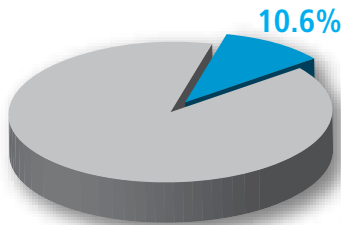




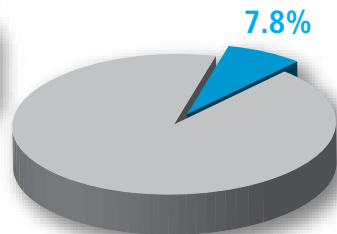
ICIS Injury Series SCORE CARD

Shoulder, Arm, Knee, Lower Leg Sprains

Top Work Injury Categories



Shoulder, Arm, Knee, Lower Leg Sprains as a Percent of All Work 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	16.5%	26.3%
Other Injuries, Poisonings & Toxic Effects	7.7%	10.1%
Sprain Of Shoulder, Arm, Knee, Lower Leg	10.6%	7.8%
Spine Disorders w/ Spinal Cord Or Root Involvement	1.4%	6.9%
Degenerative, Infective & Metabolic Joint Disorder	2.6%	6.3%
Ruptured Tendon, Tendonitis, Myositis & Bursitis	4.2%	5.8%
Wound, Fracture of Shoulder, Arm, Knee, Lower Leg	3.1%	5.1%
Carpal Tunnel Syndrome	0.9%	2.4%
Minor Wounds & Injuries to the Skin	17.0%	2.2%
Head & Spinal Injury w/o Spinal Cord Involvement	0.5%	1.7%
Subtotal	64.4%	74.5%

This Score Card focuses on California workers' compensation injuries in which the primary diagnosis was a sprain of the shoulder, arm, knee or lower leg ("Sprains"). It is the 4th in the Institute's series of analyses highlighting data from CWCI's Industry Claims Information System (ICIS) database on 10 of the top work injury categories. Together, these 10 injury categories encompass nearly 2/3 of all job injuries in the state and 3/4 of all claim payments. The first 3 Score Cards examined various types of back and head injuries. In comparison to those types of injuries, sprains of the shoulder, arm, knee or lower leg are far less severe, and less likely to result in attorney involvement or permanent disability, making them relatively inexpensive. As a result, even though sprains represent 10.6 percent of all California work injuries, they account for only 7.8 percent of all California workers' compensation claim payments.

Injured Worker Profile

AY 2001 – 2005 vs. AY 2006 – 2011

	2001 – 2005		2006 – 2011	
	Sprains	All Claims	Sprains	All Claims
Average Age (Years)	34.6	33.7	37.7	36.1
Average Tenure (Years)	3.7	3.6	4.3	4.0
Gender				
Male	63.2%	68.5%	57.8%	64.2%
Female	36.8%	31.5%	42.2%	35.8%
Location of Residence				
Northern California	40.7%	40.4%	39.5%	39.5%
Southern California	59.2%	59.6%	60.5%	60.5%

Women account for a relatively high percentage of sprain injury claims and, as with all claims, the percentage of sprain injury claims filed by women has increased considerably over the past decade, with more than 42% of the AY2006-2011 sprain injury claims involving females. Likewise, the average age and job tenure of a sprain claimant at the time of injury has increased in recent years. From 2001-2005, the average age of a sprain claimant was 34.6 years old – 0.9 years older than the average for all injured workers, though more recent figures show that after the recession began, the age differential widened to 1.6 years. Among 2006-2011 claims, the average age of a sprain claimant jumped by more than 3 years to 37.7 years of age, while the average age for all claimants increased 2.4 years to 36.1. At the same time, the average tenure of a 2006 - 2011 sprain claimant rose to 4.3 years (up from an average of 3.7 years for the prior 5 years), though for the past decade, the average job tenure for a sprain claimant has remained slightly higher than the average for all claimants.

The regional distribution shows the percentage of sprain claimants from Northern California is consistent with the distribution for all claims, with 40.7% of the pre-recession sprain claimants residing in the north (vs. 40.4% of all claimants). The regional distribution changed only slightly in the second half of the decade with 39.5% of both sprain claimants and all claimants residing in the north.

Distribution by Industry Sector

Sprain Injury Claims vs. All Claims (AY 2001 – 2007 vs. AY 2008 – 2011)

Industry Sector	2001 – 2007		2008 – 2011	
	Sprains	All Claims	Sprains	All Claims
Professional and Clerical Services	15.9%	15.8%	19.6%	21.8%
Manufacturing	14.7%	15.0%	12.3%	10.4%
Mercantile	13.6%	12.8%	13.9%	11.7%
Construction or Erection	13.6%	15.3%	8.3%	8.2%
Agriculture	5.7%	6.1%	7.4%	6.9%
Restaurants	4.4%	6.1%	4.8%	8.4%
Hospitals	2.5%	3.8%	7.3%	6.6%
Truckmen	1.7%	1.4%	1.1%	0.9%
Nursing Homes	1.5%	1.1%	1.6%	1.0%
Other	26.3%	22.7%	23.7%	24.0%
Grand Total	100.0%	100.0%	100.0%	100.0%

Four industry sectors (professional/clerical, manufacturing, mercantile and construction) account for more than half of all sprain injuries. The distribution of sprain injuries among various industry sectors shifted after the recession began in 2007, which is likely due to changes in the state's job market as the construction, manufacturing and trucking sectors each accounted for a smaller share of these claims, while professional and clerical, agriculture, and hospitals all represented a growing proportion of the claims. Construction showed the largest proportional decline, falling from 13.6% of the sprain claims in the pre-recession period to 8.3% of the 2008-2011 claims. Perhaps the most notable increase in sprain injuries over the same period occurred among hospital workers, who went from 2.5% of the 2001-2007 sprain injury claims to 7.3 percent of the sprain injury claims from accident years 2008-2011.

Approximately 1 out of 4 sprain injuries originated outside the 9 industry sectors noted above, about the same percentage noted for all California workers' compensation claims both before and after the recession.



Nature of Injury

Claim Distributions for Sprains vs. Other Injuries & All Injuries (AY 2001 – 2011 Claims)

Nature of Injury	Percent of Claims		
	Sprains	Other Types of Injuries	All Injuries
Strain	44.5%	28.9%	30.5%
Sprain	27.1%	5.6%	7.8%
All Other Cumulative Injuries	7.4%	7.7%	7.7%
All Other, NOC*	7.0%	8.6%	8.4%
Contusion	5.0%	9.8%	9.3%
Inflammation	2.3%	2.0%	2.0%
Multiple Physical Injuries Only	2.0%	2.2%	2.2%
Fracture	1.5%	3.7%	3.5%
Laceration	0.9%	14.8%	13.4%
Carpal Tunnel Syndrome	0.5%	0.6%	0.6%
Dislocation	0.4%	0.3%	0.3%
All Other	1.4%	15.7%	14.2%

"Strains" and "sprains" are by far the two most common nature of injury categories cited in sprain injuries, accounting for almost three of every four sprain claims in California. "Strains" alone account for more than 44% of sprain claims compared to 29% of all other claims and "sprains" account for over a quarter of sprain injuries, which is nearly five times the proportion noted for all other types of injuries. In contrast, a much smaller share of the strain injuries list contusions, fractures, and lacerations, as the nature of injury.

* NOC (Not Otherwise Classified)

Cause of Injury

Claim Distributions for Sprains vs. Other Injuries & All Injuries (AY 2001 – 2011 Claims)

Cause of Injury	Percent of Claims		
	Sprains	Other Types of Injuries	All Injuries
Fall/Slip	21.1%	12.5%	13.4%
Strain/Injury: NOC*	16.5%	8.2%	9.1%
Strain/Injury: Lifting	11.5%	11.4%	11.4%
Strain/Injury: Pushing or Pulling	6.4%	3.6%	3.9%
Struck/Injured by	5.9%	11.0%	10.5%
Strain/Injury: Twisting	5.4%	1.1%	1.6%
Misc. Causes: Other Injury NOC*	5.4%	6.5%	6.3%
Repetitive Motion (Carpal Tunnel Syndrome)	5.0%	3.1%	3.3%
Strike Against/Step On	3.2%	4.2%	4.1%
Strain/Injury: Holding or Carrying	2.6%	1.4%	1.6%
All Other	17.1%	37.1%	35.0%

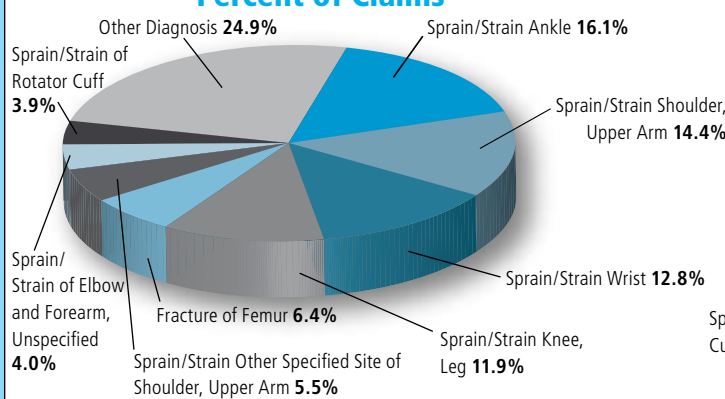
More than 42% of all sprains are caused when the worker suffers a strain while lifting, pushing or pulling, twisting, holding or carrying an object, or by an unclassified motion – about twice the proportion noted for all injuries. Injuries caused from falls or slips are the most common cause of sprains and is cited almost twice as often for sprains as for other types of injuries. Sprains are highly concentrated among these few causation categories – reflected in the relatively low percent of strain injuries in the "all other" cause of injury categories (17%), which is less than half the percentage of all injuries that fall into the "all other" causation category.

* NOC (Not Otherwise Classified)

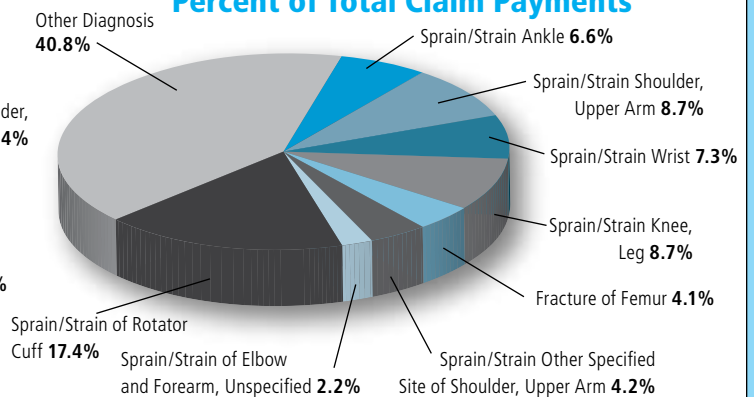
Diagnoses

Claim and Payment Distributions for AY 2001 – AY 2011 Sprain Claims

Percent of Claims



Percent of Total Claim Payments



ICD9 Descriptions	% of Claims	% of Total Paid	ICD9 Descriptions	% of Claims	% of Total Paid	ICD9 Descriptions	% of Claims	% of Total Paid
Sprain/Strain Ankle	16.1%	6.6%	Sprain/Strain Knee, Leg	11.9%	8.7%	Sprain/Strain of Elbow and Forearm, Unspecified	4.0%	2.2%
Sprain/Strain Shoulder, Upper Arm	14.4%	8.7%	Fracture of Femur	6.4%	4.1%	Sprain/Strain of Rotator Cuff	3.9%	17.4%
Sprain/Strain Wrist	12.8%	7.3%	Sprain/Strain Other Specified Site of Shoulder, Upper Arm	5.5%	4.2%	Other Diagnosis	24.9%	40.8%

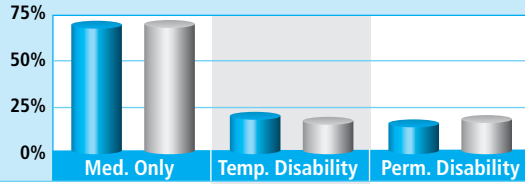
Most sprains are diagnosed as either a sprain or strain of a body part. The ankle is the body part most often sprained, accounting for 16.1% of all sprain injuries, but these tend to be inexpensive injuries, consuming only 6.6% of all sprain injury payments. Shoulder or upper arm sprains are the 2nd most common sprain injuries (14.4% of the claims, 8.7% of the payments), followed by wrist sprains (12.8% of the claims, 7.3% of payments); knee or leg sprains (11.9% of the claims, 8.7% of payments); other specified site of the shoulder or upper arm (5.5% of the claims, 4.2% of payments); and elbow and forearm (4.0% of the claims, 2.2% of payments). Fracture of the femur is the only diagnosis in the top 8 that is not a sprain, accounting for 6.4% of the claims and 4.1% of the payments. Rotator cuff sprains/strains represent less than 4% of sprain diagnoses, but 17.4% of the payments.



Claim and Payment Distribution by Claim Type

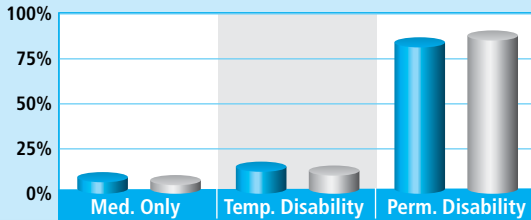
Sprains vs. All Injuries (AY 2001 – AY 2011)

Percent of Claims



Category	Sprains	All Injuries
Med. Only	67.1%	67.5%
Temp. Disability	18.5%	15.8%
Perm. Disability	14.4%	16.7%

Percent of Payments

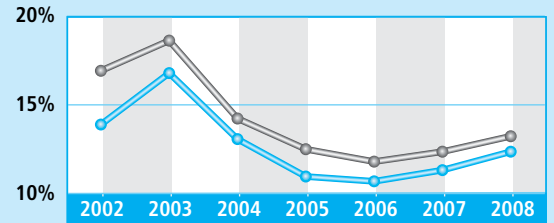


Category	Sprains	All Injuries
Med. Only	6.4%	4.8%
Temp. Disability	12.2%	10.1%
Perm. Disability	81.3%	85.1%

Sprains tend to be relatively minor injuries, with nearly 1/3 of them resulting in lost time (about the same as the rate for all injuries) but only about 1 out of 7 results in permanent disability (vs. about 1 in 6 injuries overall). As a result, permanent disability claims account for 81 cents of every dollar paid for sprains, compared to 85 cents of every dollar paid for all injuries. Medical only claims, which comprise 2/3 of all sprain injuries, account for 6.4% of the sprain injury claim payments (vs. 4.8% of the payments on all claims), while TD claims make up a relatively high 18.5% of the sprain injuries, and account for about 1 out of every \$8 paid for sprain injury claims.

Permanent Disability at 3 Years Post Injury

Sprains vs. All Injuries (AY 2002 – AY 2008)



Year	Sprains	All Injuries
2002	13.9%	16.9%
2003	16.8%	18.6%
2004	13.1%	14.2%
2005	11.0%	12.5%
2006	10.7%	11.8%
2007	11.3%	12.4%
2008	12.4%	13.2%

Most sprains do not result in a permanent impairment, and from 2002 through 2008, the percentage of sprains that resulted in a permanent disability payment within 3 years of the date of injury was consistently less than the percentage noted for all work-related injuries.

As with all injuries, the proportion of sprain claims that involved PD payments at the 3-year benchmark fell sharply as the 2002-2004 workers' compensation reforms were implemented.

Following the reforms, the percentage of these claims involving the payment of PD fell from about 1 out of every 6 claims to roughly 1 out of every 9 claims. That trend has recently reversed, however, with results for AY 2008 (the most recent year for which 3-year data are available) showing about 1 in 8 sprain injury claims involved a permanent disability payment at the 3-year benchmark.

Even though the incidence of PD for sprain injuries has been moving back toward pre-reform levels, it remains below the rate recorded for all claims.

Time Lags

Date of Injury to Employer Notice, Carrier Notice & First Treatment: Sprains vs. All Injuries (AY 2001 vs. 2009)

		2001		2009	
		Median Number of Days	Average Number of Days	Median Number of Days	Average Number of Days
Employer Notification	Sprains	0.0	8.4	0.0	5.6
	All Claims	0.0	16.7	0.0	8.7
Carrier Notification	Sprains	6.0	20.8	4.0	15.2
	All Claims	7.0	36.7	3.0	18.9
Time to First Treatment	Sprains	1.0	18.0	1.0	14.8
	All Claims	1.0	36.5	1.0	20.3

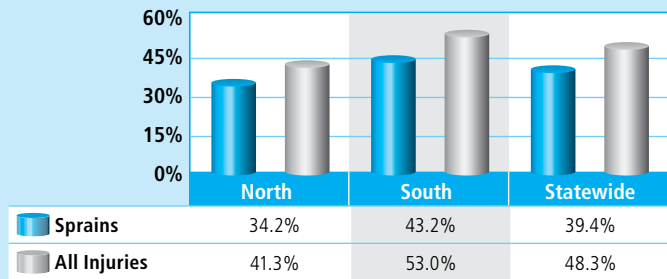
The table above compares the time lags between the date of injury and the employer notice, carrier notice, and initial treatment for sprain claims and for all claims from accident years 2001 and 2009. The median is the midpoint in a series of numbers, where 1/2 the data values are above the median and 1/2 are below. For both AY 2001 and AY 2009 claims, the median time to employer notice was 0 days for sprain injuries and for all claims, indicating that the employer became aware of the injury on the day it happened. The median time to carrier notice for sprains improved from 6 days to 4 days between AY 2001 and AY 2009, and from 7 days to 3 days for all claims. On the other hand, the median time to first treatment remained unchanged: 1 day for sprain injuries and 1 day for all claims.

As with all claims, among the sprain cases there are significant differences in the average and the median time lags between the injury date and each of these 3 benchmarks, indicating that the time lags are skewed by a small number of outlier claims in which notifications or treatment were delayed for an extended period. The average time lags between the injury date and each of these 3 events did improve between 2001 and 2009, although historically the reporting time lags for sprain injuries have been considerably less for sprain injuries than for other injuries, so the improvement in the time lags has been less as well.



Attorney Involvement Rates for Indemnity Claims by Region

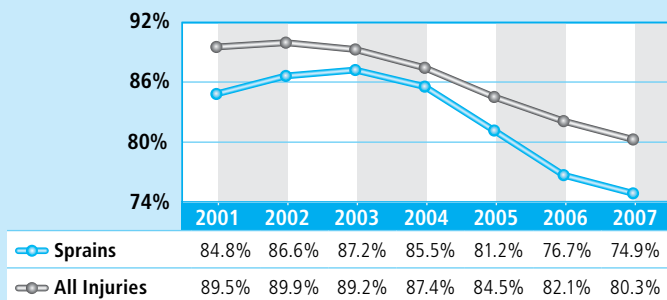
Sprains vs. All Injuries (AY 2001 – AY 2010)



Statewide, 39% of AY 2001–2010 indemnity claims for sprains involved attorneys – well below the 48% attorney involvement rate for all California workers' compensation indemnity claims. The level of attorney involvement in both sprain claims and all injury claims is far greater in Southern California than in Northern California.

Attorney Involvement Rates on PD Claims at Least 42 Months Post Injury

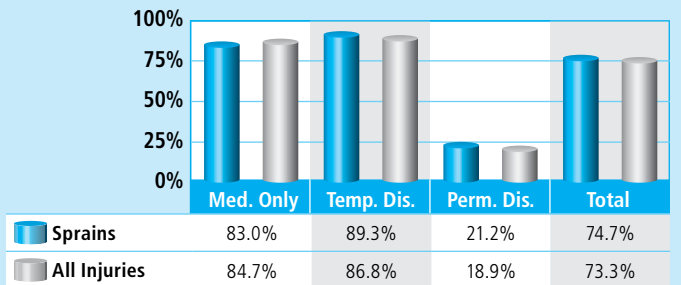
Sprains vs. All Injuries (AY 2001 – AY 2007)



The attorney involvement rate for PD claims, measured at least 3-1/2 years after injury, has consistently been a few percentage points lower for sprain cases than for all PD claims, as sprains are less likely to result in major PD awards. Since AY2005, the spread between the attorney involvement rate for sprain claims and all PD claims has widened as the attorney involvement rate for sprain PD claims at the 42 month benchmark has fallen below 75%, while the rate for all injuries has also declined, but at a slower pace, falling to about 80% for AY 2007 PD claims.

Claim Closure Rates by Claim Type at 24 Months Post Injury

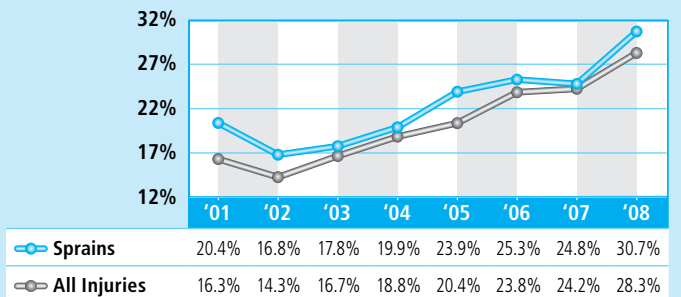
Sprains vs. All Injuries (AY 2001 – AY 2008)



The overall claim closure rate at 24 months post-injury is 74.7% for sprain injury claims vs. 73.3% for all claims. This marginally higher claim closure rate is consistent for claims with temporary disability (89.3% for sprains vs. 86.8% for all claims) and permanent disability claims (74.7% for sprains vs. 73.3% for all injuries), though sprain claims with no lost time are slightly more likely to be open at 24 months post injury compared to all claims.

Claim Closure Rates on PD Claims at 24 Months

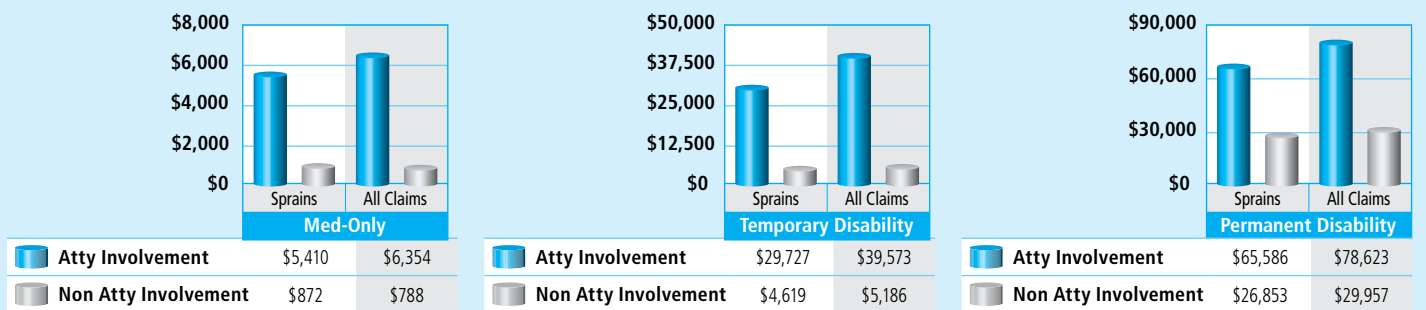
Sprains vs. All Injuries (AY 2001 – AY 2008)



At 24 months post injury, claim closure rates for sprain PD cases have been consistently above claim closure rates for all PD cases. This is likely due, at least in part, to differences in the mix of claims, as sprains result in less permanent disability and are less likely to involve litigated issues. Since AY 2002, the 24-month claim closure rates on PD cases have increased for both sprain claims and for all claims, and for AY2008 nearly 1/3 of the sprain PD claims were closed within 2 years of injury.

Average Amount Paid by Claim Type

Attorney Involvement vs. Non Attorney Involvement Claims (AY 2001 – AY 2009)



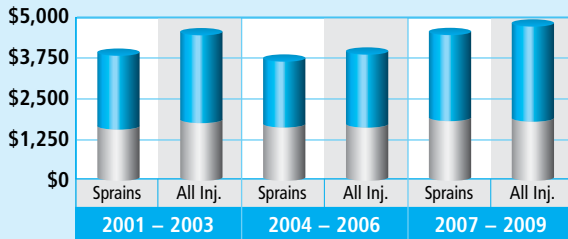
Claims that involve attorneys have much higher costs than those that do not as they are usually more complex, involve more serious injuries, remain open longer, and often involve disputes over causation, apportionment, treatment, and the extent of injury. However, such disputes are less prevalent among sprain injury claims than among other types of injury claims, and even where they do occur, the average amounts paid on sprain injury claims that involve attorneys are considerably less than the amounts paid for all attorney involvement claims, a result that holds true for med-only, TD and PD cases. For example, among AY 2001–09 sprain PD claims that involved attorneys, payments averaged \$65,586, or nearly 20% less than the average of \$78,623 paid for all PD claims that involved attorneys.



Loss Development for All Claims and Indemnity Claims

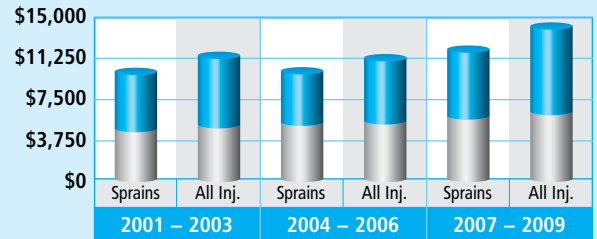
Sprains and All Injuries (AY 2001 – AY 2009)

All Claims 12 Months Post Injury



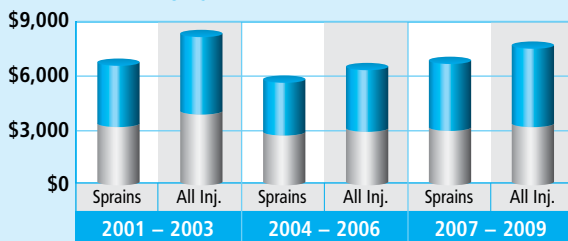
Medical	\$2,251	\$2,678	\$2,008	\$2,226	\$2,624	\$2,900
Indemnity	\$1,564	\$1,761	\$1,628	\$1,624	\$1,822	\$1,805
Total Benefits	\$3,815	\$4,439	\$3,636	\$3,850	\$4,446	\$4,705

Indemnity Claims 12 Months Post Injury



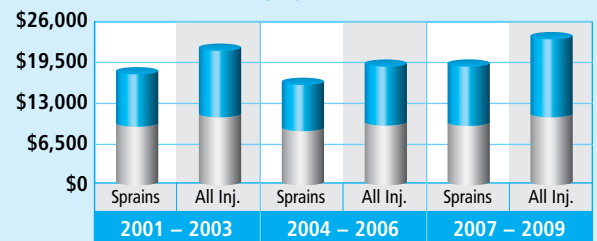
Medical	\$5,192	\$6,300	\$4,673	\$5,735	\$6,066	\$7,760
Indemnity	\$4,540	\$4,885	\$5,112	\$5,240	\$5,683	\$6,084
Total Benefits	\$9,731	\$11,185	\$9,784	\$10,975	\$11,749	\$13,843

All Claims 24 Months Post Injury



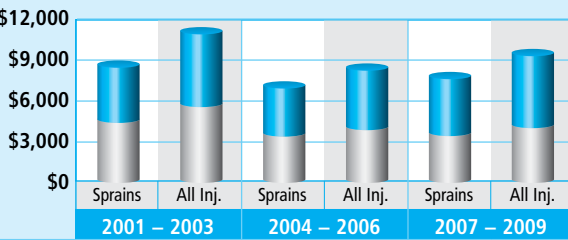
Medical	\$3,363	\$4,252	\$2,895	\$3,386	\$3,677	\$4,303
Indemnity	\$3,200	\$3,887	\$2,737	\$2,938	\$2,988	\$3,197
Total Benefits	\$6,564	\$8,139	\$5,631	\$6,324	\$6,665	\$7,500

Indemnity Claims 24 Months Post Injury



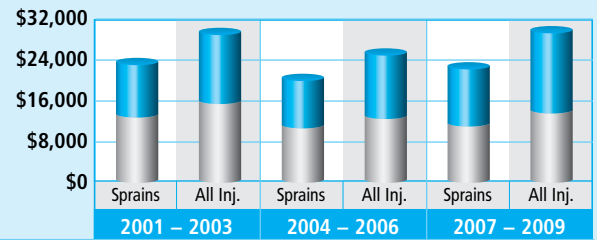
Medical	\$8,316	\$10,545	\$7,333	\$9,334	\$9,409	\$12,383
Indemnity	\$9,291	\$10,786	\$8,591	\$9,482	\$9,423	\$10,785
Total Benefits	\$17,607	\$21,331	\$15,925	\$18,817	\$18,832	\$23,168

All Claims 36 Months Post Injury



Medical	\$4,038	\$5,323	\$3,519	\$4,352	\$4,167	\$5,267
Indemnity	\$4,396	\$5,554	\$3,395	\$3,867	\$3,433	\$4,015
Total Benefits	\$8,434	\$10,877	\$6,914	\$8,219	\$7,600	\$9,282

Indemnity Claims 36 Months Post Injury



Medical	\$10,239	\$13,466	\$9,248	\$12,378	\$11,151	\$15,646
Indemnity	\$12,766	\$15,410	\$10,659	\$12,484	\$11,016	\$13,565
Total Benefits	\$23,005	\$28,876	\$19,907	\$24,862	\$22,166	\$29,211

Historically, sprains have been one of the least expensive types of work injury claims in California. Whether measured at 12, 24, or 36 months post injury, the Score Card shows the average amounts paid for all sprain claims and those resulting in lost time were consistently lower than those noted for all injuries across all 3 study periods (AY 2001–2003, 2004–2006, and 2007–2009). Over the 9-year span covered by the Score Card, average indemnity and medical treatment payments for sprain claims ranged from 5% to 24% below the averages for all California workers' compensation claims.

During the first three years of a claim, average benefit payments increase more gradually on sprain claims compared to all claims. For example, the most recent data (AY 2007 through AY 2009) show that among lost-time cases, first-year loss payments for sprain claims averaged \$11,749, or 15% less than the \$13,843 average for all indemnity claims in the system. At 24 months post injury that difference increases to 19% (\$18,832 in average loss payments for sprain claims vs. \$23,168 for all claims). By 36 months post injury, the spread grows to 24%; with losses averaging \$22,166 for sprain claims vs. \$29,211 for all claims.



Average Benefits by Injured Worker County of Residence

Sprain Claims vs. All Claims (Select Counties AY 2001 - 2010)

County	% Claims		Avg. Paid Per Claim		% of Statewide Payments	
	% of Sprains	% of All Claims	Sprains	All Claims	% of Sprains	% of All Claims
Los Angeles	21.8%	23.1%	\$12,797	\$17,087	27.4%	28.4%
San Diego	9.4%	8.2%	\$8,561	\$11,568	7.9%	6.8%
Orange	6.1%	6.3%	\$11,439	\$15,193	6.8%	6.9%
San Bernardino	6.0%	5.8%	\$10,676	\$15,722	6.3%	6.5%
Riverside	5.2%	5.2%	\$11,533	\$15,318	5.9%	5.8%
Alameda	4.4%	4.1%	\$10,964	\$13,024	4.8%	3.9%
Sacramento	4.3%	4.0%	\$7,660	\$11,683	3.2%	3.4%
Santa Clara	4.1%	3.9%	\$8,545	\$11,897	3.4%	3.3%
Fresno	3.5%	3.5%	\$8,449	\$10,399	2.9%	2.6%
Contra Costa	2.7%	2.6%	\$11,513	\$14,574	3.1%	2.8%
San Joaquin	2.5%	2.4%	\$8,012	\$10,136	2.0%	1.8%
Kern	2.5%	2.4%	\$10,150	\$15,044	2.4%	2.6%
Ventura	2.2%	2.4%	\$9,718	\$16,723	2.1%	2.8%
Sonoma	2.1%	2.0%	\$9,013	\$12,080	1.9%	1.7%
Stanislaus	1.9%	2.0%	\$9,102	\$11,661	1.7%	1.6%
Tulare	1.8%	1.9%	\$6,828	\$9,093	1.2%	1.2%
San Mateo	1.8%	1.8%	\$10,184	\$11,503	1.8%	1.5%
San Francisco	1.8%	1.7%	\$9,022	\$10,632	1.6%	1.3%
Monterey	1.6%	1.5%	\$9,195	\$12,658	1.5%	1.4%
Santa Barbara	1.4%	1.3%	\$7,203	\$14,157	1.0%	1.4%
Solano	1.4%	1.3%	\$9,990	\$12,177	1.3%	1.2%
Merced	0.9%	1.0%	\$8,286	\$10,411	0.7%	0.8%
Santa Cruz	0.8%	0.9%	\$9,057	\$12,755	0.7%	0.8%
Placer	0.7%	0.8%	\$8,877	\$12,683	0.6%	0.7%
Shasta	0.7%	0.8%	\$8,601	\$13,980	0.6%	0.8%
San Luis Obispo	0.7%	0.8%	\$4,352	\$11,920	0.3%	0.7%
Imperial	0.6%	0.6%	\$15,756	\$17,058	1.0%	0.7%
Butte	0.6%	0.8%	\$6,666	\$11,411	0.4%	0.6%
Madera	0.5%	0.6%	\$7,954	\$10,596	0.4%	0.4%
Humboldt	0.4%	0.6%	\$5,361	\$10,327	0.2%	0.4%
Top 30 SubTotal	94.5%	94.1%	\$10,240	\$13,964	95.1%	94.6%
Other Counties	5.5%	5.9%	\$9,415	\$12,715	4.9%	5.4%
Statewide	100.0%	100.0%	\$10,197	\$13,875	100.0%	100.0%

Statewide, payments for AY 2001-2010 sprain claims averaged \$10,197, or 36% below the \$13,875 average for all claims. For all 30 of the counties listed above, the average payments on sprain injury claims were significantly less than the average amounts paid for all work injury claims involving workers living in that county. Furthermore, there were only 7 counties in which the average payout on sprain claims exceeded the statewide average of \$10,197 paid for these claims. Notably 6 of these 7 high-cost counties were in the top 10 list of sprain claims by volume, as most of them were in and around the heavily populated Los Angeles Basin.

More than 1 out of 4 Californians lives in Los Angeles County, so not surprisingly, Los Angeles County residents accounted for more than 23% of all California workers' compensation claims and nearly 22% of the sprain claims filed between 2001 and 2011. Los Angeles County also had one of the highest average claim costs in the state during this period (only Imperial County has a higher average benefit by injured worker), which in the case of sprain cases was 125% of the state average. Thus, Los Angeles County residents accounted for more than 27% of all sprain claim payments between AY 2001 and AY 2011. The lowest average benefit payments per sprain injury claim were in more rural areas such as San Luis Obispo, Humboldt, and Butte Counties.



PPO/MPN Utilization			
% of Visits to Preferred Providers By Type of Service Sprain Injury vs. All Injuries			
Type of Service		2002 – 2004	2005 – 2010
E&M	Sprains	35.6%	86.6%
	All Injuries	29.4%	81.4%
Surgery	Sprains	31.8%	86.5%
	All Injuries	27.5%	77.6%
Radiology	Sprains	33.2%	85.0%
	All Injuries	26.7%	79.0%
Medicine Section	Sprains	28.4%	85.6%
	All Injuries	23.3%	74.6%
Physical Therapy	Sprains	27.8%	84.9%
	All Injuries	21.6%	79.0%
Chiropractic Manipulation	Sprains	15.5%	66.4%
	All Injuries	13.9%	66.5%
Total Visits	Sprains	29.6%	85.4%
	All Injuries	23.2%	79.3%

The use of network providers to treat injured workers increased significantly after the 2005 introduction of Medical Provider Networks (MPNs) which featured in-network medical control for the life of the claim, a significant change from the pre-reform 30-day medical control window. Overall utilization of network providers to treat injured workers in California more than tripled from 23% of all visits for AY 2002-2004 injuries to 79% of all visits for AY 2005-2010 injuries. Similarly, over the same period, use of network treaters for sprain injuries nearly tripled from 30% to 85% of all treatment visits.

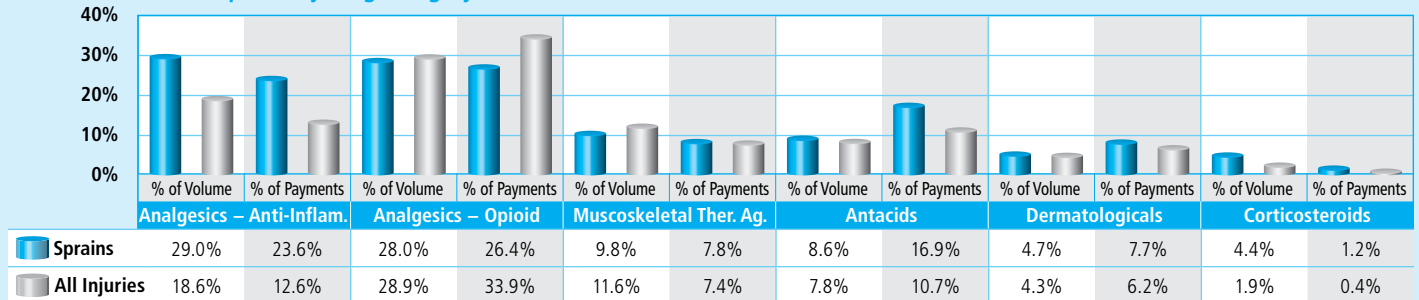
For the 5 most recent years (AY 2005–10), the use of network providers for sprain injuries has been above the rate noted for all injuries across all types of treatment, with the exception of chiropractic manipulation, where the network utilization rate has been essentially the same. Among AY 2005–10 sprain claims, the highest network utilization rates were for evaluation and management (87% of the visits) and surgery (86.5% of the visits), and networks accounted for about 85% of most other types of services. Again, the exception was chiropractic manipulation where, as with claims involving other types of injuries, the network utilization rate was just over 66%.

Prescription Drugs by Volume and Payment					
Sprain Injury vs. All Claims (Calendar Year 2010)					
Drug Grouping	Common Name	% of Total Scripts		% of Total Paid	
		Sprains	All Claims	Sprains	All Claims
Hydrocodone/Acetaminophen	Vicodin	16.7%	17.0%	10.4%	9.5%
Naproxen	Naprosyn	10.8%	5.9%	8.2%	3.4%
Ibuprofen	Ibuprofen	7.7%	4.5%	1.7%	0.7%
Omeprazole	Prilosec	7.1%	6.2%	14.6%	8.5%
Tramadol Hcl	Tramadol	3.5%	3.3%	1.8%	1.4%
Cyclobenzaprine Hcl	Flexeril	3.3%	3.6%	1.8%	1.9%
Nabumetone	Nabumetone	2.1%	1.2%	2.3%	1.1%
Acetaminophen/Tramadol Hydrochloride	Ultracet	2.0%	1.0%	1.6%	0.6%
Tizanidine Hcl	Zanaflex	1.9%	2.5%	1.0%	1.2%
Dexamethasone Sodium Phosphate	Decadron	1.9%	0.5%	0.2%	0.0%
Carisoprodol	Soma	1.8%	2.7%	0.7%	1.0%
Ketoprofen	Ketoprofen	1.6%	1.4%	2.2%	1.3%
Ambien	Ambien	1.6%	2.2%	1.1%	1.4%
Propoxyphene/Acetaminophen	Darvon	1.6%	1.3%	0.5%	0.3%
Diclofenac Potassium	Voltaren	1.5%	0.9%	2.4%	1.0%
Gabapentin	Neurontin	1.5%	2.9%	1.4%	2.3%
Acetaminophen/Codeine	Acetaminophen/Codeine	1.5%	0.9%	0.5%	0.2%
Lidoderm	Lidoderm	1.3%	1.2%	4.2%	3.9%
Celebrex	Celebrex	1.3%	1.3%	4.0%	2.8%
Orphenadrine Citrate	Norflex	1.2%	1.0%	1.0%	0.6%
Top 20		71.9%	61.6%	61.6%	43.2%

The table above shows the top 20 drug groupings dispensed to sprain injury claimants in 2010. The narcotic Hydrocodone topped the list for both sprain injuries and all injuries, followed by the anti-inflammatories Naproxyn and Ibuprofen. Oxycodone, a Schedule II opioid found on the list of most frequently prescribed drugs for many of the injuries examined in this series, is not found on the most common prescription list for sprains. Sprains tend to be less severe than many other types of injuries, with pain controlled effectively with less powerful narcotics (Vicodin) and over-the-counter anti-inflammatories like Naproxen.

Prescription Drugs
Sprain Injury vs. All Injuries for Calendar Year 2010

Distribution of Prescriptions by Drug Category



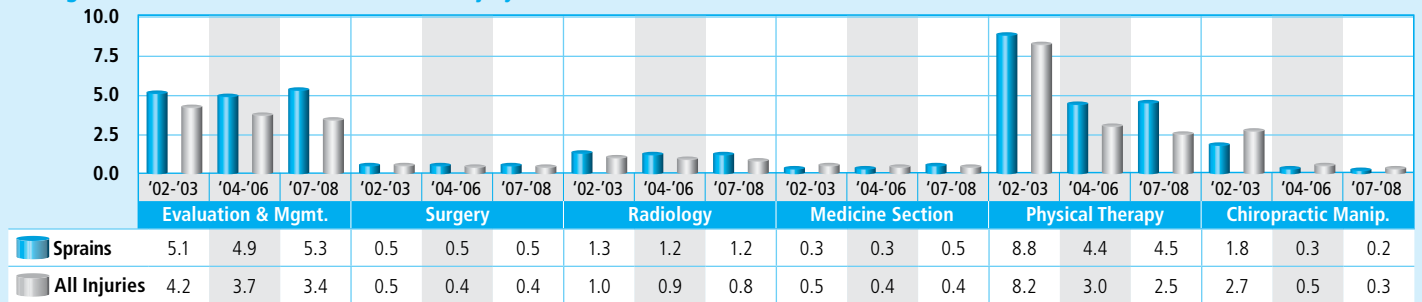
CWCI classified generic and brand equivalent drugs into 78 categories, the top 6 are shown. Opioid painkillers such as Vicodin, Percocet, and Darvon represented 28% of the sprain prescriptions – nearly matching the percentage of opioids provided for all claims, even though sprains tend to be less serious injuries. On the other hand, opioids accounted for about 26% of sprain injury prescription payments vs. nearly 34% of all workers’ compensation prescription dollars, indicating that lower-cost opioids are more heavily used for sprains. Analgesic anti-inflammatories accounted for the highest share of drugs prescribed for sprains, (29% of the scripts, 24% of the payments); musculoskeletal therapy agents comprised 10% of the scripts and 8% of the payments; and antacids represented 8.6% of the scripts and nearly 17% of the prescription payments.



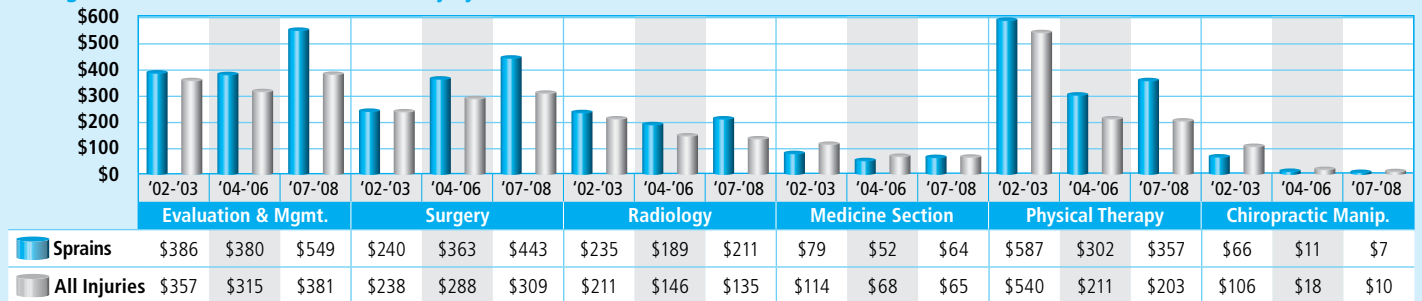
Medical Development at 12 and 24 Months

Number of Visits and Payments by OMFS Section, Sprains vs. All Claims (AY 2002 - 2008)

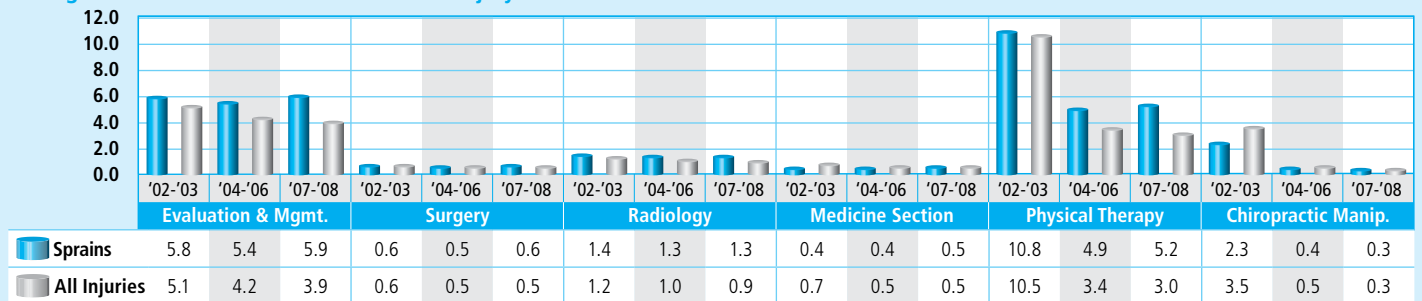
Average Number of Visits at 12 Months Post Injury – Selected OMFS Sections



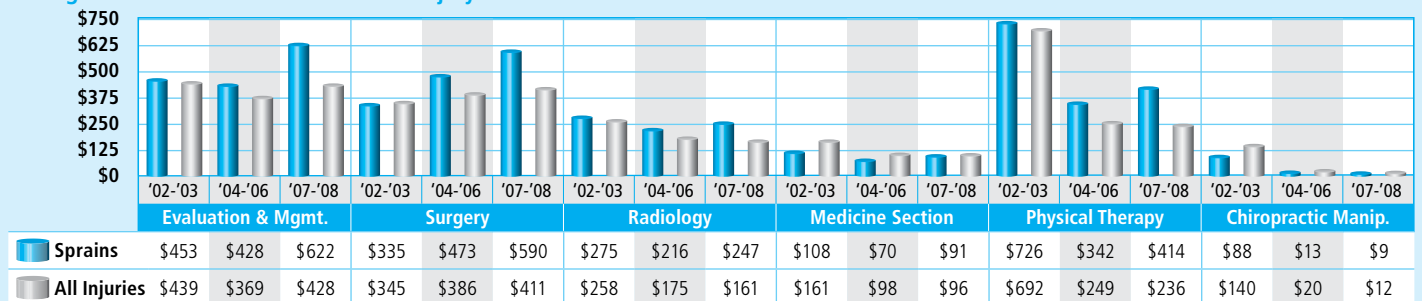
Average Amount Paid at 12 Months Post Injury – Selected OMFS Sections



Average Number of Visits at 24 Months Post Injury – Selected OMFS Sections



Average Amount Paid at 24 Months Post Injury – Selected OMFS Sections



CWCI used AY2002 - AY2008 claims to determine the average number of treatment visits and payments in 6 Official Medical Fee Schedule sections for all claims and for sprain claims at 12 and 24 months post injury. These averages include med-only and indemnity claims, and are not limited to cases that involved a specific type of care. Within the first 2 years of injury, the average number of visits and average amounts paid for E&M, radiology and physical therapy are higher for sprain injuries than for all claims. For example, at 24 months post injury, AY2007 and 2008 sprain injury claims averaged 5.9 E&M visits, 1.3 radiology visits, and 5.2 PT visits compared to 3.9 E&M visits, 0.9 radiology visits, and 3.0 PT visits for all injuries. As a result, the average amount paid for E&M services at the 2-year benchmark was 45% higher for sprain injuries than for all injuries, while the average paid for radiology was 53% higher and the average paid for physical therapy was 75% higher.

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, 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.