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# The Effect Of Pay-For-Performance In Hospitals: Lessons For Quality Improvement

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**ABSTRACT** The payment approach known as “pay-for-performance” has been widely adopted with the aim of improving the quality of health care. Nonetheless, little is known about how to use the approach most effectively to improve care. We examined the effects in 260 hospitals of a pay-for-performance demonstration project carried out by the Centers for Medicare and Medicaid Services in partnership with Premier Inc., a nationwide hospital system. We compared these results to those of a control group of 780 hospitals not in the demonstration project. The performance of the hospitals in the project initially improved more than the performance of the control group: More than half of the pay-for-performance hospitals achieved high performance scores, compared to fewer than a third of the control hospitals. However, after five years, the two groups’ scores were virtually identical. Improvements were largest among hospitals that were eligible for larger bonuses, were well financed, or operated in less competitive markets. These findings suggest that tailoring pay-for-performance programs to hospitals’ specific situations could have the greatest effect on health care quality.

**P**ay-for-performance has been widely adopted by health care providers as an incentive to improve health care quality. In contrast, most health care payment systems simply use a fee-for-service approach, paying providers based on the intensity—or the volume, duration, frequency, and type—of services they provide. Pay-for-performance adjusts the fee-for-service model to include higher payments for higher-quality care.

Although it seems intuitively obvious that such a payment adjustment would improve the quality of care, two comprehensive reviews of pay-for-performance found only mixed evidence of that result.<sup>1,2</sup> One reason may be that current pay-for-performance programs have not been optimally designed. However, there are many unanswered questions about how to design and implement pay-for-performance programs to maximize

their effectiveness.

The Affordable Care Act of 2010 establishes a pay-for-performance program for hospitals, to take effect in 2013. This program will include all US acute care hospitals. Although payment will be Medicare based, hospital performance will be judged based on both Medicare and non-Medicare patients.<sup>3</sup> This program is similar to an ongoing hospital pay-for-performance demonstration project sponsored by the Centers for Medicare and Medicaid Services (CMS). This paper examines the results of this demonstration project, to inform efforts to implement pay-for-performance across all US hospitals through the Affordable Care Act.

## Background

**PAY-FOR-PERFORMANCE IN HOSPITALS** Both private insurers and public programs such as Medi-

care have used pay-for-performance frequently in hospitals. More than forty private-sector hospital pay-for-performance programs now exist.<sup>4</sup> Despite this proliferation of programs, there is little rigorous evidence that they improve quality. There are descriptive studies that document improvements in hospital quality under pay-for-performance, but these studies are methodologically limited in their ability to link the improvements to pay-for-performance.<sup>4</sup>

In the public sector, CMS began experimenting with pay-for-performance in hospitals through the Premier Hospital Quality Incentive Demonstration project in 2003, which we examine in this paper.<sup>5</sup> Peter Lindenauer and his co-authors examined changes in the course of the quality indicators during this project. They found that over a two-year period, hospitals enrolled in pay-for-performance showed greater improvement on process-based quality indicators that were publicly reported on CMS's Hospital Compare website<sup>6</sup>—for example, data on how many patients with acute myocardial infarction received aspirin—than hospitals that publicly reported data but did not participate in the pay-for-performance program.<sup>7</sup> Follow-up studies also found short-term improvements in process-based quality,<sup>8</sup> although improving patient outcomes has proved to be a more elusive goal.<sup>9</sup>

**DESIGN OF PAY-FOR-PERFORMANCE** Although there have been some initial successes with hospital pay-for-performance, it is unknown how the design of these programs affects their results. Most experts agree that pay-for-performance incentives must be designed very carefully, to give hospitals sufficient motivation to improve quality without producing unintended consequences, such as reducing access to care for disadvantaged populations.<sup>2,10</sup> Numerous pay-for-performance programs have implemented specific strategies intended to increase the effect of the payment system. However, virtually no empirical work has examined whether those strategies work.

► **SIZE OF INCENTIVE:** Several factors may affect the success of pay-for-performance. First, it seems logical that the size of the incentive would be important.<sup>10</sup> However, some pay-for-performance programs with incentives as low as \$2 per patient have resulted in improved quality, while other programs offering bonuses of up to \$10,000 per practice have had no discernible effect.<sup>11,12</sup>

These mixed results may be partly due to the numerous factors that vary across studies and pay-for-performance systems and that make direct comparisons between studies difficult. Despite the seemingly crucial importance of incentive size in designing effective pay-for-perfor-

mance programs, no prior work has examined whether differences in incentive size within a single program affect quality improvement.

► **PUBLIC REPORTING OF QUALITY DATA:** Another factor that might affect the success of pay-for-performance programs is whether other quality improvement programs are occurring simultaneously. Prior research has suggested that public reporting of data about hospitals' quality of care improves that quality.<sup>13</sup> Public reporting was initiated for all US acute care hospitals the same year that CMS launched its hospital pay-for-performance demonstration project.

Hospitals participating in the demonstration project had larger gains in quality than hospitals not in the project that also reported quality data publicly.<sup>6</sup> However, public reporting may be an equally viable but less costly alternative to pay-for-performance in some cases. Because the financial incentive to improve quality under public reporting is generated by competition for market share, market competition is a necessary condition for public reporting to have an effect.

As a result, in competitive markets with public reporting, pay-for-performance may add little additional incentive to improve quality. However, because pay-for-performance rewards performance directly in markets where there are few hospitals, and thus little competition to spur quality improvement through public reporting, pay-for-performance may be needed to generate sufficient financial incentives for improving quality.

► **AVAILABILITY OF RESOURCES:** Finally, no matter what incentives exist to improve quality, hospitals without the resources to invest in improvement efforts will not be able to respond to the incentives. Improving quality requires substantial capital investment in areas such as information technology or staffing.<sup>14</sup> Previous research has found that as financial pressures rise—for example, during a recession—hospitals cut back on investments in quality.<sup>15</sup> If poorly financed hospitals also provide lower quality of care, pay-for-performance may further worsen such hospitals' financial status.

## Studying The Demonstration Project

To our knowledge, no prior study has examined whether hospitals have been able to sustain the initial improvements in performance observed in the CMS pay-for-performance demonstration project. Nor is there research on whether or not the response to pay-for-performance has been consistent across all hospitals in the project.

In this paper we compare improvements in quality at hospitals in the demonstration project with improvements at a matched group of hos-

pitals not in the project during the demonstration's first five years. We also examine programmatic, hospital, and market factors that led to the largest improvements for hospitals.

Our goal is to identify successful strategies for pay-for-performance and to inform the design and implementation of future programs using this payment system. As pay-for-performance becomes a routine part of health care payment, it is critical that policy makers, health care providers, and administrators understand how to maximize its effectiveness.

**MEASURING HOSPITALS' PROGRESS** CMS and Premier Inc., a nationwide hospital system, are partners in the pay-for-performance demonstration project. Participating hospitals receive higher payments for treating Medicare patients with certain conditions—acute myocardial infarction, heart failure, pneumonia, coronary artery bypass graft, and hip and knee replacements—if they meet specified standards of care. On March 31, 2003, enrollment in the project opened to 414 Premier hospitals. Of those, 267 (64 percent) initially agreed to participate. Financial incentives began in fiscal year 2004 (starting October 2003) and are ongoing.

As explained in more detail below, Premier tracks hospitals' quality based on performance measures for treatment of patients with the conditions listed above. These measures are then combined into condition-specific composite scores, which are used to determine bonus payments.<sup>16</sup>

**FINANCIAL INCENTIVES FOR HOSPITALS** Over the first two years of the demonstration project (fiscal years 2004 and 2005), financial bonuses were distributed to the top 20 percent of hospitals. In the third year (fiscal year 2006), the bonuses continued, and hospitals performing below a threshold level had to pay penalties for their low performance.

Two additional payment incentives were introduced in the fourth year (fiscal year 2007). Hospitals that attained a target performance level (defined as median performance two years previously) received an incentive. In addition, of the hospitals attaining that level, those that were in the top 20 percent in terms of improvement received another incentive.

During the demonstration project, the amount of the incentive that hospitals were eligible for was directly proportional to the base Medicare payment that they received for patients treated for each targeted clinical condition. In other words, the more Medicare patients a hospital treated for a targeted condition, the larger the possible incentive for that condition. During the project's first five years, CMS paid participating hospitals more than \$48 million in rewards.<sup>17</sup>

## Pay-for-performance incentives must motivate hospitals to improve quality without unintended consequences.

### Study Data And Methods

**STUDY SAMPLE** The study included 260 of the 267 acute care hospitals that joined the demonstration project at its beginning, in fiscal year 2004. We excluded four critical-access hospitals because they receive payments based on each hospital's reported costs, rather than prospective payments. Therefore, their responses to pay-for-performance incentives might not have been typical. We excluded another three hospitals that were not listed in the data sets that we used to define variables for propensity-score matching, as described below.

To assess the performance of these 260 hospitals, we compared them to a control group drawn from a pool of 3,159 acute care hospitals that did not participate in the pay-for-performance demonstration project between fiscal year 2004 and the end of fiscal year 2008.

Hospitals in the two groups were matched to each other using propensity-score techniques. We used logistic regression to estimate the propensity score, defined for each hospital as the probability of its being enrolled in the pay-for-performance demonstration project.

The dependent variable was an indicator of enrollment in the demonstration project, and the independent variables were hospital characteristics in the four years prior to the start of the project. We selected characteristics known to be related to hospital quality and quality improvement: number of beds, ownership, teaching status, accreditation by the Joint Commission (an organization that accredits and certifies hospitals), nurse-to-bed ratio, percentage of Medicare admissions, urban or rural location, the percentage of a hospital's patient days that are attributable to low-income patients (known as the disproportionate-share percentage), and level of market competition, or score on the Herfindahl-Hirschman Index, a commonly accepted measure of market concentration.<sup>18–22</sup>

# Pay-for-performance hospitals eligible for larger incentives had the largest improvements in performance.

To form a control group from the pool of 3,159 hospitals, we matched three control hospitals to each pay-for-performance hospital based on propensity scores.<sup>23</sup> We used optimal matching within propensity-score caliper with Mahalanobis distance matching<sup>24,25</sup> to control for key covariates—hospital costs and risk-standardized mortality rates—and exact matching within geographic region (census division). Balance checks showed that the matching was adequate.<sup>24</sup>

The final study sample consisted of all 260 pay-for-performance hospitals and 780 control hospitals. We based all of our analyses on the hospitals in this sample.

**DATA SOURCES** The main data source was the Hospital Compare data available on the CMS website.<sup>6</sup> These data, which contain publicly reported quality measures for more than 98 percent of US hospitals, represent the period from October 2003 to the present. The same process measures reported in these data are also used in the pay-for-performance demonstration project for three of the five conditions included in that demonstration: acute myocardial infarction, heart failure, and pneumonia (see Appendix Table 1 for a list of measures used in the pay-for-performance demonstration for these three conditions).<sup>26</sup> This overlap enabled us to compare hospital performance for these three conditions in pay-for-performance and non-pay-for-performance hospitals during our study period.

We supplemented these data with hospital characteristics from the Medicare Provider of Service File and Impact File. Data on hospital financial status (calculated as the average total margin in the four years prior to the pay-for-performance demonstration project) were from Medicare Cost Reports. We used the 100 percent Medicare Provider Analysis and Review file (containing all Medicare claims for hospitalization) to calculate the percentage of total Medicare payments for conditions linked to pay-for-performance as a measure of potential bonuses and

to calculate Herfindahl-Hirschman Index scores as a measure of market competition.

**QUALITY MEASURES** CMS's calculation of pay-for-performance incentives is based on performance on condition-specific composite measures. These composite measures are calculated as a weighted average across performance measures, where each measure is weighted by the number of people who are eligible for it. For two of the three clinical conditions we studied, Medicare's composite measures are based exclusively on process measures. However, in the case of acute myocardial infarction, the composite also includes one outcome measure—inpatient mortality—which is equally weighted with the eight process measures for this condition.<sup>16</sup> A full list of the performance measures included in each composite measure is in Appendix Table 1.<sup>26</sup>

We used the process measures in the Hospital Compare data to calculate condition-specific composite measures for both pay-for-performance and non-pay-for-performance hospitals, starting with the initiation of the project in October 2003. We did not include acute myocardial infarction mortality in our composite measures because mortality was not included in the Hospital Compare data during our study period. We averaged the three condition-specific composite measures for each hospital to create a single measure of overall hospital performance.

**ANALYSES** We first calculated quarterly average performance at pay-for-performance and control hospitals during the study period. We tested whether performance between the two groups was statistically different in each quarter, accounting for clustering of observations within hospital by using Huber-White variance estimates.<sup>27</sup>

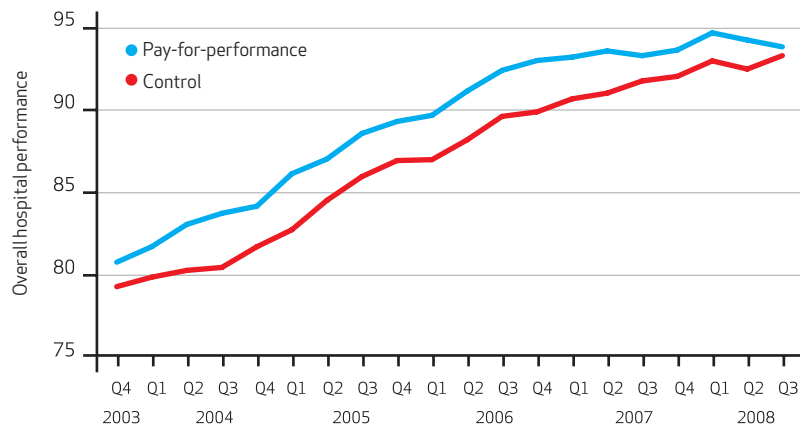
We then investigated how the distribution of hospital performance changed over time in the two groups of hospitals. To do this, we calculated the cumulative percentage of hospitals meeting set performance-score thresholds in each year after the implementation of pay-for-performance. Specifically, we determined what percentage of hospitals in each group had an overall performance score of 60 percent or higher, 70 percent or higher, 80 percent or higher, and 90 percent or higher. We then measured the difference in these cumulative percentages between pay-for-performance and control hospitals.

To examine which factors led to changes in these cumulative differences, we stratified comparisons between the two groups based on three characteristics. First, we calculated a proxy for the total pay-for-performance bonuses for which each hospital was eligible. Because Medicare cal-



EXHIBIT 1

Average Overall Performance In Pay-For-Performance And Control Hospitals, Fiscal Years 2004-08



SOURCE Hospital Compare data (see Note 6 in text). NOTES Performance is averaged across the three conditions of acute myocardial infarction, heart failure, and pneumonia; the values shown are average composite performance scores. Difference in performance between pay-for-performance and non-pay-for-performance (control) hospitals from the first quarter of 2004 through the third quarter of 2007 is statistically significant ( $p < 0.05$ ).

culates total possible bonuses as a proportion of total Medicare base payments, we approximated total eligible bonuses based on the percentage of the hospital's total Medicare base payments for conditions linked to pay-for-performance—that is, Medicare revenue for those conditions divided by total hospital Medicare revenue. This gave us the proportion of its revenue that a hospital could generate from pay-for-performance for these conditions. We then compared perfor-

mance in hospitals in the top quartile of possible pay-for-performance payments to performance in hospitals in the bottom three quartiles.

Second, we examined the effect of market competition on performance by calculating the Herfindahl-Hirschmann Index score of the Hospital Service Area<sup>28</sup> in which each hospital operated. We calculated differences in performance between hospitals in markets in the top quartile for competition and those in the three other quartiles.

Third, we examined the effect of a hospital's baseline financial status on performance by calculating each hospital's total margin (total income divided by total revenue) averaged over the four years prior to implementation of pay-for-performance. We compared performance in hospitals in the bottom quartile of financial performance with performance in hospitals in the other three quartiles.

Study Results

Our study included a total of 1,040 matched hospitals—260 pay-for-performance hospitals and 780 control hospitals. Characteristics of both groups of hospitals are displayed in Appendix Table 2.<sup>26</sup> After the propensity-score matching described above, the two groups of hospitals were similar with respect to hospital and market characteristics.

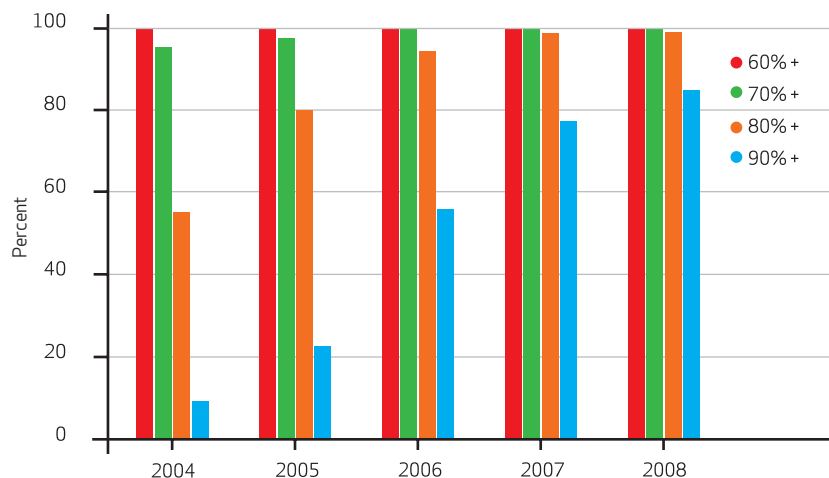
Over the first three years of the pay-for-performance demonstration project, participating hospitals had better average overall performance across all three medical conditions than hospitals that did not participate (Exhibit 1). However, the difference in average performance between the two groups started to diminish in 2007. By 2008 there was no statistically significant difference between the two groups, meaning that the effect of pay-for-performance was no longer detectable.

The changes in overall hospital performance were largely driven by changes in the proportion of hospitals with high-level performance. Exhibit 2 shows the cumulative percentage of pay-for-performance hospitals whose overall performance reached certain thresholds in the five years after pay-for-performance was implemented. Exhibit 3 shows the same percentages for non-pay-for-performance hospitals, and Exhibit 4 shows the difference in cumulative percentages between the two groups.

In 2004 the two groups were similar in overall hospital performance, although non-pay-for-performance hospitals were doing slightly worse. By 2006, 56 percent of pay-for-performance hospitals had achieved a performance score of at least 90 percent (Exhibit 2), while

EXHIBIT 2

Cumulative Percentage Of Pay-For-Performance Hospitals Achieving Performance Thresholds For Overall Performance, By Performance Score Percentile, Fiscal Years 2004-08



SOURCE Hospital Compare data (see Note 6 in text).

only 32 percent of control hospitals had done so (Exhibit 3). Thus, the two groups differed by twenty-four percentage points (Exhibit 4). However, by 2008 that gap had shrunk to ten percentage points (Exhibit 4).

**EFFECT OF SIZE OF INCENTIVE** When we stratified changes in performance by incentive size, pay-for-performance hospitals that were eligible for larger incentives had larger improvements in performance than control hospitals that would have received incentives of similar size had they been participating in the demonstration project (Appendix Figure 1, Panel A).<sup>26</sup> Among hospitals eligible for smaller incentives, participating hospitals still had larger improvements than non-participants (Appendix Figure 1, Panel B), but the difference here was smaller than that between hospitals eligible for larger incentives in the two groups (Appendix Figure 1, Panel C).<sup>26</sup>

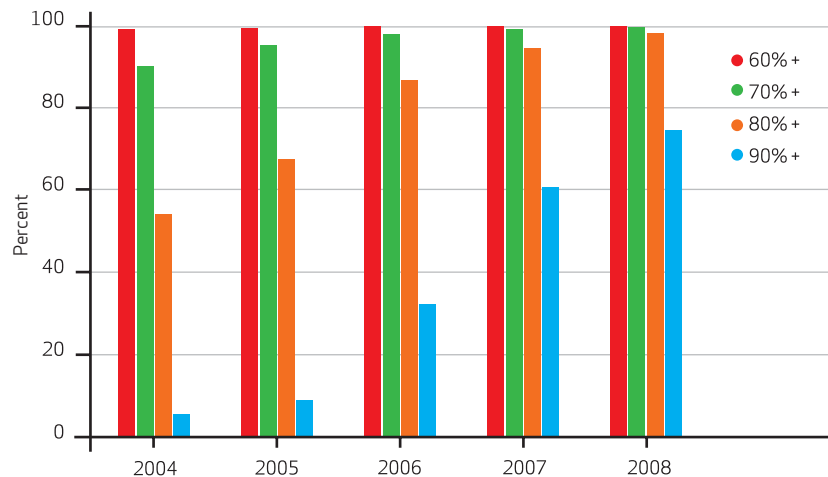
Thus, pay-for-performance hospitals eligible for larger incentives had the largest improvements in performance—fourteen, seventeen, and twelve percentage points more of them achieved a performance score of 90 percent or higher in 2006, 2007, and 2008, respectively—compared to nonparticipating hospitals and participants eligible for smaller incentives.

**EFFECT OF COMPETITION** Pay-for-performance had a larger effect on hospital performance in markets with less competition (Appendix Figure 2, Panel C).<sup>26</sup> After stratifying by level of market competition, we found that pay-for-performance had a larger effect on performance improvement than public reporting alone did among hospitals in the least competitive—sometimes called the most concentrated—markets (Appendix Figure 2, Panel A).<sup>26</sup> There were only modest differences in improvement between pay-for-performance and control hospitals in competitive markets (Appendix Figure 2, Panel B).<sup>26</sup> In 2006, twenty percentage points more pay-for-performance hospitals in less competitive markets achieved a performance score of 90 percent or higher, compared to nonparticipating hospitals and to participants in more-competitive markets, although these differences diminished over time.

**EFFECT OF HOSPITAL'S FINANCIAL STRENGTH** Pay-for-performance also had a larger effect on improvements at hospitals in good financial shape, compared to hospitals in worse financial shape (Appendix Figure 3).<sup>26</sup> In the first year of the demonstration project, there was little difference between hospitals based on their finances. However, with each subsequent year the difference between pay-for-performance and control hospitals was larger for well-financed hospitals than it was for hospitals in worse financial shape. By 2008 that difference was twenty-two percent-

**EXHIBIT 3**

**Cumulative Percentage Of Control Hospitals Achieving Performance Thresholds For Overall Performance, By Performance Score Percentile, Fiscal Years 2004-08**



**SOURCE** Hospital Compare data (see Note 6 in text). **NOTE** Control hospitals were not participating in pay-for-performance.

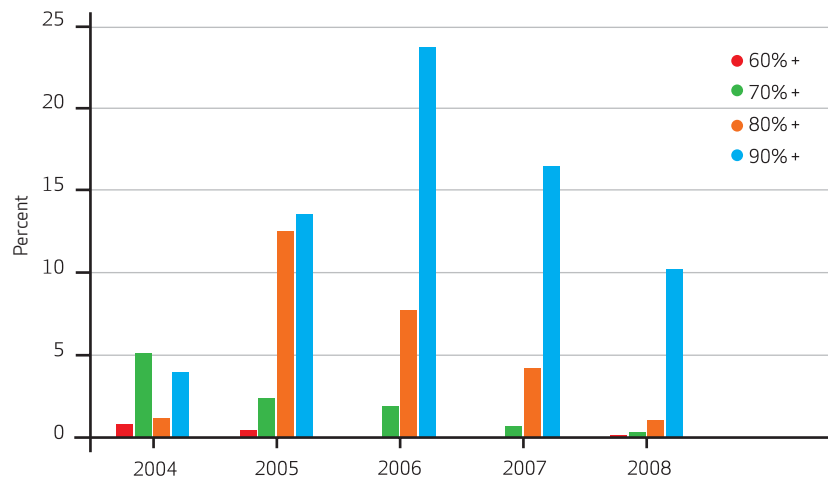
age points in terms of hospitals achieving the highest performance threshold.

**Discussion**

Although pay-for-performance has been widely adopted as a way to improve health care quality, early studies have found that the effects of this payment system have been modest. Furthermore, little is known about how the design of the system affects its impact on quality.

**EXHIBIT 4**

**Difference In The Percentage Of Pay-For-Performance And Control Hospitals Achieving Performance Thresholds, By Performance Score Percentile, Fiscal Years 2004-08**



**SOURCE** Hospital Compare data (see Note 6 in text). **NOTE** Control hospitals were not participating in pay-for-performance.

We examined changes in hospital performance under the largest experiment with pay-for-performance in hospitals to date—the demonstration project conducted by CMS and Premier Inc. We found that although hospital performance improved under pay-for-performance, the effect was short-lived. However, we found that several factors affected hospitals' response to pay-for-performance, and the effect varied by incentive size, amount of competition, and hospital finances.

This was an observational study of only one program in one health care setting, which limited our ability to definitively evaluate pay-for-performance. Nonetheless, some important lessons can be gleaned from this study.

**EXTENDING THE EFFECT OF PAY-FOR-PERFORMANCE OVER TIME** First, it is important to note that by the end of our study period, performance in control hospitals matched that in pay-for-performance hospitals. Although the performance of the hospitals participating in the demonstration project improved more in the first three years of the project, non-pay-for-performance hospitals caught up by the fourth and fifth years.

This is probably due to the very high rates of performance at participating hospitals, whose performance could not be improved much more. This baseline high performance may have resulted from the fact that the performance measures used by the demonstration project have been the primary clinical focus of hospital accreditation for many years. Thus, hospitals had already been trying to improve performance in these areas before pay-for-performance was introduced. Health care settings other than hospitals have lower baseline performance and thus may have larger and more prolonged improvements under pay-for-performance.<sup>29</sup>

It is also possible that the demonstration project led nonparticipating hospitals to change their practices. For example, nonparticipants may have assumed that pay-for-performance would soon be introduced in all hospitals and therefore focused on improving their performance.

In either case, our findings suggest that incentives may be most effective if they are tied to a set of measures only until performance has improved, particularly if the costs of improving performance are fixed or one-time costs. After that point, the dollars devoted to pay-for-performance may have a larger effect if they are applied to new, previously untargeted areas. However, continued monitoring would be necessary to ensure that quality did not decline once the incentives were removed.<sup>30</sup>

**RESTRUCTURING INCENTIVES FOR GREATER IM-**

## Pay-for-performance had the largest impact on performance in hospitals that face little competition.

**FACT** Second, larger incentives had a bigger effect on changing provider performance, as might have been expected. The response to pay-for-performance incentives was larger, and appeared to be more sustained, among those hospitals eligible for a large bonus, compared to those eligible for only a small bonus.

Overall, CMS awarded more than \$48 million to 787 hospitals over the first five years of the demonstration project. This amounts to an average annual award of just over \$12,000 per hospital. The improvements in performance might be considered a large response to these relatively small rewards. Yet there may be ways to get even more bang for the buck from rewards of this size.

For example, in this demonstration project, hospitals receive annual bonuses for performance. More frequent feedback on performance in the form of quarterly or even monthly payments could draw increased attention to performance in these areas because it would provide frequent positive reinforcement.<sup>31,32</sup> However, it might not be feasible to increase the frequency with which hospitals report data. This could be a particular problem at small hospitals, where the number of patients may be too small to produce reliable estimates of performance in short time periods.

Providing payments to individuals rather than organizations—which the demonstration project allowed, starting in its fourth year—might have a larger impact on improving performance because it is easier to hold individuals accountable for their direct effect on patient care than it is to hold organizations accountable.<sup>10</sup> For example, bonuses could be distributed to managers or front-line providers to increase their personal motivation to improve performance. However, targeting incentives toward individuals may also have undesirable effects. Individuals are likely to be risk-averse and thus to avoid caring for high-risk patients whose illness severity might hurt overall performance, whereas institutions are better able to pool risk across larger groups of patients.



In addition, using financial penalties rather than rewards may have a larger effect because people are generally more motivated by the desire to avoid losing what they consider theirs than by gaining something of equal value that is perceived as extra—like a bonus payment.<sup>33</sup>

**TAILORING INCENTIVES** Third, pay-for-performance had the largest impact on performance in hospitals that face little competition. Without competition, these hospitals did not have the additional incentive to improve that existing public reporting programs provide in more-competitive markets.

Public reporting of quality information might be adequate to spur meaningful improvement in competitive markets. However, pay-for-performance may be a necessary addition in noncompetitive markets. This suggests that pay-for-performance may be most effectively used if its use is tailored to settings in which it will have the greatest effect. One possible approach would be to offer larger incentives in settings where the predicted effect is smaller.

**TAKING HOSPITALS' FINANCIAL STATUS INTO ACCOUNT** Finally, financial incentives had a larger impact on hospitals in good financial shape than on those in worse shape. This is consistent with prior work showing that quality improvement activities are costly for providers<sup>14</sup> and that financial status predicts response to incentives for quality improvement.<sup>34</sup> These findings suggest that pay-for-performance is less effective with providers who lack the resources to invest in quality improvement. Pay-for-performance might be more effective if additional resources were available for quality improvement activities. For example, providing up-front fund-

ing for quality improvement activities to hospitals that would otherwise not be able to develop a quality improvement program and allowing the hospitals not to pay the funding back if they meet quality targets could help spur quality improvement.<sup>35</sup>

In addition, paying hospitals for improving care, not just for achieving a high level of care—a strategy that was adopted in the fourth year of the pay-for-performance demonstration project—might give poorly financed hospitals both the motivation and the means necessary to improve performance.<sup>36</sup> It is also feasible to pay larger incentives to providers that have fewer financial resources because they provide a large amount of safety-net care. This strategy is used in some nursing home pay-for-performance programs, where facilities caring for a disproportionate share of residents enrolled in Medicaid are eligible for larger bonuses based on Medicaid payments than other facilities, if they achieve performance targets.<sup>37</sup>

## Conclusion

Although it is not known precisely how hospital payment will change under the Affordable Care Act to incorporate performance-based payment, the new program may resemble the current CMS pay-for-performance demonstration project in many ways. Thus, the lessons from that project are extremely relevant.

Using strategies that we know are effective with pay-for-performance will increase the impact of future programs and lead to greater improvements in the quality of health care. ■

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