

Innovations in Reducing Reserves

Study Finds Success Lowering Reserves on Complex Large Loss Claims

Within the halls of workers' compensation claims offices nationwide are thousands of unresolved complex large loss claims. These are the type of persisting claims with mounting expenses due to continuing medical complications and excessive pharmaceutical consumption. Often open for years, even decades, these claims are viewed by many to be lost causes, and the expenses associated with them to be a fact of life. However, a new research study shows that with the right medical management better clinical outcomes are possible and expense reductions of 29% can be achieved.

The study included pre- and post-Paradigm management projections of long term costs as projected by Milliman. The reductions included a number of cost elements, including:

- Physician services
- Pharmaceutical expenses
- Attendant care
- Future indemnity benefits

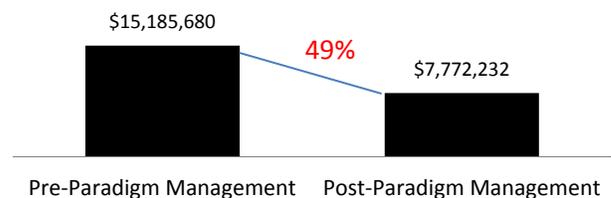
Moreover, the study shows a reduction in long term costs for persisting conditions associated with a number of primary diagnoses.

For spinal cord injuries the study found a 49% reduction in lifetime costs:

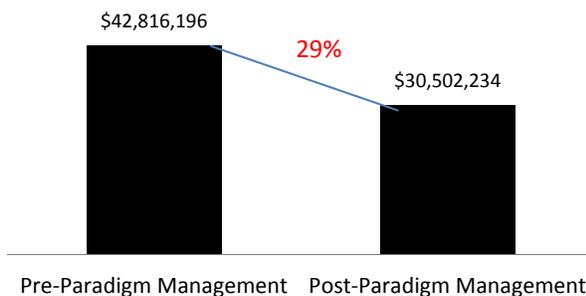
Study Findings

Milliman, Inc., one of the world's largest independent actuarial and consulting firms, looked at aged large loss claims with significant costs and found that cases managed by Paradigm Management Services experienced a 29% average reduction in lifetime projected costs.

Spinal Cord Injury

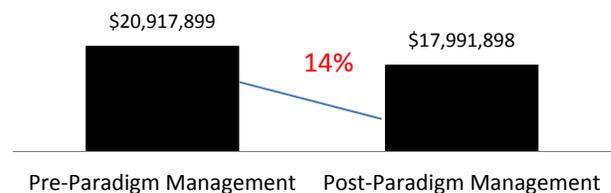


Reduction in Long Term Costs Estimates

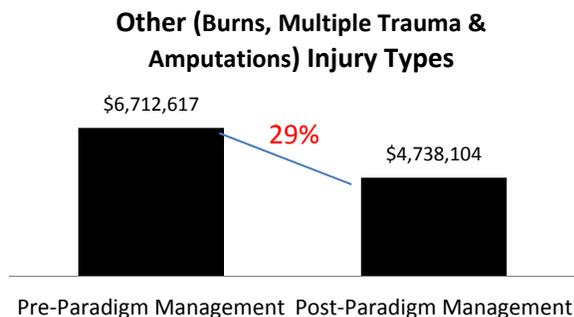


For traumatic brain injuries the reduction was 14%:

Brain Injury



For other diagnoses such as severe burns and amputations the reduction was 29%:



Scope of Reviewed Claims

Milliman reviewed cases where Paradigm provided medical management after the initial treatment phase. Each case in the study met the following criteria:

- Medical management occurred during the years 2001-2009
- The original injury was catastrophic in nature or the result of previously failed treatment
- The injury status was considered chronic in duration (i.e. injured worker was at least nine-months post original catastrophic injury)
- Paradigm never managed the claim before
- The Paradigm management period was one year
- The case was closed (i.e. contract completed)

Milliman undertook the review in a two-step retrospective process. First, Milliman reviewed the documents prepared by Paradigm up to the point of issuing the contract and prepared a pre-contract cost projection assuming the claim would continue to be handled according to general industry standards.

Milliman then reviewed Paradigm's post-contract report for each claim and determined changes to the initial cost projection indicated by the post-contract status of each claim.

These criteria yielded 30 cases with a range of diagnoses, including traumatic brain injury, spinal cord injury, multiple trauma, amputation, burn and others.

The demographic data appears in table 1.

Table 1. Demographic Variables

Demographics Variable (n = 30)	Range				
Sex	<u>Male</u>	<u>Female</u>			
	27	3			
Date of Loss to Contract Submission (in years) (mean = 2.03; SD = 3.7)	<u>(1-3)</u>	<u>(3-6)</u>			
	25	5			
Age (in years)	<u>(18-25)</u>	<u>(26-35)</u>	<u>(36-45)</u>	<u>(46-55)</u>	<u>(56+)</u>
	1	8	9	7	4
Education (in years)	<u>(4-8)</u>	<u>(9-12)</u>	<u>(13-16)</u>	<u>(16+)</u>	<u>(u/k)</u>
	3	22	2	1	2
Region of the Country	<u>North</u>	<u>South</u>	<u>East</u>	<u>West</u>	
	1	15	9	5	
Attorney Involvement	<u>Yes</u>		<u>No</u>		
	23		7		

Methodology

For purposes of this study, Milliman only considered for initial cost projections those data elements relating to actual injured worker medical and psychosocial data, along with any actual paid claims data related to nursing and/or attendant care and per diem rates for residential care. For setting post-management cost projections, Milliman reviewed data for attendant and nursing care charges (where appropriate), physician visits and pharmacy utilization for the last three months of the contract. Milliman also considered Paradigm's Final Status Report, a client report that summarizes all medical interventions for an injured worker during the contract period, and any ongoing attendant and nursing care requirements, projected physician visits, medication regimen and therapy needs present at the time of case closure.

Milliman staffed the study with claims consulting experts with decades of claims administration and claims operational expertise. The team employed a combination of cost estimate methodologies and computer software tools to produce the pre- and post-contract cost estimates for each claim reviewed.

Milliman based the process upon the computation of cost estimates for each open element of a claim, including potential future elements for which no current payments or obligation exist.

A cost element may include indemnity benefits for temporary total disability, permanent partial disability or permanent total disability, medical elements for doctors' visits, surgical procedures, drugs, attendant care, prosthetic devices or any other medical procedures which can be separately quantified from the data.

Milliman valued each cost projection element employing a proprietary tool for setting case reserves and a standard set of data field entries:

- Element type (indemnity, medical, expense)
- Element pay status
- Begin payment date
- Periodic benefit paid
- Duration
- Gender of the claimant
- Relationship of the element payee to the claimant
- Probability of payment of the reserve element
- Reduction of payment by other parties

In addition to the element specific data fields, certain global fields contain settings used by all elements:

- Mortality table (US Lives 1999 Male and Female)
- Valuation date: The age of the claimant as of the valuation date is dependent upon the valuation date set and the claimant's date of birth.
- Medical escalation rates

Certain assumptions normally set via a global field used by all elements in all claims being valued can be overridden by an element specific field including:

- Present value discount rate
- Medical escalation
- Mortality discount
- Mortality rating

In preparing cost estimates, Milliman strove to assess the facts of each claim using observed, sound industry practices. All findings are based on the author's best professional judgment.

Ultimate Findings

Milliman's final cost estimates indicate that Paradigm's medical management model reduced total long-term non-escalated future costs by 29% on average. This is a significant achievement for catastrophic cases with multiple diagnoses and high residual costs and spend rates. Table 2 documents the percent cost savings by diagnosis.

Table 2. Future Cost Savings By Diagnosis

Diagnosis	Savings Including Medical and Indemnity Benefits
TBI (n = 16)	14%
SCI (n = 4)	49%
Multiple Trauma (n = 2)	43%
Amputation (n = 2)	27%
Burn (n = 1)	73%
Other (n = 5)	12%

The analysis covered cases which Paradigm managed using the Systematic Care ManagementSM methodology for a total of one year, between 2001 and 2009, in the Complex Large Loss Program. This 29% reduction in non-escalated medical and indemnity cost is even higher when one takes future cost inflation into account.

Background Information

For more information, or to get a copy of the complete study, please contact Kevin Turner at 925-677-4835 or kevin.turner@paradigmcorp.com.