

Medical Development Trends in California Workers' Compensation Accident Years 2002 – 2010

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BACKGROUND

Between 2002 and 2004, California lawmakers enacted major workers' compensation medical reforms designed to assure that the type and quantity of treatment provided to injured workers was appropriate, as well as to help contain the rising cost of care. Among the key measures approved by state lawmakers were the adoption of a mandatory medical treatment utilization schedule (MTUS); 24-visit caps on physical medicine, chiropractic care, and occupational therapy; the expansion of the Official Medical Fee Schedule (including a revised pharmacy schedule and a generic drug substitution requirement); and the extension of medical control from 30 days post-injury to the life of the claim for employers with workers' compensation medical provider networks (MPNs).

Although analyses on the initial impact of these reforms showed sharp reductions in medical costs immediately following the implementation of these measures, by late 2008 Workers' Compensation Insurance Rating Bureau (WCIRB) data on insured claims from accident year (AY) 2006 suggested that the post-reform reduction in medical costs was over and medical losses were again on the rise. The first indication of this resurgence of workers' compensation medical costs was noted in WCIRB's December 2008 Summary of Insured Claims Experience, which measured the AY 2006 losses through the third quarter of 2008--a finding that was subsequently confirmed by the Institute in studies published in 2009 and 2010.

CWCI's 2010 study tracked changes in California workers' compensation medical expense payments from 2002 through the first half of 2009. In addition to documenting the brief downturn in aggregate medical expenditures immediately following the enactment of the reforms in 2004, the study found that within two years, the average amounts paid for treatment, pharmaceuticals and durable medical equipment (DME), med-legal reports, and medical management/cost containment were again increasing, and were back above pre-reform levels.

This report updates the prior studies by using data on California claims experience through June 2010. The results confirm the findings of the earlier studies, again showing a sharp reduction in medical payments immediately after the reforms were enacted in 2004, followed by a distinct trend of increasing medical payments associated with work injuries beginning in AY 2006 and continuing through the end of the study period. This trend has pushed average medical expenditures per claim significantly above pre-reform levels, with all four of the medical expense categories continuing to rise.

DATA AND METHODS

For this study, the authors utilized the Institute's Industry Claims Information System (ICIS) database¹ to compile a sample of 557,343 California workers' compensation indemnity claims with January 2002 through March 2010 injury dates. Data in the sample included policy and claim information, as well as medical service detail based on payment and medical bill review transactions through June 2010. The final data sets allowed the authors to analyze \$8.79 billion in medical payments on these claims and, as in the 2010 analysis, allowed them to break out the total amounts paid for four medical expense sub-categories (medical treatment, pharmacy and durable medical equipment, medical legal reports and medical management/medical cost containment²); calculate the average amounts paid for each sub-category; and track changes in the distribution of California workers' compensation medical payments since 2002. While this study focuses on results for indemnity claims (lost-time cases that result in temporary disability and/or permanent disability payments which account for the vast majority of California worker's compensation costs), the authors also calculated the averages for all claims, including medical-only cases, which represent the majority of claims in the system, but which have a much lower average cost. The results for all claims are included as appendices at the end of this report.

The authors were able to calculate the average medical expenditure per indemnity claim for each accident year³ at six valuation points: 3, 12, 24, 36, 48 and 60 months post-injury by matching the date of injury and the transaction date on each medical payment. Exhibit 1 shows the distribution of claims and the associated medical payments across the nine different accident years used in this study.

Exhibit 1: Distribution of Claims & Medical Dollars Paid
Medical Development Study Sample

Year of Injury	Number of Claims	Percent of Claims	\$ Paid	Percent of Payments
2002	110,425	19.8%	\$1,940,284,426	22.1%
2003	100,998	18.1%	\$1,759,013,866	20.0%
2004	87,169	15.6%	\$1,373,434,659	15.6%
2005	67,774	12.2%	\$1,088,743,117	12.4%
2006	58,134	10.4%	\$961,020,178	10.9%
2007	52,769	9.5%	\$803,243,798	9.1%
2008	44,363	8.0%	\$573,220,512	6.5%
2009	31,053	5.6%	\$272,182,813	3.1%
1 st Q 2010	4,658	0.8%	\$21,348,953	0.2%
Total	557,343	100.0%	\$8,792,492,321	100.0%

¹ ICIS is a proprietary database maintained by the California Workers' Compensation Institute that contains detailed information, including employer and employee characteristics, medical service information, and benefit and other administrative cost information on more than 3 million workplace injuries with dates of injury between January 1993 and June 2010 (V12A). The datasets were evaluated as representative of the California insured population of injured workers.

² The medical management/medical cost containment category includes expenses related to medical bill review, medical case management, utilization review, and network access fees.

³ Due to the June 2010 data cutoff in the ICIS database (version 12A), accident year 2010 was limited to claims with dates of injury through March 2010 to allow for 3 months of development.

RESULTS

Exhibit 2 shows the average medical payments per indemnity claim at each of the six valuation points. The most developed data show the average medical expenses paid at the 60-month benchmark for claims from accident years 2002 through 2005. In contrast, the least developed data show average medical expenditures at three months post injury, but due to the shorter time frame being measured, the three-month valuation data were available on much more recent claims – those with dates of injury in the first quarter of 2010.

Across the 8-year period ending in AY 2009, average payments for first-year medical services (Avg Med at 12M) on indemnity claims increased by 40.4 percent (from \$6,381 in AY 2002 to \$8,956 in AY 2009). The first-year medical data, however, also reveal the post-reform reduction in medical payments, as average medical benefits at the 12-month valuation

fell 14.1% from \$6,381 for AY 2002 claims to \$5,480 for AY 2005 claims. After AY 2005, that trend reversed and average first-year medical payments climbed steadily, increasing 16.9 percent from AY 2005 to AY 2006 (from \$5,480 to \$6,409), 13.9 percent from AY 2006 to AY 2007 (from \$6,409 to \$7,302), 11.7 percent from AY 2007 to AY 2008 (from \$7,302 to \$8,157), and 9.8 percent from AY 2008 to AY 2009 (from \$8,157 to \$8,956).

Similar medical development patterns for indemnity claims were noted at all of the valuation points except for the three-month valuation point. The trend in average medical benefit payments at three months post injury was less volatile until AY 2008, when payments jumped 40.4 percent from \$1,912 in AY 2007 to \$2,683 in 2008. This may indicate an overall acceleration of medical services immediately following an injury. Appendix 1 shows the comparable exhibit for all claims (medical-only and indemnity claims).

Exhibit 2: Average Medical Paid per Claim @ 3, 12, 24, 36, 48 and 60 Months for Indemnity Claims by Accident Year

Accident Year	Avg Med at 3M	Avg Med at 12M	Avg Med at 24M	Avg Med at 36M	Avg Med at 48M	Avg Med at 60M
2002	\$1,625	\$6,381	\$10,350	\$13,507	\$15,747	\$17,571
2003	\$1,535	\$6,108	\$10,446	\$13,255	\$15,520	\$17,416
2004	\$1,696	\$5,668	\$8,867	\$11,631	\$13,978	\$15,756
2005	\$1,758	\$5,480	\$9,065	\$12,237	\$14,666	\$15,778
2006	\$1,956	\$6,409	\$10,893	\$14,362	\$16,039	NA
2007	\$1,912	\$7,302	\$12,005	\$15,001	NA	NA
2008	\$2,683	\$8,157	\$13,060	NA	NA	NA
2009	\$3,062	\$8,956	NA	NA	NA	NA
1st Q 2010	\$3,363	NA	NA	NA	NA	NA
AY 02-05 % change	8.2%	-14.1%	-12.4%	-9.4%	-6.9%	-10.2%
AY 05-06 % change	11.2%	16.9%	20.2%	17.4%	9.4%	NA
AY 06-07 % change	-2.3%	13.9%	10.2%	4.5%	NA	NA
AY 07-08 % change	40.4%	11.7%	8.8%	NA	NA	NA
AY 08-09 % change	14.1%	9.8%	NA	NA	NA	NA
AY 09-10 % change	9.8%	NA	NA	NA	NA	NA
AY 02-End Point % change	107.0%	40.4%	26.2%	11.1%	1.9%	-10.2%

Medical Development by Medical Expense Sub-Category

To gain a better understanding of where the changes in medical expenditures have occurred, the authors calculated the average payments for the four medical expense sub-categories: medical treatment, pharmacy and durable medical equipment, medical management/medical cost containment and medical legal reports.

Exhibit 3 shows the change in average medical payments for each of the four medical subcategories at 12 and 24 months post injury for the accident year AY 2002 through 2009 indemnity claims. Between AY 2002 and AY 2005, the average amount paid for first-year medical treatment on these lost-time cases fell 19.5 percent, from \$5,461 to \$4,376, but that average then began a steady climb, hitting \$6,518 in AY 2009 – a four-year increase of 48.9 percent, which more than offset the 19.5 percent post-reform decline and resulted in an overall increase of 20 percent for AY 2002 to AY 2009. A similar pattern was observed at 24 months post injury, although average treatment expenditures at the 2-year benchmark hit their post-reform low of \$6,741 in AY 2004, then increased steadily through AY 2008, when they reached \$9,438, which was 10.7 percent more than the AY 2002 level.

Pharmaceutical and durable medical equipment (DME) payments also showed a similar pattern of development. The

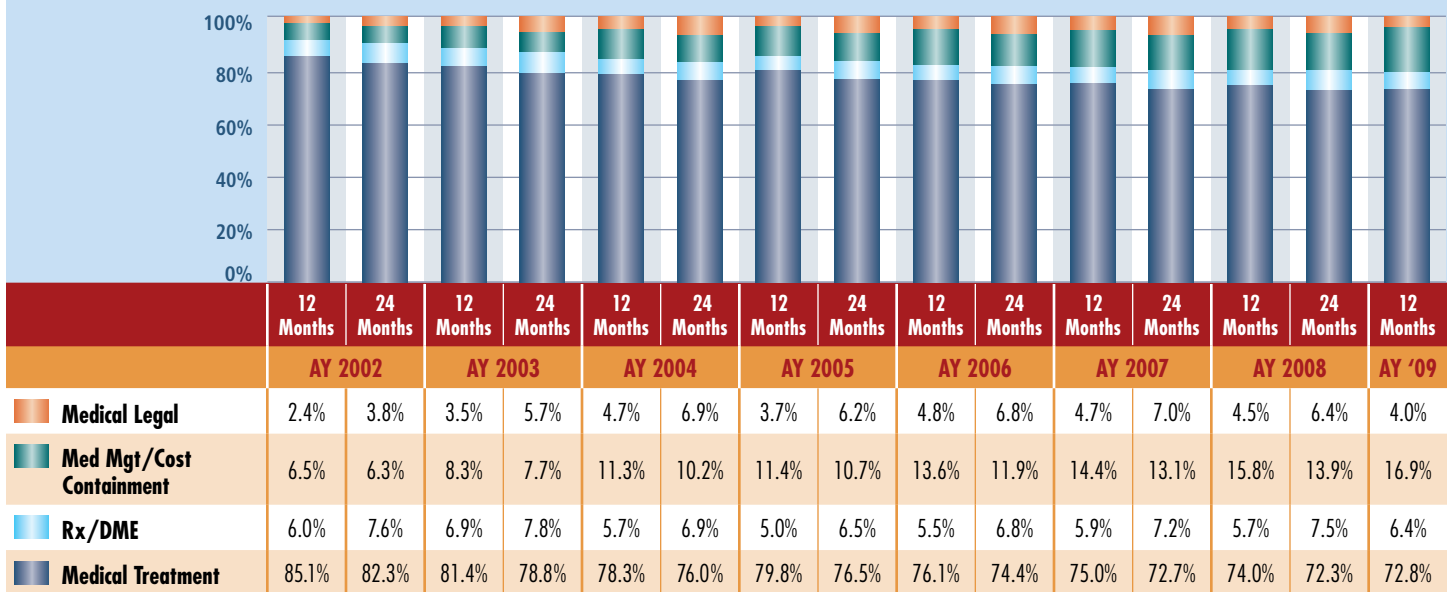
average amount paid for pharmaceuticals and DME per indemnity claim at 12 months post injury fell from \$381 in AY 2002 to \$276 in AY 2005 (-27.6 percent), but then climbed to \$571 by AY 2009 (+106.5 percent), for an overall increase of 49.9 percent over the 8-year span. Average payments for pharmaceuticals and DME on indemnity claims at 24 months post injury also displayed a similar pattern, falling from \$786 to \$593 (-24.5 percent) from AY 2002 to AY 2005, then climbing to \$974 (+64.3 percent) by AY 2008, for an overall increase of 23.9 percent from the AY 2002 level.

The average amounts paid on indemnity claims for medical management/medical cost containment and medical legal reports showed a more consistent and steady increase from AY 2002 and AY 2009, with only a small downturn in AY 2005. At the 12-month benchmark, the average amount paid for medical management/medical cost containment increased from \$412 per claim in AY 2002 to \$623 in AY 2005 (+51.2 percent), then climbed another 142.6 percent to \$1,511 in AY 2009, for a net increase of 266.7 percent over 8 years. Average medical management/medical cost containment payouts at the 24-month benchmark increased from \$649 for AY 2002 claims to \$971 for AY 2005 claims (+49.6 percent), then climbed another 87.2 percent to an average of \$1,818 for AY 2008 claims – which translates to an overall increase of 180.1 percent from AY 2002 to AY 2008.

**Exhibit 3: Average Medical Paid per Claim by Medical Expense Sub-Category
AY 2002 - 2008 Indemnity Claims**

Accident Year	Treatment		Rx/DME		Medical Management/ Cost Containment		Medical Legal		Total	
	12 Months	24 Months	12 Months	24 Months	12 Months	24 Months	12 Months	24 Months	12 Months	24 Months
2002	\$5,433	\$8,522	\$381	\$786	\$412	\$649	\$155	\$393	\$6,381	\$10,350
2003	\$4,970	\$8,229	\$421	\$816	\$505	\$809	\$212	\$593	\$6,108	\$10,446
2004	\$4,439	\$6,741	\$322	\$612	\$639	\$908	\$269	\$608	\$5,668	\$8,867
2005	\$4,376	\$6,939	\$276	\$593	\$623	\$971	\$205	\$563	\$5,480	\$9,065
2006	\$4,879	\$8,107	\$353	\$745	\$871	\$1,296	\$306	\$745	\$6,409	\$10,893
2007	\$5,480	\$8,734	\$427	\$863	\$1,051	\$1,572	\$344	\$836	\$7,302	\$12,005
2008	\$6,038	\$9,438	\$462	\$974	\$1,290	\$1,818	\$367	\$830	\$8,157	\$13,060
2009	\$6,518	NA	\$571	NA	\$1,511	NA	\$356	NA	\$8,956	NA
AY02-05 % Change	-19.5%	-18.6%	-27.6%	-24.5%	51.2%	49.6%	32.9%	43.1%	-14.1%	-12.4%
AY05-End Point % Change	48.9%	36.0%	106.5%	64.3%	142.6%	87.2%	73.3%	47.5%	63.4%	44.1%
AY02-End Point % Change	20.0%	10.7%	49.9%	23.9%	266.7%	180.1%	129.7%	111.2%	40.4%	26.2%

Exhibit 4: Distribution of California Workers' Compensation Medical Payments by Medical Sub-Category, AY 2002 – 2009 Indemnity Claims*



* Percentages may not add to 100% due to rounding.

Meanwhile, the average amount paid per indemnity claim for medical/legal reports at 12 months post injury increased from \$155 in AY 2002 to \$205 in AY 2005 (+32.9 percent), then rose another 73.3 percent to \$356 in AY 2009, resulting in a net increase of 129.7 percent over 8 years. At the 24-month benchmark, average medical-legal payments per indemnity claim increased from \$393 in AY 2002 to \$563 in AY 2005 (+43.1 percent) and then rose another 47.5 percent to \$830 by AY 2008, which was up 111.2 percent from the AY 2002 level. A comparable table showing results for all claims can be found in Appendix 2.

Exhibit 4 shows the distribution of medical payments on indemnity claims across the four medical sub-categories. Results are noted at 12 months post injury for accident year 2002 through 2009 claims, and at 24 months post injury for accident year 2002 through 2008 claims. The table showing the distribution of medical payments across the various sub-categories for all claims is in Appendix 3.

Exhibit 4 shows the shift in medical benefit payments that followed the introduction of several reforms designed to help contain treatment costs -- including mandatory utilization review and the development of Medical Provider Networks -- as well as the fee schedule adjustments for med-legal reports.

Although the utilization review and the Medical Provider Network access fees represent significant, ongoing medical cost containment expenditures for workers' compensation claims administrators, prior CWCI studies have shown that they are associated with an estimated \$12.8 billion to \$25.3 billion in medical cost saving between 2004 and 2008.⁴ The breakdown of first-year medical payments on indemnity claims shows that medical management/medical cost containment expenditures jumped from 6.5 percent to 16.9 percent of total medical payout, but that increase coincided with medical treatment payments declining from 85.1 to 72.8 percent of the overall medical dollar. At the same time, the proportion going toward pharmacy and DME held fairly constant, ranging between 5 and 6.9 percent of all medical payments during the study period, while med-legal payments rose from 2.4 percent in AY 2002 to 4 percent in AY 2009. A similar pattern was noted in the distribution of medical costs at 24-months post injury, although at this more developed level, medical management/medical cost containment expenses represented a smaller share of the medical dollar (13.9 percent of overall medical payments in AY 2008), while pharmacy/DME (7.5 percent) and med-legal expenses (6.4 percent) accounted for a higher percentage of the total medical payout.

⁴ Swedlow, A. Ireland, J., Analysis of California Workers' Compensation Reforms. Part 4: Changes in Medical Payments, AY 2002 to 2007 Claims Experience. CWCI, June 2009.

SUMMARY

This study confirms the California workers' compensation medical payment patterns that were documented by the Institute's 2009 and 2010 studies. Once again, the 2011 update found that there was a fairly steep yet brief downturn in medical expenditures immediately following the enactment of reforms in 2004, but within two years the average amounts paid for treatment, pharmaceuticals and durable medical equipment, med-legal reports, and medical management/medical cost containment were again increasing. Furthermore, the analysis of indemnity claims showed that all of those medical expense cost components, whether measured at 12 or 24 months post injury, are now back above pre-reform levels. While the impact of the increases in average medical payments on total workers' compensation medical payments has been significantly muted by the steady decline in claim frequency during the study period, should these trends continue, any increase in claim frequency could lead to a spike in overall workers' compensation medical losses.

APPENDIX 1

Average Medical Paid per Claim @ 3, 12, 24, 36, 48 and 60 Months
All Claims -- AY 2002 - 2010

Accident Year	Avg Med at 3M	Avg Med at 12M	Avg Med at 24M	Avg Med at 36M	Avg Med at 48M	Avg Med at 60M
2002	\$817	\$2,703	\$4,150	\$5,289	\$6,094	\$6,751
2003	\$795	\$2,662	\$4,305	\$5,354	\$6,201	\$6,909
2004	\$804	\$2,257	\$3,315	\$4,216	\$4,981	\$5,562
2005	\$788	\$2,093	\$3,215	\$4,188	\$4,931	\$5,363
2006	\$846	\$2,325	\$3,647	\$4,653	\$5,168	NA
2007	\$857	\$2,645	\$4,044	\$4,934	NA	NA
2008	\$1,126	\$2,911	\$4,392	NA	NA	NA
2009	\$1,256	\$3,069	NA	NA	NA	NA
2010	\$1,397	NA	NA	NA	NA	NA
AY 02-05 % Change	-3.6%	-22.6%	-22.5%	-20.8%	-19.1%	-20.6%
AY 05-06 % Change	7.3%	11.1%	13.4%	11.1%	4.8%	NA
AY 06-07 % Change	1.3%	13.8%	10.9%	6.0%	NA	NA
AY 07-08 % Change	31.4%	10.1%	8.6%	NA	NA	NA
AY 08-09 % Change	11.5%	5.4%	NA	NA	NA	NA
AY 09-10 % Change	11.2%	NA	NA	NA	NA	NA
AY 02-End Point % Change	71.0%	13.5%	5.8%	-6.7%	-15.2%	-20.6%

APPENDIX 2

Average Medical Paid per Claim @ 12 and 24 Months by Medical Sub-Category
All Claims – AY 2002 - 2009

Accident Year	Medical Treatment		Rx/DME		Medical Mgt/Medical Cost Containment		Medical Legal		Total	
	12 Months	24 Months	12 Months	24 Months	12 Months	24 Months	12 Months	24 Months	12 Months	24 Months
2002	\$2,321	\$3,445	\$147	\$294	\$164	\$250	\$72	\$161	\$2,703	\$4,150
2003	\$2,188	\$3,421	\$167	\$315	\$210	\$325	\$97	\$244	\$2,662	\$4,305
2004	\$1,792	\$2,552	\$116	\$212	\$245	\$334	\$104	\$218	\$2,257	\$3,315
2005	\$1,692	\$2,494	\$99	\$197	\$227	\$335	\$76	\$190	\$2,093	\$3,215
2006	\$1,792	\$2,742	\$122	\$238	\$302	\$427	\$108	\$240	\$2,325	\$3,647
2007	\$2,015	\$2,980	\$148	\$277	\$361	\$515	\$122	\$271	\$2,645	\$4,044
2008	\$2,188	\$3,211	\$158	\$309	\$433	\$594	\$131	\$277	\$2,911	\$4,392
2009	\$2,272	NA	\$189	NA	\$486	NA	\$122	NA	\$3,069	NA
AY02-05 % Change	-27.1%	-27.6%	-32.7%	-32.9%	38.3%	33.8%	6.2%	17.9%	-22.6%	-22.5%
AY05-End Point % Change	34.3%	28.8%	90.9%	56.9%	114.1%	77.3%	60.5%	45.8%	46.6%	36.6%
AY02-End Point % Change	-2.1%	-6.8%	28.6%	5.1%	196.3%	137.6%	69.4%	72.0%	13.5%	5.8%

APPENDIX 3

Distribution of Medical Payments @ 12 and 24 Months by Medical Sub-Category
All Claims -- AY 2002 - 2009

Accident Year	Medical Treatment		Rx/DME		Medical Management/ Cost Containment		Medical Legal	
	12 Months	24 Months	12 Months	24 Months	12 Months	24 Months	12 Months	24 Months
2002	85.9%	83.0%	5.4%	7.1%	6.1%	6.0%	2.7%	3.9%
2003	82.2%	79.4%	6.3%	7.3%	7.9%	7.6%	3.6%	5.7%
2004	79.4%	77.0%	5.2%	6.4%	10.8%	10.1%	4.6%	6.6%
2005	80.8%	77.5%	4.7%	6.1%	10.8%	10.4%	3.6%	5.9%
2006	77.1%	75.2%	5.3%	6.5%	13.0%	11.7%	4.7%	6.6%
2007	76.2%	73.7%	5.6%	6.9%	13.6%	12.7%	4.6%	6.7%
2008	75.2%	73.1%	5.4%	7.0%	14.9%	13.5%	4.5%	6.3%
2009	74.0%	NA	6.2%	NA	15.8%	NA	4.0%	NA

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. Institute members include insurers that collectively write more than 80 percent of California workers' compensation direct written premium, as well as many of the largest public and private self-insured employers in the state.



California Workers' Compensation Institute

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