Reference Brief

Digital Quality Measurement & eCQMs

Electronic Clinical Quality Measures (eCQMs)

Health data collected in an electronic health record (EHR) or other electronic health information system can be extracted and used to assess the quality of care provided within different healthcare settings, such as, but not limited to hospitals, outpatient clinics, and post-acute settings. These measurements of quality of care are also known as electronic clinical quality measures (eCQMs). Current state eCQMs use structured data defined by the Quality Data Model (QDM) and measure logic in Clinical Quality Language to evaluate a provider's or organization's performance on a measure concept.

Each eCQM specifies the intent of the calculation and provides definitions for the necessary population characteristics of the group being measured, any criteria that may include or exclude groups from the measure population, the measurement period for inclusion of records, and the setting in which records were collected among other aspects specific to the measure. These specifications use standard terminology referenced by value sets for defining each component of the eCQM.

The Centers for Medicare and Medicaid Services (CMS), other federal entities, and additional stakeholders use eCQMs to assess and support improving quality of care across the healthcare ecosystem.

More information regarding eCQMs can be found at the Electronic Clinical Quality Improvement (eCQI) Resource Center.

Digital Quality Measurement

The usability of digital health data can be further expanded by leveraging evolving health data standards, such as Fast Healthcare Interoperability Resources (FHIR®) (see Figure 1). CMS is on the

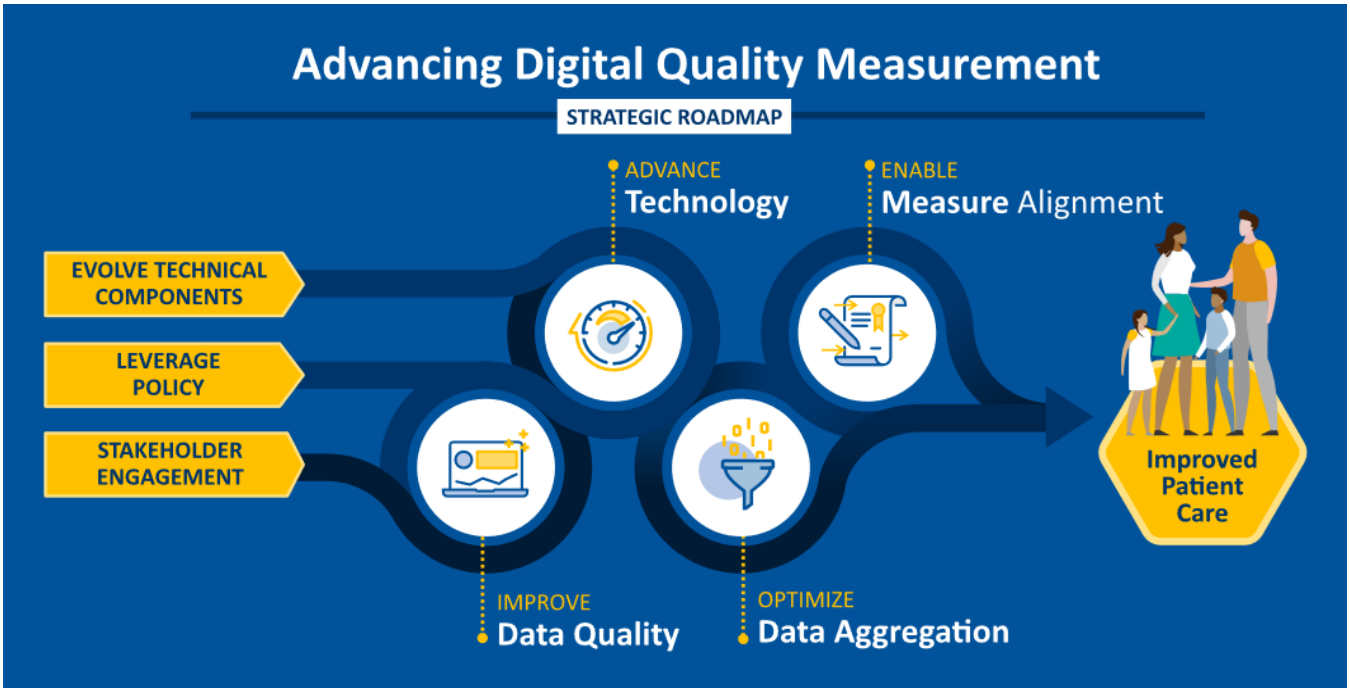

Figure 1. CMS' vision for transitioning to full digital quality measurement(source Centers for Medicare and Medicaid Services, dQM Strategic Roadmap)

pathway to digital quality measurement reporting using FHIR® standards and architecture, and expanding the accessibility of standardized health data across various platforms. dQMs overlap with current eCQMs in the intention to improve quality patient care and outcomes by measuring specific populations who meet specific criteria during specified measurement periods.

However, the goal of dQMs is to have further reach into informing a learning health system through advanced analytics, optimizing patient safety and improving outcomes, while reducing measurement burden. dQMs leverage improved structure and standardization for both terminology and exchange, such as Application Program Interfaces (APIs), thus interoperability.

The first phase in CMS' journey to digital quality measurement is the conversion of current QDM-eCQMs to FHIR®-eCQMs. FHIR®-eCQM architecture will pave the way for other future dQM structures and reporting, facilitating the exchange of critical health information impactful to patients, the quality of their care and improvement to the broader healthcare landscape.

More information regarding dQMs and the CMS dQM Strategic Roadmap is available at the eCQI Resource Center.

Comparing Current eCQMs to dQMs, including FHIR®-eCQMs

In general, eCQMs are considered to be a subset of dQMs. The following table (Table 1) compares the benefits of eCQMs to dQMs.

Table 1. Comparison of Benefits of eCQMs to dQMs

Benefits	QDM-eCQMs	FHIR®-eCQMs	dQMs
Data sources	Single	Single	Multiple
Data capture uses existing workflows	No	Yes	Yes
Uses standard terminology	Yes	Yes (increased)	Yes (increased)
Uses standard measure logic	No; variable	Yes	Yes
Uses standard exchange specifications	Yes	Yes (FHIR® APIs)	Yes (FHIR® APIs)
Employs modular software solution	No	Yes	Yes
Data sharing is timely	No	Yes	Yes
Automated data retrieval via APIs	No	Yes	Yes
Allows for versatility in calculation and reporting	Yes (limited)	Yes (could be done by multiple users such as providers, CMS, third parties)	Yes (could be done by multiple users such as providers, CMS, third parties)
Promotes interoperability using broadly applicable data exchange methods	No	Yes	Yes
Simplifies data mapping	No	Yes	Yes

More information regarding FHIR® and eCQMs can be found at the eCQI Resource Center.