Exploring FHIR to Reduce Burden for Quality Measurement

Background for EHR WG

April 20, 2020

Floyd Eisenberg, MD MPH

HL7 CQI Co-Chair

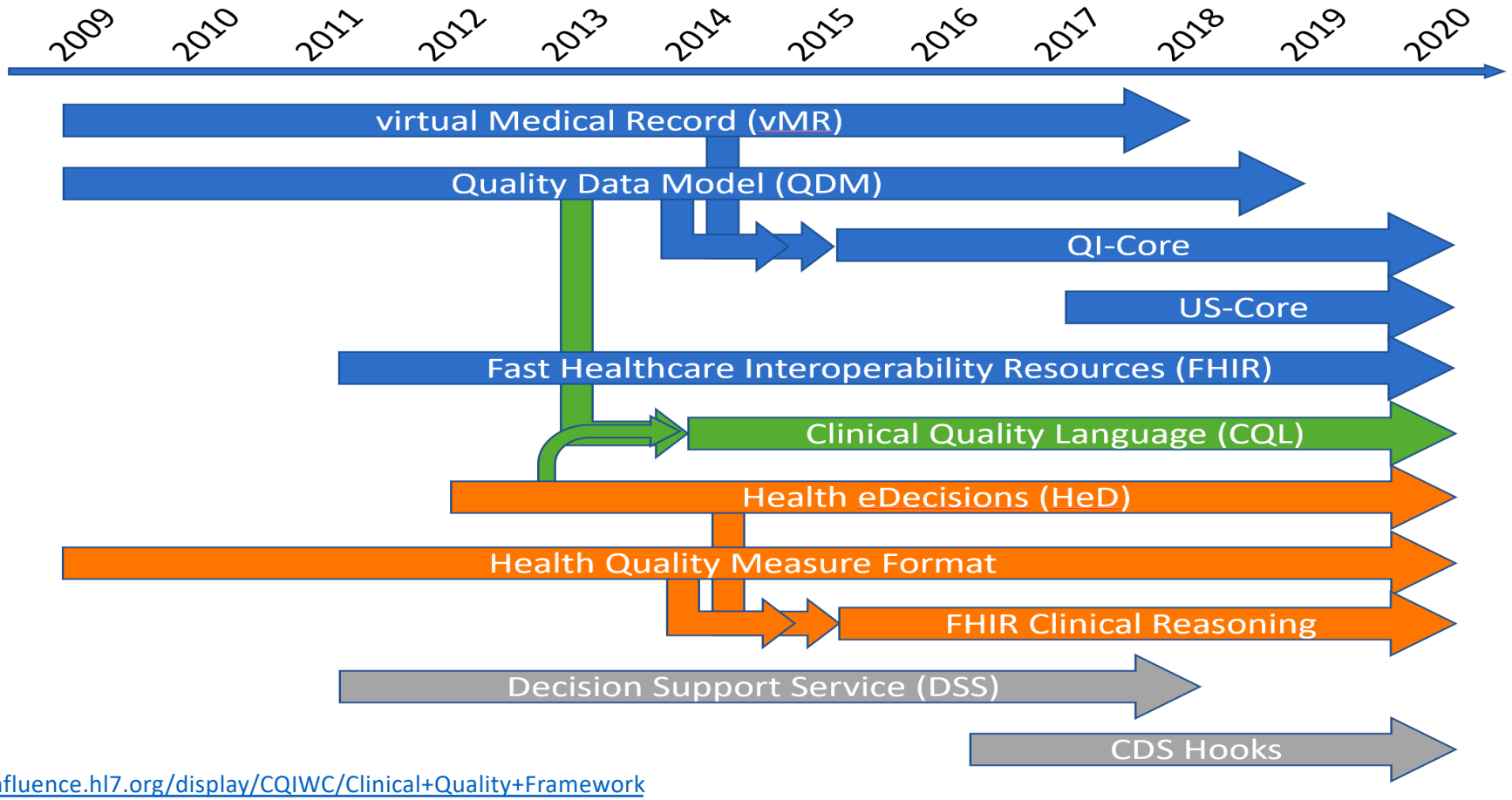
DISCLAIMER: The views, opinions and images expressed in this presentation are those of the author and do not necessarily represent official policy or position of HIMSS.

©2020 The MITRE Corporation. Approved for Public Release; Distribution Unlimited, Case Number 20-0238

® Health Level Seven and HL7 are registered trademarks of Health Level Seven International, registered with the United States Patent and Trademark Office.

HL7® International

Clinical Quality Framework: Standards Evolution



https://confluence.hl7.org/display/CQIWC/Clinical+Quality+Framework

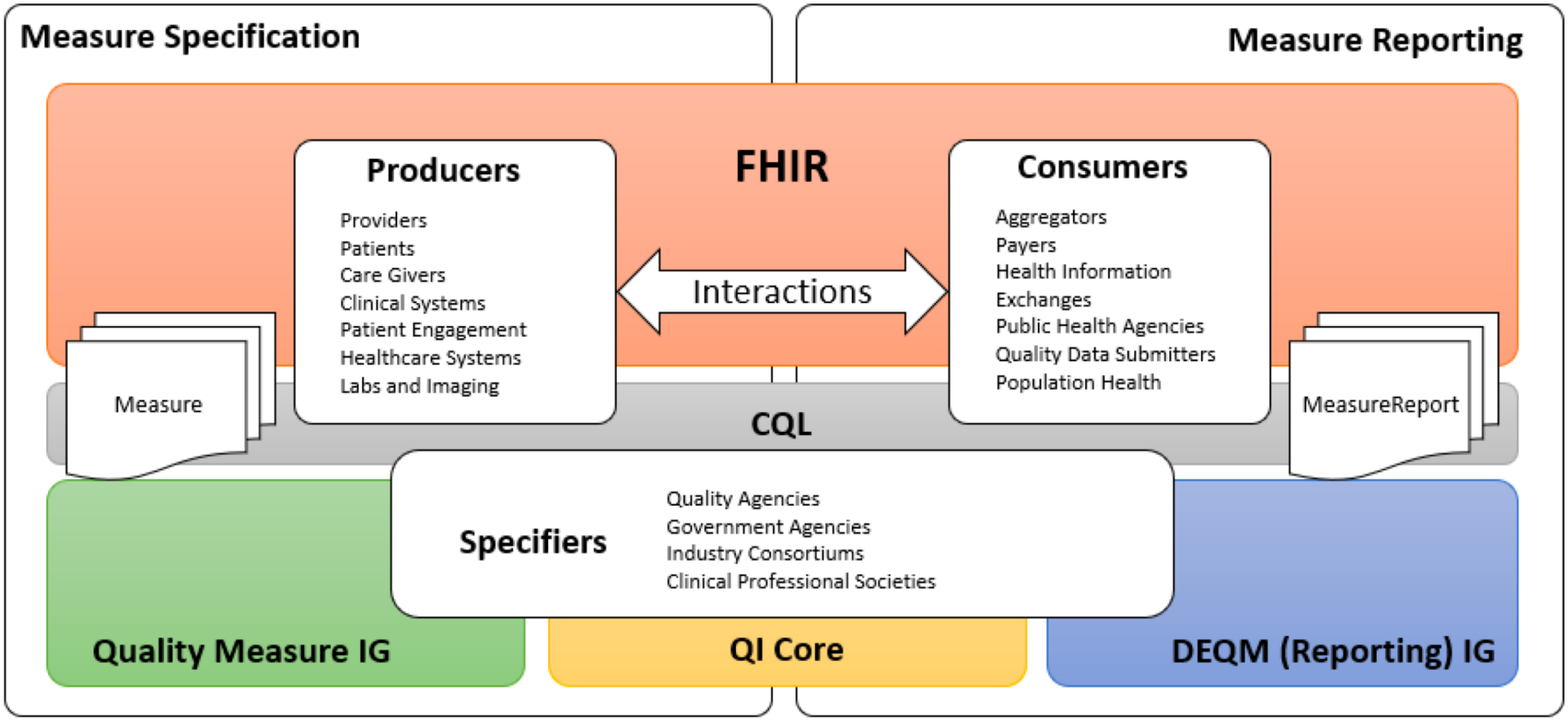
Data Model Structure Logic Service

FHIR Quality Measure Ecosystem

	Through 2018 Reporting Period	Starting 2019 Reporting Period	Proposed Future State
Reporting	QRDA Category I & III		QI-Core / DEQM
Data Model	Quality Data Model (QDM)		QUICK / QI-Core
Measure Logic	QDM	Clinical Quality Language (CQL)	
Measure Structure	Health Quality Measure Format (HQMF)		FHIR Quality Measure IG
Programs	CMS Implementation Guide (QRDA)		CMS Implementation Guide (FHIR)
Transport			DEQM

® Health Level Seven and HL7 are registered trademarks of Health Level Seven International, registered with the United States Patent and Trademark Office.

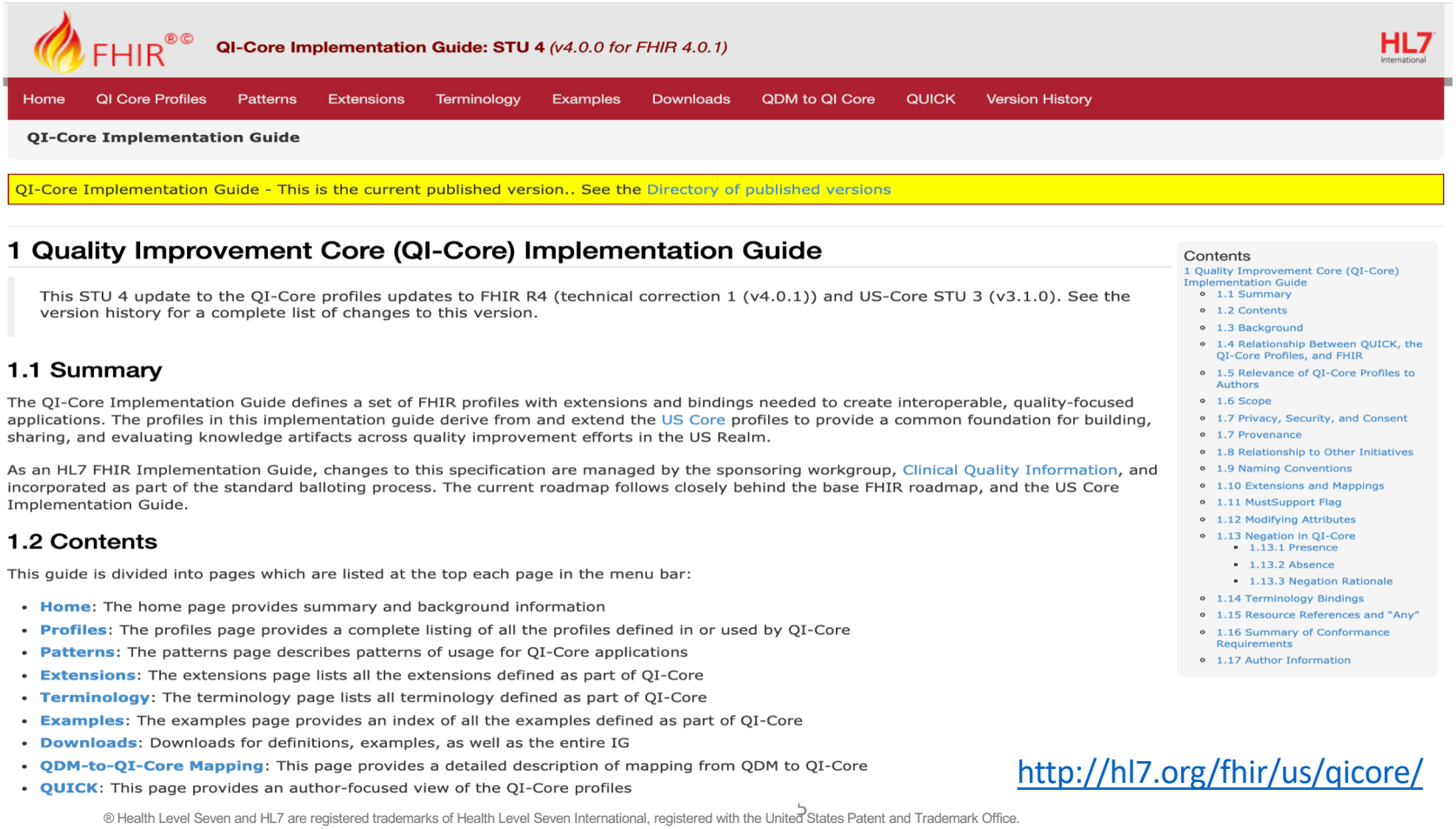
FHIR Quality Measure Ecosystem



http://hl7.org/fhir/us/cqfmeasures/2020Feb/

® Health Level Seven and HL7 are registered trademarks of Health Level Seven International, registered with the United States Patent and Trademark Office.

FHIR QI-Core



FHIR® © **QI-Core Implementation Guide: STU 4** *(v4.0.0 for FHIR 4.0.1)* HL7 International

Home | QI Core Profiles | Patterns | Extensions | Terminology | Examples | Downloads | QDM to QI Core | QUICK | Version History

QI-Core Implementation Guide

QI-Core Implementation Guide - This is the current published version.. See the Directory of published versions

1 Quality Improvement Core (QI-Core) Implementation Guide

> This STU 4 update to the QI-Core profiles updates to FHIR R4 (technical correction 1 (v4.0.1)) and US-Core STU 3 (v3.1.0). See the version history for a complete list of changes to this version.

1.1 Summary

The QI-Core Implementation Guide defines a set of FHIR profiles with extensions and bindings needed to create interoperable, quality-focused applications. The profiles in this implementation guide derive from and extend the US Core profiles to provide a common foundation for building, sharing, and evaluating knowledge artifacts across quality improvement efforts in the US Realm.

As an HL7 FHIR Implementation Guide, changes to this specification are managed by the sponsoring workgroup, Clinical Quality Information, and incorporated as part of the standard balloting process. The current roadmap follows closely behind the base FHIR roadmap, and the US Core Implementation Guide.

1.2 Contents

This guide is divided into pages which are listed at the top each page in the menu bar:

- **Home**: The home page provides summary and background information
- **Profiles**: The profiles page provides a complete listing of all the profiles defined in or used by QI-Core
- **Patterns**: The patterns page describes patterns of usage for QI-Core applications
- **Extensions**: The extensions page lists all the extensions defined as part of QI-Core
- **Terminology**: The terminology page lists all terminology defined as part of QI-Core
- **Examples**: The examples page provides an index of all the examples defined as part of QI-Core
- **Downloads**: Downloads for definitions, examples, as well as the entire IG
- **QDM-to-QI-Core Mapping**: This page provides a detailed description of mapping from QDM to QI-Core
- **QUICK**: This page provides an author-focused view of the QI-Core profiles

Contents

1 Quality Improvement Core (QI-Core) Implementation Guide
- 1.1 Summary
- 1.2 Contents
- 1.3 Background
- 1.4 Relationship Between QUICK, the QI-Core Profiles, and FHIR
- 1.5 Relevance of QI-Core Profiles to Authors
- 1.6 Scope
- 1.7 Privacy, Security, and Consent
- 1.7 Provenance
- 1.8 Relationship to Other Initiatives
- 1.9 Naming Conventions
- 1.10 Extensions and Mappings
- 1.11 MustSupport Flag
- 1.12 Modifying Attributes
- 1.13 Negation in QI-Core
  - 1.13.1 Presence
  - 1.13.2 Absence
  - 1.13.3 Negation Rationale
- 1.14 Terminology Bindings
- 1.15 Resource References and "Any"
- 1.16 Summary of Conformance Requirements
- 1.17 Author Information

http://hl7.org/fhir/us/qicore/

® Health Level Seven and HL7 are registered trademarks of Health Level Seven International, registered with the United States Patent and Trademark Office.

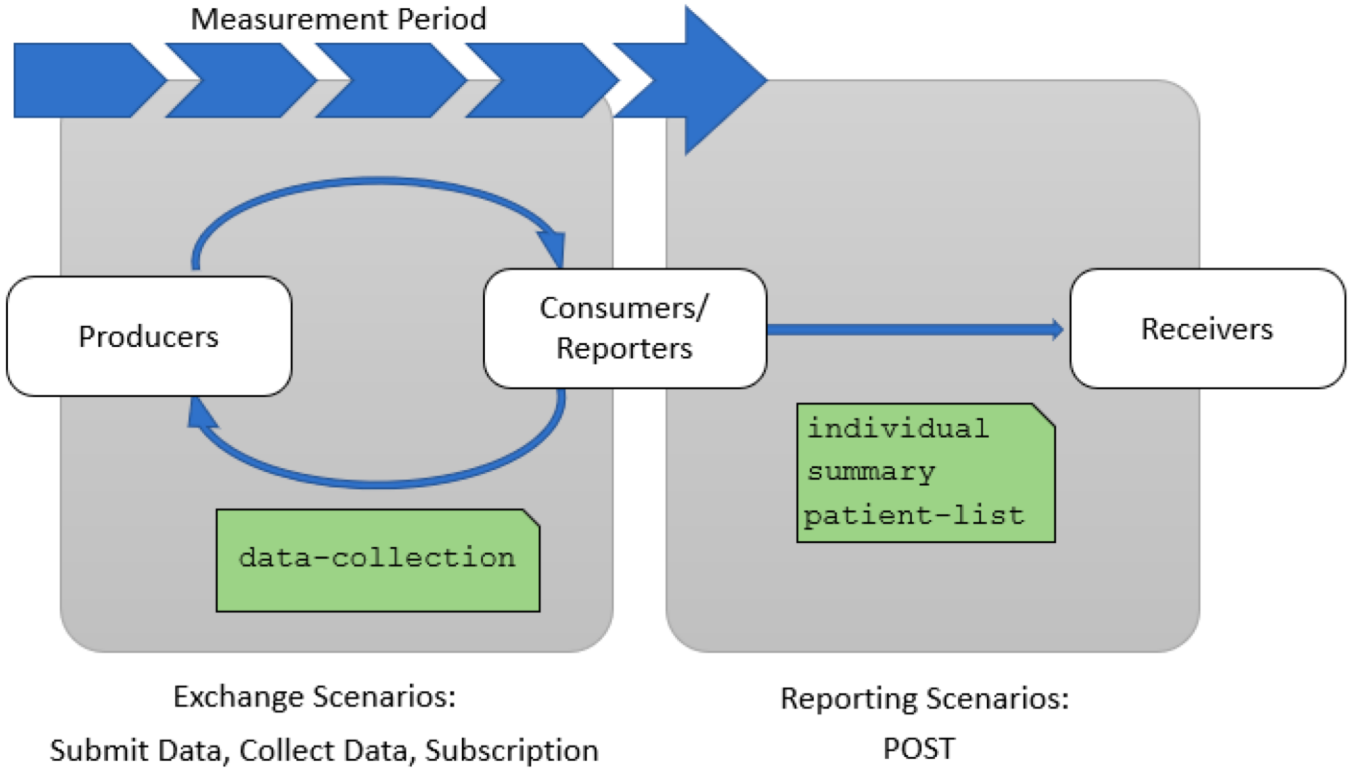
FHIR Clinical Reasoning Quality Measure IG

	Through 2018 Reporting Period	Starting 2019 Reporting Period	Proposed Future State
Reporting	QRDA Category I & III		QI-Core / DEQM
Data Model	Quality Data Model (QDM)		QUICK / QI-Core
Measure Logic	QDM	Clinical Quality Language (CQL)	
Measure Structure	Health Quality Measure Format (HQMF)		FHIR Quality Measure IG
Programs	CMS Implementation Guide (QRDA)		CMS Implementation Guide (FHIR)
Transport			DEQM

http://hl7.org/fhir/us/cqfmeasures/2020Feb/

® Health Level Seven and HL7 are registered trademarks of Health Level Seven International, registered with the United States Patent and Trademark Office.

FHIR Clinical Reasoning
Data Exchange for Quality Measures IG

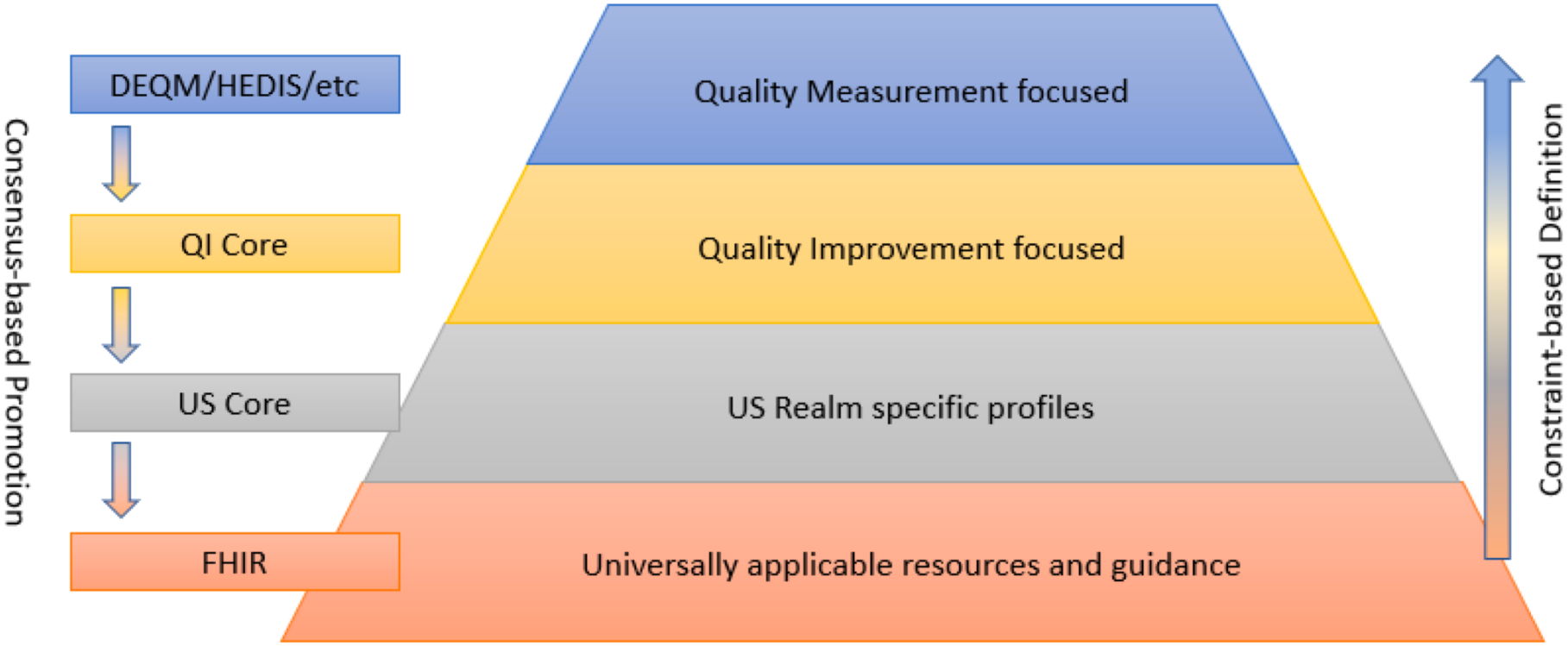


Interim Reporting, Gaps in Care:
May 2020 Connectathon,
September ballot

http://hl7.org/fhir/us/davinci-deqm/2020Feb/

® Health Level Seven and HL7 are registered trademarks of Health Level Seven International, registered with the United States Patent and Trademark Office.

Quality Measure Data Interchange



http://hl7.org/fhir/us/cqfmeasures/2020Feb/

® Health Level Seven and HL7 are registered trademarks of Health Level Seven International, registered with the United States Patent and Trademark Office.