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# Preliminary Estimate of California Workers' Compensation System-Wide Costs for Surgical Instrumentation Pass-Through Payments for Back Surgeries

by Alex Swedlow & John Ireland

## Executive Summary

The California workers' compensation inpatient hospital fee schedule includes a controversial "pass-through" payment mechanism that provides a duplicate reimbursement to hospitals for devices and instrumentation implanted in injured workers during specific types of back surgery. The debate over the rationale for the pass-through payment provision has been evolving since 2001 and in the fall of 2009, the California Department of Industrial Relations' 12-point plan for improving the workers' compensation system recommended that state policymakers consider eliminating the spinal hardware pass-through. In 2010, a CWCI study on the utilization and cost of spinal hardware for eligible back surgery admissions showed that workers' compensation accounted for more than 1 out of every 6 spinal surgeries in which hardware was used in California during 2008, and after controlling for the different mix of spinal surgeries used in workers' compensation, the workers' compensation spinal implant rate was higher than the rate for Medicare, Medi-Cal, other government programs, and private insurance.[1] Furthermore, the injured worker cases had the highest average number of implant-related procedures. As a result of this high utilization rate, CWCI estimated that in 2008 alone, the duplicate fees paid on the nearly 3,600 workers' compensation spinal hardware claims boosted payments to hospitals by $55 million.

The California Legislature is currently revisiting the issue, as SB 959 (Lieu), seeks to repeal the spinal implant pass-through payments. To help advance the debate, this analysis, prepared at the request of the Senate Committee on Labor and Industrial Relations, provides updated data on the utilization of surgeries that involve spinal hardware and the estimated cost of the spinal implant pass-through payment mechanism in the California workers' compensation system.

## Background

In 1993, the California Legislature mandated the development of an inpatient hospital fee schedule as a means to control the rapidly increasing cost of inpatient care in the California workers' compensation system. After five years of regulatory development, on April 1, 1999 the fee schedule took effect.

The new schedule was based on Diagnostic-Related Groups (DRGs) – a standardized system for classifying inpatient hospital cases developed by the federal Health Care Financing Administration for hospitals and payers. Each DRG was assigned a relative weight, and because the cost of performing a procedure can vary significantly among facilities, each hospital was assigned a specific composite factor to account for its cost and service differentials. Maximum reasonable fees were calculated using a modified Medicare formula (DRG weight x facility composite factor x 1.20), which resulted in hospitals being paid close to 120 percent of the amounts allowed under Medicare for inpatient services rendered to injured workers. For DRGs other than those specifically exempted, the fees generated by this formula were considered global fees that covered all associated costs – including surgical implants.

1 Ireland, J., Swedlow, A., Ramirez, B. Surgical Instrumentation Pass-Through Payments for Back Surgeries in the California Workers' Compensation System, CWCI Research Update, March 2010

In 2001, the state approved a series of changes and updates to the workers' compensation inpatient hospital fee schedule. The Division of Workers' Compensation (DWC) adopted separate additional fees for surgical implants for certain back and neck DRGs, as well as a Medicare-based methodology to calculate additional payments when cost calculations exceeded hospital-specific cost outlier thresholds. In 2003, state lawmakers passed SB 228 (effective January 2004), which required the administrative director of the DWC to update the Medicare values used in fee schedule calculations; and which required separate implantable hardware for specific spinal surgery DRGs only until the administrative director adopted a regulation specifying or removing separate reimbursement for implants in complex spinal surgeries. To date, however, duplicate reimbursements for spinal implants remain in force in California workers' compensation, even though Medicare does not provide an additional surgical hardware pass-through payment for back surgeries.

For more than 10 years, public policy research has raised concerns regarding the surgical instrumentation pass-through:

- Beginning in 2001, Gardner estimated that allowing separate payments for implantable hardware on back surgeries would generate between $7.1 and $28.6 million in additional costs to the California workers' compensation system and recommended the elimination of the exemption for implantable hardware and or instrumentation.[2]
- In 2003, RAND concluded that the pass-through allowance was resulting in double payment for the associated hardware and instrumentation, and that the separate pass-through allowance was unnecessary.[3]
- A subsequent 2005 report prepared for the California Commission on Health and Safety and Workers' Compensation concluded that workers' compensation spinal surgeries were less costly than those of Medicare patients and had a shorter length of stay.[4] This report also found substantial variation in utilization rates for spinal implants among participating hospitals, indicating some implant overuse, and supporting the notion that increased reimbursement encourages overutilization.
- As noted earlier, CWCI's 2010 analysis estimated that surgical implants added $55 million in duplicate payments in 2008,[5] and more recently, the opportunities for revenue enhancement within the current system of spinal hardware implant reimbursement policy received coverage in the national media.[6]

During the current (2012) legislative session, California State Senator Ted Lieu has introduced SB 959, legislation that seeks to repeal the surgical instrumentation pass-through payment (see Appendix A for the complete text of SB 959). Following the introduction of this bill, CWCI received a request from the California Senate Committee on Labor and Industrial Relations to update and analyze the utilization of eligible back surgery DRGs in workers' compensation and the associated costs. The following is a preliminary, updated estimate of system-wide costs for surgical instrumentation pass-through payments for back surgeries in the California workers' compensation system.

## Data and Methods

For this analysis, the authors accessed 2004 through 2010 inpatient discharge data from the California Office of Statewide Health Planning and Development (OSHPD) Public Patient Discharge Database.[7] In total, there were more than 27.9 million inpatient discharges from California hospitals over the 7-year span of the study. The distributions by payor category are displayed in Table 1.

2 Kominski, GF, Gardner, LB, Inpatient Hospital Fee Schedule and Outpatient Surgery Study, FINAL REPORT, Commission on Health and Safety and Workers' Compensation, December 2001

3 Wynn, B., Adopting Medicare Fee Schedules: Considerations for the California Workers' Compensation Program, Prepared for the California Commission on Health and Safety and Workers' Compensation, 2003

4 Wynn, B., Bergamo, G, Payment for Hardware Used in Complex Spinal Procedures under California's Official Medical Fee Schedule for Injured Workers, Working Paper, Prepared for the Commission on Health and Safety and Workers' Compensation and the Division of Workers' Compensation, California Department of Industrial Relations, September, 2005

5 Ireland, J., Swedlow, A., Ramirez, B., Surgical Instrumentation Pass-Through Payments for Back Surgeries in the California Workers' Compensation System, Research Update. California Workers' Compensation Institute. March 2010

6 Carreyrou J, McGinty T and Millman J, In Small California Hospitals, the Marketing of Back Surgery, Wall Street Journal, Feb 9, 2012

7 Summary discharge information can be obtained from the OSHPD website at http://www.oshpd.ca.gov/General_Info/Contact_OSHPD.html

| Table 1. 2004 – 2010 California Inpatient Hospital Discharges by Payor Category | | | | | | | | |
|---|---|---|---|---|---|---|---|---|
| **Payor** | **2004** | **2005** | **2006** | **2007** | **2008** | **2009** | **2010** | **% Change 2004–2010** |
| Workers' Compensation | 29,247 | 27,542 | 26,552 | 25,742 | 24,093 | 22,410 | 22,416 | -23.4% |
| Medicare | 1,235,330 | 1,259,318 | 1,248,265 | 1,233,409 | 1,250,549 | 1,256,097 | 1,286,035 | 4.1% |
| Medi-Cal | 991,853 | 1,003,144 | 1,011,309 | 1,025,258 | 1,027,877 | 1,036,376 | 1,035,387 | 4.4% |
| Private Coverage | 1,399,146 | 1,396,793 | 1,409,754 | 1,413,633 | 1,397,452 | 1,351,040 | 1,288,686 | -7.9% |
| County Indigent Programs | 67,439 | 69,767 | 68,621 | 69,550 | 70,370 | 69,803 | 71,714 | 6.3% |
| Other Government | 64,778 | 67,884 | 67,467 | 71,741 | 78,054 | 78,357 | 81,091 | 25.2% |
| Other Indigent | 12,716 | 10,649 | 12,141 | 13,012 | 14,629 | 12,974 | 13,961 | 9.8% |
| Self Pay | 131,070 | 134,988 | 135,464 | 141,175 | 136,876 | 139,984 | 150,877 | 15.1% |
| Other Payer | 25,267 | 18,861 | 16,970 | 18,524 | 17,445 | 17,827 | 20,499 | -18.9% |
| Unknown | 794 | 1,309 | 639 | 730 | 653 | 298 | 256 | -67.8% |
| **Grand Total** | **3,957,640** | **3,990,255** | **3,997,182** | **4,012,774** | **4,017,998** | **3,985,166** | **3,970,922** | **0.3%** |

Source: California Office of Statewide Health Planning and Development

According to OSHPD discharge data:

- Overall, the number of inpatient hospital discharges in California has remained relatively stable between 2004 and 2010, ranging between 3.9 and 4.0 million per year.
- Workers' compensation inpatient discharges:
  - comprise between 0.6 and 0.7 percent of all California inpatient discharges; and
  - decreased by more than 23 percent between 2004 and 2010, a decline that coincided with the ongoing reduction in the number of workers' compensation claims during the same period.

To estimate the number of workers' compensation back surgery discharges that involved surgical instrumentation (implants) and pass-through payments, the authors applied the calendar year 2010 discharge distribution with spinal instrumentation usage on eligible back surgery percentages from CWCI's March 2010 analysis.[8]

8 Actual distributions of back surgeries will be developed in a subsequent analysis via access to 2011 OSHPD inpatient discharge databases. The estimates of surgical implant expenses are considered conservative due to anecdotal reports of escalating hardware prices. Future analysis will attempt to compile current reimbursement levels for spinal instrumentation

**Table 2. Estimated 2010 Workers' Comp Surgical Implant Back Surgeries and Pass-Through Payments**

| DRG/Description | 2010 Workers' Comp Discharges[9] | Discharges w/ Spinal Implants[10] | Average Implant Cost[11] | Estimated System-wide Implant Cost |
|---|---|---|---|---|
| 028 - Spinal Procedures w/ Major Complications | 16 | 4 | $18,491 | $73,963 |
| 029 - Spinal Procedures w/ Complications or Neurostimulator | 86 | 4 | $18,491 | $73,963 |
| 030 - Spinal Procedures without Complications or Major Complications | 123 | 6 | $18,491 | $110,945 |
| 453 - Combined Anterior/Posterior Fusion w/ Major Complications | 43 | 41 | $30,574 | $1,253,518 |
| 454 - Combined Anterior/Posterior Fusion with Complications | 299 | 274 | $30,574 | $8,377,166 |
| 455 - Combined Anterior/Posterior Fusion w/o Complications or Major Complications | 421 | 392 | $30,574 | $11,984,851 |
| 456 - Spinal Fusion Except Cervical | 3 | 2 | $18,491 | $36,982 |
| 457 - Spinal Fusion Except Cervical w/Complications | 22 | 13 | $18,491 | $240,380 |
| 458 - Spinal Fusion Except Cervical w/o Complications/Major Complications | 18 | 10 | $18,491 | $184,908 |
| 459 - Spinal Fusion Except Cervical with Major Complications | 76 | 56 | $15,710 | $879,782 |
| 460 - Spinal Fusion Except Cervical w/o Major Complications | 2,109 | 1,647 | $19,699 | $32,444,582 |
| 471 - Cervical Spinal Fusion w/Major Complications | 19 | 11 | $17,087 | $187,955 |
| 472 - Cervical Spinal Fusion w/Complications | 201 | 126 | $13,044 | $1,643,544 |
| 473 - Cervical Spinal Fusion w/o Complications/Major Complications | 1,282 | 764 | $13,044 | $9,965,616 |
| **Grand Total** | **4,718** | **3,350** | **$20,137** | **$67,458,156** |

Table 2 shows the estimated calendar year 2010 state-wide workers' compensation eligible back surgery discharges and associated system-wide costs for surgical implant pass-through payments.

According to the authors' projections, in calendar year 2010:

- There were an estimated 4,718 California workers' compensation surgical back discharges, of which an estimated 3,350 (71%) received surgical implants that were subject to the duplicate/pass-through payment.
- Average implant payments for the 14 DRGs that were eligible for spinal hardware pass-throughs ranged from $13,044 to $30,574, with the overall average estimated at $20,137 per discharge
- The estimated system-wide cost for the identified complex back surgery cases was nearly $67.5 million in 2010. This estimate is considered conservative as managed care organizations and claims administrators have repeatedly noted the escalating cost of surgical implants and the difficulty in obtaining sufficient documentation to validate actual surgical implant costs.

9 Based on estimated 21% (4,718) of the 22,416 California workers' compensation inpatient discharges (compiled by OSHPD) that involved at least one of the 14 spinal hardware pass-through eligible DRGs (CWCI March 2010). The estimated number of discharges shown has been rounded to the nearest whole number.

10 Based on 70.9% of eligible spinal hardware pass-through DRGs that actually received spinal implant hardware (CWCI 2010). The estimated number of discharges with implants has been rounded to the nearest whole number.

11 Based on adjusted average spinal hardware cost (CWCI March 2010). Calculation of adjusted cost increased 2008 average spinal hardware cost by 20% based on a conservative estimate of spinal hardware inflation

## Conclusion

The current California Workers' Compensation Inpatient Hospital Fee Schedule provides for hospitals to be reimbursed for spinal surgeries involving implantable hardware at 120 percent of the base Medicare rate plus the pass-through allowance for the implantable hardware. While this payment formula appears to be based on the assumption that injured workers require more resources than Medicare patients who undergo the same surgery, research has shown that is not the case. In fact, a 2001 CWCI study showed that workers' compensation patients discharged from California hospitals had a lower clinical severity profile (as measured by a case-mix adjusted APR-DRG Severity index) than group health and Medicare patients.[12]

Because Medicare already accounts for the use of surgical instrumentation when it calculates reimbursement levels for these specific back surgeries, the 120 percent reimbursement rate coupled with the pass-through payment creates a potential incentive to perform spinal surgeries that utilize high-cost surgical instrumentation on workers' compensation patients. In 2010, Ireland found that while workers' compensation paid for just 1 out of every 167 inpatient hospitalizations in California, it paid for more than 1 out of every 6 surgeries in which spinal hardware was used.[13] Furthermore, the 2010 study showed that the spinal implant utilization rate was higher in workers' compensation than in Medicare, Medi-Cal, other government programs, and private insurance, and that the injured worker cases had the highest average number of implant procedures. The study's findings also challenged the assumption that workers' compensation patients required the duplicate payment to offset the costs of a more resource-intensive admission by showing that workers' compensation patients had the shortest length of stay of any payor group.

While hospitals and spinal implant manufacturers continue to assert that the Medicare rates do not cover their costs, it is clear that the system of reimbursement for spinal implants under the current workers' compensation inpatient hospital fee schedule does allow for cost inflation beyond the reasonable level associated with cost recovery that was intended by the state regulations. The authors note that in 2010, an estimated 3,350 California injured workers had back surgeries that involved one of the 14 spinal implant DRGs tracked by this study. The duplicate payments for spinal instrumentation on those claims added an estimated $20,137 to each surgical procedure, or a total of nearly $67.5 million in duplicate payments, and these estimates are considered conservative due to the lack of clear and comprehensive billing detail on the full spectrum of hardware used in these hospital admissions.

Finally, the efficacy of spinal fusion for chronic low back cases remains controversial. Recently, Nguyen and Randolph concluded that patients with chronic low back pain treated with spinal fusion were less likely to return to work within two years than similar cases without surgery.[14] Furthermore, 27 percent of spinal fusion patients required second operations and their rate of permanent disability was more than five times as high as similar patients whose spines were not fused. The potential for conflict of interest through the surgical implant pass-through mechanism further complicates medical decision making associated with the need for spinal surgery in some, if not many, of the workers' compensation cases in California.

12 Clinical Severity in Workers' Compensation Inpatient Care, CWCI Research Abstract, July 2001

13 Ireland, J., Swedlow, A., Ramirez, B. Surgical Instrumentation Pass-Through Payments for Back Surgeries in the California Workers' Compensation System, CWCI Research Update, March 2010

14 Nguyen T, Randolph D, Talmaghe J, Succop P, Travis, R, Long-Term Outcomes of Lumbar Fusion Among Workers' Compensation Subjects: A Historical Cohort Study, Spine, 15 Feb 2011 – Vol. 36, p320-331

# Appendix A

## SB 959 (Lieu) Workers' compensation: provider reimbursement: implantable medical devices, hardware, and instrumentation

SECTION 1. Section 5318 of the Labor Code~~, as added by Section 44 of Chapter 639 of the Statutes of 2003,~~ is repealed.

**The Legislative Counsel's summary of SB 959:**

SB 959, as amended, Lieu. Workers' compensation: provider reimbursement: implantable medical devices, hardware, and instrumentation.

Existing law establishes a workers' compensation system, administered by the Administrative Director of the Division of Workers' Compensation, to compensate an employee for injuries sustained in the course of his or her employment. Existing law requires the administrative director, after public hearings, to adopt and revise periodically an official medical fee schedule to establish reasonable maximum fees paid for medical services, drugs and pharmacy services, health care facility fees, home health care, and all other treatment, care, services, and goods, other than physician services. Existing law separately requires reimbursement for certain implantable medical devices, hardware, and instrumentation, at the provider's documented paid cost, plus an additional 10% up to $250, plus sales tax, as specified. Under existing law, this reimbursement formula is operative only until the administrative director adopts a regulation specifying reimbursement, if any, for the designated items, as prescribed.

This bill would delete the above-described reimbursement specifications relating to implantable medical devices, hardware, and instrumentation.


### About the Authors

**Alex Swedlow, MHSA,** is Executive Vice President of Research & Development for the California Workers' Compensation Institute.

**John Ireland,** is Associate Research Director at the California Workers' Compensation Institute.


### About CWCI

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