



Accelerating Bench-to-Bedside with FHIR

for Custom EHR-Integrated Applications

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HL7 - FHIR
hl7.org/fhir

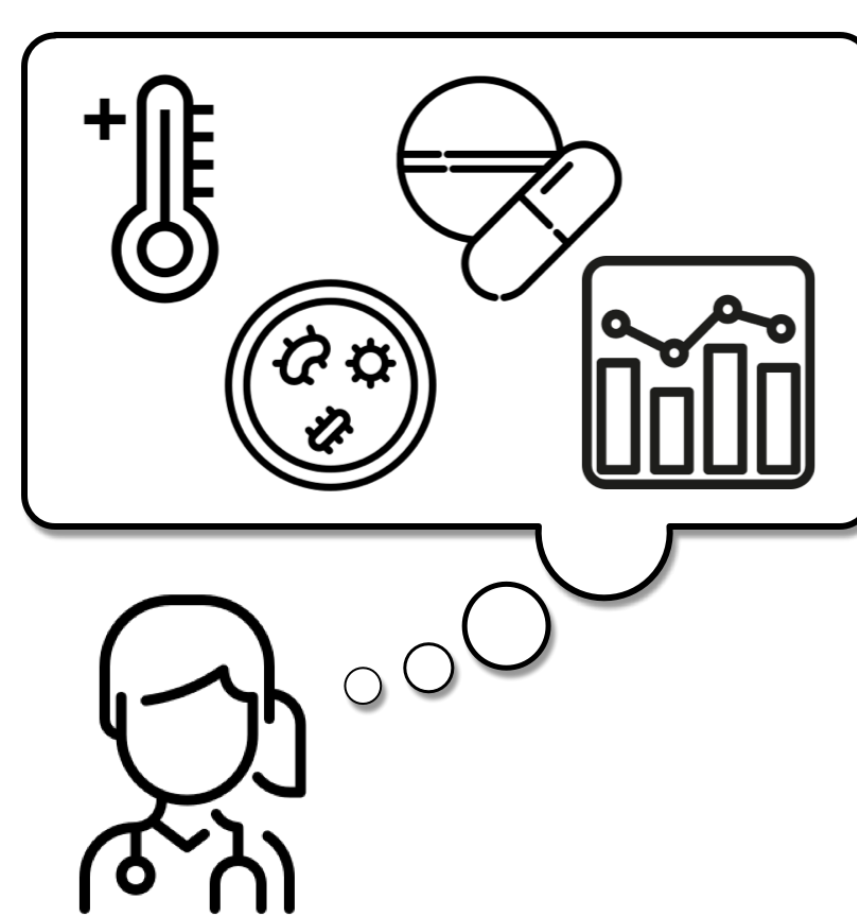
HL7 - CQL
cql.hl7.org

AHRQ - CDSConnect
cds.ahrq.gov

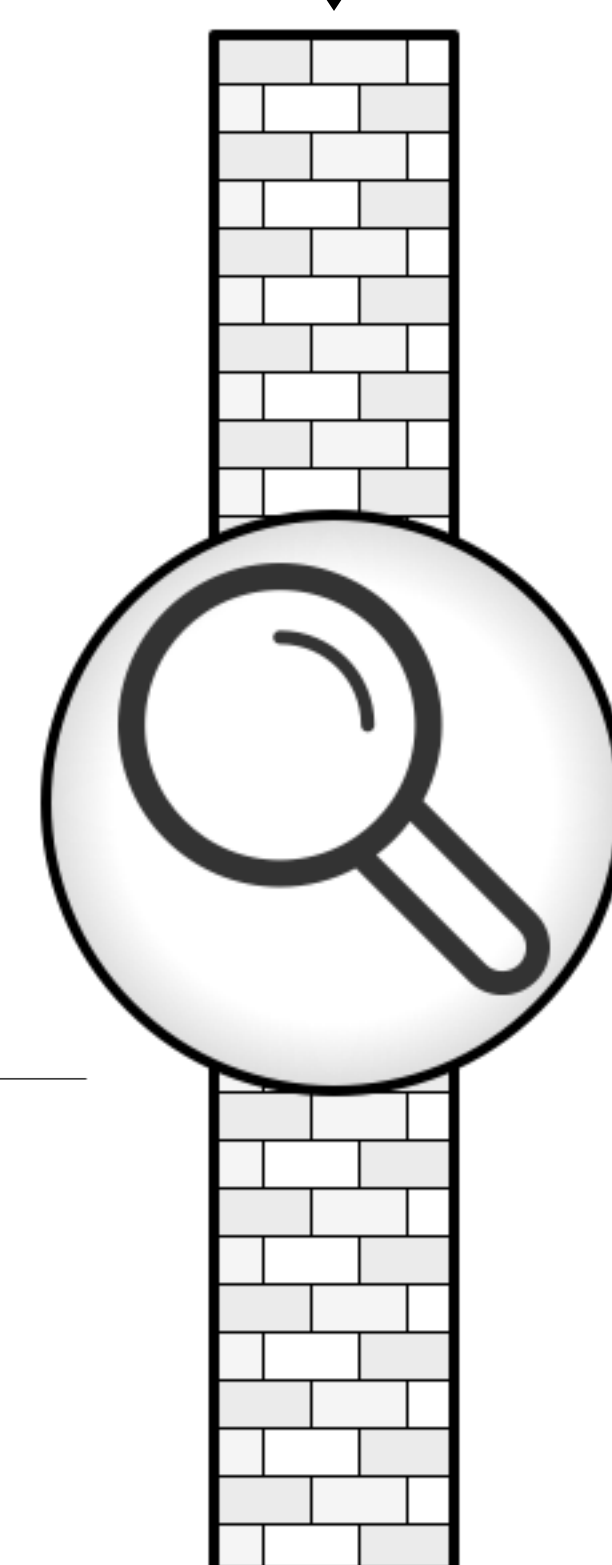
Professionals working with the EHR have innovative ideas for integrated applications to support patient care but face barriers to realizing their ideas

Feasibility

Is FHIR a good fit for this innovation?

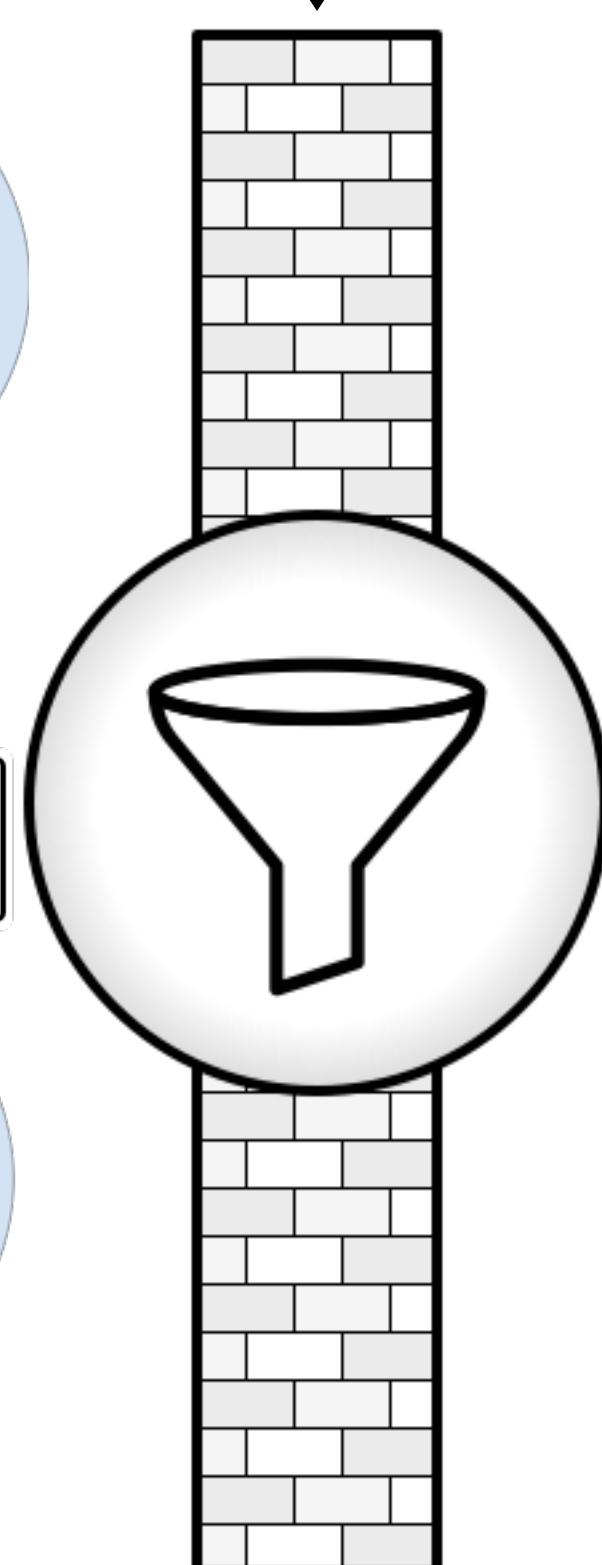
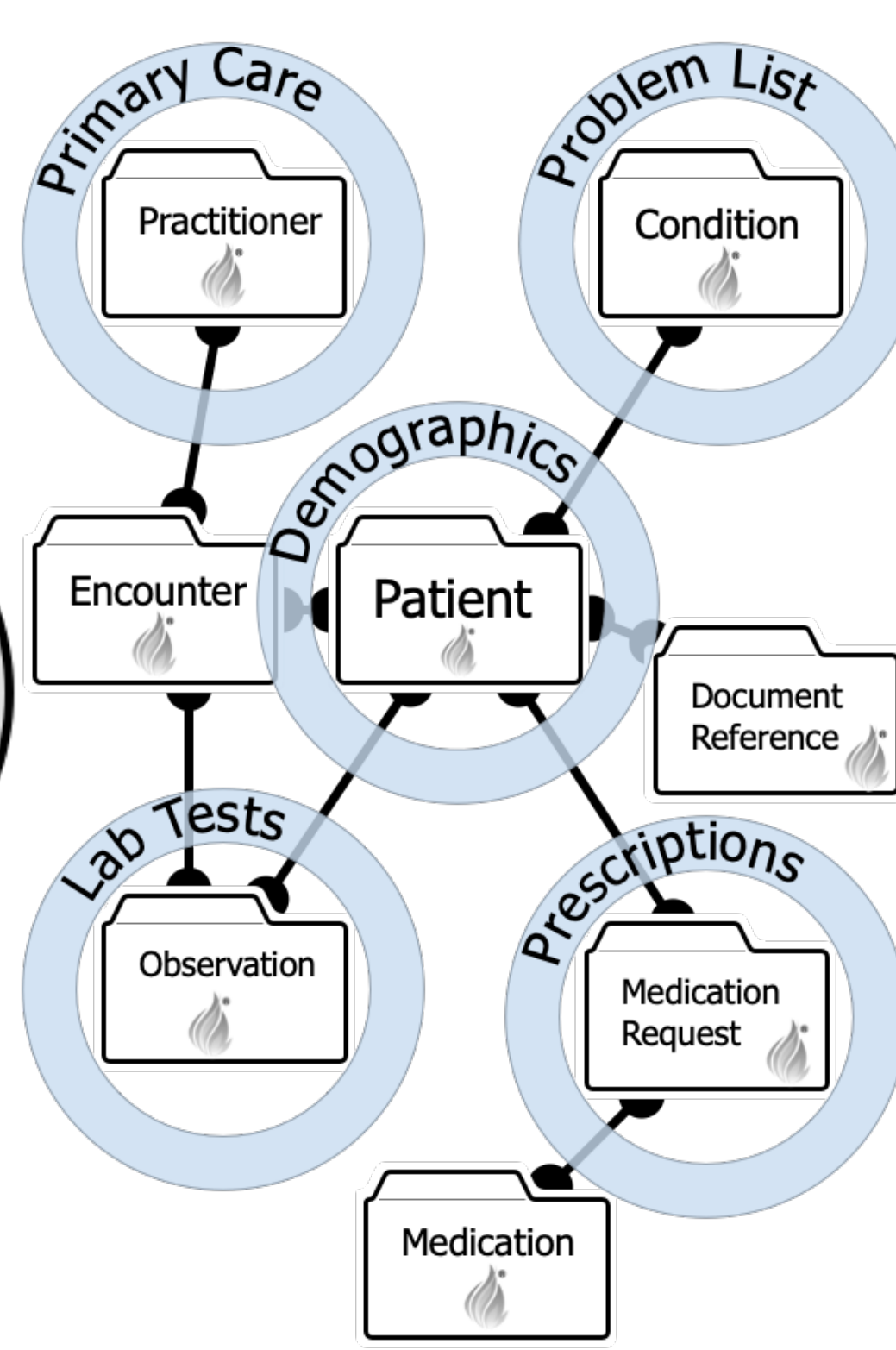


HL7 FHIR
Fast
Healthcare
Interoperability
Resources
Epic on FHIR



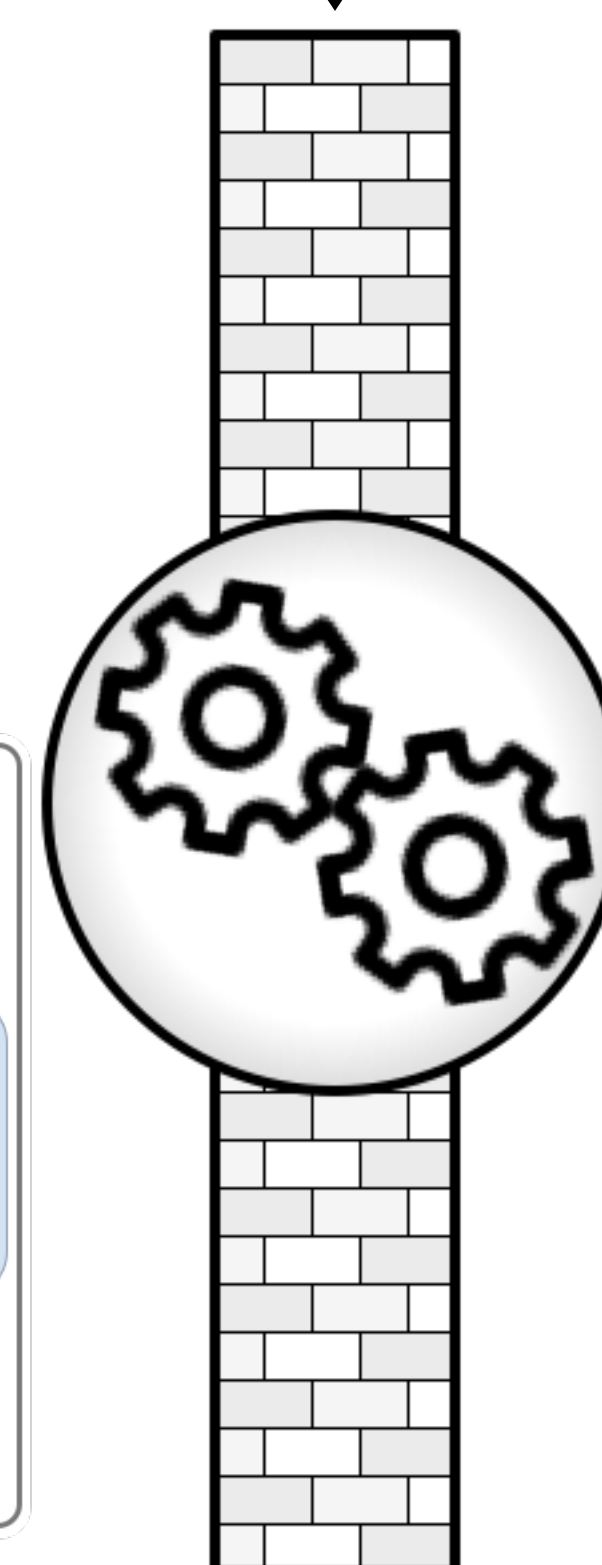
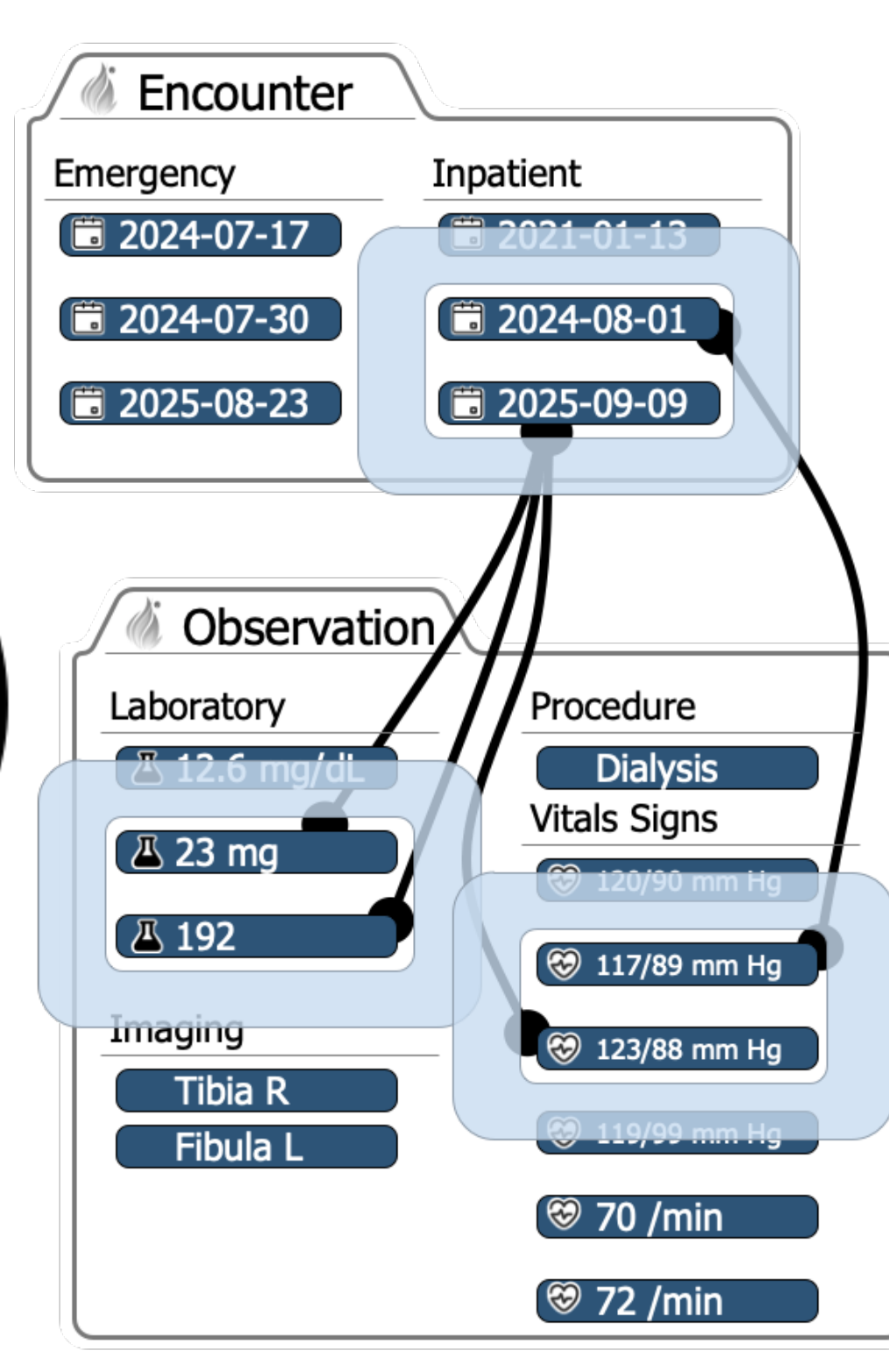
Availability

How is the required data exposed via FHIR?



Feasibility

Which data elements meet the requirements?



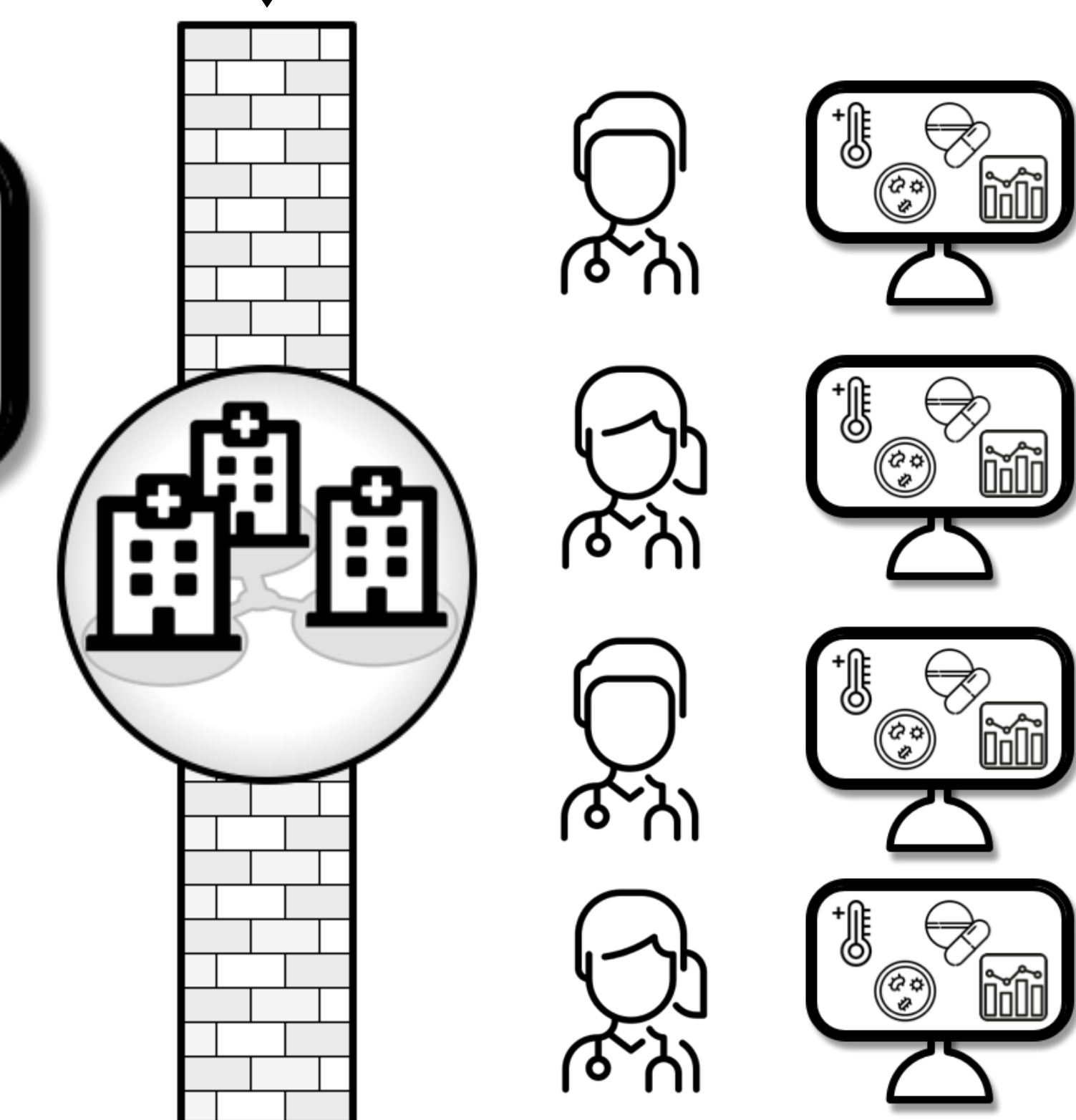
Prototyping

What does this look like in the EHR workflow?



Dissemination

How can this be published for other sites to use?



Potential Innovation

Professionals in various roles have ideas for improving their EHR

- ★ Informaticians
- ★ Physicians
- ★ Nurses
- ★ Diagnosticians

FHIR Strengths & Weaknesses

FHIR promises easier integration, factors affect the decision to implement an idea using FHIR

- ★ Awareness / Expertise
- ★ Alternative Toolsets
- ★ Interoperability Requirements

Concept Mapping

FHIR is organized and named differently than corresponding concepts in the EHR.

- ★ Understanding FHIR Resources
- ★ Mapping EHR Workflow Concepts to FHIR
- ★ Identifying Gaps in an EHR's FHIR implementation

Data Element Selection

Selecting the right data elements in context requires understanding standard terminologies

- ★ SNOMED, LOINC, RxNorm
- ★ Existing EHR Mappings
- ★ Previously Mapped Value Sets

Workflow Integration

Integrating a FHIR application with the EHR requires defined following policies and procedures

- ★ Authentication
- ★ EHR Build Policies
- ★ Server Hosting

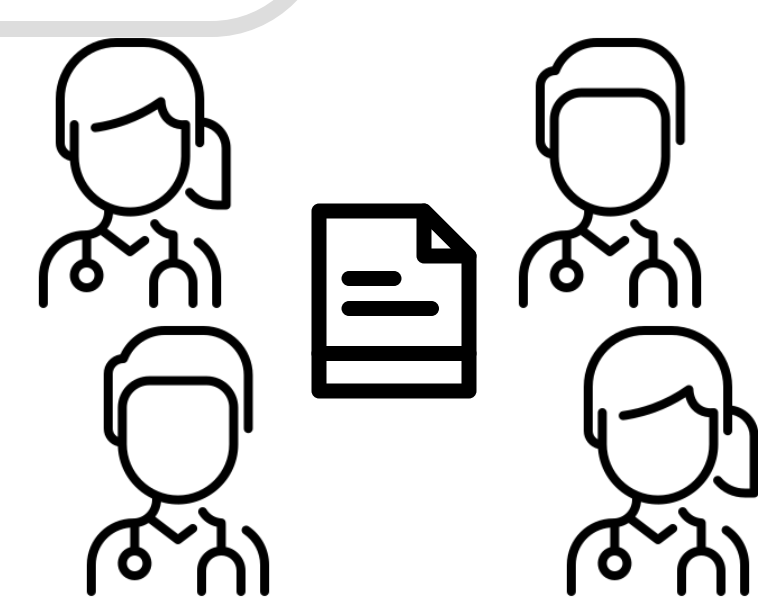
Publishing

FHIR promises interoperability and simplified integration

- ★ ValueSets - VSAC
- ★ Logic - CQL
- ★ Terminology Standards

Needs Assessment

Structured interviews with VUMC professionals in multiple roles

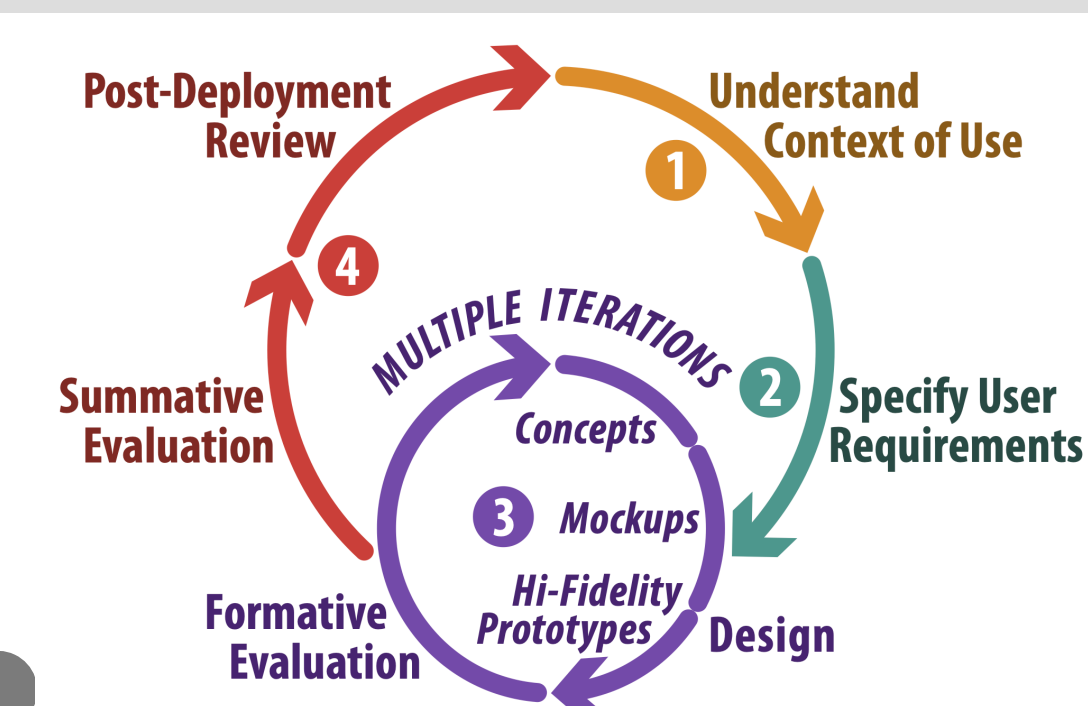


Documentation

Identify and/or author definitive tutorials, guides, and practices

Centralize documents for quick discovery

User-Centered Design Cycle



Implementation

Build interactive modules that integrate with existing VUMC infrastructure



Evaluation

Survey participants who implemented ideas

Assess ideas that reach different stages of implementation