HL7 PDDI-CDS WG Meeting 04/18/2018

In Attendance: Richard Boyce, Thomas Reese, Xia Jing, Guilherme Del Fiol, Dave Weinstein, Bryn Rhodes

Agenda:

- Value sets in FHIR format for the warfarin – NSAIDS PDDI

* Tom created a first version using RxMix:
  + <https://github.com/HL7/PDDI-CDS/tree/master/resources>
* Discussion
  + How to store the RxMix workflows?
    - Bryn suggested using the FHIR extension mechanism as has been done in the opioid-cds IG
      * <https://www.hl7.org/fhir/extensibility.html>
      * <https://www.hl7.org/fhir/extensibility-examples.html>
      * [https://github.com/cqframework/opioid-cds/search?utf8=%E2%9C%93&q=extension&type](https://github.com/cqframework/opioid-cds/search?utf8=✓&q=extension&type)=
  + Need and OID?
    - No, the value set will be published as part of the IG as was done for the opiod-cds IG. This led to a discussion of the need for a canonical URL to the IG resources.
      * For now we can use <http://hl7.org/fhir/ig/PDDI-CDS>
        + Each value set : <http://hl7.org/fhir/ig/PDDI-CDS/ValueSet/>
      * NOTE: the URLs will not be resolvable until published after balloting.

- architecture template folder resources/pages

* Tom went over high-level diagrams on PDDI mappings from the Warfarin – NSAIDs case to the CDS Hooks medication-prescribe, CDS Service, and CDS Hooks response. Particular focus on the medication-prescribe ‘context’ and ‘prefetch’ Also, a gap analysis of PlanDefinition and DetectedIssue resources compared to the W3C PDDI Min Info Model core items
  + <https://www.lucidchart.com/documents/edit/fd00084f-0e9b-45eb-98b9-55bf2ad7a11c/1?shared=true&>
* Discussion
  + The PDDI CDS use case requires that the medication exposure data resources provided in the CDS Hooks medication-prescribe card be sufficient to identify all patient drug exposures. The current specification only requires a bundle of MedicationRequest resources in the context. All other data is delegate to ‘prefetch’ but the standard does not mandate specific what data should be prefetched. We discussed options:
    - Option A: proposing a change to CDS Hooks to require MedicationDispense resources in the CDS context for medication-prescribe
    - Option B: simply requiring EHRs that are compliant with the PDDI-CDS IG to prefetch MedicationDispense resources. Also, it would probably be important to include resources for previous MedicationRequest for the patient in the prefetch in situations where orders were made but there is no way to access dispensing records (e.g., pharmacies that are out of health system).
  + Option B was thought to be a more feasible option (does not require changing the CDS Hooks Spec) and consistent with how opioid-CDS IG works.
  + The PDDI CDS use case requires that the data resources provided in the CDS Hooks response map well to the PDDI Min Info Model, be expressive, and be storable in the client EHR system for downstream decision support (e.g., PDDI exposure monitoring vs prescription CDS). The current ‘action’ resources does not meet these requirements so we discussed the following:
    - For the CDS Hooks response, DetectedIssue resources are a viable option. It was thought that the FHIR extension mechanism could be used to extend the CDS Hooks response to include DetectedIssue resources. This would bring the need to identify EHR vendor(s) who would serve as a partner (because of interest in the resulting CDS use case) and consume the extended CDS Hooks response.
      * Bryn and Guilherme could contact Cerner folks
        + Cerner and Epic are already loging DDI alerts as audit events. The PDDI CDS implementation might log extended DetectedIssue resources as audit events that could be used for other use cases including PDDI exposure monitoring, CDS Hooks medication-review, or CDS Hooks patient-voiew
      * Rich has a indirect connection to Cerner through his colleague who will be joining the calls soon. It might be an alternative to identifying interest.
      * Also, Rich will reach out to folks at his institution.
    - DetectedIssue has certain gaps when compared with the PDDI Min Info Model. However, the FHIR extension mechanism could be used to address that issue.

\*Bryn suggested that HL7 has standard ways for document working group activities; the forum is fine; another option to do community engagement is via “stream”. New members can join. The link: chat.fhir.org

\*Next steps/action items:

* Tom and Rich : set base URL for the IG to <http://hl7.org/fhir/ig/PDDI-CDS> and values sets to use the base <http://hl7.org/fhir/ig/PDDI-CDS/ValueSet/>
* Tom : revise the diagrams to show the decisions made about requiring MedicationDispense resources and previous MedicationRequest resources in the medication-prescribe prefetch
* TBD: develop an extension for storing the RxMix workflow used to arrive at a value set
* TBD: develop an extension to the CDS Hooks response to support DetectedIssue resources that are themselves extended for the PDDI-CDS use case
* After progressing on the above, plan to reach out to potential EHR vendor partner and identify an interested site for consuming the modified CDS Hooks (maybe at the Connectathon in September)