Healthcare Quality Measures: Where we have been; Where we are; Where we might be going

Department of Family Medicine and Community Health Faculty Retreat
April 11, 2014
Where we have been
Ancient History

• Early 19th century characterized by disorganized & poor quality of medical education and care
• Rise of Voluntary Professional Organization
• AMA 1847, supported Flexner report to Carnegie Foundation in 1910
• Same year Codman at MGH noted the need to improve hospital conditions and to track patients to verify that their care had been effective. “End result idea"
• 1917 American College of Surgeons established Hospital Standardization Program
ACS Minimal Standards

- Organizing hospital medical staffs
- Limiting staff membership to well-educated, competent, and licensed physicians and surgeons
- Framing rules and regulations to ensure regular staff meetings and clinical review
- Keeping medical records that included the history, physical examination, and laboratory results
- Establishing supervised diagnostic and treatment facilities such as clinical laboratories and radiology departments
JCAH(O)/Joint Commission

- Formed 1952 by ACS, ACP, AHA, AMA, CMA
- Added standards: physical plant issues, equipment, and administrative structure
- 1966 it moved to optimal achievable standards
- Donabedian's 1966 article described ways to evaluate the quality of health care measured in three areas:
  - structure—the physical and staffing characteristics of caring for patients
  - process—the method of delivery
  - outcome—the results of care.
Slightly More Recent History

- Governmental Regulatory Programs
- State licensing programs established toward the end of the 1800s,
- in 1906 national regulation of medication was undertaken by the FDA
- 1935 Social Security Act first set of federal standards for maternal and children's services
Practically Yesterday

• 1965 Medicare Conditions of Participation for hospitals
  – medical staff credentials
  – 24-hour nursing services
  – utilization review of “appropriateness of admissions“
• 1972 Professional Standards Review organization (PSRO)
  – promote efficiency
  – eliminate unnecessary hospital utilization
• PSRO effectiveness not demonstrated
• physicians and nonphysicians concerned PSRO’s emphasized cost containment over quality
Next Iteration

• Early 1980’s: Peer Review Organizations (PRO)
  – responsible for validating assignments to DRGs
  – reviewing readmissions,
  – reducing unnecessary admissions and surgery
  – lowering death and complication rates.
The PRO’s Method

• Random chart review
  – The adequacy of discharge planning
  – Medical stability at discharge
  – Unexpected deaths
  – Nosocomial infections
  – Unscheduled returns to surgery
  – Trauma suffered in the hospital
Future Prospects
LUCE, BINDMAN, LEE, MD,
WIM, March 1994

• Greater concern for cost than for quality marked older regulatory efforts
• This may lead to undesirable results
  – co-payments and deductibles to decrease utilization may worsen health if needed services are reduced
• To have a positive effect policies should provide the following
  – Limit services that are of little or no benefit to patients
  – Encourage less costly and more effective care
  – Ensure access to that care
  – Foster integrated health care systems that can provide beneficial services more efficiently
An AQC QM Primer

- NCQA National Committee for Quality Assurance
- “a private, 501(c)(3) not-for-profit organization dedicated to improving health care quality” founded in 1990

- HEDIS
- HMO Employer Data and Information Set (origin 1979 by the HMO trade association)
- Health Plan Employer Data and Information Set (1993)
- Healthcare Effectiveness Data and Information Set (2007)

The Healthcare Effectiveness Data and Information Set (HEDIS) is a tool used by more than 90 percent of America's health plans to measure performance on important dimensions of care and service. Altogether, HEDIS consists of 75 measures across 8 domains of care. Because so many plans collect HEDIS data, and because the measures are so specifically defined, HEDIS makes it possible to compare the performance of health plans on an "apples-to-apples" basis.

Chair of the Board of NCQA, Dolores L. Mitchell
Executive Director, Commonwealth of Massachusetts Group Insurance Commission
## Practice Denominator

### Practice Performance Period Ending Q4 2011*

<table>
<thead>
<tr>
<th>Measure Description</th>
<th>Practice Denominator</th>
<th>AQC Weight</th>
<th>Estimated Practice Weighted Final Points</th>
<th>Network Performance CY 2011 Per BCBS Claims Paid thru 1/31/12</th>
<th>Estimated Network Weighted Final Points</th>
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<td>Ages 16–20</td>
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<td>Upper respiratory infection</td>
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<td><strong>Pediatric well-care visits</strong></td>
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<td>Ages &lt;15 months</td>
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<td>Ages 3–6 years</td>
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<td>HbA1c poor control (&gt;9, lower score is better)</td>
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<td>16.8</td>
<td>3</td>
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<td>LDL-C control (&lt;100 mg)</td>
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<td>54.5</td>
<td>3</td>
<td>4.4</td>
<td>54.5</td>
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<td>Blood pressure control (&lt;130/80)</td>
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<td>35.3</td>
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<td>LDL-C control (&lt;100 mg)</td>
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<td>73.0</td>
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<td><strong>Patient Experience</strong></td>
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<td><strong>CAHPS/ACES)—Adult</strong></td>
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<tr>
<td>Communication quality</td>
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<td><strong>CAHPS/ACES)—Pediatric</strong></td>
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<td>87.80</td>
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<td>Access to care</td>
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<td>0.00</td>
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<td>85.40</td>
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</tbody>
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### AQC Overall Score (Sum Weighted Points / Sum Weights)

| AQC Overall Score (Sum Weighted Points / Sum Weights) | 1.3 | 1.6 |

* CY 2011 Practice Data Except Where Otherwise Noted
<table>
<thead>
<tr>
<th>Measure</th>
<th>All UMM_MCN</th>
<th>MCB-FM</th>
<th>Difference</th>
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<tbody>
<tr>
<td>CAD_LDL_Control_RATE</td>
<td>75.90%</td>
<td>61.60%</td>
<td>14.31%</td>
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<tr>
<td>Diabetes_A1C_2Tests_RATE</td>
<td>72.96%</td>
<td>59.02%</td>
<td>13.94%</td>
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<tr>
<td>WCC3to6RATE</td>
<td>84.98%</td>
<td>73.87%</td>
<td>11.11%</td>
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<tr>
<td>Pharyngitis_RATE</td>
<td>86.91%</td>
<td>76.67%</td>
<td>10.24%</td>
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<tr>
<td>WCC7to11RATE</td>
<td>73.03%</td>
<td>63.51%</td>
<td>9.53%</td>
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<tr>
<td>ACEI_ARBs_RATE</td>
<td>79.83%</td>
<td>72.79%</td>
<td>7.03%</td>
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<td>Diabetes_Nephropathy_RATE</td>
<td>80.96%</td>
<td>74.11%</td>
<td>6.85%</td>
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<td>BreastCS_RATE</td>
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<td>Diuretics_RATE</td>
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<td>WAV12to17RATE</td>
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<td>Diabetes_LDL_Testing_RATE</td>
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<tr>
<td>URI_RATE</td>
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<td>WAV18to21RATE</td>
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<td>60.01%</td>
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<td>Asthma_18_56_RATE</td>
<td>84.70%</td>
<td>89.58%</td>
<td>-4.89%</td>
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</table>
Where Do We Stand?

• 209 MCN PCP’s  53 are FM
• Top 50%
  3 med group
  9 CMG
  6 Independent
• Bottom 50%
  24 med group
  7 CMG
  4 Independent
Barre Trend

<table>
<thead>
<tr>
<th></th>
<th>AQC Q1 2011</th>
<th>AQC Q2 2011</th>
<th>AQC Q3 2011</th>
<th>AQC Q4 2011</th>
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Benedict Trend

AQC Total Gate Score

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HFHC Trend

AQC Total Gate Score

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<td>1.4</td>
<td>1.2</td>
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PVHC Trend

AQC Total Gate Score

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<th>AQC Q3 2011</th>
<th>AQC Q4 2011</th>
</tr>
</thead>
<tbody>
<tr>
<td>1.4</td>
<td>1.7</td>
<td>1.7</td>
<td>1.5</td>
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- AQC Total Gate Score: 1.4, 1.7, 1.7, 1.5
The National Track Record

The Quality of Health Care Delivered to Adults in the United States

1. Only 54.9% of recommended care delivered
2. No significant difference between preventive (54.9%), acute (53.5%), and chronic (65.1%) care delivered
3. Wide variation: 78.7% recommended care for cataracts to 10.5% for EtOH dependence. HTN 64.7 % A-Fib 24.7%
Why is This Important

• The measures are valid agreed upon indicators of quality of care
• Better performance on these measures is associated with increased revenue
• Such performance will be increasingly reported publicly
• It makes us (FM, dep’t HC’s) look (and feel) bad
The department themes for the year(s) to come

• Improving measures of quality of care
• To do so must engage
  1. Faculty
  2. Staff
  3. Residents
• Everyone must know what is on the list of measures
• We need the right tools
• A new way of getting paid
Areas of Concentration
3-5 years
(from 2009 SLT Retreat)

• Evolving the 3 Family Health Centers (Barre, Benedict, HFHC) and as many other department associated practices as possible into Patient Centered Medical Homes
Where we are
Where Are We Now

- Barre, Plumley, and Hahnemann have achieved level 3 NCQA PCMH certification
- Benedict has begun work on their application
- FHCW has achieved level 2 PCMH certification
BCBS Patients Average AQC Score by HC

Barre
HFHC
Plumley
Benedict
MCB_Fam Med
MCN
Root Causes

- HC silos contribute to non-standard approaches and differential improvement rates.
- Limited idea sharing site to site across the MCN.
- Some faculty at HC’s have balked at the use of AQC measures, challenging their validity.
- Little financial incentive to date to cause clinicians to prioritize improvement of quality scores.
- Variability of support services between the health centers.
- Poor patient engagement in improving health outcome measures.
- Top-down approach to improvement (Hospital system → administration/leadership → medical directors/POD leaders → providers → staff) with little incentive for staff to innovate or participate in quality-improvement work.
- Competing demands and priorities which distract clinicians and leadership from QM improvement work.
- EMR does not support real time reminders
Where we might be going
Core Principles

• *Principle 1*: Quality measures must address clinically meaningful, patient-centered outcomes.

• *Principle 2*: Quality measures must be developed transparently and supported by robust scientific evidence linking them to improved outcomes.

• *Principle 3*: Availability of current data, the burdens of new data collection, and the risk of gaming should be considered when developing quality measures.
The Importance of Data Analytics in Physician Practice

“The tracking of quality metrics should be incidental to the care patients are receiving and should not be the object of care”

Presentation to Massachusetts Medical Society
March 30, 2012

James L. Holly, MD
Adjunct Professor
Family and Community Health
The University of Texas Health Science Center at San Antonio
Practice Pattern Variation Analysis

The Institute of Medicine committee has defined clinical effectiveness research (CER) as "the generation and synthesis of evidence that compares the benefits and harms of alternative methods to prevent, diagnose, treat, and monitor a clinical condition or to improve the delivery of care. The purpose of CER is to assist consumers, clinicians, purchasers, and policy makers to make informed decisions that will improve health care at both the individual and population levels."
Practice Pattern Variation Analysis

Practice Pattern Variation Analysis provides (hopefully) clear, succinct and clinically based answers to five very important questions:

• What Disease Conditions account for the Highest Cost?
• What are the Key Cost Drivers within each Disease Condition?
• What variation exists within each Key Cost Driver?
• How does one select the right opportunities to reduce costs?
• How does one achieve measurable savings while maintaining or Improving Quality?
Outcomes of PPVA

- Promoting prevention by addressing underuse
- Improving chronic disease care
- Reducing overuse of unwarranted services

(Beckman)
Outcome on ENT Fiberoptic Laryngoscopy

11% Reduction in Utilization Rate

Greene RA, Beckman HB, Mahoney T. Beyond the Efficiency Index: Finding a better way to reduce overuse and increase efficiency in physician care. Health Affairs. 2008;27:w250-w259. (Published online May 20, 2008;10.1377/hlthaff.27.4.w250.)
% of HBP Patients with BP<140/90
by Practice Group, December 2011 Registry

Practices with more than 100 HBP patients in registry with known status
Control rate for patients with BP read within last 13 months
Source: December 31, 2011 High Blood Pressure Registry

Howard Beckman, MD, FACP
Chief Medical Officer, Focused Medical Analytics
Clinical Professor of Medicine,
University of Rochester School of Medicine & Dentistry
Massachusetts Center for Health Information and Analysis (CHIA)

Mission is to monitor the Massachusetts health care system and to provide reliable information and meaningful analysis for those seeking to improve health care quality, affordability, access, and outcomes.

All Payer Claims Data Base

The charter also called for enhancing the data and making the database widely available: to the public to help inform policy; to consumers to support health care purchasing decisions; and to physicians to support care management and coordination.
CHIA

- CHIA is actively soliciting input on appropriate measures of quality of care in 2 areas

- Private reporting to practices to improve quality of care, suggestions include
  - Provider Portal: tailored reports to practices based on APCD and practice panels
  - Diagnostic error
    - Reinvigoration of Betsy Lehman Center for Patient safety and Medical Error Reduction
CHIA

• Public reporting monitoring the performance of the MA health care system
  – Data pt’s use to pick a physician
  – Data physicians use to pick hospitals and consultants
• Currently Using Standard Quality Measure Set (SQMS)
Chapter 224: “Nationally accepted measure sets also be represented in the SQMS”

- Centers for Medicaid and Medicare Services’ Hospital Process Measures (for Acute Myocardial Infarction, Heart Failure, Pneumonia, and effective surgical care),
- Hospital Consumer Assessment of Healthcare Providers and Systems Survey (HCAHPS),
- Healthcare Effectiveness Data and Information Set (HEDIS), and
- Ambulatory Care Experiences Survey (ACES).
- Together, measures from these four mandated sets made up 95 of the 130 measures in the initial SQMS.
SQMS

Measures were evaluated on the following four criteria:

- **Reliability and Validity**: How strong is the empirical evidence indicating that the measure is reliable and valid?
- **Ease of Measurement**: How straightforward is data collection and reporting for this measure?
- **Field Implementation**: How widespread is the dissemination of the measure in the field?
- **Amenability to Targeted Improvement**: How reasonable is the expectation that targeted improvement at the level of analysis can affect performance on the measure?
SQMS

• Gaps included behavioral health, pediatrics, care coordination, and efficiency and utilization measures.
• Patient-centered measures such as patient-reported outcomes, shared decision-making and functional status need to be included.
• Priority areas for 2013 were:
  – Behavioral health
  – Care coordination
  – Patient-centered care
The QM Holy Grail?

- Eliminating Diagnostic (and therapeutic?) Error
- Difficult to define and detect
  - EHR based surveillance of diagnostic errors in primary care
    Singh et al BMJ Quality and Safety Feb 2012
    • Triggers to detect error
      - Admit <14 days after PCP visit
      - ED or unscheduled PCP visit <14 days after index PCP visit
    • Still missed most errors
Triggers

Osler: triggers from H&P generate a differential to then be narrowed
   Relied on human memory

Genius diagnosticians make great stories, but they don’t make great health care.
The idea is to make accuracy reliable not heroic.

Don Berwick
Boston Globe 7/14/2002
Eliminating Error

• The single greatest impediment to error prevention in the medical industry is that we punish people for making mistakes.

• Safer practice can only come about form acknowledging the potential for error and building in error reduction strategies at each stage of clinical practice.

Lucian Leape