

June 11, 2007

Leslie Norwalk, Acting Administrator
Centers for Medicare & Medicaid Services
Department of Health & Human Services
Attention: CMS-1533-P
Box 8011
Baltimore, Maryland 21244-1850

Re: file Code CMS-1533-P

Dear Ms Norwalk:

The Medicare Payment Advisory Commission (MedPAC) is pleased to submit these comments on CMS's proposed rule entitled *Medicare Program: Proposed Changes to the Hospital Inpatient Prospective Payment Systems and Fiscal Year 2008 Rates*, Federal Register Vol. 72, No. 85, pages 24680-25135 (May 3, 2007). We appreciate your staff's ongoing efforts to administer and improve the payment system for acute inpatient services, particularly considering the agency's competing demands.

In this letter, we comment on changes to the DRG classification system and relative weights, hospital-acquired conditions, hospital wage index, reporting of hospital quality data and value-based purchasing, disclosure of physician ownership in hospitals and patient safety measures, and payment for capital-related costs.

DRG reclassification

As we indicated in our letters in response to last year's proposed rule (dated April 19 and June 12, 2006), we are pleased that CMS has been actively considering three of the four payment refinements to the PPS that MedPAC recommended in our March 2005 report to Congress on physician-owned specialty hospitals. The CMS-funded development of Medicare severity DRGs (MS-DRGs) by 3M Health Information Systems and studies by RAND, Inc. and RTI International, Inc. have identified important short- and long-term steps that CMS can take to improve payment accuracy in the PPS. Further opportunities for improvement may become apparent after the RAND study is completed later this year. The one change that CMS has not yet considered (outlier financing) would require new legislation.

As we discuss further below, we have several specific comments and suggestions that are based on our extensive analysis of the MS-DRGs, methods for calculating cost-based

weights, and other issues discussed in the proposed rule. For fiscal year 2008, we recommend that you:

- Adopt MS-DRGs, as proposed;
- Make two refinements to your proposed methods for estimating cost-based weights for MS-DRGs:
 - As a short-term step to ameliorate the effects of charge compression on the weights, adopt the RTI-recommended methods for calculating national revenue center cost to charge ratios (CCRs), for drugs, supplies, radiology, emergency room, and blood products. This would increase the number of revenue centers—groups of hospital departments in which hospitals charge patients for services—from 13 to 19;
 - Standardize the Medicare charges and costs used in calculating national revenue center CCRs to adjust for differences in local wage levels and the extent of hospitals’ teaching activity and service to low-income patients. This change would be consistent with your use of national standardized charges by revenue center for each MS-DRG in the other half of the cost-weight calculation;
- Terminate the transition to cost-based weights—adopting 100 percent cost-based weights, or adopt a two-year transition period for MS-DRGs that coincides with the remainder of the current transition period for implementing cost-based weights. These actions would help to balance the payment impacts of implementing severity refinements and cost-based weights; and,
- Adopt an adjustment that is between -1.6 and -1.8 percent per year (for at least the two years following adoption of MS-DRGs) to the standardized amounts to offset the expected impact of improvements in documentation and reporting of diagnoses.

Some alternative ways of implementing the last two items are discussed below. These actions are needed to improve payment accuracy, smooth the payment impacts associated with the adoption of major payment refinements, and prevent unwarranted overpayments to hospitals that otherwise would occur due to improvements in case-mix reporting.

Although adoption of MS-DRGs and our recommended refinements to the cost weights are important steps toward achieving higher levels of payment accuracy, CMS should continue to pursue further payment refinements. Our analyses show that substantial differences in relative profitability would remain, on average, for cases grouped in many MS-DRGs, even if payments were based on the refined cost-based weights described above. Many of these differences in profitability might be reduced by selectively adopting some of the grouping logic refinements found in all-patient refined DRGs (APR-DRGs) that take into account interactions among secondary diagnoses and between combinations of secondary diagnoses and certain principal diagnoses. Our findings also suggest that adopting cost-based, hospital-specific relative value (HSRV) weights would result in substantial further improvements in payment accuracy.

In addition, CMS needs to make a sustained effort to improve the quality and specificity of the information that hospitals submit on their annual cost reports. To meet this goal, CMS

will have to change the cost reporting form and instructions, and step up efforts to inform providers and monitor the information they furnish. We are pleased that you are undertaking a comprehensive review of the cost report, including the schedule for collecting data on uncompensated care. This effort will provide an opportunity to develop longer-term solutions to important problems raised in the RTI report, such as charge compression, as well as other long-standing issues. We will be pleased to assist you in this effort and you also can take advantage of significant opportunities for cooperation with the hospital industry. These longer-term improvements are needed to reduce the extent to which Medicare encourages community hospitals to allocate capital to profitable services, such as cardiology, and stimulates the formation of specialty hospitals that often focus on providing profitable services and tend to care for low-severity patients.

MS-DRGs and cost-based weights

We commend CMS for its commitment to improve the accuracy of Medicare payments for hospital acute inpatient services. The CMS staff has made significant progress toward achieving this goal with the development of MS-DRGs coupled with cost-based weights. Our analyses show that using MS-DRGs will result in a substantial improvement in payment accuracy. We also find that adoption of the refinements developed in the RTI study that reduce the effects of charge compression on CMS's cost-based weights would yield additional gains in payment accuracy, especially for certain MS-DRGs. (Charge compression results from hospitals' use of lower markups for high cost items or services and higher markups for low cost items or services within a single hospital department, such as central supply or radiology. Under these circumstances, when CMS applies a national cost to charge ratio for the department to all related charges to estimate costs for the department's services used in each MS-DRG, costs for MS-DRGs that use the high cost items are understated, while costs for MS-DRGs that use low-cost items are overstated.)

We have taken several steps to evaluate the proposed MS-DRGs. First, we examined their face validity. An effective patient classification system—in the context of a payment system—should group together clinically similar cases that have similar costs. In addition, relative weights calculated for the classification groups (MS-DRGs) generally should exhibit a consistent hierarchy of values across levels of severity of illness for different conditions. So one issue is how much costs vary around the mean cost per case for cases grouped within MS-DRGs. Another issue is whether relative weights for different severity levels show the expected hierarchy across most clinical conditions. For comparison, we also looked at cost variation and relationships among relative weights for cases grouped in the current DRGs and in the severity categories of the all-patient refined DRGs (APR-DRGs).

We also examined how the MS-DRGs would affect payment accuracy in the PPS, measured by how closely payments would track costs for different types of cases. Again, we compared payment accuracy under the MS-DRGs with the results under the current DRGs and the severity categories of the APR-DRGs.

In addition, we wanted to examine alternative methods for constructing relative weights. Although CMS did not propose any substantial changes to the current method for calculating cost-based weights, it did ask for comments on the refinements that RTI

developed to address charge compression. We also wanted to see how cost-based weights calculated by the proposed CMS method, with and without the RTI refinements, would compare with HSRV weights calculated by the more detailed methods that we recommended in our March 2005 report to Congress on physician-owned specialty hospitals.

Data set and methods—To provide the data needed for these comparisons, we developed an updated data set like the one we used in our report on physician-owned specialty hospitals. We started with the latest annual Medicare cost report for each PPS hospital that was available in January 2007. For each cost report, we then matched all Medicare inpatient claims from the fiscal year 2003-2005 standard analytic files (SAF) that had discharge dates within the hospital's cost reporting period. After editing—using edits similar to those used by CMS—the data set included 3,336 IPPS hospitals with 11.2 million claims falling mostly in fiscal years 2004 and 2005.

To estimate the cost of each service reported on a claim, we took the charges for each detailed revenue code and multiplied them by the cost to charge ratio (CCR) for the corresponding revenue center from the hospital's cost report. Then we summed the costs of all services on the claim to get the total cost for the patient's hospital stay. To put the data for claims from different fiscal years on a common footing, we inflated the costs and charges for all claims to correspond to the mid-point of fiscal year 2005.

In making these calculations, we used CCRs for most revenue centers that were based on the corresponding costs and charges hospitals reported in their cost reports. To improve the accuracy of our cost estimates, we incorporated the refinements to reduce charge compression developed in the RTI study for drugs, supplies, and radiology. For each of these target revenue centers, we estimated hospital-specific CCRs for two or more component groups of services using the regression coefficients from the RTI study along with the appropriate version of each hospital's overall CCR for all ancillary services (calculated from our data set). We then applied the CCRs to the charges for the corresponding detailed revenue codes to estimate the costs for the component services on each claim.

The RTI regression estimates, which were based on a similar data set, demonstrate that hospitals tend to use significantly different markups for certain services within the drugs, supplies, and radiology revenue centers. For example, hospitals tend to use higher markups for IV solutions than for other drugs charged to patients. Similarly, hospitals tend to use lower markups for devices and implants than for other supplies. Consequently, using the average CCRs calculated from each hospital's cost report for each of these revenue centers would result in a substantial overstatement of costs for IV solutions and understatement of costs for other drugs. Costs would be substantially understated for devices and implants, but overstated for all other supplies. Costs for CAT scans and MRI procedures also would be overstated, while costs for other radiology procedures would be understated. These errors would bias estimated costs upward or downward for different types of patients, depending on the mix of services that they typically use.

We used the inflated charges and cost estimates from the claims and the charges and costs from the hospitals' cost reports to calculate several different sets of cost-based relative weights. We developed cost-based relative weights for DRGs using the same methods that CMS currently uses (FY 2007), but incorporating the minor changes CMS proposed for FY 2008. We estimated three sets of cost-based weights for MS-DRGs. For clarity, we call them:

- **MedPAC refined**—a version of MedPAC's recommended cost-based HSRV weights updated to incorporate the RTI-recommended refinements to reduce charge compression for drugs, supplies, and radiology,
- **CMS proposed**—the cost-based weights that CMS developed using 13 revenue centers as proposed for fiscal year 2008, and
- **CMS refined**—a version of the CMS proposed method that incorporates the RTI-recommended refinements that split drugs (2 centers), supplies (2 centers), and radiology (3 centers); refinements also include breaking out ER and blood and blood processing from "other services", for a total of 19 revenue centers. These weights also differ from the CMS proposed weights in that the refined version uses national CCRs for the 19 revenue centers that are based on national sums of standardized Medicare charges and costs. In contrast, the national CCRs in the CMS proposed weights are based on Medicare charges and costs that have not been standardized to remove the effects of local differences in wage levels, each hospital's teaching activity, and the extent to which it serves low-income patients.

We also calculated cost-based HSRV weights for the severity classes of APR-DRGs, using our detailed case-level cost estimates that incorporate the RTI refinements.

We used these weights and corresponding case-mix indexes along with MedPAC's PPS payment model with FY 2008 payment policies to calculate what payments would have been under current policy and alternative combinations of MS-DRGs and the different sets of weights. As described below, we used the resulting payments and the estimated cost for each case to calculate measures of payment accuracy. We also used hospital-level payments in examining the payment impact of adopting MS-DRGs and 100 percent cost-based weights, with and without the RTI refinements.

Grouping claims by MS-DRG—A central objective of the DRG patient classification system is to group cases with similar clinical attributes and similar resource use into a common DRG. We used MedPAC's case-level cost estimates for cases from 2003 to 2005 to calculate the amount of variation in costs among cases within the DRGs. We then recalculated the amount of cost variation among cases within MS-DRGs (and within the severity classes of APR-DRGs) for comparison.

To measure the amount of cost variation, we first standardized our case-level cost estimates to remove the effects of local differences in wage levels, teaching activity, and service to low-income patients. Then we calculated the difference between the standardized cost for each case and the average standardized cost for all cases in the same category (DRG, MS-

DRG, APR-DRG). We converted these differences to absolute values and calculated the average of the absolute differences.

The average absolute difference for MS-DRGs was 4.8 percent lower than the average absolute difference for the current DRGs. In other words, the MS-DRGs did a better job of grouping cases with similar costs into the same category. This was expected because the MS-DRGs break out high severity (and high cost) cases with major comorbidities or complications (MCCs) into separate DRGs. For comparison, we also calculated the amount of variation in costs among cases within the severity classes of APR-DRGs (version 23). The average absolute difference for the APR-DRGs, in turn, was 7.4 percent lower than the value for DRGs. This suggests that at least some opportunities are available for further refinement of the MS-DRGs. Although the MS-DRGs are not perfect, and may need to be further refined over time (as discussed below), they represent a significant improvement over the current DRGs.

Refining current methods for calculating cost-based weights—How do the CMS proposed weights and the CMS refined weights compare to the MedPAC refined weights? Neither alternative set of weights will exactly match the MedPAC refined weights. The MedPAC refined weights are based on more detailed cost estimates derived using each hospital’s own CCRs and the weights are calculated by the HSRV method (discussed more fully later). Both the CMS proposed and CMS refined weights are based on national sums of standardized charges for each of the revenue center groupings within each MS-DRG and national average revenue center CCRs.

To see how the two CMS alternatives differ from the MedPAC refined weights, we calculated the percentage differences between each set of CMS weights and the MedPAC refined weights (separately for all MS-DRGs). Then, we converted the percentage differences to absolute values and calculated the weighted average of the absolute values over all MS-DRGs, weighting by the volume of cases in each category. The resulting weighted average absolute differences in Table 1 summarize the extent of the differences in the weights (smaller is better), comparing the CMS proposed and CMS refined weights with the MedPAC refined weights for MS-DRGs.

Table 1. Weighted average absolute difference from MedPAC refined weights

<u>Method:</u>	<u>MS-DRGs</u>
CMS proposed	2.8%
CMS refined	2.5

Source: MedPAC analysis of Medicare hospital inpatient claims and cost reports from CMS, fiscal years 2003-2005.

The weights based on the CMS refined method more closely matched the MedPAC refined weights than did the weights based on CMS’s proposed method. The gain from adding the RTI refinements and standardizing the costs and charges used in calculating national CCRs may appear to be very small. But the effects of these refinements are focused primarily on the weights for a relatively small number of MS-DRGs, with comparatively minor effects on the weights for most other categories.

Combined impact of MS-DRGs and CMS refined weights—The CMS refined method discussed above would bring the MS-DRG weights closer to the weights computed using the MedPAC refined methodology. Table 2 illustrates differences between 100 percent cost-based weights calculated by the current method (for DRGs), the MedPAC refined method, the CMS proposed method, and the CMS refined method for six sets of MS-

Table 2: Comparison of methods for computing cost-based weights

MS-DRG (CC level)	Current 2007 Policy (DRGs: no MCC differentiation)	MedPAC Refined (HSRV, hospital CCRs w/ RTI)	CMS proposed method (13 cost centers)	CMS refined method (19 cost centers w/ RTI)
Coronary bypass with cardiac cath				
MS-DRG 233 (with major cc)	5.68	6.87	7.25	7.10
MS-DRG 234 (without major cc)	5.15	4.35	4.58	4.43
Cardiac pacemaker implantation w/o AMI				
MS-DRG 242 (with major cc)	2.83	3.96	3.87	4.07
MS-DRG 243 (with cc)	2.59	2.82	2.69	2.88
MS-DRG 244 (without cc/mcc)	2.31	2.22	2.06	2.23
Cardiac defibrillator implant w/o cardiac cath				
MS-DRG 226 (with major cc)	5.35	7.59	7.16	7.76
MS-DRG 227 (without major cc)	5.35	5.68	5.12	5.73
Major joint replacement or reattachment				
MS-DRG 469 (with major cc)	2.06	3.26	3.24	3.26
MS-DRG 470 (without major cc)	2.06	2.07	2.01	2.04
Diabetes				
MS-DRG 637 (with major cc)	0.81	1.47	1.49	1.49
MS-DRG 638 (with cc)	0.81	0.84	0.84	0.84
MS-DRG 639 (without cc/mcc)	0.81	0.58	0.57	0.57
Pneumonia				
MS-DRG 193 (with major cc)	1.05	1.56	1.53	1.52
MS-DRG 194 (with cc)	1.04	1.07	1.03	1.03
MS-DRG 195 (without cc/mcc)	0.96	0.82	0.77	0.76

Source: MedPAC analysis of Medicare hospital inpatient claims and cost report data from CMS, fiscal year 2003-2005.

Note: Current policy weights may differ among MS-DRG severity classes due to each severity class having cases drawn from a different mix of DRGs (e.g., DRGs with or DRGs without complications). Because all weights were computed using 2003-2005 claims, the CMS proposed weights will differ from the weights that CMS published in the 2008 proposed rule. In the CMS proposed method, only the charges for the 13 cost centers within each MS-DRG are standardized for factors such as the wage index and teaching status. In a refinement of the CMS method, we suggest that the charges and costs used in calculating the national CCRs in 19 cost centers also should be standardized.

DRGs. For MS-DRG 233 (Coronary bypass with cardiac cath), the MedPAC refined method generated a payment weight of 6.87. The CMS proposed method produced a weight of 7.25, while the CMS refined method produced a weight of 7.10. As is true for most (but not all) MS-DRGs, the CMS refined weight is closer to the MedPAC refined weight than the CMS proposed weight.

The MS-DRGs for implantation of cardiac pacemakers (MS-DRGs 242-244) and cardiac defibrillators (MS-DRGs 226 and 227) also illustrate the effect that the RTI refinements have on the weights for cases involving costly devices. The CMS refined weights are all higher than the CMS proposed weights, which primarily reflects the effect of reducing charge compression for costly devices within the supplies revenue center.

Note, however, that the differences between the CMS refined and the CMS proposed weights are much smaller for the major joint replacement groups (MS-DRGs 469 and 470). Although costly devices are used in these DRGs, the smaller differences may reflect offsetting effects from reduced charge compression in the radiology and drugs revenue centers for services that are also used by these patients, such as MRI procedures or IV solutions.

Improvement in payment accuracy—As shown in Figure 1 below, we also used our claim-level estimates of costs and payments to compare payment accuracy (how closely payments track relative costs) for cases grouped in the MS-DRGs under three scenarios in which payments are based on:

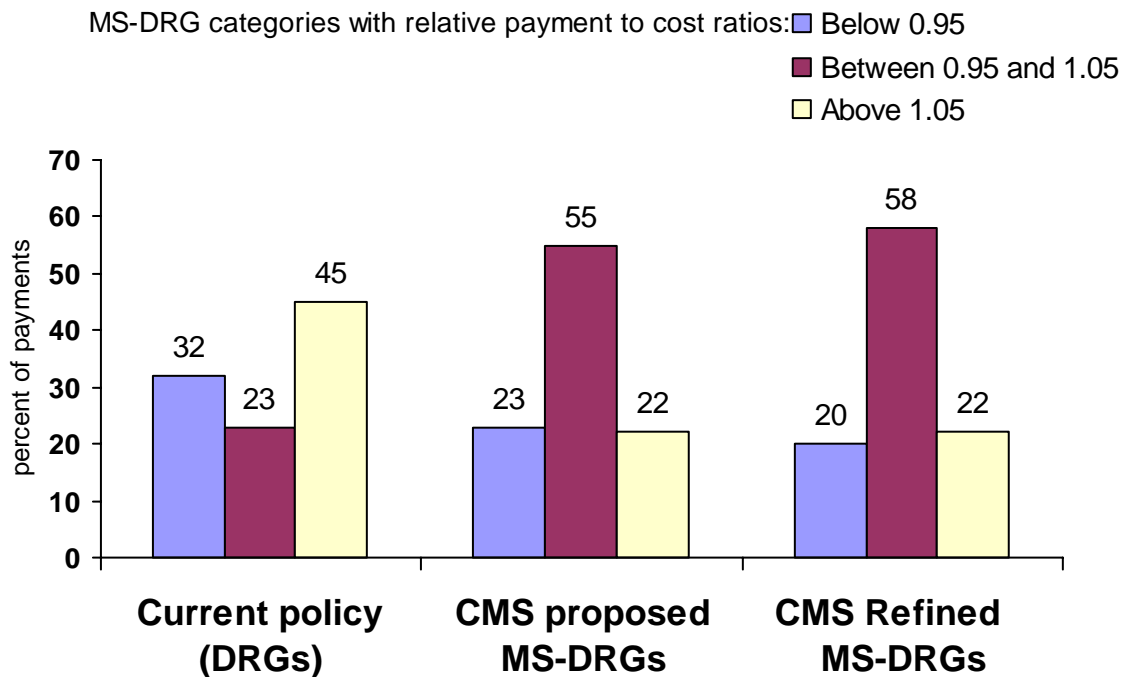
- 2007 DRGs with 100 percent cost-based weights based on CMS’s current methods (13 revenue centers);
- Proposed MS-DRGs with cost-based weights based on CMS’s current methods; and
- MS-DRGs with CMS refined cost-based weights that incorporate the RTI refinements discussed above (19 revenue centers) and use standardized Medicare charges and costs in the calculation of national average revenue center CCRs.

Payment accuracy increased substantially when moving from the current (DRG-based) payment policy to one based on the MS-DRGs. There was a further small improvement in payment accuracy by moving from the current to the refined method of calculating cost weights. The RTI refinements to the cost weights use more detailed charge data on supplies, drugs, and radiology services, which improves the accuracy of payments for MS-DRGs with significant charges in those revenue centers. Standardizing the Medicare charges and costs used to calculate the national revenue center CCRs also affects the CCRs, especially for routine and intensive care, which improves payment accuracy for MS-DRGs that have a high share of charges for these services.

Under the DRG system, only 23 percent of total payments fall in MS-DRG categories that have payment to cost ratios that are within 5 percent of the national average payment to cost ratio. In the case of proposed MS-DRGs, 55 percent of payments fall in MS-DRGs with payment to cost ratios that are within 5 percent of the national target. If CMS adopted the refined version of the cost-based weights, 58 percent of payments would meet the target for payment accuracy. Accuracy would improve even further if the Congress were to

change the way outlier payments are financed as the commission has recommended. The outlier issue is discussed further in the section on future refinements.

Figure 1. MS-DRGs improve payment accuracy



Note: DRG (diagnosis-related group). The distribution labeled “Current policy” compares the average cost-based payments that would have been made in 2005 based on 100 percent cost-based weights (calculated for DRGs using 13 revenue centers) to their costs. The “CMS proposed” compares payments that would have been made in 2005 if CMS had used 13 revenue centers to estimate costs for the MS-DRGs (this is the method CMS has proposed for 2008). The distribution labeled “CMS refined” compares the payments that would have been made using CMS refined cost-based weights, which incorporate the RTI recommended refinements (19 revenue centers) and standardized national CCRs, applied to MS-DRGs to estimate relative costs of each MS-DRG category. MS-DRG (Medicare severity diagnosis-related group).

Source: MedPAC analysis of Medicare hospital inpatient claims and cost reports from CMS, fiscal years 2003–2005

Balancing the effects of severity refinements and the transition to cost-based weights

As we have argued previously, the payment impacts of adopting significant severity refinements to the DRGs and cost-based weights tend to offset each other to some extent—although if both policies were implemented together, some hospitals would experience substantial changes in payments. It made sense to adopt cost-based weights last year with a transition period because the adoption of major severity refinements was postponed. The transition period helped to reduce swings in payment that would have occurred if cost weights had been fully implemented in 2007 followed by full implementation of severity refinements in 2008.

Now that CMS is proposing to adopt MS-DRGs in 2008, continuation of the transition period for cost-based weights would produce payment swings between 2008 and 2009. Many of the hospitals that benefit from cost-based weights (including small urban and rural hospitals) will see their payments decline under the MS-DRGs. Therefore, some hospitals that saw an increase in their DRG weights and payments in 2007 due to the phase-in of cost-based weights will see a decrease in their weights and payments in 2008, and then a slight increase in 2009 when cost weights are fully phased in. Conversely, many of the hospitals that saw a decrease in weights and payments due to the phase-in of cost-based weights will see their payments increase under MS-DRGs in 2008 and then decline again as the cost-weight transition ends in 2009.

One approach to reduce continued fluctuations in payments would be to move ahead immediately to adopt the MS-DRGs and at the same time end the transition period by adopting 100 percent cost-based weights for fiscal year 2008. Others have argued that adoption of MS-DRGs should be deferred until 2009 and then implemented with a long transition because \$800 to \$900 million in total payments would be redistributed among PPS hospitals. (\$900 million is about 0.9 percent of total PPS payments to hospitals.)

We do not see sufficient cause to delay the proposed adoption of MS-DRGs beyond fiscal year 2008. However, if MS-DRGs were fully implemented in fiscal year 2008, the resulting changes in payments would likely exceed 5 percent up or down for a few hundred hospitals. To smooth the impact, CMS could decide to implement MS-DRGs in 2008 with a transition period. If you choose this path, we think that the transition should coincide with the transition to cost-based weights—that is, implement MS-DRGs over a two-year period beginning in 2008.

A two-year transition could be managed in several ways. One approach that is fairly simple would be to group cases using the MS-DRG grouper beginning in 2008, but then use a blended weight for each category. The blended weight for an MS-DRG would reflect partly the weight that would have been assigned to the cases under prior policies and partly the weight that would be assigned under an MS-DRG system with fully implemented (100 percent) cost-based weights. Thus the weight for each MS-DRG in 2008 would be a blend of two parts:

- 50 percent of the average DRG weight that would have been attached to cases in the MS-DRG from the 2006 MedPAR file under a policy of 1/3 charge-based weights and 2/3 cost-based weights. These are the DRG weights that would have applied to the same cases under fiscal year 2008 policy if CMS simply continued the transition to cost-based weights without changing the DRG definitions; and
- 50 percent of the CMS refined weight for the MS-DRG for fiscal year 2008.

In fiscal year 2009, cases would be grouped in the MS-DRGs and the weight for each MS-DRG would be a 100 percent cost-based weight calculated using fiscal year 2007 MedPAR claims and the CMS refined method.

Correcting for anticipated improvements in hospitals' coding

To maintain budget neutrality while adopting MS-DRGs, CMS has proposed reducing payments by -2.4 percent for two years or -4.8 percent in total. The -4.8 percent reduction is designed to offset increases in total payments that are expected to occur as hospitals improve documentation and coding of comorbidities and complications (secondary diagnoses). The Commission is on record as supporting the need for an adjustment.

Historical experience—The historical experience under Medicare is clear:

- Hospitals have consistently improved documentation and coding when they have had a financial incentive to do so.
- Past prospective adjustments to reduce payments for the effects of expected coding improvements have been consistently lower than the increases in payments that actually occurred as a result of improved case-mix reporting.
- Consequently, hospitals have received higher payments resulting from increases in reported case mix that were not accompanied by increases in their costs of furnishing care.

CMS applied prospective adjustments to the payment rates to offset the effect of improved case-mix reporting when the original PPS system was implemented in fiscal year 1984. Payments were reduced by -3.38 percent for fiscal year 1984.¹ Based on early claims data from the first year of the PPS, payments were reduced an additional -1.05 percent for 1985.² However, later analysis found that these adjustments were substantially smaller than the actual change in case mix, which increased more than 7 percent from the pre-PPS period to the first full year of the PPS system (Steinwald and Dummit, 1989).³ RAND examined changes in case mix during the third year of the PPS system and found that coding improvements continued to lead to increases in case mix and payment over an extended period of time (RAND, 1990).⁴ The Prospective Payment Assessment Commission (a predecessor of MedPAC) considered case-mix change in developing its annual update recommendations to the Congress and made offsetting adjustments for continuing coding improvements for 10 consecutive years from 1986 to 1995. More recently, CMS has had similar experiences with the introduction of prospective payment systems for inpatient rehabilitation facilities (IRF) and long-term care hospitals (LTCH).

¹ See Federal Register, Vol. 48, No. 171, September 1, 1983, p. 39889 and Federal Register, Vol. 49, No. 171, August 31, 1984, p. 34770.

² Federal Register, Vol. 49, No. 171, August 31, 1984, pp. 34770-34775.

³ Steinwald B. and L. Dummit. 1989. "Hospital Case-mix change: Sicker patients or DRG Creep? *Health Affairs*. Summer 1989.

⁴ Rand. 1990. "Methodology for Measuring Case-Mix Change: How much Change in the Case Mix Index is DRG Creep? Report E-90-5 April.

The case-mix increase this time—We have every reason to expect that hospitals will respond to the adoption of MS-DRGs in much the same way as they have responded to similar events in the past. They will improve their documentation and coding of diagnoses and procedures, and this change in behavior will lead to increases in reported case mix. The reason to make offsetting adjustments is also the same. Although hospitals' efforts to improve the specificity and accuracy of documentation and coding are perfectly legitimate, the increases in payments that result are not warranted because the increase in measured case-mix does not reflect any real change in illness severity or the cost of care for the patients being treated. Therefore, offsetting adjustments to the PPS payment rates are needed to protect the Medicare program and those who support it through taxes and premiums from unwarranted increases in spending.

The question is not whether documentation and coding will improve, resulting in higher case mix and payments. The question is how much will coding change when the incentives to code particular secondary diagnoses change with the adoption of MS-DRGs, and how long will these changes continue until hospitals reach a new steady state of reporting accuracy.

The case-mix reporting changes that occurred in Maryland—when that state adopted APR-DRGs in its all payer rate-setting system—provide one of the few recent benchmarks for comparison outside of Medicare's historical experience. The Health Services Cost Review Commission in Maryland began the transition to APR-DRGs in 2000 for major teaching hospitals; this change was not adopted for other hospitals in Maryland until 2005 (although hospitals received training in the new system and began coding for the change in 2004). CMS bases its expected 4.8 percent increase on a comparison of case-mix changes for Maryland hospitals and for all hospitals outside of Maryland during the 2004–2006 period.

No one can definitively predict whether the switch from DRGs to MS-DRGs will lead to case-mix change equal to the change that occurred in Maryland. On the one hand, the APR-DRG system relies on interactions among secondary diagnoses, perhaps making more complete reporting of all secondary diagnoses more important than it may be for the MS-DRG system. Thus, case mix might increase less than the 4.8 percent estimate that CMS derived from Maryland's experience. On the other hand, past experience indicates that it takes several years for hospitals to reach a new steady state of documentation and coding after a new DRG system is implemented. Consequently, over several years, the increase in reported case mix in response to the MS-DRGs might turn out to be more than 4.8 percent.

MedPAC estimates—To examine this issue more thoroughly, we used claims from the MedPAR files for fiscal years 2004-2006 to estimate changes in case mix separately for hospitals in Maryland and in the rest of the nation. For each group, we looked at overall case-mix change for all hospitals and separately for major teaching and all other hospitals. We also examined case-mix change for these groups calculated based on DRGs, MS-DRGs, and APR-DRGs. For each of these systems, we used the weights (described earlier) that we developed to evaluate the MS-DRGs and the alternative methods for calculating cost-based weights.

The resulting estimates of the difference between case-mix growth in Maryland (where hospitals had incentives to improve documentation and coding) and in the rest of the nation

(where hospitals had few incentives to change their practices) vary widely depending on the DRG classification system used. We think that the most important estimates, however, are those based on the MS-DRGs because that is the classification system that CMS is proposing to adopt.

Our estimate based on MS-DRGs is 2.0 percent (over two years). This estimate may not capture the full effect of changes in case-mix reporting, however, for two reasons. One reason, as we mentioned earlier, is that many hospitals do not respond quickly to improve reporting after major changes in the DRG definitions. Consequently, the full effect of reporting improvements may not be felt until three or four years after the adoption of MS-DRGs. The second reason is that the estimated change in case mix for hospitals in the rest of the nation may reflect some improvements in documentation and coding in response to changes in the DRG definitions that were adopted in 2006. These include changes in the definitions of important cardiac care DRGs, among others. To the extent that coding improvements are part of the reported change in case mix for the rest of the nation, the actual difference between case-mix growth in Maryland and growth in the rest of the nation would be larger than the estimate.

So we have two estimates of the effect of changes in case-mix reporting and both are subject to uncertainty. Although our estimate may be too low at 2.0 percent, the CMS estimates may be too high. We think that CMS should adopt an adjustment that lies somewhere in the middle between these two values. A middle point in the range of 1.6 to 1.8 percent per year would put both Medicare and the hospital industry at some risk that the actual value will turn out to be higher or lower than the adjustment that is applied. If the actual increase due to improvements in case-mix reporting turns out to be higher, then the Medicare program will have paid more than it should have. If the actual increase is lower, then the hospitals will have been paid less than they should have received.

Either way, you have already stated your willingness to correct for any forecast error when data become available to estimate the actual effect of improvements in documentation and coding on case mix and payments. Data to make such estimates will first become available in the MedPAR file for fiscal year 2008, which CMS will use in 2009 as it prepares the proposed rule for fiscal year 2010. With this fundamental protection in mind, we recommend that CMS adopt a prospective adjustment in the range of -1.6 to -1.8 percent per year and we suggest that CMS plan on taking coding adjustments for longer than two years. CMS may want to adopt a series of adjustments that takes somewhat higher adjustments in the first few years of the MS-DRG changes, on the assumption that history has shown that previous coding adjustments have underestimated the impact of the changes.

Future refinements to computing DRG payment rates

As we indicated earlier, our analyses suggest several opportunities for additional refinements that we believe should be pursued.

Financing outlier payment—As we stated in our March 2005 report to Congress on physician-owned specialty hospitals, there is a need to reform the financing of outlier

payments. Currently, variation in the prevalence of high-cost outlier cases contributes to disparities in relative profitability across and within DRGs. These disparities can penalize hospitals (usually small urban and rural) that treat patients in DRGs with a low prevalence of outliers. To level the playing field, Congress should amend the law to give the Secretary authority to adjust the DRG relative weights to account for differences by DRG in the prevalence of high-cost outlier cases.

Further refinements to the method of calculating cost weights—In addition, the current method of calculating cost-based weights still results in some distortions that arise from two sources. One source is the practice of standardizing charges. Other distortions result from problems with the specificity and accuracy of the cost data that hospitals submit on their cost reports. Adjusting hospitals' charges by their revenue centers' CCRs removes most of the distortions in relative costliness across types of discharges that occur because hospitals use different markups across services (and have different overall markup levels). Distortions in relative costliness remain, however, because certain types of cases tend to be treated predominately in high- or low-cost hospitals. This results in relative weights that are too high for some types of cases and too low for others.

CMS deals with this problem by standardizing the charges for geographic differences in wage levels (the wage index), differences in teaching activity (the indirect medical education adjustment) and in the extent to which the hospital serves a disproportionate share of low-income patients (the DSH adjustment) before the charges are summed to the national level within each revenue center and MS-DRG. Standardizing by these factors, however, only accounts for part of the variation in the level of costs across hospitals.

In contrast, the HSRV method removes all of the differences in the level of costs across hospitals, regardless of their sources. In this method, we first compare the costs of different types of discharges (MS-DRGs) within each hospital to its average cost per discharge for all Medicare claims to create hospital-specific relative values. We then apply the HSRV method to the relative values to calculate a set of national relative weights for the MS-DRGs (or any other classification system). Converting all costs to relative values first prevents the weight for any case type from being raised or lowered because of where patients in that category happen to be treated.

We find that weights calculated by the HSRV method improve payment accuracy compared with either the current or refined versions of the method now used by CMS. The standardization method now used by CMS is less desirable because it is incomplete and introduces avoidable errors into the computation of payment weights.

Longer-term improvements in the quality of cost data—As indicated in the RTI study report, several other problems need to be addressed to improve the quality of the cost data used to set relative weights under the PPS. One problem is ongoing charge compression. Another problem is substantial mismatches between the charges recorded on the claims by revenue code and the charges reported for the corresponding revenue centers on hospitals' cost reports.

Charge compression exists under the old charge-based weights now being phased out and will continue to persist under the system of cost-based weights. From MedPAC's studies of charging practices, we have learned that hospitals tend to have higher percentage markups on lower cost items and lower percentage markups on higher cost items. As RTI has shown, these systematic differences in markups within a department lead to compressed estimates of the cost of drugs, supplies and devices, and radiology procedures. It is important to note that charge compression results from hospitals' mark-up practices. If each hospital would use a single markup for all items and services included within a revenue center—or better yet, all items and services in all revenue centers—this problem would disappear. Improvements in price transparency may encourage hospitals to move toward more uniform markups, but as long as they continue their historical charging practices, the use of a single departmental cost-to-charge ratio will result in inaccurate cost estimates, understating the costs of high cost items and overstating costs for low cost items.

The RTI regression estimates provide a practical short-term approach to address charge compression in the drugs, supplies, and radiology revenue centers. However, this method does not capture all of the charge compression that occurs at each hospital for the three target revenue centers. Moreover, substantial charge compression (that is undetectable with current data) also may be occurring in other revenue centers, such as cardiology, or in the routine and intensive care revenue centers where nursing costs per day are currently treated as if they were uniform across patient categories.

The RTI report offers a number of recommendations regarding changes to the cost report (such as requiring separate cost centers for devices and implants, MRIs, CTs, IV solutions) and to the MedPAR file that we think would go a long way to improve the quality of the cost data available to CMS. These changes would help improve the accuracy of the relative weights and payments under the PPS. As RTI also indicated, however, better forms and instructions to providers are only part of the solution. CMS also needs to put more emphasis—backed up by more audit resources—on ensuring that hospitals properly fill out their cost reports. This action is needed to substantially reduce the current disparities between the allocation of charges among revenue codes on the claims and their allocation among revenue centers on the cost reports.

Refining the MS-DRGs—CMS will also need to continually refine the MS-DRG categories (as it has DRGs) to reflect changes in technology and practice patterns. In addition, as we mentioned earlier, opportunities exist to selectively refine MS-DRGs to better account for the effects of interactions among secondary diagnoses on the cost of care. Review of the APR-DRGs may reveal instances where some further distinctions within MS-DRGs may reduce variation in costs among cases and improve payment accuracy.

MS-LTC-DRGs

CMS proposes revising the long-term care diagnosis-related groups (LTC-DRGs) to mirror the proposed MS-DRGs for the acute care hospital PPS. We commend CMS for its commitment to improving the accuracy of Medicare payments for long-term care hospital (LTCH) services and believe that the new MS-LTC-DRGs will go a long way toward achieving this goal.

To maintain budget neutrality in adopting MS-LTC-DRGs, CMS has proposed reducing payments by 4.8 percent (-2.4 percent for two years), the same reduction in payments it proposes for acute care hospitals. The reduction is designed to offset increases in total payments expected to occur as hospitals improve documentation and coding of comorbidities and complications under the new classification system. For the acute care hospital PPS, CMS proposes reducing the standardized payment amounts. However, because the LTCH standardized payment amounts have already been set through a different rulemaking process and are effective beginning July 1, 2007, CMS proposes applying the reduction in LTCH payments, beginning October 1, 2007, to the MS-LTC-DRG relative weights rather than to the LTCH standardized payment amounts.

As noted above, the Commission believes that CMS is justified in making some prospective adjustment to payments in anticipation of improved documentation and coding. Reducing the MS-LTC-DRG relative weights is an acceptable method of making this adjustment. We have not made separate estimates of recent case-mix change in LTCHs and so have no direct information to evaluate the appropriateness of your proposed -4.8 percent adjustment. For the reasons described above, however, this estimate may be as much too large for LTCHs as it is for acute care hospitals. Given the level of uncertainty, we think that it would be prudent for you to adopt an adjustment similar to the -1.6 to -1.8 percent adjustment per year that we recommend for the first two years following the adoption of MS-DRGs in the acute care PPS.

CMS has stated its willingness to correct for any forecast error when data become available to estimate the actual effect of improvements in documentation and coding on case mix and payments. Since LTCHs may differ in the extent to which they can make such improvements, CMS should analyze the effects of coding and documentation improvements on LTCH case mix and payments separately from those of acute care hospitals. Data to conduct such analyses will first become available in the MedPAR file for fiscal year 2008.

Hospital-acquired complications

The Deficit Reduction Act of 2005 requires CMS to select at least two hospital-acquired conditions for which hospitals will not receive additional DRG payments for cases when one of the selected conditions applies but was not present on admission. We commend CMS for carrying out a comprehensive review process in consultation with the Centers for Disease Control to identify six conditions proposed for reduced payment in FY 2009 and nine conditions that will be considered for reduced payment in the future.

Method for implementing payment reductions

The six conditions to be used in 2009 include three so-called “never events” (object left in surgery, air embolism, and blood incompatibility), pressure ulcers, and two types of infections. Each of the six conditions is coded as a secondary diagnosis, and under CMS’s proposed MS DRG system can be a complication or co-morbidity (CC) that moves the patient to a higher-weighted DRG. CMS interprets the DRA provision as requiring that “the case will be paid as though the secondary diagnosis was not present.” This means that

if another CC applies, then the patient will still move to the higher-weighted DRG. Although CMS was unable to determine how often its six proposed conditions provide the sole CC, we suspect that it is infrequent. Consequently, payment will be reduced for only a limited proportion of cases with these six conditions.

For the three never events, CMS should adopt a policy that the presence of the identified complication will bar assignment to the higher-weighted MS-DRG regardless of any other CCs that apply. Although this could result in a significant reduction in payment linked in part to unrelated complications, the never events are so grievous and easily preventable that a penalty is always warranted. For the other three conditions, however, an automatic penalty would be inappropriate. Because even the highest quality hospitals will experience at least some potentially preventable complications, a penalty should not be triggered whenever a patient acquires one of the identified conditions. Further, the risk of infection or other potentially preventable condition depends on the complexity and severity of the patients involved. If every patient exhibiting the condition triggered a penalty, hospitals with high case-mix index values under the MS-DRG system would likely suffer greater average losses, which would not be equitable.

For the conditions CMS has identified other than never events—as well as others it will develop in the future—CMS should consider adding an occurrence rate measured with a year's data to the list of measures to be included in its pay-for-performance program. With this approach, hospitals' performance can be risk adjusted to reflect their case mix and payment rewards or penalties will be based on each hospital's performance relative to its peers.

Reporting secondary diagnoses present at admission

CMS states that hospitals will be required to begin coding secondary diagnoses present at admission effective October 1, 2007, as DRA requires. CMS does not, however, detail how this coding process will work or commit to requiring hospitals to code *all* secondary diagnoses present at admission. Ideally, we would like to see hospitals code all secondary diagnoses and whether or not each was present at admission, to support the development of new complication rate measures and other quality indicators in the future. But this goal is constrained by the fact that the hospital claim form accommodates only 8 secondary diagnoses. Therefore, CMS can only require that for every secondary diagnosis the hospital enters as present at discharge, it must also indicate whether the diagnosis was present at admission.

This raises a larger issue. To avoid the possibility of hospitals failing to code secondary diagnosis codes for conditions that could result in lower payments, CMS should require that hospitals code all secondary diagnoses that are part of the logic defining the specified hospital-acquired conditions. This requirement should apply to conditions present at discharge as well as the corresponding code for whether the conditions were present at admission. CMS might also wish to expand the requirement to include the secondary diagnoses required by all quality measures in its pay-for-reporting system.

It is important that the claim form accommodate the secondary diagnoses needed to support MS-DRG assignment, reporting of hospital-acquired conditions, and required quality

measures. Our sense is that the 8 secondary diagnosis positions on the current claim form will be sufficient. But as experience is gained, CMS should monitor the reporting of secondary diagnoses and consider expanding the claim form to accept more than 8 secondary diagnoses if needed.

Data to evaluate potential conditions for reduced payment

In evaluating whether potential hospital-acquired conditions were “high cost” as mandated by the DRA, CMS calculated the average charges of patients who had the condition. For example, you reported that patients with pressure ulcer as a secondary diagnosis had average charges for their hospital stay of \$40,381. But it would be helpful if you provided a reference value for comparison; for example, you could publish the average charges of patients with and without the complication. The accuracy of the comparison might also be helped by controlling for DRG assignment (since the patients with the identified complications will likely be distributed among a number of DRGs) as well as for differences among hospitals in other factors such as teaching intensity and local wage levels.

Hospital wage index

We are proposing a new approach to the hospital wage index in our June report as mandated by Congress in the TRA. As you point out in the proposed rule, the same law requires CMS to consider our recommendation in the FY2009 proposed rule. Our recommendations will simplify the current wage index by automatically adjusting for occupational mix and eliminating exceptions to the calculated wage index—two areas you ask for comment about in this proposed rule. We look forward to working with CMS on wage index reform over the next year.

Reporting of hospital quality data and value-based purchasing

The Commission continues to support CMS’s work toward refining and expanding the set of quality indicators for inpatient acute care. CMS’s proposal to expand the surgical infection set, add a 30-day mortality measure, and add patient experience (HCAHPS) are consistent with priorities the Commission suggested for the hospital measure set in our March 2005 report to the Congress.

Selection of quality measures

The Secretary asked for input on an additional 26 measures that he will consider for “pay for reporting” in FY 2009 and beyond. We encourage the development and application of measures of resource use, such as the 30-day readmission rates that are included in the proposed measure set. Reducing potentially avoidable readmissions should be a part of efforts to increase the value of healthcare because it reduces unnecessary spending for the Medicare program and enhances the quality of care for beneficiaries.

We have some concerns, however, about the choice of length of stay as a resource use measure because it does not necessarily align with improving transitions from the inpatient

setting to other care settings or to home. Ideally, Medicare’s payment systems should provide an incentive to use the most efficient mix of services possible during and after a hospital stay. Rewarding below-average hospital lengths of stay through a quality incentive payment program would strengthen the incentive to transfer patients to a post-acute setting as quickly as possible, without regard for whether this is the most efficient course of treatment for the overall episode of care. Such a measure may conflict with hospitals’ efforts to avoid readmissions, if doing so would lengthen patients’ initial stays.

Value based purchasing

Beyond “pay for reporting,” the Commission believes that a quality incentive payment program should be implemented for acute care hospitals as soon as possible and we urge the Secretary to seek legislative authority to introduce value based purchasing in all sectors of fee-for-service Medicare. We commend CMS for its recently published paper enumerating options for structuring a value based purchasing program, and we support the use of listening sessions as proposed in the rule to gather feedback from providers and other stakeholders. Further, we support the basic concepts that have been included in the options paper:

- The system is budget neutral.
- It includes rewards for both attainment and improvement.
- It starts with process measures and risk adjusted outcomes with a clear plan for the measure set to evolve.
- It sets a threshold for reward at a level of performance rather than a preset number of rewardees.

Disclosure of physician ownership and patient safety measures

Patient safety measures

CMS proposed to require hospitals to disclose whether a physician is available on the premises 24 hours a day, 7 days a week. CMS is seeking comment as to whether this requirement should apply to all hospitals including critical access hospitals (CAHs) as a condition of participation.

Physicians have competing demands on their time and eventually need to leave the hospital to return to their offices or homes. However, ideally patients should be informed regarding the level of physician staffing that will be present at the hospital. For example, patients should know whether a physician will always remain in the hospital until all patients have recovered from their anesthesia and are fully conscious.

Therefore, patients of all acute care hospitals, including CAHs, should be informed whether one or more physicians is on the premises 24 hours a day, 7 days a week. If not, the patient should be informed of the hospital’s emergency response plan—for example, whether the hospital will be calling an on-call physician to come into the hospital if the patient goes into cardiac arrest.

The disclosure requirement should include CAHs because there is no clear distinction between the services offered by physician-owned specialty hospitals and CAHs. Most CAHs are non-profit hospitals that provide a range of services to their small rural communities. However, some CAHs are for-profit hospitals, and some offer specialty surgical services. For example, we are aware of one CAH with a hand surgery focus and another with a cardiac catheterization lab. Because CAHs are not restricted in the services they offer, they should have the same disclosure requirements as other hospitals.

Physician ownership in hospitals

CMS plans to adopt a disclosure regulation that requires hospitals to disclose to patients whether they are physician-owned, and if so, the names of physician owners. CMS is seeking comment on whether this should be addressed in the conditions of participation applicable to PPS and critical access hospitals.

All patients at physician-owned hospitals should be informed that the hospital is physician-owned and be provided a list of all physician owners. Physicians should be deemed owners if they directly or indirectly have a beneficial interest in the hospital. For example, if a partnership or a trust owns an interest in the hospital and physicians own interest in the partnership or trust, their ownership should be disclosed. Because small financial interests are thought to affect physician behavior (that is why they are recruited to be investors), even small investments should be reported.

Because there is no clear distinction between the financial incentives associated with operating a for-profit specialty hospital, for-profit traditional hospital, or for-profit critical access hospital, this disclosure requirement should apply to all privately held hospitals. The requirement should be waived for hospitals that are fully owned by publicly traded companies.

Payment for capital-related costs

The proposed rule includes proposals for the update to capital payment rates and elimination of the payment adjustment for hospitals in large urban areas. It requests comments on whether the indirect medical education (IME) and disproportionate share hospital (DSH) adjustments to capital payment rates should be reduced or eliminated.

Elimination of the large urban adjustment

The large urban adjustment increases the capital payment rate for hospitals in large urban areas by 3 percent. The Commission supports the Secretary's proposal to eliminate this adjustment starting in 2008. The Congress equalized the operating base rates of urban and rural hospitals in the MMA, and eliminating the 3 percent add-on for large urban hospitals will similarly equalize the capital base rates. Urban and rural hospitals' overall Medicare margins, reflecting both operating and capital inpatient payments along with payments for outpatient and hospital-based post-acute services, are roughly equal.

Differential update

The Secretary proposes to give no update to capital payment rates for urban hospitals for the next two years and a 0.8 percent update for rural hospitals in fiscal year 2008.⁵ The proposal for different updates for urban and rural hospitals is inconsistent with the direction of policy for the acute inpatient PPS that CMS is following with its proposal to eliminate the 3 percent large urban adjustment. As noted above, eliminating this adjustment would complete the process of equalizing the base rates of urban and rural hospitals, but differential updates would then reintroduce separate base rates. CMS should use its update framework to determine the appropriate update for capital payments and then apply that update to all PPS hospitals

Modification of the capital IME and DSH adjustments

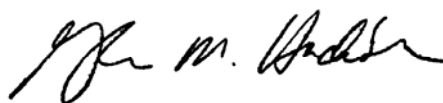
The proposed rule requests comments on possible reduction or elimination of the IME and DSH adjustments to capital payments. We believe the Secretary should seriously reexamine the appropriateness of the current capital IME adjustment. In our March 2007 report to the Congress, we recommended that the operating IME adjustment be reduced from 5.5 percent to 4.5 percent per 10 percent increment of teaching intensity. Some reduction in the capital IME adjustment would be consistent with the Commission's finding that the IME adjustment is set too high. Our findings and recommendation on IME were based on an analysis of operating and capital costs combined.

Conclusion

MedPAC appreciates the opportunity to comment on the important policy proposals crafted by the Secretary and CMS. The Commission also values the ongoing cooperation and collaboration between CMS and MedPAC staff on technical policy issues. We look forward to continuing this productive relationship.

If you have any questions, or require clarification of our comments, please feel free to contact Mark Miller, MedPAC's Executive Director.

Sincerely,



Glenn M. Hackbarth
Chairman

GMH/ja/wc

⁵ The 0.8 percent update reflects a forecast increase in the capital market basket of 1.2 percent and an adjustment for DRG reclassification and recalibration of -0.4 percent.