Health IT Enabled Quality Measurement and Improvement and The Impact to Health Plans

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For years a paper-based, manual-intensive process

Electronic claims processing → new ways to perform quality measurement

EHRs → automate process of extracting, calculating, and reporting quality measures

National quality initiatives have moved to retool paper-based measures to an electronic format

Major national programs moving towards adopting and requiring use of electronic standards for quality measurement reporting (eMeasures or eCQMs)
  - Meaningful Use, CMS/Medicare, Joint Commission, NCQA, Health Reform/Payment Reform
Who are the players?

- **Policy Directions on Quality**
  - National Priorities Partnership, National Quality Strategy, CMS, ONC

- **Measure Requesters**
  - External demands of quality measures for accountability
  - Internal demands for quality measures for improvement

- **Measure Developers**
  - National Quality Forum, Measurement Development Partnership

- **Standards Developers**
  - HL7, IHE, IHTSDO, Others

- **EHR/Tool Developers**
  - EHR vendors, quality reporting tool developers

- **Measure Reporters and Users**
  - Providers, Health Plans, Public Programs, Others
Health IT-enabled Quality Measurement and Improvement Ecosystem

RESEARCH
What’s ACTUALLY Happening
Why?

GUIDELINES
What SHOULD Happen
What do we want to happen?

CLINICAL DECISION SUPPORT
How to MAKE IT Happen

CLINICAL DECISION SUPPORT
How to MAKE IT Happen

REPORTING
- quality
- safety

Patient, provider, population, public

MEASUREMENT/ANALYTICS
What DID Happen
What is happening now?
eCQI Ecosystem and Vision

Key

| Black | Red | Tacoma | Tool | Process | Output | Model | Standard |

Communication

- eCQM Governance Group
- Annual Update Support
- Cypress Tech Talks
- QOF S&I
- QDM User Group

eCQM Resources

- QDM Enhanced
- CQM Blueprint v11

eCQM/CDS Unification

- vMR
- QDM
- HeD KA

- Will be superseded by
- Will be superseded by

Standards and Certification

- CQFM
- QMRA
- QRDA
- USHIB
- VRM

CDS Resources

- HeD
- vMR

Authoring/Updating

- VSAC
- MAT
- Telligen

Review

- Draft eMeasure
- Enhanced measure review and consultation

Implementation

- EHR
- CQM Module
- Aggregate Measure Report

The MITRE Corporation | Technical Authority for the Unified Clinical Quality Improvement Framework (Tacoma)
HL7 Clinical Quality Information Workgroup

- Mission
  Create and maintain information technology standards in support of improving health care quality, and to foster collaboration between quality measurement, outcomes and improvement stakeholders.
HL7 CQI Workgroup

- Broad Participation
  - Vendors
  - Measure Developers
  - Measure Implementers
  - Clinicians/Provider Organizations
  - Accrediting Bodies
  - Quality Improvement Organizations
  - Government Agencies
  - Payers
HL7 CQI Workgroup

- Collaboration with other HL7 Workgroups
  - Clinical Decision Support (CDS)
  - Structured Documents (SD)
  - Public Health and Emergency Response (PHER)
  - Patient Care
  - Electronic Health Record (EHR)
  - Fast Healthcare Interoperability Resources (FHIR)
  - Others....

- Collaboration with other industry groups
  - IHE, ISO, IHTSDO, LOINC
  - S&I Framework’s Clinical Quality Framework
  - NQF, CMS, NCQA, Joint Commission, others
Core Standards for Electronic Clinical Quality Measurement

- Measure Definition Standards
  - Quality Data Model (QDM)
  - Health Quality Measure Format (HQMFF)

- Measure Reporting Standards
  - Quality Reporting Data Architecture (QRDA)
  - QRDA Category I for patient level data
  - QRDA Category III for aggregate data
HL7 CQI Workgroup White Paper

A Framework for Standards

- Identifies and describes how various electronic standards meet the needs of end-to-end workflow for quality measurement and clinical decision support
Quality Data Model

- A model of information used to describe clinical concepts in a standardized format to enable clinical quality measurement
- Describes the data elements and states (or contexts) in which data elements are expected to exist in clinical information systems
- Not an HL7 standard but has been implemented in HQMF and QRDA
HQMF (eMeasure)

Health Quality Measure Format

- The first international standard for the formal representation of a clinical quality measure as an electronic document (including metadata, data elements, and logic)
- Provides for quality measure consistency and unambiguous interpretation
- An eMeasure (also known as an eCQM) is a quality measure encoded in HQMF format
eMeasure Construction

Population Criteria: How to calculate the measure

Logic

Data

Data Criteria: What data is needed to calculate

eMeasure
Quality Reporting Document Architecture

- A standard for reporting patient or aggregate quality data for one or more quality measures
  - QRDA Category I – Single Patient Report
  - QRDA Category II – Patient List Report*
  - QRDA Category III – Aggregate Report

* QRDA Category I and III are Draft Standards for Trial Use (DSTU). QRDA Category II is not a DSTU.
QRDA Category I

- Single Patient Reports
  - Individual patient-level report containing data defined in an electronic clinical quality measure
  - Clinically measureable parameters are assembled into quality measures, which are then expressible as eMeasures
  - eMeasures guide the collection of EHR and other data, which are then assembled into QRDA quality reports and submitted to quality organizations
QRDA Category III

- Aggregate Reports
  - An aggregate quality report that contains calculated summary data for one or more measures for a specified population of patients within a particular health system over a specific period of time
  - Communicates data residing in health information systems that are stripped of all patient identifiers, protecting patients and healthcare providers from the risks of inadvertent leakage of private information
New/Emerging Standards

Quality Improvement and Clinical Knowledge (QUICK) Model

- Logical model that represents patient-centric clinical concepts for the purpose of clinical decision support and clinical quality measures
- Describes the use cases and requirements of a data model for quality improvement
- Provides a standard way to reference information in EHRs
- Learns from and builds upon existing standards (e.g., QDM, QRDA, etc.)
New/Emerging Standards

- Clinical Quality Language (CQL)
  - Defining canonical representation of expression logic for clinical quality
  - Drawing on the requirements of the QDM, HQMF, CDS Knowledge Artifact Specification and QUICK
  - Also defining a mechanism for enabling the point-to-point sharing of clinical knowledge
  - Also defining a conformance profile of a human-readable syntax targeted for measure and decision support artifact authors
  - Currently in balloting process at HL7
New/Emerging Standards

- Quality on FHIR
  - Project focused on developing Fast Healthcare Interoperability Resources (FHIR) artifacts needed for clinical quality measurement and clinical decision support
  - Approach aims to transform the QUICK logical model into FHIR profiles
Current Use of CQI WG Standards

- **HQMFM/QDM/QRDA**
  - Used to represent eMeasures (eCQMs) and transmit EHR-based data for CMS health care quality programs
    - EHR Incentive Program (Meaningful Use)
    - Hospital Inpatient Quality Reporting Program
    - Physician Quality Reporting System (PQRS)
    - Comprehensive Primary Care (CPC) Initiative
    - Pioneer ACO Program
  - Emerging use of HQMF/QDM/MAT in the Netherlands
Relationship of CQI and CDS

Goal: Shared Standards

CQM Specific Standards
- HQMF
- QRDA Category-1
- QRDA Category-3
- QDM

Common Metadata Standard

Common Data Model Standard (QUICK)*

Common Expression Logic Standard (CQL)**

CDS Specific Standards
- HeD (KAS and DSS) ***
- vMR

* Quality Improvement and Clinical Knowledge
** Clinical Quality Language
Why is this Work Important for Health Plans?

- Transformative changes in health care are pointing to significantly expanding and enhancing quality measurement and improvement
- Major national initiatives adopting eStandards for collecting/reporting clinical quality measures
- Accrediting bodies (NCQA, Joint Commission) increasing adoption of electronic standards for quality reporting
- Health plans will be expected to collect quality measures electronically from providers via eStandards
Why is this Work Important for Health Plans?

- Establishes common mechanisms to communicate information about clinical quality measures
- Encourages adoption of standards
- Standardizes methods to express and understand data across all settings to enable reuse
- Enables automated queries and electronic transmission of clinical data for quality measurement
- Enables comparison of processes and outcomes over time, regardless of setting
Why is this Work Important for Health Plans?

- Participation in standards development activities
  - Ensures your organization’s needs are represented
  - Helps assess impact of standards on local system infrastructures
  - Keeps you informed of new/evolving standards and related initiatives
  - Enables networking/sharing/learning with peers
How to Participate

CQI Workgroup

- Weekly calls: Fridays, 1:00 – 3:00 pm ET
- F2F Working Group Meetings (x3/year)
- Listserv: http://www.hl7.org/myhl7/managelistservs.cfm
- Website: http://www.hl7.org/Special/committees/cqi/index.cfm
- Ballot review/comment: http://www.hl7.org/participate/onlineballoting.cfm?ref=nav
How to Participate

- CQI WG Co-chairs
  - Crystal Kallem, Lantana Consulting Group  
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