2020-05-15 Gravity
SDOH-CC Connectathon

Track Lead: (Report Out)
Lisa Nelson

SDOH-CC FHIR IG
http://build.fhir.org/ig/HL7/sdoh-cc/
Imagine you are here…

but seeing other people’s screens more clearly!
Thank you!

SDOH-CC FHIR IG
Social Determinants of Health

AMA: Monique Van Berkum, Jim Shalaby, Corey Smith, Matt Menning
MaxMD: Natasha Kreisle, Cheng Liu, Matt Elrod, Yan Wang
Gravity PMO: Evelyn Gallego, Sarah DeSilvey, Linda Hyde
Track Summary

- Test implementation guidance documented in the SDOH-CC IG
  - Identify needed revisions and improvements (August 2020 Ballot)
- Discuss Information Flow Assumptions
  - Push versus Pull Transactions
  - Task-based Workflow
  - RESTful query assumptions
- Confirm Data Content Coding Assumptions
  - Confirm requirements/recommendations on coded concepts for various data elements

SDOH-CC Use Cases:
1. Document SDOH data in conjunction with the patient encounter,
2. Document and track SDOH related interventions to completion,
3. Gather and aggregate SDOH data for uses beyond the point of care (e.g. public health, population health, quality measurement, risk adjustment, quality improvement, and research.)
Participants

- > 30 Participants at some points
  https://confluence.hl7.org/display/FHIR/2020-05+Gravity+SDOH-CC+Track

- Many first-timers, beginner-level FHIR knowledge
  - Big Capacity Building Opportunity

- Interested in comparing registration list to actual Zoom participant list

- Lots of cross-collaboration with the Care Coordination track

- 3 Testing platforms plus Direct enabled “sandbox Patients”
Notable Achievements

- First Connectathon for Gravity Project community
- Reuse of US Core, SDC, BSeR, CDex, and C-CDA-on-FHIR + new SDOH-CC defined Profiles
- 8 Patient participants were issued consumer DirectTrust addresses and completed coded SDOH screening instruments which were then shared with a simulated EHR. A referral was made for support services. A secondary system requested and received the point-of-care information (whole visit summary or just the screening data).
- 3 Organizations demonstrating implementations
- Shared coded Food Insecurity social risk data
  - Screening Instruments
  - Clinical Observations
  - Diagnoses/Conditions
  - Goals
  - Interventions (Procedures & Service Requests)
- Shared digitally signed Progress Note with corresponding FHIR Resources (best of both worlds scenario).
Use Case 1

SDOHCC Task PatientScreening
SDOHCC CommunicationRequest
SDC Questionnaire FoodInsecurity
SDOHCC List PatientScreening

SDOHCC Communication
SDC QuestionnaireResponse FoodInsecurity
SDOHCC Consent FoodInsecurity

US Core Patient
US Core Practitioner
US Core Organization
US Core PractitionerRole
US Core Location
OrganizationAffiliation

4. Communication Request
5. Communication with Requested Data or Document

PMEHR

1. Task with SDOH Questionnaire and Patient List
2. Populated Questionnaire Response with consent information
3. Completed Task

Initiator
Initiator

SDOHCC Task PatientScreening
SDOHCC CommunicationRequest
SDC Questionnaire FoodInsecurity
SDOHCC List PatientScreening

SDOHCC Communication
SDC QuestionnaireResponse
SDOHCC Consent

SDOHCC Observation FoodInsecurity
SDOHCC Condition FoodInsecurity
SDOHCC Goal FoodInsecurity
SDOHCC Procedure FoodInsecurity
SDOHCC ServiceRequest
FoodInsecurity
Bser Task PatientReferral

CCDAF Composition
CCDAF DocumentReference

CDex CommunicationRequest
CDex Communication

SDOHCC Observation FoodInsecurity
SDOHCC Condition FoodInsecurity
SDOHCC Goal FoodInsecurity
SDOHCC Procedure FoodInsecurity
**Use Case 1 Sequence Diagram**

**Scene 0**

- Start Task
- Start sub-Task
- Gather Pt consent
- Pre-pop questionnaireResp
- Render questionnaire w/ pre-pop info
- Receive submitted response
- Compute derived interpretations
- Update sub-Task
- Update/Attach to Pt Chart

**Scene 1**

- Send link to launch app
- Launch form filler app
- All subtasks done or time over
- Complete Interventions that can be performed here
- Perform Pt Encounter
- Update Plan
- Initiate Referral

**Scene 2**

- #1 Create Task, Questionnaire, patient list
- #2 Post QR, cond ref (O, Pt) to EHR

**Scene 3**

- Create Encounter Summary Document*
- Create CarePlan Document*
- Create CarePlan Resource

**Scene 4**

- Complete Task
- #3 Post Task Completion to EHR

*Structured documents can be supplied as C-CDA on FHIR or C-CDA Documents.*

**RESTful Query**

**RESTful Option**

**Solicited Communication**

**Solicited Response/Unsolicited Communication**

**Request Pattern**
Gather Patient Screening Information
Task-Based Workflow

1. CREATE Task
   POST Task data

2. READ Tasks
   GET Task data

3. READ Questionnaire
   GET Questionnaire data

4. Submit QR
   POST QR data

5. UPDATE Task
   PUT Task data

SaFHE FHIR Server Containing Q, QR, Tasks
Gather Patient Screening Information
Questionnaire Resource
Gather Patient Screening Information
Questionnaire Response
Gather Patient Screening Information

Patient App

Screening App has permission to collect and share the SDOH Screening information gathered by this questionnaire with PMEHR Demo (the organization initiating the screening request). The information may be used for treatment, payment, and operations in support of care being delivered for this patient.

Patient App

Food Insecurity (Hunger Vital Sign)

<table>
<thead>
<tr>
<th>Name</th>
<th>Value</th>
</tr>
</thead>
<tbody>
<tr>
<td>Within the past 12Mo we worried whether our food would run out before we got money to buy more</td>
<td>Sometimes true</td>
</tr>
<tr>
<td>Within the past 12Mo the food we bought just didn't last and we didn't have money to get more</td>
<td>Sometimes true</td>
</tr>
<tr>
<td>Food insecurity risk</td>
<td>At risk</td>
</tr>
</tbody>
</table>

Answered by Patient

Computed by the Form Filler (or by the Form Manager)
Gather Patient Screening Information

SDOH-CC Patient Screening

- Screening instruments that use the FHIR Questionnaire Resource and utilize standardized data elements for questions and answers
- Patient responses captured as coded data using the FHIR QuestionnaireResponse resource
- Guidance supplied in the FHIR SDC IG

Also possible to send the questionnaire to the patient’s mobile device.
Gather Patient Screening Information

Looking at Task-based workflows.

Considering ways to optimize questionnaire rendering for the patient.
Use

Gather Patient Screening Information
Record SDOH During a Patient Encounter

Screening Information is received by the EHR and is available in the patient’s chart.

Easy viewing of Questionnaire Responses
Record SDOH During a Patient Encounter

Profiles Resources for SDOH Data

Create Referral, Encounter Summary

ReferralNotes

Referral: Social Services

Performer: Local Ride Support Program
Reason for referral: Transportation problems (finding)
Code: Assistance with application for program (procedure)
Notes: Needs support getting to medical appointments
Priority: urgent
Intent: order
Status: active

FHIR Resources: ServiceRequest and Composition

FHIR Document

C-CDA Document Too
Record SDOH During a Patient Encounter

Finish the Encounter

The encounter is finished

Composition: Progress Note

Composition/e43d835f-cfb9-4f34-9dbf-ee735ca612ed
Composition/e43d835f-cfb9-4f34-9dbf-ee735ca612ed/Sdocume

C-CDA: Progress Note

DocumentReference/e3696ca4-cf72-4c22-891a-350f9676ed6c
View Document
Share POC Data for Secondary Uses

Communication Request

Request Doc to be returned  Send Doc to be reviewed, signed and returned

Request Data to be returned

PMERH
- Select Sender Organization -

FHIR Resources (SEARCHSET Bundle)

Summary  QuestionnaireResponse (4)

Bundle Type  searchset
Share POC Data for Secondary Uses

Communication Request

Request Document by Type

- Request Doc to be returned
- Send Doc to be reviewed, signed and returned
- Request Data to be returned

PMEHR | MaxMD Medical Care Solutions https://ehr-sandbox.directmdemail.com:844:

Doc Type: 11506-3: Progress Note

Send
Share POC Data for Secondary Uses

Certificate-Based Signature

Digitally sign the document

Valid Extended Long-term XML Signatures
C-CDA digest validated
Signature Certificate:
C-US-STATE-NEW JERSEY L:Fort Lee O:MaxMO OU:Lisa Nelson Signature Cert CN:nelson@directmail.com md

Referral Note
Referral note (57133-1)

Patient: Betsy Smith-Johnson
D.O.B: November 7, 1950
Sex: Female
Signed: Lisa Nelson

Assessment and plan

Allergies and intolerances
No Known Allergies

Reason for referral
Code: Assistance with application for program (procedure)
Date: 03/17/2020
Priority: Urgent
Details: Needs support getting to medical appointments

Medications
No Known Medication

Goals
- Reliable transportation to appointments; Transport problems (finding). Known absent (qualifier value) due on 2020-09-19.

Results
Laboratory Test: None needed. Laboratory Values/Results: No Lab Result data
Discovered Issues/Questions

- How to secure EHR support?
- Roadmap for “push transactions” not clear
  - Push for referral events vs Polling for referrals
- Dependency and interdependency on low maturity
  Resources and WIP IGs increases project risks
- SDOH-CC documented “temporary codes” strategy
  may prove helpful for organizations using local codes
  for screening information
Next Steps

- Additional exploration of requirements for supporting information and feedback data for referrals to community-based organizations for social care services
- More exploration of the use of the CarePlan Resource
- Review of CDS Hooks mechanisms that support writing information to EHR systems
- Clarification on the role of a “Content IG” which does not prescribe information exchange mechanisms, but focuses on “Content Profiles”
A large, technical collaboration event transformed into a virtual experience.

An emerging FHIR IG that is helping to raise the bar on what it means to produce a high-quality FHIR IG.

Community collaboration on discrete data coding AHEAD of specification development.

Capacity Building for a new audience

FHİR
FHİR IG
SDOH-CC FHİR IG

Resources
Profiles
RESTful Interactions
Messages
Questions?

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