

U.S. Department of Health and Human Services
Medicare Hospital Value-Based Purchasing Plan
Development

Issues Paper

1st Public Listening Session

January 17, 2007

Prepared by the CMS Hospital Pay-for-Performance Workgroup
with Assistance from the RAND Corporation, Brandeis University,
Booz | Allen | Hamilton, and Boston University



Table of Contents

OVERVIEW	1
PROCESS FOR DEVELOPING A PLAN TO IMPLEMENT A VALUE-BASED PURCHASING PROGRAM FOR MEDICARE HOSPITAL SERVICES	2
MEDICARE HOSPITAL VALUE-BASED PURCHASING: PROGRAM GOALS AND DESIGN CONSIDERATIONS	4
VALUE-BASED PURCHASING DESIGN ISSUES ON WHICH CMS IS SEEKING PUBLIC INPUT	6
A. Measures.....	6
B. Data Infrastructure and Validation	15
C. Incentive Structure	20
D. Public Reporting	24
APPENDIX 1: HOSPITAL QUALITY ALLIANCE (HQA) MEASURES	28
APPENDIX 2: ADDITIONAL BACKGROUND RESOURCES	30
APPENDIX 3: CMS P4P WORKGROUP MEMBERSHIP	31
GLOSSARY OF TERMS AND ACRONYMS.....	33

Medicare Hospital Value-Based Purchasing Plan Issues Paper

Overview

The Centers for Medicare & Medicaid Services (CMS) has articulated a vision for health care quality—*the right care for every person every time*. To achieve this vision, CMS is committed to care that is safe, effective, timely, patient-centered, efficient, and equitable. Medicare’s current payment systems reward quantity, rather than quality of care, and provide neither incentive nor support to improve quality of care. Value-based purchasing (VBP), which links payment more directly to the quality of care provided, is a strategy that can help to transform the current payment system by rewarding providers for delivering high quality, efficient clinical care. Through a number of public reporting programs, demonstration projects, pilot programs, and voluntary efforts, CMS has launched VBP initiatives in hospitals, physician offices, nursing homes, home health services, and dialysis facilities.

In 2006, Congress passed Public Law 109-171, the Deficit Reduction Act of 2005 (DRA), which under Section 5001(b) authorized CMS to develop a plan for VBP for Medicare hospital services commencing FY 2009. The VBP plan defined in the DRA applies only to subsection (d) hospitals, and does not apply to Critical Access Hospitals or to other hospital types that are not paid under the Inpatient Prospective Payment System (IPPS).

In addition, under Section 5001(a), the DRA specified new requirements for Medicare’s Reporting Hospital Quality Data for Annual Payment Update (RHQDAPU) program, which is a pay-for-reporting (P4R) program that uses Medicare payment as an incentive for hospitals to report on the care they provide all adults, regardless of payer. As originally mandated under the 2003 Medicare Modernization Act (MMA), the RHQDAPU provision required that PPS hospitals report on a specified set of 10 clinical performance measures in order to avoid a 0.4 percentage point reduction in their Annual Payment Update (APU) for inpatient hospital services. Hospitals have been submitting performance data under this provision since 2004.

Medicare Hospital Value-Based Purchasing Plan Issues Paper

The DRA expanded both the set of measures and the magnitude of the incentive payment involved under the RHQDAPU.¹ Beginning in FY 2007, hospitals are required to report to Medicare their performance on 21 measures to obtain their full payment update; the DRA envisions that this set of measures will expand over time. Failure to report on the measures, which are required to be identified by the Secretary of Health and Human Services (HHS) in consultation with stakeholders, will result in a 2.0 percentage point reduction in the APU for inpatient hospital services.

Process for Developing a Plan to Implement a Value-Based Purchasing Program for Medicare Hospital Services

The DRA specified that the Secretary of HHS shall develop a plan to implement a VBP program for payments (i.e., pay-for-performance or P4P program) under the Medicare program for subsection (d) hospitals beginning with FY 2009. Congress specified that the plan should include consideration of the following issues:

- The on-going process for developing, selecting, and modifying measures of quality and efficiency in hospital inpatient settings,
- The reporting, collection, and validation of quality data,
- The structure of value-based payment adjustments, including determining thresholds or improvements in quality that would substantiate a payment adjustment, the size of such payments, and the sources of funding for the value-based payments, and
- Disclosure of information on hospital performance.

In developing the plan, the Secretary is to consult with relevant affected parties and shall consider experience with other P4P demonstrations that are relevant to the VBP program.

¹ The complete list of inpatient measures that are part of the RHQDAPU is presented in Appendix 1. Sources for additional information on the topics discussed in this overview can be found in Appendix 2.

Medicare Hospital Value-Based Purchasing Plan Issues Paper

CMS has created an internal Hospital Pay-for-Performance Workgroup (Appendix 3) that is charged with developing the VBP plan for Medicare hospital services. The Workgroup is organized into four Subgroups to address each of the required planning issues:

- Measures,
- Data infrastructure and validation,
- Incentive structure, and
- Public reporting.

The CMS Workgroup and Subgroups are charged with preparing a set of design options, narrowing the set of design options to prepare a draft plan, and preparing the final plan for a Medicare Hospital VBP program.

Development of the plan is scheduled to occur between September 2006 and June 2007. CMS commenced the planning process in April 2006 by seeking public feedback during the FY 2007 IPPS rulemaking process, which referenced the DRA mandate and the planning process.² CMS will host two public Listening Sessions—January 17, 2007 and April 12, 2007—to solicit public comments on outstanding design issues associated with developing the final plan.

The Listening Sessions are initial steps in an ongoing consultative process. Actual implementation of the final plan will require statutory authority and development of regulations; such development will provide additional opportunities for consultation with affected parties through standard government processes of posting the proposed changes in the Federal Register and seeking public comment on proposed regulations.

² Revision to Hospital Inpatient Prospective Payment Systems and Fiscal Year 2007 Rates. 71 Fed Reg 160 (Aug 18, 2006) (amending 42 CFR Parts 409, 410, 412, 413, 414, 424, 485, 489, and 505), <http://www.cms.hhs.gov/QuarterlyProviderUpdates/Downloads/CMS1488F.pdf>.

Medicare Hospital Value-Based Purchasing: Program Goals and Design Considerations

The potent combination of substantial deficiencies in the quality and safety of care in the U.S. health system and the unsustainable growth in health care spending without improvements in the underlying quality of care requires fundamental policy changes to improve the value equation for American taxpayers and Medicare beneficiaries. Current payment policies do not provide appropriate incentives to achieve high quality, efficient delivery of care. In pursuing VBP in the hospital setting, CMS seeks to align payment policy with the delivery of high quality, efficient care.

CMS has defined the following goals for the Medicare Hospital VBP program:

- Improve clinical quality,
- Reduce adverse events and improve patient safety,
- Encourage more patient-centered care,
- Avoid unnecessary costs in the delivery of care,
- Stimulate investments in structural components or systems—such as IT capability and care management tools and processes—that have been proven effective in improving quality and/or efficiency, and
- Make performance results transparent and comprehensible so that consumers can be empowered to make value-based decisions about their health care and to encourage hospitals and clinicians to improve the quality of care.

The design of the Medicare Hospital VBP program is expected to build on the operational infrastructure that CMS has created for the RHQDAPU program and draw from the experiences that CMS has accrued through its P4P demonstrations. It is anticipated that CMS will adhere to the following overarching principles in designing the Medicare Hospital VBP program:

- The VBP program will be budget neutral, as specified by the President's FY2006 and FY2007 Budgets and in keeping with policy recommendations by the

Medicare Hospital Value-Based Purchasing Plan Issues Paper

Institute of Medicine (IOM) and Medicare Payment Advisory Commission (MedPAC).³

- The VBP program will build on the existing Medicare performance measurement and reporting infrastructure, specifically the components for the RHQDAPU.
- The VBP program will expand quickly to create a comprehensive performance measurement program that will foster broad-scale transformation of the health care system.
- Per the recommendations of the IOM,⁴ the selected VBP performance measures will apply to a broad range of care delivered in the acute care hospital setting, and address at least three performance domains—clinical quality, patient-centered care, and efficiency.
- CMS will continue to work collaboratively through consensus processes, such as those of the Hospital Quality Alliance (HQA), National Quality Forum (NQF), and the Joint Commission on Accreditation of Healthcare Organizations (JCAHO), to coordinate measures and implementation of the VBP program.
- The VBP program will measure and reward performance for care provided in the hospital outpatient setting, consistent with the reporting requirements as specified in Division B, Title 1, Section 109 of the recently enacted Tax Relief and Health Care Act of 2006.
- The design of the VBP program shall seek to avoid creating additional disparities in health care and to reduce existing disparities.
- Consistent with the IOM's recommendation calling for systematic evaluation of pay-for-performance programs,⁵ CMS will develop and implement ongoing evaluation processes to assess impact, examine the continued utility of the

³ Office of Management and Budget. Budget of the United States 2006. Available online at www.whitehouse.gov/omb/budget/fy2006/budget.html; Office of Management and Budget. Budget of the United States 2007. Available online at www.whitehouse.gov/omb/budget/fy2007/budget.html; Institute of Medicine: *Pathways to Quality Health Care: Rewarding Provider Performance*. Washington, D.C.: National Academy of Sciences, 2006: pgs. 23-24; Medicare Payment Advisory Commission (MedPAC), "Report to the Congress: Medicare Payment Policy," Washington, D.C.: MedPAC, March 2005, p. 184.

⁴ The three domains were identified in the 2006 IOM report *Rewarding Provider Performance: Aligning Incentives in Medicare*.

⁵ *Rewarding Provider Performance: Aligning Incentives in Medicare*. Institute of Medicine, 2006.

Medicare Hospital Value-Based Purchasing Plan Issues Paper

measures, and monitor for unintended consequences (e.g., reduced access to care as a consequence of hospitals avoiding sicker patients).

Value-Based Purchasing Design Issues on Which CMS Is Seeking Public Input

At this stage of plan development, CMS is inviting comments and input from affected stakeholders on a number of outstanding design issues to prepare the DRA-mandated plan for Medicare Hospital VBP. Below are key design issues on which CMS is requesting input. The questions are organized into sections that address the four required issue areas:

- Measures,
- Data infrastructure and validation,
- Incentive structure, and
- Public reporting.

In each section below, we identify basic principles that are expected to frame the initial design and operation of the Medicare Hospital VBP program; we list the set of issues on which CMS is seeking input; and to the extent known or theorized, we highlight potential advantages and disadvantages of possible approaches. Deciding among approaches will involve policy tradeoffs. In structuring the final plan design, CMS will seek to balance an array of factors, such as potential effects on quality and cost of care, overall burden on hospitals, and operational feasibility. CMS is soliciting public input across an array of design issues to better understand potential impacts and policy tradeoffs, so as to find the appropriate balance.

A. Measures

CMS is considering the following principles to guide development of a rigorous and standardized process for selecting, modifying, and retiring measures for VBP as mandated by the DRA.⁶ To ensure that its VBP measure-selection criteria and measures

⁶ These principles are consistent with the National Quality Forum's *Comprehensive Framework for Hospital Care Performance Evaluation* (2003).

Medicare Hospital Value-Based Purchasing Plan Issues Paper

are aligned with the industry so as to minimize hospital burden, CMS is committed to continuing to work collaboratively with such consensus-based entities as JCAHO, NQF, and HQA. CMS proposes to:

- Build upon the existing set of measures used in the RHQDAPU (P4R) program as part of the initial roll-out of the VBP program,
- Add measures that address at least the three performance domains identified by the IOM: clinical quality, patient-centered care (including care coordination), and efficiency,
- Use a standardized, transparent set of criteria to evaluate performance measures for inclusion in the VBP program. CMS will seek to align its measure-selection criteria with the criteria used by consensus-based measure endorsers, so that all VBP measures could ultimately be endorsed,
- Use a national set of standardized measures that could apply to all eligible hospitals nationwide,
- Use a systematic, transparent process for introducing performance measures that reflects consultation with relevant stakeholders,
- Provide reasonable advance notice of the direction CMS intends to take regarding the addition of new measures and the timetable for doing so, and
- Ensure measures are maintained in a way that is aligned with the direction of the industry so as to minimize confusion and burden on hospitals and other stakeholders.

CMS is seeking input on a number of issues that relate to measure selection, maintenance, modification, and retirement.

1. What criteria should CMS use in selecting measures for a Medicare Hospital VBP program? Should these criteria differ from the criteria CMS used to select measures for our public reporting (P4R) program?

CMS proposes to use a set of defined criteria to select measures for our VBP program. We recognize that not all measures that could potentially be included will meet all established criteria or meet the defined set of criteria with equal levels of stringency.

Medicare Hospital Value-Based Purchasing Plan Issues Paper

Although measure selection criteria exist for use in public reporting and/or quality improvement, there is no agreed upon, standardized set of selection criteria for measures in a VBP or pay-for-performance context.

CMS believes that the measure-selection criteria currently being used for public reporting purposes can serve as minimum criteria for selecting hospital VBP measures. CMS anticipates that measures chosen for inclusion in VBP would first need to meet consensus process criteria, such as those used by the NQF for performance measurement and public reporting, as delineated in Table 1:⁷

⁷ National Quality Forum, *A Comprehensive Framework for Hospital Care Evaluation*, 2003.

Medicare Hospital Value-Based Purchasing Plan Issues Paper

Table 1: National Quality Forum Measures Selection Criteria, 2003

Criterion	Definition
<p>Importance: Addresses the extent to which a measure reflects variation in quality and/or low levels of overall performance, and captures key aspects of the flow of care.</p>	<ul style="list-style-type: none"> • Measure addresses one or more key leverage points for improving quality. • Considerable variation in the quality of care exists. • Performance in this area (e.g. setting, procedure, condition) is suboptimal.
<p>Scientific Acceptability: Produces consistent and credible results when implemented.</p>	<ul style="list-style-type: none"> • Measure is well defined and precisely specified. • The measure is reliable, producing the same results a high proportion of the time when used in the same population. • The measure is valid, accurately representing the concept being evaluated. • The measure is precise, adequately discriminating between real differences in provider performance. • The measure is adaptable to patient preferences, clinical exceptions, and a variety of settings. • An adequate and specified risk-adjustment strategy exists, where applicable. • Consistent evidence is available linking process measures to patient outcomes.
<p>Usability: Reflects the extent to which intended audiences, including consumers and purchasers, can understand the results of the measure and are likely to find them useful for decision-making.</p>	<ul style="list-style-type: none"> • Stakeholders can use the measure to make decisions. • Differences in performance levels are statistically meaningful. • Differences in performance are practically and clinically meaningful. • Risk stratification, risk adjustment, and other forms of recommended analyses can be applied appropriately. • Effective presentation and dissemination strategies exist. • Information produced by the measure can/will be used by at least one healthcare stakeholder audience to make a decision or take an action. • Information about specific conditions for which the measure is appropriate has been given to the stakeholders. • Methods for aggregating the measure with other, related measures (e.g. to create a composite measure) are defined.
<p>Feasibility: Based on the way in which data can be obtained within the normal flow of clinical care and the extent to which an implementation plan can be achieved.</p>	<ul style="list-style-type: none"> • The point of data collection is tied to delivery, when feasible. • The timing and frequency of measure collection are specified. • The benefit of measurement is evaluated against the financial and administrative burden of implementation and maintenance of the measure set. • An auditing strategy has been designed and can be implemented. • Confidentiality concerns are addressed.

CMS recognizes that existing NQF measure-selection criteria are appropriate, but may not be sufficient for the purposes of hospital VBP. VBP may require different or additional criteria beyond those already used for performance measurement and public reporting purposes. Table 2 provides examples of additional criteria on which CMS is seeking input regarding their utility for VBP.

Medicare Hospital Value-Based Purchasing Plan Issues Paper

Table 2: Additional Sample Criteria for Measures Selection

Criterion	Considerations
Controllable	<ul style="list-style-type: none">Measures should be associated with practices that are reasonably within a provider's control or direct influence.Efforts to address care coordination may require accountability that extends beyond the hospital locus of control (e.g., to ambulatory settings), in order to encourage improvement in handoffs.
Potential for unintended consequences	<ul style="list-style-type: none">Measures should not lead to patient selection bias, which could limit access to care.
Contribution to comprehensiveness	<ul style="list-style-type: none">Measures should address the full spectrum of health care and incorporate multiple dimensions of quality--structure, process, and outcome.CMS understands that the universe of performance measures is still small relative to the universe of clinical conditions and treatments. CMS expects to work collaboratively with external organizations to fill gaps in measures.

CMS also believes careful consideration should be given to how the universe of VBP criteria will be applied to the various types of performance measures—structure, process, outcome, patient experience, and efficiency.

CMS would welcome input on the following questions related to measure-selection criteria:

- Should the measure-selection criteria for VBP differ from the measure-selection criteria used for public reporting, and if so, how?
- Are the criteria shown in Tables 1 and 2 the ones that CMS should consider when selecting measures for a VBP program? Which criteria may need modification, and how should they be modified?
- What other criteria should CMS consider in selecting measures for hospital VBP?
- Are any criteria more or less important for VBP versus public reporting? If so, which criteria are more important for VBP?
- Should the selection criteria differ for structure, process, outcome, patient experience, and efficiency measures?
- How should CMS deal with special measurement issues that affect small hospitals?

Medicare Hospital Value-Based Purchasing Plan Issues Paper

2. What processes should CMS use to introduce, maintain, modify, and retire measures for the Medicare VBP program?

The experiences of JCAHO, RHQDAPU, HQA, and NQF provide valuable lessons about introducing and modifying measures for performance measurement and public reporting. Below we highlight issues and questions regarding introduction, maintenance and modification, and retirement of measures in the context of a VBP program.

Introducing Measures: Prior experience suggests that when new measures are initially launched, hospitals and support organizations, such as vendors, developers, and aggregators, focus on refining their tools and processes for data collection, aggregation, and analysis. Error rates are often high in the first few months after a new measure is introduced. However, error rates tend to decline over time as the parties gain experience with the processes of data submission, validation, and reporting.

To ensure that accurate data are produced, all parties need adequate time to develop competency with a measure before the results are used in a VBP program. To this end, CMS is committed to a process of introducing measures that will allow hospitals, their data support vendors, and CMS to gain experience with data collection, submission, validation, and reporting before a measure is publicly reported or used in the VBP program.

Because gaps exist between desired and available performance measures, CMS expects to introduce measures for VBP over time. Our goal is to develop and publish a multi-year plan designating targeted topics for measure development and introduction into VBP.

CMS would welcome input on the following issues:

- How should CMS introduce new performance measures for VBP?
- How can CMS signal the direction and evolution of the VBP performance measures in order to help hospitals with their long-term planning?

Medicare Hospital Value-Based Purchasing Plan Issues Paper

Maintaining and Modifying Measures: Changes in the underlying science base, clinical practice, and coding require that existing performance measures used in the RHQDAPU be reviewed, and if necessary, modified approximately every 6 months to maintain standards of scientific soundness. The measures that are currently publicly reported on Hospital Compare are specified in a technical manual, jointly prepared by CMS and the JCAHO, and maintained in the public domain (see <http://www.qualitynet.org>). The manual is updated every six months in order to ensure that the measures used by the two organizations and by their vendors, contractors, and providers remain aligned.

Alignment reduces burden on the reporting providers and assures consistency in how data are collected and reported. This system allows for rapid response to new evidence, while also minimizing changes to technical specifications of measures.

CMS recognizes the challenges inherent in balancing measure stability with measure currency. CMS is seeking input on the following questions regarding measure maintenance.

- What is the appropriate frequency for introducing changes to VBP measure specifications?
- How should CMS balance the need to be consistent with current scientific evidence, clinical practice, and coding with the need to keep measures as stable as possible for VBP?

Retiring Measures: No measures included in the RHQDAPU have ever been retired, although some have been suspended for various reasons, such as shortage of influenza vaccines. Therefore, there are no lessons from the RHQDAPU experience that can be applied to the issue of retiring VBP measures. However, situations could arise in which a VBP measure should be retired. For example, if the VBP program and other efforts are successful at raising the performance of hospitals, a measure may “top out” (i.e., best

Medicare Hospital Value-Based Purchasing Plan Issues Paper

performance may be achieved across most hospitals), leaving no meaningful variation in performance across institutions.

CMS is seeking input on the following questions regarding measure retirement:

- Should CMS retire a VBP measure when hospital performance on the measure has reached a theoretical or real maximum (i.e., performance on the measure has topped out) even if the measure still reflects best practice?
- When a measure has topped out, should CMS still require data collection and public reporting of the measure, but without a financial incentive to improve performance, in order to sustain the gains in performance that have been achieved? Alternatively, should CMS make maintaining a high level of performance a threshold requirement for being eligible for financial incentives under VBP?
- Are there reasons to consider retiring a measure other than high overall performance?

3. How should composite measures be used in a Medicare Hospital Value-Based Purchasing Program?

Composite measures are aggregations of individual measures. Aggregations can be determined using statistical methods and/or determined conceptually by stakeholder preferences. For example, the CAHPS survey constructs a composite measure for doctor-patient communication by aggregating across individual communication questions that are strongly associated with each other, such as the doctor listened carefully, explained things well, and spent enough time with the patient. Composites can also be constructed by clinical condition, as is currently done in the CMS-Premier Hospital Quality Incentive Demonstration.

Composite measures can be helpful to patients and their families because they provide an overview of performance in an area. Composites can also improve the reliability of performance estimates when the composite reflects an underlying core construct (e.g.,

Medicare Hospital Value-Based Purchasing Plan Issues Paper

when the individual measures are highly correlated). CMS is seeking input on the following areas relevant to using composite measures.

- In which situations would composite measures be most useful for VBP?
- Are there preferred approaches to constructing composites, and what is their rationale?
 - Should composite scores be constructed at the hospital level (across many measures that address an array of clinical conditions) or at the condition level?
 - Should composite scores be calculated at the patient level or population level? Patient-level composites compute the proportion of patients who receive all of the care for which they were eligible—meaning what percent of patients are optimally managed. At the population level, a composite is constructed by dividing the total number of successful interventions by the total number of opportunities across all patients.
 - Are there other approaches to constructing composites that should be considered?

4. What types of thresholds, targets, and benchmarks should CMS use in a hospital VBP program?

Thresholds, targets, and benchmarks represent critical aspects of any VBP program because they define the levels of performance achievement required to receive incentive payment. In addition, these “cut-point” concepts may be used to determine how hospital performance is portrayed to the public. For the Medicare VBP program, CMS is using the following definitions:

- Thresholds are minimum levels of performance;
- Targets are performance goals that reflect levels of performance greater than the threshold or a desired level of improvement;
- Benchmarks are used as reference points or as a basis of comparison. Generally, they are calculated from current levels of hospital performance and provide realistic

Medicare Hospital Value-Based Purchasing Plan Issues Paper

standards of excellence. They are commonly used in public reporting and in giving providers feedback to stimulate performance improvement.

To determine if incentive payments should be made, CMS will need to establish cut-points such as benchmarks, thresholds, or targets relative to clinical, programmatic, or budgetary goals. There are alternative ways to accomplish this. CMS is seeking input on the following issues:

- How should the cut-point concepts be applied in a Medicare hospital VBP program?
- Should clinical practice goals be used to determine how payment thresholds and/or targets are set?
- Should the distribution of performance across all hospitals nationally be used to determine how payment thresholds and/or targets are set?

B. Data Infrastructure and Validation

The DRA requires CMS to consider the reporting, collection, and validation of performance data. Data quality and the data infrastructure are essential building blocks for any successful VBP program. The integrity of the underlying data used to score hospitals must be ensured to provide a foundation for VBP performance determinations that are accepted by all stakeholders. The data-reporting infrastructure must provide a stable, secure, and user-friendly environment for hospitals and vendors to submit performance measures data and to receive timely and accurate feedback on their data submissions, data quality, and performance results. The data infrastructure must also have well-defined rules of governance and strictly defined operating requirements.

Given the speed of implementation that would be required if Congress authorizes a hospital VBP program in the next 18 months, CMS intends to build on the existing infrastructure that has been developed for the RHQDAPU and for other performance measurement demonstration programs, such as the Premier Hospital Quality Incentive Demonstration.

Medicare Hospital Value-Based Purchasing Plan Issues Paper

Existing infrastructure components that CMS would build upon include:

- Having hospitals submit data on the defined set of performance measures to the Quality Improvement Organization (QIO) Clinical Warehouse through the QualityNet Exchange website.
- Using the QualityNet Exchange website to communicate with hospitals about measure specifications, delivery dates, audit procedures, and the resubmission and appeals process currently used for the RHQDAPU program.
- Using the CMS Abstraction and Reporting Tool (CART) to help hospitals collect clinical and administrative data to measure performance.
- Using the Medicare claims warehouse for Medicare Part A data to verify the completeness of hospital data submissions.
- Using the Clinical Data Abstraction Contractor (CDAC) to carry out the validation process and to provide user-friendly reports to hospitals and vendors on the data submission and validation audits.

CMS recognizes that the existing data infrastructure and validation structure will need to be modified to accommodate the different types of data needed to construct VBP performance measures, including survey data, administrative data, and medical chart-based data.

CMS is seeking comment on several key data submission and validation design issues in the context of a VBP program. Choosing among alternative approaches will require CMS to balance a variety of factors including:

- The costs associated with validating the data,
- Hospital burden in terms of how quickly and frequently hospitals are required to submit data and the amount of data that must be submitted,
- Alignment of data submission and validation with the efforts of other data requestors, such as the JCAHO, and
- Operational feasibility for CMS.

Medicare Hospital Value-Based Purchasing Plan Issues Paper

1. How can CMS improve the current RHQDAPU program data submission process and policies to best meet the needs of a VBP program?

CMS is considering whether and how the data submission and payment determination policies and processes now used for the RHQDAPU program should be adapted and improved for use in a hospital VBP program. Currently, hospitals that fail to meet the annual RHQDAPU requirements as outlined in the Federal Register final IPPS rule for the respective fiscal year are eligible to appeal their RHQDAPU annual payment determination, but are not allowed to resubmit data after the quarterly submission deadline when data errors are caused by the hospital or vendor.

CMS would like to know if there are ways to improve the current data submission process in order to minimize the number of payment determination appeals, which are costly and burdensome for both CMS and hospitals.

- Generally, what actions could be taken to minimize problems related to the data submission process?
- Specifically, should CMS establish a policy to permit data resubmissions within the VBP program? CMS is interested in receiving comments on the following data resubmission options:
 - Allow resubmitted data to be used for public reporting, but not for quarterly validation samples or annual payment determination.
 - Decrease the frequency of universal validation sample to an annual basis, and set a more flexible annual resubmission deadline to allow corrections to be considered in annual validation and payment decisions.
 - Allow resubmissions in the form of aggregated measure rate data similar to the form currently accepted by the JCAHO.

2. How should CMS structure the process for validating data submitted for the VBP program?

CMS is considering several approaches to validating the data that hospitals submit as the basis for making differential payments; each approach has different implications for the

Medicare Hospital Value-Based Purchasing Plan Issues Paper

cost and burden of data collection. CMS would welcome comments about the following options for validating the data used to score hospital performance.

- *Annual audit of all hospitals* to provide a reliable estimate of element-level abstraction reliability and/or the reliability of performance measures.
- *Quarterly audit of hospitals* to assess the accuracy of their data abstraction and to give them frequent feedback.
- *Targeted annual audit of a sample of hospitals* to improve the precision of outlier and questionable reliability estimates.
- *Targeted annual audit of all outlier hospitals*, including both best and worst performers as well as those hospitals close to the outlier “fence.”
- *Annual audit of a random sample of hospitals* to determine the overall accuracy of the data submitted.
- *Annual comparison of a sample of hospital patient lists to CMS-generated patient lists* to determine the completeness of the hospitals’ data submission.
- *No systematic audit, just data quality checks* to identify hospitals that appear to be outliers.
- *Attestation by hospital*. Hospitals would be required to sign an attestation that the data they submitted were complete and accurate.
- *Financial penalties* for submitting invalid data.
- Using *audit results to determine eligibility* for inclusion in an annual VBP decision.

The quarterly validation sample in the RHQDAPU program consists of data elements from five randomly-selected episodes of care independently re-abstracted by CDAC, a CMS contractor. Hospitals are eligible to appeal their quarterly validation sample results if they fail to accurately abstract 80% of the data elements sampled. Validation results potentially constitute only one of several criteria used in the annual payment determination. The current quarterly validation appeals process for the RHQDAPU program adds two to three months to the lag between quarterly data submission and public data dissemination.

Medicare Hospital Value-Based Purchasing Plan Issues Paper

- Is the current RHQDAPU quarterly validation appeals process working? Is the process suitable for a VBP program?
- How could the appeals process be improved?

Hospitals have expressed a desire for more timely feedback for the purposes of quality improvement and monitoring. The current time lag between the end of the quarterly reporting period and the availability of performance feedback under the RHQDAPU program is approximately nine months. CMS is examining various strategies for shortening the time between data submission and performance feedback and payment determination. The length of this interval will also affect the speed with which CMS can make final payment determinations in a VBP program. Depending on the approach used, reducing the time lag will probably increase burden to hospitals, CMS, or both.

CMS would like input on the following questions:

- Should *data submissions occur more frequently* than quarterly, such as monthly or on a concurrent basis?
- Should the *data submission period be shortened* from the current 4.5 months from the end of each quarterly reporting period in the RHQDAPU?
- Should CMS provide more user-friendly communication to hospitals about their measure rates and *whether the hospital has met all submission requirements for payment before the submission deadline*? What approaches for doing this might CMS consider?
- Should CMS *eliminate or streamline the validation appeals process*, which would reduce lag time by up to 2 months? Options to consider include:
 - Reducing the validation appeals process from its current quarterly process to a *single annual process*.
 - *Lowering the appeals eligibility threshold* from the current 80% pass rate.
 - Increasing efficiency by *bundling appeals processing to fewer contractors* with greater relevant expertise and processing capability.
 - *Eliminating the entire appeals process*.
 - *Reducing the required time* for hospitals to submit appeals requests.

Medicare Hospital Value-Based Purchasing Plan Issues Paper

- Are hospitals willing to have the *validation appeals process occur post-payment* in order to improve the timeliness of performance feedback to hospitals?
- Should CMS *expand the role for third-party vendors* that assist hospitals with submitting quality data to CMS and JCAHO? These vendors could provide standardized and quick performance feedback to their hospital customers on the Medicare measures.

C. Incentive Structure

The DRA requires CMS to consider the structure of value-based payment adjustments, including how payments will be distributed to achieve the goals of the program, what the basis is for receiving a payment, and how the incentive dollars should be allocated across the performance domains. The direction that CMS will pursue regarding structuring performance-based payment adjustments will reflect the following factors:

- The Medicare Hospital VBP program will be budget neutral, based on the President's FY 2006 and FY 2007 budgets and in keeping with policy recommendations as specified by MedPAC and the IOM.⁸
- For the initial implementation, performance-based differential payments are likely to be of similar magnitude to the 2007 2.0% RHQDAPU payment differential specified in the DRA; the size of the payment differential may increase in future years of the program.

CMS will need to balance a variety of factors in structuring the design of the incentive payments, including operational feasibility and distributional consequences. We are seeking comment on the following questions related to structuring performance-based payments adjustments.

⁸ Office of Management and Budget. Budget of the United States 2006. Available online at www.whitehouse.gov/omb/budget/fy2006/budget.html; Office of Management and Budget. Budget of the United States 2007. Available online at www.whitehouse.gov/omb/budget/fy2007/budget.html; Institute of Medicine: *Pathways to Quality Health Care: Rewarding Provider Performance*. Washington, D.C.: National Academy of Sciences, 2006: pgs. 23-24; Medicare Payment Advisory Commission (MedPAC), "Report to the Congress: Medicare Payment Policy," Washington, D.C.: MedPAC, March 2005, p. 184.

Medicare Hospital Value-Based Purchasing Plan Issues Paper

1. What distribution of incentives best achieves the goals of the Hospital VBP program (as specified in the Program Goals above)?

Depending on the way in which the incentive is structured, performance-based payments could be distributed narrowly or more broadly. For example, the VBP program could provide larger incentives to a smaller number of high-performing hospitals to reward them for top performance or it could distribute payments across a larger number of hospitals. Spreading payments broadly—such as paying for improvement as well as top performance—would decrease the financial risk for hospitals and potentially engage more hospitals in improving their performance. However, in this approach top-performing hospitals would receive a smaller incentive payment than they would otherwise receive.

2. What should be the basis for receiving an incentive? Are there strategies that place particular types of hospitals, such as small hospitals, at an advantage or disadvantage?

There are a variety of strategies for specifying the performance basis for incentive payments; frequently strategies are used in combination. Each strategy has different implications for the predictability of receiving a payment, budgeting, the size of the payment, and the distribution of payments across hospitals. CMS is seeking comments on the following strategies:

- ***Meeting an absolute performance threshold.*** Examples of absolute thresholds are “90% of patients with AMI must have received aspirin at arrival,” or “the 75th percentile score for the prior year’s performance across all hospitals.” This approach has the advantage of predictability: Hospitals know in advance the threshold they must meet to receive an incentive payment. It also ensures that all hospitals that achieve the threshold receive an incentive payment. From an operational perspective, this approach is more challenging to budget, because CMS does not know how many hospitals will meet the threshold in any given year. To manage this uncertainty, CMS would need to establish a fixed sum of money that could be allocated annually to the incentive. Under this scenario, the

Medicare Hospital Value-Based Purchasing Plan Issues Paper

more hospitals that meet the threshold, the smaller the incentive payment because the fixed sum of money needs to be distributed to more hospitals.

- ***Relative thresholds or percentile ranking of hospitals.*** An example of a relative threshold is payment for performance above the 75th percentile of the current year's performance across all hospitals. This is the type of approach used in the Premier Hospital Quality Incentive Demonstration, where all hospitals are ranked and incentives are given to hospitals in the top two deciles of performance. This approach is easier for CMS to budget because the number of hospitals that will receive an incentive is predictable. However, the level of performance required to trigger an incentive payment is unknown at the start of the year, thus creating uncertainty for hospitals in their own budgeting. It also penalizes high performers once performance scores become compressed at the top end of the performance distribution.
- ***Improvement in performance.*** This could take the form of either year-over-year improvement or a negotiated improvement target from baseline or from some other point in time. This approach has the advantage of encouraging performance improvements among poor performers, because the targets may seem more attainable than an absolute or relative threshold approach. Paying on the basis of improvement would also reward hospitals for continual improvement (not just stopping once a benchmark has been reached) and addresses regional variation in performance scores. However, this approach may be perceived as unfair if the program rewards a hospital that improves from 10% to 20% on a measure while another hospital that remains at 90% across the time period would receive no financial reward. Combining improvement with paying for performance above some upper threshold would mitigate this effect.
- ***Stepped or scaled approach.*** This is a variation on one of the three approaches described above. A stepped approach has a series of payment triggers, and higher achievement is tied to higher payment. For example, if a hospital reaches 50% on

Medicare Hospital Value-Based Purchasing Plan Issues Paper

a certain performance measure it receives \$X, and if it reaches 75% on the same measure, it receives \$2X. A sliding scale approach is similar, with more levels of differentiation regarding what performance levels trigger an incentive payment. The net effect of this approach is to distribute payments across a larger number of hospitals. In addition, hospitals that at baseline are on the lower end of performance might see the lower thresholds as a more achievable goal: They may be more likely to devote resources to improving performance if they thought their investment might generate some amount of payment.

- ***A combination of approaches.*** Various approaches described above could be used in combination—for example, setting an absolute performance threshold as well as paying on improved performance.

A VBP program might require a minimum level of performance before hospitals are eligible to receive any incentive. Possibilities include linking eligibility for incentives to accreditation standards or to specified levels of performance on, or continued reporting of, retired measures to sustain hospitals' performance.

3. Should the VBP program base incentive payments on payments for all Medicare admissions, payments for measured services, payments for Medicare inpatient and outpatient services, or other factors?

The VBP program could base incentive payments on payments for all Medicare admissions, payments for measured services, payments for Medicare inpatient and outpatient services, or other factors. In the current RHQDQPU program, a hospital receives a 2% greater payment for each Medicare admission. In the Premier demonstration, CMS increases the wage-adjusted DRG payments, but excludes DSH, IME, GME, outliers, and other adjustments.

An approach based on payments for Medicare admissions has the advantage of being operationally easy and generally gives greater incentives to hospitals that have a higher volume of Medicare admissions. A disadvantage is that it does not acknowledge that there are fixed costs for any hospital to measure and improve performance. A smaller

Medicare Hospital Value-Based Purchasing Plan Issues Paper

volume hospital might achieve a high performance threshold and yet receive a relatively small incentive that is not commensurate with the resources dedicated to measuring and improving performance. The opposite could occur with high volume hospitals that receive extremely large incentive payments.

4. How should the VBP program weight the broad performance domains—such as clinical effectiveness, patient experience, and resource use—when determining incentive payments?

The VBP program could weight all performance domains equally or apply differential weighting when determining how incentive payments are distributed. An example of a differential weighting approach is 50% for clinical effectiveness, 20% for patient experience, and 30% for resource use, with the total summing to 100%. A differential weighting approach may be desirable if some performance domains are deemed more robust than others or more in need of performance improvement and reducing variation in performance.

D. Public Reporting

The DRA requires CMS to consider the disclosure of information on hospital performance. CMS understands that a variety of stakeholders—including hospitals, consumers, purchasers, researchers, and policy makers—will use the performance results. The direction that CMS will pursue regarding public reporting will take the following into consideration:

- Building off of the existing Medicare Hospital Compare website for publicly reporting the hospital performance results of the Medicare Hospital VBP program,
- Ensuring that the design of the hospital VBP display supports the President's Executive Order and the DHHS Transparency Initiative,
- Addressing the needs of multiple stakeholder audiences through public reporting of performance results,

Medicare Hospital Value-Based Purchasing Plan Issues Paper

- Testing understanding of performance data displays with hospitals and their clinical and quality improvement staff, as well as with Medicare beneficiaries, and
- Employing display methods and/or decision supports that facilitate fair and accurate decision-making and strengthen the ability of consumers to make their own judgments. Among other possible strategies, CMS expects to use composites and performance goals to facilitate consumer understanding of performance results (see Section A on Measures for more detail).

CMS is seeking comment on the following questions related to publicly reporting comparative performance data in the context of a VBP program.

1. What should be reported to the public?

- Are there particular measures that do not lend themselves to public reporting? If yes, what defines these types of measures? Are there measures that should be made available for public accountability, but which should be displayed separately from other measures more suitable for informed consumer choice?
- Are there some hospital quality measures that have utility only for quality monitoring and improvement, only for financial incentives, or only for public reporting?
- Should the fact that a hospital received a financial incentive for a particular level of performance be highlighted?

2. How should the performance results be scored to facilitate interpretation?

The methods that CMS will use to score hospitals for performance-based payment adjustments may become complex in order to balance payment considerations optimally. Yet results of the methods used to score hospitals may be confusing to consumers and may not reflect what they value. For example, paying on the basis of relative performance or on improvement may foster quality improvement better than paying incentives based on absolute thresholds. However, if the actual performance rates are low, consumers may not understand why CMS is paying incentives to hospitals with low performance scores.

Medicare Hospital Value-Based Purchasing Plan Issues Paper

- CMS would like public input on the extent to which scoring for public reporting should parallel and be reflective of scoring for performance-based payments.

3. How should the performance reports be displayed to facilitate understanding and use by Medicare beneficiaries, the public, and hospitals?

There are various ways to display information to facilitate understanding and use by consumers and other potential users of the Hospital Compare website (e.g., hospitals, physicians, employers/purchasers). Among the non-display tools that Hospital Compare uses are explanations of data sources for clinicians and explanations of medical conditions for consumers. Display options that could be used alone or in combination are:

- Including some indication of uncertainty, such as confidence intervals,
- Suppressing or limiting direct access to scores for hospitals that lack an adequate number of patients to generate stable results,
- Including benchmarks (e.g., average national or state performance) to compare with specific hospital performance,
- Highlighting performance above certain targets or thresholds for incentive payments to clarify the performance goals that CMS has established for hospitals,
- Presenting data primarily in the form of composites, rather than individual measures, to meet the public's need for simplified and easy-to-understand displays (see Section A on Measures for more detailed discussion), and/or
- Including some indication of improvement in quality.

Which, if any, of the suggested display options should be used to facilitate the use and understanding of the performance results by Medicare beneficiaries?

4. What role should CMS play in providing decision-support tools to allow consumers to weight performance measures according to their own values?

- In order to achieve transparency, should CMS explain the weighting decisions used to determine incentive payments and to construct composite measures for public reporting?

Medicare Hospital Value-Based Purchasing Plan Issues Paper

- Should CMS focus primarily on letting consumers input their own values with tools that help them evaluate multiple measures at one time or that offer customized sorting on the metric of their choice?
- How much should CMS strive to do both: provide transparency about scoring for incentives and provide tools for customized consumer decision support?

Medicare Hospital Value-Based Purchasing Plan Issues Paper

APPENDIX 1: Hospital Quality Alliance (HQA) Measures

Hospital Quality Alliance (2004-2007) <i>Measure Build Out Table</i>		11/04	4/1/05	9/1/05	2006	2007
		“Starter Set” ¹	7 New Measures	3 New Measures	1 New Measure	15 New Measures
<i>Acute Myocardial Infarction (AMI)</i>						
AMI-1	• Aspirin at arrival	x	x	x	x	x
AMI-2	• Aspirin prescribed at discharge	x	x	x	x	x
AMI-3	• ACE inhibitor (ACE-I) or Angiotensin Receptor Blocker (ARBs) for left ventricular systolic dysfunction ²	x	x	x	x	x
AMI-4	• Adult smoking cessation advice/counseling		N	x	x	x
AMI-5	• Beta blocker prescribed at discharge	x	x	x	x	x
AMI-6	• Beta blocker at arrival	x	x	x	x	x
AMI-7a	• Thrombolytic agent received within 30 minutes of hospital arrival		N	x	x	x
AMI-8a	• Primary Percutaneous Coronary Intervention (PCI) received within 120 minutes of hospital arrival ³		N	x	x	x
	• 30-day AMI mortality					June
<i>Heart Failure (HF)</i>						
HF-1	• Discharge instructions		N	x	x	x
HF-2	• Left ventricular function assessment	x	x	x	x	x
HF-3	• ACE inhibitor (ACE-I) or Angiotensin Receptor Blocker (ARBs) for left ventricular systolic dysfunction ⁴	x	x	x	x	x
HF-4	• Adult smoking cessation advice/counseling		N	x	x	x
	• 30-day HF mortality					June
<i>Pneumonia (PN)</i>						
PN-1	• Oxygenation assessment	x	x	x	x	x
PN-2	• Pneumococcal vaccination status	x	x	x	x	x
PN-3b	• Blood culture performed in emergency department before first antibiotic received in hospital ⁵		N	x	x	x
PN-4	• Adult smoking cessation advice/counseling		N	x	x	x
PN-5b	• Initial antibiotic received within 4 hours of hospital arrival	x	x	x	x	x
PN-6	• Appropriate initial antibiotic selection			N	x	x
PN-7	• Influenza vaccination status (Collected but not reported earlier due to vaccine shortage in 2004)				N	x
	• 30-day Pneumonia mortality (pending NQF endorsement)					June
<i>Surgical Care Improvement/Surgical Infection Prevention (SCIP/SIP)</i>						
SCIP-Inf-1	• Prophylactic antibiotic received within 1 hour prior to surgical incision			N	x	x
SCIP-Inf-2	• Prophylactic antibiotic selection for surgical patients (Collected but not reported earlier due to measure revision) ⁶					June
SCIP-Inf-3	• Prophylactic antibiotics discontinued within 24 hours after surgery end time			N	x	x
SCIP-VTE-1	• Surgery patients with recommended venous thromboembolism prophylaxis ordered					Dec
SCIP-VTE-2	• Surgery patients with recommended venous thromboembolism prophylaxis received within 24 hours prior to or after surgery					Dec

		11/04 "Starter Set" ¹	4/1/05 7 New Measures	9/1/05 3 New Measures	2006 1 New Measure	2007 15 New Measures
Hospital-CAHPS (HCAHPS) -- Patient perspectives on hospital care						
	• Communication with Doctors (composite)					Dec
	• Communication with Nurses (composite)					Dec
	• Responsiveness of Hospital Staff (composite)					Dec
	• Cleanliness and Quietness of Hospital (composite)					Dec
	• Pain Control (composite)					Dec
	• Communication about Medicines(composite)					Dec
	• Discharge Information (composite)					Dec
	• Overall Rating of Hospital Care					Dec
	• Overall Recommendation					Dec
	TOTALS	10	17	20	21	36

NQF Note Specifications for all measures can be found in the joint CMS and JCAHO *Specifications Manual for National Hospital Quality Measures*. All measures have been endorsed by the National Quality Forum (NQF), with the exception of 30-day PN mortality, which has been submitted for consideration and endorsement in 2007.

Footnotes **N = new measure**

1. Original 10 measure set used by both HQA and Section 501(b) of Medicare Prescription Drug, Improvement and Modernization Act of 2003 (MMA).
2. AMI-3: Measure was previously "ACE-I for left ventricular systolic dysfunction"; change effective 1Q2005 discharges.
3. AMI-8a: Measure was previously "PTCA received within 90 minutes of hospital arrival;" change effective for 3Q2004 discharges. Note: effective for 3Q2006 discharges, measure timeframe decreases to 90 minutes.
4. HF-3: Measure was previously "ACE-I for left ventricular systolic dysfunction;" change effective 1Q2005 discharges.
5. PN-3b: Measure was previously "Blood culture performed prior to first antibiotic received in hospital;" change effective 1Q2006 discharges.
6. SCIP Inf-2: Measure was collected but suppressed pending revision effective for 3Q2006 discharges. (Rev. 12/13/2006)

APPENDIX 2: Additional Background Resources

- **HospitalCompare** at www.hospitalcompare.hhs.gov and www.medicare.gov
- CMS Website
 - **Hospital Quality Initiatives – Reporting Hospital Quality Data for Annual Payment Update** at http://www.cms.hhs.gov/HospitalQualityInits/20_HospitalRHQDAPU.asp
 - **Hospital Quality Initiative – Hospital Compare** at http://www.cms.hhs.gov/HospitalQualityInits/25_HospitalCompare.asp
 - **Hospital Quality Initiative – Hospital Quality Alliance** at http://www.cms.hhs.gov/HospitalQualityInits/15_HospitalQualityAlliance.asp#TopOfPage
 - **Hospital Quality Initiative – Quality Measures** at http://www.cms.hhs.gov/HospitalQualityInits/10_HospitalQualityMeasures.asp#TopOfPage
- **QualityNet** at www.qualitynet.org :Established by the Centers for Medicare & Medicaid Services (CMS), QualityNet provides healthcare quality improvement news, resources and data reporting tools and applications used by healthcare providers and others.
- **Legislative Sources:**
 - Section 109 of Tax Relief and Health Care Act of 2006 (HR 6111, signed by President 12/20/2006)
 - Section 5001 of P.L. 109-171, the Deficit Reduction Act of 2005 (DRA)
 - Section 501(b) P.L. 108-173, the Medicare Prescription Drug, Improvement, and Modernization Act of 2003 (MMA)
- **Regulatory Sources:**
 - CY 2007 -- Reporting Quality Data for Improved Quality and Costs Under the Outpatient Prospective Payment System (OPPS) and
 - FY 2008 -- Additional Quality Measures and Procedures for Hospital Reporting of Quality Data for the FY 2008 Inpatient Prospective Payment System (IPPS) Annual Payment Update

<http://www.cms.hhs.gov/quarterlyproviderupdates/downloads/cms1506fc.pdf>
Final Changes to the Hospital Outpatient Prospective Payment System for CY 2007 and Reporting Hospital Quality Data for FY 2008 Inpatient Prospective Payment System Annual Payment Update Program – (CMS-1506-FC; CMS-4125-F)

(71 FR 68189) -Section XIX. Reporting Quality Data for Improved Quality and Costs Under the OPSS
(71 FR 68201)- Section XXII. Additional Quality Measures and Procedures for Hospital Reporting of Quality Data for the FY 2008 IPPS Annual Payment Update
 - FY 2007 -- Quality Measures and Procedures for Hospital Reporting of Quality Data for the FY 2007 Inpatient Prospective Payment System (IPPS) Annual Payment Update

<http://www.cms.hhs.gov/QuarterlyProviderUpdates/Downloads/CMS1488F.pdf>
Changes to the Hospital Inpatient Prospective Payment Systems and Fiscal Year 2007 Rates–(CMS-1488-F)

APPENDIX 3: CMS P4P Workgroup Membership

Name	Group	Function Lead
Benedicta Abel-Steinberg	Office of Beneficiary Information Services	Public Reporting Subgroup Co-Lead
Karen Allen	Office of Information Services	
Sheila Blackstock	Office of Clinical Standards and Quality	
Cheryl Bodden	Office of Clinical Standards and Quality	
Susan Bogasky	Assistant Secretary for Planning and Evaluation	ASPE Liaison
David Bott	Office of Research, Development and Information	
Frank Cipolloni	Office of Information Services	
Erin Clapton	Office of Legislation	
Loretta Conyers	Center for Medicare Management	
Shannon Flood	Office of Research, Development and Information	
Laura Gange	Office of E-health Standards and Services	
Elizabeth Goldstein	Center for Beneficiary Choices	
Lisa Grabert	Office of Fiscal Management and Center for Medicare Management	
Thomas Gustafson	Center for Medicare Management	
Nilsa Gutierrez	CMS New York Regional Office	
Debbra Hattery	Office of Clinical Standards and Quality	
Valerie Hartz	Office of Information Systems	
Angelique Hebert	Office of Beneficiary Information Services	
Julianne Howell	Independent Technical Advisor	Hospital VBP Planning Coordinator
Monica Kay	Office of Operations Management	
Terrence Kay	Office of Clinical Standards and Quality	
Joseph Kelly	Center for Medicare Management	
Terris King	Office of Clinical Standards and Quality	CMS VBP Lead
Mark Koepke	Office of Clinical Standards and Quality	
Lisa Lang	Office of Clinical Standards and Quality	
Linda Magno	Office of Research, Development and Information	
William Matos	Office of Clinical Standards and Quality	Data Infrastructure and Validation Subgroup Co-Lead
Renee Mentnech	Office of Research, Development and Information	
Karen Milgate	Office of Policy	
Fatima Millar	Office of Clinical Standards and Quality	
David Miranda	Center for Beneficiary Choices	Public Reporting Subgroup Co-Lead
Susan Nedza	CMS Chicago Regional Office	
Helen Nolt	Office of Clinical Standards and Quality	
John Pilotte	Office of Research, Development and Information	
James Poyer	Office of Clinical Standards and Quality	Data Infrastructure and Validation Subgroup Co-Lead
Sylvia Publ	CMS Chicago Regional Office	
Linda Radey	Office of Research, Development and Information	
Michael Rapp	Office of Clinical Standards and Quality	Measures Subgroup Co-Lead
Thomas Reilly	Office of Research, Development and Information	
Lesley Reis	Office of Legislation	

Name	Group	Function Lead
Liz Richter	Center for Medicare Management	
Sheila Roman	Office of Clinical Standards and Quality	Measures Subgroup Co-Lead
Steven Sheingold	Assistant Secretary for Planning and Evaluation	ASPE Liaison
Sarah Shirey- Losso	Center for Medicare Management	
Stewart Streimer	Center for Medicare Management	
Dennis Stricker	Office of Clinical Standards and Quality	
Donald Thompson	Center for Medicare Management	Incentive Structure Subgroup Lead
Karen Trudel	Office of E-health Standards and Services	
Thomas Valuck	Center for Medicare Management	Hospital VBP Project Lead
Timothy Walsh	Office of Beneficiary Information Services	
Mark Wynn	Office of Research, Development and Information	

Glossary of Terms and Acronyms

Acronym/Term	Definition
Absolute performance threshold	A pre-specified level of performance that would qualify a hospital for an incentive payment (e.g., 90% of patients with AMI must have received aspirin at arrival)
APU	Annual Payment Update
Attestation	Confirmation statement signed by a hospital official that testifies as to the completeness and accuracy of the data being submitted
Benchmark	A reference point or basis of comparison
CMS Abstraction & Reporting Tool (CART)	A software application for the collection and submission of data to the QIO Clinical Warehouse, and analysis of quality improvement data.
Clinical Data Abstraction Center (CDAC)	The contractor used by CMS to carry out the process for validating data collected from medical records for the RHQDAPU program
Composite measures	An aggregation of individual measures
CAH	Critical Access Hospitals
DRA	Deficit Reduction Act of 2005
HQA	Hospital Quality Alliance
IOM	Institute of Medicine
IPPS	Inpatient Prospective Payment System
JCAHO	Joint Commission on Accreditation of Healthcare Organizations
Medicare Hospital Compare	A tool on the CMS website that provides information on how well hospitals care for their adult patients with certain medical conditions (www.hospitalcompare.hhs.gov)
MedPAC	Medicare Payment Advisory Commission
MMA	Medicare Modernization Act of 2003
NQF	National Quality Forum
OPPS	Outpatient Prospective Payment System
Precision	Accuracy in discriminating between real differences in provider performance
QIO	Quality Improvement Organization
QIO Clinical Warehouse	Data repository maintained by the Iowa Foundation for Medicare Care that contains data uploaded from hospitals across the nation for various initiatives
QualityNet Exchange	A secure website approved by CMS for communications and data exchange that contains updates, tools, and applications useful for public reporting and data submission (www.qnetexchange.org)
Relative performance threshold	A level of performance that would qualify a hospital for an incentive payment that is determined by comparing the performance of participating organizations (e.g., 75 th percentile of the current year's performance across all hospitals)
Reliability	Producing the same results a high proportion of the time when assessed in the same population
RHQDAPU	Medicare's Reporting Hospital Quality Data for Annual Payment Update program
Risk Adjustment	A method to reduce effects on performance measures by characteristics of the patient population that affect results but are outside the control of providers and are not randomly distributed, such as level of illness in the population
Target	Performance goals that reflect levels of performance greater than the threshold or a desired level of improvement
Threshold	A minimum level of performance that would qualify a hospital for payment
Validity	The ability of a measure to accurately represent the concept being evaluated