CDS Connect Work Group
Meeting Summary
June 20, 2019
3:00-4:30 PM EST

Attendees

Organization	Attendee Names
AHRQ Sponsors	Roland Gamache, Shafa Al-Showk, Steve Bernstein
Work Group Members	Alexandra Burn, Anthony Gerardi, Apurva Desai, Barry Blumenthal, Christian Boxley, Danny Van Leeuwen, Daryl Chertcoff, Jorge Ferrar, Julia Skapik, Julie Scherer, Linda Wedemeyer, Majid Afshar, Maria Michaels, Noam Artz, Patrick O'Connor, Paul Seville, Preston Lee, Randolph Barrows, Ruben Nazario, Sandra Lewis, Vimal Mishra, Yelena Balin
MITRE CDS Connect Project Members	Ginny Meadows, Chris Moesel, Dave Winters, Dylan Mahalingam, Howard Gershen, Julie Afeltra, Sharon Pacchiana, Sharon Sebastian

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

Agenda

- Welcome and brief review of meeting objectives and the agenda
- Share information on the b.well patient notification methods and content development
- Share information on artifact data elements definition and pilot data challenges
- Demonstrate uploading external Clinical Quality Language (CQL) libraries in the Authoring Tool (AT)
- Demonstrate ability to specify parameter values when using the testing feature in the AT
- Closing

Action Items

None

Meeting Summary

Welcome

MITRE started the meeting by welcoming participants and reviewing the names of Work Group (WG) members participating in the call. Maria Michaels then reviewed the agenda and facilitated the rest of the discussion.

Overall:

The meeting opened with a discussion on the b.well patient-facing notification methods and the development of educational challenge content. In addition, the CDS Connect team provided information and led a discussion on data element definitions within artifacts and data requirements for this year's pilot. The meeting also included an update and demonstration of uploading external CQL libraries to the AT, and a demonstration on the ability to specify parameter values when testing CQL logic that includes parameters. During each presentation, WG member ideas, suggestions and concerns were encouraged.

b.well Patient-facing Notification and Content Development, Ginny Meadows (MITRE)

Ginny Meadows began the discussion by providing a brief overview of this year's pilot partner including the various sources of patient data and the overall functionality and objectives of the organization. She reviewed the four U.S. Preventive Services Task Force (USPSTF) recommendations implemented as clinical decision support (CDS) artifacts. She discussed the collaborative process that b.well and MITRE employed to create the intervention notification content as well as educational challenges for the five piloted CDS artifacts. She shared examples of the b.well notification process and content. She also described the "Care Needs" that provide the end users identified by the CDS with activities specific to their health needs, incentivizing preventive care and providing educational information, and showed some examples of the content developed by b.well.

Ginny ended the presentation by reviewing the next steps for intervention content development, which include MITRE working with Danny van Leeuwen, our patient advocate, to develop example patient-facing intervention text for each artifact. This example intervention text will be incorporated into the CQL for each artifact prior to publishing on the Repository. Implementers may choose to use or modify the text or create their own in order to meet their needs and methodology.

Ginny invited additional discussion from the WG, but there were no questions or comments.

Artifact Data Elements Definition, Ginny Meadows and Sharon Sebastian (MITRE)

Ginny Meadows began the discussion by describing the "Data Requirements" document that MITRE created to clearly define every data element required for each CDS artifact. Each data element entry lists the artifact(s) that use the element, the associated Fast Healthcare Interoperability Resources (FHIR) resource and attributes, and the definition code or value set used to represent the data element. The Data Requirements document was a helpful tool for the pilot and will be published with each artifact on the Repository.

Sharon Sebastian discussed the process MITRE used to determine the most appropriate way to represent each data element using standard terminology data sets, including the identification of any existing value sets (VSs) on the Value Set Authority Center (VSAC) that could be used. When no

appropriate value set (VS) was identified, MITRE created a new VS that includes descriptive metadata to help other users understand the intent and use of the VS. Sharon communicated that 44 data concepts were defined this year for the CDS artifacts, and each was defined using either a single terminology code, a single VS, a union of more than one VS, or a "hybrid" approach.

Ginny Meadows then discussed the data challenges experienced by b.well from their multiple data sources, which include claims, pharmacy benefit management systems, laboratories, electronic health records, biometrics, and user-entered survey responses. Although the multiple data sources provide a rich repository of data, much of the data received was not mapped to standard terminology codes such as LOINC or RxNorm. In addition, several of the data sources did not include some of the FHIR attributes needed, such as the verificationStatus or clinicalStatus for patient conditions. The MITRE team assisted b.well by providing information to help b.well map the data they had to an appropriate terminology code. For example, most of their lab results did not include Logical Observation Identifiers Names and Codes (LOINC) codes, so b.well had to identify the appropriate lab result by description. MITRE provided common lab result descriptions to help b.well identify the appropriate results, as well as a LOINC code for mapping each lab result used in the CDS. In addition, in some cases required data was missing, such as race and smoking status. The MITRE team worked with b.well to determine the most appropriate resolution to all of the identified issues.

Ginny invited questions and comments from the WG. WG member comments include:
   a. A WG member asked if MITRE identified whether any of the VSs identified for use are also used for electronic clinical quality measures (eCQMs).
      i. Ginny explained that when searching for appropriate value sets in VSAC, MITRE put a high priority on those developed for eCQMs.
      ii. The WG member mentioned that future implementers may desire to know if the VSs used for each artifact were also used for eCQMs.
   b. A WG member asked if MITRE used a "direct reference code model" for those data elements identified with a solo code (versus a VS), similar to eCQMs.
      a. Sharon confirmed that when we needed just one code to represent a concept, we used the direct reference code model.
   c. A WG participant asked if the new VSs created are available somewhere publicly.
      a. Sharon responded that they are all on VSAC.
   d. A WG member indicated that she found the presentation excellent, and the data findings and issues MITRE described are exactly what they are experiencing. The WG member asked if the presentation would be made available.
      i. Ginny responded that all WG notes and presentation slides are published on the CDS Connect Repository. Sharon provided the link in the chat box: "Work Group notes are published and publicly available here: https://cds.ahrq.gov/cdsconnect/community/work_group

Demonstrate Uploading External CQL Libraries, Julia Afeltra (MITRE)

Julia demonstrated additional functionality to support uploading external CQL libraries for use in the AT. Julia showed that the user can upload single files or zipped collections of CQL libraries and preview the available expression definitions within them. Julia also demonstrated that the user cannot delete libraries that are dependencies of other libraries. In addition, if the file or zip package has any errors, the upload will be aborted before it is added to the artifact. Next steps involve allowing the user to reference definitions from the uploaded CQL libraries in the AT data elements.

Julia invited additional discussion from the WG, but there were no questions or comments.

Demonstrate Specifying Parameter Values with the Testing Feature in the AT, Chris Moesel (MITRE)

Chris Moesel demonstrated the ability to specify parameter values when using the testing capability of the AT. Parameters allow the user to create named, reusable values that can be supplied by the CDS execution environment at run-time. This new feature is not quite ready for release but very close.

Chris demonstrated how this could work, using the "Statin Use" artifact grade B and grade C recommendations. He explained that some organizations may have policies around what grade of recommendations can be implemented in their organization. If an organization did not allow grade C recommendations, the parameter "AllowGradeC" could be set to false. Chris demonstrated how setting the "AllowGradeC" parameter value to *false* affected the corresponding test results.

Chris invited additional discussion from the WG, but there were no questions or comments.

Open Discussion and Closeout

No one had any additional discussion, and the meeting was adjourned.