

Managing the Impossible

Getting better results in returning catastrophically injured people to work

Catastrophic injuries take a major toll upon the injured worker, his or her future livelihood, and the bottom line of employers and insurers. From the injured person to their healthcare providers, all parties have an extensive list of needs that must be met for a positive outcome. Fortunately these disparate interests align as achieving the goal of better medical outcomes leads to earlier release to return to work and avoids a long tail of medical and indemnity costs.

The challenge lies in selecting the most appropriate course of treatment and evaluating the effectiveness of those programs. As healthcare spending continues to rise and risk management becomes increasingly important to a company's economic viability, the importance of making efficient healthcare decisions without compromising care intensifies. Risk managers know catastrophic and complex cases account for the majority of healthcare and indemnity spending and want to control these costs.

In a new independent study, Robert Briscoe and Christine Fleming, claim consultants with the actuarial and consulting firm, Milliman, Inc., examined medical and indemnity spending for catastrophic cases using a sophisticated full cost methodology to shed new light on how the industry performs. Their analysis points to a large opportunity.

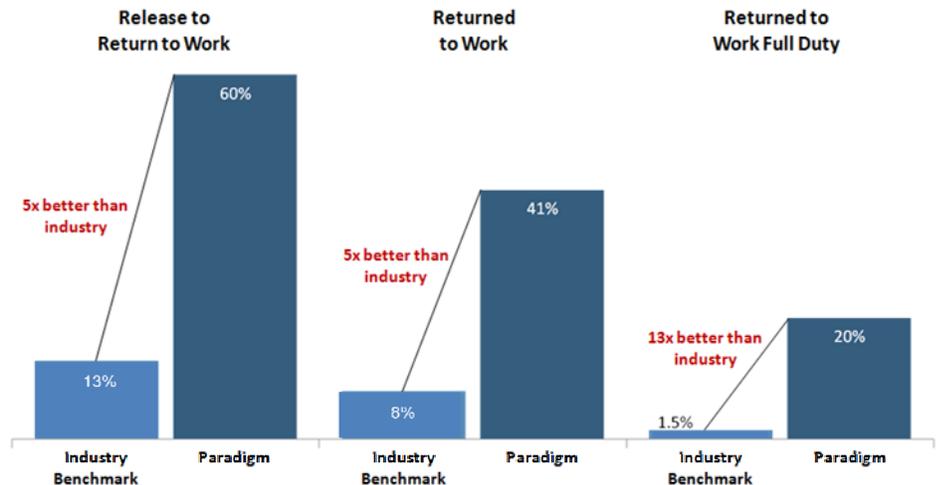
The wide variance identified between Paradigm Management Services and their benchmark-matched comparison case group raises a number of important insights as to how particular patterns of interventions

and infrastructure may be the key to getting better results. In fact, the study found Paradigm delivers five-times better medical outcomes and 36 percent lower costs.

Study Findings

Looking only at the claims that were catastrophic in nature, Briscoe and Fleming compared the outcomes of Paradigm's cases to Milliman's benchmark workers' compensation database. They found that Paradigm outperformed the benchmark in getting patients released to return to work, returned to competitive work, and returned to work in full duty by a significant margin.

Return to Work Results



"When you start by focusing on the patient's best interests and ensuring the right care, everything else follows," says D. Nathan Cope, M.D., a leading physician of head and spinal cord injuries and the

Chief Medical Officer of Paradigm Management Services. For the patient that means achieving a fast, high quality recovery; and for our customers, getting a patient healthy and back to work means avoiding a long tail of medical and indemnity costs."

Paradigm's experience saving insurers money was also independently verified. Briscoe and Fleming estimated that Paradigm delivered a total lifetime cost that was 36 percent lower than comparable claims in the workers' compensation industry.

"When we started Paradigm nearly 20 years ago, we knew the best way to get people healthy was to align the interests of everyone involved," says Dr. Cope.

"When an insurer turns a catastrophic case over to us, they pay us a fee up front to manage the case for as long as it takes to reach a specified outcome, such as getting the patient back to work. Because we are responsible for achieving that particular health outcome, we focus singularly on that goal. It can cost more as we invest in additional care during the acute period, but in the long run that pays off for everyone involved."

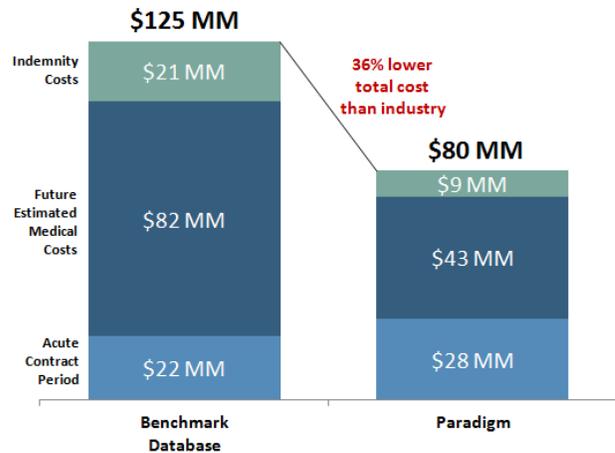
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- D. Nathan Cope, M.D.,
Chief Medical Officer

Paradigm Chief Financial Officer Kevin Fleming adds, "The fact that since its founding in 1991 Paradigm has delivered a success rate of more than 99 percent in achieving or exceeding targeted outcomes for the nearly 10,000 cases for which we have provided services is no accident.

"This is a company that is built to address the most complex and catastrophic cases. Everything about the company is oriented around helping patients get healthy. From our staffing model to the way in which we collect, manage and use data, we are designed to deliver these results. And we are thrilled Milliman was able to verify how very good our results have been."

Medical & Indemnity Costs Released to Return to Work

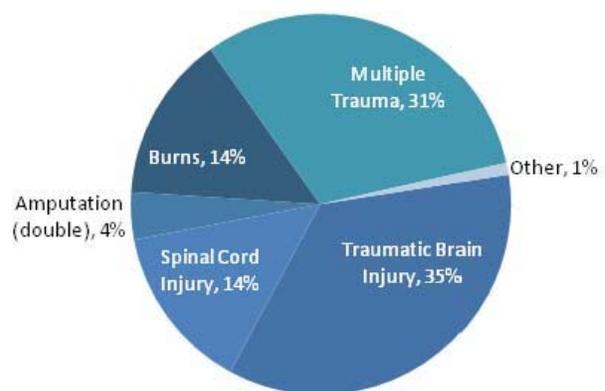


Study Methodology

To credibly share its results industry wide, Paradigm reached out to Milliman to validate the dramatic success it has experienced in managing traumatic brain injuries (TBI), spinal cord injuries (SCI), multiple traumas, amputations and burns.

For the study, Briscoe and Fleming selected a sample of 6 percent of completed Paradigm-managed contracts from 1999-2006. They compared this sample to outcome results in their benchmark database consisting of more than 60,000 workers' compensation claims. Of those, 563 fit the ICD-9 description matching Paradigm cases.

Sample Distribution by Injury Type



Attributes of Paradigm's Claims

The study looked at the most severe catastrophic injuries within the broader category of "serious/ catastrophic" injuries in the industry. The claims were the most complex, costly, uncertain, and likely to pose lifetime exposure for both indemnity and medical benefits.

The term "catastrophic," in this context includes claims that:

- involve multiple body parts or multiple symptoms;
- involve significant time in intensive care or high level monitoring units in a hospital;
- involve the use of multiple specialty physicians and healthcare professionals;
- can result in permanent effects on ongoing physical or psychological health;
- require immediate surgical intervention;
- require multiple surgeries over time;
- require comprehensive, lengthy rehabilitation;
- require retraining and education to restore pre-injury functions;
- require new skills to integrate to normal life functions;
- require long-term or life follow-up care; and
- involve lost time from work.

Many claims which resolve medically in short periods of time with relatively little medical treatment may exhibit a few of the above criteria. In contrast, catastrophic claims exhibit many or most of the criteria, have high early medical treatment costs (i.e., several hundred thousand dollars to more than half a million dollars), and a high potential to ultimately be awarded permanent total disability benefits.

It should be noted that all of the cases reviewed exhibited the characteristics of a catastrophic claim by any accepted standard. Claims characteristics included:

- spinal cord and serious brain injuries, severe burns, and multiple traumas;
- complex injuries requiring multiple levels of long-term medical treatment;

- high medical costs in the early stages of the claim (of the reviewed claims, the claim with the lowest contract amount was for approximately \$62,000 of medical costs in the first nine months and the claim with the highest contract amount was for approximately \$1.5 million in the first 18 months); and
- high projected medical costs (in the hundreds of thousands, often more \$1 million).

Paradigm's experience saving insurers money was independently verified. Briscoe and Fleming estimated that Paradigm delivered a total lifetime cost that was 36 percent lower than that for comparable claims in the workers' compensation industry.

Return to Work Comparisons

Release to Return to Work

The study demonstrates that patients who are managed by Paradigm are released by treating physicians to return to work more frequently than in similar claims in the benchmark database. Of the Paradigm files reviewed, 60 percent had a release to return to work by the end of the Paradigm contract period, whereas only 13 percent (141 out of 1,117) of the claims reviewed in the benchmark database with return to work information had a release to return to work. Obtaining a release to return to work from a qualified treating physician is valuable for positioning carriers to settle at a reduced amount for the indemnity portion of the claim, even if actual return to work does not occur.

Return to Competitive Employment

Additionally, injured workers managed by Paradigm do return to competitive work more frequently than similar claims in the benchmark database. Of the Paradigm files reviewed, 41 percent returned to work by the end of the Paradigm contract period, whereas only 8 percent of the claims reviewed in the benchmark database with return to work information had claimants who actually returned to work.

Return to Work Full Duty

Once there, injured workers returned to work full duty capacity 20 percent of the time. Of the claims reviewed in the benchmark database with return to work information in them, only 1.5 percent of injured workers returned to work full duty capacity.

Table 1 summarizes Paradigm's results for the claims reviewed by Briscoe and Fleming, by diagnosis. Table 2 summarizes the Paradigm sample, by diagnosis, as classified by Milliman after the review. Table 3 shows the Briscoe and Fleming cost estimate.

Comparison of Costs

Based on the information contained in the selected claim files, the combined estimated medical and indemnity incurred costs for the selected Paradigm files were 36 percent lower than costs for similar claims in the benchmark database.

And, while a few of Paradigm's clients paid more for medical in the acute phase of the claims (i.e., in approximately the first 18 months), all paid less for total medical costs (i.e., future medical costs).

By virtue of paying the Paradigm contract amount, the client is fixing, very early in the claim, the most volatile financial element of the claim. The early medical treatment costs may develop adversely and significantly in the first 12 to 24 months of a catastrophic claim.

According to Kevin Fleming, "There has never been an industry-wide study of this kind performed that identifies the benefits for catastrophically injured workers of having prompt access to uniformly excellent medical care.

"It is our hope that with this unbiased study we will continue to establish an industry standard for catastrophic care that will benefit everyone in the industry but most of all the patients we care for."

**Table 1: Return to Work Status
Claim Distribution by RTW Capacity**

Company Comparison	Total Number of Claims	Release to Return to Work	% RTW	Actual RTW	% Actual RTW	RTW Full Duty	%RTW Full Duty
Milliman Database	1,117	149	13.3%	87	7.8%	17	1.5%
Paradigm Contracts	80	48	60%	33	41.3%	16	20.00%

**Table 2: Return to Work Status
Claim Distribution by Nature of Injury**

	Diagnosis/Nature of Injury						Grand Total
	ABI	Amputation	Burn Injury	Multiple Trauma	Other	SCI	
Not Released to RTW/Not Emp.	11.11%	0.00%	9.09%	7.69%	0.00%	50.00%	15.00%
Not Released to RTW/None Anticipated	25.93%	0.00%	27.27%	30.77%	0.00%	16.67%	25.00%
Released to RTW/Emp. w/o restrictions	18.52%	0.00%	54.55%	19.23%	100.00%	0.00%	21.25%
Released to RTW/Emp. w/ restrictions	25.93%	33.33%	9.09%	19.23%	0.00%	16.67%	20.00%
Released to RTW/Not Emp.	14.81%	66.67%	0.00%	23.08%	0.00%	0.00%	15.00%
Released to RTW/Voc. Rehab	3.70%	0.00%	0.00%	0.00%	0.00%	16.67%	3.75%

**Table 3: Comparison of Paradigm to Benchmark
Medical and Indemnity**

	Milliman Database Claims	Paradigm Contracts	Percent Difference
Contract Price Paid	\$21,303,642	\$28,420,280	33.4%
Estimated Future Medical Costs	\$81,767,716	\$42,599,737	-47.9%
Total Medical Incurred	\$103,071,358	\$71,020,017	-31.1%
Total Indemnity Costs	\$22,313,576	\$9,347,909	-58.1%
Total Costs	\$125,384,934	\$80,367,926	-35.9%
Avg. Medical Cost per Claim	\$1,662,441	\$1,145,484	-31.1%
Avg. Indemnity Cost per Claim	\$359,896	\$150,773	-58.1%
Avg. Cost per Claim	\$2,022,338	\$1,296,257	-35.9%

Background Information

For more information, please contact Kevin Turner at 925-677-4835 or kevin.turner@paradigmcorp.com.

D. Nathan Cope, M.D., founder and Chief Medical Officer at Paradigm, brings more than 30 years of career experience in catastrophic care and is a nationally recognized physiatrist and psychiatrist. Dr. Cope has specialized in catastrophic head and spinal cord injury treatment, and performing and publishing seminal research on treatment and outcomes. Prior to starting Paradigm in 1991, Dr. Cope held senior medical and management positions at some of the country's leading hospitals, including Chief of Rehabilitation at Palo Alto Veterans Administration Hospital; Chief of Physical Medicine and Rehabilitation at Stanford University Medical Center; and Chief of the Brain Injury Program at the National Rehabilitation Hospital in Washington, D.C. He has lectured throughout the world on catastrophic head and spinal cord injury treatment, and managing catastrophic care in workers' compensation and managed care environments. Dr. Cope has served on many national committees, panels and boards. Dr. Cope earned his BA from Stanford University and his M.D. from Ohio State University, both with honors. Dr. Cope may be reached at nathan.cope@paradigmcorp.com.

Kevin Fleming brings more than 25 years of healthcare and financial services experience to the role of acting CEO for Paradigm Management Services. Prior to joining Paradigm, Mr. Fleming held senior executive positions with Ernst & Young, Consultancy Services, and Electronic Data Systems. In these roles he served some of the largest healthcare, banking and insurance companies in the U.S. His business experience includes CEO/CFO roles, mergers and acquisitions, P&L ownership, large scale business transformations and turn-around situations. He has served on the Bay Area Council board of directors and is a member of the Financial Executives Institute. Mr. Fleming earned BS degrees in both accounting and finance with honors from Oregon State University. He is a licensed CPA and member of both the AICPA and California State Society of CPAs. Mr. Fleming may be reached at kevin.fleming@paradigmcorp.com.

Robert Briscoe is a Milliman claims consultant in New York. He specializes in the valuation and cost determination of individual large and long-term workers' compensation claims. He has extensive experience in analyzing the effects of law changes on future workers' compensation costs and in evaluating underwriting prospects for employer classifications with exposure to long term/high cost claim payout potential. Mr. Briscoe conducts claim reviews for a variety of clients in all U.S. jurisdictions to assess case reserve adequacy, claim handling, and case management relative to best practices and industry standards. He has developed commercial software to manage and case reserve claims, and has collected workers' compensation data for thousands of claims.

Christine Fleming is a claims consultant and an actuary in Milliman's Boston office. Prior to joining Milliman 12 years ago, she was a lawyer at a national insurance coverage defense firm. She has extensive experience conducting claim reviews for workers' compensation, general liability, professional liability, and mass tort (including pollution and asbestos) claims. Ms. Fleming is an Associate of the Casualty Actuarial Society and Member of the Academy of Actuaries, and performs actuarial analyses of property/casualty lines for various self-insureds, risk retention groups, captives and other entities.

Briscoe and Fleming point out their analysis is based on a sample of claims, and as such, the results are subject to variability; the actual results for any claim could differ in either direction from their findings. Also, in many cases, they were 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 report.

Paradigm Management Services provides catastrophic and complex case management services for traumatic brain injuries, spinal cord injuries, amputations, burns, wounds, post-traumatic stress disorder, and chronic pain. As the nation's leading provider of complex and catastrophic medical management, Paradigm serves as an extension of its clients' case management process, bringing nationally recognized expert doctors and specialists, the best network of care facilities in the country, and 17 years of clinical data to guide decisions to deliver exceptional health and financial results.