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](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:

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

Robert Wood Johnson Foundation
The University of Vermont
Yale School of Nursing

sirenUCSF
AHRQ
AAFP
AMA
AHRQ
AmeriHealth Caritas
UnitedHealthcare
Arkansas

The Office of the National Coordinator for Health Information Technology
juxly
Children's HealthWatch
HL7 International

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
HL7 SDOH CC FHIR IG Public Meetings

- HL7 SDOH CC FHIR IG Public Meetings are scheduled Wednesdays from 3:00 to 4:00 pm ET
- See the HL7 meeting calendar here: http://www.hl7.org/concalls/CallDetails.aspx?concall=51839
Administration for Community Living Challenge Grant is Now Accepting Applications

- Registration for Phase 1 (i.e. the letter of intent) is due December 14, 2020. The challenge.gov posting will be updated with this information.
  - To learn more about the grant requirements, refer to the July 28th webinar here: [https://confluence.hl7.org/pages/viewpage.action?pageId=76153059#GravityProjectEvents-PastGravityProjectEventMaterials](https://confluence.hl7.org/pages/viewpage.action?pageId=76153059#GravityProjectEvents-PastGravityProjectEventMaterials)
The HL7® FHIR Virtual Connectathon will occur from January 13th to 15th, 2021

- The Gravity team is leading the Gravity Project SDOH-CC Connectathon Track. The focus of this Connectathon track is 1) exchange and update interventions, and 2) exchange of observations, conditions, and goals.
  - See Gravity’s Connectathon Track Page here: https://confluence.hl7.org/display/FHIR/2021-01+Gravity+SDOH-CC+Track
  - Sign up to be a participant in Gravity’s track here: https://confluence.hl7.org/display/GRAV/Connectathon+Participation+Sign-Up
  - See the HL7® FHIR Connectathon Page here: https://confluence.hl7.org/display/FHIR/2021-01+Connectathon+26
NCQA Phyllis Torda Health Care Quality and Equity Fellowship
Open for 2021 Fellowship Applicants

- The Phyllis Torda Health Care Quality and Equity Fellowship Program enables NCQA to train a new generation of leaders from diverse backgrounds. NCQA recognizes that strength comes through diversity and actively seeks and welcomes applicants with diverse backgrounds, experiences, and identities.

- The Fellowship is a year-long, virtual program that offers an exciting training opportunity for someone interested in conducting research on health care quality and equity and gaining exposure to national health care policy issues and quality measure development.

- Applications are due January, 22nd 2021. Learn more about the fellowship here: https://www.ncqa.org/about-ncqa/sponsorship-events/torda/
<table>
<thead>
<tr>
<th>Topic</th>
<th>Presenter</th>
</tr>
</thead>
<tbody>
<tr>
<td>New Gravity Roadmap and Upcoming Domains</td>
<td>Evelyn</td>
</tr>
<tr>
<td>Project Schedule</td>
<td>Sarah</td>
</tr>
<tr>
<td>Gravity USCDI Submission</td>
<td>Mark</td>
</tr>
<tr>
<td>Review: ICD-10-CM Submission</td>
<td>Sarah</td>
</tr>
<tr>
<td>Identify: Inadequate Housing, Transportation Insecurity, Financial Strain: Goals and Interventions</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.
## Gravity Roadmap

<table>
<thead>
<tr>
<th>2020</th>
<th>2021</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>JAN</strong></td>
<td><strong>JAN</strong></td>
</tr>
<tr>
<td><strong>FEB</strong></td>
<td><strong>FEB</strong></td>
</tr>
<tr>
<td><strong>MAR</strong></td>
<td><strong>MAR</strong></td>
</tr>
<tr>
<td><strong>APR</strong></td>
<td><strong>APR</strong></td>
</tr>
<tr>
<td><strong>MAY</strong></td>
<td><strong>MAY</strong></td>
</tr>
<tr>
<td><strong>JUN</strong></td>
<td><strong>JUN</strong></td>
</tr>
<tr>
<td><strong>JUL</strong></td>
<td><strong>JUL</strong></td>
</tr>
<tr>
<td><strong>AUG</strong></td>
<td><strong>AUG</strong></td>
</tr>
<tr>
<td><strong>SEP</strong></td>
<td><strong>SEP</strong></td>
</tr>
<tr>
<td><strong>OCT</strong></td>
<td><strong>OCT</strong></td>
</tr>
<tr>
<td><strong>NOV</strong></td>
<td><strong>NOV</strong></td>
</tr>
<tr>
<td><strong>DEC</strong></td>
<td><strong>DEC</strong></td>
</tr>
</tbody>
</table>

### Terminology

- **FOOD INSECURITY**
- **HOUSING INSTABILITY & HOMELESSNESS**
- **INADEQUATE HOUSING**
- **TRANSPORTATION**

### Single Domain Goals & Interventions Development

- **INADEQUATE HOUSING**
- **HOUSING INSTABILITY & HOMELESSNESS**
- **TRANSPORTATION**

### Multi Domain Screening & Diagnosis Development

- **FINANCIAL STRAIN**
- **INTERPERSONAL VIOLENCE**
- **SOCIAL ISOLATION**
- **STRESS**
- **DEMOGRAPHICS**
- **NEIGHBORHOOD/COMMUNITY**

### Key

- **LOINC Code Submissions (APR/OCT)**
- **SNOMED Code Submissions (MAY/DEC)**
- **ICD-10 Code Submissions (JUN/DEC)**

### Technical

- **Gravity FHIR IG Development**
- **IG Ballot**
- **Final updates/IG Publication**
- **IG Ballot Reconciliation**
- **Reference Implementation Development**
- **Reference Implementation Update**
- **HL7 FHIR Connectathons**

### Pilots

- **SDOH FHIR IG PILOTS**

---

**WE ARE HERE**
<table>
<thead>
<tr>
<th>Date</th>
<th>Gravity WG Meeting Tasks</th>
<th>Homework</th>
</tr>
</thead>
</table>
| 12/10  | **Inadequate Housing, Transportation Insecurity, Financial Strain:** Goals and Interventions | **Review:** Inadequate Housing  
**Submit:** Transportation, Financial Strain, Education, Veteran Status, and Employment: Goals and Interventions Concepts |
| 12/24  | Meeting Cancelled - Holiday                                                             | **Review:** Inadequate Housing  
**Submit:** Transportation, Financial Strain, Education, Veteran Status, and Employment: Goals and Interventions Concepts |
| 1/07   | **Inadequate Housing:** Consensus Vote  
**Transportation Insecurity, Financial Strain:** (Goals) and Interventions  
**Transportation Insecurity, Financial Strain:** Screening and Diagnosis End to End Review | **Submit:** Transportation Insecurity, Financial Strain, Education, Veteran Status, and Employment: Goals and Interventions Concepts  
**Review:** Transportation Insecurity, Financial Strain: Screening and Diagnosis Concepts |
| 1/21   | **Transportation Insecurity, Financial Strain:** Interventions End to End Review       | **Review:** Transportation Insecurity, Financial Strain  
**Submit:** Education, Veteran Status, and Employment: Goals and Interventions Concepts |
| 2/04   | **Transportation Insecurity, Financial Strain:** Consensus Vote                        | **Submit:** Education, Veteran Status, and Employment: Goals and Interventions Concepts |
Gravity Overview: Two Streams

**SDOH Domains (Terminology)**
- Data Set Identification
- Coding Gap Analysis & Recommendations
- New Code Submissions
- Publication in NLM VSAC & ONC ISA

**Technical (FHIR)**
- Community & FHIR Coordination
- FHIR IG Ballot & Publication
- FHIR IG Development
- FHIR IG Testing

**CODED VALUE SETS**
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.
Gravity USCDI Submission
Gravity Project’s Submission to USCDI: A New SDOH Data Class!

- ONC announced that the United States Core Data for Interoperability (USCDI) is open for submissions through October 23, 2020.
- The Gravity Project formally submitted our collective work as a new SDOH data class.
- Members of the Gravity Community also made submissions building on the Gravity Project’s work.
- On November 4, ONC categorized our submitted SDOH data class as Level 2:
  - Level 2 data elements demonstrate extensive existing use in systems and exchange between systems, and use cases that show significant value to current and potential users. These data elements would clearly improve nationwide interoperability. Any burdens or challenges would be reasonable to overcome relative to the overall impact of the data elements.
  - Level 2 data classes/elements will be considered for USCDI V2 Draft based on ONC assessment of a number of factors, including impacts for potential users, maturity of data and technical standards/implementation specifications, burden for implementation, etc.
- Members of the Gravity Community are now sending formal letters of support.
  - Thank yous (to date): Providence St. Joseph Health, New York eHealth Collaborative, Jim Meyers, Nebraska Health Information Initiative, American Academy of Family Physicians, Highmark Health, Blue Shield of California, National Partnership for Women & Families, Lucy Johns, Stewards of Change Institute, University of California San Francisco, OCHIN
### Common Clinical Data Set (2015 Edition CEHRT)
- Individual name
- Sex (birth sex)
- Date of birth
- Race
- Ethnicity
- Preferred language
- Smoking status
- Problems
- Medications
- Medication allergies
- Laboratory test(s)
- Laboratory value(s)/result(s)
- Vital signs
- Procedures
- Care team members
- Immunizations
- Unique device identifier(s) for implantable device(s)
- Assessment and plan of treatment
- Patient goals
- Health concerns

### 2020 USCDI v1
- Address (current, historical)
- Phone number (current, historical)
- Pediatric vital signs
- Provenance
- Clinical notes

### + 1 year Candidate Status
- Cognitive status
- Encounter
- Discharge instructions
- Family health history
- Functional status
- Gender identity
- Pregnancy status
- Reason for hospitalization

### + 2 years Candidate Status
- Care provider demographics
- Care team members—contact info
- Care team members—roles/relationships
- Diagnostic image reports

### + 3 years Candidate Status
- Individual goals, priorities
- Practitioner responsible for care
- Provider goals, priorities
- Reason for referral
- Referring or transitioning providers—name & contact info

### Not scheduled Emerging Status
- Advance care planning
- Advance directive
- Power of attorney
- POLST
- Alive status/date of death
- Communication facilitators
- Minor consent
- Disability status
- Durable medical equipment
- Health insurance info
- Minor status
- Personal representative
- Social, psychological & behavioral data
- Education
- Overall financial resource strain
- Social support & isolation
- Domestic violence
- Employment status
- Depression
- Stress
- Physical activity
- Alcohol use
- Military history
- Reconciled medication list
- Travel status/history
- Weight-based dosing

---

[HL7 International](https://www.hl7.org)
Gravity Project’s submission for USCDI version 2

<table>
<thead>
<tr>
<th>Domains / Data Elements</th>
<th>Activities</th>
<th>Code Systems / Value Sets</th>
</tr>
</thead>
</table>
| **PHASE 1**             | • Assessments  
  • Problems/Health concerns  
  • Goals  
  • Interventions  
  • Outcomes  
  • Consent | • LOINC  
  ▪ Assessments  
  ▪ Goals  
  ▪ Outcomes (e.g., quality measures)  
  ▪ SNOMED-CT  
  ▪ Problems/Health concerns (clinical)  
  ▪ Interventions (clinical)  
  ▪ ICD-10-CM  
  ▪ Problems/Health concerns (billing)  
  ▪ CPT/HCPCS  
  ▪ Interventions (billing, where available) |
|                         | **PHASE 2** |                          |
|                         | • Social isolation  
  • Stress  
  • Interpersonal violence |                          |

---

**Textual Content:**

Gravity Project’s submission for USCDI version 2

**Domains / Data Elements**

**PHASE 1**
- Food insecurity
- Housing instability & Homelessness
- Housing inadequacy
- Transportation insecurity
- Financial stress
- Employment
- Education
- Veteran status

**PHASE 2**
- Social isolation
- Stress
- Interpersonal violence

**Activities**

- Assessments
- Problems/Health concerns
- Goals
- Interventions
- Outcomes
- Consent

**Code Systems / Value Sets**

- **LOINC**
  - Assessments
  - Goals
  - Outcomes (e.g., quality measures)

- **SNOMED-CT**
  - Problems/Health concerns (clinical)
  - Interventions (clinical)

- **ICD-10-CM**
  - Problems/Health concerns (billing)

- **CPT/HCPCS**
  - Interventions (billing, where available)
Submission to USCDI version 2

In addition to “Comment” and “Level 1” criteria, Level 2 data elements demonstrate extensive existing use in systems and exchange between systems, and use cases that show significant value to current and potential users. These data elements would clearly improve nationwide interoperability. Any burdens or challenges would be reasonable to overcome relative to the overall impact of the data elements.

- **Allergies and Intolerances**
  - Represents harmful or undesirable physiological response associated with exposure to a substance.
  - Substance (Food)
  - Substance (Non-Medication)

- **Laboratory**
  - Laboratory Result Status
  - Laboratory Result Value
  - Laboratory results: date and timestamps
  - Laboratory Test Performed Date
  - Laboratory Test/Panel Code

- **Provenance**
  - The metadata, or extra information about data, that can help answer questions such as when and who created the data.
  - Author

- **Care Team Member(s)**
  - The specific person(s) who participate or are expected to participate in the care team.
  - Provider DEA Number
  - Provider Identifier
  - Provider Location

- **Medical Device or Equipment**
  - Devices used (applied)

- **Social Determinants of Health**
  - Assessment
  - Goals
  - Interventions
  - Outcomes
  - Problems/Health Concerns

- **Medications**
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.
Identify: Definitions
## Subject Matter Experts

### Housing Insecurity/Homelessness
- Allison Bovel - Ammon- Children’s HealthWatch
- Richard Sheward - Children’s HealthWatch
- Susan Walker - HMIS Analyst
- George Carter - HUD

### Transportation Insecurity
- Jennifer Sisto-Gall – Lyft
- Alexandra King - Community Transportation Association of America

### Financial Insecurity
- Dr Ipek Sener - Texas A&M Transportation Institute
- Michael Adelberg – Research Lead, Medical Transportation Access Coalition
- Dr Adam Schickedanz - UCLA Health
- Dr Jeffrey Colvin - U Missouri/Kansas

---

**Housing Insecurity/Homelessness**

- Allison Bovel- Ammon- Children’s HealthWatch
- Richard Sheward- Children’s HealthWatch
- Susan Walker- HMIS Analyst
- George Carter- HUD

**Transportation Insecurity**

- Jennifer Sisto-Gall – Lyft
- Alexandra King- Community Transportation Association of America

**Financial Insecurity**

- Dr Ipek Sener- Texas A&M Transportation Institute
- Michael Adelberg – Research Lead, Medical Transportation Access Coalition
- Dr Adam Schickedanz- UCLA Health
- Dr Jeffrey Colvin- U Missouri/Kansas
Transportation Insecurity- Definition

- **Transportation Insecurity**

  - **Synthesis**
    - Lack of sustainable access to transportation modalities that permit a person to reliably arrive in a safe and timely manner at sites necessary for maintaining that person’s health and well-being due to lack of accessible, reliable, appropriate, or affordable transportation available to the person.
Financial Strain- Definitions

- Financial Strain- A state of being wherein a person has difficulty fully meeting current and/or ongoing financial obligations and/or does NOT feel secure in their financial future

- Material Hardship- the lack of specific socially perceived basic physical necessities
Build: Multi-Domain ICD-10-CM
We are so thankful for the invested effort of our subject matter experts, our coding colleagues from AHIMA and AHA, the investment of our Executive Committee members, and the sustained care of our broad collective.
ICD-10-CM

Multi Domain Social Determinants of Health ICD-10-CM Application
The Gravity Project: Consensus Driven Standards on Social Determinants of Health
December 4th, 2020

Background

Over the last decades a growing literature has clarified the health, and health cost impacts of the social determinants of health. This has sparked initiation and dissemination of national recommendations and projects. However, as we advance to collectively gain insight into social risks and social interventions, the terminology we use to represent these concepts lags behind. In 2017 national experts and thought leaders gathered in Washington, D.C. and identified a three-step process to address terminology needs: collate existing terminology, assess the fitness of existing terms and collaboratively fill and address gaps, and craft a path for data standards to ground this work. Out of this, the Gravity Project was born.

The Gravity Project, convened in 2019, is a national, public, consensus-based community charged with developing data elements, and data standards for the social determinants of health by leveraging the insights of subject matter experts and key stakeholders across the medical and social care community (patients, providers, payers, community-based organizations, vendors, and government). The Project’s terminology recommendations span all U.S. applicable coding systems: ICD-10-CM, SNOMED CT, LOINC, and CPT®/HCPCS when appropriate. (For review of the Gravity Project’s process, principles, members, and full deliverables, please follow the link in “Resources” below.)

In order to frame its work, the Gravity Project conceptualizes concentric rings of determinants. At the center are concerns driven by a person’s own economic resources, or personal and social history. Next come risks of neighborhood resources and characteristics, including utilities, groceries, and neighborhood safety. The initial phase of Gravity’s work focused principally on the risk imparted by lack of personal resources: food insecurity, homelessness, housing instability, inadequate housing, transportation insecurity, and general financial insecurity. However, concerns of less than high school education and veterans were also addressed. In early 2021, the Gravity Project will focus on social connection and domains of interpersonal violence. In later 2021, the Project will focus on elements of digital equity and neighborhood/environmental factors.

The following presents the Gravity Project’s first ICD-10-CM submission. This submission integrates the requests of two previous social risk submissions to the committee from American Medical Association/UnitedHealthcare (AMA/UHC) (multi-domain) and BlueCross BlueShield of Vermont (BCBS VT) (food insecurity), because elements of each have been considered as the Gravity Project progressed.

ICD-10-CM Approach

In every recommendation for using ICD-10-CM to capture the agreed upon data elements the Gravity community has carefully considered the degree of risk associated with each domain, its subdomains, and calculations of domain severity (mild – severe) as presented in the peer-reviewed literature. The reason for this is threefold.

• First, to aid on the ground workers in triaging resources to those most in need, anticipating the aim of analyzing the effects of interventions.
• Second, to anticipate the use of claims data to predict person-level risk within value-based health care and risk adjustment.
• Third, to align with development and dissemination of national social risk quality metrics and Healthy People 2030 Objectives.

Driven by the strong representation of ground level providers and organizations in the Gravity community, and collaboration with colleagues at the American Health Information Management Association (AHIMA) and the American Hospital Association (AHA), the Gravity Project takes care to recommend revisions to the classification that are easily operationalized. All ICD-10-CM recommendations are aligned with standardized screening questions and answers such as PRAPARE, the Accountable Health Screening Tool, or the Health Leads Screening Tools.

Furthermore, it is crucial to highlight that within the evidence-based distinction between personal and neighborhood or environmental risk, the Gravity Project recommends that the Z58 category for classifying problems related to physical environment, be added in order to form the logical root of neighborhood and environmental domains. The Committee will see this initially in our recommendations for “Inadequate drinking water supply” resulting from the splitting of current Z59.4 “Lack of adequate food and safe drinking water.” Although this is the first domain we recommend aligned with this root, we can anticipate more as we work on other neighborhood domains in 2021.

Lastly, this submission is comprehensive, including new subcategories (example: Food insecurity and Housing instability) and subclassifications (example: Severe food insecurity and “Housing instability, housed, homelessness in past 12 months”) respectively. This aligns with the peer-reviewed literature and reflects broad stakeholder requests.

We are grounded in the criticality of having codes for the missing core domains to be able to capture the data at the highest level of specificity. However, should it be the wish of the Committee to start with the subcategory level, then test, evaluate, and revisit, the Gravity Project, supported by federal partners, has a committed forum for this work with its broad coalition of pilot sites. Additionally, we are working with our SNOMED CT partners to build these concepts and further subdomains into SNOMED CT terminology.
Gaps, Recommendations, and Rationales

Education (Less than a high school degree)- although current ICD-10-CM contains general concepts of literacy and underachievement there is, at present no way to distinctly represent the known risk imparted by inability to attain a high school diploma or equivalent, independent of literacy.

Homelessness- although current ICD-10-CM contains a code for homelessness, there is no distinction between sheltered and unsheltered homelessness. COVID discharge planning has given us a critical use case on why this distinction is necessary from both a treatment plan and risk perspective.

Housing Instability- there is a vast literature representing the health risks of economically driven housing instability for individuals and families. Yet, there are no specific codes to define this broad risk nor the specific risk of subtypes of housing instability that segue into homelessness.

Food insecurity- as stated in the previous VT BCBS submission, the health risks and health costs associated with food insecurity are vast. Furthermore, as evidenced by the research of the USDA, risk increases as severity of food insecurity increases. Yet, there is no specific code for food insecurity or its strata of severity. Furthermore, we recommend revising the description of Z59.4 from “Lack of adequate food” into “Food insecurity”. Lack of adequate food could represent both food insecurity (lack of food because of limited economic resources) and neighborhood food access concerns (lack of food because of no groceries in neighborhood). We will recommend a term for neighborhood food access in 2021.

Inadequate drinking water supply- as mentioned above, by suggesting a necessary split of Z59.4, the Gravity Project needed to address the placement of “Inadequate drinking water supply.” This could be placed within Z59 as originally suggested in the VT BCBS submission. However, this is not the most logical placement. In WHO’s ICD-10 this concept is within Z58. The Gravity Project recommends adding Z58 to ICD-10-CM in order to be the base for Inadequate drinking water supply and future neighborhood and environment domains.

Transportation Insecurity- this domain represents both health risks and management complexities as systems consider transportation barriers to care. The Gravity Project proposes an ICD-10-CM code for transportation insecurity.

Financial Insecurity and Material Hardship- Currently ICD-10-CM contains terminology for low income and poverty. However, the health risks driven by limited financial resources are not limited to low income or impoverished individuals. Financial Insecurity (“A subjective evaluation of one's current financial situation that includes perceived inadequacy of financial resources and financial concerns or worries, including expectations regarding one's future economic situation”) and the more severe Material Hardship ("unable to obtain basic needs") can be considered broad terms that identify all economic-driven social risk. A clear outcome of Gravity’s work was the understanding that there is a need for a general concept for financial insecurity and material hardship as the health risks and management needs of each are clear in the peer-reviewed literature and excluded from the individual domains such as food insecurity, housing instability, or transportation insecurity. Furthermore, it is critical to define risk beyond low income and poverty thresholds. These two concepts also streamline the granular recommendations of the UHC/AMA submission. Akin to transportation insecurity, we recommend two codes only.

Socioeconomic Risk Counseling- we highlight the need for a specific counseling code to represent the effort of assessing and patient centered goal setting required to address socioeconomic risks.

Non-compliance and financial hardship- based on existing Z91.120 Patient’s intentional underdoing of medication regimes due to financial hardship, we recommend correlogating codes within the “dietary” and “other medication treatment and regimen” roots. Uses cases for these include the inability to follow diabetes nutrition recommendations (the risk of this is well documented in the peer-reviewed literature) and the rationing of office visits and orders because of underinsurance.

Veterans- There is no ICD-10-CM code to represent veteran status. The existing code Z91.82, personal history of military deployment, is often incorrectly applied (one can be a veteran and never be deployed). The need for an ICD-10-CM code to capture the data element, personal history of military service, is accentuated by dissemination of community care of Veterans through the “Veterans Choice Program.” If accepted a map from the existing SNOMED CT “Served in armed forces” concept to the new code would be possible.

TABULAR MODIFICATION

<p>| Z55 Problems related to education and literacy |
| Excludes1: disorder of psychological development (F80-F89) |
| Z55.5 Less than a high school diploma |
| Add |
| No high school equivalency (GED) |
| Add |
| Did not graduate high school |
| Add |
| Less than high school graduate (LTHSG) |
| Z58 Problems related to physical environment |
| Z58.6 Inadequate drinking-water supply |
| Excludes1: effects of thirst (T73.1) |
| Lack of safe drinking water |
| Z59 Problems related to housing and economic circumstances |
| Excludes2: problems related to upbringing (Z62—) |
| Z59.0 Homelessness |</p>
<table>
<thead>
<tr>
<th>New code</th>
<th>Z59.01</th>
<th>Sheltered homelessness</th>
</tr>
</thead>
<tbody>
<tr>
<td>Add</td>
<td></td>
<td>Living in a shelter (motel, temporary or transitional living situation, scattered site housing)</td>
</tr>
<tr>
<td>Add</td>
<td></td>
<td>Doubled up</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>New code</th>
<th>Z59.02</th>
<th>Unsheltered homelessness</th>
</tr>
</thead>
<tbody>
<tr>
<td>Add</td>
<td></td>
<td>Residing in place not meant for human habitation (cars, parks, sidewalk, abandoned buildings)</td>
</tr>
<tr>
<td>Add</td>
<td></td>
<td>Residing on the street</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>New code</th>
<th>Z59.09</th>
<th>Homelessness unspecified</th>
</tr>
</thead>
</table>

| Revise | Z59.04 | Lack of adequate food and safe drinking water Food insecurity |
| Delete  |       | Inadequate drinking water supply |
| Delete  |       | Excludes: effects of hunger (T73.0) |
| Delete  |       | inappropriate diet or eating habits (Z72.4) |
| Delete  |       | malnutrition (E40-E46) |

<table>
<thead>
<tr>
<th>New code</th>
<th>Z59.41</th>
<th>Mild food insecurity</th>
</tr>
</thead>
<tbody>
<tr>
<td>New code</td>
<td>Z59.42</td>
<td>Moderate food insecurity</td>
</tr>
<tr>
<td>New code</td>
<td>Z59.43</td>
<td>Severe food insecurity</td>
</tr>
<tr>
<td>New code</td>
<td>Z59.49</td>
<td>Food insecurity, unspecified</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Z59.8</th>
<th>Other problems related to housing and economic circumstances</th>
</tr>
</thead>
<tbody>
<tr>
<td>Delete</td>
<td>Foreclosure on loan</td>
</tr>
<tr>
<td>Delete</td>
<td>Isolated dwelling</td>
</tr>
<tr>
<td>Delete</td>
<td>Problems with creditors</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>New subcategory</th>
<th>Z59.81</th>
<th>Housing instability, housed</th>
</tr>
</thead>
<tbody>
<tr>
<td>Add</td>
<td></td>
<td>Behind on rent or mortgage</td>
</tr>
<tr>
<td>Add</td>
<td></td>
<td>Unwanted multiple moves in the last 12 months</td>
</tr>
</tbody>
</table>

| New code | Z59.811 | Housing instability, housed, with risk of homelessness |
| Add      |        | Imminent risk of homelessness |

| New code | Z59.812 | Housing instability, housed, homelessness in past 12 months |
| Add      |        | Inadequate transportation |

| New code | Z59.819 | Housing instability, housed unspecified |
| Add      |        | Inadequate transportation |

| Z59.82 | Transportation insecurity |
| Add     | Excessive transportation time |
| Add     | Inadequate transportation |

<table>
<thead>
<tr>
<th>Z59.8</th>
<th>Other problems related to housing and economic circumstances</th>
</tr>
</thead>
<tbody>
<tr>
<td>Delete</td>
<td>Foreclosure on loan</td>
</tr>
<tr>
<td>Delete</td>
<td>Isolated dwelling</td>
</tr>
<tr>
<td>Delete</td>
<td>Problems with creditors</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>New subcategory</th>
<th>Z59.81</th>
<th>Housing instability, housed</th>
</tr>
</thead>
<tbody>
<tr>
<td>Add</td>
<td></td>
<td>Behind on rent or mortgage</td>
</tr>
<tr>
<td>Add</td>
<td></td>
<td>Unwanted multiple moves in the last 12 months</td>
</tr>
</tbody>
</table>

| New code | Z59.811 | Housing instability, housed, with risk of homelessness |
| Add      |        | Imminent risk of homelessness |

| New code | Z59.812 | Housing instability, housed, homelessness in past 12 months |
| Add      |        | Inadequate transportation |

| New code | Z59.819 | Housing instability, housed unspecified |
| Add      |        | Inadequate transportation |

| Z59.82 | Transportation insecurity |
| Add     | Excessive transportation time |
| Add     | Inadequate transportation |
| Add | Lack of transportation |
| Add | Unaffordable transportation |
| Add | Unreliable transportation |
| Add | Unsafe transportation |

**New code**

Z59.86 Financial insecurity, not elsewhere classified

**New code**

Z59.87 Material hardship, not elsewhere classified

**New code**

Z59.88 Other problems related to housing and economic circumstances

**New code**

Z71.85 Encounter for counseling for socioeconomic factors

**Add**

Excludes2: contact with and (suspected) exposures hazardous to health (Z77.-)

- Exposure to pollution and other problems related to physical environment (Z77.1-)
- Female genital mutilation status (N90.81-)
- Personal history of physical injury and trauma (Z87.81, Z87.82-)
- Occupational exposure to risk factors (Z57.-)

**Add**

Z91.1 Patient’s noncompliance with medical treatment and regimen

**Add**

Z91.11 Patient’s noncompliance with dietary regimen

- Z91.110 Patient’s noncompliance with dietary regimen due to financial hardship
- Z91.118 Patient’s noncompliance with dietary regimen for other reasons

**Add**

Z91.19 Patient’s noncompliance with other medical treatment and regimen

- Z91.190 Patient’s noncompliance with other medical treatment and regimen due to unspecified reason
- Z91.198 Patient’s noncompliance with other medical treatment and regimen due to unspecified reason

**Add**

Z91.85 Personal history of military service

**Add**

Z91.85 Personal risk factors, not elsewhere classified
ICD-10-CM Letters of Support

- The next step for the submission is review at the March 9-10 ICD-10-CM Coordination and Maintenance Committee Meeting.
- Should any member wish to send a letter of support, please send these directly to the committee at E-mail: nchsicd10cm@cdc.gov
  - Aim to send prior to 1/30/2020 to help make the case for review
Key points one might highlight in a letter

- The broad stakeholder representation
- The risk-based approach to diagnosis development as detailed in the rationale:
  1. To aid on the ground workers in triaging resources to those most in need, anticipating the aim of analyzing the effects of interventions.
  2. To anticipate the use of claims data to predict person-level risk within value-based health care and risk adjustment.
  3. To align with development and dissemination of national social risk quality metrics and Healthy People 2030 Objectives
Key points one might highlight in a letter

- The pressing need for these concepts during the pandemic
  - COVID positive individuals experiencing homelessness, sheltered vs unsheltered
  - Consider the poor economic outcomes
    - Increasing food insecurity rates
    - Increasing risk of eviction and housing instability
    - Increasing financial strain

*All of these are detailed on the ICD-10-CM Submission Page on the Confluence here: [https://confluence.hl7.org/display/GRAV/ICD-10+Coding+Submissions](https://confluence.hl7.org/display/GRAV/ICD-10+Coding+Submissions)*
Identify: Goals Consensus
Goals Consensus

- We are meeting with HL7 PCWG
- One of the things we are exploring is the relationship between goals and protective factors...
- If goals are “a desired state” can we build protective factors for use, as is appropriate, in global goal setting?

- Social determinants are not all risk!
Social Risks, Action Steps, Goals, and Protective Factors

- Social Risks
  - Subdomain
  - Subdomain

- Action Steps

- Protective Factors
  - Subdomain
  - Subdomain

- Action Steps

- Transportation Insecurity
  - Lack of transportation (ride)
  - Inadequate transportation (ride)
  - Unaffordable Transportation (ride)
  - Inaccessible Transportation (ride)
  - Unsafe Transportation (ride)
  - Unreliable Transportation (ride)
  - Excessive Transportation (ride) Time

- Transportation Security
  - Has transportation
  - Adequate Transportation
  - Affordable Transportation
  - Accessible Transportation
  - Safe Transportation
  - Reliable Transportation
  - ...
Identify: Interventions Huddle
Interventions Initiative

- We met as a subgroup on 11/20
- *Now collective cross domain collation of programs*
- *Please all thoughts back by 12/22*

- *If any others would like to help, please send an email to gravityproject@emiadvisors.net*
Initial Transportation Program Brainstorm
Community Homework and Next Steps
Homework

- **General**
  - Catch up as needed on materials and recordings on Gravity Project Materials Confluence page

- **Transportation Insecurity**
  - Submit new concepts: via excel and email
    - [https://confluence.hl7.org/display/GRAV/Transportation+Domain](https://confluence.hl7.org/display/GRAV/Transportation+Domain)

- **Financial Strain**
  - Submit new concepts: via excel and email
    - [https://confluence.hl7.org/display/GRAV/Financial+Domain](https://confluence.hl7.org/display/GRAV/Financial+Domain)

- **Demographics: Education, Veteran Status, and Employment**
  - Submit new concepts: via excel and email
    - [https://confluence.hl7.org/display/GRAV/Demographics+Domain](https://confluence.hl7.org/display/GRAV/Demographics+Domain)
Next Steps

- 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

LinkedIn: Gravity Project
Twitter: @thegavityproj
Back-Up
Overview: Gravity Terminology
Development Process
Gravity Terminology Development Process

1. Data Set Identification
2. Coding Gap Analysis & Recommendations
3. New Code Submissions (LOINC, SNOMED, ICD-10-CM)
4. Development of Coded Value Sets
5. Value Set Publication
Community Terminology Development

A. Community Terminology Development

1. The anchor of every domain is the SIREN compendium of existing SDOH terminology – a study of what exists

2. Domain relevant terms are gleaned from the compendium and adjudicated against the literature

3. A collective brainstorming enriches the Master List
   1. Always published on Confluence

4. Concepts are added, refined, *and defined*, until we’ve a representative set aligned with literature and practice

5. Consensus Review and Voting
Gravity Overview: Two Streams

SDOH Domains (Terminology)

1. Data Set Identification
2. Coding Gap Analysis & Recommendations
3. New Code Submissions
4. Publication in NLM VSAC & ONC ISA

CODED VALUE SETS

Technical (FHIR)

1. FHIR IG Ballot & Publication
2. FHIR IG Development
3. FHIR IG Testing
4. Community & FHIR Coordination
## Adjudication Dispositions - Review

<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 to 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, not fit for purpose</td>
<td>Will be noted on adjudication file with reason</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 submitter</td>
<td>Will be noted on adjudication file with reason</td>
</tr>
</tbody>
</table>