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MEDICARE

CMS's Proposed Approach to Set Hospital Inpatient Payments Appears Promising



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Highlights of [GAO-06-880](#), a report to congressional committees

Why GAO Did This Study

Under Medicare's inpatient prospective payment system (IPPS), hospitals generally receive fixed payments for hospital stays based on diagnosis-related groups (DRG), a system that classifies stays by patient diagnosis and procedures. CMS is required to at least annually update DRG payments to address changes in the cost of inpatient care. CMS uses charge-based weights to update these payments. Cost-based weights are used to set payments in the outpatient prospective payment system (OPPS). The Medicare Prescription Drug, Improvement, and Modernization Act of 2003 required GAO to study IPPS payments in relation to costs. During the course of GAO's work, CMS proposed a new cost-based method for determining DRG weights. This report (1) examines the applicability of CMS's cost-based method—used for the OPPS—to weight DRGs in the IPPS and (2) evaluates whether CMS's proposed approach is an improvement over its OPPS method for setting cost-based weights. Using fiscal year 2002 cost reports and claims from 2001, 2002, and 2003 to examine the applicability of the OPPS method, GAO estimated costs for 1,025 IPPS hospitals whose Medicare cost reports most consistently reflected the total charges and number of Medicare stays that these hospitals reported on their claims. To evaluate CMS's proposed approach, GAO analyzed fiscal year 2003 cost reports and 2003 claims for 3,558 hospitals.

www.gao.gov/cgi-bin/getrpt?GAO-06-880.

To view the full product, including the scope and methodology, click on the link above. For more information, contact A. Bruce Steinwald, (202) 512-7101 or steinwald@gao.gov.

MEDICARE

CMS's Proposed Approach to Set Hospital Inpatient Payments Appears Promising

What GAO Found

If the OPPS method were applied to the IPPS, it could undermine the objective of better aligning DRG payment weights with actual costs. GAO estimated costs for 1,025 hospitals using CMS's cost-based OPPS weighting method to determine its applicability for weighting inpatient DRGs, and found that, for all but one of the 1,025 hospitals, GAO's application of CMS's OPPS method resulted in cost estimates for inpatient accommodation services that on average were 72 percent less than what the hospitals reported on their Medicare cost reports for these services. For 57 percent of the hospitals, GAO's application of CMS's OPPS method resulted in cost estimates for inpatient ancillary services that on average were 8 percent more than what the hospitals reported on their Medicare cost reports. For 22 percent of the hospitals, the application of CMS's OPPS method resulted in cost estimates for inpatient ancillary services that were on average 6 percent less than what the hospitals reported on their Medicare cost reports. These differences occur because the current OPPS weighting method does not address the variation in how hospitals allocate charges and costs in reporting Medicare services.

GAO found that CMS's proposed new approach to set payment weights for DRGs appears promising, and may result in improvements in setting cost-based weights compared with the OPPS method. CMS's proposed approach relies on grouping charges into 10 broad service groups, and converting those charges to cost-based weights by using national-average cost-to-charge ratios (CCR) that are derived from hospital data submitted to CMS. Use of national-average CCRs ameliorates the effects that variations in hospital charge and cost allocation decisions can have on DRG weights. GAO's analysis, using 2003 claims data and fiscal year 2003 cost report data for 3,558 IPPS hospitals, suggests that 6 of the service groups, which constitute a majority of Medicare inpatient charges, appear promising. GAO also found that wide ranges in the CCRs for 2 of the groups, the therapeutic services and operating room groups, raise concerns about their ability to better align payment with costs for those services. GAO did not have enough specific information to determine whether the remaining 2 groups are likely to capture the relevant cost-to-charge relationship for services in those groups.

In commenting on a draft of this report, CMS stated that it was pleased with GAO's findings. CMS also stated that it could not comment further because it is currently considering public comments in developing the fiscal year 2007 final rule for the IPPS payment rates. Hospital association reviewers agreed that cost estimation problems can result because of hospital reporting variation. However, they noted that because hospital reporting variation still affects the data CMS is proposing to use to set DRG weights, they were concerned with GAO's assessment that the CMS approach is promising. GAO believes the approach appears promising, in particular, because CMS proposes to use national-average CCRs to reduce the impact of individual hospital reporting practices.

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Abbreviations

AAMC	Association of American Medical Colleges
AHA	American Hospital Association
APC	ambulatory payment classification
CCR	cost-to-charge ratio
CMS	Centers for Medicare & Medicaid Services
COPD	chronic obstructive pulmonary disease
DRG	diagnosis-related groups
HCRIS	Healthcare Cost Reporting Information System
HHS	Department of Health and Human Services
ICD-9-CM	International Classification of Diseases, 9th Revision, Clinical Modification
IPPS	inpatient prospective payment system
MedPAC	Medicare Payment Advisory Commission
MEDPAR	Medicare Provider Analysis and Review
MMA	Medicare Prescription Drug, Improvement, and Modernization Act of 2003
OPPS	outpatient prospective payment system

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Congressional Committees

At \$119.4 billion, spending for hospital inpatient services accounted for over a third of total Medicare spending in fiscal year 2005. Most of these dollars were spent on care provided to Medicare beneficiaries by the approximately 4,000 acute care hospitals that bill Medicare under its inpatient prospective payment system (IPPS). Under this payment system, a hospital generally receives a fixed, predetermined payment amount for a hospital stay.¹ IPPS rates are based on diagnosis-related groups (DRG), a system that classifies inpatient stays by patient diagnosis and the procedures they receive. Each DRG has a numeric weight, which signifies the average costliness of stays assigned to that DRG relative to the average costliness of other inpatient stays. The Centers for Medicare & Medicaid Services (CMS) in the Department of Health and Human Services (HHS) is required by statute to update DRG weights at least annually to address the changes in the cost of inpatient care. As a result of the DRG updates, changes occur annually in the payments hospitals receive for inpatient stays.

Because CMS does not have a direct measure of the cost of a hospital stay, it uses the charge information hospitals include on their Medicare claims to adjust the DRG weights. The weights that are developed from charge data are referred to as charge-based weights. Health policy analysts have had long-standing concerns about the use of charge data to set DRG weights.² They contend that charges are not a good proxy for costs, in large part, because of the variation in hospitals' charge-setting practices.

¹Throughout this report, we use the term stay to represent a patient's hospitalization, which CMS and hospitals refer to as a discharge for data-reporting purposes.

²See Medicare Payment Advisory Commission (MedPAC), *Report to the Congress: Variation and Innovation in Medicare* (Washington, D.C.: June 2003); MedPAC, *Report to the Congress: Physician-Owned Specialty Hospitals* (Washington, D.C.: March 2005). MedPAC advises the Congress on issues affecting the Medicare program. See also J. Newhouse, et al., "Predicting Hospital Accounting Costs," *Health Care Financing Review*, vol. 11, no. 1 (1989); and Kurt F. Price, "Pricing Medicare's Diagnosis Related Groups: Charges versus Estimated Costs," *Health Care Financing Review*, vol. 11, no. 1 (1989).

A hospital sets a charge for a service that is generally above the cost of the service. The difference between the charge and cost is referred to as a mark-up. Not all services are marked up by the same percentage; mark-ups for services may be influenced by several factors, including level of competition in the local market, service utilization, and insurers' purchasing arrangements. If all services were marked up over costs by an identical percentage, charges would represent the relative costliness of services perfectly. However, because variations in mark-up percentages vary across services and across hospitals, weights based on charges can overvalue some services and undervalue others and compromise the accuracy of DRG payment amounts.

Recognizing the problem involved in using charges to determine DRG weights, the Medicare Payment Advisory Commission (MedPAC) recommended in 2005 that CMS use a cost-based rather than charge-based method to weight the DRGs in the IPPS.³ A cost-based method entails estimating the costs of hospital services for each DRG. Basing weights on cost estimates is intended to better align payments with hospitals' costs compared with the current charge-based method.

CMS currently uses cost-based weights to determine relative costliness for outpatient services provided to Medicare beneficiaries under its hospital outpatient prospective payment system (OPPS).⁴ However, in its notice of proposed rulemaking for the fiscal year 2006 IPPS rates, CMS noted that, without further analysis, it was uncertain whether using the current OPPS cost estimation method would better align payments with costs for inpatient DRGs.⁵

The Medicare Prescription Drug, Improvement, and Modernization Act of 2003 (MMA) required us to conduct a study of the appropriateness of Medicare's IPPS payments in relation to costs.⁶ In light of MedPAC's recommendation that CMS adopt a cost-based weighting method, we evaluated CMS's concern about using the OPPS cost-based method to set DRG weights. During the course of our work, CMS published a notice of

³MedPAC, *Report to the Congress: Physician-Owned Specialty Hospitals* (Washington D.C.: March 2005).

⁴See 42 U.S.C. § 1395l(t)(2)(C).

⁵70 *Fed. Reg.* 23,306, 23,455 (May 4, 2005).

⁶Pub. L. No. 108-173, § 501(c), 117 Stat. 2066, 2290.

proposed rulemaking describing its intent to use a new cost-based approach to adjust the DRG weights beginning in fiscal year 2007.⁷ We discussed these developments with the committees of jurisdiction, and this report examines (1) the applicability of CMS's cost-based method—used to set weights in OPSS—to weight DRGs in the IPPS and (2) whether CMS's proposed approach for the IPPS is an improvement over its OPSS method for setting cost-based weights.

To examine the applicability of CMS's OPSS cost-based method to weight DRGs in the IPPS, we reviewed CMS instructions to hospitals on billing Medicare for services provided, and CMS instructions to hospitals for filing Medicare cost reports—these cost reports are submitted annually to CMS by hospitals and contain aggregate information on charges for services and the actual costs of providing those services to all patients, as well as information on total charges and estimates of costs for services provided to Medicare beneficiaries. We used the Medicare Provider Analysis and Review (MEDPAR)—a CMS database that compiles and maintains hospitals' Medicare claims—to analyze hospital claims. For 3,660 hospitals paid under Medicare IPPS in fiscal year 2002, we compared Medicare cost reports and claims for services delivered. We identified 1,025 IPPS hospitals whose Medicare cost reports most consistently reflected the total charges and number of Medicare stays that these hospitals reported on their claims.⁸ Using each hospital's fiscal year 2002 claims and Medicare cost report data for the 1,025 hospitals, we applied the OPSS cost estimation method to estimate Medicare costs for each hospital separately. CMS uses a single method to match cost information from the cost reports to charge information from the claims, and applies this method uniformly to all hospitals to estimate costs. Costs are estimated by using hospital-specific cost-to-charge ratios (CCR) derived from each hospital's respective Medicare cost report. A CCR is a ratio that describes the cost and charge relationship for similar services, such as pharmacy or laboratory, or for all services provided in a hospital. Similar to CMS, we developed a single method to match costs to charges, applied this method uniformly to all hospitals, and used hospital-specific CCRs to

⁷71 *Fed. Reg.* 23,996, 24,006-24,011 (April 25, 2006). By August 1, 2006, after evaluating comments on its notice of proposed rulemaking, CMS expects to publish a final rule describing its decision on the use of cost-based weights.

⁸We excluded hospitals from our analysis if the total Medicare charges and number of stays from their cost reports and claims data did not match within .3 percent.

estimate a hospital's costs.⁹ For each hospital, we aggregated cost estimates for accommodation and ancillary services separately.¹⁰ We then compared these aggregate estimates to what each hospital reported as its total Medicare costs for these services for fiscal year 2002 to determine the extent to which our cost estimates matched what each hospital reported on its Medicare cost report. We interviewed representatives from CMS, and fiscal intermediaries (claims administration contractors for CMS that process hospital claims). In addition, we spoke with representatives of the American Hospital Association (AHA) and the Association of American Medical Colleges (AAMC) about general hospital IPPS issues in October 2004. Our results are not generalizable to hospitals whose total charges and hospital stays from their Medicare cost reports and claims data did not match within .3 percent in fiscal year 2002.

To address whether CMS's proposed approach for the IPPS is an improvement over its OPSS method of setting cost-based weights, we first identified potential problems in applying the OPSS method to the IPPS. If our cost estimates did not match what hospitals reported on their cost reports, we compared how charges were categorized on the claims relative to how they were categorized on the cost report. On the basis of this analysis, we then determined whether CMS's proposed approach would better capture measures of cost. In particular, CMS's approach entails grouping charges from hospitals' claims into 10 broad service groups.¹¹ CMS uses these service groups as a basis to create cost-based weights by using national-average CCRs to eliminate charge mark-ups for each service group. In examining the proposed approach, we reviewed CMS's April 2006 notice of proposed rulemaking and analyzed 2003 Medicare claims and fiscal year 2003 Medicare cost reports for 3,558 IPPS hospitals to evaluate the national-average CCRs.¹² We determined the data to be

⁹Because the data sources that CMS uses to set payment rates are different for the IPPS and OPSS and because certain IPPS services are not provided in the OPSS, we needed to develop a mapping method to match cost information from the cost report to IPPS charge information from the claims. For more detail on our mapping method, see our scope and methodology in app. I.

¹⁰Accommodation services include room and board and nursing services. Ancillary services include all other services associated with an inpatient stay, for example, drugs and diagnostic services.

¹¹The 10 proposed service groups are routine, intensive, drugs, supplies & equipment, therapeutic services, operating room, cardiology, laboratory, radiology, and other services.

¹²We did not examine the extent to which the OPSS method measures relative costliness for outpatient services.

sufficiently reliable for the purposes of this report. (For more detail on our scope and methodology, see app. I.) We performed this work from June 2004 through July 2006 in accordance with generally accepted government auditing standards.

Results in Brief

If the OPSS method were applied to the IPPS, it could undermine the objective of better aligning DRG payment weights with costs. When we estimated fiscal year 2002 costs using CMS's cost-based OPSS weighting method to determine its applicability for weighting inpatient DRGs, we found that, for all but one of the 1,025 hospitals in our analysis, our application of CMS's OPSS method resulted in cost estimates for inpatient accommodation services that on average were 72 percent less than what the hospitals reported on their Medicare cost reports for these services. For 57 percent of the hospitals, our application of CMS's OPSS method resulted in cost estimates for inpatient ancillary services that on average were 8 percent more than what the hospitals reported on their Medicare cost reports.¹³ For 22 percent of the hospitals, our application of CMS's OPSS method resulted in cost estimates for inpatient ancillary services that were on average 6 percent less than what the hospitals reported on their Medicare cost reports. These differences resulted from our application of CMS's single approach to mapping hospital-specific cost center CCRs to revenue center charges. Cost differences result because this method does not address the variation in how hospitals allocate their charges and costs.

CMS is proposing a new cost-based approach to set payment weights for inpatient DRGs that appears promising, and may result in improvements in setting cost-based weights compared with the OPSS method. The proposal involves grouping charges into 10 broad service groups. The charges for each of the 10 service groups are converted to cost-based weights by using national-average CCRs that correspond to each of the service groups. This approach ameliorates the problems we observed with the OPSS method because the approach does not require the application of hospital-specific CCRs. When CMS applies hospital-specific CCRs to match charges to costs for all hospitals, it may not capture the relevant cost-to-charge

¹³The 8 percent is based on estimates from 1,020 hospitals. This estimate excludes ancillary cost estimates for 5 hospitals from our sample of 1,025 because they were extreme outliers. When we included data from these hospitals in our aggregate cost estimates, the resulting ancillary cost estimates for the 1,025 were overestimated on average by 222 percent relative to what all the hospitals reported.

relationships for services. Using national-average CCRs in the proposed approach is intended to reduce the impact that variations in hospital charge and cost allocation decisions can have on the DRG weights. Six of the service groups, which constitute a majority of Medicare inpatient charges, appear promising because their CCRs are relatively consistent with one another within a service group and are likely to capture the relevant cost-to-charge relationship for the services included in these groups. An additional 2 groups contain cost center CCRs that range widely within their respective groups and, therefore, raise concerns about their ability to better align payment with costs for services in those groups. While the remaining 2 groups also include cost center CCRs that vary widely, due to the limitations of the MEDPAR data, we did not have enough specific information to determine whether the 2 remaining service groups are likely to capture the relevant cost-to-charge relationship for the services included in those groups.

In commenting on a draft of this report, CMS stated that it was pleased with our findings. CMS also stated that it could not comment further because it is currently considering public comments in developing the fiscal year 2007 final rule for the IPPS payment rates. Hospital association reviewers agreed that cost estimation problems can result because of hospital reporting variation. However, they noted that because hospital reporting variation still affects the data CMS is proposing to use to set DRG weights, they were concerned with our assessment that the CMS approach is promising. We believe the approach appears promising, in particular, because CMS proposes to use national-average CCRs to reduce the impact of individual hospital reporting practices.

Background

To set payment weights for inpatient and outpatient services, CMS has two sources of data: claims, which are bills hospitals submit to CMS upon a Medicare beneficiary's discharge to receive payment for inpatient and outpatient services rendered to Medicare beneficiaries, and Medicare cost reports, which are statements that hospitals submit annually to CMS identifying, by service category, the charges and costs for services rendered to all patients, not just Medicare beneficiaries. Charge-based weights, derived from claims data, are used to measure the relative costliness of stays assigned to DRGs in the hospital inpatient setting. Cost-based weights, derived from claims and Medicare cost report information, are used to measure the relative costliness of ambulatory payment classification (APC) groups in the outpatient setting. APCs in the OPPIs are analogous to DRGs in the IPPS.

Claims and Medicare Cost Reports Are the Data Sources Available to Set Payment Weights for IPPS and OPSS Services

Hospitals submit claims upon a beneficiary's discharge to CMS identifying charges for services delivered to a Medicare beneficiary. These charges are billed by categories of service—for example, anesthesiology, cardiology, radiology—and these categories are referred to as revenue centers. A revenue center represents a revenue-generating department or unit within a hospital. By associating a revenue center with each service billed on a claim, a hospital can track its charges for services associated with that department.

In addition to keeping track of its charges for services by department or unit, a hospital tracks the costs associated with these departments. Hospitals submit this information annually to CMS on their Medicare cost reports. These reports contain hospitals' actual total costs and costs by department for all patients. The costs are reported in broad categories called cost centers. Similar to revenue centers, pharmacy, supplies, cardiology, and emergency room are also examples of cost centers, based on departments common to many hospitals.

CMS requires hospitals to report total charge and cost data for all patients by cost center. Although CMS does not require a one-to-one match between cost centers and revenue centers, it requires that a hospital report its list of revenue centers that are contained in each of its cost centers. Neither the cost nor the charge data reported in cost centers are broken down by individual items and services delivered by hospital stay, or DRG. Revenue center charges are accumulated from all claims for all patients and reported in total in associated cost centers on the Medicare cost report. The relationship between revenue centers and cost centers is subject to individual hospital discretion in how they accumulate charges and costs and is therefore variable across hospitals. Table 1 describes the information included on claims and on Medicare cost reports.

Table 1: Hospital Information Included on Claims and Medicare Cost Reports Submitted to CMS

Information	Claims ^a	Medicare cost report ^b
Charges	Lists charges for each service provided	Includes hospital's total charges and charges aggregated by cost center for (1) all patients and (2) Medicare beneficiaries
Costs	None	Includes hospital's total costs aggregated by cost center for all patients and hospital's estimates of the share of costs accounted for by Medicare beneficiaries
Categories of services	Revenue centers	Cost centers
Submitted to CMS	Upon a beneficiary's discharge	Annually

Source: GAO analysis of information contained on claims and Medicare cost reports.

^aA claim contains billed charges for services provided during an inpatient stay.

^bA Medicare cost report contains an annual summary of a hospital's total costs and charges.

Hospitals vary in the number of cost centers and revenue centers they use, and their decisions in allocating costs and charges to cost centers are driven typically by the hospitals' own internal accounting systems and organizational structure. For example, if a hospital does not have a separate department for anesthesia services, it may allocate its charges for anesthesia to the Medicare cost report's cost center for operating room.

Though hospitals report their total charges and total costs for all patients, as well as total costs and charges by cost center, they do not separately track the costs of services delivered by payer source. However, in reporting to CMS, each hospital must include in its Medicare cost report total charges for all patients, total charges for Medicare beneficiaries, and an estimate of the share of the hospital's costs for services delivered to Medicare beneficiaries, in total and by cost center.

Charge-Based Weights Are Used to Measure Relative Costliness of Inpatient DRGs

To determine the costliness of one inpatient DRG compared with others, CMS uses charge data from claims. Generally, the charges on a claim are for accommodation and ancillary services. Accommodation services include room and board and nursing services. These services are classified as either routine or intensive care, based on the level of intensity of the nursing services required. Ancillary services include all other services

associated with an inpatient stay; for example, drugs and diagnostic services.¹⁴

Charges for accommodation and ancillary services have been used to weight DRGs since 1986. In general, the average charge for each DRG is divided by the average charge for all DRGs to produce a weight. The resulting weights are multiplied by a base payment rate to determine payment for each DRG.¹⁵

Charges have long been considered a problem in setting relative weights for inpatient hospital services because the method assumes a consistent relationship between the charge set for an item or service and its cost to the hospital. A recent MedPAC-sponsored report on hospitals' charge-setting practices attributes the wide variation in the relationship between costs and charges to hospital-specific factors—such as mission, location, and payer mix—and charge mark-up decisions.¹⁶

Cost-Based Weights Are Used to Measure Relative Costliness of Outpatient APCs

Unlike IPPS, which uses charges to set payment weights for DRGs, CMS uses cost-based weights in the OPSS to measure the costliness of one APC relative to the others. Because neither the claims nor the Medicare cost reports include the costs for individual items or services, these costs must be estimated by CMS in order to calculate payment weights. As a first step, CMS obtains hospital charge data on each outpatient service from the claims. It calculates each hospital's cost for each service by multiplying the charge amount for each service by the CCR that is computed from each hospital's cost report, generally on a cost center-specific basis. The application of a CCR to a charge is designed to remove the mark-up from each charge in order to identify the cost of the item or service. For example, to estimate the cost of a radiology service, CMS multiplies the charge associated with a hospital's radiology revenue center on each claim by the radiology cost center CCR for that hospital. CMS uses these estimated costs to develop payment weights for each APC.

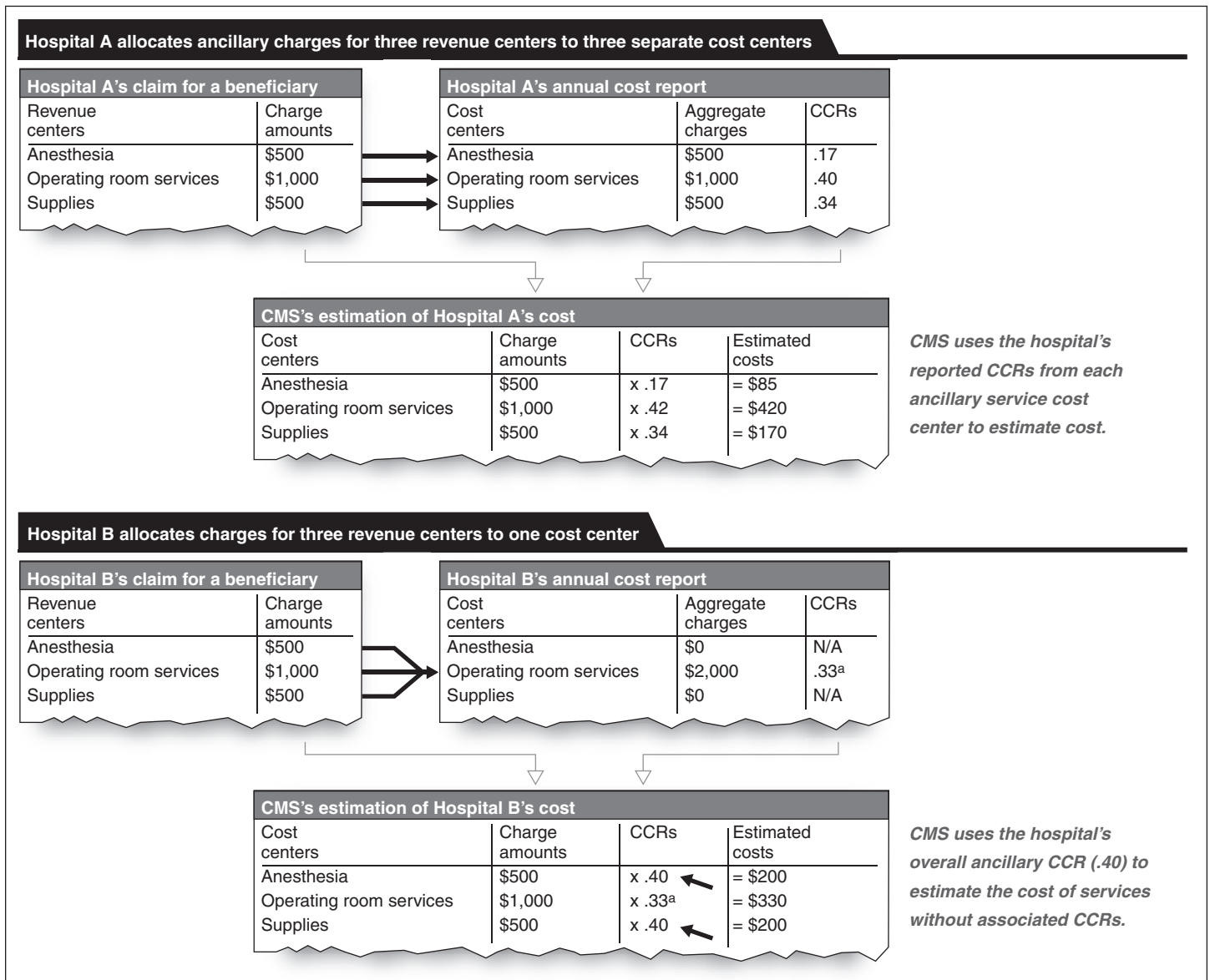
¹⁴Payment for physician services is not included in the DRG payment to hospitals. Physicians are paid by Medicare under a separate fee schedule.

¹⁵The base payment rate is a standardized amount, which is divided into labor and nonlabor-related shares.

¹⁶The Lewin Group, *A Study of Hospital Charge Setting Practices* (Falls Church, Va.: 2005).

Hospitals vary in how they allocate revenue center charges to cost centers on their Medicare cost reports. When estimating costs for purposes of weighting APCs, however, CMS uses its own system of mapping the hospitals' revenue center charges to cost center CCRs in order to convert the charges to an estimate of cost. This can be problematic since hospitals may allocate their revenue centers to cost centers in a different manner from CMS. For example, as illustrated in figure 1, some hospitals allocate charges from the same revenue center to separate cost centers; others allocate charges from several revenue centers to a single cost center. CMS's use of a single method in mapping charges to costs and then applying that method across all hospitals for purposes of cost estimation does not recognize the differences in hospital allocation decisions when estimating costs. As a result, some service costs are systematically overestimated and some are underestimated.

Figure 1: How Hospitals Can Allocate Charges from Revenue Centers to Cost Centers and the Effect on CMS's Cost Estimates



Source: GAO.

Note: For illustrative purposes, these hospitals' total charges reflect charges for only one patient. Hospitals' Medicare cost reports would normally contain all charges for all services delivered during a fiscal year.

^aThe CCR computed for Hospital B's operating room services is a weighted average reflecting the costs and charges for all three of the services reported on the Medicare cost report.

The services represented in figure 1 are ancillary services typical to many hospitals. Hospital A reports charges in all three cost centers, and reports CCRs for these cost centers. Hospital B does not use separate cost centers for anesthesia and supplies; therefore, it does not report any charges in its cost centers for anesthesia and supplies. As a result, Hospital B does not report CCRs for these services specifically. To estimate the cost for these services without an associated CCR, the current OPPS cost-based weighting method uses, or defaults to, the hospital's overall ancillary CCR—which is the ratio of a hospital's total ancillary costs to its total ancillary charges. Therefore, in the case of Hospital B, CMS's single mapping approach defaults to Hospital B's overall ancillary CCR to estimate a cost for its anesthesia and supply charges. To the extent that the hospital's overall ancillary CCR is an inaccurate measure of the cost-to-charge relationship for those services, the costs of those services will be overestimated or underestimated. If these cost estimates are used to set relative weights, payment amounts for the services can be inappropriate.

CMS asserts that the application of CCRs to Medicare charges is a fundamental principle of cost reimbursement and has been in effect for many years. Because CMS does not have any other financial information from hospitals except each hospital's claims and Medicare cost report, it views the use of CCRs as the most straightforward way to estimate costs from charges.¹⁷

Applying the OPPS Weighting Method to IPPS Could Undermine the Objective of Better Aligning DRG Payment Weights with Costs

When we used CMS's cost-based OPPS weighting method to determine its applicability for weighting inpatient DRGs, we found that, for the majority of hospitals in our analysis, our estimates of aggregate costs for Medicare stays were on average more than what the hospitals reported on their cost reports for ancillary services. In addition, our estimates for accommodation services were on average less than what the hospitals reported on their cost reports for the Medicare services associated with these stays. These differences resulted from CMS's single approach to mapping hospital-specific cost center CCRs to revenue center charges. Cost differences result because the CMS method does not address the variations in how hospitals allocate charges and costs. Using such cost estimates to set DRG weights in the IPPS would undermine the goal of better aligning payment with costs.

¹⁷See 70 *Fed. Reg.* at 23,455 (May 4, 2005).

We estimated costs using the OPPS method for each hospital stay and aggregated the accommodation and ancillary cost estimates for each of the 1,025 hospitals in our analysis. We compared our aggregate accommodation and ancillary cost estimates to the accommodation and ancillary costs each hospital reported on its Medicare cost report. For all but one of the hospitals in our analysis, our application of CMS's OPPS method resulted in cost estimates for inpatient accommodation services that were on average 72 percent less than what the hospitals reported on their Medicare cost reports for these services. For 57 percent of the hospitals, our application of CMS's OPPS method resulted in cost estimates for inpatient ancillary services that were on average 8 percent more than what the hospitals reported on their Medicare cost reports.¹⁸ For 22 percent of the hospitals, our application of CMS's OPPS method resulted in cost estimates for inpatient ancillary services that were on average 6 percent less than what the hospitals reported on their Medicare cost reports.

The differences between our aggregate estimates using the OPPS method and hospitals reported costs indicate that a single approach to mapping cost center CCRs to revenue center charges is problematic because CCRs are applied to certain charges that do not capture the cost-to-charge relationship for those charges. For example, approximately 18 percent of the hospitals in our analysis did not allocate their charges for anesthesia services to their Medicare cost report's anesthesia cost center and thus did not report a CCR for that cost center.¹⁹ In applying the CMS OPPS method to estimate the cost of anesthesia services for these hospitals, we multiplied each hospital's anesthesia charge included on the hospital's claims by each hospital's overall ancillary CCR. Although we could not measure the precise effect of using a default CCR for these services, our information on average CCRs was instructive. That is, the average overall ancillary CCR for the 1,025 hospitals in our analysis was .34 and for the hospitals that reported costs and charges in the anesthesia cost center, the

¹⁸The 8 percent is based on estimates from 1,020 hospitals. This estimate excludes ancillary cost estimates for 5 hospitals from our sample of 1,025 because they were extreme outliers. When we included data from these hospitals in our aggregate cost estimates, the resulting ancillary cost estimates for the 1,025 were overestimated on average by 222 percent relative to what all the hospitals reported.

¹⁹This hospital allocation practice—billing for services and allocating the charges to a different cost center service type—occurred to varying degrees for all ancillary cost centers.

average anesthesia CCR was .16.²⁰ The difference between the two CCRs suggests that using each hospital's overall ancillary CCRs to estimate its anesthesia costs produced an estimate that, on average, overvalued these services at the individual hospital level and contributed to the differences between the aggregated ancillary cost estimates we calculated and what hospitals reported to CMS as their ancillary costs. The extent of the problem for cost estimation depends upon the frequency with which the overall ancillary CCR is used in place of a specific cost center CCR.

Cost estimation problems can also result when hospitals report two distinct service types, with different mark-ups, in one cost center. Specifically, about 9 percent of the hospitals in our analysis reported charges for intensive care services in a cost center other than intensive care. For example, some of these hospitals may have reported intensive care charges with routine service charges in the routine cost center. In fiscal year 2002, hospitals' average CCR for intensive care services for the 1,025 hospitals in our analysis was .81 compared with the average CCR for routine services of .96. Such combining into one cost center results in a weighted average CCR that may undervalue routine services and overvalue intensive care services. These estimates can systematically influence DRGs that have a disproportionate amount of either intensive care or routine services.

CMS's Proposed Cost-Based Approach for IPPS May Result in Improvements over the OPSS Cost-Based Method

CMS is proposing an approach to set payment weights for inpatient DRGs that appears promising, and may result in improvements in setting cost-based weights compared with the OPSS method. The proposal involves grouping charges into 10 broad service groups. The charges for each of the 10 service groups are converted to cost-based weights by using national-average CCRs that correspond to each of the service groups. This approach ameliorates the problems we observed with the OPSS method because it does not require the application of hospital-specific CCRs, which, using CMS's single method to match charges to cost, may not capture the relevant cost-to-charge relationships for services. Using national-average CCRs is intended to reduce the impact that variations in

²⁰The average mark-up for overall ancillary services was 194 percent of the cost, and for anesthesia services the average mark-up was 525 percent. These mark-ups were in addition to the cost and result in a charge that is almost three times and six times the cost of services for all ancillary and anesthesia services, respectively. For example, a hospital's cost for an anesthesia service was \$16. The hospital applied a mark-up of \$84, which is 525 percent of \$16, resulting in a charge of \$100.

hospital charge and cost allocation decisions can have on the DRG weights. Six of the service groups, which constitute a majority of Medicare inpatient charges, appear promising because their CCRs are relatively consistent within a service group and are likely to capture the relevant cost-to-charge relationship for the services included in these groups. An additional 2 groups contain cost center CCRs that range widely within their respective groups and, therefore, raise concerns about their ability to better align payment with costs for services in those groups. Finally, due to the limitations of the MEDPAR data, we did not have enough information to determine whether the 2 remaining service groups are likely to capture the relevant cost-to-charge relationship for the services included in those groups.

National-Average CCRs Intended to Reduce Impact on IPPS Weights of Variation in Hospital Charge and Cost Allocation Decisions

Under its proposed approach for the IPPS, CMS takes several steps to create cost-based weights for each DRG. The approach entails grouping charges from hospital's claims into 10 broad service groups.²¹ (See table 2.) CMS uses these service groups as a basis to create charge-based weights by standardizing the charges in each group to remove differences due to hospital-specific characteristics. To standardize the charges, CMS calculates an average charge for each hospital for each of the 10 proposed service groups. CMS then divides each individual hospital's charge for each service by that hospital's average charge for the service group. Ultimately, these standardized charges for all hospitals are aggregated by DRG and the average charge for each DRG is divided by the national-average charge for all cases. This yields 10 standardized, national charge-based weights that correspond to each service group for each DRG. In order to convert these charge-based weights to cost-based weights, charge mark-ups must be removed. To accomplish this, CMS calculates 10 national-average CCRs for each of the 10 broad service groups using hospitals' Medicare cost report data. CMS then uses these CCRs to convert the national charge-based weights to cost-based weights.²² The 10 cost-based weights for each DRG are summed to produce one final weight for each DRG.

²¹In this report, we use the term service group to describe CMS's proposed groups. In its *Federal Register* notice, CMS refers to these groups as cost centers.

²²It is possible that a particular DRG may have a zero value for one or more of the 10 service groups. This can occur if hospitals do not provide particular services as part of a DRG.

Table 2: CMS's Proposed Service Groups

CMS's proposed service group	Revenue centers from claims used to calculate relative charge weights^a	Cost centers from Medicare cost report used to calculate national-average CCRs
Routine	Private room Semi-private room Ward	Adults & pediatrics
Intensive	Intensive care Coronary care	Intensive care unit Coronary care unit Burn intensive care unit Surgical intensive care unit Other special care unit
Drugs	Pharmacy	Drugs charged to patients Intravenous therapy
Supplies & Equipment	Medical/surgical supply Durable medical equipment Used durable medical equipment	Medical supplies charged to patients Durable medical equipment rented Durable medical equipment sold
Therapeutic Services	Physical therapy Occupational therapy Speech therapy Inhalation therapy	Physical therapy Occupational therapy Speech pathology Respiratory therapy
Operating Room	Operating room Anesthesia	Operating room Recovery room Delivery and labor room Anesthesiology
Cardiology	Cardiology	Electrocardiology Electroencephalography
Laboratory	Laboratory	Laboratory Provider-based physician clinical laboratory service
Radiology	Radiology Magnetic resonance imaging (MRI) Lithotripsy	Radiology-diagnostic Radiology-therapeutic Radioisotope
Other Services	Ambulance Blood Blood administration Outpatient services Emergency room Clinic visit End-stage renal disease (ESRD) Other services	Ambulance Whole blood and packed red blood cells Blood storing, processing, and transporting Other outpatient services Ambulatory surgical center (Non-distinct part) Emergency Clinic Home program dialysis Renal dialysis Other ancillary

Source: GAO analysis and 71 *Fed. Reg.* 23,996, 24,009-24,010 (April 25, 2006).

^aData for the revenue centers are from the CMS MEDPAR file. MEDPAR pools revenue centers into broad revenue center categories and reports total charges by these categories. The revenue centers from MEDPAR are not a one-to-one match with cost centers from the Medicare cost reports.

The proposed approach, which entails using national-average CCRs rather than individual hospital CCRs, is intended to reduce the impact that variations in hospital charge and cost allocation decisions can have on DRG weights. Specifically, the national-average CCRs, in conjunction with standardized charge-based weights, are more likely than the OPPS method that entails using hospital-specific CCRs to capture the relevant cost-to-charge relationships for the services in each group. In principle, the national-average CCRs are applied to a group of services with similar charge mark-ups. Similarly, the national-average CCRs will be influenced by the most commonly used hospital allocation practices among hospitals and are, therefore, less likely to be influenced by atypical hospital allocation practices. Furthermore, because a national-average CCR is established for each service group, the proposed approach eliminates the need to use, or default to, a hospital's overall CCR when a particular cost center CCR is not reported. For these reasons, CMS's proposed approach to establishing cost-based weights for the purpose of better aligning payments with costs for DRGs appears promising.

Service Group Approach Appears Promising but Some Concerns Exist

Because CMS's broad service group approach is integral to improved payment accuracy, and because CMS is currently considering refinements to the service groups for the fiscal year 2007 IPPS payments, we examined the 10 proposed service groups and their associated national-average CCRs.²³ For 6 of the proposed service groups, which constitute a majority of Medicare inpatient charges, the national-average CCRs appear promising, and are likely to capture the relevant cost-to-charge relationships for the services included in these groups. An additional 2 groups contain cost center CCRs that range widely within their respective groups, and therefore, raise concerns about their ability to better align payment with costs for services in those groups. Due to the limitations of the MEDPAR data, we did not have enough information to determine whether the 2 remaining service groups are likely to capture the relevant cost-to-charge relationship for the services included in the groups.

²³CMS's proposed service groups are based on its analysis of cost report and claims data. Each group includes revenue center charges that, in total for the group, represent at least 5 percent of all Medicare charges for inpatient hospital services. The groups also include cost centers that, CMS asserts, are consistent with general hospital accounting definitions. To analyze the cost centers within the service groups, we used fiscal year 2003 Medicare cost report data for 3,558 hospitals paid under the IPPS in order to conform to the same time period as the analysis CMS conducted for its April 2006 notice of proposed rulemaking.

Six of the groups, which constitute approximately 63 percent of total Medicare inpatient charges in 2003, appear promising since they either contain cost center CCRs that are relatively consistent with one another within a group, or contain individual cost center CCRs that vary from the national-average CCRs, but the charges associated with those services constitute a small percentage of total Medicare inpatient charges. For example, one of these six groups—radiology—includes three cost center CCRs that are relatively consistent with the radiology national-average CCR, with a range of 7 percentage points between the highest and lowest CCR for these three cost centers. This grouping produces a national-average CCR that will not be unduly influenced by any one cost center CCR included in the average. The other service groups that appear promising include cardiology, routine, drugs, supplies & equipment, and other services.²⁴

While six of the service groups that constitute a majority of Medicare inpatient charges appear promising, two other groups, therapeutic services and operating room, raise concerns because they contain cost center CCRs that vary widely and involve services that can be linked to high-volume DRGs. The national-average CCR for these service groups may not capture the appropriate cost-to-charge relationships for certain services in those groups and could undermine the goal of better aligning payments with costs for those services. Table 3 illustrates this problem for one of the groups, therapeutic services, where the difference between the lowest and highest cost center CCR is 26 percentage points. The cost center CCR for respiratory therapy is substantially lower than the other cost center CCRs included in this group.²⁵ Respiratory therapy is used to treat respiratory diseases classified under DRG 088—chronic obstructive pulmonary disease (COPD)²⁶—Medicare’s fourth most frequently billed DRG. In 2003, hospitals billed Medicare approximately \$1.4 billion for respiratory therapy services provided under DRG 088. This amount accounted for 17 percent of the total ancillary service charges and 11 percent of the total charges for DRG 088, which were \$12 billion. The

²⁴The supplies & equipment and other services groups include cost center CCRs that range widely from the national-average CCR for their groups; however, the charges associated with those services constitute approximately 1 percent of total Medicare charges and, therefore, are not likely to have an impact on the DRG weights that include those services.

²⁵Respiratory therapy is also referred to as inhalation therapy.

²⁶COPD refers to chronic lung disorders that result in blocked air flow in the lungs. The two main COPD disorders are emphysema and chronic bronchitis, the most common causes of respiratory failure.

other therapy services in the group accounted for approximately 1 percent of the DRG's total charges.

Table 3: Proposed Therapeutic Services Group: Cost Centers and CCRs

Cost centers included in the therapeutic services group	GAO-calculated cost center CCRs	CMS-proposed national-average CCR for therapeutic services group
Physical therapy	.52	.35
Occupational therapy	.44	
Speech pathology	.53	
Respiratory therapy	.27	

Source: GAO analysis based on fiscal year 2003 Medicare cost report data and 71 *Fed. Reg.* 24,021 (April 25, 2006).

Our analysis of hospitals' fiscal year 2003 Medicare cost report data showed that, on average, for the 3,558 hospitals paid under the IPPS that we reviewed, the CCR for respiratory therapy is .27. The use of the national-average CCR would result in a weight that would undervalue physical, occupational, and speech therapy services. Conversely, the use of the national-average CCR in this instance would result in an estimate that overvalues respiratory therapy services. Because these services account for 17 percent of all ancillary charges for DRG 088, the application of the national-average CCR will result in a weight that would be based on an overstated cost estimate. This is a problem because the overstated cost estimate for this service is a significant portion of a high-volume DRG.

Similarly, the operating room service group may not capture the appropriate cost-to-charge relationships for certain services. The services contained within this group can be linked to DRGs that involve surgery, and those DRGs constitute almost half of the number of IPPS DRGs. The group contains CCRs for operating room and anesthesia, which are .38 and .17, respectively. CMS's proposed national-average CCR for this service group is .37. The use of the national-average CCR would result in a weight that would overvalue anesthesia services. In its comment on the CMS proposed approach, MedPAC noted problems with the therapeutic services and the operating room service groups.²⁷

²⁷MedPAC correspondence to CMS, June 12, 2006.

Finally, the remaining two groups—intensive and laboratory—include cost center CCRs that also vary widely. However, using the MEDPAR data that CMS uses to construct the IPPS rates, we could not assess the charges associated with those services because they cannot be separately identified. Without such information, we could not determine the volume of specific services provided under these groups and, therefore, we could not assess the potential impact on the DRG weights.

Concluding Observations

Policy analysts have for decades suggested that replacing charge-based with cost-based weights would improve the accuracy of the weights to measure relative costliness for hospital inpatient DRGs. Our findings suggest that the CMS approach of using national-average CCRs to develop cost-based weights for inpatient DRGs appears promising because it addresses the concerns associated with charges that are currently used to weight DRGs. The proposed approach improves the OPSS method of estimating costs because the OPSS uses a single method to map hospital-specific CCRs to charges. That method does not reflect the effects that variation in hospital charge and cost allocation decisions can have on the DRG weights.

The national-average CCRs for the service groups are critical to the goal of better aligning payments with costs for DRGs. As CMS is considering refining its service group categories, we note that two of the groups, therapeutic services and operating room, contain cost center CCRs that range widely and raise concerns about its ability to better align payment with costs for services in those groups. This issue notwithstanding, we found that most of the proposed service groups, which represent a majority of the Medicare inpatient charges, are likely to capture the relevant cost-to-charge relationship for the services included in these groups.

Agency and External Reviewer Comments and Our Evaluation

We received written comments on a draft of this report from CMS (see app. II). We also received oral comments from representatives from two hospital associations, the AHA and the AAMC.

CMS Comments

In commenting on a draft of this report, CMS stated that it was pleased with our findings. CMS also stated that it could not comment further because it is currently considering public comments in developing the fiscal year 2007 final rule for the IPPS payment rates.

Hospital Association Comments and Our Evaluation

Representatives from both AHA and AAMC acknowledged the problems inherent in matching charges from claims to cost information on hospitals' cost reports due to the differences in the ways in which hospitals report these data. The AHA representatives specifically noted that the problems with cost estimation due to hospital reporting variation we describe in this report parallels what AHA has found in its own analysis. AHA representatives also agreed that the differences in which hospitals allocate their charges and costs, and the cost estimates that result, could potentially affect DRG relative weights.

AHA representatives stated, however, that we should more prominently discuss the issues of using cost report data to set the relative weights. Specifically, they stated that we should better emphasize that CMS's proposed national-average CCRs are based on cost report data that could still present problems as a result of hospital reporting variation.

As we stated in the draft report, the only data sources available to CMS to set the DRG weights are hospital Medicare cost report and claims. Medicare cost report data reflect hospital reporting variation because CMS allows hospitals the flexibility to report charges and costs in a manner that is consistent with each hospital's accounting system and organizational structure. Our conclusion that the proposed approach appears promising is based on our assessment that, given that cost report and claims are the only data available, CMS's approach in using these data to set DRG weights, that is, using national-average CCRs with standardized charge-based weights, can ameliorate the effects of differences in hospital reporting.

Representatives from both organizations also were concerned about the overall message of the report that the CMS approach appears promising. The AHA representatives stated that although the proposed approach could address some issues associated with using cost report data, they also noted that we did not test the validity of the proposed approach. The AAMC representatives also questioned our overall message given some of the concerns we noted in the report with the national service groups. In particular, AAMC stated that although we found that the service groups accounting for 63 percent of total inpatient charges appear promising, they believed that the remaining 37 percent was a substantial percentage.

Testing the validity of CMS's proposed approach was beyond the scope of our work. However, we believe that the report presents a balanced view of the CMS approach, given our findings on hospital reporting variation and its effects on cost estimation. As noted in the draft report, we found that

6 of the 10 service groups that represent 63 percent of Medicare inpatient charges are promising because the cost center CCRs within each service group are relatively consistent. As a result, the proposed national-average CCRs for these 6 groups are likely to capture the relevant cost-to-charge relationships for the services within these groups. However, we also noted in the draft report that we have concerns about the ability of 2 of the service groups to better align payment with costs, and that we did not have enough information to evaluate the 2 remaining service groups.

Additionally, we received technical comments from the two associations, which we incorporated as appropriate.

We are sending a copy of this report to the Administrator of CMS. We will also provide copies to others on request. The report is available online at no charge on GAO's Web site at <http://www.gao.gov>.

If you or your staff have any questions, please contact me at (202) 512-7101 or steinwalda@gao.gov. Contact points for our Offices of Congressional Relations and Public Affairs may be found on the last page of this report. GAO staff who made major contributions to this report are listed in appendix III.



A. Bruce Steinwald
Director, Health Care

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The Honorable Nancy Johnson
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The Honorable Pete Stark
Ranking Minority Member
Subcommittee on Health
Committee on Ways and Means
House of Representatives

Appendix I: Scope and Methodology

This appendix identifies data sources used for our analyses and summarizes our methods.

Data Sources

We used data from Medicare Provider Analysis and Review (MEDPAR)—the Centers for Medicare & Medicaid Services' (CMS) database for compiling and maintaining hospitals' Medicare claims—from 2001, 2002, and 2003. A MEDPAR record represents one distinct stay, and contains patient and hospital identifiers and diagnosis and procedure codes based on the International Classification of Diseases, 9th Revision, Clinical Modification (ICD-9-CM). CMS uses MEDPAR for rate-setting purposes under the inpatient hospital prospective payment system (IPPS).

We also used fiscal year 2002 and 2003 hospital Medicare cost report data that individual hospitals are required to submit annually to Medicare as compiled in CMS's Healthcare Cost Reporting Information System (HCRIS) database. HCRIS is constructed by CMS based on the Medicare cost reports submitted to the fiscal intermediaries. Each hospital defines its own fiscal year—the only requirement is that the beginning date of the hospital fiscal year must fall within the federal fiscal year (October 1 through September 30). There is a time lag of up to 2 years before the data are complete for all hospitals.

Hospitals report total costs and total charges by cost center on their Medicare cost reports. They have the discretion to use as many or as few cost centers on the cost report as they choose. Beyond the more general cost centers, hospitals have the ability to report more detailed information, referred to as subscripsts, for specific services. For example, a hospital may report data for the cardiology cost center, and additional data for a subscripsts of cardiology, called cardiac catheterization. In the HCRIS database, the cost center data reflect the sum of the subscripsts data. This level of detail is similar to the manner in which service-level data are available in the MEDPAR file.

To assess the reliability of the MEDPAR and HCRIS data, we reviewed existing documentation related to the data quality control procedures and electronically tested the data to identify obvious problems with accuracy. We determined that the data were sufficiently reliable for the purposes of this report. Further, because we chose to estimate costs using only those hospitals that most consistently reported charges and stays between their claims and their Medicare cost report, we could then assess the validity of our cost estimates relative to the aggregate Medicare costs these hospitals reported on their Medicare cost reports. Because our cost estimation

analysis was conducted on a subset of hospitals in fiscal year 2002, the results are not generalizable to the hospitals in fiscal year 2002 whose total charges and number of stays from their Medicare cost reports and claims did not match within .3 percent.

Methods

To examine the applicability of CMS's current cost-based method used to set weights in the outpatient prospective payment system (OPPS) to weight diagnosis-related groups (DRG) in the inpatient prospective payment system (IPPS), we first identified 3,660 short-term, acute hospitals that were paid under IPPS and submitted fiscal year 2002 data to CMS. A hospital's fiscal year 2002 could start anytime from October 1, 2001, through September 30, 2002. As a result, the cost reports contain charges and estimated costs for services provided to Medicare beneficiaries in 2001, 2002, and 2003. For this reason, we used MEDPAR and Medicare cost reports to match claims from 2001, 2002 and 2003 to each hospital's fiscal year 2002 Medicare cost report. Using approximately 12 million MEDPAR records and HCRIS data from 3,660 hospitals, we aggregated charges and stays from the MEDPAR claims file for each hospital in our universe. We compared the aggregate charges and stays from MEDPAR with the charges and number of stays reported on each hospital's Medicare cost report. We used fiscal year 2002 data because these were the most recent, complete Medicare cost report data available when we began our analysis in October 2004.

From this analysis, we identified 1,025 hospitals whose Medicare cost report charges and number of stays matched within .3 percent. We looked at the distribution of hospitals matching aggregate charges and stays ranging from .1 percent to 1 percent as reported in Medicare cost reports and claims. We chose .3 percent (1,025 hospitals), because it represented over a quarter of the total IPPS hospitals and included at least 25 hospitals for each hospital type (e.g., teaching, urban, for-profit). The 1,025 hospitals have a distribution across types of hospitals similar to the population of IPPS hospitals. We assumed these 1,025 hospitals had the most consistent cost information available to perform our cost analysis.

To estimate costs for inpatient services for each of the 1,025 hospitals, we applied the cost estimation method that CMS uses in the outpatient hospital setting; that is, we used individual cost center CCRs based on each hospital's Medicare cost report data to convert charges to costs. Similar to what CMS does for estimating costs for outpatient services, we developed a mapping method to match revenue centers to cost centers to determine which CCR to use to estimate costs for the 1,025 hospitals

included in our analysis. For example, we mapped the radiology revenue center charges to the radiology cost center. In cases where revenue centers and cost centers did not directly correspond, we used the hospital's overall ancillary CCR to estimate costs, with the following exceptions. If a hospital billed for speech, occupational or physical therapy charges, but did not include a matching cost center on its cost report for those services, we used another therapy cost center CCR to estimate costs. For example, if a hospital billed for physical therapy but did not have a matching cost center, we used the speech therapy cost center CCR. In addition, if a hospital's cost report did not include a DME cost center but the claims showed DME revenue center charges, we applied the hospital's overall supply CCR to estimate costs.

We multiplied the cost center CCR from the hospital Medicare cost report to each charge for each claim. Subsequently, for each of the 1,025 hospitals we summed our cost estimates for accommodation and ancillary services separately and then compared these aggregate cost estimates to what hospitals reported as their costs for these services on their Medicare cost reports. From this analysis, we calculated the percentage of hospitals where our estimates were, on average, either more or less than what the hospitals reported for ancillary and accommodation services separately. After comparing our cost estimates to what the hospitals reported on their Medicare cost report, we examined hospital reporting methods, that is, we identified the cost centers to which hospitals reported their charges and compared these charges to how hospitals reported these services on their claims. For example, while a hospital may record \$1,500 in physical therapy charges on its claims, it may record these physical therapy charges in the occupational therapy cost center on its cost report. This practice is in keeping with the discretion CMS affords hospitals in how they accumulate and report charges and costs.

To examine whether CMS's proposed approach for the IPPS is an improvement over its OPSS method for setting cost-based weights, we estimated costs for fiscal year 2002 using the OPSS method, and reviewed CMS's April 2006 notice of proposed rulemaking.¹ In particular, we identified potential problems in applying the OPSS cost-based method to the IPPS and determined whether CMS's proposed approach would ameliorate those problems. We evaluated CMS's proposal to use national-

¹We did not examine the extent to which the OPSS method measures relative costliness for outpatient services.

average CCRs to derive cost-based weights. We used data from 3,558 hospitals paid under the IPPS that submitted a fiscal year 2003 Medicare cost report. We used fiscal year 2003 Medicare cost reports in order to conform to the same time period as the analysis CMS conducted for its April 2006 notice of proposed rulemaking. We calculated CCRs for each of the cost centers that are included in CMS's 10 proposed service groups.² We determined whether the service groups appear promising based on the extent to which cost center CCRs contained within each group varied. Additionally, using 2003 claims data, we analyzed the proportion of service group charges to determine whether the service groups appear promising in capturing cost-to-charge relationships for the respective services in each group.

²The 10 proposed service groups are routine, intensive, drugs, supplies & equipment, therapeutic services, operating room, cardiology, laboratory, radiology, and other services.

Appendix II: Comments from the Centers for Medicare & Medicaid Services



DEPARTMENT OF HEALTH & HUMAN SERVICES

Centers for Medicare & Medicaid Services
Office of Strategic Operations
and Regulatory Affairs

200 Independence Avenue SW
Washington, DC 20201

JUL 18 2006

DATE:

TO: A. Bruce Steinwald
Director, Health Care
U.S. Government Accountability Office

FROM: Mark B. McClellan, M.D., Ph.D.
Administrator

A handwritten signature in black ink, appearing to read "Mark B. McClellan".

SUBJECT: Government Accountability Office's (GAO) Draft Report: "MEDICARE: CMS's Proposed Approach to Set Hospital Inpatient Payments Appears Promising" (GAO-06-880)

Thank you for the opportunity to review and comment on the GAO's draft report entitled "MEDICARE: CMS's Proposed Approach to Set Hospital Inpatient Payments Appears Promising." We appreciate GAO's efforts to analyze potential improvements to the relative weighting methodology used for the Hospital Inpatient Prospective Payment System (IPPS). As GAO stated in the report, "policy analysts have for decades suggested that replacing charge-based with cost-based weights would improve the accuracy of the weights to measure relative costliness for hospital inpatient DRGs." The Centers for Medicare & Medicaid Services (CMS) is pleased that GAO's findings suggest our approach of using the national average cost-to-charge ratios to develop cost-based weight for inpatient diagnosis-related groups (DRGs) appears promising because it addresses the concerns associated with charges that are currently used to weight DRGs. As stated by the GAO, use of national-average cost-to-charge ratios ameliorates the effects that variations in hospital charge and cost allocation decisions can have on DRG weights.

The Medicare Prescription Drug, Improvement, and Modernization Act of 2003, required GAO to study IPPS payments in relation to costs. During the course of GAO's work, CMS proposed a hospital-specific cost weighting methodology for determining the DRG weights. GAO examined the applicability of CMS' method for developing cost weights under the Outpatient Prospective Payment System (OPPS) to the hospital-specific cost weights proposed for the IPPS.

The fiscal year (FY) 2007 IPPS proposed rule was made available on April 12, 2006. The comment period on the proposed rule ended on June 12, 2006, and CMS is carefully evaluating the public comments we received. At this time, we are not commenting further on the GAO's analysis because we are considering these issues for the FY 2007 IPPS final rule that we expect to make available on August 1, 2006.

Once again, thank you for your analysis of this issue and the opportunity to review your report.

Appendix III: GAO Contact and Staff Acknowledgments

GAO Contact

A. Bruce Steinwald, (202) 512-7101 or steinwalda@gao.gov

Acknowledgments

In addition to the contact above, Maria Martino, Assistant Director, Shamonda Braithwaite, Melanie Anne Egorin, Hannah Fein, Nora Hoban, Julian Klazkin, Daniel Lee, and Eric Wedum made key contributions to this report.

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