Driving Quality Improvement: *Looking beyond eCQMs*
Conflict of Interest Disclosure

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*have no real or apparent conflicts of interest to report*
Session Objectives

• Describe the purpose, goals, outcomes of the DQIC and expected next steps

• Identify key milestones in the evolution of the eCQMs

• Identify strategies to drive quality improvement
Driving Quality Improvement Collaborative Overview and Next Steps
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Texas Tech University Health Sciences Center
History & Goals of DQIC

• History
  – The DQI Collaborative originated from December 2014 Kaizen focused on improving eCQM process from concept to execution out of the workgroup: eCQM Implementation Workflow Workgroup

• Goals
  – The DQI Collaborative considers the clinician/implementer perspective to inform how to design workflows, streamline data capture, ensure data quality, and improve usability while ensuring a high quality of care
  – An outgrowth of this exploration was to generate useful insights into enhancements to quality improvement approaches that achieve helpful and accurate performance measurement and effective improvement in patient outcomes and provider effectiveness in a manner that enhances and does not disrupt clinical workflow and care
HITECH: Catalyst for Transformation

We cannot improve what we cannot measure...

Pre 2009
A system plagued by inefficiencies

2009
EHR Incentive Program and 60 Regional Extension Centers

2015
Widespread adoption and meaningful use of EHRs

Realizing the Triple Aim requires ability to measure cost, quality and population health!
Methods

• 100 participants including, broken into work streams:
  - Clinician/implementers
  - Federal agency representatives
  - Provider and health data exchange organizations
  - HIT developers
  - And QI content developers

• All participants were be asked to consider the issues facing clinician/implementers as a primary goal, with other stakeholder needs and improvement opportunities as supplementary considerations
Work Streams/Work Groups

1. Implementation Management (IMWG)
2. Work/Data Flow: (Inpatient and Outpatient Subgroups)
3. Data and Information Governance: Data Provenance, Mapping, Reporting, and Asset Management
4. Electronic Clinical Quality Measure (eCQM) and Clinical Decision Support (CDS) Development
5. User Interface and Experience
Recommendations and Considerations from the DQIC

- Align and create opportunities to share best practices
- Develop standards that facilitate sharing of best practices
- Provide resources to support continuing quality improvement
- CDC, ONC and CMS continue working on strategies to automate workflow and CDS with ability to capture valid eCQMs and public health reporting
Commonality between eCQMs and Public Health Reporting
National Development Underway to Address Standards

**Objective**
To determine a viable, sustainable approach to workflow portability, building upon existing standards, to support sharing across and among healthcare organizations

**“The Work”**
Two workstreams have been initially identified and launched:
- Field Guide & workflow pilot

**The Approach**
- Intent is to leverage existing industry standards (Business Process Modeling Notation, Case Management and Modeling Notation, and Decision Management notation) languages
- Define extension mechanisms within the standard to address gaps adversely affecting modeling work
- Identify early adopter organizations to develop, share, and consume workflow models
- Collect lessons learned and feedback into the Guide
- Promulgate the Guide among content developers, including professional societies, clinical colleges, and healthcare providers
- Extend the work to focus on institutional adoption / implementation
A call to action: “the quadruple aim”: Health and Well-being of the Clinical Team

“The joy of practicing medicine is gone.”
“I hate being a doctor...I can’t wait to get out.”

“I can’t tell you how defeated I feel...The feeling of being punished for delivering good care is nerve-racking.”

“I am no longer a physician but the data manager, data entry clerk and steno girl... I became a doctor to take care of patients. I have become the typist.”

“Yes, the documentation of "quality standards" has greatly improved, but patient care and patient safety has not.

In fact nurses have to enter false information sometimes and work around the system (I use vendor X, Y and Z) and all have similar issues.

I know first hand of 2 sentinel events caused by the systems (X and Y). Also systems audits are being used to evaluate and discipline nurses; this is a big ethical issue as nurses are charting stuff for the wrong reasons ...creating a conflict of interest”

http://www.annfammed.org/content/12/6/573.full
Important Considerations for Organizations

• Focus on improved data standards and reliability of data within EHRs
• Interoperability within and across care settings and usability can present challenges for eCQMs
• Workflow redesign with clinical teams and quality improvement specialists are critical to success
• Enterprise Data Warehouse (EDWs) and Business Intelligence tools that capitalize on electronic data to track and trend process and outcomes are important particularly for validating eCQMs
  
  - *eCQMs are foundational to improvement efforts*
  - *eCQMs set us up for ethical dilemmas* (Harman & Cornelius, 2017, p. 185)
  
  - *Just Culture are critical* throughout the organization
Evolution of Electronic Clinical Quality Measures
Kimberly M. Bodine, DNP, RN
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Delivery of the First eCQMs

- Retooled chart abstracted measures
- National Quality Strategy Domains
  - Patient Safety
  - Care Coordination
  - Population and Public Health
  - Clinical Process/Effectiveness
  - Efficient Use of Healthcare Resources
  - Patient and Family Engagement
- Conditions represent national public health priorities
Healthcare Information
Quality Measures Technical
Note: April 30, 2010
Health Quality Measures Format (HQMF)

**Header**
- Metadata
- Body
  - Population
  - Data Criterion
  - Stratification
  - Observation

**Table**

<table>
<thead>
<tr>
<th>Measure Name</th>
<th>EMeasure Id</th>
</tr>
</thead>
<tbody>
<tr>
<td>Venous Thromboembolism (VTE) Prophylaxis</td>
<td>1.3.6.1.4.1.33869.1.2.16000.1.1 STK-1</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>Ischemic and hemorrhagic stroke patients who received VTE prophylaxis or have documentation why no VTE prophylaxis was given on the day of or the day after hospital admission</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Measure scoring</th>
</tr>
</thead>
<tbody>
<tr>
<td>Proportion</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Measure type</th>
</tr>
</thead>
<tbody>
<tr>
<td>Process</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Rationale</th>
</tr>
</thead>
<tbody>
<tr>
<td>Stroke patients are at increased risk of developing venous deep vein thrombosis in more than a third of patients with vary depending on the type of screening used. Prevention risk patients is a noted recommendation in numerous clinical who are confined to bed, thromboembolism with low-molecular unfractionated heparin is not recommended</td>
</tr>
</tbody>
</table>

**Population**

```sql
/* * * IF Patient Class of Inpatient Encounter THEN 'Y' ELSE 'N' */
IF PatientClass contains ValueSet [Joint Commission Inpatient Encounter Value Set] THEN 'Y' ELSE 'N'
```

**Denominator**

**Denominator Inclusion**

```sql
/******* Ischemic or hemorrhagic stroke patients */
IF "Principal Diagnosis of Ischemic or hemorrhagic stroke" THEN 'Y' ELSE 'N' */
```

**Denominator Exclusion**

```sql
/****** Ischemic or hemorrhagic stroke patients */
IF "Principal Diagnosis of Ischemic or hemorrhagic stroke" THEN 'Y' ELSE 'N' */
```

**Observation**

- Patients <18 years of age
- Patients who have a Length of Stay >120 days
- Patients who have a Length of Stay < 2 days
- Patients with Comfort Measures Only documented on day of or day after hospital arrival
- Patients enrolled in Clinical Trial
- Patients admitted for Elective Cardiac Intervention
The Office of National Coordinator Issue Tracking System

[CQM-1428] Incorrect medication on Lipid-Lowering Agent listing

Created: 02/Jan/12 Updated: 25/Mar/16

Status: Resolved

Reporter: Kimberly M. Bodine
Assignee: Mathematica EH CQM Team

Description: CMS105v3 STK6, Lipid-lowering agent value set OID: 2.16.840.1.113883.3.117.1.7.1.217 contains Clopidogrel (Plavix) 75 MG oral tablet and 300 MG oral tablet. This medication is not a lipid-lowering agent and should be removed.

Solution: Thank you for raising this issue. You are correct, the Lipid Lowering Agent value set (2.16.840.1.113883.3.117.1.7.1.217) includes the following RXNORM codes in error: 749196 Clopidogrel 300 MG oral tablet, 369362 Clopidogrel 75 MG oral tablet, 313406 Ticlopidine 250 MG oral tablet.

These medications are not lipid lowering agents and will be removed from the value set in the 2015 annual update.
2016: A Year of Change

• eCQMs recognized as future of quality reporting
• Required for Hospital Inpatient Quality Reporting Program
• Alignment of reporting periods to CY for hospitals
• Inclusion of new operators
• Submission using Quality Reporting Data Architecture Category 1
Quality Data Model (QDM) defines relationships between patients and clinical concepts as structure data.

Limitations:
- Vague
- Unable to derive data
- Requires a complex calculation engine
- Cannot perform comparisons necessary to assess outcomes
- Unable to compare results to determine an improvement over time

Clinical quality language (CQL) is HL7 standard expression logic for eCQMs and clinical decision support (CDS).

**Benefits**
- **Precise**
- **Simplifies time relationships**
- **Performs calculations necessary to assess patient outcomes**
  - \( \text{LDL} = (\text{Total cholesterol} - \text{HDL} + \frac{(\text{Triglycerides}/5)}{ }) \)
- **Identifies components of assessments, examinations and test procedures**
Clinical Quality Language (CQL)

CQL allows for the expression of components of clinical care, i.e. assessment, evaluation or test procedure

- **Example 1**
  - Ophthalmology examination measurements
    - *Cup/Disc ratio*
    - *Retinal hemorrhage*

- **Example 2**
  - Labor and delivery room assessment
    - *Infant gestational age*
    - *Mothers choice to exclusively breast feed*

- **Example 3**
  - Ensure systolic and diastolic blood pressure results are from same blood pressure reading
    - *Calculation of mean arterial pressure*

Engagement is Necessary
Driving Quality Improvement Initiatives
Donna M. DeBoever, MA, RN-BC
JPS Health Network
The Problem: How Do We Drive Quality Improvement?

• Provider organizations need substantial support to be successful in applying patient-centric quality improvement approaches to achieve the quadruple aim (better: health, care, satisfaction, costs)

• Provider organizations need to move beyond a focus on configuring and reporting eCQMs to a focus on quality improvement activities based on the data generated by the eCQMs
Principles

• Focus on achieving the **quadruple aim**

• There is a need for adopting Value as the core of the healthcare system

• Value is defined as the health outcomes achieved that matter most to patients relative to the cost of achieving those outcomes

• Whole-organization buy-in is required for success
The Solution

• Guide the implementation of effective and high value quality improvement and value-increasing projects that are aligned with explicit organizational priorities that support the quadruple aim

• Provide resources to support implementers as they develop a quality improvement plan that serves as a road map for all quality activities, both clinical and operational

• Outline formal processes by which an organization will utilize quality measures to monitor and evaluate the quality of care provided to patients

• Identify various conceptual frameworks to consider when implementing quality improvement techniques
Using QI to Move From Current State to Future State

Excerpted from the National Learning Consortium
Continuous Quality Improvement (CQI) Strategies to Optimize your Practice
Steps for Implementing a Successful QI Strategy

- Define/refine your organization’s mission, vision, and values for clinical care
- Define your organizations value-related goals and objectives
- Use a vetted QI approach to implement target-focused initiatives
- Select and coordinate relevant and impactful quality improvement initiatives to achieve the goals
- Identify the group who will serve as the center of excellence for determining evidence-based outcome measurements for your organization
- Employ Analytics and Business Intelligence tools that support this process and enable your Healthcare Organization to measure and predict the Value they are providing to their patients
- Identify Areas for Improvement
  - Analyze data to determine if it meets the desired quality level
  - Interpret that data to evaluate and improve activities, identify gaps, and plan for improvement
Leading Strategies for Quality Improvement

IHI Model for Improvement

Lean

Define Value from the client’s viewpoint and express value in terms of a specific project.

1. Identify Value
2. Specify Value

Lean Business

The elimination of wasteful activities creates value for the customer and promotes continuous improvement.

3. Process Delivery
4. Pull/Pull Activities

Six Sigma

Map each step that brings a process or service to the client... both value added and non-value added.

1. Define
2. Measure
3. Analyze
4. Improve
5. Control

Baldrige Core Values and Concepts

The Baldrige Health Care Criteria build on core values and concepts... which are embedded in systematic processes... (Criteria categories 1–10)

Excerpted from the National Learning Consortium Continuous Quality Improvement (CQI) Strategies to Optimize your Practice
Value Management Framework

• The Value Management framework: (Value=Outcomes[Results that matter]/Cost) provides the methodology to align mission, vision and values with strategies to determine if the organization is achieving desired goals.

• Value Management provides organizations with the tools and methodologies to define and measure Value for their patients moving from the old world (volume-based) to the new world (value-based).

• The components of the value equation are assessed by analyzing measurements taken in the context of technical, patient health and programmatic considerations. Costs are assessed by calculating time and materials, to include using time-driven activity-based costing methods.
Value Management

Mission/Vision/Values

Strategies (Issues & Initiatives)
- Learning & Growth
- Employee Satisfaction
- Patient Satisfaction
- Financial
- Clinical
- Process Improvement

Critical Success Factors

Key Results Indicators

Performance Indicators (Program Metrics)
- User Perspective KPIs
  - Learning & Growth
  - Employee Satisfaction
  - Patient Satisfaction
- Technical KPIs
  - Financial
  - Clinical
  - Process Improvement

VALUE
Resources

• (HRSA) Guide to Improving Care Processes and Outcome in Health Centers
• (HIMSS) Guidebooks on Improving Outcomes with Clinical Decision Support
• (ONC) Planning and Implementing Improved Care Processes
• (ONC) Health IT Playbook

• National Learning Consortium Continuous Quality Improvement (CQI) Strategies to Optimize your Practice

• The Strategy That Will Fix Health Care HBR Article, references the hierarchy:
  https://hbr.org/2013/10/the-strategy-that-will-fix-health-care

• National Academy of Medicine (NAM/IOM) Best Care At Lower Cost/Learning Health System:
Discussion, Questions & Answer
Contact Information

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