CDS Connect project might better align to the guidelines.

Potential alignment options presented for consideration and discussion included:
- Aligning the CDS Connect Repository to CPG-on-FHIR by:
    - Revising existing field names and definitions.
    - Requiring certain metadata for all Repository contributions.
    - Changing the application programming interface (API) to allow the Repository to consume CPG-on-FHIR resources.
- Expanding the CDS Connect Authoring Tool to allow creation of metadata in alignment with CPG-on-FHIR.

Questions from WG Members
1. A WG Member asked about the potential for accommodating non-guideline content (non-CPG-type information) in the Authoring Tool and Repository, such as patient name and social security number data. It was observed that, while such data is not required by the guidelines, it is information that needs to be shared in an interoperable way and that may need to be gathered to inform decisions at various care levels (including regional, national, etc.). It was suggested that the CPG format may be able to be used as a template for such data.
    a. AHRQ suggested that, in the future, there may be multiple repositories, each for different types of data (e.g. CDS, other decision support content) and that, perhaps, they could feed a common network.
    b. The MITRE team discussed that the primary use case for CDS Connect is clinical and that it might be worthwhile to understand whether certain types of CDS (e.g. clinical) might preclude development of others (e.g. non-guideline-based information).
    c. AHRQ also observed that a key factor might be how close the standards for the different types of data would be.
2. A WG Member asked for a demonstration of the Authoring Tool, including how to upload and use it. The MITRE team provided the following link to the recorded CDS Connect Authoring Tool Webinar: https://digital.ahrq.gov/events/national-web-conference-clinical-decision-support-authoring-tool.
3. Several WG Members discussed the general concept of requiring specific types of metadata. During discussion, it was suggested that the burden of complying with required metadata might be lessened if:
    a. Requirements are understood.
    b. There are recommendations / pre-selected guidance provided to facilitate filling out the metadata fields.
    c. The value of the metadata to the user is understood (e.g. it would help the author's work be used).

Sharing Lessons Learned with CDS Connect: Using the CDS Authoring Tool in a Graduate Course

Dr. Mustafa Ozkaynak shared how the CDS Connect Authoring Tool was integrated into a one-month, Decision Support Tools module assignment in a Decision Support Systems and Data Management course for Master of Science in Nursing-Health Care Informatics degree candidates at the University of Colorado. Dr. Ozkaynak provided an overview of the degree program, the course, the module assignment, and lessons learned from the assignment. Lessons learned included:

- Eight out of 48 students chose to complete the module assignment using the CDS Connect Authoring Tool, which Dr. Ozkaynak assessed as a good result, given that the informatics program is not technical and none of the students had taken any prior programming courses.
- Students did not require significant support to be able to complete the assignment using the Authoring Tool.
- Students provided positive feedback about their experience using the Authoring tool and the assignment.
- Dr. Ozkaynak plans to continue to allow students the option to complete this module assignment at the next course offering in Fall 2020 and plans to add more use cases which are more clinically relevant and include more complex logic.
- Dr. Ozkaynak has recommended the CDS Connect Authoring Tool to other instructors and plans to collect data about the efficacy of future use of the assignment.

Questions from WG Members
1. The MITRE team expressed an interest in learning more about any challenges or barriers to using the Authoring Tool, especially with respect to CDS Connect documentation. The team also observed that Dr. Ozkaynak's student population is a great demographic for evaluating the Authoring Tool and its documentation, in that the students are interested in learning about CDS but not experienced programmers.
2. A WG Member offered to follow up with Dr. Ozkaynak to provide real-world examples for integration into the use cases for the module assignment.
3. A WG Member noted that the CDC has a partnership with Georgia Tech re: SMART-on-FHIR applications that similarly involves a real-world examples. The same member suggested that Dr. Ozkaynak reach out to clinicians in his area for real-world scenarios and incorporate them into the assignment and also consider writing up the lessons learned as a scholarly paper on the efficacy of using government-owned, open-source tools like CDS Connect in real-world applications.

Closing
At the end of the meeting there was an open discussion about technical difficulties experienced by some WG Members during the call. It was announced that planning for the February 2020 WG meeting is underway and the MITRE team is open to suggestions for future topics and presenters.