HL7 PDDI-CDS WG Meeting 01/23/2019

In Attendance: Richard Boyce, Thomas Reese, Howard Strasberg, Dan Malone

Agenda:

      1**. Revisit the discussion of CDS Hooks - are we able to finalize**

**pointing to specific hooks for order selection and order signing? Are**

**these medication specific?**

<http://hl7.org/fhir/uv/pddi/2018Sep/start.html>

<https://cds-hooks.org/hooks/medication-prescribe/>

order-select:

* one of the first workflow events for order in draft status
* context may include default order details
* triggered upon selecting order from CPOE catalogue of products, before order details are populated
* <https://github.com/cds-hooks/docs/pull/428>

order-sign:

* triggered when clinician signs one or more orders for a patient
* among the last workflow events before order is promoted out of draft status (still in draft status until signed)
* context contains all order details (e.g., dose, quantity, route)
* use this hook when service requires all order details
* to deprecate order-review
* <https://github.com/cds-hooks/docs/pull/429>

1. Any concerns with my proposing order-select and order-sign and then simply identifying medication-prescribe as a medication specific subset of order-sign? (Effectively, implementing Matt's suggestion from [#411](https://github.com/cds-hooks/docs/issues/411)<[#411](https://github.com/cds-hooks/docs/issues/411)>).

I have a couple concerns with order-select and -sign. The first concern stems from my lack of knowledge from other types of orders (e.g., procedures). I worry by making the hooks generic across other orders it will lead to growing requirements for each hook with more use-cases. My second concern is having multiple orders per select (e.g., order set) and sign (e.g., multiple medication orders completed but signed once) events. I am unsure how to get around the order-select since the medications will be prepopulated. But I like the idea of a “finalizing” event for a specific medication order rather than specifying “sign”. It seems to reduce the workload vendors have made it easier to sign off on multiple orders with one action. With the PDDI use case we could be providing information for an order that was placed a couple orders prior or even at a different EHR interaction, when the orders are signed.

**Discussion and action items (1):**

We want to move forward and make relevant changes to the IG. We need to discuss with CDS WG about Mutability and if they decided on a PSS for each so the CDS Hooks 1.0 could be finalized. We are on the CDS WG agenda for January 30th (Bryn added but may need to double check).

* Post response on GitHub issues and announce on Zulip that we would like to discuss this at the CDS WG meeting.
* Invite relevant people (Isaac Vetter, Matt V).

       2. **Moving the discussion of extending DetectedIssue forward - we will**

**review our discussion last fall and see if there is change needed based**

**on the recent Connectathon.**

<https://www.hl7.org/fhir/detectedissue.html>

Issues:

1. Passing back a resource such as DetectedIssue or RiskAssessment in the response
2. Referencing drug-drug pair (i.e., context and prefetch) in DetectedIssue resource. Implicated element of DetectedIssue is a reference. There needs to be a way to indicate the context medication is implicated, but it is difficult to reference the medication without an instance.
3. There is a mitigation element but no potentiation element. Options: added potentiation element with CodeableConcept or group all actions (good and bad) in mitigation element.
4. DetectedIssue resource in response will likely be specified in the suggestion (array) element of a card. Options: only add DetectedIssue to base card (one per response/PDDI) or add this resource to all cards returned (4 for PDDI IG). Sometimes there will be more than one interaction for a pair of drugs. For example, QTc and serotonin syndrome for the context medication and one prefetch medication (create more than one DetectedIssue but need to indicate for different issue). Also, context medication to more than one prefetch medication.

2. Will likely extend DetectedIssue to include .contextMedication and .prefetchMe

2.1) extend DetectedIssue to add an attribute that would hold the   
terminological identifier (e.g., RxNorm CUI as a URI) of the context   
medication. For now, let's say DetectedIssue.contextMedication. This   
would include an identifier field.  
  
2.2) add the identifier field of DetectedIssue.contextMedication to a   
Reference resource and add that to DetectedIssue.implicated

 I thought there were two options, and we would invite community feedback:

·        Add something like DetectedIssue.contextMedication with data type CodeableConcept  
OR

·        Two components:

o   Request that EHRs add a GUID to the context medication, for example:  
          "resource": {  
            "resourceType": "MedicationRequest",  
          "guid": "a88578dc-f180-49c8-a244-444a7d8d5175",

o   Reference this GUID in DetectedIssue.implicated, as in:  
"reference": "MedicationRequest/a88578dc-f180-49c8-a244-444a7d8d5175",

3. Will likely add potentiation element extension with CodeableConcept, specified in StructureDefinition. We will need to specify the EHR is to populate the mitigation or potentiation element of DetectedIssue before it is stored (is this an option?).

**Discussion and action items (2):**

Howard discussed potentially a third method using Contained within the DetectedIssue for context medication.

* (<https://fhirblog.com/2013/10/10/fhir-contained-resources/> and
* <http://lists.hl7.org/read/messages?id=237825>)
* Tom will create example resources for each of the options to discuss at the next PDDI meeting February 20th.
* Explore pros and cons of creating a DetectedIssue for each response card versus one per response.

**3. Planning for the September WG meeting: identify paperwork**

**requirements, set milestones and timeline**

33rd Annual Plenary & Working Group Meeting

Sep 14, 2019 to Sep 20, 2019 - Atlanta Marriott Marquis, Atlanta GA

Which FHIR version to build artifacts against?

<https://fhir.cerner.com/millennium/faq/>

Tasks:

* Revise IG (based on feedback) for next version and comments (STU ballot?)
* Create a PDDI CDS track
* Others…

**Discussion and action items (3):**

Suggested to go for another round of ballot for comment. Suggested to write IG with R4 and create artifacts in DSTU 2 or whatever will be used at the Connectathon.

* (<http://wiki.hl7.org/index.php?title=Co-Chair_Handbook_Information#Cycle_deadlines>) that we will need to submit a Notice of Intent to Ballot and the HL7 calendar (<https://confluence.hl7.org/display/HL7/Ballot+Content>) indicates that deadline is Jun 30, 2019
* Our group will reach out to Cerner and Epic closer to the NIB deadline to confirm the need to provide DSTU2 resources (as well as our own DSTU2 CDS service)

       4. **Evidence-based medicine resource**

<http://wiki.hl7.org/index.php?title=EBMonFHIR>

The Fast Healthcare Interoperability Resources (FHIR) Resources for Evidence-Based Medicine (EBM) Knowledge Assets project (EBMonFHIR) was approved on May 16, 2018 as an HL7 project.

EBMonFHIR is sponsored by the Clinical Decision Support Work Group and co-sponsored by the Clinical Quality Information Work Group and Biomedical Research and Regulation Work Group.

The goal of EBMonFHIR is to provide interoperability (standards for data exchange) for those producing, analyzing, synthesizing, disseminating and implementing clinical research (evidence) and recommendations for clinical care (clinical practice guidelines).

This page will be updated soon with details about how to get involved and stay informed. In the meantime if you want to get involved and stay informed email [balper@ebsco.com](mailto:balper@ebsco.com)

MedicationKnowledge resource and keeping Pharmacy WG in the loop with PDDI

<https://www.hl7.org/fhir/medicationknowledge.html>

contraindication element that may reference DetectedIssue, might be relevant

**Discussion and action items (4):**

We need to join Pharmacy meeting to discuss PDDI to update and pose questions about MedicationKnowledge resource and how it might fit into PDDI. Goal is to get Pharmacy up to date with PDDI before September, so we can discuss during the joint meeting. Rich to add email discussion on EBM to see if and where it is relevant to use with evidence element of minimum information model.

* schedule a joint call w/ Pharmacy in the next couple of months to discuss the use of PlanDefinition with CQL vs MedicationResource.
* Evidence Based Medicine resource : this came up at the Oct 2018 WG meeting. Might be relevant to the representation of evidence in the card responses Rich took some notes and will report at the next call