Pay for Performance in Health Care: Methods and Approaches

Edited by
Jerry Cromwell, Michael G. Trisolini, Gregory C. Pope,
Janet B. Mitchell, and Leslie M. Greenwald

March 2011

RTI Press

RTI INTERNATIONAL

Library of Congress Control Number: 2011921923
ISBN 978-1-934831-04-5

doi:10.3768/rtipress.2011.bk.0002.1103
www.rti.org/rtipress

Suggested Citation
Cromwell, J., Trisolini, M. G., Pope, G. C., Mitchell, J. B., and Greenwald, L. M., Eds. (2011). *Pay for Performance in Health Care: Methods and Approaches*. RTI Press publication No. BK-0002-1103. Research Triangle Park, NC: RTI Press. Retrieved [date] from http://www.rti.org/rtipress.

This publication is part of the RTI Press Book series.
RTI International
3040 Cornwallis Road, PO Box 12194, Research Triangle Park, NC 27709-2194 USA
rtipress@rti.org
www.rti.org

CHAPTER 9

Overview of Selected Medicare Pay for Performance Demonstrations

Leslie M. Greenwald

Several current pay for performance (P4P) initiatives began as Medicare pilot projects, or demonstrations, that test both the administrative feasibility and outcomes-defined "success" of the individual performance models. This approach of pilot testing P4P initiatives allows Medicare policy makers to determine the models that best meet their intended goals and can be operationalized at an acceptable level of administrative cost and burden to physicians and health care provider organizations, insurers, and other stakeholders. Reliance on testing through demonstrations also allows policy makers to identify lessons learned and opportunities for improvement, and to adapt aspects of new initiatives that do not work—all on a manageable scale not possible with full implementation through a program the size of Medicare. Demonstrations also identify the most successful variants within a general type of innovation—such as P4P—for replication, expansion, and possible national application.

As one of the largest public insurers in the world, Medicare has played a special role in pilot testing a wide range of health care programs, in addition to P4P. The Medicare program has several advantages in testing health care innovation. First, because Medicare is a major publicly funded program, Congress often makes funding available both to support technical development of P4P and other innovations and for comprehensive independent evaluations of the pilot programs. Second, the Medicare program operates in a way that makes large amounts of administrative data available for development of a variety of P4P models, supports their implementation, and allows for relatively efficient evaluation options. Finally, because of Medicare's size and importance in the clinician and provider marketplace, it is often more feasible for this public program to gather practitioners and providers and other organizations willing to engage in demonstration projects to develop and evaluate P4P demonstration options (as well as other policy pilot projects). Thus, complex new initiatives such as proposed Medicare P4P models start

out as demonstrations, with national implementation an implicit future goal (although national implementation of a demonstration is rare, a topic discussed in further detail in Chapter 11 of this book).

Medicare has a rich history of demonstration projects for even as relatively recent a policy initiative as physician or provider P4P. The dozens of new Medicare P4P and other related demonstrations mandated under the Affordable Care Act continue policy makers' reliance on the Medicare program to test new ideas for health care reform.

This chapter summarizes a range of the Medicare P4P demonstrations currently completed or near implementation. The demonstrations described here are not exhaustive of all the P4P demonstrations the Medicare program has considered, designed, or implemented. As a result of health care reform under the Affordable Care Act, this list will expand significantly. Rather, this selection of demonstrations is intended to give the reader a sense of the kinds of P4P projects that have been tried under Medicare and, when the information is available, whether they were successful in improving health care efficiency and quality of care. As a group, they may give some signals as to the possible success of P4P models in future years under reform.

Table 9-1. Overview of Medicare P4P demonstrations

Demonstration Name	Summary Description
Care Management Pay for Performance Demonstrations	
Medicare Coordinated Care Demonstration	Demonstration's goal was to identify intervention components that save the government money while maintaining quality of care or possibly improving the quality through better coordination of the chronically ill—without net increase in Medicare spending.
Medicare Health Support Pilot Program	The pilot is testing a P4P third-party non–health care provider contracting model. MHSOs aimed to improve clinical quality, increase beneficiary and clinician/provider satisfaction, and achieve Medicare program savings for chronically ill Medicare FFS beneficiaries with targeted conditions of heart failure and/or diabetes.

The demonstration projects described in this chapter are organized into three categories:

- Care management P4P demonstrations—projects that use a third-party care management organization or other strategies to coordinate Medicare beneficiary care
- Physician-focused P4P demonstrations—projects that base P4P models around outpatient and ambulatory care and/or use the physician group as the primary responsible organization
- Hospital-focused P4P demonstrations—projects that base P4P around hospital-based care and use the hospital as the primary responsible organization

This chapter provides an overview of each P4P demonstration, describes the key features of the initiative, and summarizes the status of each project. When evaluation findings to date are publicly available, they are presented here.

Some readers may not be interested in the full demonstration details provided here and may choose to refer to the detailed descriptions only to supplement points or references made in other chapters of this book. Therefore, Table 9-1 summarizes the P4P demonstration projects described in this chapter.

	Demonstration Status and Available Findings
	• Implemented in 2002 • Of 15 programs, only 1 had statistically significant reduction in hospitalizations. All programs saw increases in Medicare expenditures for care for intervention population between baseline and demonstration period. None of the 15 produced statistical savings in Medicare outlays on services relative to control group, but 2 had higher costs. Clinical measures showed few, scattered effects of self-reported flu and pneumococcal vaccinations, mammography, or other routine diabetic and CAD tests. No pattern of patient responses suggested that preventable hospitalizations had been reduced.
	• Implemented in 2005/2006 • Only limited positive impacts achieved on positive improvements in patient overall satisfaction. No statistically significant findings for clinical interventions relative to comparison group. Limited Medicare savings achieved in first 18 months, but none of the gains were statistically significant.

(Continued)

Table 9-1. Overview of Medicare P4P demonstrations *(Continued)*

Demonstration Name	Summary Description
Care Management for High-Cost Beneficiaries Demonstration	Demonstration's principal objective was to test care management models for Medicare beneficiaries who are high cost and have complex chronic conditions, with goals of reducing future costs, improving the quality of care, and improving beneficiary and clinician/provider satisfaction.
Cancer Prevention and Treatment Demonstration	Demonstrations were aimed at reducing disparities in cancer screening, diagnosis, and treatment among racial and ethnic minority Medicare beneficiaries through use of peer navigators. Peer navigators help steer Medicare beneficiaries through health care system.
Physician-Focused Pay for Performance Demonstrations	
Medicare Physician Group Practice Demonstration	Medicare's first physician P4P initiative. PGP demonstration establishes incentives for quality improvement and cost efficiency at level of physician group practice. Goals included (1) encouraging coordination of health care furnished under Medicare Parts A and B, (2) encouraging investment in administrative structures and processes for efficient service delivery, and (3) rewarding physicians for improving health care processes and outcomes.
Medicare Medical Home Demonstration	A medical home is a physician-directed practice that provides care that is accessible, continuous, comprehensive, and coordinated and is delivered in context of family and community. Some variants combine use of health information technology and/or electronic medical records as a care-coordination tool.
Hospital-Focused Pay for Performance Demonstrations	
Medicare Participating Heart Bypass Center Demonstration	Under this demonstration, government paid a single negotiated global price for all Parts A & B inpatient hospital and physician care associated with bypass surgery. Demonstration was to encourage regionalization of procedure in higher-volume hospitals and to align physician with hospital incentives under bundled prospective payment. Hospitals shared global payment with surgeons and cardiologists based on cost savings. CMS allowed participants to market a CoE demonstration imprimatur referring to themselves as a "Medicare Participating Heart Bypass Center." Medicare patients were not restricted to demonstration hospitals for their surgery.
Expanded Medicare Heart and Orthopedics Centers of Excellence Demonstration	Developed as follow-on to Medicare Participating Heart Bypass Center Demonstration. Expanded demonstrations were to include more cardiovascular procedures and major orthopedic procedures such as hip and knee replacement.

Demonstration Status and Available Findings
• Implemented in 2006 • No evaluation findings publicly available.
• Implemented in 2006/2007 • Publicly available evaluation results focus on *implementation* issues. Based on available results, five of six demonstration sites encountered difficulty in identifying eligible beneficiaries and enrolling them in a demonstration, resulting in substantially fewer participants than initially projected.
• Implemented in 2005 • CMS has publicly reported evaluation of results through second demonstration year. In the second performance year, 4 of the 10 participating physician groups earned a total of $13.8 million in performance payments for improving quality and cost efficiency of care as their share of a total of $17.4 million in Medicare savings. When adjusted for predemonstration expenditure trends, reduction in expenditures was $58 per person, or 0.6% less than the target, and not statistically different from zero. Between base year and second demonstration year, 4 of 7 claims-based quality indicators showed greater improvement among PGP-assigned beneficiaries than among comparison beneficiaries. This improvement was statistically significant at 5% level.
• Implementation pending coordination with medical home mandates in Affordable Care Act health care reform legislation.
• Implemented in 1991 • Over the demonstration's 5 years, Medicare program saved $42.3 million on the 13,180 bypass patients treated in the seven demonstration hospitals. About 85% of savings came from demonstration discounts, another 9% from volume shifts to lower-cost demonstration hospitals, and 5% from lower post-discharge utilization.
• Not implemented due to health care provider resistance.

(Continued)

Table 9-1. Overview of Medicare P4P demonstrations *(Continued)*

Demonstration Name	Summary Description
Medicare Acute Care Episode Demonstration	Most recent iteration of CoE P4P model. Demonstration offers bundled payments and increased flexibility in financial arrangements between participating hospital-physician consortia. Will also focus on methods for improved quality of care for bundles of heart and orthopedic hospital-based procedures. Approved demonstration sites will be allowed to use term "Value-Based Care Centers" in approved marketing programs.
Premier Hospital Quality Incentive Demonstration	Demonstration recognizes and provides financial rewards to hospitals that demonstrate high-quality performance in hospital acute care. Conducted by Medicare in collaboration with Premier, Inc., nationwide organization of not-for-profit hospitals. Top-performing hospital participants rewarded with increased payment for Medicare patients.
Medicare Hospital Gainsharing Demonstration and Physician–Hospital Collaboration Demonstration	Both demonstrations test similar a gainsharing model. Overall concept is intended to allow hospitals to share efficiency savings with physicians under controlled setting in which quality of care standards are maintained or improved.

CAD = coronary artery disease; CMS = Centers for Medicare & Medicaid Services; CoE = Center of Excellence; FFS = fee-for-service; MHSO = Medicare health support organization; P4P = pay for performance; PGP = Physician Group Practice.

Note: This table describes the demonstrations discussed in this chapter only and is not an overview of all Medicare P4P demonstrations.

Care Management P4P Demonstrations

A large group of P4P demonstration projects center on the concept of disease and chronic care management: that by implementing specifically targeted chronic care/disease management interventions, we can improve beneficiaries' adherence to self-care and other preventative approaches that can potentially reduce overall costs of acute care. Under these demonstrations, the Medicare program pays disease management organizations (sometimes on a risk basis) for managing patients with specific target conditions such as diabetes and congestive heart failure (CHF). Medicare pays the organizations based on a per beneficiary per month (PBPM) fee. Under many of these models, disease management firms forfeit some or all of their fees if they fail to achieve savings targets.

Demonstration Status and Available Findings
• Implemented in 2009 • No evaluation findings publicly available.
• Implemented in 2003. Phase II projects operated between 2007 and 2009. • Findings from initial years of demonstration are publicly available. Over initial 2 years, both nonparticipating (those only reporting data) and hospitals participating in P4P program, showed quality improvements. In 7 of 10 quality indicators, P4P hospitals showed greater improvements. After adjusting for baseline differences in study and control groups, incremental increases in quality attributed to P4P incentives declined. Preliminary results from first 4 years suggest participating hospitals raised overall quality by average of 17 points over 4 years, based on their performance on more than 30 nationally standardized care measures for patients in five clinical areas.
• Medicare Hospital Gainsharing Demonstration implemented in 2008. • Medicare Physician–Hospital Collaboration Demonstration implemented in 2009. • No evaluation findings publicly available.

Medicare Coordinated Care Demonstration

Project Overview

The Balanced Budget Act of 1997 instructed the Secretary of Health and Human Services to conduct and evaluate care coordination programs in Medicare's fee-for-service (FFS) setting (Peikes et al., 2009). In 2002, Centers for Medicare & Medicaid Services (CMS) selected 15 demonstration programs of various sizes and intervention strategies as part of the Medicare Coordinated Care Demonstration (MCCD). The demonstration's goal was to identify intervention components that save the government money while maintaining quality of care or possibly improving the quality of care through better coordination of health care the chronically ill—without any

net increase in Medicare spending. The MCCD used a randomized intent-to-treat (ITT) design. Eligible beneficiaries in areas served by the 15 programs were randomized on a 1:1 basis to the intervention and control groups. Four programs requested a stratified randomization process.

Project Status

Programs began enrolling beneficiaries in the intervention group over summer 2002, followed by a 3-year evaluation period. Beneficiary participation was voluntary. CMS paid a negotiated monthly management fee that ranged from $80 to $444. The average fee across the 15 programs was $235 (Peikes et al., 2009). Fees were limited to 20 percent of the historical average monthly PBPM costs of the chronically ill, given that savings on Medicare outlays were unlikely to be greater. After the 6-month enrollment period, CMS paid no fees on intervention beneficiaries who were not enrolled or had decided to drop out. Programs had to be budget neutral and were at financial risk if savings in Medicare outlays on intervention beneficiaries were less, on a monthly basis, than the monthly fee. Calculations of savings also included Medicare expenditures incurred by intervention beneficiaries who dropped out of the demonstration, thereby putting programs at risk for lower enrollment rates.

None of the programs charged beneficiaries to participate. Three types of quality measures were used in evaluating the programs: (1) Medicare claims were used to identify six disease-specific and preventive process-of-care indicators; (2) claims data were also used to track hospitalizations of eight ambulatory care sensitive conditions thought to be avoidable through improved care management; and (3) a beneficiary survey collected responses related to health education received from the programs, functional status, knowledge and adherence to medication and other protocols, and perceived quality of life.

The participating sites were a broad mix of disease management organizations, including commercial ones, academic medical centers, and community hospitals (an integrated delivery system, a long-term care facility, and a retirement community). The selection provided an opportunity to compare cost-effectiveness between two competing disease management models, one relying on commercial vendors and another grounded in physician practices. Programs served beneficiaries in diverse geographic areas, including Maine (statewide), southern Florida, South Dakota, Phoenix, and central California.

The programs targeted Medicare-aged and disabled beneficiaries with coronary artery disease (CAD), CHF, diabetes, chronic obstructive pulmonary disease (COPD), and a few minor chronic conditions. In identifying eligibles, 10 programs required at least one hospitalization (6 stipulated that the hospitalization be related to a target chronic condition), 4 excluded the nonelderly, 13 excluded end-stage renal disease (ESRD) beneficiaries, 9 excluded long-term nursing home residents, and all but 1 program excluded patients who were terminally ill, had AIDS, or had similarly complex conditions.

The number of beneficiaries in each program was generally small. The largest 3 programs had between 2,289 and 2,657 total beneficiaries and had only roughly as many in the intervention group. Three programs had between 90 and 115 intervention patients and fewer than 250 including the control group. Overall, 18,402 beneficiaries were spread across 15 programs. Consequently, the study's power to detect significant differences was low, although the evaluators generally had more than 90 percent power to detect a 20 percent or greater gain in outcomes and cost savings in the intervention over the control group. None of the programs appear to have had 80 percent statistical power to detect intervention gains of 10 percent or less. (Peikes et al., 2009, p. 608).

Participants varied widely across programs by geographic area (Peikes et al., 2009). A few sites had no minorities, whereas Georgetown University had 63 percent African American and Hispanic enrollees. Medicaid eligibility ranged from 0 percent to 28 percent. CAD and CHF generally were the dominant diagnoses, with significant numbers (>20 percent) of beneficiaries who had COPD, cancer, or stroke. Jewish Home & Hospital was exceptional with 33 percent of enrolled patients having dementia.

All of the programs assigned enrollees to a registered nurse care coordinator. Eleven programs contacted patients 1 to 1.5 times on average per month by telephone, and 3 contacted patients 4 to 8 times per month. All but 1 educated the patients regarding diet, medications, exercise, and self-care management. The University of Maryland did not educate patients but simply tested the effect of home monitoring of vital signs. One-half used transtheoretical or motivational interviewing approaches to behavior change. Most taught patients how to better communicate with their physicians using role playing. Only 4 programs concentrated on improving physicians' adherence to evidence-based practice guidelines. To avoid costly readmissions, 10 programs kept timely information on hospitalizations and emergency room visits that would allow them to intervene quickly post-discharge.

Findings to Date

Peikes and colleagues have already published findings for this project (2009). Similar to the Medicare Health Support Pilot Program's disappointing results, this demonstration found no statistically significant improvements in clinical outcomes or savings to Medicare. Of the 15 programs, only 1 (Mercy) had a statistically significant reduction in hospitalizations relative to its control group, controlling for patient characteristics. All of the programs saw increases in Medicare expenditures for care for the intervention population between baseline and the demonstration period. None of the 15 programs produced any statistical savings in Medicare outlays on services relative to the control group, but 2 had higher costs. Peikes and colleagues based these findings on regressions controlling for age, gender, race, disabled/aged entitlement, Medicaid coverage, and whether beneficiaries used skilled nursing facility or hospital services prior to the demonstration.

Once they added monthly fees to estimate savings net cost, 9 out of 15 programs had statistically higher costs to the Medicare program than did their control group (Peikes et al., 2009, p. 612). The one site with a reduction in hospitalizations had a large management fee that overwhelmed its (statistically insignificant) $112 in PBPM savings, resulting in higher net total Medicare costs.

Treatment beneficiaries were more likely to report having received education on diet, exercise, and disease warning signs than their corresponding control group. However, the "treatment group members were no more likely than control group members to say they understood proper diet and exercise" or that they were adhering better to prescribed diet, exercise, and medication regimens (Peikes et al., 2009, p. 613). Clinical measures showed few, scattered effects of self-reported flu and pneumococcal vaccinations, mammography, or other routine diabetic and CAD tests. No pattern of patient responses suggested that preventable hospitalizations had been reduced.

Care coordination activities, as practiced in the 15 varied interventions in this study, "hold little promise of reducing total Medicare expenditures" for the Medicare chronically ill (Peikes et al., 2009, p. 613). Two programs did show some promise in reducing hospitalizations and costs, however, suggesting that care coordination might be at least cost neutral.

The demonstration's main limitation was the small sample size and lack of statistical power to detect smaller savings rates. The study was unable to confirm a statistically significant savings rate of 9 percent at the 10 percent

confidence level for the most successful site. This program also had one of the highest average monthly management fees, due in part to extensive registered nurse face-to-face contact with patients. A possible major reason for the lack of success in both Medicare savings and better health outcomes is the absence of a true transitional care model in which patients are enrolled during their hospitalization. Studies have shown the approach to significantly reduce admissions within 30/60 days post-discharge when the patient is at high risk of being readmitted (Coleman et al., 2006; Naylor et al., 1999; Rich et al., 1995). "By providing close links between the patient's nurse coordinator and physician, [with] substantial in-person contact between the patient and the care coordinator, . . . the medical home model may be able to replicate or exceed the success of the most effective MCCD programs" (Peikes et al., 2009, p. 617).

Medicare Health Support Pilot Program

Project Overview

Section 721 of the Medicare Prescription Drug, Improvement, and Modernization Act of 2003 (Pub. L. 108–173, also called the Medicare Modernization Act, or MMA), required the Secretary of Health and Human Services to provide for the phased-in development, testing, evaluation, and implementation of chronic care improvement programs (McCall et al., 2007). CMS selected eight Medicare Health Support (MHS) pilot programs under Phase I. The MHS initiative's principal objectives were as follows: to test a P4P contracting model and MHS intervention strategies that may be adapted nationally to improve clinical quality, increase beneficiary and clinician and provider satisfaction, and achieve Medicare program savings for chronically ill Medicare FFS beneficiaries with targeted conditions of heart failure and/or diabetes.

This initiative provides the opportunity to evaluate the success of the "fee at risk," P4P, model. MHS disease management organizations enjoy flexibility in their operations, coupled with strong incentives to expand outreach and refine intervention strategies to improve population outcomes. The MHS pilot program is distinct, legislatively, from most demonstration programs. A congressionally mandated pilot can be expanded easily into a national program if it reports positive results during the pilot phase; no additional legislation is required.

The MHS pilot's overall design follows an ITT model (McCall et al., 2007). Medical health support organizations (MHSOs) are held at risk for up-front monthly management fees based on the performance of the entire eligible Medicare population randomized to the intervention group and as compared with all eligible beneficiaries randomized to the comparison group. Beneficiary participation in the MHS programs is voluntary and does not change the scope, duration, or amount of Medicare FFS benefits that beneficiaries currently receive. The traditional Medicare FFS program continues to cover, administer, and pay for all Medicare FFS benefits, and beneficiaries do not pay any charge to receive MHS program services.

After the initial 6-month outreach period, the MHSOs accrue management fees for only those beneficiaries who verbally consent to participate and only during participation periods. Participation continues until a beneficiary becomes ineligible for the MHS program or opts out of services provided by the MHSO. To retain any monthly fees, MHSOs originally had to achieve 5 percent savings relative to the comparison group. Savings are defined as the difference in mean Medicare PBPM spending on services between the entire intervention and comparison groups, multiplied by the total number of eligible months in the intervention group. CMS subsequently dropped the 5 percent minimum savings requirements.

To retain all of its accrued fees, an MHSO had only to reduce average monthly payments equivalent to the monthly management fee. Because small differences remained in Medicare PBPM payments between intervention and comparison groups, CMS made an actuarial adjustment in the intervention PBPM for any difference from the comparison group in the 12 months just prior to each MHSO's start date. The MHSOs must also meet quality and satisfaction improvement thresholds or pay back negotiated percentages of their fees.

Project Status

Eight MHSOs launched their programs between August 1, 2005, and January 16, 2006. Several programs serve urban and suburban populations, whereas others target metropolitan and rural communities. Among the populations served are significant minority populations of African American, Native American, and Hispanic beneficiaries. During the second year of operations, three organizations requested early termination of their programs, primarily, they stated, out of concern that the 5 percent savings requirement plus savings covering accrued fees was too ambitious a goal. The MHS pilot targets

beneficiaries with the threshold condition(s) of heart failure and/or diabetes from among the diagnoses listed on Medicare claims.

CMS prospectively identified 30,000 eligible beneficiaries from each MHSO area and randomly assigned them to intervention and comparison groups in a ratio of 2:1 under an ITT evaluation model. With 240,000 pilot beneficiaries, it is the largest disease management randomized trial ever conducted. Randomization produced statistically equivalent demographic, disease, Hierarchical Condition Category (HCC) risk score, and economic burden profiles between the intervention and comparison groups.

All programs provide MHS participants with telephonic care management services, including nurse-based health advice for the management and monitoring of symptoms, health education (via health information, videos, online information), health coaching to encourage self-care and management of chronic health conditions, medication management, and health promotion and disease prevention coaching. Only a few of the MHSOs actively serve an institutionally based population. Most of the MHS programs have an end-of-life intervention. Several of the MHSOs rely on sophisticated predictive models using proprietary logic with more than 100 variables to identify gaps in care, create risk strata scores, and achieve operational efficiency. MHSOs that found that their own stratification models did not adequately discriminate among different risk groups have relied on Medicare's HCC scores to target their MHS populations.

Findings to Date

Results available at this writing include the first 18 (of 36) pilot months (McCall et al., 2008a). Beneficiary participation averaged 84 percent across the eight MHSOs and ranged from a high of 95 percent to a low of 74 percent. Refusals explain nearly 0.4 percent of the 16 percent average nonparticipation rate. Defining *active engagement* as having five or more calls or two or more home visits over 18 months, MHSOs worked actively with two in three intervention beneficiaries (65 percent). Only two (of seven reporting) MHSOs achieved positive improvements in patient overall satisfaction, although a majority increased the number of beneficiaries who had received help to set goals for self-care management. None of the MHSOs demonstrated consistent positive intervention effects across six physical and mental health functioning indicators relative to the comparison group.

Out of the 40 evidence-based process of care tests (eight MHSOs, five process rates), 16 were statistically significant, all in the positive direction; however, the absolute rate of change was very small (perhaps not an

unexpected finding given the relatively short period of time elapsed during the intervention). MHSOs had the greatest success in improving cholesterol screening among heart failure and diabetes beneficiaries: 9 gains out of 16 were statistically significant (McCall et al., 2008a). MHSOs did less well in improving urine protein screening and eye exams. Only one MHSO significantly improved on all five concordant care processes, and a second MHSO improved on four of five. Despite gains in several process measures, none of the MHSOs were able to reduce the mortality rate among intervention compared with comparison group beneficiaries.

During the pilot, all-cause admission rates ranged from a low of 767 to 1,078 per 1,000 intervention beneficiaries (McCall et al., 2008a). Heart failure and diabetes together were minor reasons for Medicare admissions (16–19 percent; roughly one in six). None of the eight MHSOs succeeded in statistically reducing hospitalization rates among intervention compared with comparison group beneficiaries. Although four of the eight MHSOs achieved Medicare savings during the pilot's first 18 months, none of the gains were statistically significant at the 95 percent confidence level. McCall and colleagues found no significant differences within disease cohort. Although savings among intervention beneficiaries willing to participate were somewhat greater, none were statistically significant. Savings rates between 1.0 percent and 2.1 percent fell far short of the MHSO budget neutrality criterion that ranged from 4.7 percent to 9.3 percent for the same MHSO. Sample sizes were large enough to detect savings rates as low as 3.5 percent to 4.5 percent of average PBPM costs. Medicare savings net of fees were negative for all eight MHSOs through 18 months, implying negative returns on investment. All MHSOs experienced substantial regression-to-the-mean PBPM growth across both intervention and comparison groups.

With 16 successes out of 40 possible gains in evidence-based process-of-care measures, the cost per successful improvement was approximately $15 million, based on $235 million in Medicare fees through 18 months (McCall et al., 2008a). The cost would be $6.6 million per percentage point quality improvement. There did not appear to be any correlation between MHSOs that "saved" money and their quality of care improvements.

Taken together, the findings from this demonstration were disappointing in terms of both clinical and cost impact. Results from this project show that third-party care management is a difficult model under which to achieve measurable clinical improvement and net savings.

Care Management for High-Cost Beneficiaries Demonstration

Project Overview

Medicare beneficiaries with multiple progressive chronic diseases are a large and costly subgroup of the Medicare population. The Congressional Budget Office estimated that in 2001, high-cost beneficiaries in the top 25 percent of spending accounted for 85 percent of annual Medicare expenditures (Congressional Budget Office, 2005). Beneficiaries who had multiple chronic conditions, were hospitalized, or had high total costs had expenditures that were twice as high as those for a reference group. Further, these beneficiaries currently must navigate a health care system that has been structured and financed to manage their acute, rather than chronic, health problems. When older patients seek medical care, their problems are typically treated in discrete settings rather than managed in a holistic fashion (Anderson, 2002; Todd et al., 2001). Because Medicare beneficiaries have multiple conditions, see a variety of clinicians and providers, and often receive conflicting advice, policy makers are concerned about the care that beneficiaries actually receive (Jencks et al., 2003; McGlynn et al., 2003).

Congress mandated the Care Management for High-Cost Beneficiaries (CMHCB) Demonstration to address current failings of the health care system for chronically ill Medicare FFS beneficiaries. In July 2005, CMS announced the selection of six care management organizations (CMOs) to operate programs in the CMHCB Demonstration (McCall et al., 2008c). The demonstration's principal objective was to test new models of care for Medicare beneficiaries who are high cost and have complex chronic conditions, with the goals of reducing future costs, improving quality of care, and improving beneficiary and clinician/provider satisfaction.

The CMHCB initiative employs a mixed-mode experimental design (McCall et al., 2008c). Two interventions are population based, whereas the other four are provider-based and provider-care services to a "loyal" patient population (Piantadosi, 1997). As a trial, it is unusual in employing a "pre-randomized" scheme, assigning eligible beneficiaries to an intervention or comparison group before gaining consent to participate. The Medicare program pays CMHCB organizations a monthly administrative fee per participant, and the organizations may participate in a gainsharing arrangement with the government contingent on improvements in quality, beneficiary and clinician/provider satisfaction, and savings to the Medicare program over a 3-year period. Participating organizations are held at risk for

all fees based on the performance of the full population of eligible beneficiaries assigned to the intervention group (an ITT model). CMS developed the CMHCB Demonstration with considerable administrative risk as an incentive to reach targeted beneficiaries and their providers and to improve care management (i.e., 5 percent savings requirement).

Beneficiary participation in the CMHCB Demonstration is voluntary and does not change the scope, duration, or amount of Medicare benefits they currently receive. Beneficiaries do not pay a charge to receive CMHCB Demonstration program services. After the initial 6-month outreach period, the MHSOs accrue management fees for only those beneficiaries who verbally consent to participate and only during participation periods. Participation continues until a beneficiary becomes ineligible for the MHS program or opts out of services that the MHSO provides. Beneficiaries who become ineligible during the demonstration program are removed from the intervention and comparison groups for the total number of months following loss of eligibility for purposes of assessing cost savings and quality, outcomes, and satisfaction improvement.

Project Status

The participating sites implemented this demonstration with some differences. Among the six CMO programs, CMS assigned the two community-based programs—Care Level Management and Key to Better Health—approximately 15,000 and 5,000 intervention beneficiaries, respectively, in Southern California and New York City (McCall et al., 2008c). In contrast, for the four remaining programs, which are integrated delivery systems, CMS chose their intervention population based on a minimum number, or plurality, of visits to participating physicians and hospitals. The four provider-based organizations were Massachusetts General Hospital, Montefiore Medical Center, Texas Senior Trails, and the Health Buddy Consortium. Each CMO worked collaboratively with CMS to finalize its intervention population definition for the demonstration. All programs include high-cost beneficiaries and/or beneficiaries with high HCC risk scores. The definition for *high cost* and *cut-off* of the HCC score varies by program.

CMS awarded contracts under this initiative to CMOs offering approaches that blend features of the chronic care management, disease management, and case management models. Their approaches rely, albeit to varying degrees, on engaging both physicians and beneficiaries and supporting the care processes with additional systems and staff. They proposed to improve chronic illness

care by providing the resources and support directly to beneficiaries, using their existing relationships with insurers, physicians, and communities in their efforts.

Although each of the CMOs has unique program characteristics, they share some common features (McCall et al., 2008c), which include educating beneficiaries and their families on improving self-management skills; teaching beneficiaries how to respond to adverse symptoms and problems; and providing care plans and goals, ongoing monitoring of beneficiary health status and progress, and a range of resources and support for self-management.

Findings to Date

No evaluation results of this demonstration are publicly available to date.

Cancer Prevention and Treatment Demonstration

Project Overview

Racial/ethnic disparities in cancer screening and treatment have been well documented. Minority populations are less likely to receive cancer screening tests than are white populations and, as a result, are more likely to be diagnosed with late-stage cancer (Agency for Healthcare Quality and Research [AHQR], 2004; National Institutes of Health & National Cancer Institute, 2001). For those with a positive test result, racial/ethnic minorities are more likely to experience delays in receiving the diagnostic tests needed to confirm a cancer diagnosis (Battaglia et al., 2007; Ries et al., 2003). Similarly, differences in primary cancer treatment, as well as appropriate adjuvant therapy, have been shown to exist between white and minority populations (AHQR, 2004). Although ability to pay is one of the explanatory factors, researchers have found similar disparities among Medicare beneficiaries.

To address this problem, Congress mandated that the US Department of Health and Human Services conduct demonstrations aimed at reducing disparities in screening, diagnosis, and treatment of cancer among racial and ethnic minority Medicare-insured beneficiaries (Section 122 of the Medicare, Medicaid, and State Children's Health Insurance Program [SCHIP] Benefits Improvement and Protection Act of 2000).

CMS decided to assess the use of patient navigators in reducing racial disparities. Patient navigators are individuals who help steer, or "navigate," Medicare beneficiaries through the health care system (Brandeis University Schneider Institute for Health Policy, 2003). Patient navigators primarily have helped cancer patients (Dohan et al., 2005; Hede, 2006); their use for cancer

screening and diagnosis is more limited, although some recent studies are promising (Battaglia et al., 2007).

Project Status

CMS issued an announcement on December 23, 2004, soliciting cooperative agreement proposals for the Cancer Prevention and Treatment Demonstration (CPTD) for Racial and Ethnic Minorities. In particular, the announcement sought demonstration projects that targeted four legislatively mandated minority populations: American Indians, Asian Pacific Islanders, African Americans, and Hispanics. Following review of all applications and negotiations with individual sites, CMS announced the selection of six CPTD sites on April 3, 2006.

Each site has two study arms: screening and treatment. Both study arms have one intervention group and one control group. CMS assigned to the treatment arm participants with a diagnosis of breast, cervical, colorectal, lung, or prostate cancer who have received some form of treatment within the past 5 years; it excluded from the study those who have received treatment in the past 5 years for another type of cancer care. All other participants are assigned to the screening arm. The study uses a randomized ITT design; therefore, participants enrolled in the screening arm remain in that arm, even if they are diagnosed with cancer over the course of the study.

Each site developed its own navigation model to ensure that the intervention was culturally sensitive to the needs of each minority community. Three of the sites adopted a nurse/lay navigation model in which nurses play a leadership and oversight role, supported by lay navigators from the community. The other three sites rely almost entirely on lay navigators (community health workers) who provide the bulk of services to intervention group participants. Sites using the nurse/navigator model have more thoroughly developed patient-flow algorithms that may result in better monitoring of care over time. This model also includes more direct interaction with primary care providers in the community, thus allowing them greater influence over screening rates. Control groups in each arm receive relevant educational materials.

Each demonstration project has three sources of funding: (1) start-up payments, (2) payment for administration of CMS-mandated participant surveys, and (3) capitated payments for navigation services (Centers for Medicare & Medicaid Services [CMS], 2008a). The first source was a one-time $50,000 payment at the beginning of each project. As part of the second source, the sites received a fixed payment for each baseline survey they

completed on participants in both the intervention and control groups, as well as for an exit survey administered at the end of the demonstration period for all participants. Sites also received payments for administering an annual survey to all intervention group participants. The third source was a capitated monthly payment to each site for all intervention group participants, which covered the cost of navigation services and varied across sites. The normal Medicare claims process handled billing and payment for all clinical screening, diagnosis, and treatment services.

Each site focuses on Medicare beneficiaries from a single racial/ethnic minority group. This substantially strengthens the experimental design, because intervention and control participants share the same racial/ethnic background and are drawn from the same community.

The screening intervention group received navigation services to help ensure that participants undergo the appropriate screenings for breast, cervical, colorectal, and prostate cancer in accordance with Medicare coverage policy for preventive services (CMS, 2009b), as well as clinical practice guidelines. Intervention participants received navigation services to ensure completion of all primary and secondary cancer treatments and all necessary follow-up and monitoring.

Findings to Date

Findings to date, based on site visits and CMS enrollment data, focus on implementation issues (Mitchell et al., 2008); Medicare will not assess demonstration impacts until the demonstrations end in late 2010. Five of the six sites (all but Josephine Ford Cancer Center) encountered difficulty in identifying eligible beneficiaries and enrolling them in the demonstration, resulting in substantially fewer participants than initially projected. At the end of year 1, projected enrollment was 6,484 in the screening arm. After 15 months, the number of screening participants totaled 4,138, more than half of whom were enrolled at Josephine Ford.

Enrollment in the treatment arm fared even worse, with none of the sites meeting their year 1 goals. After 15 months, only 300 treatment participants were enrolled, compared with the originally projected 1,276 for year 1. (The majority of treatment participants also are at Josephine Ford.) Challenges included a larger-than-expected proportion of the population enrolled in managed care (an exclusion criteria for CPTD); limited electronic medical record systems or linkages between existing systems; a lack of current partnerships with community agencies serving their targeted minority population; and lack of identification, recruitment, and retention of qualified

staff. For some sites, actual implementation did not begin until well after the October 1, 2006, start date because of delays in institutional review board approval and staff recruitment.

Because staffing and other costs were not quickly offset by capitation payments owing to slower-than-expected enrollments, CMS increased capitation and lump sum payments for debt relief. In some instances, CMS also renegotiated total enrollment goals. Total CMS spending on the CPTD remains unchanged, however (i.e., not to exceed the $25 million obligated by Congress).

Physician-Focused P4P Demonstrations

Medicare has also experimented through demonstrations with physician-focused P4P. The rationale behind this group of projects is that, regardless of the institutional site of care, physicians are the primary drivers behind care treatment decisions, influencing both costs and outcomes. Therefore, initiatives that improve the incentives for physicians to improve quality and efficiency of care, in theory, could have a powerful impact on health care systems performance.

Physician Group Practice Demonstration

Project Overview

The Medicare Physician Group Practice (PGP) Demonstration, Medicare's first physician P4P initiative, establishes incentives for quality improvement and cost efficiency at the level of the PGP. The Medicare, Medicaid, and SCHIP Benefits Improvement and Protection Act of 2000 included a legislative mandate for the PGP Demonstration.

The premise of the PGP Demonstration is that PGPs can achieve higher quality and greater cost efficiency by managing and coordinating patient care. The physician groups participating in the PGP Demonstration engaged in a wide variety of care management interventions to improve the cost efficiency and quality of health care for Medicare FFS patients (RTI International, 2006). These interventions include chronic disease management programs, high-risk/high-cost care management, transitional care management, end-of-life/palliative care programs, practice standardization, and quality improvement programs. In addition, PGP participants use information technology, such as electronic medical records, patient disease registries, and patient monitoring systems, to improve practice efficiency and quality of care delivered to patients,

and to better understand the utilization of services by the Medicare FFS population.

The PGP Demonstration tests whether care management initiatives generate cost savings by reducing avoidable hospital admissions, readmissions, and emergency department visits, while at the same time improving the quality of care for Medicare beneficiaries. This demonstration is a shared-savings clinician and provider-payment model in which participating physician groups and the Medicare program share savings in Medicare expenditures. In effect, this model is a hybrid between the FFS and capitation payment methods (Wallack & Tompkins, 2003). Medicare continues to pay physicians and provider organizations under FFS rules, and beneficiaries are not enrolled (i.e., they retain complete freedom of provider choice). However, participating physician groups are able to retain—through annual performance payments in addition to their FFS revenues—part of any savings in Medicare expenditures that they generate for their patients.

This shared-savings payment model gives participating clinicians and providers a financial incentive to control the volume and intensity of medical services, such as what exists under capitated payment. Moreover, physician groups retain a higher portion of savings as their measured quality of care increases. In this way, incentives for both cost efficiency and quality improvement are introduced into FFS payment. Because participating clinicians and providers retain only part of the savings generated by reducing expenditures, incentives for underservice and risk selection are lower than under full capitated payment. Another difference from capitation is that the Medicare program shares in any savings, benefiting from cost-efficiency improvements and lowering government expenditures.

As a Medicare FFS innovation, the PGP Demonstration does not have an enrollment process whereby beneficiaries accept or reject involvement. Therefore, CMS employs a methodology to assign beneficiaries to participating PGPs based on utilization of Medicare-covered services. CMS assigns beneficiaries to a participating PGP if the PGP provided the largest share (i.e., the plurality) of outpatient evaluation and management (E&M) visits to the beneficiary during a year. A beneficiary is assigned to the PGP for the entire year even if the visit occurred late in the year. The assignment methodology incorporates outpatient E&M services provided by specialists as well as by primary care physicians. Beneficiary assignment is redetermined after each year based on that year's utilization patterns. This algorithm assigns

beneficiaries uniquely to a single PGP, obviating issues of shared responsibility or rewards among multiple PGPs serving overlapping patient populations. Approximately 50 percent of beneficiaries who were provided at least one Medicare Part B physician service by the PGP during a year are assigned to the PGP; groups with greater primary care orientation have more patients assigned (Kautter et al., 2007). PGPs generally retain approximately two-thirds of their assigned beneficiaries from one year to the next.

Local Medicare beneficiaries not assigned to the participating PGP serve as the comparison population. A PGP's comparison group resides in its service area, which is defined as counties in which at least 1 percent of a PGP's assigned beneficiaries reside. These counties typically include 80 to 90 percent or more of a PGP's assigned beneficiaries. Each participating PGP's service area may differ across years to reflect changes in the location of the PGP's assigned beneficiaries.

Demonstration savings are computed as the difference between the expenditure target and the PGP's expenditures in the performance year. A PGP's annual expenditure target is calculated as PGP's Base Year Expenditures × (1 + Comparison Group Growth Rate). Both the PGP base year expenditures and the comparison group-expenditure growth rate are adjusted for case-mix change between the base and performance years.

If the participating PGP holds the expenditures for its assigned beneficiaries to more than 2 percent below its target, it is eligible to earn a performance payment for that performance year (Kautter et al., 2007). The net savings are calculated as the amount of annual savings that exceeds the 2 percent threshold. The net savings are divided, with 80 percent going to the PGP performance payment pool and Medicare retaining 20 percent as program savings. The PGP performance payment pool is then itself divided between a cost-performance payment and a maximum-quality performance payment. The shares of the cost and maximum-quality performance payment change from 70 percent/30 percent in performance year 1 to 50 percent/50 percent in performance year 3 and after. The Medicare program determines the actual quality performance payment based on the percentage of the PGP Demonstration's quality targets that the PGP met in the performance year. Performance payments are capped at 5 percent of the PGP's target expenditures.

The PGP demonstration includes 32 quality measures covering five modules: (1) diabetes mellitus, (2) heart failure, (3) coronary artery disease,

(4) hypertension, and (5) preventive care. The 32 quality measures are a subset of those developed by CMS's Quality Measurement and Health Assessment Group for the Doctors Office Quality Project (CMS, 2005).

PGP participants are eligible to earn quality performance payments if they achieve at least one of three targets. The first two are threshold targets and the third is an improvement target:

- The higher of 75 percent compliance or the Medicare Health Plan Employer Data and Information Set (HEDIS) mean for the measure (for those measures where HEDIS indicators are also available).
- The 70th percentile Medicare HEDIS level (for those measures where HEDIS indicators are also available).
- A 10 percent or greater reduction in the gap between the baseline performance and 100 percent compliance (e.g., if a PGP achieves 40 percent compliance for a quality measure in the base year, its quality improvement target is 40 percent + (100-40)*10 percent = 46 percent).

Including both threshold and improvement targets gives participating groups positive incentives for quality whether they start out at high or low levels of performance. Groups starting at low levels of quality might view threshold targets as unachievable.

CMS uses claims data to calculate 7 of the 32 quality measures; it uses medical record abstraction or other internal PGP data systems for the other 25 measures. Claims measures receive a weight of four points compared with one point for medical records measures, reflecting the larger sample size of beneficiaries used in calculating claims measures. To calculate a PGP's quality performance payment for a demonstration year, we sum the points for each quality measure where at least one of the three targets was attained, then divide this sum by the total possible points for all quality improvements and apply the resulting ratio to the maximum quality performance payment.

Project Status

The PGP Demonstration began April 1, 2005, and has continued to run for more than 5 years. Calendar year 2004 is used as a baseline for cost and quality performance assessment.

Ten large multispecialty physician groups participated in the PGP Demonstration. CMS selected them through a competitive process based on organizational structure, operational feasibility, geographic location, and implementation strategy. Large PGPs were selected to ensure that participants

would have the administrative and clinical capabilities necessary to respond to the PGP demonstration's incentives. The participating PGPs all had at least 200 physicians and together represented more than 5,000 physicians. They included freestanding group practices, components of integrated delivery systems, faculty group practices, and physician network organizations. The number of Medicare FFS patients assigned to the 10 participating physician groups ranged from 8,383 to 44,609, and totaled 223,203. Overall for the 10 physician groups, the percentage of assigned patients that were female was 57.5 percent, dually eligible for Medicare/Medicaid was 13.3 percent, and aged 85 or older was 10.3 percent. These distributions were broadly similar to the Medicare FFS population (CMS, 2006).

Findings to Date

CMS has reported the evaluation of results through the second demonstration year (CMS, 2008b; Sebelius, 2009). In the second performance year, 4 of the 10 participating physician groups earned $13.8 million in performance payments for improving the quality and cost efficiency of care as their share of a total of $17.4 million in Medicare savings. This compares to two physician groups that earned $7.3 million in performance payments as their share of $9.5 million in Medicare savings in the first year of the demonstration. In the first demonstration year, two PGPs accrued "negative savings" of $1.5 million combined. In the second demonstration year, one PGP accrued "negative savings" of $2.0 million. Subtracting the incentive payments to the PGPs and negative savings from Medicare savings, the net savings to the Medicare Trust Fund was $1.6 million in the second demonstration year and $0.7 million in the first.

Medicare expenditures were $120 per person, or 1.2 percent less than target (expected) expenditures per beneficiary for the combined 10 PGPs in the second demonstration year. This reduction was statistically significant ($p < .01$). However, when adjusted for predemonstration expenditure trends, the reduction in expenditures was $58 per person, or 0.6 percent less than the target, and not statistically different from zero. The majority of the second year demonstration savings occurred in outpatient, not inpatient, services. On average, outpatient expenditures were $83 per person year less than expected, whereas inpatient expenditures were $25 per person year less than expected and not statistically significant. Across the 10 PGPs, actual expenditures were lower than target expenditures for beneficiaries with diabetes mellitus ($224 per person year lower), CAD ($555 per person year lower), and COPD ($423 per person year lower). No statistically significant cost reductions were

observed for beneficiaries with CHF, cancer, stroke, vascular disease, or heart arrhythmias.

All 10 groups achieved target performance on at least 25 of 27 quality measures applicable in the second performance year. Five of the 10 participating groups achieved target performance on all 27 quality measures for diabetes, CHF, and CAD, compared with 2 that achieved benchmark performance on all 10 measures used in the first demonstration year. Between the base year and the second demonstration year, the PGP groups showed improvement by increasing their quality scores an average of 9 percentage points on the diabetes mellitus measures, 11 percentage points on the heart failure measures, and 5 on the CAD measures.

Between the base year and second demonstration year, four of seven claims-based quality indicators (lipid measurement, urine protein testing, left ventricular ejection fraction testing, and lipid profile) showed greater improvement among PGP-assigned beneficiaries than among comparison beneficiaries. This improvement was statistically significant at the 5 percent level. The differences in the three other indicators (HbA1c management, eye exam, and breast cancer screening) between the PGP and comparison group beneficiaries were not statistically significant. The finding that participating PGPs improved their claims-based quality process indicators more than did their comparison group remained true even after adjusting for predemonstration trends in the claims-based quality indicators.

The PGP Demonstration shared-savings model changes payments to clinicians and providers, not the insurance arrangements of Medicare beneficiaries, who remain enrolled in the traditional FFS program with complete freedom of provider choice. The innovation of the PGP Demonstration model is that participating physicians and provider groups have the opportunity to earn additional performance payments for providing high-quality and cost-efficient care. The financial risk to clinicians and providers is mitigated by the continuation of FFS payment, the use of clinician- and provider-specific base costs as a starting point for measuring savings, and the lack of penalties for underperformance. However, like all payment innovations, the PGP Demonstration shared-savings model faces some challenges. For example, it remains to be seen how much control a physician or provider group can exert over its assigned beneficiaries when they retain freedom of provider choice and have limited incentives to restrain their use of services. This issue of "attribution" is discussed in Chapter 7 of this book.

Medicare Medical Home Demonstration

Project Overview

Policy makers are promoting the patient-centered medical home concept as a potentially transformative health system innovation. A medical home, in broad terms, is a physician-directed practice that provides care that is accessible, continuous, comprehensive, and coordinated and delivered in the context of family and community. Current interest in the medical home as the anchor for a patient's interaction with the health care system stems from growing recognition that even patients with insurance coverage may not have an established access to basic care services and that care fragmentation affects the quality and cost of care that patients experience. Studies (e.g., Rittenhouse et al., 2009; Reid et al., 2010) suggest that the medical home might be a component of health care reform, particularly useful for patients with chronic conditions who typically receive care from many physicians, prescriptions for several medications, and, generally, face unique problems related to redundant, or, worse, inconsistent care that compromises quality and increases spending.

The Tax Relief and Health Care Act of 2006 (TRHCA) mandated that CMS establish a medical home demonstration project to provide patient centered care to "high-need populations." The legislation has targeted the medical home demonstration to a "high-need population," defined as individuals with multiple chronic illnesses that require regular monitoring, advising, or treatment. CMS has decided to adopt a broad definition of the target population to include more than 80 percent of Medicare beneficiaries to broaden the scope and reach of the demonstration. The demonstration legislation provides that care management fees and incentive payments be paid to physicians rather than to practices per se, although qualifying physicians must be in practices that provide medical home services. To qualify, physicians must implement an interdisciplinary plan of care in partnership with patients, use clinical decision support tools to support practice of evidence-based medicine, rely on health information technology, and promote patient self-management skills. Additionally, the medical home itself is responsible for targeting eligible beneficiaries and for promoting patient access to personal health information, developing a health assessment tool for targeted individuals, and providing training for personnel involved in care coordination.

Project Status

CMS has completed work toward a solicitation and final design for the demonstration, and sites were originally projected to be operational sometime in 2010. However, the Affordable Care Act health care reform legislation also includes a mandate for a Medicare Medical Home Demonstration. Therefore, CMS put the TRHCA-mandated demonstration on hold until the outcome of the health care reform legislation made clear the specific parameters for a congressionally mandated Medicare Medical Home Demonstration. At this writing it is unclear whether this originally mandated Medicare Medical Home Demonstration will be implemented or combined with an Affordable Care Act–mandated demonstration.

Medicare Hospital-Focused P4P Demonstrations

A large proportion of Medicare expenditures goes to provide inpatient hospital services. As a result, Medicare has devoted significant attention to improving both the efficiency and quality of hospital care on behalf of its beneficiaries. Current demonstrations in the planning and development stage include projects aimed at implementing a new round of bundled payment/improved quality of care hospital-focused demonstration projects.

Medicare Hospital Heart Bypass Demonstration

Project Overview

Since the implementation of Medicare's inpatient prospective payment system (IPPS) in 1983, the annual update in allowed charges nationally has capped Part A hospital payments per discharge for bypass surgery. Both hospital managers and policy makers have expressed major concern about the asymmetric Medicare financial incentives facing hospitals compared with physicians. Unlike hospitals (and surgeons paid a global payment), other physicians seeing a patient are paid for every additional service they provide. Surgeons are also paid more for more complex bypass surgeries. Moreover, all hospital support services (e.g., nursing) are essentially "free" to physicians, who bear none of the financial risk of higher use of these services as a result of longer hospital stays, more tests, and higher utilization of other hospital-based services. Misaligned physician incentives were thought to raise the cost of an admission.

An alternative strategy focused on the structural characteristics of clinicians and provider organizations that set them apart as Centers of Excellence

(CoEs). In this strategy, payers "reward" both hospitals and physicians in an indirect way by allowing them to market a CoE imprimatur to potential patients in their plan. The CoE concept is straightforward: a payer (such as Medicare) solicits applicants that are then thoroughly reviewed according to a set of structure, process, and outcome measures. The payer then authorizes those meeting high standards to market an imprimatur to subscribers or beneficiaries as a CoE for inpatient surgery. Payers, like Medicare, may also request discounts off the usual payment rates—particularly if the payer believes that its seal of approval is highly valuable to a physician or a provider organization. The approach is a win-win-win for the payer, the payers' beneficiaries, and the hospitals and their medical staffs.

Project Status

In 1988, CMS solicited proposals from more than 40 hospital and physician groups to participate in the Medicare Participating Heart Bypass Demonstration (Cromwell et al., 1998). In the demonstration, the government paid a single negotiated global price for all Parts A and B inpatient hospital and physician care associated with bypass surgery (diagnosis-related-groups [DRGs] 106 and 107, bypass with and without cardiac catheterization). The intent of the demonstration was to encourage regionalization of the procedure in higher-volume hospitals and to align physician with hospital incentives under a bundled prospective payment. Hospitals shared the global payment with surgeons and cardiologists based on cost savings. CMS allowed participants to market a demonstration imprimatur as a "Medicare Participating Heart Bypass Center." Medicare patients were not restricted to demonstration hospitals for their surgery.

In May 1991, after extensive evaluation of 27 final applicants, CMS began paying four provider groups, later expanded to seven. Initial discounts averaged 13 to 15 percent, depending on DRG (Cromwell et al., 1998). Discounts were substantial considering that CMS could not offer exclusive contracting to sites, nor did CMS allow the sites the right to market a true Centers of Medicare Excellence imprimatur. All participants said that they would have offered even deeper discounts had they been allowed to market a CoE imprimatur.

Findings to Date

Over the demonstration's 5 years, the Medicare program saved $42.3 million on the 13,180 bypass patients treated in the seven demonstration

hospitals (Cromwell et al., 1998). About 85 percent of the savings came from demonstration discounts, another 9 percent from volume shifts to lower-cost demonstration hospitals, and 5 percent from lower post-discharge utilization. In addition, beneficiaries (primarily their supplemental insurers) saved another $8 million, resulting in $50 million in overall demonstration savings. Total savings were $3,794 per bypass admission. Micro-cost analyses showed that three of the four initial sites experienced 10 to 40 percent declines in direct intensive care units and routine nursing expenses resulting in rising profit margins in spite of substantial discounts. Fewer surgeon requests for specialist consultations also produced Medicare savings (Cromwell et al., 1997b).

One-third of demonstration patients surveyed were aware of the hospital's demonstration status when choosing their site of surgery, and only one-third of knowledgeable patients said it had affected their hospital choice (Cromwell et al., 1998). Two-thirds of referring physicians were aware of the demonstration hospital's status , but this knowledge reportedly had little effect on their referral recommendation compared with the general reputation and their own familiarity with the hospital's staff. That the marketing of the imprimatur influenced only one in nine patients raises questions about the effectiveness of "consumer-driven" health care based on more information, given the government's goal of regionalizing bypass surgery to improve community-wide outcomes.

Controlling for risk factors (e.g., age, gender, ejection fraction, comorbid illnesses), demonstration hospitals exhibited a statistically significant decline in annual inpatient mortality (one-half of a percentage point from a mean of 4.6 percent). One-year post-discharge mortality exhibited the same rate of decline. The two sites with above-average mortality achieved statistically significant declines in mortality during the demonstration. The CMS-funded evaluation found a small, positive trend in complication rates that did not result in greater mortality and no significant trend in the appropriateness rating of bypass patients when angioplasty was an alternative (Cromwell et al., 1998).

Expanded Medicare Heart and Orthopedics CoE Demonstration

Project Overview

The first Medicare Hospital Heart Bypass Demonstration illustrated the potential of using the CoE imprimatur to self-finance higher quality care. Having proof of concept, CMS developed a follow-on demonstration with more cardiovascular procedures and a few major orthopedic procedures, such

as hip and knee replacement. The demonstration also was intended to provide a true test of the value of the CoE imprimatur to applicants.

Project Status

In 1997, CMS initiated a two-stage process that began with a pre-application form to nearly 1,000 hospitals seeking Medicare's CoE imprimatur in the San Francisco and Chicago regions. CMS received 538 pre-applications and invited 160 heart and orthopedics hospitals to submit full applications (Cromwell et al., 1997a). (Most pre-applicants did not meet the minimum-volume criteria.) Eventually, 123 (75 percent) submitted full applications. CMS then convened 10 government panels comprising expert clinicians from inside and outside the agency to conduct in-depth reviews of the applications. At the end of an intensive 3-month period, the panels recommended 31 (of 70 invited) cardiovascular and 42 (of 53) orthopedic applicants for final approval. The 73 winners represented 14 percent of the original 538 submitting pre-applications, suggesting a very select group of high-quality hospitals.

Discounts from the accepted applicants ranged widely from zero percent to 35 percent. Excluding 9 zero-discount applicants (of the 70 eligible applicants), the mean heart bypass discount was 9.3 percent (Cromwell & Dayhoff, 1998; Cromwell et al., 1997a). Two-thirds of the proposed discounts ranged between 5 and 14 percent. Part B physician discounts averaged 17 percent less than hospital Part A discounts. Four out of 10 applicants (including 8 monopolists) were considered dominant in their market and submitted discounts a full 3 percentage points lower than nondominant applicants (significant at the 1 percent level). However, another 25 percent of dominant providers offered discounts of 13.6 percent or more. Applicants operating in duopoly markets offered discounts more than twice as great (10.7 percent) as monopolists. High-cost (to Medicare) providers offered substantially greater discounts. The 18 applicants in very high health maintenance organization (HMO) penetration areas (>40 percent) offered discounts nearly 6 percentage points lower than those in low HMO penetration markets, a highly significant difference. This finding supports other research indicating that competitive pressures on prices may have already reduced costs with less financial leeway for further discounts (Hadley et al., 1996).

Project Findings to Date

Ultimately, CMS never implemented the expanded CoE demonstrations because of opposition on the part of the health care provider community in

addition to other logistical complications internal to CMS. Any P4P approach will encounter opposition from some clinicians and provider organizations. The CoE approach was particularly contentious because rejected (or ineligible) clinicians and providers argued that patients would perceive them as being less qualified. Since 1997, CMS has failed in three attempts to implement a CoE imprimatur P4P demonstration.

Acute Care Episode Value-Based Purchasing Demonstration

Project Overview

The Acute Care Episode (ACE) Demonstration is the most recent iteration of the CoE P4P model. The demonstration, implemented in late 2009, offers bundled payments and increased flexibility in financial arrangements between participating hospital-physician consortia (CMS, 2009c). Under the demonstration, a bundled payment is a single payment for both Part A and Part B Medicare services furnished during an inpatient stay (McCall et al., 2008b). Currently, under Medicare Part A, CMS reimburses a hospital a single prospectively determined amount under the IPPS for all the care it furnishes to the patient during an inpatient stay. Physicians who care for the patient during the hospital stay are paid separately under the Medicare Part B Physician Fee Schedule for each service they perform. The demonstration will also focus on methods for improved quality of care for bundles of heart and orthopedic hospital-based procedures.

The Medicare program will permit approved demonstration sites to use the term "Value-Based Care Centers" in approved marketing programs. This demonstration is intended to provide an opportunity for Value-Based Care Centers to develop efficiencies in the care they provide to beneficiaries through quality improvement in clinical pathways, improved coordination of care among specialists, and gainsharing. This demonstration also provides an opportunity for Medicare to share savings achieved through the demonstration with beneficiaries who, based on quality and cost, choose to receive care from participating demonstration providers (CMS, 2009a).

Project Status

CMS selected six sites for ACE demonstration participation: Baptist Health System in San Antonio, Tex.; Oklahoma Heart Hospital LLC in Oklahoma City, Okla.; Exempla Saint Joseph Hospital in Denver, Colo.; Hillcrest Medical Center in Tulsa, Okla.; and the Lovelace Health System in Albuquerque,

N.M. Under this version of the CoE-type model, the bundled payment demonstration includes 28 cardiac and 9 orthopedic inpatient surgical services and procedures. CMS selected these elective procedures because volume for them has historically been high, and there is also sufficient marketplace competition and existing quality metrics. The ACE demonstration sites began implementation in 2009, with some procedures in some sites beginning implementation in 2010.

Findings to Date

No publicly available findings are ready yet.

Premier Hospital Quality Incentive Demonstration

Project Overview

In the Deficit Reduction Act of 2005 (DRA), Congress mandated CMS to develop initiatives for hospital value-based purchasing by 2009 (Lindenauer et al., 2007). Likely driving this mandate was interest in the earlier Hospital Quality Alliance (HQA) initiative, launched in December 2002 by the American Hospital Association, the Federation of American [proprietary] Hospitals, and the Association of American Medical Colleges. The Alliance was intended to build a collaborative relationship between private hospitals and the government to improve quality of care. The Alliance invited all hospitals to participate and report data on at least 10 quality indicators for clinical conditions such as heart failure and pneumonia. Building on this initiative, CMS tied Medicare hospital payment updates to reporting quality indicators, ultimately achieving a 98 percent participation rate among hospitals (Lindenauer et al., 2007, p. 487). CMS made hospital quality indicators available on its Hospital Compare Web site. In March 2003 CMS invited hospitals providing the quality indicator data to participate in its Medicare Premier Hospital Quality Incentive Demonstration (HQID), a P4P demonstration managed by Premier Healthcare Informatics. Nonparticipating hospitals could still report quality data but could not participate in the P4P program.

The Medicare Premier HQID project recognizes and provides financial rewards to hospitals that demonstrate high-quality performance in areas of hospital acute care. CMS conducts the Medicare demonstration in collaboration with Premier, Inc., a nationwide organization of not-for-profit hospitals. Under the demonstration, top-performing participating hospitals receive increased payment for Medicare patients.

Project Status

The Premier HQID phase one operated initially from 2003 through 2006. HQID paid bonuses for superior quality performance based on a limited set of 33 indicators, which spanned five clinical conditions: heart failure, acute myocardial infarction (heart attack), pneumonia, bypass surgery, and hip and knee replacement. Example indicators included the following:

- Heart attack: Percentage of patients given aspirin or beta blocker on arrival
- Heart failure: Percentage of patients assessed for left ventricular function
- Pneumonia: Percentage of patients assessed for oxygenation or given antibiotics within 4 hours of arrival.

To be eligible in any year, practitioners and hospitals needed a minimum of 30 cases per condition. For each clinical condition, hospitals performing in the top two deciles of all participants received a 2 percent or 1 percent bonus payment per Medicare patient along with their regular Medicare prospective payment. Bonuses were expected to be paid for by 1 to 2 percent payment penalties on Medicare payments for participants falling into the lowest two performance deciles. Thus, the demonstration design is budget neutral, reallocating Medicare payments away from poor performing to high-performing hospitals based on a limited set of quality measures. Hospitals qualified for bonuses based only on whether their absolute level of performance was superior and not by their rate of improvement. Multihospital groups submitted bills and quality data as a single entity, thereby sharing in financial gains and possible losses.

The primary metric in evaluating hospital performance was the improvement in their quality scores, even though financial incentives were based solely on absolute scores each year. CMS benchmarked performance improvements several ways. First, it developed a comparison group by matching each participating hospital with one or two HQA hospitals that agreed to participate in the HQID based on number of beds, teaching status, region, urban/rural, and ownership status (for-profit vs. nonprofit). Second, CMS benchmarked participant quality improvements against all HQA facilities, using linear regression methods with change in overall quality as the dependent variable. Third, to address a potential volunteer bias, CMS repeated multivariate analyses of performance by including all HQID hospitals in the intervention group following a clinical trial, ITT experimental design.

Of the 421 hospitals invited to participate in the P4P program, 63 percent accepted and began providing data on 33 quality indicators (Lindenauer et al., 2007, p. 488); 11 facilities eventually withdrew. Patient admission was the unit of observation for quantifying changes in process outcomes. CMS based approximately 117,000 P4P patients and 192,000 control patients for statistical testing with no apparent adjustment for clustering effects on variance in the 207 participating and 406 nonparticipating hospitals.

A second phase of the Premier Hospital demonstration is continuing, allowing for an additional 3 years of implementation and testing of new incentive models. Currently, about 230 hospitals continue to participate in this phase of the demonstration.

Findings to Date

Lindenauer and colleagues (2007) have published initial findings for this demonstration. Over 2 years, both nonparticipating hospitals (those only reporting data) and hospitals participating in the P4P program, showed quality improvements. In 7 of 10 quality indicators, P4P hospitals showed greater improvements (Lindenauer et al., 2007, p. 489). In these findings based on early years of the project, performance increases varied inversely with baseline rates. For example, among acute myocardial infarction (AMI) patients, the highest-performing quintile showed increases in composite process scores of 7.5 percentage points above the control group beginning from a baseline score of only 73 percent. The poorest-performing quintile saw a relative increase in its composite AMI score of only 2.4 percentage points (and a 1.1 percentage point decline from 97.9 percent to 96.8 percent). After adjusting for baseline differences in study and control groups, the incremental increases in quality attributed to P4P incentives declined.

Bonus payouts to hospitals participating in the P4P program averaged $71,960 per year per hospital, but they ranged widely from $914 to $847,227. Similar "losses" among the lowest-performing hospitals offset these bonus payments. Bonuses and penalties, however, were not based on rates of improvement over baseline but on absolute levels during the demonstration period. Hospitals in the lowest two deciles (or quintile) in terms of rates of improvement during the demonstration had the highest average baseline scores and tended to receive most of the bonuses. Hospitals in the highest demonstration quintile based on rate of improvement still had the lowest scores by demonstration's end and paid a disproportionate percentage of the bonuses.

With very small P4P financial incentives, this demonstration found relatively small improvements in several quality process indicators. Because of the large sample sizes, the analysis could detect and accept very small quality improvements of less than 1 percentage point. For example, baseline composite process scores for AMI increased from 88.7 percent to 94.8 percent. After adjusting for study-control differences in patient characteristics and volunteerism, the P4P effect fell to 1.8 percentage points, or an improvement from 88.7 percent to 90.5 percent. Baseline process scores for the other two conditions averaged roughly 80 percent for AMI, suggesting high adherence levels as well. We do not know from this demonstration how effective a larger financial incentive (and penalty) might be for another group of hospitals with much lower adherence rates.

According to Lindenauer and colleagues (2007), hospitals that already had the highest average baseline performance received the majority of performance bonuses. In fact, many of the hospitals with the greatest improvements in quality incurred payment penalties because their scores remained in the lowest quintile by the end of the demonstration. Another concern in using process measures at the hospital level was the narrow range of indicators. Using just 33 indicators to track quality in a few broad reasons for admission may be too narrow to accurately represent differences in absolute quality or rates of improvement in quality. Also of concern was the limiting of payment reallocations between just the bottom and top quintiles based on quality scores. In the longer run, this could discourage hospitals unable to achieve the highest quintile from continuing to strive (at high internal cost) to further raise quality.

The evaluation of the Premier demonstration is ongoing. Preliminary results from the first 4 years of the demonstration suggest that participating hospitals raised overall quality by an average of 17 points over 4 years, based on their performance on more than 30 nationally standardized care measures for patients in five clinical areas (heart attack, coronary bypass graft, heart failure, pneumonia, and hip and knee replacements (CMS, 2009d).

Medicare Gainsharing and Physician Hospital Collaboration Demonstrations

Project Overview

Ever since CMS implemented hospital prospective per case payments using DRGs (through the IPPS) in 1984, hospital managers and researchers have

raised concerns about the misalignment of hospital and physician incentives. At the time, per case DRG payment represented an unprecedented bundling of facility services in a single Part A payment, including routine and intensive care unit nursing, operating room, and other ancillary services. Physicians, by contrast, remained under a fractionated Current Procedural Terminology billing system with thousands of codes that encouraged them to continue providing separate services with no incentive to conserve health care costs. The overall concept of gainsharing is intended to allow hospitals to share efficiency savings with physicians in a controlled setting in which quality of care standards are simultaneously maintained (or improved).

To test the gainsharing concept under Medicare, Congress mandated two separate but very similar demonstrations. Under Section 5007 of the DRA, Congress required CMS to conduct a qualified gainsharing program that tests alternative ways that hospitals and physicians can share in efficiency gains. Similarly, under Section 646 of the MMA, Congress authorized the Secretary of Health and Human Services to conduct a Physician Hospital Collaboration demonstration as part of the larger Medicare Health Care Quality Initiative (CMS, 2010b). Like the Gainsharing Demonstration, the purpose of this Physician Hospital Collaboration Demonstration is to test gainsharing models that facilitate collaborations between physicians and hospitals to improve quality and efficiency.

Under both demonstrations, incentive payments made to physicians under the Physician-Hospital Demonstration must tie directly to improvements in quality and/or efficiency, and cannot be based on other standards (such as volume or patient referrals). Physician payments are limited to 25 percent of Medicare payments made to physicians for other similar patients. Payments must also be based on a methodology that is replicable and auditable, and the demonstration must—at a minimum—be budget neutral.

However, unlike the Gainsharing Demonstration, which has a distinct hospital-based focus, the Physician Hospital Collaboration project places particular emphasis on participation of integrated delivery systems and coalitions of physicians in collaboration with hospitals. The project also places a greater emphasis on improved efficiency and quality of care over a longer episode of care, including post-acute services, beyond the acute-care stay.

Both of the current Medicare gainsharing demonstration initiatives are modeled on an earlier project that, because of legal challenges, was never fully implemented. In 2001, the New Jersey Health Association (NJHA) submitted

an application to CMS to run an eight-hospital all-payer refined DRG (APR-DRG) Demonstration of gainsharing in its state (NJHA, 2001). Introducing all the facets that other gainsharing proposals are likely to include, this gainsharing methodology was likely the most complex ever proposed. The New Jersey plan was to establish maximum pools of Part A hospital savings for each APR-DRG in the hospital to be shared with the medical staff. These pools were limited to 25 percent of total Part B outlays. Next the pools were converted to a per discharge basis for each APR-DRG based on average costs of the lowest 90 percent of cases (i.e., so-called Best Practice Norms).

Excluding the most expensive cases from the target baseline cost per discharge was the primary mechanism to achieve reductions in hospital costs. Once the demonstration site identified responsible physicians, they became eligible for gainsharing, depending on how the average cost of their cases related to the mean cost of the 90 percent baseline group of cases. The demonstration standardized baseline and demonstration cases for case severity and inflation. In the early demonstration years, responsible physicians could participate in gainsharing, even if they failed the Best Practice Norms, as long as they showed reductions in their Part A costs per case. The demonstration carved out gainsharing pools for hospital-based and consulting physicians to partially shelter them from lost billings associated with shorter stays and less testing.

The demonstration used process and outcome indicators to restrict gainsharing to physicians maintaining high-quality standards. Physicians in the NJHA project were put at risk for excessive post-acute Medicare outlays from any source (including outpatient physician services: "any absolute increase in Medicare PAC [post-acute care] payments per discharge [must] be smaller than any absolute decrease in Part B inpatient physician payments per discharge" [Cromwell & Adamache, 2004]). The two demonstrations also differed in that CMS negotiated up-front discounts in its cardiac DRG global Part A and B rates, whereas New Jersey hospitals had to reduce baseline Part A and B inpatient outlays by 2 percent after adjusting for inflation and case-mix changes.

Project Status

CMS solicited volunteer participating sites for the Gainsharing Demonstration in fall 2006 (CMS, 2010a), with applications due November 17, 2006. CMS initially selected five sites from this solicitation for participation but also issued a new announcement to resolicit for rural demonstration sites. CMS

designated five sites as potential Medicare Gainsharing Demonstration participants. Two sites signed terms and conditions and initially participated in the demonstration:

- Beth Israel Medical Center (BIMC), New York, New York
- Charleston Area Medical Center (CAMC), Charleston, West Virginia

These two demonstration sites began the implementation process as of October 1, 2008. Charleston Area Medical Center withdrew from the demonstration effective December 31, 2009.

The BIMC site includes all DRGs in its demonstration. Enrollment is voluntary for physicians. A pool of bonus funds will be prospectively estimated from hospital savings based on variances from best practices. If no hospital savings are realized, no bonuses will be allocated to participating physicians. In the BIMC model, each patient is assigned to one practitioner who will take financial responsibility for the care of the patient. For medical patients, the "responsible physician" is the attending physician. For surgical patients, the responsible physician is the surgeon. The actual bonus paid to physicians is called the performance incentive, which is calculated as a percentage of the maximum performance incentive, based on performance. Gainsharing payments are capped according to CMS policy at 25 percent of the physician's affiliated Part B reimbursements. BIMC proposes a range of physician quality standards, which, if not met by individual physicians, would make them ineligible for the gainsharing bonus (Greenwald et al., 2010a).

The CAMC gainsharing model focused on cardiac care. Each cardiac-related DRG included in the demonstration had established savings initiatives. CAMC measured participating physicians on several grounds to ensure that quality of patient care remained the same. Worse performance on any of the following standards for an individual physician made that physician ineligible to receive the gainsharing bonus (Greenwald et al., 2010a).

CMS has solicited participants for the Physician Hospital Collaboration Demonstration in this project and selected the NJHA/New Jersey Care Integration (NJCI) Consortium, Princeton, N.J. (with 12 hospitals), targeting all inpatient Medicare beneficiaries, to participate in the demonstration (CMS, 2010c). The 12 hospitals participating in the NJCI Consortium began implementing the demonstration in July 2009.

The NJCI Consortium sites will include all DRGs in their demonstration. Enrollment is voluntary for physicians. Physicians must have at least 10 admissions at the consortium member to be eligible for incentive payments.

In the NJCI model, each patient is assigned to one practitioner who will take financial responsibility for the patient's care. For medical patients, the "responsible physician" is the attending physician. For surgical patients, the responsible physician is the surgeon. Up to 12.5 percent of internal hospital savings will be available for incentive payments (Greenwald et al., 2010b)

Physician incentive payments will consist of two parts: a performance incentive and an improvement incentive. In the initial year, the improvement incentive will be two-thirds of the gainsharing payment, and the performance incentive will be one-third. In year 2, the maximum improvement incentive is reduced to one-third, and by year 3, the improvement incentive will be eliminated, with all funds directed to the performance incentives. A physician's peer performance incentive is based on his or her average cost per case relative to the best practice cost per case of a cost-efficient peer group. The NJCI Consortium proposes a range of physician quality standards to ensure that patient safety and quality of care. In addition, the consortium proposes to track and review several parameters for any unusual or exceptional changes (Greenwald et al., 2010b).

Findings to Date

No publicly available evaluation findings are ready for either the Medicare Gainsharing or the Physician Hospital Collaboration demonstrations.

Medicare Demonstrations and the Future of Pay for Performance

The examples cited previously in this chapter and in earlier chapters make up only a partial list of Medicare demonstrations related in some way to P4P. Previous chapters (especially Chapters 1 and 2) also discuss private-sector P4P initiatives implemented by a range of sponsors (see Table 1-1 in Chapter 1 for a complete list of all demonstrations). Because the Affordable Care Act health care reform legislation mandates dozens more P4P, accountable care organization and other value-based purchasing projects and demonstrations, the range of models, provider types, payment incentives, and other variations will only expand in the next 5 years.

Conspicuously missing from these lists of P4P initiatives is a nationally implemented program for P4P. Of course, P4P initiatives sponsored by regional employers and insurers will logically remain focused on the issues and needs of these regional sponsors. Resources to fund implementation, evaluation, and refinement of P4P models may be scarce. In contrast, the Medicare program presents a very likely candidate for eventual national

implementation of P4P initiatives. Medicare is the largest US insurer and sponsor of a national program with access to implementation and evaluation funding from Congress. It is curious then that given the extent of Medicare P4P demonstrations currently completed or ongoing, no serious move toward national implementation of any of the existing P4P models is currently under serious consideration. Chapter 11 of this book discusses this issue and explores the challenges of implementing Medicare P4P on a national level.

References

Agency for Healthcare Quality and Research. (2004). *National healthcare disparities report, 2003: Summary*. Retrieved March 24, 2010, from http://www.ahrq.gov/qual/nhdr03/nhdrsum03.htm

Anderson, G. (2002). *Chronic conditions: Making the case for ongoing care*. Baltimore, MD: Partnership for Solutions, Johns Hopkins University, and the Robert Wood Johnson Foundation.

Battaglia, T. A., Roloff, K., Posner, M. A., & Freund, K. M. (2007). Improving follow-up to abnormal breast cancer screening in an urban population. A patient navigation intervention. *Cancer, 109*(2 Suppl), 359–367.

Brandeis University Schneider Institute for Health Policy. (2003). *Cancer Prevention and Treatment Demonstration for Ethnic and Racial Minorities*. Retrieved March 24, 2010, from http://www.cms.hhs.gov/DemoProjectsEvalRpts/downloads/CPTD_Brandeis_Report.pdf

Centers for Medicare & Medicaid Services. (2005, November). *CMS Physician Focus Quality Initiative: Chronic disease and prevention measures*. Baltimore, MD: CMS.

Centers for Medicare & Medicaid Services. (2006). *Health Care Financing Review, statistical supplement* (Publication No. 03477). Available from http://www.cms.hhs.gov/review/default.asp.

Centers for Medicare & Medicaid Services. (2008a, October 1). *Cancer Prevention and Treatment Demonstration for Ethnic and Racial Minorities: Fact sheet*. Retrieved November 12, 2009, from http://www.cms.hhs.gov/DemoProjectsEvalRpts/downloads/CPTD_FactSheet.pdf

Centers for Medicare & Medicaid Services. (2008b, August 14). *Physician groups earn performance payments for improving quality of care for patients with chronic illnesses*. Retrieved November 12, 2009, from http://www.cms.hhs.gov/DemoProjectsEvalRpts/downloads/PGP_Press_Release.pdf

Centers for Medicare & Medicaid Services (2009a). *CMS announces sites for a demonstration to encourage greater collaboration and improve quality using bundled hospital payments*. Retrieved November 12, 2009, from http://www.cms.hhs.gov/DemoProjectsEvalRpts/downloads/ACEPressRelease.pdf

Centers for Medicare & Medicaid Services. (2009b). *Quick reference information: Medicare preventive services*. Retrieved November 12, 2009, from http://www.cms.hhs.gov/MLNProducts/downloads/MPS_QuickReferenceChart_1.pdf

Centers for Medicare & Medicaid Services. (2009c). *Acute Care Episode Demonstration*. Retrieved March 9, 2010, from http://www.cms.hhs.gov/DemoProjectsEvalRpts/downloads/ACEFactSheet.pdf

Centers for Medicare &Medicaid Services. (2009d). *Medicare demonstrations show paying for health care quality pays off*. Retrieved July 13, 2010, from http://www.cms.gov/HospitalQualityInits/downloads/HospitalPremierPressReleases20090817.pdf

Centers for Medicare & Medicaid Services. (2010a). *DRA 5007 Medicare Hospital Gainsharing Demonstration solicitation*. Retrieved March 9, 2010, from http://www.cms.hhs.gov/DemoProjectsEvalRpts/downloads/DRA5007_Solicitation.pdf

Centers for Medicare & Medicaid Services (2010b). *Physician-Hospital Collaboration Demonstration solicitation*. Retrieved March 9, 2010, from http://www.cms.hhs.gov/DemoProjectsEvalRpts/downloads/PHCD_646_Solicitation.pdf

Centers for Medicare & Medicaid Services. (2010c). *Press release: Medicare demonstrations show paying for quality health care pays off*. Retrieved March 9, 2010, from http://www.cms.hhs.gov/apps/media/press/release.asp?Counter=3495

Coleman, E. A., Parry, C., Chalmers, S., & Min, S. J. (2006). The care transitions intervention: Results of a randomized controlled trial. *Archives of Internal Medicine, 166*(17), 1822–1828.

Congressional Budget Office. (2005). *High-cost Medicare beneficiaries*. Retrieved March 24, 2010, from http://www.cbo.gov/ftpdocs/63xx/doc6332/05-03-MediSpending.pdf

Cromwell, J., & Adamache, W. (2004). *Rates and savings report: Final design report*. CMS Contract No. 500-92-0013. Waltham, MA: RTI International.

Cromwell, J., & Dayhoff, D. A. (1998). *An analysis of proposed discounts under the Medicare Participating Cardiovascular and Orthopedic Centers of Excellence Demonstration: Draft report*. Health Care Financing Administration Contract No. 500-95-0058-004. Waltham, MA: Health Economics Research, Inc.

Cromwell, J., Dayhoff, D. A., McCall, N., Subramanian, S., Freitas, R., Hart, R., et al. (1998). *Medicare Participating Heart Bypass Center Demonstration: Final report*. Health Care Financing Administration Contract No. 500-92-0013. Retrieved January 11, 2011, from http://www.cms.hhs.gov/reports/downloads/CromwellExecSum.pdf; http://www.cms.hhs.gov/reports/downloads/CromwellVol1.pdf; http://www.cms.hhs.gov/reports/downloads/CromwellVol2.pdf; http://www.cms.hhs.gov/reports/downloads/CromwellVol3.pdf

Cromwell, J., Dayhoff, D. A., Subramanian, S., & Hart, R. (1997a). *Medicare Negotiated Bundled Payment Demonstration: Full application banking report*. HCFA Contract No. 500-92-0013. Waltham, MA: Health Economics Research, Inc.

Cromwell, J., Dayhoff, D. A., & Thoumaian, A. H. (1997b). Cost savings and physician responses to global bundled payments for Medicare heart bypass surgery. *Health Care Financing Review, 19*(1), 41–57.

Dohan, D., & Schrag, D. (2005). Using navigators to improve care of underserved patients: Current practices and approaches. *Cancer, 104*(4), 848–855.

Greenwald, L., Cromwell, J., Adamache, W., Healy, D., Halpern, M., & West, N. (2010a). *Evaluation of the Medicare Gainsharing Demonstration: Design report*. CMS Contract Number HHSM-500-2005-00029I; Task 3. Waltham, MA: RTI International.

Greenwald, L., Cromwell, J., Healy, D., Adamache, W., Drozd, E., Bernard, S., et al. (2010b). *Evaluation of the Medicare Physician Hospital Collaboration Demonstration: Design report*. CMS Contract Number HHSM-500-2005-00029I; Task 17. Waltham, MA: RTI International.

Hadley, J., Zuckerman, S., & Iezzoni, L. I. (1996). Financial pressure and competition. Changes in hospital efficiency and cost-shifting behavior. *Medical Care, 34*(3), 205–219.

Hede, K. (2006). Agencies look to patient navigators to reduce cancer care disparities. *Journal of the National Cancer Institute, 98*(3), 157–159.

Jencks, S. F., Huff, E. D., & Cuerdon, T. (2003). Change in the quality of care delivered to Medicare beneficiaries, 1998-1999 to 2000-2001. *JAMA, 289*(3), 305–312.

Kautter, J., Pope, G. C., Trisolini, M., & Grund, S. (2007). Medicare Physician Group Practice Demonstration design: Quality and efficiency pay-for-performance. *Health Care Financing Review, 29*(1), 15–29.

Lindenauer, P. K., Remus, D., Roman, S., Rothberg, M. B., Benjamin, E. M., Ma, A., et al. (2007). Public reporting and pay for performance in hospital quality improvement. *New England Journal of Medicine, 356*(5), 486–496.

McCall, N. T., Cromwell, J., & Bernard, S. (2007). *Evaluation of Phase I of Medicare Health Support (formerly Voluntary Chronic Care Improvement) Pilot Program under traditional fee-for-service Medicare: Report to Congress*. CMS Contract No. 500-00-0022. Retrieved March 24, 2010, from http://www.cms.hhs.gov/reports/downloads/McCall.pdf

McCall, N. T., Cromwell, J., Urato, C., & Rabiner, D. (2008a). *Evaluation of Phase I of the Medicare Health Support Pilot Program under traditional fee-for-service Medicare: 18-month interim analysis. Report to Congress*. CMS Contract No. 500-00-0022. Available from http://www.cms.hhs.gov/reports/downloads/MHS_Second_Report_to_Congress_October_2008.pdf

McCall, N. T., Dalton, K., Cromwell, J., Greenwald, L., Freeman, S., & Bernard, S. (2008b). *Medicare Acute Care Episode Demonstration: Design, implementation, and management: Design report*. CMS Contract No. 500-2005-00291. Waltham, MA: RTI International.

McCall, N. T., Urato, C., Spain, P., Smith, K., & Bernard, S. (2008c). *Evaluation of Medicare Care Management for High Cost Beneficiaries (CMHCB) Demonstration: Second annual report*. CMS Contract No. 500-00-0024, T.O. # 25. Waltham, MA: RTI International.

McGlynn, E. A., Asch, S. M., Adams, J., Keesey, J., Hicks, J., DeCristofaro, A., et al. (2003). The quality of health care delivered to adults in the United States. *New England Journal of Medicine, 348*(26), 2635–2645.

Mitchell, J. B., Holden, D. J., & Hoover, S. (2008). *Evaluation of the Cancer Prevention and Treatment Demonstration for racial and ethnic minorities: Report to Congress*. Available from http://www.cms.hhs.gov/reports/downloads/Mitchell_CPTD.pdf

National Institutes of Health & National Cancer Institute. (2001). Voices of a broken system: Real people, real problems. President's Cancer Panel. Report of the Chairman, 2000–2001. Available from http://deainfo.nci.nih.gov/advisory/pcp/video-summary.htm

Naylor, M. D., Brooten, D., Campbell, R., Jacobsen, B. S., Mezey, M. D., Pauly, M. V., et al. (1999). Comprehensive discharge planning and home follow-up of hospitalized elders: A randomized clinical trial. *JAMA, 281*(7), 613–620.

New Jersey Hospital Association. (2001). *Medicare demonstration performance-based incentives*. Prepared for the Centers for Medicare & Medicaid Services. Princeton, NJ: New Jersey Hospital Association.

Peikes, D., Chen, A., Schore, J., & Brown, R. (2009). Effects of care coordination on hospitalization, quality of care, and health care expenditures among Medicare beneficiaries: 15 randomized trials. *JAMA, 301*(6), 603–618.

Piantadosi, S. (1997). *Clinical trials: A methodologic perspective*. New York: Wiley-Interscience.

Reid, R. J., Coleman, K., Johnson, E. A., Fishman, P. A., Hsu, C., Soman, M. P., et al. (2010). The Group Health Medical Home at year two: Cost savings, higher patient satisfaction, and less burnout for providers. *Health Affairs, 29*(5), 835–843.

Rich, M. W., Beckham, V., Wittenberg, C., Leven, C. L., Freedland, K. E., & Carney, R. M. (1995). A multidisciplinary intervention to prevent the readmission of elderly patients with congestive heart failure. *New England Journal of Medicine, 333*(18), 1190–1195.

Ries, L. E., Eisner, M. P., Kosary, C. L., Hankey, B. F., Miller, B. A., Clegg, L., et al. (2003). *SEER Cancer Statistics Review, 1975–2000*. Available from http://seer.cancer.gov/csr/1975_2000/.

Rittenhouse, D. R., & Shortell, S. M. (2009). The patient-centered medical home: Will it stand the test of health care reform? *JAMA, 301*(19), 2038–2040.

RTI International. (2006). *PGP site visit reports*. Retrieved November 12, 2009, from http://www.cms.hhs.gov/DemoProjectsEvalRpts/dowloads/PGP_Site_Visit_Reports.zip

Sebelius, K. (2009). *Report to Congress: Physician Group Practice Demonstration evaluation report*. Retrieved January 31, 2010, from http://www.cms.hhs.gov/reports/downloads/RTC_Sebelius_09_2009.pdf.

Todd, W., & Nash, T. (Eds.). (2001). *Disease management, a systems approach to improving patient outcomes*. New York: Jossey-Bass Publishers.

Wallack, S. S., & Tompkins, C. P. (2003). Realigning incentives in fee-for-service Medicare. *Health Affairs (Millwood), 22*(4), 59–70.