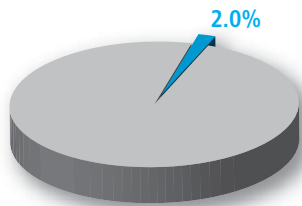




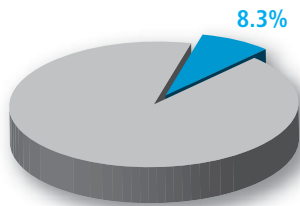
ICIS Injury Series SCORE CARD

Spine Disorders w/Spinal Cord or Root Involvement

Top Work Injury Categories



Spine Disorders with Spinal Cord or Root Involvement as a Percent of All Injuries



Spine Disorders with Spinal Cord or Root Involvement as a Percent of All Payments

Injury Category	% Injuries	% of Payments
Medical Back Problems w/o Spinal Cord Involvement	21.7%	31.1%
Shoulder, Arm, Knee, Lower Leg Sprains	13.4%	10.0%
Spine Disorders w/Spinal Cord or Root Involvement	2.0%	8.3%
Ruptured Tendon, Tendonitis, Myositis & Bursitis	5.1%	6.4%
Degenerative, Infective & Metabolic Joint Disorder	3.0%	5.9%
Carpal Tunnel Syndrome	1.1%	2.9%
Other Diagnoses of Musculoskeletal Systems	1.6%	1.7%
Subtotal	47.9%	66.4%

This scorecard focuses on California workers' compensation injuries in which the primary diagnosis was a spine disorder with spinal cord or root involvement ("spine disorders"). It is the third in a series of analyses providing data from CWCI's Industry Claims Information System (ICIS) database on 7 of the top work injury categories, which encompass 1/2 of all job injuries in the state and 2/3 of all claim payments. Spine disorders with spinal cord or root involvement are among the most costly claims in California, accounting for 2% of all work injuries but more than 8% of all claim payments.

Injured Worker Profile

2002 – 2005 Claimants

	Spine Disorders	All Claims
Average Age (Years)	39.7	36.7
Average Tenure (Years)	4.0	3.6
Gender		
Male	68.0%	65.3%
Female	32.0%	34.7%
Location of Residence		
Northern California	46.0%	41.1%
Southern California	54.0%	58.9%

The profile of spine disorder claimants differs from that of all injured workers. At the time of injury, workers with these diagnoses tend to be older and have more job tenure than California workers' compensation claimants overall, and a higher percentage of the spine disorder claimants are male or Northern California residents.

Diagnoses

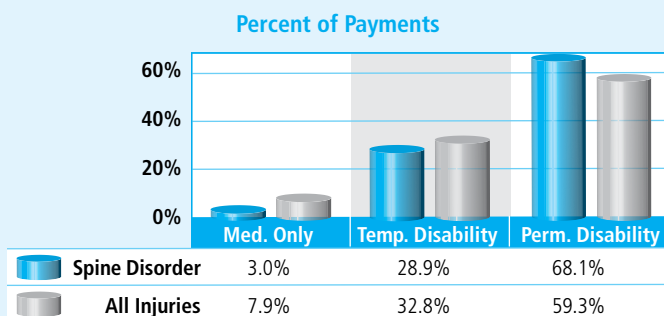
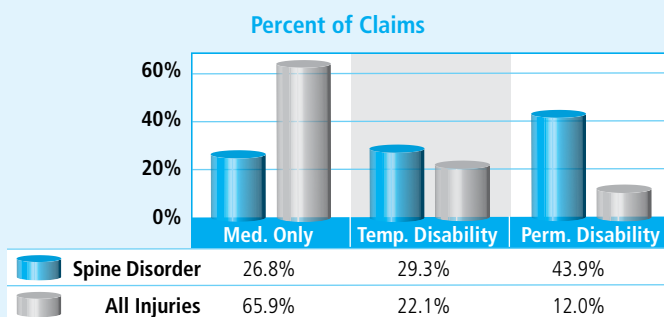
Spine Disorders w/Spinal Cord or Root Involvement

ICD9 Descriptions	% of Claims	% of Total Paid
Thoracic/lumbosacral neuritis/radiculitis, unspecified	21.2%	18.0%
Lumbar intervertebral disc w/o myelopathy	18.0%	16.6%
Brachia neuritis/radiculitis cervical region	11.2%	9.8%
Displaced intervertebral disc, site unspecified, w/o myelopathy	9.5%	10.3%
Sciatica	8.7%	3.9%
Intervertebral disc disorder w/ myelopathy lumbar region	8.2%	13.5%
Unspecified disorder of coccyx	6.2%	7.6%
Displaced cervical intervertebral disc w/o myelopathy	4.6%	3.7%
Brachia neuritis or radiculitis	3.5%	4.3%
Intervertebral disc disorder w/ myelopathy cervical region	3.1%	5.1%
Displaced thoracic/lumbar intervertebral disc w/o myelopathy	1.4%	0.9%
Thoracic intervertebral disc w/o myelopathy	1.1%	1.0%
Other	3.1%	5.4%

The top six diagnoses account for 77% of spine disorder injuries and 72% of the dollars paid. Among the spine disorder injuries, 36% are related to nerve inflammation (neuritis) or nerve root inflammation (radiculitis). Twenty percent of the spine disorder injuries are related to nerve compression (brachia neuritis and sciatica) and 15% are associated with disc displacement.

Claim and Payment Distribution by Claim Type

Spine Disorders vs. All Injuries (AY 2002 – 2005)



Nearly 3 out of 4 spine disorders result in lost time (TD and/or PD) -- more than twice the lost-time rate for all injuries, with nearly 44% of the spine disorders involving a permanent disability -- almost 4 times the rate for all injuries. Consequently, PD claims account for 68 cents of every dollar paid for spine disorders vs. 59 cents of every dollar paid for all injuries.

Distribution by Industry Sector

Spine Disorders vs. All Injuries (AY 2002 – 2005)

Industry Sector	% of Spine Disorders by Sector	Spine Disorders as % of Injuries in Sector
Construction	19.5%	2.2%
Manufacturing	14.1%	1.7%
Mercantile	13.6%	2.1%
Professional and Clerical Services	11.6%	2.1%
Agriculture	7.5%	2.1%
Restaurants	4.2%	1.7%
Hospitals	3.9%	3.2%
Parcel Delivery Companies	2.3%	1.8%
Trucking	1.9%	2.4%
Nursing Homes	1.3%	1.9%
Other Industry	20.1%	2.2%
TOTAL	100.0%	2.0%

Over 1/2 of spine disorders come from construction, manufacturing, mercantile and professional\ clerical sectors. These injuries account for 2.0% of all claims, and their prevalence within various sectors ranges from 1.7% of manufacturing and restaurant claims to 3.2% of hospital claims. The even distribution across sectors suggests these injuries may correlate with non-work factors.



ICIS Injury Series SCORE CARD

Spine Disorders w/Spinal Cord or Root Involvement

Average Benefits by Injured Worker County of Residence

Spine Disorders vs. All Claims (Select Counties AY 2002 - 2005)

County	% of Spines	% of All Claims	Avg. Paid Per Claim		Avg. Paid As % of Statewide Avg.	
			Spines	All Claims	Spines	All Claims
Los Angeles	20.0%	21.8%	\$41,852	\$11,025	112%	119%
San Diego	7.9%	8.0%	\$38,783	\$8,417	104%	91%
Orange	5.5%	6.2%	\$40,555	\$10,575	109%	114%
Santa Clara	5.1%	3.8%	\$42,663	\$9,275	114%	100%
Alameda	4.8%	3.8%	\$37,068	\$10,231	99%	111%
San Bernardino	4.6%	5.5%	\$40,011	\$9,872	107%	107%
Riverside	4.4%	5.0%	\$41,783	\$10,320	112%	112%
Sacramento	4.2%	4.2%	\$40,024	\$7,856	107%	85%
Ventura	3.5%	2.4%	\$38,385	\$11,197	103%	121%
Contra Costa	3.3%	2.4%	\$34,401	\$9,983	92%	108%
Sonoma	2.4%	2.3%	\$26,613	\$7,930	71%	86%
San Francisco	1.9%	1.7%	\$28,136	\$7,653	75%	83%
Other Counties	32.5%	32.9%	\$32,630	\$7,811	87%	84%
Statewide	100.0%	100.0%	\$37,330	\$9,253	100%	100%

More than 1 in 5 injured workers in California, as well as 1 in 5 spine disorder claimants, live in Los Angeles County, where claim costs are among the highest in the state: 119% of the state average for all claims, 112% of the state average for spine disorders.

Average payments on claims from San Diego and Sacramento County residents are below the state average, yet the average amount paid on spine disorder claims for claimants in these counties is above the statewide figure. Conversely, average benefit payments for claimants in Alameda and Contra Costa are higher than the state average, but payments for spine disorder claimants in these counties are below the state average. Average amounts paid spine disorder claimants in Southern California counties are consistently higher than the statewide average.

PPO/MPN Utilization

% of Visits to Preferred Providers By Type of Service
Spine Disorders vs. All Injuries (AY 2002 - 2005)

Type of Service		PPO			MPN
		2002	2003	2004	2005
E&M	Spine Disorders	40.7%	36.4%	42.5%	64.4%
	All Injuries	56.7%	56.0%	61.6%	74.0%
Surgery	Spine Disorders	31.2%	33.5%	35.5%	55.4%
	All Injuries	51.7%	52.6%	55.7%	69.5%
Radiology	Spine Disorders	29.5%	28.5%	27.9%	40.1%
	All Injuries	45.9%	45.9%	47.2%	58.5%
Medicine Section	Spine Disorders	21.2%	19.1%	27.5%	48.1%
	All Injuries	39.9%	40.0%	49.3%	70.1%
Physical Therapy	Spine Disorders	14.5%	14.1%	21.5%	37.5%
	All Injuries	23.3%	23.5%	36.7%	50.3%
Chiropractic Manipulation	Spine Disorders	6.9%	6.3%	8.7%	29.4%
	All Injuries	8.1%	7.9%	11.2%	32.0%
Total Visits	Spine Disorders	17.2%	16.5%	26.6%	46.4%
	All Injuries	32.1%	32.6%	47.6%	63.2%

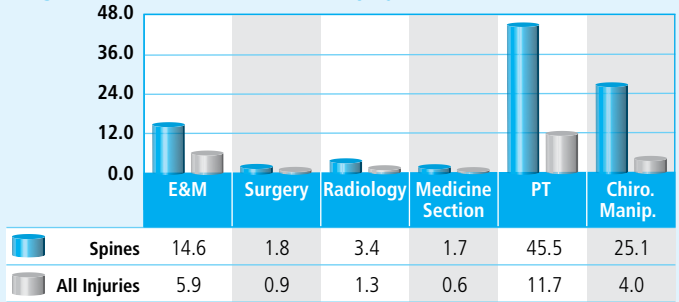
The use of preferred provider networks to treat injured workers has increased significantly since the advent of Medical Provider Networks (MPNs) in 2005. Overall, network utilization in California workers' compensation almost doubled from 32% of all visits for AY 2002 injuries to 63% of all visits for AY 2005 injuries. Over the same period, the use of network providers to treat spine disorders with spinal cord or root involvement rose even more dramatically, climbing from 17% to 46% of visits.

In most cases, employers offering MPNs are given medical control for the life of a claim, a major change from the pre-reform 30-day medical control window. Compared to other diagnoses, spine disorders had a significantly lower network utilization rate across all 6 medical fee schedule categories studied, and across all 4 accident years, though the use of networks for all categories of services did increase significantly.

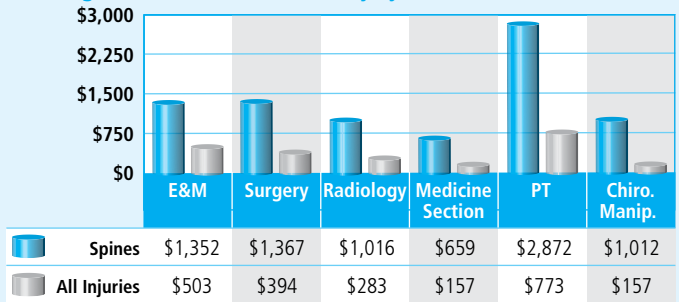
Medical Development at 24 Months

Spine Disorders vs. All Injuries (AY 2002 - 2003)

Avg. of Visits at 24 Months Post Injury - Selected OMFS Sections



Avg. Paid at 24 Months Post Injury - Selected OMFS Sections

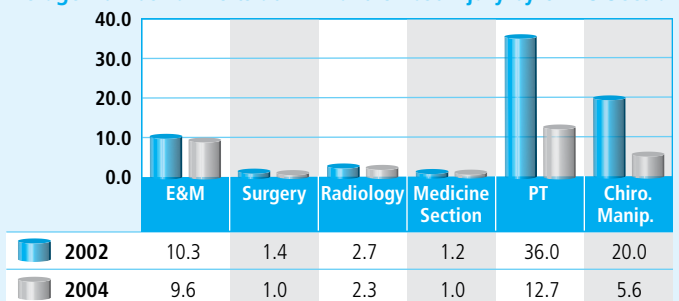


Using AY 2002 and 2003 claims, CWCI calculated the average number of visits and payments for 6 types of care for all claims and spine disorders at 24 months. Averages included medical only and indemnity claims and were not limited to those that involved a specific type of care. Spine disorder treatment plans rely more heavily on all types of care, particularly physical therapy and chiropractic, so average amounts paid for all service types at 2 years are higher for spine disorders than for all injuries. Relative differences in average surgery and radiology payments for spine disorders vs. all injuries were greater than relative differences in the average number of visits, suggesting that spine disorders involve a more complex/expensive mix of procedures.

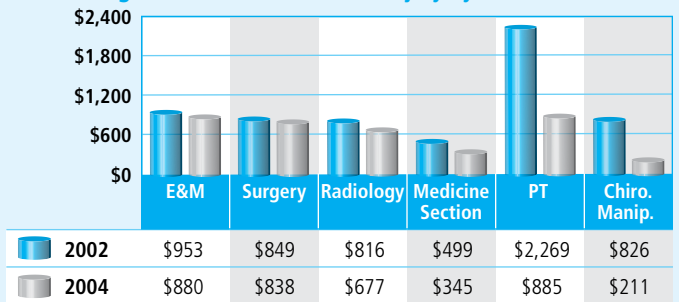
Medical Utilization & Payments: Pre- vs. Post-Reform

Spine Disorders - Pre-Reform (AY 2002) vs. Post-Reform (AY 2004)

Average Number of Visits at 12 Months Post Injury by OMFS Section



Average Paid at 12 Months Post Injury by OMFS Section



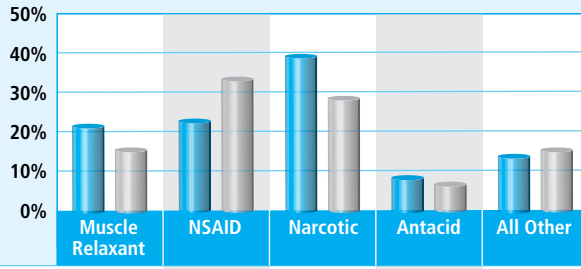
A comparison of AY 2002 and 2004 data at 12 months post injury shows that after reform, the average number of visits and payments on spine disorders declined across all 6 types of services. PT and chiropractic care had the most notable reductions. The average number of PT visits in the first year fell 65%, yielding a similar reduction in average PT payouts. Reductions in chiropractic care were even greater, as the average number of visits for these services in the first 12 months fell from 20.0 to 5.6 visits (-72%), cutting the average paid amounts from \$826 to \$211.



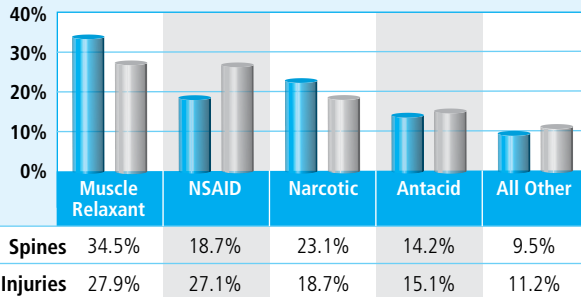
Prescription Drugs

Spine Disorders vs. All Injuries (2005)

Distribution of Prescriptions by Drug Category



Distribution of Paid Dollars by Drug Category



The Institute classified 1.1 million prescriptions from calendar year 2005 into 5 drug categories. Narcotics and muscle relaxants account for a higher share of the prescriptions used for spine disorders than for all injuries, while nonsteroidal anti-inflammatory drugs (NSAIDs) represent a smaller share of the spine disorder medications. Narcotics account for 1/3 of all drugs prescribed for spine disorders, and nearly 1/4 of the prescription payments, while muscle relaxants consume just over 1/3 of the total prescription payments for spine disorder injuries.

Prescription Drugs by Volume and Payment

Spine Disorders vs. All Claims (2005)

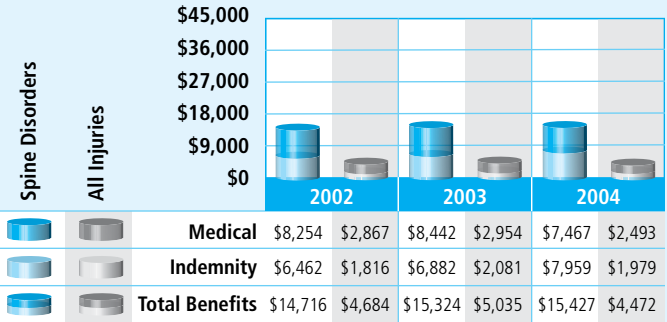
Drug Grouping	Drug Class	% of Total Prescriptions		% of Total Paid	
		Spines	All Claims	Spines	All Claims
Hydrocodone	Narcotic	16.0%	13.3%	8.6%	7.4%
Carisoprodol	Muscle Relax	11.1%	7.1%	23.3%	17.8%
Ranitidine	Antacid	6.1%	4.7%	10.8%	11.1%
Ibuprofen	NSAID	5.5%	10.9%	1.6%	3.6%
Tramadol	Narcotic	4.0%	2.7%	4.3%	2.9%
Cyclobenzaprine	Muscle Relax	3.9%	3.2%	2.4%	2.1%
Naproxen	NSAID	3.8%	6.9%	3.3%	6.7%
Propoxy	Narcotic	3.3%	3.7%	1.8%	2.3%
Piroxicam	NSAID	2.4%	1.8%	3.3%	3.2%
Etodolac	NSAID	2.0%	1.5%	2.7%	2.2%
Garbapentin	Anti-Convulsant	1.2%	0.6%	1.7%	1.2%
Acetaminophen w/Codeine	Narcotic	1.2%	1.7%	0.6%	0.7%
Diclofenac	NSAID	1.0%	1.2%	0.9%	1.4%
Nabumetone	NSAID	1.0%	0.7%	0.9%	0.9%
Lidocaine	Local Anesthetic	0.9%	0.8%	1.5%	1.5%
Top 15		63.4%	60.8%	67.7%	65.5%

Generic drugs were grouped with their brand equivalents to identify the most commonly prescribed drugs and associated payments. The narcotic Hydrocodone was the most prescribed drug for spine disorders and for all injuries, but the muscle relaxant Carisoprodol consumed more of the payments than any other drug. The antacid Ranitidine ranked third in prescription volume for spine disorders, but second in terms of prescription payments for these injuries.

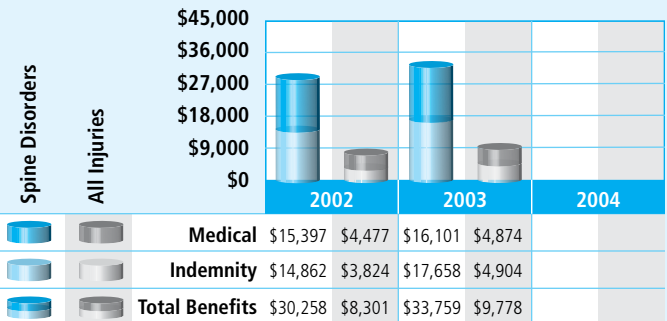
Loss Development

Spine Disorders vs. All Injuries

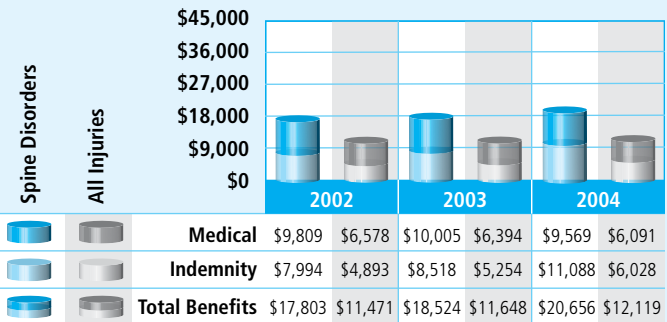
All Claims 12 Months Post Injury



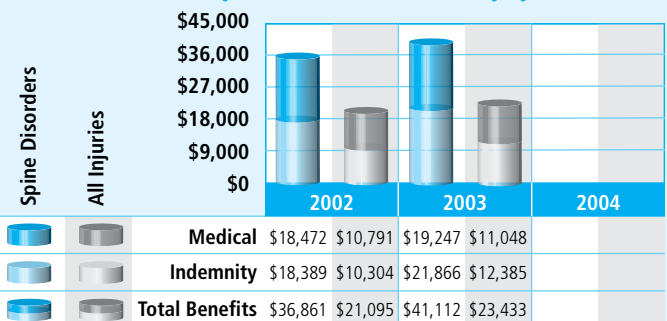
All Claims 24 Months Post Injury



Indemnity Claims 12 Months Post Injury



Indemnity Claims 24 Months Post Injury



Spine disorders with spinal cord or root involvement are relatively expensive. Average benefit payments for all spine disorder claims and spine disorder indemnity claims were above those noted for all injuries across all study years at both 12 and 24 months post injury.

Payments on spine disorders increase sharply during the second year of the life of the claim. For example, at 24 months post injury, payments for AY 2003 spine disorder indemnity claims climbed to \$41,112 (+122%) from the 12-month payment level. In comparison, average payments for all indemnity claims rose 101% between 12 and 24 months post injury. Among the AY 2003 claims, indemnity payments were the biggest cost driver in the second year following the injury, accounting for 59% of the overall increase in spine disorder claims and 60% of the increase among all injury claims.



Nature of Injury			
Claim Distributions for Spine Disorders vs. Other Injuries & All Injuries (AY 2002 - 2005 Claims)			
Percent of Claims			
Nature of Injury	Spine Disorders	Other Types of Injuries	All Injuries
Strain	54.3%	29.0%	29.5%
All Other Cumulative Injuries	18.3%	11.6%	11.8%
All Other, Not Otherwise Classified	11.0%	8.5%	8.5%
Multiple Physical Injuries Only	4.3%	2.7%	2.7%
Sprain	3.5%	6.3%	6.3%
Contusion	3.5%	8.3%	8.2%
Fracture	0.9%	3.4%	3.4%
Inflammation	0.8%	1.6%	1.6%
Laceration	0.7%	13.6%	13.4%
Hernia	0.6%	0.8%	0.8%
All Other	2.2%	14.1%	13.9%

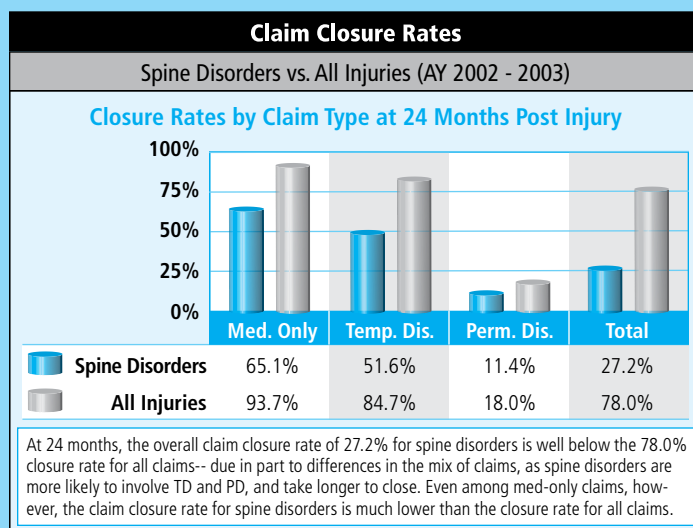
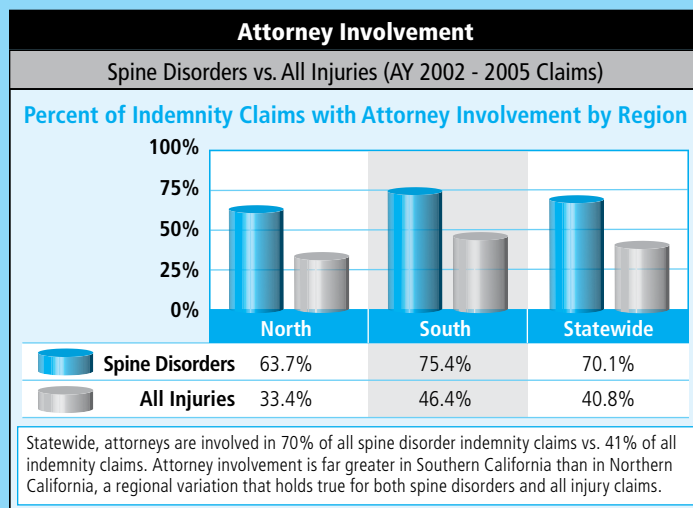
"Strains" are the number one nature of injury category, accounting for nearly 1/3 of all work injuries and more than half of spine disorders with spinal cord or root involvement. Strains are often cumulative injuries that occur over time. Nearly 1 in 5 spine disorders are other cumulative injuries, compared to 1 in 9 work injuries overall, and a higher proportion of the spine disorders involve multiple physical injuries.

Cause of Injury			
Claim Distributions for Spine Disorders vs. Other Injuries & All Injuries (AY 2002 - 2005 Claims)			
Percent of Claims			
Cause of Injury	Spine Disorders	Other Types of Injuries	All Injuries
Strain/Injury: Lifting	25.9%	11.8%	12.1%
Strain/Injury (not otherwise classified)	14.9%	8.5%	8.7%
Misc. Causes: Other Injury (not otherwise classified)	7.9%	6.3%	6.3%
Strain/Injury: Pushing or Pulling	5.7%	3.6%	3.7%
Fall/Slip: Miscellaneous	5.6%	5.2%	5.2%
Miscellaneous Cause: Cumulative Injury (not otherwise classified)	5.1%	2.7%	2.8%
Fall/Slip: On Same Level	3.4%	3.1%	3.1%
Repetitive Motion (Carpal Tunnel Syndrome)	3.1%	2.8%	2.8%
Strain/Injury: Holding or Carrying	3.0%	1.7%	1.7%
Fall/Slip: From Ladder or Scaffolding	2.3%	2.0%	2.0%
All Other	23.2%	52.3%	51.7%

Half of all work-related spine disorders are caused by some type of strain (including strains associated with lifting, pushing, pulling, holding or carrying), while about 1 out of 9 spine disorders results from various types of falls and slips (including "on same level", "from ladder or scaffolding" and "miscellaneous"). In addition, nearly 13% of spine disorder claims result from miscellaneous causes (including "cumulative injury" and "other injury").

Time Lags			
Date of Injury to Employer Notice, Carrier Notice & First Treatment Spine Disorders vs. All Injuries (AY 2002 vs. 2004)			
		Median # of Days	
		2002	2004
Employer Notification	Spine Disorders	1.0	1.0
	All Claims	0.0	0.0
Carrier Notification	Spine Disorders	10.0	10.0
	All Claims	7.0	6.0
Time to First Treatment	Spine Disorders	36.5	34.0
	All Claims	3.0	2.0

To gauge how long it takes for the initial stages of a claim to unfold, and how this has changed recently, CWCI compared the median number of days from the injury date to employer notice, carrier notice, and initial treatment for spine disorders and all claims from AY 2002 and 2004. A median is the midpoint in a series of numbers, where half the data values are above the median, and half are below. In both years, the median time to employer notice was 1 day for spine disorders and 0 days (same day of injury) for all claims. The median time to carrier notice remained unchanged at 10 days between 2002 and 2004 on spine disorder injuries. The median time to first treatment for spine disorders improved modestly from 36.5 to 34 days, though that is over a month longer than the median for all claims, which may reflect the subjective nature and prevalence of cumulative traumas and late discoveries among spine disorders.



ICIS Injury Scorecards are based on Industry Claims Information System data, compiled and maintained by the California Workers' Compensation Institute, 1111 Broadway, Suite 2350, Oakland CA 94607, (510) 251-9470. Additional injury scorecard data is posted in the ICIS section of the Institute's website (www.cwci.org).

About CWCI: The California Workers' Compensation Institute, incorporated in 1964, is a private, non-profit organization of insurers and self-insured employers conducting and communicating research and analyses to improve the California workers' compensation system.