



The Gravity Project

HITAC ISP TF Presentation

Robert Dieterle, Gravity Project Technical Director

April 8, 2021

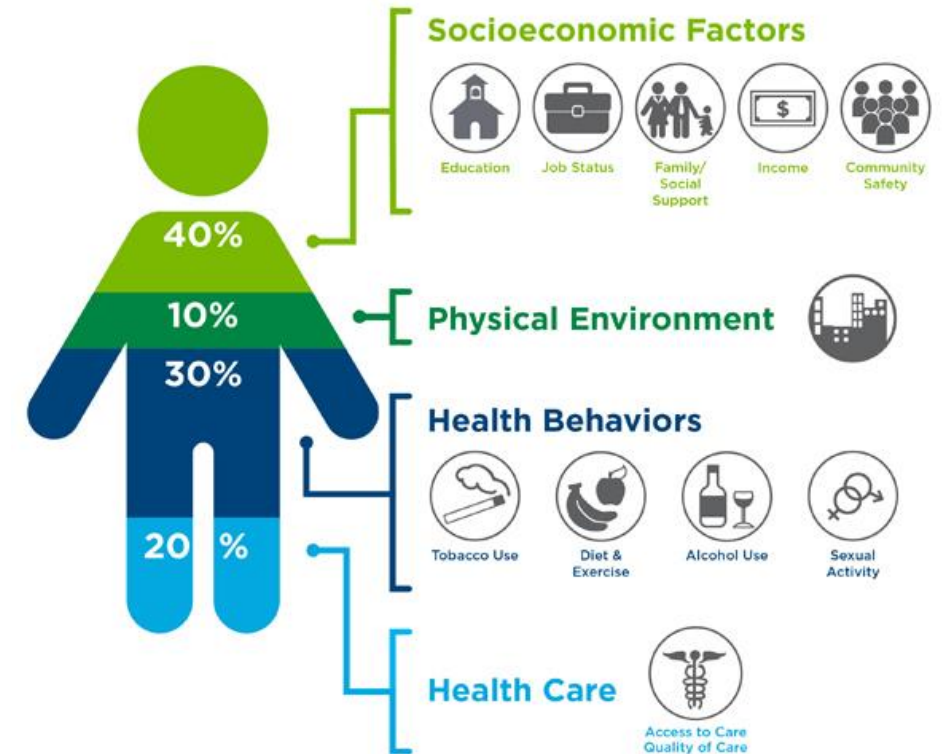


Why Social Determinants of Health (SDOH) are Important

There is growing consensus 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

What Goes Into Your Health?



<https://www.bridgespan.org/insights/library/public-health/the-community-cure-for-health-care-1>
Source: Institute for Clinical System Improvement, Going Beyond the Top 100 (October 2014)
The Bridgespan Group

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

HL7® FHIR® Accelerator Program

- Designed to assist implementers across the health care spectrum in the creation of FHIR Implementation Guides or other informative documents
- Gravity Project became an official Accelerator in August 2019:

http://www.hl7.org/documentcenter/public_temp_3840821C-1C23-BA17-0C64E3ACBE05D630/pressreleases/HL7_PRESS_20190820.pdf



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

Terminology Public Calls 4-5:30 pm EST every other Thursday

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

Technical (FHIR IG) Calls 3-4 pm EST every Wednesday

<https://confluence.hl7.org/display/GRAV/FHIR+IG+Work+Group+Meetings>



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



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

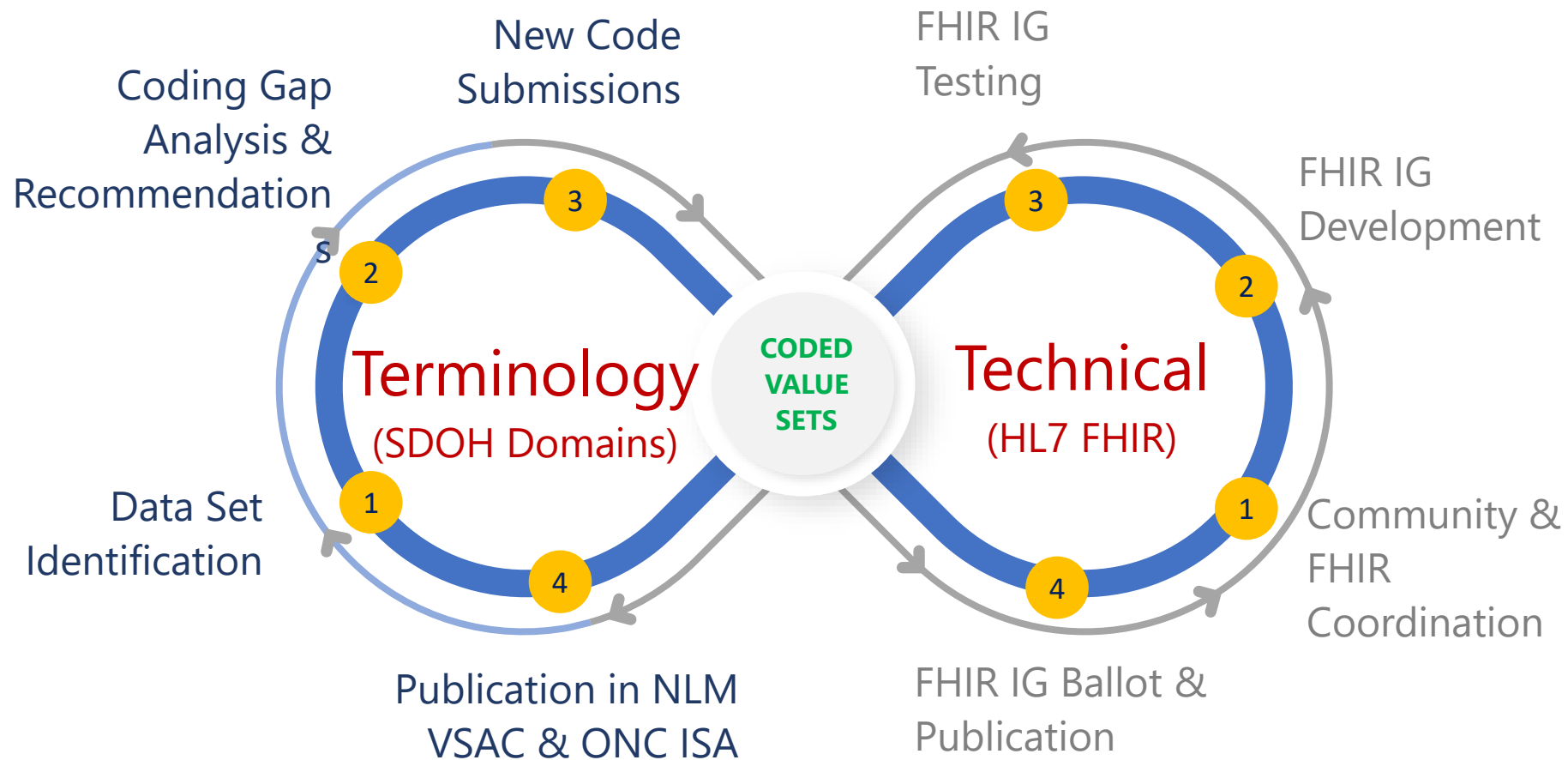


Gravity PMO Team

- **Evelyn Gallego**, Program Manager, EMI Advisors
- **Carrie Lousberg**, Project Manager, EMI Advisors
- **Mark Savage**, SDOH Policy Lead, USCF/SIREN
- **Sarah DeSilvey**, Clinical Informatics Director, University of Vermont
- **Bob Dieterle**, Technical Director, EnableCare



Gravity Overview: Two Streams



Terminology Workstream

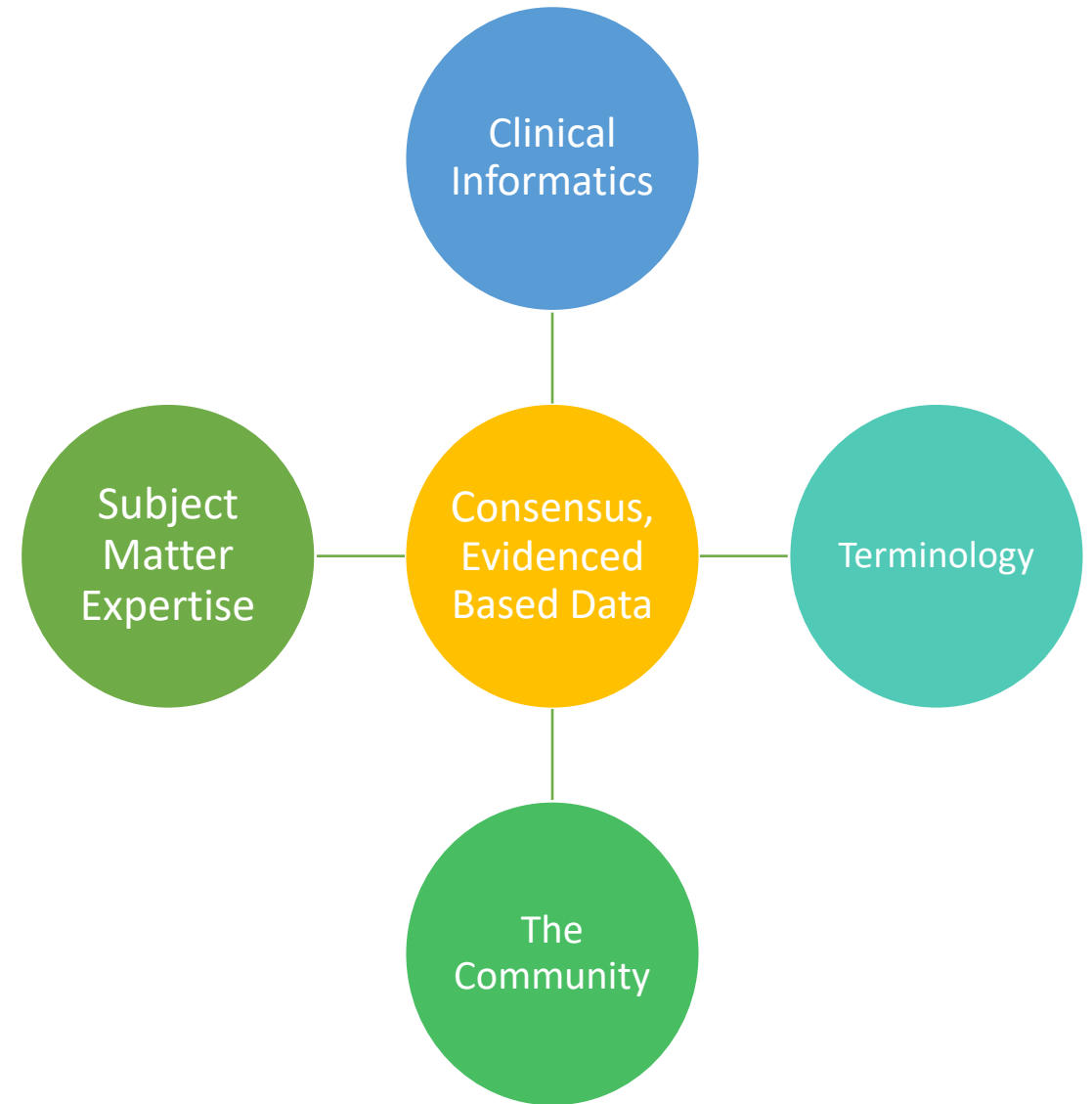
The Gravity Project...

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.



Terminology Team Collaborative Structure


- Clinical and Process Insight
- Terminology and Taxonomy Insight
- Literature and Evidence
- Risk r/t Health Outcomes
- Practical Fit



Terminology Stream

Domain	Terminology Identification				Code Submission		Value Set Publication
	Plan	Gather	Review	Finalize	Submit	Finalize	
Food Insecurity	●	●	●	●	●	●	●
Housing Instability/ Homelessness	●	●	●	●	●	●	●
Inadequate Housing	●	●	●	●	●	●	●
Transportation	●	●	●	●	●	●	●
Financial Strain	●	●	●	●	●	●	●
Demographics	●	●	●	●	●	●	●
Material Hardship	●	●	●	●	●	●	●
Stress	●	●	●	●	●	●	●
Intimate Partner Violence	●	●	●	●	●	●	●
Social Isolation	●	●	●	●	●	●	●


Where to find Published Gravity Data Sets?

 Gravity Project

Pages

» Blog

SPACE SHORTCUTS

 HL7 Documentation & Help

PAGE TREE






- Terminology Workstream Dashboard
 - Coding Submissions
 - Financial Strain
 - Food Insecurity
 - Housing Instability and Homelessness
 - Inadequate Housing
 - Terminology Overview
 - Transportation
 - Demographics Domain
 - Stress
- Technical Workstream Dashboard
- Gravity Project Meetings
- Gravity Project Events
- Consensus Process
- The Gravity Project Materials
 - Gravity Data Principles
- Gravity Project Communications
- Gravity Project Media and Public
- Gravity Project Executive Committee
- Gravity Project Strategic Advisory
- Gravity Project Technical Advisory
- Gravity Project Sponsors
- Gravity Project USCDI Submission
- Gravity SDOH COVID-19 Response
- Why the Name Gravity
- FAQ
- Join the Gravity Project
- ICD-10 Coding Submissions
- CMS RFI - Accelerating Adoption

Dashboard / The Gravity Project















Terminology Workstream Dashboard

Created by Carrie Lousberg, last modified on Mar 08, 2021

Overview and Information

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

 FOOD INSECURITY	 HOUSING INSTABILITY	 INADEQUATE HOUSING	 TRANSPORTATION INSECURITY	 FINANCIAL INSECURITY
	 HOMELESSNESS			 MATERIAL HARDSHIP
 UNEMPLOYMENT	 STRESS	 SOCIAL ISOLATION Coming Soon!	 NEIGHBORHOOD SAFETY Coming Soon!	 INTERPERSONAL VIOLENCE (IPV) Coming Soon!
 EDUCATION				
 VETERANS				

ICD-10 CM Submission & March 10th Presentation



ICD-10 Coordination and Maintenance Committee Meeting

Diagnosis Agenda

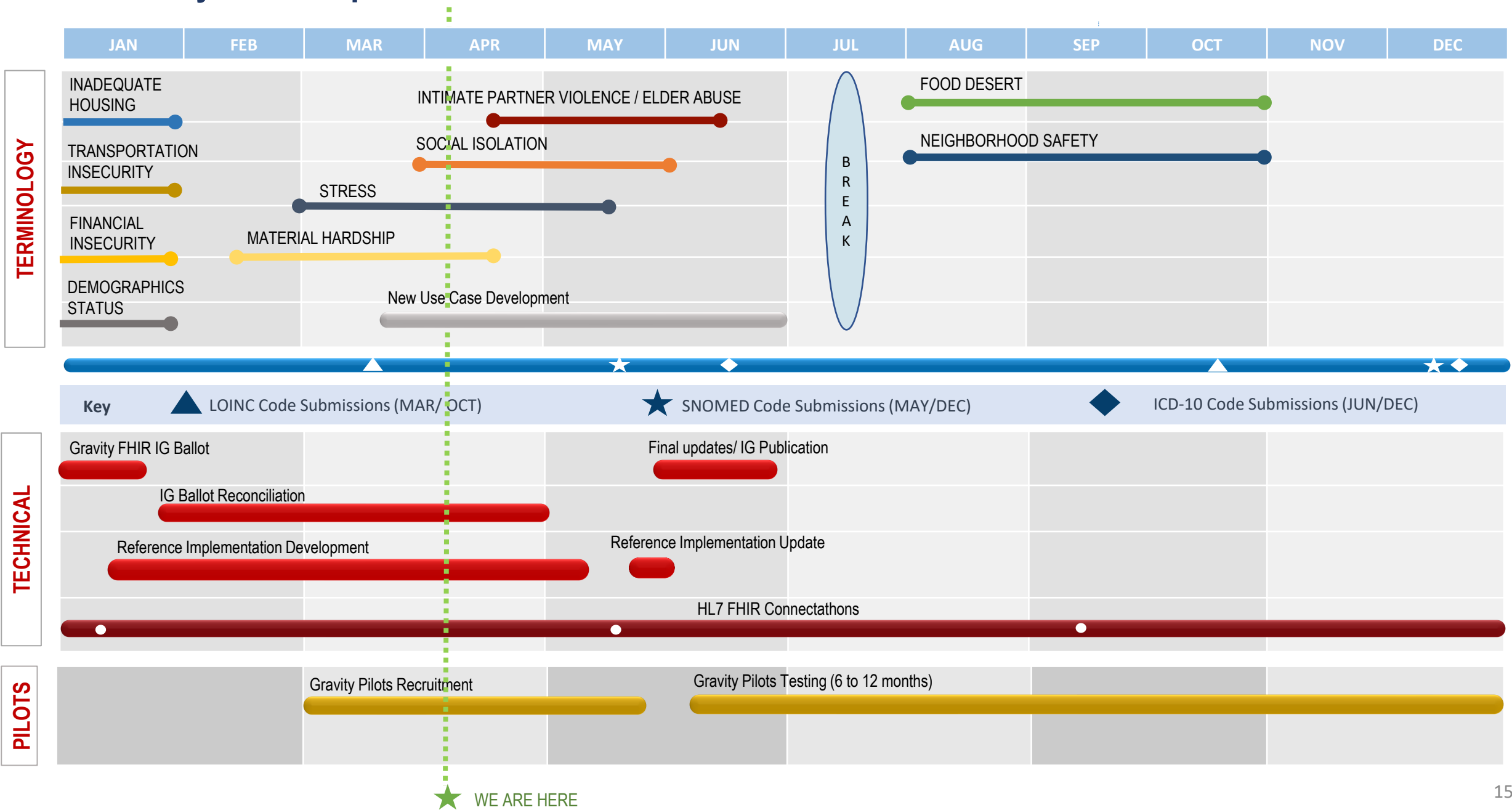
Zoom Webinar and Dial-In Information

- 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.

<https://www.cdc.gov/nchs/data/icd/March-2021-proposal-packet-508.pdf>

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 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

2021 Gravity Roadmap

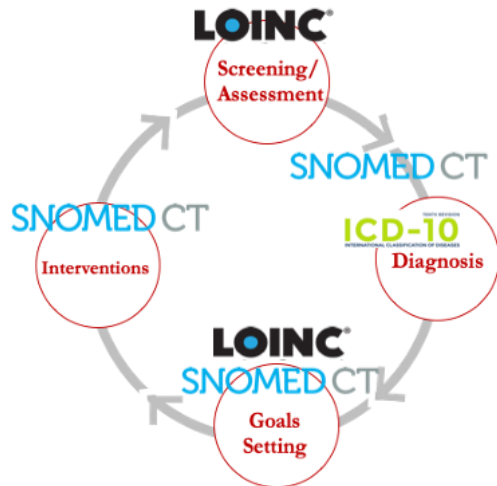


Accelerating Adoption Using Nationally Recognized Standards

Consensus Approved SDOH Data Elements

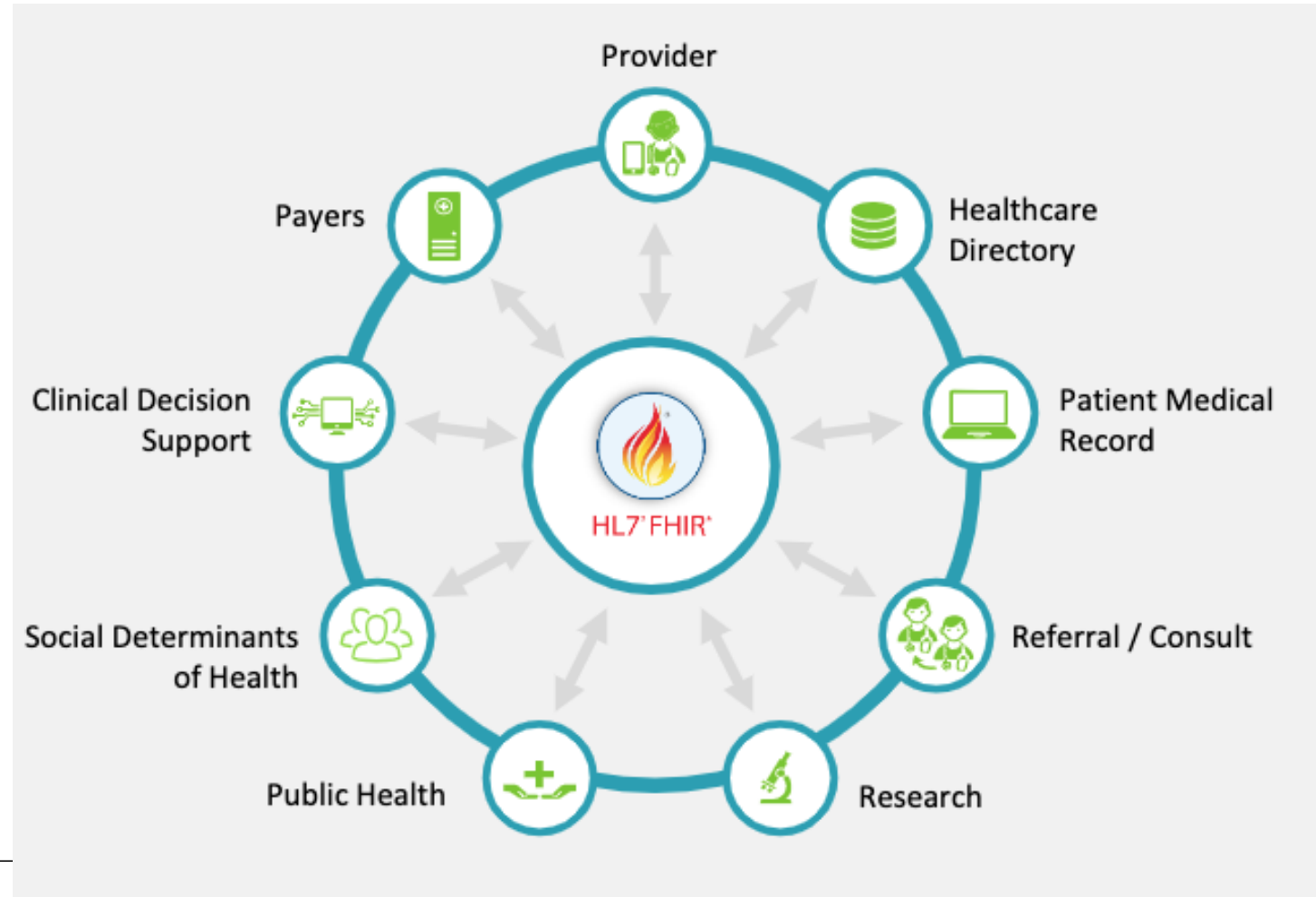


Coded SDOH Data Elements



FHIR

Fast Healthcare Interoperability Resources



Technical Workstream

Technical Stream – SDOH Clinical Care FHIR Implementation Guide

1. The SDOH Clinical Care IG is a framework Implementation Guide (IG) and supports multiple domains
2. The IG supports the following clinical activities
 - Assessments
 - Health Concerns / Problems
 - Goals
 - Referrals
 - Consent
 - Aggregation for exchange/reporting
3. Completed January 2021 ballot as a Standard for Trial Use Level 1 (STU1)

<http://hl7.org/fhir/us/sdoh-clinicalcare/2021Jan/>

The screenshot displays the HL7 International website for the SDOH Clinical Care FHIR Implementation Guide (IG). The page title is 'SDOH Clinical Care 0.1.0 - STU 1'. The navigation menu includes 'IG Home', 'Table of Contents', 'Background', 'Context', 'Specifications', 'Downloads', and 'Artifact Index'. The main content area is titled 'Table of Contents > Home Page' and contains the following text:

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.

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

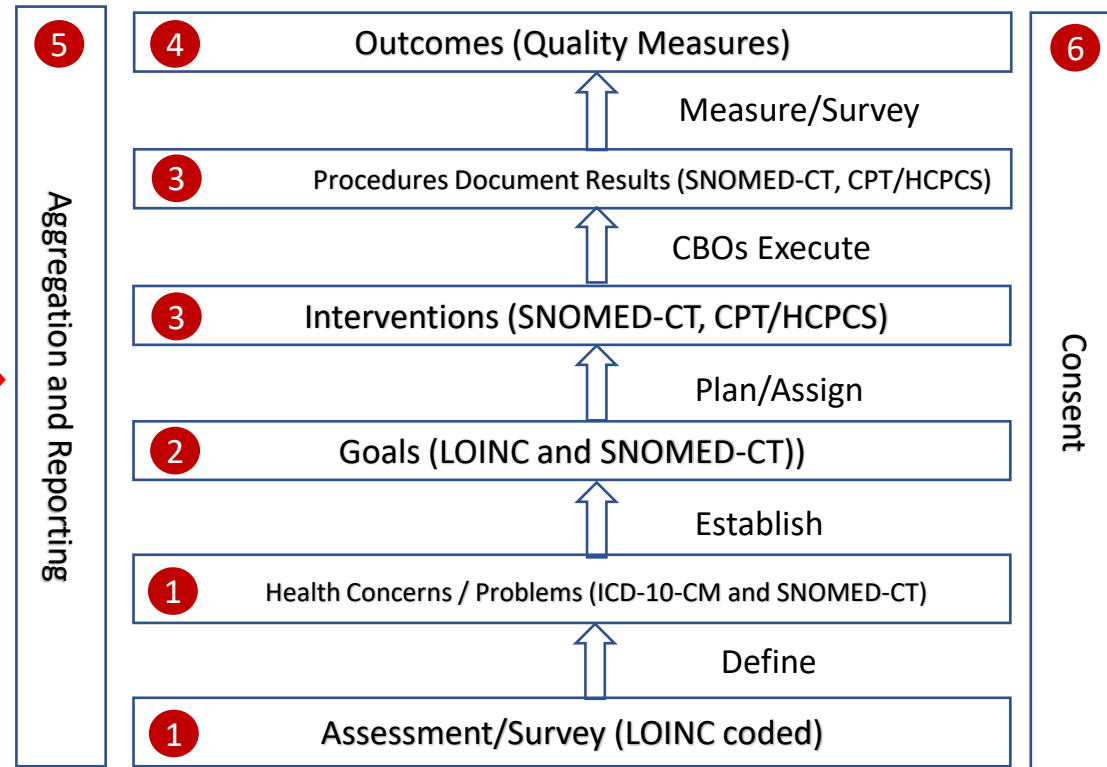
Name	Email/URL
HL7 International - Patient Care	http://www.hl7.org/Special/committees/patientcare

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

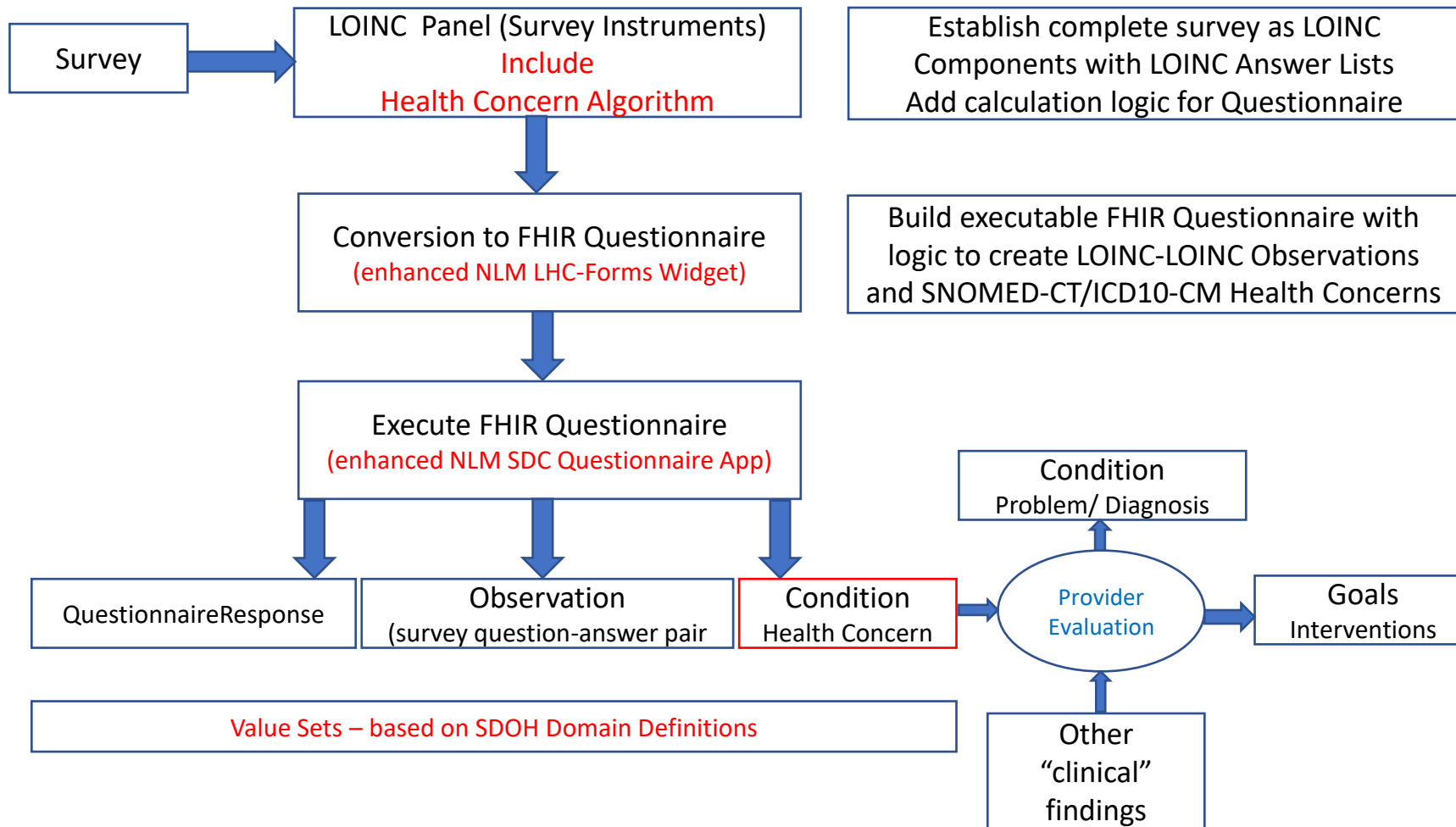
Gravity FHIR SDOH Clinical Care IG Scope

- 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



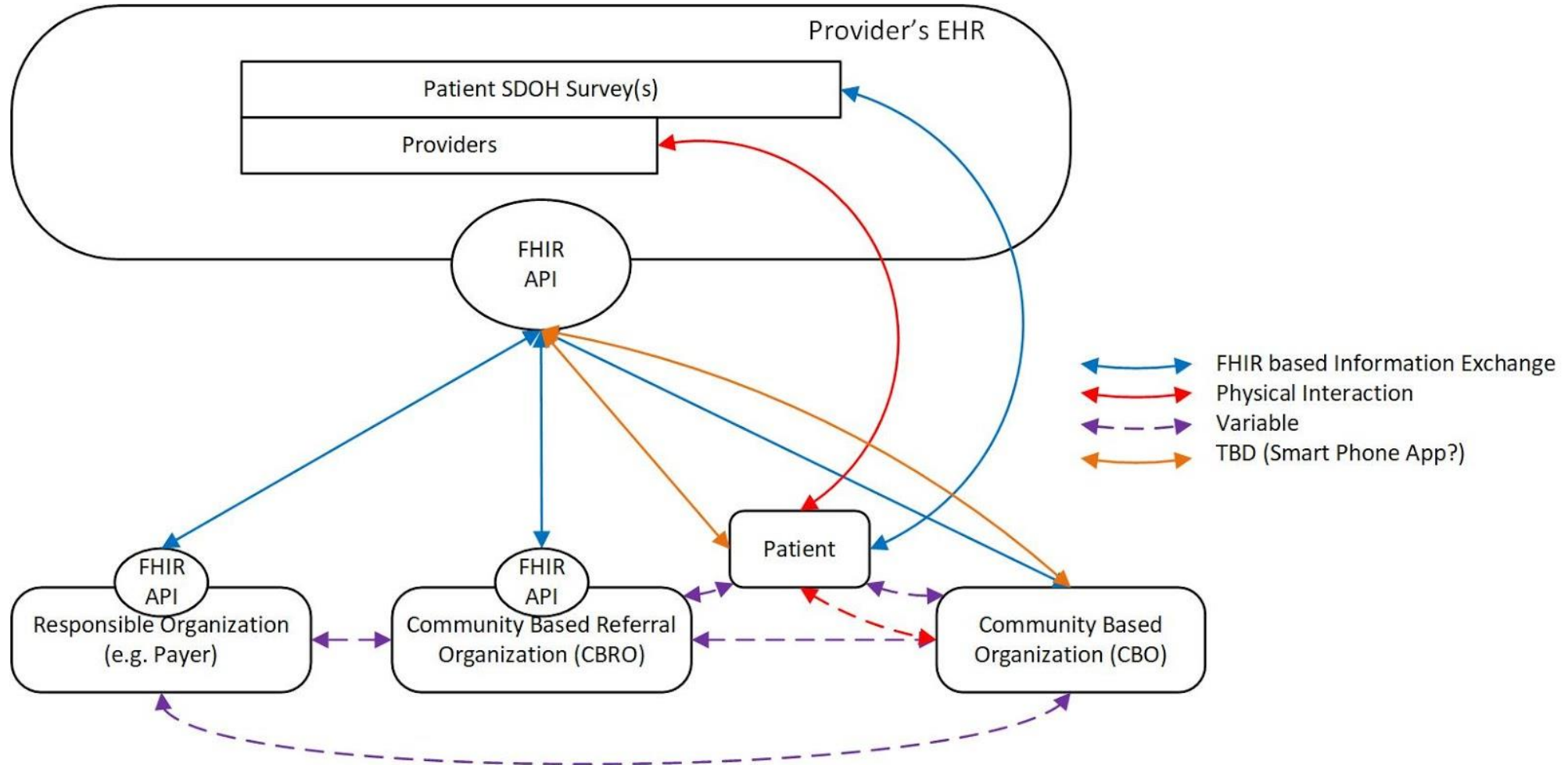
<http://build.fhir.org/ig/HL7/fhir-sdoh-clinicalcare/>

Enabling Survey Instruments

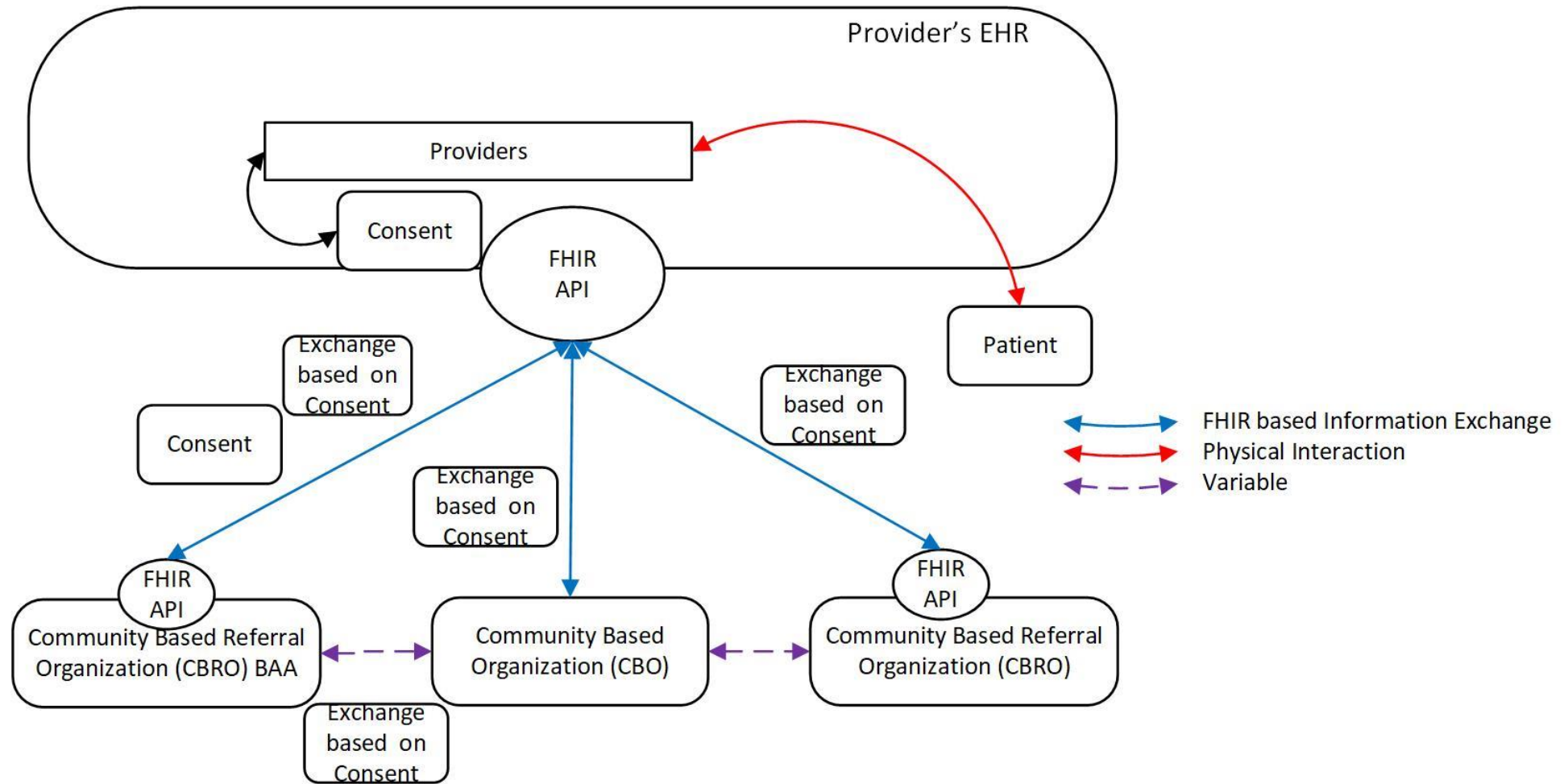


Note: Survey instruments typically generate Health Concerns with Gravity defined value sets

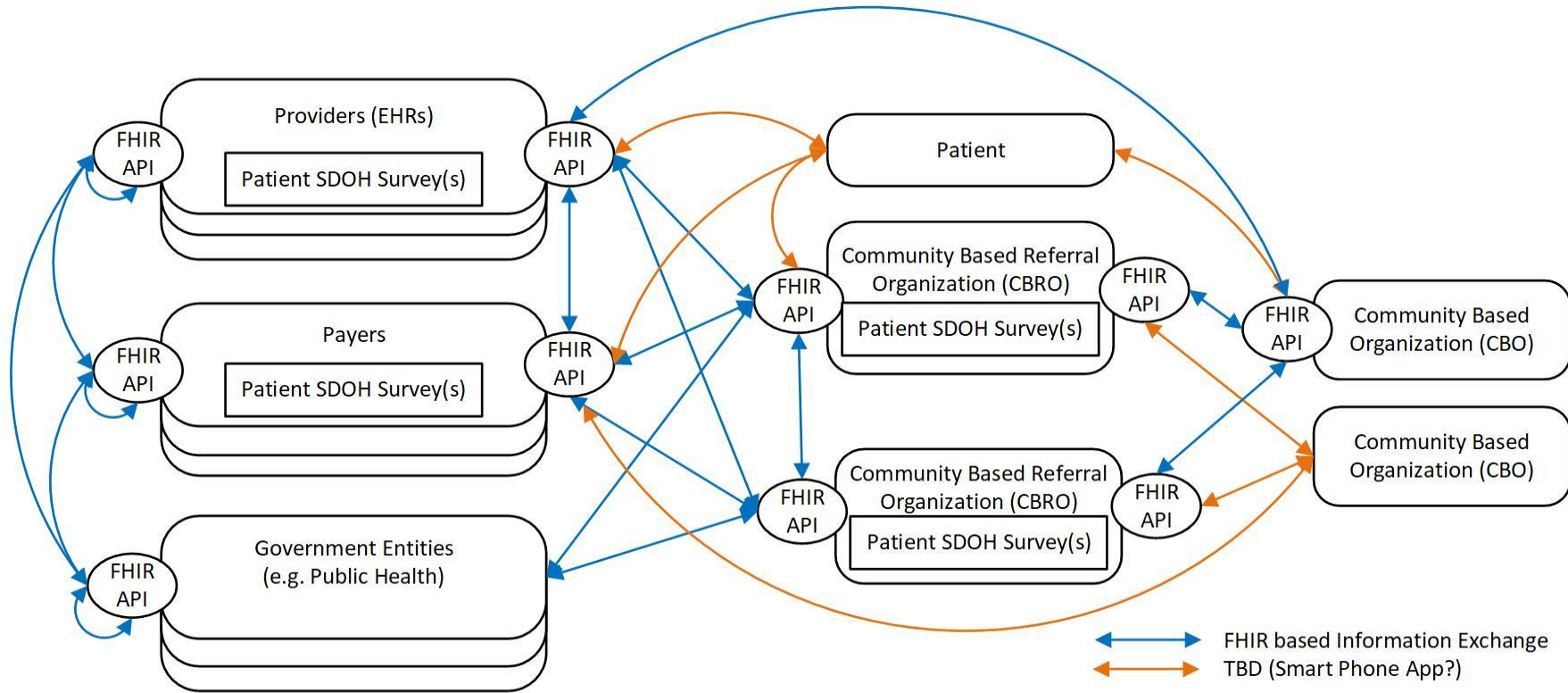
Enabling SDOH Interactions/ Workflow (Initial exchanges)



Consent exchange for SDOH Clinical Care IG

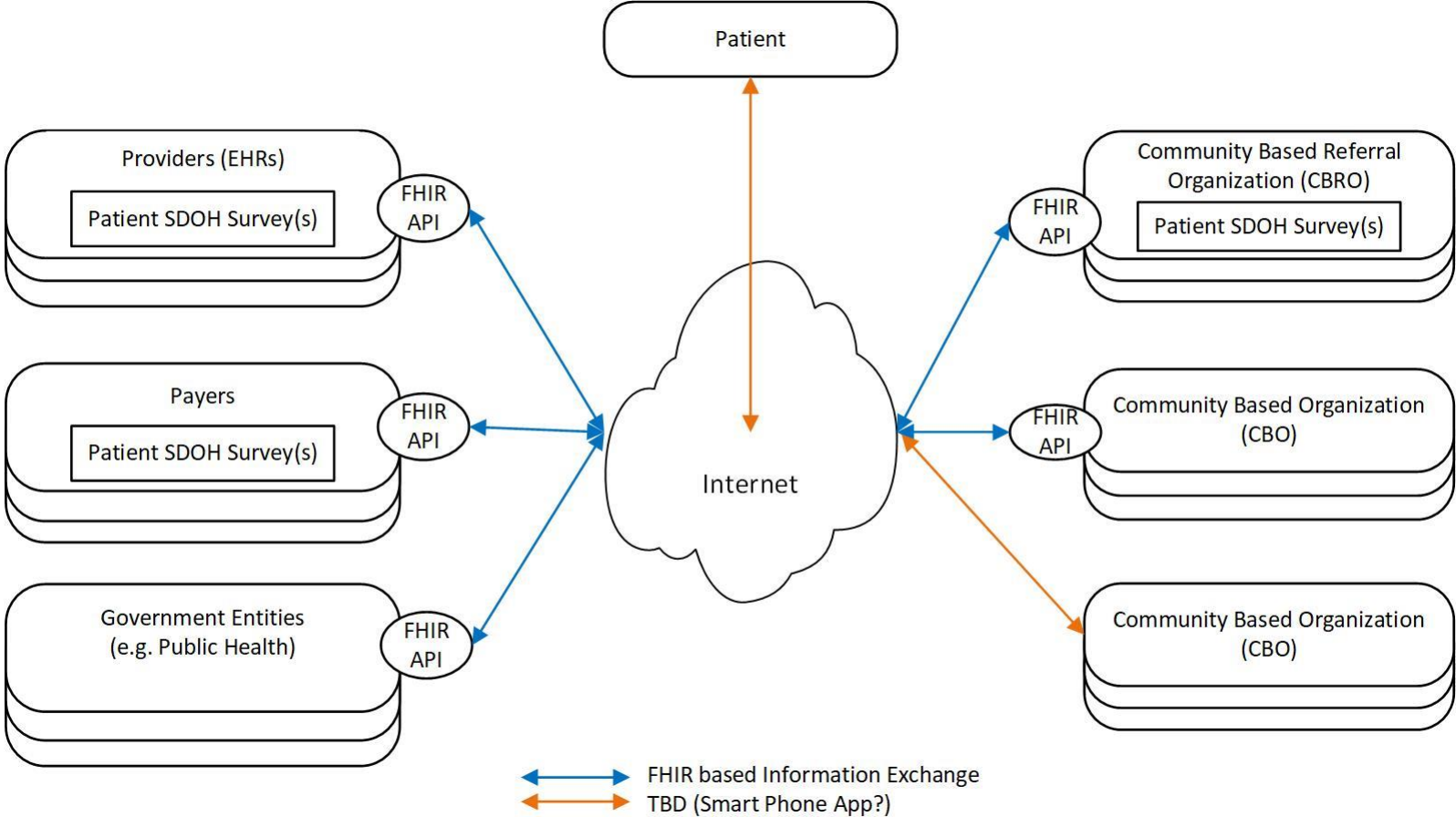


Expanded workflow guidance for other actors



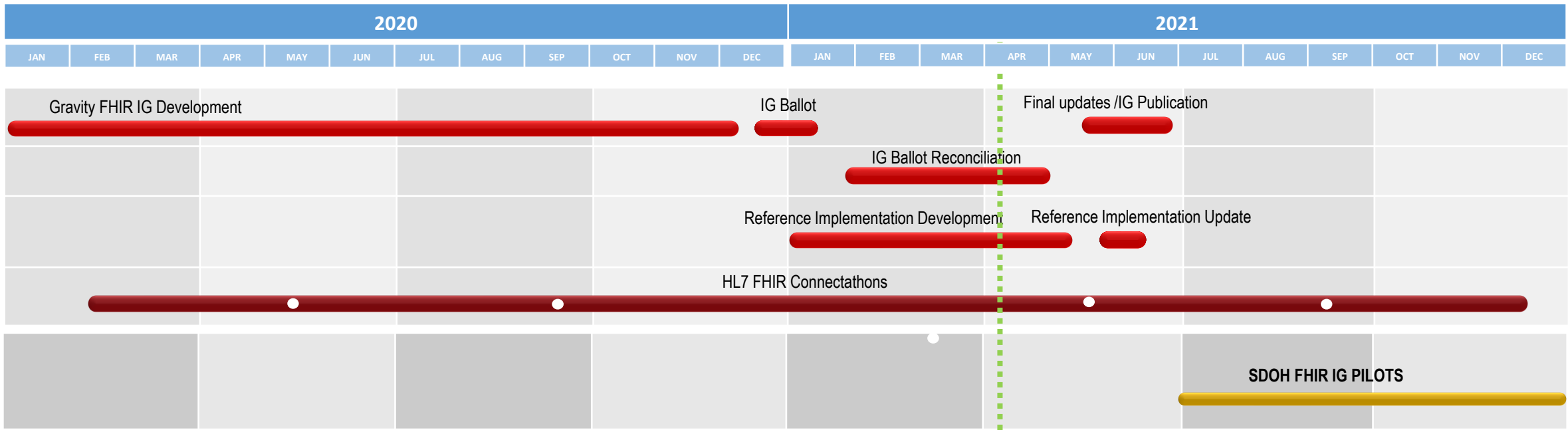
Note: Where two FHIR APIs are shown, it is for drawing simplicity and not a technical requirement

Simplified interaction picture



Results from the January SDOH Clinical Care IG Ballot



<p>Results of ballot voting</p> <ul style="list-style-type: none"> Affirmative 63 Negative 30 Abstain 56 No Vote 43 Total 192 <p>The ballot met the 60% threshold required to publish as an STU</p>	<p>Ballot comments submitted</p> <ul style="list-style-type: none"> Total ballot comments 227 Total negative comments 72 Total affirmative comments 155 <p>Note: Affirmative comments include typos, questions, suggestions, comments</p>	<p>Ballot Reconciliation Status</p> <ul style="list-style-type: none"> The ballot reconciliation process started on 2/7/2021 and is expected to continue until the end of April. As of 4/7/2021 161 of the 227 ballot comments have dispositions - 66 to go
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What's Next?

- Work with NLM, Regenstrief and other stakeholders to advance tooling that supports the multi-domain Gravity IG, externally maintained value sets, and questionnaires
- Work with the community to establish the clinical content required for multiple SDOH domains
- Advance development of the reference implementation
- Incorporate dispositions from January 2021 ballot comments
- Preparation for the May HL7 Connectathon
- Please join us every **Wednesday from 3 to 4 pm ET**. Meeting details and agendas available here: <https://confluence.hl7.org/display/GRAV/FHIR+IG+Work+Group+Meetings>

How to Engage

- 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
 - Joint us at the HL7 May Connectathon Gravity SDOH Track (watch the Gravity Project Confluence site for signup instructions)
 - 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?

Robert Dieterle

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CEO EnableCare LLC

rdieterle@enablecare.us



Additional questions? Contact: gravityproject@emiadvisors.net

 @thegravityproj



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