ACL Challenge Competition: Innovative Technology Solutions for Social Care Referrals

July 28, 2020

Administration for Community Living

Agenda

- Welcome and Introductions
- Background
- Overview of the Challenge
- The Gravity Project
- Phase 1 Submission Details
- Resources
- Q&A

Welcome and Introductions

What is a Challenge?

Unique opportunities with Prize Challenge Competitions:

- attract new and unlikely innovators to the table
- have merits over grants/contracts
- speed and ease of use
- rewards outcomes not process
- generate interest in new services, data or technologies
- excuses us from the comforts of bureaucratic routine, force us to reframe long-standing problems, and animate our creativity

Social Care Referrals Challenge: The Problem

Why Now?

- Partnerships between health care and community-based social services organizations have been shown to improve health outcomes and lower costs.
- Increased collaboration with the existing networks of community based organizations that serve older adults and individuals with disabilities have proven to be an effective way for health care organizations to include interventions that address social determinants of health in the continuum of care.
- A growing class of technology vendors supporting closed loop referrals between health care and social services are gaining market share quickly.

Today's Landscape of Health and Social Care Coordination

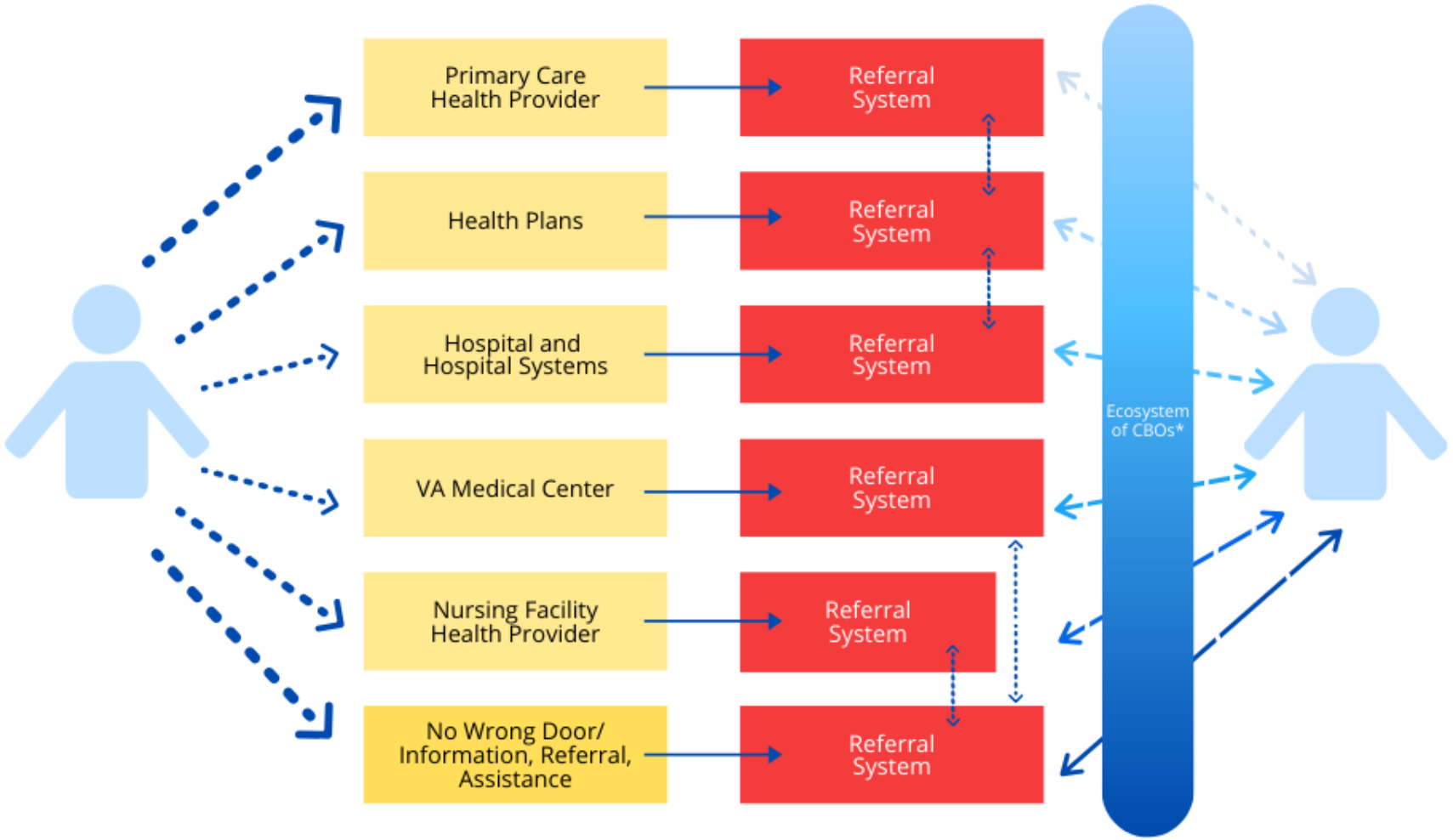
- States have invested in resource directory and referral management systems to support their efforts to streamline and improve access to LTSS for older adults and people with disabilities.
- Individual health plans and health systems are implementing technology approaches to screen and refer individuals to community resources in order to address their social needs and improve their health and overall well-being.
- Health IT developers are implementing innovative platforms that many hospitals or health care plans are using and there is desire to refer people to community resources, but there is a lack of common standards and lack interoperability with existing systems.

The Need to Address Interoperability

- Individuals seek care from providers with differing platforms that lack seamless connections with community based organizations.
- Existing technology solutions lack interoperability and scalability within and across communities.
- Provider and plan specific referral platforms are often not leveraging this existing infrastructure that enables access to a variety of services and supports that address social needs.
- Duplicative spending across stakeholders as they independently contract for different referral vendors to secure community connections.
- CBOs are faced with the burden of accessing multiple platforms to receive and act on referrals.

A challenge of differing platforms that lack seamless connections

Person has a need, either direct or indirect	An inquiry is conducted	Referrals generated and tracked in different systems and in different ways	Risk assessments, follow-up protocols, and data collection on success or change in needs varies



*Includes connections to social and health-related services, such as housing assistance, assistive technology, nutrition programs, caregiver support, and in-home services

The Challenge

Establish A Shared Technology Infrastructure

ACL is seeking interoperable technology solutions developed by multi-stakeholder teams that:

- More efficiently share data to enable **standardized referral processes** and better informed decision-making.
- Incorporate **closed-loop referral** protocols to track and support individuals when they obtain services from any organization or health care provider within the network.
- **Produce data on** the individual, organizational, and regional levels about referrals, the prevalence of **social determinants of health**, and service utilization and outcomes.

Forming a Team

- Critical partners for designing solutions to this Challenge should include a team of key stakeholders.
- Teams should include health IT developers, health care providers, health plans, state and local agencies that lead the aging and disability networks and Medicaid, and others with relevant technical expertise in data standards, architecture, and/or data analysis.

Challenge Details

The total prize award available is $500,000.

- Phase 1: Concept & Design Submission (July 2020 – December 2020)
  - Up to six prize winners at $30,000 each
- Phase 2: Proof of Concept & Demonstration (January 2021 – June 2021)
  - Up to three prize winners at $60,000 each
- Phase 3: Implementation & Testing - (July – December 2021)
  - One final prize winner at $140,000 or more

The Gravity Project

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

ACL Challenge Competition Webinar, July 28, 2020

Evelyn Gallego, MBA, MPH, CPHIMS

Gravity Program Manager, EMI Advisors LLC

Agenda

- Business Drivers
- Project Scope
- Project Approach & Accomplishments
- Use Cases & Terminology Framework
- eReferrals in FHIR IG Build
- How to Engage

Business Drivers

There is broad 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.

One of the biggest barriers to addressing social risk and social needs in clinical settings is the limited standards available to represent the data. We need standards to promote the:

- Collection and use of the data;
- Facilitate the sharing of the data across clinical and non-clinical organizations; and
- Facilitate payment for social risk data collection and intervention activities

Key Learning: Despite increased interest around identifying and addressing SDOH in context of US health care settings, existing medical coding vocabularies and health information exchange standards are poorly equipped to capture related activities.

HL7 International

Arons A, DeSilvey S, Fichtenberg C, Gottlieb L. Documenting social determinants of health-related clinical activities using standardized medical vocabularies. JAMIA Open. 2018;2(1):81-88. (http://sirenetwork.ucsf.edu/tools-resources/mmi/compendium-medical-terminology-codes-social-risk-factors)

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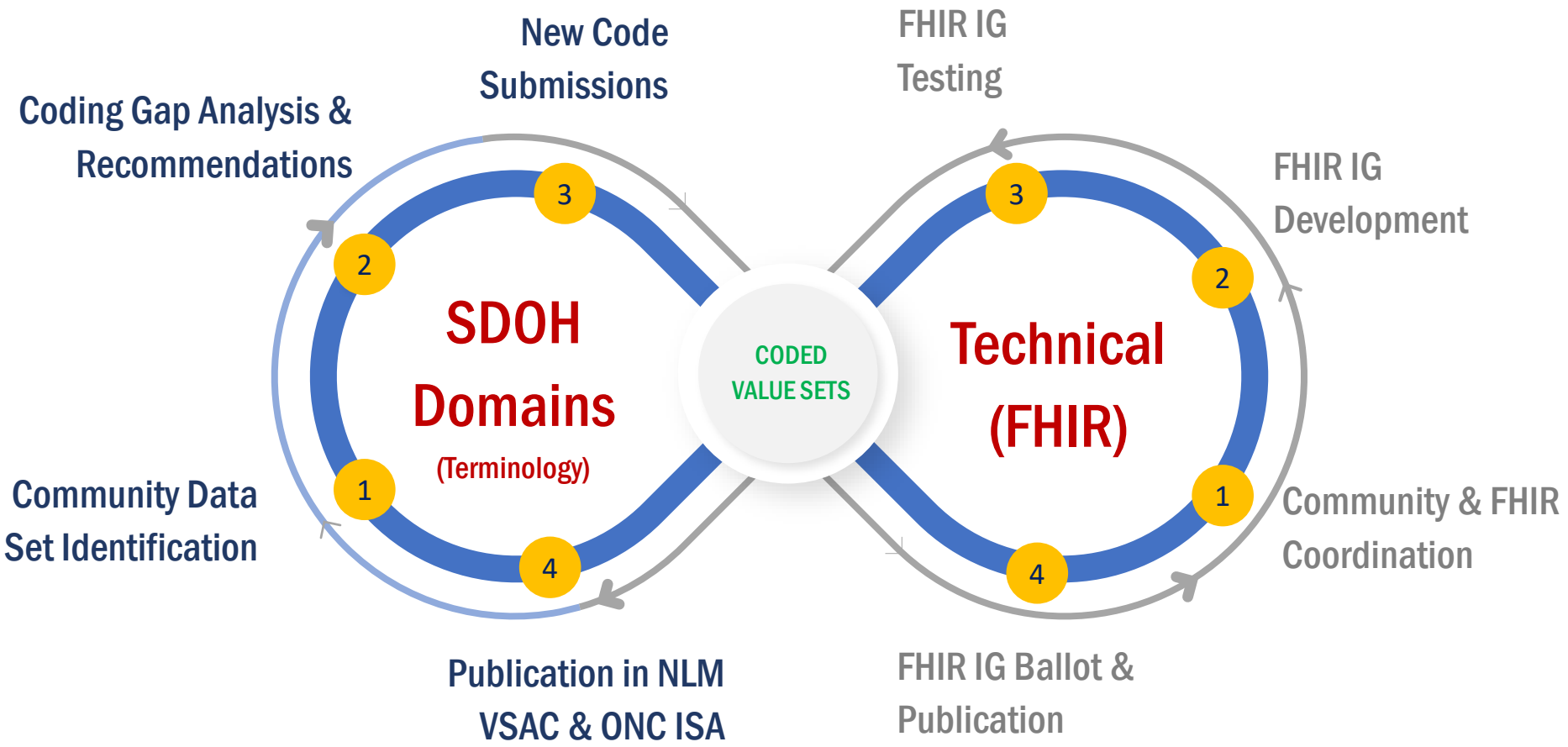
Enter the Gravity Project…

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.

Gravity Overview: Two Streams



Accelerating Adoption Using Nationally Recognized Standards

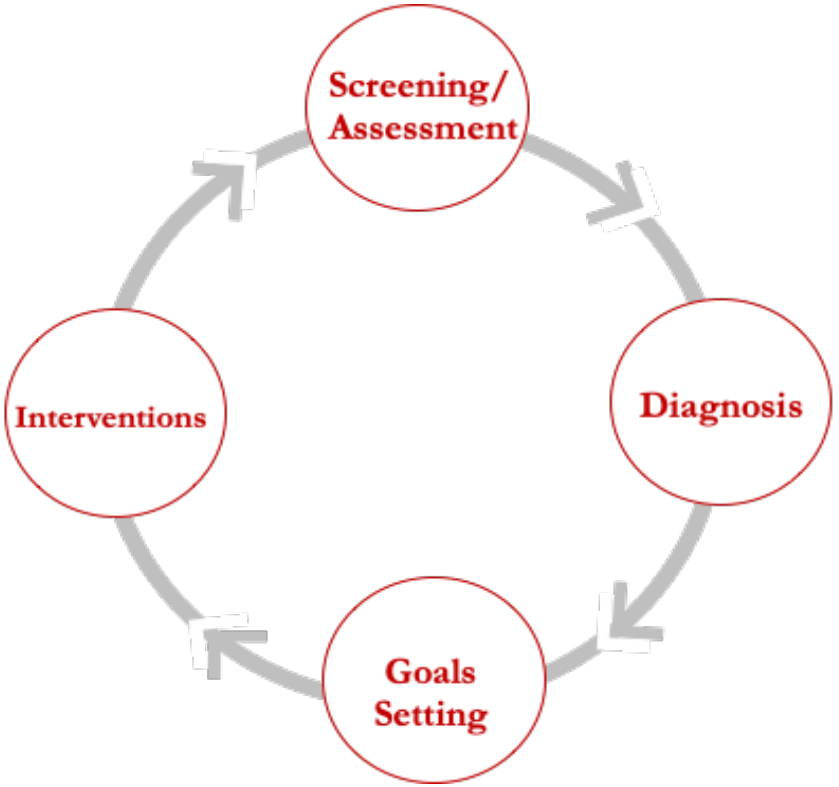
LOINC®

TENTH REVISION
ICD-10
INTERNATIONAL CLASSIFICATION OF DISEASES

SNOMED CT

HL7 FHIR®
Fast Health Interoperability Resource

HL7 CDA®
Clinical Document Architecture (CDA)



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Gravity Community

1,100+ Participants

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

Gravity Project Accomplishments to Date

- Developed consensus-approved **Use Case Package:** https://confluence.hl7.org/display/GRAV/Gravity+Use+Case+Package
- Developed consensus-approved **Food Insecurity Data Set:** https://confluence.hl7.org/display/GRAV/Food+Insecurity+Domain
- Developed Food Insecurity **Gap Analysis & Coding Recommendations Report.**
- Submitted new code applications for Food Insecurity concepts to Regenstrief, ICD-10, and SNOMED CT.
- Developed **Gravity Manuscript Outline (ONC Deliverable)**
- Developed draft **SDOH FHIR Implementation Guide (IG):** https://confluence.hl7.org/display/GRAV/Gravity+SDOH+FHIR+IG
- **Completed two SDOH IG Connectathons:** https://confluence.hl7.org/display/GRAV/Gravity+SDOH+FHIR+Connectathons
- Developed draft **Housing Instability and Homelessness Data Set:** https://confluence.hl7.org/display/GRAV/Housing+Instability+and+Homelessness+Domain

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

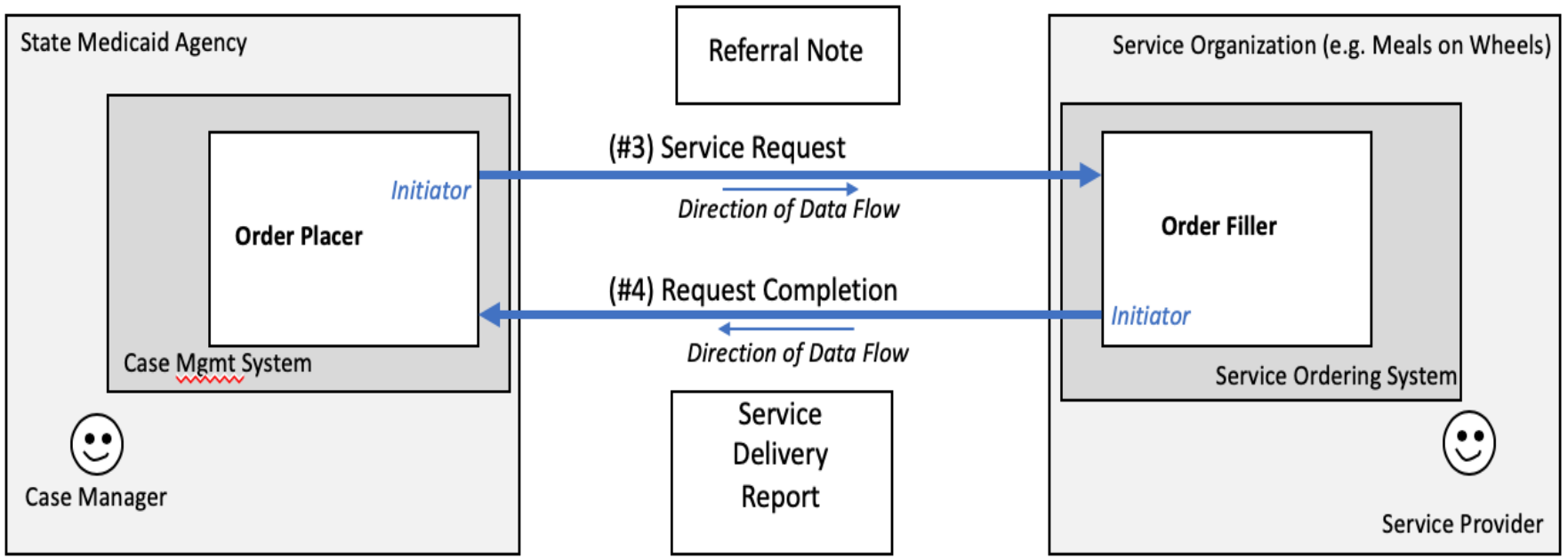
(e.g., population health management, quality reporting, and risk adjustment/risk stratification).

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

eReferrals

Ability to electronically submit standardized documents to support referrals, track the status of referrals, and send consultation notes back to referring provider to close the referral loop.

Example:



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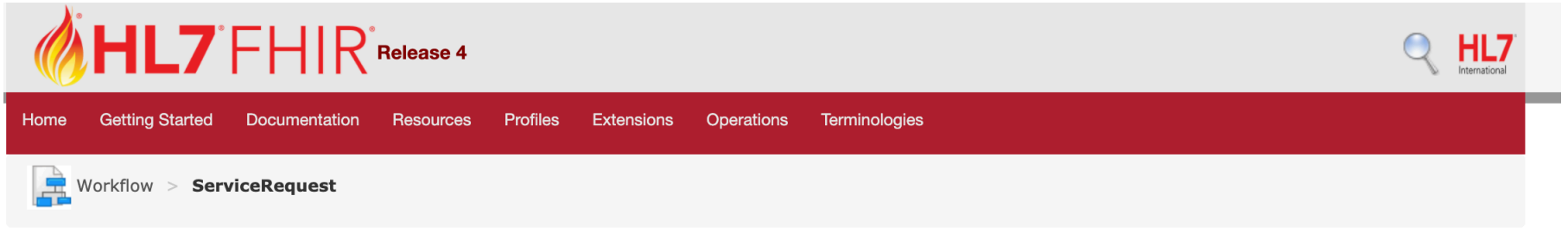
Current Elements in the IG for eReferral

- Service Request
  - *Evaluate use of FHIR BSeR Workflow Management Resources*
- Service Delivery Report
  - *Service request + status of procedure*

HL7 FHIR Resource ServiceRequest



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http://hl7.org/fhir/servicerequest.html

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HL7 FHIR BiDirectional Services_eReferral

HL7 International — BSeR: Bidirectional Services_eReferral

IG Home | Table of Contents | Background | Resource Profile Information | Downloads | Artifact Index

Table of Contents > Table of Contents > Resource Profiles > Workflow Management Resources

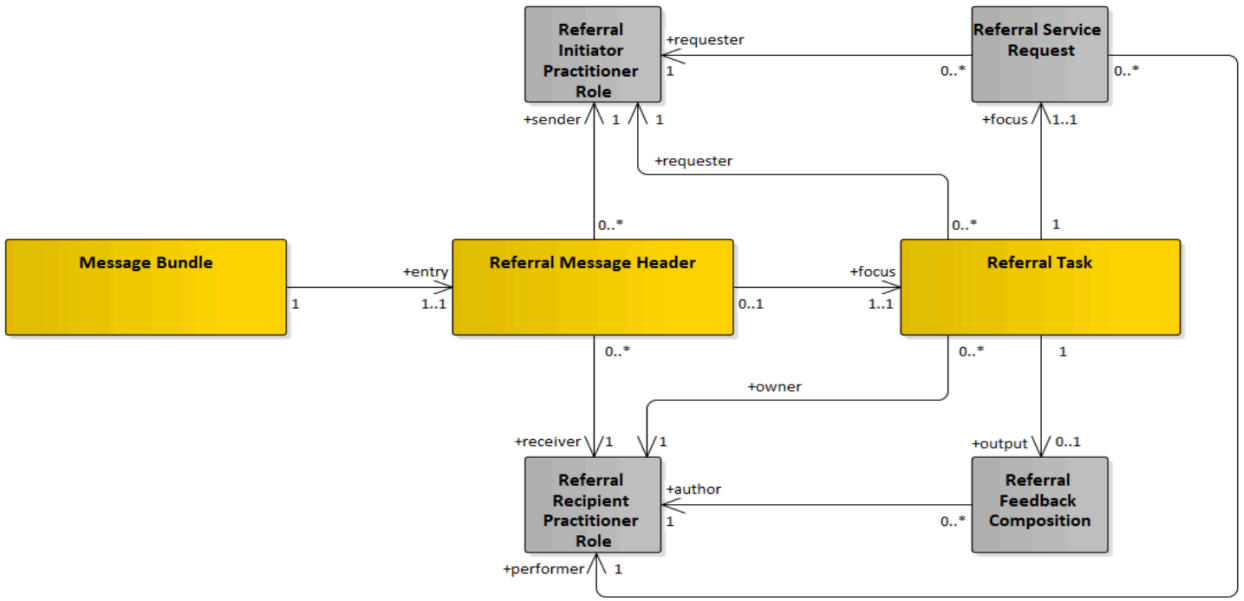
BSeR: Bidirectional Services_eReferral - Local Development build (v1.0.0). See the Directory of published versions

Workflow Management Resources

Contents:
- Trigger Events and State Transitions
- State Machine and Business Status

Previous Page - Referral Participant Resources

BSeR service request workflow resources - Message Bundle, Referral Message Header, and Referral Task - are depicted in the following diagram:



http://hl7.org/fhir/us/bser/WorkflowManagementResources.html

Examples of Minimum Data for eReferral

- That a referral was done
- When was the referral done
- Who did the referral
- Who was the recipient of the referral
- Who was the subject of the referral
- What kind of services were requested ✯
- A way to determine what state the service request is in over time as it moves through a commonly accepted life-cycle/state-model ✯
- A way to determine what activities were actually provided as a result of that service request. ✯

✯= tricky

Implementation Guide Home Page

Contents:

- Description
- Acknowledgements
- Introduction
  - IG Purpose
  - Note to Reviewers and Balloters
  - How to Read This Guide
  - How to Use This Guide: Practical Guidance for Implementers
- Background
  - Gravity Project Overview
  - Gravity Project Challenge Statement
  - Scope
  - Out of Scope
  - Conceptual Framework
    - Data Modeling Framework
    - Role of the FHIR CarePlan Resource
  - SDOH Content
    - Core Clinical Content
    - SDOH Food Insecurity Content
    - Other Content
  - Personas and Patient Stories
  - Use Cases
    - Use Case Actors
    - Data Sharing Transactions
  - Profiles Used in this IG
    - SDOH Profiles Defined in this IG
    - Profiles Reused from US Core
    - Profiles Reused from SDC
    - Profiles Reused from CDex
    - Profiles Reused from BSeR
  - Security and Consent
  - Conformance Guidance
    - Conformance Verbs
    - Must Support
    - Missing Data
    - U.S. Core Data for Interoperability and 2015 Edition Common
    - Conformance to US Core Profiles
  - Appendix A: FHIR Artifact Naming Conventions
  - Appendix B: Placeholder Code Systems, Codes, and Value Sets
  - Appendix C: Local Identifier Systems

https://trifolia-fhir-dev.lantanagroup.com/igs/lantana_prod_hapi_r4/SDOH-CC/

https://confluence.hl7.org/display/GRAV/Gravity+SDOH+FHIR+IG

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FHIR IG Next Steps

- FHIR IG development and balloting approach recently revised to meet accelerated timeline
- Changes to FHIR IG timeline and scope
  - Multiple SDOH domains in parallel to current approach (one domain at time)
  - Prioritization of screening and diagnosis SDOH data capture, exchange, and aggregation
  - Target FHIR IG ballot with HL7 in January 2021
- Test FHIR IG build at Sept. HL7 Virtual Connectathon
  - Sign up here: https://confluence.hl7.org/display/FHIR/2020-09+Gravity+SDOH-CC+Track

How to engage!

Join our Project!

- Join the Gravity Project: https://confluence.hl7.org/display/GRAV/Join+the+Gravity+Project
- Review and incorporate **Food Insecurity Data Set** definitions: https://confluence.hl7.org/pages/viewpage.action?pageId=55938680#FoodInsecurityDomain-FinalFoodInsecurityMasterList-Published16April2020
- Review and comment on the **Housing Instability and Homelessness Data Set**: https://confluence.hl7.org/pages/viewpage.action?pageId=76157877#HousingInstabilityandHomelessnessDomain-HousingInstabilityandHomelessnessDataElements
- Submit **inadequate housing** and **transportation access** data elements: https://confluence.hl7.org/display/GRAV/Data+Element+Submission
- Commit to test the Gravity FHIR IG at the September 2020 HL7 FHIR Connectathon: https://confluence.hl7.org/display/FHIR/2020-09+Connectathon+25

Questions?

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Phase 1 Submission

Rules and Terms and Conditions*

- Team lead must be a U.S. Citizen or permanent resident
- Teams cannot include Federal entity or Federal employee acting within the scope of their employment
- Federal grantees may not use Federal funds to develop their Challenge Submissions unless use of such funds is consistent with the purpose of their grant award
- Federal contractors may not use Federal funds from a contract to develop their Submissions

*Please see challenge.gov posting for more information

Phase 1 Submission

Applications for Phase 1 are due Monday, December 14, 2020 by 11:59 PM EST

- Submissions shall include one application package in PDF format
- Font size no smaller than 11-point Arial
- No more than 10 pages, not including the cover page, appendixes, or diagrams of the design.

Application Outline

Cover Page

- Include team lead contact information (full name, email, phone).

Abstract

- Brief abstract describing the proposed solution and how the idea and concept design supports the problem presented in this Challenge.

Project Narrative

- Describe existing methods or technologies that were used, combined, or built upon to design the proposed technology solution.
- How the concept addresses each component of the judging criteria.
- Describe the potential and likelihood for a successful demonstration and implementation.

Application Outline cont.

Team Member Roles

- Brief description of relevant experience and expertise and their role and contribution to the team's solution.

Appendixes

- Use Case(s) that describe an example of how the proposed solution will enable referral solutions that will be implemented at the community and/or state level.
- Technical architecture and workflow diagram(s) that clearly articulate how the proposed solution addresses interoperability, closed-loop referral processes, the exchange of data, and access to resource directories.

Judging Criteria

1. Level of Innovation
   - Forward-thinking solution that supports health and social integration and advances Health IT trends
2. Partnerships and Collaboration
   - Inclusion of health IT developers, health care providers, health plans, state and local agencies that lead the aging and disability networks, and others with relevant technical expertise in data standards, architecture, and/or data analysis

Judging Criteria cont.

3. Scalability and Feasibility of Implementation
   - Consider the future state of interoperability and recognize emerging health IT standards
     - Including standardization of bi-directional e-referral messages and community resource directories
   - Developed and supported open Application Programming Interfaces (APIs) for existing community resource directories

Judging Criteria cont.

4. Product Functionality and Usability
   - Describes functionality for planning assessments, closed-loop referrals, and data tracking through dashboard visuals
5. Business and Technical Risk
   - Identifies potential business and technical risks with exchange and use of data that satisfies applicable legal and regulatory standards

Summary - Phase 1 Submission

- **Applications due Monday, December 14, 2020**
- Focus on concept & design for interoperable, standards-based referral and analytics technology solutions that support health and social care integration.
- Emphasis on forming a team
- Up to six prize winners will be announced in January 2021 with awards of $30,000 each

Resources

- All details will be posted to: https://www.challenge.gov/challenge/innovative-technology-solutions-for-social-care-referrals/
- New interactive webpage coming soon!
- Contact: ami.patel@acl.hhs.gov

Questions?