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 the meeting.

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
Eat Right
Academy of Nutrition and Dietetics
AAFP
BlueCross BlueShield Association
AMA
AmeriHealth Caritas
UnitedHealthcare
Highmark
The Office of the National Coordinator for Health Information Technology
juxly
lyft
Humana

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 to GravityProject@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>Review: Updated Interventions Definitions</td>
<td>Sarah</td>
</tr>
<tr>
<td>Discussion: Overcrowding Concepts</td>
<td>Allison</td>
</tr>
<tr>
<td>SDOH FHIR IG and Connectathon Updates</td>
<td>Lisa</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.
Announcements

- ONC has released the Leading Edge Acceleration Projects (LEAP) in Health IT, Special Emphasis Notice (SEN) on grants.gov. Additional information is available on the healthit.gov website. See LEAP Special Emphasis Notice – 2020 under Related documents on grants.gov.

- In 2020, ONC is particularly interested in applications whose specific aims address one of the following areas of interest:
  - Area 1: Advancing Registry Infrastructure for a Modern API-based Health IT Ecosystem
  - Area 2: Cutting Edge Health IT Tools for Scaling Health Research
  - Area 3: Integrating Health Care and Human Services Data to Support Improved Outcomes
Announcements, cont’d...

- An informational session was held on Wednesday, April 15, 2020: [https://www.healthit.gov/topic/onc-funding-opportunities/leading-edge-acceleration-projects-leap-health-information](https://www.healthit.gov/topic/onc-funding-opportunities/leading-edge-acceleration-projects-leap-health-information)
  
  - A video recording of the informational session will be made available shortly and posted on this page.

- Applications focused on the areas of interest identified in this Notice must be submitted by 11:59 P.M. Eastern Standard Time on **June 8, 2020**.
Gravity and COVID-19 Collaboration Site

  
  • 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&issuetype=11300
Upcoming Connectathon (Testing) Events

- Gravity Connectathon Prep meeting tomorrow, Wednesday April 15th at 3:00 pm ET

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

- May virtual Connections
  - HL7 Connectathon 24:
    [https://confluence.hl7.org/display/FHIR/2020-05+Connectathon+24](https://confluence.hl7.org/display/FHIR/2020-05+Connectathon+24)
  - MiHIN InterOpathon:
    [https://confluence.hl7.org/display/GRAV/2020-05-28+MiHIN+InterOpathon+Virtual](https://confluence.hl7.org/display/GRAV/2020-05-28+MiHIN+InterOpathon+Virtual)
# Gravity Project Schedule and Activities (Feb to 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><em>Review:</em> Consensus Voting and Dispositions Results&lt;br&gt;<em>Review:</em> Data Element Concept Submissions To-Date&lt;br&gt;<em>Overview:</em> Coding Work</td>
<td><em>Submit:</em> 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><em>Submit:</em> Housing Instability Data Elements</td>
</tr>
<tr>
<td>04/02</td>
<td><em>Review:</em> Housing Instability Data Element Concepts&lt;br&gt;SDOH FHIR IG and Connectathon Updates</td>
<td><em>Submit:</em> Housing Instability Data Elements</td>
</tr>
<tr>
<td>04/16</td>
<td><em>Review:</em> Housing Instability Data Element Concepts&lt;br&gt;SDOH FHIR IG and Connectathon Updates</td>
<td><em>Submit:</em> Housing Instability Data Elements</td>
</tr>
<tr>
<td>04/30</td>
<td><em>Review:</em> 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><em>Review:</em> Housing Instability Data Element Concepts&lt;br&gt;SDOH FHIR IG and Connectathon Updates</td>
<td></td>
</tr>
<tr>
<td>05/28</td>
<td><em>Review:</em> Housing Instability Data Element Concepts&lt;br&gt;<em>Overview:</em> End-to-End Review Process&lt;br&gt;SDOH FHIR IG and Connectathon Updates</td>
<td></td>
</tr>
</tbody>
</table>
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 20)

4c. Coding Recommendations (Nov to Dec 20)

FHIR IG Development & Testing

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

WE ARE HERE
Housing Domain Data Concepts Submission Status Update
Data Element Submissions Summary

**Total Submissions Received = 6**

<table>
<thead>
<tr>
<th>Screening Tool/ Questions</th>
<th>Diagnosis</th>
<th>Goal</th>
<th>Intervention</th>
</tr>
</thead>
<tbody>
<tr>
<td>16 Tools / 212 Questions</td>
<td>5</td>
<td>4</td>
<td>41</td>
</tr>
</tbody>
</table>

**Submissions Reviewed = 5**

<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 – 0</td>
<td>Duplicate – 0</td>
<td>Duplicates – 0 Synonymous – 0</td>
</tr>
<tr>
<td>Park – 4 Tools/5 Questions</td>
<td>Park – 0</td>
<td>Park – 0</td>
<td>Park – 5</td>
</tr>
<tr>
<td>Hold – 3 Tools/119 Questions</td>
<td>Hold – 0</td>
<td>Hold – 3</td>
<td>Hold – 4</td>
</tr>
</tbody>
</table>

**Total Submissions Returned* = 1**

* Adjudication completed and file returned to submitter with dispositions
Data Element Submitters

- Allscripts® / All possible
- Kansas City
- NCDHHS
- School of Medicine
- University of Colorado Anschutz Medical Campus
- Washington State Health Care Authority
Data Submission Framework

Phase 1: Housing Instability and Homelessness
- Screening tools
- Assessments/Diagnoses
- Goals of care
- Interventions
  - Program Names and Definitions
  - Provider/Practitioner Roles (e.g. community health navigator)
  - Applicable Intervention Activities/Services

Phase 2: Inadequate Housing
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
How to Submit Housing Data Concepts

- Go to the Data Element Submission Confluence page and follow instructions
  - [https://confluence.hl7.org/display/GRAV/Data+Element+Submission](https://confluence.hl7.org/display/GRAV/Data+Element+Submission)
  - You can submit via spreadsheet or web tool

- Submissions are due by Friday, May 1
Review: Updated Interventions Definitions
## Interventions

<table>
<thead>
<tr>
<th>Gravity Term</th>
<th>Former Gravity Definition</th>
<th>Current Proposal</th>
</tr>
</thead>
<tbody>
<tr>
<td>Referral</td>
<td>A type of order wherein clinicians/providers request services and/or assessment from other professionals and/or programs.</td>
<td>The act of clinicians/providers sending or directing a patient to healthcare professionals and/or programs for services (e.g., evaluation, treatment, aid, information, etc.)</td>
</tr>
<tr>
<td>Evaluation/Assessment</td>
<td>The process of both provider clinical observation and interpretation, and the application of assessment tools. In both activities the aim is to arrive at outcomes that define the status of the patient in order to guide further care.</td>
<td>Determination of a value, conclusion, or inference by evaluating evidence.</td>
</tr>
<tr>
<td>Evaluation of eligibility (for &lt;x&gt;)</td>
<td>Used to mark the activities prior to determination of eligibility. (Crucial for federal assistance programs).</td>
<td>Suggestion: Process of determining eligibility by evaluating evidence</td>
</tr>
<tr>
<td>Assistance/Assisting</td>
<td>Non-clinical aid with the tasks of care such as applications and setting up appointments</td>
<td>To give support or aid to; help</td>
</tr>
<tr>
<td>Counseling</td>
<td>Psychosocial procedure that involves listening, reflecting, etc. to facilitate recognition of course of action / solution.</td>
<td>None – Definitions are synchronized.</td>
</tr>
<tr>
<td>Education</td>
<td>Procedure that is synonymous with those activities such as teaching, demonstration, instruction, explanation, and advice that aims to increase knowledge and skills, change behaviors, assist coping</td>
<td>Procedure that is synonymous with those activities such as teaching, demonstration, instruction, explanation, and advice that aim to increase knowledge and skills.</td>
</tr>
<tr>
<td>Provision</td>
<td>Covers any concrete support that is able to be given to the patient directly at the point of service</td>
<td>To supply/make available for use</td>
</tr>
<tr>
<td>Coordination</td>
<td>Organizing activities and sharing information</td>
<td>Process of organizing activities and sharing information to improve effectiveness</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: Overcrowding Concepts
Overcrowding as a Housing Concept

Crowding is negatively associated with

- mental health status
- ability to cope with stress
- child and parent interaction
- social relationships
- sleep

It also increases the risk for

- childhood injuries
- elevated blood pressure
- respiratory conditions
- exposure to infectious disease

Overcrowding as a Housing Concept

Adults\(^8\) and children\(^9\) living in crowded households are less likely to access health care services than are those in non-crowded households.

Note: this research is dated and more recent studies/research needs to be taken into account.
Overcrowding Defined

- From HUD: There are only a few accepted definitions of crowding, and of these definitions, persons-per-room is the measure most prevalent in the literature. [https://bit.ly/2K9gmEc](https://bit.ly/2K9gmEc)

- Children's HealthWatch 2011 AJPH paper: Using the US Department of Housing and Urban Development definition as a guideline, we defined crowding as having more than 2 people per bedroom or as temporarily living with other people because of economic difficulties (doubling up).
Multivariate analysis showed that, compared with the referent of secure housing, crowding was significantly associated with HFI (adjusted odds ratio [AOR]=1.30; 95% confidence interval [CI]=1.18, 1.43; P< .001) and with CFI (AOR=1.47; 95% CI=1.34, 1.63; P< .001)

NOT significantly associated with health outcomes
Crowding Statistics

Limitations & considerations:
- Unique sample of urban low-income families with infants/toddlers
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.
SDOH FHIR IG and Connectathon Updates
2020 Connectathons

- San Antonio, TX HL7 Connectathon - May 13-15
  • Virtual Event
- 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
May HL7 FHIR Connectathon

https://confluence.hl7.org/display/FHIR/2020-05+Connectathon+24

🔗 HL7 FHIR CONNECTATHON 24

WILL BE VIRTUAL!

Wednesday May 13, Thursday May 14, and Friday May 15

Gravity Project SDOH-CC Connectathon Track

Gravity Project SDOH-CC Connectathon Prep Session – April 29th

3 System Actors: PMEHR, Screening App/Patient App, Clinical Data R/R
2 Human Actors: Patient, Documentarian

NEW! Care Coordination Connectathon Track

Demonstrate data interoperability across multiple care coordination activities: SDOH Screening, Functional Assessment Status, Discharge Planning, Transitions of Care, and Care Planning
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/

- V0.0.4 – end of April
  - Most likely will not have Use Case 2 materials included
  - Use Case 2 guidance in 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 & Testing

- Connectathon Planning
  - System Participants
  - Human Participants

Sign Up:
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/

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

Wednesdays 3:00pm-4:00pm ET April 29
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
Submit Housing Instability Data Element Concepts

- Please submit concepts via downloadable spreadsheet template or web tool

- For instructions, links and downloads go to Confluence: https://confluence.hl7.org/display/GRAV/Data+Element+Submission

- For questions, please send an email to GravityProject@emiadvisors.net
Review Introductory Materials

• Introduction to Concepts and Coding Systems
  ▪ Download materials or watch recording
• Introduction to Data Elements
  ▪ Download materials or watch recording
• Coding System Overview Videos
  https://confluence.hl7.org/display/GRAV/Educational+and+Instructional+Materials
HMIS and Data Principles

- **HMIS**
  - Please email *Sarah.DeSilvey@med.uvm.edu* if you are interested in participating

- **Data Justice/Data Principles**
  - Please review example principles on Confluence
  - Write Mark and Sarah with thoughts
    - Mark Savage, SDOH Data Policy Lead
      - *Mark.Savage@ucsf.edu*
    - Sarah DeSilvey, SDOH Clinical Informatics Lead
      - *Sarah.DeSilvey@med.uvm.edu*
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
Housing Domain Approach and Concepts
Housing Domain Context

- There is no agreed upon singular definition of circumstances that define housing instability/insecurity, homelessness, and other housing-related social risks
- There is no gold standard housing stability measure against which housing instability screening tools (e.g., the Housing Stability Vital Sign) can be compared
- Investments in future research to create robust standard testing of a diagnostic tool, is warranted
Housing Domain Context, cont’d...

Stability: The Housing Iceberg

HOMELESS

HOUSING INSTABILITY

• behind on rent
• multiple moves

INEQUITABLE POLICIES
Homelessness Defined

- U.S. Department of Housing and Urban Development
  - Individual or family who lacks a fixed, regular, and adequate nighttime residence, including:
    - Living in a public or private place not meant for human habitation
    - Living in a shelter (including congregate shelter, transitional housing, hotel and motels)
    - Exiting an institution where they lived for 90 days or less and who resided in one of the aforementioned settings prior to entering that institution.

- U.S. Department of Education (McKinney-Vento Act)
  - Applies to homeless children and youth
  - Includes settings above AND applies to children and youths sharing housing of other persons due to loss of housing, economic hardship, or similar reasons.
Homelessness and Health

- Robust research across the life course linking homelessness and health including increased risk of:
  - adverse physical and mental health outcomes for children and adults
  - health care utilization and costs
  - infectious disease transmission
Among 22,234 families with children < 4yrs in 5 urban safety net hospitals, 34% had at least one adverse housing circumstance:

- 27% behind on rent
- 8% multiple moves
- 12% history of homelessness
- Each circumstance individually associated with adverse health and material hardship compared to stable housing
Little overlap among three adverse housing conditions
Outcomes of Unstable Housing with Health and Material Hardship Outcomes

Adjusted Odds Ratios

- Child fair/poor health
- Maternal fair/poor health
- Maternal depression
- Food insecurity
- Energy insecurity
- Health care trade-offs

Legend:
- Stable Housing
- Behind on Rent
- Multiple Moves
- Homelessness
Limitations

- This research was conducted among low-income families with young children in five US cities – needs to be replicated among additional populations and/or the general population.
- No gold standard is problematic.
- While we examined the relationship between these circumstances and health/hardship outcomes, more work can/should be done.
Other Housing Domains

- Unsafe or substandard housing
- Housing conditions including the presence of mold, lead, and pests are known health hazards.
- Neighborhood-level housing indicators
- Emerging research on concentrations of poverty, air quality, and other neighborhood-level factors on health points to the need to understand neighborhood indicators
- While these are important indicators, they are currently out of scope for this project. Future work may seek to address these domains.