TECHNICAL
REPORT

# Payment Reform

## Analysis of Models and Performance Measurement Implications

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RAND HEALTH

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# PREFACE

In the United States, policymakers are increasingly turning to performance measurement as a cornerstone of health care payment reform. With the support of the National Quality Forum (NQF), the RAND Corporation conducted this evaluation, cataloging nearly 100 implemented and proposed payment reform programs, classifying each of these programs into one of 11 payment reform models (PRMs), and identifying the performance measurement needs associated with each model. A synthesis of the results suggests near-term priorities for performance measure development and identifies pertinent challenges related to the use of performance measures as a basis for payment reform. Our intent is that this report will be useful to a broad range of stakeholders with an interest in the appropriate use of standardized performance measures to improve the quality and efficiency of health care delivery for all of the people of the United States.

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## TABLE OF CONTENTS

# SUMMARY

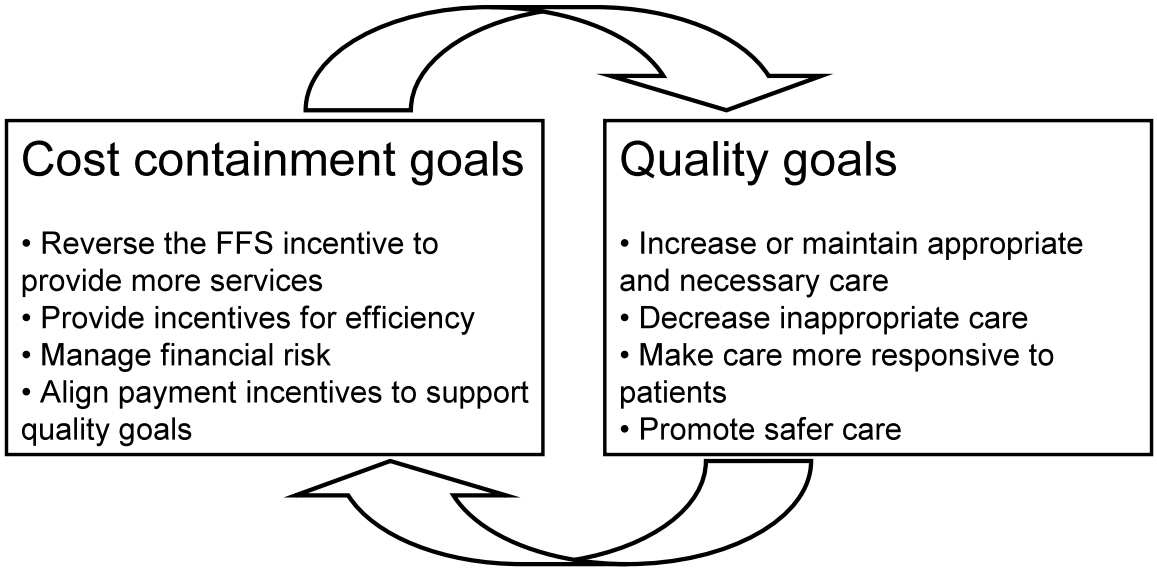
## BACKGROUND

Insurers and purchasers of health care in the United States are on the verge of potentially revolutionary changes in the approaches they use to pay for health care.[1] While the traditional fee-for-service payment model has been altered or joined by payment reforms, including prospective payment for hospitals in the 1980s and health plan and medical group capitation in the 1990s, critics continue to assert that the persistent use of fee-for-service payment is increasing the volume and intensity of services without enhancing the quality of care or its efficiency. Specifically, fee-for-service payment may contribute to the overuse of services with little or no health benefit and does not foster coordination of care across providers or care delivery organizations.[2,3]

Recently, purchasers and insurers have been experimenting with payment approaches that include incentives to improve quality and reduce the use of unnecessary and costly services.[3,4,5] The federal government has given a new impetus to these payment approaches within the Patient Protection and Affordable Care Act (PPACA) of 2010.[6] These payment approaches are designed to achieve two interrelated goals: quality improvement and cost containment (Figure S.1). Cost containment is to be achieved by reversing the incentives under fee-for-service payment to increase the use of services by shifting some amount of financial risk to providers, spurring them to consider the costs of their decisions. The introduction of financial risk in payment models may have mixed consequences for quality. On the one hand, financial risk may promote high quality by motivating providers to reduce rates of overuse of inappropriate services. On the other hand, financial risk may lead providers to reduce services that are important to high-quality care or impede access to care.

To address the risks to quality that may emerge in the transition away from fee-for-service payment, proposed new payment reform models (PRMs) do more than simply introduce new ways to pay for services. They include explicit measures of quality and tie payment to performance on those measures so that quality improvement will be driven by financial incentives to providers for the use of clinically appropriate services, efforts to make care more patient-centered through coordination and integration of a patient's care among providers, and incentives to invest in patient safety.

**Figure S.1**
**Goals of Payment Reform Models**




As this discussion implies, PRMs will have to be designed and implemented carefully in order to ensure that both the cost containment and quality goals are achieved. Furthermore, performance measurement and reporting are a crucial component of new payment models. The potential reliance on performance measures to address both cost containment and quality goals is already placing new demands on the performance measure development enterprise. Measures will be needed to perform several important functions in new payment systems, including two that are central to this report:

- *Setting performance-based payment incentives.* New PRMs typically create performance incentives by adjusting payment amounts based on measured performance (e.g., determining whether a payment occurs and the amount of a payment or determining nonpayment for services if they are linked to poor-quality care).

- *Protecting against unintended adverse consequences of cost containment.* PRMs may create unintended adverse consequences, such as avoidance of some high-risk or high-cost patients by providers, other barriers to access, and underuse of evidence-based services. Measurement approaches will be needed to identify and ameliorate these unintended consequences.

The purpose of this report is to provide information about the current status of performance measurement in the context of payment reform and to identify near-term opportunities for performance measure development. The report is intended for the many stakeholders tasked with outlining a national quality strategy in the wake of health care reform legislation. Through a subcontract to the National Quality Forum (NQF), a team of investigators at RAND used a rigorous and selective process to create a catalog of payment reform programs that includes both demonstration projects and those outlined in legislation. Based on the features of these programs, each was categorized into one of 11 PRMs. Next, each model and its programs were analyzed to describe the rationale for performance measurement, identify the performance measures available to the model, and assess its unmet measure needs. Finally, a set of near-term measure development opportunities and implementation challenges were explored to inform the direction of future measure development.

The uses of performance measurement and reporting in health care are a vast and complex topic. Performance measures have many other functions in addition to their use to set payment incentives. Of necessity, this report focuses on the two functions noted above and limits the scope of discussion to these functions. The report does not address the following issues:

- *Measures of "financial performance," such as total spending on services or resource use that may be used by payers to negotiate payment amounts with providers, are not addressed.* These "accounting" measures are a focus of the report only if they are closely linked to quality measures within an efficiency framework.

- *Other applications of performance measurement and reporting are not addressed unless they are an intrinsic part of the PRMs.* These other applications include the use of performance measures to

    - monitor progress toward improvement goals
    - inform consumers and purchasers to enable selection of providers
    - stimulate competition among providers
    - stimulate innovation
    - promote the "values" of the health system.

- *Variations in the implementation of actual incentives and the distribution of payments between health plans, hospitals, provider groups, and individual providers are beyond the scope of the report.* Many payment models are complex and not yet fully specified, making

it difficult to assume any special configuration of payers, providers, and incentives. However, where such configurations would affect performance measure development and implementation, we note this.

- *PRMs relevant to hospitals, physicians, and other medical providers are emphasized.* Long-term care, home health, ambulatory surgery, and many other delivery organizations are obviously critically important. These organizations have participated in payment reform experiments, and they are addressed in health reform legislation. Nevertheless, to make the scope of the discussion manageable, we have elected to focus on hospital and physician PRMs. Results and lessons from these models could be applicable to payment reform programs developed for these other organizations.

## KEY FINDINGS

*Payment Reform Models*

- We identified and catalogued 90 payment reform programs, classifying them into 11 general PRMs.
- The PRMs are diverse with respect to the targeting of payment to performance goals, the bundling of services, and the level at which payment is made to organizations and individual providers.
- While three types of care delivery entities have been prominently featured in PRMs (the hospital, the ambulatory group practice, and the individual physician), performance-based payment reform will involve other types of providers (long-term care, ambulatory surgical centers, and others).
- Payment reform programs frequently blend elements of the 11 PRMs.
- Additional blending of PRMs seems likely as programs are implemented in the future.

*Implications of the Use of Performance Measurement to Support the Emerging Payment Reform Models*

- The number and sophistication of measures in use varies widely across programs within each PRM, suggesting ongoing experimentation to determine optimal approaches.
- Many available performance measures are not yet in use in current payment reform programs.

- Measure development should be guided by a longitudinal care framework rather than a focus on discrete clinical services.
- Complex organizational types may benefit from complex measurement strategies that support internal incentive and quality improvement models.
- Composite measures will be important, especially in assessing episodes of care.
- Efficiency-of-care measures may be useful in PRMs that are not based on global or capitated payment.
- Blended payment models will rely on blended performance measurement strategies.
- Structure-of-care measures will be required for some models, at least in the near term.

*Priority Areas for Further Measure Development*

The following measure types offer promising opportunities for further measure development and refinement across many of the PRMs we identified:

- health outcome measures that can be used to assess care for populations:
  - health status measures (functional status and quality of life)
  - safety outcomes (preventable harms attributable to health care)
- care coordination measures (including measures that assess care transitions)
- measures of patient and caregiver engagement (measures that assess the participation of patients and caregivers in their care)
- measures of structure (particularly management measures and health information technology [HIT] utilization measures that address new organizational types)
- composite measures that combine outcome, process, structure, patient experience, cost, and other measure types
- efficiency measures that combine quality and resource use measures.

To minimize the risk that new PRMs will increase disparities in care, additional measure development may be useful in two specific areas:

- clinical and sociodemographic risk profiles of providers' patient populations
- measures of access to care and measures to detect provider avoidance of high-risk patients.

## PROJECT METHODS

The goal of the project was to describe the performance measurement needs created by current and emerging payment reform approaches, to assess the suitability of existing performance measures to support these needs, and to suggest near-term priority areas for performance measure development that would support these needs effectively going forward. To achieve the goal, RAND, in consultation with NQF staff, carried out the following tasks (see Figure S.2):

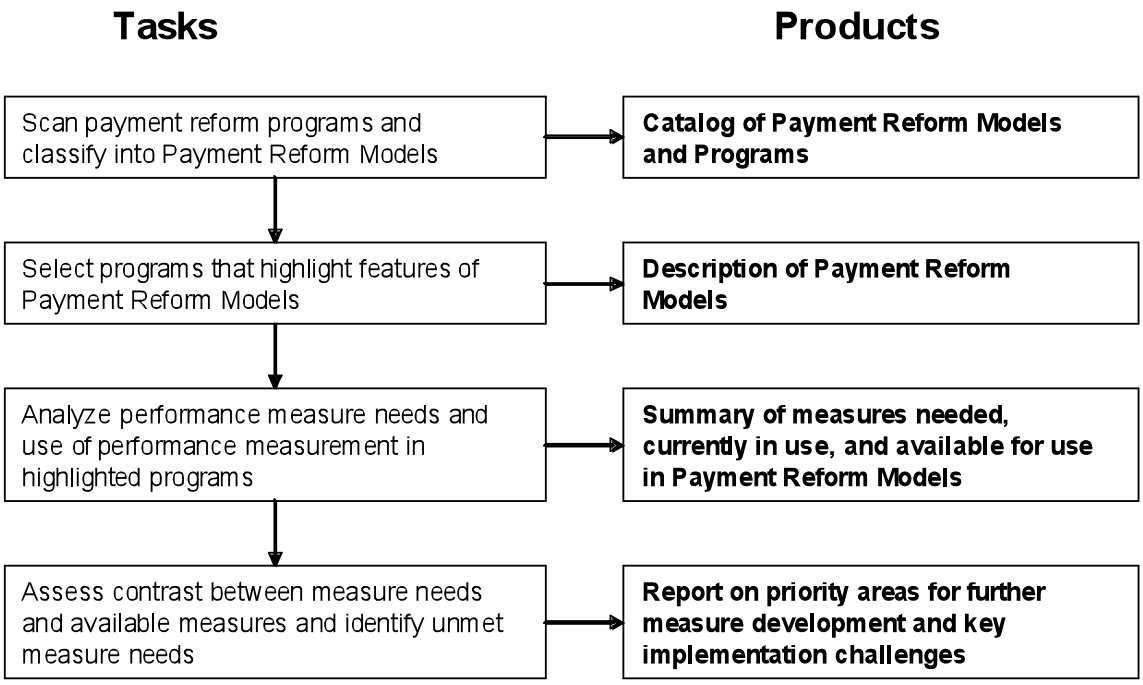
- scan of payment reform programs to derive payment reform models (PRMs)
- selection of payment reform programs to highlight features of PRMs
- analysis of the rationale for use of performance measures in the model and the suitability of available performance measures
- assessment of the gap between measures needed and available measures to identify unmet measure needs.

For each PRM, we describe

- the rationale guiding selection of performance measures, payment incentive–specific uses of measurement in the PRM, and the special need for measures created by the model
- an analysis of available measures, including the contrast between available measures, the unmet measure needs of the PRM, and the implementation challenges associated with measure implementation.

Across the PRMs, we summarize the key opportunities for measure development and the common implementation challenges associated with implementing performance measurement.

**Figure S.2**
**Tasks and Products**




## RESULTS

We grouped the reviewed payment reform programs into 11 PRMs that create demand for performance measures (Table S.1).

These 11 models vary widely in the extent to which they alter current payment methods, the scope of patients and services affected, and the providers subject to the new payment arrangements. Therefore, the model incentives and purposes of performance measurement also vary substantially between models. Even within a particular model, different implementations may vary widely on these dimensions. However, there are some general patterns of relationships between the models that can be helpful in comparing their performance measurement needs.

**Table S.1**

**Description of Payment Reform Models and Uses of Performance Measures**

| Payment Reform Model | Brief Description | Payment Incentive–Specific Uses of Performance Measurement |
|---|---|---|
| **Model 1: Global payment** | A single per-member per-month payment is made for all services delivered to a patient, with payment adjustments based on measured performance and patient risk. | 1. Determining based on measured performance whether bonus payments will be made and the amount of those payments (using a pay-for-performance [P4P] mechanism)<br>2. Assessing negative consequences, such as avoidance of patients with complex conditions, greater severity of disease, or other risk factors<br>3. Informing strategic decisions by payers about the design and implementation of the payment program (e.g., assessing the impact of the payment model on cost and quality)<br>4. Assisting providers to identify opportunities for quality improvement and greater efficiency of care delivery |

**Table S.1**

**Description of Payment Reform Models and Uses of Performance Measures**

| Payment Reform Model | Brief Description | Payment Incentive–Specific Uses of Performance Measurement |
|---|---|---|
| **Model 2: ACO shared savings program** | Groups of providers (known as accountable care organizations [ACOs]) that voluntarily assume responsibility for the care of a population of patients share payer savings if they meet quality and cost performance benchmarks. | Similar to global payment model:<br>1. Determining based on measured performance whether bonus payments will be made and the amount of those payments (using a P4P mechanism)<br>2. Assessing negative consequences, such as avoidance of patients with complex conditions, greater severity of disease, or other risk factors<br>3. Informing strategic decisions by payers about the design and implementation of the payment program (e.g., assessing the impact of the payment model on cost and quality)<br>4. Assisting providers to identify opportunities for quality improvement and greater efficiency of care delivery |
| **Model 3: Medical home** | A physician practice or other provider is eligible to receive additional payments if medical home criteria are met. Payment may include calculations based on quality and cost performance using a P4P-like mechanism. | 1. Evaluating whether practices meet medical home qualification criteria, which may include multiple tiers of achievement<br>2. Evaluating practice impact on quality and resource use<br>3. Supporting practice-based quality improvement activities |

**Table S.1**

**Description of Payment Reform Models and Uses of Performance Measures**

| Payment Reform Model | Brief Description | Payment Incentive–Specific Uses of Performance Measurement |
|---|---|---|
| **Model 4: Bundled payment** | A single "bundled" payment, which may include multiple providers in multiple care settings, is made for services delivered during an episode of care related to a medical condition or procedure. | 1. Making adjustments to providers' episode-based payment rates based on quality of care<br>2. Determining whether providers meet performance criteria for participation in a bundled payment program<br>3. Assessing negative consequences, including avoidance of certain types of patients or cases, particularly through patient experience measures<br>4. Assisting providers to identify opportunities for quality improvement and greater efficiency of care delivery |
| **Model 5: Hospital-physician gainsharing** | Hospitals are permitted to provide payments to physicians that represent a share of savings resulting from collaborative efforts between the hospital and physicians to improve quality and efficiency. | 1. Determining if hospitals and affiliated physicians are eligible to participate in a gainsharing program<br>2. Ensuring that the quality of patient care is not compromised<br>3. Ensuring that the payment incentives lead to improved hospital operational and financial performance (e.g., efficiency)<br>4. Detecting increases in the volume of referrals for services not covered within the gainsharing arrangement<br>5. Assessing adverse consequences, such as hospital or physician avoidance of patients with adverse risk characteristics<br>6. Making information available to providers about opportunities for improvement |

**Table S.1**

**Description of Payment Reform Models and Uses of Performance Measures**

| Payment Reform Model | Brief Description | Payment Incentive–Specific Uses of Performance Measurement |
|---|---|---|
| **Model 6: Payment for coordination** | Payments are made to providers furnishing care coordination services that integrate care between providers. | 1. Determining whether providers receive performance-related bonuses (in some programs)<br>2. Evaluating the effectiveness of programs that seek to improve coordination-related performance. The approaches taken by programs within this PRM have tended to offer flexible financing to multidisciplinary teams of providers and then measure cost and health outcome measures to assess how cost and quality change over time.<br>3. Assessing negative consequences, including avoidance of certain types of patients or cases, particularly through patient experience measures<br>4. Assisting providers to identify opportunities for quality improvement and greater efficiency of care delivery |
| **Model 7: Hospital P4P** | Hospitals receive differential payments for meeting or missing performance benchmarks. | 1. Determining the amount of bonus payments or adjustments to the diagnosis-related groups (DRG) payment schedule<br>2. Measuring unintended adverse consequences of the PRM and monitoring performance trends in areas not targeted by P4P<br>3. Assisting hospitals to identify opportunities for quality improvement and greater efficiency of care delivery |

**Table S.1**

**Description of Payment Reform Models and Uses of Performance Measures**

| Payment Reform Model | Brief Description | Payment Incentive–Specific Uses of Performance Measurement |
|---|---|---|
| **Model 8: Payment adjustment for readmissions** | Payments to hospitals are adjusted based on the rate of potentially avoidable readmissions. | 1. Determining which readmissions are considered preventable<br>2. Determining which hospitals will be subjected to a payment penalty<br>3. Assisting hospitals to identify opportunities to improve the discharge transition<br>4. Measuring unintended adverse consequences of the PRM, such as assignment of admitting diagnoses to avoid the penalty |
| **Model 9: Payment adjustment for hospital-acquired conditions** | Hospitals with high rates of hospital-acquired conditions are subject to a payment penalty, or treatment of hospital-acquired conditions or serious reportable events is not reimbursed. | 1. Determining whether a payment is adjusted<br>2. Assisting hospitals to identify opportunities to improve safety<br>3. Measuring unintended adverse consequences of the PRM and monitoring performance trends in areas not targeted by the payment adjustment |
| **Model 10: Physician P4P** | Physicians receive differential payments for meeting or missing performance benchmarks. | 1. Determining adjustments to bonus payments or to fee schedules<br>2. Measuring unintended adverse consequences of payment models and monitoring trends in performance for areas not targeted by P4P<br>3. Identifying opportunities for quality improvement |

**Table S.1**

**Description of Payment Reform Models and Uses of Performance Measures**

| Payment Reform Model | Brief Description | Payment Incentive–Specific Uses of Performance Measurement |
|---|---|---|
| **Model 11: Payment for shared decisionmaking** | Payment is made for the provision of shared decisionmaking services. | 1. Evaluating the use of shared decisionmaking tools in improving patient decisionmaking and better aligning treatment choices with patient preferences<br>2. Certification of patient decision aids<br>3. Assessing the potential for unintended adverse consequences of tying payments to the shared decisionmaking process |

Table S.2 describes the 11 models with regard to four attributes relevant to performance measurement and performance-based incentives: (1) whether performance is measured for a predefined population, (2) whether performance is measured for a predefined episode of care, (3) whether performance is measured across more than one type of care delivery organization, and (4) whether the PRM incentive is a fee-for-service payment applied to one or more newly specified services.

**Table S.2**
**Attributes of Payment Reform Models**

| | Attributes | | | |
|---|---|---|---|---|
| **Model** | **Performance Measured for a Population** | **Performance Measured for an Episode of Care** | **Performance Measured Across More Than One Type of Delivery Organization** | **Fee-for-Service Payment Applied to One or More Newly Specified Services** |
| **Model 1: Global payment** | √√ | √ | √√ | |
| **Model 2: ACO shared savings program** | √√ | √ | √√ | |
| **Model 3: Medical home** | √√ | √ | √ | √ |
| **Model 4: Bundled payment** | √ | √√ | √√ | √ |
| **Model 5: Hospital-physician gainsharing** | √ | √ | √ | |

| | Attributes | | | |
|---|---|---|---|---|
| **Model** | **Performance Measured for a Population** | **Performance Measured for an Episode of Care** | **Performance Measured Across More Than One Type of Delivery Organization** | **Fee-for-Service Payment Applied to One or More Newly Specified Services** |
| **Model 6: Payment for coordination** | √ | √ | √ | √√ |
| **Model 7: Hospital P4P** | | √ | | |
| **Model 8: Payment adjustment for readmissions** | | √ | √ | |
| **Model 9: Payment adjustment for hospital-acquired conditions** | | √ | | |
| **Model 10: Physician P4P** | | √ | | |
| **Model 11: Payment for shared decisionmaking** | | √ | | √√ |

NOTES: √√ = key attribute of the PRM, √ = may be an attribute of the PRM, none = unlikely to be an attribute of the PRM.

The PRMs toward the top of the table tend to represent payment made to a group of providers and/or provider organizations to provide high-quality and efficient care to a defined population over time. The performance goals generally include a broader and more comprehensive

set of services than the goals defined for the models toward the bottom of the table. The PRMs at the top of the table may incorporate and combine elements of PRMs from rows at the bottom of the table. At the bottom of the table, payment is generally used to achieve relatively narrowly defined performance goals, and the payment is more frequently made to individual providers, rather than groups. PRMs in the middle of the table are blended with respect to each of the three dimensions. These models generally focus payment on specific sets (e.g., bundles) of services that are delivered during an episode of care.

Table S.3 briefly describes the near-term performance measurement needs defined by each PRM. The lists of near-term performance measurement needs are not intended to be comprehensive or exclusive. For each PRM, it is possible to imagine a program that includes all possible measures. Because the devotion of resources to measure development and implementation is likely to be limited, such a perspective would be uninformative. Instead, we have selected those measure needs that are likely to be of greatest interest within the context of each specific PRM.

**Table S.3**

**The Special Performance Measure Needs Created by Payment Reform Models**

| Payment Reform Model | Special Performance Measurement Needs of Payment Model |
|---|---|
| **Model 1: Global payment** | 1. Reflect the broad range of care services delivered and the multiple care delivery settings that participate in providing care to a population under the global payment (i.e., measures for physician groups, hospitals, emergency departments, post-acute care, and any other setting that may provide care under the global payment)<br>2. Include key indicators (such as health outcomes attributable to the care provided under the global payment), composite measures, or measure sets<br>3. Enable longitudinal, population-based measurement of the care services provided to the population covered by the global payment<br>4. Can be used within or across global payment programs that vary with respect to<br>a. the length of the time period addressed by longitudinal measurement and whether this time period is fixed or variable<br>b. the provider holding the global payment (e.g., integrated delivery system, hospital, or ambulatory provider group)<br>c. the range of providers that participate in the global payment<br>d. the range of services providers deliver under the global payment. |

**Table S.3**

**The Special Performance Measure Needs Created by Payment Reform Models**

| Payment Reform Model | Special Performance Measurement Needs of Payment Model |
|---|---|
| **Model 2: ACO shared savings program** | 1. Reflect the broad range of care services delivered and the multiple care delivery settings that participate in the ACO (i.e., measures for physician groups, hospitals, emergency departments, post-acute care, and any other setting that may be included in the ACO)<br>2. Include key indicators (such as health outcomes attributable to the care provided under the global payment), composite measures, or measure sets<br>3. Enable longitudinal, population-based measurement of the care services provided to the population enrolled in the ACO<br>4. Can be used within or across ACOs that vary with respect to<br>a. the length of the time period addressed by longitudinal measurement and whether this time period is fixed or variable<br>b. the features of the ACO management responsible for allocating the shared savings (e.g., integrated delivery system, hospital, or ambulatory provider group)<br>c. the range of providers that participate in the ACO<br>d. the range of services that providers deliver within the ACO. |
| **Model 3: Medical home** | 1. Reflect the adoption of care processes and structural capabilities (management features and health information technology) that enhance continuity and coordination of care<br>2. Assess whether care is patient-centered, including the outcomes of primary care, the patient experience, and patient and caregiver engagement with primary care |

**Table S.3**

**The Special Performance Measure Needs Created by Payment Reform Models**

| Payment Reform Model | Special Performance Measurement Needs of Payment Model |
|---|---|
| **Model 4: Bundled payment** | 1. Are related to the conditions targeted by the bundles<br>2. Are tailored to the care delivery settings that participate in delivering components of the care bundle (i.e., measures for hospitals as well as for individual physicians) or that can be used effectively across multiple care delivery settings in an episode-of-care framework<br>3. Can be used to detect negative consequences of the payment model (e.g., bundle-specific measures of appropriateness of care and the patient experience of care)<br>4. Assess coordination of care within and across episodes (or bundles) |
| **Model 5: Hospital-physician gainsharing** | 1. Apply to both the hospital and individual physicians covered by the gainsharing arrangement<br>2. Evaluate the specific treatments or procedures covered by the gainsharing arrangement<br>3. Are treatment-specific or procedure-specific, particularly to evaluate adverse consequences, such as avoidance of high-risk patients<br>4. Include patient health and safety outcomes. Measures of process should be chosen carefully to avoid the potential to "lock in" care processes that have acceptable or superior substitutes.<br>5. Assess care coordination, access, cost, and utilization |
| **Model 6: Payment for coordination** | 1. Assess whether care coordination activities are accomplished<br>2. Assess costs, service utilization, patient experience, and health outcomes of patients who receive care coordination services |

**Table S.3**

**The Special Performance Measure Needs Created by Payment Reform Models**

| Payment Reform Model | Special Performance Measurement Needs of Payment Model |
|---|---|
| **Model 7: Hospital P4P** | 1. Measure sets may be narrowly or broadly defined, depending on the number of performance goals included in the performance incentive.<br>2. A narrowly constructed set may focus on a specific domain of measurement, such as health care–associated infections (HAI). Other P4P measure sets may focus on patient outcomes, patient experience, costs of care, or access to care. For example, measurement may focus on the evidence-based safety processes associated with avoidance of preventable complications, such as HAI.<br>3. A broadly constructed measure set will blend payment incentives on measures from multiple domains.<br>4. P4P programs may also be included as components of other PRMs, such as the global payment or ACO shared savings PRMs. Hospital P4P may also be layered on top of a bundled payment program with hospital episodes defining bundles of care and performance measures defining the P4P adjustment to a bundled payment.<br>5. Structural capabilities of a hospital or credentials of hospital-based clinicians may determine eligibility for participation in a P4P program or eligibility for a differential payment. |
| **Model 8: Payment adjustment for readmissions** | 1. Emphasize aspects of care under the hospital's control and account for the clinical and sociodemographic risk characteristics of the hospital's patient population<br>2. Can be used to assess adverse outcomes (such as patient experience measures)<br>3. Can be used to understand the processes that influence the risk of readmission and can help to redesign the discharge transition to reduce readmission rates |

**Table S.3**

**The Special Performance Measure Needs Created by Payment Reform Models**

| Payment Reform Model | Special Performance Measurement Needs of Payment Model |
|---|---|
| **Model 9: Payment adjustment for hospital-acquired conditions** | 1. Enable identification and documentation of the occurrence of hospital-acquired conditions (e.g., treatment complications and other safety outcomes). Performance measurement within this model is used to document the occurrences of preventable hospital-acquired conditions. While the NQF publishes a list of serious reportable events that are considered preventable, these are rare events.<br>2. Provide an assessment of the preventability of these conditions. Hospital-acquired conditions used in measurement should be associated with evidence that they are preventable.[7]<br>3. Enable meaningful aggregation of conditions to form composite measures. In addition, measures of safety processes that can prevent such events may enable stakeholders to implement the PRM so that it is more likely to reduce the incidence of hospital-acquired conditions over time. |
| **Model 10: Physician P4P** | 1. Assess delivery of evidence-based chronic disease management, including care processes, patient outcomes, patient experience, and access to care<br>2. Include composites of measures across conditions to assure that clinicians do not focus on some aspects of care delivery to the detriment of others<br>3. Assess structural capabilities of physician practices to determine eligibility to participate in a P4P program or eligibility for a differential payment<br>4. Can be used to evaluate the quality of episodes of care (in combination with the bundled payment model)<br>5. Assess the appropriateness of care and efficiency of care delivery |

**Table S.3**

**The Special Performance Measure Needs Created by Payment Reform Models**

| Payment Reform Model | Special Performance Measurement Needs of Payment Model |
|---|---|
| **Model 11: Payment for shared decisionmaking** | 1. Can be used to assess patient and caregiver experience and patient and caregiver engagement<br>2. Include structural aspects of care, such as criteria for the certification of patient decision aids<br>3. Assess the process used to enable shared decisionmaking |

## THE POTENTIAL IMPACT OF PAYMENT REFORM MODELS ON PERFORMANCE MEASURE DEVELOPMENT

Any portfolio of performance measures generally reflects those quality problems that are concerning to health care stakeholders. Frequently, the concerns arise in relation to the payment mechanisms used to purchase health care services. During the past decade, performance measure developers have tended to specify measures for either a fee-for-service payment environment or a capitated health plan environment. Early efforts to develop measures for use in capitated health plans tended to focus on assessing underuse of preventive services and chronic care. Fewer measures focused on inappropriate service delivery, and very few prior measurement efforts have addressed the efficiency of care delivery. Our analysis suggests that new initiatives to base payment on performance measurement may create a new set of demands on performance measure developers.

There are several implications of the shift to a focus on measurement to support the emerging PRMs.

### Measure Development Should Be Guided by a Longitudinal Care Framework Rather Than a Discrete Service Focus

Many past performance measures have tended to focus on the delivery of discrete clinical services, such as preventive services, medications, or other treatments delivered at a specific point in time. Exceptions include the chronic disease measurement sets that address care processes delivered during a specified time frame (e.g., one year). Some of the PRMs we studied are built on a longitudinal care framework for services delivered to a population (global payment, ACO shared savings, medical home, bundled payment, and hospital-physician gainsharing). Episode-based measurement is not a new construct. Risk-adjusted mortality after hospitalization or surgery is an outcome measure that is used to assess an episode of hospitalization or surgery. However, developing and refining a variety of quality measures to address episodes of care will be an important step. Using a longitudinal measurement framework to develop measures will naturally emphasize health outcomes. In particular, the measurement of changes in functional status, morbidity, and quality of life will be attractive to clinicians to the extent that these results can guide clinical care. The selection of process measure sets should also be informed by the longitudinal framework.

**Complex Organizational Types May Benefit from Complex Measurement Strategies That Support Internal Incentive and Quality Improvement Models**

Some of the PRMs encompass a broad range of clinical activities and organizational types that must coordinate with one another (e.g., global payment and ACO shared savings) in contrast to others that target relatively narrowly specified goals for a specific organizational type (e.g., reducing hospital-acquired conditions or promoting the use of shared decisionmaking tools). Although it is also possible to set performance incentives on a few key indicators (e.g., population outcomes), the complex organizational types (meaning those organizations that encompass multiple specialized services that have not traditionally been merged together outside of integrated delivery systems) may have expansive measure needs in order to set incentives to providers internally (including outcome, process, and other measure types). While each organization could develop its own measures for internal use, nonstandardized measurement approaches may defeat the use of results for other purposes (such as public reporting). Standardized but flexible measure sets including both outcome and process that can serve P4P and other PRMs (independent of the ACO or medical home context) will also be useful to complex organizations.

Priorities for measure development may be unclear until these delivery models and their patient populations are more specifically defined. For example, it will be difficult to specify measures for an ACO without knowing the range of providers and delivery organizations that will participate. The creation of composite measures may be especially challenging until the ACO organization is better defined.

**Composite Measures Will Be Important in an Episode-Based Payment Framework**

Composite measures that combine clinical process measures or process and outcome measures longitudinally will be desirable in an episode-based measurement framework. A recent paper summarizes some of the considerations in choosing composite measure sets for specific purposes.[8]

**Efficiency of Care Measures May Be Useful**

Containing costs is a goal of most of the PRMs either directly (through the fixed base payment of models, such as the global payment PRM) or indirectly (through bonuses that improve quality and reduce the need for future care, such as the physician P4P PRM). While assessment of

costs may be necessary to set or negotiate payment amounts, measurement of costs is not necessary once a cost-containing incentive is established. In the context of the cost-containing incentive, performance measurement is used primarily to counteract the potential quality deficits that could arise from actions taken to reduce costs (e.g., reducing services). Given the challenges of developing measures of efficiency, some observers have favored measuring cost or resource use (especially relative resource use). Cost and resource use can be difficult to interpret in the absence of accompanying measures of quality (to form efficiency measures) or case-mix or risk adjustment. Setting payment adjustments based on reductions in resource use or cost may undermine quality.

Identifying and rewarding efficient care is desirable. Efficiency measures could be useful.[9] However, few efficiency measures have been developed to date, and such measures are very challenging to develop. Measuring appropriateness or overuse of services can be useful in some of the PRMs (e.g., hospital and physician P4P). For example, P4P bonuses could be set based on efficiency measure results. The bundled payment PRM requires payers to establish payment amounts that account for the cost of a bundle of services delivered efficiently. Thus, the bundle includes an implicit efficiency consideration by defining an optimal set of services (and their associated cost) to set a payment rate. Gainsharing programs set implicit targets related to cost but do not define efficiency explicitly.

**Blended Payment Models Will Rely on Blended Measurement Strategies**

Where payment models are blended, the measurement strategies may be adapted across models. Addition of P4P to a global payment strategy has been accomplished under the Alternative Quality Contract of Blue Cross Blue Shield of Massachusetts. Likewise, the use of bundled payment may be readily combined with other payment models. The measures developed for use in these other payment models can be readily integrated into the more complex payment models.

**Structure-of-Care Measures Will Be Required for Some Models, at Least in the Near Term**

Some of these measures will take the traditional form of structure used in accreditation programs. These typically assess the presence or absence of a feature without further assessing its functionality. For example, computerized order entry systems can be present but not used. The recent approach in legislation that defines “meaningful use” of health information technology

(HIT; translated by the Department of Health and Human Services into operational criteria for functionality) represents an example of this more sophisticated approach to assessing the structure of care.[10] The medical home, payment for care coordination, and payment for shared decisionmaking models require the specification of criteria to enable certification that a provider or organization has basic capabilities. Medical home criteria define capabilities related to care management, access, and HIT. Shared decisionmaking payments will depend on the use of certified decision aids and, possibly, processes, and payments for care coordination will require criteria for certifying the coordinating provider or organization.

## CONCLUSIONS

The signing of PPACA into law in 2010 is likely to accelerate payment reform based on performance measurement. This technical report is intended to inform multiple stakeholders about the principal PRMs and the status of performance measures in these models and programs. The report summarizes the characteristics of PRMs and the performance measure needs they will generate. Finally, the report identifies the near-term measure development opportunities that may best accelerate the successful implementation of performance measurement in these models.

The report is also intended to create a shared framework for analysis of future performance measurement opportunities. Much measure development, implementation, and evaluation remains to be accomplished. Even for models with a track record of implemented programs and evaluation (such as the hospital and physician P4P models), measure sets have not reached their full potential. These programs were important first steps showing that payment based on performance is feasible even with the relatively limited measure sets available today. Barriers to a fully operational performance measurement system in health care can be overcome with careful planning and integration of care delivery systems, investments in measure development and testing, and investments in the development of valid and reliable data sources that have adequate clinical data to support new measures.

Ongoing and planned demonstration projects and their evaluations will offer valuable lessons about the measures needed to implement these and future PRMs. Investing in infrastructure that improves the available data for performance measurement will be a necessary precursor to successful deployment of new types of measures. Carefully bridging payment reform and performance measurement while attending to the potential adverse unintended consequences should optimize the health of Americans and assure that care is affordable in the future.

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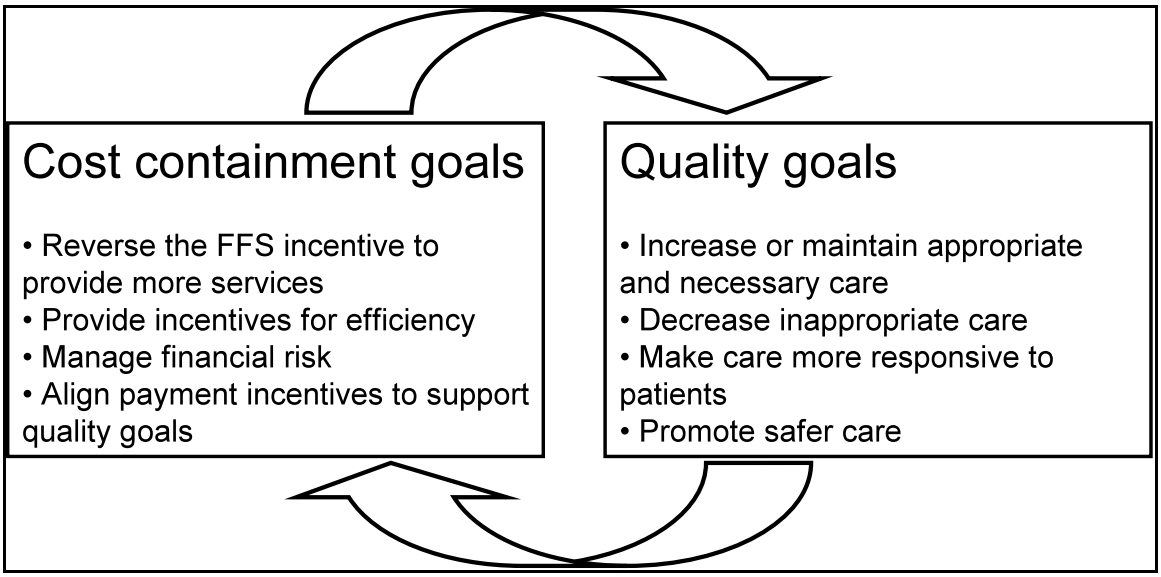
# CHAPTER ONE: BACKGROUND

Insurers and purchasers of health care in the United States are on the verge of potentially revolutionary changes in the approaches they use to pay for health care.[1] While the traditional fee-for-service payment model has been altered or joined by payment reforms, including prospective payment for hospitals in the 1980s and health plan and medical group capitation in the 1990s, critics continue to assert that the persistent use of fee-for-service payment is increasing the volume and intensity of services without enhancing the quality of care or its efficiency.[2] Specifically, fee-for-service payment may contribute to the overuse of services with little or no health benefit and does not foster coordination of care across providers and care delivery organizations.[3]

Recently, purchasers and insurers have been experimenting with payment approaches that include incentives to improve quality and reduce the use of unnecessary and costly services.[3,4,5] The federal government has given a new impetus to these payment approaches within the Patient Protection and Affordable Care Act (PPACA) of 2010.[6] These payment approaches are designed to achieve two interrelated goals: quality improvement and cost containment (Figure 1.1). Cost containment is to be achieved by reversing the incentives under fee-for-service payment to increase the use of services by shifting some amount of financial risk to providers, spurring them to consider the costs of their decisions. The introduction of financial risk in payment models may have mixed consequences for quality. On the one hand, financial risk may promote high quality by motivating providers to reduce rates of overuse of inappropriate services. On the other hand, financial risk may lead providers to reduce services that are important to high-quality care or to impede access to care.

**Figure 1.1**
**Goals of Payment Reform Models**




To address the risks to quality that may emerge in the transition away from fee-for-service payment, proposed new payment reform models (PRMs) do more than simply introduce new ways to pay for services. They include explicit measures of quality and tie payment to performance on those measures so that quality improvement will be driven by financial incentives to providers for the use of clinically appropriate services, efforts to make care more patient-centered through coordination and integration of a patient's care among providers, and incentives to invest in patient safety.

As this discussion implies, PRMs will have to be designed and implemented carefully in order to ensure that both the cost containment and quality goals are achieved. Furthermore, performance measurement and reporting are a crucial component of new payment models. The potential reliance on performance measures to address both cost containment and quality goals is already placing new demands on the performance measure development enterprise. Measures will be needed to perform several important functions in new payment systems, including two that are central to this report:

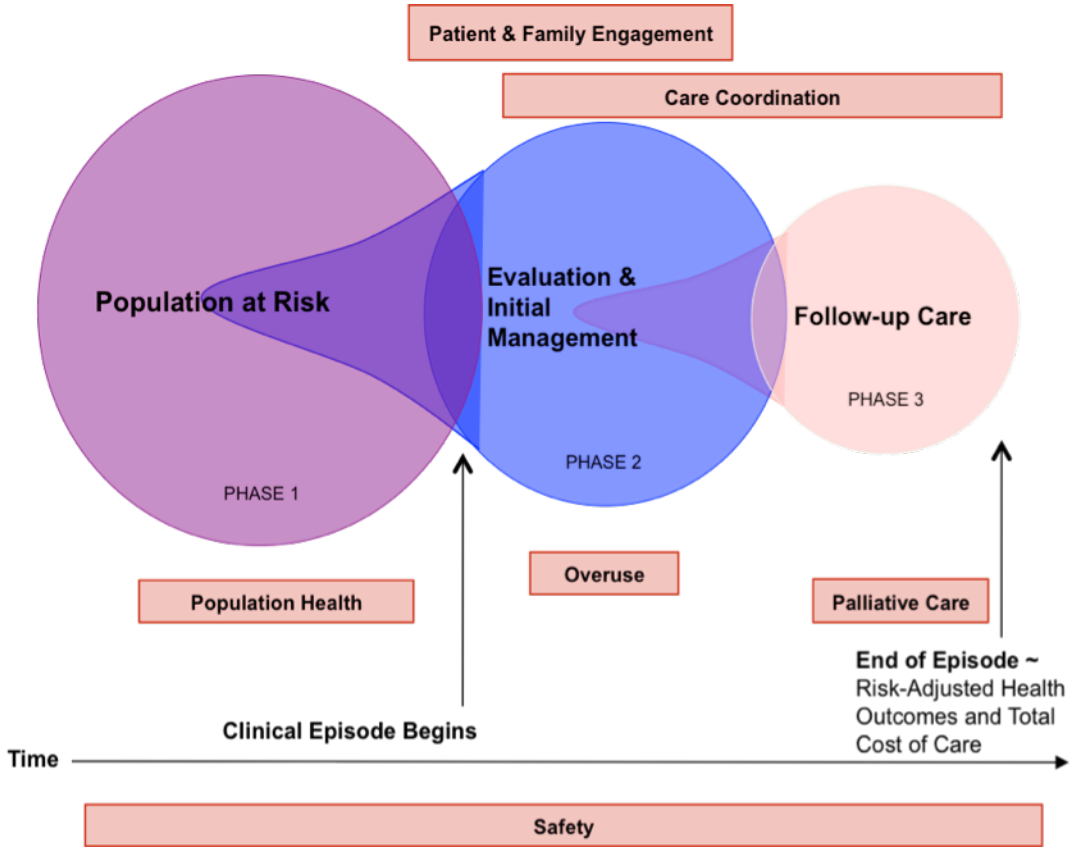
- *Setting performance-based payment incentives.* New PRMs typically create performance incentives by adjusting payment amounts based on measured performance (e.g., determining whether a payment occurs and the amount of a payment or determining nonpayment for services if they are linked to poor-quality care).

- *Protecting against unintended adverse consequences of cost containment.* PRMs may create unintended adverse consequences, such as avoidance of some high-risk or high-cost patients by providers, other barriers to access, and underuse of evidence-based services. Measurement approaches will be needed to identify and ameliorate these unintended consequences.

The field of performance measurement has made impressive strides in the decades since Donabedian first described a framework for quality measurement.[10] Since 1986, when the Centers for Medicare and Medicaid Services (then the Health Care Financing Administration) published the risk-adjusted mortality rates of U.S. hospitals, hundreds of measures addressing many additional aspects of care have been developed.[11] Standardized instruments for eliciting the views of patients and consumers about their experiences with care are now routinely in use. Risk-adjustment models have become more sophisticated. Electronic health records and the exchange of health information have the potential to provide valid and reliable data at lower cost. Through acquisition of interoperable electronic health records and the creation of standards for health information exchange, it is believed that performance measurement may soon be derived with greater efficiency using the detailed clinical data that such a health information framework may provide.[12] This new effort may create multiple new opportunities for performance measurement and also solve some of the vexing problems that have prevented progress in the past.

Reflecting these developments, the National Quality Forum (NQF) has created an integrated measurement framework that situates performance goals and associated measures within the continuum of care for a patient or a population (Figure 1.2). This integrated framework reflects an episode of care, taking into account preventive, acute, and post-acute phases. The six national priorities identified by the National Priorities Partnership further emphasize six aspects of care that should be addressed as patients move through an episode: population health, patient and family engagement, safety, care coordination, palliative and end-of-life care, and overuse. The integrated framework for performance measurement, which focuses on longitudinal and cross-cutting performance, offers guidance for the development and endorsement of measures that will be needed for multiple purposes.

**Figure 1.2**
**National Quality Forum Integrated Measurement Framework**




The purpose of this report is to provide information about the current status of performance measurement in the context of payment reform and to identify near-term opportunities for performance measure development. The report is intended for the many stakeholders tasked with outlining a national quality strategy in the wake of health care reform legislation. Through a subcontract to NQF, a team of investigators at RAND used a rigorous and selective process to create a catalog of payment reform programs that includes demonstration projects, as well as those outlined in legislation. Based on the features of these programs, each was categorized into one of 11 PRMs. Next, the models and their programs were analyzed to describe the rationale for performance measurement, to identify the performance measures available to the model, and to assess its unmet measure needs. Finally, a set of near-term measure development opportunities and implementation challenges were explored to inform the direction of future measure development.

The use of performance measurement and reporting in health care is a vast and complex topic. Performance measures have many other functions in addition to their use to set payment incentives. Of necessity, this report focuses on the two functions noted above and limits the scope of discussion to these functions. The report does not address the following issues:

- *Measures of "financial performance," such as total spending on services or resource use that may be used by payers to negotiate payment amounts with providers, are not addressed.* These "accounting" measures are a focus of the report only if they are closely linked to quality measures within an efficiency framework.

- *Other applications of performance measurement and reporting are not addressed unless they are an intrinsic part of the PRMs.* These other applications include the use of performance measures to

    - monitor progress toward improvement goals
    - inform consumers and purchasers to enable selection of providers
    - stimulate competition among providers
    - stimulate innovation
    - promote the "values" of the health system.

- *Variations in the implementation of actual incentives and the distribution of payments between health plans, hospitals, provider groups, and individual providers are beyond the scope of the report.* Many payment models are complex and not yet fully specified, making it difficult to assume any specific configuration of payers, providers, and incentives. However, where such configurations would affect the performance measure development and implementation, we note this.

- *PRMs relevant to hospitals, physicians, and other medical providers are emphasized.* Long-term care, home health, ambulatory surgery, and many other delivery organizations are obviously critically important. These organizations have participated in payment reform experiments, and they are addressed in health reform legislation. Nevertheless, to make the scope of the discussion manageable, we have elected to focus on hospital and physician PRMs. Results and lessons from these models could be applicable to payment reform programs developed for these other organizations.

## CHAPTER TWO: SUMMARY OF TECHNICAL APPROACH

The goal of this project was to describe the performance measurement needs created by current and emerging payment reform approaches, to assess the suitability of existing performance measures to support these needs, and to suggest near-term opportunities for performance measure development that would support these needs effectively going forward. This report summarizes the findings for use by multiple stakeholders as they chart a course of action on payment reform and performance measurement.

To achieve the goal, RAND, in consultation with NQF staff, carried out the following tasks (see Figure 2.1):

*1. Scan of payment reform programs to derive PRMs*

We conducted a scan of payment reform programs, created a standard characterization of their key attributes, and classified the payment reform programs into 11 key PRMs. We prioritized the selection of payment reform programs from the following sources:

- *Health reform legislation and other government sources*. This category included both the PPACA and state legislation, as well as government demonstrations and pilots.

- *Private sector programs.* This category included programs designed and implemented by insurers, health systems, hospitals, and other provider organizations.

- *Other proposed programs.* This category included programs proposed in publications by academics, foundations, nonprofit advocacy organizations, and advisory groups.

*2. Selection of payment reform programs to highlight features of PRMs*

For each PRM, we selected illustrative programs that highlight the essential features of the PRM and key variations in program design. The criteria used to select highlighted programs included the likelihood that the program would be implemented, the level of innovation, the stage of development, the extent of a performance measurement component, and potential impact. From

these highlighted programs, we created more-detailed descriptions of the models for use by stakeholders and to inform the analyses of performance measure needs.

*3. Analysis of the rationale for use of performance measures in the model and the suitability of available performance measures*

For each PRM, we carried out the following analyses:

(a) The rationale guiding selection of performance measures and payment-incentive–specific uses of measurement in the model, including consideration of the use of performance measurement to set payments, as well as its use to serve other purposes, such as monitoring for potential adverse effects of the payment incentives. We used available program documentation, as well as assessments by RAND researchers, to develop the rationale for each PRM.

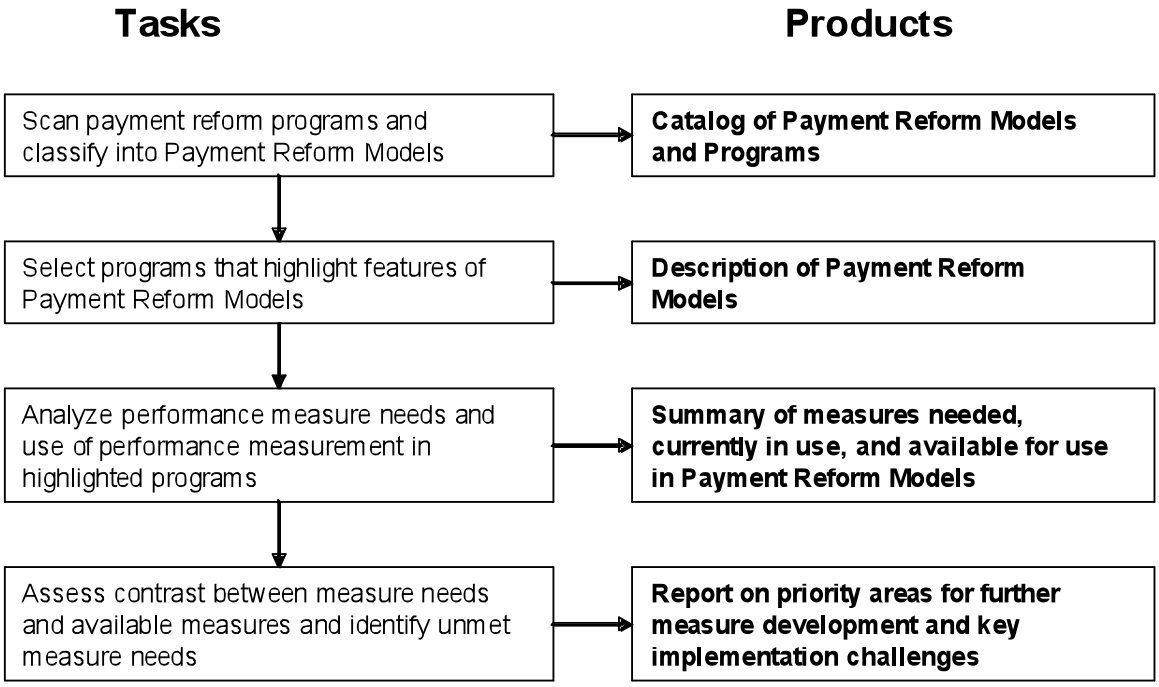
(b) An overview of the use of performance measurement in the highlighted payment reform programs. We used available program documentation to assess which performance measure domains and care delivery settings were addressed by each highlighted payment reform program. The categories used to describe measurement domains and care delivery settings were supplied by NQF (see Table 3.1). We documented whether the specification of performance measurement included named measures or measure sets, customized measures or measure sets, general statements about measures to be specified or developed at a later date, or no mention of measures for that domain or setting.

(c) An analysis of the suitability of available measures, including the contrast between available measures, the unmet measure needs of the PRM, and the implementation challenges associated with measure implementation. To anchor the comparison, we used two other sources as general comparators for the availability of measures: (1) the list of currently NQF-endorsed performance measures (available at http://www.qualityforum.org/Measures_List.aspx) and (2) the list of measures from the Agency for Healthcare Research and Quality (AHRQ)–sponsored National Quality Measures Clearinghouse, a comprehensive, searchable, web-based repository of performance measures currently in use (available at http://www.qualitymeasures.ahrq.gov/).

*4. Assessment of the gap between measures needed and available measures to identify unmet measure needs*

For each PRM, we assessed the unmet measure needs that emerged from the analysis of the gap between needed and available measures. The near-term opportunities for measure development depend on the current status of developed measures and the potential for new measure development. The potential to fill current gaps in measure development is dependent on a number of implementation challenges and the likelihood that those challenges can be addressed by innovative methodologies that can enhance the validity, reliability, and feasibility of performance measurement. For each PRM, we highlighted the implementation challenges that seemed especially pertinent to that model.

**Figure 2.1**
**Project Tasks and Products**




In conducting the analysis, we focused on four aspects of performance measures that are highly relevant to measure development, implementation, and use:

(1) the domain of measurement
(2) the applicable care delivery settings

(3) the health conditions, treatments, and procedures addressed
(4) selected implementation challenges.

As a working set of domains, we used NQF's defined set of measure domains and subdomain categories, which are listed in Table 2.1. To address care delivery settings, we used an NQF-defined list of care delivery settings, which refers to the types of facilities or organizations where care is delivered, such as primary care clinics, hospitals, or long-term care facilities. Often, the care delivery setting is also the location that generates the data needed for performance measurement. For our analysis of health conditions, treatments, and procedures, we referred to standard lists of diseases, health states, and the full range of treatment options and therapeutic procedures (surgical and nonsurgical) that are the clinical focus of performance measurement. Our analysis considered all of the clinical services that constitute health care delivery, including cognitive services and preventive services.

**Table 2.1**

**NQF Measurement Domain Definitions**

| NQF Measurement Domain | | | Measure Definition |
|---|---|---|---|
| Outcome | Mortality | | All mortality measures, including disease-specific or all-cause, reported for a specific time period |
| | Health status | Morbidity | Intermediate outcome measures that describe level of health or disease |
| | | Functional status | Measures that report patient ability to perform activities of daily living (e.g., bathing, toileting, dressing, eating) or instrumental activities of daily living (e.g., medication management, shopping, food preparation) |
| | | Health-related QoL | Measures related to patient self-perception of quality of life; usually based on patient survey |
| | Safety outcomes | | Measures assessing outcomes of poor safety practices and/or of safety practices meant to reduce harm (e.g., medication administration errors) |
| | Patient experience/satisfaction | | Measures that use feedback from patients and their families about their experience with care (e.g., CAHPS, other patient surveys) |
| | Other outcome | | Other outcome measures not elsewhere specified |
| Process | Population health | Preventive services | Measures related to health care services that prevent disease or its consequences. It includes primary, secondary, and tertiary prevention. |
| | | Healthy behaviors | Measures associated with any activity undertaken by an individual, regardless of actual or perceived health status, for the purpose of promoting, protecting, or maintaining health, whether or not such behavior is objectively effective towards that end |
| | Clinical care | | Measures assessing adherence to processes of care (e.g., aspirin at arrival, foot exam for diabetics, etc.) |
| | Care coordination | | Measures assessing relationship and communication between providers and patients, including plan of care development and follow-up; follow-up to tests, referrals, etc.; availability of patient information to necessary caregivers/patient/family members; information systems to support coordination (e.g., registries, health data exchange among providers); and care transition issues (e.g., medication reconciliation, communication between providers, etc.) |

| | | | |
|---|---|---|---|
| | Patient/family/caregiver engagement | | Measures assessing involvement of patient and family in decisionmaking around care |
| | Safety practices | | Measures whose primary purpose is to prevent harm while participating in the health care system |
| | Other process | | Other process measures not elsewhere specified |
| Cost/ resource use | Per capita | | Annual spending on health care per person |
| | Episode | | Measures that may be applied across a course of an episode of illness |
| | Service | Imaging | Measures related to the use of outpatient imaging |
| | | Hospital LOS | Measures related to length of stay, such as in an inpatient facility |
| | | Hospital readmits | Measures related to *N*-day readmissions |
| | | ER/ED visits | A measure tied to utilization of the emergency department |
| | | Antibiotic prescribing | A measure tied to overuse or misuse of antibiotics |
| | | Other | Measures related to service use that are not specified elsewhere |
| | Other cost/resource use | | Measures related to cost or resource use that are not specified elsewhere |
| Structure | HIT utilization | | Measures related to the use of HIT (a global term that encompasses electronic health records and personal health records and indicates the use of computers, software programs, electronic devices and the Internet to store, retrieve, update and transmit information about patients' health) |
| | Management | | Measures related to the presence or absence of certain management features |
| | Other structure | | Other structure measures not elsewhere specified |
| Access | | | Measures that assess the ability to obtain needed health care services in a timely manner |
| Composite | | | A measure that is the combination of two or more separate measures |
| Other measurement domain | | | Other measures not elsewhere specified |

SOURCE: National Quality Forum, 2010.

NOTES: QoL = quality of life, CAHPS = Consumer Assessment of Healthcare Providers and Systems, LOS = length of stay, ER = emergency room, ED = emergency department.

For each PRM, we analyzed implementation challenges using the checklist in Table 2.2 to identify the most salient issues. Most of these implementation challenges have been identified in other measurement programs over the past three decades. For many of these issues, methodological solutions have been developed and can be refined to improve the validity and reliability of performance measure results.

**Table 2.2**
**Selected Implementation Challenges Relevant to Payment Reform Models**

| Implementation Challenge | Issue Relevant to Payment Reform Models |
|---|---|
| Attribution of performance results | How is it assured that the results of a performance measure are attributable to the providers and organizations that are included in the payment for the patient's care? |
| Data sources | Do available or potential data sources provide valid and reliable data for the calculation of performance results? |
| Sample size | For a given performance measure, are sufficient numbers of observations available to estimate performance and make comparisons among providers or organizations with a reasonable degree of confidence? |
| Aggregation | How can observations be combined (across providers, organizations, patients, conditions, etc.) in a valid way to increase the precision of performance measurement results? |
| Exclusion criteria | Do denominator samples exclude individuals who should not receive the indicated care? |
| Risk adjustment | What data and modeling techniques are available to address differences in the populations that receive care from different providers and organizations so that comparisons are accurate and fair? |
| Benchmarks | Can expected rates of performance be derived from clinical criteria or comparative performance data to enable the setting of performance thresholds that may trigger payment? |

# CHAPTER THREE: RESULTS—PAYMENT REFORM MODELS, HIGHLIGHTED PROGRAMS, AND ANALYSIS OF PERFORMANCE MEASURE NEEDS FOR EACH MODEL

## OVERVIEW OF PAYMENT REFORM MODELS

Table 3.1 lists the 11 PRMs that we identified and provides a brief description of the manner in which payments are made under each model.

**Table 3.1**
**Payment Reform Models**

| Payment Reform Model | Brief Description |
|---|---|
| **Model 1: Global payment** | A single per-member per-month payment is made for all services delivered to a patient, with payment adjustments based on measured performance and patient risk. |
| **Model 2: ACO shared savings program** | Groups of providers that voluntarily assume responsibility for the care of a population of patients (known as accountable care organizations [ACOs]) share payer savings if they meet quality and cost performance benchmarks. |
| **Model 3: Medical home** | A physician practice or other provider is eligible to receive additional payments if medical home criteria are met. Payment may include calculations based on quality and cost performance using a pay-for-performance–like (P4P-like) mechanism. |
| **Model 4: Bundled payment** | A single "bundled" payment, which may include multiple providers in multiple care settings, is made for services delivered during an episode of care related to a medical condition or procedure. |
| **Model 5: Hospital-physician gainsharing** | Hospitals are permitted to provide payments to physicians that represent a share of savings resulting from collaborative efforts between the hospital and physicians to improve quality and efficiency. |
| **Model 6: Payment for coordination** | Payments are made to providers furnishing care coordination services that integrate care between providers. |

| | |
|---|---|
| **Model 7: Hospital P4P** | Hospitals receive differential payments for meeting or missing performance benchmarks. |
| **Model 8: Payment adjustment for readmissions** | Payments to hospitals are adjusted based on the rate of potentially avoidable readmissions. |
| **Model 9: Payment adjustment for hospital-acquired conditions** | Hospitals with high rates of hospital-acquired conditions are subject to a payment penalty, or treatment of hospital-acquired conditions or serious reportable events is not reimbursed. |
| **Model 10: Physician P4P** | Physicians receive differential payments for meeting or missing performance benchmarks. |
| **Model 11: Payment for shared decisionmaking** | Reimbursement is provided for shared decisionmaking services. |

We grouped payment reform programs into 11 PRMs that create demand for performance measures. These models vary on several dimensions. All models can be designed to address cost containment and quality improvement goals, although the relative emphasis of quality improvement and cost containment may vary across models. Some models that emphasize the performance of new services (medical home, payment for coordination, payment for shared decisionmaking) may increase costs in the short term, but with the intent of reducing other costs through more effective management of care. Other PRMs create financial disincentives by reducing payment for services that may be markers of poor quality (readmissions, hospital-acquired conditions).

The 11 models vary in the extent to which they alter current payment methods, the scope of patients and services affected, and the providers who are subject to the new payment arrangements. Therefore, the model incentives and purposes of performance measurement also vary substantially between models. Even within a particular model, different implementations may vary on these dimensions. However, there are some general patterns of relationships between the models that can be helpful in comparing their performance measurement needs.

Table 3.2 describes the 11 models with regard to four attributes relevant to performance measurement and performance-based incentives: (1) whether performance is measured for a predefined population, (2) whether performance is measured for a predefined episode of care, (3) whether performance is measured across more than one type of care delivery organization, and (4)

whether the PRM incentive is a fee-for-service payment applied to one or more newly specified services.

**Table 3.2**
**Attributes of Payment Reform Models**

| | Attributes | | | |
|---|---|---|---|---|
| **Model** | **Performance Measured for a Population** | **Performance Measured for an Episode of Care** | **Performance Measured Across More Than One Type of Delivery Organization** | **Fee-for-Service Payment Applied to One or More Newly Specified Services** |
| **Model 1: Global payment** | √√ | √ | √√ | |
| **Model 2: ACO shared savings program** | √√ | √ | √√ | |
| **Model 3: Medical home** | √√ | √ | √ | √ |
| **Model 4: Bundled payment** | √ | √√ | √√ | √ |
| **Model 5: Hospital-physician gainsharing** | √ | √ | √ | |
| **Model 6: Payment for coordination** | √ | √ | √ | √√ |
| **Model 7: Hospital P4P** | | √ | | |

| | Attributes | | | |
|---|---|---|---|---|
| **Model** | **Performance Measured for a Population** | **Performance Measured for an Episode of Care** | **Performance Measured Across More Than One Type of Delivery Organization** | **Fee-for-Service Payment Applied to One or More Newly Specified Services** |
| **Model 8: Payment adjustment for readmissions** | | √ | √ | |
| **Model 9: Payment adjustment for hospital-acquired conditions** | | √ | | |
| **Model 10: Physician P4P** | | √ | | |
| **Model 11: Payment for shared decisionmaking** | | √ | | √√ |

NOTES: √√ = key attribute of the PRM, √ = may be an attribute of the PRM, none = unlikely to be an attribute of the PRM.

The PRMs toward the top of the table tend to represent payment made to a group of providers and/or provider organizations to provide high quality and efficient care to a defined population over time. The performance goals generally include a broader and more comprehensive set of services than the goals defined for the models toward the bottom of the table. The PRMs at the top of the table may incorporate and combine elements of PRMs from rows at the bottom of the table. At the bottom of the table, payment is generally used to achieve relatively narrowly defined performance goals, and the payment is more frequently made to individual providers, rather than groups. PRMs in the middle of the table are blended with respect to each of the three

dimensions. These models generally focus payment on specific sets (e.g., bundles) of services that are delivered during an episode of care.

Table 3.2 illustrates some of the shared characteristics of selected models. For instance, under the global payment, ACO shared savings, and medical home models, payment is made to a group of providers and/or provider organizations *to provide care to a defined population during a period of time*. Reflecting the breadth of accountability under these PRMs, the performance goals are broad and comprehensive. Because of similarities in the structure and intent of the global payment and ACO models, they share many core measurement needs, as described below. In particular, a key need in both models is for measurement of care and its costs for a population of patients across care delivery settings and over time. The focus on population-based measurement distinguishes these models from the others we identified, which are more narrowly focused on selected groups of patients defined by having received a diagnosis, treatment, procedure, or service.

Among the key distinctions between the global payment model and the ACO shared savings model is the potentially broader scope of provider organizations that might be included in an ACO. For example, global payments may be made to a multispecialty group, with separate payments made to hospitals and other facilities. ACOs, on the other hand, might include not just a multispecialty group but also hospitals and other delivery organizations.

Under the medical home, bundled payments, hospital-physician gainsharing, and payment for coordination models, payment is made to a group of providers and/or provider organizations *to deliver specified sets of services to a population during a period of time or throughout an episode of care*. In contrast to the broad and comprehensive performance goals of the global payment and ACO shared savings models, these PRMs focus on specific sets (e.g., bundles) of services aggregated across episodes of care. The episode may be defined as primary or chronic care over the course of a year (medical home), a defined clinical episode (bundled payment), or a defined episode based on a utilization event (surgical procedure or the coordination of a transition between settings, such as hospital and ambulatory care or home care). The measurement activities for these PRMs need to span the care delivery settings and sets of services covered by the payments but generally do not need to reflect the full range of population-based care covered by the global payment or ACO shared savings models. The specific measurement needs vary across these PRMs.

Under the hospital P4P, payment adjustment for readmissions, payment adjustment for hospital-acquired conditions, physician P4P, and payment for shared decisionmaking models, payment is made (or not made) to a group of providers and/or provider organizations. Although P4P programs can, in theory, be quite broad in scope, in practice these models target specific performance goals and typically include only patients who receive care from the hospital or physician (as opposed to populations defined by other characteristics). These PRMs address specific types of providers and services, typically involving an adjustment to an underlying payment model. These PRMs may be incorporated as payment components of any of the models described above.

While a program designed for each PRM could stand alone (because payment adjustments for readmissions can be done in isolation), many payment reform programs blend elements of multiple models. For example, a global payment program or bundled payment program may incorporate P4P incentives. A hospital P4P program might include measures of inpatient readmissions. An accountable care organization could include medical homes.[13] These blended models can be used to set complex incentives that may address multiple important performance goals.

## OVERVIEW OF PERFORMANCE MEASURES CURRENTLY IN USE OR PROPOSED FOR THE PAYMENT REFORM MODELS

Table 3.3 summarizes the measures in use or proposed within each of the 11 PRMs with respect to the following areas:

(1) *The care delivery organizations and/or providers that would typically receive payment under the model.* The unit of payment and the unit of measurement should be the same if performance is to serve as a basis for payment incentives. That is, the measure results should be attributable to the providers or care delivery organizations that provide care (e.g., services) and should reflect achievement by those providers or organizations of the specified performance goals for patients or populations.

(2) *The types of measures in use in one or more highlighted payment reform programs.* This information is based on a review of available documentation for the highlighted programs that we selected in each PRM and provides a sense of what types of measures are available for use. To be

included in this category, a highlighted program must have named a specific measure in its documentation (corresponding to dark gray boxes in the tables in Appendix B).

(3) *The types of measures that have been proposed for use in a highlighted payment program but have not yet been used.* This information is also based on a review of available documentation for the highlighted programs but reflects measurement areas where no specific measure has been named or implemented (corresponding to the light gray boxes in the tables in Appendix B).

Table 3.3 reveals wide variation in the degree to which types of measures are in use in payment reform programs. It also shows wide variation in the availability of measure types that have been developed but have not yet been used in the payment reform programs we studied. This variation is driven by a number of factors:

- The PRMs vary significantly in their stage of evolution. Some of the PRMs have been implemented widely, while others have only been proposed. The most extensive experience to date is with two PRMs: Hospital P4P and Physician P4P. P4P PRMs are grounded in process and outcome measures reflecting a focus on quality measurement. As currently implemented, these two models have incorporated few cost-reducing incentives. Experience with potentially cost-reducing models is less complete. For example, the payment for shared decisionmaking model has not been implemented in a payment context at this time.

- Some of the PRMs (e.g., payment adjustment for readmissions, payment adjustment for hospital-acquired conditions, payment adjustment for shared decisionmaking) have narrowly focused objectives compared to other models. For these narrowly focused PRMs, refinement of the measurement strategy for readmission (e.g., targeting condition-specific or condition-related readmissions) or hospital-acquired conditions (e.g., continually developing and refining the NQF list of serious reportable events) will be more important than creating new measure sets within these models. As they target important goals, these narrowly focused models will be well suited for inclusion and integration with other PRMs.

- We identified some types of measures as "in use," but within these measure sets some measures may be well-developed, refined, and implemented, while others have not been fully specified yet. For example, measures of care coordination may be "in use" in a global payment program, but there are few of them, they may be rudimentary, and they may not

have been extensively tested. Recognizing this, we classify the care coordination measure type as both "in use" (see Table 3.3) and also as a priority area for further development (see Table 3.4).

By organizing our analysis using 11 PRMs, we provide a framework to systematically address this variation that can guide discussions about how best to invest resources in performance measure development, refinement, pilot testing, and implementation.

**Recipients of Payment and Implications for Performance Measurement**

Table 3.3 emphasizes that most current payment reform programs are designed to change payments to three main types of care delivery entities: the hospital, the ambulatory practice, and the individual physician. In the near term, these entities will remain a high priority for measure development. Taken together, they account for a significant amount of health care spending. Much of the data needed to measure performance are available for these organizational types. In addition, they are increasingly adopting electronic health records, which will improve the availability of clinical data needed to support performance measurement.

However, this framing is not meant to limit performance measure development. As operational impediments, such as data availability, are overcome, entities other than hospitals and ambulatory practice groups that are critically important to health care delivery will also require performance measures that support new PRMs. Ambulatory surgical centers, long-term care, skilled nursing facilities, and home health care have invested heavily in the creation of clinical data registries that can serve the needs of performance measurement and may be adapted to support PRMs. While this report has not focused explicitly on these other organizations (except in descriptions of payment reform programs), we note that PPACA includes provisions related to these other organizational types. In addition, nonphysician professionals have critical roles on care delivery teams. The PRMs we describe, the associated measurement needs, and the challenges will be similar to those involving hospitals and physicians. We anticipate that this report will provide a framework for approaching performance measurement and payment reform that can be extended and refined to apply to these other settings and professionals.

The number and sophistication of measures in use varies across programs within each model. This is described for each of the PRMs in the next chapter, and additional details of these analyses are provided in Appendix B. Tables 3.2 and 3.3 summarize the results of our analysis across the models that are described in the next section.

**Table 3.3**
**Summary of Current and Proposed Performance Measures for Payment Reform Models**

| | PAYMENT REFORM MODEL | | |
|---|---|---|---|
| | **1. Global Payment** | **2. ACO Shared Savings Program** | **3. Medical Home** |
| **Care delivery organizations and/or providers that would typically receive payment** | Integrated delivery system, multispecialty group practice, other aggregated provider groups and organizations | Integrated delivery system, multispecialty group practice, other aggregated provider groups and organizations | Ambulatory group practices and/or individual physicians (primary care) |
| **Types of measures in use in one or more highlighted payment programs** | • Mortality<br>• Morbidity (disease and treatment complications)<br>• Safety outcomes*<br>• Patient experience*<br>• Preventive services<br>• Healthy behaviors<br>• Clinical care processes<br>• Care coordination* (patient survey)<br>• Safety practices* (infection control)<br>• Inappropriate resource use (e.g., imaging, antibiotic prescribing) | • Morbidity (disease and treatment complications)<br>• Clinical care processes<br>• Care coordination* (patient survey)<br>• Preventive services | • Clinical care processes<br>• Preventive services<br>• Access*<br>• Patient experience*<br>• Patient engagement*<br>• Care coordination (survey)<br>• Organizational capabilities, including care management practices and meaningful use of HIT |
| **Types of measures that have been proposed for use in a highlighted payment program but not used** | • Functional status (longitudinal change)<br>• Quality of life (longitudinal change) | • Mortality<br>• Functional status (longitudinal change)<br>• Quality of life (longitudinal change)<br>• Structure (ACO criteria)<br>• Management | • Morbidity (disease complications)<br>• Functional status (change)<br>• Quality of life (change)<br>• Staff satisfaction |

*Measures of this type may be used to monitor for unintended adverse consequences of the payment model.

**Table 3.3**
**Summary of Current and Proposed Performance Measures for Payment Reform Models (continued)**

| | PAYMENT REFORM MODEL | | |
|---|---|---|---|
| | **4. Bundled Payment** | **5. Hospital-Physician Gainsharing** | **6. Payment for Coordination** |
| **Care delivery organizations and/or providers that would typically receive payment** | Hospitals, ambulatory group practices, and/or other providers | Hospitals, ambulatory group practices, individual physicians, and/or other providers | Ambulatory group practices, individual physicians, and/or other providers |
| **Types of measures in use in one or more highlighted payment programs** | • Episode cost (predicted)<br>• Mortality<br>• Morbidity (treatment complications)<br>• Functional status (change)<br>• Safety outcomes*<br>• Patient experience*<br>• Preventive services<br>• Healthy behaviors<br>• Clinical care process (episode-specific)<br>• Patient engagement*<br>• Care coordination (survey)<br>• Safety practices*<br>• Service use | • Patient experience<br>• Preventive services<br>• Healthy behaviors<br>• Clinical care process (episode-specific)<br>• Safety practices*<br>• Patient engagement* | • None currently |
| **Types of measures that have been proposed for use in a highlighted payment program but not used** | • None currently | • Morbidity (treatment complications)*<br>• Functional status (change)<br>• Quality of life (change)<br>• Safety outcomes*<br>• Care coordination (survey)<br>• Cost/resource use | • Process (transitions between settings)<br>• Patient experience*<br>• Patient engagement* |

*Measures of this type may be used to monitor for unintended adverse consequences of the payment model.

**Table 3.3**
**Summary of Current and Proposed Performance Measures for Payment Reform Models (continued)**

| | PAYMENT REFORM MODEL | | |
|---|---|---|---|
| | **7. Hospital P4P** | **8. Payment Adjustment for Readmissions** | **9. Payment Adjustment for Hospital-Acquired Conditions** |
| **Care delivery organizations and/or providers that would typically receive payment** | Hospitals | Hospitals | Hospitals |
| **Types of measures in use in one or more highlighted payment programs** | • Mortality<br>• Morbidity (treatment complications)<br>• Safety outcomes<br>• Patient experience<br>• Preventive services (e.g., immunization)<br>• Clinical care process<br>• Care coordination (survey)<br>• Safety practices<br>• Cost (per capita and per discharge)<br>• Resource use<br>• Readmissions<br>• HIT use | • Readmissions | • Safety outcomes |
| **Types of measures that have been proposed for use in a highlighted payment program but not used** | • Measures of overuse or inappropriate use of services | • Clinical care process*<br>• Care coordination*<br>• Access* (to hospital care or services designed to prevent admissions) | • None currently |

*Measures of this type may be used to monitor for unintended adverse consequences of the payment model.

**Table 3.3**
**Summary of Current and Proposed Performance Measures for Payment Reform Models (continued)**

| | PAYMENT REFORM MODEL | |
|---|---|---|
| | **10. Physician P4P** | **11. Payment for Shared Decisionmaking** |
| **Care delivery organizations and/or providers that would typically receive payment** | Ambulatory group practices and individual physicians | Ambulatory group practices, individual physicians, or other providers |
| **Types of measures in use in one or more highlighted payment programs** | • Morbidity<br>• Patient experience<br>• Preventive services<br>• Clinical care process<br>• Care coordination (survey)<br>• Patient engagement<br>• Safety practices<br>• Cost (per capita and per condition)<br>• Resource use<br>• HIT use<br>• Care management practices | • None currently |
| **Types of measures that have been proposed for use in a highlighted payment program but not used** | • Functional status (change)<br>• Clinical and sociodemographic risk profiles (for adjustment of outcome measures)* | • Certification criteria for decision aids<br>• Patient experience<br>• Patient engagement |

*Measures of this type may be used to monitor for unintended adverse consequences of the payment model.

## ANALYSIS OF PERFORMANCE MEASUREMENT NEEDS OF EACH PAYMENT REFORM MODEL

This section describes in detail each of the PRMs we identified and the performance measure needs of the model. For each payment model, the summary provides

(1) a brief description of the PRM
(2) a table summarizing the payment reform programs we selected to illustrate the PRM
(3) a rationale for the payment-incentive–specific uses of performance measurement in the PRM
(4) an analysis of suitability of available measures, including three key dimensions:
    (a) the gap between measures needed for the PRM and available measures
    (b) the unmet measure needs of the PRM
    (c) implementation challenges relevant to measurement within this PRM.
(5) a summary of the near-term opportunities for further measure development within the PRM.

Additional details of the payment programs appear in Appendix A.

Table 3.4 summarizes the results of our analysis of the measurement implications of the 11 PRMs in two areas:

(1) near-term opportunities for further measure development, extracted from the analyses of the 11 models in the preceding section
(2) selected measure implementation challenges, also extracted from the analyses of the 11 models in the preceding section.

In general, our analysis of near-term opportunities for measure development is limited to the gaps between the measures that have been implemented in a program and the measures that have been proposed but not yet developed or implemented. Additional measures can be imagined, but these innovations are more appropriate for development and application over a longer time frame, and these are outside the scope of this report.

**Table 3.4**

**Summary of Performance Measure Analysis for Payment Reform Models**

| | PAYMENT REFORM MODEL | | |
|---|---|---|---|
| | **1. Global Payment** | **2. ACO Shared Savings Program** | **3. Medical Home** |
| **Near-term opportunities for further measure development** | • Care coordination (direct)<br>• Inappropriate resource use<br>• Functional status (longitudinal change)<br>• Quality of life (longitudinal change)<br>• Structure, including management and HIT utilization<br>• Composite measures | • Care coordination (direct)<br>• Inappropriate resource use<br>• Functional status (longitudinal change)<br>• Quality of life (longitudinal change)<br>• Safety outcomes*<br>• Structure, including management and HIT utilization<br>• Composite measures | • Patient engagement*<br>• Care coordination (direct)<br>• Functional status (longitudinal change)<br>• Quality of life (longitudinal change)<br>• Structure, including management and HIT utilization<br>• Composite measures |
| **Selected measure implementation challenges (see Table 2.2)** | • Attribution of performance results (to providers and organizations)<br>• Exclusion criteria (population)<br>• Data sources (health information exchange)<br>• Risk adjustment (population) | • Attribution of performance results (to providers and organizations)<br>• Exclusion criteria (population)<br>• Data sources (health information exchange)<br>• Risk adjustment (population) | • Attribution of performance results (to providers and organizations)<br>• Exclusion criteria (population)<br>• Data sources (health information exchange)<br>• Risk adjustment (population) |

*Measures of this type may be used to monitor for unintended adverse consequences of the payment model.

**Table 3.4**

**Summary of Performance Measure Analysis for Payment Reform Models (continued)**

| | PAYMENT REFORM MODEL | | |
|---|---|---|---|
| | **4. Bundled Payment** | **5. Hospital-Physician Gainsharing** | **6. Payment for Coordination** |
| **Near-term opportunities for further measure development** | • Patient engagement*<br>• Care coordination (direct)<br>• Clinical care process (episode-specific)<br>• Functional status (episode-specific change)<br>• Quality of life (longitudinal change)<br>• Structure, including management and HIT utilization<br>• Composite measures | • Safety outcomes*<br>• Access (e.g., ambulatory care sensitive conditions)* | • Process (transitions between settings)<br>• Patient engagement*<br>• Organizational capabilities to support coordination of care<br>• Composite measures |
| **Selected measure implementation challenges (see Table 2.2)** | • Exclusion (specifying measures for relevant care bundles)<br>• Sample size (uncommon episodes)<br>• Data sources (health information exchange)<br>• Aggregation (measures within and across bundles) | • Sample size (to monitor adverse outcomes of restricted patient access to hospital care)<br>• Data sources (health information exchange)<br>• Attribution of performance results (contributing team members) | • Attribution of performance results (providers and organizations) |

*Measures of this type may be used to monitor for unintended adverse consequences of the payment model.

**Table 3.4**

**Summary of Performance Measure Analysis for Payment Reform Models (continued)**

| | PAYMENT REFORM MODEL | | |
|---|---|---|---|
| | **7. Hospital P4P** | **8. Payment Adjustment for Readmissions** | **9. Payment Adjustment for Hospital-Acquired Conditions** |
| **Near-term opportunities for further measure development** | • HIT use<br>• Composite measures<br>• Efficiency measures | • Care coordination*<br>• Access* | • Safety outcomes<br>• Composite measures |
| **Selected measure implementation challenges (see Table 2.2)** | • Attribution of performance results (care coordination activities among independent providers and organizations)<br>• Sample size (small hospitals, low-volume services, uncommon conditions)<br>• Risk adjustment (patient populations) | • Data sources (for clinical characteristics related to risk of readmission and for readmission to other facilities)<br>• Sample size (condition-specific readmission rates)<br>• Exclusions (planned readmissions)<br>• Risk adjustment (patient populations) | • Data sources (detecting hospital-acquired conditions)<br>• Sample size (uncommon conditions)<br>• Exclusions (conditions present on admission)<br>• Benchmarks (variable underreporting) |

*Measures of this type may be used to monitor for unintended adverse consequences of the payment model.

**Table 3.4**

**Summary of Performance Measure Analysis for Payment Reform Models (continued)**

| | PAYMENT REFORM MODEL | |
|---|---|---|
| | **10. Physician P4P** | **11. Payment for Shared Decisionmaking** |
| **Near-term opportunities for further measure development** | • Clinical care process for specialty care<br>• HIT use<br>• Safety practices<br>• Safety outcomes<br>• Composite measures<br>• Efficiency measures | • Access to decision aids<br>• Patient engagement |
| **Selected measure implementation challenges (see Table 2.2)** | • Attribution of performance results (to physicians and small groups)<br>• Sample size (for small groups and solo physicians, low-volume services, and uncommon clinical conditions)<br>• Risk adjustment (patient populations) | • Attribution of performance results (to providers and organizations)<br>• Data sources (assessing use of shared decisionmaking tools) |

*Measures of this type may be used to monitor for unintended adverse consequences of the payment model.

## MODEL SUMMARIES

### Model 1: Global Payment

*Brief Description of the Global Payment PRM*

The global payment model replaces current fee-for-service payment methods with a single payment to cover all services provided to a defined population during a defined time period. The model aims to create incentives for providers to deliver coordinated, high-quality, low-cost, population-based care to a predefined population.

The global payment model is analogous to capitation in providing a per-person payment for services. Global payment programs elaborate the capitation notion by incorporating payment adjustments based on the results of performance measures (and also risk adjustment). The global payment model shares some characteristics with the ACO shared savings program model (the notion of an estimated total budget calculated for a population of patients) and the bundled payment model (the expectation that providers will reduce the costs of each episode of care by reducing the number of services and changing the types of services used by the patient). Unlike the ACO shared savings program model, which pays a bonus based on achieved savings, the provider receiving a global payment assumes financial risk for higher-than-expected costs. Unlike past capitation programs, current global payment programs may reduce the impact of this financial risk by including a P4P component.

**Table 3.5**
**Highlighted Global Payment Programs**

| Highlighted Payment Reform Programs | Program Description |
|---|---|
| **BCBSMA Alternative Quality Contract (AQC)**<br><br>**Source: Blue Cross Blue Shield of Massachusetts[1]** | The AQC combines two forms of payment. The first is a monthly global, or fixed, payment per patient, adjusted for age, sex, and health status, that increases annually in line with inflation. The initial global budget is based on the actual cost of care for the entity's patients and is not reduced at the beginning of the contract for anticipated savings, as traditionally occurs in other global models. The second payment includes substantial performance incentives tied to the latest nationally accepted measures of quality, effectiveness, and patient experience of care. The contract's global payment covers all services received by a patient, including primary, specialty, and hospital care. |
| **Condition-Specific Capitation**<br><br>**Source: Network for Regional Healthcare Improvement[2]** | A periodic comprehensive care payment would be paid to a group of providers to cover all of the care management, preventive care, and minor acute services associated with the patient's chronic illnesses in place of all current fees for those services. Major acute care and long-term care would be paid separately. The amount of the comprehensive care payment would vary based on the patient's characteristics. This proposal is similar to bundled payment for chronic conditions but differs in that a single payment covers care of multiple conditions. The provider group would receive payment bonuses or penalties based on (a) health outcomes for patients, (b) patient satisfaction levels, and (c) patient utilization of major acute care services. Patients would receive incentives to use higher-quality/lower-cost providers and adhere to care processes jointly developed by them and their providers. |

1: Blue Cross Blue Shield of Massachusetts (BCBSMA). Alternative Quality Contract. May 2010. As of January 2, 2011: http://www.qualityaffordability.com/pdf/alternative-quality-contract.pdf

2: Network for Regional Healthcare Improvement. "From Volume to Value: Transforming Health Care Payment and Delivery Systems to Improve Quality and Reduce Costs." 2008.As of January 2, 2011: http://www.nrhi.org/downloads/NRHI2008PaymentReformRecommendations.pdf

*Rationale Guiding the Selection of Performance Measures and Payment-Incentive–Specific Uses of Performance Measurement Within the Global Payment PRM*

Inclusion of performance measurement is among the key features that distinguish this PRM from previous capitation models. The key role of measurement in a global payment model is to monitor the quality of care and to counteract the cost-containment incentive that could undermine quality if clinicians seek to avoid the financial risk by reducing care inappropriately. In addition, global payment models tend to include P4P bonuses based on clinical process, patient experience, and resource use measures (see the hospital P4P and physician P4P model descriptions later in this chapter).

Specifically, the payment-incentive–specific uses of performance measurement are

1. determining based on measured performance whether bonus payments will be made and the amount of those payments (using a P4P mechanism)
2. assessing negative consequences, such as avoidance of patients with complex conditions, greater severity of disease, or other risk factors
3. informing strategic decisions by payers about the design and implementation of the payment program (e.g., assessing the impact of the payment model on cost and quality)
4. assisting providers to identify opportunities for quality improvement and greater efficiency of care delivery.

This model creates a special need for measures that

1. reflect the broad range of care services delivered and multiple care delivery settings that participate in providing care to a population under the global payment (i.e., measures for physician groups, hospitals, emergency departments, post-acute care, and any other setting that may provide care under the global payment)
2. include key indicators (such as health outcomes attributable to the care provided under the global payment), composite measures, or measure sets
3. enable longitudinal, population-based measurement of the care services provided to the population covered by the global payment
4. can be used within or across global payment programs that vary with respect to
    a. the length of the time period addressed by longitudinal measurement and whether this time period is fixed or variable
    b. the provider holding the global payment (e.g., an integrated delivery system, a hospital, or an ambulatory provider group)

c. the range of providers that participate in the global payment
d. the range of services that providers deliver under the global payment.

*Analysis of Available Measures*

*Contrast Between Measures Needed for the Global Payment PRM and Available Measures*

*1. Measurement Domains.* Program documentation for existing payment reform programs suggests that a measurement approach for the global payment model can take one of two approaches. A comprehensive approach may address all of the domains of quality measurement (including structure and process of care) with adjustments to the global payment or additional bonus payments based on measured performance results. Alternatively, a key indicator approach might focus only on health outcomes or patient experience measures to monitor both the benefits and adverse consequences of the global payment for the defined population. To date, global payment programs have relied on process of care and patient experience measures. The key indicator approach would require the definition of relevant health outcome measures.

*2. Care delivery settings.* Two key considerations will influence the design of performance measures. The first is whether the global payment is held by a hospital, a medical group, an integrated delivery system, or another organizational type. The second is the variety of care delivery settings involved in a global payment scheme. Both will influence the sample sizes and availability of data for performance measurement. Like the ACO shared savings program model, the global payment model may require measures that address these two delivery setting considerations.

*3. Conditions, treatments, and procedures.* Providers that receive global payments will be expected to coordinate and deliver care for a broad range of conditions, treatments, and procedures. Available measures have largely focused on prevention and chronic care. Many other types of measures will need to be developed, such as outcome measures for the most prevalent conditions, treatments, and procedures.

*Unmet Measure Needs of the Global Payment PRM*

*1. General observations.* The contrast in the selection and scope of measures applied in the highlighted programs signifies the opportunity for experimentation and flexibility in the

design of organizations that may receive global payments (see Appendix B). Like the ACO shared savings program model described below, the design of performance measurement for the global payment model is highly dependent on the considerations described above. Table 3.3 indicates that two types of outcome measures have been proposed but not yet used in the highlighted programs: functional status and quality of life. Measuring changes in these health outcomes would be preferred because the measures will be applied at a population level and because assessing change in functional status and quality of life can control implicitly for baseline differences in populations covered by global payments. The optimal time period for assessing change should be informed by data on rates of enrollment turnover within the population covered by the global payment.

*2. Near-term opportunities for further measure development.* Measurement strategies used by large integrated delivery systems and health plans will serve as a useful starting point for measure development. Direct measurement of coordination of the care covered by the global payment will be a useful adjunct to patient experience reported measures of coordination. "Direct" in this context refers to the use of data on the timely combination of services to address specific clinical needs (in contrast to patient experience reporting, which is an indirect summary of the effectiveness of efforts to coordinate care).

Because the global payment will include use of specialty services, measurement of inappropriate resource use may be important to assure clinically effective use of the global payment funds. Measurement of longitudinal changes in functional status and quality of life may be the most effective way to assess whether providers are optimally applying services within the global payment. Measures of structure specifically related to management features and meaningful use of HIT to produce high-quality care may be useful in the short term, as data for outcome measures may take time to collect.

Composite measures of performance can be used to reflect the comprehensiveness of the care delivered within a global payment and may be useful as a means for setting and adjusting global payment amounts. Prioritization of specific conditions and care delivery settings may be difficult in the near term. In the absence of well-specified exclusion criteria that would limit the number of patients with complex, high-risk conditions who are enrolled in the population covered by the global payment, risk adjustment approaches will need to address these conditions.

The global payment model may create a powerful incentive to reduce use of services, especially if global payment amounts are set too low. Priority measurement domains that may counteract the adverse effects of this incentive include process measures (addressing underuse), patient experience, care coordination, safety outcomes (measures of harm attributable to medical care), and safety practices.

*Implementation Challenges Relevant to Measurement Within the Global Payment PRM*

The global payment model (and the ACO shared savings program model) may solve some important performance measurement implementation challenges (see Table 2.2). Because the enrolled populations under the global payment and ACO shared savings program models will tend to be larger than those of a single hospital, group, or physician, it may be easier to obtain adequate sample sizes for performance measurement. If organizations receiving global payments are integrated on a common data platform, the data sources available for performance measurement may also be enhanced. Nevertheless, the implementation challenges of the global payment and ACO shared savings program models are, in general, similar to the implementation challenges that have confronted health plan performance measurement:

- *Attribution of performance results (to providers and delivery organizations).* The global payment, ACO shared savings program, and medical home models require measurement of care for predefined populations that may or may not receive care during the time period of interest. In addition, individuals may join or leave the organization that receives the payment during the measurement period. Attribution of services to the individual providers and organizations that participate in delivering care may be challenging in this context. Care delivered outside of the organization that manages the global payment creates an attribution challenge similar to that faced in the evaluation of preferred provider organization (PPO) health plans. This challenge can be addressed by careful specification of inclusion and exclusion criteria for the measures to ensure that the payment adjustment is based on care delivered by providers that are subject to the performance-based payment adjustments.

- *Exclusion criteria (population).* The feasibility of longitudinal performance measurement for the spectrum of care delivered to a population could be enhanced by careful implementation of electronic health data systems within organizations that accept global payments. However, selecting the populations to be included in the denominator of each performance measure will remain a challenge, especially as the measures are aggregated to

form composite measures. The consequence of failure to appropriately exclude patients from denominators is imprecision in the measured performance and use of measured performance to set payment adjustments.

- *Data sources (health information exchange).* Global payment recipients may include organizations that have varying data infrastructure (electronic health records, paper records, claims systems). If submission of claims for specific services is phased out under the PRM or "shadow claims billing systems" are retained, the administrative data they provide will become a less reliable source of data about care services. On the other hand, organizations willing to accept global payment may want to track spending on care services and could enrich the variety of data available to conduct performance measurement by using electronic health record systems to monitor care delivery. Performance measurement in the context of health information exchange is a relatively new undertaking. "Virtual" delivery organizations that may not rely on a common health information exchange infrastructure may face special challenges. Research is needed to assess the implications of new health data sources and to inform the optimal use of data sources for this and other PRMs.

- *Risk adjustment (population).* Use of a population-based measurement approach to adjust the payments to care delivery organizations will raise the issue of the variation in the clinical and sociodemographic profiles of populations enrolled by organizations—either because some organizations may choose to specialize in the care of selected chronic disease populations (patients with renal disease, cancer, or cardiovascular disease) or because organizations may serve geographic areas with differing socioeconomic characteristics. Risk adjustment for mortality and for cost prediction has become increasingly sophisticated in some situations (e.g., cardiac surgery, cancer treatment). As new measures are developed to assess changes in health status, safety outcomes, and processes of care, new risk adjustment approaches will need to be established. Modifying risk adjustment for use in a composite measure framework may be a special challenge, depending on the types of measures included in the composite.

**Model 2: Accountable Care Organizations (ACO) Shared Savings Program**

*Brief Description of the ACO Shared Savings PRM*

This model is based on adding an incentive payment to traditional fee-for-service reimbursement that is a percentage of "savings" generated by the ACO. ACOs could be defined in a variety of possible configurations, but the core concept is a group of providers held jointly accountable for the quality and cost of care for a defined population.[14] Savings are estimated as the difference between total health spending by an ACO population during a time period and expected (risk-adjusted) spending for that period. Shared savings payments would be made in addition to typical fee-for-service payments. Many ACO programs and proposals also include additional incentive payments tied to performance measurement and improvement.

The goal of the ACO model is to counter the incentive under fee-for-service payment to increase volume of services and to induce providers to deliver care more efficiently (delivering care of equal or greater quality at equal or lower cost relative to the delivery of the same care under traditional fee-for-service alone) by motivating them to improve management and coordination of the care of a population of patients.

**Table 3.6**
**Highlighted ACO Shared Savings Programs**

| Highlighted Payment Reform Programs | Program Description |
|---|---|
| **Medicare Shared Savings Program for ACOs**<br><br>**Source: PPACA Sec. 3022** | Rewards ACOs that take responsibility for the costs and quality of care received by their patient panel over time. ACOs can include groups of health care providers (including physician groups, hospitals, nurse practitioners and physician assistants, and others). ACOs that meet quality-of-care targets and reduce the costs of their patients relative to a spending benchmark are rewarded with a share of the savings they achieve for the Medicare program. |

| | |
|---|---|
| **Medicare Physician Group Practice Demonstration**<br><br>**Source: CMS Demonstration**[1] | Pays physician group practices a reward for meeting cost and quality benchmarks. The amount of the reward is a percentage of savings to the Medicare program. Savings are calculated as actual per-capita spending compared to risk-adjusted expected spending per capita. Quality measures have undergone review or validation by NQF. The measures included clinical processes and outcomes for only four clinical areas: diabetes mellitus, congestive heart failure, coronary artery disease, and preventive care. |

1: Centers for Medicare and Medicaid Services. Medicare Demonstrations: Details for Medicare Physician Group Practice Demonstration. Last modified December 10, 2010. As of January 2, 2011:
http://www.cms.hhs.gov/DemoProjectsEvalRpts/MD/itemdetail.asp?filterType=none&filterByDID=-99&sortByDID=3&sortOrder=descending&itemID=CMS1198992&intNumPerPage=10

*Rationale Guiding the Selection of Performance Measures and Payment-Incentive–Specific Uses of Measurement Within the ACO Shared Savings Program PRM*

Although the ACO shared savings program payment mechanism differs in some ways from that of the global payment PRM, the role of performance measurement in the ACO shared savings program model is identical to that in the global payment model. Under the ACO shared savings program model, the ACO serves as the recipient and distributor of shared savings. As an administrator, an ACO could also serve as the distributor of bonus payments, using a P4P payment mechanism or other fee-based payments, such as payment for shared decisionmaking.

The key performance measurement roles are to monitor the quality of care delivered by participants in the ACO and to ensure that quality does not decline as clinicians seek to reduce the cost of treating the ACO population. For additional detail, see the discussion of the global payment model in the previous section.

This model creates a special need for measures that

1. reflect the broad range of care services delivered and multiple care delivery settings that participate in the ACO (i.e., measures for physician groups, hospitals, emergency departments, post-acute care, and any other setting that may be included in the ACO)
2. include key indicators (such as health outcomes attributable to the care provided under the global payment), composite measures, or measure sets
3. enable longitudinal, population-based measurement of the care services provided to the population enrolled in the ACO

4. can be used within or across ACOs that vary with respect to
    a. the length of the time period addressed by longitudinal measurement and whether this time period is fixed or variable
    b. the features of the ACO management responsible for allocating the shared savings (e.g., integrated delivery system, hospital, or ambulatory provider group)
    c. the range of providers that participate in the ACO
    d. the range of services providers deliver within the ACO.

*Analysis of Available Measures*

*Contrast Between Measures Needed for the ACO Shared Savings Program PRM and Available Measures*

*1. Measurement domains.* Program documentation for existing payment reform programs suggests that a measurement approach for the ACO shared savings program model (like the global payment model) can take one of two approaches. A comprehensive approach may address all of the domains of quality measurement (including structure and process of care) with adjustments to the shared savings or additional bonus payments based on measured performance results. Alternatively, a key indicator approach might focus only on health outcomes or patient experience measures to monitor both the benefits and adverse consequences of the global payment for the defined population. To date, ACO programs have been defined for a limited number of clinical conditions for which there are standardized process of care, intermediate outcome, and patient experience performance measures. The key indicator approach would require the definition of additional relevant health outcome measures.

*2. Care delivery settings.* An ACO may combine a variety of care delivery settings. The measurement approach may involve any setting that is part of an ACO (i.e., all care delivery settings). Existing measures have usually been designed for specific care delivery settings (such as health plans or hospitals). As the settings that participate in a typical ACO are specified, this will determine the range of possible performance measures. In addition, measures may need to reflect care delivered in settings that are not formally part of the patient's ACO (e.g., specialized neurosurgery services that an ACO may not offer).

*3. Conditions, treatments, and procedures.* Initial demonstration projects have limited the shared savings potential to specific conditions; however, ACOs are expected in the future

to coordinate and deliver care for a broad range of conditions, treatments, and procedures. Available measures have focused on prevention and chronic care. The expansion of conditions managed by ACOs may continue to be dependent on the conditions, treatments, and procedures for which standardized performance measures can be developed.

*Unmet Measure Needs of the ACO Shared Savings PRM*

*1. General observations.* The contrast between the narrow scope of measures applied in the Physician Group Practice demonstration project and the very broad scope of measurement statements included in the Medicare Shared Savings program reflects the ambition to enable flexibility and experimentation in the structure and scope of ACOs. The design and implementation of measurement is highly dependent on the structure of the ACO, the range of providers and institutions it will include, and the clinical characteristics of the enrolled populations. Assuming that a broad variety of ACO structures will be implemented during the experimentation phase, new measures will be needed across all the domains of performance measurement.

*2. Near-term opportunities for further measure development.* Measurement strategies used by large integrated delivery systems and health plans will serve as a useful starting point for measure set development. Direct measurement of coordination of the care covered by payments to the ACO will be a useful adjunct to patient experience–reported measures of coordination (as described above, "direct" in this context refers to the use of data on the timely combination of services to address specific clinical needs—in contrast to patient experience reporting, which is an indirect summary of the effectiveness of efforts to coordinate care).

An ACO will typically include specialty services, so measurement of inappropriate resource use may be important to assure clinically effective use of the population-based payment to the ACO. Measurement of longitudinal changes in functional status and quality of life may be the most effective way to assess whether providers are optimally applying services within the ACO. However, this approach will work only if the populations are large enough and the functional status or quality of life of the population is relatively poor at baseline. Otherwise, changes in functional status or quality of life will be too small to be detectable. Measures of structure that are related to management features of the ACO—specifically the use of HIT to enable quality monitoring—may be useful in the short term, as data for outcome measures may take time to collect.

Prioritization of specific conditions and care delivery settings may be difficult in the near term because the range of ACO structures has not yet been well specified. Condition-specific composite measures of performance can be used to reflect the quality of care for conditions managed using an ACO model. Prioritization of specific conditions and care delivery settings included in an ACO will be necessary in the near term to guide performance measure development.

The ACO shared savings program model may create a powerful incentive to reduce use of services and to avoid potentially costly patients (depending on the magnitude of the revenue that can be achieved through this mechanism versus the fee-for-service payments that the ACO model includes). Condition-specific risk adjustment approaches may address the incentive to avoid complex or high-risk patients. Priority measurement domains that may counteract the adverse effects of this incentive include process measures (underuse), safety outcomes, patient experience, care coordination, and safety practices.

*Implementation Challenges Relevant to Measurement Within the ACO Shared Savings Program PRM*

The ACO shared savings program model (like the global payment model) may solve some important performance measurement implementation challenges (see Table 2.2). Because the enrolled populations under ACOs will tend to be larger than those of a single hospital, group, or physician, it may be easier to obtain adequate sample sizes for performance measurement. If organizations receiving global payments are integrated on a common data platform, the data sources available for performance measurement may also be enhanced. Nevertheless, the implementation challenges of the ACO shared savings program model are similar, in general, to the implementation challenges that have confronted health plan performance measurement. These challenges are described in the previous section (see the global payment model).

**Model 3: Medical Home**

*Brief Description of the Medical Home PRM*

Primary care is viewed as critical to improving health outcomes, but primary care practices are under increasing financial strain relative to specialty practices.[15] Current payment methods lack explicit financial incentives for delivery of coordinated, high-quality primary care to a patient panel.[16] This PRM seeks to improve primary care by providing additional payments in recognition of the enhanced capabilities of practices that serve as "medical homes." Although definitions vary, in general, medical homes involve restructuring physician practices to deliver comprehensive, continuous, high-quality care to a panel of patients.[17] In this model, practices qualify as medical homes by meeting criteria for practice structural capabilities and care management processes. Qualifying practices are eligible for additional payments beyond typical fee-for-service payments, often structured as a per-member per-month payment. They do not typically receive an advance payment amount to invest in these changes. This model seeks to encourage improvements in care coordination, access, and quality through use of tools, such as electronic health records and patient registries, and processes, such as quality improvement and care management for chronically ill patients.

**Table 3.7**
**Highlighted Medical Home Programs**

| Highlighted Payment Reform Programs | Program Description |
|---|---|
| **Medicare Medical Home Demonstration**<br><br>**Source: CMS Demonstration**[1] | Three-year demonstration providing reimbursement in the form of a care management fee to physician practices for the services of a "personal physician"; includes family practice, internal medicine, geriatrics, general practice, and specialty and sub-specialty practices (except where specifically excluded) |

| | |
|---|---|
| **Rhode Island Chronic Care Sustainability Initiative**<br><br>**Source: Rhode Island Statewide Initiative[2]** | This initiative is convened by the Rhode Island Office of the Health Insurance Commissioner. It was developed and is overseen by a broad multi-stakeholder coalition. All Rhode Island payers, except fee-for-service (FFS) Medicare, are participating. The pilot began in October 2008. In addition to existing FFS schedules, pilot sites receive a per-member per-month fee based on a payment attribution methodology that is standardized across commercial payers. In addition, pilot sites are reimbursed by the health plans for the services of a nurse care manager who is employed by the practice, based in the practice, and sees patients of any and all insurers. As a condition of participation, practices and care managers have received training through the Rhode Island Department of Health and Rhode Island Quality Improvement Organization. Practices report quarterly from an electronic medical record or electronic registry on clinical measures for diabetes, coronary artery disease, and depression. All pilot sites have received Level 1 Patient-Centered Medical Home (PCMH) recognition from the National Committee for Quality Assurance (NCQA) as of July 2009. Practices must achieve Level 2 recognition after 18 months of pilot participation in order to continue. |
| **Federally Qualified Health Center (FQHC) Advanced Primary Care Practice Demonstration**<br><br>**Source: CMS Demonstration[3]** | This demonstration, funded through the American Recovery and Reinvestment Act, will provide funding to FQHCs qualifying as medical homes. |

1: Centers for Medicare and Medicaid Services (website). Medicare Demonstrations: Details for Medicare Medical Home Demonstration. Last modified September 14, 2010. As of January 2, 2011:

http://www.cms.hhs.gov/demoprojectsevalrpts/md/itemdetail.asp?filterType=none&filterByDID=0&sortByDID=3&sortOrder=descending&itemID=CMS1199247&intNumPerPage=10

2: Patient-Centered Primary Care Collaborative (PCPCC). Proof in Practice: A compilation of patient centered medical home pilot and demonstration projects. 2009. As of January 2, 2011: http://www.pcpcc.net/files/PilotGuidePip.pdf

3: The White House. Office of the Press Secretary. "Presidential Memorandum—Community Health Centers." December 9, 2009. As of January 2, 2011: http://www.whitehouse.gov/the-press-office/presidential-memorandum-community-health-centers

*Rationale Guiding the Selection of Performance Measures and Payment-Incentive–Specific Uses of Measurement Within the Medical Home PRM*

The current role for measurement in this model is to evaluate whether practices meet medical home qualification criteria, which may include multiple tiers of achievement, as well as for evaluation of the practice impact on quality and cost. In addition, participating practices would be expected to use measurement in quality improvement activities.

Specifically, the payment-incentive–specific uses of performance measurement are

1. evaluation of whether practices meet medical home qualification criteria, which may include multiple tiers of achievement
2. evaluation of the practice's impact on quality and resource use
3. supporting practice-based quality improvement activities.

This model creates a special need for measures that

1. reflect the adoption of care processes and structural capabilities (management features and HIT) that enhance continuity and coordination of care. The medical home model relies on the adoption of care processes and structures that enhance continuity and coordination of care and create incentives for providers to deliver care in ways that are poorly compensated through the traditional fee-for-service system. Therefore, medical home programs specify performance measures that target these care processes and practice structural capabilities.
2. assess whether care is patient-centered, including the outcomes of primary care, the patient experience, and patient and caregiver engagement with primary care. These measures can ensure that the transformations promoted under the medical home model produce more efficient and patient-centered care.

*Analysis of Available Measures*

*Contrast Between Measures Needed for the Medical Home PRM and Available Measures*

*1. Measurement domains.* The focus of current medical home demonstration projects is on measurement of the achievement of structural capabilities, as defined by medical home standards. These standards are expressed in the form of structure measures and include the use of HIT, registries for tracking patients, case management services, and patient self-

management education. The structure measures are also designed to assess whether capabilities are in place to provide enhanced access, communication with patients, and achieve performance improvement. For the future, measures are needed that address the primary care domains of prevention, clinical processes, health outcomes, and patient experience. Such measures would assess the effect of the structural capabilities and could enable payment adjustments based on the quality and efficiency of care using a P4P payment mechanism.

*2. Care delivery settings.* The medical home payment is designated to support primary care practices. Typically, insurers administer payments to other providers (e.g., emergency department, hospital, long-term care) independently of payments to the medical home.

*3. Conditions, treatments, and procedures.* Physicians who receive medical home payments are expected to coordinate and deliver care for a broad range of conditions, treatments, and procedures, but reductions in use of specialty care, emergency department care, and inpatient services are not explicitly or directly incentivized by the medical home payment. Instead, the expectation is that better primary care will lead to less need for these other services. Some medical home initiatives include P4P components that target the use of emergency department and hospital inpatient care.

*Unmet Measure Needs of the Medical Home PRM*

*1. General observations.* Compared to other PRMs, most current medical home demonstration projects focus on traditional measures of structure (including the presence of an electronic health record [EHR] and other care management processes). These projects imply a traditional accreditation approach; however, developers of medical home criteria have begun to revise the qualifying criteria to focus more on measures of the functioning or use of these structural capabilities to produce higher quality. These efforts may lead to a greater emphasis on process and outcome measures. Some medical home initiatives include P4P provisions related to selected process and outcome measures. Outcome measures assessing health outcomes and aspects of patient experience, such as care coordination, are also integral to the model. Current patient experience surveys may not be adequately designed to assess these outcomes of the medical home innovation. Speculation about the creation of specialty-centered medical homes points to a potential future need for measures of the quality of specialty services.

*2. Near-term opportunities for further measure development.* Revision of traditional structure measures to emphasize functional assessment is a work in progress. The development of a medical home–specific patient experience survey has also been initiated. Because the medical home as a primary care mechanism is designed to encourage greater patient involvement in all aspects of care, measures of patient engagement will be important. Direct measurement of coordination of the care covered by payments to the medical home will be a useful adjunct to patient experience–reported measures of coordination. (As noted earlier, "direct" in this context refers to the use of data on the timely combination of services to address specific clinical needs, in contrast to patient experience reporting, which is an indirect summary of the effectiveness of efforts to coordinate care).

Measurement of longitudinal changes in functional status and quality of life may be the most effective way to assess whether providers are achieving the integrated care goals of the medical home. Refining measures of structure, specifically related to management features and meaningful use of HIT to produce high-quality care, may be useful in the short term, as data for outcome measures may take time to collect.

The population-based measurement approach and structural requirements will drive development of electronic information-sharing capabilities, enabling detailed data on samples of patients sufficiently large to permit measurement of primary care health outcomes effectively. Measures of the health outcomes of primary care patients may be a special area of need. Condition-specific measures for diabetes, hypertension, cardiovascular disease, and asthma have been developed and are in use, but additional condition-specific measures may be an important near-term objective.

Composite measures of primary care performance may be useful as a means for setting and adjusting medical home payment amounts. Measures that address patients with multiple comorbid conditions may be useful, and some initial research and development efforts are under way.

*Implementation Challenges Relevant to Measurement Within the Medical Home PRM*

Under the medical home PRM, qualifying practices may receive global payments for some aspects of the care they provide. While the medical home PRM shares some of the implementation challenges that confront the global payment and ACO shared savings program PRMs, the scope of the model is more clearly specified.

Implementation challenges include the following:

- *Attribution of performance results (to providers and delivery organizations).* The medical home PRM requires measurement of care for predefined populations that may or may not receive care during the course of the time period of interest. In addition, individuals may join or leave the medical home during the measurement period. Attribution of services to the medical home providers may be challenging in this context. Care delivered outside of the medical home creates an attribution challenge similar to that faced in the global payment model. Unlike providers under the global payment model, if the medical home provider is considered responsible for care coordination, then the quality of the patient's specialty care may, in theory, be attributed to the referral practices of the medical home. The resolution of this issue will depend on the expectations associated with the medical home.

- *Exclusion criteria (population).* The medical home model defines a population of patients to be managed by the medical home, and this enhances the feasibility of longitudinal performance measurement for the spectrum of care delivered to the population. However, as the range of measures of chronic disease management expands, selecting the populations that will be excluded from the denominator of each performance measure will remain a challenge, especially as the measures are aggregated to form composite measures. The consequence of failure to appropriately exclude patients from denominators is imprecision in the measured performance and use of measured performance to set payment adjustments.

- *Data sources.* Medical homes may enrich the variety of data available to conduct performance measurement because the medical home specifies the creation of data infrastructure as a care management strategy. Medical homes will need to exchange health information with their associated specialty, hospital, and other providers.

- *Risk adjustment (population).* As is the case for the global payment and ACO shared savings program models, use of a population-based measurement approach to adjust the payments to medical homes will raise the issue of the variation in the clinical and sociodemographic profiles of populations enrolled. As new measures are developed to assess changes in health status, safety outcomes, and processes of care, new risk adjustment approaches will need to be established. Modifying risk adjustment for use in

the medical home composite measure framework may be a special challenge, depending on the types of measures included in the composite.

**Model 4: Bundled Payment**

*Brief Description of the Bundled Payment PRM*

In this model, a single "bundled" payment is made for services delivered during an episode of care related to a medical condition or procedure. In contrast to fee-for-service payment, the bundled payment may cover multiple providers in multiple care delivery settings. However, unlike the global payment model or ACO shared savings program model, the payment covers services related to a single condition or procedure, not all services delivered to a patient during a time period. The payment rates are often adjusted based on quality performance using a P4P payment mechanism.

The goal of payment bundling is to create incentives for providers to deliver care more efficiently (delivering care of equal or greater quality at equal or lower cost), relative to the delivery of the same care under a traditional fee-for-service model. By offering providers a bundled payment for an entire episode, the providers assume some risk, as they may realize a gain or loss based on how they manage resources and total costs associated with treating the episode.

**Table 3.8**
**Highlighted Bundled Payment Programs**

| Highlighted Payment Reform Program | Program Description |
|---|---|
| **Medicare Acute Care Episode (ACE) Demonstration**<br><br>**Source: CMS Demonstration[1]** | The ACE demonstration provided payments for acute care episodes. The payment covered all Part A and Part B services, including physician services, pertaining to the inpatient stay for FFS Medicare beneficiaries, with possible extension to post-acute care. The episodes of care were for specified cardiovascular and/or orthopedic procedures, and participating sites were known as value-based care centers. ACE demonstration goals were to improve quality for FFS Medicare beneficiaries; produce savings for providers, beneficiaries, and Medicare using market-based mechanisms; improve price and quality transparency for improved decisionmaking; and increase collaboration among providers. |
| **Minnesota "Baskets of Care"**<br><br>**Source: Minnesota Statewide Initiative[2]** | Uniform payments will be made for "baskets of care", or collections of health care services designed to treat particular health conditions or episodes of care. Providers may choose whether or not to package relevant services as baskets of care, and payers may decide whether or not to contract for baskets of care. If providers do choose to offer a state-designated basket, it must offer it at a uniform price that does not vary based on the identity of the payer or patient, the provider's contractual relationship with the payer, or the patient's insurance status. Providers that choose to offer any particular basket must report a set of basket-specific performance measures to the state. A work group has developed definitions for eight uniform baskets of care and has recommended quality measures to be reported for each one. The eight baskets are pediatric asthma, medically uncomplicated type 2 diabetes, prediabetes, low back pain, obstetric care, preventive care (adults), preventive care (children), and total knee replacement. |

| | |
|---|---|
| **ProvenCare[SM]**<br><br>**Source: Geisinger Health System[3,4]** | This integrated delivery system bundles payment for all care related to coronary artery bypass graft (CABG) and is expanding the program to cover seven other conditions (percutaneous coronary intervention [PCI], total hip replacement, cataract, erythropoietin [EPO] prescription, perinatal, bariatric surgery, and low back pain). The price for the bundle of services was set at a level calculated to cover treatment for 50 percent of the historical rate of complications. Geisinger also guaranteed adherence to 40 processes of care performance measures for CABG and used adherence to delivering the right care as a basis for a portion of surgeons' payments. |
| **Prometheus Payment**<br><br>**Source: Prometheus[5] (Multipayer Private Sector Initiative)** | This pilot program has developed 21 evidence-informed case rates (ECRs) for a select set of chronic conditions and hospital-centered events. Prometheus has developed and operationalized a method for identifying the core services that guidelines recommend should be delivered to individuals with the select conditions or admissions and for identifying those services that could be avoided with high-quality medical care (called potentially avoidable complications [PACs]). The system works by identifying the distribution of spending for both typical and PAC services and enabling health plans to negotiate with providers around the price for an ECR (generally typical care plus a percentage of the PAC costs). In the full implementation of Prometheus, providers are paid a risk-adjusted fee for ECR services. In addition, a portion of payment is held in a performance contingency fund that is paid out based on the performance of the contracting entity on an agreed-on set of performance measures. |

1: Centers for Medicare and Medicaid Services. Medicare Demonstrations: Details for Medicare Acute Care Episode (ACE) Demonstration. Last modified August 3, 2010. As of January 2, 2011:

http://www.cms.hhs.gov/demoprojectsevalrpts/md/itemdetail.asp?filterType=none&filterByDID=0&sortByDID=3&sortOrder=descending&itemID=CMS1204388&intNumPerPage=10

2: Minnesota Department of Health. Baskets of Care. 2010. As of January 2, 2011:

http://www.health.state.mn.us/healthreform/baskets/index.html

3: Geisinger. About ProvenCare. Last modified July 27, 2010. As of January 2, 2011: http://www.geisinger.org/provencare/

4: Casale AS, Paulus RA, Selna MJ, et al. ProvenCareSM: A Provider-Driven Pay-for-Performance Program for Acute Episodic Cardiac Surgical Care. Annals of Surgery. 2007;246(4):613-623.

5: Prometheus Payment home page. 2010. As of January 2, 2011: http://prometheuspayment.org/

*Rationale Guiding the Selection of Performance Measures and Payment-Incentive–Specific Uses of Measurement within the Bundled Payment PRM*

The role of performance measurement in the model is to monitor the quality of the "bundle of care" delivered under the bundled rate and to monitor whether quality is maintained or improved as providers seek to reduce the cost of treating an episode.

Specifically, the payment-incentive–specific uses of performance measurement are

1. making adjustments to providers' episode-based payment rates based on quality of care
2. determining whether providers meet performance criteria for participation in a bundled payment program
3. assessing negative consequences, including avoidance of certain types of patients or cases, particularly through patient experience measures
4. assisting providers to identify opportunities for quality improvement and greater efficiency of care delivery.

This model creates a special need for measures that

1. are related to the conditions targeted by the bundles
2. are tailored to the care delivery settings that participate in delivering components of the care bundle (i.e., measures for hospitals, as well as for individual physicians) or that can be used effectively across multiple care delivery settings in an episode-of-care framework
3. can be used to detect negative consequences of the payment model (e.g., bundle-specific measures of appropriateness of care and the patient experience of care)
4. assess coordination of care within and across episodes (or bundles).

*Analysis of Available Measures*

*Contrast Between Measures Needed for the Bundled Payment PRM and Available Measures*

*1. Measurement domains.* Measures of the quality of care bundles are needed in domains of clinical process, health outcome, safety, and patient experience. A limited number of clinical process and outcome measures have been introduced in early bundled payment programs. However, the number of bundled payment programs is relatively limited and each program has tested few bundles, so new measures will be needed that apply to future episodes and care bundles.

*2. Care delivery settings.* Care bundles will increasingly be defined that occur across multiple settings (e.g., cancer care) and composite measures that address multiple settings. To date, bundled payment programs have been applied mostly in a limited number of care delivery settings where the majority of care is delivered for these conditions (surgery and office-based practice).

*3. Conditions, treatments, and procedures.* Bundles will need to be defined to address many conditions, treatments, and procedures. Currently, the conditions (e.g., diabetes, asthma, coronary disease, heart failure, preventive services, prenatal care) and procedures (e.g., general surgery, cardiac surgery) chosen to create bundles have well-established guidelines, and, in most cases, both process and outcome quality measures have been defined. They also are relatively costly conditions. As the conditions and procedures addressed by defined bundles increase, performance measures specific to those conditions and procedures will be needed.

*Unmet Measure Needs of the Bundled Payment PRM*

*1. General observations.* The existence of suitable clinical guidelines appears to be an important prerequisite for defining a bundle and for bundle-specific measure development. Limitations of available evidence-based clinical guidelines with recommendations suitable for the creation of measures may be an important practical constraint on the number of bundles that can be established. Nonetheless, it should be possible to increase the number of conditions for which episodes, their associated payment bundles, and associated performance measures are specified.

*2. Near-term opportunities for further measure development.* The bundled payment model defines sets of services delivered as part of a specified episode of care. Care bundles can be delivered by organized teams with incentives to make innovative improvements in quality and efficiency. Although measurement of costs is not the focus of this report, the predicted cost of optimal treatment of an episode of care depends on the definition of the care bundle, as determined by evidence and clinical guidelines.

Measures of patient engagement in the successful completion of a bundle of care will be important. Direct measurement of coordination of the care covered by a bundled payment will be a useful adjunct to patient experience–reported measures of coordination. (As noted earlier, "direct" in this context refers to the use of data on the timely combination of services to

address specific clinical needs, in contrast to patient experience reporting, which is an indirect summary of the effectiveness of efforts to coordinate care). Measures of episode-specific clinical processes of care are needed to ensure that the quality of care for an episode is maintained or improved, despite the fixed payment associated with an episode. Measurement of episode-specific health status or functional status (e.g., exercise capacity before and after myocardial infarction) may offer the most precise approach to assessing the health outcomes of a bundle of care.

A more complicated question is whether to pursue measures of structure, specifically related to management features (such as HIT) that might be associated with high-quality care for an episode. On the one hand, these measures might be useful in the short term, while data for episode-specific outcome measures is being collected. On the other hand, the structural features that support one episode may not be the same as those that support another episode.

The clinical episodes and care bundles will lend themselves to bundle-specific composite measures of performance that can be used to adjust bundled payment amounts. Development of performance measures for specialized treatments (e.g., cancer treatment) and operative procedures (e.g., elective joint replacement) may represent special opportunities. As bundles are defined, consideration should be given to composites of related bundles (e.g., in the area of heart disease or cancer treatment). Performance measures for procedures and treatments may include process, outcome, coordination of care, and patient experience measures.

An additional set of measures can be included to track changes in patient case mix that may be used as an indicator that providers are actively avoiding more complex patients. These measures may also be used to adjust payment based on the complexity of the patients treated within the bundle context.

*Implementation Challenges Relevant to Measurement Within the Bundled Payment PRM*

- *Exclusion (specifying measures for relevant bundles).* Successful implementation will require specification of several quality measures for each bundle on which a payment amount would be set. In theory, health care services can be classified into many thousands of episodes of care. Standard episode groupers have generally defined between 400 and 600 episodes.[18] Once inclusion and exclusion criteria have been developed to define those patients who are included in an episode, then quality metrics for that type of episode must be specified. These quality metrics may include their own

clinical logic leading to special exclusion criteria for some patients that may be included in the bundle.

- *Sample size (low prevalence episodes).* For a given care delivery organization or clinical provider, the sample size for performance measurement will be highly dependent on both the size of the provider organization or group and the prevalence within an organization (or clinical provider) of the condition, treatment, or procedure that defines the episode and its associated bundle of services. For example, many small hospitals, groups, or individual physicians may not treat a sufficient number of acute myocardial infarctions in the course of one year to produce reliable estimates of performance based on that episode bundle alone.

- *Data sources (health information exchange).* The data source challenges related to bundled payments are analogous to those for the global payment, ACO shared savings program, and medical home models described above. Like these other models, the challenges will vary between measurement using survey data and that using medical record data. Performance measurement for bundled payment requires aggregation of data longitudinally over the course of an episode (as defined by the protocol) and across care delivery settings if bundle-related services are delivered in multiple care settings (e.g. hospital, rehabilitation, and ambulatory care).

- *Aggregation (within and across bundles).* Performance measure summaries can be produced at the level of the episode or across multiple episodes delivered by organizations or providers. If the providers who participate in delivering a bundle of services are not stable (e.g., different teams provide care for groups of patients within a bundle), then data will need to be reaggregated to successfully attribute performance to each of the provider teams. This may be especially challenging when a bundle of care involves services delivered across many organizations.

**Model 5: Hospital-Physician Gainsharing**

*Brief Description of the Hospital-Physician Gainsharing PRM*

Under DRG and fee-for-service payment systems, hospitals and physicians face different incentives in the provision of inpatient care. Hospitals have a strong incentive to provide

hospitalization services at the lowest cost but often have limited leverage to encourage physicians to cooperate in cost-reduction efforts, since physicians are voluntary members of the hospital medical staff and professional services are reimbursed separately.[19] Hospitals are generally prohibited from providing incentives to physicians to reduce the costs of care under existing laws.[20] Under gainsharing arrangements, these rules are waived subject to certain conditions, and hospitals are allowed to share savings (i.e., insurer payment minus costs of care) with physicians. This new incentive is expected to permit hospitals and physicians to collaborate on innovative approaches that increase the efficiency of patient care. Gainsharing arrangements are typically allowed for specific treatments or procedures that define a set of products or services, such as coronary artery bypass graft (CABG) surgery.

**Table 3.9**
**Highlighted Hospital-Physician Gainsharing Programs**

| Highlighted Payment Reform Programs | Program Description |
|---|---|
| **MMA Section 646 Physician Hospital Collaboration Demonstration**<br><br>**Source: CMS Demonstration**[1] | This demonstration will determine if gainsharing is an effective means of aligning financial incentives to enhance quality and efficiency of care across an entire system of care. It will examine approaches that involve long-term follow-up to assure both documented improvements in quality and reductions in the overall costs of care beyond the acute inpatient stay. CMS is particularly interested in demonstration designs that track patients well beyond a hospital episode to determine the impact of hospital-physician collaborations on preventing short and longer-term complications, duplication of services, coordination of care across care delivery settings, and other quality improvements that hold great promise for eliminating preventable complications and unnecessary costs. |

| | |
|---|---|
| **DRA 5007 Medicare Hospital Gainsharing Demonstration**<br><br>**Source: CMS Demonstration[2]** | This demonstration will examine if gainsharing aligns incentives between hospitals and physicians in order to improve the quality and efficiency of inpatient care and to improve hospital operational and financial performance. Continuous monitoring of quality and efficiency will be required to ensure that care provided to beneficiaries is not compromised throughout the demonstration. Gainsharing must be based on net savings—i.e., reductions in patient care costs attributable to the gainsharing activity offset by any corresponding increases in costs associated with the same patients. The evaluation will consider short-term improvements in quality and efficiency that occur during the inpatient stay and immediately following discharge. PPACA extends the demonstration through September 30, 2011, and extends the date for the final report to Congress on the demonstration to September 30, 2012. It also authorizes an additional $1.6 million in FY 2010 for carrying out the demonstration. |

1: Centers for Medicare and Medicaid Services. Medicare Demonstrations: Details for MMA Section 646 Physician Hospital Collaboration Demonstration. Last modified November 16, 2010. As of January 2, 2011:

http://www.cms.hhs.gov/demoprojectsevalrpts/md/itemdetail.asp?filterType=none&filterByDID=0&sortByDID=3&sortOrder=descending&itemID=CMS1186653&intNumPerPage=10

2: Centers for Medicare and Medicaid Services. Medicare Demonstrations: Details for DRA 5007 Medicare Hospital Gainsharing Demonstration. Last modified November 16, 2010. As of January 2, 2011:

http://www.cms.hhs.gov/demoprojectsevalrpts/md/itemdetail.asp?filterType=none&filterByDID=0&sortByDID=3&sortOrder=descending&itemID=CMS1186805&intNumPerPage=10

*Rationale Guiding the Selection of Performance Measures and Payment-Incentive–Specific Uses of Measurement Within the Hospital-Physician Gainsharing PRM*

Gainsharing arrangements may create strong incentives to reduce the amount of care delivered. Therefore, gainsharing programs must include measures of the quality of care to ensure that care is not compromised. Gainsharing arrangements might reduce admissions for conditions that are covered by the gainsharing arrangement but carry the risk that providers and hospitals will admit these patients under alternate diagnoses that are not addressed by the gainsharing arrangement. Measuring admissions overall and by condition may be useful to detect this problem.

Specifically, the payment-incentive–specific uses of performance measurement are

1. determining if hospitals and affiliated physicians are eligible to participate in a gainsharing program
2. ensuring that the quality of patient care is not compromised
3. ensuring that the payment incentives lead to improved hospital operational and financial performance (e.g., efficiency)
4. detecting increases in the volume of referrals for services not covered within the gainsharing arrangement
5. assessing adverse consequences, such as hospital or physician avoidance of patients with adverse risk characteristics
6. making information available to providers about opportunities for improvement.

This model creates a special need for measures that

1. apply to both the hospital and individual physicians covered by the gainsharing arrangement
2. evaluate the specific treatments or procedures covered by the gainsharing arrangement
3. are treatment-specific or procedure-specific, particularly to evaluate adverse consequences, such as avoidance of high-risk patients
4. include patient health and safety outcomes. Measures of process should be chosen carefully to avoid the potential to "lock in" care processes that have acceptable or superior substitutes.
5. assess care coordination, access, cost, and utilization.

### *Analysis of Available Measures*

#### *Contrast Between Measures Needed for the Hospital-Physician Gainsharing PRM and Available Measures*

*1. Measurement domains.* The existing gainsharing programs have emphasized hospital process (underuse) measures and patient experience measures, in part because these are readily available, and established measures of the quality of hospital care under Medicare. However, available standardized measures may not be sufficient to detect the potential adverse effects on quality of constraining the services used during a hospitalization. The Hospital Consumer Assessment of Healthcare Providers and Systems (HCAHPS) measure set includes components related to patient reports of coordination of care and access to care. Of note, such measures of

patient outcomes as morbidity, functional status, health-related quality of life, and safety outcomes are not yet well specified in existing programs.

*2. Care delivery settings.* To date, the gainsharing model has been applied primarily to hospital, emergency department, and surgical care. However, the effects of the gainsharing model could occur in other care delivery settings in a later stage of the episode of care. Measures will be needed to address the potential for underuse of necessary services in these other care delivery settings.

*3. Conditions, treatments, and procedures.* In current demonstration projects, the focus has been on measures of processes of care in hospitals and emergency departments that address a narrow set of common chronic conditions (Hospital Quality Alliance [HQA] measures). As the scope of conditions included in gainsharing increases, quality measures—especially the type that assess underuse and access to care—will be needed.

*Unmet Measure Needs of the Hospital-Physician Gainsharing PRM*

*1. General observations.* To date, gainsharing programs have focused somewhat narrowly on reducing waste (e.g., use of unnecessary equipment) in the inpatient setting. The key unmet measure needs of the gainsharing PRM are related to health outcomes specific to the conditions addressed during hospitalization (morbidity, functional status, quality of life, and safety outcomes), coordination of care, and access to care. It is expected that measures of health outcomes, care coordination, and access to care will be required by gainsharing models (beyond the patient-reported measures that are included in HCAHPS). The highlighted Medicare demonstrations have selected participating providers based in part on their ability to measure these domains:

> "CMS intends to implement projects that demonstrate that the sponsoring organization has the capacity to ensure care will be coordinated and tracked across the entire episode of care. The evaluation will consider the demonstration's broader and longer-term impacts on quality beyond the inpatient stay and over entire episodes of care throughout the course of the demonstration." (Centers for Medicare and Medicaid Services, Details for MMA Section 646 Physician Hospital Collaboration Demonstration, Program Solicitation, undated, p. 7. As of January 2, 2011: http://www.cms.gov/DemoProjectsEvalRpts/downloads/PHCD_646_Solicitation.pdf)

*2. Near-term opportunities for further measure development.* Measures of short-term post-discharge health outcomes are especially important under the gainsharing model because of the risk that providers may reduce necessary care when they try to reduce care that is inappropriate or has uncertain benefits. Measures of safety outcomes in both the hospital and ambulatory setting and access (such as ambulatory care sensitive conditions) could be used to ensure that providers do not reduce appropriate and necessary care as a result of the gainsharing incentive.

*Implementation Challenges Relevant to Measurement Within the Hospital-Physician Gainsharing PRM*

- *Sample size (to monitor adverse outcomes of constraints on patient access to hospital care).* Under a hospital-physician gainsharing program, the detection of adverse outcomes associated with potential restrictions on services provided by emergency departments and hospitals will be important. Sample sizes for monitoring adverse unintended consequences of gainsharing may be limited by the number of patients admitted each year and by the prevalence of relevant conditions, treatments, and procedures that would put patients at high risk for hospitalization (a comparison group).

- *Data sources (health information exchange).* The data source challenges related to hospital-physician gainsharing are analogous to those for the global payment, ACO shared savings program, and medical home models described earlier in this chapter. Aggregation of data will be longitudinal over the course of an episode (as defined by the gainsharing protocol) and across care delivery settings (hospital, rehabilitation, and ambulatory care). Creation of registries that can exchange data across these settings could improve the data available to assess performance.

- *Attribution of performance results (to contributing providers).* Performance measure results are summarized for a set of providers that practice in both hospital and ambulatory provider settings. Gainsharing participants may rely on nonparticipating independent providers and subcontractors to deliver some services. The measurement strategy may need to account for this in attributing performance to providers and may accordingly modify the use of performance results to adjust the shared amount.

**Model 6: Payment for Coordination**

*Brief Description of the Payment for Coordination PRM*

Improving care coordination has been identified by the National Priorities Partnership as one of six priority areas.[21] Traditional payment methods do not create incentives for providers to improve care coordination.[16] Under this PRM, the payer makes additional payments to providers that are explicitly tied to care coordination activities. The model aims to encourage more intensive, proactive, coordinated care in order to improve patient health and reduce preventable service utilization and costs.

**Table 3.10**
**Highlighted Payment for Coordination Programs**

| Highlighted Payment Reform Programs | Program Description |
|---|---|
| **Independence at Home Demonstration Program**<br><br>**Source: PPACA, Section 3024** | Creates a new demonstration program for chronically ill Medicare beneficiaries to test a payment incentive and service delivery system that utilizes physician and nurse practitioner–directed home-based primary care teams aimed at reducing expenditures and improving health outcomes |

| | |
|---|---|
| **Community Nursing Organization (CNO) Demonstration**<br><br>**Source: CMS Demonstration**[1] | The CNO demonstration tests a capitated, nurse-managed system of care. The demonstration assesses the impact of providing a specified package of community-based services, in conjunction with case management, under a capitated payment methodology. A unique feature of the demonstration is the use of nurse case managers to coordinate care and to provide a more flexible array of services, such as prevention and health promotion, that are not normally covered by Medicare but which become possible under a capitated system of payment. The CNOs provide the treatment groups at four demonstration sites with a package of community-based services plus case management (not a Medicare benefit) under the capitation payment methodology. All other Medicare covered services are paid for under the standard FFS Medicare payment methodology. |

1: Centers for Medicare and Medicaid Services. Medicare Demonstrations: Details for Evaluation of the Community Nursing Organization Demonstration. Last modified June 7, 2006. As of January 2, 2011: http://www.cms.hhs.gov/DemoProjectsEvalRpts/MD/itemdetail.asp?filterType=none&filterByDID=-99&sortByDID=3&sortOrder=descending&itemID=CMS064340&intNumPerPage=10

*Rationale Guiding the Selection of Performance Measures and Payment-Incentive–Specific Uses of Measurement Within the Payment for Coordination PRM*

In some programs in this model, payments are tied to performance; other programs make direct payment for coordination activities without adjustment for performance (although performance is typically measured for evaluation purposes).

Specifically, the payment-incentive–specific uses of performance measurement are

1. determining whether providers receive performance-related bonuses (in some programs)
2. evaluating the effectiveness of programs that seek to improve coordination-related performance. The approaches taken by programs within this PRM have tended to offer flexible financing to multidisciplinary teams of providers and then measure cost and health outcome measures to assess how cost and quality change over time.
3. assessing negative consequences, including avoidance of certain types of patients or cases, particularly through patient experience measures
4. assisting providers to identify opportunities for quality improvement and greater efficiency of care delivery.

This model creates a special need for measures that

1. assess whether care coordination activities are accomplished
2. assess costs, service utilization, patient experience, and health outcomes of patients who receive care coordination services.

### *Analysis of Available Measures*

#### *Contrast Between Measures Needed for the Payment for Coordination PRM and Available Measures*

*1. Measurement domains.* The two highlighted programs permit considerable flexibility in the design of the programs that are expected to increase care coordination. A broad range of measures has been suggested, including measures of health outcomes amenable to coordination services (e.g., functioning), process of care, cost and resource use, structure, and access to care. However, the specific measures applicable to this model have not yet been identified. The Medicare demonstration tracks general measures of per capita spending and utilization but not measures of quality related to coordination services.

*2. Care delivery settings.* Nearly all care delivery settings may be involved in developed measures because coordination to achieve independence in the community involves enhanced communication with providers from a broad range of care delivery settings and also with organizations that are not traditionally considered part of the health care delivery system.

*3. Conditions, treatments, and procedures.* Payment for coordination is likely to reward organizations that can handle patients with a wide range of conditions, treatments, or procedures.

#### *Unmet Measure Needs of the Payment for Coordination PRM*

*1. General observations.* Defining the standards and criteria that assess care coordination capabilities and will qualify organizations and providers to receive funding will be an important priority. Performance measures will almost certainly play a role in the certification of these organizations. Care coordination in long-term care settings may be measurable by adapting approaches from other previously developed instruments (e.g., the Minimum Data Set).

*2. Near-term opportunities for further measure development.* Two starting points for measure development are especially important. One starting point is ongoing work on care transitions (discharge from hospital to home, discharge from hospital to skilled nursing facility, transfer from long-term care facility to hospital) and referrals (between primary care providers, specialist providers, home health providers, etc.). Development of process measures pertinent to transitions between some of these settings is already under way (e.g., medication reconciliation at hospital discharge). The second starting point is ongoing work on patient experience survey instruments. Adaptation of the CAHPS instrument (which covers coordination and access to care) or surveys of home care can be used to assess patient and caregiver engagement with care goals. As in the medical home model, measurement of structure may be needed in the near term to assess whether organizations possess the management features necessary to coordinate care effectively. Composites of the measures noted above may be useful to set care coordination payment amounts.

*Implementation Challenges Relevant to Measurement Within the Payment for Coordination PRM*

The implementation strategy for payment for coordination services is not yet sufficiently specified to anticipate all of the potential implementation challenges.

Implementation challenges include the following:

- *Attribution of performance results (to providers and organizations).* Just as qualifying criteria (structure measures) have been defined for the medical home model, an initial implementation challenge will be defining the structural criteria that will qualify organizations and providers to participate in a payment for coordination program. Care coordination may involve the participation of distinct organizations, and the attribution of performance results to each of the participants (in order to adjust payment) may be challenging conceptually and practically.

**Model 7: Hospital Pay-for-Performance**

*Brief Description of the Hospital P4P PRM*

In this model, hospitals receive differential payments based on performance, which can be measured using an array of different types of measures. The goal is to create incentives to improve processes of care and health outcomes, especially for high-cost and common conditions.

Typically, hospital P4P programs focus on measures of access, process, outcomes, and patient experience, although they may also include cost and efficiency measures. Measures can be used individually or can be compiled into one or several composite performance scores for each participating hospital. The amount of a differential payment is determined using a formula related to either individual or composite performance score(s).

**Table 3.11**
**Highlighted Hospital P4P Programs**

| Highlighted Payment Reform Programs | Program Description |
|---|---|
| **Hospital Value-Based Purchasing Program**<br><br>**Source: PPACA Sec. 3001** | The proposal would establish a value-based purchasing program for hospitals starting in FY 2013. Under this program, a percentage of hospital payment would be tied to hospital performance on quality measures related to common and high-cost conditions, such as cardiac, surgical, and pneumonia care. Quality measures included in the program (and in all other quality programs in this title) will be developed and chosen with input from external stakeholders. |
| **Blue Cross Blue Shield (BCBS) Michigan Hospital P4P**<br><br>**Source: BCBS of Michigan**[1] | In 1989, BCBS of Michigan launched one of the nation's first incentive programs for participating hospitals. Developed in collaboration with hospital leaders and physicians, the Hospital P4P program includes initiatives specifically tailored for large, medium, small, and rural hospitals. Individual hospitals can earn up to 5 percent in additional payment for collective performance on a series of quality measures. Hospitals are evaluated on quality, efficiency, and participation in collaborative quality initiatives. |

| | |
|---|---|
| **Premier Hospital Quality Incentive Demonstration**<br><br>**Source: CMS Demonstration[2]** | A 3-year demonstration designed to determine if financial incentives are effective toward improving the quality of inpatient care. Hospital quality incentive payments are based on quality measures associated with five clinical conditions: heart attack, heart failure, pneumonia, coronary artery bypass graft, and hip and knee replacements. The demonstration involves a CMS partnership with Premier Inc., a nationwide organization of not-for-profit hospitals, and will reward participating top-performing hospitals by increasing their payment for Medicare patients. Participation in the demonstration is voluntary and open to hospitals in the Premier Perspective system. |
| **Hospital Recognition Program**<br><br>**Source: Horizon Blue Cross Blue Shield of New Jersey (BCBSNJ)[3,4]** | This program is a hybrid of the Leapfrog Hospital Rewards Program and the Horizon Program Option. Horizon network hospitals annually choose the option through which they will participate. Horizon BCBSNJ endorses the Leapfrog methodology of measurement and encourages hospitals to consider this option of the Horizon BCBSNJ Hospital Recognition Program. As an alternative to the Leapfrog program, Horizon BCBSNJ has developed the Horizon Program Option. Both programs are designed to acknowledge hospitals for achieving improved clinical performance. The Horizon Program Option measures hospital performance in clinical outcomes and utilizes the Joint Commission National Patient Safety Goals and performance in the Institute for Healthcare Improvement [IHI] 5 Million Lives Campaign as the measure for patient safety. |
| **Pennsylvania Medicaid Model**<br><br>**Source: Pennsylvania Medicaid Program[5]** | Implemented in 2005, this program provides incentives to hospitals that demonstrate commitment to improved management of the health care needs of medical assistance consumers. It rewards better management of chronic disease; better management of drug therapies; better coordination with physicians, MCOs, and Access Plus; and investment in quality-related infrastructure. It uses data already reported by hospitals. |

1: Blue Cross Blue Shield Michigan Value Partnerships. Pay-for-Performance. 2011.As of February 9, 2011: http://www.valuepartnerships.com/hospital_initiatives/pay_for_performance.shtml

2: Centers for Medicare and Medicaid Services. Medicare Demonstrations: Details for Premier Hospital Quality Incentive Demonstration. 2010. As of January 2, 2011:

http://www.cms.hhs.gov/demoprojectsevalrpts/md/itemdetail.asp?filterType=none&filterByDID=0&sortByDID=3&sortOrder=descending&itemID=CMS1183818&intNumPerPage=10

3: America's Health Insurance Plans (AHIP). Innovations in Recognizing and Rewarding Quality. March 2009. Pp. 75–76. As of January 2, 2011: http://www.ahipresearch.org/pdfs/P4PMonographWeb.pdf

4: Horizon Blue Cross Blue Shield of New Jersey. Making Healthcare Work: Horizon BCBSNJ Hospital Recognition Program. Undated. As of January 2, 2011: http://www.horizon-bcbsnj.com/providers/phs/hospital_recognition_program.html?WT.svl=breadcrumb

5. Kelley, D. "Pennsylvania's Pay for Performance Programs." Pennsylvania Office of Medical Assistance Programs. Undated. As of January 2, 2011: http://www.agencymeddirectors.wa.gov/Files/Kelley_Medicaid.ppt

### *Rationale Guiding the Selection of Performance Measures and Payment-Incentive–Specific Uses of Measurement Within the Hospital P4P PRM*

In hospital P4P programs, differential payment amounts are calculated based on hospital performance scores from a prior time period. Performance scores focus on areas that hospitals can control, such as care within the hospital and discharge planning. The goal is to improve the care during the hospital stay (e.g., improving the delivery of effective care, reducing preventable complications) in order to improve post-hospital health outcomes (and perhaps decreasing hospital readmissions). Typically, a P4P model pays bonuses from a predefined incentive pool, making bonus payments as an added percentage over and above the standard fee schedule.

Specifically, the payment-incentive–specific uses of performance measurement are

1. determining the amount of bonus payments or adjustments to the DRG payment schedule
2. measuring unintended adverse consequences of the PRM and monitoring performance trends in areas not targeted by P4P
3. assisting hospitals to identify opportunities for quality improvement and greater efficiency of care delivery.

This model creates a special need for measures that meet the following conditions:

1. Measure sets may be narrowly or broadly defined, depending on the number of performance goals included in the performance incentive.
2. A narrowly constructed set may focus on a specific domain of measurement, such as patient outcomes, patient experience, costs of care, or access to care. For example, measurement may focus on the evidence-based safety processes associated with avoidance of preventable complications, such as health care–associated infections (HAI).

3. A broadly constructed measure set will blend payment incentives on measures from multiple domains.
4. P4P programs may also be included as components of other PRMs, such as the global payment or ACO shared savings program PRMs. Hospital P4P may also be layered on top of a bundled payment program, with hospital episodes defining bundles of care and performance measures defining the P4P adjustment to a bundled payment.
5. Structural capabilities of a hospital or credentials of hospital-based clinicians may determine eligibility for participation in a P4P program or eligibility for a differential payment.

*Analysis of Available Measures*

*Contrast Between Measures Needed for the Hospital P4P PRM and Available Measures*

*1. Measurement domains.* Unlike other PRMs, several large-scale hospital P4P programs are ongoing, and, therefore, specific measures and measure sets have been developed. Current programs address clinical processes for common conditions (such as acute myocardial infarction, congestive heart failure, and pneumonia), the patient experience of care (via the HCAHPS instrument), and use of safety protocols (particularly on the topic of preventable hospital-acquired infections). With a few exceptions, such as readmissions, few measures have been applied in the cost/resource use, structure, or access domains.

*2. Care delivery settings.* The inpatient setting is the predominant focus of hospital P4P, along with inpatient and hospital-based surgical units. While hospitals are complex and variably structured organizations that include many diverse units and services, P4P programs have focused on measures that emphasize performance somewhat independent of the units within hospitals that deliver those services. P4P programs may increasingly focus on the hospital role in coordination of care between hospitals and post–acute care providers.

*3. Conditions, treatments, and procedures.* Measures have focused on the most common inpatient conditions and procedures primarily because of the availability of adequate samples of patients for measures in those areas.

*Unmet Measure Needs of the Hospital P4P PRM*

*1. General observations.* Hospital P4P programs have focused on traditional measurement approaches that address underuse of evidence-based measures of processes of care, mortality and other safety outcomes, and patient experience.

*2. Near-term opportunities for further measure development.* Significant effort has produced and evaluated hospital P4P measures. Two key near-term opportunities will be the development of measures built on HIT functionalities established through the "meaningful use" program of the Office of the National Coordinator for HIT and the gathering of existing P4P measures to form sophisticated multidomain composites that can be used to adjust bonus payments.

Readmissions and hospital-acquired conditions are other areas for potential further measure development (discussed in more detail under the payment adjustment for readmissions and payment adjustment for hospital-acquired conditions PRMs later in this chapter).

*Implementation Challenges Relevant to Measurement Within the Hospital P4P PRM*

- *Attribution of performance results (between hospitals and other organizations and staff).* Performance measure results are summarized at the hospital level. However, hospitals are complex organizations that vary in the availability and mix of services they provide. In many hospitals, performance results may be driven by independent providers and subcontractors who are paid through separate mechanisms (e.g., Medicare Part B). Outcomes of care may be determined by prehospital and post-discharge care delivered by nonhospital staff. As health outcomes measures are incorporated into a hospital P4P framework, the attribution of performance between hospital and nonhospital providers may be challenging.

- *Sample size (small hospitals, low volume services, uncommon conditions).* Condition-specific hospital performance measures typically focus on a one-year time window in order to ensure that results are current and relevant. However, achieving adequate sample sizes can be challenging if the incidence of hospitalization for a condition is low or if a low-volume service is the intended topic of measurement. Very small hospitals may have too few condition-specific admissions even for relatively common conditions. For these hospitals and conditions, sample sizes over the course of a year

may be too small to provide stable estimates of performance. Multiyear rolling averages and aggregation of reporting across hospitals are among the strategies that can address this issue.

- *Risk adjustment (patient populations).* A wealth of prior experience and research illustrates the challenges of successful risk adjustment for outcome measures in hospital P4P programs. Successes in such areas as coronary artery bypass graft surgery have been instructive. Basing payment incentives on condition-related outcome measures will increase the need for methodologically sound risk-adjustment strategies that level the playing field across hospitals that serve populations with differing clinical and sociodemographic risk profiles.

**Model 8: Payment Adjustment for Readmissions**

*Brief Description of the Payment Adjustment for Readmissions PRM*

Payments to hospitals on a per-admission basis, such as the Medicare Inpatient Prospective Payment System, create an incentive to discharge patients quickly and an opportunity to receive an additional payment if patients are subsequently readmitted to the hospital.[22] The payment adjustment for readmissions PRM counteracts the potential financial gain associated with readmitting patients by introducing penalties for hospitals with higher-than-expected readmission rates compared to peer hospitals. The goal of the PRM is to encourage hospitals to improve patient readiness for discharge and the quality of the care transition in order to reduce readmission rates.

**Table 3.12**
**Highlighted Payment Adjustment for Readmissions Programs**

| Highlighted Payment Reform Programs | Program Description |
|---|---|
| **Hospital Readmissions Reduction Program**<br><br>**Source: PPACA, Section 3025** | Beginning in FY 2012, this provision would adjust payments for hospitals paid under the inpatient prospective payment system based on the dollar value of each hospital's percentage of potentially preventable Medicare readmissions for the three conditions with risk-adjusted readmission measures that are currently endorsed by NQF. The provision also provides the secretary authority to expand the policy to additional conditions in future years and directs the secretary to calculate and make publicly available information on all patient hospital readmission rates for certain conditions. |

*Rationale Guiding the Selection of Performance Measures and Payment-Incentive–Specific Uses of Measurement within the Payment Adjustment for Readmissions PRM*

This PRM focuses on a single aspect of care (hospital readmissions) that represents a potential inefficiency and has been considered a proxy health outcome reflecting inadequate prior clinical management (patients who are clinically unstable may require readmission). Technically, the model can be implemented by specifying measures of hospital readmissions for targeted conditions. These measures may need to be methodologically complex, however, because readmissions occur for many reasons, and not all readmissions are avoidable. Failure to recognize this in measure specifications can lead to unintended adverse consequences, such as incorrect classification of hospitals as high or low quality based on their approach to handling patients needing readmission.

Specifically, the payment-incentive–specific uses of performance measurement are

1. determining which readmissions are considered preventable
2. determining which hospitals will be subjected to a payment penalty
3. assisting hospitals to identify opportunities to improve the discharge transition
4. measuring unintended adverse consequences of the PRM, such as assignment of admitting diagnoses to avoid the penalty.

This model creates a special need for measures that

1. emphasize additional aspects of care under the hospital's control and account for the clinical and sociodemographic risk characteristics of the hospital's patient population
2. can be used to assess adverse outcomes (such as patient experience measures)
3. can be used to understand the processes that influence the risk of readmission and can help to redesign the discharge transition to reduce readmission rates.

### *Analysis of Available Measures*

#### *Contrast Between Measures Needed for the Payment Adjustment for Readmissions PRM and Available Measures*

*1. Measurement domains.* Measurement of readmissions is often considered a proxy outcome measure for assessment of the quality of prior inpatient care and post–hospital discharge care. A basic measure of readmissions is relatively straightforward, requiring identification of repeat hospitalizations of the same patient within a set time frame (including readmission to hospitals other than the index hospital) and the causes of admission. Several such measures have been endorsed by NQF. Measuring the expected rate of readmissions adds complexity because it requires an estimated readmission rate based on characteristics of a hospital's patient population. Measurement approaches that define preventable or avoidable readmissions are more complex and are less well-developed. These approaches would likely use "ancillary measures" of the process, access, structure, and care coordination that may be associated with readmissions. Measures of the quality of antecedent processes of care have been developed for some conditions (notably pneumonia, acute myocardial infarction, and congestive heart failure).

*2. Care delivery settings.* The readmissions focus defines a relatively limited number of care delivery settings. For most measures in use, only hospital care is measured. Approaches that incorporate ancillary measures would also include home health, post-acute care, outpatient clinics, and emergency department care delivery settings.

*3. Conditions, treatments, and procedures.* Readmissions measures are both generic and condition-specific.

*Unmet Measure Needs of the Payment Adjustment for Readmissions PRM*

*1. General observations.* Risk-adjusted readmissions measures for a limited set of conditions have been developed by prior research.[23,24,25] More work is necessary to extend the list of conditions that address inpatient care. Additional work to develop measures of the preventability of readmissions may also be needed as some research suggests that substantial proportions of readmissions may not be preventable. Data on admission to facilities other than the primary admitting facility are needed to detect and prevent diversion of patients to other facilities.

*2. Near-term opportunities for further measure development.* Measures of access to various types of care (home care, outpatient care), transitions in care, and coordination of care are needed. Specifically, refinement of condition-specific readmissions measures may lead to the creation of new measures of care coordination. Measures of access to hospital care may be important to assess the potential adverse impact of incentives that may create barriers to both preventable and nonpreventable readmissions.

*Implementation Challenges Relevant to Measurement Within the Payment Adjustment for Readmissions PRM*

- *Data sources (for clinical characteristics related to risk of readmission and for readmission to other facilities).* Differences among facilities in the risk of readmission may be due to patient population characteristics, including clinical and sociodemographic risk profiles. Data for constructing these profiles will be required. Patients may be readmitted to hospitals other than the primary admitting hospital, and obtaining these data may be difficult. For example, measures could be biased if patients receive care in hospitals under different insurance schemes (e.g., private, public, and Veterans Administration hospitals).

- *Sample size (condition-specific readmission rates).* The low prevalence of some conditions and low condition-specific readmissions rates may lead to small sample sizes, especially in smaller hospitals.

- *Exclusions (planned readmissions).* The inclusion or exclusion of readmissions for conditions or procedures that are unrelated to the condition that prompted the primary admission may be a formidable implementation challenge. Defining the sets of "related

indications" for admission and readmission is required to increase the validity of comparisons.

- *Risk adjustment (patient populations).* Measuring actual rates of readmissions and calculating expected rates based on comorbid illness and severity of illness may reduce the perverse incentive for hospitals to avoid admitting patients who are at high risk for readmission. Focusing measurement on "preventable" readmissions, using additional criteria to separate "preventable" from "nonpreventable" readmissions may address this concern.[24,25]

**Model 9: Payment Adjustment for Hospital-Acquired Conditions**

*Brief Description of the Payment Adjustment for Hospital-Acquired Conditions PRM*

Hospitalized patients who experience errors or preventable complications of care often generate higher payment rates to the hospital. This PRM creates a differential payment associated with preventable hospital-acquired conditions through either nonpayment for costs related to treatment of the preventable condition or a payment adjustment to hospitals with higher rates of hospital-acquired conditions. The PRM aims to create incentives for hospitals to implement quality improvement initiatives that will reduce the rate of preventable hospital-acquired conditions.

**Table 3.13**
**Highlighted Payment Adjustment for Hospital-Acquired Conditions Programs**

| Highlighted Payment Reform Programs | Program Description |
|---|---|
| **Payment Adjustment for Conditions Acquired in Hospitals**<br><br>**Source: PPACA Sec. 3008** | Starting in FY 2015, hospitals in the top 25th percentile nationally of rates of hospital-acquired conditions for certain high-cost and common conditions would be subject to a payment penalty under Medicare. This policy may also be extended to other providers, including nursing homes, inpatient rehabilitation facilities, long-term care hospitals, outpatient hospital departments, ambulatory surgical centers, and health clinics. |
| **CMS Nonpayment for Preventable Hospital Acquired Conditions**<br><br>**Source: CMS Policy**[1] | As per Section 5001(c) of the Deficit Reduction Act of 2005, CMS has taken steps to eliminate payments for poor quality by no longer making a higher DRG payment to hospitals for preventable hospital-acquired conditions. In FY 2009, CMS defined 10 categories of hospital-acquired conditions subject to this policy. |
| **Massachusetts Nonpayment for Serious Reportable Events (SREs)**<br><br>**Source: Massachusetts Statewide Program**[2] | Massachusetts state law prohibits hospitals from seeking reimbursement for SREs. This policy is based on the NQF list of 28 discrete adverse medical events, known as SREs. All Massachusetts hospitals are required to report these events within seven days of occurrence. |
| **HealthPartners "Never Events" policy**<br><br>**Source: HealthPartners**[3] | As of January 1, 2005, hospitals are required to report NQF SREs, or "never events," to HealthPartners. HealthPartners denies payment or recoups payment related to these events. Members cannot be billed for never events. The policy applies only to hospitals, not to physicians. |

1: Centers for Medicare and Medicaid Services. Hospital-Acquired Conditions (Present on Admission Indicator). 2010. As of January 2, 2011: http://www.cms.gov/HospitalAcqCond/01_Overview.asp#TopOfPage

2: Massachusetts Executive Office of Health and Human Services, Department of Public Health, Bureau of Health Care Safety and Quality. "Serious Reportable Events in Massachusetts Acute Care Hospitals: January 1, 2009—December 31, 2009." 2010. As of January 2, 2011: http://www.mass.gov/?pageID=eohhs2terminal&L=6&L0=Home&L1=Provider&L2=Reporting+to+the+State&L3=Reporting+Entities&L4=Hospital&L5=Reporting+Serious+Incidents&sid=Eeohhs2&b=terminalcontent&f=dph_quality_healthcare_p_sre_report_2009&csid=Eeohhs2

3: HealthPartners. HealthPartners Hospital Payment Policy. 2010. As of January 2, 2011: http://www.healthpartners.com/portal/866.html

### *Rationale Guiding the Selection of Performance Measures and Payment-Incentive–Specific Uses of Measurement Within the Payment Adjustment for Hospital-Acquired Conditions PRM*

Under this PRM, the primary role for performance measurement is to make payment adjustments based on preventable adverse patient outcomes. Secondarily, hospitals may use the measures in quality improvement activities.

Specifically, the payment-incentive–specific uses of performance measurement are

1. determining whether a payment is adjusted
2. assisting hospitals to identify opportunities to improve safety
3. measuring unintended adverse consequences of the PRM and monitoring performance trends in areas not targeted by the payment adjustment.

This model creates a special need for measures and data that

1. enable identification and documentation of the occurrence of hospital-acquired conditions (e.g., treatment complications and other safety outcomes). Performance measurement within this model is used to document the occurrences of preventable hospital-acquired conditions. While NQF publishes a list of SREs that are considered preventable, these are rare events.
2. provide an assessment of the preventability of these conditions. Hospital-acquired conditions used in measurement should be associated with evidence that they are preventable.[7]
3. enable meaningful aggregation of conditions to form composite measures. In addition, measures of safety processes that can prevent such events may enable stakeholders to

implement the PRM, so that, over time, it is more likely to reduce the incidence of hospital-acquired conditions.

*Analysis of Available Measures*

*Contrast Between Measures Needed for the Payment Adjustment for Hospital-Acquired Conditions PRM and Available Measures*

*1. Measurement domains.* Lists of hospital-acquired conditions have been specified in three payment reform programs, but because the lists cover a fairly small number of conditions, additional development of these measures may be needed.

*2. Care delivery settings.* By definition, hospital-acquired conditions are limited to hospital care delivery settings. Application to other care delivery settings (e.g., health care–acquired conditions) is feasible.

*3. Conditions, treatments, and procedures.* NQF and patient safety organizations have defined specific conditions (e.g., falls), treatments (e.g., transfusion of ABO-incompatible blood), and procedures (e.g., medication prescribing) that form the basis for measures. Many systems rely on organizational staff to report the occurrence of these events rather than to develop formal measure specifications.

*Unmet Measure Needs of the Payment Adjustment for Hospital-Acquired Conditions PRM*

*1. General observations.* Among the primary challenges in defining hospital-acquired (or health care–acquired) conditions is to identify avoidable adverse outcomes that are clearly separable from known complications of specific treatments and procedures, that were acquired rather than present on admission, and that are not a consequence of other comorbid conditions. In a payment reform context, self-reporting of events may be unreliable, so formal specifications that use independently collected data (e.g., administrative data) to screen for events may be an important step. Overcoming these logistical challenges of implementation may be more important than expansion of the list of hospital-acquired conditions.

*2. Near-term opportunities for further measure development.* NQF has recently updated its consensus standard for serious reportable events.[26] Additional development of safety outcome measures will consist of further expansion and refinement of the NQF standard and

the Medicare list of hospital-acquired conditions over time. Construction of composites based on these serious reportable events and additional hospital-acquired condition measures may be useful to enable aggregation of these relatively rare events and to improve the precision of results on which payment will be based.

*Implementation Challenges Relevant to Measurement Within the Payment Adjustment for Hospital-Acquired Conditions PRM*

- *Data sources (detecting hospital-acquired conditions).* Underreporting is considered a significant problem for many types of hospital-acquired conditions. Insurance claims can be used to detect hospital-acquired conditions, but they have limited sensitivity and specificity without the use of adjunct data sources, such as medical record review, staff reporting systems, or patient survey.[27-30]

- *Sample size (hospital-acquired conditions).* Many of the hospital-acquired conditions occur rarely (or are detected and reported rarely), so sample sizes over the course of a year are very small at the hospital level, making rate estimates of hospital-acquired conditions difficult to use. The direct fiscal impact of nonpayment is likely to be limited by this, although the reputational effect of public reporting of specific events may be a powerful motivator.

- *Exclusions (conditions present on admission).* It may be difficult to separate conditions present on admission from acquired conditions attributable to the admitting hospital. The real-time coding of conditions that are "present on admission" may be useful in this context.

- *Benchmarks (variable underreporting).* Benchmarks may be difficult to obtain because of differences among hospitals in the data collection strategy (e.g., reporting requirements and detection systems). For example, the state of Pennsylvania has a statewide reporting system, while hospitals in other states define their own reporting protocols.[31]

**Model 10: Physician Pay-for-Performance**

*Brief Description of the Physician P4P PRM*

Under this payment model, physicians or other health care providers receive differential payments based on performance. Performance can be measured using an array of different types of measures, which can be used individually or compiled into one or several composite performance scores. Programs can focus on individual physicians or physicians in a practice or physician group. The amount of differential payment is determined using a formula related to either individual or composite performance score(s).

The goal of physician P4P is to create incentives that motivate clinicians to deliver evidence-based care more consistently, to implement clinical care processes linked by scientific evidence to improved health outcomes, and to avoid the delivery of care that is minimally beneficial or for which risk outweighs the expected benefit ("overuse"). Under P4P, bonus payments (or returns of withhold) are tied directly to measured performance (access, process, patient experience, and some outcomes). Typically, a P4P model pays bonuses from a predefined incentive pool, making bonus payments as an added percentage over and above the standard fee schedule.

**Table 3.14**
**Highlighted Physician P4P Programs**

| Highlighted Payment Reform Programs | Program Description |
|---|---|
| **Value-Based Payment Modifier Under the Physician Fee Schedule**<br><br>**Source: PPACA, Section 3007** | Directs the secretary of HHS to develop and implement a budget-neutral payment system that will adjust Medicare physician payments based on the quality and cost of the care they deliver. Quality and cost measures will be risk-adjusted and geographically standardized. The secretary will phase in the new payment system over a two-year period beginning in 2015. |

| | |
|---|---|
| **Integrated Healthcare Association (IHA)**<br><br>**Source: IHA (Multi-Payer Private Sector Initiative)[1,2]** | IHA is a statewide, multi-stakeholder leadership group that promotes quality improvement, accountability, and affordability of health care in California by actively convening all health care parties for cross-sector collaboration. IHA administers the California P4P program, which involves about 220 physician groups representing approximately 35,000 doctors who provide care for 10 million commercial HMO patients in California. In addition to P4P incentive payments, plans also pay financial incentives to physician groups for non–IHA-sponsored measures to promote better data collection, administrative processes, generic pharmacy utilization, and medical management. The principles of this P4P program are (1) common performance measures for physician groups developed collaboratively by health plan and physician group medical directors, researchers, and other industry experts; (2) public reporting of results; and (3) significant health insurance plan financial payments based on that performance, with each plan independently deciding the source, amount, and payment method for its incentive program. |
| **Alabama Medicaid Patient 1st**<br><br>**Source: Alabama Medicaid Program[3]** | Primary care physicians are eligible for bonus payments according to their performance on use of generics, emergency department visits, office visits, and an index of actual-versus-expected total of allowed charges. |

| | |
|---|---|
| **Medicare Care Management Performance (MCMP) Demonstration**<br><br>**Source: CMS Demonstration**[4] | This three-year demonstration was mandated under Section 649 of the Medicare Prescription Drug Improvement and Modernization Act of 2003, or Medicare Modernization Act (MMA), to promote the use of HIT and improve the quality of care for beneficiaries. Doctors in small- to medium-sized practices who meet clinical performance measure standards receive a bonus payment for managing the care of eligible Medicare beneficiaries and reporting quality measure data to CMS from an electronic health record. The demonstration is being implemented in California, Arkansas, Massachusetts, and Utah and will continue through June 30, 2010. Practices participating in the MCMP demonstration are rewarded for reporting clinical quality data and for meeting clinical performance standards for treating diabetes, congestive heart failure, and coronary artery disease. In addition, they are measured and rewarded for how well they provide preventive services (immunizations, blood pressure screening, and cancer screening) to high-risk, chronically ill Medicare beneficiaries. |
| **Anthem Quality-In-Sights (QIS) Primary Care Incentive Program**<br><br>**Source: Anthem**[5] | The Anthem QIS Program rewards high performance by providing a fee schedule enhancement for primary care physicians that is based on nationally endorsed, industry-standard measures of quality of care. The incentive payment methodology also incorporates measures of technology adoption; recognition by external programs, including Bridges to Excellence and the National Committee for Quality Assurance; and internal measures of generic drug utilization. |

1: America's Health Insurance Plans (AHIP). Innovations in Recognizing and Rewarding Quality. March 2009. Pp. 75–76. As of January 2, 2011: http://www.ahipresearch.org/pdfs/P4PMonographWeb.pdf

2: Integrated Healthcare Association home page. 2010. As of January 2, 2011: http://www.iha.org

3: Alabama Medicaid Agency: Patient 1st. 2009 Patient 1st Sharing of Savings Calculation Methodology. September 28, 2009. As of January 2, 2011: http://www.medicaid.state.al.us/documents/Program-Pt1st/Shared_Savings/Pt1st_Shared_Savings_Calculation_Methodology_9-30-09.pdf

4: Centers for Medicare and Medicaid Services. Medicare Demonstrations: Details for Medicare Care Management Performance Demonstration. 2010. As of January 2, 2011:

http://www.cms.hhs.gov/demoprojectsevalrpts/md/itemdetail.asp?filterType=none&filterByDID=0&sortByDID=3&sortOrder=descending&itemID=CMS1198950&intNumPerPage=10

5: Empire BlueCross BlueShield. 2009 Quality-In-Sights Primary Care Incentive Program. December 2009. As of January 2, 2011: http://www.empireblue.com/provider/noapplication/f5/s3/t6/pw_b141150.pdf?refer=ehpprovider

*Rationale Guiding the Selection of Performance Measures and Payment-Incentive–Specific Uses of Measurement Within the Physician P4P PRM*

In physician P4P programs, differential payment amounts are calculated based on group or individual performance scores from a prior time period. Performance measures focus on prevention and care management. Typically, a P4P model pays bonuses from a predefined incentive pool, making bonus payments as an adjustment to the fee schedule or to the negotiated per member per month (PMPM) payment rate.

Specifically, the payment-incentive–specific uses of performance measurement are

1. determining adjustments to bonus payments or to fee schedules
2. measuring unintended adverse consequences of payment models and monitoring trends in performance for areas not targeted by P4P
3. identifying opportunities for quality improvement.

This model creates a special need for measures that

1. assess delivery of evidence-based chronic disease management, including care processes, patient outcomes, patient experience, and access to care
2. include composites of measures across conditions to assure that clinicians do not focus on some aspects of care delivery to the detriment of others
3. assess structural capabilities of physician practices to determine eligibility to participate in a P4P program or eligibility for a differential payment
4. can be used to evaluate the quality of episodes of care (in combination with the bundled payment model)
5. assess the appropriateness of care and efficiency of care delivery.

*Analysis of Available Measures*

*Contrast Between Measures Needed for the Physician P4P PRM and Available Measures*

*1. Measurement domains.* Like hospital P4P programs, physician P4P programs have largely used the available measures and measure sets that were developed for health plans and Medicare demonstration programs. Measures have been used to assess processes of outpatient care for common chronic conditions (diabetes, coronary artery disease, asthma) and for prevention (cancer screening, lipid screening, etc.) and the patient experience of care (via specially developed patient experience survey instruments). Measures of cost and resource use

have focused on formulary adherence, generic medication prescribing, utilization of imaging, and emergency department utilization. Very few programs have incorporated safety process, overuse, appropriateness, care coordination, access, or patient outcomes of any type. Recently, medical home payment models have begun to develop measures of the structural capabilities of primary care practice (see the medical home PRM).

*2. Care delivery settings.* The physician P4P model is used almost exclusively in the outpatient office setting and is applied for the most part to primary care providers.

*3. Conditions, treatments, and procedures.* Most P4P programs address conditions, treatments, and services delivered by primary care providers (general internists, family physicians, pediatricians). Fewer measures of specialist care have been developed for use in P4P programs.

*Unmet Measure Needs of the Physician P4P PRM*

*1. General observations.* Overall, physicians (and teams of providers) provide a vast and complex set of services. Within specialties, many clinical services have the potential to serve as a basis for performance measurement, although sample sizes may be a barrier to measure implementation of performance measures for specialty care.

Physician P4P programs have relied on narrowly or broadly constructed measure sets. Measure sets and complex composites are increasingly needed to reflect the variety of services that constitute high quality. To populate these sets and composites in a way that permits expansion of P4P, a diverse and expansive "universe" of measure concepts and measures is needed.

*2. Near-term opportunities for further measure development.* Measures of the processes of care delivered by specialists and surgeons will be required to extend physician P4P beyond primary care programs. These measures should cover specialist care and conditions not yet addressed by existing measure sets. Measures of HIT use (through the meaningful use process of the Office of the National Coordinator) are under development. Measurement of safety practices and safety outcomes in ambulatory care settings would be useful to set P4P incentives to physicians. Combining existing measures to form specific P4P composites may be useful as the physician P4P measure set expands.

*Implementation Challenges Relevant to Measurement Within the Physician P4P PRM*

The implementation challenges related to physician P4P are well known and have been described previously. Three key problems in the context of PRMs are the following:

- *Attribution of performance results (to physicians and small groups).* While performance on process of care measures is generally attributable to individual physicians and groups, performance on outcome measures may be more difficult, especially in the ambulatory setting.

- *Small sample sizes (small groups and solo practices, low-volume services, and uncommon clinical conditions).* Small sample sizes for small groups and solo physicians, low-volume services, and uncommon clinical conditions may undermine the precision of measurements. The result will be random fluctuations in performance-based payment adjustments.

- *Risk adjustment (patient populations).* Risk adjustment has proven to be a special barrier to development and implementation of outcome measures in physician P4P. Risk adjustment is needed to counteract the payment-related incentive to physicians to avoid high-risk patients. However, the data available to conduct risk adjustment are less complete in the ambulatory setting than in the hospital setting.[32-34]

**Model 11: Payment for Shared Decisionmaking**

*Brief Description of the Payment for Shared Decisionmaking PRM*

Shared decisionmaking is a process through which patients and their caregivers are active participants in communicating and making decisions about their care. The process uses patient decision aids, which help patients decide between treatments, given their preferences. This model would provide financing to support the provision of shared decisionmaking services. The model would include standards and certification for patient decision aids.

**Table 3.15**
**Highlighted Payment for Shared Decisionmaking Programs**

| Highlighted Payment Reform Programs | Program Description |
|---|---|
| **Program to Facilitate Shared Decisionmaking**<br><br>**Source: PPACA, Section 3506** | Establishes a program at HHS for the development, testing, and disseminating of educational tools to help patients, caregivers, and authorized representatives understand their treatment options |

*Rationale Guiding the Selection of Performance Measures and Payment-Incentive–Specific Uses of Measurement Within the Payment for Shared Decisionmaking PRM*

The primary role of performance measurement in this model is to evaluate the use of shared decisionmaking tools in improving patient decisionmaking and better aligning treatment choices with patient preferences. The shared decisionmaking model assumes that patient or caregiver values and preferences should be weighed along with scientific evidence when choosing appropriate treatments, particularly when evidence does not point to a single clearly superior approach for a particular condition or set of circumstances.[35]

Specifically, the payment-incentive–specific uses of performance measurement are

1. evaluate the use of shared decisionmaking tools in improving patient decisionmaking and better aligning treatment choices with patient preferences
2. certification of patient decision aids
3. assessing the potential for unintended adverse consequences of tying payments to the shared decisionmaking process.

This model creates a special need for measures that

1. can be used to assess patient and caregiver experience and patient and caregiver engagement
2. include structural aspects of care, such as criteria for the certification of patient decision aids
3. assess the process used to enable shared decisionmaking.

*Analysis of Available Measures*

*Contrast Between Measures Needed for the Payment for Shared Decisionmaking PRM and Available Measures*

*1. Measurement domains.* No performance measures have been developed that are specific to this model. Patient experience and activation measures exist and could be tailored to the shared decisionmaking context as outcome measures. Criteria and standards for decision aids will initially be specified as structure measures. These and associated process measures will need to be developed. Most measures will be condition-specific (see later in this section), but some generic measures of shared decisionmaking may also be developed.

*2. Care delivery settings.* If criteria and standards specify the process for presentation or discussion of the shared decisionmaking tools, then care delivery settings may need to be specified.

*3. Conditions, treatments, and procedures.* Shared decisionmaking tools have been developed primarily for high-risk or expensive surgical procedures for which there are alternative treatments, procedures, or therapeutic approaches that may be influenced by patient preferences (e.g., cardiac surgery, prostate cancer, etc.). If this use of decision aids becomes widely established, decision aids for other conditions, treatments, and procedures may be developed.

*Unmet Measure Needs of the Payment for Shared Decisionmaking PRM*

*1. General observations.* Criteria must be specified that allow evaluation and certification of the content and format of shared decisionmaking tools, as well as their use in practice. Measures may be needed to support "generic" decision aids (those that assist patients to ask questions that are useful in any health care decision) as well as "situation-specific" decision aids (those that address a specific condition or treatment).

*2. Near-term opportunities for further measure development.* Measures will be needed to assess patient access to decision aids. Measurement of patient engagement in decisionmaking will also need to be developed. These measures may require the use of patient experience surveys and/or clinician documentation of use.

*Implementation Challenges Relevant to Measurement Within the Payment for Shared Decisionmaking PRM*

- *Attribution of performance results (to providers and organizations).* The implementation strategy for payment for the shared decisionmaking payment model is not yet sufficiently specified to anticipate all of the potential implementation challenges. If payment is structured as a fee for service, then qualifying providers will submit claims and the attribution issue will not be a significant challenge. However, if the program is similar to the criterion-based care coordination model (see earlier in this section), there may be challenges to developing structural measures that identify which providers of shared decisionmaking services can qualify for payment and to attributing the results of "outcomes" measures that assess improvements in the patient's decisionmaking.

- *Data sources (assessing use of shared decisionmaking tools).* This payment model will demand creative development of data sources that will enable measurement of whether patients have received appropriate decision aids and whether providers, patients, and caregivers followed an appropriate process for using those decision aids.

# CHAPTER FOUR: SUMMARY OF PERFORMANCE MEASURE DEVELOPMENT OPPORTUNITIES AND IMPLEMENTATION CHALLENGES

## OVERVIEW

We have described 11 PRMs based on a review of dozens of existing payment reform programs and programs proposed in federal health reform legislation, state-based initiatives, and private sector initiatives. Here we summarize the measure development opportunities that are notable across many of the 11 PRMs and reflect on the most significant implementation challenges that will confront measure developers and others as they develop measures suitable for use in payment reform programs.

## THE POTENTIAL IMPACT OF PAYMENT REFORM MODELS ON PERFORMANCE MEASURE DEVELOPMENT

Any portfolio of performance measures generally reflects those quality problems that are concerning to health care stakeholders. Frequently, the concerns arise in relation to the payment mechanisms used to purchase health care services. During the past decade, performance measure developers have tended to specify measures for either a fee-for-service payment environment or a capitated health plan environment. Early efforts to develop measures for use in capitated health plans tended to focus on assessing underuse of preventive services and chronic care. Fewer measures focused on inappropriate service delivery, and very few prior measurement efforts have addressed the efficiency of care delivery.

Our analysis suggests that new initiatives to base payment on performance measurement may create a new set of demands on performance measure developers. There are several implications of the shift to a focus on measurement to support the emerging PRMs.

- *Measure development should be guided by a longitudinal care framework rather than a discrete service focus.*
  Many past performance measures have tended to focus on the delivery of discrete clinical services, such as preventive services, medications, or other treatments delivered at a specific point in time. Exceptions include the chronic disease measurement sets that address care processes delivered during a time frame. Some of the PRMs we studied rest on a longitudinal care framework (global payment, ACO shared savings program, medical home, bundled payment, and hospital-physician gainsharing). Episode-based measurement is not a new construct. Risk-adjusted mortality after hospitalization or surgery is an

outcome measure that is used to assess an episode of hospitalization or surgery. However, developing and refining a variety of quality measures to address episodes of care will be an important step. Using a longitudinal measurement framework to develop measures will enable an emphasis on health outcomes. In particular, the measurement of changes in functional status, morbidity, and quality of life will be attractive. The selection of process measure sets should also be informed by the longitudinal framework.

- *Complex organizational types may benefit from complex measurement strategies that support internal incentive and quality improvement models.*
  Some of the PRMs encompass a broad range of clinical activities and organizational types that must coordinate with one another (e.g., global payment and ACO shared savings), in contrast to others that target relatively narrowly specified goals for a specific organizational type (e.g., reducing hospital-acquired conditions or promoting the use of shared decisionmaking tools). Although it is also possible to set performance incentives on a few key indicators (e.g., population outcomes), the complex organizational types may have expansive measure needs in order to set incentives to providers internally (including outcome, process, and other measure types). While each organization could develop its own measures for internal use, nonstandardized measurement approaches may defeat the use of results for other purposes (such as public reporting). Standardized measures of outcome and process that can serve P4P and other PRMs (independent of the ACO or medical home context) will also be useful to complex organizations.
  Priorities for measure development may be unclear until these delivery models and their patient populations are more specifically defined. For example, it will be difficult to specify measures for an ACO without knowing the range of providers and delivery organizations that will participate. The creation of composite measures may be especially challenging until the ACO organization is better defined.

- *Composite measures will be important in an episode-based payment framework.*
  Composite measures that combine clinical process measures or process and outcome measures longitudinally will be desirable in an episode-based measurement framework. A recent paper summarizes some of the considerations in choosing composite measure sets for specific purposes.[8]

- *Efficiency of care measures may be useful.*
  Containing costs is a goal of most of the PRMs, either directly (through the fixed base payment of models like the global payment PRM) or indirectly (through bonuses that

improve quality and reduce the need for future care, such as the physician P4P PRM). While assessment of costs may be necessary to set or negotiate payment amounts, measurement of costs is not necessary once a cost-containing incentive is established. In the context of the cost-containing incentive, performance measurement is used primarily to counteract the potential quality deficits that could arise from actions taken to reduce costs (e.g., reducing services). Given the challenges of developing measures of efficiency, some observers have favored measuring cost or resource use (especially relative resource use). Cost and resource use can be difficult to interpret in the absence of accompanying measures of quality (to form efficiency measures) or case-mix or risk adjustment. Setting payment adjustments based on reductions in resource use or cost may undermine quality. Identifying and rewarding efficient care is desirable. Efficiency measures could be useful.[36] However, few efficiency measures have been developed to date, and such measures are very challenging to develop. Measuring appropriateness or overuse of services can be useful in some of the PRMs (e.g., hospital P4P and physician P4P). For example, pay-for-performance bonuses could be set based on efficiency measure results. The bundled payment PRM requires payers to establish payment amounts that account for the cost of a bundle of services delivered efficiently. Thus the bundle includes an implicit efficiency consideration by defining an optimal set of services (and their associated cost) to set a payment rate. Gainsharing programs set implicit targets related to cost but do not define efficiency explicitly.

- *Blended payment models will rely on blended measurement strategies.*
  Where payment models are blended, the measurement strategies may be adapted across models. The addition of P4P to a global payment strategy has been accomplished under the Alternative Quality Contract of Blue Cross Blue Shield of Massachusetts. Likewise, the use of bundled payment may be readily combined with other payment models. The measures developed for use in these other payment models can be readily integrated into the more complex payment models.

- *Structure-of-care measures will be required for some models, at least in the near term.*
  Some of these measures will take the traditional form of structure used in accreditation programs. These typically assess the presence or absence of a feature without further assessing its functionality. For example, computerized order entry systems can be present but not used. The recent approach in legislation that defines "meaningful use" of HIT (translated by the Department of Health and Human Services into operational criteria for functionality) represents an example of this more-sophisticated approach to assessing the

structure of care.[10] The medical home, payment for coordination, and payment for shared decisionmaking models require the specification of criteria to enable certification that a provider or organization has basic capabilities. Medical home criteria define capabilities related to care management, access, and HIT. Shared decisionmaking payments will depend on the use of certified decision aids and possibly processes, and payments for coordination will require criteria for certifying the coordinating provider or organization.

## SUMMARY OF NEAR-TERM OPPORTUNITIES FOR FURTHER MEASURE DEVELOPMENT

Our analysis of measure needs and gaps has identified many opportunities for further measure development to support the payment models. The analysis has taken into account the needs outlined by each PRM, existing measures, and measurement science. We have considered the evolving terrain of health care delivery, including new organizational types and the potential for new data availability, as meaningful use of electronic health records and health information exchanges are implemented in the next five to ten years. This topic is considered in more detail below, with reference to the challenges to performance measure implementation. The term *development* refers here both to new measure specification and to refinement of existing measures that could improve their validity and reliability.

### *Performance Measures to Set or Adjust Payment*

The following measure types offer near-term opportunities for further measure development and refinement. Measures developed in these domains could serve several of the 11 PRMs.

- *Health outcome measures.*
  Much of the effort to define health care outcome measures has been devoted to condition-specific and procedure-specific measures (e.g., mortality after myocardial infarction or mortality after carotid endarterectomy).[37,38] Further development of condition-specific and procedure-specific outcome measures will continue to be important. Condition-specific and treatment-specific health outcomes are highly salient to patients and physicians. General outcome measures (i.e., non–condition-specific outcomes) or aggregations of condition-specific outcome measures may be more useful in payment reform applications. For many conditions and procedures, mortality is too rare to be used as a basis for setting payment

incentives, so two types of outcome measures may be especially useful: changes in health status and nonmortality safety outcomes.

- *Health status (functional status and quality of life).*
  Changes in functional status and quality of life can be measured using standardized instruments. The application of these instruments to populations receiving care under global payment, ACOs, and medical homes is an attractive incentive. The key measurement application is to assess improvement, or the prevention of condition-related decline in functional status and quality of life for defined populations that receive care from the specified delivery organizations and providers. The measurement of a change in health status (as opposed to cross-sectional assessment) can mitigate some of the need for risk adjustment and case-mix adjustment. Medicare's Health Outcomes Survey is an early example of this approach, which points out two challenges: the limitation if instruments are not sensitive to clinically meaningful changes over time and the attribution of the performance result to health care services rather than other non–health care factors.

- *Safety outcomes.*
  We define safety outcomes as avoidable harms attributable to medical care. Assuring safe care can be costly. The cost-constraining financial incentives in some of the PRMs we describe and the concerns about the safety of U.S. health care suggest that a set of measures of preventable adverse events will be needed in order to detect unfavorable trends in the safety of care as costs (and potentially resources) are reduced. Safety outcomes are featured in some of the payment reform programs we reviewed. As electronic health records become widespread, the measurement of safety outcomes should become more feasible. Safety outcomes encompass a range of measurement approaches, including the SREs list previously defined by NQF (and currently under refinement) and additional preventable adverse events related to medication use, procedures, and other treatments.[26]

- *Care coordination measures.*
  New PRMs focus on aligning payment incentives to reward coordination of care. Defining, identifying, and measuring coordinated care at the level necessary to support adjustment to payment incentives is a key near-term challenge. Most currently used care coordination measures rely on surveys of patients about the degree to which their care is coordinated.[39,40] While patient surveys offer an important window on coordination, not all

patients can or will respond to surveys, and not all aspects of care coordination are observable by patients. Defined episode groups and bundles of care offer one new opportunity to measure care coordination and continuity by defining expectations about a cluster of services that should occur during a defined time interval across providers. This framework may permit "direct" measurement of the degree to which care is coordinated (in contrast to "indirect" evidence provided by patient reports).[41] Electronic health records and health information exchanges may provide the data that can be used to begin to make direct measurements of the degree to which care is coordinated among providers.[42]

- *Patient and caregiver engagement.*
  Some PRMs create new responsibilities for patients and their caregivers in collaborating with providers to take responsibility for key aspects of their care. Providers should be able to increase the engagement of their patients in care and thereby produce better health outcomes. For example, the management of diabetes and most other chronic illnesses is much more successful when the patient participates in care. Measurement of this aspect of care is distinct from measurement of patient experience or patient satisfaction. Current patient experience survey instruments (and satisfaction surveys) do not adequately capture the engagement of patients and caregivers with their care.[43]

- *Structure (particularly management measures and HIT utilization measures that address new organizational types).*
  Payment reform aims to motivate organizations to deliver and coordinate care more effectively. In the interim, as measures of outcomes, efficiency, and patient engagement are developed, organizations will need to demonstrate fundamental capabilities to implement these new approaches to care. The emphasis in these new measures of structure will be on functional capabilities rather than the presence of absence of qualified staff or a specific piece of equipment. The presence of a computerized physician order entry (CPOE) system is an example of a traditional structural measure. Next-generation structure measures will include the adequate use and functioning of a CPOE capability. In other words, measures will assess how effectively the CPOE system is used in practice to delivery high-quality care.
  To date, the medical home PRM has provided the most advanced example of a structural measurement strategy. Other PRMs will require that the organization receiving payment have specific characteristics that make it suitable to deliver high-quality and efficient care. ACOs and those groups that receive global payments and bundled payments will need to be

assessed using newly developed measures of structural capabilities that are not captured by current licensing and certification standards.

- *Composite measures.*
  Composite measures combine individual measures to create a summary score. The use of composite measures to assess care delivered across care delivery organizations can be used to adjust payment in a multiprovider or multiorganizational setting (such as an ACO or medical home). For example, a composite might be used to assess the success of clinicians and delivery organizations in managing and coordinating services during an episode of care. In a payment incentive context, assigning relative weights to the components of a composite measure must be done explicitly and must be guided by the intent of the payment incentives and the desired health outcomes.

- *Efficiency measures.*
  As noted earlier, efficiency measures are not a prerequisite for cost containment if payments are constrained. Quality measures can be used to identify suboptimal responses to cost-containing incentives. However, efficiency measures might be useful in adjusting payments using a P4P or bonus mechanism, particularly for those services that continue to be reimbursed on a fee-for-service basis.

*Measures to Assess Unintended Adverse Consequences of Payment Reform Models*

PRMs have the potential to increase disparities in care if they are implemented without an adequately broad-based performance measurement foundation.[10,44] Many of the measures identified as components or needs for PRMs can also be useful for monitoring the unintended adverse consequences of the new payment models. Because of the incentives created by most new PRMs, additional measure development will also be important in two specific areas:

- *Clinical and sociodemographic risk profiles.*
  Where providers or care delivery organizations will be compared or paid differentially based on performance, then performance measures may need to account for differences among their populations in the presence of key risk factors. This is particularly important for health outcomes, patient engagement, and efficiency measures but may affect other measures as well. The methods for measuring sociodemographic and clinical risk factors in populations are increasingly well-developed.[45] Newer techniques, such as geocoding, surname analysis, and other imputation strategies, are enabling additional improvements.[46]

These approaches should be implemented to the extent possible so that payment incentives do not increase disparities in the quality of care. However, risk-adjustment models may need to be tailored to each PRM, since the outcomes of interest vary between models. For example, a given risk factor may have different predictive power for the total cost of caring for a patient in an ACO than for the rate of inpatient readmissions for heart failure. Furthermore, adjustment for these factors must be approached judiciously to avoid unintentionally rewarding substandard care for vulnerable populations.

- *Access to care and measures to detect provider avoidance of high-risk patients.* Resource-constrained health care systems may be tempted to impede access for some patients. For example, in a gainsharing model or any prepayment model, there may be a powerful financial incentive to withhold necessary as well as unnecessary care. Measures of access to care should be further developed. Patient experience surveys often include questions to evaluate access, but such surveys are inevitably biased by nonresponse, and patients with poor access to care may be less likely to respond to such surveys. Measurement approaches akin to the ambulatory care sensitive conditions and population-based assessments of service use for preventive care may provide important insights into populations that fail to receive needed care. Additional measures of underuse of care, similar to those that have been developed and used in P4P programs, are needed as a subset of process measures. Resource use measures may also be constructed to assess whether organizations reduce services below minimum expected levels, which may serve as a signal that necessary care is also being reduced.

## SUMMARY OF MEASURE IMPLEMENTATION CHALLENGES

We considered a selected set of implementation challenges as we assessed the rationale and need for measures to serve each PRM (see Table 2.2). Many of these challenges are well known, based on more than two decades of work developing performance measures.[47–53] Measure developers and other stakeholders will need to consider a longer list of implementation challenges that are germane to any measure development activity. Nevertheless, we expect that the linkage of payment to performance measures will heighten the level of scrutiny of these specific implementation challenges and the solutions proposed by developers and methodologists:

- *Attribution of performance results.*
  Ideally, the payment will align with the attribution of performance results so that the incentives for performance are clearly transmitted to organizations and to providers. The attribution rules that determine how performance results are interpreted (and as a result how these incentives are allocated) are likely to have a powerful impact.[54] In the case of population-based and bundle-related payments, multiple providers and organizations may contribute services to the care of a single patient. Likewise, attribution of health outcomes results to organizations or individual providers will be challenging. Measuring health outcomes at the organization level can help, although organizations may want to create performance-based incentives internally and, if so, will need to identify performance results of the individual providers that contributed to the performance. Tracking which providers contributed to care delivery, especially in the absence of claims for specific services, may be difficult.[55] Health outcomes are frequently influenced by factors external to the provider organization, and risk adjustment may not fully address these external influences.

- *Exclusion criteria.*
  Definition of denominator populations is a fundamental challenge in all performance measurement activities. Selecting the populations and patients to be included in the denominator of each performance measure and defining the criteria that will exclude patients from the denominator will pose a challenge across most of the PRMs that we studied. Payment incentives may lead to gaming based on inappropriate exclusion of some patients.[56] Exclusion of patients based on characteristics not well captured in administrative data, such as patient preferences, comorbidity, and appropriateness for palliative rather than curative care, will require thoughtful specification and recording of exclusion criteria.

- *Data sources.*
  Performance measurement requires excellent data.[12] Regardless of the payment model, valid and reliable data will be necessary to generate performance measure results that enable accurate payment and payment adjustment. Electronic health information systems will inevitably be a component of health care delivery and performance measurement in the future. However, performance measurement in the context of electronic health records is a relatively new undertaking.[57,58] Health information exchange is largely untested despite the formidable new investment in developing this infrastructure.[59] Substantial research is under way to assess the implications of these new health data implementations, and the results of this research will be needed to inform data source selection for the PRMs.

- *Risk adjustment.*
  Risk adjustment is a key dimension of performance measurement in a high-stakes reporting or payment incentive system. Inadequate risk adjustment may undermine the credibility of programs, may create perverse incentives that lead providers to avoid caring for high-risk or high-cost patients, and might financially penalize providers who care for such patients. If organizations or providers specialize in the care of chronic disease populations (patients with renal disease, cancer, or cardiovascular disease) or operate in geographic areas where patients have socioeconomic characteristics that make them more challenging to manage, then risk adjustment (or payment adjustment) will be needed to counteract incentives that might reduce access for some patients. Risk adjustment for prediction of mortality, costs, and other health outcomes has become fairly sophisticated. As new measures are developed to assess changes in health status, safety outcomes, and processes of care, risk adjustment approaches will need to be established. Composite measures may pose a special challenge, depending on the components included in the composite. The definition of risk depends on a clear specification of the measure result of interest (e.g., health outcome), and mixed composites that include process and outcome measure results may not have a clear risk model.

- *Sample size.*
  Sample size is directly related to the precision of a performance result. In a payment model, poor precision of results can lead to erroneous payments or rewards to providers because of misclassification of providers as high or low performers. For a given care delivery organization or clinical provider, the sample size for performance measurement will be highly dependent on the prevalence within that organization (or clinical provider) of the condition, treatment, or procedure that defines the denominator. Population-based measurement strategies are typically less prone to sample size problems, but, as subsets of patients are selected for a denominator because they have specific diagnoses, care episodes, bundles of services, or receive care in specific care settings, sample size is nearly always an issue. For example, many small hospitals, groups, or individual physicians may not treat a sufficient number of acute myocardial infarctions in the course of one year to produce reliable estimates of performance based on that episode bundle alone.

A well-designed HIT platform may be helpful in addressing many of the implementation challenges, but only if the platform is designed with performance measurement objectives in mind. To date, even well-designed health information systems have not yet delivered on the promise of

improved validity and reliability of data for performance measurement. However, HIT initiatives are still embryonic, and the design principles for HIT that serves the needs of performance measurement and payment reform (as opposed to traditional billing management) are only now emerging. Careful attention to health information is necessary to match performance measurement and payment reform objectives.

# CHAPTER FIVE: CONCLUSION

The signing of PPACA into law in 2010 is likely to accelerate payment reform based on performance measurement. This technical report is intended to inform multiple stakeholders about the principal PRMs and the status of performance measures in these models and programs. The report summarizes the characteristics of PRMs and the performance measure needs they will generate. Finally, the report identifies the near-term measure development opportunities that may best accelerate the successful implementation of performance measurement in these models.

The report is also intended to create a shared framework for analysis of future performance measurement opportunities. Much measure development, implementation, and evaluation remains to be accomplished. Even for models with a track record of implemented programs and evaluation (such as the hospital P4P and physician P4P models), measure sets have not reached their full potential. These programs were important first steps showing that payment based on performance is feasible even with the relatively limited measure sets available today. Barriers to a fully operational performance measurement system in health care can be overcome with careful planning and integration of care delivery systems, investments in measure development and testing, and investments in the development of valid and reliable data sources that have adequate clinical data to support new measures.

Ongoing and planned demonstration projects and their evaluations will offer valuable lessons about the measures needed to implement these and future PRMs. Investing in infrastructure that improves the available data for performance measurement will be a necessary precursor to successful deployment of new types of measures. Carefully bridging payment reform and performance measurement while attending to the potential adverse unintended consequences should optimize the health of Americans and assure that care is affordable in the future.

# APPENDIX A: CATALOG OF HEALTH CARE PAYMENT REFORM MODELS

## GLOBAL PAYMENT

### Synthesis Description of Global Payment Payment Reform Model

*Summary:* The global payment model replaces current payment methods with a single payment to cover the services provided to a patient panel during a defined time period. The model aims to create incentives for providers to provide coordinated, high-quality, low-cost, population-based care for a panel of patients.

The global payment model is analogous to capitation. In contrast to the way capitation was most commonly implemented in the past, global payment programs typically incorporate payment adjustments based on performance and patient risk. The global payment model shares some characteristics with the ACO shared savings program model (the notion of an estimated total budget calculated for a population of patients) and the bundled payment model (the expectation that providers will reduce the costs of each episode of care by reducing the number of services and changing the types of services used by the patient). Unlike the ACO shared savings program model, which pays a bonus based on achieved savings, the provider receiving a global payment assumes financial risk for higher-than-expected costs.

*Highlighted programs:* Blue Cross Blue Shield of Massachusetts Alternative Quality Contract, Condition-Specific Capitation

### Common Areas Among Highlighted Programs

*Participation:* Voluntary participation by provider organizations willing to assume financial risk for a patient panel.

*Payment method:* Both highlighted programs use per-member per-month payment for a broad set of services provided to a patient, with adjustments based on performance and patient risk.

*Measurement*: Both highlighted programs include measurement of outcomes and patient satisfaction.

*Consumer characteristics*: No limits on consumer choice of provider are explicitly described for either highlighted program.

### Key Differences Between Highlighted Programs

*Participation:* No key differences.

*Payment method:* Condition-Specific Capitation uses separate payments for major inpatient and long-term care. Condition-Specific Capitation pays payment rates specific to patients with

different chronic conditions, whereas the Alternative Quality Contract uses a more general adjustment for health status.

*Measurement:* The Alternative Quality Contract explicitly names performance measures and includes measures of utilization of clinical priority areas with large unexplained variations.

*Consumer-related considerations:* Condition-Specific Capitation includes financial incentives for consumers to use higher-quality/lower-cost providers.

**Table A.1**

**Description of Highlighted Global Payment Programs**

| **Blue Cross Blue Shield of Massachusetts (BCBSMA) Alternative Quality Contract** | |
|---|---|
| Source | Blue Cross Blue Shield of Massachusetts. "Alternative Quality Contract." 2010. As of April 21, 2010: http://www.qualityaffordability.com/solutions/alternative-quality-contract.html |
| Participation | |
| Payer | Blue Cross Blue Shield of Massachusetts |
| Provider Participation | Voluntary participation |
| Patient Participation | None specified in description |
| Payment | |
| Unit of Payment | Global payment per person |
| Payment Mechanism | Global payment covering all health care services with additional incentive payments related to performance measures |
| Eligibility for Payment | Incentive payments of up to 10% of global payment are made if providers exceed negotiated performance targets. |
| Payment Adjustments | Global payments are adjusted for patient health status. |
| Budget Implications | Global payments are set initially based on historical fee-for-service payment levels and are then adjusted annually for inflation. |
| Budget Reconciliation | Not specified in description |
| Measurement | |
| Quality Measures | Process, outcome, and patient experience measures for both ambulatory and inpatient care |
| Cost Measures | A category of measures labeled "Addressing Unexplained Practice Variations: Select Clinical Priorities" includes service utilization rates. Utilization is measured for service categories: advanced imaging, prescription medicines, orthopedic procedures, treatment of sinusitis, and other. |

| | |
|---|---|
| Unit of Analysis | Integrated delivery systems |
| Data Sources | Not specified in description |
| Specific Conditions Addressed | Ambulatory measures address depression, diabetes, hypertension, hyperlipidemia, and preventive services for several adult and pediatric conditions. Hospital measures address acute myocardial infarction, heart failure, pneumonia, and surgical site infections. |
| Specific Populations | Some pediatric measures are included. |
| Consumer-Related Considerations | |
| Effect on Out-of-Pocket Payments | Not specified in description |
| Provider Choice | Not specified in description |
| Legal Protections | Not specified in description |
| Implementation | |
| Status as of April 2010 | Ongoing |
| Geographic Reach | Massachusetts |
| Program Evaluation | None specified in description |

| | |
|---|---|
| Condition-Specific Capitation | |
| Source | Network for Regional Health Improvement. From Volume to Value: Transforming Health Care Payment and Delivery Systems to Improve Quality and Reduce Costs. January 2009. As of February 17, 2010: http://www.nrhi.org/downloads/NRHI2008PaymentReformRecommendations.pdf |
| Participation | |
| Payer | Not specified in description |
| Provider Participation | All primary care providers |
| Patient Participation | Patients with chronic illness; not specified further in description |
| Payment | |
| Unit of Payment | Per capita |

| | |
|---|---|
| Payment Mechanism | Periodic payment for services related to chronic illness; major acute and long-term care are paid separately. There are also additional performance-related incentive payments. |
| Eligibility for Payment | Groups of providers; not specified further in description. Incentive payments are tied to performance scores; eligibility criteria are not specified in description. |
| Payment Adjustments | Adjusted based on comorbidities and other risk factors |
| Budget Implications | Not specified in description |
| Budget Reconciliation | Not specified in description |
| Measurement | |
| Quality Measures | Outcomes and patient satisfaction; specific measures or measure sets not specified in description |
| Cost Measures | Patient utilization of major acute care services used as part of performance scores (not explicitly recognized as a cost measure in description) |
| Unit of Analysis | Provider group |
| Data Sources | Not specified in description |
| Specific Conditions Addressed | Not specified in description |
| Specific Populations | Not specified in description |
| Consumer-Related Considerations | |
| Effect on Out-of-Pocket Payments | Consumers are given incentives to use higher-quality/lower-cost providers. |
| Provider Choice | Not specified in description |
| Legal Protections | None specified in description |
| Implementation | |
| Status as of April 2010 | Proposal |
| Geographic Reach | Not specified in description |

| | |
|---|---|
| Program Evaluation | Not applicable (proposal only) |

**Table A.2**

**Description of Other Global Payment Programs**

| Program Title | Targeted Payer | Source | Program Summary | Status |
|---|---|---|---|---|
| Global Payment per Enrollee | Medicare | Common-wealth Fund[1] | Under this payment method, an integrated delivery system including one or more hospitals and multispecialty physician group practices would be paid a fee covering all Part A, Part B, and Part D services, including inpatient and post-inpatient care, ambulatory care, and prescription drugs, for each patient enrolled in the system. The payment amount would be adjusted for the health risk of enrolled beneficiaries and geographic differences in the prices of practice inputs. Any services provided to enrolled beneficiaries by other providers would be covered only if provided under contract to the integrated delivery system. Participating delivery systems would also receive reward payments for achieving high performance on quality, patient experience, and care coordination and increased payment updates that reflect the increased efficiency of these systems. | Proposal |
| Medicaid Global Payment System Demonstration Project for Safety Net Hospitals | Medicaid | PPACA Sec. 2705 | Establishes a demonstration project, in coordination with the CMS Innovation Center, in up to five states that would allow participating states to adjust their current payment structure for safety net hospitals from a fee-for-service model to a global capitated payment structure | Proposal |

| | | | | |
|---|---|---|---|---|
| Massachusetts Special Commission on the Health Care Payment System | Multiple Payers | Massachusetts Division of Health Care Finance and Policy[2] | The Special Commission concluded that global payment should serve as the direction for payment reform. The Special Commission concluded that global payments can be implemented over a period of five years on a statewide basis, with some providers participating in the near term, while others will need more time and support to transition. Key components of the recommendations include (1) participation by private and public payers, (2) development of ACOs, (3) patient-centered care and adoption of medical homes, (4) patient choice, (5) common core performance measures and cost and quality transparency, (6) appropriately balanced sharing of financial risk between ACOs and carriers, (7) strong and consistent risk adjustment. | Proposal |
| Medicare Advantage Modification | Medicare | PPACA Sec. 3201, as modified by HCEARA Sec. 1102 | Creates performance bonus payments based on a plan's level of care coordination and care management and achievement on quality rankings. Sets Medicare Advantage payment based on the average of the bids from Medicare Advantage plans in each market. Provides a four-year transition to new benchmarks beginning in 2011. Provides a longer transition of the amount of extra benefits available from plans to beneficiaries in certain areas where the level of extra benefits available is highest relative to other areas. | Proposal |

1: S. Guterman, K. Davis, S. C. Schoenbaum, and A. Shih, "Using Medicare Payment Policy to Transform the Health System: A Framework for Improving Performance," Health Affairs Web Exclusive, Jan. 27, 2009:w238–w250. As of December 26, 2010: http://www.commonwealthfund.org/Content/Publications/In-the-Literature/2009/Jan/Using-Medicare-Payment-Policy-to-Transform-the-Health-System--A-Framework-for-Improving-Performance.aspx

2: Commonwealth of Massachusetts, Recommendations of the Special Commission on the Health Care Payment System, July 16, 2009. As of December 26, 2010: http://www.mass.gov/Eeohhs2/docs/dhcfp/pc/Final_Report/Final_Report.pdf

## ACCOUNTABLE CARE ORGANIZATIONS SHARED SAVINGS PROGRAM

### Synthesis Description of ACO Shared Savings Program Payment Reform Model

*Summary:* This model is based on adding an incentive payment to traditional fee-for-service reimbursement that is a percentage of "savings" generated by an ACO. ACOs could be defined in a variety of possible configurations, but the core concept is a group of providers held jointly accountable for the quality and cost of care for a defined population.[14] Savings is estimated as the difference between total health spending by an ACO population during a time period and expected (risk-adjusted) spending for that period. Shared savings payments would be made in addition to typical fee-for-service payments. Many ACO programs and proposals also include additional incentive payments tied to performance measurement and improvement.

The goal of the ACO model is to create incentives for providers to improve coordination of care among providers and to deliver care more efficiently (delivering care of equal or greater quality at equal or lower cost), relative to the delivery of the same care under traditional fee-for-service programs alone, by offering providers a share of savings.

*Highlighted programs:* Medicare Physician Group Practice (PGP) demonstration, PPACA Medicare Shared Savings Program for ACOs

### Common Areas Among Highlighted Programs

*Participation:* ACOs include groups of health care providers meeting criteria demonstrating that they are capable of assuming accountability for a patient population.

*Payment method:* Shared savings. Periodic reward payments are made to ACOs meeting cost and quality performance criteria. The amount of the reward would be a percentage of "savings," estimated as the difference between total health spending by an ACO population during a time period and expected (risk-adjusted) spending for that period. Shared savings payments would be made in addition to typical payments.

*Measurement*: ACOs would report a variety of quality measures. The main data sources are likely to be medical records (clinical measures), surveys (experience), and claims (utilization). Shared savings calculations require measurement of actual and expected costs for the ACO population, adjusted for beneficiary characteristics. The main data source is likely to be insurance claims. Measurement of utilization is also used to assign patients to ACOs.

*Consumer characteristics*: Consumers attributed to an ACO are free to receive care outside of the ACO. The program is not targeted to specific populations or conditions. There is no explicit impact on out-of-pocket spending.

**Key Differences Between Highlighted Programs**

*Participation:* The Medicare PGP demonstration invited only multispecialty physician group practices to participate. House and Senate health reform proposals expanded eligibility to other provider groups that can assume accountability for populations. These groups need to have a legal structure for receiving and distributing payments among participating providers but do not have to be otherwise legally integrated. Programs may use different methods for attributing patients to ACOs.

*Payment method:* Programs may differ in the levels of cost and quality performance required to qualify for shared savings payments, as well as the formula for determining the payment amount based on cost and quality measures.

*Measurement:* The general approach to measurement is similar across programs, but there may be differences across programs in the specific quality measures used as well as the method for calculating expected costs to determine the amount of "savings."

*Consumer characteristics:* No key differences.

**Table A.3**

**Description of Highlighted ACO Shared Savings Programs**

| **Medicare Shared Savings Program for ACOs** | |
|---|---|
| Source | Patient Protection and Affordable Care Act of 2010, Pub. L. No. 111-148, 124 Stat. 119 through 124 Stat. 1025 (2010), sec. 3022 |
| Participation | |
| Payer | Medicare |
| Provider Participation | Participating ACOs can include groups of health care providers (including physician groups, hospitals, nurse practitioners and physician assistants, and others) meeting criteria to be specified by the secretary, including serving at least 5,000 beneficiaries. Participation is voluntary. |
| Patient Participation | Medicare beneficiaries are assigned to ACOs based on primary care utilization using a method to be specified by the Secretary for Health and Human Services. |
| Payment | |
| Unit of Payment | Annual reward based on cost and quality performance, in addition to normal Medicare payments |
| Payment Mechanism | Shared savings; reward based on annual per-capita cost and quality performance vs. risk-adjusted benchmarks, in addition to normal Medicare payments. Details to be specified by the Secretary for Health and Human Services. The House bill also allows the Secretary to implement partial capitation payments for some ACOs. |
| Eligibility for Payment | To be specified by the Secretary of Health and Human Services |
| Payment Adjustments | Expected costs adjusted for "beneficiary characteristics" not specified |
| Budget Implications | Budget neutral (compared to estimated expenditure in absence of program) |
| Budget Reconciliation | CMS to reconcile budget annually |
| Measurement | |
| Quality Measures | Quality measures to be specified by the secretary |

| | |
|---|---|
| Cost Measures | Total Medicare Parts A and B (and possibly Part D, at discretion of secretary) expenditures per beneficiary per capita, expected minus observed |
| Unit of Measurement—Quality | Quality measures to be specified by the Secretary of Health and Human Services |
| Unit of Measurement—Cost | Beneficiary year, including all Medicare Parts A and B (and possibly Part D, at discretion of secretary) payments to ACO and non-ACO providers |
| Data Sources | To be specified by the Secretary of Health and Human Services, but likely to include medical records, claims, and potentially dedicated data collection. Costs are measured using claims. |
| Specific Conditions Addressed | To be specified by the Secretary for Health and Human Services |
| Specific Populations | Medicare fee-for-service beneficiaries with service utilization |
| Consumer-Related Considerations | |
| Effect on Out-of-Pocket Payments | None specified in legislation |
| Provider Choice | Patients are free to receive care outside of the ACO. |
| Legal Protections | None specified in legislation |
| Implementation | |
| Status as of February 2010 | Proposal for implementation in 2012 |
| Geographic Reach | National |
| Program Evaluation | The House bill establishes an evaluation of pilot program and possible expansion of program based on results. The Senate bill does not specify an evaluation. |

| **Medicare Physician Group Practice Demonstration** | |
|---|---|
| Source | Centers for Medicare and Medicaid Services. Medicare Demonstrations. As of April 14, 2010: http://www.cms.hhs.gov/DemoProjectsEvalRpts/MD/itemdetail.asp?filterType=none&filterByDID=-99&sortByDID=3&sortOrder=descending&itemID=CMS1198992&intNumPerPage=10 |
| Participation | |
| Payer | Medicare |
| Provider Participation | Ten physician groups with well-developed clinical and management information systems are participating: Billings Clinic, Billings, Montana; Dartmouth-Hitchcock Clinic, Bedford, New Hampshire; The Everett Clinic, Everett, Washington; Forsyth Medical Group, Winston-Salem, North Carolina; Geisinger Health System, Danville, Pennsylvania; Marshfield Clinic, Marshfield, Wisconsin; Middlesex Health System, Middletown, Connecticut; Park Nicollet Health Services, St. Louis Park, Minnesota; St. John's Health System, Springfield, Missouri; University of Michigan Faculty Group Practice, Ann Arbor, Michigan. |
| Patient Participation | Medicare beneficiaries were assigned to each group if the group provided the plurality of their office or other outpatient evaluation and management services during the performance year. |
| Payment | |
| Unit of Payment | Annual reward based on cost and quality performance, in addition to normal Medicare payments |

| | |
|---|---|
| Payment Mechanism | Shared savings; reward based on annual per-capita cost and quality performance vs. risk-adjusted benchmarks, in addition to normal Medicare payments. At the end of each performance year, total Medicare Part A and Part B per capita spending is calculated for assigned beneficiaries and compared to a target based on spending from other Medicare beneficiaries in the surrounding community. "Savings" are defined as the difference between actual spending and expected spending based on the target. Physician groups may earn performance payments of up to 80% of the savings they generate. The Medicare Trust Funds retain at least 20% of the savings. Performance payments are divided between cost efficiency for generating savings and performance on 32 quality measures phased in during the demonstration. As quality measures were added in performance years two and three, the quality portion has increased so that in the third performance year 50% of any performance payment is for cost efficiency and 50% is for achieving national benchmarks or improvement targets on quality. |
| Eligibility for Payment | Physician group practices whose risk-adjusted Medicare spending growth rate for assigned beneficiaries is more than 2 percentage points lower than their comparison population are eligible for shared savings payments. |
| Payment Adjustments | Expected costs adjusted for patient risk factors using the concurrent CMS-HCC model |
| Budget Implications | Budget neutral (compared to estimated expenditure in absence of program) |
| Budget Reconciliation | CMS reconciles budget annually |
| Measurement | |
| Quality Measures | The 32 quality measures were developed by CMS working in an extensive process with the American Medical Association's Physician Consortium for Performance Improvement and the National Committee for Quality Assurance (NCQA). The measures have undergone review or validation by NQF, which provides endorsement of consensus-based national standards for measurement and public reporting of health care performance data. |

| | |
|---|---|
| Cost Measures | Total Medicare Parts A and B expenditures per beneficiary per capita, expected minus observed |
| Unit of Measurement—Quality | Patient or visit |
| Unit of Measurement—Cost | Beneficiary year, including all Medicare Parts A and B payments to ACO and non-ACO providers |
| Data Sources | Quality: medical records or dedicated data collection (25 measures) and claims (7 measures). Costs are measured using claims. |
| Specific Conditions Addressed | Quality measured for diabetes mellitus, congestive heart failure, coronary artery disease, and preventive care. Cost measured for all care. |
| Specific Populations | Medicare fee-for-service beneficiaries with service utilization |
| Consumer-Related Considerations | |
| Effect on Out-of-Pocket Payments | None explicitly specified |
| Provider Choice | Beneficiaries were assigned to groups retrospectively but were free to seek care from other providers. |
| Legal Protections | None specified in legislation |
| Implementation | |
| Status as of February 2010 | Demonstration began April 1, 2005, and is scheduled to conclude April 1, 2010. |
| Geographic Reach | National (ten sites) |
| Program Evaluation | Physician groups implemented a variety of process redesign, care management, and patient targeting strategies. All ten physician groups improved quality performance. Five physician groups qualified for shared savings. |

**Table A.4**

**Description of Other ACO Shared Savings Programs**

| Program Title | Jurisdiction | Source | Program Summary | Implementation Status |
|---|---|---|---|---|
| Pediatric ACO Demonstration Project | Medicaid | PPACA, Sec. 2706 | Establishes a demonstration project that allows qualified pediatric providers to be recognized and receive payments as ACOs under Medicaid. The pediatric ACO would be required to meet certain performance guidelines. Pediatric ACOs that met these guidelines and provided services at a lower cost would share in those savings. | Proposal |
| Voluntary ACO | Medicare | MedPAC[1] | ACOs are defined as a combination of a hospital, primary care physicians, and specialists. ACOs could include integrated delivery systems, physician-hospital organizations, a hospital plus multispecialty groups, or a hospital teamed with independent practices. Medicare would inform all physicians and hospitals of their current relationships based on Medicare claims data. Physicians and hospitals could then choose to be recognized as an ACO. ACOs would qualify for shared savings payments if they met quality and cost benchmarks. | Recommendation |

| | | | | |
|---|---|---|---|---|
| Mandatory Hospital Medical Staff ACO | Medicare | MedPAC[1] | CMS would use Medicare claims to associate physicians and beneficiaries with hospitals to define empirically based hospital medical staffs. These empirical physician groups could then be held accountable for the Medicare services used by the beneficiaries attributed to them. Providers would be subject to bonuses and penalties based on the performance of their ACO against cost and quality benchmarks. | Recommendation |
| Voluntary ACO with Shared Savings | Medicare | Dartmouth/ Brookings workgroup[2] | Private sector pilot including 3 pilot sites. ACOs that meet savings and quality benchmarks are rewarded with a share of the savings. | Pilot |

1: Medicare Payment Advisory Committee (MedPAC). Report to the Congress: Improving Incentives in the Medicare Program. June 2009. Chapter Two (starts on page 39). As of December 26, 2010: http://www.medpac.gov/documents/Jun09_EntireReport.pdf

2: Fisher, McLellan, et al. "Fostering Accountable Health Care: Moving Forward in Medicare." Health Affairs 28, no.2 (2009): w219.

## MEDICAL HOME

### Synthesis Description of Medical Home Payment Reform Model

*Summary:* Primary care is viewed as critical to improving health outcomes, but primary care practices are under increasing financial strain relative to specialty practices.[15] Current payment methods lack explicit financial incentives for delivery of coordinated, high-quality primary care to a patient panel.[16] This PRM seeks to improve primary care by providing additional payments in recognition of the enhanced capabilities of practices that serve as "medical homes." Although definitions vary, in general medical homes involve restructuring practice to deliver comprehensive, continuous, high-quality care to a panel of patients.[17] In this model, practices qualify as medical homes by meeting criteria for practice structural capabilities and care management processes. Qualifying practices are eligible for additional payments beyond typical fee-for-service payments, often structured as a per-member per-month payment. This model seeks to encourage improvements in care coordination, access, and quality through use of such tools as electronic health records and patient registries and such processes as quality improvement and care management for chronically ill patients.

*Highlighted programs:* Medicare Medical Home Demonstration, Rhode Island Chronic Care Sustainability Initiative, Medicare Federally Qualified Health Center Advanced Primary Care Practice Demonstration

### Common Areas Among Highlighted Programs

*Participation:* Voluntary participation. Participating providers must qualify as medical homes by meeting structural criteria.

*Payment method:* All three highlighted programs use a monthly per-member per-month payment in addition to usual payments.

*Measurement*: Two programs (Medicare Medical Home Demonstration and Rhode Island) use National Committee for Quality Assurance (NCQA) criteria to determine eligibility as a medical home. These programs also track quality using measures drawn from established sources and track cost using measures that are not specified in program descriptions. The third highlighted program (Federally Qualified Health Center Demonstration) is not yet sufficiently specified to determine measurement methods.

*Consumer characteristics*: None of the highlighted programs places limits on consumer choice of provider.

**Key Differences Between Highlighted Programs**

*Participation:* The Medicare Medical Home Demonstration is the only highlighted program that includes specialist practices as medical homes and the only highlighted program that is targeted to a chronically ill patient population.

*Payment method:* The Rhode Island program is the only highlighted program that provides salary support for a nurse care manager in addition to the per-member per-month payment.

*Measurement:* No key differences.

*Consumer-related considerations:* No key differences.

**Table A.5**

**Description of Highlighted Medical Home Programs**

| **Medicare Medical Home Demonstration** | |
|---|---|
| Source | Centers for Medicare and Medicaid Services. "Medicare Demonstrations: Details for Medicare Medical Home Demonstration." As of April 22, 2010: http://www.cms.gov/DemoProjectsEvalRpts/MD/itemdetail.asp?itemID=CMS1199247 |
| Participation | |
| Payer | Medicare |
| Provider Participation | Physician practices, including primary care and certain specialties |
| Patient Participation | Medicare fee-for-service beneficiaries with qualifying chronic diseases |
| Payment | |
| Unit of Payment | Per capita |
| Payment Mechanism | Qualifying practices are paid per-member per-month fees, with higher fees for practices with greater medical home capabilities (Tier 2). In addition, if the demonstration produces greater than 2 percent savings for Medicare, savings will be shared with participating practices. |
| Eligibility for Payment | Practices will be evaluated for provision of medical home capabilities using a modified version of National Committee for Quality Assurance (NCQA) criteria (Physician Practice Connections—Patient-Centered Medical Home—CMS Version). Two levels of eligibility are possible, Tier 1 and Tier 2, with higher payments for Tier 2 qualification. |
| Payment Adjustments | Payments are adjusted for patient risk using hierarchical condition categories. |
| Budget Implications | Not specified in legislation. The design report interprets the demonstration design as implying budget neutrality. |
| Budget Reconciliation | Not specified in description |
| Measurement | |

| | |
|---|---|
| Quality Measures | Quality measures are used to evaluate impact only, not as a basis for payment. Quality measures are not specifically named. Medical home qualification criteria include a number of structure measures. |
| Cost Measures | Per capita costs are used to evaluate impact only. |
| Unit of Analysis | Physician practice |
| Data Sources | Administrative claims are cited as a potential source for both cost and quality measures. |
| Specific Conditions Addressed | Participating beneficiaries will have at least one of a list of qualifying chronic conditions. |
| Specific Populations | None |
| Consumer-Related Considerations | |
| Effect on Out-of-Pocket Payments | No effect |
| Provider Choice | No effect |
| Legal Protections | None specified in description |
| Implementation | |
| Status as of April 2010 | Demonstration under review at Office of Management and Budget; no implementation date set |
| Geographic Reach | Up to eight states |
| Program Evaluation | Independent evaluation to be conducted |

| **Rhode Island Chronic Care Sustainability Initiative** | |
|---|---|
| Source | Rhode Island Office of the Health Insurance Commissioner. "Improving Primary Care: CSI Project." As of April 22, 2010: http://www.ohic.ri.gov/Employers_Premiums_CSI.php |
| Participation | |
| Payer | All payers in Rhode Island except fee-for-service Medicare |
| Provider Participation | Five pilot sites with 26 providers, including primary care practices and a federally qualified health center, expanding to an additional nine sites in 2010 |

| | |
|---|---|
| Patient Participation | The patient panel for each medical home practice is defined empirically based on patterns of primary care visits. |
| Payment | |
| Unit of Payment | Per capita |
| Payment Mechanism | "Care management" fee of $3 per member per month, plus salary of a nurse care manager |
| Eligibility for Payment | NCQA Level 1 certification as a medical home |
| Payment Adjustments | None specified in description |
| Budget Implications | Not specified in description |
| Budget Reconciliation | Not specified in description |
| Measurement | |
| Quality Measures | Eight process and outcome measures drawn from measure sets including HEDIS, DOQ-IT, PQRI, and the Ambulatory Quality Alliance (AQA) |
| Cost Measures | Cost and utilization information reported quarterly; measures not named in description |
| Unit of Analysis | Practice or health center |
| Data Sources | Electronic medical records, chronic disease registries |
| Specific Conditions Addressed | Diabetes, coronary artery disease, depression |
| Specific Populations | None specified in description |
| Consumer-Related Considerations | |
| Effect on Out-of-Pocket Payments | No effect |
| Provider Choice | No effect |
| Legal Protections | None specified in description |
| Implementation | |
| Status as of April 2010 | Ongoing pilot, October 2008 to October 2010 |

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|---|---|
| Geographic Reach | Rhode Island |
| Program Evaluation | Independent evaluation is ongoing. |

| **Federally Qualified Health Center Advanced Primary Care Practice Demonstration** | |
|---|---|
| Source | The White House. "Presidential Memorandum—Community Health Centers." December 9, 2009. As of December 26, 2010: http://www.whitehouse.gov/the-press-office/presidential-memorandum-community-health-centers |
| Participation | |
| Payer | Medicare |
| Provider Participation | Up to 500 Federally Qualified Health Centers (FQHCs) |
| Patient Participation | Medicare fee-for-service beneficiaries receiving primary care; details not specified in description |
| Payment | |
| Unit of Payment | Per capita |
| Payment Mechanism | Monthly care management fee in addition to regular Medicare payments |
| Eligibility for Payment | To be determined |
| Payment Adjustments | Not specified in description |
| Budget Implications | Not specified in description |
| Budget Reconciliation | Not specified in description |
| Measurement | |
| Quality Measures | Not specified in description |
| Cost Measures | Not specified in description |
| Unit of Analysis | FQHCs |
| Data Sources | Not specified in description |

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|---|---|
| Specific Conditions Addressed | Not specified in description |
| Specific Populations | Not specified in description |
| Consumer-Related Considerations | |
| Effect on Out-of-Pocket Payments | Not specified in description |
| Provider Choice | Not specified in description |
| Legal Protections | Not specified in description |
| Implementation | |
| Status as of April 2010 | Planned demonstration, implementation date unknown |
| Geographic Reach | National |
| Program Evaluation | Not specified in description |

**Table A.6**

**Description of Other Medical Home Programs**

| Program Title | Targeted Payer | Source | Program Summary | Status |
|---|---|---|---|---|
| State Medical Home Demonstrations and Pilots | Private payers | Patient-Centered Primary Care Collaborative (PCPCC)[1] | PCPCC has compiled descriptions of 27 private payer medical home pilot and demonstration projects in 18 states in "Proof in Practice: A compilation of patient centered medical home pilot and demonstration projects."[1] Several examples are given in this catalog. | Pilots and demos |

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|---|---|---|---|---|
| EmblemHealth Medical Home High Value Network Project | Emblem Health | PCPCC[1] | New York medical home pilot seeking to determine whether the provision of enhanced payment and support for redesign and care management results in greater transformation of supported practices to medical homes and better performance on measures of quality, efficiency, and patient experience than in comparison practices. The program uses a three-part payment model: (1) fee-for-service, (2) care management payment equal to $2.50 per patient per month (PMPM) for a practice that is fully functioning as a medical home with an eligible patient population of average care management need, and (3) performance-based payment equal to $2.50 PMPM at maximum for each member that is identified on the practice's member list. The specific amount earned by the practice depends on practice results on performance measures relating to quality, efficiency, and patient experience. | Pilot |

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|---|---|---|---|---|
| Colorado Multi-Payer, Multi-State Patient-Centered Medical Home (PCMH) Pilot | Multiple payers | PCPCC[1] | Colorado is the site of a multipayer, multistate PCMH pilot that includes multiple participants at both the local and national levels. The PCMH model will be tested in 16 family medicine and internal medicine practices. Following an initial preparation period, payment for the two-year PCMH pilot will begin in May 2009, once practices have met specific requirements to achieve at least a Level 1 NCQA Medical Home designation. It replaces encounter-based reimbursement with comprehensive payment plus a bonus for meeting certain benchmarks to help offset and justify the costs of the investment. To ensure optimal allocation of resources and the rewarding of desired outcomes, the comprehensive payment is needs- and risk-adjusted and performance-based. The Colorado Clinical Guidelines Collaborative will serve as the convening organization and provide technical assistance for the PCMH pilot practices in Colorado, including in-office coaching, learning communities, and innovative technology. | Pilot |

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|---|---|---|---|---|
| Pennsylvania Chronic Care Initiative | Multiple payers | PCPCC[1] | A multipayer medical home pilot in Southeastern Pennsylvania. Physician practices must make a three-year commitment to participate in a seven-day learning collaborative, currently focused on diabetes and pediatric asthma; work with a practice coach; use a patient registry; achieve Level 1 NCQA PPC-PCMH by 12 months; report data; and reinvest funds into the practice site. In return, practices receive payments to help offset practice management costs, the cost of hiring or contracting for care management, and incentives to achieve Level 1 Plus, Level 2, and Level 3 recognition in the PCMH standards. There is also a shared savings payment of up to 50%, based on performance to identified measures. | Pilot |

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|---|---|---|---|---|
| UnitedHealth Group PCMH Demonstration Program | UnitedHealth Arizona | PCPCC[1] | The intent of the program is to demonstrate the value of a PCMH primary care practice. The "medical home" physician will be responsible for the primary care of the individual patient, as well as managing and arranging care collaboratively with UnitedHealth for those patients. Though the emphasis will be on primary disease prevention and improving quality of care for chronically ill patients, the program includes an outreach to members to become more engaged in their overall health and wellness. | Ongoing program |
| North Carolina Community Care | Medicaid | North Carolina Medicaid Program[2] | Under the Community Care program (formerly known as Access), North Carolina is building community health networks that are organized and operated by community physicians, hospitals, health departments, and departments of social services. Fourteen Community Care networks—nonprofit organizations comprising safety net providers—with more than 1,380 practices across North Carolina are working with their local health departments, hospitals, and social service agencies to better manage the care of 970,558 Medicaid and NCHC Enrollees. Networks receive a payment of $3 PMPM from the state to manage the care of Medicaid enrollees. | Active program |

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|---|---|---|---|---|
| Maine Patient-Centered Medical Home Pilot | Medicaid | PCPCC[1] | The Maine Patient-Centered Medical Home Pilot is the first step in achieving statewide implementation of the PCMH model. We are working with participating practices to support their continued transformation to a more patient-centered model of care and are working with all major private payers in the state and Medicaid (MaineCare) to pilot an alternative payment model that recognizes and rewards practices for demonstrating high quality and efficient care. We will evaluate the pilot using a comprehensive approach that includes nationally recognized measures of quality, efficiency, and patient-centered measures of care that reflect the six aims of quality care identified by the Institute of Medicine (i.e., safe, effective, timely, efficient, equitable, and patient-centered). | Ongoing program |

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|---|---|---|---|---|
| Multi-Payer Advanced Primary Care Initiative | Medicare | Medicare demo[3] | Under this demonstration, CMS will participate in innovative multipayer reform initiatives that are being conducted by states to make advanced primary care practices more broadly available. The demonstration will evaluate whether advanced primary care practice will (1) reduce unjustified variation in utilization and expenditures; (2) improve the safety, effectiveness, timeliness, and efficiency of health care; (3) increase the ability of beneficiaries to participate in decisions concerning their care; (4) increase the availability and delivery of care that is consistent with evidence-based guidelines in historically underserved areas; and (5) reduce overall utilization and expenditures under the Medicare program. The demonstration will be open to states that have undertaken multipayer reform initiatives and will be conducted under the authority of section 402 of the Social Security Amendments of 1967. | Demo—not yet begun |

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|---|---|---|---|---|
| Global Fee for Patient-Centered Medical Home | Medicare | Commonwealth Fund[4] | Physician practices would receive a risk-adjusted per patient global fee per month to cover all primary care services. This would be in lieu of payment for individual primary care services, and an amount would be included to cover the functions of the patient-centered medical home. The primary care global fee could be based on the expected average payment for primary care services per Medicare beneficiary, risk-adjusted for those enrolled in the practice and adjusted for geographic differences in the prices of practice inputs. Over time, these savings could be shared between Medicare and participating practices in at least two ways: (1) A share of the savings from reduced costs could be added to the pool from which rewards are made to individual participating practices for high performance on quality, patient experience, and coordinated care measures; and (2) the mechanism for updating the primary care global fees for all participating practices could be structured to reflect a share of the total savings from reduced costs as a provider group. | Proposal |

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|---|---|---|---|---|
| State Option to Provide Health Homes for Enrollees with Chronic Conditions | Medicaid | PPACA sec. 2703 | Provide states the option of enrolling Medicaid beneficiaries with chronic conditions into a health home. Health homes would be composed of a team of health professionals and would provide a comprehensive set of medical services, including care coordination. | Proposal |

1: Patient-Centered Primary Care Collaborative (PCPCC). Proof in Practice: A compilation of patient centered medical home pilot and demonstration projects. 2009. As of December 26, 2010: http://www.pcpcc.net/files/PilotGuidePip.pdf

2: Community Care of North Carolina. "Community Care at a Glance." November 2009. As of December 26, 2010: http://www.communitycarenc.com/PDFDocs/CCNC%20AT%20A%20GLANCE.pdf

3: Medicare Demonstrations: Details for Multi-Payer Advanced Primary Care Initiative. As of December 26, 2010: http://www.cms.hhs.gov/demoprojectsevalrpts/md/itemdetail.asp?filterType=none&filterByDID=0&sortByDID=3&sortOrder=descending&itemID=CMS1230016&intNumPerPage=10

4: S. Guterman, K. Davis, S. C. Schoenbaum, and A. Shih, "Using Medicare Payment Policy to Transform the Health System: A Framework for Improving Performance," Health Affairs Web Exclusive, Jan. 27, 2009:w238–w250. As of December 26, 2010: http://www.commonwealthfund.org/Content/Publications/In-the-Literature/2009/Jan/Using-Medicare-Payment-Policy-to-Transform-the-Health-System--A-Framework-for-Improving-Performance.aspx

## BUNDLED PAYMENT

### Synthesis Description of Bundled Payment Payment Reform Model

*Summary:* In this model, a single "bundled" payment is made for services delivered during an episode of care related to a medical condition or procedure. In contrast to fee-for-service payment, the bundled payment may cover multiple providers in multiple care delivery settings. However, unlike in the global payment model or ACO shared savings program model, the payment covers services related to a single condition or procedure, not all services delivered to a patient during a time period. The payment rates are often adjusted based on quality performance using a P4P-like mechanism.

The goal of payment bundling is to create incentives for providers to deliver care more efficiently (delivering care of equal or greater quality at equal or lower cost), relative to the delivery of the same care under a traditional fee-for-service model. By offering providers a bundled payment for an entire episode, the providers assume some risk as they may realize a gain or loss based on how they manage resources and total costs associated with treating the episode.

*Highlighted programs:* Medicare Acute Care Episode (ACE) Demonstration; Minnesota Baskets of Care; Geisinger Health System ProvenCare SM; Prometheus Payment

### Common Areas Among Highlighted Programs

*Participation:* All of the highlighted programs have limited, voluntary enrollment by providers. Three of the highlighted programs (Medicare, Geisinger, Prometheus) are pilots, while the fourth (Minnesota) is a program in development.

*Payment method:* All of the highlighted programs base payments on episodes of care for a particular condition or acute event, including multiple providers involved in the episode.

*Measurement*: All of the highlighted programs include process and outcome quality measures. All of the programs also use definitions of episodes of care.

*Consumer characteristics*: None of the highlighted programs place any limits on consumer choice of provider.

### Key Differences Between Highlighted Programs

*Participation:* The Medicare ACE Demonstration includes only physician-hospital organizations (PHOs). Geisinger ProvenCare is implemented only for beneficiaries of Geisinger Health Plan, so that the payer and participating providers are all part of the same integrated delivery system. The Minnesota and Prometheus programs do not specify an organizational arrangement for participating providers.

*Payment method:* The Medicare ACE Demonstration is the only highlighted program that explicitly uses a competitive bidding process to determine payment rates for episodes of care. Prometheus Payment is the only highlighted program to use episode-specific risk adjustment of episode payment rates. Prometheus Payment is also the only highlighted program to explicitly adjust episode payment rates based on performance on quality measures, although the Medicare ACE Demonstration and Geisinger ProvenCare programs allow participating organizations to make incentive payments to individual providers.

*Measurement:* Each highlighted program uses different quality measures and different definitions of episodes of care.

*Consumer-related considerations:* The Medicare ACE Demonstration is the only highlighted program that explicitly replaces out-of-pocket payments for services during an episode of care with a single copayment per episode.

**Table A.7**

**Description of Highlighted Bundled Payment Programs**

| **Medicare Acute Care Episode Demonstration** | |
|---|---|
| Source | Centers for Medicare and Medicaid Services. "Medicare Demonstrations: Details for Medicare Acute Care Episode (ACE) Demonstration." As of April 21, 2010: http://www1.cms.gov/DemoProjectsEvalRpts/MD/itemdetail.asp?filterType=none&filterByDID=0&sortByDID=3&sortOrder=descending&itemID=CMS1204388&intNumPerPage=10 |
| Participation | |
| Payer | Medicare |
| Provider Participation | Participants were required to be physician-hospital organizations meeting procedure volume thresholds; have established quality improvement mechanisms; and be located in Texas, Oklahoma, New Mexico, or Colorado. |
| Patient Participation | All Medicare fee-for-service beneficiaries receiving care from a demonstration hospital |
| Payment | |
| Unit of Payment | Hospital discharge |
| Payment Mechanism | Bundled payment; payment covers all Medicare Parts A and B services provided during the hospital stay. Payment rates determined by competitive bidding. Sites have the option to provide incentive payments to staff and in-kind services to beneficiaries and their families. |
| Eligibility for Payment | All hospital stays covered by the demonstration are eligible for payment. |
| Payment Adjustments | None specified in description |
| Budget Implications | Designed to be budget-reducing |
| Budget Reconciliation | Not specified in description |
| Measurement | |

| | |
|---|---|
| Quality Measures | Various process and outcome measures, readmissions |
| Cost Measures | Average length of stay |
| Unit of Analysis | Hospitals |
| Data Sources | Medical records, administrative claims |
| Specific Conditions Addressed | Hip/knee replacement, percutaneous coronary intervention, cardiac defibrillator implant, cardiac pacemaker implant or revision, coronary artery bypass graft, cardiac valve, and other major cardiothoracic procedures |
| Specific Populations | None |
| Consumer-Related Considerations | |
| Effect on Out-of-Pocket Payments | Beneficiaries pay a fixed copayment per discharge instead of usual out-of-pocket arrangements. In addition, CMS will share 50% of savings with beneficiaries up to a maximum of Part B premium amount. |
| Provider Choice | No effect |
| Legal Protections | None specified in legislation |
| Implementation | |
| Status as of April 2010 | Ongoing through December 31, 2011 |
| Geographic Reach | Five sites in Texas, Oklahoma, Colorado, and New Mexico |
| Program Evaluation | Independent evaluation is ongoing. |

| **Minnesota "Baskets of Care"** | |
|---|---|
| Source | Minnesota Department of Health. "Baskets of Care." As of May 20, 2010: http://www.health.state.mn.us/healthreform/baskets/adoptedrule.html |
| Participation | |
| Payer | Voluntary participation by Minnesota payers |
| Provider Participation | Voluntary participation by any provider or provider group offering one of the state-designated baskets of care |
| Patient Participation | Voluntary participation; criteria not determined as of April 2010 |

| | |
|---|---|
| **Payment** | |
| Unit of Payment | Episode of care |
| Payment Mechanism | Bundled payment; details not specified in description |
| Eligibility for Payment | The episode of care must include all services specified in the state-designated basket and must not include additional services not specified in the state-designated basket. |
| Payment Adjustments | None specified in description |
| Budget Implications | Not specified in description |
| Budget Reconciliation | Not specified in description |
| **Measurement** | |
| Quality Measures | Various process, outcome, functional status, and patient experience specified in Final Rule published March 2010 |
| Cost Measures | Various cost measures specified in Final Rule published March 2010 |
| Unit of Analysis | Physicians and physician groups for chronic conditions and preventive care, hospitals for total knee replacement |
| Data Sources | Not specified in description |
| Specific Conditions Addressed | Pediatric asthma, medically uncomplicated type 2 diabetes, prediabetes, low back pain, obstetric care, preventive care (one basket for adults and one for children), total knee replacement |
| Specific Populations | Two baskets focus on children. |
| **Consumer-Related Considerations** | |
| Effect on Out-of-Pocket Payments | Not specified in description |
| Provider Choice | Not specified in description |
| Legal Protections | Not specified in description |
| **Implementation** | |
| Status as of April 2010 | Implemented in March 2010 |
| Geographic Reach | Minnesota |

| | |
|---|---|
| Program Evaluation | Not specified in description |

| **Geisinger Health System ProvenCare[SM]** | |
|---|---|
| Source | Geisinger. "About ProvenCare." As of April 21, 2010: http://www.geisinger.org/provencare/<br>Casale AS, Paulus RA, Selna MJ, et al. ProvenCare SM: A Provider-Driven Pay-for-Performance Program for Acute Episodic Cardiac Surgical Care. Annals of Surgery 2007;246:613–23. |
| Participation | |
| Payer | Geisinger Health Plan |
| Provider Participation | Geisinger Health System providers |
| Patient Participation | Voluntary; eligibility criteria defined by condition |
| Payment | |
| Unit of Payment | Episode of care |
| Payment Mechanism | Bundled payment; payment covers all services during episode of care, with price set to cover 50% of historical complication and readmission rates |
| Eligibility for Payment | All covered services eligible |
| Payment Adjustments | Not specified in description |
| Budget Implications | Budget-reducing |
| Budget Reconciliation | Not specified in description |
| Measurement | |
| Quality Measures | Process of care measures are developed/selected by Geisinger physicians. A small set of outcome measures have been reported in Casale et al. (2007) and on the Geisinger website. |
| Cost Measures | Used in evaluation and to set payment rates only |
| Unit of Analysis | Hospital and physician group |

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|---|---|
| Data Sources | Electronic medical records |
| Specific Conditions Addressed | Coronary artery bypass graft, percutaneous coronary intervention, total hip replacement, cataract, erythropoietin, perinatal, bariatric surgery, low back pain |
| Specific Populations | Not specified in description |
| Consumer-Related Considerations | |
| Effect on Out-of-Pocket Payments | Not specified in description |
| Provider Choice | Not specified in description |
| Legal Protections | Not specified in description |
| Implementation | |
| Status as of April 2010 | Ongoing program |
| Geographic Reach | One site in Pennsylvania |
| Program Evaluation | Geisinger found increased performance on process measures, decreased hospital charges, and decreased average length of stay. |

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|---|---|
| Prometheus Payment | |
| Source | Prometheus Payment, home page, 2010. As of April 21, 2010: http://www.prometheuspayment.org/ |
| Participation | |
| Payer | Several private sector payers |
| Provider Participation | Varies by site |
| Patient Participation | Not specified in description |
| Payment | |
| Unit of Payment | Episode of care |

| | |
|---|---|
| Payment Mechanism | Bundled payment, covering all services related to the episode of care; the payment amount is derived from historical payment rates for the type and number of services related to an episode based on clinical guidelines and evidence-based medicine, minus an adjustment for potentially avoidable complications. In practice, payment mechanisms vary by pilot site, with some sites using a shared-savings approach. |
| Eligibility for Payment | Not specified in documentation |
| Payment Adjustments | Payment rates for episodes of care are adjusted for patient risk, using risk adjustment models specific to each episode type and each participating payer. Payment rates are also adjusted for performance on quality measures. |
| Budget Implications | Not specified; may vary between sites |
| Budget Reconciliation | Participants may use a claims processing mechanism developed by Prometheus Payment and administered by a claims processor. |
| Measurement | |
| Quality Measures | Various process and outcome measures developed for use in the Bridges to Excellence program, plus Prometheus' potentially avoidable complications |
| Cost Measures | None used for performance assessment, other than actual and budgeted costs for episodes of care |
| Unit of Analysis | Provider groups |
| Data Sources | Electronic medical records, paper medical records |
| Specific Conditions Addressed | Episodes of care have been defined for 21 acute and chronic conditions. |
| Specific Populations | None |
| Consumer-Related Considerations | |
| Effect on Out-of-Pocket Payments | Not specified in description |
| Provider Choice | Not specified; may vary by pilot site |
| Legal Protections | Not specified by description |
| Implementation | |

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|---|---|
| Status as of April 2010 | Ongoing pilot program |
| Geographic Reach | Four pilot sites |
| Program Evaluation | Independent implementation evaluation ongoing |

**Table A.8**

**Description of Other Bundled Payment Programs**

| Program Title | Targeted Payer | Source | Program Summary | Status |
|---|---|---|---|---|
| National Pilot Program on Payment Bundling | Medicare | PPACA sec. 3023 | Direct the secretary to develop a national, voluntary pilot program encouraging hospitals, doctors, and post–acute care providers to improve patient care and achieve savings for the Medicare program through bundled payment models. Requires the secretary to establish this program by January 1, 2013, for a period of five years. Before January 1, 2016, the secretary is also required to submit a plan to Congress to expand the pilot program if doing so will improve patient care and reduce spending. | Proposal |
| Demonstration to Evaluate Integrated Care Around a Hospitalization | Medicaid | PPACA sec. 2704 | Establishes a demonstration project, in up to eight states, to study the use of bundled payments for hospital and physicians services under Medicaid | Proposal |

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|---|---|---|---|---|
| Bundled Payment for MassHealth Hospital Services | Medicaid (Massachusetts) | Massachusetts Medicaid Program[1] | A pilot program will test the concept of bundling MassHealth payments to one or more hospitals or hospital systems. An aggregate prospective payment will cover the total cost of a defined set of health care services. | |
| Bundled Payments for Services Around Hospitalization Episodes | Medicare | MedPAC[2] | A voluntary pilot program to test the feasibility of bundled payment for services around hospitalization episodes for select conditions. The pilot must have clear and explicit thresholds for determining whether it can be expanded into the full Medicare program or should be discontinued. | Recommendation |

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|---|---|---|---|---|
| Global DRG Case Rate for Hospitalization | Medicare | Commonwealth Fund[3] | Establish a global DRG hospital case rate, including expected hospital readmissions, post–acute care (inpatient rehabilitation, skilled nursing, and home health), and ED use over a 30-day period following the initial hospital discharge. This case rate includes acute and subacute care and ED services, including any services provided by other hospitals, but not office-based physician services. These global rates could apply to all hospitalized patients or to patients with a selected set of conditions, such as surgical procedures or chronic illnesses. Hospital systems that qualify for this payment method would have the prospect of greater control of the resources they use to treat their patients, reimbursement that covers a continuum of care over 30 days after admission, and the opportunity to benefit from savings resulting from reduced complications and readmissions. | Proposal |

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|---|---|---|---|---|
| Episode-of-Care Payment | Not specified | Network for Regional Health Improvement[4] | A single, bundled episode-of-care payment would be paid to a group of providers to cover all of the services needed by the patient during the episode of care. The group of providers would include all of the hospitals, physicians, home health care agencies, etc. involved in the patient's care for that episode. The providers would be encouraged to create joint arrangements for accepting and dividing up the episode-of-care payment among themselves. The amount of the episode-of-care payment would vary based on the patient's diagnosis and other patient-specific factors. However, there would be no increase in payment to cover preventable adverse events, such as errors and infections. The amount of the episode-of-care payment would be prospectively defined but would include a retrospective adjustment based on the level of outcomes achieved by the provider group. | Proposal |

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|---|---|---|---|---|
| Medicare Cataract Alternative Payment Demonstration | Medicare | Medicare demo[5] | Medicare tested an episode-based payment for outpatient cataract surgery in 1993–1996. The episode included physician and facility fees, intraocular lens costs, and selected pre- and postoperative tests. Payment rates were determined by competitive bidding. Participation was very low, and the demonstration produced a low level of savings compared to the Participating Heart Bypass Center Demonstration, with little impact on utilization or patient outcomes. | Demo—completed |

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|---|---|---|---|---|
| Medicare Participating Heart Bypass Center Demonstration | Medicare | Medicare demo[6] | The Medicare Participating Heart Bypass Center Demonstration was conducted to assess the feasibility and cost effectiveness of a negotiated all-inclusive bundled payment arrangement for coronary artery bypass graft (CABG) surgery while maintaining high-quality care. HCFA originally negotiated contracts with four applicants in 1991. In 1993 the demonstration was expanded to include three more participants. The evaluation found that an all-inclusive bundled payment arrangement can provide an incentive to physicians and the hospital to work together to provide services more efficiently, improve quality, and reduce costs. The bundling of the physician and hospital payments did not have a negative impact on the post-discharge health improvements of the demonstration patients. | Demo–completed |

1: Mark Heit and Kip Piper. Global Payments to Improve Quality and Efficiency in Medicaid: Concepts and Considerations. Massachusetts Medicaid Policy Institute. November 2009. As of December 26, 2010: http://www.massmedicaid.org/~/media/MMPI/Files/20091116_GlobalPayments.pdf

2: Medicare Payment Advisory Committee (MedPAC). Report to the Congress: Reforming the Delivery System. June 2008. Starts on page 84. As of December 26, 2010: http://www.medpac.gov/documents/Jun08_EntireReport.pdf

3: S. Guterman, K. Davis, S. C. Schoenbaum, and A. Shih, "Using Medicare Payment Policy to Transform the Health System: A Framework for Improving Performance," Health Affairs Web Exclusive, Jan. 27, 2009:w238–w250. As of December 26, 2010:

http://www.commonwealthfund.org/Content/Publications/In-the-Literature/2009/Jan/Using-Medicare-Payment-Policy-to-Transform-the-Health-System--A-Framework-for-Improving-Performance.aspx

4: Network for Regional Health Improvement. “From Volume to Value: Transforming Health Care Payment and Delivery Systems to Improve Quality and Reduce Costs.” January 2009. As of December 26, 2010: http://www.nrhi.org/downloads/NRHI2008PaymentReformRecommendations.pdf

5: Abt Associates Inc. Medicare Cataract Surgery Alternate Payment Demonstration: Final Evaluation Report. Cambridge, Mass.: June 13, 1997.

6: Medicare Demonstrations: Details for Medicare Participating Heart Bypass Center Demonstration. Last modified May 16, 2006. As of December 26, 2010: http://www.cms.hhs.gov/DemoProjectsEvalRpts/MD/itemdetail.asp?filterType=none&filterByDID=-99&sortByDID=3&sortOrder=descending&itemID=CMS063472&intNumPerPage=10

## HOSPITAL-PHYSICIAN GAINSHARING

### Synthesis Description of Hospital-Physician Gainsharing Payment Reform Model

*Summary:* Under DRG and fee-for-service payment systems, hospitals and physicians face different incentives in the provision of inpatient care. Hospitals have a strong incentive to provide hospitalization services at the lowest cost but often have limited leverage to encourage physicians to cooperate in cost-reduction efforts, since physician professional services are reimbursed separately.[19] Hospitals are generally prohibited from providing incentives to physicians to lower the costs of care under existing laws. Under gainsharing arrangements, these rules are waived subject to certain conditions, and hospitals are allowed to share savings (i.e., insurer payment minus costs of care) with physicians. This new incentive is expected to permit hospitals and physicians to collaborate on innovative approaches that increase the efficiency of patient care. Gainsharing arrangements are typically allowed for specific treatments or procedures that define a set of products or services, such as CABG surgery.

*Highlighted programs:* Medicare Physician Hospital Collaboration Demonstration, Medicare Gainsharing Demonstration

### Common Areas Among Highlighted Programs

*Participation:* Hospitals and affiliated physicians

*Payment method:* Hospitals devise methods to share net savings with physicians. Payments from insurers do not change.

*Measurement*: Cost and quality are monitored to ensure that patient care is not compromised.

*Consumer characteristics*: No consumer impact.

### Key Differences Between Highlighted Programs

*Participation:* No key differences.

*Payment method:* No key differences.

*Measurement:* The Medicare Physician Hospital Collaboration Demonstration includes a focus on long-term outcomes, while the Medicare Gainsharing Demonstration is focused on the period spanning hospitalization and a brief post-hospitalization window.

*Consumer-related considerations:* No key differences.

**Table A.9**

**Description of Highlighted Hospital-Physician Gainsharing Programs**

| **MMA Section 646 Physician Hospital Collaboration Demonstration** | |
|---|---|
| Source | Centers for Medicare and Medicaid Services. "Medicare Demonstrations: Details for MMA Section 646 Physician Hospital Collaboration Demonstration." As of April 16, 2010: http://www.cms.gov/DemoProjectsEvalRpts/MD/itemdetail.asp?filterType=none&filterByDID=99&sortByDID=3&sortOrder=ascending&itemID=CMS1186653 |
| Participation | |
| Payer | Medicare |
| Provider Participation | Participation limited to the 12 hospitals in the New Jersey Care Consortium. Preference was given to projects developed and operated by a consortium of groups, with each consortium consisting of up to 12 physician groups and their affiliated hospitals in a single geographically contiguous area (state or metropolitan area) in which there is standardization of the quality improvement gainsharing activity, quality measures, internal cost measurement methodology, and gainsharing payment methodology. |
| Patient Participation | Not specified in description |
| Payment | |
| Unit of Payment | Medicare payments to hospitals and physicians will not change. |
| Payment Mechanism | Gainsharing; hospitals are expected to share a portion of existing DRG payments with physician groups. |
| Eligibility for Payment | Not specified in description; at discretion of hospitals |
| Payment Adjustments | Not specified in description; at discretion of hospitals |
| Budget Implications | Participants guarantee Medicare budget neutrality or savings. |
| Budget Reconciliation | Not specified in description |
| Measurement | |

| | |
|---|---|
| Quality Measures | Participant specifies measures drawn from the following sources: HQA measures, NQF-endorsed measures, Hospital Consumer Assessment of Healthcare Providers and Systems (HCAHPS) patients' perspectives on care measures, Agency for Health Care Research and Quality hospital-level patient safety indicators, 30-day and longer-term mortality and complication measures, other CMS quality measures, and other evidence-based quality measures developed by the relevant medical specialty society or a consensus of the peer-reviewed literature. Some measures must reflect longer-term outcomes over an episode of care. |
| Cost Measures | Participant specifies measures, including measures for an episode of care |
| Unit of Analysis | Hospital |
| Data Sources | Not specified in description |
| Specific Conditions Addressed | Not specified in description |
| Specific Populations | Not specified in description |
| Consumer-Related Considerations | |
| Effect on Out-of-Pocket Payments | None |
| Provider Choice | No effect |
| Legal Protections | None |
| Implementation | |
| Status as of April 2010 | Ongoing, July 2009—July 2012 |
| Geographic Reach | New Jersey |
| Evaluation | Independent evaluation will be conducted. |

| **Deficit Reduction Act of 2005 (DRA) 5007 Medicare Hospital Gainsharing Demonstration** | |
|---|---|
| Source | Centers for Medicare and Medicaid Services. "Medicare Demonstrations: Details for DRA 5007 Medicare Hospital Gainsharing Demonstrations." As of April 16, 2010: http://www.cms.gov/demoprojectsevalrpts/md/itemdetail.asp?filterType=none&filterByDID=0&sortByDID=2&sortOrder=ascending&itemID=CMS1186805&intNumPerPage=10 |
| Participation | |
| Payer | Medicare |

| | |
|---|---|
| Provider Participation | Two participants were chosen. Applicants were required to be hospitals submitting HQA performance data, have an internal quality committee comprising hospital and physician representatives, and propose innovative gainsharing approaches beyond current Office of the Inspector General of the U.S. Department of Health and Human Services (OIG)–approved arrangements. CMS was interested in selecting participants from both urban and rural areas. |
| Patient Participation | Not specified in description |
| Payment | |
| Unit of Payment | Medicare payments to hospitals and physicians will not change. |
| Payment Mechanism | Gainsharing; hospitals are expected to share a portion of existing DRG payments with physician groups. |
| Eligibility for Payment | Not specified in description; at discretion of hospitals |
| Payment Adjustments | Not specified in description; at discretion of hospitals |
| Budget Implications | Participants guarantee Medicare budget neutrality or savings. |
| Budget Reconciliation | Not specified in description |
| Measurement | |
| Quality Measures | Participant specifies measures drawn from the following sources: Hospital Quality Alliance, NQF-endorsed measures, HCAHPS patients' perspectives, AHRQ hospital-level patient safety indicators, 30-day and longer-term mortality and complication measures, other CMS quality measures, and relevant medical specialty society or a consensus of the peer-reviewed literature. Measures should reflect quality during hospitalization as well as the immediate post-discharge period. |
| Cost Measures | Participants specify measures. |
| Unit of Analysis | Hospitals |
| Data Sources | Not specified in description |
| Specific Conditions Addressed | Not specified in description |

| | |
|---|---|
| Specific Populations | Not specified in description |
| **Consumer-Related Considerations** | |
| Effect on Out-of-Pocket Payments | None |
| Provider Choice | No effect |
| Legal Protections | None |
| **Implementation** | |
| Status as of April 2010 | Completed on December 31, 2009 |
| Geographic Reach | Two hospitals: Beth Israel Medical Center, New York City, and Charleston Area Medical Center, West Virginia |
| Program Evaluation | Independent evaluation to be completed |

**Table A.10**

**Description of Other Hospital-Physician Gainsharing Programs**

| Program Title | Targeted Payer | Source | Program Summary | Status |
|---|---|---|---|---|
| OIG-Sanctioned Gainsharing Arrangements | Private Payers | AMA[1] | OIG has approved gainsharing arrangements in a series of advisory opinions. The approved arrangements have used such cost reduction mechanisms as limits on use of certain supplies; product standardization; and using certain supplies and services only on an "as needed" basis, in order to curtail waste. While the gainsharing arrangements reviewed by OIG vary, other features common to the permitted arrangements include<br>- specific, identifiable, and transparent cost-saving actions and verifiable cost savings from those actions<br>- a ceiling on how much of the realized savings participating physicians could receive<br>- arrangements of limited duration<br>- a floor on the minimum permissible use of certain services and materials, set in accordance with objective evidence<br>- provisions for participating physicians to make a patient-by-patient determination of necessary care and other patient-care safeguards<br>- disclosures to patients about the hospital's and physician's participation in cost-saving efforts | Ongoing Program |

| | | | | |
|---|---|---|---|---|
| | | | - equal distribution of cost savings among all participating physicians<br>- use of third parties to develop and monitor the gainsharing arrangement. | |

1: American Medical Association. Health Care Fraud Abuse: Gainsharing Arrangements, 2010. As of December 26, 2010: http://www.ama-assn.org/ama/pub/physician-resources/legal-topics/regulatory-compliance-topics/health-care-fraud-abuse/gainsharing-arrangements.shtml

## PAYMENT FOR COORDINATION

### Synthesis Description of Payment for Coordination Payment Reform Model

*Summary:* Improving care coordination has been identified as one of six priority areas by the National Priorities Partnership.[21] Traditional payment methods do not create incentives for providers to improve care coordination.[16] Under this PRM, the payer makes additional payments to providers that are explicitly tied to care coordination activities. The model aims to encourage more intensive, proactive, coordinated care in order to improve patient health and reduce preventable service utilization and costs.

*Highlighted programs:* PPACA Independence at Home Medical Practice Demonstration Program, Medicare Community Nursing Organization Demonstration

### Common Areas Among Highlighted Programs

*Participation:* Provider and patient participation is voluntary in both highlighted programs; there are no other common areas.

*Payment method:* Payments for care coordination were made in addition to typical payments in both highlighted programs.

*Measurement*: No common areas

*Consumer characteristics*: No limits on choice of provider in either highlighted program

### Key Differences Between Highlighted Programs

*Participation:* The PPACA Independence at Home Demonstration includes multidisciplinary care teams that provide home-based primary care. The Medicare Community Nursing Organization Demonstration included four diverse providers of community nursing and ambulatory care services who provided case management services.

*Payment method:* The PPACA Independence at Home Demonstration pays via a shared savings mechanism, while the Medicare Community Nursing Organization Demonstration paid via partial capitation.

*Measurement:* The PPACA Independence at Home Demonstration bases payment eligibility and rates on performance against cost and quality benchmarks. The Medicare Community Nursing Organization did not explicitly employ a measurement component, except in evaluation.

*Consumer-related considerations:* No key differences.

**Table A.11**

**Description of Highlighted Payment for Coordination Programs**

| **Independence at Home Demonstration Program** | |
|---|---|
| Source | Patient Protection and Affordable Care Act of 2010, Pub. L. No. 111-148, 124 Stat. 119 through 124 Stat. 1025 (2010), Sec. 3024 |
| Participation | |
| Payer | Medicare |
| Provider Participation | "Independence at home medical practices" are defined as physicians or nurse practitioners practicing with a team of other health and social services staff to provide home-based primary care to at least 200 patients, available 24/7, and using HIT. Other criteria may be specified by the secretary. |
| Patient Participation | Voluntary enrollment by fee-for-service Medicare beneficiaries, not enrolled in PACE, with two or more chronic illnesses, with nonelective hospital admission and rehabilitation services in the past 12 months, with functional limitations, or with other criteria to be specified by the secretary |
| Payment | |
| Unit of Payment | Incentive payments in addition to normal Medicare payments |
| Payment Mechanism | Shared savings; payment is a to-be-specified percentage of any difference between expected and actual spending greater than 5 percent, adjusted for quality performance. |
| Eligibility for Payment | Participants with actual spending more than 5 percent below expected |
| Payment Adjustments | Expected cost benchmark adjusted for patient risk |
| Budget Implications | Budget-neutral or reducing relative to expected costs |
| Budget Reconciliation | Not specified in legislation |
| Measurement | |
| Quality Measures | Beneficiary and caregiver satisfaction. Other quality measures may be specified by the secretary. |

| | |
|---|---|
| Cost Measures | Preventable hospitalizations, hospital readmissions, emergency room visits, efficiency of care (e.g., duplicative diagnostic and laboratory tests), cost of care |
| Unit of Analysis | Provider groups |
| Data Sources | Not specified in legislation |
| Specific Conditions Addressed | Chronic illnesses to be specified by the secretary |
| Specific Populations | Chronically ill Medicare beneficiaries with functional limitations |
| Consumer-Related Considerations | |
| Effect on Out-of-Pocket Payments | None specified in legislation |
| Provider Choice | Beneficiaries must not be required to relinquish access to any services. |
| Legal Protections | None specified in legislation |
| Implementation | |
| Status as of April 2010 | Demonstration to begin January 1, 2012 |
| Geographic Reach | National |
| Program Evaluation | Mandatory evaluation |

| **Community Nursing Organization Demonstration** | |
|---|---|
| Source | Centers for Medicare and Medicaid Services. "Medicare Demonstrations: Details for Evaluation of the Community Nursing Organization Demonstration." Last modified June 7, 2006. As of April 21, 2010: http://www.cms.gov/demoprojectsevalrpts/md/itemdetail.asp?itemid=CMS064340 |
| Participation | |
| Payer | Medicare |
| Provider Participation | Providers of community nursing and ambulatory care services. Four diverse sites were selected via a competitive application process. |

| | |
|---|---|
| Patient Participation | Voluntary participation by fee-for-service Medicare beneficiaries living near participating providers |
| **Payment** | |
| Unit of Payment | Per capita |
| Payment Mechanism | Partial capitation; the capitation payment covered home health services, medical supplies and durable medical equipment, ambulance, physical therapy, speech pathology, clinical psychologist services, nursing care, and case management services that are not covered under Medicare Part B. |
| Eligibility for Payment | All participating providers eligible for payment |
| Payment Adjustments | Adjusted for case mix |
| Budget Implications | Not determined by design, but demonstration was budget-increasing |
| Budget Reconciliation | Not specified in description |
| **Measurement** | |
| Quality Measures | None |
| Cost Measures | None, except in evaluation |
| Unit of Analysis | Provider group |
| Data Sources | Administrative claims |
| Specific Conditions Addressed | None |
| Specific Populations | None |
| **Consumer-Related Considerations** | |
| Effect on Out-of-Pocket Payments | Not specified in description |
| Provider Choice | No effect |
| Legal Protections | None specified in description |
| **Implementation** | |
| Status as of April 2010 | Demonstration concluded in December 2009 |

| | |
|---|---|
| Geographic Reach | Four sites |
| Program Evaluation | Demonstration was found to increase total costs. The partial capitation payment amounts were not offset by reductions in payments for other services. |

**Table A.12**

**Description of Other Payment for Coordination Programs**

| Program Title | Targeted Payer | Source | Program Summary | Status |
|---|---|---|---|---|
| Community-Based Care Transitions Program | Medicare | PPACA sec. 3026 | Provides funding to hospitals and community-based entities that furnish evidence-based care transition services to Medicare beneficiaries at high risk for readmission | Proposal |
| Medicare Care Coordination and Disease Management demonstrations | Medicare | CMS[1] | Medicare has conducted seven demonstrations related to disease management, including population-based, third-party, and hybrid models. A review of the results of these demonstrations found that most have not improved compliance with evidence-based care, satisfaction for providers or beneficiaries, or behavior change. Most have not been successful in reducing costs sufficient to cover program fees. | Demonstrations |

| | | | | |
|---|---|---|---|---|
| Provider Group Care Coordination | Medicare | MedPAC[2] | A group practice or integrated delivery network provides care coordination and clinical care. Providers would receive either a care management fee with adjustment for cost and quality performance or shared savings payments (similar to the ACO shared savings model). In addition, physicians could be reimbursed for time spent on care management activities. | Recommendation |
| Care Management Organization Plus Physician Office Care Coordination | Medicare | MedPAC[2] | Similar to the Provider Group Care Coordination proposal, except that a care management organization to the physician office performs coordination activities, while the physician office provides referral and clinical care. Care management organizations would receive either a care management fee with adjustment for cost and quality performance or shared savings payments (similar to the ACO shared savings model). In addition, physicians could be reimbursed for time spent on care management activities. | Recommendation |

1: Bott DM, Kapp MC, Johnson LB, Magno LM. Disease Management for Chronically Ill Beneficiaries in Traditional Medicare. Health Aff 2009;28:86–98.

2: Medicare Payment Advisory Committee (MedPAC). Report to the Congress: Increasing the Value of Medicare (Ch. 2). June 2006. As of December 26, 2010: http://www.medpac.gov/publications/congressional_reports/Jun06_Ch02.pdf

## HOSPITAL PAY-FOR-PERFORMANCE (P4P)

### Synthesis Description of Hospital P4P Payment Reform Model

*Summary:* In this model, hospitals receive bonus payments (or return of withheld amounts) based on performance, which can be measured using an array of different types of measures. The goal is to create incentives to improve health outcomes and potentially reduce overall costs for hospitalized patients.

Typically, hospital P4P programs focus on measures of access, process, outcomes, and patient experience, though they may also include cost measures. Measures can be used individually or compiled into one or several composite performance scores for each participating hospital. The amount of a bonus payment (or return of withhold) is determined using a formula related to either individual or composite performance score(s).

*Highlighted programs:* Medicare Hospital Value-Based Purchasing Program, Blue Cross Blue Shield of Michigan Hospital Pay for Performance, Medicare Premier Hospital Quality Incentive Demonstration, Horizon Blue Cross Blue Shield of New Jersey Hospital Recognition Program, Pennsylvania Medicaid Hospital Pay for Performance

### Common Areas Among Highlighted Programs

*Participation:* Participants include acute care hospitals.

*Payment method:* In addition to usual payments, incentive payments are made to the highest-performing hospitals. Two of the highlighted programs (Medicare Hospital Value-Based Purchasing Program and Horizon Blue Cross Blue Shield of New Jersey) reward improvement as well as achievement on performance measures.

*Measurement*: Most of the quality measures used to determine eligibility for incentive payments reflect processes of care. The process measures reported through the CMS Hospital Compare program are used in all of the highlighted programs except Pennsylvania Medicaid.

*Consumer characteristics*: None of the highlighted programs directly affect consumers.

### Key Differences Between Highlighted Programs

*Participation:* The Medicare Hospital Value-Based Purchasing Program is the only mandatory program. The Horizon Blue Cross Blue Shield of New Jersey program is the only one to allow hospitals to choose between two performance measurement approaches.

*Payment method:* The eligibility criteria for bonus payments differ between the highlighted programs.

*Measurement:* The Medicare Premier Demonstration is the only highlighted program that does not include any cost measures. The other programs use different cost measures.

*Consumer-related considerations:* No key differences.

**Table A.13**

**Description of Highlighted Hospital P4P Programs**

| **Hospital Value-Based Purchasing Program** | |
|---|---|
| Source | Patient Protection and Affordable Care Act of 2010, Pub. L. No. 111-148, 124 Stat. 119 through 124 Stat. 1025 (2010), sec. 3001 |
| Participation | |
| Payer | Medicare |
| Provider Participation | Hospitals without cited deficiencies, with a minimum (determined by secretary) number of performance measures and cases available. Hospitals participating in qualifying state programs may be exempted. |
| Patient Participation | No patient participation criteria |
| Payment | |
| Unit of Payment | Bonus payments made as add-on to base operating DRG payment rates |
| Payment Mechanism | Pay for performance; bonus payments made to highest-performing hospitals. Amount of payment to be determined by secretary. |
| Eligibility for Payment | The secretary will establish performance standards for levels of achievement and improvement during a fiscal year. Hospital performance scores will be determined using the higher of its achievement or improvement scores for each measure. |
| Payment Adjustments | None specified in description |
| Budget Implications | Budget neutral. Bonus payments will be funded by reducing all hospitals' base operating DRG payment rates by 1.0 percent in FY 2013, increasing to 2.0 percent in FY 2017 and succeeding years. |
| Budget Reconciliation | Annually, conducted by secretary |
| Measurement | |
| Quality Measures | Measures to be selected by secretary, covering at least acute myocardial infarction, heart failure, pneumonia, Surgical Care Improvement Project, health care–associated infections, and HCAHPS |
| Cost Measures | Efficiency measures to be specified by the secretary, including measures of Medicare spending per beneficiary. Adjusted for age, sex, race, severity of illness, and other factors. |

| | |
|---|---|
| Unit of Analysis | Hospital |
| Data Sources | Patient survey, medical records |
| Specific Conditions Addressed | Acute myocardial infarction, heart failure, pneumonia |
| Specific Populations | Medicare beneficiaries |
| Consumer-Related Considerations | |
| Effect on Out-of-Pocket Payments | No effect |
| Provider Choice | No effect |
| Legal Protections | Not applicable |
| Implementation | |
| Status as of April 2010 | To be implemented in FY 2013 |
| Geographic Reach | National |
| Program Evaluation | Mandates study and report by January 1, 2016 |

| **Blue Cross Blue Shield of Michigan Hospital Pay for Performance** | |
|---|---|
| Source | Blue Cross Blue Shield of Michigan, "Hospital Pay for Performance Program—2009." 2010. As of April 14, 2010: http://bcbsmi.net/provider/value_partnerships/hpp/index.shtml |
| Participation | |
| Payer | Blue Cross Blue Shield of Michigan |
| Provider Participation | Participating hospitals must meet three prequalifying conditions: (1) publicly report performance on CMS Hospital Compare, (2) demonstrate an active commitment to patient safety, and (3) maintain high performance on five intensive care unit ventilator bundle measures. |
| Patient Participation | No patient participation criteria |
| Payment | |
| Unit of Payment | Bonus payments made as adjustments to inpatient and outpatient operating payment rates |

| | |
|---|---|
| Payment Mechanism | Pay for performance; bonus payments made to highest-performing hospitals. The highest-performing hospitals can receive up to a 5-percent bonus. In future years, the amount of the reward pool will be adjusted based on hospital payment trends compared to the national trend. |
| Eligibility for Payment | Rewards for achievement and improvement on a performance score based 50% on quality and 50% on efficiency |
| Payment Adjustments | None specified in program description |
| Budget Implications | Not specified in program description |
| Budget Reconciliation | Performed annually by Blue Cross Blue Shield of Michigan |
| Measurement | |
| Quality Measures | Participation in collaborative quality initiatives, plus performance on measures related to acute myocardial infarction—percutaneous coronary intervention, acute myocardial infarction, heart failure, pneumonia, surgical infection prevention, and central line associated blood stream infection rates. |
| Cost Measures | Standardized inpatient cost per case and per-member-per-month hospital payment trend |
| Unit of Analysis | Hospital |
| Data Sources | Not specified in program description but likely to include medical records and administrative claims |
| Specific Conditions Addressed | Acute myocardial infarction, heart failure, pneumonia |
| Specific Populations | None |
| Consumer-Related Considerations | |
| Effect on Out-of-Pocket Payments | No effect |
| Provider Choice | No effect |
| Legal Protections | Not applicable |
| Implementation | |
| Status as of April 2010 | Ongoing |

| | |
|---|---|
| Geographic Reach | Michigan |
| Program Evaluation | A Robert Wood Johnson–funded evaluation of the program from 2002–2005 found continuous improvement on quality measures. |

| **Premier Hospital Quality Incentive Demonstration** | |
|---|---|
| Source | CMS Medicare Demonstrations. Premier Hospital Quality Incentive Demonstration. As of April 14, 2010: http://www.cms.gov/HospitalQualityInits/35_HospitalPremier.asp |
| Participation | |
| Payer | Medicare |
| Provider Participation | Participation in the demonstration is voluntary. As of 2009, about 230 hospitals were participating in the demonstration. |
| Patient Participation | None |
| Payment | |
| Unit of Payment | Annual lump sum bonus payments |
| Payment Mechanism | Pay for performance; bonus payments made to highest-performing hospitals |
| Eligibility for Payment | Eligibility is based on performance scores relative to a benchmark as well as improvement. |
| Payment Adjustments | None |
| Budget Implications | CMS has budgeted $12 million per year for demonstration incentives. |
| Budget Reconciliation | Conducted by CMS annually |
| Measurement | |
| Quality Measures | Quality measures for inpatients with heart attack, heart failure, pneumonia, coronary artery bypass graft, and hip and knee replacements. The quality measures in the demonstration have an extensive record of validation through research and are based on work by the Quality Improvement Organizations (QIOs), the Joint Commission on Accreditation of Healthcare Organizations (JCAHO), the Agency for Healthcare Research and Quality, NQF, the Premier system, and other CMS collaborators. |
| Cost Measures | None |

| | |
|---|---|
| Unit of Analysis | Hospitals |
| Data Sources | Medical records |
| Specific Conditions addressed | Heart attack, heart failure, pneumonia, coronary artery bypass graft, hip and knee replacement |
| Specific Populations | None |
| Consumer-Related Considerations | |
| Effect on Out-of-Pocket Payments | No effect |
| Provider Choice | No effect |
| Legal Protections | Not applicable |
| Implementation | |
| Status as of April 2010 | Concluded in September 2009 |
| Geographic Reach | National |
| Program Evaluation | Evaluation has found improvement in quality performance among intervention hospitals. |

| **Hospital Recognition Program** | |
|---|---|
| Source | America's Health Insurance Plans. "Innovations in Recognizing and Rewarding Quality." March 2009. As of April 15, 2010: http://www.ahip.org/content/default.aspx?docid=26393 |
| Participation | |
| Payer | Horizon Blue Cross Blue Shield of New Jersey |
| Provider Participation | All network hospitals are required to participate. Hospitals have a choice of participation using Leapfrog Hospital Rewards Program criteria or alternative performance criteria developed by Horizon Blue Cross Blue Shield (Horizon program). Hospitals participating in the Leapfrog program are eligible for larger bonus payments. |
| Patient Participation | None |
| Payment | |
| Unit of Payment | Annual lump sum bonus payments |
| Payment Mechanism | Pay for performance; details not specified in description |

| | |
|---|---|
| Eligibility for Payment | Hospitals in the top 25% of performance in a disease category or those demonstrating improvement of 10% from their baseline are eligible for bonus payments. |
| Payment Adjustments | None specified in program description |
| Budget Implications | None specified in program description |
| Budget Reconciliation | None specified in program description |
| Measurement | |
| Quality Measures | Leapfrog program participants report on computerized physician order entry implementation; intensivist physician staffing; the volume of high-risk surgeries; processes of care for acute myocardial infarction, pneumonia, and normal deliveries; the incidence of hospital-acquired conditions; reporting of "never events"; and use of safe practices.<br>Horizon program participants report CMS core measures for heart attack, heart failure, pneumonia, and surgical infection prevention; Joint Commission National Safety Goals and participation in the Institute for Healthcare Improvement 5 Million Lives campaign; and HCAHPS. |
| Cost Measures | Leapfrog program participants report on volume of CABG and percutaneous coronary intervention (PCI), risk-adjusted and readmission-adjusted length of stay for selected conditions, and incidence of hospital-acquired conditions.<br>Horizon program participants do not report cost measures. |
| Unit of Analysis | Hospitals |
| Data Sources | Medical records, hospital survey, patient survey, administrative claims |
| Specific Conditions Addressed | Heart attack, heart failure, pneumonia |
| Specific Populations | None |
| Consumer-Related Considerations | |
| Effect on Out-of-Pocket Payments | None |
| Provider Choice | None |
| Legal Protections | None |
| Implementation | |

| | |
|---|---|
| Status as of April 2010 | Ongoing |
| Geographic Reach | New Jersey |
| Program Evaluation | Participating hospitals demonstrated improvement in performance measures in the period 2006–2007. |

| **Pennsylvania Medicaid Model** | |
|---|---|
| Source | "Pennsylvania's Pay for Performance Programs," presentation by David Kelley, Pennsylvania Office of Medical Assistance Programs. As of April 15, 2010: http://www.agencymeddirectors.wa.gov/Files/Kelley_Medicaid.ppt |
| Participation | |
| Payer | Pennsylvania Medicaid |
| Provider Participation | Not specified in description |
| Patient Participation | None specified in description |
| Payment | |
| Unit of Payment | Bonus payments |
| Payment Mechanism | Pay for performance; adjustments to rate increases provided to acute care disproportionate share hospitals (DSH hospitals) |
| Eligibility for Payment | Hospitals with the highest levels of achievement on performance score are eligible for larger payment increases. |
| Payment Adjustments | None specified in description |
| Budget Implications | Not specified in description |
| Budget Reconciliation | Not specified in description |
| Measurement | |
| Quality Measures | Readmission rates, left ventricular function assessment, antibiotic dose for pneumonia, use of a single medical record, use of a pharmacy error reduction program, and reporting to Leapfrog |
| Cost Measures | Readmission rates |
| Unit of Analysis | Hospitals |

| | |
|---|---|
| Data Sources | Not specified in description |
| Specific Conditions Addressed | Asthma, diabetes, congestive heart failure, chronic obstructive pulmonary disease, pneumonia |
| Specific Populations | None |
| Consumer-Related Considerations | |
| Effect on Out-of-Pocket Payments | None |
| Provider Choice | None |
| Legal Protections | None |
| Implementation | |
| Status as of April 2010 | Ongoing |
| Geographic Reach | Pennsylvania |
| Program Evaluation | Not specified in description |

**Table A.14**
**Description of Other Hospital P4P Programs**

| Program Title | Jurisdiction | Source | Program Summary | Implementation Status |
|---|---|---|---|---|
| Hospital Value-Based Purchasing Plan | Medicare | CMS[1] | As part of the 2005 Deficit Reduction Act, Congress required the Secretary of the U.S. Department of Health and Human Services to develop a plan for implementing value-based purchasing for Medicare hospital services starting in FY 2009. Between September 2006 and July 2007, CMS developed the plan in consultation with affected stakeholders, and the plan was submitted to Congress in November 2007. | Proposal |
| Innovations in Recognizing and Rewarding Quality | Multiple | AHIP document[2] | The AHIP report entitled "Innovations in Recognizing and Rewarding Quality" documents P4P programs that have been implemented by commercial insurers nationwide. It includes 17 examples of physician P4P programs, 7 examples of hospital P4P programs, and 4 examples of collaborative programs. | Ongoing Programs |

| | | | | |
|---|---|---|---|---|
| Leapfrog Hospital Recognition Program | Multiple | Leapfrog Group[3] | The program uses the data captured in the Leapfrog Hospital Survey to evaluate hospital performance within the standardized national measure set, composed of quality and resource utilization measures. These measures are weighted and rolled up into an overall efficiency score, which is used to determine recognition and rewards levels. Health plans customize the program to meet their local needs. | Ongoing Programs |
| Reporting Hospital Quality Data for Annual Payment Update | Medicare | CMS[4] | The Reporting Hospital Quality Data for Annual Payment Update (RHQDAPU) program was originally mandated by Section 501(b) of the Medicare Prescription Drug, Improvement, and Modernization Act (MMA) of 2003. This section of the MMA authorized CMS to pay a higher annual update to the payment rates of hospitals that successfully report designated quality measures. Initially, the MMA provided for a 0.4 percentage point reduction in the annual market basket (the measure of inflation in costs of goods and services used by hospitals in treating Medicare patients) update for hospitals that did not successfully report. The Deficit Reduction Act of 2005 increased that reduction to 2.0 percentage points. | Ongoing Program |

| | | | | |
|---|---|---|---|---|
| Quality Reporting for PPS-Exempt Cancer Hospitals | Medicare | PPACA, sec. 3005 | Establishes a quality measure reporting program for PPS-exempt cancer hospitals beginning in FY 2014. Providers under this section who do not successfully participate in the program would be subject to a reduction in their annual market basket update. | Proposal |

1: U.S. Department of Health and Human Services. Report to Congress: Plan to Implement a Medicare Hospital Value-Based Purchasing Program. November 21, 2007. As of December 26, 2010: http://www.cms.gov/AcuteInpatientPPS/downloads/HospitalVBPPlanRTCFINALSUBMITTED2007.pdf

2: America's Health Insurance Plans (AHIP). Innovations in Recognizing and Rewarding Quality. March 2009. Pp. 75–76. As of December 26, 2010: http://www.ahipresearch.org/pdfs/P4PMonographWeb.pdf

3: The Leapfrog Group. Hospital Recognition Program. 2009. As of December 26, 2010: http://www.leapfroggroup.org/for_hospitals/fh-incentives_and_rewards/hosp_rewards_prog

4: CMS Hospital Quality Initiatives: Reporting Hospital Quality Data for Annual Payment Update. Last updated September 9, 2010. As of December 26, 2010: http://www.cms.hhs.gov/HospitalQualityInits/08_HospitalRHQDAPU.asp

## PAYMENT ADJUSTMENT FOR READMISSIONS

### Synthesis Description of Payment Adjustment for Readmissions Payment Reform Model

*Summary:* Payments to hospitals on a per-admission basis, such as the Medicare Inpatient Prospective Payment System, create an incentive to discharge patients from the hospital quickly but result in additional payment if patients are subsequently readmitted to the hospital.[22] This PRM creates financial penalties for hospitals with higher-than-expected readmission rates compared to peer hospitals. The goal of the PRM is to encourage hospitals to improve the quality and coordination of care in order to reduce readmission rates.

*Highlighted programs:* PPACA Hospital Readmissions Reduction Program

### Common Areas Among Highlighted Programs

Only one highlighted program; see next page for description.

### Key Differences Between Highlighted Programs

Only one highlighted program; see next page for description.

**Table A.15**

**Description of Highlighted Payment Adjustment for Readmissions Program**

| **Hospital Readmissions Reduction Program** | |
|---|---|
| Source | Patient Protection and Affordable Care Act of 2010, Pub. L. No. 111-148, 124 Stat. 119 through 124 Stat. 1025 (2010), sec. 3025 |
| Participation | |
| Payer | Medicare |
| Provider Participation | Sole community hospitals and Medicare-dependent small rural hospitals are exempt. |
| Patient Participation | None |
| Payment | |
| Unit of Payment | Adjustment to base operating DRG payment rate |
| Payment Mechanism | Adjustment is based on the ratio of aggregate payments of excess readmissions to aggregate payments for all discharges. The floor adjustment rate is 0.99 in 2013, 0.98 in 2014, and 0.97 thereafter. |
| Eligibility for Payment | All hospitals are eligible for the payment adjustment. |
| Payment Adjustments | Readmission rates that determine payment adjustment amounts are risk-adjusted. |
| Budget Implications | Not specified in legislation |
| Budget Reconciliation | Not specified in legislation |
| Measurement | |
| Quality Measures | "Excess" readmissions are defined as the ratio between observed and expected (risk-adjusted) readmission rates. Hospital readmission rates are reported on CMS Hospital Compare as of April 2010—i.e., 30-day readmission for heart attack, heart failure, and pneumonia. Beginning in FY 2015, the secretary may expand the program to include other conditions and procedures. |
| Cost Measures | None |
| Unit of Analysis | Hospitals |

| | |
|---|---|
| Data Sources | Not specified in legislation |
| Specific Conditions Addressed | Heart attack, heart failure, pneumonia, others to be determined |
| Specific Populations | None |
| Consumer-Related Considerations | |
| Effect on Out-of-Pocket Payments | None |
| Provider Choice | No effect |
| Legal Protections | None |
| Implementation | |
| Status as of April 2010 | Scheduled to begin in FY 2013 |
| Geographic Reach | National |
| Program Evaluation | None specified in legislation |

**Table A.16**

**Description of Other Payment Adjustment for Readmissions Program**

| Program Title | Targeted Payer | Source | Program Summary | Status |
|---|---|---|---|---|
| Hospital Transparency and Payment Reform | Medicare | MedPAC[1] | Congress should require the secretary to confidentially report readmission rates and resource use around hospitalization episodes to hospitals and physicians. Beginning in the third year, providers' relative resource use should be publicly disclosed. Because information disclosure alone is likely not sufficient to fully motivate and sustain change, MedPAC also recommends that Medicare reduce payment to hospitals with relatively high risk-adjusted readmission rates for select conditions. The commission recommends that this payment change be made in tandem with a previously recommended change in law to allow hospitals and physicians to share in the savings that result from reengineering inefficient care processes during the episode of care (gainsharing). | Recommendation |

1: Medicare Payment Advisory Committee (MedPAC). Report to the Congress: Reforming the Delivery System. June 2008. Starts on p. 84. As of December 28, 2010: http://www.medpac.gov/documents/Jun08_EntireReport.pdf

## PAYMENT ADJUSTMENT FOR HOSPITAL-ACQUIRED CONDITIONS

### Synthesis Description of Payment Adjustment for Hospital-Acquired Conditions Payment Reform Model

*Summary:* Hospitalized patients who experience errors or preventable complications of care often generate higher payment rates to the hospital. This PRM creates a financial penalty associated with preventable hospital-acquired conditions through either nonpayment for costs related to treatment of the preventable condition or a payment adjustment to hospitals with the highest rates of hospital-acquired conditions. The model aims to create incentives for hospitals to implement quality improvement initiatives that will reduce the rate of preventable hospital-acquired conditions.

*Highlighted programs:* Payment Adjustment for Conditions Acquired in Hospitals, Medicare Nonpayment for Preventable Hospital Acquired Conditions, Massachusetts Nonpayment for Serious Reportable Events, HealthPartners "Never Events" Policy

### Common Areas Among Highlighted Programs

*Participation:* Mandatory participation by all acute care hospitals.

*Payment method:* All of the highlighted programs except the PPACA Payment Adjustment for Conditions Acquired in Hospitals Program eliminate payments to hospitals for services related to a defined list of hospital-acquired conditions.

*Measurement*: Two of the programs (Massachusetts and HealthPartners) use NQF SREs as the conditions subject to nonpayment.

*Consumer characteristics*: No direct consumer effects in highlighted programs.

### Key Differences Between Highlighted Programs

*Participation:* No key differences.

*Payment method:* The PPACA Payment Adjustment for Conditions Acquired in Hospitals Program is the only highlighted program that uses a financial penalty for hospitals with the highest rates of hospital-acquired conditions.

*Measurement:* The Medicare Nonpayment for Preventable Hospital Acquired Conditions program uses a list of hospital-acquired conditions defined by CMS. The PPACA Payment Adjustment for Conditions Acquired in Hospitals Program instructs the Secretary of Heath and Human Services to define the hospital-acquired conditions.

*Consumer-related considerations:* No key differences.

**Table A.17**

**Description of Highlighted Payment Adjustment for Hospital-Acquired Conditions Programs**

| **Payment Adjustment for Conditions Acquired in Hospitals** | |
|---|---|
| Source | Patient Protection and Affordable Care Act of 2010, Pub. L. No. 111-148, 124 Stat. 119 through 124 Stat. 1025 (2010), sec. 3008 |
| Participation | |
| Payer | Medicare |
| Provider Participation | Acute care hospitals |
| Patient Participation | None |
| Payment | |
| Unit of Payment | Hospital discharge payment adjustment |
| Payment Mechanism | Hospitals with the highest hospital-acquired condition rates receive 99 percent of normal payments. |
| Eligibility for Payment | Top quartile of hospitals by hospital-acquired condition rate. |
| Payment Adjustments | The hospital-acquired condition rate used to determine eligibility for payment reduction will be risk-adjusted. |
| Budget Implications | Not specified in legislation |
| Budget Reconciliation | Not specified in legislation |
| Measurement | |
| Quality Measures | Hospital-acquired condition rates to be determined by the secretary |
| Cost Measures | None |
| Unit of Analysis | Hospitals |
| Data Sources | Not specified in legislation |
| Specific Conditions Addressed | Not specified in legislation |

| | |
|---|---|
| Specific Populations | Not specified in legislation |
| Consumer-Related Considerations | |
| Effect on Out-of-Pocket Payments | None |
| Provider Choice | No effect |
| Legal Protections | None |
| Implementation | |
| Status as of April 2010 | Scheduled to begin in FY 2015 |
| Geographic Reach | National |
| Program Evaluation | Legislation mandates secretary to report on feasibility of expanding program to other care settings. |

| **CMS Nonpayment for Preventable Hospital Acquired Conditions** | |
|---|---|
| Source | Centers for Medicare and Medicaid Services. "Hospital-Acquired Conditions (Present on Admission Indicator)." As of April 21, 2010: http://www.cms.gov/HospitalAcqCond/01_Overview.asp#TopOfPage |
| Participation | |
| Payer | Medicare |
| Provider Participation | All Medicare inpatient prospective payment system hospitals |
| Patient Participation | None |
| Payment | |
| Unit of Payment | Hospital discharge payment rate adjustment |
| Payment Mechanism | Hospitals will not receive additional payment for discharges with a hospital-acquired condition (i.e., payment as though secondary diagnosis of hospital-acquired condition were not present). |
| Eligibility for Payment | All hospital-acquired conditions not present on admission |
| Payment Adjustments | None |

| | |
|---|---|
| Budget Implications | Budget-reducing |
| Budget Reconciliation | Not applicable |
| Measurement | |
| Quality Measures | In FY 2009, CMS defined 10 categories of hospital-acquired conditions: (1) foreign object retained after surgery, (2) air embolism, (3) blood incompatibility, (4) stage III and IV pressure ulcers, (5) falls and trauma, (6) manifestations of poor glycemic control, (7) catheter-associated urinary tract infection, (8) vascular catheter-associated infection, (9) surgical site infection, (10) deep vein thrombosis/pulmonary embolism. |
| Cost Measures | None |
| Unit of Analysis | Hospitals |
| Data Sources | Administrative claims |
| Specific Conditions Addressed | None |
| Specific Populations | None |
| Consumer-Related Considerations | |
| Effect on Out-of-Pocket Payments | No effect |
| Provider Choice | No effect |
| Legal Protections | None |
| Implementation | |
| Status as of April 2010 | Ongoing since October 1, 2008 |
| Geographic Reach | None |
| Program Evaluation | Independent evaluation ongoing |

| **Massachusetts Nonpayment for Serious Reportable Events** | |
|---|---|
| Source | Massachusetts Executive Office of Health and Human Services, Department of Public Health, Bureau of Health Care Safety and Quality. "Serious Reportable Events in Massachusetts Acute Care Hospitals: January 1, 2009—December 31, 2009." 2010. As of April 21, 2010: http://www.mass.gov/?pageID=eohhs2terminal&L=6&L0=Home&L1=Provider&L2=Reporting+to+the+State&L3=Reporting+Entities&L4=Hospital&L5=Reporting+Serious+Incidents&sid=Eeohhs2&b=terminalcontent&f=dph_quality_healthcare_p_sre_report_2009&csid=Eeohhs2 |
| Participation | |
| Payer | All nonfederal payers in Massachusetts |
| Provider Participation | All Massachusetts hospitals |
| Patient Participation | None |
| Payment | |
| Unit of Payment | Hospital services |
| Payment Mechanism | Hospitals are prohibited from seeking payment for care provided as the result of a serious reportable event. |
| Eligibility for Payment | All serious reportable events |
| Payment Adjustments | None |
| Budget Implications | Budget-reducing |
| Budget Reconciliation | Not applicable |
| Measurement | |
| Quality Measures | Serious reportable events as defined by NQF. In 2009, there were 28 events in six categories: surgical events, product or device events, patient protection events, care management events, environmental events, and criminal events. The state may add or remove events from the NQF list if appropriate. |

| | |
|---|---|
| Cost Measures | None |
| Unit of Analysis | Hospitals |
| Data Sources | Hospital reporting system |
| Specific Conditions Addressed | None |
| Specific Populations | None |
| Consumer-Related Considerations | |
| Effect on Out-of-Pocket Payments | No effect |
| Provider Choice | No effect |
| Legal Protections | Regulations include specific requirements for notification of patients about serious reportable events. |
| Implementation | |
| Status as of April 2010 | Ongoing since June 2009 |
| Geographic Reach | Massachusetts |
| Program Evaluation | None specified in description |

| **HealthPartners "Never Events" Policy** | |
|---|---|
| Source | HealthPartners. "HealthPartners Hospital Payment Policy." 2010. As of April 21, 2010: http://www.healthpartners.com/portal/866.html |
| Participation | |
| Payer | HealthPartners |
| Provider Participation | All hospitals |
| Patient Participation | None |
| Payment | |
| Unit of Payment | Hospital services |
| Payment Mechanism | Nonpayment for services associated with an SRE and prohibition on billing of beneficiaries. |

| | |
|---|---|
| Eligibility for Payment | All SREs |
| Payment Adjustments | None |
| Budget Implications | Budget-reducing |
| Budget Reconciliation | Not applicable |
| Measurement | |
| Quality Measures | SREs as defined by NQF. In 2009, there were 28 events in six categories: surgical events, product or device events, patient protection events, care management events, environmental events, and criminal events. |
| Cost Measures | None |
| Unit of Analysis | Hospitals |
| Data Sources | Hospital reporting system |
| Specific Conditions Addressed | None |
| Specific Populations | None |
| Consumer-Related Considerations | |
| Effect on Out-of-Pocket Payments | No effect |
| Provider Choice | No effect |
| Legal Protections | None |
| Implementation | |
| Status as of April 2010 | Ongoing since 2005 |
| Geographic Reach | Minnesota |
| Program Evaluation | None specified in description |

**Table A.18**

**Description of Other Payment Adjustment for Hospital-Acquired Conditions Programs**

| Program Title | Targeted Payer | Source | Program Summary | Status |
|---|---|---|---|---|
| Payment Adjustment for Health Care–Acquired Conditions | Medicaid | PPACA sec. 2702 | Payment adjustment for health care–acquired conditions. Prohibits Medicaid payment for services related to a health care–acquired condition. The secretary will develop a list of health care–acquired conditions for Medicaid based on those defined under Medicare as well as current state practices. | Proposal |
| Medicaid Hospital-Acquired Conditions program | Medicaid (New York) | NY Medicaid Program[1] | The New York State Medicaid program will deny reimbursement on 14 "never events"—avoidable hospital complications and medical errors that are identifiable, preventable, and serious in their consequences to patients. As defined by several national quality measurement organizations, never events include such surgical errors as procedures performed on the wrong body part or the wrong patient. In addition to wrong-site surgery and serious medication errors, never events also include such complications as unintentionally leaving a foreign object in a patient or administering incompatible blood. | Ongoing Program |

1: New York State, Department of Health: Medicaid to Cease Reimbursement to Hospitals for ‘Never Events’ and Avoidable Errors. June 5, 2008. As of December 29, 2010: http://www.health.state.ny.us/press/releases/2008/2008-06-05_medicaid_cease_paying_never_events.htm

## PHYSICIAN PAY-FOR-PERFORMANCE (P4P)

### Synthesis Description of Physician P4P Payment Reform Model

*Summary:* Under this payment model, physicians or other health care providers receive bonus payments (or return of withheld amounts) based on performance. Performance can be measured using an array of different types of measures, which can be used individually or compiled into one or several composite performance scores. Programs can focus on individual physicians or physicians in a practice or physician group. The amount of a bonus payment (or return of withhold) is determined using a formula related to either individual or composite performance score(s).

The goal of physician P4P is to create incentives to improve health outcomes by motivating clinicians to achieve desired health outcomes via the following methods: delivering evidence-based care more consistently, adopting new clinical care processes linked by scientific evidence to improved health outcomes, or avoiding the delivery of care that is minimally beneficial or for which risk outweighs benefit (called "overuse"). Under P4P, bonus payments (or returns of withhold) are tied directly to measured performance (access, process, outcomes, patient experience). Typically, a P4P model pays bonuses from a predefined incentive pool, making bonus payments as an added percentage over and above the standard fee schedule.

*Highlighted programs:* Medicare Value-Based Payment Modifier under the Medicare Physician Fee Schedule, Integrated Healthcare Association Physician Pay-for-Performance, Alabama Medicaid Patient 1st, Medicare Care Management Performance Demonstration, Anthem Bridges to Excellence Program

### Common Areas Among Highlighted Programs

*Participation:* Individual physicians or physician groups, often voluntary participation.

*Payment method:* Bonus payments based on performance.

*Measurement*: Several programs use process measures of clinical quality, particularly for treatment of chronic disease.

*Consumer characteristics*: No consumer impact.

### Key Differences Between Highlighted Programs

*Participation:* Many programs are voluntary, but the Value-Based Payment Modifier under the Medicare Physician Fee Schedule will be mandatory in 2017. The Medicare Care Management Performance Demonstration is limited to small and medium practices (<10 physicians).

*Payment method:* The Alabama Patient 1st program uses a shared savings approach to determining the amount of bonus payments. Other programs divide a predetermined bonus pool using performance-related formulas, with the specific formulas differing between programs.

*Measurement:* The performance measures vary widely between programs, with little overlap.

*Consumer-related considerations:* No key differences.

**Table A.19**

**Description of Highlighted Physician P4P Programs**

| **Value-Based Payment Modifier Under the Physician Fee Schedule** | |
|---|---|
| Source | Patient Protection and Affordable Care Act of 2010, Pub. L. No. 111-148, 124 Stat. 119 through 124 Stat. 1025 (2010), sec. 3007 |
| Participation | |
| Payer | Medicare |
| Provider Participation | In 2015 and 2016, specific physicians and groups of physicians that the secretary determines appropriate will participate. Beginning in 2017, all physicians will participate. |
| Patient Participation | Not specified in law |
| Payment | |
| Unit of Payment | Bonus paid as differential fee schedule payment amount |
| Payment Mechanism | Pay for performance; details not specified in law |
| Eligibility for Payment | Not specified in law |
| Payment Adjustments | Excludes geographic payment adjustments |
| Budget Implications | Budget-neutral |
| Budget Reconciliation | Not specified in law |
| Measurement | |
| Quality Measures | Measures to be established by the secretary and submitted for endorsement by contracted entity (NQF) |
| Cost Measures | Measures to be established by the secretary; "growth in expenditures per individual for a physician compared to the amount of such growth for other physicians" |
| Unit of Analysis | Physicians (individuals or groups) |
| Data Sources | Not specified in law |

| | |
|---|---|
| Specific Conditions Addressed | Not specified in law |
| Specific Populations | Not specified in law |
| Consumer-Related Considerations | |
| Effect on Out-of-Pocket Payments | No effect |
| Provider Choice | No effect |
| Legal Protections | Not specified in law |
| Implementation | |
| Status as of April 2010 | Scheduled to begin implementation on January 1, 2015 |
| Geographic Reach | National |
| Program Evaluation | Not specified in law |

| **Integrated Healthcare Association Physician Pay-for-Performance** | |
|---|---|
| Source | America's Health Insurance Plans. "Innovations in Recognizing and Rewarding Quality." March 2009. As of December 29, 2010: http://www.ahip.org/content/default.aspx?docid=26393 |
| Participation | |
| Payer | Seven California health insurance plans |
| Provider Participation | 235 physician groups participate; criteria not specified in description |
| Patient Participation | No patient participation criteria |
| Payment | |
| Unit of Payment | Bonus payments |
| Payment Mechanism | Pay for performance; details determined individually by each participating health plan |
| Eligibility for Payment | Each health plan developed its own eligibility criteria. |

| | |
|---|---|
| Payment Adjustments | None |
| Budget Implications | Not specified in description |
| Budget Reconciliation | Not specified in description |
| Measurement | |
| Quality Measures | Clinical quality measures based on Healthcare Effectiveness Data and Information Set (HEDIS), patient experience measures from Clinician and Group Consumer Assessment of Healthcare Providers Survey (CG-CAHPS), information technology-enabled system measures adapted from Physician Practice Connections, coordinated diabetes care measures adapted from HEDIS and Physician Practice Connections |
| Cost Measures | Inpatient readmissions, inpatient utilization (discharges and bed days), percentage of outpatient surgeries performed in ambulatory surgery centers, emergency department visits, generic prescribing |
| Unit of Analysis | Physician groups |
| Data Sources | Not specified in description |
| Specific Conditions Addressed | Upper respiratory infection, preventive care (immunizations, cancer screening, chlamydia screening), cardiovascular disease, asthma, pharyngitis, acute bronchitis, low back pain |
| Specific Populations | None |
| Consumer-Related Considerations | |
| Effect on Out-of-Pocket Payments | None |
| Provider Choice | None |
| Legal Protections | None |
| Implementation | |
| Status as of April 2010 | Ongoing program |
| Geographic Reach | California |

| | |
|---|---|
| Program Evaluation | Participating groups have shown improvement in clinical quality measures and increased adoption of HIT. Patient experience scores have remained stable. |

| **Alabama Medicaid Patient 1st** | |
|---|---|
| Source | Alabama Medicaid Agency. "Patient 1st." Undated. As of April 15, 2010: http://www.medicaid.state.al.us/programs/patient1st/index_patient1st.aspx |
| Participation | |
| Payer | Alabama Medicaid |
| Provider Participation | Voluntary participation by individual physicians or physician groups |
| Patient Participation | No patient participation criteria |
| Payment | |
| Unit of Payment | Annual lump sum shared savings bonus payment plus monthly case management fee |
| Payment Mechanism | Shared savings based on performance and a separate case management fee |
| Eligibility for Payment | Physicians and groups in the top 75% of performers receive a shared savings payment weighted by their performance score. The case management fee is based on participation in specific programs and activities. |
| Payment Adjustments | None |
| Budget Implications | Not specified in description |
| Budget Reconciliation | Not specified in description |
| Measurement | |

| | |
|---|---|
| Quality Measures | The case management fee is related to participation in the following programs and activities: Early and Periodic Screening, Diagnostic, and Treatment (EPSDT) provider, Vaccines for Children participant, medical home training, 24/7 coverage, hospital admitting privileges, in-home monitoring, practice management participant, receiving Medicaid Agency (MA) program notices electronically, electronic patient educational materials. |
| Cost Measures | Actual vs. expected risk-adjusted expenditures per capita for patients in the panel, generic dispensing rate, visits per unique member, number of noncertified emergency visits per capita |
| Unit of Analysis | Individual physicians or physician groups |
| Data Sources | Not specified in description |
| Specific Conditions addressed | None |
| Specific Populations | None |
| Consumer-Related Considerations | |
| Effect on Out-of-Pocket Payments | None |
| Provider Choice | Patients are assigned to primary medical providers. |
| Legal Protections | None |
| Implementation | |
| Status as of April 2010 | Ongoing |
| Geographic Reach | Alabama |
| Program Evaluation | None specified in description |

| **Medicare Care Management Performance Demonstration** | |
|---|---|
| Source | Centers for Medicare and Medicaid Services. "Medicare Demonstrations: Details for Medicare Care Management Performance Demonstration." As of April 16, 2010: http://www.cms.gov/demoprojectsevalrpts/md/itemdetail.asp?filterType=dual,%20keyword&filterValue=care%20management&filterByDID=0&sortByDID=3&sortOrder=descending&itemID=CMS1198950&intNumPerPage=10 |
| Participation | |
| Payer | Medicare |
| Provider Participation | Voluntary participation by small and medium (<10) physician practices in Arkansas, California, Massachusetts, and Utah also enrolled in the Doctor's Office Quality Information Technology (DOQ-IT) Project. Participants must be main provider of primary care for at least 50 beneficiaries, provide primary care, and bill through a carrier. |
| Patient Participation | Fee-for-service Medicare beneficiaries with chronic illnesses |
| Payment | |
| Unit of Payment | Annual lump sum bonus payment |
| Payment Mechanism | Pay-for-performance; bonus payments for meeting performance standards |
| Eligibility for Payment | Providers with the top 70% of performance scores receive payments with amount related to level of achievement. Additional bonus payment available for reporting quality measures electronically using an electronic health record. |
| Payment Adjustments | None |
| Budget Implications | Budget-neutral |
| Budget Reconciliation | Not specified in description |
| Measurement | |

| | |
|---|---|
| Quality Measures | Processes and outcomes for treatment of diabetes, coronary artery disease, and congestive heart failure; delivery of preventive services. Majority of measures endorsed by the Ambulatory Quality Alliance (AQA) and/or NQF. |
| Cost Measures | None |
| Unit of Analysis | Physician practice |
| Data Sources | Electronic medical records |
| Specific Conditions Addressed | Diabetes, coronary artery disease, congestive heart failure |
| Specific Populations | None |
| Consumer-Related Considerations | |
| Effect on Out-of-Pocket Payments | None |
| Provider Choice | None |
| Legal Protections | None |
| Implementation | |
| Status as of April 2010 | Ongoing through July 1, 2010 |
| Geographic Reach | Arkansas, California, Massachusetts, and Utah |
| Program Evaluation | Evaluation conducted by Mathematica Policy Research due in summer 2011 |

| **Anthem Quality-In-Sights Primary Care Incentive Program (incorporating Bridges to Excellence)** | |
|---|---|
| Source | Empire BlueCross BlueShield. "2009 Quality-In-Sights Primary Care Incentive Program." December 2009. As of May 7, 2010: http://www.empireblue.com/provider/noapplication/f5/s3/t6/pw_b141150.pdf?refer=ehpprovider |
| Participation | |
| Payer | Anthem health plan affiliates in Georgia, Colorado, and New York |
| Provider Participation | Primary care providers (PCPs) contracting with Anthem affiliates in Georgia, Colorado, and New York |

| | |
|---|---|
| Patient Participation | Health plan members receiving services from qualifying PCPs |
| Payment | |
| Unit of Payment | Reimbursement enhancement to standard payment (appears to apply to both capitated and fee-for-service contracts) |
| Payment Mechanism | Pay for performance |
| Eligibility for Payment | Bonus payments are based on a scoring system, with points accumulated for (1) measured clinical quality performance, (2) external physician recognition through Bridges to Excellence (BTE) or National Committee for Quality Assurance (NCQA), (3) participation in a state or national quality improvement collaborative or practice improvement activity, (4) generic prescribing rate, and (5) information technology implementation. |
| Payment Adjustments | None specified |
| Budget Implications | None specified |
| Budget Reconciliation | None specified |
| Measurement | |
| Quality Measures | Multiple clinical outcome, clinical process, safety process, preventive service, and utilization measures from such sources as HEDIS and NQF; HIT-related structure measures; certification requirement relies on one or more of 12 qualifying BTE or NCQA measure sets. |
| Cost Measures | None |
| Unit of Analysis | Physician or physician group (tax ID number) |
| Data Sources | Captured claims data and/or health care service information from medical records |
| Specific Conditions Addressed | Diabetes, hypertension, heart disease, bronchitis, upper respiratory infection, pharyngitis, asthma |
| Specific Populations | None specified |
| Consumer-Related Considerations | |

| | |
|---|---|
| Effect on Out-of-Pocket Payments | None |
| Provider Choice | None |
| Legal Protections | None |
| Implementation | |
| Status as of April 2010 | Ongoing |
| Geographic Reach | Georgia, Colorado, and New York |
| Program Evaluation | None |

**Table A.20**

**Description of Other Physician P4P Programs**

| Program Title | Targeted Payer | Source | Program Summary | Status |
|---|---|---|---|---|
| Physician Value Based Purchasing Plan | Medicare | CMS[1] | Section 131(d) of the Medicare Improvements for Patients and Providers Act of 2008 (MIPPA) requires the secretary to develop a plan to transition to a value-based purchasing program for Medicare payment for professional services. No later than May 1, 2010, the secretary shall submit a report to Congress containing the plan with recommendations for legislation and administrative action. | CMS Initiative |
| Physician Quality Reporting Initiative (PQRI) | Medicare | CMS, PPACA sec. 3002 | Provides incentive payments to physicians who report quality data to Medicare. Ongoing since 2006. PPACA extends through 2014. Creates appeals and feedback processes for participating professionals in PQRI. Establishes a participation pathway for physicians completing a qualified Maintenance of Certification program with their specialty board of medicine. Beginning in 2014, physicians who do not submit measures to PQRI will have their Medicare payments reduced. | Ongoing Program |

| | | | | |
|---|---|---|---|---|
| Innovations in Recognizing and Rewarding Quality | Multiple | AHIP document[2] | The AHIP report entitled "Innovations in Recognizing and Rewarding Quality" documents P4P programs that have been implemented by commercial insurers nationwide. It includes 17 examples of physician P4P programs, 7 examples of hospital P4P programs, and 4 examples of collaborative programs. | Ongoing Programs |
| Bridges to Excellence (BTE) | Multiple | Bridges to Excellence[3] | A set of programs designed to provide incentives that reward physicians and practices for adopting better systems of care that result in physician practice reengineering, the adoption of HIT, and delivering good outcomes to patients. Physicians and their office practices are eligible to receive BTE program rewards if they (1) play the role of primary caregiver for eligible patients as identified by BTE, based on physician-to-patient attribution data supplied by the participating health plans on behalf of participating purchasers, and (2) demonstrate high levels of performance in BTE program content areas by obtaining passing scores on physician performance measure programs. The programs can be adapted by employers, health plans, and providers. | Ongoing Programs |

| | | | | |
|---|---|---|---|---|
| Physician Group Incentive Program | Blue Cross Blue Shield of Michigan (BCBSM) | BCBSM[4] | Program participants, including primary care physicians and specialists, collaborate on initiatives designed to improve the health care system in the state. Each initiative offers incentives based on clearly defined metrics to measure performance improvement and program participation. For services subject to the The Responsible Use System of Treatment (TRUST) PPO fee schedule, BCBSM will fund the physician incentive reward by reserving a portion (3.1 percent as of July 1, 2009) of the physician fee for most procedure codes (anesthesiology services, immunizations, durable medical equipment, prosthetics and orthotics, and most injections are not included). | Ongoing Program |
| Pennsylvania Medicaid: Access Plus | Medicaid | Pennsylvania Medicaid Program[5] | P4P program targeted to reward PCPs for quality of care and participation in disease management. Payment is based on physician performance in three areas: (1) assistance with enrollment of eligible patients in disease management programs, (2) collaboration in care management of disease management enrollees, (3) delivery of key clinical interventions that help improve quality of care and clinical outcomes. | Ongoing Program |

| | | | | |
|---|---|---|---|---|
| Minnesota Medicaid: Rewarding Optimal Diabetes Care | Medicaid | Minnesota Medicaid Program[6] | Provides a reward payment to physicians or clinics for optimal care for Medical Health Care Program (MHCP) enrollees with diabetes. The reward is $125 per patient with optimal diabetes care, payable every 6 months. | Ongoing Program |

1: Centers for Medicare & Medicaid Services. Roadmap for Implementing Value Driven Healthcare in the Traditional Medicare Fee-for-Service Program. As of December 29, 2010: http://www.cms.hhs.gov/QualityInitiativesGenInfo/downloads/VBPRoadmap_OEA_1-16_508.pdf

2: America's Health Insurance Plans (AHIP). Innovations in Recognizing and Rewarding Quality. March 2009. As of December 29, 2010: http://www.ahipresearch.org/pdfs/P4PMonographWeb.pdf

3: Bridges to Excellence Programs. 2010. As of February 9, 2011: http://www.bridgestoexcellence.org/

4: Blue Cross Blue Shield of Michigan: Physician Group Incentive Program. 2010. As of December 29, 2010: http://www.bcbsm.com/provider/value_partnerships/pgip/

5: Kelley, D. "Pennsylvania's Pay for Performance Programs." Pennsylvania Office of Medical Assistance Programs. Undated. As of December 29, 2010: http://www.agencymeddirectors.wa.gov/Files/Kelley_Medicaid.ppt

6: Hasselman, D. "Pay for Performance for Medicaid and Safety Net Providers: Innovations and Trends in 2009." Center for Health Care Strategies. March 13, 2009. As of December 29, 2010: www.ehcca.com/presentations/pfpsummit4/hasselman_ms3.ppt

## PAYMENT FOR SHARED DECISIONMAKING

### Synthesis Description of Payment for Shared Decisionmaking Payment Reform Model

*Summary:* Shared decisionmaking is a process through which patients and their care providers are active participants in the communication and decisionmaking about their care. The process uses patient decision aids that help patients and providers decide between treatments given their preferences. This model would provide financing to support the implementation of shared decisionmaking. The model would include standards and certification for patient decision aids.

*Highlighted program:* PPACA Program to Facilitate Shared Decision-Making

### Common Areas Among Highlighted Programs

Only one highlighted program; see Table A.21 for description.

### Key Differences Between Highlighted Programs

Only one highlighted program; see Table A.21 for description.

**Table A.21**

**Description of Highlighted Payment for Shared Decisionmaking Programs**

| **Program to Facilitate Shared Decision-Making** | |
|---|---|
| Source | Patient Protection and Affordable Care Act of 2010, Pub. L. No. 111-148, 124 Stat. 119 through 124 Stat. 1025 (2010), sec. 3506 |
| Participation | |
| Payer | Medicare |
| Provider Participation | Health care providers; not further specified in legislation. Preference to be given to providers participating in shared decisionmaking training. |
| Patient Participation | Not specified in legislation |
| Payment | |
| Unit of Payment | Grants to providers; not further specified in legislation |
| Payment Mechanism | Grants to be provided "for the development and implementation of shared decisionmaking techniques and to assess the use of such techniques" |
| Eligibility for Payment | Not specified in legislation |
| Payment Adjustments | Not specified in legislation |
| Budget Implications | Funds to be appropriated as needed; not further specified in legislation |
| Budget Reconciliation | Not specified in legislation |
| Measurement | |
| Quality Measures | Standards and certification process for shared decisionmaking aids to be developed by NQF |
| Cost Measures | None |
| Unit of Analysis | Not applicable |
| Data Sources | Not applicable |

| | |
|---|---|
| Specific Conditions Addressed | None specified in legislation |
| Specific Populations | None specified in legislation |
| Consumer-Related Considerations | |
| Effect on Out-of-Pocket Payments | None specified in legislation |
| Provider Choice | Not specified in legislation |
| Legal Protections | Not specified in legislation |
| Implementation | |
| Status as of April 2010 | To be implemented with funds available as early as FY 2010 |
| Geographic Reach | Not specified in legislation |
| Program Evaluation | Not specified in legislation |

**Table A.22**

**Other Payment for Shared Decisionmaking Payment Reform Models**

| Program Title | Targeted Payer | Source | Program Summary | Status |
|---|---|---|---|---|
| MMA 646: Medicare Health Care Quality Demonstration Program | Medicare | Medicare demo[1] | Multiple demonstrations will test major changes to improve quality of care while increasing efficiency, improving patient safety, and reducing scientific uncertainty and the unwarranted variation in medical practice across an entire health care system. Projects may involve the use of alternative payment systems for items and services provided to beneficiaries, and they may involve modifications to the traditional Medicare benefit package. Example demonstration: Indiana Health Information Exchange (IHIE) will implement a regional, multipayer P4P program based on a common set of quality measures. IHIE's interventions are expected to provide important empirical evidence on the effectiveness of P4P, HIT, and multipayer initiatives in improving the quality and efficiency of care provided to Medicare beneficiaries. | Demo—ongoing |

| | | | | |
|---|---|---|---|---|
| Nursing Home Value-Based Purchasing | Medicare | Medicare demo[2] | CMS assesses the performance of participating nursing homes based on selected quality measures. CMS will then make incentive payment awards to those nursing homes that perform the best or improve the most in terms of quality. Each year of the demonstration, CMS will assess each participating nursing home's quality performance based on four domains: staffing, appropriate hospitalizations, minimum data set (MDS) outcomes, and survey deficiencies. CMS will award points to each nursing home based on how they perform on the measures within each of the domains. For each state, nursing homes with scores in the top 20% and homes that are in the top 20% in terms of improvement in their scores will be eligible for a share of that state's savings pool. | Demo—ongoing |
| Value-Based Purchasing for Skilled Nursing Facilities and Home Health Agencies | Medicare | PPACA sec. 3006 | Directs the secretary to submit a plan to Congress by FY 2012 outlining how to effectively move these providers into a value-based purchasing payment system | Proposal |

| | | | | |
|---|---|---|---|---|
| Home Health Pay for Performance Demonstration | Medicare | Medicare demos[3] | The Home Health Pay for Performance demonstration will offer incentive payments to a sample of Medicare Home Health Agencies (HHAs) for maintaining high levels of quality care or making significant improvements in the quality of their services. This demonstration will determine the impact of offering incentive payments to HHAs for improving the quality of care rendered to Medicare beneficiaries when such quality of care results in reduced need for additional services and reduces cost. | Demonstration |
| Pay-for-Perfomance: Home Health | Medicare | MedPAC[4] | Recommendation to implement a P4P measure that penalizes agencies with a high rate of adverse events (the rate at which their patients are hospitalized or use the emergency department). Adverse events can serve as a benchmark for identifying acceptable standards of care, as these outcomes are undesirable for beneficiaries and the Medicare program. This incentive would discourage inappropriate cost reductions by penalizing agencies with unacceptable rates of adverse events. A P4P incentive should be linked to actual changes in quality, rather than nominal changes that reflect changes in coding practices. | Recommendation |

| | | | | |
|---|---|---|---|---|
| Dialysis Facility Pay for Performance program | Medicare | CMS | MIPPA established a P4P program for dialysis facilities scheduled to begin in 2012. Quality measures for dialysis facilities are currently publicly reported on the CMS website. Under the P4P program, a dialysis facility will be required to achieve a total performance score that meets or exceeds a level as determined by the secretary. Dialysis facilities will be assessed on a wide range of performance standards, including anemia management and other possible factors, such as patient satisfaction. | Program in development |
| Pay-for-Perfomance: Skilled nursing facilities (SNFs) | Medicare | MedPAC[5] | Recommendation to revise the SNF payment system and adopt a P4P program. The recommended prospective payment system redesign would shift payments from rehabilitation patients to patients with medically complex care needs and to those requiring high-cost nontherapy ancillary services. These revisions would more accurately reflect providers' costs to treat different types of cases, reduce the incentives to select certain patients over others, and narrow the range of Medicare margins across facilities. | Recommendation |

| | | | | |
|---|---|---|---|---|
| End Stage Renal Disease (ESRD) Disease Management Demonstration | Medicare | Medicare demo[6] | The ESRD Disease Management Demonstration is designed to test the effectiveness of disease management models to increase quality of care for ESRD patients while ensuring that this care is provided more effectively and efficiently. Organizations serving ESRD patients receive the same risk-adjusted ESRD capitation payments as the Medicare Advantage program overall—with separate rates for dialysis, transplant, and post-transplant modalities. However, the actual payment amounts are reduced by 5%, which are available to the organizations depending on performance on quality measures, as part of a quality incentive payment. Organizations are able to earn back withheld payment through acceptable and improved performance on the quality measures. CMS has determined six dialysis-related indicators on which performance is assessed. | Demo— ongoing |

| | | | | |
|---|---|---|---|---|
| Quality Reporting for Long-Term Care Hospitals, Inpatient Rehabilitation Hospitals, and Hospice Programs | Medicare | PPACA sec. 3004 | Establishes a path toward value-based purchasing for long-term care hospitals, inpatient rehabilitation facilities, and hospice providers by requiring the secretary to implement quality measure reporting programs for these providers in FY 2014. Providers under this section who do not successfully participate in the program would be subject to a reduction in their annual market basket update. | Proposal |
| Post–Acute Care Payment Reform Demonstration | Medicare | Medicare demo[7] | Develops a uniform assessment instrument for acute hospitals and four post–acute care settings long-term care hospitals (LTCHs), inpatient rehabilitation facilities (IRFs), skilled nursing facilities (SNFs), and home health agencies (HHAs). Analysis topics are payment recommendations, discharge patterns, and patient outcomes. In 2007 it developed data collection tools and recruited participants. Recruitment will be based on market analyses, the need for a representative sample, and provider volunteers. Data collection began in 2008. The demonstration is scheduled to conclude three years after the start of data collection. | Demo—ongoing |

| | | | | |
|---|---|---|---|---|
| Geographic Variation | Medicare | Multiple | Medicare adjusts fees paid for physician services based on geographic variations in costs, including special payment considerations for rural providers and hospitals. A number of proposals would extend or adjust these mechanisms used to adjust payments across geographic regions, including some that would adjust payments for high-cost and low-cost regions. | Proposal |
| Competitive Bidding for Durable Medical Equipment and Supplies | Medicare | CMS | Section 302 of the Medicare Modernization Act of 2003 (MMA) established requirements for a new competitive bidding program for certain Durable Medical Equipment, Prosthetics, Orthotics, and Supplies (DMEPOS). MMA requires that competitive bid payment amounts be used to replace the current Medicare DMEPOS fee schedule payment amounts for selected items in selected areas. The competitive bid payment amounts are determined by using bids submitted by DMEPOS suppliers. The intent of the competitive bidding program is to set more-appropriate payment amounts for DMEPOS items, which will result in reduced beneficiary out-of-pocket expenses and savings to taxpayers and the Medicare program. MIPPA, enacted on July 15, 2008, made limited changes to the DMEPOS Competitive Bidding Program, including a requirement that competition to rebid Round 1 occur in 2009. | Ongoing |

| | | | | |
|---|---|---|---|---|
| Pay-for-Population Health Performance | Not specified by proposal | Kindig, JAMA 2006[8] | Proposal to provide financial incentives for nonmedical care determinants of population health. May involve the formation of "health outcome trusts," local public-private partnerships provided with incentives to integrate resources across determinants of health. | Proposal |

1: Medicare Demonstrations: Details for MMA 646: Medicare Health Care Quality Demonstration Program. Last modified October 19, 2010. As of December 29, 2010: http://www.cms.hhs.gov/demoprojectsevalrpts/md/itemdetail.asp?filterType=none&filterByDID=0&sortByDID=3&sortOrder=descending&itemID=CMS023618&intNumPerPage=10

2: Medicare Demonstrations: Details for Nursing Home Value-Based Purchasing. Last modified November 2, 1010. As of December 29, 2010: http://www.cms.hhs.gov/demoprojectsevalrpts/md/itemdetail.asp?filterType=none&filterByDID=0&sortByDID=3&sortOrder=descending&itemID=CMS1198946&intNumPerPage=10

3: Medicare Demonstrations: Details for Home Health Pay for Performance Demonstration. Last modified November 16, 2010. As of December 29, 2010: http://www.cms.hhs.gov/demoprojectsevalrpts/md/itemdetail.asp?filterType=none&filterByDID=0&sortByDID=3&sortOrder=descending&itemID=CMS1189406&intNumPerPage=10

4: Medicare Payment Advisory Committee (MedPAC). Report to Congress: Medicare Payment Policy. March 2009. Starts on p. 200. As of December 29, 2010: http://www.medpac.gov/documents/Mar09_EntireReport.pdf

5: Medicare Payment Advisory Committee (MedPAC). Report to Congress: Medicare Payment Policy. March 2009. Starts on p. 161. As of December 29, 2010: http://www.medpac.gov/documents/Mar09_EntireReport.pdf

6: Medicare Demonstrations: Details for ESRD Disease Management Demonstration. Last modified November 4, 2010. As of December 29, 2010:

http://www.cms.hhs.gov/demoprojectsevalrpts/md/itemdetail.asp?filterType=none&filterByDID=0&sortByDID=3&sortOrder=descending&itemID=CMS1198991&intNumPerPage=10

7: Medicare Demonstrations: Details for Post Acute Care Payment Reform Demonstration. Last modified August 3, 2010. As of December 29, 2010:
http://www.cms.hhs.gov/demoprojectsevalrpts/md/itemdetail.asp?filterType=none&filterByDID=0&sortByDID=3&sortOrder=descending&itemID=CMS1201325&intNumPerPage=10

8: Kindig, DA. “A pay-for-population health performance system.” JAMA. 2006 Dec 6;296(21):2611–3.

## APPENDIX B: OVERVIEW OF MEASUREMENT IN HIGHLIGHTED PROGRAMS

### OVERVIEW OF MEASUREMENT IN HIGHLIGHTED GLOBAL PAYMENT PROGRAMS

Both highlighted programs emphasize health outcomes and patient experience measurement. While the Blue Cross Blue Shield of Massachusetts (BCBSMA) Alternative Quality Contract (AQC) also includes multiple process measures, the Network for Regional Health Improvement (NRHI) explicitly recommends avoiding process measures in order to offer providers flexibility in how they deliver care. Both programs also recommend measurement of utilization in order to ensure that appropriate treatment is delivered and that care is neither over- nor underutilized as a result of the payment model.

**Table B.1**
**Domains Addressed by Global Payment Program Documentation**

| | | | **Highlighted Payment Programs** | |
|---|---|---|---|---|
| **NQF Measurement Domain** | | | **BCBSMA AQC[1]** | **NRHI Condition-Specific Capitation[2]** |
| Outcome | Mortality | | AQC | |
| | Health status | Morbidity | AQC | |
| | | Functional status | | |
| | | Health-related quality of life (QoL) | | |
| | Safety outcomes | | AQC | |
| | Patient experience/satisfaction | | H-CAHPS, CG-CAHPS/ACES | |
| | Other outcome | | | |
| Process | Population health | Preventive services | AQC | |
| | | Healthy behaviors | AQC | |
| | Clinical care | | AQC | |

| | | | | |
|---|---|---|---|---|
| | Care coordination | | AQC | |
| | Patient/family/caregiver engagement | | | |
| | Safety practices | | AQC | |
| | Other process | | | |
| Cost/ resource use | Per capita | | | |
| | Episode | | | |
| | Service | Imaging | AQC | |
| | | Hospital length of stay (LOS) | | |
| | | Hospital readmits | | |
| | | Emergency room/emergency department (ER/ED) visits | | |
| | | Antibiotic prescribing | AQC | |
| | | Other | AQC | |
| | Other cost/resource use | | | |
| Structure | HIT utilization | | | |
| | Management | | | |
| | Other structure | | | |
| Access | | | | |
| Composite | | | | |
| Other measurement domain | | | | |

1: The Blue Cross Blue Shield of Massachusetts (BCBSMA) Alternative Quality Contract (ACQ), May 2010, bases performance incentives on a custom set of measures drawn from nationally recognized measure sets. As of December 26, 2010: http://www.qualityaffordability.com/pdf/alternative-quality-contract.pdf

2: The NHRI Condition-Specific Capitation documentation only discusses performance measurement in general terms, stating a preference for measuring outcomes over processes of care, emphasizing the measurement of service utilization, and indicating that the latter should be assessed across all provider settings. For more information, see Network for Regional Healthcare Improvement, "From Volume to Value: Transforming Health Care Payment and Delivery Systems to Improve Quality and Reduce Costs," 2008. As of December 26, 2010: http://www.nrhi.org/downloads/NRHI2008PaymentReformRecommendations.pdf

**Key:**

**No shading:** no measure statements, measures, or measure sets in program documentation.

**Light shading:** measure statements, but no measures or measure sets in program documentation.

**Dark shading:** specific measures or measure sets fit within this domain, or program documentation names a specific measurement algorithm.

**Table B.2**
**Settings Addressed by Global Payment Program Documentation**

| | | | **Highlighted Payment Programs** | |
|---|---|---|---|---|
| **Measurement Setting** | | | **BCBSMA AQC** | **NRHI Condition-Specific Capitation** |
| Clinician office | | | | |
| Hospital /acute care facility | Inpatient | | | |
| | Out-patient | ER/ED | | |
| | | Surgery/ambulatory surgery center (ASC) | | |
| | | Laboratory | | |
| | | Imaging | | |
| | | Clinic | | |
| | | Other outpatient | | |
| Post acute/ long-term care (LTC) | Nursing home/skilled nursing facility (SNF) | | | |
| | Rehabilitation | | | |
| | Other post acute/LTC | | | |
| Home health | | | | |
| Hospice | | | | |
| Dialysis facility | | | | |
| Ambulance | | | | |
| Other setting | | | | |

**Key:** **No shading:** setting not mentioned in program documentation.
**Light shading:** setting mentioned in program documentation.

## OVERVIEW OF MEASUREMENT IN HIGHLIGHTED ACO SHARED SAVINGS PROGRAMS

Theoretically, ACOs with shared savings can be implemented without performance measures; however, the highlighted programs incorporate performance measurement components. The extent of measurement will vary across programs. The PGP demo utilized a set of 32 process and outcome measures. The Medicare Shared Savings ACO legislative language requires quality measurement across a wider array of domains but does not include specific measures.

**Table B.3**
**Domains Addressed by ACO for Shared Savings Program Documentation**

| | | | **Highlighted Payment Programs** | |
|---|---|---|---|---|
| **NQF Measurement Domain** | | | **Physician Group Practice (PGP) Demo[1]** | **PPACA Medicare Shared Savings[2]** |
| Outcome | Mortality | | | |
| | Health status | Morbidity | DOQ | |
| | | Functional status | | |
| | | Health-related QoL | | |
| | Safety outcomes | | | |
| | Patient experience/satisfaction | | | |
| | Other outcome | | | |
| Process | Population health | Preventive services | DOQ | |
| | | Healthy behaviors | | |
| | Clinical care | | DOQ | |
| | Care coordination | | DOQ | |
| | Patient/family/caregiver engagement | | | |

| | | | | |
|---|---|---|---|---|
| | Safety practices | | | |
| | Other process | | | |
| Cost/ resource use | Per capita | | In PGP document | |
| | Episode | | | |
| | Service | Imaging | | |
| | | Hospital LOS | | |
| | | Hospital readmits | | |
| | | ER/ED visits | | |
| | | Antibiotic prescribing | | |
| | | Other | | |
| | Other cost/resource use | | | |
| Structure | HIT utilization | | | |
| | Management | | | |
| | Other structure | | | |
| Access | | | | |
| Composite | | | | |
| Other measurement domain | | | | |

1: PGP Demo performance measures were selected from the Doctors Office Quality (DOQ) set, which includes measures from multiple developers. For more information, see Appendix 2 in Trisolini et al. Physician Group Practice Demonstration: Quality Measurement and Reporting Specifications, Version 2. July 29, 2005. As of December 26, 2010: http://www.cms.gov/DemoProjectsEvalRpts/downloads/Quality_Specs_Report.pdf

The algorithm for calculating savings (for shared savings bonus) is described in detail in Kautter et al. Physician Group Practice Demonstration Bonus Methodology Specifications. December 20, 2004. As of December 26, 2010: http://www.cms.gov/DemoProjectsEvalRpts/downloads/PGP_Payment.pdf

2: The legislative language authorizing the PPACA Medicare Shared Savings Program describes the performance measurement requirements in general terms and does not identify specific measures. It also states that the secretary may incorporate incentive payments based on the PQRI program; however, this provision is optional and nonspecific. For more information, see Patient Protection and Affordable Care Act of 2010, Pub. L. No. 111-148, 124 Stat. 119 through 124 Stat. 1025 (2010), sec. 3022.

**Key:**

**No shading:** no measure statements, measures, or measure sets in program documentation.

**Light shading:** measure statements, but no measures or measure sets in program documentation.

**Dark shading:** specific measures or measure sets fit within this domain, or program documentation names a specific measurement algorithm.

**Table B.4**
**Settings Addressed by ACO for Shared Savings Program Documentation**

| | | | Highlighted Payment Programs | |
|---|---|---|---|---|
| **Measurement Setting** | | | **Physician Group Practice Demo** | **Medicare Shared Savings** |
| Clinician office | | | | |
| Hospital /acute care facility | Inpatient | | | |
| | Out-patient | ER/ED | | |
| | | Surgery/ASC | | |
| | | Laboratory | | |
| | | Imaging | | |
| | | Clinic | | |
| | | Other outpatient | | |
| Post acute/ LTC | Nursing home/SNF | | | |
| | Rehabilitation | | | |
| | Other post acute/LTC | | | |
| Home health | | | | |
| Hospice | | | | |
| Dialysis facility | | | | |
| Ambulance | | | | |
| Other setting | | | | |

**Key:** **No shading:** setting not mentioned in program documentation.
**Light shading:** setting mentioned in program documentation.

## OVERVIEW OF MEASUREMENT IN HIGHLIGHTED MEDICAL HOME PROGRAMS

The highlighted programs rely heavily on the National Committee for Quality Assurance (NCQA) Physicians Practice Connections Patient-Centered Medical Home (PPC-PCMH) criteria to qualify practices for receipt of bonus payments as a medical home. These criteria include a

number of structure and process measures related to patient engagement, care coordination, and HIT utilization.

**Table B.5**
**Domains Addressed by Medical Home Program Documentation**

| | | | Highlighted Payment Programs | | |
|---|---|---|---|---|---|
| **NQF Measurement Domain** | | | **Medicare Medical Home Demo[1]** | **RI Chronic Care Sustainability Initiative (CSI)[2]** | **Medicare FQHC Advanced PCP Demo[3]** |
| Outcome | Mortality | | | | |
| | Health status | Morbidity | | RI CSI | |
| | | Functional status | | | |
| | | Health-related QoL | | | |
| | Safety outcomes | | | | |
| | Patient experience/satisfaction | | | RI CSI | |
| | Other outcome | | | | |
| Process | Population health | Preventive services | PPC-PCMH | | |
| | | Healthy behaviors | | RI CSI | |
| | Clinical care | | PPC-PCMH | RI CSI | |
| | Care coordination | | PPC-PCMH | | |
| | Patient/family/caregiver engagement | | PPC-PCMH | | |
| | Safety practices | | | | |
| | Other process | | | | |
| | Per capita | | | | |
| | Episode | | | | |
| | | Imaging | | | |
| | | Hospital LOS | | | |

| | | | | | |
|---|---|---|---|---|---|
| Cost/ resource use | Service | Imaging | | | |
| | | Hospital LOS | | | |
| | | Hospital readmits | | | |
| | | ER/ED visits | | | |
| | | Antibiotic prescribing | | | |
| | | Other | | | |
| | Other cost/resource use | | | | |
| Structure | HIT utilization | | PPC-PCMH | | |
| | Management | | PPC-PCMH | | |
| | Other structure | | | | |
| Access | | | PPC-PCMH | | |
| Composite | | | PPC-PCMH | | |
| Other measurement domain | | | | | |

1: Physician practices qualify for participation in one of two tiers based on a determination of capabilities using a modified version of the PPC-PCMH checklist, which includes structure and process measures. Ongoing performance measurement is not an explicit component of payment mechanism. For more information, see Centers for Medicare and Medicaid Services, Details for Medicare Medical Home Demonstration, 2007. As of December 26, 2010: http://www.cms.gov/DemoProjectsEvalRpts/MD/itemdetail.asp?itemID=CMS1199247

2: Measures used in CSI were obtained through personal communication between members of the research team and CSI program staff.

3: Requirements for performance measurement are not specified in the program description for the Medicare Federally Qualified Health Center Advanced Primary Care Practice Demonstration. For more information, see The White House, Presidential Memorandum—Community Health Centers, December 9, 2009. As of December 26, 2010: http://www.whitehouse.gov/the-press-office/presidential-memorandum-community-health-centers

**Key:**

**No shading:** no measure statements, measures, or measure sets in program documentation.

**Light shading:** measure statements, but no measures or measure sets in program documentation.

**Dark shading:** specific measures or measure sets fit within this domain, or program documentation names a specific measurement algorithm.

**Table B.6**
**Settings Addressed by Medical Home Program Documentation**

| | | | Highlighted Payment Programs | | |
|---|---|---|---|---|---|
| **Measurement Setting** | | | **Medicare Medical Home Demo** | **RI CSI** | **Medicare FQHC Advanced PCP Demo** |
| Clinician office | | | | | |
| Hospital /acute care facility | Inpatient | | | | |
| | Out-patient | ER/ED | | | |
| | | Surgery/ASC | | | |
| | | Laboratory | | | |
| | | Imaging | | | |
| | | Clinic | | | |
| | | Other outpatient | | | |
| Post acute/ LTC | Nursing home/SNF | | | | |
| | Rehabilitation | | | | |
| | Other post acute/LTC | | | | |
| Home health | | | | | |
| Hospice | | | | | |
| Dialysis facility | | | | | |
| Ambulance | | | | | |
| Other setting | | | | | |

**Key:** **No shading:** setting not mentioned in program documentation.
**Light shading:** setting mentioned in program documentation.

## OVERVIEW OF MEASUREMENT IN HIGHLIGHTED BUNDLED PAYMENTS FOR EPISODES OF CARE PROGRAMS

Episode-based payment bundling can theoretically be done without performance measures; however, the highlighted bundling programs incorporate a measurement component. The extent of measurement varies significantly across programs, and a number of distinct measures have been

selected across the highlighted programs. All four of the highlighted programs include process and outcome measures related to the specific treatments or conditions that are targeted for episode bundling. Some programs also include patient experience and cost measures related to these treatments or conditions.

**Table B.7**
**Domains Addressed by Bundled Payment Program Documentation**

| | | | Highlighted Payment Programs | | | |
|---|---|---|---|---|---|---|
| **NQF Measurement Domain** | | | **Medicare ACE Demo[1]** | **Minne-sota Baskets of Care[2]** | **Geisinger ProvenCare[3]** | **Prome-theus Payment[4]** |
| Outcome | Mortality | | RTI-ACE | | | |
| | Health status | Morbidity | RTI-ACE | | **ProvenCare** | BTE |
| | | Functional status | | MDH | | BTE |
| | | Health-related QoL | | | | |
| | Safety outcomes | | RTI-ACE | | **ProvenCare** | |
| | Patient experience/satisfaction | | | | | BTE |
| | Other outcome | | RTI-ACE | | **ProvenCare** | BTE |
| Process | Population health | Preventive services | | MDH | | BTE |
| | | Healthy behaviors | | MDH | **ProvenCare** | BTE |
| | Clinical care | | RTI-ACE | MDH | **ProvenCare** | BTE |
| | Care coordination | | | MDH | **ProvenCare** | BTE |
| | Patient/family/ caregiver engagement | | | | **ProvenCare** | BTE |
| | Safety practices | | RTI-ACE | | **ProvenCare** | |
| | Other process | | | | **ProvenCare** | |
| | Per capita | | | | | |
| | Episode | | | | | |

| | | | | | | |
|---|---|---|---|---|---|---|
| Cost/ resource use | Service | Imaging | | MDH | | BTE |
| | | Hospital LOS | RTI-ACE | | **ProvenCare** | |
| | | Hospital readmits | RTI-ACE | MDH | **ProvenCare** | PAC |
| | | ER/ED visits | | MDH | | PAC |
| | | Antibiotic prescribing | | | | BTE |
| | | Other | RTI-ACE | | **ProvenCare** | BTE/PAC |
| | Other cost/resource use | | RTI-ACE | MDH | | |
| Structure | HIT utilization | | | | | |
| | Management | | | | | |
| | Other structure | | | | | |
| Access | | | | | | |
| Composite | | | | MDH | | BTE |
| Other measurement domain | | | | | | |

1: The Medicare ACE Demonstration requires collection and reporting on a set of 22 measures assembled by Research Triangle Institute (RTI) from a variety of sources specifically for the project. For more information, see Technical Specifications for Proposed ACE Demonstration Quality Measures Requested in the Acute Care Demonstration Application, undated. As of December 26, 2010: http://www1.cms.gov/DemoProjectsEvalRpts/downloads/ACETechSpecAQM.pdf

2: The required performance measures for the eight baskets of care in Minnesota are available in Minnesota Department of Health (MDH), "State-Designated Baskets of Care: Appendices to Minnesota Administrative Rules, Chapter 4765," March 2010 As of December 26, 2010:

http://www.health.state.mn.us/healthreform/baskets/adoptedruleappendices.pdf

3: The Geisinger ProvenCare program relies on adherence to a set of evidence-based standards for eight conditions or procedures. The 40 standards for coronary artery bypass graft (CABG) surgery are provided at Geisinger, ProvenCare web page, last modified October 10, 2008. As of December 26, 2010: http://www.geisinger.org/provencare/benchmarks.html Geisinger also reports the results of ProvenCare on their website using a small set of outcome and utilization measures available at Geisinger, "ProvenCare by the Numbers," last modified October 10, 2008. As of December 26, 2010: http://www.geisinger.org/provencare/numbers.html

4: Prometheus Payment uses a custom set of measures developed for the Bridges to Excellence (BTE) program, in addition to the Prometheus list of potentially avoidable complications (PAC). These have been endorsed or included in measure sets maintained by multiple sources, including NQF, NCQA, PQRI, and AMA-PCPI. The list of measures is available online at Bridges to Excellence, "Final Program Measures," 2010. As of February 9, 2011:

http://www.bridgestoexcellence.org/Content/ContentDisplay8141.html?ContentID=34

**Key:**

**No shading:** no measure statements, measures, or measure sets in program documentation.

**Light shading:** measure statements, but no measures or measure sets in program documentation.

**Dark shading:** specific measures or measure sets fit within this domain, or program documentation names a specific measurement algorithm.

**Table B.8**

**Settings Addressed by Bundled Payment Program Documentation**

| | | | **Highlighted Payment Programs** | | | |
|---|---|---|---|---|---|---|
| **Measurement Setting** | | | **Medicare ACE Demo** | **Minne-sota Baskets of Care** | **Geisinger** | **Prometheus** |
| Clinician office | | | | | | |
| Hospital /acute care facility | Inpatient | | | | | |
| | Out-patient | ER/ED | | | | |
| | | Surgery/ASC | | | | |
| | | Laboratory | | | | |
| | | Imaging | | | | |
| | | Clinic | | | | |
| | | Other outpatient | | | | |
| Post acute/ LTC | Nursing home/SNF | | | | | |
| | Rehabilitation | | | | | |
| | Other post acute/LTC | | | | | |
| Home health | | | | | | |
| Hospice | | | | | | |
| Dialysis facility | | | | | | |
| Ambulance | | | | | | |
| Other setting | | | | | | |

**Key:** **No shading:** setting not mentioned in program documentation.

**Light shading:** setting mentioned in program documentation.

## OVERVIEW OF MEASUREMENT IN HIGHLIGHTED HOSPITAL-PHYSICIAN GAINSHARING PROGRAMS

Gainsharing programs must include performance measurement to be allowable under existing statutes. The highlighted programs have required, at a minimum, reporting of Hospital Quality Alliance (HQA) measures included in CMS' Hospital Compare. The programs required participants to propose additional measures as necessary to monitor improvements in quality and efficiency and to address specific populations or procedures targeted under gainsharing arrangements.

**Table B.9**
**Domains Addressed by Hospital-Physician Gainsharing Program Documentation**

| | | | **Highlighted Payment Programs** | |
|---|---|---|---|---|
| **NQF Measurement Domain** | | | **Medicare Physician Hospital Collaboration Demonstration[1]** | **Medicare Hospital Gainsharing Demonstration[1]** |
| Outcome | Mortality | | | |
| | Health status | Morbidity | | |
| | | Functional status | | |
| | | Health-related QoL | | |
| | Safety outcomes | | | |
| | Patient experience/satisfaction | | HCAHPS | HCAHPS |
| | Other outcome | | | |
| Process | Population health | Preventive services | HQA | HQA |
| | | Healthy behaviors | HQA | HQA |
| | Clinical care | | HQA | HQA |
| | Care coordination | | HQA | HQA |
| | Patient/family/caregiver engagement | | | |
| | Safety practices | | HQA | HQA |

| | | | | |
|---|---|---|---|---|
| | Other process | | | |
| Cost/ resource use | Per capita | | | |
| | Episode | | | |
| | Service | Imaging | | |
| | | Hospital LOS | | |
| | | Hospital readmits | | |
| | | ER/ED visits | | |
| | | Antibiotic prescribing | | |
| | | Other | | |
| | Other cost/resource use | | | |
| Structure | HIT utilization | | | |
| | Management | | | |
| | Other structure | | | |
| Access | | | | |
| Composite | | | | |
| Other measurement domain | | | | |

1: The performance measurement requirements of both highlighted programs are identical (for example, see DRA 5007 Medicare Hospital Gainsharing Demonstration Solicitation, undated, p. 7. As of December 26, 2010: http://www.cms.gov/DemoProjectsEvalRpts/downloads/DRA5007_Solicitation.pdf). CMS requires, at a minimum, the reporting of the 21 HQA indicators reported for Hospital Compare, as well as the HCAHPS patient perspective measures. CMS requires that participating projects propose other measures to monitor increases in hospital quality and efficiency specific to gainsharing activity.

**Key:**

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**Table B.10**
**Settings Addressed by Hospital-Physician Gainsharing Program Documentation**

| | | | Highlighted Payment Programs | |
|---|---|---|---|---|
| **Measurement Setting** | | | **Medicare Physician Hospital Collaboration Demonstration** | **Medicare Hospital Gainsharing Demonstration** |
| Clinician office | | | | |
| Hospital /acute care facility | Inpatient | | | |
| | Out-patient | ER/ED | | |
| | | Surgery/ASC | | |
| | | Laboratory | | |
| | | Imaging | | |
| | | Clinic | | |
| | | Other outpatient | | |
| Post acute/ LTC | Nursing home/SNF | | | |
| | Rehabilitation | | | |
| | Other post acute/LTC | | | |
| Home health | | | | |
| Hospice | | | | |
| Dialysis facility | | | | |
| Ambulance | | | | |
| Other setting | | | | |

**Key:** **No shading:** setting not mentioned in program documentation.
**Light shading:** setting mentioned in program documentation.

## OVERVIEW OF MEASUREMENT IN HIGHLIGHTED PAYMENT FOR COORDINATION PROGRAMS

The documentation for the two highlighted demonstration projects makes little mention of performance measurement. The specific performance measurement requirements described below were inferred from the provisions for program evaluation under each program.

**Table B.11**
**Domains Addressed by Payments for Coordination Program Documentation**

| | | | Highlighted Payment Programs | |
|---|---|---|---|---|
| **NQF Measurement Domain** | | | **PPACA Independence at Home Medicare Demo[1]** | **Medicare Community Nursing Organization Demo[2]** |
| Outcome | Mortality | | | |
| | Health status | Morbidity | | |
| | | Functional status | | |
| | | Health-related QoL | | |
| | Safety outcomes | | | |
| | Patient experience/satisfaction | | | |
| | Other outcome | | | |
| Process | Population health | Preventive services | | |
| | | Healthy behaviors | | |
| | Clinical care | | | |
| | Care coordination | | | |
| | Patient/family/caregiver engagement | | | |
| | Safety practices | | | |
| | Other process | | | |
| Cost/ resource use | Per capita | | | Abt Evaluation |
| | Episode | | | |
| | Service | Imaging | | |
| | | Hospital LOS | | |
| | | Hospital readmits | | |
| | | ER/ED visits | | Abt Evaluation |
| | | Antibiotic prescribing | | |
| | | Other | | Abt Evaluation |

| | | | |
|---|---|---|---|
| | Other cost/resource use | | |
| Structure | HIT utilization | | |
| | Management | | |
| | Other structure | | |
| Access | | | |
| Composite | | | |
| Other measurement domain | | | |

1: The only reference to performance measurement requirements in the text of PPACA Section 3024 is the statement that "The Secretary shall develop quality performance standards for independence at home medical practices participating in the demonstration program." The legislation does state that participating practices may be eligible for shared savings incentive payments "subject to performance on quality measures." The entries above reflect the objectives of the demonstration that must be evaluated under the legislation. For more information, see Patient Protection and Affordable Care Act of 2010, Pub. L. No. 111-148, 124 Stat. 119 thru 124 Stat. 1025 (2010), sec. 3024.

2: In the formal evaluation of the CNO demonstration, preformed by Abt Associates, they examined per capita expenditures and inpatient, outpatient, and emergency room medical encounters as outcomes. For more information, see Frakt, Pizer, and Schmitz. Phase II Evaluation of CNO Demonstration, Final Report to Congress. Abt Associates, Cambridge, Mass. January 6, 2003.

**Key:**

**No shading:** no measure statements, measures, or measure sets in program documentation.

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**Dark shading:** specific measures or measure sets fit within this domain, or program documentation names a specific measurement algorithm.

**Table B.12**
**Settings Addressed by Hospital-Physician Gainsharing Program Documentation**

| | | | **Highlighted Payment Programs** | |
|---|---|---|---|---|
| **Measurement Setting** | | | **PPACA Independence at Home Medicare Demo** | **Medicare Community Nursing Organization Demo** |
| Clinician office | | | | |
| | Inpatient | | | |
| | | ER/ED | | |

| | | | | |
|---|---|---|---|---|
| Hospital /acute care facility | Out-patient | ER/ED | | |
| | | Surgery/ASC | | |
| | | Laboratory | | |
| | | Imaging | | |
| | | Clinic | | |
| | | Other outpatient | | |
| Post acute/ LTC | Nursing home/SNF | | | |
| | Rehabilitation | | | |
| | Other post acute/LTC | | | |
| Home health | | | | |
| Hospice | | | | |
| Dialysis facility | | | | |
| Ambulance | | | | |
| Other setting | | | | |

**Key:** **No shading:** setting not mentioned in program documentation.
**Light shading:** setting mentioned in program documentation.

## OVERVIEW OF MEASUREMENT IN HIGHLIGHTED HOSPITAL PAY-FOR-PERFORMANCE (P4P) PROGRAMS

While the scope of performance measurement varies widely across implemented hospital P4P programs, there are also significant areas of overlap. The highlighted hospital P4P programs tend to measure preventable complications (such as healthcare-acquired infections [HAI]). All programs measure surgical safety processes, and several programs make use of the Hospital Quality Alliance (HQA) measures, which are reported on the HHS-maintained HospitalCompare website. Two of the highlighted programs rely on the HCAPHS measure set to assess patients' experience of care, and three of them utilize measures of hospital readmissions as a proxy for unfavorable outcomes. In addition to these common elements, several highlighted program include areas of measurement that are unique.

**Table B.13**

**Domains Addressed by Hospital P4P Program Documentation**

| | | | Highlighted Payment Programs | | | | |
|---|---|---|---|---|---|---|---|
| **NQF Measurement Domain** | | | **Medicare Hospital VBP Program[1]** | **BCBS-MI Hospital P4P[2]** | **Premier Hospital Quality Incentive Program[3]** | **Horizon BCBS-NJ HRP[4]** | **Penn. Medicaid Hospital P4P[5]** |
| Outcome | Mortality | | | | Premier | | |
| | Health status | Morbidity | | | Premier | | |
| | | Functional status | | | | | |
| | | Health-related QoL | | | | | |
| | Safety outcomes | | HAI | BCBSM | | Horizon /LHRP | |
| | Patient experience/satisfaction | | HCAHPS | | | HCAHPS | |
| | Other outcome | | HAI | | Premier | LHRP | |
| Process | Population health | Preventive services | | BCBSM | Premier | Horizon | |
| | | Healthy behaviors | | | Premier | Horizon | |
| | Clinical care | | SCIP | BCBSM | Premier | Horizon | PA HP4P |
| | Care coordination | | | BCBSM | Premier | Horizon | |
| | Patient/family/caregiver engagement | | | | | | |
| | Safety practices | | SCIP/HAI | BCBSM | Premier | Horizon / LHRP | PA HP4P |
| | Other process | | | | | LHRP | |
| | Per capita | | | BCBSM | | | |
| | Episode | | | BCBSM | | | |
| | | Imaging | | | | | |

| | | | | | | | |
|---|---|---|---|---|---|---|---|
| Cost/ resource use | Service | Imaging | | | | | |
| | | Hospital LOS | | | | LHRP | |
| | | Hospital readmits | | | Premier | LHRP | PA HP4P |
| | | ER/ED visits | | | | | |
| | | Antibiotic prescribing | | | | | |
| | | Other | | | | LHRP | |
| | Other cost/resource use | | | | | LHRP | |
| Structure | HIT utilization | | | | | | PA HP4P |
| | Management | | | | | | |
| | Other structure | | | | | | |
| Access | | | | BCBSM | | | |
| Composite | | | | | | LHRP | |
| Other measurement domain | | | | | | | |

1: The Medicare Hospital Value-Based Purchasing (VBP) Program documentation specifically references HCAPHS and measures used in the HHS Surgical Care Improvement Project (SCIP) and the Action Plan to Prevent Healthcare-Associated Infections (HAI), described at U.S. Department of Health and Human Services, "Office of the Assistant Secretary for Health (ASH)," undated. As of December 26, 2010: http://www.hhs.gov/ophs/initiatives/hai/prevtargets.html. The legislation also requires inclusion of "efficiency measures," including risk-adjusted spending per Medicare beneficiary. The legislation requires that any measures adopted for the program have been part of the Hospital Quality Alliance (HQA) set, reported on the HHS HospitalCompare website for at least one year. These measures are described at U.S. Department of Health and Human Services, "Information for Professionals on Data Collection," undated. As of December 26, 2010:http://www.hospitalcompare.hhs.gov/Hospital/Static/InformationForProfessionals_tabset.asp?activeTab=1&language=English&version=default

2: Eligibility for participation in Blue Cross Blue Shield of Michigan Hospital P4P program requires (1) submission of HQA measures to HHS Hospital Compare, (2) participation and compliance with one of several national patient safety initiatives, and (3) achieving a minimum score of 95 percent on a set of five ICU Ventilator Bundle Measures. P4P bonus payments are based on a combination of quality measures, efficiency scores, and participation in each of six statewide Continuous Quality Improvement initiatives. Tables above reflect only the quality and efficiency components; the complete bonus payment methodology is described at "2009 BCBSM Hospital Pay-for-Performance Program," undated. As of December 26, 2010: http://bcbsmi.net/pdf/HPP_pg14_program_description.pdf

3: The Premier Hospital Quality Incentive Program utilized a set of measures taken from multiple sources including NQF, MCS, the Joint Commission, and AHRQ. More information, including the complete measure set, can be downloaded at Centers for

Medicare and Medicaid Services, "Premier Hospital Quality Incentive Demonstration," undated. As of December 26, 2010: http://www.cms.gov/hospitalqualityinits/35_hospitalpremier.asp

4: Participants in the Horizon Blue Cross Blue Shield of New Jersey Hospital Recognition Program can choose to either meet the standardized reporting requirements of the Leapfrog Hospital Recognition Program (LHRP) or report a set of measures assembled by the health plan from a variety of sources (Horizon). LHRP utilizes a unique system of standardized, categorical composite measures, available at The Leapfrog Group, "LHRP Scoring," 2009. As of December 26, 2010: http://www.leapfroggroup.org/for_hospitals/fh-incentives_and_rewards/hosp_rewards_prog/4751817/4752142. The Horizon measure set, for hospitals that do not participate in LHRP, is described in America's Health Insurance Plans (AHIP). Innovations in Recognizing and Rewarding Quality. March 2009. Pp. 62–63.

5: For more information regarding the Pennsylvania Medicaid Hospital P4P program, see David K. Kelley, "Pennsylvania's Pay for Performance Programs," undated, slides 13–18. As of December 26, 2010:http://www.agencymeddirectors.wa.gov/Files/Kelley_Medicaid.ppt

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**Table B.14**
**Settings Addressed by Hospital P4P Program Documentation**

| | | | Highlighted Payment Programs | | | | |
|---|---|---|---|---|---|---|---|
| **Measurement Setting** | | | **Medicare Hospital VBP Program** | **BCBS-MI Hospital P4P** | **Premier Hospital Quality Incentive** | **Horizon BCBS-NJ HRP** | **Penn. Medicaid Hospital P4P** |
| Clinician office | | | | | | | |
| Hospital /acute care facility | Inpatient | | | | | | |
| | Out-patient | ER/ED | | | | | |
| | | Surgery/ASC | | | | | |
| | | Laboratory | | | | | |
| | | Imaging | | | | | |
| | | Clinic | | | | | |
| | | Other outpatient | | | | | |
| Post | Nursing home/SNF | | | | | | |

| | | | | | | |
|---|---|---|---|---|---|---|
| acute/ LTC | Rehabilitation | | | | | |
| | Other post acute/LTC | | | | | |
| Home health | | | | | | |
| Hospice | | | | | | |
| Dialysis facility | | | | | | |
| Ambulance | | | | | | |
| Other setting | | | | | | |

**Key:** **No shading:** setting not mentioned in program documentation.
**Light shading:** setting mentioned in program documentation.

## OVERVIEW OF MEASUREMENT IN HIGHLIGHTED PAYMENT ADJUSTMENT FOR READMISSIONS PROGRAMS

The scope of measurement for the highlighted program is limited to hospital readmissions. The implementation of the payment reform requires measuring these in several ways, including risk-adjusted total actual readmissions, as well as risk-adjusted expected hospital readmissions. These measures will need to be calculated for several targeted conditions, which will initially include heart attack, heart failure and pneumonia, and may be expanded in later years.

**Table B.15**
**Domains Addressed by Payment Adjustment for Readmissions Program Documentation**

| | | | **Highlighted Payment Programs** |
|---|---|---|---|
| **NQF Measurement Domain** | | | **PPACA Hospital Readmissions Reduction Program[1]** |
| Outcome | Mortality | | |
| | Health status | Morbidity | |
| | | Functional status | |
| | | Health-related QoL | |
| | Safety outcomes | | |

| | | | |
|---|---|---|---|
| | Patient experience/satisfaction | | |
| | Other outcome | | |
| Process | Population Health | Preventive services | |
| | | Healthy behaviors | |
| | Clinical care | | |
| | Care coordination | | |
| | Patient/family/caregiver engagement | | |
| | Safety practices | | |
| | Other process | | |
| Cost/ resource use | Per capita | | |
| | Episode | | |
| | Service | Imaging | |
| | | Hospital LOS | |
| | | Hospital readmits | HQA |
| | | ER/ED visits | |
| | | Antibiotic prescribing | |
| | | Other | |
| | Other cost/resource use | | |
| Structure | HIT utilization | | |
| | Management | | |
| | Other structure | | |
| Access | | | |
| Composite | | | |
| Other measurement domain | | | |

1: The legislation requires use of readmission measures that are part of the Hospital Quality Alliance set reported on the CMS HospitalCompare website. For more information, see Patient Protection and Affordable Care Act of 2010, Pub. L. No. 111-148, 124 Stat. 119 thru 124 Stat. 1025 (2010), sec. 3025.

**Key:**

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**Table B.16**

**Settings Addressed by Payment Adjustment for Readmissions Program Documentation**

| | | | **Highlighted Payment Programs** |
|---|---|---|---|
| **Measurement Setting** | | | **PPACA Hospital Readmissions Reduction Program** |
| Clinician office | | | |
| Hospital /acute care facility | Inpatient | | |
| | Out-patient | ER/ED | |
| | | Surgery/ASC | |
| | | Laboratory | |
| | | Imaging | |
| | | Clinic | |
| | | Other outpatient | |
| Post acute/ LTC | Nursing home/SNF | | |
| | Rehabilitation | | |
| | Other post acute/LTC | | |
| Home health | | | |
| Hospice | | | |
| Dialysis facility | | | |
| Ambulance | | | |
| Other setting | | | |

**Key:** **No shading:** setting not mentioned in program documentation.
**Light shading:** setting mentioned in program documentation.

## OVERVIEW OF MEASUREMENT IN HIGHLIGHTED PAYMENT ADJUSTMENT FOR HOSPITAL-ACQUIRED CONDITIONS PROGRAMS

The documentation available for the highlighted programs indicates that currently, the only performance measurement that is undertaken in these programs is recording the occurrences of events that are not reimbursed under the respective policies.

**Table B.17**

**Domains Addressed by Payment Adjustment for Hospital-Acquired Conditions Program Documentation**

| | | | Highlighted Payment Programs | | | |
|---|---|---|---|---|---|---|
| **NQF Measurement Domain** | | | **PPACA Medicare Payment Adjustment[1]** | **CMS Non-payment for HAC[2]** | **Mass. Non-payment for SRE[3]** | **Health-Partners "Never Events"[4]** |
| Outcome | Mortality | | | | | |
| | Health status | Morbidity | | | | |
| | | Functional status | | | | |
| | | Health-related QoL | | | | |
| | Safety outcomes | | | CMS | NQF-SRE | NQF-SRE |
| | Patient experience/satisfaction | | | | | |
| | Other outcome | | | | | |
| Process | Population health | Preventive services | | | | |
| | | Healthy behaviors | | | | |
| | Clinical care | | | | | |
| | Care coordination | | | | | |
| | Patient/family/caregiver engagement | | | | | |
| | Safety practices | | | | | |
| | Other process | | | | | |
| Cost/ | Per capita | | | | | |
| | Episode | | | | | |
| | Service | Imaging | | | | |
| | | Hospital LOS | | | | |
| | | Hospital readmits | | | | |

| | | | | | | |
|---|---|---|---|---|---|---|
| resource use | | ER/ED visits | | | | |
| | | Antibiotic prescribing | | | | |
| | | Other | | | | |
| | Other cost/resource use | | | | | |
| Structure | HIT utilization | | | | | |
| | Management | | | | | |
| | Other structure | | | | | |
| Access | | | | | | |
| Composite | | | | | | |
| Other measurement domain | | | | | | |

1: For more information, see Patient Protection and Affordable Care Act of 2010, Pub. L. No. 111-148, 124 Stat. 119 thru 124 Stat. 1025 (2010), sec. 3008.

2: The Medicare HAC program is based on a list of ten categories of conditions listed in the Inpatient Prospective Payment System (IPPS) Fiscal Year (FY) 2009 Final Rule. For more information, see Centers for Medicare and Medicaid Services. "Hospital-Acquired Conditions (Present on Admission Indicator)," last modified September 2, 2010. As of December 26, 2010: http://www.cms.gov/HospitalAcqCond/01_Overview.asp#TopOfPage

3: Massachusetts state law prohibits hospitals from seeking reimbursement for Serious Reportable Events (SRE), based on the NQF list of SRE. For more information, see Massachusetts Executive Office of Health and Human Services, Department of Public Health, Bureau of Health Care Safety and Quality, "Serious Reportable Events in Massachusetts Acute Care Hospitals: January 1, 2009–December 31, 2009," 2010. As of December 26, 2010: http://www.mass.gov/?pageID=eohhs2terminal&L=6&L0=Home&L1=Provider&L2=Reporting+to+the+State&L3=Reporting+Entities&L4=Hospital&L5=Reporting+Serious+Incidents&sid=Eeohhs2&b=terminalcontent&f=dph_quality_healthcare_p_sre_report_2009&csid=Eeohhs2

4: HealthPartners policy prohibits reimbursement for conditions on the NQF list of SRE. For more information, see HealthPartners, "HealthPartners Hospital Payment Policy," 2010. As of December 26, 2010: http://www.healthpartners.com/portal/866.html

**Key:**

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**Dark shading:** specific measures or measure sets fit within this domain, or program documentation names a specific measurement algorithm.

**Table B.18**

**Settings Addressed by Payment Adjustment for Hospital-Acquired Conditions Program Documentation**

| | | | Highlighted Payment Programs | | | |
|---|---|---|---|---|---|---|
| **Measurement Setting** | | | **PPACA Medicare Payment Adjustment** | **Medicare Non-payment for HAC** | **Mass. Non-payment for SRE** | **Health-Partners "Never Events"** |
| Clinician office | | | | | | |
| Hospital /acute care facility | Inpatient | | | | | |
| | Out-patient | ER/ED | | | | |
| | | Surgery/ASC | | | | |
| | | Laboratory | | | | |
| | | Imaging | | | | |
| | | Clinic | | | | |
| | | Other outpatient | | | | |
| Post acute/ LTC | Nursing home/SNF | | | | | |
| | Rehabilitation | | | | | |
| | Other post acute/LTC | | | | | |
| Home health | | | | | | |
| Hospice | | | | | | |
| Dialysis facility | | | | | | |
| Ambulance | | | | | | |
| Other setting | | | | | | |

**Key:** **No shading:** setting not mentioned in program documentation.

**Light shading:** setting mentioned in program documentation.

## OVERVIEW OF MEASUREMENT IN HIGHLIGHTED PHYSICIAN PAY-FOR-PERFORMANCE (P4P) PROGRAMS

The scope of performance measurement varies widely across implemented physician P4P programs. The Alabama Patient 1st Medicaid program bases payment entirely on three utilization measures. The Integrated Healthcare Association uses a set of 32 measures encompassing a much wider array of performance domains. The physician P4P programs highlighted here generally

focus on performance measured in the outpatient clinic setting, although some also include measures in inpatient or other settings. Where measures address inpatient settings, the intent is to assess use of other types of care by patients as an attribute of the outpatient physicians included in the program.

A number of programs, including the Anthem Quality-In-Sights (AQIS) program, rely on "certification" of providers through Bridges-to-Excellence (BTE) or the National Committee for Quality Assurance (NCQA). These certifications are achieved by meeting performance measurement benchmarks assessed by independent organizations that are not necessarily connected to a particular payer. In AQIS, providers receive points toward an overall score by achieving one or two out of ten possible certifications (seven from BTE and/or three from NCQA). For provider groups, 25 percent of physicians in the group must meet this requirement to earn the points. Performance bonuses are based on the final overall composite score.

**Table B.19**
**Domains Addressed by Physician P4P Program Documentation**

| | | | Highlighted Payment Programs | | | | |
|---|---|---|---|---|---|---|---|
| **NQF Measurement Domain** | | | **Value-Based Payment Model[1]** | **IHA Physician P4P[2]** | **Alabama Medicaid[3]** | **Medicare CMP Demo[4]** | **Anthem Quality-In-Sights[5]** |
| Outcome | Mortality | | | | | | |
| | Health status | Morbidity | | | | DOQ | BTE/ NCQA |
| | | Functional status | | | | | BTE |
| | | Health-related QoL | | | | | |
| | Safety outcomes | | | | | | |
| | Patient experience/satisfaction | | | CG-CAHPS | | | BTE/ NCQA |
| | Other outcome | | | HEDIS/ PPC | | | AQIS/ BTE |
| | Population health | Preventive services | | HEDIS | | DOQ | AQIS/ BTE |

| | | | | | | | |
|---|---|---|---|---|---|---|---|
| Process | | Healthy behaviors | | | | | BTE/ NCQA |
| | Clinical care | | | HEDIS/ PPC | | DOQ | AQIS/ BTE/ NCQA |
| | Care coordination | | | CG-CAHPS/ HEDIS/ PPC | | DOQ | BTE |
| | Patient/family/caregiver engagement | | | CG-CAHPS | | | BTE/ NCQA |
| | Safety practices | | | HEDIS | | | AQIS/ NCQA |
| | Other process | | | | | | |
| Cost/ resource use | Per capita | | | | Pt. 1st | | |
| | Episode | | | | | | |
| | Service | Imaging | | HEDIS | | | BTE/ NCQA |
| | | Hospital LOS | | IHA | | | |
| | | Hospital readmits | | IHA | | | |
| | | ER/ED visits | | IHA | Pt. 1st | | |
| | | Antibiotic prescribing | | HEDIS | | | AQIS |
| | | Other | | IHA | Pt. 1st | | AQIS/ BTE/ NCQA |
| | Other cost/resource use | | | | | | |
| Structure | HIT utilization | | | PPC | | | AQIS/ BTE/ NCQA/ CCHIT |
| | Management | | | HEDIS/ PPC | | | |
| | Other structure | | | | | | |
| Access | | | | | | | |

| | | | | | |
|---|---|---|---|---|---|
| Composite | | | | | BTE |
| Other measurement domain | | | | | |

1: For more information, see Patient Protection and Affordable Care Act of 2010, Pub. L. No. 111-148, 124 Stat. 119 thru 124 Stat. 1025 (2010), sec. 3007.

2: IHA Physician P4P includes measures taken from or based on HEDIS, Clinician-Group Consumer Assessment of Healthcare Providers Survey (CG-CAHPS), and Physician Practice Connections (PPC), as well as a handful of specific resource use measures that appear to have been created internally by IHI for the program. For more information, see America's Health Insurance Plans (AHIP), *Innovations in Recognizing and Rewarding Quality*, March 2009, pp. 75–76. As of December 26, 2010: http://www.ahipresearch.org/pdfs/P4PMonographWeb.pdf

3: Bonus payments under the Alabama Medicaid Patient 1st Program are described in "2009 Patient 1st Sharing of Savings Calculation Methodology," September 28, 2009. As of December 26, 2010: http://www.medicaid.state.al.us/documents/Program-Pt1st/Shared_Savings/Pt1st_Shared_Savings_Calculation_Methodology_9-30-09.pdf

4: Medicare Care Management Performance Demonstration performance measures were selected from the Doctors Office Quality (DOQ) set, which includes measures from multiple developers. The selected measures for this demonstration were identical to those selected for the Physician Group Practice demonstration (see analysis of ACO Shared Savings Programs). For more information, see "Table 1: Clinical Quality Measures in the MCMP Demonstration," updated January 8, 2007. As of December 26, 2010:http://www.cms.gov/DemoProjectsEvalRpts/downloads/MMA649_Clinical.pdf

5: The Anthem Quality-In-Sights program relies on a points system that incorporates a small set of quality measures taken from existing sources, such as HEDIS and NQF, as well as certification through BTE or NCQA. For a full explanation of the bonus methodology, see Empire BlueCross BlueShield, *2009 Quality-In-Sights Primary Care Incentive Program*, December 2009. As of December 26, 2010: http://www.empireblue.com/provider/noapplication/f5/s3/t6/pw_b141150.pdf?refer=ehpprovider

**Key:**

**No shading:** no measure statements, measures, or measure sets in program documentation.

**Light shading:** measure statements, but no measures or measure sets in program. documentation

**Dark shading:** specific measures or measure sets fit within this domain, or program documentation names a specific measurement algorithm.

**Table B.20**
**Settings Addressed by Physician P4P Program Documentation**

| Measurement Setting | | | Highlighted Payment Programs | | | | |
|---|---|---|---|---|---|---|---|
| | | | Value-Based Payment Model | IHA Physician P4P | Alabama Medicaid | Medicare CMP Demo | Anthem Quality-In-Sights |
| Clinician office | | | | | | | |
| Hospital /acute care facility | Inpatient | | | | | | |
| | Out-patient | ER/ED | | | | | |
| | | Surgery/ASC | | | | | |
| | | Laboratory | | | | | |
| | | Imaging | | | | | |
| | | Clinic | | | | | |
| | | Other outpatient | | | | | |
| Post acute/ LTC | Nursing home/SNF | | | | | | |
| | Rehabilitation | | | | | | |
| | Other post acute/LTC | | | | | | |
| Home health | | | | | | | |
| Hospice | | | | | | | |
| Dialysis facility | | | | | | | |
| Ambulance | | | | | | | |
| Other setting | | | | | | | |

**Key:** **No shading:** setting not mentioned in program documentation.
**Light shading:** setting mentioned in program documentation.

## OVERVIEW OF MEASUREMENT IN HIGHLIGHTED PAYMENT FOR SHARED DECISIONMAKING PROGRAMS

There are no performance measurement requirements in legislation authorizing the highlighted program. However, it does require the creation of standards (typically classified as structure measures) that define "shared decision aids," presumably tools or techniques that can be employed by clinicians to facilitate shared decisionmaking. These aids are intended to "assist health care providers in educating patients, caregivers, and authorized representatives concerning

the relative safety, relative effectiveness (including possible health outcomes and impact on functional status), and relative cost of treatment or, where appropriate, palliative care options" (Patient Protection and Affordable Care Act of 2010, Pub. L. No. 111-148, 124 Stat. 119 thru 124 Stat. 1025 [2010], sec. 3506).

**Table B.21**
**Domains Addressed by Payment for Shared Decisionmaking Program Documentation**

| | | | **Highlighted Payment Program** |
|---|---|---|---|
| **NQF Measurement Domain** | | | **PPACA Program to Facilitate Shared Decisionmaking[1]** |
| Outcome | Mortality | | |
| | Health status | Morbidity | |
| | | Functional status | |
| | | Health-related QoL | |
| | Safety outcomes | | |
| | Patient experience/satisfaction | | |
| | Other outcome | | |
| Process | Population health | Preventive services | |
| | | Healthy behaviors | |
| | Clinical care | | |
| | Care coordination | | |
| | Patient/family/caregiver engagement | | |
| | Safety practices | | |
| | Other process | | |
| | Per capita | | |
| | Episode | | |
| | | Imaging | |
| | | Hospital LOS | |

| | | | |
|---|---|---|---|
| Cost/ resource use | Service | Imaging | |
| | | Hospital LOS | |
| | | Hospital readmits | |
| | | ER/ED visits | |
| | | Antibiotic prescribing | |
| | | Other | |
| | Other cost/resource use | | |
| Structure | HIT utilization | | |
| | Management | | |
| | Other structure | | |
| Access | | | |
| Composite | | | |
| Other measurement domain | | | |

1: There are no performance measurement requirements specified in the legislation for this program. It calls for (1) the development of standards and a certification process for shared decision aids, (2) the creation of Shared Decisionmaking Resource Centers to provide technical assistance on the adoption and use of such aids, and (3) grants to providers for developing and implementing shared decisionmaking techniques. For more information, see Patient Protection and Affordable Care Act of 2010, Pub. L. No. 111-148, 124 Stat. 119 thru 124 Stat. 1025 (2010), sec. 3506.

**Key:**

**No shading:** no measure statements, measures, or measure sets in program documentation.

**Light shading:** measure statements, but no measures or measure sets in program documentation.

**Dark shading:** specific measures or measure sets fit within this domain, or program documentation names a specific measurement algorithm.

**Table B.22**

**Settings Addressed by Payment for Shared Decisionmaking Program Documentation**

While the legislation does not specify settings in which shared decisionmaking tools would be used, these aids would normally be available in settings where patients are considering elective treatments or procedures, such as clinician offices and outpatient clinics. They could also be made available in inpatient settings, post-acute and long-term care facilities, home health settings, and by web-based electronic delivery.

| | | | **Highlighted Payment Programs** |
|---|---|---|---|
| **Measurement Setting** | | | **PPACA Program to Facilitate Shared Decisionmaking** |
| Clinician office | | | |
| Hospital /acute care facility | Inpatient | | |
| | Out-patient | ER/ED | |
| | | Surgery/ASC | |
| | | Laboratory | |
| | | Imaging | |
| | | Clinic | |
| | | Other outpatient | |
| Post acute/ LTC | Nursing home/SNF | | |
| | Rehabilitation | | |
| | Other post acute/LTC | | |
| Home health | | | |
| Hospice | | | |
| Dialysis facility | | | |
| Ambulance | | | |
| Other setting | | | |

**Key:** **No shading:** setting not mentioned in program documentation.
**Light shading:** setting mentioned in program documentation.

**SUMMARY OF PERFORMANCE MEASUREMENT IN HIGHLIGHTED PAYMENT PROGRAMS**

| | | | Payment Reform Models | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| **Measurement Domain** | | | **Global Payment** | **ACO Shared Saving Program** | **Medical Home** | **Bundled Payment** | **Hospital-Physician Gain-sharing** | **Payment for Coor-dination** | **Hospital P4P** | **Payment Adjust-ment for Readmis-sions** | **Payment Adjust-ment for Hospital-Acquired Condi-tions** | **Physician P4P** | **Payment for Shared Decision-making** |
| Outcome | Mortality | | | | | | | | | | | | |
| | Health status | Morbidity | | | | | | | | | | | |
| | | Functional status | | | | | | | | | | | |
| | | Health-related QoL | | | | | | | | | | | |
| | Safety outcomes | | | | | | | | | | | | |
| | Patient experience/satisfaction | | | | | | | | | | | | |
| | Other outcome | | | | | | | | | | | | |
| Process | Population health | Preventive services | | | | | | | | | | | |
| | | Healthy behaviors | | | | | | | | | | | |
| | Clinical care | | | | | | | | | | | | |
| | Care coordination | | | | | | | | | | | | |

| | | | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | Patient/family/caregiver engagement | | | | | | | | | | | | | |
| | Safety practices | | | | | | | | | | | | | |
| | Other process | | | | | | | | | | | | | |
| Cost/ resource use | Per capita | | | | | | | | | | | | | |
| | Episode | | | | | | | | | | | | | |
| | Service | Imaging | | | | | | | | | | | | |
| | | Hospital LOS | | | | | | | | | | | | |
| | | Hospital readmits | | | | | | | | | | | | |
| | | ER/ED visits | | | | | | | | | | | | |
| | | Antibiotic prescribing | | | | | | | | | | | | |
| | | Other | | | | | | | | | | | | |
| | Other cost/resource use | | | | | | | | | | | | | |
| Structure | HIT utilization | | | | | | | | | | | | | |
| | Management | | | | | | | | | | | | | |
| | Other structure | | | | | | | | | | | | | |
| Access | | | | | | | | | | | | | | |
| Composite | | | | | | | | | | | | | | |
| Other measurement domain | | | | | | | | | | | | | | |

Key: No shading: no measure statements, measures, or measure sets in program documentation.

Light shading: measure statements, but no measures or measure sets in program documentation.

Dark shading: specific measures or measure sets fit within this domain, or program documentation names a specific measurement algorithm.

## SUMMARY OF PERFORMANCE MEASUREMENT SETTINGS IN HIGHLIGHTED PAYMENT PROGRAMS

| | | | Payment Reform Models | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| **Measurement Setting** | | | **Global Payment** | **ACO Shared Savings Program** | **Medical Home** | **Bundled Payment** | **Hospital-Physician Gain-sharing** | **Payment for Coordination** | **Hospital P4P** | **Payment Adjustment for Readmissions** | **Payment Adjustment for Hospital-Acquired Conditions** | **Physician P4P** | **Payment for Shared Decision-making** |
| Clinician office | | | ■ | ■ | ■ | ■ | | ■ | | | | ■ | |
| Hospital /acute care facility | Inpatient | | ■ | ■ | | ■ | ■ | ■ | ■ | ■ | ■ | ■ | |
| | Outpatient | ER/ED | | ■ | | | | ■ | | | | ■ | |
| | | Surgery/ASC | | ■ | | ■ | | ■ | | | | ■ | |
| | | Laboratory | ■ | ■ | | ■ | | ■ | | | | | |
| | | Imaging | ■ | ■ | | | | ■ | | | | | |
| | | Clinic | ■ | ■ | ■ | ■ | | ■ | | | | ■ | |
| | | Other outpatient | ■ | ■ | | ■ | | ■ | | | | | |

| | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Post acute/ LTC | Nursing home/SNF | | | | | | | | | | | |
| | Rehabilitation | | | | | | | | | | | |
| | Other post acute/LTC | | | | | | | | | | | |
| Home health | | | | | | | | | | | | |
| Hospice | | | | | | | | | | | | |
| Dialysis facility | | | | | | | | | | | | |
| Ambulance | | | | | | | | | | | | |
| Other setting | | | | | | | | | | | | |

Key: No shading: setting not mentioned in program documentation.

Light shading: setting mentioned in program documentation.

# APPENDIX C: DETAILED TECHNICAL APPROACH

## OVERVIEW

The goal of the project was to describe the performance measurement needs created by current and emerging payment reform approaches, to assess the suitability of existing performance measures to support these needs, and to suggest near-term priority areas for performance measure development that would support these needs effectively going forward. This report summarizes the findings for use by multiple stakeholders as they chart a course of action on payment reform and performance measurement.

To achieve the goal, RAND, in consultation with NQF staff, carried out the following tasks (see Figure C.1):

1. Scan of payment reform programs to derive payment reform models (PRMs). We conducted a scan of payment reform programs, created a standard characterization of their key attributes, and classified the payment reform programs into 11 key PRMs.

2. Selection of payment reform programs to highlight features of PRMs. For each PRM, we selected illustrative programs that highlight the essential features of the PRM and key variations in program design.

3. Analysis of performance measure needs and suitability of available performance measures. For each PRM, we carried out the following analyses:

(1) the rationale guiding selection of performance measures and fundamental uses of measurement in the model

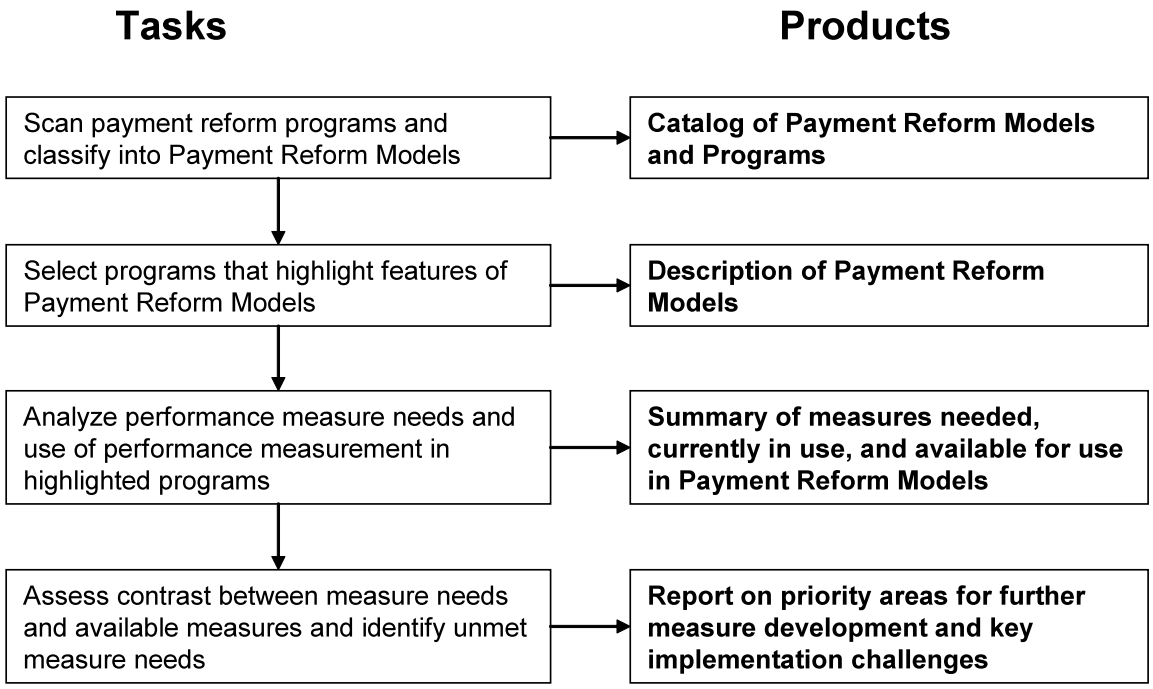
(2) an overview of the use of performance measurement in the highlighted programs

(3) an analysis of the suitability of available measures, including the contrast between measures needed and the available measures

(4) an assessment of the unmet measure needs of the model and key implementation challenges.

**Figure C.1**

**Tasks and Products**




## SCAN OF PAYMENT REFORM PROGRAMS

Payment reform programs exist in a wide variety of forms. Some are well established or undergoing testing in health care delivery systems. These may exist in contracts between health plans and physician groups and between hospitals, health plans, physician organizations, and other facilities. Important programs and models are codified in legislation that was passed by the U.S. Congress and signed into law during the course of this project. Others have only been described in published academic or gray literature.

To maximize the coverage of our scan, the RAND team drew on our previous experience and networks to identify payment programs, rather than relying mainly on systematic database reviews. The RAND team also sought regular input from NQF program staff throughout the process of assembling the catalog. This helped ensure that the catalog would contain the relevant programs characterized based on a comprehensive but parsimonious list of attributes and in a manner consistent with prior NQF work.

The team began the scan by working with NQF to develop priorities among potential sources of payment reform programs to include in the catalog. Once the priorities had been established, the team conducted a comprehensive scan of existing and proposed payment reform programs. Based on the priorities, we searched for payment reform programs from the following sources:

- *Health reform legislation and other government sources.* First, the research team began by scanning the House and Senate health reform proposals. These scans were updated as the bills were modified and eventually combined and passed into law as the Patient Protection and Affordable Care Act (PPACA). The team also reviewed state legislation and recommendations from the Medicare Payment Advisory Committee (MedPAC), as well as federal and state-level demonstration and pilot programs that have been proposed or carried out for the Medicare and Medicaid programs.

- *Private sector programs.* Next, the research team also searched for programs designed and implemented in the private sector. These programs include initiatives proposed or implemented by insurers, health systems, and hospital and physician organizations.

- *Other proposed programs.* Finally, the team looked for additional programs proposed by thought leaders outside of government and the health care industry. This category included programs proposed by academics, foundations, nonprofit advocacy organizations, and advisory groups.

The initial scan identified approximately 120 payment reform programs that had been proposed or implemented across the nation. These ranged from highly specified programs that had been fully implemented by government or private payers to more-general policy proposals released by researchers or think tanks.

The team distilled the list of payment reform programs from the comprehensive scan into a set of 11 general PRMs. In the process, we eliminated a number of programs that were duplicated in multiple versions of legislative proposals, did not specify a payment mechanism, or lacked a performance-based component. The 90 programs that remained were then sorted into the 11 general PRMs. We based this classification on an organizing framework that would aid in creating criteria (or attributes) that would enable us to differentiate programs and to see their common features and also to identify specific measurement needs. The classification also required the team to specify definitions of terms related to payment reform. Much of the terminology in the area of

health care payment and delivery reform has not been consistently defined. Concepts such as the primary care medical home and accountable care organizations are associated with a range of subtly different programs. However, categorizing the identified payment programs required establishing consistent definitions to be used within the framework of this project.

Because the focus of our analysis is on performance measurement, we sought to identify those variations among programs classified into particular models that could meaningfully affect measurement strategy. In our analysis, we describe how the 11 general models fit together along key dimensions, illustrating how different criteria or definitions may have affected the final classification of programs among the general model types.

## SELECTION OF PAYMENT REFORM PROGRAMS TO HIGHLIGHT FEATURES OF PAYMENT REFORM MODELS

Once each of the programs had been sorted into one of the 11 general models, the team chose a set of example programs from each model to highlight in the measurement analysis.

The final set of criteria for selecting which programs were highlighted is described in detail below:

### Primary Criteria

1. Likelihood of implementation:
    a. The highest priority was given to payment reform programs that are most likely to be implemented in the near future (2010).
    b. High-priority models included
        i. programs included in PPACA
        ii. other proposals included in previous bills that are likely to be reintroduced
        iii. ongoing or completed pilot or demo programs that are likely to be expanded
        iv. private sector initiatives that are being more widely adopted.

2. Innovation:
    a. Significant weight was also given to programs that are highly likely to be implemented and particularly novel or "cutting edge."

b. Unique programs or "outliers" that are less likely to be implemented were still included in the analysis if they are particularly promising or innovative.

These primary criteria guided us toward a set of programs that are consistent with the conceptual frameworks listed above. With the passage of PPACA, a number of these new models will be tested in practice in the near future. Many of the innovations contained in PPACA or recent private sector initiatives also rely on an integrated approach to care and to performance measurement across treatment episodes. This stands in contrast to the traditional "siloed" approach that examines interactions between patients and individual providers in isolation among different care delivery settings. Highlighting these innovative, emerging programs allowed us to provide an analysis that is consistent with, and relevant to, the efforts of other organizations working on the cutting edge of performance measurement.

**Additional Criteria**

1. *Stage of development.* Programs at a higher stage of development were more heavily weighted, taking into account whether the program is
    a. fully implemented (e.g., Physician Quality Reporting Initiative)
    b. a pilot/demo program (e.g., Medicare ACE demonstration)
    c. fully specified but not in use (e.g., Medicare Medical Home demo)
    d. conceptual with key details unaddressed (e.g., Massachusetts Global Payment Recommendations).

2. *Extent of measurement component*
    a. The focus was on payment reform programs that include, or are likely to include, an explicit measurement requirement (i.e., a performance-based component).
    b. Programs with a more extensive measurement component were preferred.
        i. How many measures, across how many different domains, are likely to be needed?
        ii. How many parties will need to be involved in the measurement activities to make it work (i.e., patient, clinician, hospital, payer, purchaser, government, etc.)?
    c. Programs that create significant new measurement demands were preferred.
        i. Will the program require new/novel techniques for risk or case-mix adjustment?

ii. Will the program require the development new data collection procedures?
iii. Will the program require the deployment of new infrastructure (i.e., HIT)?

3. *Impact.* Higher priority was given to programs that have the potential for a broader overall impact.
    a. What is the expected impact on the health care marketplace?
        i. How many payers, providers, and/or patients does/will it affect?
        ii. How many dollars or how much market share is/may be at stake?
        iii. Is the program broad in scope or is it narrowly targeted?
        iv. How large is the effect on the players that it targets?
    b. Leverage on quality improvement activities: Does the program target areas where there is a large gap in performance for the included measures?
    c. High-priority areas: Does the program directly address specific stakeholder priorities?
        i. the CMS 20 priority conditions[1]
        ii. NPP priority areas
            a. patient and family engagement
            b. population health
            c. safety
            d. palliative and end-of-life care
            e. overuse
            f. care coordination.

4. The portfolio of selected payment programs represents a full range of ideas and proposals, assessed using the key attributes described later in this appendix:
    a. Groups of similar reforms were classified by general model type; typically, only one will be chosen for full characterization; others were assigned to brief characterization.
    b. Reforms were grouped together as similar or separated in the catalog based on a careful analysis of their key attributes, rather than simply relying on naming conventions.

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[1] National Quality Forum (NQF). *Measure Prioritization Advisory Committee Report: Prioritization of High-Impact Medicare Conditions and Measure Gaps*. Washington, D.C.: NQF, May 2010.

c. The range of variations across each general model type were described, and specific examples were mapped to this description in order to demonstrate the sensitivity of our selection to alternative criteria or definitions.
d. Proposals that include all of the essential features of that general class of reform model were preferred (this required defining essential features for each model).

5. *Strength of evidence base (related to item 4 above).* Programs with positive outcomes that are supported by evidence with stronger internal and external validity were preferred. Programs tested in national pilot programs are expected to have higher external validity than those piloted in a single health system.
    a. Few programs have an extensive empirical evidence base.
    b. The extent of the evidence base available for evaluating programs was assessed on a continuum, taking into account the impending emergence of evidence on programs currently being tested.

While these additional criteria reflect some of the practical constraints of conducting this analysis, they are also informed in part by the frameworks promoted by NQF and other organizations. In general, these frameworks, such as the NQF-endorsed Patient-Focused Episodes of Care model and the national priorities set forth by the National Priorities Partnership, are shifting the paradigm for performance measurement, moving the focus toward such areas as population health outcomes and multiple-setting treatment episodes where relatively few measures have been developed and implemented. This shift is leading to the development of a diverse set of delivery and payment models that could theoretically lead to significant improvements in health. Our intent was for the final set of criteria to guide us toward a set of highlighted payment reform programs that reflect the diversity and the ambition of the PRMs and performance measurement fields.

After finalizing these criteria in collaboration with NQF program staff, the RAND team applied them to the full list of payment reform programs, sorted into the 11 general PRMs, in order to identify the examples that are highlighted in the analysis. For each of the general models, we identified between one and five highlighted programs that collectively illustrate their key features and measurement requirements. More-complex or heterogeneous payment models required more programs to be highlighted in order to sufficiently demonstrate the relevant needs and challenges related to performance measurement.

Once we identified the highlighted programs for each general PRM, we created more-detailed, structured descriptions of the models for use by stakeholders and to inform the analysis of performance measure needs. In order to develop these descriptions, we first identified the key attributes that determine the measurement requirements of the different models. This enabled us to define prototypical models that distinguish major from minor variations in design.

The RAND team worked with NQF program staff to develop a preliminary list of key attributes based on initial assumptions about the features of payment reform programs most relevant to measurement. We then conducted a pilot test of the preliminary list of key attributes, applying them to a small set of three different payment reform programs. The purpose of the pilot test was to evaluate whether the list of key attributes sufficiently captured the important details of reform proposals, particularly with regards to measurement implications.

Based on the pilot test, the team continued to work with NQF to refine and finalize the list of key attributes. The final list was selected to account for several priorities:

- understanding the relationship between the proposed payment reform mechanism and the delivery system model
- understanding the intended effects, the underlying mechanisms for achieving those effects, and the potential unintended consequences
- accommodating the full range of options that have been proposed or considered.

**Final List of Key Attributes**

Identifying information:

1. Title—a descriptive name for the payment reform program
2. Source—PPACA provision, private proposal, etc. This may include bill and section numbers, start and end years for past programs, projected start dates for proposed programs, whether it is a pilot or demonstration project, and so on.
3. Citation—source(s) for the information about the particular program

Participation:

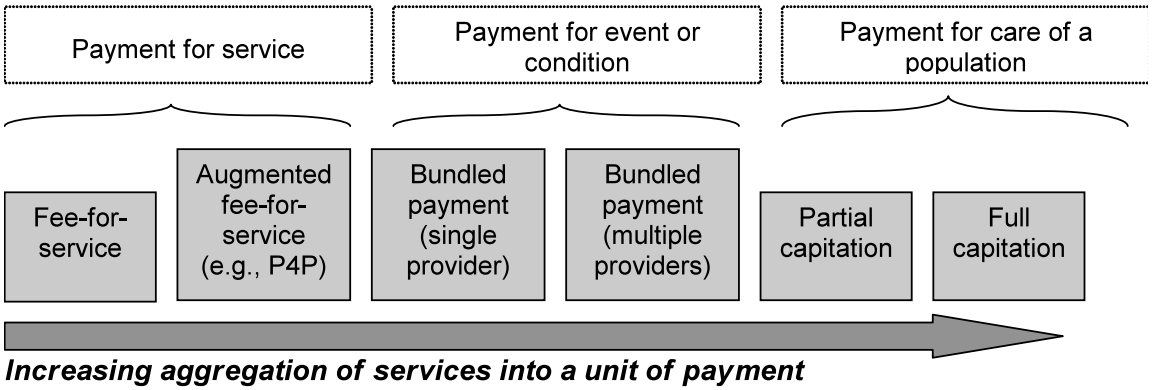
1. Payer—the payer entity implementing the program
2. Provider participation—the group targeted by the incentive (i.e., physicians, medical groups, hospitals, etc.)
3. Patient participation—the patient group targeted by the mechanism (i.e., enrollees of a particular program or those with a specific condition)

Payment—how the mechanism works, including the following types of dimensions:

1. The unit of payment (services, bundles, capitation). Payment approaches can be organized along a continuum of aggregation of services into a unit of payment, spanning from fee for service at the most disaggregated extreme to population-based payment (capitation) at the most aggregated extreme, with a variety of approaches in between. Figure C.2 illustrates this dimension.

**Figure C.2**

**Units of Payment**




2. Payment mechanism. Payment reform approaches can utilize a variety of different mechanisms:

a. bonus versus penalty/withhold

b. achieved performance against a benchmark versus improvement over time

c. competitive (limited pool) versus noncompetitive

d. project-specific grants

e. tier assignment

f. timing (along a continuum from prospective to contemporaneous [fee for service] to retrospective.

3. Eligibility for payment

a. Scope—Is participation limited based on meeting threshold requirements or strictly capped (i.e., a pilot or demo phase)?

b. Participation determination—Is the program voluntary, encouraged or coerced, mandatory, or phased in?

4. Payment adjustments. Are standard payments adjusted based on considerations such as risk, case mix, or measurement of outliers?

5. Budget implications. Does the program require new funding, or does it rely on the redistribution of existing dollars?

6. Budget reconciliation. What is the responsible entity and the process?

Measurement:

1. Quality measures—measures that the payment mechanisms (e.g. incentive payments) are based on, including both:

    a. minimum standards for participation in a program

    b. measures used to derive actual payment amounts.

2. Cost measures—measures to calculate cost of care in dollars or standardized resource units

3. Unit of analysis—the clinical personnel or delivery setting for which measurement takes place (i.e., physician group, hospital, etc.)

4. Data sources—possible sources of performance data required by the program

5. Specific conditions addressed—particular medical diagnoses targeted by the PRM

6. Specific populations addressed—particular demographic groups or socioeconomic factors targeted by the PRM

Consumer-related considerations:

1. Effect on out-of-pocket payments. Does the mechanism have implications for patients in terms of financial risk (i.e., differential copayments)?

2. Provider choice. Does the program lock individuals into a medical home or specify a network?

3. Legal protections. Does the program affect the legal rights of the patients (i.e., require arbitration to settle malpractice claims)?

Implementation status:

1. Status as of April 2010. Has the PRM been piloted or implemented?

2. Geographic reach. Where is the program being implemented?

3. Evaluation/research activity. Has the program been the subject of empirical research, and, if so, what have the high-level findings been?

This list of key attributes formed the basis of a template that the team used to create descriptions of each general model and detailed characterizations of each of the highlighted programs. These descriptions were assembled into a comprehensive catalog of payment reform options that is included as Appendix A of this report. In addition to the detailed descriptions of the

highlighted programs, the catalog also includes brief summaries of the remaining payment reform programs from the initial scan that were not highlighted in the analysis. This catalog provided the starting point for the analysis of measurement implications of the PRMs that makes up the bulk of this report.

## ANALYSIS OF PERFORMANCE MEASURE NEEDS AND SUITABILITY OF AVAILABLE PERFORMANCE MEASURES

Using the catalog as an organizing framework, the team then analyzed the performance measurement implications of the 11 PRMs. The analytic approach for this task was driven by the following priorities:

- describing the measurement implications of the PRMs most likely to be implemented through public policy initiatives, most notably federal health reform legislation
- informing multi-stakeholder meetings convened by NQF and other NQF programmatic activities
- informing priority-setting exercises for measure development and endorsement
- providing guidance to measure developers and other stakeholders by identifying key gaps in current measurement frameworks.

For each PRM we first described the rationale guiding the selection of performance measures and use of measurement in the model. The primary consideration for the use of performance measurement relates to determining the level of the payments made under the model. In some programs, performance measurement is also used to determine eligibility for participation. These determinations may be based on previous implementation of performance measurement or assessments based on specific measures, such as structure measures that assess organizational capabilities. We also considered the use of measurement to serve other purposes, such as monitoring for potential adverse effects of the payment incentives.

Next, we developed overviews of the use of performance measurement in the highlighted programs. The team used available program documentation to assess which performance measure domains and care settings were addressed by each highlighted payment program. These overviews took into account actual measurement regimens employed by established programs, as well as the measurement-related provisions of proposals and programs that have yet to be fully implemented. We documented whether the specification of performance measurement included named measures

or measure sets, customized measures or measure sets, general statements about measures to be specified or developed at a later date, or no mention of measures for that domain or setting. Where possible, we also documented the sources of the individual measures or measure sets that were specified. The categories used to describe measurement domains and care settings were supplied by NQF (see Table C.2 at the end of this appendix). Summaries of performance measurement domains and care delivery settings for each highlighted program in the 11 general PRMs are provided in Appendix B.

The information sources used to describe individual payment reform programs were initially identified during the scan described in the "Scan of Payment Reform Programs" section, primarily through Internet searches and supplemented by outreach to stakeholders. For federal programs, the primary sources were the final text of PPACA (and the predecessor bills) and the CMS Medicare Demonstration Program website (http://www.cms.gov/DemoProjectsEvalRpts/MD/list.asp). Sources for state-level public programs and private sector initiatives were generally identified through the websites of the sponsoring organizations (such as a state Medicaid agency or a private insurance company). For both hospital and physician pay-for-performance (P4P) programs, the team made significant use of the report titled "Innovations in Recognizing and Reporting Quality" released by America's Health Insurance Plans in March 2009. We similarly used a report titled "Proof in Practice: A Compilation of Patient-Centered Medical Home Pilot and Demonstration Projects" produced by the Patient-Centered Primary Care Collaborative as a source for several medical home programs. When program data located through the primary sources appeared incomplete or outdated, we performed additional Internet searches for backup sources that could be used to expand and confirm our descriptions.

In order to ensure the accuracy of our descriptions of individual payment programs, the research team built a number of checks into the process of collecting and summarizing data on these programs. Using the sources identified for each program, one member of the research team completed the structured program summaries contained in Appendix A and Tables 3.5 through 3.15. A second member of the research team completed structured measurement summaries for each program, which consisted of the summary tables contained in Appendix B and additional information that has been integrated into Chapter Three. The two researchers then exchanged the documents they had created, and each one reviewed the others' work, highlighting any apparent inconsistencies with the source documentation. Individual program summaries were also circulated on an ad hoc basis for review by members of the research team with knowledge of those specific programs. All feedback was then returned to the researcher who created the summaries for revision.

In addition to the internal checks, we chose a handful of programs for which we verified our data sources and brief descriptions (contained in Tables 3.1 through 3.11 of this report). For five programs, we sent an email to the contact named in the documentation with a brief description of the project, the brief description of the program, and our primary source of information on the program. We asked the contact to verify that the description was accurate and that the data source listed provided the most accurate and up-to-date description of the program. This process resulted in minor changes to the description of one program and did not uncover any significant inaccuracies in our data.

After assessing the use of measurement in the highlighted models, the team undertook an analysis of the suitability of available measures for each of the PRMs, including

- the contrast between measures needed and the available measures
- the unmet measure needs of the model
- the key methodological challenges associated with measurement in the model.

To anchor the comparison between needed and available measures, we used two other sources as general comparators for the availability of measures:

- a tally of the list of currently NQF-endorsed performance measures
- a tally of measures from the AHRQ-sponsored National Quality Measures Clearinghouse, a comprehensive, searchable, web-based repository of performance measures currently in use (http://www.qualitymeasures.ahrq.gov/).

Next we assessed the unmet measure needs that emerged as we looked across the rationales for measurement, the provisions for measurement in the highlighted programs, and the scans of available measures through NQF and NQMC (see Table C.1). To describe these, we first recorded general observations about the status of needed measures for each of the PRMs. For instance, although more established models, such as P4P, make extensive use of existing measures, there still may be areas of unmet measure needs. Following the general observations, we then described the priority areas for measure development in the near term for each PRM.

In conducting the analysis, we focused on four key features of performance measures that are highly relevant to measure development and implementation:

(1) the domain of measurement
(2) the applicable care delivery settings

(3) the health conditions, treatments, and procedures addressed
(4) selected implementation challenges.

As a working set of domains, we used the NQF's defined set of measure domains and subdomain categories. These are listed at the end of this document in Table C.2. To address care delivery settings, we used an NQF-defined list of care delivery settings that refer to the types of facilities or organizations where care is delivered, such as primary care clinics, hospitals, or long-term care facilities. Often, the care delivery setting is also the location that generates the data needed for performance measurement. For our analysis of health conditions, treatments, and procedures, we referred to standard lists of diseases, health states, and the full range of treatment options and therapeutic procedures (surgical and nonsurgical) that are the clinical focus of performance measurement. Our analysis considered all of the clinical services that constitute health care delivery, including cognitive services and preventive services.

Finally, we analyzed implementation challenges using the following checklist to identify the most salient issues for each PRM. Most of these implementation challenges have been identified in other measurement programs over the past three decades. For many of these issues, methodological solutions have been developed and can be refined.

- Attribution: Are the results of a performance measure attributable to the providers and organizations that are included in the payment for the patient's care?

- Data sources: Are available or potential data sources able to provide valid and reliable data for the calculation of performance results?

- Sample size: For a given performance measure, are sufficient numbers of observations available to estimate performance and make comparisons among providers or organizations with a reasonable degree of confidence?

- Aggregation: Can observations be combined (across providers, organizations, patients, conditions, etc.) in a valid way to increase the precision of performance measurement results?

- Exclusion criteria: Do denominator samples exclude individuals that should not receive the indicated care?

- Risk adjustment: Are the data and modeling techniques available to address differences in the populations that receive care from different providers and organizations so that comparisons are accurate and fair?

- Benchmarks: Can useful expected rates of performance be derived from clinical criteria or comparative performance data to enable the setting of performance thresholds that may trigger payment?

The process described above for performing the measurement analysis was developed by the RAND research team in close collaboration with NQF program staff. We used a pilot test method similar to that described above for creating the summaries of PRMs included in the catalog. For the measurement analysis, we chose one PRM as a pilot and drafted an analysis framework that we shared with NQF for input. We then performed a preliminary analysis as specified in the draft framework, identifying key gaps and challenges in the process. The team reviewed the results of the preliminary analysis and again sought input from NQF program staff. After several iterations of the preliminary analysis, we refined the framework, applied it to an additional PRM, and repeated the iterative process in order to identify any remaining gaps. We then presented the revised proposed analysis to NQF for a final review before finalizing the approach. The team then applied the framework to the remaining PRMs to complete the analysis.

On completing the analysis for each of the individual PRMs, we summarized the performance measurement findings across the full range of models. This allowed the team to identify important synergies and contrasts among the performance measurement requirements across the spectrum of payment reform options. This summary also described measurement gaps and methodological challenges that emerged as common across multiple models. These common measurement needs may prove to be the highest priorities for measure development as multiple payment reform programs are implemented over the coming years.

**Table C.1**

**Scan of Measures Contained in NQMC, by NQF Performance Measurement Domains**

| **Domain** | | | **Total Measures in NQMC** | **NQF-Endorsed in NQMC** |
|---|---|---|---|---|
| Outcome | Mortality | | 31 | 14 |
| | Health status | Morbidity | Too nonspecific to search | |
| | | Functional status | 75 | 30 |
| | | Health-related QoL | NQMC does not distinguish between QoL and functional status | |
| | Safety outcomes | | 130 | 23 |
| | Patient experience/satisfaction | | 324 | 75 |
| | Other outcome (specify) | | Too nonspecific to search | |
| Process | Population health | Preventive services | 42 | 13 |
| | | Healthy behaviors | 6 | 5 |
| | Clinical care | | 1,002 (all process measures) | 244 |
| | Care coordination | | 20 | 5 |
| | Patient/family/caregiver engagement | | 142 | 42 |
| | Safety practices | | 146 | 32 |
| | Other process (specify) | | Too nonspecific to search | |
| Cost/ resource use | Per capita | | 0 | 0 |
| | Episode | | 0 | 0 |
| | Service | Imaging | 4 | 3 |
| | | Hospital LOS | 7 | 0 |
| | | Hospital readmits | 20 | 3 |
| | | ER/ED visits | 3 | 0 |
| | | Antibiotic prescribing | 2 | 2 |
| | | Other (specify) | Too nonspecific to search | |
| | Other cost/resource use | | Too nonspecific to search | |
| Structure | HIT utilization | | 0 | 0 |
| | Management | | 44 | 0 |

| | | | |
|---|---|---|---|
| | Other structure (specify) | 90 (all structure measures) | 4 |
| Access | | 26 | 2 |
| Composite (specify elements) | | Too nonspecific to search | |
| Other measurement domain (specify) | | Too nonspecific to search | |

NOTES: QoL = quality of life, LOS = length of stay, ER = emergency room, ED = emergency department.

**Table C.2**

**NQF Measurement Domain Definitions**

| **NQF Measurement Domain** | | | **Measure Definition** |
|---|---|---|---|
| Outcome | Mortality | | All mortality measures, including disease specific or all-cause, reported for a specific time period |
| | Health status | Morbidity | Intermediate outcome measures that describe level of health/disease |
| | | Functional status | Measures that report patient ability to perform activities of daily living (e.g., bathing, toileting, dressing, eating) or instrumental activities of daily living (e.g., medication management, shopping, food preparation) |
| | | Health-related QoL | Measures related to patient self-perception of quality of life; usually based on patient survey |
| | Safety outcomes | | Measures assessing outcomes of poor safety practices and/or of safety practices meant to reduce harm (e.g., medication administration errors) |
| | Patient experience/satisfaction | | Measures that use feedback from patients and their families about their experience with care (e.g., CAHPS, other patient surveys) |
| | Other outcome | | Other outcome measures not elsewhere specified |
| | Population health | Preventive services | Measures related to health care services that prevent disease or its consequences; includes primary, secondary, and tertiary prevention |

| | | | |
|---|---|---|---|
| Process | | Healthy behaviors | Measures associated with any activity undertaken by an individual, regardless of actual or perceived health status, for the purpose of promoting, protecting, or maintaining health, whether or not such behavior is objectively effective toward that end |
| | Clinical care | | Measures assessing adherence to processes of care (e.g., aspirin at arrival, foot exam for diabetics, etc.) |
| | Care coordination | | Measures assessing relationship and communication between providers and patients, including plan of care development and follow-up; follow-up to tests, referrals, etc.; availability of patient information to necessary caregivers/patient/family members; information systems to support coordination (e.g., registries); health data exchange among providers; and care transition issues (e.g., medication reconciliation, communication between providers, etc.) |
| | Patient/family/caregiver engagement | | Measures assessing involvement of patient and family in decisionmaking around care |
| | Safety practices | | Measures whose primary purpose is to prevent harm while participating in the health care system |
| | Other process | | Other process measures not elsewhere specified |
| Cost/ resource | Per capita | | Annual spending on health care per person |
| | Episode | | Measures that may be applied across a course of an episode of illness |
| | Service | Imaging | Measures related to the use of outpatient imaging |
| | | Hospital LOS | Measures related to length of stay, such as in an inpatient facility |
| | | Hospital readmits | Measures related to *N*-day readmissions |
| | | ER/ED visits | A measure tied to utilization of the emergency department |

| | | | |
|---|---|---|---|
| use | | Antibiotic prescribing | A measure tied to overuse or misuse of antibiotics |
| | | Other | Measures related to service use that are not specified elsewhere |
| | Other cost/resource use | | Measures related to cost or resource use that are not specified elsewhere |
| Structure | HIT utilization | | Measures related to the use of HIT (a global term that encompasses electronic health records and personal health records and indicates the use of computers, software programs, electronic devices and the Internet to store, retrieve, update, and transmit information about patients' health) |
| | Management | | Measures related to the presence or absence of certain management features |
| | Other structure | | Other structure measures not elsewhere specified |
| Access | | | Measures that assess the ability to obtain needed health care services in a timely manner |
| Composite | | | A measure that is the combination of two or more separate measures |
| Other measurement domain | | | Other measures not elsewhere specified |

NOTES: QoL = quality of life, CAHPS = Consumer Assessment of Healthcare Providers and Systems, LOS = length of stay, ER = emergency room, ED = emergency department.

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