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Effectiveness of Pay for Performance as a Quality Improvement Strategy

By Stephen R. Grossbart, PhD

Background

Catholic Healthcare Partners (CHP) is the largest health care provider in Ohio, with other hospitals located in Kentucky, Pennsylvania, and Tennessee. It is organized into 9 regional service areas in 5 states and includes 29 hospitals. When, in July 2003, Health and Human Services (HHS) Secretary Tommy G. Thompson announced a hospital-based pay-for-performance (P4P) demonstration project involving Premier, Inc., hospitals in CHP's network had to decide whether or not to participate. Because Premier, Inc. required that hospitals renew a subscription to a relatively expensive database tool as a condition for participation, cost was a limiting factor.

Even if small-volume hospitals attained the highest performance ratings, they would not earn sufficient bonuses to offset the cost of the Premier database and the additional staff required to support data abstraction. Ultimately, each of 4 regional health systems within the CHP network volunteered to have its largest volume facility join the project. These systems believed that P4P was inevitable and saw the project as an opportunity to be better prepared for payment reform.

CHP recognized the opportunity to study the impact of public reporting, P4P, and governance oversight on quality improvement in a multihospital system by comparing the P4P participants with a set of similar CHP hospitals that did not join the demonstration project. The study tested the question: Did hospitals participating in the Center for Medicare and Medicaid Services' (CMS) "Premier Hospital Quality Incentive Demonstration Project" have significantly different rates of improvement in the quality of care delivered compared to similar hospitals within the same system that did not participate in the voluntary demonstration project over the course of the 3-year project?

Study design

The study compared the impact of 1) the Premier Demonstration, 2) public reporting through the Hospital Quality Alliance (HQA), and 3) the evolving role of governance oversight, with particular attention to assessing the long-term impact of the Premier Demonstration project relative to internal and other external drivers of quality improvement. Within a single health care system, a test group of 4 acute care hospitals that participated in the demonstration project in federal fiscal years (FFY) 2004-2006 was compared to a control group of 5 hospitals that did not participate in the project. The study limited analysis to 3 clinical areas that are included in the Premier Demonstration: 1) acute myocardial infarction (AMI), 2) heart failure (HF), and 3) pneumonia (PN). Performance was compared to a baseline year (2003) for both participating and nonparticipating hospitals to determine if the rate of improvement differed between the 2 cohorts of hospitals over the following 3 years based on a composite opportunity quality score.

Study results

The 4 hospitals participating in the P4P demonstration project had significantly higher composite quality scores in each of the 3 clinical areas studied in Year 1 of the demonstration; however, by Year 3, the added pressure for public reporting of performance coupled with corporate goals

requiring all hospitals in the system to be accountable at leadership and governance levels, eliminated the significant differences that once separated the 2 cohorts (Figure 1).

Baseline

In the baseline year (2003), the 2 cohorts had similar rates of overall performance, with participating hospitals starting at 80% and nonparticipating hospitals at 79%.

Year 1

In 2004, participant hospitals improved their performance in HF and increased their overall composite quality scores to 90% (vs. 86% for nonparticipants). The Year 1 rate of increase for participants (9.8%) was significantly better than the nonparticipant rate (6.7%) (p= <.001). This difference was attributed primarily to HF care, where improvement from baseline to Year 1 for participating hospitals was 19% vs. 11% for nonparticipating hospitals (p= <.001).

Year 2

In 2005, CHP expanded its internal accountability for quality performance at all hospitals in the system by including all measures in the Premier demonstration for AMI, HF, and PN with the goal of achieving a top quartile ranking in the 3rd quarter. Composite scores achieved by the 4 participating hospitals and the nonparticipating hospital group were 92% and 90% respectively. The demonstration project hospitals had only a 2.6% increase in performance, significantly lower than the nonparticipant group, which improved by 4.4% (p= <.001).

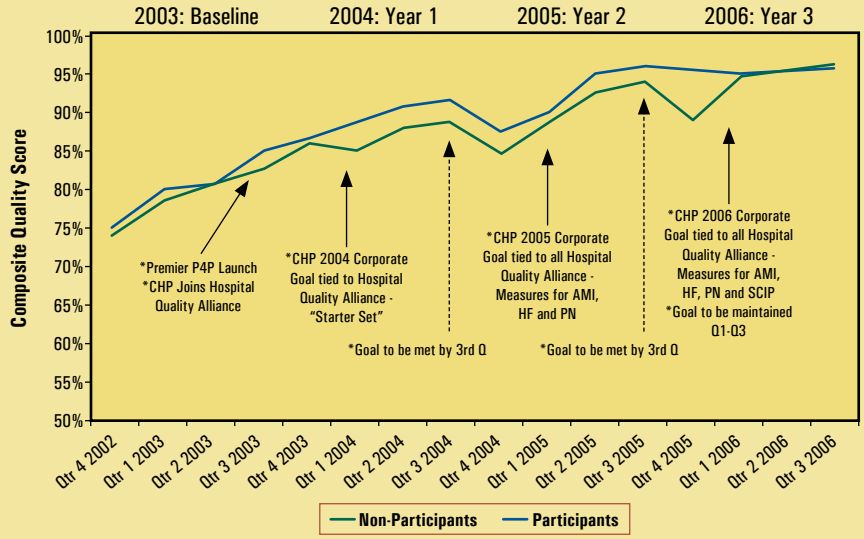
Year 3

By year 3, the difference in performance between the 2 cohorts had narrowed and the pace of improvement was virtually identical. This was fueled in part by the increased internal accountability (ie, expansion of CHP performance measurements) and higher levels of expected performance.

Participants in the project achieved an overall composite quality score of 95% (2.7% improvement over Year 2) and nonparticipants improved their composite score by 3.5% to 94% (p= .015).

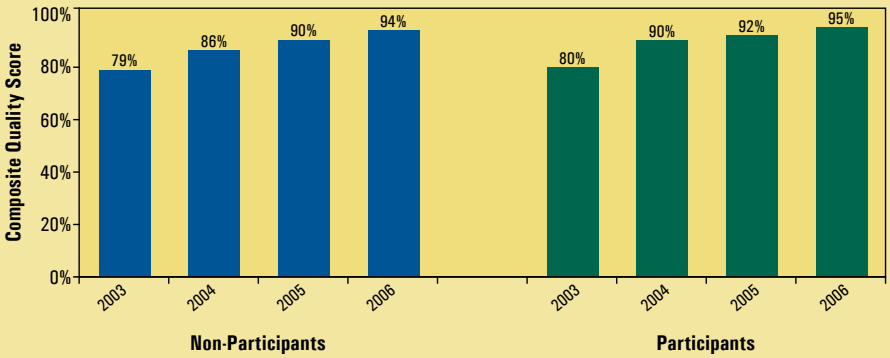
Over the course of 3 years, performance of the 2 groups of hospitals converged. Participants in the demonstration project improved their overall composite quality score by 15.1% compared to 14.6% for nonparticipants (p= .543) over the 3-year period (Figure 2).

Figure 1. Overall Composite Quality Score for HQA Measures for AMI, HF, and PN, Catholic Healthcare Partners: CMS/Premier HQID Participants vs. Non-Participants



HQA, Hospital Quality Alliance; AMI, Acute Myocardial Infarction; HF, Heart Failure; PN, Pneumonia
HQID, Hospital Quality Improvement Demonstration; SCIP, Surgical Care Improvement Project

Figure 2. Overall Composite Quality Score for HQA Measures for AMI, HF, and PN, Catholic Healthcare Partners: CMS/Premier HQID Participants vs. Non-Participants



HQA, Hospital Quality Alliance; AMI, acute myocardial infarction; HF, heart failure; PN, pneumonia; HQID, Hospital Quality Incentive Demonstration

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Conclusion

Although the P4P demonstration clearly accelerated performance by participant hospitals in the first year of the project, performance by nonparticipants exceeded the performance of participants in years 2 and 3. Both cohorts of hospitals performed at identical levels by 2006. While nonparticipants had greater opportunity for improvement, the significant drivers of public reporting and internal focus on quality improvement (ie, tying senior executive accountability to performance on quality indicators and board oversight of corporate quality objectives and goals) created a strong environment for improvement.

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Additional Reading:

1. 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.* 2006; 63(1 suppl):29S-48S.

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