MEDPAC Medicare Payment Advisory Commission

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June 22, 2012

Marilyn Tavenner
Administrator
Centers for Medicare & Medicaid Services
200 Independence Avenue, SW
Suite 314-G
Washington, DC 20201

RE: File code CMS-1588-P

Dear Ms. Tavenner:

The Medicare Payment Advisory Commission (MedPAC) welcomes the opportunity to comment on the Centers for Medicare and Medicaid Services (CMS) acute and long-term care hospitals proposed rule, published in the May 11, 2012 *Federal Register*, vol. 77, no. 92, pages 27870 to 28192. The proposed rule addresses the hospital inpatient prospective payment systems for acute care hospitals and the long term care hospital prospective payment system, as well as quality reporting requirements for certain providers. In view of their competing demands and limited resources, we especially appreciate your staff's efforts to improve hospital payment systems.

In this letter we have four key comments:

- Your adjustments for the effects of documentation and coding changes in the inpatient payment systems are appropriate;
- Your initial rules governing the policy on readmissions at acute care hospitals fit the requirements under current law, but adjustments to the law and regulations may be needed over the longer term;
- Your proposal to simplify reporting of quality data is appropriate, but we see some opportunities for further refinement;

- Although we agree that the current hospital wage index needs to be redesigned, we have concerns with the new wage index method outlined in the proposed rule.

Adjusting payments for documentation and coding changes

The proposed rule includes several adjustments to the operating and capital payment rates for fiscal year 2013 to redress the effects of hospitals' clinical documentation and coding changes in response to implementation of MS-DRGs in fiscal year 2008. The proposed adjustment of -1.9 percent would raise the cumulative adjustment for documentation and coding changes from 3.5 percent in fiscal year 2012 to 5.4 percent in fiscal year 2013. This would prevent any further overpayments in 2013 and later years resulting from the 5.4 percent change in case mix due to documentation and coding changes that occurred in fiscal years 2008 and 2009. The second proposed adjustment of -0.8 percent would prevent further overpayments in 2013 and later due to continuing documentation and coding changes that occurred in fiscal year 2010. Proposed adjustments differ for sole community hospitals and Puerto Rico hospitals, in part, because recovery of past overpayments to these hospitals is not authorized under current law.

We fully support all of the proposed adjustments because they are consistent with the findings from our analysis of hospital claims for fiscal year 2010 as reported in MedPAC's comment letter dated June 17, 2011. Even with these adjustments, however, payments to hospitals will not be budget neutral to what they would have been without the adoption of MS-DRGs and cost-based weights in fiscal year 2008. This is because CMS lacks authority under current law to recover overpayments that occurred after fiscal year 2009 due to hospitals' changes in documentation coding. As we discussed in last year's comment letter and recommended again in our March 2012 Report to the Congress, we believe that the Congress should change the law to require CMS to gradually recover all past overpayments due to documentation and coding changes.

Hospital readmissions reduction program

The proposed rule asks for comments on your proposed implementation of section 1886 (q) of PPACA, the hospital readmissions reduction program. The program is designed to reduce

payments to hospitals that have excess readmissions and encourage them to reduce their readmission rates. Doing so requires a measure of readmissions, a method for determining excess readmissions, and a formula for computing penalties for hospitals with excess readmissions.

The Commission recommended implementation of a readmissions policy because avoidable readmissions represent poor outcomes for beneficiaries and unnecessary costs to the Medicare program (Medicare Payment Advisory Commission 2008). Giving hospitals an incentive to reduce avoidable readmissions should not only result in better care for beneficiaries and lower costs to the program but also encourage better coordination of care across payment silos. To facilitate hospitals' ability to reduce readmissions, CMS should make post-acute care providers' hospital readmission rates publicly available so hospitals can work with post-acute providers with high readmission rates to improve care throughout the episode.

The initial policy outlined in the proposed rule will create incentives for hospitals to improve coordination of care and reduce readmissions. The initial average magnitude of the penalty is 0.3 percent of operating payments. Each hospital's risk is limited in fiscal year 2013 because its total penalty is capped at 1 percent of inpatient base operating payments.

While the current policy is adequate in the short term, over the longer term, the mechanics of the policy may need to be revised. Specifically in this letter we discuss the following aspects of the readmission policy:

- How the current readmission penalty is computed in general
- Refining the methods used to determine "excess" readmissions.
- Two long-term problems with how the magnitude of the penalty is computed
    a. The penalty formula should eventually change so that the penalty is consistently proportionate to the cost of readmissions above the expected level.
    b. The penalty formula should eventually change so national improvements in readmission rates (i.e., lower average rates for individual conditions) do not trigger higher penalties.

Under current law, CMS has limited discretion, and addressing some of these issues may require legislation. Other steps may be necessary in future years as hospitals' readmission rates and strategies to reduce readmission rates evolve. For example, there may be new measures of readmissions that do a better job of excluding planned or unrelated readmissions.[1]

How the current readmission penalty is computed

The current readmission penalty formula is complex, but in essence the penalty is computed as the product of a hospitals adjusted cost of excess readmissions and a multiplier. Usually, excess readmissions would be computed as the difference between the hospital's actual observed readmissions and its expected number of readmissions, given the riskiness of the hospital's patient population. However, the CMS method for computing "excess" readmissions compares the hospital's adjusted number of readmissions to the expected number. The adjusted number is a blend of the hospital's actual observed readmissions for a condition and the national mean readmission rate for the condition. This is discussed further below.

The proposed readmission penalty formula can be simplified as follows:

Excess Cost		*Penalty multiplier*
(Payment rate for the initial DRG) X (adjusted number of excess readmissions)	X	1 / national readmission rate for the condition

Note: The derivation of this simplified formula is shown in the technical appendix to this letter.

For example, if a hospital had 100 admissions in a DRG, the expected number of readmissions was 20 (because the national average readmission rate in the DRG was .20), and the hospital's adjusted number of readmissions was 22, then the number of excess readmissions would be 2. If the base DRG payment per initial admission was $10,000, the estimated cost of excess readmissions would be $20,000. The second box can be viewed as a multiplier that increases the incentive to reduce readmissions. For example, given a national readmission rate for this condition of .20 the

[1] Under current law CMS is limited to using NQF endorsed measures for the three conditions subject to readmission penalties.

multiplier would be 5 (1/.20). So the penalty would be equivalent to 5 times the cost of the adjusted excess readmissions, or $100,000 in this example. In general, the formula produces penalties that are much higher than Medicare payments for the excess readmissions; this creates a strong incentive to reduce readmissions. However, the full impact of the formula is limited because the penalty for each hospital is capped under current law at 1 percent of base inpatient operating payments in 2013, 2 percent in 2014, and 3 percent in 2015. The detailed computation of the penalty is shown in the appendix below.

Refining the methods used to determine "excess" readmissions

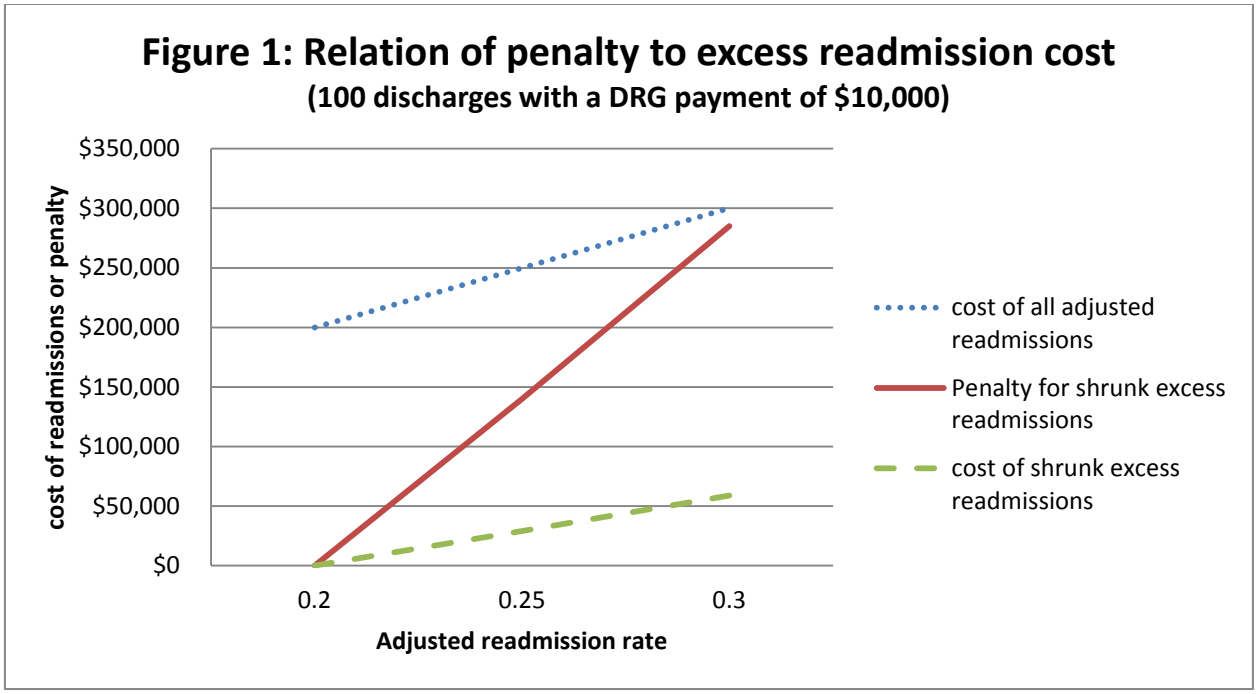
In practice, the number of excess readmissions will be underestimated due to the process of "shrinking" a hospital's observed readmissions toward the national mean value to derive its adjusted number of readmissions. In the rule, after the data is shrunk toward the national mean, the computed number of readmissions is referred to as "predicted" readmissions; for clarity, we use the term "adjusted" readmissions rather than "predicted" readmissions to refer to shrunk readmission numbers because the term "predicted" can be confusing given that it is based on the hospital's actual performance. Using our terminology, excess readmissions are computed by comparing the adjusted actual readmissions and the expected level of readmissions for the types of patients admitted to the hospital. The shrinkage works by blending the hospital's own actual readmission experience with the average experience in the country. The smaller the hospital, the less the blend uses its actual experience and the more it uses the national average. CMS has previously described the effect of this method on mortality rates: "In essence, the [adjusted] mortality rate for a hospital with a small number of cases is moved toward the overall U.S. national mortality rate for all hospitals" (CMS, 2011). The net result of this method is to underestimate any real deviations from the mean that do exist (Silber et al. 2010). For example, a small hospital with 25 pneumonia admissions (over three years) will have its excess readmission rate shrunk by roughly 75 percent, a hospital with 100 pneumonia admissions will have its excess rate shrunk by roughly 50 percent, a hospital with 500 pneumonia admissions would have its excess rate shrunk by roughly 15 percent, with declining reductions as sample size increases. The shrinkage reduces the chance that a provider will be penalized for random variation in its readmission rate due to having a small number of cases; but shrinkage also weakens the incentive

to reduce readmissions. The commission will evaluate alternatives to the current method which could include looking at more conditions over several years which would increase the sample size, reduce random variation, and reduce the need to shrink estimates toward the national mean.

Two long-term problems with the penalty multiplier

After the shrunken level of excess readmissions is computed and the cost of those excess readmissions is computed (based on costs of related initial admissions), those shrunk costs are multiplied by what we refer to as the "penalty multiplier". In general, the penalty multiplier for a condition is the reciprocal of its national readmission rate—the share of admissions that end up being readmissions. This creates two problems. First, penalty multipliers vary across conditions, with larger penalty multipliers for conditions with smaller readmission rates. Second, if the hospital industry improves its performance for a condition from an average readmission rate of 20 percent to an average rate of 10 percent, for example, the penalties would double due to the multiplier growing from 5 to 10. Because the current policy only includes three conditions with relatively high readmission rates and the penalty is capped at 1 percent in 2013 and 2 percent in 2014, no change is needed immediately. However, before conditions with low readmission rates are included in the policy and as the industry lowers the national average readmission rates a change to the formula will be needed.

In Figure 1, we show how the penalty grows with a hospital's readmissions for a condition with an average readmission rate of 20 percent. The figure shows that the hospital would have no penalty, or a very modest penalty, for shrunk readmission rates close to the national mean of 20 percent. However, the hospital's penalty grows much more rapidly than the cost of its shrunk excess readmissions as its readmission rate grows toward 30 percent. At all levels of excess readmissions, the penalties exceed the shrunk costs of the excess readmissions by a factor of about 5. While the current multiplier may be reasonable to generate a material incentive to change behavior and offset the effect of shrinkage, the formula will need to change as more conditions are added to the policy and as readmission rates decline.



Note: In the proposal and this figure, the cost of a readmission is estimated to be equal to the cost of an initial admission. This is a reasonable assumption given the clinical conditions currently included in the readmission measure, but this assumption would fail if the measure is expanded to include surgical conditions, such as CABG, or device dependent conditions, such as hip replacements.

Readmission policy summary

The current penalty creates a substantial incentive to reduce readmissions and is capped to limit the exposure of hospitals, therefore it should continue at least until the law can be revised. Over the longer term, policy makers should make the penalty more consistently proportionate to the cost of excess readmissions. Making penalties proportionate to the cost of excess readmissions would treat different types of admissions equally and prevent penalties from increasing (due to a higher multiplier) if the hospital industry succeeds in lowering national average readmission rates. Future analyses should evaluate both the issues of shrinking "excess" readmission computations toward the national mean and appropriate changes to the current penalty multiplier.

Hospital inpatient quality reporting (IQR)

Under the Hospital Inpatient Quality Reporting (IQR) program, CMS is required to reduce the annual market basket update by 2 percentage points for any IPPS hospital that fails to successfully report on a specified set of quality measures. The FY 2013 IPPS proposed rule would change the

list of performance measures that would be used to determine hospital payment updates in FY 2015 and subsequent years.

For the FY 2015 update, CMS proposes to remove 17 measures from the IQR program, of which 16 are claims-based and one is based on data abstracted from a sample of patient medical charts. The 16 claims-based measures include eight hospital-acquired condition (HAC) measures, three in-hospital mortality measures developed by the Agency for Healthcare Research and Quality (AHRQ), and five patient safety indicators (PSIs) from AHRQ. The chart-based measure proposed for elimination—the only one that would save hospitals some administrative costs—is a surgical care quality measure that overlaps with another measure that would stay.

CMS also proposes to add three claims-based measures and one chart-based measure for the FY 2015 and subsequent payment update determinations. These measures include a hospital-wide readmission rate, complication and readmission rates specific to hip and knee replacement surgeries, and the hospital's percentage of elective deliveries prior to 39 completed weeks gestation. Like other chart-based measures used for the IQR program, the elective delivery measure is based on medical records for patients, not solely Medicare patients. Lastly, CMS proposes to add the 3-question Care Transitions Measure (CTM-3) to the existing HCAHPS survey, which technically would not count as an additional measure since the CTM-3 questions would be added to the existing HCAHPS survey instrument.

If the proposed changes are adopted, the IQR program in FY 2015 and subsequent years would include 59 measures, compared to the 76 measures for FY2015 and after that were proposed in the FY 2012 final rule. For the FY 2016 payment update, CMS proposes to add one additional structural measure to the IQR program—the use of a safe surgery checklist—which CMS has adopted already for the hospital outpatient and ASC quality reporting programs. Adoption of this proposal would increase the total number of measures in the IQR program in FY 2016 to 60.

Table 1 shows the changes in the number of measures by data source used in the IQR program since its implementation.

Table 1. Number of inpatient quality reporting program measures by data source, FY 2004-2016

Measures required for payment update determination in FY:	Number of measures by data source					
	Total	Chart-abstracted	Claims-based	Patient survey (HCAHPS)	Structural attestation	NHSN reporting
2004–2006	10	10	0	0	0	0
2007	21	21	0	0	0	0
2008	27	24	2	1	0	0
2009	30	26	3	1	0	0
2010	44	26	16	1	1	0
2011	45	27	14	1	3	0
2012	55	27	24	1	3	0
2013	57	28	24	1	3	1
2014	56	22	25	1	4	4
2015 (FY 2012 final rule)	76	36	29	1	4	6
2015 (FY 2013 NPRM)	59	32	16	1	4	6
2016 (FY 2013 NPRM)	60	32	16	1	5	6

Note: FY (fiscal year), HAIs (healthcare-associated infections), HCAHPS (Hospital Consumer Assessment of Healthcare Providers and Systems), NHSN (National Healthcare Safety Network), NPRM (notice of proposed rule-making).

Source: FY 2013 IPPS NPRM (display): 705-708; FY 2012 IPPS final rule (76 *Federal Register* 51636-51637).

Reducing reporting burdens is appropriate

In our comment letter on the FY 2012 IPPS proposed rule, we expressed concern about the steadily increasing number of measures required by the Hospital IQR program. We were particularly concerned about the rising numbers of clinical process measures because they require hospitals to devote substantial resources to clinical record data abstraction, and a growing body of literature suggests that such measures may have little or no association with reducing mortality or readmission rates.[2] These findings suggest that the benefits from continuing to measure hospitals' adherence these processes may be outweighed by the costs of implementing the measures, and may deflect hospitals' attention and resources from more productive quality improvement activities. Therefore we are encouraged by and generally support CMS's proposal to reduce the number of measures used for the IQR program, especially the continued suspension of data collection for four chart-based clinical process measures. Guided by the research literature, CMS

[2] See also MedPAC comment letter on proposed rule for Medicare Hospital Value-Based Purchasing Program, March 4, 2011.

could annually evaluate the IQR program's process measures based on whether each significantly associated with differences in outcomes, such as mortality and readmission rates. We also urge CMS to continue closely monitoring hospitals' aggregate performance levels on the process measures and propose deleting or suspending data collection for "topped-out" measures where hospitals' performance scores are so high among the vast majority of hospitals that there is little room for improvement.

We encourage retaining a focus on outcomes measures

Regarding CMS's proposal to drop eight claims-based hospital-acquired condition (HAC) measures, we appreciate CMS agreeing with our suggestion in our comment letter last year to delete two of the HAC measures that would duplicate National Healthcare Safety Network (NHSN) measures—central line-associated bloodstream infection (CLABSI) rates and catheter-associated urinary tract infection (CAUTI) rates. We are concerned, however, about the agency's proposal to drop several outcomes measures and rely solely on three condition-specific 30-day mortality rate measures. Condition specific mortality metrics could be affected by changes in coding (Lindenauer et al. 2012). Further analysis should be undertaken to examine other outcomes metrics that are of primary importance to patients and that can be measured with reasonable accuracy.

Long-term care hospital quality reporting (LTCHQR)

As with the IQR, CMS is required in fiscal year 2014 and each subsequent year to reduce the annual market basket update by 2 percentage points for any long-term care hospital (LTCH) that fails to successfully report on a specified set of quality measures.[3] In the FY 2012 LTCH PPS final rule, CMS adopted three quality measures for the pay-for-reporting program: urinary catheter-associated urinary tract infections, central line catheter-associated bloodstream infections, and new or worsened pressure ulcers. Data on urinary tract infections and central line infections will be collected through the National Healthcare Safety Network (NHSN), an internet-based surveillance system maintained by the Centers for Disease Control and Prevention. The data elements

[3] The Patient Protection and Affordable Care Act specifies that the LTCHQR program be implemented beginning in "rate year" (RY) 2014. However, because the annual update to the LTCH PPS occurs on October 1, the Commission follows CMS convention of using the term "fiscal year" (FY) rather than RY when discussing annual updates to LTCH policies.

necessary to calculate the pressure ulcer measure will be collected using the LTCH Continuity Assessment Record & Evaluation (CARE) data set, which incorporates data items contained in other data sets such as the Minimum Data Set 3.0. Data collection for these measures will begin on October 1, 2012.

The FY 2013 LTCH proposed rule would add five new measures for FY 2016 and beyond. The CARE tool would be used to collect necessary data for four of the proposed measures: (1) percent of patients assessed and appropriately given influenza vaccine; (2) percent of patients assessed and appropriately given pneumococcal vaccine; (3) ventilator-acquired pneumonia prevention bundled process measure; and (4) restraint rate per 1,000 patient days. Data for the fifth proposed measure—influenza coverage among healthcare personnel—would be collected through the NHSN.

Potential for uniform assessment in PAC settings is promising

The Commission is encouraged by CMS's efforts to implement the LTCH CARE data set, which is a subset of a uniform assessment instrument designed to collect data on patients' medical, functional, and cognitive status at admission and discharge across the post-acute care spectrum. Although, at present, CMS intends to use this subset of the CARE tool only in LTCHs, the recently completed Post-Acute Care Payment Reform Demonstration tested the CARE tool and found that it performed reliably in LTCHs, skilled nursing facilities, and inpatient rehabilitation facilities. The results were consistent with those achieved in earlier efforts testing site-specific assessment instruments, suggesting that a uniform assessment tool such as the CARE tool could be used to replace them. A common patient assessment tool would allow us to compare costs, quality of care, and patient outcomes across all post-acute settings, while controlling for differences in patient condition and other characteristics that affect the content and cost of care or the patient's capacity to benefit from care. Those comparisons, in turn, would allow us to know what Medicare is buying in each setting and assess the value of the services furnished.

Although it was not a primary focus, the CARE demonstration also tested the use of a subset of the CARE data set at discharge from the acute care hospital. All acute care hospitals assess patients before discharge, at least informally, to determine whether and what kind of post-acute care or

other follow-up care is needed. Increasingly, acute care hospitals are developing and using assessment tools to make these determinations. However, there is little standardization across hospitals and no requirement for such data to be reported to CMS or consistently to PAC providers. Under CMS's Bundled Payments Initiative, participating acute care hospitals will collect and report a standard set of patient assessment measures at hospital discharge. The measure set will be developed collaboratively with demonstration participants and aligned as much as possible with those already being used by CMS in other programs. The Commission is hopeful that the demonstration will identify a set of hospital discharge measures that will provide sufficient information to evaluate patients' current and expected care needs and help determine which post-acute services can meet those needs.

Inpatient psychiatric facilities quality reporting (IPFQR)

CMS is required in fiscal year 2014 and each subsequent year to reduce the annual market basket update by 2 percentage points for any inpatient psychiatric facility (IPF) that fails to successfully report on a specified set of quality measures.[4] The May 11, 2012 rule proposes policies for the IPFQR program, as well as six quality measures. CMS would require IPFs to submit aggregate—rather than patient-level—data needed to calculate the quality measures. The aggregate data would be collected from all inpatients, regardless of payer.

The Commission recognizes the considerable burden that data collection can pose for providers, particularly those that are not accustomed to reporting patient-level data. However, we are concerned that the aggregate all-payer data submitted to CMS would hinder future analyses of the relationship between Medicare costs and quality in IPFs. Ideally, Medicare's payments to IPFs would be set at a level that adequately covers the costs of efficient providers—those maintaining relatively low costs for their Medicare patients while furnishing good quality care. Properly evaluating providers' efficiency in serving Medicare patients thus requires information about the cost and quality of care furnished to *Medicare* patients. We encourage CMS to examine the feasibility of requiring IPFs to submit the necessary aggregated data for Medicare patients only in

[4] The Patient Protection and Affordable Care Act specifies that the IPFQR program be implemented beginning in "rate year" (RY) 2014. Beginning in 2012, the annual update to the IPF PPS will occur on October 1. Therefore, the Commission will follow CMS convention of using the term "fiscal year" (FY) rather than RY when discussing annual updates to IPF policies.

addition to the aggregated data for all patients (for example, we recognize that there may be statistical issues due to small samples sizes for Medicare-only measures). CMS also could explore the possibility of adding Medicare-specific measures to the IPFQR program if research findings indicate that the care processes or outcomes for Medicare patients are markedly different from other patients.

Hospital Value-Based Purchasing (VBP) Program

As mandated by PPACA, CMS will implement a hospital value-based purchasing (VBP) program in FY 2013. For the FY 2013 VBP program, CMS will use 13 quality measures, including 12 clinical process of care measures and a patient experience measure based on HCAHPS, to calculate participating hospitals' performance scores. The measures are categorized into two domains (clinical process of care and patient experience of care); in calculating a hospital's score, the measure domains will be weighted 70 percent for the process measures and 30 percent for the patient experience measure.

For FY 2014, CMS will add one clinical process of care measure (for a total of 13) and three outcome measures: 30-day mortality rates for AMI, heart failure, and pneumonia. Although CMS also previously adopted 8 HAC measures, 2 AHRQ composite measures, and a Medicare spending per beneficiary measure for the FY 2014 program, the agency has suspended the effective date of these measures, and these measures will not be included in the FY 2014 hospital VBP program. The three mortality measures alone will comprise a new outcome measure domain, and the resulting three domains in FY 2014 will be weighted as follows: Clinical Process of Care—45 percent; Patient Experience of Care—30 percent; Outcome—25 percent.

For FY 2016, CMS proposes a major revision to the measure domain structure, which could significantly change the relative weights of the domains in calculating hospitals' performance scores. CMS proposes six domains for FY 2016 and after:

- Clinical Care
- Person- and Caregiver-Centered Experience and Outcomes

- Safety
- Efficiency and Cost Reduction
- Care Coordination
- Community/Population Health

The most significant impact of this proposed change is that the outcome measures in the Outcome domain—three 30-day mortality rates, composite PSI measure, and the CLABSI measure—would no longer be in a single Outcomes domain in FY 2016; instead the 30-day mortality measures would be grouped with the clinical process measures under the Clinical Care domain and the PSI and CLABSI measures would be grouped in the Safety domain. CMS solicits comments on the proposed domains for FY 2016.

Retain a focus on outcomes metrics in the VBP program

The Commission is concerned about the potential for the proposed FY 2016 measure domain structure to dilute the impact of hospitals' performance on outcome measures such as mortality and hospital-acquired infection rates. The proposed structure would disperse outcome measures across multiple domains and potentially reduce the weight of each domain. We would prefer that the outcome measures continue to be grouped together into one domain and that this domain be given a relatively greater weight than the others in calculating VBP performance scores, to reflect the relatively greater importance of outcomes for patients and taxpayers who fund the program.

Proposed changes to the hospital wage index for acute care hospitals

The FY 2013 IPPS Proposed Rule requests comments on a variety of detailed hospital wage index issues. We wish to reiterate our recommendations on wage index reform, included in the Commission's 2007 Report to Congress, which were to repeal the existing hospital wage index statute, including reclassification and exceptions, and give the Secretary the authority to establish a new wage index system. Our 2007 recommendations stated that the new hospital compensation index should be established so that it:

- Uses compensation data from all employers together with hospital industry-specific occupational weights;

- Is adjusted for geographic differences in the ratio of benefits to wages;
- Is adjusted at the county level and smoothes large differences between counties; and
- Is implemented so that large changes in wage index values are phased in over a transition period.

The Institute of Medicine (IOM) reached a similar conclusion in its recent report which recommends a new wage index system based on Bureau of Labor Statistics data with a method for smoothing differences in wage indexes across adjacent payment areas. The new system is intended to replace the system of geographic reclassification and exceptions that is currently in place.[5]

Issues in the current wage index system

The flaws of the existing hospital wage index system continue to erode the accuracy of Medicare's hospital payment system and remain evident in the FY 2013 IPPS Proposed Rule. For example, according to data in the FY 2013 Proposed Rule, over one-quarter of IPPS hospitals will receive either a reclassification to a different geographic area with a higher wage index or a specific exception to their original FY 2013 geographic wage index. Among the proposed wage index reclassifications or exceptions granted to hospitals for FY 2013, the rural floor exception triggered in the state of Massachusetts will have a large impact on hospital payments. Beginning in FY 2012, the conversion of Nantucket Cottage Hospital (a rural island hospital with 15 inpatient beds serving about 150 Medicare inpatients per year) from a critical access hospital to an IPPS hospital triggered the rural floor wage index exception for the 60 urban hospitals in the state of Massachusetts. The rural floor increases wage indexes for the urban hospitals from an average of 1.16 in FY 2011 to 1.30 in FY 2013. As a result of this change in one small hospital's status, and the subsequent change in the wage index, payment rates for urban hospitals in Massachusetts will be about $183 million higher than they would have been in the absence of the rural floor. These extra payments will be made budget neutral at the national level, and therefore all hospitals—including all other rural hospitals—will absorb the financial loss. This is a clear example of how the current system of exceptions is not an equitable method of adjusting for market differences in

[5] Institute of Medicine, 2011. *Geographic Adjustment in Medicare Payment: Phase I: Improving Accuracy*. The National Academy Press, Washington DC.

input prices. We concur with the findings from the separate analyses by the IOM and Accumen (the CMS contractor) that a new wage index system is needed.

Issues in the proposed wage index system

However, the proposal for changing the wage index system described in section IX (B), "*Plan to reform the Medicare hospital wage index"* is flawed and rests upon a misunderstanding of the role of the wage index and a mischaracterization of the IOM and MedPAC proposals. The basic principles behind the wage index as expressed by the IOM committee on geographic adjustment in Medicare payment include:

- Geographic adjustment for input price differences is intended to reflect the input prices faced by providers, not the costs incurred by providers.
- Geographic adjustment, where possible, should reflect the area-wide input prices for labor faced by all employers operating in the same local market and should not be drawn exclusively from data on the prices paid by hospitals or health care practitioners.
  (Geographic adjustment in Medicare payment: Phase I Improving accuracy, IOM June 2011)

However, the proposed rule endorses a system that contradicts both of these principles. First, it cites as a justification for the new system that it would "…more closely reflect hospitals' actual wages than the current CBSA-based system or the MedPAC proposal." But this is not the correct measure for the accuracy of a geographic adjustment system as pointed out by IOM's first principle. (If it were, it could be achieved simply by reporting the hospital's wages and dividing by the national average.) The proposed system also only uses data from hospital employees. This contradicts IOM's second principle.

Using only data from zip codes where a hospital's employees live creates great circularity risk. Circularity is where poorer hospitals cannot afford to pay higher wages; and therefore, the average wage earned by people living in the zip code areas where their employees live is lower. This risk is higher in the CMS proposal because it uses a narrow pool of data; data is purely from hospital

wages for the set of zip codes or census tracts where a single hospital's workers live. For example, in a town with one hospital, that hospital will essentially be setting its own wage index. The MedPAC and IOM proposals draw on a bigger pool of workers (all workers in an entire MSA) and are therefore less influenced by an individual hospital's wages.

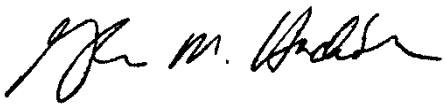
CMS should publish simulated data on a hospital-by-hospital basis to make sure that hospitals in the same city would not have materially different wage indexes under the proposed wage index system. This is a concern because two hospitals in the same city may draw employees from different sets of zip codes or have different types of employees within a category of employees. For example, under the current wage index system the public use files indicate that the occupational mix adjusted wage for a hospital in a wealthier neighborhood in Chicago is over 20 percent higher than for hospitals 5 miles away that serve poorer neighborhoods. The difference in wages could reflect differences of skill sets within labor categories (office workers may differ in their skill sets) and differences in hospitals' financial resources to pay wages to attract workers. It would be prudent to make sure that the proposed methodology does not result in different wage indexes for neighboring hospitals that are clearly in the same general market but may have different levels of financial resources.

Finally, it should be clear that while the proposed hospital-specific wage index may appear to address some issues, it is not consistent with how hospital labor markets work. Hospitals pay workers based on where they work, not on where they live. Hospital contracts with nurses set wages based on where the nurses work, not the zip code of nurses homes. For example, the nurse who commutes one hour into an urban hospital from a lower-wage rural area will get the same wage as a coworker who lives in the higher-wage city and commutes 10 minutes to the same job. In contrast, a nurse who stays in the lower-wage rural community to avoid the long commute will receive a lower wage. CMS is proposing a wage index that ignores well understood relationships between wage rates and commuting costs and implicitly assumes that workers will demand the same wage from a job with an hour commute as a job with a 10 minute commute. This is at odds with the wage index data collected from hospitals. It is also counterintuitive that a hospital's wage index might change as a result of employees moving without their wages changing.

In addition to these foundational flaws, there are also errors in reporting the properties of the three proposals (CMS's, IOM's and MedPAC's). Those errors will be confusing to readers of the proposed rule and make it difficult to judge the merits of the proposals. For example, contrary to the claims in the table on page FR28119, no occupational mix adjustment is necessary under MedPAC's proposal or the IOM proposal and we explicitly recommended using our proposed hospital compensation index in the home health and skilled nursing facility prospective payment systems (Medicare Payment Advisory Commission 2007). CMS should carefully review its statements in the final rule to assure they are accurate and rethink its approach to replacing the wage index system for all providers.

If you have questions about any of the issues raised in our comments, please contact Mark Miller, MedPAC's Executive Director, at (202) 220-3700.

Sincerely,



Glenn M. Hackbarth
Chairman

Appendix: Computation of readmission penalties

On page 4 of this comment letter, we present an intuitive explanation of the readmission penalty and a simplified formula. We show the penalty is roughly equivalent to:

Excess Cost		*Penalty multiplier*
(Payment rate for the initial DRG) X (adjusted number of excess readmissions)	X	1 / national readmission rate for the condition

The purpose of this appendix is to show how the language in the law governing readmission penalties is roughly equivalent to the simplified formula above for cases where the initial admission has a DRG payment similar to the DRG payment for the readmission. We start with the criteria that readmission measures must meet under the law which requires that: "measures of such readmissions—

(I) have been endorsed by the entity with a contract under section 1890(a) [which refers to the National Quality Forum (NQF)];

(II) such endorsed measures have exclusions for readmissions that are unrelated to the prior discharge (such as planned readmission or transfer to another applicable hospital)."

CMS has chosen to use three condition-specific readmissions measures developed by Yale University and endorsed by the NQF. These measures meet criterion I, but have very limited exclusions. The measures incorporate a statistical technique that is intended to reduce the chance that a hospital will appear to have excess readmissions solely due to random variation. In effect, that technique blends the hospital's own actual readmission value with the national mean readmission value. The national mean value is given less weight as the number of cases in the hospital increases. This blending tends to dampen the effect of random variation in readmission rates that is due to small numbers of cases. But, as we show below, using this measure will have a large influence on the computation of the penalty.

The formula in the law can be written as follows:

The readmission penalty reduces a hospital's total base operating DRG payments (DRGP):

$$DRGP_A = DRGP_B \times A \qquad \text{equation 1}$$

Where:

$DRGP_A = Total$ base DRG payments after the readmission penalty
$DRGP_B = Total$ base DRG payments before the readmission penalty
$A = Readmission\ penalty$ adjustment factor

The readmission penalty is limited by law not to exceed 1 percent in fiscal year 2013, 2 percent in fiscal year 2014, and 3 percent in 2015 and later years:

$$A = greater\ of\ [R, Floor] \qquad \text{equation 2}$$

Floor = 0.99 2013
0.98 2014
0.97 2015 and after

The preliminary readmission penalty ratio (before applying the annual limit) is 1 minus the ratio of two amounts:

$$R = 1 - \frac{\sum_{i=1}^{c} DRGP_{Bi} \times n_i \times (X_i - 1)}{\sum_{j=1}^{k} DRGP_{B_j} \times n_j} \qquad \text{equation 3}$$

Where:

$R =$ penalty ratio (preliminary)
$c =$ number of conditions for which readmissions are assessed
$n_i =$ number of admissions for DRG_i
$k =$ total number of DRGs in hospital
$n_j =$ total number of admissions in DRG_j, and

$$X_i = greater\ of\ [1, \frac{n_{P_i}}{n_{E_i}}] \qquad \text{equation 4}$$

Where:

$X_i =$ excess readmission ratio
$n_{P_i} =$ adjusted actual number of readmissions for condition i (risk adjusted)
$n_{E_i} =$ expected number of readmissions for condition i (risk adjusted)

The adjusted actual (predicted in CMS terminology) number of readmissions is a function of the hospital's actual number of readmissions and the shrinkage factor. The shrinkage factor is the weight given to the hospital's actual risk adjusted rate of readmissions. One minus the shrinkage factor is the weight given to the national average readmission rate. Those weighted rates are averaged together to yield the adjusted actual rate. The shrinkage factor is small when the number of cases for the given condition at the hospital is small and when the variance within the hospital is large relative to the variance across hospitals (Mukamel et al. 2010).

Essentially, the numerator of the second term in equation 3: $\sum_{i=1}^{c} DRGP_{Bi} \times n_i \times (X_i - 1)$ is the amount of money being collected as the penalty for excess readmissions (putting aside the limit imposed by the floor). The penalty amount is the sum over the three measured conditions of the products of the DRG payment rates, the numbers of admissions in each DRG and the percentage of readmissions in each DRG that are calculated to be excess (that is, X_i the excess admission ratio, minus 1). Equation 3 converts the penalty amount to a share of the total DRG payments. Then equations 1and 2 take this share and apply it to all Medicare admissions in the hospital.

If we simplify the analysis for illustrative purposes and consider the case where there is only one condition (c = 1 not three as is currently the case) then the penalty for DRG_i is the payment rate for that DRG times the number of cases in that DRG times the excess readmission percentage:

$$Penalty_i = DRGP_{Bi} \times n_i \times (X_i - 1) \text{ equation 5}$$

For cases where the computed number of excess readmissions is positive, this is equivalent to:

$$P_i = DRGP_{Bi} \times n_i \times (\frac{n_{P_i}}{n_{E_i}} - 1) \text{ equation 5a}$$

$$\text{Or } P_i = DRGP_{Bi} \times (n_{P_i} - n_{E_i})(\frac{n_i}{n_{E_i}}) \text{ equation 5b}$$

The cost to the government of excess readmissions at a hospital for that DRG (including DRG payments only) would be the product of the average cost of a readmission stemming from initial admissions for that DRG, and the number of excess readmissions stemming from that DRG.

If we further simplify by assuming that the cost of the average readmission equals the cost of the initial admission, then the cost of 'excess' readmissions (C_i) where excess is defined as in the regulation, becomes;

$$C_i = DRGP_{Bi} \times (n_{P_i} - n_{E_i}) \quad \text{equation 6}$$

That is the cost of a readmission (assumed equal to the cost of the initial admission) times the adjusted actual (CMS refers to this as predicted) number of readmissions (n_{pi}) minus the expected number of readmissions (n_{Ei}).

Substituting the cost (Ci) into equation 5 for the term $DRGP_{Bi} \times (n_{P_i} - n_{E_i})$, *we have the following magnitude of a penalty* (equation 7).

$$P_i = C_i \left(\frac{n_i}{n_{E_i}}\right) \qquad \text{equation 7}$$

In other words, the penalty will exceed the cost by a factor equal to the number of admission in that DRG divided by the expected number of readmissions in that DRG. We refer to this multiplier as the "penalty multiplier." If the readmission rate (n_{Ei}) were 20 percent the penalty would be five times larger than the cost. If the national rate was 5 percent, the penalty would be 20 times higher than the cost of the shrunken estimate of excess readmissions in that DRG. The difference between the penalty and the cost will increase as conditions with smaller readmission rates are included in the policy.

We have made a simplifying assumption that the cost of a readmission equals the cost of the initial admission. If the cost of the average readmission were less, then the penalty would be even more than the cost. This could be the case for example, if the original DRG included an expensive implant. If the cost of the average readmission were more than the cost of the initial admission, then the penalty would exceed the cost by somewhat less, namely the ratio of the cost of the admission's DRG divided by the cost of the average readmission's DRG. This is one more reason why the formula needs to be reevaluated before expanding the policy to more types of admissions.

References

Lindenauer, P. K., T. Lagu, M. S. Shieh, et al. 2012. Association of diagnostic coding with trends in hospitalizations and mortality of patients with pneumonia, 2003-2009. *Journal of the American Medical Association* 307, no. 13 (April 4): 1405-1413.

Medicare Payment Advisory Commission. 2007. *Report to the Congress: Promoting greater efficiency in Medicare*. Washington, DC: MedPAC.

Medicare Payment Advisory Commission. 2008. *Report to the Congress: Reforming the delivery system*. Washington, DC: MedPAC.

Mukamel, D. B., L. G. Glance, A. W. Dick, et al. 2010. Measuring quality for public reporting of health provider quality: Making it meaningful to patients. *American Journal of Public Health* 100, no. 2 (February): 264-269.

Silber, J. H., P. R. Rosenbaum, T. J. Brachet, et al. 2010. The Hospital Compare mortality model and the volume-outcome relationship. *Health Services Research* 45, no. 5, pt 1 (October): 1148-1167.