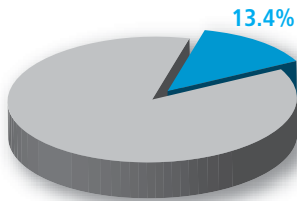




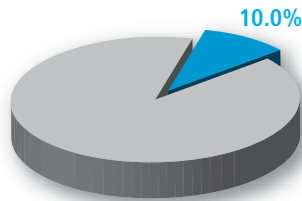
ICIS Injury Series SCORE CARD

Shoulder, Arm, Knee, Lower Leg Sprains

Top Work Injury Categories



Shoulder, Arm, Knee, Lower Leg Sprains as a Percent of All Injuries



Shoulder, Arm, Knee, Lower Leg Sprains 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 sprain of the shoulder, arm, knee, lower leg ("sprains"). It is the second 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. Sprains are the third most common job injury category in California behind "medical backs" and "minor wounds and injuries to the skin" (a group not scheduled for scorecard analysis).

Injured Worker Profile

2002 – 2005 Claimants

	Sprains	All Claims
Average Age (Years)	36.9	36.7
Average Tenure (Years)	3.9	3.6
Gender		
Male	62.8%	65.3%
Female	37.2%	34.7%
Location of Residence		
Northern California	41.6%	41.1%
Southern California	58.4%	58.9%

The profile of sprain claimants closely tracks the profile for all injured workers. Both average just under 37 years of age and almost 4 years of job tenure at injury. Females account for 37.2% of work-related sprain injuries vs. 34.7% of all injuries, but the regional distribution of sprains by claimant residence matches the proportion noted for all claims.

Diagnoses

Shoulder, Arm, Knee, Lower Leg Sprains

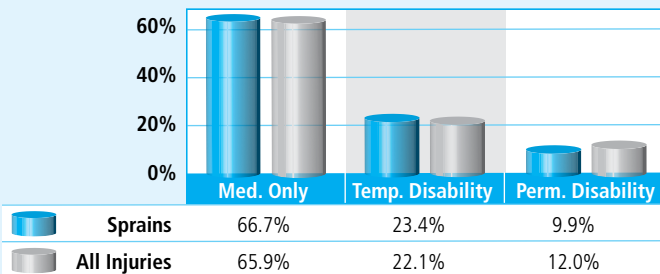
ICD9 Descriptions	% of Claims	% of Total Paid
Sprains/strain of shoulder/upper arm unspecified site	15.1%	10.3%
Sprains/strain of ankle unspecified site	14.8%	7.2%
Sprains/strain of knee and leg unspecified site	12.4%	10.5%
Sprains/strain of wrist unspecified site	11.0%	6.9%
Sprains/strain of hand unspecified site	6.0%	3.8%
Sprains/strain of shoulder/upper arm other specified site	5.0%	4.1%
Sprains/strain of elbow and forearm unspecified site	4.7%	2.7%
Sprains/strain of rotator cuff (capsule)	3.9%	16.0%
Sprains/strain foot unspecified site	2.5%	1.9%
Sprains and strains of knee and leg other specified sites	2.1%	2.9%
Sprains and strains of ankle and foot	1.9%	0.6%
Sprains and strains of wrist	1.8%	1.4%
Other	18.8%	31.7%

This diagnostic category includes injuries to most body parts that incorporate a joint other than the back (shoulders, arms, ankles, knees, legs, wrists, hands, elbows or feet). The top 4 diagnoses account for 53% of sprains and 35% of the dollars paid.

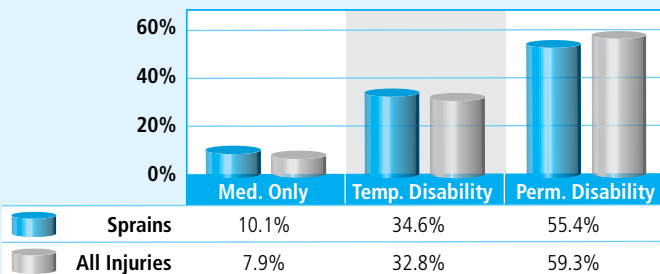
Claim and Payment Distribution by Claim Type

Sprains vs. All Injuries (AY 2002 – 2005)

Percent of Claims



Percent of Payments



Sprains result in a slightly higher proportion of medical only and TD claims than all injuries, and a slightly lower proportion of PD claims. One in 10 sprains involves a permanent disability -- compared to 1 in 8 claims for all injuries. As a result, PD claims account for 55 cents of every dollar paid for sprain cases, compared to 59 cents of every dollar paid for all injuries.

Distribution by Industry Sector

Sprains vs. All Injuries (AY 2002 – 2005)

Industry Sector	% of Sprains by Sector	Sprains as % of Injuries in Sector
Manufacturing	15.8%	12.2%
Mercantile	14.2%	14.7%
Construction	14.2%	10.4%
Professional and Clerical Services	13.3%	15.8%
Agriculture	6.0%	11.1%
Parcel Delivery Companies	4.2%	21.3%
Restaurants	3.9%	10.1%
Hospitals	3.4%	18.1%
Trucking	1.9%	15.3%
Nursing Homes	1.8%	17.4%
Other Industry	21.4%	15.6%
TOTAL	100.0%	13.4%

Over 1/2 of sprains occur in the manufacturing, mercantile, construction and professional/clerical sectors. Industries where sprains represent the highest percentage of injuries include parcel delivery companies (more than 1 out of 5 work injuries), followed by hospitals, nursing homes, and the professional and clerical service sector.



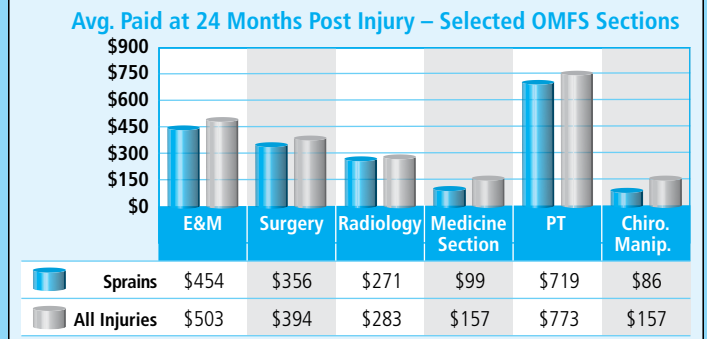
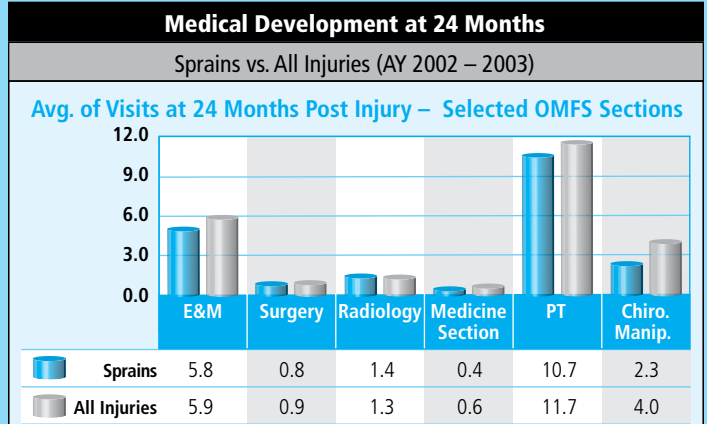
Average Benefits by Injured Worker County of Residence						
Sprains vs. All Claims (Select Counties AY 2002 - 2005)						
County	% of Sprains	% of All Claims	Avg. Paid Per Claim		Avg. Paid As % of Statewide Avg.	
			Sprains	All Claims	Sprains	All Claims
Los Angeles	21.6%	21.8%	\$8,368	\$11,025	121%	119%
San Diego	8.8%	8.0%	\$6,305	\$8,417	91%	91%
San Bernardino	6.0%	5.5%	\$7,031	\$9,872	101%	107%
Orange	5.8%	6.2%	\$8,029	\$10,575	116%	114%
Riverside	4.8%	5.0%	\$7,563	\$10,320	109%	112%
Sacramento	4.5%	4.2%	\$5,112	\$7,856	74%	85%
Alameda	4.5%	3.8%	\$7,747	\$10,231	112%	111%
Santa Clara	4.2%	3.8%	\$6,713	\$9,275	97%	100%
Fresno	3.7%	3.8%	\$5,618	\$6,916	81%	75%
Contra Costa	2.8%	2.4%	\$7,609	\$9,983	110%	108%
San Joaquin	2.5%	2.5%	\$5,399	\$6,689	78%	72%
Other Counties	30.8%	33.0%	\$6,097	\$8,074	88%	87%
Statewide	100.0%	100.0%	\$6,941	\$9,253	100%	100%

For accident years 2002 through 2005, more than 1 in 5 injured workers in California, as well as 1 in 5 sprain claimants, lived in Los Angeles County, where claim costs were among the highest in the state--119% of the state average for all claims, 121% of the state average for sprains. Payments for sprain claims were also well above average in Orange, Alameda, Contra Costa and Riverside Counties. Payments for sprain claims were lowest in the Central Valley and in rural areas that comprise most "Other Counties."

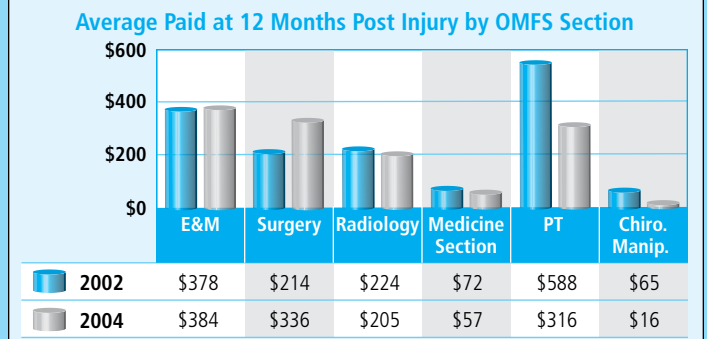
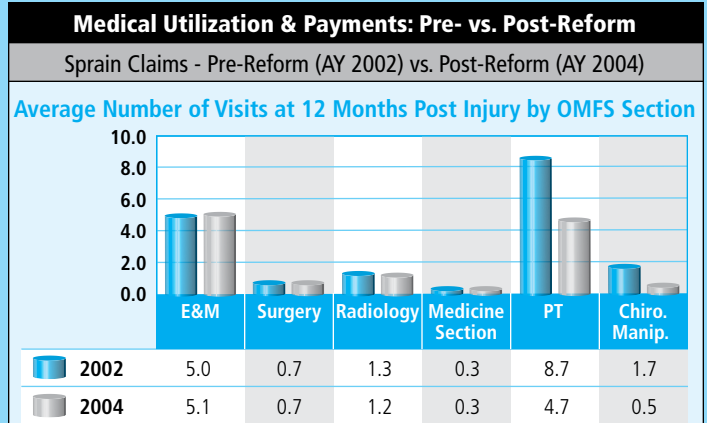
PPO/MPN Utilization					
% of Visits to Preferred Providers By Type of Service					
Sprains vs. All Injuries (AY 2002 - 2005)					
Type of Service		PPO			MPN
		2002	2003	2004	2005
E&M	Sprains	67.6%	65.2%	68.8%	81.3%
	All Injuries	56.7%	56.0%	61.6%	74.0%
Surgery	Sprains	65.2%	61.1%	62.6%	75.6%
	All Injuries	51.7%	52.6%	55.7%	69.5%
Radiology	Sprains	56.9%	55.4%	55.2%	64.5%
	All Injuries	45.9%	45.9%	47.2%	58.5%
Medicine Section	Sprains	41.1%	40.1%	51.3%	71.1%
	All Injuries	39.9%	40.0%	49.3%	70.1%
Physical Therapy	Sprains	35.2%	33.8%	47.1%	58.4%
	All Injuries	23.3%	23.5%	36.7%	50.3%
Chiropractic Manipulation	Sprains	8.0%	8.5%	10.2%	33.6%
	All Injuries	8.1%	7.9%	11.2%	32.0%
Total Visits	Sprains	44.7%	43.1%	56.3%	69.9%
	All Injuries	32.1%	32.6%	47.6%	63.2%

The use of preferred providers to treat injured workers has increased significantly since reform implementation. Overall utilization of preferred providers in California workers' compensation almost doubled from 32% of all visits for AY 2002 injuries to 63% of all visits for AY 2005 injuries. During the same period, preferred provider use for the treatment of sprains rose from about 45% to nearly 70%.

These increases coincided with the 2005 introduction of Medical Provider Networks (MPNs) which featured medical control for the life of the claim, a significant change from the pre-reform 30-day medical control window. It is interesting to note that sprains had a significantly higher rate of PPO/MPN use across all study years compared to PPO/MPN utilization among all injuries, even though the directional trends were up for both groups.



Using AY 2002 and 2003 claims, CWCI calculated the average number of visits and payments in 6 fee schedule sections for all claims and for sprains at 24 months. Averages included medical only and indemnity claims and were not limited to those that involved a specific type of care. In sprain claims, the average number of visits for evaluation and management, surgery, and radiology, was similar to the average for all claims. On the other hand, sprains averaged fewer visits for medicine section services, physical therapy and chiropractic manipulation, resulting in significantly lower average payments for these services at 24 months post-injury.



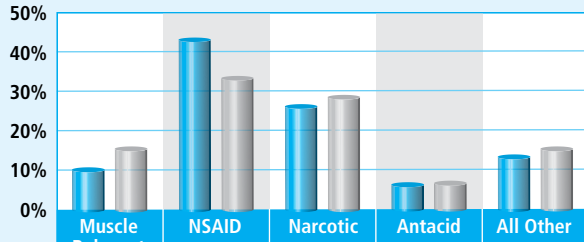
A comparison of AY 2002 and 2004 data at 12 months post injury shows that only 2 types of services, PT and chiropractic, had fewer average visits following reform implementation. The average number of PT visits to treat sprains fell 46% from 8.7 to 4.7 visits, yielding a similar reduction in average PT payouts, which fell from \$588 to \$316. At the same time, the average number of chiropractic manipulation visits to treat sprains fell 70% from 1.7 to 0.5 visits, cutting the average paid amounts by 75% from \$65 to \$16.



Prescription Drugs

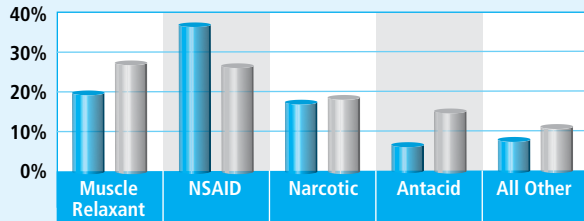
Sprains vs. All Injuries (2005)

Distribution of Prescriptions by Drug Category



Drug Category	Sprains (%)	All Injuries (%)
Muscle Relaxant	10.2%	15.6%
NSAID	43.8%	33.7%
Narcotic	26.4%	28.8%
Antacid	6.2%	6.6%
All Other	13.4%	15.3%

Distribution of Paid Dollars by Drug Category



Drug Category	Sprains (%)	All Injuries (%)
Muscle Relaxant	20.1%	27.9%
NSAID	37.7%	27.1%
Narcotic	17.7%	18.7%
Antacid	16.6%	15.1%
All Other	7.9%	11.2%

The Institute classified a total of 1.1 million prescriptions from 2005 into 5 drug categories. Non-steroidal anti-inflammatory drugs (NSAIDs) comprised 43.8% of sprain prescriptions and 37.7% of the payments. Narcotics were the second most common type of prescription for sprains, representing more than 1/4 of all drugs prescribed for these injuries, nearly the same proportion noted for all injuries. Muscle relaxants accounted for a smaller share of the drugs prescribed in sprain cases, and a smaller share of the prescription dollars.

Prescription Drugs by Volume and Payment

Sprains vs. All Claims (2005)

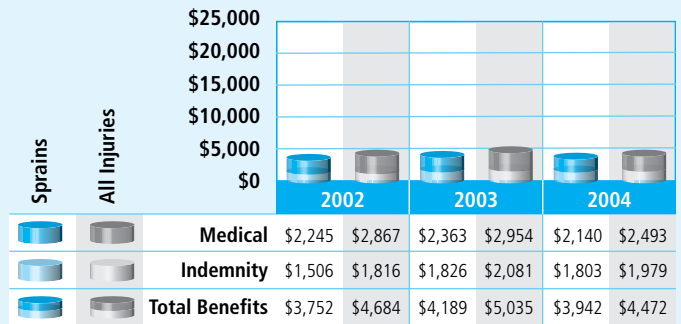
Drug Grouping	Drug Class	% of Total Prescriptions		% of Total Paid	
		Sprains	All Claims	Sprains	All Claims
Ibuprofen	NSAID	15.7%	10.9%	5.9%	3.6%
Hydrocodone	Narcotic	12.5%	13.3%	7.4%	7.4%
Naproxen	NSAID	10.0%	6.9%	10.6%	6.7%
Ranitidine	Antacid	4.7%	4.7%	12.7%	11.1%
Carisoprodol	Muscle Relax	4.7%	7.1%	13.2%	17.8%
Propoxy	Narcotic	4.0%	3.7%	2.6%	2.3%
Banalg Liniment	Pain Relief Ointment	3.3%	1.9%	1.1%	0.5%
Cyclobenzaprine	Muscle Relax	2.4%	3.2%	1.7%	2.1%
Tramadol	Narcotic	2.2%	2.7%	2.5%	2.9%
Acetaminophen	Non-Narc. Analgesic	2.2%	1.5%	0.4%	0.2%
Acetaminophen w/Codeine	Narcotic	1.9%	1.7%	0.9%	0.7%
Piroxicam	NSAID	1.9%	1.8%	3.7%	3.2%
Etodolac	NSAID	1.7%	1.5%	2.5%	2.2%
Diclofenac	NSAID	1.5%	1.2%	2.0%	1.4%
Nabumetone	NSAID	1.0%	0.8%	1.1%	0.8%
Top 15		69.8%	62.7%	68.3%	63.0%

Generic drugs were grouped with their brand equivalents to identify the most commonly prescribed drugs and associated payments. The anti-inflammatory Ibuprofen topped the list of most prescribed drugs for sprains, followed by the narcotic hydrocodone (which was used in 1 out of 8 sprain cases), although the muscle relaxant carisoprodol consumed more of the paid dollars than any other drug, followed by the antacid ranitidine.

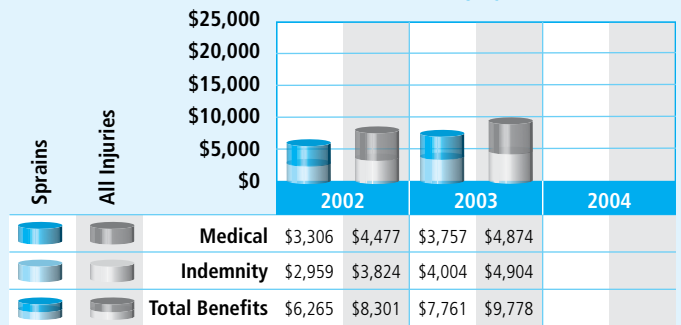
Loss Development

Sprains vs. All Injuries

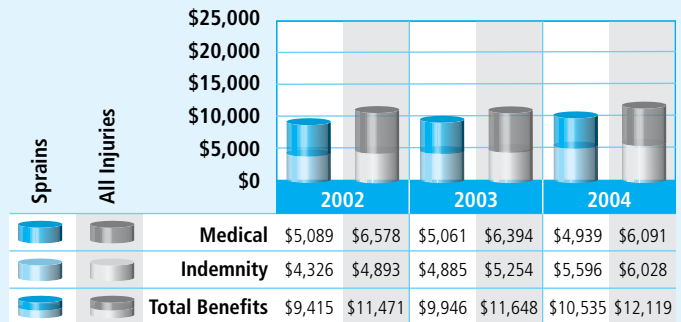
All Claims 12 Months Post Injury



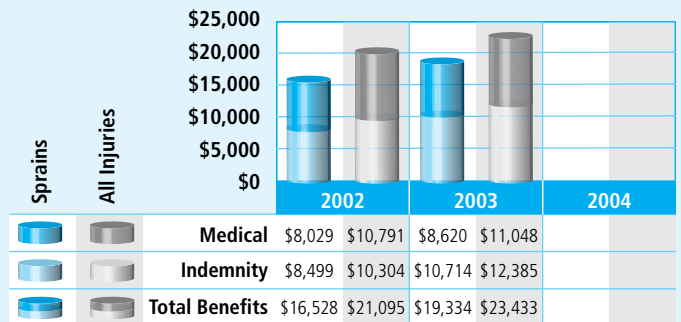
All Claims 24 Months Post Injury



Indemnity Claims 12 Months Post Injury



Indemnity Claims 24 Months Post Injury



Sprain injuries are relatively inexpensive. Average benefit costs for all sprain claims and sprain indemnity claims were below those noted for all injuries across all study years at both 12 and 24 months post injury. In all cases, both average indemnity and average medical payments were less for sprain claims.

The increase in average payments on sprain claims was less than the increase noted for all claims in the second year following the injury. For example, at 24 months post injury, payments for AY 2003 sprain indemnity claims climbed to \$19,334 (+94% from the 12-month payment level). In comparison, average payments for indemnity claims for all injuries rose 101% between 12 and 24 months post injury. Among the AY 2003 indemnity claims, total average benefit payments for sprain injuries were 21% below the average for all claims.



Nature of Injury

Claim Distributions for Sprains vs. Other Injuries & All Injuries (AY 2002 - 2005 Claims)

Nature of Injury	Percent of Claims		
	Sprains	Other Types of Injuries	All Injuries
Strain	44.9%	27.4%	29.5%
Sprain	23.4%	4.0%	6.3%
All Other Cumulative Injuries	11.3%	11.8%	11.8%
All Other, Not Otherwise Classified	7.0%	8.8%	8.5%
Contusion	4.4%	8.7%	8.2%
Multiple Physical Injuries Only	2.4%	2.8%	2.7%
Inflammation	2.4%	1.5%	1.6%
Fracture	1.4%	3.6%	3.4%
Laceration	0.8%	15.0%	13.4%
Carpal Tunnel Syndrome	0.5%	0.6%	0.6%
All Other	1.6%	15.7%	14.0%

"Strains" are the number one nature of injury category, accounting for nearly 1/3 of all work injuries and 45% of all sprain diagnoses. Strains are often cumulative injuries that occur over time. Nearly 1 in 9 sprains are "other cumulative injuries" about the same proportion noted for work injuries overall. In contrast, claims for other types of injuries are far more likely to involve less subjective nature of injury categories such as contusions, fractures, and lacerations.

Cause of Injury

Claim Distributions for Sprains vs. Other Injuries & All Injuries (AY 2002 - 2005 Claims)

Cause of Injury	Percent of Claims		
	Sprains	Other Types of Injuries	All Injuries
Strain/Injury (not otherwise classified)	15.6%	7.6%	8.7%
Strain/Injury: Lifting	12.1%	12.1%	12.1%
Fall/Slip: Miscellaneous	8.5%	4.7%	5.2%
Strain/Injury: Pushing or Pulling	6.3%	3.3%	3.7%
Misc. Causes: Other Injury (not otherwise classified)	5.5%	6.4%	6.3%
Strain/Injury: Twisting	5.2%	1.1%	1.6%
Fall/Slip: On Same Level	5.0%	2.8%	3.1%
Repetitive Motion (Carpal Tunnel Syndrome)	4.6%	2.6%	2.8%
Fall/Slip: From Different Level	3.0%	1.9%	2.0%
Strain/Injury: Holding or Carrying	2.7%	1.6%	1.7%
All Other	31.6%	56.0%	52.7%

The number one cause of work-related sprains is an unclassified strain or injury. However, almost 1 out of 8 sprains is caused by strains due to lifting. Strains caused by pushing or pulling, twisting, holding or carrying account for another 14%. In addition, 1 out of 6 work-related sprains results from a slip or fall, compared to less than 1 in 10 work injuries overall.

Time Lags

Date of Injury to Employer Notice, Carrier Notice & First Treatment Sprains vs. All Injuries (AY 2002 vs. 2004)

		Median # of Days	
		2002	2004
Employer Notification	Sprains	0.0	0.0
	All Claims	0.0	0.0
Carrier Notification	Sprains	7.0	6.0
	All Claims	7.0	6.0
Time to First Treatment	Sprains	5.0	3.0
	All Claims	3.0	2.0

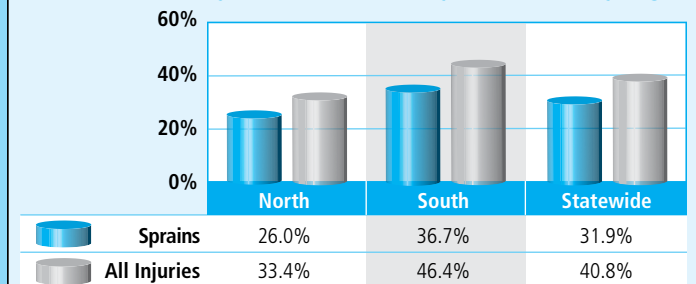
To gauge how long it takes for the initial stages of a claim to unfold, and how this has changed recently, CWCI compared the median number of days from the injury date to employer notice, carrier notice, and initial treatment for sprains and for all claims from AY 2002 and 2004.

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 0 days for sprains and for all claims, reflecting same-day notice. The median time to carrier notice fell from 7 days to 6 days between 2002 and 2004, and was the same for sprains and for all claims. The median time to first treatment for sprains improved from 5 to 3 days, though that remained longer than the median for all claims.

Attorney Involvement

Sprains vs. All Injuries (AY 2002 - 2005 Claims)

Percent of Indemnity Claims with Attorney Involvement by Region

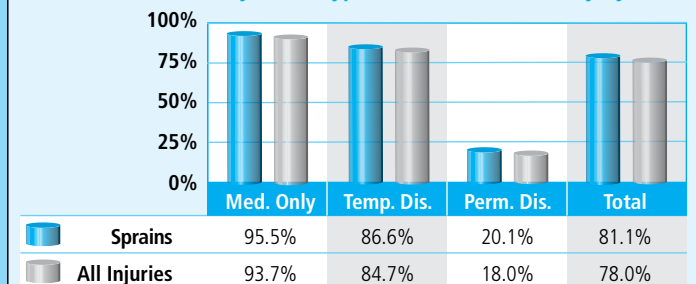


Statewide, attorneys are involved in less than 1/3 of all sprain indemnity claims vs. 41% of all indemnity claims. Attorney involvement is far greater in Southern California than in Northern California, a regional variation that holds true for both sprains and all injury claims.

Claim Closure Rates

Sprains vs. All Injuries (AY 2002 - 2003)

Closure Rates by Claim Type at 24 Months Post Injury



At 24 months, the overall claim closure rate of 81.1% for sprains is slightly above the 78.0% closure rate for all claims. This is due in part to differences in the mix of claims by claim type, as a smaller proportion of sprain claims result in permanent disability.

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.