2020-04-01 SDOH-CC Connectathon Participant Meeting

https://confluence.hl7.org/display/GRAV/Gravity+SDOH+FHIR+Connectathon+Participant+Meetings
Antitrust Policy

ANSI Antitrust Policy

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Approved by the ANSI Board of Directors (May 22, 2014)
Agenda 2020-04-01

• Roll call – Organization Name; PMEHR, ScreeningApp/Pt.App, Clin Data R/R, (or Pt.App User)
• Review Use Case 1 Scenes 1&2
  ▪ Scene 3 Clinical Data R/R interactions with PMEHR
  ▪ Review Connectathon Testing supported by Aegis.
    • Moved to April 15th

• PMEHR/Form Creator demonstration
  • Link to recording
  • Link for form builder
  • Link to Master List with Temporary Codes
The Gravity Project creates and maintains a consensus-building community to expand interoperable social determinants of health (SDOH) data exchange by using HL7® FHIR®.

Collaboratively develop recommendations for how best to capture information for interoperable electronic health information exchange about clinical activities related to three SDOH domains:

- food insecurity,
- housing instability and homelessness, and
- transportation access.
Gravity Project Use Cases

Use Case 1: Document SDOH Data in Conjunction with the Patient Encounter

Use Case 2: Document and Track SDOH Related Interventions to Completion

Use Case 3*: Gather and Aggregate SDOH Data for Uses Beyond the Point of Care

*Out of scope for 2020 cycle
Overview of Connectathon Schedule

- 2020-05-16 Gravity SDOH FHIR Connectathon 24
- 2020-05-28 MiHIN InterOpathon 2020-09-15
- Gravity SDOH FHIR Connectathon 25 Baltimore, MD

- Assumption: Participants are committed Gravity Project community participants
- Each Connectathon Event is two-days long
- All events will be virtual—EASIER TO ATTEND
Roles for Use Case 1: Actor Capabilities

This use case is relevant to how coded SDOH data are captured in a health care system and how data are shared with other systems. SDOH data are documented either as part of screening or assessment/diagnosis activities and may be the reason for ordering care activities. Client system initiates the transaction. Server system receives and responds to the transaction. FHIR workflow support (Task Resource) and $process-message operation support is required.

Messages/Transactions:
- Initiate Screening Task
- Return Screen
- Update Screening Task
- Communication Request
- Communication Response

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Roles for Use Case 1

Gravity Project Use Case 1 “Quick Tips”

SDOH-CC Community Review CI Build V0.0.3
Use Case 1 Sequence Diagram

Scene 0
- Start Task
- Gather Pt consent
- Pre-pop questionnaire Resp
- Render questionnaire w/ pre-pop info
- Receive submitted response
- Compute derived interpretations
- #2 Post QR, cond ref (O, Pt) to EHR
- Update sub-Task
- Update/Attach to Pt Chart
- Complete Interventions that can be performed here
- Perform Pt Encounter
- Update Plan
- Initiate Referral

Scene 1
- Send link to launch app
- Start sub-Task
- Launch form filler app
- All subtasks done or time over

Scene 2
- Complete Task
- #3 Post Task Completion to EHR

Scene 3
- RESTful Query
- RESTFUL Retrieve
- Solicited Communication
- Solicited Response/Unsolicited Communication

* Structured documents can be supplied as C-CDA on FHIR or C-CDA Documents.
Use Case 1: Connectathon Track

- Three “scenes”:
  - Scene 0: PMEHR/Form Creator, create (screening tool, pt. list)
  - Scene 1: PMEHR, Screening App Interaction
  - Scene 2: PMEHR documenting SDOH info during an encounter
  - Scene 3: Clin Data R/R, PMEHR Interaction

- Connectathon 24 Track Page

- Use Case 1 ➔ Scenario 1
  - Scene 1 ➔ Steps 1,2,&3
  - Scene 2 ➔ Step 4
  - Scene 3 ➔ Steps 5 & 6
Use Case 1:

Scene 0: Create the Screening Instrument

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

Scene 1

1. Initiate Screening Task
2. Return Screen
   2.1 Consent provided by patient
   2.2 Consent not provided by patient
3. Update Screening Task

Scene 2: The Visit

Scene 3

3. Communication Request
   4.1 CDA document request
   4.2 FHIR composition resource request
   4.3 FHIR Screening questionnaire request
4. Communication Response
   5.1 CDA document response
   5.2 FHIR composition resource response
   5.3 FHIR Screening questionnaire response

XML and Json samples of technical system roles and information exchanges
Use Case #1

Scene 1: Gather Screening information (precondition Scene 0)
PMEHR(grouped with SDC:Form Creater), Screening App Interaction

More Information on Form Creation
Link to recording
Link for form builder
Link to Master List with Temporary Codes

Connectathon Track Steps 1, 2, and 3
FHIR Workflow Execution and Request Patterns (Maturity Level 2)

- [Link](http://hl7.org/FHIR/workflow.html)
- [Link](http://hl7.org/FHIR/workflow-communications.html)

- Message Bundle (Bundle.type = “message”)
  - MessageHeader
    - Task
      - [X]Request

- Use Case #1 - Gather SDOH info in clinical encounter
  - CommunicationRequest Patterns (CDex v0.1.0 FHIR IG)

- Use Case #2 – Track Referrals to completion
  - ServiceRequest Patterns (BSeR FHIR IG)

[Link](http://build.fhir.org/ig/HL7/sdoh-cc/#how-to-use-this-guide)
Use Case #1

Scene 2: The Visit

PMEHR

New Connectathon Track Step 4
Food Insecurity Data Concepts

**Question:** Within the past 12 months we worried whether our food would run out before we got money to buy more [U.S. FSS]?  
**Answer:** Often true, Sometimes true, Never true, Don’t Know/Refused

**Clinical Finding:**  
Food Insecurity  
Mild Food Insecurity,  
Moderate Food Insecurity,  
Severe Food Insecurity  
Present or Absent

**Screening Interpretation:**  
Food Insecurity  
(At Risk, Not at Risk)

**Intervention**  
Counseling about nutrition (procedure)  
Meals on wheels provision education (procedure)  
Evaluation of eligibility for home delivered

**Assessment Observation**  
Food Security screened and intervened

**Goal Setting**

**Screening**

**Diagnosis**

https://confluence.hl7.org/display/GRAV/Food+Insecurity+Domain
FHIR Modeling

Care Plan

Diagnosis

Patient Centered Goal

Planned & Requested Services

Completed Services (Procedures)

Assessment Observation(s)

Screening Question/Response
Food Insecurity Definition (December 3, 2019)

Working definition
“Uncertain, limited, or unstable access to food that is: adequate in quantity and in nutritional quality; culturally acceptable; safe and acquired in socially acceptable ways”

Goal. Description
Food Security

Absent  |  Mild  |  Moderate  |  Severe
---|---|---|---
High food security | Marginal food security | Low food security | Very low food security

Food Insecurity-effect on quality, variety, quantity

Goal. Target Measure

Goal. Reference
Compares “next” Food Insecurity Assessment Observation with “previous” Food Insecurity Assessment Observation

Goal. Achievement Status
Improving, Worsening, No-change, Achieved
### Enriching the Amount and Type of Patient-Centered Information Available for Sharing Across the Healthcare Ecosystem

<table>
<thead>
<tr>
<th><strong>Encounter Summary</strong></th>
<th><strong>Referral Note</strong></th>
<th><strong>SDOH Data Elements</strong></th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Header</strong></td>
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<tr>
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<td><strong>Assessment Observations++</strong></td>
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<td><strong>Service Requests (requested, completed)</strong></td>
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**Encounters Section**
- Conditions of focus for this encounter
- Do we need an Assessment Section?
- Do we need Health Insurance Section?

**** Progress Note, H&P Document, Consultation Note, Discharge Summary

***Referral Note
# Enriching the Amount and Type of Patient-Centered Information Available for Sharing Across the Healthcare Ecosystem

## Patient Summary*

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<td>Encounter Diagnoses for Encounters that occurred during the specified range of time ++</td>
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* Continuity of Care Document

++ Do we need Health Insurance Section?
Incremental Approach to FHIR IG Development

SDOH Data Elements

- Screenings
- Interventions (completed)
- Assessment Observations
- Risks & Health Concerns
- Conditions
- Patient Centered Goals
- Interventions (planned)
- Service Requests (requested, completed)
- Health Concerns
- Goals
- Interventions
- Health Status Evaluations & Outcomes
Use Case 1

Scene 3

Clin Data R/R, PMEHR Interaction

Connectathon Track Steps 5 & 6
Use Case 1:

Scene 0: Create the Screening Instrument

1. Task with SDOH Questionnaire and Patient List

Scene 1

1. Initiate Screening Task
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   2.1 Consent provided by patient
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Scene 2: The Visit

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XML and Json samples of technical system roles and information exchanges
Use of CDex Solicited Communication

- **Da Vinci CDex IG**
- Communication Request for C-CDA Documents
- Communication Request for C-CDA on FHIR Documents
- Request for data as FHIR Resources

- **Sample Transactions on Confluence**

- **Additional Connectathon Examples** (from CDex)
HINTS for Scenario 1 Step 4

- Request a Hunger Vital Sign Questionnaire Response
  - Use the **Data Request** on resource type QuestionnaireResponse

- Request a Progress Note C-CDA on FHIR (Dynamic) Document
  - Use the **Data Request** on resource type Composition

- Request a Progress Note C-CDA Document
  - Use the **Document Request**.
    - Progress Document type is (LOINC: 11506-3 : Progress Note)
Actor Roles

Transaction Initiators and Responders
Roles for Use Case 1: Actor Capabilities

This use case is relevant to how coded SDOH data are captured in a health care system and how data are shared with other systems. SDOH data are documented either as part of screening or assessment/diagnosis activities and may be the reason for ordering care activities. Client system initiates the transaction. Server system receives and responds to the transaction. FHIR workflow support (Task Resource) and $process-message operation support is required.

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## Practice Management/EHR (PMEHR) - gathers and shares SDOH information in a clinical care setting.

(Grouped with SDC:Form Creator/SDC:Form Manager)

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<tr>
<td><strong>Initiate a screening task for a list of patients and a specific screening tool to be used</strong> [1]. Receive individual patient consent and screening information as it becomes available [2]. Associate received information with the patient’s chart. Receive a confirmation when a screening task has been completed [3].</td>
<td>[base]/$process-message Bundle MessageHeader, Task List, US Core Patient SDC Questionnaire SDC QuestionnaireResponse, Observation</td>
</tr>
<tr>
<td><strong>Enable review of received screening information associated with a patient’s medical record. Enable the clinician to document an SDOH clinical finding. Permit clinicians to document an SDOH issue as a health concern or condition to be tracked on the patient’s problem list. Include a structured SDOH goal in the patient’s documentation to facilitate outcome tracking. Document planned or completed activities to address SDOH needs using structured data.</strong></td>
<td>SDOHCC_Observation_FoodInsecurity_1 SDOHCC_Condition_FoodInsecurity_1 SDOHCC_Goal_FoodInsecurity_1 SDOHCC_Procedure_FoodInsecurity_1</td>
</tr>
<tr>
<td><strong>Receive a communication requesting SDOH information gathered during a patient encounter</strong> [4].</td>
<td>CDex CommunicationRequest</td>
</tr>
<tr>
<td><strong>Responder</strong></td>
<td>CDex Communication</td>
</tr>
<tr>
<td><strong>Share requested SDOH information as structured data or using a standard visit summary</strong> [5].</td>
<td>C-CDA on FHIR Composition [base]/Composition/[id]/$document Or C-CDA document</td>
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**Initiator**
**Screening App Actor** - receives and executes the screening task by interacting with the patient and the PMEHR.

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<td>Upon receiving request [1], initiate the requested screening task for the list of patients, using the supplied questionnaire. Interface with the user to gather the needed data sharing consent and collect the screening responses and compute the screening interpretation.</td>
<td>Task, List, US Core Patient, SDC Questionnaire</td>
</tr>
<tr>
<td>Return the consent and screening information to the screening task initiator [2]. If the patient does not consent to share screening information, return SDOH screening indicating patient preference not to participate [2.1].</td>
<td>Consent, SDC QuestionnaireResponse, Observation</td>
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<tr>
<td>Update the task initiator when the task is completed [3].</td>
<td>Task</td>
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Security Assumptions & Connectathon Testing

- Open connections are utilized for initial Connectathon testing.

- Optionally, System-level OAuth 2.0 authentication (grant_type: client_credentials) is tested for production use.

- Connectathon Testing and Testing Scripts available from Aegis
Gaging Interest for “Observer” Participants

• Are there parties who want to participate as observers?
  • What does it mean to be a Connectathon Observer?

• Would there be interest in a fourth “patient participant” role?
  • Options to participate by playing the role of the Patient in Scene 1
  • Options to participate by playing the role of the Patient in Scene 3

Patients’ Right to Access Their Own Data
Important Links and Planning Information

- [Main Gravity Confluence Space](#)
- [Gravity FHIR IG Development](#)
- [Sign up for Connectation Participation](#)
- [Community Review SDOH-CC CI Build V0.0.3](#)
  - V0.0.4 TBD April 20, 2020
- [Gravity Project Use Case 1 “Quick Tips” One-Pager](#)
- [Use Case 1 “Track” Plan](#)
Gravity SDOH FHIR Connectathon Participant Meetings Schedule

Wednesdays at 3:00pm ET

https://global.gotomeeting.com/join/454082317

United States (Toll Free): 1 877 309 2073
- One-touch: tel:+18773092073,,454082317#tel:+18773092073,,454082317

Access Code: 454-082-317

- Feb 26 – Connectathon participation overview
- March 4 – PMEHR interactions with Screening App
- March 25 – PMEHR documenting SDOH information in a clinical care encounter
- April 1 – Clinical Data R/R interactions with PMEHR
- April 15 – Review of OAuth 2.0 implementation considerations; Options for the “patient participant” role; Aegis Touch Stone demo and CDex Test Script use
- April 29 – Participation Logistics-what to expect, Final Questions

All sessions are recorded.
Next Steps Checklist 2020-04-01

• Determine the actor role(s) your system will play.
• Begin reviewing the needed messages/transactions that your actor needs to initial or respond to.
• Begin to understand the FHIR Resources needed to support the application interfaces and specified payloads.
• Check out the LHC Form Builder: https://lhcforms.nlm.nih.gov/
• Review the Gravity MasterList with Placeholder codes to use for creating other types of Food Insecurity Questionnaires included in the Gravity Project: https://confluence.hl7.org/display/GRAV/Gravity+FHIR+IG
• Familiarize yourself with the Da Vinci CDex IG guidance

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