The Gravity Project

Housing Data Concept Review
May 14, 2020
Welcome

Thank you for joining the Gravity Project Workgroup meeting!

Due to the large number of attendees, participants are muted upon entry. Please remain muted to avoid background noise.

- This call is being recorded; recording will be available on the Gravity Confluence page following.

You are encouraged to actively participate in the discussion using the Webex chat feature (bottom right of the Webex Meeting window).

Please send chats to “Everyone.”
Gravity Project Anti-Trust Practices

- Gravity Project participants have the responsibility to comply fully with federal and state antitrust laws.
- Individuals speaking or providing written communications shall refrain from any discussion which may provide the basis for an inference that they have agreed to take any action relating to prices, services, production and allocation of markets or any other matter having a market effect.
- Participants shall not discuss their pricing or others’ pricing or any term that might affect pricing or fees, such as costs, discounts, terms of sales or profit margins.
- Adherence to these guidelines involves not only avoidance of antitrust violations, but avoidance of behavior that might be so construed.
Gravity Project Participation

- If you have not already done so, we invite you to **officially join the project here**: https://confluence.hl7.org/display/GRAV/Join+the+Gravity+Project

- If you want to **check whether you have already signed up** or if others from your organization have signed up, please review the existing membership here: https://confluence.hl7.org/pages/viewpage.action?pageId=46892669#JointheGravityProject-GravityProjectMembershipList

- For **all other Gravity Project information**, please visit: https://confluence.hl7.org/display/GRAV/The+Gravity+Project
Project Founders and In-Kind Support To-Date

Robert Wood Johnson Foundation
The University of Vermont
Larner College of Medicine
Yale School of Nursing
siren
UCSF
The Academy of Nutrition and Dietetics
AAFP
BlueCross BlueShield Association
AMA
AmeriHealth Caritas
UnitedHealthcare
Highmark
The Office of the National Coordinator for Health Information Technology
Humana
juxly
newwave
lyft

https://confluence.hl7.org/display/GRAV/Gravity+Project+Sponsors
Gravity Project Sponsorship

- The Gravity Project is currently seeking additional sponsors for our 2020 operations
  - This is an opportunity to be a recognized contributor to our critical national work
- If you are interested in learning more about sponsoring opportunities, please send an email togravityProject@emiadvisors.net or visit https://confluence.hl7.org/display/GRAV/Gravity+Project+Sponsors
# Agenda

<table>
<thead>
<tr>
<th>Topic</th>
<th>Presenter</th>
</tr>
</thead>
<tbody>
<tr>
<td>Announcements</td>
<td>Lynette</td>
</tr>
<tr>
<td>Project Roadmap and Upcoming Schedule</td>
<td>Lynette</td>
</tr>
<tr>
<td>Housing Domain Data Concepts Submission Status Update</td>
<td>Linda</td>
</tr>
<tr>
<td>Debrief: Diagnoses</td>
<td>Sarah</td>
</tr>
<tr>
<td>Discussion: Interventions: Professions, Agencies and Organizations, Provisions</td>
<td>Sarah</td>
</tr>
<tr>
<td>Community Homework and Next Steps</td>
<td>Sarah</td>
</tr>
</tbody>
</table>

Please submit questions and comments using the Webex chat feature.
Track HL7 May Virtual Connectathon Progress

- The May HL7 Virtual Connectathon 24 is happening right now!
  - General information
  - [https://confluence.hl7.org/display/FHIR/2020-05+Connectathon+24](https://confluence.hl7.org/display/FHIR/2020-05+Connectathon+24)
  - Track Connectathon progress and notes [https://docs.google.com/spreadsheets/d/1Ww4ctlSToRRavdsviKqVjFXV3PJSVSOzTgXOn0PnmW4/edit](https://docs.google.com/spreadsheets/d/1Ww4ctlSToRRavdsviKqVjFXV3PJSVSOzTgXOn0PnmW4/edit)
Upcoming Connectathon (Testing) Events

- NEW! Care Coordination Track (includes Gravity Use Case)
  https://confluence.hl7.org/display/FHIR/2020-05+Care+Coordination+Track

- Upcoming Virtual Connectathon
  • MiHIN InterOpathon
  https://confluence.hl7.org/display/GRAV/2020-05-28+MiHIN+InterOpathon+Virtual
Gravity and COVID-19 Collaboration Site

- Visit and contribute to the new Gravity Project SDOH COVID-19 Response page: 
  https://confluence.hl7.org/display/GRAV/Gravity+SDOH+COVID-19+Response+page

  • No login is required to view or download the blog
  • An HL7 Confluence login is required to post on the blog

    – Instructions for requesting a login: 
      https://jira.hl7.org/secure/CreatelIssue.jspa?pid=11200&issuotype=11300
# Gravity Project Schedule and Activities (Feb through May)

<table>
<thead>
<tr>
<th>Date</th>
<th>Gravity WG Meeting Tasks</th>
<th>Homework</th>
</tr>
</thead>
<tbody>
<tr>
<td>02/13</td>
<td><strong>Review:</strong> Consensus Voting and Dispositions Results&lt;br&gt;<strong>Review:</strong> Data Element Concept Submissions To-Date&lt;br&gt;<strong>Overview:</strong> Coding Work</td>
<td><strong>Submit:</strong> Housing Instability Data Elements&lt;br&gt;Review: Coding Systems</td>
</tr>
<tr>
<td>03/19</td>
<td>Housing Instability Domain Kickoff&lt;br&gt;SDOH FHIR IG and Connectathon Updates</td>
<td><strong>Submit:</strong> Housing Instability Data Elements</td>
</tr>
<tr>
<td>04/02</td>
<td><strong>Review:</strong> Housing Instability Data Element Concepts&lt;br&gt;SDOH FHIR IG and Connectathon Updates</td>
<td><strong>Submit:</strong> Housing Instability Data Elements</td>
</tr>
<tr>
<td>04/16</td>
<td><strong>Review:</strong> Housing Instability Data Element Concepts&lt;br&gt;SDOH FHIR IG and Connectathon Updates</td>
<td><strong>Submit:</strong> Housing Instability Data Elements</td>
</tr>
<tr>
<td>04/30</td>
<td><strong>Review:</strong> Housing Instability Data Element Concepts&lt;br&gt;SDOH FHIR IG and Connectathon Updates</td>
<td>Housing Instability Data Element Submission&lt;br&gt;<em>Deadline May 1</em></td>
</tr>
<tr>
<td>05/14</td>
<td><strong>Review:</strong> Housing Instability Data Element Concepts&lt;br&gt;SDOH FHIR IG and Connectathon Updates</td>
<td></td>
</tr>
<tr>
<td>05/28</td>
<td><strong>Review:</strong> Housing Instability Data Element Concepts&lt;br&gt;<strong>Overview:</strong> End-to-End Review Process&lt;br&gt;SDOH FHIR IG and Connectathon Updates</td>
<td></td>
</tr>
</tbody>
</table>
Gravity Timeline (High Level)

1. Collaborative Launch
   - Project Charter, Coding Systems Education

2. Use Case Development & Functional Requirements
   - Personas, Patient Story, Use Cases (X3)

3a. Data Set Identification
   - Data Element Identification, Adjudication, and End-to-End Review

4a. Coding Recommendations
   - Coding Gap Analysis & Recommendations for Coding Systems

3b. Data Set Identification (Mar to June 20)

4b. Coding Recommendations (June to Jul 20)

3c. Data Set Identification (Aug to Oct 2020)

4c. Coding Recommendations (Nov to Dec 20)

4a. Coding Recommendations
   - Data Element Identification, Adjudication, and End-to-End Review

5a. FHIR Implementation Guide Development V.1.0 (Dec 19 to Aug 20)

5b. FHIR IG Ballot Reconciliation & Publication

SDOH Domain Projects

- a) Food Insecurity
- b) Housing Instability
- c) Transportation Access

HL7 Connectathon Testing
- Feb 20
- May 20
- Sept 20

Public Collaborative Kick-Off 02MAY2019
Housing Domain Data Concepts Submission Status Update
# Data Element Submissions Summary

**Total Submissions Received = 13**

<table>
<thead>
<tr>
<th>Screening Tool/ Questions</th>
<th>Diagnosis</th>
<th>Goal</th>
<th>Intervention</th>
</tr>
</thead>
<tbody>
<tr>
<td>29 Tools / 360 Questions</td>
<td>15</td>
<td>10</td>
<td>74</td>
</tr>
</tbody>
</table>

**Submissions Reviewed = 9**

<table>
<thead>
<tr>
<th>Disposition</th>
<th>Disposition</th>
<th>Disposition</th>
<th>Disposition</th>
</tr>
</thead>
<tbody>
<tr>
<td>Duplicates –2 Tools/4 Questions</td>
<td>Duplicates – 1</td>
<td>Duplicate – 0</td>
<td>Duplicates – 0 Synonymous – 0</td>
</tr>
<tr>
<td>Do Not Add – 4 Tools/152 Questions</td>
<td>Do Not Add – 4</td>
<td>Do Not Add – 0</td>
<td>Do Not Add – 5</td>
</tr>
<tr>
<td>Park – 8 Tools/43 Questions</td>
<td>Park – 2</td>
<td>Park – 0</td>
<td>Park – 5</td>
</tr>
<tr>
<td>Hold – 2 Tools/3 Questions</td>
<td>Hold – 0</td>
<td>Hold – 3</td>
<td>Hold – 4</td>
</tr>
</tbody>
</table>

**Total Submissions Returned* = 4**

* Adjudication completed and file returned to submitter with dispositions
# Adjudication Dispositions

<table>
<thead>
<tr>
<th>Adjudication Status</th>
<th>Definition</th>
<th>Disposition</th>
</tr>
</thead>
<tbody>
<tr>
<td>Duplicate Data Element</td>
<td>Conceptually similar, same code(s), same answers for questions</td>
<td>Submitter will be added as contributor for the data element in the Master file</td>
</tr>
<tr>
<td>Add Data Element</td>
<td>In scope, fit for purpose, not too broad and not too narrow</td>
<td>Data element will be added to the Master file</td>
</tr>
<tr>
<td>Do Not Add - Park</td>
<td>Not in scope for this domain but may be useful for another Gravity Domain</td>
<td>Will be added to a Parking File for future review</td>
</tr>
<tr>
<td></td>
<td>(housing insecurity, transportation)</td>
<td></td>
</tr>
<tr>
<td>Do Not Add</td>
<td>Not in scope for this domain or another Gravity domain, not well formed,</td>
<td>Will be noted on adjudication file with reason</td>
</tr>
<tr>
<td></td>
<td>not fit for purpose</td>
<td></td>
</tr>
<tr>
<td>On-Hold (Info Needed)</td>
<td>Need additional clarification from submitter</td>
<td>Will be noted on adjudication file with additional information needed</td>
</tr>
<tr>
<td>Withdrawn</td>
<td>After discussion between submitter and SMEs, concept was withdrawn by</td>
<td>Will be noted on adjudication file with reason</td>
</tr>
<tr>
<td></td>
<td>submitter</td>
<td></td>
</tr>
</tbody>
</table>
Data Element Submitters

- Allscripts® / All possible
- NCDHHS
- Washington Association for Community Health
  Community Health Centers • Advancing Quality Care for All
- National Institute of Nursing Research
- School of Medicine
  UNIVERSITY OF COLORADO ANSCHUTZ MEDICAL CAMPUS
- HUD EXCHANGE
- Providence St. Joseph Health
- IBM Watson Health PULSE® Health Polls

HL7 International
How to Review Housing Instability Adjudicated Data Submissions (Master List)

https://confluence.hl7.org/display/GRAV/Housing+Instability+and+Homelessness+Domain

- The Housing Master List with adjudicated data elements will be published on Confluence page following each community meeting
Debrief: Housing Diagnoses Codes
Housing Insecurity – Domain and Sub-Domains

Housing Insecurity

Homelessness – History of Homelessness – Overcrowding – Doubling Up – Housing Instability – Multiple Moves – At Risk of Eviction – Behind on Rent – Inadequate Housing

Now, can we screen for these?
And how to organize them?
Mapping Screeners to Sub-Domains

• American Housing Survey 2019 Housing Insecurity Supplement (All)
• Children’s HealthWatch Survey
• PRAPARE
• AHC/Naruzzaman et al.
• VA HOMELESS
• WellRx
• WeCare
• Health Leads

Homelessness
History of Homelessness
Overcrowding
Doubling Up
Multiple Moves
At Risk for Eviction
Behind on Rent
Inadequate Housing
Housing Insecurity- Domain and Sub-domains

• Housing Insecurity
  • Housing Instability
    • Behind on Rent
    • Multiple Moves
    • At Risk for Eviction
    • (Doubled Up?)
    • (Overcrowding?)
    • (History of Homelessness?)
  • Homelessness
    • (Current/Literal) Homelessness
    • (Overcrowding)
  • Inadequate Housing
    • (Overcrowding)
But what is already here?
Diagnoses- Current State

- Z59 Problems related to housing and economic circumstances
  - Z59.0 Homelessness
  - Z59.1 Inadequate Housing
  - Z59.2 Discord with neighbors, lodgers, and landlord
  - Z59.3 Problems related to living in a residential institution
    - Z59.4 Lack of adequate food and safe drinking water
    - Z59.5 Extreme poverty
    - Z59.6 Low income
    - Z59.7 Insufficient social insurance and welfare support
    - Z59.9 Other problems related to housing and economic circumstances
## Diagnoses

<table>
<thead>
<tr>
<th>ICD CODE</th>
<th>SNOMED</th>
</tr>
</thead>
<tbody>
<tr>
<td>Z59.0 Homelessness</td>
<td>Homeless</td>
</tr>
<tr>
<td></td>
<td>Housing Lack</td>
</tr>
<tr>
<td></td>
<td>Homeless family</td>
</tr>
<tr>
<td></td>
<td>Homeless single person</td>
</tr>
<tr>
<td></td>
<td>Lives in squat</td>
</tr>
</tbody>
</table>
## Diagnoses

<table>
<thead>
<tr>
<th>ICD CODE</th>
<th>SNOMED</th>
</tr>
</thead>
<tbody>
<tr>
<td>Z59.1 Inadequate Housing</td>
<td>Housing unsuited to needs</td>
</tr>
<tr>
<td></td>
<td>Overcrowded in house</td>
</tr>
<tr>
<td></td>
<td>Lack of space in house</td>
</tr>
<tr>
<td></td>
<td>Lack of space for privacy in accommodation</td>
</tr>
<tr>
<td></td>
<td>Lives in damp conditions</td>
</tr>
<tr>
<td></td>
<td>Damp in house</td>
</tr>
<tr>
<td></td>
<td>Lack of heat in house</td>
</tr>
<tr>
<td></td>
<td>Lives in sheltered housing</td>
</tr>
<tr>
<td></td>
<td>Housing contains exposed wiring</td>
</tr>
<tr>
<td></td>
<td>Housing contains unsafe equipment</td>
</tr>
<tr>
<td></td>
<td>Housing contains unsafe appliance</td>
</tr>
<tr>
<td></td>
<td>Housing structurally unsound</td>
</tr>
<tr>
<td></td>
<td>Living in house without electricity</td>
</tr>
<tr>
<td></td>
<td>Living in house with technical defects</td>
</tr>
</tbody>
</table>
## Diagnoses

<table>
<thead>
<tr>
<th>ICD CODE</th>
<th>SNOMED</th>
</tr>
</thead>
<tbody>
<tr>
<td>Z59.2 Discord with neighbors, lodgers, and landlord</td>
<td>Discord with neighbors, lodgers, and landlord</td>
</tr>
<tr>
<td></td>
<td>Problem with neighbors</td>
</tr>
<tr>
<td></td>
<td>Discord with lodgers</td>
</tr>
<tr>
<td></td>
<td>Discord with landlord</td>
</tr>
</tbody>
</table>
## Diagnoses

<table>
<thead>
<tr>
<th>ICD CODE</th>
<th>SNOMED</th>
</tr>
</thead>
<tbody>
<tr>
<td>Z59.3 Problems related to living in a residential institution</td>
<td>Problems related to living in a residential institution</td>
</tr>
</tbody>
</table>
## Diagnoses

<table>
<thead>
<tr>
<th>ICD CODE</th>
<th>SNOMED</th>
</tr>
</thead>
<tbody>
<tr>
<td>Z59.9 Other problems related to housing and economic circumstances</td>
<td>On urgent housing list</td>
</tr>
<tr>
<td></td>
<td>On housing list</td>
</tr>
<tr>
<td></td>
<td>Awaiting housing improvement</td>
</tr>
<tr>
<td></td>
<td>On waiting lost for accommodation</td>
</tr>
<tr>
<td></td>
<td>Eviction notice served</td>
</tr>
<tr>
<td></td>
<td>Eviction from dwelling</td>
</tr>
</tbody>
</table>
## Diagnoses

<table>
<thead>
<tr>
<th>ICD CODE</th>
<th>SNOMED</th>
</tr>
</thead>
<tbody>
<tr>
<td>Z76.89 Persons encountering health services in other specified circumstances</td>
<td>Unsafe stairs in house</td>
</tr>
<tr>
<td>R45.82 Worries</td>
<td>Feels at risk of crime in the neighborhood</td>
</tr>
</tbody>
</table>
Notably absent

But perhaps should be there....

- History of homelessness
- Behind on rent

Because they cross other domains

- IPV

<table>
<thead>
<tr>
<th>ICD</th>
<th>SNOMED</th>
</tr>
</thead>
<tbody>
<tr>
<td>Z91.410 Personal history of adult physical and sexual abuse</td>
<td>History of domestic violence</td>
</tr>
<tr>
<td>T74.11x Adult physical abuse, confirmed</td>
<td>Domestic violence</td>
</tr>
<tr>
<td>Z91.89 Other specified personal risk factors, not elsewhere classified</td>
<td>At risk for violence</td>
</tr>
</tbody>
</table>
Questions?

You are encouraged to actively participate in the discussion using the Webex chat feature (bottom right of the Webex Meeting window).

Please send all chats to Everyone.
Discussion: Interventions Programs and Agencies
Interventions: Professions, Agencies, and Organizations

- **Professions**
  - Case manager
  - Care manager
  - Social worker
  - Community health worker

- **Agencies/Organizations**
  - Housing agency
  - Medical-legal partnership
  - Legal aid
  - Community action agency
  - Benefit enrollment assistance
  - Coordinated Entry

- **Provisions**

- **Housing voucher**
HUD Housing Program Types

- Emergency Shelter
- Transitional Housing
- Day Shelter
- Safe Haven
- Rapid-Rehousing
- Permanent Supportive Housing
- Housing with Services
- Housing Only
- Others?
  - (healthcare funded temporary emergency housing?)
Questions?

You are encouraged to actively participate in the discussion using the Webex chat feature (bottom right of the Webex Meeting window).

Please send all chats to Everyone.
Questions?

You are encouraged to actively participate in the discussion using the Webex chat feature (bottom right of the Webex Meeting window).

Please send all chats to Everyone.
Community Homework and Next Steps
Review Past Meeting Materials

- View materials and recordings on Gravity Project Materials Confluence page
  - https://confluence.hl7.org/display/GRAV/The+Gravity+Project+Materials
Next Steps

- Sign up to join our **2020 Connectathon Events**: [https://confluence.hl7.org/display/GRAV/Connectathon+Testing](https://confluence.hl7.org/display/GRAV/Connectathon+Testing)
  - Looking for implementers across the health ecosystem—EHRs, HIEs, PHRs, digital health platforms, community-based services and referral platforms, system integrators
  - **Ideal to have both clinical and non-clinical participants**

- Join the Gravity Project as a Committed Member or Other Interested Party:
  - [https://confluence.hl7.org/display/GRAV/Join+the+Gravity+Project](https://confluence.hl7.org/display/GRAV/Join+the+Gravity+Project)
Thank you for participating in this national consensus-building process.

Additional questions? Contact: gravityproject@emiadvisors.net
Background Slides
SDOH FHIR IG and Connectathon Updates
2020 Connectathons

- Detroit MiHIN Interopathon – May 28-29
  - Virtual Event
- Baltimore, MD HL7 Connectathon – Sept 19-20
  - Stay tuned
- [https://confluence.hl7.org/display/GRAV/Gravity+SDOH+FHIR+Connectathons](https://confluence.hl7.org/display/GRAV/Gravity+SDOH+FHIR+Connectathons)
Gravity 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., population health management, quality reporting, and risk adjustment/risk stratification).

https://confluence.hl7.org/display/GRAV/Gravity+Use+Case+Package
FHIR IG Updates

- V0.0.3 is now available – Quick Links Access
  - [http://build.fhir.org/ig/HL7/sdoh-cc/](http://build.fhir.org/ig/HL7/sdoh-cc/)
- V0.0.4 – end of April (end of day 5/1)
  - Most likely will not have Use Case 2 materials included
  - Use Case 2 guidance is being developed in a separate artifact that will be merged into version V0.0.5
Use Case 2 – Review of Content Requirements

Work

2. Document and track SDOH related interventions to completion.

- Consent Information
- Patient Information
- Referral Information
  - Who is making the Referral
  - Who is receiving the Referral
  - What type of services are requested
- Supporting Information
  - Other Information that may inform the Referral Process
  - Screening Information, Clinical Assessment, other care planning information
- Feedback Information
  - Enrollment Information and Enrollment Status
  - Other care planning information
  - Services provided

Spreadsheet for review/comment, introduced at the April 30th meeting
Next Steps for FHIR IG Development and Testing

- Connectathon Planning
  - System Participants
  - Human Participants

Express Interest:  
https://confluence.hl7.org/display/GRAV/Connectathon+Participation+Sign-Up

Register for Entrance to the Event:  
https://www.hl7.org/events/fhir/connectathon/2020/05/

Review Recorded Prep Session:  
https://confluence.hl7.org/display/GRAV/Gravity+SDOH+FHIR+Connectathon+Participant+Meetings