Forging Change in Quality Improvement

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Mountain-Pacific Quality Health

Centers for Medicare & Medicaid Services

CMS
Should Beth’s Experience Matter to Anybody but Beth?

• Moved to Arizona after retirement and is now widowed.
• Nasty cough
• Cough medicine for a week. Another via phone
• Rx not called in – spitting up blood
• Hospital 1 night, new medication
• Bad reaction with other meds – ER – 3day admission.
• No follow-up calls
Exhibit 1. International Comparison of Spending on Health, 1980–2009

Average spending on health per capita ($US PPP)

Total expenditures on health as percent of GDP

Note: PPP = Purchasing power parity—an estimate of the exchange rate required to equalize the purchasing power of different currencies, given the prices of goods and services in the countries concerned.

Source: OECD Health Data 2011 (Nov. 2011).
U.S. Spends Much More on Health Care Than 12 Industrialized Nations, but Quality Varies

The U.S. Spends the Most per Person on Health Care Annually

$7,960
US

$5,352
Norway

$2,983
New Zealand

Americans Pay More for the Same Health Care Goods and Services

Uneven Quality Despite High Spending

Health System vs. Health Care System

• Solutions need to focus on the ultimate outcome of interest
  – Population’s health
  – Each individual’s health
  – NOT only on the formal system of care designed to primarily treat illness
Mountain-Pacific’s Three-Goal Focus

• Better patient care
• Better population health
• Lower health care costs through improvement
Partners

• Providers, facilities
• Performance Improvement Network
  – MHA and MHREF
• Hospital Engagement Networks
  – MHA, Premier
• DPHHS and other state and Federal entities
Setting and Reaching Bold Goals

• Improved cardiac health

• Fewer avoidable hospital readmissions

• 40% national reduction in health care-acquired conditions
“Boundarilessness”

• Forge system-wide change
• Learning & Action Networks
  – Accelerate the pace of change
  – Rapidly spread best practices
• Collaborative projects
  – Monthly education webinars
  – Stakeholder partnerships
• Mountain-Pacific Technical Assistance
  – 1:1 assistance and navigation
Improve Individual Patient Care

- Inpatient and outpatient quality data reporting
- Nursing home pressure ulcers and restraints
- Decreasing adverse drug events
- Catheter associated urinary tract infections
- *C. diff.* – antibiotic associated infections
- Surgical site infections
- Central line associated blood stream infections
Patient-Centered Care

• Protect the rights of beneficiaries
  – Review quality of care complaints
  – Review appeals of denials or discontinuation of services

• Equip providers and beneficiaries with tools to make shared health care decisions

• Include the voice of the patient in our activities

• “How will it help the patient?”
Integrate Care & Improve Health for Populations and Communities

- Improve transitions of care
- Community coalitions of patient advocacy groups, hospitals, nursing homes, AOA, etc.
- Reduce cardiovascular disease risk
- Partner with REC to promote IT integration
- Coordinate and report quality measures using EHRs
Successful Health System Attributes

• Healthy people
  — A population that attains the highest level of health possible

• Superior care
  — Effective, safe, timely, patient-centered, equitable, efficient

• Fairness
  — Without discrimination or disparities
  — “Deliverers” of care
Sustainable Health System Attributes

• Affordability for
  – Patients, families, employers, government

• Acceptability to
  – Key constituents, patients, health professionals

• Adaptability
  – Health and health care needs are not static
Quality *is* the Strategy

- Link QI to your mission and strategic plan
- Establish an organizational culture that actively supports QI
- Assess community health status and community health priorities
- Participate in public reporting initiatives
- Develop QI teams in your hospital that address quality and patient safety issues
  - Move from practice-centered to patient-centered
Health Care Improvement Strategies

• Use of Health Information Technology
  – Not simply adoption and use of technology
  – Produce quantum leaps forward in outcomes
    • Care quality
    • Efficiency
    • Coordination
    • Patient-centeredness
IT and a Superior Health System

- Nationwide health information infrastructure
- Standards for meaningful use
- More widespread adoption of IT in health care settings
- Emerging standards for interoperability
- Availability of data
Information Exchange

- Pathetically slow
- US lacks a nationwide broadband Internet access
- Public wary of data privacy
- Providers may lack business interest in data exchange
"OK. I understand a lot is going to change. But how do I stay the same?"
Conclusion: Compared with non-CAHs, CAHs had fewer clinical capabilities, worse measured processes of care, and higher mortality rates for patients with AMI, CHF, or pneumonia.

JAMA. 2011;306(1):45-52
Rehospitalization in Heart Failure

• Nearly one in four patients hospitalized with HF is rehospitalized within 30 days of discharge

  Opportunity to Improve

• 30-day rates of rehospitalizations in HF have risen over the past 2 decades and vary widely by hospital, even after adjusting for case mix and other factors

  Opportunity to Improve

• Many HF hospitalizations are preventable, but effective strategies to prevent rehospitalizations are underutilized

  Opportunity to Improve
All-Cause Mortality After Each Subsequent Hospitalization for HF

Randomized Trial of Education/Support Intervention to Prevent Readmission in HF

88 patients hospitalized with HF, Nurse education and support, home visit or phone contact
Krumholtz J Am Coll Cardiol 2002;39:83-9
Causes of Readmission for Heart Failure

Over 2/3 of HF Hospitalizations Preventable

- Diet Noncompliance: 24%
- Inappropriate Rx: 16%
- Failure to Seek Care: 19%
- Rx Noncompliance: 24%
- Other: 17%

Annals of Internal Medicine 122:415-21, 1995
<table>
<thead>
<tr>
<th>Heart Failure (HF)</th>
<th>Q1 2011</th>
<th>Q2 2011</th>
<th>Goal</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>N / D</td>
<td>%</td>
<td>N / D</td>
</tr>
<tr>
<td>HF 1: Discharge Instructions</td>
<td>0/2 0%</td>
<td>0/1 0%</td>
<td>95%</td>
</tr>
<tr>
<td>Evaluation of Left Ventricular Systolic (LVS) Function</td>
<td>2/2 100%</td>
<td>1/1 100%</td>
<td>95%</td>
</tr>
<tr>
<td>HF 2: Ventricular Systolic (LVS) Function</td>
<td>0/2 0%</td>
<td>0/1 0%</td>
<td>95%</td>
</tr>
<tr>
<td>HF 3: Angiotensin Converting Enzyme Inhibitor (ACEI) or Angiotensin Receptor blocker (ARB) for Left Ventricular Systolic Dysfunction (LVSD)</td>
<td>- -</td>
<td>- -</td>
<td>95%</td>
</tr>
<tr>
<td>Adult Smoking HF 4: Cessation Advice/Counseling</td>
<td>- -</td>
<td>- -</td>
<td>95%</td>
</tr>
</tbody>
</table>
How Are We Doing Compared to the Theoretical Ideal (100% or zero)?

• A raw count of the missed opportunities is a fair indicator of room for improvement each month.

• By making measurement a ratio between two measurements we add measurement error.

• Ratios make the data fairly abstract especially with small numbers.
Eliminate the Denominator
Key Elements to Quality Improvement: Why Do Some Programs Succeed?

• Access to current and accurate data on treatment and outcomes
• Have stated goals
• Administrative support
• Support among clinicians
• Use of care maps and pathways
• Use of data to provide feedback
Benefits of Reporting

- Engages your facility in quality improvement initiatives
- Shows your community you are committed to transparency and quality improvement
- Improves patient care and hospital services
- Allows for clear benchmarking and the identification of best practices
- Prepares facilities for Value-Based Purchasing (VBP)
Reporting Opportunities

• Hospital Compare
• Physician Compare
• Home Health Compare
• Nursing Home Compare
• Dialysis Unit Compare
• Physician Quality Reporting System
• Hospital Engagement Networks and Partnership for Patients
• MBQIP
• Million Hearts
• HCAPS
• Meaningful Use
• Patient-Centered Medical Home
Current Montana Participants

- Inpatient quality data reporting active participants: 44 out of 48 CAHs = 91.7%
- Hospital Compare/public reporting participants: 43 out of 48 CAHs = 89.6%
- Outpatient quality data reporting pledged participants: 36 out of 48 CAHs = 75.0%
National Hospital Inpatient Quality Measures:

Current Measures
• Acute Myocardial Infarction (AMI)
• Pneumonia (PN)
• Heart Failure (HF)
• Surgical Care Improvement Project (SCIP)
• Structural

New Measures *(effective Q1 2012 encounters)*
• Emergency Department (ED)
• Immunization (IMM)
National Hospital Outpatient Quality Measures:

Current Measures
• Outpatient Surgery
• Outpatient Acute Myocardial Infarction (AMI)
• Chest Pain
• Imaging Efficiency
• Structural

New Measures *(effective Q1 2012 encounters)*
• Emergency Department (ED)
• Pain Management (PM)
• Stroke (STK)
MBQIP
Medicare Beneficiary QIP

• Put patients first-focus on improving health care services, processes and administration
• Provide Flex funding to support CAHs
• CAHs are being compared to their urban counterparts to ensure public confidence
• Is a proactive and visionary approach to equip CAHs to meet future quality legislation
• Technical assistance in reporting to Hospital Compare
Tools and/or Methods for Collection

• Vendor
  o Paid to submit data on facility’s behalf

• Paper tools
  o Abstraction Resources

• CMS Abstraction & Reporting Tool (CART)
  o FREE software that allows facility to submit their own data
What is CART?

- Acronym that stands for:
  - CMS Abstraction & Reporting Tool

- Application used for the collection and analysis of quality improvement data for Inpatient and Outpatient hospital measures

- Enables hospitals to comprehensively evaluate and manage quality improvement efforts
Attack a Complex Problem

1. Determine a goal
2. Find the “highest-leverage approach”
3. Discover the ideal technology for that approach
4. Make the smartest application of the technology you already have

– Bill Gates
### Stage 1: Meaningful Use (MU) Objectives for EPs only

The measures listed below are the requirements for Eligible Professionals (EPs) only.

**Click here to access the MU Table of Contents**

<table>
<thead>
<tr>
<th>Core Objective</th>
<th>NCQA PCMH 2011 Standards</th>
<th>2012 Physician Quality Reporting System (PQRS)</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Core 1</strong></td>
<td><strong>CPOE Med Orders by Provider</strong></td>
<td><strong>PCMH 3: Element E.3.</strong> The practice uses an electronic prescription system with the following capabilities. 3. Enters electronic medication orders into the medical record for more than 30 percent of patients with at least one medication in their medication list.</td>
</tr>
<tr>
<td>Core 2</td>
<td><strong>Drug-Drug, Drug-Allergy Interaction Check</strong></td>
<td><strong>PCMH 3: Element E.4.</strong> The practice uses an electronic prescription system with the following capabilities. 4. Performs patient-specific checks for drug-drug and drug-allergy interactions.</td>
</tr>
<tr>
<td>Core 3</td>
<td><strong>Active Problem List</strong></td>
<td><strong>PCMH 2: Element B.1</strong> The practice uses an electronic system to record...</td>
</tr>
</tbody>
</table>

*Note: The table continues with additional core objectives and corresponding standards.*
Moving Forward

• Maintain the health of populations rather than just provide services to the very sick

• “Big Data” -massive data sets that are generated by all the activity in an increasingly digital world

• Estimated in 2011 alone, health care would generate 150 exabytes of information
  – (equivalent to 6 million times all the published works in the Library of Congress)
“Big Data” and Heavy Users:

• Predicting

• Analyzing

• Segmenting

• Treating and coordinating care
Health IT – Interrelated and Interconnected

- High-speed network connectivity
- Geospatial positioning capacity
- Wireless communication
- Robotics and artificial intelligence
- Biosensor technology
- Bioinformatics
- Other ingenious applications,
The future ain’t what it used to be!

– Yogi Berra
Any Questions?
How can IT help?

- Possible Import function from EMR/EHR into CART
- EMR/EHR vendor applications
- Meaningful Use

Get with your EMR/HER vendor, work with your vendor and their writers/programmers to include the info. that your facility collects and utilizes in CART.

Introduce them to CART, its features, its functions, and the questions/data it asks for.
System-level quality performance

• Senior leaders must declare the aim and make the commitment visible to the patients, governing board and staff
• Board must adopt the goal of achieving a new level of performance
• Line-management must also commit
• Make connection to the overall organizational strategies and plans
Conclusion: Compared with non-CAHs, CAHs had fewer clinical capabilities, worse measured processes of care, and higher mortality rates for patients with AMI, CHF, or pneumonia.

JAMA. 2011;306(1):45-52
Exhibit 5. Hospital Spending per Discharge, 2009
Adjusted for Differences in Cost of Living

<table>
<thead>
<tr>
<th>Country</th>
<th>Dollars</th>
</tr>
</thead>
<tbody>
<tr>
<td>US*</td>
<td>18,142</td>
</tr>
<tr>
<td>CAN**</td>
<td>13,483</td>
</tr>
<tr>
<td>NETH</td>
<td>13,244</td>
</tr>
<tr>
<td>DEN</td>
<td>11,112</td>
</tr>
<tr>
<td>SWIZ</td>
<td>10,875</td>
</tr>
<tr>
<td>NOR**</td>
<td>10,441</td>
</tr>
<tr>
<td>SWE</td>
<td>9,870</td>
</tr>
<tr>
<td>AUS*</td>
<td>8,350</td>
</tr>
<tr>
<td>NZ*</td>
<td>7,160</td>
</tr>
<tr>
<td>OECD Median</td>
<td>6,222</td>
</tr>
<tr>
<td>FR</td>
<td>5,204</td>
</tr>
<tr>
<td>GER</td>
<td>5,072</td>
</tr>
</tbody>
</table>

* 2008.
** 2007.
Source: OECD Health Data 2011 (Nov. 2011).
# National Scorecard on U.S. Health System Performance, 2011: Scores on 42 Key Performance Indicators

## OVERALL SCORE

<table>
<thead>
<tr>
<th>Indicator</th>
<th>U.S. Average Rate*</th>
<th>Benchmark</th>
<th>Score: Ratio of U.S. to Benchmark</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>HEALTHY LIVES</strong></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>1 Mortality amenable to health care, deaths per 100,000 population</td>
<td>96</td>
<td>Top 3 of 16 countries</td>
<td>57</td>
</tr>
<tr>
<td>2 Infant mortality, deaths per 1,000 live births</td>
<td>6.8</td>
<td>Top 10% states</td>
<td>4.7</td>
</tr>
<tr>
<td>3 Healthy life expectancy at age 60, years (average of two ratios)</td>
<td>Various</td>
<td>Various</td>
<td>Various</td>
</tr>
<tr>
<td>4 Adults ages 18–64 limited in any activities because of physical, mental, or emotional problems</td>
<td>18.4</td>
<td>Top 10% states</td>
<td>11.5</td>
</tr>
<tr>
<td>5 Children ages 6–17 missed 11 or more school days because of illness or injury</td>
<td>5.8</td>
<td>Top 10% states</td>
<td>3.8</td>
</tr>
<tr>
<td>6 Adults who smoke</td>
<td>17.0</td>
<td>Top 10% states</td>
<td>12.2</td>
</tr>
<tr>
<td>7 Children ages 10–17 who are overweight or obese</td>
<td>32</td>
<td>Top 10% states</td>
<td>23</td>
</tr>
<tr>
<td><strong>QUALITY</strong></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>8 Adults received recommended screening and preventive care</td>
<td>51</td>
<td>Target</td>
<td>80</td>
</tr>
<tr>
<td>9 Immunizations and preventive care (average of two ratios)</td>
<td>Various</td>
<td>Various</td>
<td>Various</td>
</tr>
<tr>
<td>10 Adults and children needed mental health care and received treatment (average of two ratios)</td>
<td>Various</td>
<td>Various</td>
<td>Various</td>
</tr>
<tr>
<td>11 Chronic disease under control (average of two ratios)</td>
<td>Various</td>
<td>Various</td>
<td>Various</td>
</tr>
<tr>
<td>12 Hospitalized patients received recommended care for heart attack, heart failure, and pneumonia</td>
<td>96</td>
<td>Top hospitals</td>
<td>100</td>
</tr>
<tr>
<td>13 Surgical patients received appropriate care to prevent complications</td>
<td>96</td>
<td>Top hospitals</td>
<td>100</td>
</tr>
<tr>
<td>14 Adults ages 19–64 with an accessible primary care provider</td>
<td>56</td>
<td>65+yrs, high income</td>
<td>77</td>
</tr>
<tr>
<td>15 Children with a medical home</td>
<td>58</td>
<td>Top 10% states</td>
<td>68</td>
</tr>
<tr>
<td>16 Care coordination at hospital discharge (average of three ratios)</td>
<td>Various</td>
<td>Various</td>
<td>Various</td>
</tr>
<tr>
<td>17 Nursing homes: hospital admissions and readmissions among residents (average of two ratios)</td>
<td>Various</td>
<td>Various</td>
<td>Various</td>
</tr>
<tr>
<td>18 Home health care: hospital admissions among home health patients</td>
<td>29</td>
<td>Top 25% agencies</td>
<td>17</td>
</tr>
<tr>
<td>19 Sicker adults reported medical, medication, or lab test error</td>
<td>32</td>
<td>Best of 8 countries</td>
<td>16</td>
</tr>
<tr>
<td>20 Unsafe drug use (average of three ratios)</td>
<td>Various</td>
<td>Various</td>
<td>Various</td>
</tr>
<tr>
<td>21 Nursing home residents with pressure sores (average of two ratios)</td>
<td>Various</td>
<td>Various</td>
<td>Various</td>
</tr>
<tr>
<td>22 Hospital-standardized mortality ratios, actual to expected deaths</td>
<td>73</td>
<td>Top 10% hospitals</td>
<td>68</td>
</tr>
<tr>
<td>23 Risk-adjusted 30-day hospital mortality rates for heart attack, heart failure, and pneumonia (average of three ratios)</td>
<td>Various</td>
<td>Various</td>
<td>Various</td>
</tr>
</tbody>
</table>

## ACCESS

<table>
<thead>
<tr>
<th>Indicator</th>
<th>U.S. Average Rate*</th>
<th>Benchmark</th>
<th>Score: Ratio of U.S. to Benchmark</th>
</tr>
</thead>
<tbody>
<tr>
<td>24 Sicker adults able to see doctor on same/next day when sick or needed medical attention</td>
<td>43</td>
<td>Best of 8 countries</td>
<td>81</td>
</tr>
<tr>
<td>25 Sicker adults reported very/somewhat easy to get care after hours without going to the emergency room</td>
<td>37</td>
<td>Best of 8 countries</td>
<td>72</td>
</tr>
<tr>
<td>26 Adults whose health providers always listened carefully, explained things clearly, respected what they had to say, and spent enough time with them</td>
<td>57</td>
<td>90th %ile health plans</td>
<td>77</td>
</tr>
<tr>
<td>27 Sicker adults with chronic conditions received self-management plan</td>
<td>66</td>
<td>Best of 8 countries</td>
<td>66</td>
</tr>
<tr>
<td>28 Patient-centered hospital care (average of three ratios)</td>
<td>Various</td>
<td>Various</td>
<td>Various</td>
</tr>
<tr>
<td>29 Home health care patients whose ability to walk or move around improved</td>
<td>47</td>
<td>Top 25% agencies</td>
<td>58</td>
</tr>
</tbody>
</table>

## EFFICIENCY

<table>
<thead>
<tr>
<th>Indicator</th>
<th>U.S. Average Rate*</th>
<th>Benchmark</th>
<th>Score: Ratio of U.S. to Benchmark</th>
</tr>
</thead>
<tbody>
<tr>
<td>30 Adults ages 19–64 insured all year, not underinsured</td>
<td>56</td>
<td>Target</td>
<td>100</td>
</tr>
<tr>
<td>31 Adults with no access problems because of costs</td>
<td>67</td>
<td>Best of 11 countries</td>
<td>95</td>
</tr>
<tr>
<td>32 Persons under age 65 in families that spend 10 percent or less of income (or 5 percent or less, if in low-income family) on out-of-pocket medical expenses and premiums</td>
<td>78</td>
<td>Target</td>
<td>100</td>
</tr>
<tr>
<td>33 Persons under age 65 living in states where premiums for employer-sponsored health coverage are less than 15 percent of under-65 median household income</td>
<td>4</td>
<td>Target</td>
<td>100</td>
</tr>
<tr>
<td>34 Adults ages 19–64 with no medical bill problems or medical debt</td>
<td>60</td>
<td>Target</td>
<td>100</td>
</tr>
</tbody>
</table>

## Note:

*All rates are expressed as percentages unless otherwise labeled. Various denotes that the indicator consists of two or more related measures; the scorecard averages the ratio scores for each of the measures to produce the indicator score.*

Source: Commonwealth Fund National Scorecard on U.S. Health System Performance, 2011.