FEATURE STORY

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is your organization's wage index accurate?

One study reveals that an incorrect wage index for a single hospital can skew the wage index for an entire labor market area—especially in areas with a small number of hospitals.

AT A GLANCE

Hospitals should take these steps to ensure their wage reporting follows Medicare directives and that all information is reported accurately:

- Check the reasonability of your hospital's wage data.
- Ensure your hospital's compliance with reporting directives.
- Consider your hospital demographics.
- Take corrective action, if needed.

The relationship between a hospital's average hourly wage and the wage index for its labor market area can be challenging to understand. The methods used by the Centers for Medicare and Medicaid Services to calculate the wage index are complex, and it might seem that data for an individual hospital cannot materially impact the process.

However, a recent study reveals that an overstatement or understatement of wage data can have a substantial impact on payment. This is particularly true in areas that have only one hospital and in areas where one hospital's labor costs are significantly higher or lower than those of other area hospitals. In some instances, wage index irregularities can even be viewed as compliance issues. Recently, the Office of Inspector General recommended that CMS develop a corrective action plan to address errors in reporting wage data.

The Importance of an Accurate Wage Index

Under the inpatient prospective payment system, hospitals are paid a predetermined diagnosis-related group rate for each Medicare discharge. CMS adjusts this rate annually using a wage index for the labor market area where a hospital is located. The wage index for each area is calculated using hospital wage data as reported in Medicare cost reports.

An accurate wage index is important because labor costs—which consume more than half of a hospital's operating revenue—can vary significantly from one labor market area to another.

Each year, the OIG issues a work plan to identify vulnerabilities of federal agencies, including CMS. In the work plan issued for FY07, the OIG identified several areas of interest, including the IPPS wage index. Because these indexes are a significant component in determining the rate paid for inpatient services, an incorrect wage index can result in incorrect DRG payment. Incorrect information for a single hospital can seriously skew the wage index for an area, especially in areas with fewer hospitals.

The OIG issued a report in February 2007 regarding the review of 21 short-term acute care hospitals from FY00-04. The hospitals were selected for review based on factors such as an elevated wage index for an area versus the average wage index for the state, the dominance of a single hospital within an area, and Medicare volumes. The report also included limited-scope reviews of deferred compensation wage data reported by four hospitals in their FY04 cost reports.

OIG Findings

The OIG used Medicare cost report data to analyze potential areas of concern for short-term acute care hospitals and to derive comparative information for ensuring accurate reporting of hospital wage data. The OIG concentrated on annual increases in wage data, benefit costs as a percentage of total wages, and other measures.

In May 2005, the OIG alerted CMS to preliminary findings regarding inconsistent reporting of pension and other postretirement benefit costs as wage data in the cost reports of the hospitals reviewed. Although some hospitals included millions of dollars in unfunded pension and other postretirement benefit costs in their annual wage data, others included only funded amounts. In August 2005, CMS released the IPPS final rule, which in part clarifies CMS's policy that hospitals must comply with the *Medicare Provider Reimbursement Manual* and Medicare instructions for reporting deferred compensation costs as wage-related costs (*Federal Register*, Aug. 12, 2005). These instructions require that pension and other postretirement benefit costs be liquidated in a timely manner to be properly reported as wage-related costs.

The hospitals reviewed also did not fully comply with Medicare requirements for reporting wage data in their Medicare cost reports. Problems included:

> Overstated pension and other postretirement benefit costs
> Misstated wages, fringe benefit costs, and home office and nonsalary costs
> Misstated and unsupported costs for contract labor services
> Costs for unallowable Part B services
> Misstated and misclassified wages

Based on these findings, the OIG recommended that CMS develop a corrective action plan to address hospital errors in reporting wage data.

The OIG work plan for FY07 indicated various reviews to determine whether hospital and Medicare controls are adequate to ensure the accuracy of the hospital wage data used for calculating wage indexes for the IPPS. The OIG noted that wage indexes are vulnerable to inaccuracy because the data used to calculate them for many metropolitan areas (i.e., "metropolitan statistical areas" or "core-based statistical areas") are significantly influenced by a single hospital. For example, if a single hospital reports incorrect wage data through its Medicare cost report, the result would be not only incorrect DRG payment for the hospital, but also incorrect wage indexes for all hospitals in the area. The OIG intends to determine the effect on the Medicare program of incorrect DRG reimbursement caused by inaccurate wage data (Office of Inspector General, "Work Plan Fiscal Year 2007," Offices of Audit Services, W-00-04-35142).

But the results of these focused reviews cannot be applied to all hospitals. With that in mind, we conducted a study of cost report data for all short-term acute care hospitals during four recent years to provide comparative information for hospitals that may wish to examine their own reporting practices in comparison with others. Our findings do not provide as much depth as the focused OIG review because they do not include detailed audits of the data reported versus hospital documentation. The findings, however, do offer generalized perspectives that should be applicable to all hospitals.

Purpose of This Study

By examining historical Medicare cost report data, it is possible to better understand average wage information, trends over time, and variations among different market sizes. Our study was designed to provide such a perspective.

WAGE INFORMATION FOR SHORT-TERM ACUTE CARE HOSPITALS FY02-05 ($ MILLIONS)

Hospital Fiscal Year	Number of Hospitals	Total Salary and Wage Costs	Total Paid Hours	Average Hourly Rate
FY02	4,440	$182,996.90	7,093.8	$25.80
FY03	4,211	$199,092.30	7,248.0	$27.47
FY04	4,094	$211,201.60	7,253.3	$29.12
FY05	3,870	$221,933.70	7,293.5	$30.43

Medicare cost report data for FY02-05 were selected for the study. (Data for FY06 are preliminary since they are not yet available for most hospitals.) CMS calculates a wage index for each metropolitan area using hospital wage data (which include wages, wage-related costs, and corresponding hours) collected several years earlier to allow time for the collection of complete cost report data from all IPPS hospitals and for reviews of hospital wage data by CMS's fiscal intermediaries. For example, CMS based FY07 wage indexes on wage data collected primarily from hospital cost reports for their fiscal years that began during FY03.

Hospitals that participate in Medicare are required to submit annual financial reports that detail their operations. These reports are subsequently made available in electronic form by CMS. CMS's Healthcare Cost Report Information System dataset contains data elements from the most recent version (e.g., as submitted, settled, or reopened) of each cost report filed since federal FY96.

Though hospitals that participate in Medicare are legally required to submit accurate and timely cost reports, data are sometimes incorrect or incomplete. Further, some hospitals may be exempt from filing complete cost reports or may operate on a basis other than fee-for-service. Cost reports were excluded from our study if they had missing or unreasonable wage data. Specifically, the study focused only on short-term acute care hospitals reporting more than 100 hours, with average wages greater that $5/hour and less than $100/hour. Hospitals outside these parameters may have special circumstances, errors in reporting, or a misunderstanding of why accurate cost reporting is important under IPPS. For purposes of this study, wage information included wages and wage-related cost. These amounts and corresponding hours were taken from the Medicare cost report, worksheet S-3, part III.

Annual Increases in Average Hourly Rate

As seen in the exhibit top left, the average hourly rate reported by hospitals has increased nearly 18 percent from FY02 to FY05. The declining number of short-term acute care hospitals is explained in part by conversions of acute care hospitals to critical access hospitals, which are not included in this analysis.

In looking at individual hospitals, however, there are some extreme variations. Though some normal variation is expected due to differences in local wages among various areas, some of the more extreme variations may indicate problems such as overstated or understated pension or benefit costs. The exhibit below summarizes the number of hospitals more than two standard deviations above or below the national median.

HOSPITALS MORE THAN TWO STANDARD DEVIATIONS ABOVE OR BELOW THE NATIONAL MEDIAN HOURLY RATE

		Above Two Standard Deviations			Below Two Standard Deviations		
Hospital Fiscal Year	National Median Hourly Rate	Number of Hospitals	Hourly Rate Lowest	Hourly Rate Highest	Number of Hospitals	Hourly Rate Lowest	Hourly Rate Highest
FY02	$23.20	92	$36.18	$90.84	29	$5.15	$10.12
FY03	$24.77	84	$37.99	$58.17	34	$5.79	$11.62
FY04	$26.17	88	$40.79	$85.04	42	$5.81	$12.13
FY05	$27.74	104	$42.56	$74.86	48	$5.97	$12.86

Possible Irregularities in Other Wage-Related Costs

The OIG report noted that overstatement of other wage-related costs (e.g., pension, benefits) is one reason for overstatement of hourly rates. In order to test for overstatement, wage-related costs were expressed as a percentage of total salary and wage costs in the study. The exhibit at right shows national averages of wage-related costs as percentages of total salary and wage costs for the four fiscal years studied.

NATIONAL WAGE-RELATED COSTS AS A PERCENTAGE OF TOTAL SALARY AND WAGE COSTS ($ MILLIONS)

Hospital Fiscal Year	Number of Hospitals	Wage-Related Costs	Total Salary and Wage Costs	Wage-Related Costs as a Percentage of Total
FY02	4,440	$30,950.70	$182,996.90	16.9
FY03	4,211	$35,753.10	$199,092.30	18.0
FY04	4,094	$39,866.30	$211,201.60	18.9
FY05	3,870	$42,814.90	$221,933.70	19.3

Individual hospital data were then compared with national averages in order to identify any extraordinary variations. The exhibit below summarizes the number of hospitals more than two standard deviations above or below the national median.

Issues in Areas with a Dominant Hospital

The OIG report stated concerns about markets where a single dominant provider could significantly influence the wage index. The markets studied by the OIG for this issue, however, were those with the largest number of discharges. Smaller markets with few facilities were not addressed. In smaller markets, changes in the wage data reported by only one facility can significantly impact the wage index for the market.

An analysis of the percentage change in hourly wages from the prior year was prepared for cost reports ending during FY01-05. This analysis revealed that core-based statistical areas with few providers more often experience a greater variance in hourly wages than larger CBSAs with four or more facilities. The exhibit at the top of page 78 illustrates the annual percentage change in average hourly rates for several categories of CBSAs with small numbers of hospitals. For each size category, the exhibit shows the number of hospitals exceeding two standard deviations from the national median.

Data indicate that those hospitals with few or no other providers in a CBSA are more prone to volatile changes in their average hourly wage data from year to year. This volatility would lead to corresponding changes in payment. Small market providers are in a situation where failure to report accurate information can interfere with accurate Medicare payment if errors go unchecked.

This can result in needless under/overpayments. The situation can also tempt a dominant hospital to artificially inflate wage costs through its cost reporting practices. Facilities in larger provider markets are somewhat shielded from these dramatic changes due to the effects of large numbers.

HOSPITALS MORE THAN TWO STANDARD DEVIATIONS ABOVE OR BELOW THE NATIONAL MEDIAN PERCENTAGE OF WAGE-RELATED COSTS

		Above Two Standard Deviations			Below Two Standard Deviations		
			Wage-Related Cost Percentage			Wage-Related Cost Percentage	
Hospital Fiscal Year	National Median Percentage	Number of Hospitals	Lowest	Highest	Number of Hospitals	Lowest	Highest
FY02	16.6	61	26.4	53.4	25	0.0	6.7
FY03	17.5	68	27.0	64.4	28	0.0	7.9
FY04	18.1	53	29.1	74.4	19	0.0	6.8
FY05	18.5	52	29.2	69.9	22	0.0	7.9

CORE-BASED STATISTICAL AREAS MORE THAN TWO STANDARD DEVIATIONS ABOVE THE NATIONAL MEDIAN FOR PERCENTAGE CHANGE IN AVERAGE WAGE FROM THE PRIOR PERIOD

Fiscal Year	Total Hospitals		Number of Single-Hospital CBSAs		Number of 2-to-3-Hospital CBSAs		Number of >4-Hospital CBSAs		Median	Standard Deviation	High	Low
	–	+	–	+	–	+	–	+				
FY02	20	23	13	15	7	7	0	1	6.28%	5.18%	31.44%	–35.41%
FY03	21	15	12	12	9	2	0	1	5.97%	5.46%	44.71%	–58.39%
FY04	17	12	15	6	1	5	1	1	4.94%	5.09%	65.27%	–40.04%
FY05	21	23	12	17	6	5	3	1	4.42%	5.61%	35.55%	–44.03%

It is also important to note that five CBSAs appear in two or more years due to variations greater than two standard deviations from the median. None of those five CBSAs includes more than three facilities in any given period.

A similar analysis was performed to examine the change in the ratio of wage-related costs to total salary expenses over the same period. The exhibit below again shows that CBSAs with fewer hospitals have the highest incidence of dynamic change. However, in this examination, it is apparent that in FY05, there was a significant shift in the median value of the change in this ratio. Although it is not clear from the data what the precise cause for this shift is, one explanation could be reactions in hospital cost reporting due to the OIG's investigation of this issue, which began in FY05, and/or consequent compliance with CMS reporting clarifications.

Issues with the Time Period Covered

As previously stated, CMS includes data from cost reports four years prior to the year for which the wage index is being determined. For example, data used for the calculation of the wage index for FY08 will be obtained from cost reports covering periods that began on Oct. 1, 2003, through Sept. 30, 2004. Providers with a fiscal year beginning closer to the beginning of this period may report understated wage information in comparison to facilities that file with later begin dates (and later end dates) due to additional inflation incurred over the differential of the period. In addition, other market factors, such as new competition in the market for healthcare workers or natural/manmade disasters, would not be included in the information for a facility reporting information for an earlier period than its neighbors.

What Hospitals Should Consider

Hospitals should take steps to ensure that their wage reporting follows Medicare directives and that all information is reported accurately on their Medicare cost report (see the sidebar, "Action Steps for Hospitals"). Although some hospitals believe their cost reports are no longer important under prospective payment, these reports are in fact used in policy development, setting payment rates, calculating adjustments (e.g., outliers, disproportionate share hospital adjustments, indirect medical education

CBSAs MORE THAN TWO STANDARD DEVIATIONS ABOVE THE NATIONAL MEDIAN FOR PERCENTAGE CHANGE IN RELATED COSTS TO TOTAL SALARY COSTS FROM THE PRIOR PERIOD

Fiscal Year	Total Hospitals		Number of Single-Hospital CBSAs		Number of 2-to-3-Hospital CBSAs		Number of >4-Hospital CBSAs		Median	Standard Deviation
	+	–	+	–	+	–	+	–		
FY02	29	20	17	9	10	9	2	2	3.71%	11.35%
FY03	13	30	9	22	4	7	0	1	4.60%	10.91%
FY04	11	28	7	19	4	6	0	3	3.85%	11.85%
FY05	8	26	3	18	4	6	1	2	2.29%	12.21%

payments), and, of course, calculating local wage indexes. CMS officials who were contacted in the course of this study emphasized that hospitals must report wage index information consistently, accurately, and in conformance with Medicare rules and regulations.

CMS has made recent modifications to its wage index methodology, such as adoption of CBSAs and considerations for occupational mix. On April 13, 2007, the Medicare Payment Advisory Commission voted to recommend legislation that would give CMS authority to make major changes that could include using Census Bureau and Bureau of Labor Statistics data in lieu of cost report data, setting limits on variation between adjacent counties, reducing volatility among areas and time periods, and other measures.

However, the CMS officials interviewed for this article stressed that unless or until legislative and regulatory changes are implemented, the wage index will continue to be defined primarily by cost report information, and any significant changes would likely have a phased implementation.

Responsible oversight and documentation are critical to avoid potential problems. A responsible party within a hospital signs a document certifying the accuracy of every cost report submitted. Failure to ensure that accuracy can constitute fraud. Increased scrutiny by the OIG and fiscal intermediaries will increase the likelihood that problems will be discovered.

Hospitals should closely follow the cost report instructions for reporting wage data on

ACTION STEPS FOR HOSPITALS

Check the reasonability of your hospital's wage data. Review wage information reported on cost report worksheet S-3, Parts II and III. Be sure it has been accurately reported and that you can explain any anomalies. Cost report data are public information and may be questioned:

- Is your average hourly rate reasonable when compared with local or national averages? For example, how does your average hourly rate for FY05 compare with the national median of $27.74/hour?
- Is your average hourly rate within two standard deviations? For example, is it between $12.86 and $42.56 for FY05?
- Are your wage data comparable with those of similar hospitals in your area? (This can be determined by obtaining copies of their cost reports from their fiscal intermediaries or from commercial sources.)
- Have there been any unusual variations in your average hourly rate from year to year? National averages have increased in the range of 4 percent to 6 percent each year.

Ensure your hospital's compliance with reporting directives. The OIG noted that overstatement of other wage-related costs (e.g. pension, benefits) is one reason for overstatement of hourly rates. Make certain that such costs are reported correctly:

- Are your wage-related costs reasonable when compared with your total salary and wage costs? For example, how do your wage-related costs as a percentage of total salary and wage costs compare with the national average of 19.3 percent in FY05?
- Is your percentage of wage-related costs within two standard deviations? For example, is it between 7.9 percent and 29.2 percent for FY05?
- Have there been any unusual variations in your percentage of wage-related costs from year to year?

Consider your hospital demographics. If you are the only hospital in your CBSA, be mindful that your wage information may be scrutinized. A single hospital in a CBSA or a dominant hospital in a CBSA either defines or greatly influences the wage index. Since there are little or no comparative wage data under such circumstances, it may be advisable to choose similar hospitals in other areas or state data for benchmarking. State data are used to determine the wage index for rural hospitals that are not in a CBSA.

Take corrective action, if needed. Make certain that any unexpected variations or findings are researched and understood. Insist on education for responsible parties, if needed. In some situations, it may also be advisable to file a corrected cost report if it will influence the accuracy of your local wage index for an upcoming federal fiscal year.

READ ABOUT FFY07 MOMA

Hospitals need to prepare for the impact that the Medicare occupational mix adjustment will have on their bottom line. Find out what hospitals should do now in "FFY07 Final Medicare Occupational Mix Adjustment Rules" in the May 2007 issue of *Revenue Cycle Strategist*. Visit www.hfma.org/rcs for more information and to subscribe.

worksheet S-3, parts II and III. Hospital executive management may want to verify the wage data or set policies and remind those who collect these data to do so in accordance with Medicare cost report principles. If the hospital does not have this support internally, it should consider seeking competent outside support.

Hospitals may also want to consider re-reviewing their wage data on cost reports that CMS will use to calculate the FY08, FY09, and FY10 wage indexes (i.e., cost reports beginning on or after Sept. 30, 2004, 2005, and 2006, respectively). If any discrepancies are found, the hospital may need to follow CMS guidance for filing an amended report. ●

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