



BULLETIN

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A new CWCI study measures changes in the use of spinal fusion surgeries to treat injured workers in California over the past 15 years and generates detailed data on the costs and characteristics of spinal fusion claims, providing a detailed picture of some of the most serious and expensive claims in the California workers' compensation system.

The study by CWCI senior research associate Stacy L. Jones is based on an analysis of 18,266 open and closed California work injury claims from accident years (AY) 2000 to 2014 in which one or more spinal fusions were performed. Claim characteristics, including the nature and cause of injury, demographics, notification, and medical and indemnity payment data were extracted from this sample of claims, along with comparable data on a subset of claims in which the primary diagnosis was for medical back problems without spinal cord involvement, which are typically sprain and strain injuries. Detailed medical and pharmacy bill data also were extracted for the spinal fusion claims, along with procedure and diagnostic codes, which were used to further define the types of surgeries performed and the presence of any comorbid conditions. Among the key findings of the analysis:

- Across the 15-year study period, the average at-injury age of injured workers who received a spinal fusion was 43.5 years, more than 3 years older than the average for other injured workers with lost-time claims. The average age for injured workers who received spinal fusions increased from 41.6 years old in AY 2000 to 46.2 years old in AY 2014, while the average for other indemnity claimants rose from 38.9 to 41.3 years.
- Men accounted for at least 64 percent of the spinal fusion claims in each of the 15 years studied, and average amounts paid across the entire span were higher for males than females (15.5 percent more for temporary disability; 27.1 percent more for permanent disability; and 16 percent more for medical).
- 62 percent of the claims that involved a spinal fusion were initially reported as strains and sprains; followed by cumulative traumas (including mental stress), which comprised 14 percent.
- More than half (55 percent) of the spinal fusions were associated with primary diagnoses of back disorders without spinal cord or root involvement.
- The majority of spinal fusions occurred within two years of the date of injury.
- Loss payments on fusion claims involving a medical back diagnosis without spinal cord involvement averaged as much as \$378,392 in AY 2003 -- 6.7 times the average for similar claims without a fusion.
- Mental health disorders were the leading comorbidity (noted in 37 percent of the spinal fusion cases), while 29.9 percent involved circulatory problems, and 17.1 percent listed substance abuse as a comorbid condition.
- Lumbar fusions accounted for almost half of the workers' comp spinal fusions; while fusions involving additional vertebral segments (i.e., multiple-level fusions) represented one third of the fusions.
- As the spinal fusion claims developed over time, more than 20 percent (and up to 40 percent for AY 2000 claims) received more than one spinal fusion.

The breakdown of indemnity and medical payments on spinal fusion claims by gender and accident year shows the average temporary and permanent disability payments, as well as average medical payments, were significantly higher for men than for women. Over the 15-year span, TD payments for men averaged 15 percent more than for women, while PD payments averaged 27.1 percent more – due at least in part to the differences in average earnings between males and females. On the other hand, average medical payments also were higher for the males, averaging 16 percent more than for females across the AY 2000 - 2014 study period – a differential that raises a topic for further study. While the average amounts paid on claims from the most recent accident years are notably lower, that difference largely reflects the age of the claims, as there has been less time for the expenses to accrue on these younger claims.

Average TD, PD and Medical Payments for Spinal Fusion Claims by Gender and Accident Year

AY 2000 – AY 2014 Claims

	Average TD Paid		Average PD Paid		Average Medical Paid	
	Male	Female	Male	Female	Male	Female
2000	\$56,775	\$52,358	\$68,436	\$56,540	\$222,278	\$194,662
2001	\$60,997	\$51,729	\$62,199	\$49,088	\$230,860	\$212,344
2002	\$57,393	\$56,955	\$56,013	\$53,867	\$226,212	\$205,478
2003	\$67,854	\$59,689	\$75,211	\$51,870	\$242,905	\$200,392
2004	\$46,018	\$39,143	\$69,062	\$49,326	\$222,728	\$193,286
2005	\$38,137	\$26,165	\$78,164	\$42,900	\$247,701	\$175,771
2006	\$38,897	\$28,535	\$70,106	\$62,131	\$234,474	\$197,435
2007	\$39,339	\$27,611	\$70,768	\$52,717	\$254,757	\$200,624
2008	\$42,328	\$32,480	\$54,154	\$47,520	\$226,284	\$215,579
2009	\$44,144	\$33,871	\$49,712	\$39,688	\$188,348	\$219,646
2010	\$42,750	\$34,582	\$46,650	\$34,481	\$198,516	\$165,468
2011	\$44,816	\$35,015	\$36,140	\$25,565	\$200,373	\$139,564
2012	\$40,926	\$36,508	\$28,007	\$19,755	\$157,084	\$112,623
2013	\$42,537	\$34,680	\$14,422	\$11,420	\$100,884	\$85,356
2014	\$34,744	\$23,880	\$10,412	\$3,384	\$138,280	\$70,427

CWCI has published a full report on the study, including background information, additional graphics, analyses and commentary as a Report to the Industry, “Spinal Fusion Claims in California Workers’ Compensation.” CWCI members and subscribers can access the report in the Research section at www.cwci.org. Others may purchase the report for \$32 from the Institute’s online store at www.cwci.store.

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