Introducing Health Level Seven International (HL7) Fast Healthcare Interoperability Resources (FHIR®) for Implementers

Centers for Medicare & Medicaid Services (CMS) Webinar Qs&As
Wednesday, January 22, 2020

Q: Why do the draft FHIR electronic clinical quality measure (eCQM) specifications use the published version and not the build versions?
A: The current, published version of Quality Improvement (QI)-Core is Standard for Trial Use (STU) 3. The build version is based on Revision 4 and it is in process of finalization to move to publication. CMS is in the investigation phase of looking at quality reporting using FHIR. The goal is to use the most advanced version available. As findings are learned, CMS will utilize the latest balloted version or a version that will be balloted before the measures are released. After the investigation phase is wrapped up and should CMS transition to using FHIR, there will be more stable versions published prior to implementing the use of FHIR.

Q: Are there any presentations available on Connectathons specifically on the quality measures for CMS?
A: CMS typically provides a report out of the Connectathon results, which can be found on the [HL7 Connectathon](#) site. For future Connectathons, HL7 track leads typically host introductory orientation meetings a week or two before the Connectathon. This information is available on the [HL7 Connectathon wiki page](#) .

Q: What is the relationship between the Java and JavaScript implementations in the Clinical Quality Framework (CQF) ruler?
A: The intent is to provide cross-platform support for reference implementations. The Java and JavaScript version of the evaluation engine start with the same basis but have slightly different uses. The JavaScript version is used as an input for the Bonnie tool. Ideally, they should be the same implementation just different technology stacks.

Q: What would the timeline be for new eCQMs to be written using QI-Core vs. Quality Data Model (QDM)?
A: CMS currently does not have a defined timeline for when new eCQMs need to be written using QI-Core as the data model. All decisions would be made through the notice of proposed rulemaking (NPRM) process first to provide an opportunity for public comment on the proposal before a final rule is published. However, CMS is in the process of converting the current program measures to FHIR for implementation testing purposes. CMS is also working on building Measure Authoring Tool (MAT) and Bonnie tools to support FHIR eCQMs. Once these tools are sufficiently tested by the CMS measure developers, they will be made publicly available for use.

Q: If a new eCQM is being worked on today, is it helpful to write it against both data models? If so, what is the best way to provide feedback?

A: For all interested measure developers who would like more knowledge on writing eCQMs for QI-Core vs. QDM, there are a couple of groups to consider joining. The first would be the HL7 Clinical Quality Information (CQI) Workgroup held every Friday. Anyone may attend and meeting information can be accessed on the [CQI Work group wiki](#). The second group would be the FHIR Collaboration Meeting – this is a closed group restricted to CMS contractors. If you are a CMS contractor and would like to join this group, please request to do so through your Contracting Officer's Representative (COR) or project lead. The CMS point of contact for this group is [Debbie Krauss](#).

Q: When converting QDM FHIR-based eCQMs, what tools are used to validate and test the converted eCQMs?

A: Until the MAT and Bonnie instances of FHIR are developed, the current process involves two types of tests; one is for clinical relevance to make sure the measure is evaluating patients as expected, and the other is checking for syntactical errors. When conducting the clinical relevance test, the CQF ruler is utilized. Test patients are developed with known expected results. It is expected that one particular patient would be in the numerator and the denominator and another only in the denominator. Then, this measure is evaluated against the patients using the CQF ruler to determine if the measure is doing what it is intended to do. The second test is more syntactical and making sure that the Clinical Quality Language (CQL) and FHIR resources used to draft the measure are correct. This can be done using the CQF ruler or with a tool called [Atom](#) (a text editor) that has a plugin to test for both CQL and FHIR syntax.

Q: When will the MAT support FHIR-based eCQM development?

A: CMS is currently in a development and user acceptance testing phase. Therefore, the MAT should come available sometime within the next three months, but only in a staging environment. It will not replace the current MAT production system so the current standards in MAT would still be available for measure development. Communications to the industry will be sent once it becomes available.

Q: How would the Center for Medicare & Medicaid Innovation (CMMI) support the development of a customized FHIR-based eCQM?

A: The development of a custom eCQM would be done in a similar fashion as the development of the current set of eCQMs. This may either involve the conversion of an existing QDM-based measure into a FHIR based measure or the development of an entirely new measure. It would make use of the same tools to develop the measure and would need the same type of testing.

Q: Is there any probability that 2021 eCQMs will be in the new FHIR format?

A: Not at this time. CMS is still in the testing and piloting phase with implementers to ensure measures are developed, implemented, exchanged, and calculated successfully. Any changes to eCQMs would go through the NPRM process first to provide an opportunity for public comment on the proposal before a final rule is published.