Moving the Needle under CMS' Value-based Purchasing Initiative

A Quality Indicator Project® Executive Briefing

QUALITY INDICATOR PROJECT® EXECUTIVE BRIEFING:

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From Pay-for-Reporting to Pay-for-Performance—Seismic Shift?

On average Medicare makes up about 40% of U.S. hospital costs. Since 2005, a small portion of every hospital's annual Medicare revenue has been (and is currently) at risk under the Reporting Hospital Quality Data for the Annual Payment Update (RHQDAPU) portion of the 2005 IPPS rule. Under the current regulation, whether or not a facility receives its full Medicare annual payment update depends upon its ability to successfully—and accurately—collect and submit data on a subset of the National Hospital Quality Measures.

Certainly the current "pay for reporting" requirement presents some challenges to hospitals—challenges largely associated with allocating staff and other resources for data collection and ensuring that data abstractors are adequately trained on measure definitions. However, by and large, hospitals meet this requirement without problem (notwithstanding a small minority of hospitals each year that fail to receive their full update).

Hospitals have more revenue at risk under VBP

Beginning in fiscal year 2009—provided Congress approves a pending CMS proposal—a new reimbursement model, "value-based purchasing," will replace the current model. Under value-based purchasing (VBP), a portion of Medicare funds will be set aside for incentive payments to hospitals. Like the RQHDAPU model, VPB is a zero-sum proposition: Under RQHDAPU, two percentage points of the annual payment update is at stake. Under VBP, CMS proposes a variety of options for payment incentives, the mostly likely of which is to use a percentage of the DRG payment as the incentive

Regardless of which option is selected, VBP will put a greater percentage of Medicare revenue at risk than is currently at risk under the RHQDAPU requirement--some estimates suggest as much as 5% of total Medicare IPPS. In addition, under VBP, reimbursement levels would hinge not merely on reporting the National Hospital Quality Measures data, but on a facility's actual *performance* on these measures. Should Congress approve VBP, as is expected, it will be the first national implementation of a pay-for-performance program.

This shift from pay-for-reporting to VBP will have significant implications for hospitals and their quality improvement teams. Collecting data is one thing. Improving and sustaining performance is another.

Key Elements of the proposed VBP methodology: Attainment vs. Improvement

According to CMS' draft VBP methodology, reimbursement will be determined by a facility's performance on a subset of the National Hospital Quality Measures from the acute myocardial infarction, heart failure, pneumonia, surgical care, and outpatient measure sets, as well as on the HCAHPS patient satisfaction survey.

VBP rewards high performers as well as substandard performers that demonstrate improvement

The model assesses hospitals both on improvement and attainment. To assess improvement, the facility's performance during the previous year is set as the baseline and points are assigned for improvement from the baseline to the facility's performance in the assessment year for each measure. To assess attainment, a threshold and benchmarks are set to assign points for an overall level of achievement ("attainment") in the assessment year. The facility receives the higher of the two scores (improvement or assessment) for each measure. By awarding points in this manner, the model aims to ensure that poor-performing facilities are not doomed to a cycle of continued failure, but instead are incentivized to improve.

The points earned for each measure are added to calculate "Total VBP points," which is then used to calculate a percentage score representing VBP points earned out of total possible VBP points. An exchange function converts total VBP points into percentages of incentive payment. A facility at 100% will always earn the maximum incentive payment.

The question on everyone's mind

The question on everyone's mind is, simply, how can my facility earn the greatest number of VBP points? But the better question is this: For *my* facility, on which measures will we gain maximum points for attainment (meeting the threshold) and on which measures will we gain the most points for improvement?

To move the needle: identify the measures that will net the most improvement points

Quality improvement initiatives are expensive and time-consuming. Under VBP, there is no reward for improving scores on measures where your facility has already attained threshold performance. Knowing where higher scores will translate into higher VPB points will enable facilities to be strategic in targeting the opportunities for improvement and deploying the necessary resources to attain goals.

Under the VBP methodology, scores earned for each measure are weighted equally in calculating the VBP performance

score—so a measure earning a high number of VBP points will contribute more to the hospital's Total VBP Points than a measure earning a low number of VBP points. However, measures with low scores offer a high potential for improvement, which can contribute more for the improvement of future VBP performance scores.

Hospital characteristics offer clues on where to focus efforts

Ever on the look out to help its hospitals, Quality Indicator Project® researchers and statisticians wondered if performance patterns—and, therefore, incentive payments—vary by type of hospital. If this were the case, hospitals with room to improve would have a head start in understanding where to focus their improvement efforts. The team carried out its research using 2005 and 2006 data from 450 hospitals submitting NHQM data to the QI Project®.

The results of the research clearly show distinct patterns across measures and among certain types of hospitals.

- Across the sample of overall VBP scores, attainment was the primary driver in 41% of the scores; improvement was the primary driver in 25% of scores; in the remaining 34%, attainment and improvement scores contributed equally to the overall VBP scores .
- Teaching and not-for-profit hospitals serving urban areas were more likely to achieve optimal care by improvement, while smaller hospitals with fewer than 100 staffed beds located in the West showed low levels of improving to optimal care.
- Maintaining optimal performance (scoring maximum points on attainment) was associated with for-profit status and a high number of staffed beds.
- Hospitals in the West had lower overall VBP scores than those in the Northeast, South, and Mid-west.
- Not-for-profit hospitals tended to have higher overall VBP scores than for-profit hospitals.
- Improvement contributed more to the total overall VBP score for Mid-western hospitals, and medium-sized hospitals (100-300 staffed beds) were more likely to earn their total VBP score based on improvement than large hospitals (those with over 500 staffed beds).
- Measures with low means scores and high variation offered the most opportunity for improvement. These measures include ACEI or ARB for LVSD for heart failure patients, fibrinolytic therapy and PCI timing for patients with a heart attack, and antibiotic timing after surgery.

Things to consider when selecting areas for improvement

QI Project® research indicates that hospitals that are looking to increase their VPB scores should consider the following:

- Examine the facility's performance on each measure to determine which measures they are most likely to gain points through reaching the attainment benchmark or improving performance.
- With the understanding that some aspects of care lend themselves more readily to quality improvement interventions than others, identify the effort required to improve candidate measures.
- With the understanding that you can't improve everything at once, identify the potential rewards for improving or hitting the attainment threshold on each measure. Consider focusing first on those that offer the greatest potential for reward—realizing that these might not be the easiest areas to improve.
- Allocate resources and efforts accordingly.

How is your hospital performing in these areas ?

Acute Myocardial Infarction (AMI)	Aspirin at arrival Aspirin prescribed at discharge ACEI or ARB for LVSD Adult smoking cessation advice/counseling Beta blocker prescribed at discharge Fibrinolytic therapy received within 30 minutes of arrival Primary PCI received within 120 minutes of arrival 30-day mortality
Heart Failure (HF)	Discharge instructions ACEI or ARB for LVSD Adult smoking cessation advice/counseling 30-day mortality
Pneumonia (PN)	Pneumococcal vaccination Adult smoking cessation advice/counseling Blood culture performed before first antibiotic received in hospital Initial antibiotic selection for CAP in immunocompetent patients Influenza vaccination
Surgical Care Improvement (SCIP)	Prophylactic antibiotic received within 1 hour prior to surgical incision Prophylactic antibiotics discontinued within 24 hours after surgery end time

Research Details for the Statistically-minded

- To determine how much improvement or attainment contributed to the overall VBP performance scores, we calculated the percentage of improvement or attainment used in computing the overall VBP performance score across all hospitals.
- Chi square tests were performed with "excellent care measures" versus hospital characteristics to identify whether hospitals achieved high levels of performance differently.
- We conducted a multiple linear regression in order to ascertain how the overall VBP performance scores vary between hospitals with different characteristics.
- Since the VBP methodology considers improvement and attainment, a hospital's overall VBP score represents a combination of attainment and improvement scores from all available individual measures.
- To ascertain what type of hospitals had more attainment or improvement contribute to the overall VBP performance score, we first performed a multivariate logistic regression and created a new outcome variable. For each measure we set the variable to 1 if the score was earned by improvement and to 0 if the score was earned by attainment. To account for potential clustering we also performed Generalized Estimating Equations (GEE) analysis.
- A full overview of the CMS proposed VBP initiative, is available at http://www.cms.hhs.gov/AcuteInpatientPPS/downloads/HospitalVBPPlanRTCFINALSUBMITTED2007.pdf

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