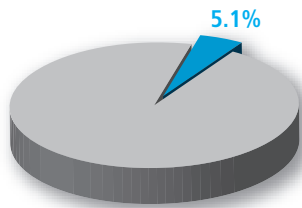




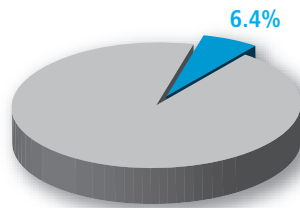
ICIS Injury Series SCORE CARD

Ruptured Tendon, Tendonitis, Myositis & Bursitis

Top Work Injury Categories



Ruptured Tendon, Tendonitis, Myositis & Bursitis as a Percent of All Injuries



Ruptured Tendon, Tendonitis, Myositis & Bursitis 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%
<b>Ruptured Tendon, Tendonitis, Myositis &amp; Bursitis</b>	<b>5.1%</b>	<b>6.4%</b>
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%
<b>Subtotal</b>	<b>47.9%</b>	<b>66.4%</b>

This scorecard focuses on California workers' compensation injuries in which the primary diagnosis was a ruptured tendon, tendonitis, myositis or bursitis ("inflamed muscles and joints"). It is the fourth in a series of analyses providing data from CWC's Industry Claims Information System (ICIS) database on 7 of the top work injury categories, encompassing 1/2 of all job injuries in the state and 2/3 of all claim payments. The inflamed muscle and joint diagnostic category accounts for 5.1% of California work injuries and 6.4% of workers' compensation payments.

Injured Worker Profile

2002 – 2005 Claimants

	Inflammation	All Claims
Average Age (Years)	38.9	36.7
Average Tenure (Years)	4.9	3.6
<b>Gender</b>		
Male	51.1%	65.3%
Female	48.9%	34.7%
<b>Location of Residence</b>		
Northern California	46.1%	41.1%
Southern California	53.9%	58.9%

The profile of inflamed muscle and joint claimants differs from that of all injured workers. Their average age is two years older than the average for all injured workers, and their average job tenure is 1.3 years longer. In addition, females and Northern Californians comprise a relatively high proportion of inflamed muscle and joint claimants compared to all injured workers.

Diagnoses

Ruptured Tendon, Tendonitis, Myositis & Bursitis (AY 2002 – 2005)

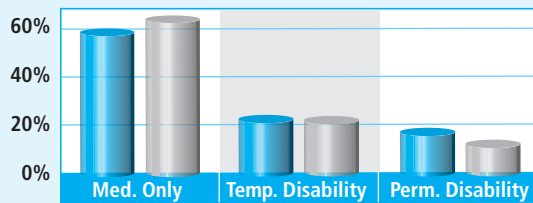
ICD9 Descriptions	% of Claims	% of Total Paid
Other tenosynovitis of hand and wrist	17.1%	10.1%
Enthesopathy of elbow region - Lateral epicondylitis	15.6%	15.8%
Shoulder region affections not elsewhere classified	10.2%	28.6%
Pain in limb	10.0%	7.9%
Disorders of bursae and tendons in shoulder, unspecified	4.6%	4.4%
Enthesopathy of specified site	4.5%	1.4%
Radial styloid tenosynovitis - de Quervain's disease	4.1%	2.8%
Ganglion and cyst of synovium, tendon, and bursa - Ganglion, unspecified	2.7%	2.0%
Enthesopathy of elbow region - Medial epicondylitis	2.1%	1.7%
Trigger finger (acquired)	2.1%	1.5%
Synovitis and tenosynovitis - Other	2.1%	1.2%
Enthesopathy of wrist and carpus	1.8%	1.6%
Other	23.1%	21.0%

Inflamed muscles and joints are often inflammations of synovium (the sheath surrounding a tendon) or enthuses (the point at which a tendon inserts into bone), and typically involve the hand, wrist, elbow or shoulder. The top 4 diagnoses account for more than 1/2 of these injuries and 62% of the dollars paid.

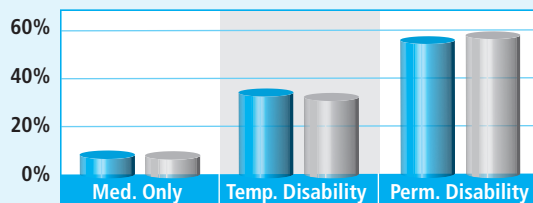
Claim and Payment Distribution by Claim Type

Inflamed Muscles and Joints vs. All Injuries (AY 2002 – 2005)

Percent of Claims



Percent of Payments



Nearly 40% of inflamed muscle and joint injuries result in lost time (TD and/or PD) vs. 34% of all injuries. About 1/6 of these injuries result in permanent disability vs. 1 in 8 claims for all injuries. PD claims, however, consume 57 cents of every dollar paid for inflamed muscle and joint injuries vs. 59 cents of every dollar paid for all injuries, suggesting that while these injuries are slightly more likely to result in a PD, the disabilities are often less costly.

Distribution by Industry Sector

Ruptured Tendon, Tendonitis, Myositis & Bursitis

Industry Sector	% of Inflammation Injuries by Sector	Inflammation as % of Injuries in Sector
Professional and Clerical Services	19.9%	9.0%
Manufacturing	19.3%	5.7%
Mercantile	12.5%	4.9%
Construction	11.7%	3.3%
Hospitals	5.4%	11.1%
Agriculture	4.7%	3.3%
Restaurants	3.5%	3.5%
Parcel Delivery Companies	3.0%	5.9%
Trucking	1.2%	3.9%
Nursing Homes	1.1%	4.0%
Other Industry	17.7%	5.2%
<b>TOTAL</b>	<b>100.0%</b>	<b>5.1%</b>

Over 1/2 of inflamed muscle and joint injuries come from the professional/clerical, manufacturing, mercantile and construction sectors. These injuries are most prevalent among hospital employees, where they comprise 1 out of 9 work injuries, and professional and clerical workers, where they account for about 1 out of every 11 workers' compensation claims.



**Average Benefits by Injured Worker County of Residence**

Inflamed Muscles and Joints vs. All Claims (Select Counties AY 2002 - 2005)

County	% of Inflamed Muscles & Joints	% of All Claims	Avg. Paid Per Claim		Avg. Paid As % of Statewide Avg.	
			Inflamed Muscles & Joints	All Claims	Inflamed Muscles & Joints	All Claims
Los Angeles	18.6%	21.8%	\$13,063	\$11,025	112%	119%
San Diego	8.9%	8.0%	\$11,020	\$8,417	95%	91%
Orange	5.7%	6.2%	\$12,349	\$10,575	106%	114%
Santa Clara	5.5%	3.8%	\$10,870	\$9,275	93%	100%
Alameda	5.4%	3.8%	\$11,784	\$10,231	101%	111%
San Bernardino	4.6%	5.5%	\$13,972	\$9,872	120%	107%
Riverside	4.3%	5.0%	\$14,768	\$10,320	127%	112%
Sacramento	4.0%	4.2%	\$10,061	\$7,856	86%	85%
Fresno	3.4%	3.8%	\$9,889	\$6,916	85%	75%
Contra Costa	3.1%	2.4%	\$12,646	\$9,983	109%	108%
Sonoma	2.8%	2.3%	\$10,189	\$7,930	88%	86%
San Francisco	2.4%	1.7%	\$9,707	\$7,653	83%	83%
Other Counties	31.3%	31.5%	\$10,772	\$8,176	93%	88%
<b>Statewide</b>	<b>100.0%</b>	<b>100.0%</b>	<b>\$11,643</b>	<b>\$9,253</b>	<b>100%</b>	<b>100%</b>

For accident years 2002 through 2005, more than 1 in 5 injured workers in California lived in Los Angeles County – which also had the highest concentration of claimants with inflamed muscle and joint injuries. However, the percentage of muscle and joint inflammation injuries involving Bay Area residents was higher than the percentage of all claims from those counties. Except for San Diego, average payments for inflammation claims in Southern California were above the statewide average, with the highest payments noted in Riverside (127% of the statewide average) San Bernardino (120%) and Los Angeles (112%).

**PPO/MPN Utilization**

% of Visits to Preferred Providers By Type of Service  
Inflamed Muscles and Joints vs. All Injuries (AY 2002 - 2005)

Type of Service		PPO			MPN
		2002	2003	2004	2005
E&M	Inflammation	62.7%	61.3%	63.7%	77.9%
	All Injuries	56.7%	56.0%	61.6%	74.0%
Surgery	Inflammation	59.4%	58.1%	58.2%	74.3%
	All Injuries	51.7%	52.6%	55.7%	69.5%
Radiology	Inflammation	50.4%	49.4%	48.3%	63.2%
	All Injuries	45.9%	45.9%	47.2%	58.5%
Medicine Section	Inflammation	43.2%	39.0%	45.7%	69.8%
	All Injuries	39.9%	40.0%	49.3%	70.1%
Physical Therapy	Inflammation	36.4%	36.3%	43.8%	56.7%
	All Injuries	23.3%	23.5%	36.7%	50.3%
Chiropractic Manipulation	Inflammation	12.5%	11.6%	11.4%	34.2%
	All Injuries	8.1%	7.9%	11.2%	32.0%
Total Visits	Inflammation	43.8%	43.4%	51.6%	66.4%
	All Injuries	32.1%	32.6%	47.6%	63.2%

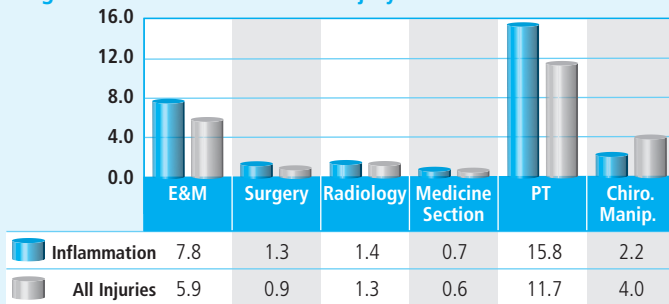
The use of preferred providers to treat injured workers has increased significantly since reform implementation. Overall utilization of preferred providers in California workers' compensation almost doubled from 32% of all visits for AY 2002 injuries to 63% of all visits for AY 2005 injuries. During the same period, preferred provider use rose from about 44% to 66% of all treatment visits for inflamed muscle and joint injuries.

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. Notably, inflamed muscle and joint injuries had a significantly higher rate of PPO/MPN use in all study years compared to the network utilization rate for all injuries. The use of networks increased for both groups of claims, though the difference in network penetration between the two groups lessened over the 4-year study period.

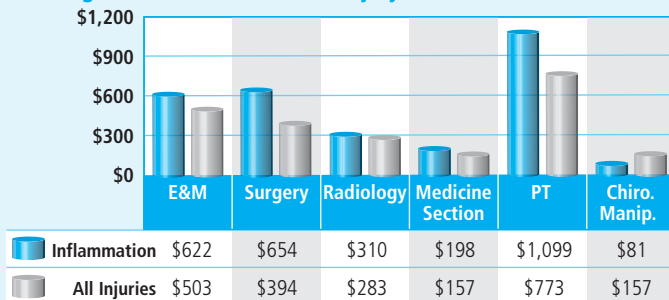
**Medical Development at 24 Months**

Inflamed Muscles and Joints 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**

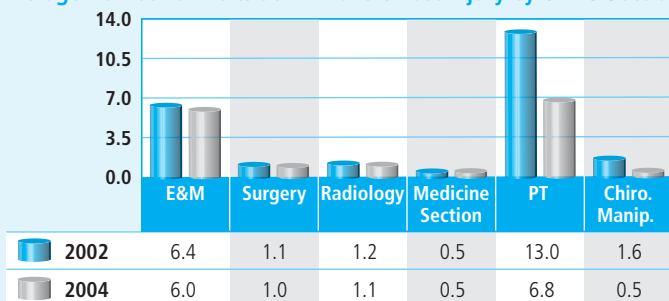


Using AY 2002 and 2003 claims, CWCI calculated the average number of visits and payments for 6 types of medical services for all claims and for inflamed muscles and joints at 24 months. Averages included medical only and indemnity claims, and were not limited to those that involved a specific type of care. Treatment plans for inflamed muscles and joints rely heavily on physical therapy, so average amounts paid for PT at 2 years were higher for inflammation claims than for all injuries. Average amounts paid for surgery services were also significantly higher (66%) for inflamed muscle and joint claims, as were payments for evaluation and management (24%), radiology (10%) and medicine section services (26%).

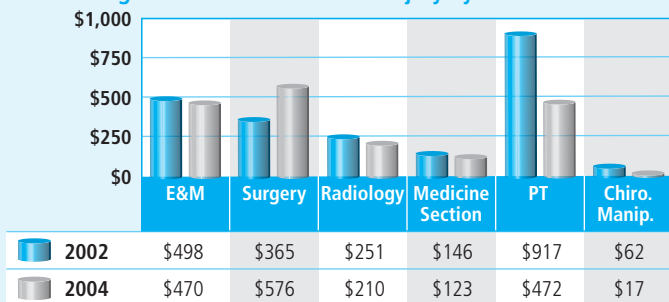
**Medical Utilization & Payments: Pre- vs. Post-Reform**

Inflammation 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**



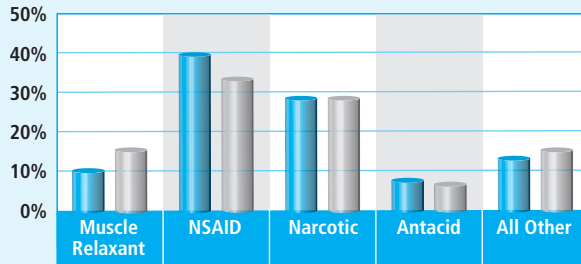
Comparing AY 2002 and 2004 data on inflammation claims at 12 months post injury shows that following reform implementation, the average number of visits declined for all 6 types of services except medicine section services. Average amounts paid for services declined in all areas except surgery, where the average amount paid per claim at 12 months rose 58%. PT and chiropractic had the most notable reductions: average first-year PT visits fell 48% from 13.0 to 6.8 visits, reducing average PT payouts from \$917 to \$472. Likewise, first-year chiropractic manipulation visits fell 69% from 1.6 to 0.5, cutting the average paid by 73% from \$62 to \$17.



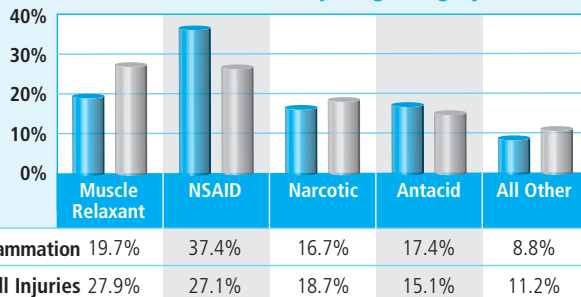
**Prescription Drugs**

Inflamed Muscle and Joints vs. All Injuries (2005)

**Distribution of Prescriptions by Drug Category**



**Distribution of Paid Dollars by Drug Category**



The Institute classified a total of 1.1 million prescriptions from calendar year 2005 into 5 drug categories. Non-steroidal anti-inflammatory drugs (NSAIDs) comprised 40% of inflamed muscle and joint prescriptions and 37% of the payments. Narcotics were the second most common type of prescription (nearly 29% of all prescriptions) and represented 1/6 of all prescription dollars paid for inflamed muscles and joints, followed by muscle relaxants, which accounted for 10% of the prescribed drugs but about 20% of the payments.

**Prescription Drugs by Volume and Payment**

Inflamed Muscles and Joints vs. All Claims (2005)

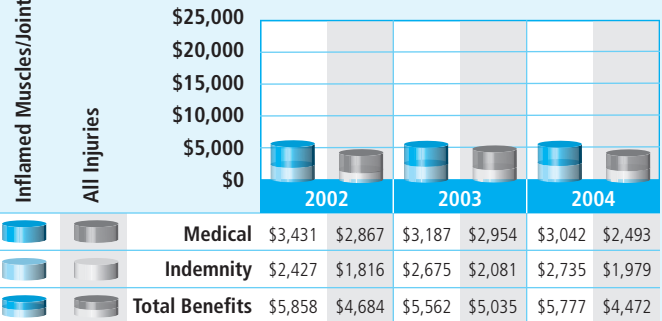
Drug Grouping	Drug Class	% of Total Prescriptions		% of Total Paid	
		Inflamed Muscles & Joints	All Claims	Inflamed Muscles & Joints	All Claims
Hydrocodone	Narcotic	13.1%	13.3%	7.2%	7.4%
Ibuprofen	NSAID	10.9%	10.9%	4.3%	3.6%
Naproxen	NSAID	9.0%	6.9%	9.5%	6.7%
Ranitidine	Antacid	5.5%	4.7%	13.5%	11.1%
Carisoprodol	Muscle Relax	4.8%	7.1%	13.6%	17.8%
Propoxy	Narcotic	3.8%	3.7%	2.4%	2.3%
Tramadol	Narcotic	2.5%	2.7%	2.5%	2.9%
Piroxicam	NSAID	2.4%	1.8%	4.8%	3.2%
Etodolac	NSAID	2.1%	1.5%	3.5%	2.2%
Banalg Liniment	Pain Relief Ointment	2.0%	1.9%	0.6%	0.5%
Cyclobenzaprine	Muscle Relax	1.9%	3.2%	1.5%	2.1%
Acetaminophen w/Codeine	Narcotic	1.8%	1.7%	1.0%	0.7%
Diclofenac	NSAID	1.4%	1.2%	1.8%	1.4%
Cephalexin	Antibiotic	1.2%	2.0%	1.3%	2.2%
Celebrex	NSAID	1.1%	0.7%	2.3%	1.3%
<b>Top 15</b>		<b>63.5%</b>	<b>63.3%</b>	<b>69.8%</b>	<b>65.4%</b>

CWCI grouped generic drugs and brand equivalents to identify the most commonly prescribed drugs and associated payments. The narcotic Hydrocodone topped the list of most prescribed drugs for inflamed muscles and joints and for all injuries, though in both groups the muscle relaxant Carisoprodol and the antacid Ranitidine ranked above Hydrocodone in total dollars paid.

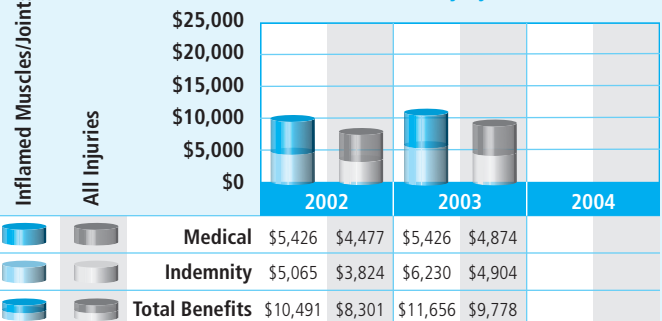
**Loss Development**

Inflamed Muscles and Joints vs. All Injuries

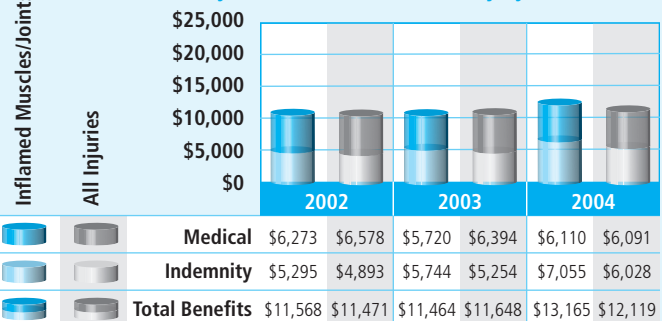
**All Claims 12 Months Post Injury**



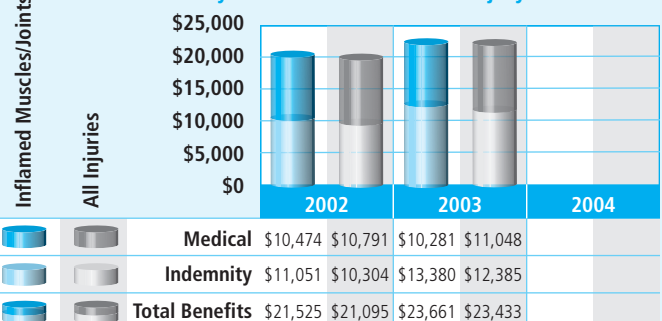
**All Claims 24 Months Post Injury**



**Indemnity Claims 12 Months Post Injury**



**Indemnity Claims 24 Months Post Injury**



Payment data for all claims (including med-onlys) shows the average amount paid for medical treatment and indemnity at 12 and 24 months was significantly more for inflamed muscle and joint injuries than for all injuries. For example, at 24 months post-injury benefit payments on AY 2003 inflamed muscle and joint claims averaged \$11,656, 19% more than the average for all claims.

However, limiting the analysis to just indemnity claims shows inflamed muscle and joint injuries usually involved lower than average medical payments, but indemnity payments were higher at both valuation points and across all accident years. The higher indemnity payments offset the lower medical costs, bringing total benefit payments for inflamed muscle and joint claims up to par with the average for all claims. The most developed data in the analysis, AY 2003 payments at 24 months post-injury, show that overall, payments on indemnity claims for inflamed muscles and joints averaged \$23,661, nearly identical to the average for all indemnity claims.



**Nature of Injury**

Claim Distributions for Inflamed Muscles and Joints vs. Other Injuries & All Injuries (AY 2002 - 2005 Claims)

Nature of Injury	Percent of Claims		
	Inflamed Muscles/Joints	Other Types of Injuries	All Injuries
Strain	38.1%	29.1%	29.5%
All Other Cumulative Injuries	20.3%	11.4%	11.8%
All Other, NOC	15.4%	8.2%	8.6%
Inflammation	6.4%	1.4%	1.6%
Sprain	4.8%	6.4%	6.3%
Contusion	4.4%	8.4%	8.2%
Multiple Physical Injuries Only	2.2%	2.8%	2.7%
Carpal Tunnel Syndrome	2.1%	0.5%	0.6%
Laceration	1.9%	13.9%	13.4%
Fracture	1.1%	3.5%	3.4%
<b>All Other</b>	<b>3.3%</b>	<b>14.4%</b>	<b>13.9%</b>

"Strains" are the number one nature of injury category, cited in nearly 30% of all work injuries and in more than 1/3 of inflamed muscle and joint injuries. Strains are often cumulative -- occurring over time. One in 5 inflamed muscle and joint injuries are categorized as other cumulative injuries vs. 1 in 9 work injuries overall. In contrast, other types of injuries are far more likely to involve specific injuries such as sprains, contusions, lacerations, and fractures.

**Cause of Injury**

Claim Distributions for Inflamed Muscles and Joints vs. Other Injuries & All Injuries (AY 2002 - 2005 Claims)

Cause of Injury	Percent of Claims		
	Inflamed Muscles/Joints	Other Types of Injuries	All Injuries
Repetitive Motion (Carpal Tunnel Syndrome)	16.0%	2.1%	2.8%
Strain/Injury: NOC	15.6%	8.3%	8.7%
Strain/Injury: Lifting	11.5%	12.1%	12.1%
Misc. Causes: Cumulative Injury (n.o.c.)	9.9%	2.4%	2.8%
Misc. Causes: Other Injury (n.o.c.)	8.3%	6.2%	6.3%
Strain/Injury: Pushing or Pulling	5.7%	3.5%	3.7%
Rubbed/Abraded by: Repetitive Motion	3.1%	0.4%	0.5%
Strain/Injury: Using Tool or Machine	2.9%	0.9%	1.0%
Fall/Slip: Miscellaneous	2.6%	5.3%	5.2%
Strain/Injury: Holding or Carrying	2.4%	1.7%	1.7%
<b>All Other</b>	<b>22.0%</b>	<b>57.1%</b>	<b>55.2%</b>

Almost 1 in 6 inflamed muscle and joint work injuries are caused by repetitive motion, and a similar proportion are caused by unspecified strains. Strains caused by lifting account for 11% of the inflamed muscle and joint claims, and another 6% are caused by pushing or pulling. In addition, unspecified cumulative injuries are cited as the cause of nearly 10% of all inflamed muscle and joint claims, more than 4 times the percentage noted for other types of injury claims.

**Time Lags**

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

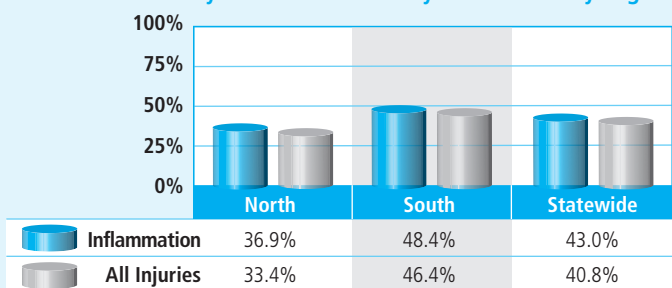
		Median # of Days	
		2002	2004
<b>Employer Notification</b>	<b>Inflammation</b>	0.0	1.0
	<b>All Claims</b>	0.0	0.0
<b>Carrier Notification</b>	<b>Inflammation</b>	9.0	8.0
	<b>All Claims</b>	7.0	6.0
<b>Time to First Treatment</b>	<b>Inflammation</b>	19.0	14.0
	<b>All Claims</b>	3.0	2.0

CWCI compared the median number of days from the injury date to employer notice, carrier notice, and initial treatment for inflamed muscle and joint injuries and for all injuries from AY 2002 and 2004. A median is the midpoint in a series of numbers, where half the values are above the median, and half are below. For AY 2002 and AY 2004 claims, the median time to employer notice for all claims was 0 days (same-day notice) but for inflamed muscle and joint claims the median time to employer notification increased from 0 to one day. On the other hand, the median time to first treatment for inflamed muscles and joints improved from 19 to 14 days -- still 12 days longer than the median for all claims, but that may reflect the subjective nature and prevalence of cumulative traumas among inflamed muscle and joint injuries.

**Attorney Involvement**

Inflamed Muscles and Joints vs. All Injuries (AY 2002 - 2005 Claims)

Percent of Indemnity Claims with Attorney Involvement by Region

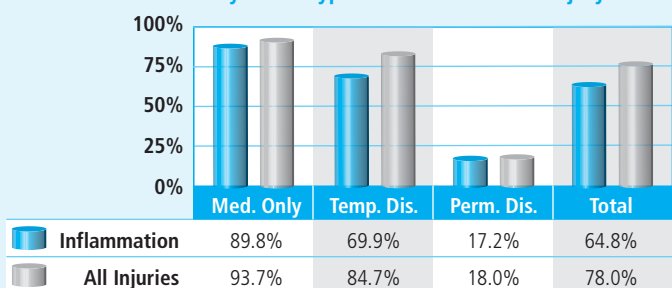


Statewide, attorneys are used in 43% of indemnity claims with a primary diagnosis of inflamed muscles or joints vs. 41% of all indemnity claims. Attorney involvement is greater in Southern California than in the north, both for inflamed muscle and joint claims and for all claims.

**Claim Closure Rates**

Inflamed Muscles and Joints 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 64.8% for inflamed muscle and joint claims is below the 78% rate for all claims, partly due to a different mix of claims, as inflamed muscles and joints are more likely to involve TD and PD. The subjective, cumulative nature of many of these injuries, notification delays, and high litigation rate also may be linked to the lower closure rate.

**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](http://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.