

# California Workers' Compensation Institute

## BULLETIN

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New Institute research on medical treatment of low back soft tissue injuries in California workers' comp found utilization of medical services beyond the American Academy of Occupational and Environmental Medicine (ACOEM) recommended levels was associated with higher medical and indemnity payments, prolonged medical treatment and delayed return to work.

Patterns of over-utilization of certain tests and procedures in workers' comp, and the resulting escalation of costs, prompted state lawmakers to revoke the treating physician's presumption of correctness and to mandate an evidence-based treatment utilization schedule in the 2003 reforms. But adoption of the ACOEM guidelines as the basis for the schedule stirred controversy in the community. Physicians and others assert that requiring treatment consistent with the guidelines limits a provider's ability to use their clinical judgment in determining medical care and that treatment beyond what guidelines show to be effective may still have value to a worker.

Appropriate medical care for low back soft tissue injuries is crucial in workers' comp, as these are among the most common work injuries and can be difficult to diagnose and expensive to treat. Last year, a CWCI study found wide variations in the treatment of low back problems in California workers' compensation and noted that prior to the 2003 reforms, levels of service far exceeded ACOEM recommendations, with disability durations well beyond those anticipated by ACOEM Guidelines. The new study measures differences in treatment duration, length of disability and medical and indemnity costs between workers with low-back soft tissue problems who received treatment beyond the ACOEM targets and those who did not. The study sample included 107,194 low back soft tissue claims with no nerve impairment or spinal involvement. The injuries occurred between 1997 and 2002, and resulted in \$1.1 billion in medical and indemnity payments through December 2003. The research examines common medical services that ACOEM does not typically recommend for low back soft tissue injuries (x-rays, CTs/MRIs, spinal fusions and laminectomies) as well as physical therapy and chiropractic manipulation, which ACOEM recommends within utilization targets.

Analysts used regression models to determine the case-mix adjusted incremental effects of providing services within and outside the ACOEM Guideline. Thus, for all five procedures, the models gauged the independent effect of each medical encounter beyond the ACOEM Guideline. Table 1 shows the results for all claims and Table 2 shows results for indemnity claims only. (Back surgery outcomes are limited to indemnity claims.)

### Incremental Effects: Low Back Soft Tissue Injury Treatment Outside ACOEM Guidelines -- (All Claims)

<b>Table 1</b>	Add'l medical paid or (saved) per encounter	Add'l Indemnity paid or (saved) per encounter	Increase (decrease) in treatment days per encounter	Increase (decrease) in Paid TD days
Plain X-ray Films	\$482	\$430	25.3	1.8
CT/MRI	\$2,876	\$4,832	174.5	15.7
Physical Therapy <=2 visits	\$87	(\$44)	4.7	-0.2
Physical Therapy >2 visits	\$212	\$176	8	0.8
Chiropractic visits <=12	(\$175)	(\$474)	(10.2)	(1.7)
Chiropractic visits >12	\$273	\$292	12.7	0.9

**Incremental Effects: Low Back Soft Tissue Injury Treatment Outside ACOEM Guidelines--(Indemnity Only)**

<b>Table 2</b>	Additional medical paid (or saved) per encounter	Additional indemnity paid (or saved) per encounter	Increase (decrease) in treatment days per encounter	Increase (decrease) in paid TD days
Plain X-rays Films	\$1,223	\$1,433	65.4	6.2
CT/MRI	\$5,956	\$13,964	237.4	45.5
Surgery	\$45,292	\$43,733	736.2	229.3
Physical Therapy <=2 visits	(\$9)	(\$177)	(3.9)	(0.7)
Physical Therapy >2 visits	\$197	\$278	6.4	1.3
Chiropractic visits <=12	(\$441)	(\$1,178)	(19.2)	(4.2)
Chiropractic visits >12	\$304	\$398	10.9	1.2

The study found no evidence to support the assertion that providing treatment outside ACOEM-recommended targets improves medical treatment or return-to-work outcomes for injured workers with low back soft tissue injuries. On the other hand, among the claims involving physical therapy and chiropractic services, those in which the level of care remained within the ACOEM guidelines were associated with reduced treatment duration, faster return to work, and reduced medical and indemnity payments. Beyond that, claims in which services exceeded ACOEM-recommended levels were strongly associated with higher total (medical and indemnity) claim costs, prolonged treatment, and delayed return to work, as evidenced by the greater number of paid temporary disability days. In some cases, the costs were substantial. For example, even though ACOEM generally does not recommend surgery for the low back soft tissue injuries in this study, the researchers found nearly 1,600 cases that involved laminectomies and/or spinal fusions. When compared to similar low back soft tissue claims without surgery, these laminectomy and spinal fusion cases were associated with two years of additional medical treatment and an additional 7.6 months of temporary disability – and an additional \$89,025 in total claim costs.

While these findings do not mean that exceptions to ACOEM guideline targets are never warranted, the authors suggest that a reasonable middle ground would be to allow deviations from the guidelines only for compelling reasons, to closely correlate treatment with measurable recovery, and to try to avoid the wide variations in care that that in the past have led to wide variations in medical outcomes.

More detailed information and results from the study are included in the attached CWCI Research Notes, [Measuring the Value of Medical Treatment Outside ACOEM Guideline Targets on Low Back Soft Tissue Injury Outcomes](#). Additional copies of the report are \$12.45 each, plus shipping and handling, or Institute members and subscribers may download a copy from the Member/Subscriber section of the Institute web site ([www.cwci.org](http://www.cwci.org)).

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