The CMS/Premier Hospital Quality Incentive Demonstration Project

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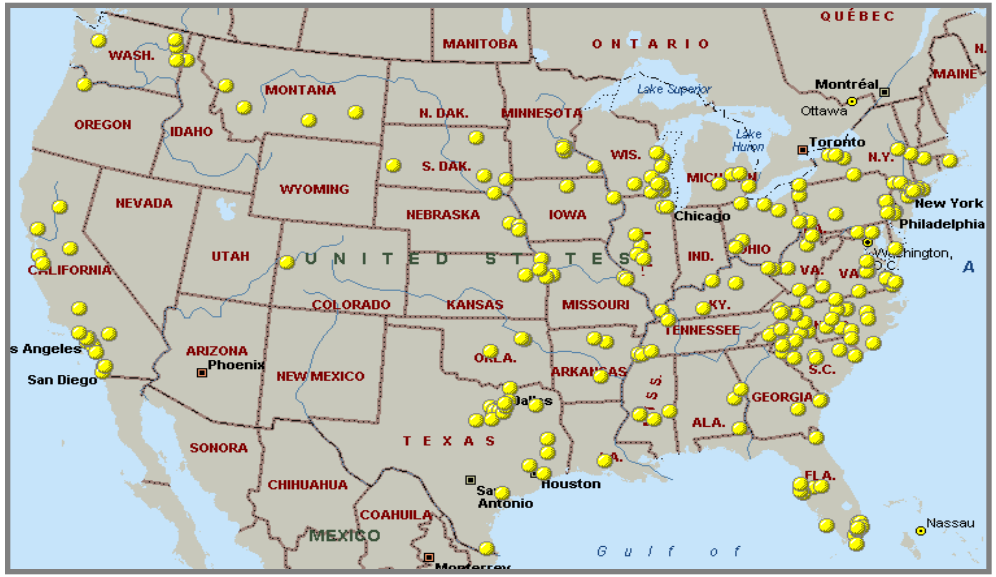
Discussion Topics

- Overview
- Methodology for weighting & scoring measures
- Methodology evolution
- Reward calculations
- Lessons Learned during the first two years

Hospital Quality Incentive Demonstration Project

- CMS and Premier partnership project
- First national hospital-based Pay-for-Performance (P4P) demonstration
- Tests the hypothesis that monetary incentives and market recognition can increase quality of care
- A three-year effort launched October, 2003
- Approximately 260 hospitals in 38 states



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CMS/Premier HQID Overview

- 5 clinical conditions: AMI, HF, PN, CABG, Hip/Knee
- 30 measures as of Sept. 1, 2005 (was 34)
- 268 current participants as of Sept. 1, 2005
- 3 year project: Oct 1, 2003-Sept 30, 2006 data
- Hospitals placed in deciles based on quality composite score within each clinical condition
  - Each Year: Quality Incentive Payments - Bonuses to top hospitals within each of the 5 clinical conditions (top decile – 2%, 2nd decile = 1%)
  - Year Three: Payment Penalty – reduction in payments if quality score not above the 9th or 10th decile thresholds established in year 1 (by 1 or 2% respectively).

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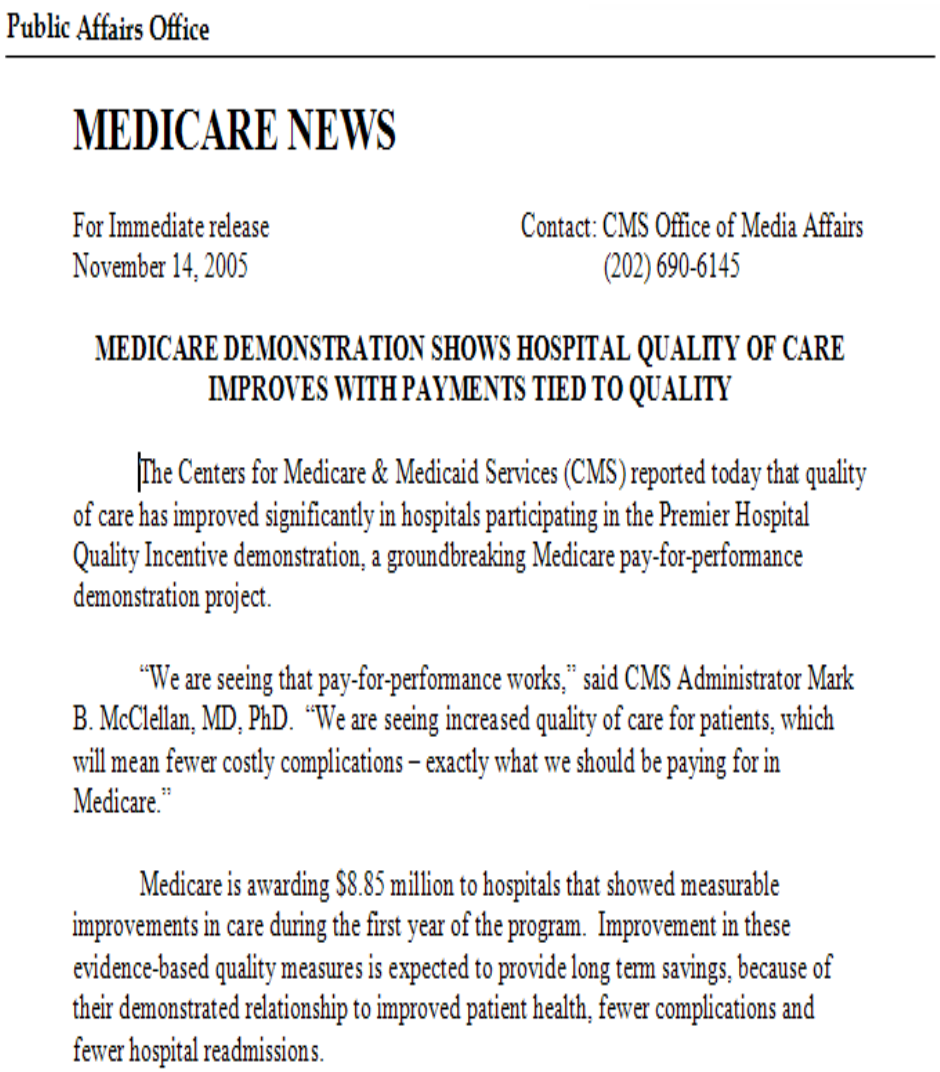
HQID Year 1 – Final Results

Released November 14, 2005

- Quality improvement across all hospitals and clinical areas
- AMI alone – 235 "lives saved"
- $8.85 million awarded to 123 top performers
- Top performers represented large and small facilities across the country.



Public Affairs Office

MEDICARE NEWS

For Immediate release
November 14, 2005

Contact: CMS Office of Media Affairs
(202) 690-6145

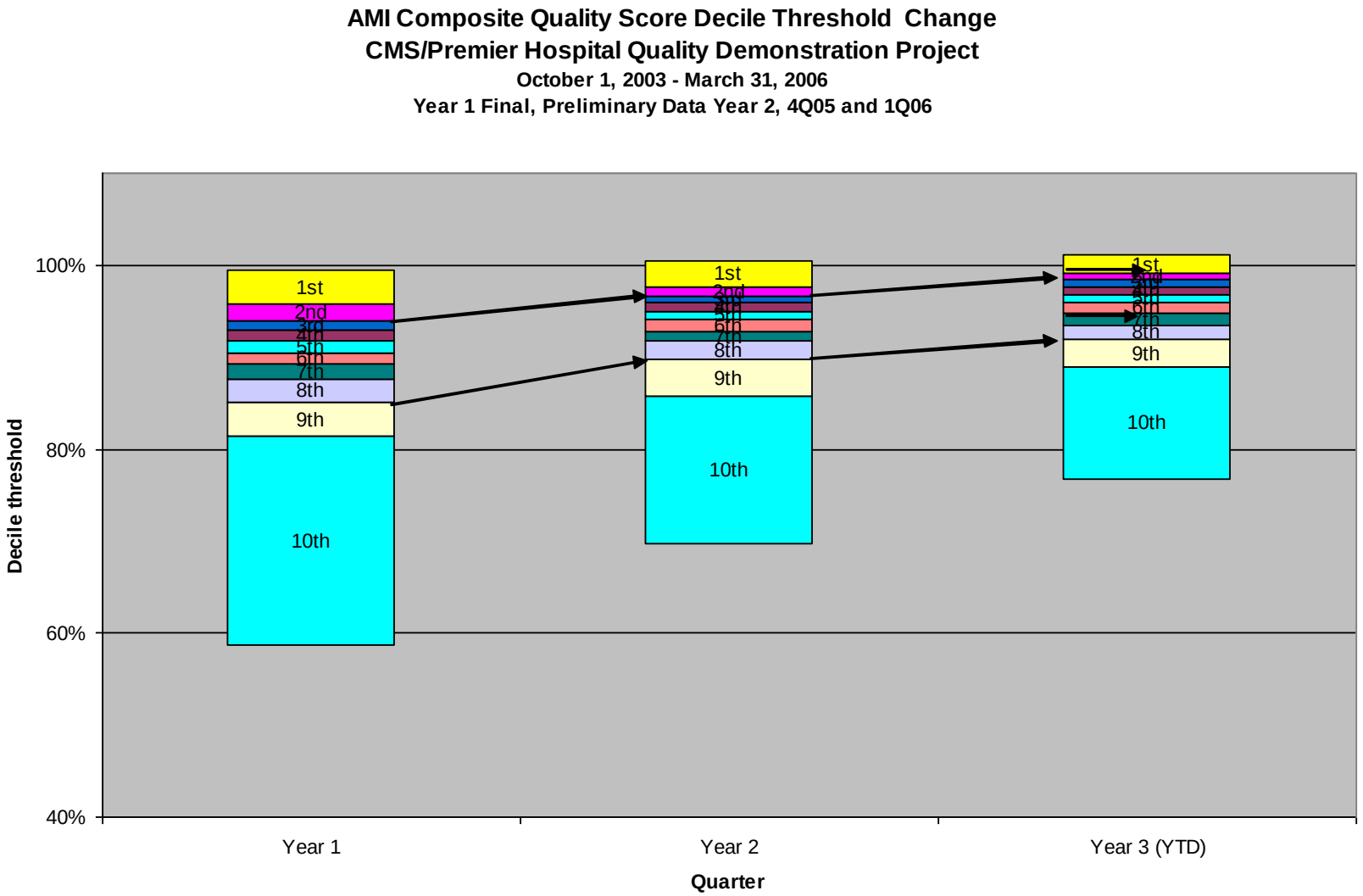
MEDICARE DEMONSTRATION SHOWS HOSPITAL QUALITY OF CARE IMPROVES WITH PAYMENTS TIED TO QUALITY

The Centers for Medicare & Medicaid Services (CMS) reported today that quality of care has improved significantly in hospitals participating in the Premier Hospital Quality Incentive demonstration, a groundbreaking Medicare pay-for-performance demonstration project.

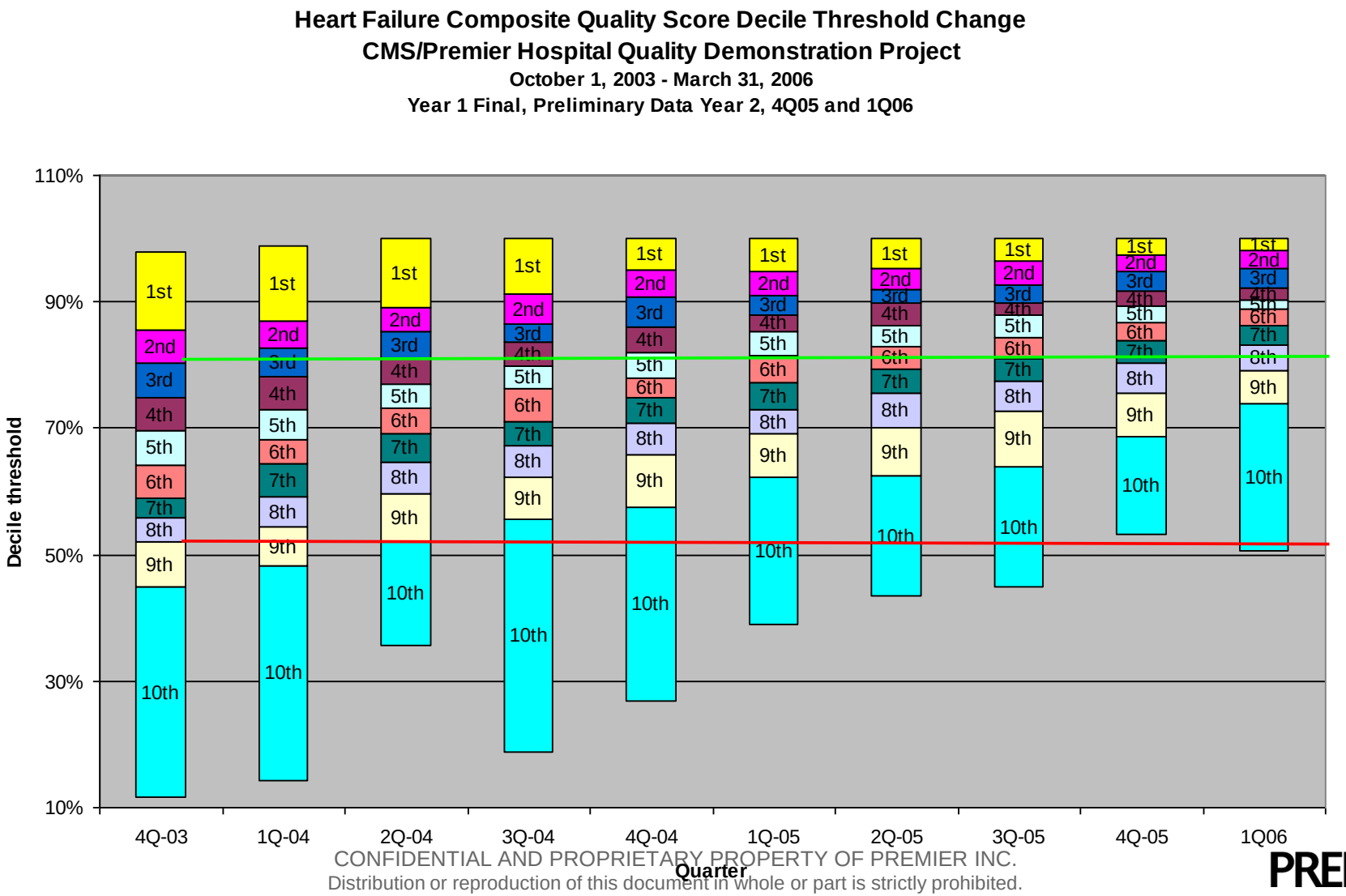
"We are seeing that pay-for-performance works," said CMS Administrator Mark B. McClellan, MD, PhD. "We are seeing increased quality of care for patients, which will mean fewer costly complications – exactly what we should be paying for in Medicare."

Medicare is awarding $8.85 million to hospitals that showed measurable improvements in care during the first year of the program. Improvement in these evidence-based quality measures is expected to provide long term savings, because of their demonstrated relationship to improved patient health, fewer complications and fewer hospital readmissions.

Overview: Example of decile movement (by year)



Overview: Example of decile movement (by quarter)



Methodology: Opportunity Model

- Why Opportunity Model selected
  - The HQID Composite Quality Score is a modification of the opportunity model developed by the Hospital Core Performance Measurement Project (HCPM) for the Rhode Island Public Reporting Program for Health Care Services in 1998
  - In the public domain
  - Model had been scientifically tested

Reference:

Landrum MB, Bronskill SE, Normand ST Analytic Methods for Constructing Cross-Sectional Profiles of Health Care Providers. *Health Services & Outcomes Research Methodology 1:1 (2000): 23-47* 2 Scinto, J, Courtney, J, et al, Final Report: Hospital Core Performance Measurement Project, April 2002

Methodology: Opportunity Model

- The HCPM developed its model on the assumption that an opportunity exists whenever a patient meets the criteria to be included in the target patient population for a particular measure.
  - Given that, one patient represents numerous opportunities for evidence-based interventions that may be measured by performance indicators.
  - A composite may be developed for a disease category by dividing the total number of achieved interventions by the total number of opportunities for the same targeted interventions.

Methodology: Composite Report

CONFIDENTIAL
PRELIMINARY RESULTS

PREMIER MEMORIAL HOSPITAL
Hospital Quality Incentive Demonstration Project - Year 2
Reporting for the period: October 2004 - March 2005

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The Hospital Quality Incentive Demonstration Project report displays the individual numerator, denominator, calculated measure rate, and decile for each measure. The composite process score, survival index (if applicable), and the Composite Score are displayed for each area. The HQI Decile Threshold information displays the lowest score for each decile. This report is for your use and will not be made public by Premier.

	Facility				HQI Decile Threshold Score					YR 1 Baseline	
Area/Measure	Numerator	Denominator	Rate/Index	Decile	1st (Top)	2nd	3rd	4th	5th (Median)	8th	Bottom
AMI											
Aspirin at arrival	77	78	98.72%	4	100.00%	100.00%	98.75%	97.30%	96.15%	90.76%	88.19%
Aspirin prescribed at discharge	29	35	82.86%	10	100.00%	100.00%	98.76%	98.06%	97.04%	86.84%	80.77%
ACEI or ARB for LVSD	14	17	82.35%	7	100.00%	100.00%	100.00%	92.31%	88.12%	66.67%	60.00%
Adult smoking cessation advice/counseling	7	10	70.00%	9	100.00%	100.00%	100.00%	97.61%	95.12%	61.11%	46.15%
Beta blocker prescribed at discharge	7	10	70.00%	10	100.00%	100.00%	98.94%	96.96%	95.78%	82.76%	76.19%
Beta blocker at arrival	30	41	73.17%	10	100.00%	100.00%	97.03%	95.45%	94.12%	82.19%	76.77%
Thrombolytic agent received within 30 minutes of hospital arrival	4	6	66.67%	3	100.00%	66.67%	50.00%	33.33%	16.67%	0.00%	0.00%
PCI received within 120 minutes of hospital arrival	14	17	82.35%	4	92.31%	87.50%	83.33%	76.67%	68.75%	42.46%	30.77%
Composite Process Component (1)	182	214	86.79%	9	97.58%	96.21%	95.07%	93.96%	92.88%	84.10%	80.14%
Survival Index (2)	81.00%	83.00%	97.59%	7	105.73%	103.44%	101.56%	100.55%	99.57%	94.77%	87.41%
Composite Quality Score (3)			87.97%	9	97.93%	96.73%	95.46%	94.63%	93.65%	85.17%	81.45%
CABG											
Aspirin prescribed at discharge	70	70	100.00%	1	100.00%	100.00%	100.00%	100.00%	98.36%	91.57%	88.46%
CABG using internal mammary artery	73	75	97.33%	2	98.21%	96.10%	94.74%	93.16%	91.67%	84.83%	80.00%
Prophylactic antibiotic received within 1 hour prior to surgical incision	29	60	48.33%	10	97.65%	96.08%	93.64%	91.67%	88.37%	52.76%	38.24%
Prophylactic antibiotic selection for surgical patients	60	60	100.00%	1	100.00%	100.00%	100.00%	100.00%	100.00%	93.37%	80.54%
Prophylactic antibiotics discontinued within 24 hours after surgery end time	54	57	94.74%	3	97.67%	95.92%	92.73%	88.01%	83.33%	12.00%	4.32%
Composite Process Component (1)	286	322	88.82%	5	96.83%	95.02%	93.61%	92.61%	88.60%	71.73%	66.53%
Survival Index (2)	81.00%	83.00%	97.59%	9	103.15%	102.21%	101.68%	101.36%	100.88%	99.26%	98.70%
Post-op hemorrhage/hematoma avoidance index (4)	100.00%	100.00%	100.00%	1	100.00%	100.00%	100.00%	100.00%	100.00%	99.46%	98.93%
Post-op phy/metabolic derangement avoidance index (5)	96.56%	100.00%	96.56%	10	100.00%	100.00%	100.00%	100.00%	100.00%	98.58%	98.11%
Composite Quality Score (6)			92.86%	5	98.07%	96.86%	96.02%	95.34%	92.86%	81.99%	78.81%

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Methodology: Composite Quality Score

- Composite Quality Score Calculation (CQS)
  - Two components:
    - Composite Process Score (CPS) – sum the numerator and denominator value from each process-based indicator; then divide num/den for each clinical condition.
    - Composite Outcome Score (COS) - Inpatient mortality transposed to create a survival index; PSIs and readmission transposed to create avoidance index.
    - Weighting values are on premise of “equal weight for each measure”
    - If hospital does not have patients eligible for an outcome measure, the hospital's weights are modified – adjusted down by each missing outcome measure.
    - After weights are applied to CPS and COS, a composite score is calculated by adding CPS and COS together. If the clinical area does not include outcome measures the CPS is the same as the CQS.

Methodology: Application

- Eligible cases:
  - 30 cases per year
  - Must pass chart validation–80% yearly confidence interval
  - Each year starts over / not cumulative
- Risk Adjustment – Outcome measures:
  - AMI inpatient mortality – JCAHO
  - CABG inpatient mortality – 3M APR-DRG
  - CABG & Hip /Knee – Post Operative hemorrhage / hematoma & Post Operative physiologic and metabolic derangement - AHRQ PSI
  - Hip/Knee – Readmissions w/in 30 days to any acute care facility

Methodology: Example of CQS Calculation

COMPOSITE QUALITY SCORE – AMI EXAMPLE			
COMPOSITE PROCESS SCORE (CPS)			
Process Measures	**Numerator**	**Denominator**	**Weight**
Aspirin at Arrival	60	60	1/9
Aspirin at Discharge	55	58	1/9
ACEI or ARB for LVSD	53	56	1/9
Smoking Cessation Counseling	55	61	1/9
Beta Blocker at Discharge	63	63	1/9
Beta Blocker at Arrival	59	61	1/9
Thrombolytic Received Within 30 Minutes of Arrival	35	48	1/9
PCI Within 120 Minutes of Hospital Arrival	27	31	1/9
Total Process Components	**407**	**438**	8/9 or factor of 0.89
COMPOSITE PROCESS SCORE	407 / 438 = 0.9292 then ((0.9292 x 0.89) x 100) = 82.69%		
Outcome Measure			**Weight**
Inpatient Mortality Rate – Actual	0.0476		
Inpatient Mortality Rate – Expected	0.1161		
Actual Survival Rate = 1 – 0.0476	0.9524		
Expected Survival Rate = 1 – 0.1161	0.8839		1/9 or factor of 0.11
Composite Outcome Score Survival Index = Actual Survival Rate / Expected Survival Rate	0.9524 / 0.8839 = 1.0775 then ((1.0775 x 0.11) x 100) = 11.85%		
Composite Quality Score			
Composite Process Score	82.69%		
Composite Outcome Score	11.85%		
Total	82.69% + 11.85% = 94.54%		
AMI COMPOSITE QUALITY SCORE = 94.54%			

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Provision of rewards

Financial

- Incentive payments are made annually in a lump sum.
- Project required all participants to return 588 form to authorize EFT transfer of funds.
- Trailblazer contracted to disperse funds.
- Hospitals notified when funds were deposited.

Lessons Learned

- Design
- Measurement
- Motivating Factors

Lessons Learned: Design

Attainment vs. Improvement

- Deciles created challenges in identifying and recognizing improvement. Does not differentiate quality levels accurately, no significant difference between hospitals in the 2nd decile (payment) and 4th decile (public recognition).
- Hospitals achieving significant improvements in quality were not rewarded for these efforts due to quality gaps narrowing.
- Recommend incentives be based on attainment of a predetermined threshold, significant improvements or both. Acknowledging improvement can motivate hospitals who perceive the threshold as unattainable in the immediate future.

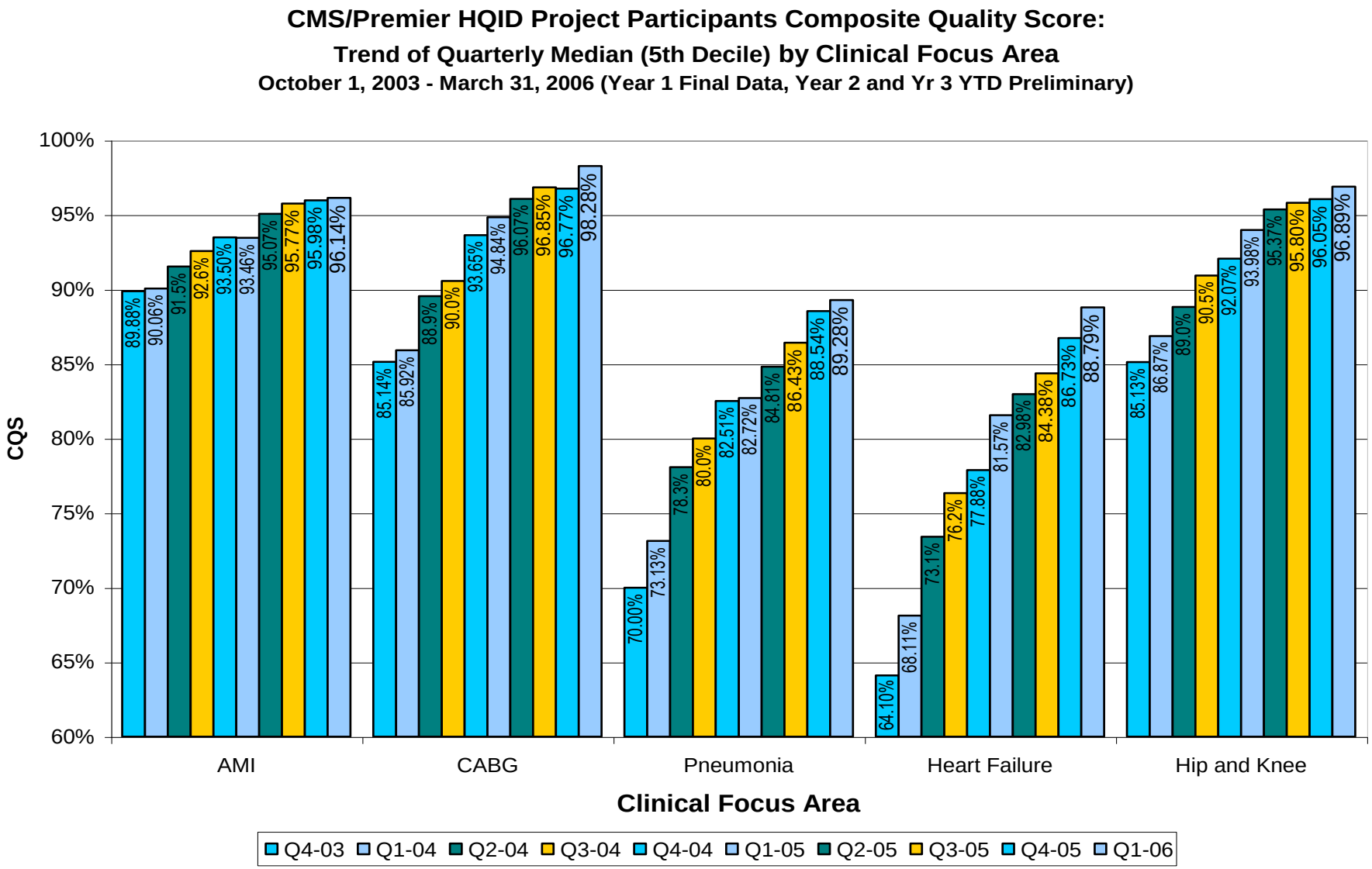
Lessons Learned: Measurement

- Alignment with national performance initiatives
  - Flu Vaccination – suppressed year 2 due to shortage of vaccine
  - Prophylactic antibiotic selection for surgical patients – national discussion related to MRSA and antibiotic selection – measure suppressed year 2

Lessons Learned: Measurement

- Measure Challenges
  - 24/48 hours discontinuation of antibiotics
    - National society (STS) recommends 24 to 48 hours May 2005
    - Change to allow up to 48 hours beginning January 1, 2006.
  - CABG - Use of IMA
    - Measure nationally endorsed by NQF however ICD-9 codes used to identify history of prior CABG found to be in accurate.
    - Suppressed for entire three years of project.

Lessons Learned : Sustained Continued Improvement



Lessons Learned: Motivating factors for Improvements

- The participant hospitals are focused on increasing their quality to better serve their communities
- Linking payment to quality inevitable - need to be prepared
- Demonstration provides a learning opportunity
- Respond to purchasers and payors demands for transparency
- Public recognition could increase market demand

Questions

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