

WORKING P A P E R

Payment for Hardware Used in Complex Spinal Procedures under California's Official Medical Fee Schedule for Injured Workers

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SUMMARY

BACKGROUND

The Official Medical Fee Schedule (OMFS) for hospital inpatient services is adapted from the Medicare payment system for inpatient services furnished by acute care hospitals. A pre-determined maximum allowable fee is established for each admission based on the diagnosis-related group- or DRG- to which the patient is assigned. The DRG assignment takes into account factors such as the patient's principal diagnosis, co-morbidities, and surgical procedures. Each DRG has a relative weight reflecting the average resources or costs required by patients assigned to the DRG relative to patients in other DRGs.

The OMFS standard allowance for a discharge is determined as the composite rate² x DRG relative weight x 1.20. Additional allowances are made for discharges with atypically high costs, or outliers. The additional allowance for an outlier case equals 80 percent of the difference between the estimated costs for the discharge and the standard payment for the DRG plus an outlier threshold. In addition, the OMFS allows a separate payment for hardware and instrumentation used in complex spinal surgeries. The separate payment was originally established administratively with respect to all back and spinal procedures. Senate Bill 228 (Alarcon, 2003) limited the pass-through to complex spinal procedures and only until the Administrative Director (AD) of the Division of Workers' Compensation (DWC) adopts a regulation specifying separate reimbursement, if any, for the hardware and instrumentation.

This study updates analyses from a 2003 RAND report³ examining OMFS allowances for workers' compensation spinal surgery discharges from acute care hospitals. The earlier report concluded that the OMFS allowances were resulting in payment for the hardware and instrumentation twice: once in the standard DRG allowance and again in the separate pass-through amount. The report concluded that the standard allowance should be sufficient and that the pass-through was unnecessary.

The purpose of this study is to:

- provide information concerning the hardware and instrumentation that is used in connection with spinal surgery,
- analyze the adequacy of the standard allowance for complex spinal surgeries, and
- discuss options that the AD may wish to consider in adopting a regulation establishing the maximum allowable fee, if any, for the hardware and instrumentation furnished in connection with complex spinal surgeries.

² The composite rate is a hospital-specific rate based on the Medicare standard payment rate adjusted for geographic differences in wages and, if applicable, the hospital's additional payments for teaching and serving a disproportionate share of low-income patients.

³ Barbara O. Wynn, *Adopting Medicare Fee Schedules: Considerations for the California Workers' Compensation Program*, Santa Monica, CA: RAND, MR-1776-ICJ, 2003.

DATA AND METHODOLOGY

We used 2003 administrative and financial data from the California Office of Statewide Health Planning and Development to compare the estimated costs per spinal surgery discharge for CA workers' compensation patients and Medicare patients. Conceptually, if the estimated costs for the workers' compensation patients are less than 120 percent of the costs for Medicare patients, the OMFS allowances for spinal surgery discharges should be sufficient without the pass-through allowance for hardware and instrumentation. The 20 percent reflects the 1.20 multiplier that is intended to compensate for any higher costs that workers' compensation patients might incur and to provide a reasonable margin on treating injured workers.

Another aspect of our study was to simulate what payments would have been under the OMFS if the Medicare-based fee schedule had applied in 2003 and to compare the simulated payments to estimated costs. To estimate costs, we applied an overall cost-to-charge ratio to the total charges in the administrative data for each workers' compensation complex spinal surgery case. In theory, a hospital's charges should be consistently related to its costs. An overall cost-to-charge ratio reflects the hospital's average markup across all services, but there can be substantial differences in hospital markups for particular types of services. We are limited to using an overall cost-to-charge ratio for this analysis and do not have the detailed charge information needed to know how a particular hospital's average markup (or cost-to-charge ratio) for spinal surgery discharges compares with its markup for other services.

Finally, we looked at usage rates across patient populations and hospitals for four selected products used during spinal surgery that we are able to identify by procedure code: interbody cages, bone morphogenic proteins, bone growth stimulators, and neurostimulators for pain.

FINDINGS

Our comparative analysis of Medicare and workers' compensation spinal surgery discharges shows that on average workers' compensation patients are less costly than Medicare patients and have a shorter length of stay. The DRG-mix adjusted Medicare cost per discharge is about 14% higher than the cost per discharge for workers' compensation patient.

The payment simulation suggests that 1.20 times the Medicare rates had been used to pay for spinal surgery discharges in 2003, total OMFS payments would have exceeded estimated costs. The estimated payment-to-cost ratio across all DRGs was 1.43 and was higher (1.51) when no hardware was inserted than when it was used (1.33). We also looked at the payment-to-cost ratios by type of hardware to see whether the use of a particular device had a substantially different effect on the payment-to-cost ratio for workers' compensation patients and found that while there are differences across the products, the average payment-to-cost ratio for each type of hardware was 1.09 or higher. Finally, when we looked at usage of hardware across patient populations and hospitals, we found that the usage rates for workers' compensation patients are considerably higher than for Medicare patients for some but not all DRGs. We also found substantial variation in the usage rates for workers' compensation patients. Four hospitals used hardware 75 percent more often than would be expected based on the overall usage rates for workers' compensation patients with the same DRG mix. Even though these hospitals are reporting considerably more hardware usage than other hospitals, their average payment-to-cost

ratio is comparable to the discharge-weighted average across all hospitals with at least 20 workers' compensation spinal surgeries.

DISCUSSION OF FINDINGS AND POLICY OPTIONS

Under current policies, the OMFS allowances for spinal surgeries essentially pay for the hardware used in spinal procedures twice: once through the DRG payment and again in the pass-through payment. Moreover, the cost-based payment plus handling provides no incentive for prudent purchasing and use of hardware. Also, there is considerable administrative burden involved in establishing the appropriate pass-through amount through pricing each claim individually.

The data analyzed in this study do not support a continuation of the pass-through. The comparison of Medicare and workers' compensation discharges shows that on average injured workers are less costly than Medicare patients and have a shorter length of stay. Although more hardware is used for workers' compensation patients in certain DRGs than for Medicare patients, the shorter length of stay generally offsets the added costs. The comparison suggests that the 1.20 multiplier to the Medicare payment rate should be sufficient to assure that OMFS payments on average for complex spinal surgeries are more than the cost of providing care. This does not mean that the payment for every workers' compensation discharge will be higher than the costs for that patient. The DRG system is built on a system of averages, where some discharges are more costly than others, and the goal is to assure that on average the payment is adequate.

The results of the payment simulation are based on an overall cost-to-charge ratio and should be interpreted with some caution since hospital markups may differ for spinal surgeries. Not unexpectedly, the results indicate payment-to-cost ratios are lower when expensive hardware is used than when it is not. However, even when hardware is used, the payment-to-cost ratios are on average above 1.20 for most spinal surgery DRGs. The 1.20 is comparable to the average ratio for private payors.⁴ Moreover, hospitals that use substantially more hardware than other hospitals still have payment-to-cost ratios that are comparable to the overall average for workers' compensation patients. While the payment simulation results are not definitive given the limitations of the methodology, they lend further support to the conclusion that a pass-through is unnecessary to assure payments are adequate for workers' compensation spinal surgeries.

The OMFS has adopted Medicare's temporary add-on for quality-enhancing costly hardware that is intended to assure that FDA-approved high-cost quality-enhancing new technology is recognized before the higher costs are reflected in the charge data used to establish the DRG relative weights. If desired, a higher percentage of the estimated cost could be paid for technology qualifying for the add-on payment. After the expiration of the temporary add-on payment, the high cost outlier policy provides some protection for hospitals that have a disproportionate share of procedures using high-cost technology.

Any special payment policy for hardware and instrumentation should be evaluated for its likely impact on financial incentives for appropriate utilization of these products during spinal surgery and on administrative burden. There is no support in the data for continuing to pay for

⁴ Medicare Payment Advisory Commission, *Report to the Congress: Medicare Payment Policy*, March 2005.

relatively inexpensive hardware and instrumentation that is used during spinal surgical procedures. If there is a continuing concern that the payment-to-cost ratios are lower when costly hardware is used than when it is not, alternatives to the current pass-through could be considered. For example, the multiplier could be reduced for most spinal surgery discharges and increased when specific high cost technology is used, such as those examined in this study. This approach would minimize administrative burden by keeping any additional payment within the DRG per discharge payment and would eliminate the duplicate payment. While it retains an incentive to use hardware and instrumentation during spinal surgery, this alternative creates an incentive to use less costly instead of more costly products of comparable quality. Establishing a separate fee schedule for the individual products that would be eligible for special payment would improve payment accuracy but would also add the administrative burden of maintaining the fee schedule and pricing the claims.