

Better Results for Patients with Post-Acute Chronic Pain

How outstanding medical outcomes lead to lower lifetime costs

The problem of treating patients with chronic pain appears to be on the rise despite a proliferation of new drugs and advanced medical procedures. An increasing number of patients are entering “pain management programs” and fewer are successfully weaned off addictive pain medication. As spending for these unresolved claims continues to rise and narcotics addiction and other long term health risks affect the individual’s well-being, effective pain management becomes all the more important.

Many statistics document the extent of the problem:

- More than one-quarter of Americans (26%) age 20 years and over—or, an estimated 76.5 million Americans—suffer from chronic pain¹
- Admission rates for abuse of opiates other than heroin—including prescription painkillers—rose by 345 percent from 1998-2008²
- 20% of workers’ compensation medical costs of fully developed claims are spent on prescription drugs; Narcotics account for 34% of this spend³
- 120,000 Americans a year go to the emergency room after overdosing on opioid painkillers, according to Laxmaiah Manchikanti, chief executive officer and board chairman for the American Society of Interventional Pain Physicians⁴

In a new independent study, Robert Briscoe, claim consultant with the actuarial and consulting firm Milliman, Inc., examined medical and indemnity cost projection for pain cases using a sophisticated and rigorous full cost methodology. The results shed new light on the effectiveness of industry-standard chronic pain programs and the opportunity for savings.

The substantial reduction from pre- to post-medical and indemnity cost projection on a random sample of pain cases managed by Paradigm Management Services raises a number of important insights as to how an evidence-based, multidisciplinary approach may be the key to achieving better results. In fact, the findings show that Paradigm reduced lifetime cost projections by 40.9%.

More than one-quarter of Americans age 20 years and over suffer from chronic pain.

Study Findings

The findings show that Paradigm substantially reduced lifetime cost projections for the claims in the analysis. The 40.9% reduction was the result of reductions in a number of cost elements, including:

- Physician services including interventional procedures, such as injections and radiofrequency ablations
- Pharmaceutical expenses, especially opioid and other drugs prescribed for pain
- Implantation of pain pumps, spinal cord stimulators and other surgical interventions
- Future indemnity benefits

When future cost inflation is taken into account, the reduction in medical and indemnity cost was even higher at 43.1%. Even in cases where no specific future cost reductions were identified, clinical, functional and social stabilization was demonstrated in the files which have a likelihood of creating a significant avoided future cost.

Chart 1. Long Term Savings with Paradigm’s Management Non-Escalated for Cost Inflation

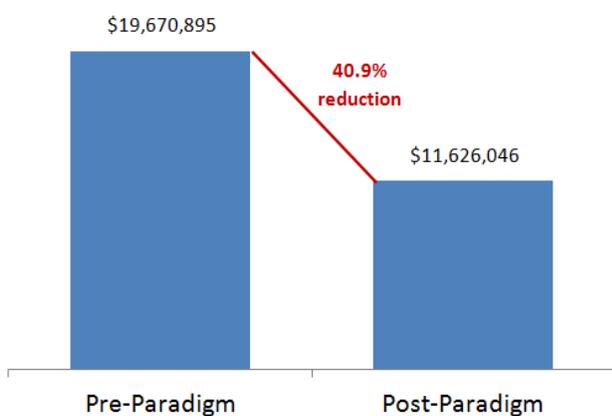
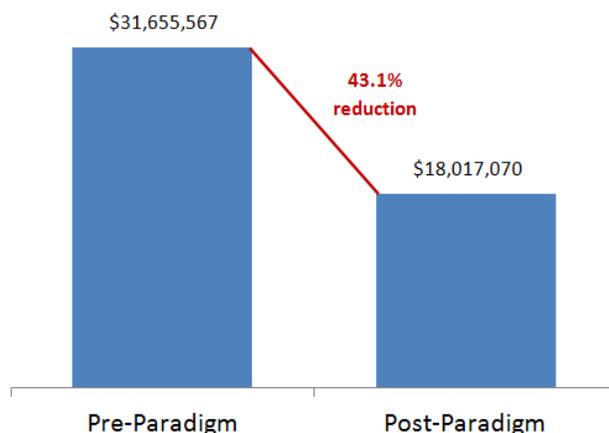


Chart 2. Long Term Savings with Paradigm’s Management Escalated for Cost Inflation



“When you take a comprehensive approach to pain management and address the clinical, psychological, and social needs of the patient, everything else follows,” says Stuart Sweetser, Paradigm Senior Vice President of Pain Clinical Operations. “This approach, which we call Systematic Care ManagementSM, has been very successful for pain cases which are beyond the acute stage and continue to generate significant dysfunction for the injured person and medical costs for the payor.”

An evidence-based, multidisciplinary approach may be the key to achieving better results.

Study Scope

Milliman reviewed a random set of pain management cases from Paradigm’s database based on the following criteria:

- Medical management was completed during calendar years 2004-2010.
- The original injury was the result of a work accident resulting in pain in at least one body part, including slip, fall and being struck by an object.

- The injury status was considered chronic in duration as it was past the normal time period for acute pain. Specifically, the injured worker was at least four months post injury at time of referral.
- The claim had never before been managed by Paradigm.
- The Paradigm management period for the otherwise randomly selected claims ranged from 3 to 24 months with an average of 10.5 months.
- The Paradigm program was completed.
- The cases studied were predicted to be similar to future cases Paradigm expects to undertake, thereby representing Paradigm’s pain management product.

The above criteria yielded 50 cases with the following diagnoses and demographic data:

Table 1. Cases Included in Study	
Claims by Injured Body Part	Number
Back	34
Neck and head	5
Upper extremity: shoulder, elbow, wrist and hand	4
Lower extremity: Hip, knee, ankle and foot	5
Other	2
Total	50

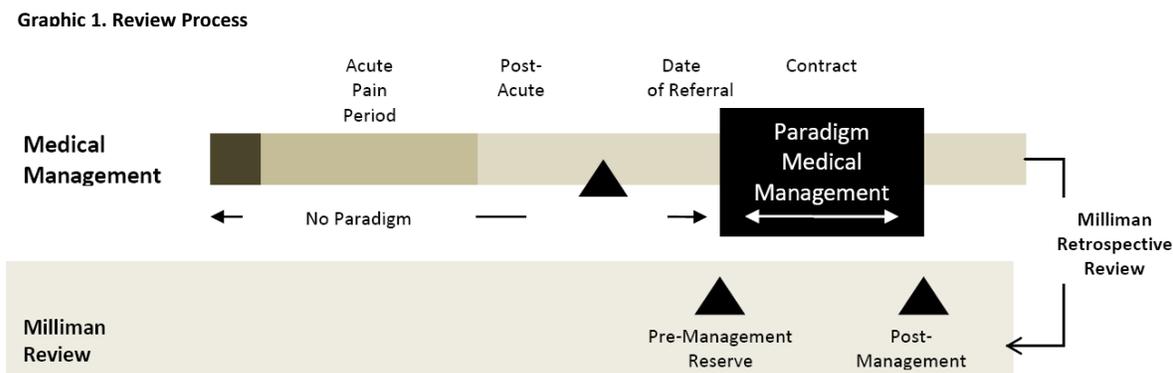
Table 2. Demographic Variables				
Demographic Variable (N = 50)				
Sex		<u>Male</u>	<u>Female</u>	
		26	24	
Date of Loss to Contract Start in Years (Mean = 5.08 years)	<u>(<1)</u>	<u>(1-5)</u>	<u>(5-10)</u>	<u>(>10)</u>
	14	17	9	10
Age (in years)	<u>(18-25)</u>	<u>(26-35)</u>	<u>(36-45)</u>	<u>(46-55)</u> <u>(56+)</u>
	2	7	18	17 6
Education (in years)	<u>(4-8)</u>	<u>(9-12)</u>	<u>(13-16)</u>	<u>(16+)</u> <u>(U/K)</u>
	1	28	20	0 1
Region of the Country	<u>Northeast</u>	<u>Southeast</u>	<u>Midwest</u>	<u>West</u>
	9	15	10	16
Attorney Involvement		<u>Yes</u>	<u>No</u>	
		26	24	
Occupations	<u>Skilled Trades</u>	<u>Trucking</u>	<u>Labor/Construction</u>	<u>Managerial/Sales</u>
	27	3	7	1

The types of claims covered in the study are familiar to insurance carriers and self-insured employers—specifically post-acute claims that are hard to resolve, long term and high cost with expenses that arise from the payment of pain drugs, associated doctors visits, extensive tests, the implantation of pain pumps, spinal cord stimulators and other surgeries over the life of the claim.

Study Methodology

For each case, Briscoe prepared a pre-contract cost projection assuming the claim would continue to be handled according to general industry standards. He then took these same cases, post Paradigm management, and prepared another cost projection using the same methodology.

Briscoe and his team at Milliman, claims consulting experts with decades of claims administration and claims operational expertise, employed a combination of cost estimate methodologies and proprietary computer software tools to produce the pre- and post-contract cost estimates for each claim reviewed. Unlike industry standard methods, Milliman’s cost projections break each claim into multiple cost elements, achieving a higher level of flexibility and accuracy. Moreover, Milliman claim experts will project long term or lifetime medical costs when warranted, which is particularly important for claims that have been open for more than a few years for which high cost, addictive pain medications are being prescribed.



Milliman, among the world's largest independent actuarial and consulting firms, provides independent consulting services and products on a fee-for-service basis, but does not act as an agent, broker, reinsurance intermediary, third party administrator or adjuster, nor does Milliman accept any form of contingency or brokerage compensation. This allows Milliman to provide completely independent and objective analyses and opinions.

While Milliman, in preparing cost estimates, strove to assess the facts of each claim using observed, sound, industry practices, all findings are based on their best professional judgment. Since the analysis is based on a sample of claims, the results are also subject to variability; the actual results for any claim could differ in either direction from the findings. Lastly, in many cases, Milliman was not able to trace the development of individual claims after Paradigm had fulfilled its contract. There are other sources of uncertainty and additional caveats in their full report.

The Paradigm Approach

When Paradigm manages complex chronic pain cases characterized by multiple pain diagnoses, many with high residual costs and spend rates, they significantly reduce total estimated future costs.

These improved financial outcomes are a byproduct of leading clinical outcomes, which Paradigm achieves through its Systematic Care ManagementSM model. This comprehensive approach addresses all aspects of chronic pain, including the most appropriate clinical treatment facility and medical provider, psychological and social sequelae. Paradigm's pain team ensures timely and appropriate multidisciplinary treatment to achieve the desired results and avoid a long tail of medical and indemnity costs for payors.

Background Information

For more information, please contact Kevin Turner at 925-677-4835 or kevin.turner@paradigmcorp.com. You may also visit Paradigm's Website at www.paradigmcorp.com. A copy of Milliman's full report is available upon request.

¹ National Centers for Health Statistics, Chartbook on Trends in the Health of Americans. 2006. Special Feature: Pain. Accessed 2/18/2011.

<http://www.cdc.gov/nchs/data/hus/hus06.pdf>.

² Substance Abuse and Mental Health Administration, news release, Dec. 23, 2010

³ NCCI Workers' Compensation Prescription Drug Study, 2008 Update

⁴ USA Today, Prescriptions now biggest cause of fatal drug overdoses. Aug. 10, 2010. Accessed 2/18/2011. http://www.usatoday.com/news/health/2009-09-30-drug-overdose_N.htm.