

# The Gravity Project

Use Case Kick-Off & Use Case Process  
Overview

May 23, 2019

# Welcome

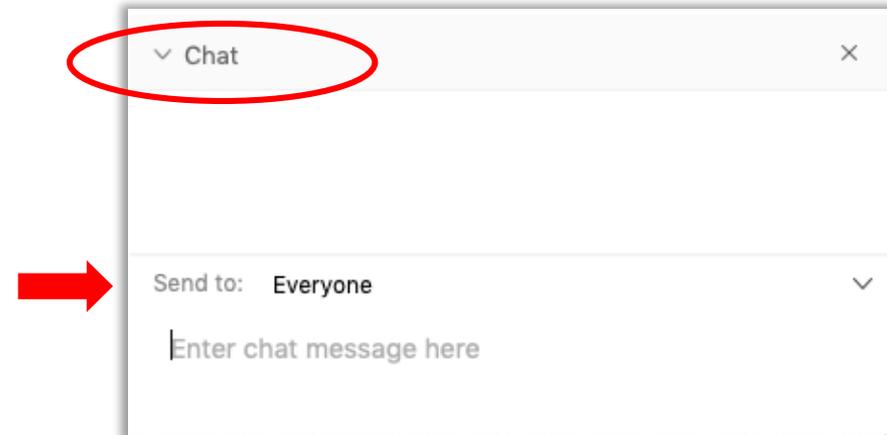
Thank you for joining the **Gravity Project** Workgroup meeting!

Due to the large number of attendees, participants are **muted upon entry**. Please remain muted to avoid background noise.

- This call is being recorded; recording will be available on the Gravity Confluence page following the meeting.

You are encouraged to actively participate in the discussion using the Webex chat feature (bottom right of the Webex Meeting window).

**Please send chats to “Everyone.”**



We will review and try to address all comments submitted during the call. If you are experiencing technical difficulties, please contact [lynette.elliott@emiadvisors.net](mailto:lynette.elliott@emiadvisors.net).

# Gravity Project Participation

- If you have not already done so, we invite you to officially join the project here:  
<https://confluence.hl7.org/display/PC/Join+the+Gravity+Project>
- If you want to check whether you have already signed up or if others from your organization have signed up, please review the existing membership here:  
<https://confluence.hl7.org/pages/viewpage.action?pageId=46892669#JointheGravityProject-GravityProjectMembershipList>
- For all other Gravity Project information, please visit:  
<https://confluence.hl7.org/display/PC/The+Gravity+Project+Home>

# Agenda

Topic	Presenter
Use Case Overview	Evelyn
Gravity Use Case Development Approach	Evelyn
Q&A	All
Gravity Use Case Components: Personas, Patient Story, and Use Cases	Evelyn
Q&A	All
Next Steps	Lynette

Please submit questions and comments using the Webex chat feature.

# Goals for Today

- Explain what we mean by a use case and why it is important
- Introduce our approach and timeline for developing a Use Case package
- Introduce fictional characters and a fictional story to inform Gravity Project activities and other SDH related initiatives.

# Gravity Project Schedule and Activities (May)

Week	Call Date	Gravity WG Meeting Tasks	Homework <i>due following Tuesday COB</i>
1	5/2	<b>Project Kick-Off &amp; Overview</b> <i>Introduce: Project Background, Scope and Approach</i>	<b>Join the Collaborative</b> <i>Review: Collaborative Norms</i> <i>Review: Project Deliverables</i>
2	5/9	<i>Introduce: Concepts &amp; Coding Systems</i>	<b>Join the Collaborative</b> <i>Review: Coding Concept</i> <b>Educational Videos</b>
3	5/16	<i>Introduce: Data Elements &amp; Data Element Submission Template</i>	<b>Join the Collaborative</b> <i>Review: Data Element Submission Template</i> <i>Submit: Candidate Data Elements</i>
 4	5/23	<b>Use Case Kick-Off &amp; UC Process Overview</b> <i>Introduce: Personas, Patient Story, Use Cases, Use Case Template</i>	<i>Review: Personas; Patient Stories; Use Cases</i>
5	5/30	<i>Review: Personas, Patient Stories, Use Cases</i>	<i>Review: Personas; Patient Story; Use Cases</i>

# Gravity Project Schedule and Activities (June to July)

Week	Target Date	Gravity WG Meeting Tasks		Homework <i>due following Tuesday COB</i>
6	6/6	Assumptions, Pre/Post Conditions, Actors & Roles	<i>Review: Personas, Patient Stories, Use Cases</i>	<i>Review: Assumptions, Pre/Post Conditions; Actors &amp; Roles</i>
7	6/13	Base Flow, Activity Diagrams, Functional Requirements, Sequence Diagram	<i>Review: Assumptions, Pre/Post Conditions, Actors &amp; Roles</i>	<i>Review: Base Flow; Activity Diagrams; Functional Requirements, Sequence Diagram</i>
8	6/20	Data Set Considerations, Risks, Issues, & Obstacles	<i>Review: Functional Requirements, Sequence Diagram</i>	<i>Review: Data Set Considerations, Risks, Issues, &amp; Obstacles</i>
9	6/27	Risks, Issues & Obstacles	<i>Review: Data Set Considerations, Risks, Issues, &amp; Obstacles</i>	<i>Begin: End-to-End Review</i>
10	7/4	NO MEETING		
11	7/11	End-to-End Review (6/28-7/8)	<i>Review: End-to-End Comment Dispositions To-Date</i>	<i>End-to-End Review due 7/8</i>
12	7/18	Food Insecurity Kick-Off <i>Introduce: Food Insecurity Data Set Submissions</i>		<i>UC Consensus Voting (7/15-7/19)</i>
13	7/25	FINAL UC CONSENSUS	<i>Review: UC Vote Dispositions</i>	<i>Review: Food Insecurity Data Set Submissions from Community</i>

# Recap: Gravity Project Business Drivers

Why capture social risk data in a standardized and structured way?

1. To promote collection and use of the data
2. To facilitate sharing of the data across organizations
3. To facilitate payment for social risk data collection and intervention activities

# What is a Use Case?

- A framework to guide the development of the solution needed to meet the business drivers or business need
- Defines the functional requirements and technical specifications of the solution by describing the interactions between the system and its user(s)
- Can be used for business process development, software development, systems engineering, and standards development
- Allows you to communicate what the solution needs to do without actually knowing ‘how’ the solution will be built

# Why do we need a Use Case to develop coded SDH concepts?

- A Use Case sets the foundation for *identifying* and *specifying* the standards required to support the data exchange, reference implementations, and tools
- Describes operational context for documenting, sharing, and exchanging SDH data
- Illustrates the information flows that must be supported by the data exchange
- Defines the types of data and their specifications required in the data exchange

# Key Components

- **Personas (the WHO).** Fictional characters who represent a person expected to use a service or product. Also referred to as the human actors within a use case.
- **Patient Story (the WHAT).** Describe the Personas engaging with the service, technology, or setting over a period of time to accomplish a specific goal.
- **Use Case(s).** Narratives of the interactions between the personas and the systems they use.

# Use Case Package Outline

## 1.0 Preface and Introduction\*\*

## 2.0 Project Overview

### 2.1 Project Challenge Statement\*\*

## 3.0 Use Case Scope

### 3.1 Background\*\*

### 3.2 In Scope\*\*

### 3.3 Out of Scope\*\*

### 3.4 Stakeholders

## 4.0 Actors

### 4.1 User Actors

#### 4.1.1 Personas

#### 4.2.1 Patient Story

### 4.2 Business Actors

### 4.3 System Actors

### 4.4 Actor Transaction Diagram

## 5.0 Use Case Assumptions

## 6.0 Use Cases

### 6.1 Use Case 1 (repeat for 2,3,4...)

#### 6.1.1 Activity Description

##### 6.1.1.1 Preconditions

##### 6.1.1.2 Main Flow

##### 6.1.1.3 Post Conditions

#### 6.1.2 Functional Requirements

#### 6.1.3 Sequence Diagram

## 7.0 Risks, Issues and Obstacles

## 8.0 Data Element & Value Set Requirements

## Appendices

Related Use Cases

Previous Work Efforts

References

\*\* Developed from Project Charter

# Use Case Development Approach

# Gravity Project Use Case Development Approach

1. **Review and finalize Personas, Patient Story, and Use Cases.**
2. **Identify the Assumptions, Pre-Conditions and Post-Conditions.**  
These sections lay the foundation for creating the functional and data set requirements. Additionally, these items will act as inputs for the standards harmonization activities.
3. **Review and finalize Actors and Roles.** This activity defines the user actors (derived from the Personas), System Actors (e.g., EHR) and Actor Activity Diagram.
4. **Review and finalize the Diagrams.** These diagrams (Use Case, Context, Activity, Sequence) are crafted to pictorially represent the interaction between systems.

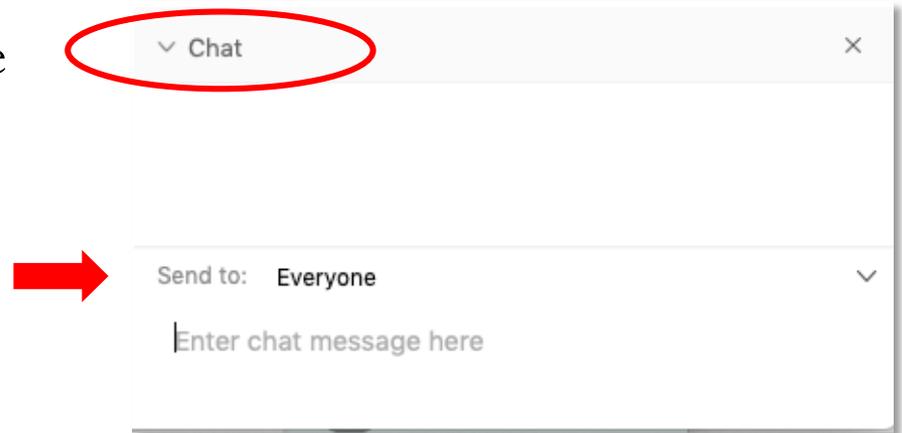
# Gravity Project Use Case Development Approach

- 5. Develop the Functional Requirements.** Identify the capabilities a system in a role must have in order to enable interoperable exchange of SDH data. This provides a detailed breakdown of the requirements in terms of the intended functional behaviors of the application. Includes System Requirements and Information Interchange Requirements.
- 6. Develop Data Set Requirements.** This table lists the data elements that need to be available within the message or document. Placeholders will be included for the three domain focus areas (food insecurity, housing instability/quality, and transportation)
- 7. Finalize Issues, Risks and Obstacles.** Throughout the Use Case development process, this list can be compiled as the Collaborative identifies various issues, risks and obstacles associated with the Use Case.
- 8. Achieve consensus on the Use Case Package.**

# Questions?

You are encouraged to actively participate in the discussion using the Webex chat feature (bottom right of the Webex Meeting window).

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# Gravity Use Case Components: Personas, Patient Story, and Use Cases

# Personas

- Commonly used in user-centered design where developers create a fictional character to represent a user type that might use a site, brand, or product in a similar way
- Presented in a one or two pager document describing the users' behavior patterns, skills, preferences, and needs
- Enables a deep understanding of a target audience in order to develop an exceptional service or product
- In standards development, allows stakeholders to prioritize key data capture and exchange features based on how well they address the needs of a primary persona.

Source: <https://theblog.adobe.com/putting-personas-to-work-in-ux-design-what-they-are-and-why-theyre-important/>

# Gravity Persona Components

- **Name**
- **Role:** *e.g., Patient, Provider, Caregiver*
- **Age**
- **Qualifications/specialties (if practitioner)**
- **Employer**
- **About Persona:** *Brief description of persona. What is their profession? What is their history with health and social conditions identified? Are they married, divorced? How many children? What are their preferences?*
- **Typical Routine & Interactions:** *What does a regular day look like?*
- **Challenges & Goals:** *What are primary challenges faced at most recent point in time? What are short-term and long-term goals?*
- **What Persona wants from the Health System**
- **Clinical Health Concern**
- **Social Risk Factors**
- **Location (city)**

# Persona Candidates

- Rebecca Smith (patient)
- Samir Patel (clinical staff member)
- Dr. Carla Sanchez (primary care physician)
- Reeza Shah (care coordinator)
- Michael Frank (asthma home visit provider)

<https://confluence.hl7.org/display/PC/Gravity+Personas>

# Suggestions for Persona Profiles

- One for individuals (not acting as practitioners in the patient story)
- One for practitioners (acting as care and service providers in the patient story)

# Persona 1: Rebecca Smith



- 32 years old
- Clinical Health Concern: asthma
- Social Risk Factors: housing instability; food insecurity; transportation access
- 3 children (Lily 18 months, James 3 years old, Anna 6 years old).
- Lives in San Francisco, CA

## About Rebecca

- Admin assistant at a local community college
- Recently separated from her husband; no child support from husband
- Lives in a small apartment in the city but the rent is high; can barely pay for rent, utilities, and food
- Does not own a car and relies on public transportation; average commute between home, daycare, and work is 2 hours on bus per day

## Rebecca's Typical Routine & Interactions

- Rises at 6 to get the children up and fed
- Drops children at daycare at 7:30 in order to get the many buses to work and be there by 9am
- Picks up children at 6:30pm, walks home, feeds them dinner, bathes them, and puts them to bed by 8:30 pm

# Persona 1: Rebecca Smith

## Challenges & Goals

- Saves money by buying low cost foods such as mac and cheese and pizza; cannot afford fresh fruits and veggies
- Arrives home so tired at the end of the day
- Concerned about controlling her asthma and recent weight gain
- Gets caught with shut off letters from the utility company but she needs electricity for her nebulizer
- Goals are to feed herself and family well, better manage her asthma, and to settle into a better house

## What Rebecca wants from the health system

- Treatment plan that addresses her asthma and life situation
- Contact information for social worker or case manager
- List of affordable and accessible food options
- Referral to case management to access SNAP and WIC benefits

# Persona 2: Dr. Carla Sanchez



## About Carla

- Primary Care Physician
- 40 years old
- Practices at Sanchez Family Practice
- Married with two young children

- Caring, competent, and innovative doctor who really enjoys being part of a small community and having long term relationships with her patients
- In private practice for 10 years and works alongside another Family Practitioner, an Advanced Nurse Practitioner, and a Physician's Assistant
- Her practice recently became an NCQA Level 3

## Carla's Typical Routine & Interactions

- Begins with hospital rounds seeing average 2-4 patients; continues in office seeing ~25 patients
- Often sees patients with social risk factors that she cannot readily address as a clinician
- Her Practice sees 100 patients per day and makes another 100 phone calls a day for transitions of care and population management
- Carla feels her EHR does a good job with prescription writing and medication reconciliation but is not useful with helping her document non-clinical findings

# Persona 2: Dr. Carla Sanchez

## Challenges & Goals

- Becoming overworked and on the verge of burnout.
- Would like to use her EHR to conduct initial screening for her patients and to document social risks observations during a clinical counter.
- Frustrated with the lack of guidance on what codes she can use to document her observations and thereby facilitate payment.
- Struggles on how to better coordinate referrals to community-based organizations. Most referrals are unidirectional and she does not know whether the patient was seen by the referred provider or the outcome of the intervention.
- Her practice recently adopted a new screening tool to use for all annual wellness visits.

## What Carla wants from the health system

- Provide whole person care and use her EHR to document both clinical and social risk information for her patients. This will improve her ability to identify the right interventions to meet her patient's whole person needs.
- Use her EHR to access relevant patient information existing in clinical and non-clinical settings: past social risk screenings, problem list, medications and refill pattern, diet history.
- Ability to aggregate social risk data on her patients to improve her practice's quality improvement initiatives.

# Patient Story Components (for discussion next week)

- Personas:
  - Rebecca Smith (patient)
  - Samir Patel (clinical staff member)
  - Dr. Carla Sanchez (primary care physician)
  - Reeza Shah (care coordinator)
  - Michael Frank (asthma home visit provider)
- Settings:
  - Rebecca's home, PCP office
- Activities:
  - Screening, diagnosis, planning, and treatment

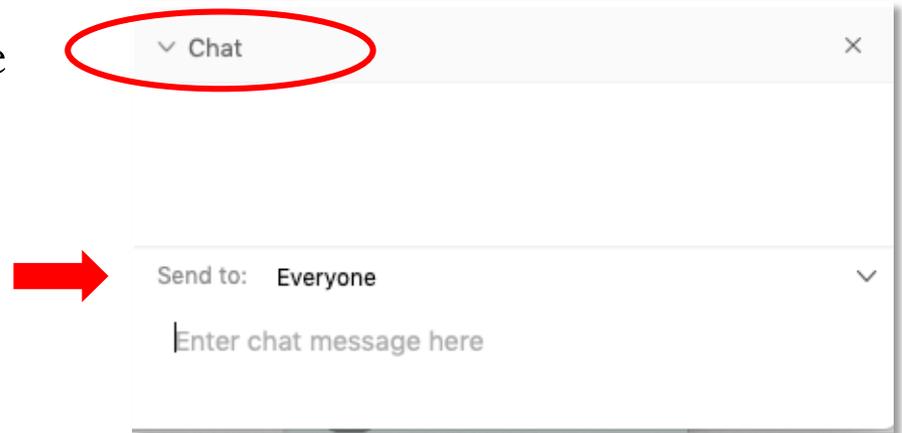
## Use Cases (for discussion next week)

- Document SDH data in a patient encounter.
- Document SDH actions taken in response to identified needs.
- Gather and aggregate data for use beyond the point of care.

# Questions?

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# Next Steps (Homework)

- Join the Gravity Project either as a Committed Member or Other Interested Party  
<https://confluence.hl7.org/display/PC/Join+the+Gravity+Project>
- Download and begin to populate the Data Element Submission Template  
<https://confluence.hl7.org/display/PC/Data+Element+Submission>
- Review Candidate Personas and send recommendations for revisions and additions to: [gravityproject@emiadvisors.net](mailto:gravityproject@emiadvisors.net)

**NOTE: WE NEED TO DEFINE ONLY A SELECT NUMBER OF PERSONAS FOR THE PATIENT STORY AND USE CASES. OUR FOCUS IS CREATING THE RIGHT PERSONAS THAT CAN HELP US REPRESENT REAL-LIFE SCENARIOS.**

Thank you for participating in this national  
consensus-building process.

Additional questions? Contact: [gravityproject@emiadvisors.net](mailto:gravityproject@emiadvisors.net)