

The Gravity Project: Consensus-driven Standards on Social Determinants of Health

NAM: Building Data Capacity for PCOR

May 24, 2021



Evelyn Gallego, EMI Advisors LLC



Agenda

- Overview (WHY)
- Project Scope (WHAT)
- Accomplishments & Success Factors
- Building Data Capacity for PCOR
- How to Engage

Overview

Why SDOH is Important

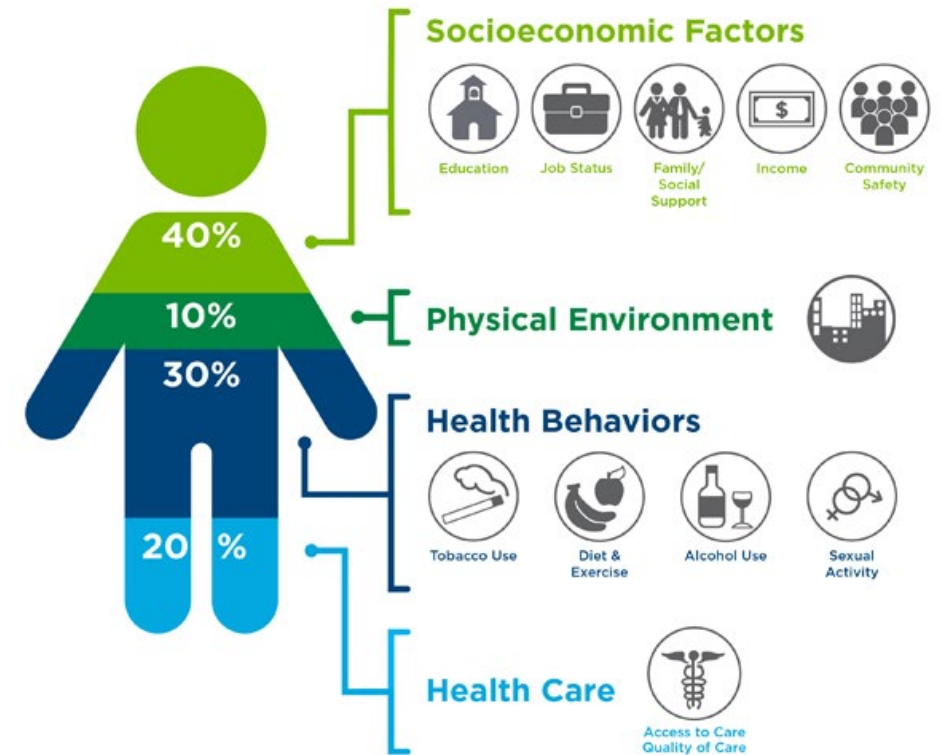
There is growing awareness that SDOH information improves whole person care and lowers cost. Unmet social needs negatively impact health outcomes.

- **Food insecurity** correlates to higher levels of diabetes, hypertension, and heart failure.
- **Housing instability** factors into lower treatment adherence.
- **Transportation barriers** result in missed appointments, delayed care, and lower medication compliance

Addressing SDOH is a primary approach to achieve health equity.

<https://www.cdc.gov/nchhstp/socialdeterminants/faq.html>

What Goes Into Your Health?



Source: Institute for Clinical Systems Improvement, Going Beyond Clinical Walls: Solving Complex Problems (October 2014)

The Bridgespan Group

[https://www.bridgespan.org/insights/library/public-health/the-community-cure-for-health-care-\(1\)](https://www.bridgespan.org/insights/library/public-health/the-community-cure-for-health-care-(1))

Uses for Social Risk Data in Clinical Settings



Challenges in SDOH Data Capture and Exchange

- Consent Management
- Standardization of SDOH Data Collection and Storage
- Data Sharing Between Ecosystem Parties
- Access & Comfort with Digital Solutions
- Concerns about Information Collection and Sharing
- Social Care Sector Capacity and Capability
- Unnecessary Medicalization of SDOH

https://www.nasdoh.org/wp-content/uploads/2020/08/NASDOH-Data-Interoperability_FINAL.pdf

Enter the Gravity Project...

Goal- Develop consensus-driven data standards to support use and exchange of social determinants of health (SDOH) data within the health care sectors and between the health care sector and other sectors.



Domains grounded by those listed in the NASEM [“Capturing Social and Behavioral Domains in Electronic Health Records”](#) 2014

Project Scope

In May 2019, the [Gravity Project](#) was launched as a multi-stakeholder public collaborative with the goal to develop, test, and validate standardized SDOH data for use in patient care, care coordination between health and human services sectors, population health management, public health, value-based payment, and clinical research.

The Gravity Project was initiated by the Social Interventions Research and Evaluation Network (SIREN) with funding from the Robert Wood Johnson Foundation and in partnership with EMI Advisors LLC.

Gravity Project Scope: Develop data standards to represent patient level SDOH data documented across four clinical activities: screening, assessment/diagnosis, goal setting, and treatment/interventions.

Public Collaboration

Gravity has convened over **1,800+** participants from across the health and human services ecosystem:

- clinical provider groups
- community-based organizations
- standards development organizations
- federal and state government
- payers
- technology vendors

Public Calls 4-5:30 EST every other Thursday

<https://confluence.hl7.org/pages/viewpage.action?pageId=46892669#JointheGravityProject-GravityProjectMembershipList>



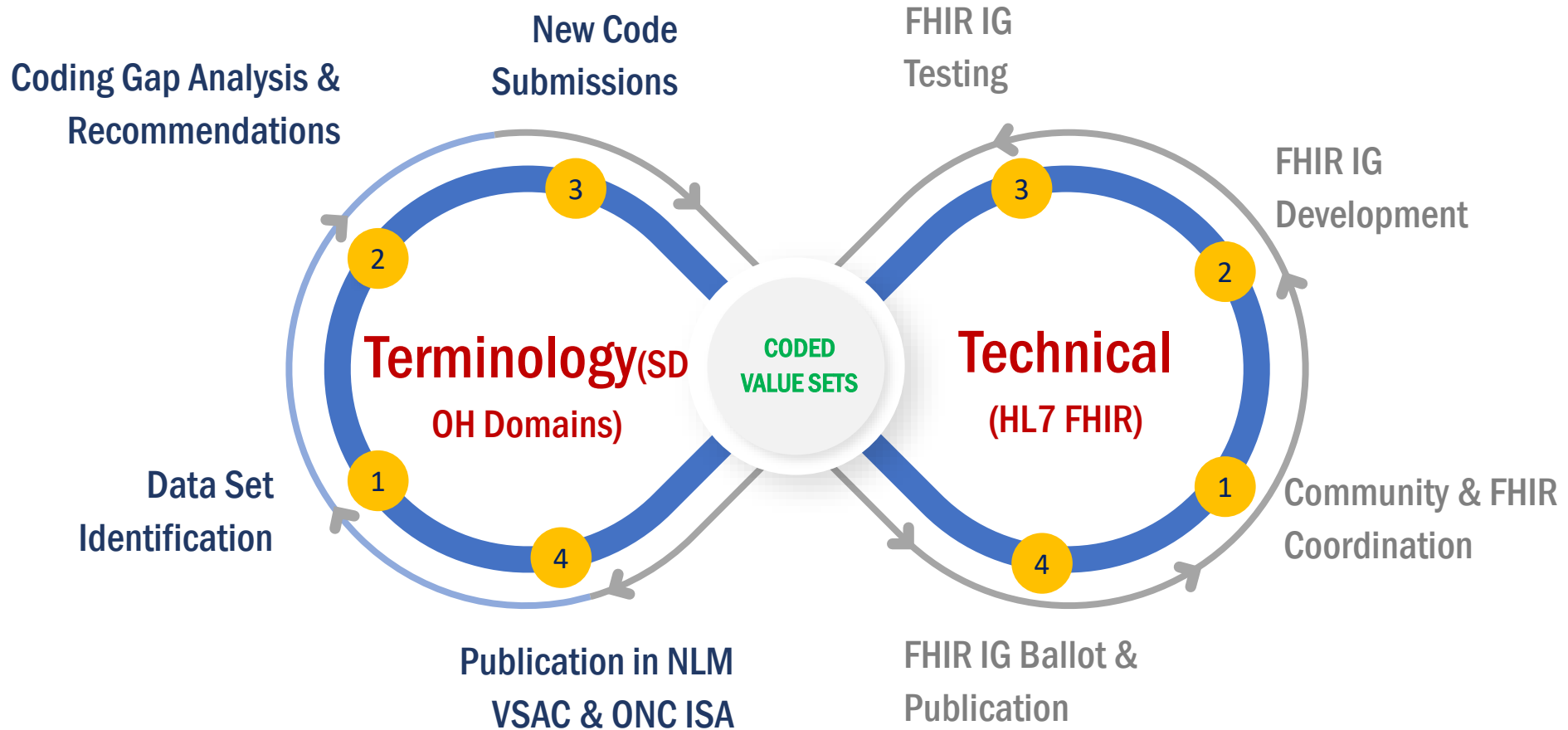
Project Founders, Grants, and In-Kind Support To-Date



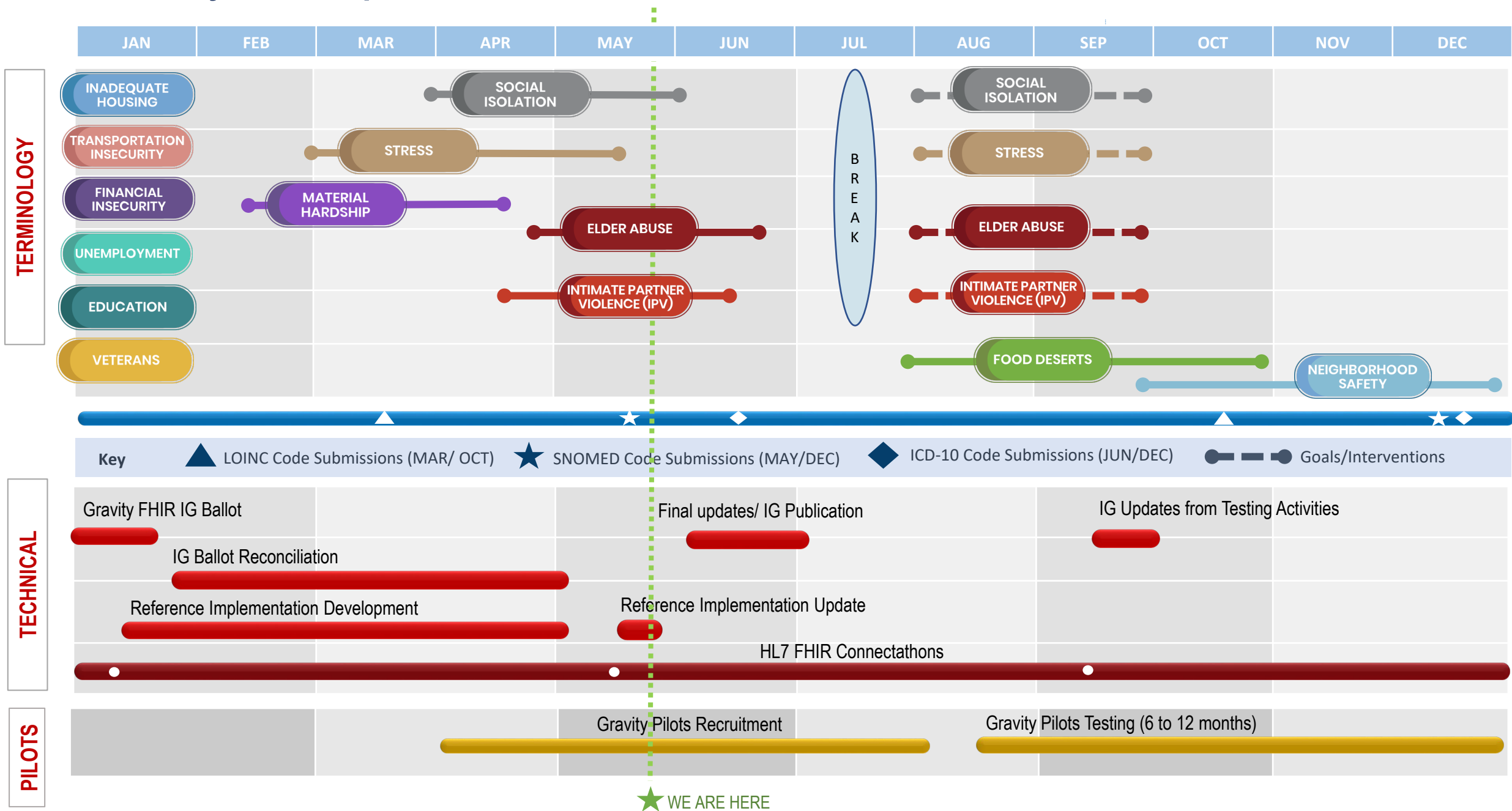
<https://confluence.hl7.org/display/GRAV/Gravity+Project+Sponsors>



Gravity Overview: Two Streams



2021 Gravity Roadmap

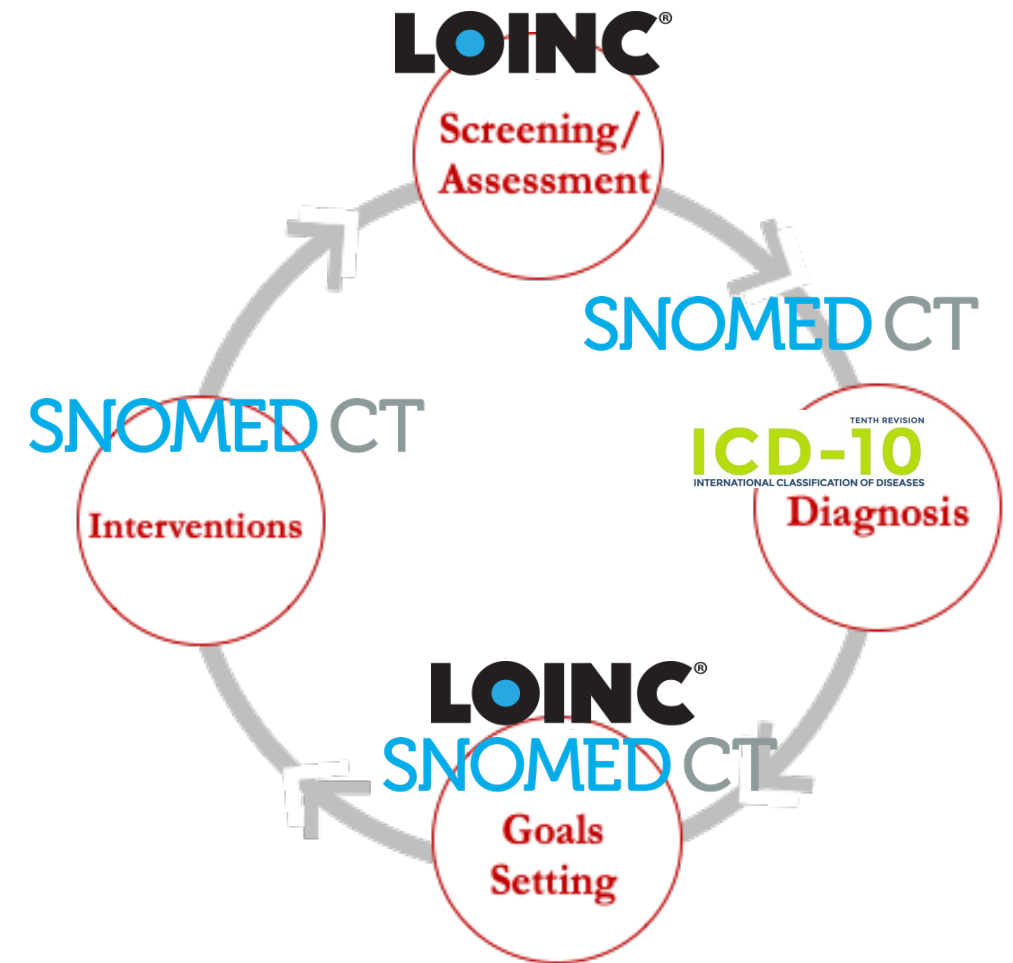


Terminology Workstream

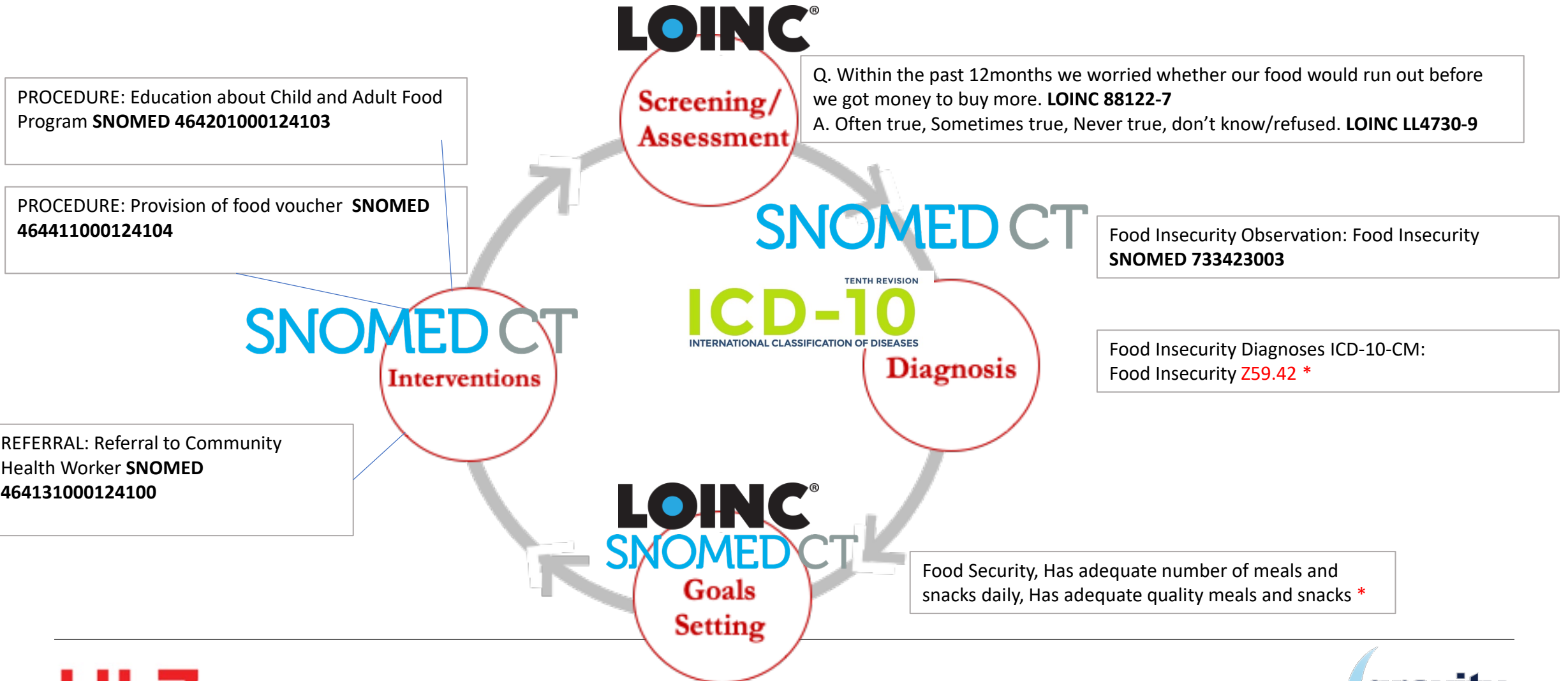
Terminology Workstream

Data Element and Ensuring Gap Analysis

- All data is sorted across four activities into a master set.
- For data within each domain, we ask:
 - What concepts need to be documented across the four activities?
 - What codes reflecting these concepts are currently available?
 - What codes are missing?



Food Insecurity Terminology Build



Interventions Framework

Gravity Term	Definitions
Assistance/ Assisting	To give support or aid to; help
Coordination	Process of organizing activities and sharing information to improve effectiveness
Counseling	Psychosocial procedure that involves listening, reflecting, etc. to facilitate recognition of course of action / solution.
Education	Procedure that is synonymous with those activities such as teaching, demonstration, instruction, explanation, and advice that aim to increase knowledge and skills.
Evaluation of eligibility (for <x> Subtype of Evaluation	Process of determining eligibility by evaluating evidence
Evaluation/ Assessment	Determination of a value, conclusion, or inference by evaluating evidence.
Provision	To supply/make available for use
Referral	The act of clinicians/providers sending or directing a patient to professionals and/or programs for services (e.g., evaluation, treatment, aid, information, etc.)

Applicable Intervention Codes for OAA Nutrition Programs

Intervention	SNOMED-CT Code/ Data Element
Assistance/ Assisting	467801000124106: Assistance with application for Community meal Program 467731000124106: Assistance with application for Home-Delivered meals Program
Education	464351000124105: Education about Congregate Meal Program 464211000124100: Education about Community Meals Program 464261000124102: Education about home-delivered meals program 464341000124108: Education about Senior Farmers' Market Nutrition Program
Evaluation of eligibility	467661000124106: Evaluation of eligibility for Community Meal Program 464621000124105: Evaluation of eligibility for home-delivered meals program
Provision	464421000124107: Provision of home-delivered meals 464431000124105: Provision of medically tailored meals
Referral	464151000124107: Referral to Congregate Meal Program 464081000124100: Referral to home-delivered meals program 464091000124102: Referral to medically tailored meal program 464171000124102: Referral to Senior Farmers' Market Nutrition Program



Where to find Published Gravity Data Sets?

Dashboard / The Gravity Project

Terminology Workstream Dashboard

Created by Carrie Lousberg, last modified by Sara Behal on Apr 21, 2021

Overview and Information

 Terminology Overview	 Education Materials	 Coding Submissions	 Data Element Submission	 Community Meeting
---	--	---	--	--

Domains

FOOD INSECURITY	HOUSING INSTABILITY	INADEQUATE HOUSING	TRANSPORTATION INSECURITY	FINANCIAL INSECURITY
	HOMELESSNESS			MATERIAL HARDSHIP
UNEMPLOYMENT	STRESS	SOCIAL ISOLATION	INTIMATE PARTNER VIOLENCE (IPV)	ELDER ABUSE
EDUCATION				
VETERANS				

ICD-10 CM Submission & March 10th Presentation



ICD-10 Coordination and Maintenance Committee Meeting

Diagnosis Agenda

Zoom Webinar and Dial-In Information

- This meeting will be conducted via Zoom Webinar. The URL to join the Zoom Webinar, the password, and the call-in numbers are the same for both days of the meeting
- Day 1: March 9, 2021: The meeting will begin promptly at 9:00 AM ET and will end at 5:00 PM ET. Lunch will be held from 12:30 PM to 1:30 PM.
- Day 2: March 10, 2021: The meeting will begin promptly at 9:00 AM ET and will end at 5:00 PM ET. Lunch will be held from 12:30 PM to 1:15 PM.

ICD-10 Coordination and Maintenance Committee Meeting March 9-10, 2021

Z59 Problems related to housing and economic circumstances Excludes2: problems related to upbringing (Z62.-)

New subcategory	Z59.0 Homelessness
New code	Z59.00 Homelessness unspecified
New code	Z59.01 Sheltered homelessness
Add	Doubled up
Add	Living in a shelter such as: motel, temporary or transitional living situation, scattered site housing
New code	Z59.02 Unsheltered homelessness
Add	Residing in place not meant for human habitation such as: cars, parks, sidewalk, abandoned buildings
Add	Residing on the street
Revise	Z59.4 Lack of adequate food and safe drinking water
Delete	Inadequate drinking water supply
	Excludes1: effects of hunger (T73.0)
	inappropriate diet or eating habits (Z72.4)
	malnutrition (E40-E46)
New code	Z59.41 Lack of adequate food
Add	Inadequate food
Add	Lack of food
New code	Z59.42 Food insecurity
	Z59.8 Other problems related to housing and economic circumstances
	Foreclosure on loan
	Isolated dwelling
	Problems with creditors
New sub subcategory	Z59.81 Housing instability, housed
Add	Past due on rent or mortgage
Add	Unwanted multiple moves in the last 12 months
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

Technical Workstream

HL7 SDOH Clinical Care FHIR Implementation Guide

1. This is a framework Implementation Guide (IG) and supports multiple domains
2. IG support the following clinical activities
 - Assessments
 - Health Concerns / Problems
 - Goals
 - Interventions including referrals
 - Consent
 - Aggregation for exchange/reporting
3. Completed January 2021 ballot as a Standard for Trial Use Level 1 (STU1)
4. Target June 2021 for publication

HL7 International

SDOH Clinical Care 0.1.0 - STU 1

HL7 FHIR

IG Home Table of Contents Background Context Specifications Downloads Artifact Index

Table of Contents > Home Page

This page is part of the SDOH Clinical Care for Multiple Domains (v0.1.0: STU 1 Ballot 1) based on FHIR R4. For a full list of available versions, see the Directory of published versions of IG.

1 Home Page

1.1 Overview

Social Determinants of Health (SDOH) are increasingly being recognized as essential factors that influence healthcare outcomes. This HL7 Implementation Guide (IG) defines how to exchange SDOH content defined by the Gravity Project using the Fast Healthcare Interoperability Resources (FHIR) standard. It defines how to represent coded content used to support the following care activities: screening, clinical assessment/diagnosis, goal setting, and the planning and performing of interventions. This IG addresses the need to gather SDOH information in the context of clinical encounters and describes how to share SDOH information and other relevant information with outside organizations for the purpose of coordinating services and support to address SDOH related needs. In addition, the IG demonstrates how to share clinical data to support secondary purposes such as population health, quality, and research. The guide supports the following use cases:

- Document SDOH data in conjunction with the patient encounters
- Document and track SDOH related interventions to completion
- Gather and aggregate SDOH data for uses beyond the point of care (e.g. public health, population health, quality measurement, risk adjustment, quality improvement, and research)

This implementation guide was developed under the auspices of the Gravity FHIR accelerator project, which specifically focuses on using HL7 FHIR to define standards for the exchange of SDOH-related information. Both the project and this implementation guide are focused on the U.S. environment. This implementation guide leverages content from the US Core implementation guide and binds to US-specific terminology. However, the basic constructs and interaction patterns may well be applicable outside the U.S.

1.2 Content and organization

The implementation guide is organized into the following sections:

- **Background:** Includes [Gravity Background](#), [SDOH Clinical Care Scope](#), [Personas and Patient Stories](#) that describe the SDOH environment surrounding the intended use of this implementation guide
- **Context:** Describes the [Survey Instrument Support](#), [QuestionnaireResponse Mapping Instructions](#), [Support for Multiple Domains](#), and [Exchange Workflow diagram](#) that describes a high-level overview of expected process flow
- **Specifications:** Provides a [Technical Background](#), overview of the [FHIR Artifacts](#) defined and used in this IG, description of [Privacy and Security](#) issues, and explains [MustSupport and Missing Data](#) concepts
- **Downloads:** Provides for the download of various IG related artifacts
- **Credits:** Identifies the individuals and organizations involved in developing this implementation guide
- **Artifacts Index:** Introduces and provides links to the FHIR R4 profiles, examples and other FHIR artifacts used in this implementation guide

1.3 Authors

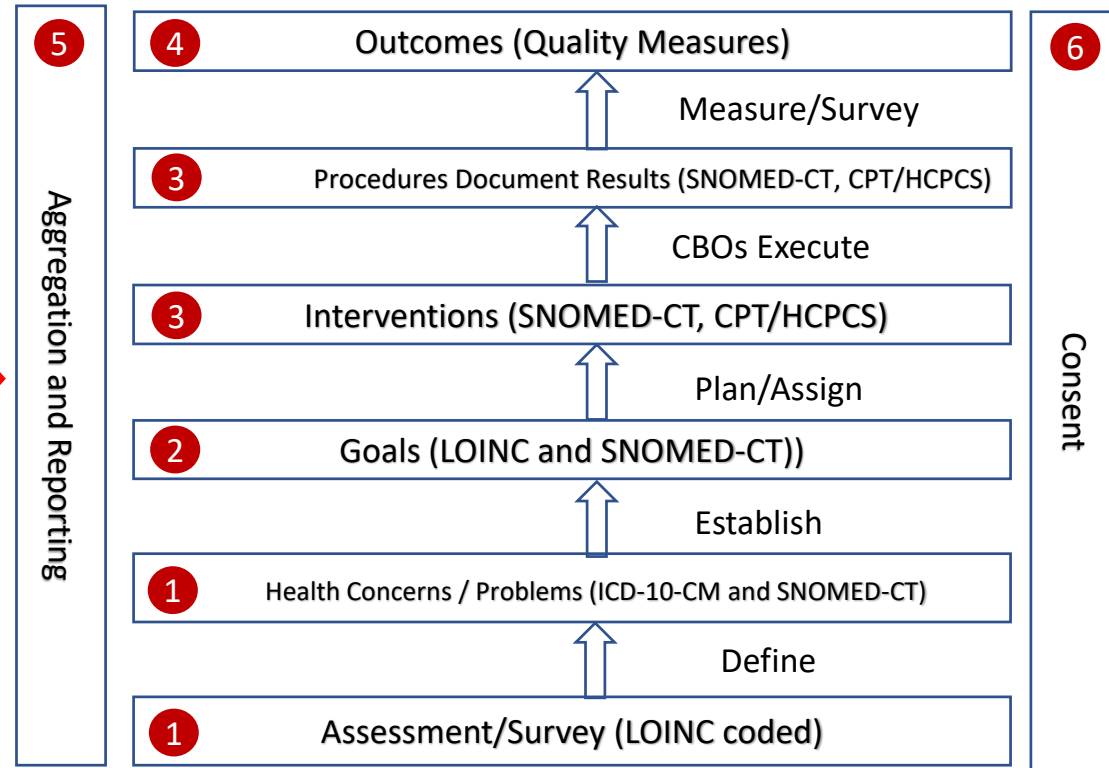
Name	Email/URL
HL7 International - Patient Care	http://www.hl7.org/Special/committees/patientcare

Next Page - Gravity Background

IG © 2020+ HL7 International - Patient Care WG. Package hl7.fhir.us-sdoh-clinicalcare#0.1.0 based on FHIR 4.0.1. Generated 2020-12-16
Links: [Table of Contents](#) | [QA Report](#) | [Version History](#) | [Search](#) | [Feedback](#) | [Propose a change](#)

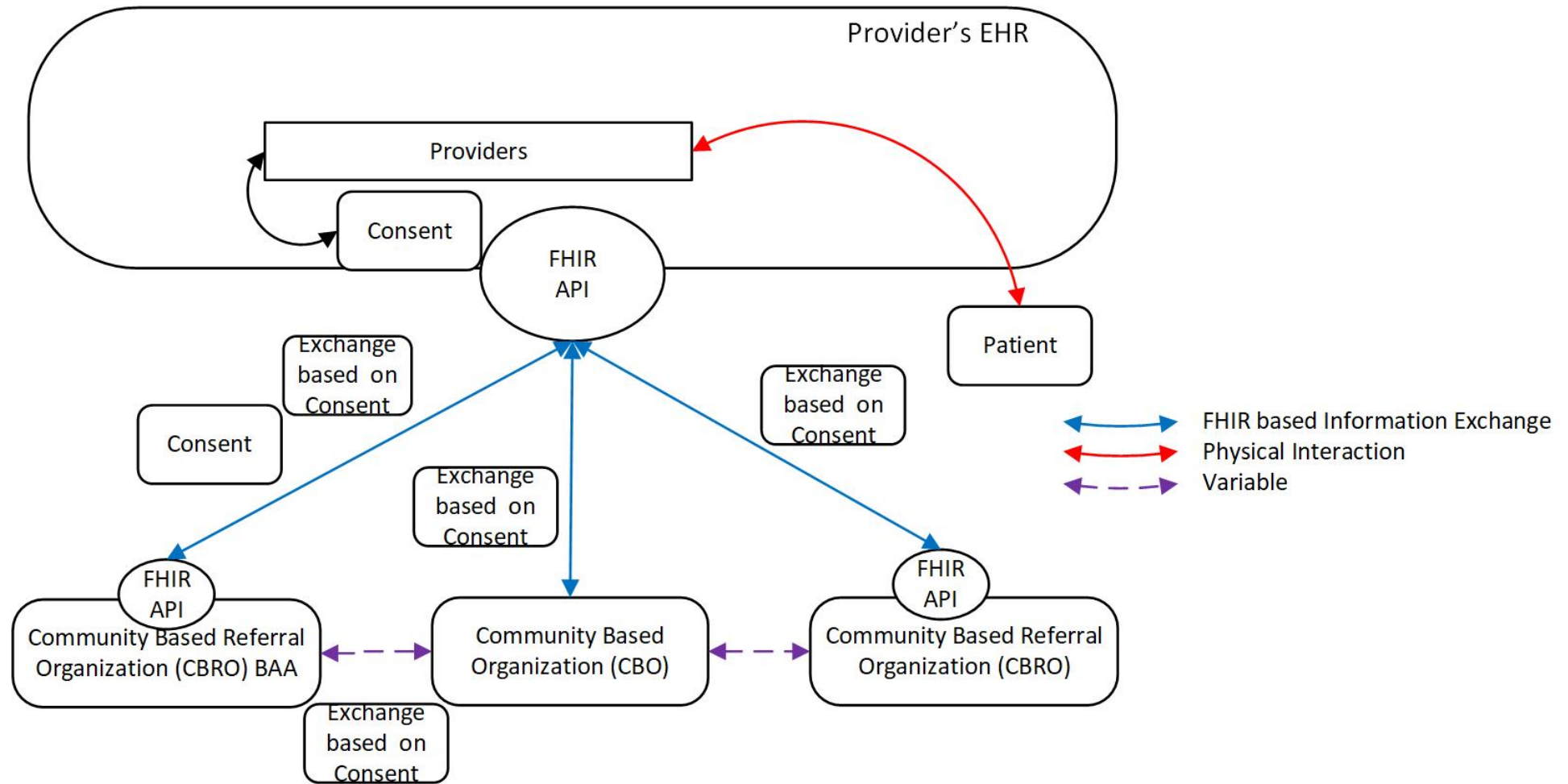
Gravity FHIR IG Scope

- 1 Document SDOH data in conjunction with the patient encounter and define Health Concerns / Problems.
- 2 Patient and provider establish SDOH related goals.
- 3 Plan, communicate, and track related interventions to completion.
- 4 Measure outcomes.
- 5 Establish cohorts of patients with common SDOH characteristics for uses beyond the point of care (e.g., population health management, quality reporting, and risk adjustment/ risk stratification).
- 6 Manage patient consent



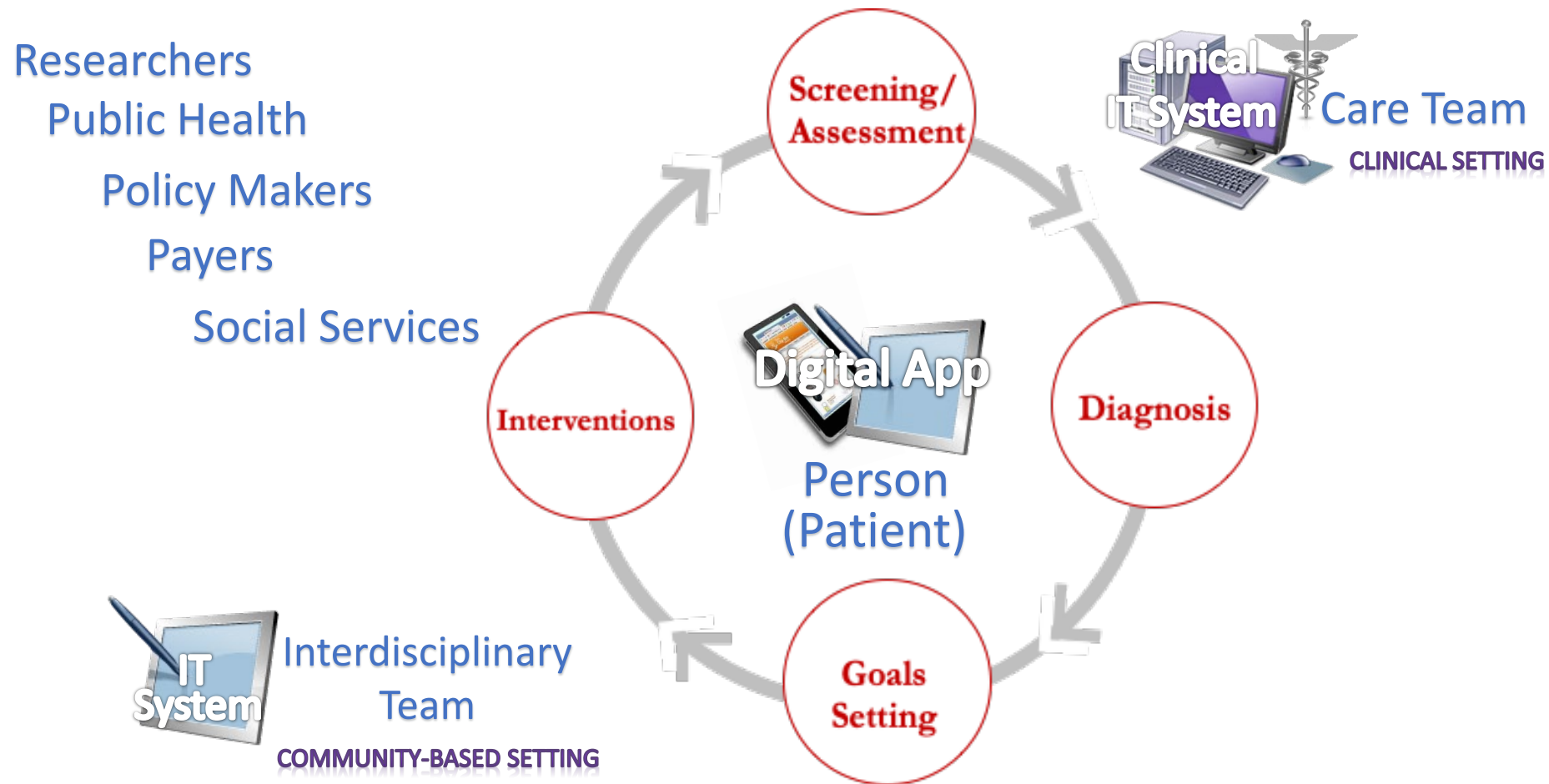
<http://build.fhir.org/ig/HL7/fhir-sdoh-clinicalcare/>

Consent exchange for SDOH Clinical Care IG



Building Data Capacity for SDOH Research

Conceptual Framework



Interoperability Glide Path: Domain Data Sets & IGs

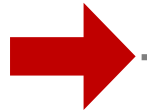
Accelerate standards development and uptake

SDOH Data Sets



Develop and test coded value sets for use in FHIR

Refine, test, and ballot HL7® FHIR® SDoH Implementation Guide



Accomplishments & Success Factors

Success Factors—Integration of Data Standards Into...

INNOVATION:

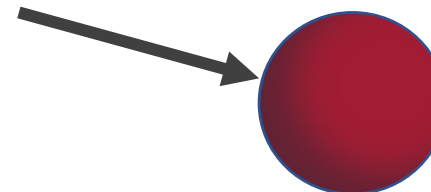
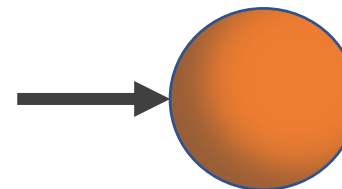
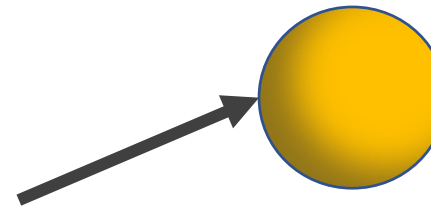
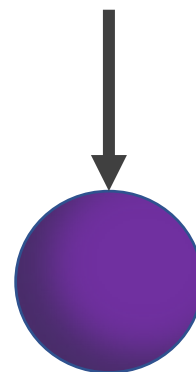
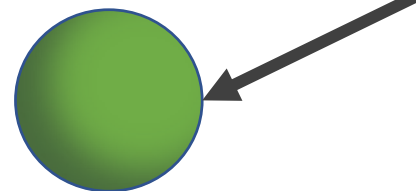
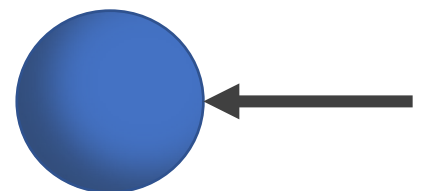
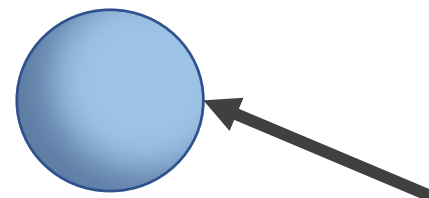
New tools for capture, aggregation, analytics, and use.

PRACTICE:

(e.g., repeatable process for adoption, implementation, and use of SDOH data at practice level.

GRANTS:

(e.g., ACL Challenge Grant, ONC Health IT LEAP)



POLICY: (e.g., ONC USCDI, CMS Promoting Interoperability, State Medicaid Director Letters)



PAYMENT MODELS: (e.g., CMMI SDOH Model)

PROGRAMS: (e.g., Medicare Advantage, Medicaid Managed Care, Hospital QRRP, MIPS).

OTHER STANDARDS: HL7 FHIR Accelerators (DaVinci, Argonaut, CARIN)

How to Engage!

Join our Project!

- Join the Gravity Project: <https://confluence.hl7.org/display/GRAV/Join+the+Gravity+Project>
 - Public Collaborative Workgroup meets bi-weekly on **Thursdays' 4:00 to 5:30 pm ET**
 - SDOH FHIR IG Workgroup meets weekly on **Weds. 3:00 to 4:00 pm ET**
- Help us find new sponsors and partners
- Give us feedback on the Data Principles:
<https://confluence.hl7.org/display/GRAV/Gravity+Data+Principles>
- Submit SDOH domain data elements (especially for Interventions):
<https://confluence.hl7.org/display/GRAV/Data+Element+Submission>
- Help us with Gravity Education & Outreach
 - Use Social Media handles to share or tag us to relevant information
 -  @the gravityproj
 -  <https://www.linkedin.com/company/gravity-project>
 - Partner with us on development of blogs, manuscripts, dissemination materials

Questions?

Evelyn Gallego

evelyn.gallego@emiadvisors.net

Twitter: @egallego

LinkedIn: [linkedin.com/in/egallego/](https://www.linkedin.com/in/egallego/)

Additional questions? Contact:
gravityproject@emiadvisors.net



@thegravityproj



<https://www.linkedin.com/company/gravity-project>

<https://thegravityproject.net/>