Objectives

• Review current literature on P4P in hospital settings

• Review effect of the Centers for Medicare & Medicaid Services/Premier pay-for-performance (P4P) demonstration project on performance improvement at Catholic Healthcare Partners, Cincinnati, OH

• Analyze national impact of P4P on quality of care
Pay For Performance – Policy Moving Faster than Research

• “Pay-for-performance methods work. . . . Medicare should move forward with new financial models that encourage quality and efficiency, not only for its own fiscal health, but for the well being of our beneficiaries and to support physicians in what they want to do in the first place.” – Mark McClellan, CMS Administrator (Testimony, November 17, 2005)

• “The debate about whether [pay-for-performance] is the right thing to do is over.” – Herb Kuhn, Director, Center for Medicare Management, CMS. (Deloitte 2006).

• Release of IOM Report, September 21, 2006: Rewarding Provider Performance: Aligning Incentives in Medicare
Public Reporting & P4P Time Line

- July 2002: JCAHO ORYX Core Measures collection begins
- December 2002: Hospital Quality Alliance (HQA), a national public-private collaboration to encourage hospitals to voluntarily collect and report hospital quality performance information beginning with January 2004 discharges
- July 15 2003: 1294 hospital “pledge”
- July 2003: Premier/CMS P4P Demonstration announced beginning with October 2003 discharges – 278 hospitals volunteer to participate. Includes public reporting
- October 2003: 417 Hospitals publish the ten “starter set” measures on CMS web site
- December 2003: CMS ties 0.4% Annual Payment update to submitting HQA “starter set” – Voluntary participation increases dramatically to 4000+ hospitals
- July 2004: JCAHO Quality Check web site open to public
- March 2005: Hospital Compare web site goes live
- April 2005: seven new measures first published
- September 2005: three new measures first published
- August 2006: CMS ties 2.0% Annual Payment update to continued submission of 21 HQA measures
- December 2006: one new measure first published
Current measures collected and publicly reported (through Q3 2006)

<table>
<thead>
<tr>
<th>Acute Myocardial Infarction (Heart Attack)</th>
<th>Pneumonia</th>
</tr>
</thead>
<tbody>
<tr>
<td>• AMI-1 Aspirin at arrival*</td>
<td>• PN-1 Oxygenation assessment*</td>
</tr>
<tr>
<td>• AMI-2 Aspirin at discharge*</td>
<td>• PN-2 Pneumococcal vaccination*</td>
</tr>
<tr>
<td>• AMI-3 ACEI/ARB given for LVSD*</td>
<td>• PN-3b Initial blood culture in ER*</td>
</tr>
<tr>
<td>• AMI-4 Adult smoking cessation advice</td>
<td>• PN-4 Adult smoking cessation advice</td>
</tr>
<tr>
<td>• AMI-5 Beta blocker at discharge</td>
<td>• PN-5b Antibiotic within 4 hours of arrival</td>
</tr>
<tr>
<td>• AMI-6 Beta blocker at arrival*</td>
<td>• PN-6 Antibiotic selection</td>
</tr>
<tr>
<td>• AMI-7a Fibrinolysis therapy within 30 min of arrival</td>
<td>• PN-7 Influenza vaccination</td>
</tr>
<tr>
<td>• AMI-8a Primary percutaneous coronary intervention within 90 minutes of arrival</td>
<td></td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Heart Failure</th>
<th>Surgical Care Improvement Project (colon surgery, hip and knee arthroplasty, abdominal and vaginal hysterectomy, cardiac surgery (including coronary artery bypass grafts (CABG)) and vascular surgery)</th>
</tr>
</thead>
<tbody>
<tr>
<td>• HF-1 Discharge instructions</td>
<td>• SCIP-Inf-1a Antibiotic within 1 hr of incision-Overall</td>
</tr>
<tr>
<td>• HF-2 LVF Assessment *</td>
<td>• SCIP-Inf-3a Antibiotic disc. within 24 hrs-Overall (48 hrs for CABG)</td>
</tr>
<tr>
<td>• HF-3 ACEI/ARB given for LVSD*</td>
<td></td>
</tr>
<tr>
<td>• HF-4 Adult smoking cessation advice</td>
<td></td>
</tr>
</tbody>
</table>

*Hospital Quality Alliance "Starter Set Measures"
What are we looking for from P4P?

**Placing “A Few Simple Rules” in Context**  
(Refreshing a Highly Viral PowerPoint Slide)

- **High Efficiency of Health Benefits Spending (Health Gain / $)**
- **Value Gain by Americans**: $40 ppts, then “5 wks” & 2.5 ppts p.a.
- **Clinical Performance Management**: Q → 50 ppts
- **Market Sensitivity to Performance**
- **Faster clinical re-engineering by MDs, hospitals & innovators**

**Evolutionary Path**

- **2005**
  - **Transparency on Quality & Cost-Efficiency**
  - **Performance comparisons for hospitals, MDs, treatments & innovations**

- **2015**
  - **“Aerobic” professionalism, benefits design, innovation vetting & P4P**
  - Q = % adherence to evidence-based rules
  - $ = Per capita health care spending. Includes new investment in IT / industrial engineering capability. Excludes impact of inflation, aging and biomedical innovation


Reproduced with permission of Arnold Milstein, MD (Mercer)
What does the research show about pay for performance programs in hospital settings?

• Limited early evidence on P4P
  – Medical Care Research and Review, February 2006
    • Guest Editors: Dan Berlowitz, MD, MPH, James F. Burgess, PhD, Gary J. Young, JD, PhD)
    • AHRQ sponsored supplement on 5 studies informing P4P.
    • Commentaries by Mark Chassin, Robert Galvin, and Glen Hackbarth.
  – Rewarding Results
    • Early findings
  – Premier Demonstration
      – 8.5 million in incentive payments in year 1
    • Premier study (non-peer reviewed 2006)
What does the research show about pay for performance programs in Hospital Settings?

• **P4P improves Quality in Hospitals:** *Medical Care Research & Review* Supplement, 2006
  - Heart failure composite score improved 19% in acute care hospitals (Grossbart)
  - Cost Effectiveness ratio, $30,000 – $13,000 per Quality Adjusted Life Years (QALY) for heart related acute hospital care (Nahra et al.)

  Dan Berlowitz, James F. Burgess, Jr., and Gary J. Young
  *Med Care Res Rev.* February 1 2006, Volume 63, No. 1 suppl.

• **Rewarding Results Pay-for-Performance Initiative - Highlights of a National Project - Nov. 15, 2005 Michigan Blue Cross Blue Shield (BCBS)**
  - Improved care for hospitalized patients by focusing on measures that have yielded higher than national averages for cardiac care
  - Decreased rates of life-threatening infections by 45 percent for patients in the intensive care unit.

  Robert Woods Johnson Foundation, Press release, November 15, 2005;
The Premier Demo at the two year mark

Composite Quality Score
Trend of Quarterly Median (5th Decile) by Clinical Focus Areas
October 1, 2003 - December 31, 2005 (Year 1 Final Data, Year 2 and Q4-05 Preliminary)

Implications of the Premier Demo

- Medicare paid $8.9 million to 123 of the 260 participating hospitals
- CMS sponsoring independent analysis of quality gains
- CMS extended demonstration for additional year.
- Premier claims if implemented nationally:
  - $1 billion could be saved\(^1,2\)
  - 3,465 lives could be saved\(^1\)
  - 5,950 complications could be avoided\(^1,2\)
  - 5,804 readmissions could be avoided\(^1,2\)
  - 469,3541 days could be avoided\(^1,2\)

1. CABG patients
2. Pneumonia patients
Catholic Healthcare Partners: Mission and Values

Lead by our MISSION

Catholic Healthcare Partners extends the healing ministry of Jesus by improving the health of our communities with emphasis on people who are poor and underserved.

Live by our VALUES

- compassion
- human dignity
- service
- excellence
- sacredness of life
- justice
CHP’s Experience with Pay-for-Performance

What’s the Return? Assessing the Effect of “Pay-for-Performance” Initiatives on the Quality of Care Delivery

Stephen R. Grossbart
Catholic Healthcare Partners

This article evaluates the impact of the Centers for Medicare & Medicaid Services/Premier pay-for-performance demonstration project on performance improvement in three clinical areas in a multihospital health care system. The study compares a group of hospitals participating in this project against a control group of similar hospitals that did not participate. Although the incentives are extremely small, the findings show that participation in the pay-for-performance initiative had a significant impact on the rate and magnitude of performance improvement. The project led to marked improvement in the quality of clinical process delivery and accelerated the adoption of evidence-based practices.

Keywords: quality; clinical effectiveness; financial incentives
“What’s the Return?” Study

• Analyze a “test” group of participating hospitals against a “control” group of similar hospitals within the same multi-hospital system that chose not to participate in the project.

• Compare rate and magnitude of performance improvement between CHP hospitals participating in the CMS/Premier HQI Demonstration Project to a control group of non-participating CHP hospitals in three clinical areas:
  – Heart Failure
  – Acute Myocardial Infarction
  – Pneumonia
A mission-driven, not-for-profit health system—one of the largest in the U.S. and the largest in the state of Ohio.
### Year 1 Performance in Premier P4P at CHP (CMS Validated Data)

<table>
<thead>
<tr>
<th></th>
<th>Community Health Partners Reg Med Cntr Lorain, OH</th>
<th>Lourdes Hospital Paducah, KY</th>
<th>Mercy Medical Center Springfield, OH</th>
<th>St. Vincent’s Mercy Medical Center Toledo, OH</th>
</tr>
</thead>
<tbody>
<tr>
<td>AMI</td>
<td>Top 10%</td>
<td>Top 20%</td>
<td></td>
<td>Top 20%</td>
</tr>
<tr>
<td>Heart Failure</td>
<td>Top 10%</td>
<td>Top 10%</td>
<td></td>
<td>Top 10%</td>
</tr>
<tr>
<td>Pneumonia</td>
<td>Top 10%</td>
<td>Top 10%</td>
<td></td>
<td>Top 10%</td>
</tr>
<tr>
<td>CABG</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Hip/Knee</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>TOTAL Incentive</td>
<td>$106,907</td>
<td>$63,458</td>
<td></td>
<td>$167,846</td>
</tr>
</tbody>
</table>

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# Year 2 Performance in Premier P4P at CHP
(Premier Preliminary Data)

<table>
<thead>
<tr>
<th></th>
<th>Community Health Partners Reg Med Cntr Lorain, OH</th>
<th>Lourdes Hospital Paducah, KY</th>
<th>Mercy Medical Center Springfield, OH</th>
<th>St. Vincent’s Mercy Medical Center Toledo, OH</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>AMI</strong></td>
<td>Top 10%</td>
<td>Top Performer (Above Median)</td>
<td>Top 10%</td>
<td>Top 10%</td>
</tr>
<tr>
<td><strong>Heart Failure</strong></td>
<td>Top 10%</td>
<td>Top Performer (Above Median)</td>
<td>Top Performer (Above Median)</td>
<td>Top 10%</td>
</tr>
<tr>
<td><strong>Pneumonia</strong></td>
<td>Top 10%</td>
<td>Top 20%</td>
<td>Top Performer (Above Median)</td>
<td>Top 20%</td>
</tr>
<tr>
<td><strong>CABG</strong></td>
<td></td>
<td></td>
<td>Top Performer (Above Median)</td>
<td>Top Performer (Above Median)</td>
</tr>
<tr>
<td><strong>Hip/Knee</strong></td>
<td></td>
<td></td>
<td>Top Performer (Above Median)</td>
<td></td>
</tr>
<tr>
<td><strong>TOTAL Incentive</strong></td>
<td>$TBD</td>
<td>$TBD</td>
<td>$TBD</td>
<td>$TBD</td>
</tr>
</tbody>
</table>
Rate of Improvement: Baseline to Year 1

Improvement in Composite Quality Score by Focus Area, Catholic Healthcare Partners CMS/Premier HQID Participants vs. Non-Participants:
Improvement from Federal Fiscal Year 2003 to 2004

Overall Acute Myocardial Infarction Pneumonia Heart Failure

% Increase in Composite Quality Score 2003 to 2004

- Overall: Non-Participants 6.7%, Participants 9.3% (p-value <.001)
- Acute Myocardial Infarction: Non-Participants 2.9%, Participants 3.1% (p-value = .730)
- Pneumonia: Non-Participants 7.9%, Participants 7.2% (p-value = .395)
- Heart Failure: Non-Participants 0%, Participants 10.9%, 19.2% (p-value <.001)

Grossbart SR. What’s the Return? Assessing the Effect of “Pay for Performance” Initiatives on the Quality of Care Delivery. Medical Care Research and Review 63:1 (Suppl to February 2006) 29S-48S
Key drivers of performance improvements among demonstration project participants

- Faster rate of improvement and higher performance levels for measures beyond HQA 10-measure Starter Set
- More effective use of data and reporting systems
- Effective use of case managers to monitor care delivery
- Best practice sharing among system HQID participants
- Corporate office support
Understanding Impact at CHP Beyond the First Year of the Premier Demo – New Research

• The pace of quality improvement among “pay-for-performance” participants at CHP was greater than expected compared to non-participants at onset of project.

• The overall quality of care, measured by a composite quality score was significantly better than expected.

• By year 2, with added leadership accountability to Board of Trustees around all HQA measures, differences were slowly minimized between participants and non-participants.

• By year 3, no significant differences between participants and non-participants
Rate of Improvement: Baseline to Year 3

Improvement in Composite Quality Score by Focus Area, Catholic Healthcare Partners CMS/Premier HQID Participants vs. Non-Participants: Improvement from Federal Fiscal Year 2003 to 2006

Overall Acute Myocardial Infarction Pneumonia Heart Failure
% Increase in Composite Quality Score 2003 to 2006
- Overall: 14.6% (Non-Participants), 15.1% (Participants)
- Acute Myocardial Infarction: 11.3% (Non-Participants), 6.6% (Participants)
- Pneumonia: 18.9% (Non-Participants), 15.4% (Participants)
- Heart Failure: 19.2% (Non-Participants), 25.7% (Participants)
Overall Composite Quality Score for HQA Measures for AMI, HF, and PN, Catholic Healthcare Partners: CMS/Premier HQID Participants vs. Non-Participants

<table>
<thead>
<tr>
<th>Year</th>
<th>Non-Participants</th>
<th>Participants</th>
</tr>
</thead>
<tbody>
<tr>
<td>2003</td>
<td>79%</td>
<td>90%</td>
</tr>
<tr>
<td>2004</td>
<td>86%</td>
<td>92%</td>
</tr>
<tr>
<td>2005</td>
<td>90%</td>
<td>95%</td>
</tr>
<tr>
<td>2006</td>
<td>94%</td>
<td>90%</td>
</tr>
</tbody>
</table>

Composite Quality Score

Copyright 2006, Catholic Healthcare Partners
Overall Composite Quality Score for HQA Measures for AMI, HF, and PN, Catholic Healthcare Partners: CMS/Premier HQID Participants vs. Non-Participants

<table>
<thead>
<tr>
<th>Quarter</th>
<th>Participants</th>
<th>Non-Participants</th>
</tr>
</thead>
<tbody>
<tr>
<td>Qtr 4 2002</td>
<td>50%</td>
<td>55%</td>
</tr>
<tr>
<td>Qtr 1 2003</td>
<td>55%</td>
<td>60%</td>
</tr>
<tr>
<td>Qtr 2 2003</td>
<td>60%</td>
<td>65%</td>
</tr>
<tr>
<td>Qtr 3 2003</td>
<td>65%</td>
<td>70%</td>
</tr>
<tr>
<td>Qtr 4 2003</td>
<td>70%</td>
<td>75%</td>
</tr>
<tr>
<td>Qtr 1 2004</td>
<td>75%</td>
<td>80%</td>
</tr>
<tr>
<td>Qtr 2 2004</td>
<td>80%</td>
<td>85%</td>
</tr>
<tr>
<td>Qtr 3 2004</td>
<td>85%</td>
<td>90%</td>
</tr>
<tr>
<td>Qtr 4 2004</td>
<td>90%</td>
<td>95%</td>
</tr>
</tbody>
</table>

*Premier P4P Launch
*CHP 2004 Corporate Goal tied to Hospital Quality Alliance - "Starter Set"
*Goal to be met by 3rd Q

*CHP 2005 Corporate Goal tied to all Hospital Quality Alliance Measures for AMI, HF, and PN
*Goal to be met by 3rd Q

*CHP 2006 Corporate Goal tied to all Hospital Quality Alliance Measures for AMI, HF, PN, and SCIP
*Goal to be maintained Q1-Q3

Q1-Q3 2003: Baseline
Q1-Q3 2004: Year 1
Q1-Q3 2005: Year 2
Q1-Q3 2006: Year 3

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Composite Quality Score for HQA Starter Set Measures, Catholic Healthcare Partners: CMS/Premier HQID Participants vs. Non-Participants

- 2003: 84% (Non-Participants), 87% (Participants)
- 2004: 89% (Non-Participants), 92% (Participants)
- 2005: 94% (Non-Participants), 97% (Participants)
- 2006: 96% (Non-Participants), 97% (Participants)
Composite Quality Score for HQA Non-Starter Set Measures, Catholic Healthcare Partners: CMS/Premier HQID Participants vs. Non-Participants

- 2003 Non-Participants: 66%
- 2004 Non-Participants: 77%
- 2005 Non-Participants: 82%
- 2006 Non-Participants: 87%
- 2003 Participants: 65%
- 2004 Participants: 84%
- 2005 Participants: 84%
- 2006 Participants: 91%
CHP’s Experience

• Public reporting increased focus on “starter-set”

• Premier P4P led participants to “leapfrog” over non-participants in 2004 with significant quality improvement across measures

• Corporate focus on larger measure sets in 2005 and 2006 moved all hospitals to higher performance levels

• Getting Boards on board critical
National Impact of P4P

• Based on publicly reported data available in Medicare’s Hospital Compare
  – Premier P4P participants had a more rapid increase in performance improvement in all major clinical areas than other hospitals submitting to Hospital Quality Alliance (HQA)
  – P4P had no impact on performance for HQA publicly reported ten-measure “Starter Set”
  – Difference most pronounced with other HQA (non-starter set) measures
  – P4P participants had higher performance rates in early 2004 and increased the spread through 2005
National Rates of Improvement in Composite Quality Score by Hospital Quality Alliance Focus Area: Premier HQID Participants vs. Non-Participants: Q2 2004 to Q1 2006

% Increase in Composite Quality Score 2004 to 2006

- Overall: 4.3% (Non-Participants) vs. 6.6% (Participants)
- Acute Myocardial Infarction: 2.1% (Non-Participants) vs. 4.1% (Participants)
- Pneumonia: 6.5% (Non-Participants) vs. 9.7% (Participants)
- Heart Failure: 3.2% (Non-Participants) vs. 6.1% (Participants)
- SCIP: 1.5% (Non-Participants) vs. 9.8% (Participants)
National Rates of Improvement in Composite Quality Score for Hospital Quality Alliance Starter Set and Non-Starter Set Measures: Premier HQID Participants vs. Non-Participants:
Q2 2004 to Q1 2006
National Rates of Improvement in Overall Composite Quality Score for HQA Measures for AMI, HF, and PN: Premier HQID Participants vs. Non-Participants

Composite Quality Score


65%  | 70%  | 75%  | 80%  | 85%  | 90%  | 95%  | 100%

Hospital Compare "Beta" Web Site - Available: Publishes ALL Measures
JCAHO Web Site Launched
Surgical Measures Added
Hospital Compare Goes Live

Non-Participants | Participants
National Rates of Improvement in "Starter Set" Composite Quality Score for HQA Measures for AMI, HF, and PN: Premier HQID Participants vs. Non-Participants

- Hospital Compare "Beta" Web Site - Available: Publishes ALL Measures
- JCAHO Web Site Launched
- Surgical Measures Added
- Hospital Compare Goes Live

Composite Quality Score


Non-Participants | Participants
National Rates of Improvement in "Non-Starter Set" Composite Quality Score for HQA Measures for AMI, HF, and PN: Premier HQID Participants vs. Non-Participants

- Hospital Compare "Beta" Web Site - Available: Publishes ALL Measures
- JCAHO Web Site Launched
- Surgical Measures Added
- Hospital Compare Goes Live
National Rates of Improvement in Surgical Care Improvement Project
Composite Quality Score for HQA Measures: Premier HQID Participants vs. Non-Participants

Composite Quality Score


Hospital Compare "Beta" Web Site - Available: Publishes ALL Measures
JCAHO Web Site Launched
Surgical Measures Added to HQA
Hospital Compare Goes Live

Non-Participants  Participants
Conclusions

- Evidence from both a single multi-hospital system and national data suggests that P4P accelerates performance improvement.
- Incorporating executive and board accountability around quality improved performance in a single multi-hospital system.
- Public reporting for ten measure “starter-set” accelerated performance at a rate similar as P4P, but not as broadly.
- Potential for sub-optimization great:
  - Performance lagged in “non-starter” set measures and SCIP
Today’s Challenge for Hospitals and Health Systems

- Lack of clarity on the direction of CMS and Commercial Payers
- Rapid increase in NQF and HQA endorsed measures
- Resources and infrastructure to support data collection
- Current measure sets designed for retrospective collection rather creating waste and inefficiency
- Internal capacity to improve performance
Appendix: National Hospital Sample

• National hospital sample
  – 3276 hospitals with complete data submitting HQA data to Medicare (available from the Hospital Compare Web Site)
  – 232 hospitals with complete data participated in the Premier/CMS Hospital Quality Incentive Demonstration Project