

Medical Development Trends in California Workers' Compensation Accident Year 2002 – 3Q 2010 Claims

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BACKGROUND

Over the past several years, multiple studies have documented that policy reforms signed into law between 2002 and 2004 were associated with an immediate reduction in medical costs in the California workers' compensation system.^{1,2} These reforms included provisions aimed at managing the delivery and containing the cost of medical treatment while assuring that both the type and quantity of care provided for specific injuries were appropriate. Among the 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 an outpatient surgery facility schedule, a revised pharmacy schedule and a generic drug substitution requirement; and the extension of employer medical control from 30 days post-injury to the life of the claim for employers that have workers' compensation Medical Provider Network (MPN) programs.³

Though medical costs declined sharply in the immediate aftermath of these reforms, by 2008 Workers' Compensation Insurance Rating Bureau (WCIRB) loss data on insured claims from accident year (AY) 2006 indicated that the post-reform reduction in medical costs was short-lived⁴ and medical losses were trending up. The WCIRB's subsequent quarterly summaries of California workers' compensation insurer experience, as well as CWCI studies published in 2009,⁵ 2010,⁶ and in April 2011,⁷ have all confirmed this post-reform reversal and the steady growth in workers' compensation medical payments over the past several years.

This report updates the prior studies with data on California claims with dates of injury through September 2010. Once again, the findings document significant reductions in medical payments immediately after the implementation of SB 899 in 2004, followed by a distinct trend of increasing medical expenditures associated with work injuries beginning with AY 2006 claims through the end of the study period. Although the AY 2010 payment data show some indication that the rate of medical inflation is slowing, the study confirms that average paid medical costs per claim are now significantly higher than they were before the implementation of the 2003-2004 reforms.

1 WCIRB Summary of September 30, 2005 Insurer Experience, December 9, 2005

2 Swedlow, A., Ireland, J. Analysis of California Workers' Compensation Reforms Part 1: Medical Utilization & Reimbursement Outcomes Accident Years 2002 - 2006 Claims Experience. CWCI. December 2007

3 Analysis of California Workers' Compensation Reforms: Medical Utilization & Reimbursement Outcomes. CWCI. Jan. 2007

4 WCIRB Summary of September 30, 2008 Insurer Experience, December 9, 2008

5 Swedlow, A, Ireland, J, Gardner, L, Analysis of Workers' Compensation Reforms, Part 4: Changes in Medical Payments, AY 2002 to 2007 Claim Experience, June 2009

6 Ireland, J, Swedlow, A, Medical Development Trends In California Workers' Compensation, Accident Years 2002-2009, May 2010

7 Ireland, J, Swedlow, A, Medical Development Trends In California Workers' Compensation, Accident Years 2002-2010, April 2011

DATA AND METHODS

For this analysis, the authors used data from CWCI's Industry Claim Information System (ICIS).⁸ The data include policy, claim, benefit and medical service detail from 1,961,325 California work injury claims with dates of injury between January 2002 and September 2010 and medical payment and medical bill review transactions through December 2010. Benefit payments on these claims totaled nearly \$25 billion. The final data sets allowed the authors to analyze total medical benefit payment transactions and sub-categories of medical benefits (including medical treatment, pharmacy and durable medical equipment, medical legal and medical management/medical cost containment⁹).

Exhibit 1 shows the distribution of claims and associated benefit payments across the nine accident years used in the analysis. By matching the date of injury and the transaction date on each medical payment, the authors were able to calculate the average medical expenditure per indemnity claim for each accident year¹⁰ and the average amount paid per claim for each of the medical sub-categories at six valuation points: 3, 12, 24, 36, 48 and 60 months post-injury. 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 & Payments – Medical Development Study Sample

Year of Injury	Number of Claims	Percent of Claims	\$ Paid	Percent of Payments
2002	316,599	16.0%	\$5,406,344,966	22.1%
2003	281,661	14.2%	\$4,970,747,711	20.3%
2004	280,169	14.2%	\$3,573,693,035	14.6%
2005	235,891	11.9%	\$2,652,899,173	10.9%
2006	218,587	11.1%	\$2,402,962,525	9.8%
2007	203,426	10.3%	\$2,179,192,123	8.9%
2008	181,199	9.2%	\$1,750,804,720	7.2%
2009	141,693	7.2%	\$1,078,695,791	4.4%
1 st -3Q 2010	102,100	5.2%	\$415,543,610	1.7%
Total	1,961,325	100.0%	\$24,430,883,653	100.0%

⁸ 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 1993 and 2010(v12B). The datasets were evaluated as representative of the California insured population of injured workers (58.1 percent of the insured market in 2008).

⁹ The medical management/medical cost containment category includes expenses related to medical bill review, medical case management, utilization review, and network access fees.

¹⁰ Due to the December 2010 benefit data cutoff in the ICIS database (version 12B), accident year 2010 was limited to claims with dates of injury through September 2010 to allow for 3 months of development.

RESULTS

Exhibit 2 displays average medical benefits per claim paid at the six valuation points. As the valuation points are extended further from the initial date of injury, the ending accident year of each set of claims is truncated to allow opportunity for full claim development at each comparison point. The benefit payment data ends on December 31, 2010, which defines the dates from which valuation points are marked. For example, the three-month valuation point ends with claims with dates of injury no later than September 30, 2010, which allowed three months (to December 31) for the accumulation of benefit payment data. The 60-month valuation point ends with claims with dates of injury no later than December 31, 2005 – 60 months (five years) before December 31, 2010.

Exhibit 2 shows that between AY 2002 and AY 2009, average medical benefit payments on indemnity claims at 12 months post injury increased by 40.7 percent (from \$6,399 to \$9,005). The initial post-reform decline is evident at the 12-month valuation as medical benefit payments on indemnity claims

from AY 2005 averaged 14.3 percent less than those from AY 2002 (\$5,484 vs. \$6,399). After that, however, average medical benefit payments began to climb, increasing 15.8 percent from AY 2005 to AY 2006 (from \$5,484 to \$6,350); 13.3 percent from AY 2006 to AY 2007 (from \$6,350 to \$7,193); 10.0 percent from AY 2007 to AY 2008 (from \$7,193 to \$7,913); and 13.8 percent from AY 2008 to AY 2009 (\$7,913 to \$9,005). Similar patterns of medical benefit payments development were shown for all of the valuation points for indemnity claims except for the 3-month valuation point. At 3 months post injury, average medical benefit payments were relatively stable until AY 2008, when payments jumped 34.7 percent from \$1,885 in AY 2007 to \$2,540 in AY 2008. This may indicate an overall change to a faster delivery of medical services after injury instead of a significant increase in the eventual medical services delivered. A comparable exhibit for all claims (medical-only and indemnity claims) is available in Appendix 1.

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	\$1,622	\$6,399	\$10,389	\$13,552	\$15,795	\$17,615
2003	\$1,541	\$6,123	\$10,455	\$13,264	\$15,527	\$17,416
2004	\$1,692	\$5,658	\$8,869	\$11,634	\$13,979	\$15,760
2005	\$1,770	\$5,484	\$9,067	\$12,229	\$14,654	\$16,538
2006	\$1,946	\$6,350	\$10,797	\$14,268	\$17,005	NA
2007	\$1,885	\$7,193	\$11,898	\$15,877	NA	NA
2008	\$2,540	\$7,913	\$13,415	NA	NA	NA
2009	\$2,694	\$9,005	NA	NA	NA	NA
Adjusted 2009 ¹¹	\$3,207	NA	NA	NA	NA	NA
1st-3Q 2010	\$3,441	NA	NA	NA	NA	NA
AY 02-05 % change	9.1%	-14.3%	-12.7%	-9.8%	-7.2%	-6.1%
AY 05-06 % change	10.0%	15.8%	19.1%	16.7%	16.0%	NA
AY 06-07 % change	-3.1%	13.3%	10.2%	11.3%	NA	NA
AY 07-08 % change	34.7%	10.0%	12.7%	NA	NA	NA
AY 08-09 % change	6.1%	13.8%	NA	NA	NA	NA
AY 09-3Q10 % change ¹²	7.3%	NA	NA	NA	NA	NA
AY 04-End Point % change	103.3%	59.2%	51.2%	36.5%	21.6%	4.9%
AY 02-End Point % change	112.1%	40.7%	29.1%	17.2%	7.7%	-6.1%

¹¹ There was concern that the increase in average paid dollars from AY 2009 to AY 2010 claims was overstated because the AY 2010 claims had not yet had sufficient time to establish indemnity payments, thus flagging many claims as medical only claims that would eventually become indemnity claims. To "level the playing field", CWCI flagged AY 2009 claims as indemnity claims only if they had an indemnity payment by December 31, 2009. This revised indemnity flag procedure mirrors the AY 2010 claims that were flagged as indemnity only if they had an indemnity payment by December 31, 2010, the last day that data was collected in the dataset used for the analysis.

¹² This percentage change row is based on the Adjusted Average Medical Payments per Claim on the 2009 population of claims.

Medical Development by Medical Expense Sub-Category

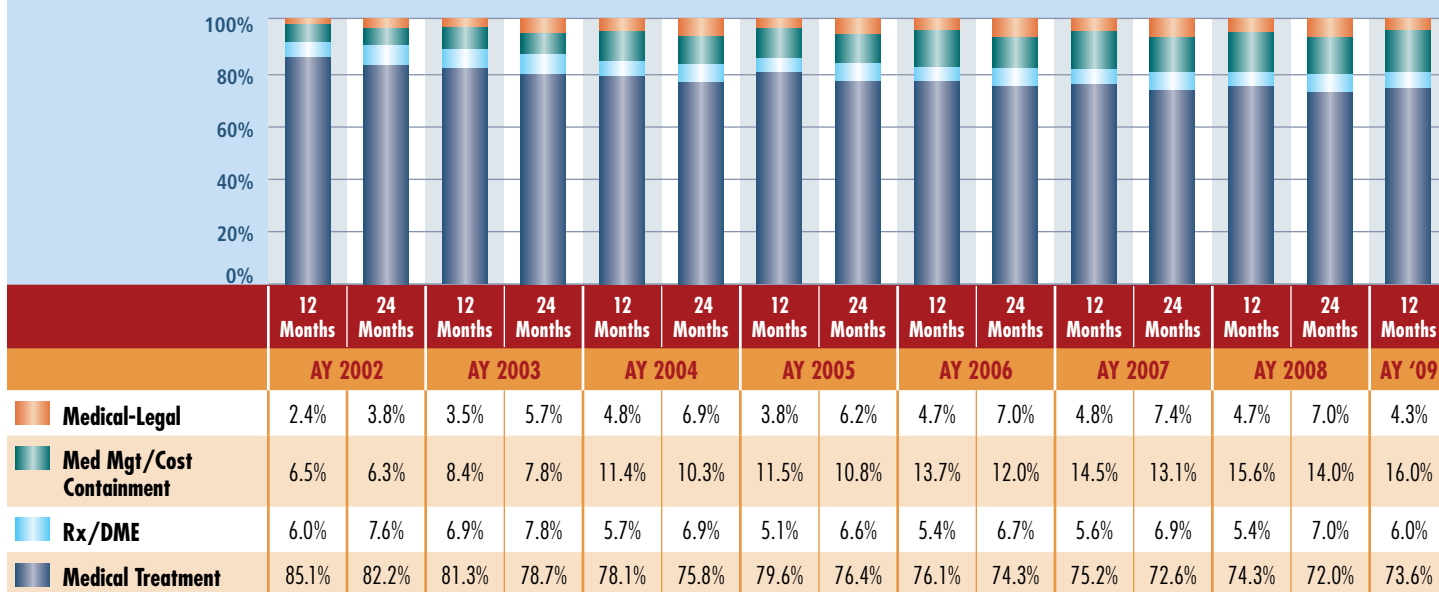
The medical benefit payment transaction data were further divided into payment sub-categories of medical treatment, pharmacy and durable medical equipment, medical management/medical cost containment, and medical-legal.

Exhibit 3 shows the change in average payments associated with each medical payment sub-category for indemnity claims. The average amount paid per indemnity claim for medical treatment at 12 months post injury decreased from \$5,443 in AY 2002 to \$4,367 in AY 2005 (-19.8 percent), but then steadily rose to \$6,631 by AY 2009 (+51.8 percent). This resulted in an overall increase in average medical treatment paid per claim of 21.8 percent from AY 2002 to AY 2009. A similar pattern was observed at 24 months post injury, although the overall increase in the average medical treatment paid per claim from AY 2002 to the end point was 13.0 percent. 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 \$384 in AY 2002 to \$279 in AY 2005 (-27.3 percent), but then climbed to \$543 by AY 2009 (+94.6 percent), for an overall increase of 41.5 percent. Average payments for pharmaceuticals and DME on indemnity claims at 24 months post injury also showed an initial post-reform drop, falling from \$791 to \$596 (-24.7 percent) from AY 2002 to AY 2005, but then climbed to \$938 (+57.4 percent) by AY 2008, for an overall increase of 18.6 percent.

Average payments on indemnity claims for medical management/medical cost containment and for medical-legal reports showed a more consistent and steady increase from AY 2002 through AY 2009, with only one small downturn in first-year payments noted between AY 2004 and AY 2005. At the 12-month benchmark, the average amount paid per claim for medical management/medical cost containment increased from an average of \$417 per indemnity claim in AY 2002 to an average of \$632 in AY 2005 (+51.5 percent), then climbed another 128.0 percent to \$1,440 in AY 2009, resulting in an overall increase 245.5 percent. At the 24-month benchmark, these payments increased from an average of \$658 in AY 2002 to \$980 in AY 2005 (+49.0 percent), then rose another 92.2 percent to an average of \$1,883 in AY 2008, an overall increase of 186.3 percent from AY 2002 to AY 2008. Meanwhile, the average amount paid per indemnity claim for medical-legal reports at 12 months post injury increased from \$155 in AY 2002 to \$206 in AY 2005 (+32.7 percent), then rose another 89.9 percent to \$391 in AY 2009 for an overall increase of 152.1 percent. At the 24-month benchmark, average medical-legal payments per indemnity claim increased from \$396 in AY 2002 to \$563 in AY 2005, then rose another 66.6 percent to \$938 by AY 2008, an overall increase of 136.7%. A comparable table for all claims can be found in Appendix 2.

Exhibit 3: Average Medical Paid per Claim by Medical Expense Sub-Category
AY 2002 - 2009 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	\$5,443	\$8,544	\$384	\$791	\$417	\$658	\$155	\$396	\$6,399	\$10,389
2003	\$4,976	\$8,226	\$421	\$816	\$512	\$818	\$214	\$596	\$6,123	\$10,455
2004	\$4,421	\$6,726	\$322	\$615	\$645	\$916	\$270	\$612	\$5,658	\$8,869
2005	\$4,367	\$6,929	\$279	\$596	\$632	\$980	\$206	\$563	\$5,484	\$9,067
2006	\$4,831	\$8,024	\$346	\$722	\$871	\$1,299	\$301	\$752	\$6,350	\$10,797
2007	\$5,406	\$8,640	\$401	\$819	\$1,042	\$1,564	\$343	\$875	\$7,193	\$11,898
2008	\$5,876	\$9,656	\$430	\$938	\$1,237	\$1,883	\$370	\$938	\$7,912	\$13,414
2009	\$6,631	NA	\$543	NA	\$1,440	NA	\$391	NA	\$9,005	NA
AY02-05 % Change	-19.8%	-18.9%	-27.3%	-24.7%	51.5%	49.0%	32.7%	42.1%	-14.3%	-12.7%
AY05-End Point % Change	51.8%	39.4%	94.6%	57.4%	128.0%	92.2%	89.9%	66.6%	64.2%	47.9%
AY02-End Point % Change	21.8%	13.0%	41.5%	18.6%	245.5%	186.3%	152.1%	136.7%	40.7%	29.1%

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.

The varying growth patterns among the different medical expense sub-categories has caused a shift in the distribution of California workers' compensation medical payments, as noted in Exhibit 4.

Exhibit 4 shows the proportion of each medical expense sub-category by accident year for indemnity claims. The proportion of medical benefit payments made for pharmacy and DME remained fairly constant over the eight-year period from 2002 to 2009, with the percentage of payments for these types of benefits remaining unchanged at 6.0 percent on AY 2002 claims and on AY 2009 claims. A significant portion of medical benefit payments shifted from medical treatment into the sub-categories of medical management and medical-legal reports. Following the adoption of the 2002 – 2004 reforms aimed at managing medical delivery and containing treatment costs, the proportion of medical payments for treatment decreased from 85.1 percent on AY 2002 claims to 73.6 percent on AY 2009 claims – a 13.5 percent relative change. Conversely, as these programs were implemented, the proportion of workers' compensation medical dollars paid for medical management/medical cost containment increased from 6.5 percent on AY 2002 claims to 16.0 percent on AY 2009 claims – a relative change of 146.1 percent. Likewise, the proportion of medical benefit payments for medical-legal reports increased from 2.4 percent to 4.3 percent from AY 2002 to AY 2009 – a 79.2 percent relative change. A comparable table showing the proportional changes for all claims can be found in Appendix 3.

SUMMARY

This report confirms prior findings which showed that despite a short-term decline in California workers' compensation medical costs immediately following implementation of the 2002 – 2004 reforms, medical payments began trending up in accident year 2006, and that trend has continued through the end of this most recent study period (December 2010). Although the results for the 2010 claims are preliminary, it appears that the year-to-year inflation in average medical payments may be slowing. The analysis also documents increases in the average amounts paid per claim in all four medical sub-categories (medical treatment, pharmaceuticals/durable medical equipment, medical-legal, and medical management/medical cost containment), suggesting that inter-related, underlying factors are influencing rising costs.

CWCI will soon publish a follow-up analysis that isolates and measures the individual contribution of key underlying factors such as attorney involvement, geography, and specific co-morbidities and secondary medical conditions that are associated with the increasing medical payment trends in California workers' compensation.

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	\$816	\$2,710	\$4,164	\$5,305	\$6,111	\$6,767
2003	\$797	\$2,667	\$4,308	\$5,357	\$6,202	\$6,907
2004	\$803	\$2,255	\$3,318	\$4,220	\$4,985	\$5,565
2005	\$793	\$2,096	\$3,221	\$4,192	\$4,935	\$5,516
2006	\$847	\$2,315	\$3,631	\$4,640	\$5,433	NA
2007	\$851	\$2,621	\$4,026	\$5,192	NA	NA
2008	\$1,100	\$2,865	\$4,497	NA	NA	NA
2009	\$1,164	\$3,267	NA	NA	NA	NA
2010	\$1,398	NA	NA	NA	NA	NA
AY 02-05 % Change	-2.8%	-22.6%	-22.7%	-21.0%	-19.2%	-18.5%
AY 05-06 % Change	6.8%	10.4%	12.8%	10.7%	10.1%	NA
AY 06-07 % Change	0.6%	13.2%	10.9%	11.9%	NA	NA
AY 07-08 % Change	29.2%	9.3%	11.7%	NA	NA	NA
AY 08-09 % Change	5.8%	14.0%	NA	NA	NA	NA
AY 09-10 % Change	20.2%	NA	NA	NA	NA	NA
AY 05-End Point % Change	76.3%	55.9%	39.6%	23.9%	10.1%	NA
AY 02-End Point % Change	71.3%	20.6%	8.0%	-2.1%	-11.1%	-18.5%

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	\$2,324	\$3,453	\$148	\$295	\$166	\$254	\$72	\$162	\$2,710	\$4,164
2003	\$2,190	\$3,419	\$167	\$315	\$213	\$329	\$97	\$245	\$2,667	\$4,308
2004	\$1,786	\$2,548	\$116	\$213	\$247	\$337	\$105	\$220	\$2,255	\$3,318
2005	\$1,690	\$2,494	\$100	\$198	\$230	\$338	\$76	\$190	\$2,096	\$3,221
2006	\$1,784	\$2,729	\$120	\$231	\$304	\$430	\$107	\$241	\$2,315	\$3,631
2007	\$2,000	\$2,964	\$139	\$264	\$361	\$517	\$121	\$282	\$2,621	\$4,026
2008	\$2,161	\$3,276	\$149	\$299	\$424	\$616	\$131	\$305	\$2,865	\$4,497
2009	\$2,434	NA	\$192	NA	\$498	NA	\$143	NA	\$3,267	NA
AY02-05 % Change	-27.3%	-27.8%	-32.6%	-33.0%	38.3%	33.5%	6.1%	17.2%	-22.6%	-22.7%
AY05-End Point % Change	44.0%	31.4%	92.5%	51.1%	116.6%	82.0%	88.2%	60.7%	55.9%	39.6%
AY02-End Point % Change	4.7%	-5.1%	29.8%	1.3%	200.5%	142.9%	99.6%	88.4%	20.6%	8.0%

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	85.8%	82.9%	5.5%	7.1%	6.1%	6.1%	2.7%	3.9%
2003	82.1%	79.4%	6.3%	7.3%	8.0%	7.6%	3.6%	5.7%
2004	79.2%	76.8%	5.2%	6.4%	10.9%	10.1%	4.7%	6.6%
2005	80.6%	77.4%	4.8%	6.1%	11.0%	10.5%	3.6%	5.9%
2006	77.1%	75.1%	5.2%	6.4%	13.1%	11.8%	4.6%	6.6%
2007	76.3%	73.6%	5.3%	6.5%	13.8%	12.8%	4.6%	7.0%
2008	75.4%	72.9%	5.2%	6.7%	14.8%	13.7%	4.6%	6.8%
2009	74.5%	NA	5.9%	NA	15.2%	NA	4.4%	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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