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PAPER

Regulatory Actions that Could Reduce Unnecessary Medical Expenses Under California's Workers' Compensation Program

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A study by the RAND Institute for Civil Justice and RAND Health

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PREFACE

Recent increases in medical expenses under California's workers compensation (WC) program have renewed interest in regulatory initiatives that might reduce medical treatment costs. The California Commission on Health and Safety and Workers' Compensation (CHSWC) asked RAND to provide in a single document a summary of potential refinements to the Official Medical Fee Schedule that would reduce WC medical expenses. These findings should be of interest to policymakers and others involved in the medical care payment issues under California's WC system.

This Working Paper and the recommendations herein draw largely on findings from existing RAND Working Papers (WR-310-ICJ, WR-629-CHSWC and WR-635-CHSWC) that have been produced for CHSWC under Contract Number 40536045 as part of an on-going study evaluating the impact of recent legislative changes on the medical care provided under California's WC program. Those Working Papers provide a fuller explanation of the analyses underlying the findings summarized here. Working paper findings and recommendations should be considered preliminary because they have not gone through RAND's peer review process. The study's final peer-reviewed report will integrate the analyses presented in the working papers with findings from interviews with individuals with different perspectives on the WC medical treatment system.

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GLOSSARY, LIST OF SYMBOLS, ETC.

Symbol	Definition
AD	Administrative Director
ASC	ambulatory surgical center
CCs	co-morbidities and complications
CHSWC	Commission on Health, Safety and Workers' Compensation
CMS	Centers for Medicare and Medicaid Services
DRG	diagnosis-related group
MS-DRG	Medicare-Severity Diagnosis-related Group
OMFS	Official Medical Fee Schedule
OSHPD	Office of Statewide Health Planning and Development
WC	workers' compensation

1. INPATIENT HOSPITAL SERVICES

BACKGROUND

Payors (insurers and self-insured employers) under California's Workers' Compensation (WC) program generally pay for medical services provided to injured workers on a fee-for-service basis. The Administrative Director (AD) of the Division of Worker's Compensation maintains an Official Medical Fee Schedule (OMFS) that establishes the maximum allowable fees for most medical services. The OMFS amounts apply unless the payor and provider have contracted for a different price.

The OMFS for inpatient care provided by acute care hospitals is adapted from the Medicare payment system for these services. A pre-determined maximum allowable fee is established for each admission based on the diagnosis-related group (DRG) to which the patient is assigned. The DRG assignment takes into account factors such as the patient's principal diagnosis, co-morbidities and complications (CCs), and surgical procedures. Each DRG has a relative weight reflecting the average resources or costs for Medicare patients assigned to that DRG relative to Medicare patients in other DRGs. The OMFS standard allowance for a discharge is determined as the product of a facility-specific composite rate[1] x the DRG relative weight x 1.20.[2] Additional allowances are made for discharges with atypically high costs and for the cost of hardware (implanted devices and instrumentation) used in complex spinal surgery. Effective December 2007, the OMFS update incorporated Medicare severity-adjusted rates (MS-DRGs) that are designed to improve payment accuracy.

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1 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.

2 L.C. Section 5307.1(a) specifies that the maximum allowable fees shall not exceed 120 percent of the estimated aggregate fees allowed under the Medicare payment system. In establishing the OMFS, the AD adopted a 1.20 multiplier so that aggregate payments will approximate 120 percent of the Medicare allowable payments for comparable services.

The Labor Code specifies that the OMFS incorporate Medicare-based fee schedules for inpatient stays in specialty hospitals (e.g., rehabilitation, psychiatric) effective January 1, 2005; however, the AD has not implemented this provision.

FINDINGS

RAND recently completed a working paper analyzing inpatient hospital services provided to WC patients (Wynn, 2008). As described below, the paper identified several issues that warrant consideration in revising the OMFS for acute care hospital services.

Pass-through for Spinal Hardware

The pass-through for the cost of hardware used during complex spinal surgery is problematic and should be re-considered. Based on the average device costs for Medicare patients, the hardware pass-through involves at least $60 million in additional allowances.[3] WC data that could be used to estimate the cost impact of revising the pass-through policies were not available to RAND researchers.

The OMFS allowance at 1.2 times the Medicare payment rate is adequate -or more than adequate- to cover the cost of inpatient stays.[4]

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3 The study by Dalton et al. (2008) provides MS-DRG specific estimates of Medicare device costs in 2005/2006. The cost estimate assumed the costs were the same for WC discharges, weighted the average for each MS-DRG by the number of WC discharges assigned to the MS-DRG and updated for inflation to 2009. This method may understate the actual device costs for WC patients for several reasons. First, the estimate reflects implanted device costs only; the pass-through allows additional items that are likely to result in higher amounts. Second, the pass-through does not contain the same incentives as a per discharge prospective rate to consider less costly alternatives in making decisions on device usage and related materials. Without these incentives, WC patients are likely to have higher usage rates for more costly materials.

4 One measure of the adequacy of the OMFS allowances is the ratio of OMFS allowances to the estimated costs of WC stays. A ratio of 1.0 means that the allowances equal estimated costs. A ratio greater than 1.0 means that allowances exceed estimated costs and a ratio of less than 1.0 means that allowances are less than estimated costs. Using 2007 WC administrative data and the MS-DRGs, the estimated average allowance-to-cost ratio for WC patients assigned to MS-DRGs for complex spinal surgery was 1.14 before consideration of the pass-through amounts. See Appendix A for an example of how the pass-through is determined and its impact on the allowance-to-cost ratio.

On average, about 51 percent of the payment (before the 1.2 multiplier) represents device costs for the average Medicare patient receiving spinal surgery (Dalton et al., 2008). Passing through WC device costs on top of 120 percent of the Medicare payment results in paying for the spinal hardware twice, creates incentives for unnecessary device usage, and imposes unnecessary administrative burden. Options for addressing this issue include: 1) eliminating the pass-through, 2) reducing the pass-through to the estimated cost in excess of the allowance included in the OMFS rate, or 3) reducing the OMFS multiplier to exclude the amounts implicit for hardware in Medicare's payment rates and continuing to allow a pass-though or a fixed allowance for spinal hardware (Wynn and Bergamo, 2005).

If the pass-through is continued, inconsistencies in the pass-through policies for spinal procedures performed for nervous system conditions and for musculoskeletal conditions should be reviewed. The Spinal Procedures MS-DRGs for nervous system conditions include not only spinal fusions that are defined as complex spinal surgery when performed for musculoskeletal conditions but also other spinal procedures that do not qualify as complex spinal procedure when performed for musculoskeletal conditions. For musculoskeletal conditions, these spinal procedures are assigned to the base DRG for Back and Neck Procedures, which does not qualify for the hardware pass-through.

Further, if the pass-through is continued, the regulations should clarify that the hospital must bill for any items qualifying for the pass-through payment. Under Medicare rules, a hospital must provide all services required during a hospital stay either directly or under arrangements in which the hospital pays for services provided by an outside supplier and includes the costs in its bill. Suppliers have started to bill directly for hardware and devices implanted during complex spinal surgery for WC patients. As a result, the WC program does not benefit from hospital group purchasing and other activities to reduce device costs and faces additional bill processing costs.

Inflationary Impact of Coding Improvement

The MS-DRGs should improve payment accuracy by paying more for more severely ill patients and less for other patients; however, the severity-adjusted rates may also lead to unwarranted payment increases caused by coding improvement. The increases are not attributable to real changes in case mix but rather improvement in the completeness with which complications and co-morbidities are coded. For Medicare patients, the Centers for Medicare & Medicaid Services (CMS) actuaries estimated that coding improvement led to a 4.8 percent increase in expenditures (2.5 percent increase in FY 2008 and a 2.3 percent (preliminary estimate) in FY 2009)(CMS, 2009a). The increase will be built permanently into the MS-DRG relative weights. The Medicare law provides that the coding improvement effect be eliminated through a reduced update factor.

The Labor Code specifies the annual update factor for WC composite rates. Therefore, Medicare's solution for removing the inflationary impact of coding improvement by reducing the update factor is not an administrative option. However, the AD's authority to adjust the OMFS allowances within the overall 120 percent of Medicare limit could be used to account for the effect of coding improvements by implementing either 1) a lower percentage add-on or 2) an adjustment factor to reduce the relative weights. Either approach would achieve the same result. Using the Medicare estimate to make a permanent adjustment to the rates would reduce allowances 4.8 percent annually (an estimated $23 million in 2010).

OMFS for Specialty Hospitals

The AD has not implemented an OMFS for specialty hospitals. Because hospital charges are substantially higher than costs, payors are at risk for unnecessary expenditures as long as specialty hospitals-particularly rehabilitation facilities - remain exempt from the OMFS.

Hospital charges for WC stays in inpatient rehabilitation facilities totaled $ 52.2 million in 2007 compared to estimated costs of $20 million. The Medicare fee schedule for inpatient rehabilitation uses a per discharge methodology that requires collection of functional

status data to determine payment. Further analysis is needed to determine whether the rates are appropriate for the WC patient population and if not, whether sufficient modifications to a strict "Medicare-based" methodology are permissible under current law to implement a fee schedule without further revision in the Labor Code. The Medicare fee schedule for inpatient psychiatric care ($6.7 million in total charges) uses per diem rates and is less likely to require modifications or new data collection. The administrative burden of expanding the OMFS to other small - volume specialty hospitals such as long-term care hospitals may outweigh potential cost savings unless an alternative to Medicare-based fee schedules is utilized (e.g., allowances based on a percentage of charges).

2. AMBULATORY SURGICAL SERVICES

BACKGROUND

Effective January 1, 2004, Section 5307.1 of the California Labor Code requires that the OMFS for ambulatory surgery be based on the fee-related structure and rules of Medicare program. Ambulatory surgery can be performed in either a hospital or a freestanding ambulatory surgery center (ASC). The Labor Code caps the aggregate allowances for ambulatory surgery at 120 percent of the fee paid by Medicare for the same services performed in a hospital. The current OMFS allows the same fees for surgical services provided in hospital and ASC settings.

Since the OMFS was established for ambulatory surgery facility fees, major changes have been implemented in the Medicare payment system for ASC procedures (CMS, 2007). Medicare now pays for most ASC services under a system that parallels the payment system for hospital outpatient services but at a lower rate (about 67 % of the hospital rate). For procedures that are commonly performed in a physician office, the ASC payment rate is capped at the non-facility practice expense payment amount in the physician fee schedule.

FINDINGS

The AD has broad authority to establish different multipliers or conversion factors within the 120 percent aggregate cap. The revised Medicare policies link ASC payment levels to differences in the cost of providing services and reduce financial incentives to shift services from physician offices to ASCs. The adoption of the lower conversion factor for ASC services would reduce OMFS allowances approximately $70 million in 2010. [5]

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5 See Wynn and Griffin (2009)for an analysis of facility fees in 2005-2007. ASCs accounted for approximately $171 million in allowances in 2007. Savings were arrived at by updating for inflation and determining the payment difference between using Medicare's ASC 2009 conversion factor and relative weight adjustment and the OMFS conversion factor.

3. PHYSICIAN AND OTHER PRACTITIONER SERVICES

BACKGROUND

The AD is developing a new OMFS for physician services. The current fee schedule is based on historical charge-based relative values that undervalue primary-care services relative to other services and do not explicitly pay for many work-related services that medical providers offer to injured workers, such as care coordination. The new fee schedule will be based on the Medicare fee schedule for physician and other practitioner services, which sets rates based on the relative resources (physician time and effort, practice expenses, and malpractice insurance costs) required to provide services.

FINDINGS

Evaluation and Management Visits

A resource-based fee schedule has the potential to improve payment equity under the OMFS, particularly if a single conversion factor is adopted that would increase payments for primary care relative to other services. The AD has already established the Medicare rate as a floor on evaluation and management (E+M) visits. Further rate increases are appropriate for these services under a resource-based relative value fee schedule, but they should be accompanied by the adoption of Medicare's documentation requirements for E+M visits (CMS, 2009b). Benchmarking data from the Workers' Compensation Research Institute indicate that relative to the median for a 14-state comparison group for 2004 claims at 12-months maturity, there is substantially higher use of evaluation and management services in California than in other states (Eccleston et. al., 2009). The average California claim with evaluation and management services (96 percent of claims) had 9.3 visits compared to a median of 6.0 visits and the services were about 26 percent more resource-intensive. For example, 48 percent of office visits for established patients were billed as extended or comprehensive visits compared to a median of 23 percent.

Linking Payment to Quality Improvement

In addition to improving payment equity, the new fee schedule provides an opportunity to align financial incentives with improved processes of care (Wynn and Sorbero, 2008). The OMFS could be modified to include explicit fees for activities that are unique to work-related injuries. For example, Washington's quality improvement initiative reimbursed physicians for calls to employers of injured workers to coordinate return-to-work and rewarded physicians who filed timely reports (Wickizer et al., 2004).

Electronic Billing

L.C. section 4603.4 requires the AD to adopt rules to establish standardized medical treatment billing forms and adopt standard protocols for electronic billing of medical treatment. Proposed rules were issued in July 2007 but final rules have not been adopted. Employers are required to accept electronic billing 18 months after the regulations are adopted. Submission of electronic bills is optional on the part of the provider. Standardized billing forms and electronic billing have the potential to reduce the paperwork burden for payors and providers, reduce claims processing costs and timeframes, and make medical cost containment activities more efficient. In addition to issuing the final rules, the AD could create incentives for physicians to bill electronically by explicitly providing for a higher allowance for services billed electronically compared to those submitted on paper bills (Wynn and Sorbero, 2008).

APPENDIX: EXAMPLE OF SPINAL HARDWARE PASS-THROUGH

To illustrate how the payment system works with the hardware pass-through, we use an example for the most common WC spinal surgery MS-DRG, namely, Spinal Fusion except Cervical without MCC (MS-DRG 460). Figure 1 contains an explanation of the average allowance for these discharges compared to the estimated cost. While we have used actual data to the extent possible in the data, there are a number of assumptions and the example should be viewed as a hypothetical illustration of the issue.

- *OMFS Allowance.* We simulated 2009 allowances using 2007 WC administrative data from the Office of Statewide Health Planning and Development and 2009 OMFS composite rates and MS-DRG relative weights. The estimated 2009 OMFS allowance for MS-DRG 460 before taking the pass-through into account was $35,857. The standard payment rate was increased 51 percent on average for the wage index, teaching, and low-income patient adjustments and another 20 percent for the WC multiplier.
- *Pass-through Amount.* Because we do not know device usage and costs for WC patients, we assumed that device costs are the same for Medicare and WC patients. Using regression analysis to account for charge compression (i.e., the hospital practice of marking up lower cost items more than higher cost items), Dalton et. al (2008) estimated device costs for MS-DRG 460 averaged $12,071 for Medicare patients. The analysis used data for calendar years 2005 and 2006 (midpoint= January 1, 2006). Using a CMS estimate of the average increase in hospital cost per discharge from FY 2005-FY 2009 to update for 3.5 years of inflation produces an estimated device cost of $14,214 in 2009 (midpoint=July 1, 2009). This method may understate the actual device costs for WC patients for several reasons. First, the estimate reflects implanted device costs only; the pass-through allows additional items that are likely to result in higher

amounts.[6] Second, the pass-through does not contain the same incentives as a per discharge payment to consider less costly alternatives in making decisions on device usage and related materials. Without these incentives, WC patients are likely to have higher usage rates for more costly materials.

- *Total Estimated Allowance.* The total estimated allowance of $50,071 is the sum of the OMFS allowance and the pass-through amount.
- *Estimated Cost Per Discharge*. The average cost per WC discharge was estimated at $28,808 by applying a hospital-specific overall cost-to-charge ratio to the total charges on each 2007 record assigned to MS-DRG 460 in the 2009 payment simulations. The estimate was updated to 2009 using a CMS estimate of the average increase in hospital cost per discharge. The inflation-adjusted cost was then increased 13.5 percent to account for charge compression that understates the cost for devices. The adjustment is based on the RTI study finding that the cost-based relative weight for MS-DRG 460 is understated by approximately 13.5 percent.
- *Total Allowance-to-Cost Ratio.* The average ratio of the total allowance to total cost for 2009 WC discharges assigned to MS-DRG 460 is estimated to be 1.40 in this example. If actual WC

6 Specifically, Title 8, California Code of Regulations §9789.22(f) provides: "Implantable medical devices, hardware, and instrumentation … shall be separately reimbursed at the provider's documented paid cost, plus an additional 10% of the provider's documented paid cost, net of discounts and rebates, not to exceed a maximum of $ 250.00, plus any sales tax and/or shipping and handling charges actually paid. For purposes of this subdivision, a device is an instrument, apparatus, implement, machine, contrivance, implant, in vitro reagent, or other similar related article, including a component part, or accessory which is: (1) recognized in the official National Formulary, or the United States Pharmacopoeia, or any supplement to them; (2) intended for use in the cure, mitigation, treatment, or prevention of disease; or (3) intended to affect the structure or any function of the body, and which does not achieve any of its primary intended purposes through chemical action within or on the body and which is not dependent upon being metabolized for the achievement of any of its primary intended purposes.

pass-through amounts are higher than estimated, the allowance-to-cost ratio is understated.

Figure 1 Estimate of Total Allowance and Allowance-to-Cost Ratio for MS-DRG 460 in 2009

OMFS Allowance		
A. Standard Rate	$ 5,680.17	Sum of operating and capital standard rates effective for discharges occurring on or after December 1, 2008
B. MS-DRG 460 Relative Weight	3.5607	Federal Register
C. Standard MS-DRG 460 rate	$ 20,225	A x B x 1.20 multiplier
D. Average Adjustment	1.51	From 2009 payment simulations
E. Average OMFS Allowance	$ 35,857	From 2009 payment simulations
Estimated Pass-through Amount		
F. 2005/6 Average Device Cost	$12,071	Average for MS-DRG 460 adjusted for charge compression from RTI study
G. Inflation adjustment	1.178	3.5 years inflation based on increase in average Medicare cost per discharge [7]
H. Average 2009 Device Cost	$ 14,214	F x G
Total Estimated Allowance	$ 50,071	E + H
Estimated Per Discharge Cost		
I. Estimated 2007 cost	$ 28,828	From 2007 payment simulations
J. Inflation adjustment	1.094	2 years inflation based on increase in average Medicare cost per discharge
K. Charge compression adjustment	1.135	RTI study
L. Estimated 2009 cost	$35,811	I x J x K
Total Allowance-to-Cost Ratio	1.40	Total Estimated Payment/Total Estimated Cost

7 The adjustment factor is based on the CMS actuary's determination of the estimated increases in hospital cost per discharge: FY06 over FY05: 5.8%; FY07 over FY06: 4.6%; FY08 over FY07: 5.6%. The estimate for FY09 over FY08 is 3.6%. It is based on the projected increase in the hospital market basket 2.1%) adjusted for the average increase in the earlier years in cost per discharge above the hospital market basket (1.51%). These factors were obtained from the FY2010 Federal Register notice. We adjusted the device costs for 3.5 years of inflation in Step G (.5 of the FY06 over FY05 because the average cost was for calendar year 2005 and 2006) and the cost per discharge in Step J for FY09 over FY07 inflation.

REFERENCES

Centers for Medicare and Medicaid Services, Evaluation and Management Services Guide, Medicare Learning Network, July 2009b available at www.cms.hhs.gov/MLNProducts/downloads/eval_mgmt_serv_guide.pdf as of 7/21/09 .

Centers for Medicare & Medicaid Services, Department of Health and Human Services. Medicare Program; Revised Payment System Policies for Services Furnished in Ambulatory Surgical Centers (ASCs) Beginning in CY 2008. CMS-1517-F (2007).

Centers for Medicare & Medicaid Services, Department Of Health And Human Services, Medicare Program; Proposed Changes to the Hospital Inpatient Prospective Payment Systems for Acute Care Hospitals and Fiscal Year 2010 Rates and to the Long-Term Care Hospital Prospective Payment System and Rate Year 2010 Rates. CMS-1406-P (2009a). Available at www.federalregister.gov/inspection.aspx#spec_C as of 5/5/09.

Dalton, Kathleen, Sara Freeman and Arnold Bragg, Refining Cost to Charge Ratios for Calculating APC and MS-DRG Relative Payment Weights, Research Triangle Park, NC: RTI International, July 2008.

Eccleston, Stacey M., Petia Petrova, and Xiaoping Zhao. The Anatomy of Workers' Compensation Medical Costs and Utilization in California, 7th Edition: Monitoring Reforms. Cambridge, MA: Workers' Compensation Research Institute WC-08-16, January 2009.

Wickizer Thomas M., Gary M. Franklin, Robert D. Mootz, Deborah Fulton-Kehoe, Roy Plaeger-Brockway, Diana Drylie, Judith A. Turner, and Terri Smith-Weller, "A Communitywide Intervention to Improve Outcomes and Reduce Disability Among Injured Workers in Washington State," *The Milbank Quarterly*, Vol. 82, No. 3, September 2004, pp. 547–567.

Wynn, Barbara O. Inpatient Hospital Services: An Update on Services Provided Under California's Workers' Compensation Program, Santa, Monica, CA: RAND WR-629-CHSWC, November 2008.

Wynn, Barbara O. and Giacomo Bergamo, Payments for Hardware Used in Complex Spinal Procedures under California's Official Medical Fee Schedule for Injured Workers. Santa Monica, CA: RAND WR-301-ICJ, 2005.

Wynn,Barbara O. and Beth Ann Griffin, Ambulatory Surgery Facility Services Provided To California's Injured Workers, Santa Monica, CA: RAND WR-635-CHSWC, March 2009.

Wynn, Barbara and Melony Sorbero. Pay-for-Performance in California's Workers' Compensation Medical Treatment System: An Assessment of Options, Challenges and Potential Benefits, Santa Monica, CA: RAND OP-229-ICJ, 2008.