

Reporting Electronic Clinical Quality Measures (eCQMs) Using the HL7® Fast Healthcare Interoperability Resources® (FHIR®) Standard

July 1, 2021
3:00 PM ET

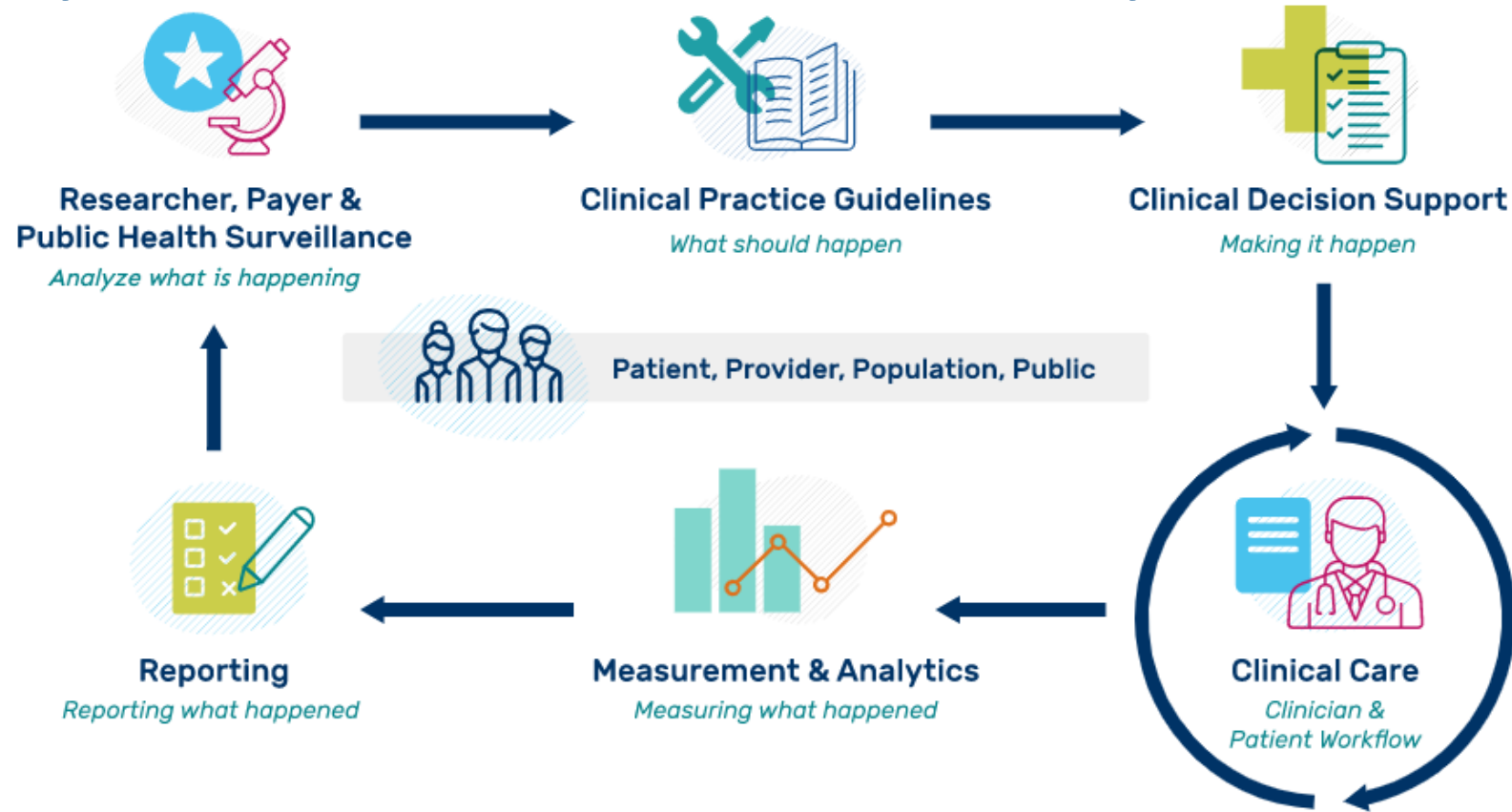
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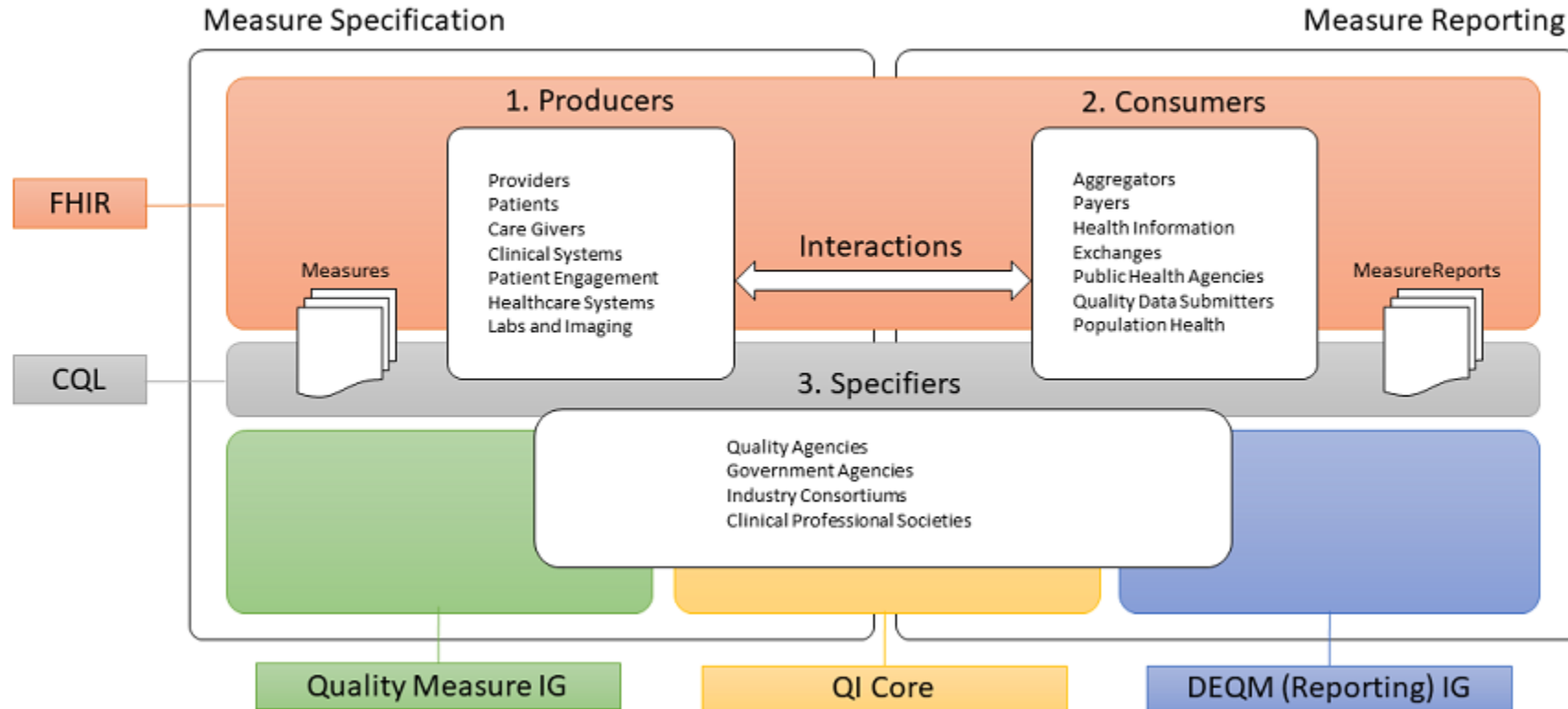
Agenda

- Welcome and background
- Review Quality Measure architecture
- Data Exchange for Quality Measures (DEQM) deep dive:
 - Describe exchange roles, workflow steps
 - Review Data Exchange scenarios
 - Review Measure Reporting scenarios
- Question & Answer session

Quality Improvement Ecosystem



Quality Measurement Standards Landscape

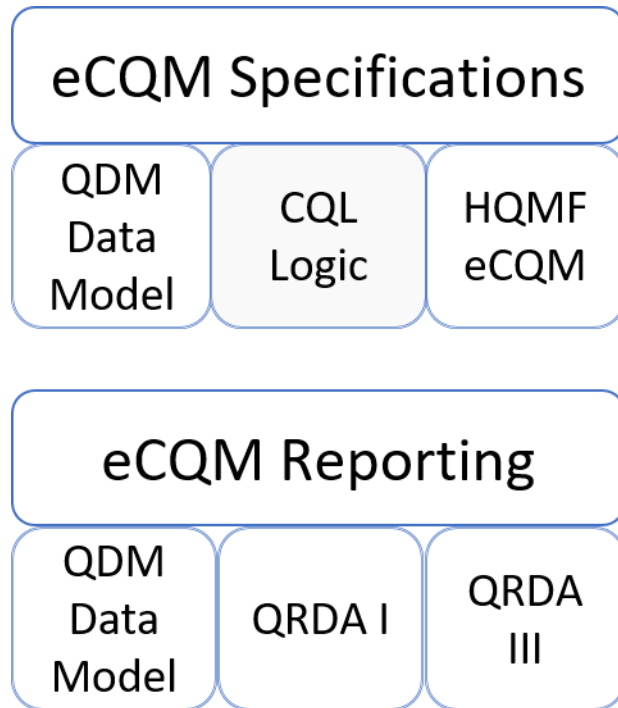


CQL – Clinical Quality Language
DEQM - Data Exchange for Quality Measures
FHIR – Fast Healthcare Interoperability Resources
IG – Implementation Guide
QI – Quality Improvement

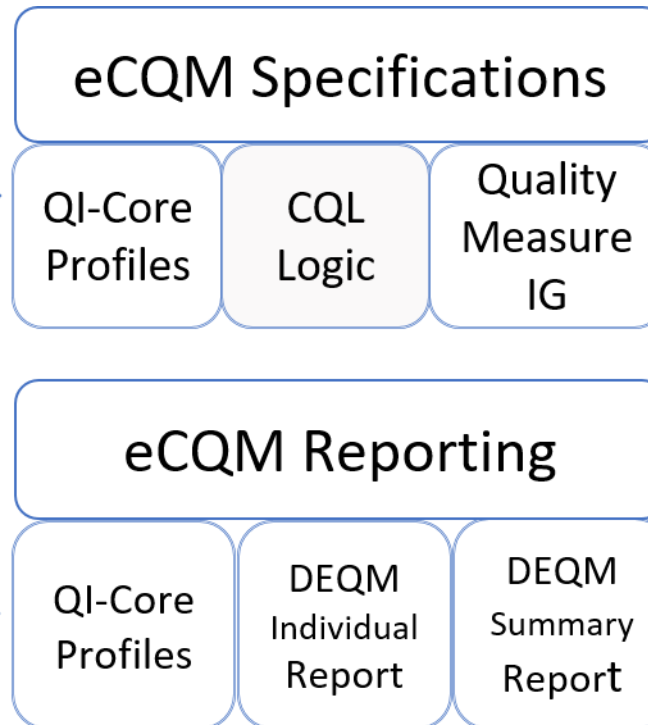
Retrieved from: [HL7 Data Exchange For Quality Measures STU3 for FHIR R4](https://hl7.org/fhir/stu3/quality-measures/) website

Evolution of eCQM Standards

Current



Emerging

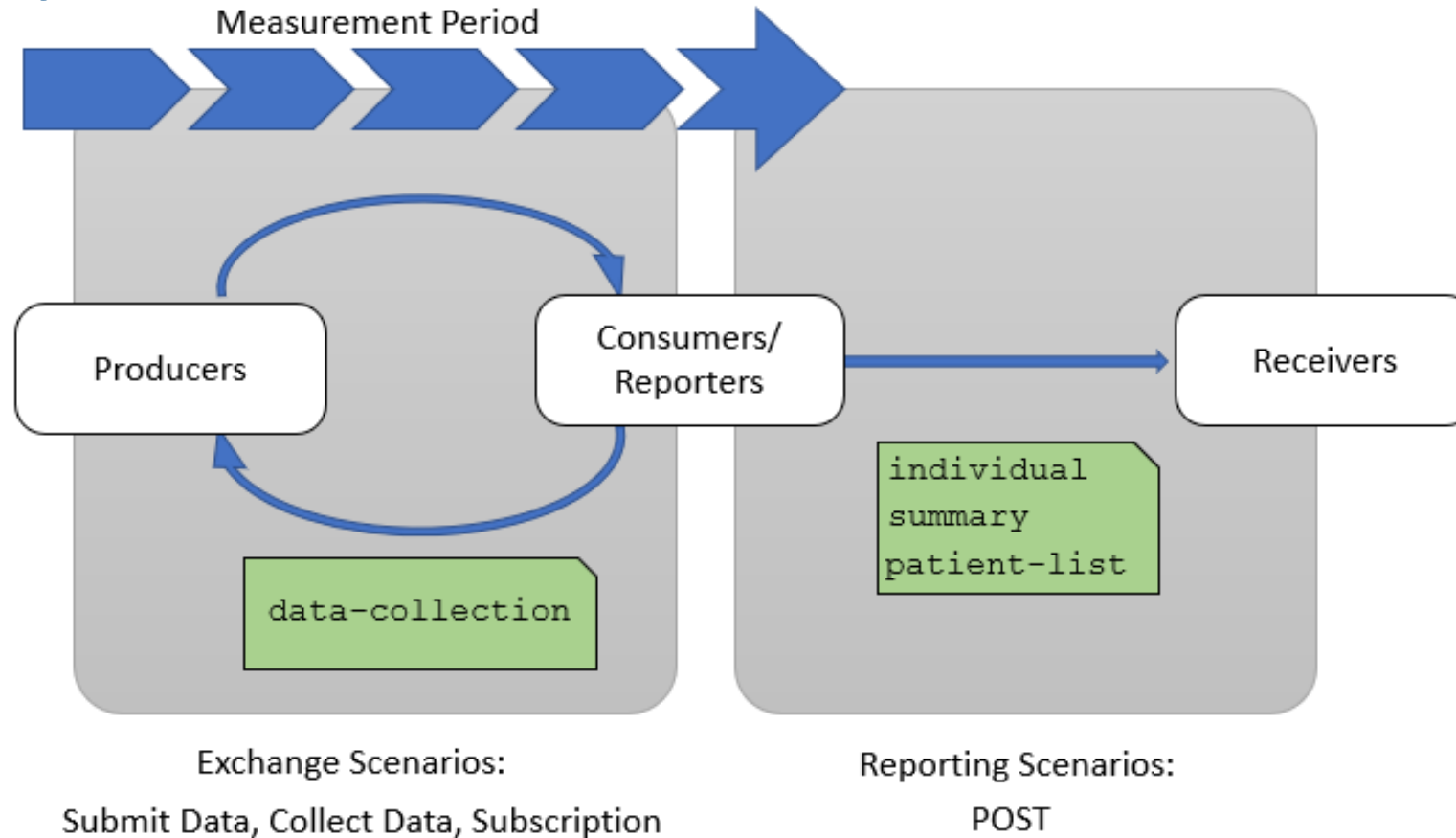


Goal is to align quality measurement standards for eCQM development and reporting using FHIR

- QI-Core replaces QDM for clinical data element representation
- Quality Measure IG replaces HQMF for eCQM structure
- DEQM IG for Individual and Summary replaces QRDA I and III

CQL – Clinical Quality Language | HQMF- Health Quality Measure Format | QRDA- Quality Reporting Document Architecture | DEQM – Data Exchange for Quality Measures

Quality Scenarios in DEQM



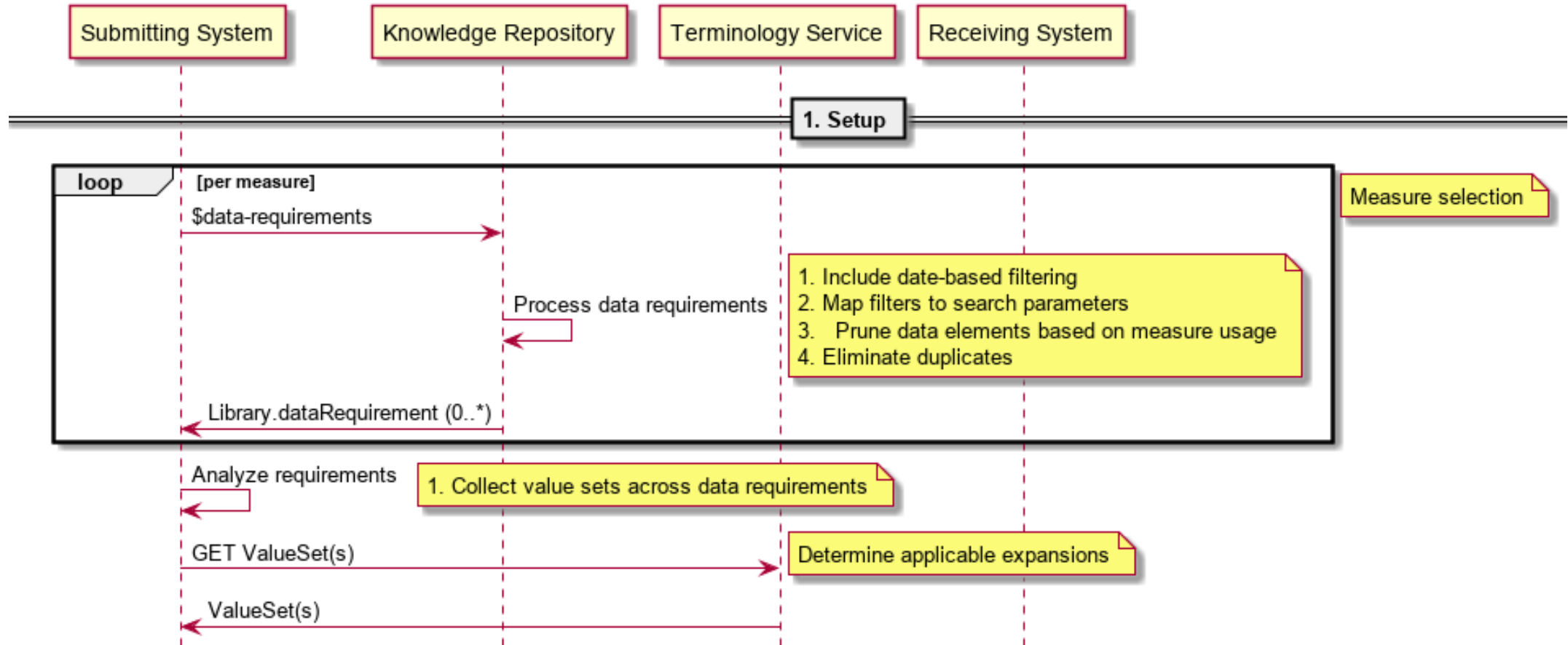
Reporting/Exchange Roles

- Producer – clinician or clinician system that produces data as part of the delivery of care
- Consumer – payers, health information exchanges (HIEs), aggregators, reporting vendors
- Reporter – providers, clinics, hospitals, institutions
- Receiver – payers, agencies
- Knowledge Repository – publishes eCQM specifications
- Terminology Service – publishes eCQM value sets

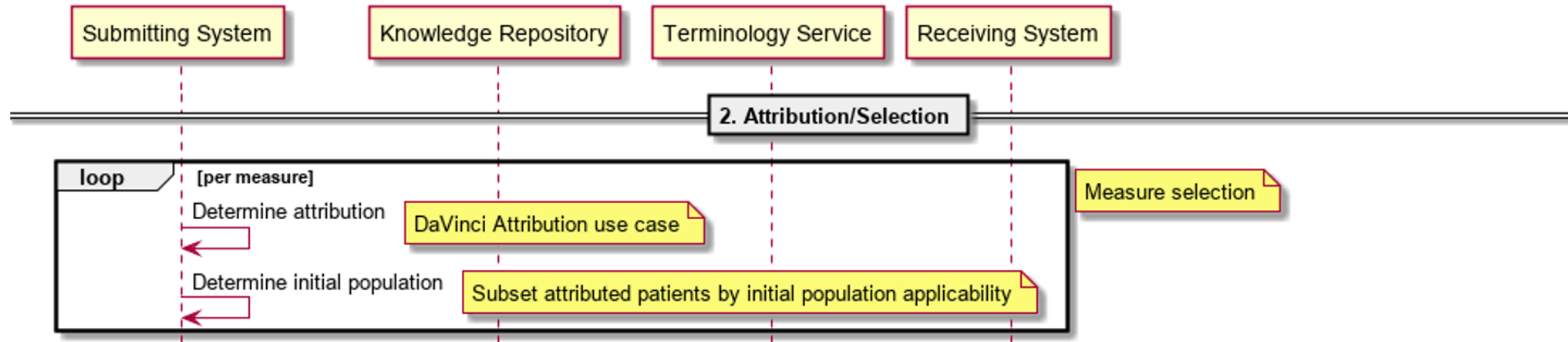
Workflow Steps

- Setup – Measure selection, terminology load
- Attribution – Provider attribution
- Submission – Submitting data-of-interest
- Evaluation – Evaluation of quality measures
- Care Gaps – Determination of care gaps

Setup



Attribution



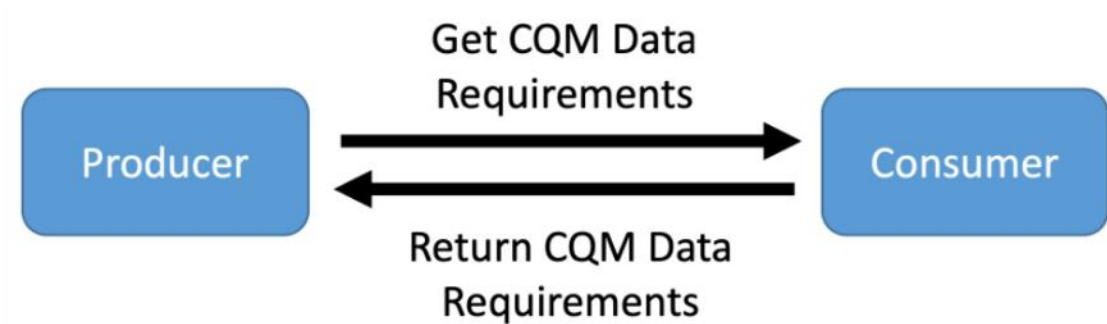
Data Exchange with DEQM

DEQM defines three exchange operations:

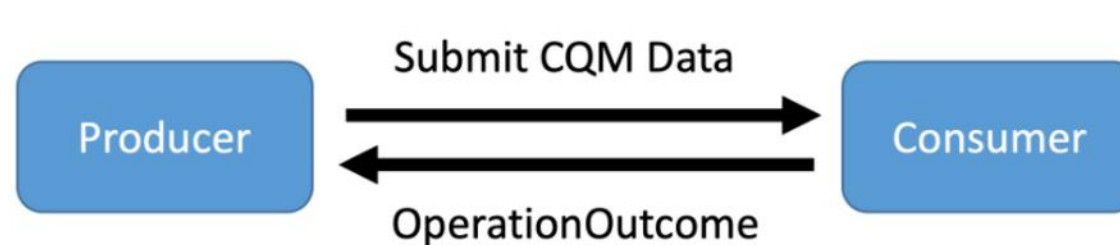
- \$submit-data
 - A data Producer submits data to a Consumer
- \$collect-data
 - A data Consumer requests data from a Producer
- Subscription
 - Under development, will support subscription-based exchange

Conceptual Submit Data Workflow

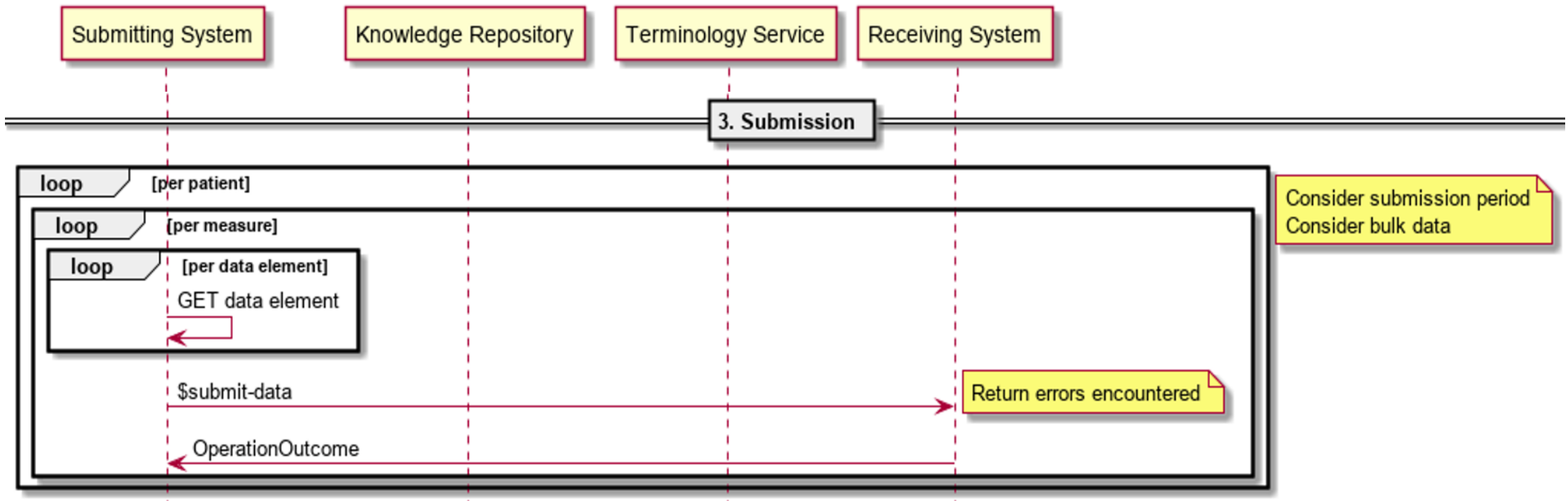
1. Confirm Data Requirements



2. Submit Data



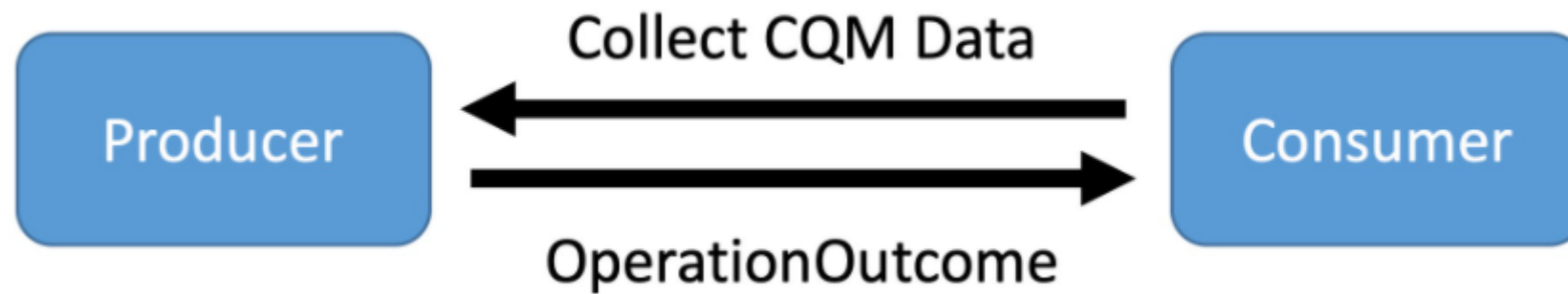
Submission (per-patient)



Technical \$submit-data workflow

- Colon Cancer Screening Measure Data Exchange-Submit Data Example

Conceptual Collect Data workflow



Technical \$collect-data workflow

- Colon Cancer Screening Measure Data Exchange:
Collect Data example

Considerations for Data Exchange Scenarios

- Incremental vs Snapshot
- Provenance of submitted data (multi-tenant)
- Use of Bulk Data protocol

Quality Reporting with DEQM

- DEQM defines three reporting scenarios:
 - Individual Reporting
 - Summary Reporting
 - Patient-List Reporting
 - Patient-list reporting is under development

Individual Reporting

- Individual report contains data for one patient for one measure
- Data elements in the report are defined by the measure reported on
- Supported by the DEQM [Individual MeasureReport Profile](#)

Individual Reporting: Default Profiles

FHIR Resource Type	Profile Name	Link to Profile
Measure	CQFM Measure Profile	<u>CQFM Measure</u>
Individual MeasureReport	DEQM Individual MeasureReport Profile	<u>DEQM Individual MeasureReport</u>
Organization	DEQM Organization Profile	<u>DEQM Organization</u>
Patient	QI Core Patient Profile	<u>QI Core Patient</u>

Individual Reporting Technical Workflow

- [Colorectal Cancer Screening Individual Reporting Example](#)

Summary Reporting

- Summary reports contain calculated summary data for one or more measures. This includes:
 - Patient counts for initial population, denominator, denominator exclusions/exceptions, and numerator
 - Summary data for stratifier criteria (e.g., gender, age)

Summary Reporting Default Profiles

FHIR Resource Type	Profile Name	Link to Profile
Measure	CQFM Measure Profile	<u>CQFM Measure</u>
Summary MeasureReport	DEQM Summary MeasureReport Profile	<u>DEQM Summary MeasureReport Profile</u>
Organization	DEQM Organization Profile	<u>DEQM Organization</u>

Summary Reporting Technical Workflow

- [Colorectal Cancer Screening Summary Report example](#)

End to End Use Case: Medication Reconciliation

- Medication Reconciliation Post-Discharge

Current Activities

- CMS began converting QDM-based eCQMs to use FHIR in spring of 2019
- CMS program measures continue to be tested at HL7 Connectathons
 - See [GitHub](#) for work-in-progress eCQMs and example expressions
- [The Da Vinci Project](#) advances DEQM implementation through multi-stakeholder collaboration

Current HL7 Activities

- eCQM conversion of 2020 CMS program measures to FHIR is ongoing using MAT on FHIR
- Planning for ballots and updates
 - DEQM was balloted September 2020, applying updates
 - QM IG May 2021- ballot
 - QI-Core based on US Core Fall 2021- planned update
- HL7 convenes Connectathons three times per year
 - January
 - May
 - September

Resources to Get You Started

- Current FHIR Measures on [GitHub](#)
- HL7 FHIR R4 Standards and IGs
 - [Current Version R4.0.1](#)
 - [US Core R4 version](#) (STU4 (v4.0.0) published Jun 2021)
 - [DEQM](#) (STU3 (v3.0.0) published Jun 2021)
 - [QM IG](#) (STU2 (v2.0.0) published Feb 2020)
- Electronic Clinical Quality Improvement (eCQI) Resource Center [FHIR Education page](#)

Resources to Get Involved

- Collaborative learning
 - [Cooking with CQL, QDM, and FHIR Webinars](#)
- Standards advancement
 - [HL7 Clinical Quality Information workgroup](#)
 - [HL7 FHIR® Connectathons](#)
- eCQI Resource Center [FHIR Connect page](#)

Questions?