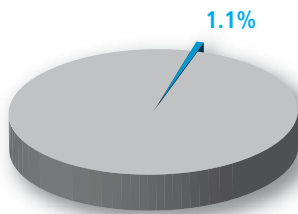




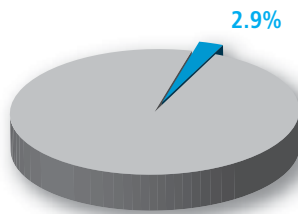
ICIS Injury Series SCORE CARD

Carpal Tunnel Syndrome

Top Work Injury Categories



Carpal Tunnel Syndrome as a Percent of All Injuries



Carpal Tunnel Syndrome 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 Carpal Tunnel Syndrome (carpal tunnel). It is the sixth in a series of analyses providing data from CWCI's Industry Claims Information System (ICIS) database on the top 7 work injury categories, which together encompass nearly 1/2 of all California job injuries and 2/3 of all workers' compensation claim payments. Carpal tunnel syndrome accounts for just 1.1% of all work injuries in California, but 2.9% of all workers' compensation benefit payments due to the high average cost of these claims.

Injured Worker Profile

2002 – 2005 Claimants

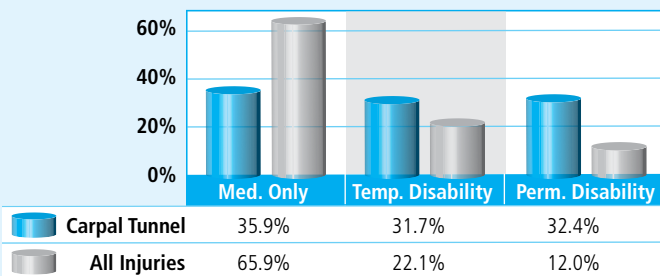
	Carpal Tunnel	All Claims
Average Age (Years)	39.8	36.7
Average Tenure (Years)	6.0	3.6
Gender		
Male	71.4%	65.3%
Female	28.6%	34.7%
Location of Residence		
Northern California	44.0%	41.1%
Southern California	56.0%	58.9%

The profile of carpal tunnel claimants differs from that of all injured workers. Their average age is nearly 40 years – 3 years older than the average for all injured workers – and their average job tenure is 6 years – 2-1/2 years longer. Males account for 71% of carpal tunnel claims vs. 65% of all claims; and 44% of carpal tunnel claimants live in No. California vs. 41% of all claimants.

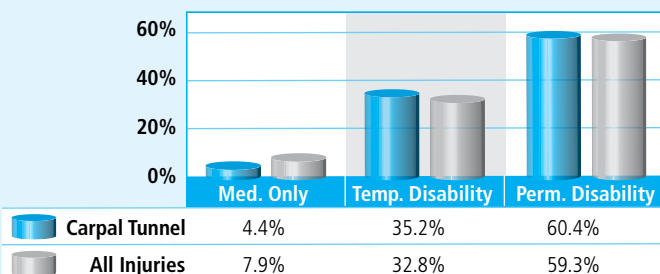
Claim and Payment Distribution by Claim Type

Carpal Tunnel vs. All Injuries (AY 2002 – 2005)

Percent of Claims



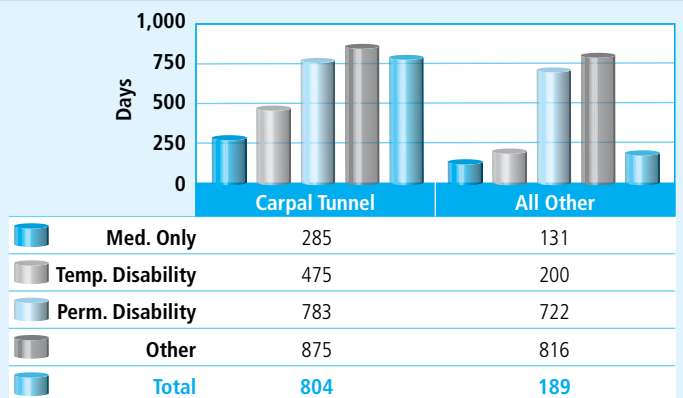
Percent of Payments



Nearly 2 out of every 3 carpal tunnel injuries result in lost time (TD and/or PD), almost twice the proportion noted for all injuries. About 1 in 3 carpal tunnel injuries result in a permanent disability – compared to a rate of 1 in 8 claims for all injuries. However, PD claims account for only 60 cents of every dollar paid for carpal tunnel, which is in line with the average of 59 cents of every dollar paid for all injuries.

Average Claim Duration

Closed Claims (AY 2002 - 2005)



Across all claim types, carpal tunnel claims have longer than average claim durations. Overall, carpal tunnel claims average nearly 27 months (804 days) from the claim filing to the case closure – more than 20 months longer than the average for all other claims. Uncertainty over the cause and nature of injury, notification and initial treatment delays, high levels of attorney involvement, the higher incidence of loss time claims (especially PD cases), and treatment plans that often involve surgery and physical therapy may all contribute to longer claim durations.

Distribution by Industry Sector

Carpal Tunnel Syndrome

Industry Sector	% of Carpal Tunnel Claims	Carpal Tunnel as % of Injuries in Sector
Professional and Clerical Services	29.3%	3.0%
Manufacturing	17.4%	1.1%
Mercantile	12.8%	1.1%
Hospitals	8.1%	3.8%
Construction	8.0%	0.5%
Restaurants	3.4%	0.8%
Agriculture	2.2%	0.3%
Parcel Delivery Companies	1.5%	0.6%
Trucking	1.2%	0.8%
Nursing Homes	0.9%	0.7%
Other Industry	15.3%	1.1%
TOTAL	100.0%	1.1%

Almost 60% of carpal tunnel injuries come from the professional/clerical, manufacturing and mercantile sectors. Industry sectors where carpal tunnel syndrome represents the highest percentage of injuries include hospitals, where carpal tunnel accounts for 3.8 percent of all work injury claims, and professional and clerical services, where carpal tunnel accounts for 3 percent of the injuries.



Average Benefits by Injured Worker County of Residence

Carpal Tunnel vs. All Claims (Select Counties AY 2002 - 2005)

County	% of Carpal Tunnel	% of All Claims	Avg. Paid Per Claim		Avg. Paid As % of Statewide Avg.	
			Carpal Tunnel	All Claims	Carpal Tunnel	All Claims
Los Angeles	20.0%	21.8%	\$28,551	\$11,025	120%	119%
San Diego	8.9%	8.0%	\$24,122	\$8,417	101%	91%
Alameda	6.1%	3.8%	\$24,740	\$10,231	104%	111%
San Bernardino	5.7%	5.5%	\$30,413	\$9,872	128%	107%
Orange	5.5%	6.2%	\$26,736	\$10,575	112%	114%
Riverside	4.9%	5.0%	\$26,817	\$10,320	113%	75%
Sacramento	4.7%	4.2%	\$17,688	\$7,856	74%	85%
Santa Clara	4.3%	3.8%	\$21,872	\$9,275	92%	100%
Contra Costa	3.5%	2.4%	\$26,826	\$9,983	113%	108%
Fresno	3.3%	3.8%	\$20,068	\$6,916	84%	75%
San Francisco	1.2%	1.7%	\$17,741	\$7,653	75%	83%
Other Counties	31.9%	33.8%	\$19,935	\$8,159	84%	88%
Statewide	100.0%	100.0%	\$23,790	\$9,253	100%	100%

For accident years 2003 – 2005, more than 1 in 5 injured workers in California lived in Los Angeles County, which also had the largest number of carpal tunnel claimants and among the highest average claim costs in the state. Several Bay Area counties – Alameda, Santa Clara, and Contra Costa – had relatively high numbers of carpal tunnel injuries, which may reflect a high concentration of professional/clerical workers in those areas.

On the other hand, average payments for carpal tunnel claims tended to be highest in Southern California, where without exception, they were well above the statewide average, while payments well below the statewide average were noted in Sacramento, San Francisco, Fresno, and rural areas that comprise the "other counties."

PPO/MPN Utilization

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

Type of Service		PPO			MPN
		2002	2003	2004	2005
E&M	Carpal Tunnel	57.4%	52.1%	57.0%	71.2%
	All Injuries	56.7%	56.0%	61.6%	74.0%
Surgery	Carpal Tunnel	54.8%	51.7%	48.8%	62.2%
	All Injuries	51.7%	52.6%	55.7%	69.5%
Radiology	Carpal Tunnel	48.4%	45.0%	44.1%	63.2%
	All Injuries	45.9%	45.9%	47.2%	58.5%
Medicine Section	Carpal Tunnel	39.5%	38.5%	41.6%	52.8%
	All Injuries	39.9%	40.0%	49.3%	70.1%
Physical Therapy	Carpal Tunnel	31.7%	29.9%	39.3%	50.2%
	All Injuries	23.3%	23.5%	36.7%	50.3%
Chiropractic Manipulation	Carpal Tunnel	11.9%	13.2%	12.6%	49.3%
	All Injuries	8.1%	7.9%	11.2%	32.0%
Total Visits	Carpal Tunnel	37.0%	35.4%	45.7%	60.0%
	All Injuries	32.1%	32.6%	47.6%	63.2%

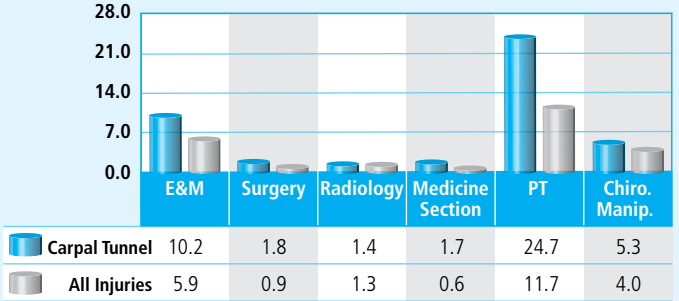
The use of preferred providers to treat injured workers has increased significantly since reform implementation. Overall utilization of preferred providers in California workers' compensation almost doubled from 32% of all visits for AY 2002 injuries to 63% of all visits for AY 2005 injuries. During the same period, preferred provider use for carpal tunnel injuries rose from 37% to 60%.

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. The growth in the network utilization rate was most notable for chiropractic services. Among carpal tunnel claims and all claims, the use of network providers for chiropractic manipulation quadrupled between 2002 and 2005.

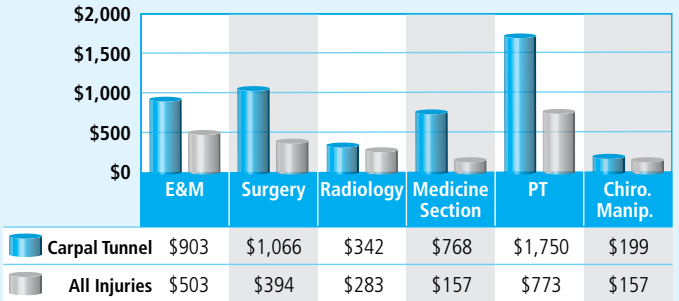
Medical Development at 24 Months

Carpal Tunnel 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

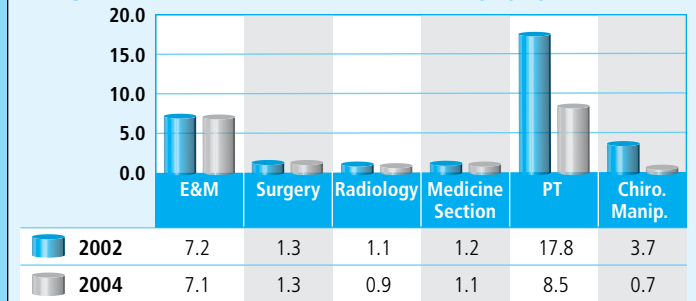


Across all six categories of treatment, the average number of visits for carpal tunnel exceeds the average for all claims. For example, at 24 months post-injury, carpal tunnel injuries average twice as many surgery visits, more than twice as many physical therapy visits, and nearly three times as many visits for medicine section services. As a result, average medical payments on carpal tunnel claims at 24 months are well above the average for all claims – ranging from 21% higher for radiology services to 389% higher for medicine section services.

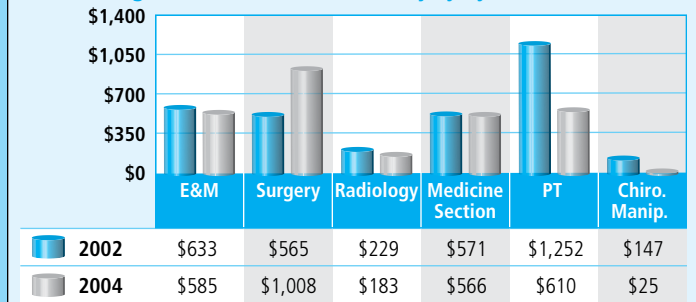
Medical Utilization & Payments: Pre- vs. Post-Reform

Carpal Tunnel Claims – 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



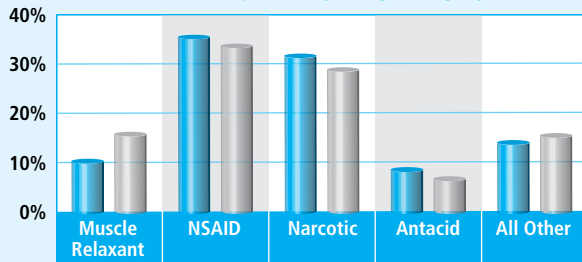
A comparison of medical data from AY 2002 and 2004 carpal tunnel claims at 12 months post injury found only two types of treatment where the average number of visits and payments declined significantly: physical therapy and chiropractic manipulation. The average number of PT visits in the first year fell 52% from 17.8 to 8.5 visits, yielding a similar reduction in average PT payments, which fell from \$1,252 to \$610, while the reductions in chiropractic manipulation were even greater, as the average number of first-year visits for these services fell 81% from 3.7 to 0.7 visits, cutting the average paid amounts by 83% from \$147 to \$25.



Prescription Drugs

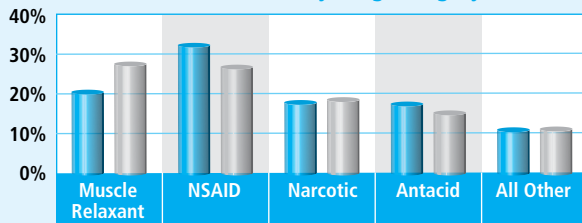
Carpal Tunnel vs. All Injuries (2005)

Distribution of Prescriptions by Drug Category



Drug Category	Carpal Tunnel	All Injuries
Muscle Relaxant	10.1%	15.6%
NSAID	35.5%	33.7%
Narcotic	32.1%	28.8%
Antacid	8.4%	6.6%
All Other	13.9%	15.3%

Distribution of Paid Dollars by Drug Category



Drug Category	Carpal Tunnel	All Injuries
Muscle Relaxant	20.6%	27.9%
NSAID	32.8%	27.1%
Narcotic	18.0%	18.7%
Antacid	17.6%	15.1%
All Other	11.0%	11.2%

The Institute classified a total of 1.1 million prescriptions from calendar year 2005 into 5 drug categories. Non-steroidal anti-inflammatory drugs (NSAIDs) were the most commonly prescribed type of drug for carpal tunnel syndrome, comprising nearly 36% of the prescriptions and 1/3 of all prescription dollars paid. Narcotics were the second most common type of prescription, with almost 1/3 of the prescriptions and 18% of the payments, while muscle relaxants accounted for 1 in 10 carpal tunnel prescriptions, and just over 20% of the payments.

Prescription Drugs by Volume and Payment

Carpal Tunnel vs. All Claims (2005)

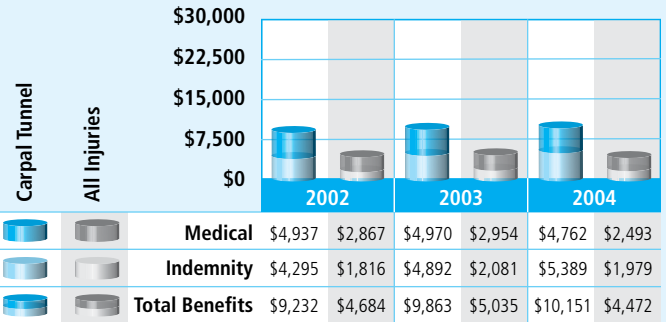
Drug Grouping	Drug Class	% of Total Prescriptions		% of Total Paid	
		Carpal Tunnel	All Claims	Carpal Tunnel	All Claims
Hydrocodone	Narcotic	14.9%	13.3%	7.4%	7.4%
Ibuprofen	NSAID	9.5%	10.9%	3.8%	3.6%
Naproxen	NSAID	7.7%	6.9%	8.2%	6.7%
Ranitidine	Antacid	6.2%	4.7%	13.3%	11.1%
Carisoprodol	Muscle Relax	5.4%	7.1%	13.7%	17.8%
Propoxy	Narcotic	4.4%	3.7%	2.7%	2.3%
Piroxicam	NSAID	2.8%	1.8%	4.9%	3.2%
Tramadol	Narcotic	2.8%	2.7%	2.6%	2.9%
Etodolac	NSAID	2.2%	1.5%	3.2%	2.2%
Cyclobenzaprine	Muscle Relax	1.5%	3.2%	1.2%	2.1%
Acetaminophen w/ Codeine	Narcotic	1.4%	1.7%	0.7%	0.7%
Cephalexin	Antibiotic	1.4%	1.9%	1.2%	2.1%
Garbapentin	Anti-convulsant	1.4%	0.6%	1.9%	1.2%
Lidocaine	Local Anesthetic	1.2%	0.8%	1.4%	1.3%
Diclofenac	NSAID	1.0%	1.2%	1.0%	1.4%
Top 15		63.9%	62.0%	67.1%	66.0%

WCWI grouped generic drugs with their brand equivalents to rank the most heavily prescribed drugs used in carpal tunnel cases and the associated payments. The narcotic Hydrocodone topped the list of most prescribed drugs for carpal tunnel and for all injuries, though in both groups the muscle relaxant Carisoprodol and the antacid Ranitidine ranked above Hydrocodone in total dollars paid.

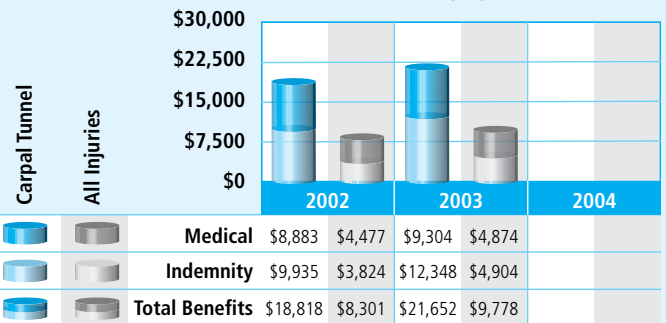
Loss Development

Carpal Tunnel vs. All Injuries

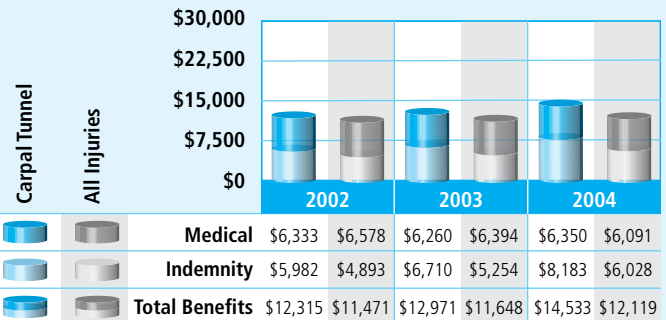
All Claims 12 Months Post Injury



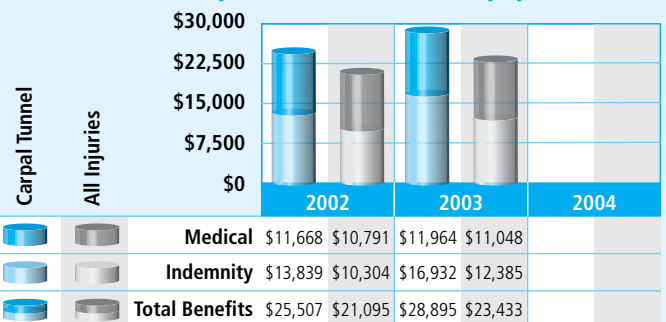
All Claims 24 Months Post Injury



Indemnity Claims 12 Months Post Injury



Indemnity Claims 24 Months Post Injury



Carpal tunnel injuries are relatively expensive compared to most types of work injuries. Average benefit costs for all carpal tunnel claims were above those noted for all injuries across all study years at both 12 and 24 months post injury. Among indemnity claims, medical payments associated with carpal tunnel injuries were similar to those of all claims, but indemnity payments were significantly higher for all years and at both valuation points.

Payments on carpal tunnel claims increased more sharply during the second year of the life of the claim. For example, at 24 months post injury, average payments for AY 2003 carpal tunnel indemnity claims climbed to \$28,895, up 123% from the 12-month payment level. In comparison, average payments for indemnity claims for all injuries were up 101% in the second year following injury. Among the AY 2003 claims, indemnity payments were the biggest cost driver in the second year, accounting for 64% of the overall increase in carpal tunnel claims, and 60% of the overall increase in all claims.



Nature of Injury

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

Nature of Injury	Percent of Claims		
	Carpal Tunnel	Other Types of Injuries	All Injuries
All Other Cumulative Injuries	24.9%	11.6%	11.8%
Strain	24.5%	29.5%	29.5%
Carpal Tunnel Syndrome	23.4%	0.4%	0.6%
All Other, (not otherwise classified)	10.0%	8.5%	8.6%
Inflammation	4.4%	1.6%	1.6%
Sprain	3.3%	6.3%	6.3%
Multiple Physical Injuries Only	2.8%	2.7%	2.7%
Dermatitis	2.4%	0.5%	0.6%
Contusion	1.1%	8.3%	8.2%
Laceration	0.7%	13.5%	13.4%
All Other	2.4%	17.0%	16.8%

Carpal tunnel injuries are heavily concentrated among 3 "nature of injury" categories: "All Other Injuries," "Strains," and "Carpal Tunnel Syndrome," with each of these categories accounting for about 1/4 of all carpal tunnel claims. In contrast, other types of injuries are more widely dispersed across other nature of injury classifications, including many very specific categories such as lacerations, contusions, and sprains.

Cause of Injury

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

Cause of Injury	Percent of Claims		
	Carpal Tunnel	Other Types of Injuries	All Injuries
Repetitive Motion (Carpal Tunnel Syndrome)	35.2%	2.5%	2.8%
Misc. Causes: Cumulative Injury (not otherwise classified)	21.1%	2.6%	2.8%
Strain/Injury: (not otherwise classified)	12.5%	8.6%	8.7%
Misc. Causes: Other Injury (not otherwise classified)	8.3%	6.3%	6.3%
Rubbed/Abraded by: Repetitive Motion	5.8%	0.5%	0.5%
Strain/Injury: Lifting	3.5%	12.2%	12.1%
Strain/Injury: Using Tool or Machine	2.0%	1.0%	1.0%
Strain/Injury: Pushing or Pulling	1.8%	3.7%	3.7%
Fall/Slip: Miscellaneous	1.1%	5.3%	5.2%
Strain/Injury: Holding or Carrying	1.0%	1.7%	1.7%
All Other	7.8%	55.7%	55.2%

Most carpal tunnel injuries are caused by some type of repetitive motion or cumulative injury. More than 1 in 3 carpal tunnel claims list repetitive motion as the cause, though the issue of causation is often not clear. More than 1 in 5 are said to be due to "miscellaneous causes: cumulative injury, not otherwise classified;" "strains/injuries not otherwise classified" account for another 13%; and "miscellaneous causes: other injury not otherwise classified" are cited in 8% of all carpal tunnel claims.

Time Lags

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

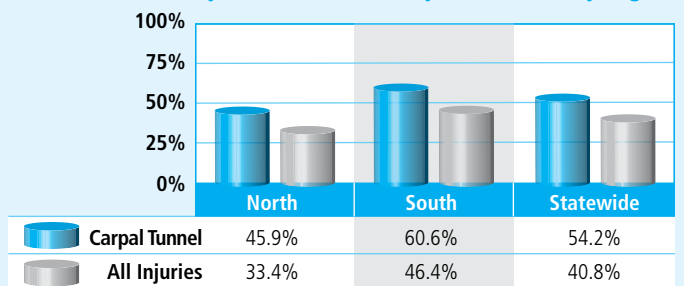
		Median # of Days	
		2002	2004
Employer Notification	Carpal Tunnel	1.0	1.0
	All Claims	0.0	0.0
Carrier Notification	Carpal Tunnel	11.0	11.0
	All Claims	7.0	6.0
Time to First Treatment	Carpal Tunnel	56.0	58.0
	All Claims	3.0	2.0

To measure 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 carpal tunnel 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. Among carpal tunnel injuries and all injuries, neither the median time to employer notification nor the median time to carrier notification changed from 2002 to 2004. The median time to first treatment for carpal tunnel injuries rose from 56 to 58 days, however, making carpal tunnel the only diagnostic group studied in the scorecard series in which the median time to first visit increased after reform.

Attorney Involvement

Carpal Tunnel vs. All Injuries (AY 2002 - 2005 Claims)

Percent of Indemnity Claims with Attorney Involvement by Region

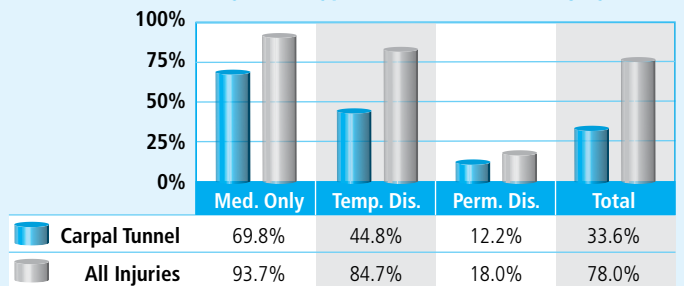


Statewide, attorneys are used in 54% of all carpal tunnel indemnity claims vs. 41% of all indemnity claims. The attorney involvement rate is greater in Southern California than in the north, a regional difference that is slightly more pronounced among carpal tunnel claims.

Claim Closure Rates

Carpal Tunnel vs. All Injuries (AY 2002 - 2003)

Closure Rates by Claim Type at 24 Months Post Injury



Only 1 out of every 3 carpal tunnel claims is closed within 24 months after the injury, well below the 78% claim closure rate for all claims. The lower closure rate for carpal tunnel may be associated with a number of factors, including the high percentage of lost time cases, uncertainty over the cause and nature of injury, longer lag times between injury and employer notice and treatment, greater attorney involvement, and treatment plans that are more likely than other types of injuries to involve surgery and extended physical therapy.

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.