

Comprehensive Catastrophic Care Management Project

2017 Report to the Legislature

January 2018

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Executive Summary

Introduction

A 2016 supplemental budget proviso¹ approved by the Washington State Legislature funded a pilot project in which the Department of Labor & Industries (L&I) is to partner with an experienced firm or firms to manage care for catastrophically injured workers. The proviso also includes requirements intended to ensure that catastrophically injured workers receive the highest quality care and timely and effective claim resolution.

L&I is pleased to provide the second annual report on the progress of the pilot program. Reports on the program will continue annually through either December 2019, or the last December following termination of the contracts. <u>The December 2016 report is available on L&I's website:</u> http://www.lni.wa.gov/Main/AboutLNI/Legislature/PDFs/Reports/2016/CompCataCareMngmntPrjct .pdf.

What is a catastrophic injury?

For the purposes of this report, a catastrophic injury is defined as:

- A work-related injury for which L&I assumes responsibility,
- An injury that requires hospitalization within 24 hours, and
- An injury that requires at least four consecutive days of hospitalization.

L&I currently receives fewer than 250 catastrophic claims annually.

Comprehensive Care Management Plan

In October 2015, following a 2014 Gap Analysis identifying strengths and gaps in the care of catastrophically injured workers, L&I developed and began implementing a five-point Comprehensive Catastrophic Care Management plan to improve the care of Washington's most severely injured workers. The plan's goals are to:

- 1. Increase use of **external nurse case management** services for catastrophic claims.
- 2. Create an internal L&I referral team to medically manage catastrophic claims.
- 3. Improve outcomes and quality of care and prevent disability for injured workers through **catastrophic care coordination.**
- 4. Establish Centers of Excellence for catastrophic injuries.
- 5. Conduct retrospective and prospective evaluations of catastrophic care management.

¹ 2ESHB 2376, section 217(8)

2017 progress

L&I began systematic identification and proactive monitoring of catastrophic claims in late 2015. Through August 2017, 224 claims occurred. More than half of these were "multiple trauma," meaning multiple injuries such as more than one injured limb or major crush injuries. The four other injury types² are much less common, representing between four percent and 15 percent of claims. L&I continues to see an overall decline in catastrophic claims, following a trend over more than 10 years in which claims dropped from around 400 per year to about 150 per year now. Catastrophic claims are now typically identified within days of hospitalization, and are immediately assigned to the catastrophic claim management team focusing solely on catastrophic cases. Communication, assessment of needs, and services such as nurse case management occur earlier, and the claims are proactively monitored with physician oversight.

Building on the significant strides made in 2016, L&I continued to make progress toward meeting each of the five goals of the Comprehensive Catastrophic Care Management plan in 2017:

- L&I continued to work with five established nurse case management (NCM) firms with experience in catastrophic injury management. These firms provide nurse case management and life care planning services to catastrophically injured claimants.
- The department's internal group of claim managers and occupational nurse consultants (ONCs) handling catastrophic claims changed during 2017. Initially composed of seven claim managers and six ONCs who managed catastrophic and other claims, the team now consists of two claim managers and one ONC focused solely on catastrophic claims. This adjustment has helped streamline workflow and aid in decision-making. The larger "catastrophic team" within the Office of the Medical Director (OMD) continues to work with Occupational Health Management System (OHMS) team members to expand existing technology systems enabling catastrophic claim tracking and management.
- L&I continued to engage with internal and regional staff to more clearly identify and define care coordination roles. The catastrophic team completed the Discharge Planning Gap Analysis, a detailed report that provides insight into variations in the discharge process and coordination across the care continuum. This will spur further work to address the identified issues. The catastrophic team, collaborating with the vocational rehabilitation team, also decided to increase access to Progressive Goal Attainment Program (PGAP) referrals for catastrophically injured workers. PGAP is an evidence-based treatment program for reducing disability associated with pain, depression, cancer, and other chronic health conditions.

² Other catastrophic injury types are major burns, spinal cord injuries, amputations, and traumatic brain injuries.

- A Center of Excellence for burn care was established in February 2017 at Harborview Medical Center. This center has provided care for 18 injured workers as of November 2017. The Center of Excellence in Amputee Care, also at Harborview Medical Center, continues to excel and has provided care for 32 injured workers as of November 2017.
- Injured worker enrollment in the University of Washington (UW) evaluation of catastrophic care began in late 2016 and has continued throughout 2017. The UW study team contacts and evaluates injured workers soon after injury and every six months thereafter to assess functional improvements and mental and social functioning.

2018 goals

L&I expects to continue making significant progress on the Comprehensive Catastrophic Care Management plan in 2018:

- L&I's team of claim managers and occupational nurse consultant will continue to manage catastrophic claims.
- The contracted external NCM firms will continue to be assigned catastrophic claims as needed.
- L&I will evaluate care coordination provided by NCM firms to identify areas of strength or deficiencies that need to be further addressed.
- Catastrophic team members are evaluating best approaches to provide targeted interventions for the remaining injury types, which may include additional centers of excellence. These injury types are multi-trauma, spinal cord, and traumatic brain injuries.
- The prospective evaluation will continue to enroll catastrophically injured workers until April 2018. Worker follow-up will continue until every enrolled participant accrues 18 months of follow-up, which will occur in October 2019.

Introduction

Washington's workers' compensation system provides benefits to workers who suffer from an occupational disease or work related injury. It pays for medical treatment and partial wage replacement, and provides disability benefits.

The 2016 supplemental budget passed by the Washington State Legislature funded a pilot project to manage care for catastrophically injured workers through a Comprehensive Catastrophic Care Management plan that ensures these workers receive the highest quality care and timely and effective claim resolution. A catastrophic injury is:

- A work-related injury for which L&I assumes responsibility,
- An injury that requires hospitalization within 24 hours, and
- An injury that requires at least four consecutive days of hospitalization.

L&I currently receives fewer than 250 catastrophic claims annually (down from a high of 415 in 2007).

The pilot project funded by the legislature aims to address gaps identified in a 2014 L&I evaluation of the care received by catastrophically injured workers (Catastrophic Claims Gap Analysis). This project also provides a more integrated and formalized role for L&I staff with clinical expertise in the medical management of catastrophic claims so L&I can ensure the highest quality health outcomes and reduce disability and time-loss for catastrophically injured workers.

This report summarizes the progress L&I made in meeting the pilot project goals during 2017 and identifies planned next steps for 2018.

Progress and Achievements in 2017

L&I began systematic identification and proactive monitoring of catastrophic claims in late 2015. Through August 2017, 224 claims occurred. More than half of these were "multiple trauma," meaning multiple injuries such as more than one injured limb or major crush injuries. The four other injury types³ are much less common, representing between four percent and 15 percent of claims. L&I continues to see an overall decline in catastrophic claims, following a trend over more than 10 years in which claims dropped from around 400 per year to about 150 per year now. Catastrophic claims are now typically identified within days of hospitalization, and are immediately assigned to the catastrophic claim management team focusing solely on catastrophic cases. Communication, assessment of needs, and services such as nurse case management occur earlier, and the claims are proactively monitored with physician oversight.

This section of the report describes actions L&I took during 2017 to achieve the goals of the proviso contained in the 2017 supplemental budget:

- 1. Increase use of external nurse case management services for catastrophic claims.
- 2. Create an internal L&I referral team to medically manage catastrophic claims.
- 3. Improve outcomes and quality of care and prevent disability for injured workers through **catastrophic care coordination.**
- 4. Establish Centers of Excellence for catastrophic injuries.
- 5. Conduct retrospective and prospective evaluations of catastrophic care management.

EXTERNAL NURSE CASE MANAGEMENT

L&I continues to partner with five nurse case management firms with which the department contracted in 2015 and 2016. These five firms continued to function as defined in their contracts throughout 2017.

L&I's Catastrophic Claims Gap Analysis showed that between 2005 and 2011, only 5.3 percent of catastrophic claims were assigned a nurse case manager (NCM). The department has shown that assigning NCMs to cases involving certain injury types and severity or other complications related to an injured workers' claim can improve workers' experiences and outcomes. L&I plans to continue to

³ Other catastrophic injury types are major burns, spinal cord injuries, amputations, and traumatic brain injuries.

assign catastrophic claims to receive nurse case management services as deemed appropriate by the catastrophic care occupational nurse consultant (ONC).

Hourly rate case management

L&I refers cases to three hourly rate firms – Rainier Case Management Inc., Coventry, and Stubbe and Associates. Work activities are assigned to each firm's NCMs and overseen by L&I's ONC.

Outcomes-based case management

L&I refers cases for outcomes-based management to two firms: Qualis Health and Paradigm Outcomes. Each of these contracts is managed differently based on the specific injuries being addressed.

Qualis Health

The Qualis contract focuses on isolated spinal injuries and traumatic brain injuries. Qualis provides care management for a fixed case rate until the worker reaches "maximum rehabilitation," meaning the worker:

- Is discharged to appropriate long-term placement such as a home or residential facility after completing rehabilitation;
- Has achieved his or her vocational goals or has a vocational plan in place; and
- Has a life-care plan established when appropriate.

Desired outcomes are established in five areas:

- The ultimate expected level of recovery at the end of rehabilitation (approximately 18 months);
- Functional recovery milestones measured at discharge and at six, 12, and 18 months after injury;
- Successful achievement of all transitions identified in the patient care plan (i.e., transition from a long-term care facility to home);
- Evaluation for mental health services and receipt of appropriate services, if indicated; and
- Patient and family satisfaction.

If the desired outcomes are not achieved at maximum rehabilitation or by 18 months following injury, L&I and Qualis Health will evaluate the case to determine the reasons the outcomes were not met and to establish next steps.

As of November 2017, Qualis Health has accepted three referrals for management of catastrophically injured workers.

Paradigm Outcomes

The Paradigm Outcomes contract focuses on higher-severity catastrophic injuries.

Paradigm provides care management based on an individual outcome plan. This care management continues until the outcome selected by Paradigm and agreed to by L&I is achieved. The five potential outcomes are:

- Physiologic stability,
- Physiologic maintenance,
- Residential integration,
- Community integration, or
- Capacity to return to work.

Paradigm formulates a price for each plan that includes care management; estimated medical expenditures during the contract period; and a risk coefficient cost, which is a cost attributed to the amount of risk Paradigm assumes based on the outcome they propose.

Paradigm manages the case until the outcome is achieved for the agreed price, unless the plan is terminated early for reasons listed in the contract, such as substantial, documented noncompliance by the injured worker preventing Paradigm from medically managing the case.

As of November 2017, Paradigm Outcomes has accepted six referrals for management of catastrophically injured workers.

Figure 1 shows referrals made by L&I to NCM firms in 2017, the number of referrals accepted by the firms, and the average cost for each firm's NCM. For hourly rate case management firms, NCMs have so far spent an average of six months on care management. For outcome-based firms, NCMs expect to spend an average of 15-20 months. Some of this difference in the dollar amounts identified for each contract is due to the fact that the hourly contracts have not yet fully matured, and we expect the average for hourly NCM to increase.

The cases reflected in this chart are not mature enough to enable reporting on medical expenditures over a similar time period from date of injury. That information will be included in the next report.

External Firm	# Referred	# Accepted	Average NCM costs	Average Risk Coefficient cost
Stubbe (hourly rate)	40	40	\$15,000	Not Applicable
Rainier (hourly rate)	30	23	\$17,000	Not Applicable
Coventry (hourly rate)	43	36	\$8,500	Not Applicable
Paradigm (outcome- based)	15	6	\$71,450	\$252,000
Qualis (outcome- based)	5	3	\$67,000	Not Applicable

Figure 1: NCM firm referrals and costs

The internal referral team is in near-daily contact with NCM firms to discuss cases and any issues as they arise. L&I is reviewing deliverables to address some variability in timing, and will be emphasizing the required reporting on functional status to improve timely and consistent receipt of information.

Webinars and training with nurse case management firms

The L&I team has hosted four communication webinars since December 2016 for the nurse case management firms. Webinar topics have included appropriate billing practices, roll-out of updated report templates, communication requests for the internal team, opioids authorization, over-the-counter coverage reminders, and Progressive Goal Attainment Program (PGAP) referrals.

L&I REFERRAL TEAM CLAIM MANAGEMENT

A dedicated internal team of two experienced claim managers and an occupational nurse consultant handles catastrophic injury claims, with the help of expanded technology systems to track and manage the claims.

Changes resulting from the pilot project

Prior to this pilot project, L&I was notified of catastrophic claims by email, with no way to monitor them beyond the general systems in place for all claims. Like most other claims, catastrophic claims were assigned to claim managers (CMs) based on the worker's address and the CM's experience level, with no way to take into account the unique needs of these seriously injured workers. There

was no tracking mechanism to help proactively manage the worker's care and address care coordination, medications and discharge planning. In addition, when a claim transferred to a different unit and claim manager, the occupational nurse consultant (ONC) also changed, resulting in a loss of continuity. There were also no standards specific to catastrophic claims for assigning the claim to an NCM.

Now, L&I uses a centralized system to track and proactively monitor catastrophic claims, and a catastrophic "flag" functions within the claim management system. Catastrophic claims are assigned to the specific, dedicated catastrophic team,⁴ which oversees and manages newly identified catastrophic claims. The ONC is now notified of the catastrophic claim at the same time as the dedicated CM. This allows the ONC to take immediate action and to monitor the case so that coordination of expected length of hospital stay and discharge planning can occur in a timely manner. Upon initial assignment of the catastrophic claim, the ONC reviews the claim and assigns a nurse case manager to work directly with the injured worker in their community, if needed.

What difference have these changes made?

A recent case that involved a 69-year-old man highlights the value of L&I's efforts. The injured worker fell and received a significant traumatic brain injury. The L&I team acted quickly and the ONC immediately assigned a nurse case manager. While the worker has not experienced complete recovery, he improved significantly and has regained some independence. Through care coordination efforts that included identifying the worker's priorities, L&I facilitated transferring the worker at the appropriate time to a skilled nursing facility in California where he can be close to his family and friends.

Catastrophic claim data

Figure 2 shows the catastrophic claims, by injury type, identified and referred to L&I's catastrophic management team from October 2015 through August 2017. More than half are "multiple trauma," meaning multiple injuries such as more than one injured limb or major crush injuries. Other injury types are much less common; the next most frequent injury type is traumatic brain injury. L&I has tracked catastrophic claims since 2015 to ensure they are proactively identified; referred to the internal team; and monitored for patient discharges, transfers to other health care facilities, and return to work.

⁴ The 2016 report described the team as comprised of seven CMs and six ONCs. The make-up of the team has changed to a smaller group that allows these core individuals to focus only on catastrophic claims.

	Major Burn	Spinal Cord Injury	Amputation	Traumatic Brain Injury	Multiple Trauma	Other	Total
4Q15	6	1		9	28	1	45
1Q16	3	5	2	8	14	4	36
2Q16	2	1		3	26	4	36
3Q16	5	1	1	7	17	6	37
4Q16	1	3		4	20	6	34
1Q17		1	1	1	13	3	19
2Q17	2	6	4	6	16	7	41
3Q17	2	1	2	4	20	3	32
4Q17	1	1	1	2	12	4	21
Total	22	20	11	44	166	38	301

Figure 2: Catastrophic referrals by injury type

L&I's catastrophic care team carefully assesses an injured worker's need for nurse case management. Some catastrophic claims do not require NCM assignment, such as those in which the injured worker is clinically stable and an injury care plan is in place; other claims may be assigned an NCM later if current medical information is not complete or if claim allowance is still an issue.

Figure 3 shows the total number of catastrophic claims received by L&I in 2017 to date, and those that have been assigned to an external NCM firm. In 2016, 78 of 143 claims (55 percent) were assigned to an external NCM. Since January 2017, 38 of 113 claims (33 percent) have been assigned to an external NCM.

Figure 3: Catastrophic Nurse Case Management assignment – January – November 2017

Number of catastrophic claims	113
Number of catastrophic claims assigned an NCM	38
Number of catastrophic claims unassigned	75

CATASTROPHIC CARE COORDINATION

Following mapping of the various roles in care coordination throughout the care continuum and in different health care facilities, L&I's implementation of "best practices" in care coordination is now

well underway. Catastrophically injured workers are being identified sooner, which allows the L&I team to initiate best practice interventions more quickly. Each case is reviewed to identify service needs, including external NCMs which are assigned to the catastrophically injured worker earlier in the process, when appropriate. The team continues to collect data at key intervals in order to measure improvements in areas such as claim notification and discharge planning.

L&I staff members met with social workers at Harborview Medical Center in July 2017 to discuss discharge planning. Multiple copies of the newly created catastrophic injury pamphlet, "*L&I Workers' Compensation, We're Here for You, Information About Your Recovery Team*" (publication F242-429-000), were distributed to the social workers, who commended it as a useful means to circulate information about workers' compensation insurance claims.

L&I also completed a discharge planning gap analysis. Strategic objectives identified by the analysis are:

- Provide a seamless transition from acute care to the recovery phase,
- Reduce emergency department visits with fewer hospital readmissions, and
- Improve worker satisfaction by reducing barriers to care.

The analysis also identified some gaps in the discharge planning process that need to be addressed. For example, a hospital may plan to discharge a patient to home with a need for durable medical equipment; but the discharge plan might not be faxed to L&I until late on the day of discharge, meaning the needed equipment is not arranged in advance.

L&I's next steps will be to prioritize process improvements to help implement evidence-based best practices.

CENTERS OF EXCELLENCE

The aim of Centers of Excellence (COE) is to assure continuity in care -- especially long-term care that is often needed but not planned for -- where coordination is needed between an informed specialist and a community provider. L&I is committed to expanding the role of current providers of world-class trauma and rehabilitative services in Washington to be COEs for catastrophic injuries.

COEs must meet high standards, including national recognition for leadership in research, training and practice. Center physician leaders must be board-certified in physical medicine and rehabilitation, and have both statewide and national recognition as leaders and experts in their relevant field (for example, publications, expert panel participations, faculty appointments, research participation or quality improvement participation). A COE must have the capacity to provide expert services by physicians, a multi-disciplinary team or other health care professionals to respond to the complex challenges of a referral and for post-consultation care coordination, planning, and services. These services may include tracking, program evaluation, outcomes review and analysis.

COEs commit to provide timely, coordinated access to patient-centered, appropriate team-based, multi-disciplinary services. These services focus on comprehensive assessment, expert analysis and evidence-based treatment for work-related amputations. They are actively measured, monitored and adjusted to achieve key clinical targets such as return to work.

A COE for Amputations at Harborview Medical Center was established in 2016 and has been receiving L&I referrals since April 2016. In February 2017, a second COE, for care of burn patients, was established at Harborview. Standard referral criteria and processes are in place at these centers for both new claimants and those with claims already in the system.

L&I continues to have ongoing internal team discussions regarding the implementation of targeted interventions for multi-trauma, spinal cord, and traumatic brain injuries. The multi-trauma injury type is the most prevalent of these, with 55 percent of catastrophic claims in this category. Given the overall excellence of the Washington state trauma and rehabilitation system, however, there may be opportunities to institute a targeted intervention for this group that goes beyond a "brick-and-mortar" COE. For example, multi-trauma patients could benefit from an early consultation with a rehabilitation specialist, but may not need to receive ongoing treatment from a COE. L&I is working on several potential options, and will pilot interventions in 2018 after discussion with providers.

EVALUATION OF CATASTROPHIC CASE MANAGEMENT

The budget proviso also directed L&I to conduct an evaluation of nurse case management services. L&I and the University of Washington (UW) have signed a contract to conduct a prospective evaluation of catastrophic case management provided by the contracted firms. The overall purpose of this project is to critically analyze the effect of NCM assignment for workers who have experienced catastrophic work-related injuries. Before developing the evaluation plan, L&I conducted a rigorous retrospective analysis of past cases that met the current case definition of a catastrophic claim, to better understand trends in return to work and disability among these individuals.

The UW Institutional Review Board (IRB) approved the study protocol in September 2016; subject recruitment, enrollment, and data collection began in November 2016 and will continue through May 2018. Data collection will continue until all subjects have accrued 18 months of follow-up time, which should be completed by November 2019.

As of November 2017, 49 subjects have consented to participate in this evaluation. The UW research coordinator has attempted to contact 94 injured workers or worker families to invite study participation. Forty-four eligible injured workers declined participation, with 37 of those not responding. Of the 22 subjects who initially participated six or more months earlier, 68 percent have completed both their six-month and baseline evaluations.

The prospective component of the evaluation required extensive discussions between L&I staff and the UW research team. The contract clarifies and describes the agreed-upon procedures and

evaluation methods. Evaluated outcomes will be measured using transparent, validated, publicly available instruments.⁵ L&I will compare the patient-centered outcomes of this care management model with other strategies to improve care, and will publish the results to provide education about the best ways to achieve better outcomes for injured workers. L&I is in the second year of this four-year study.

The evaluation, as outlined in the IRB application, specifically aims to:

- Compare return to work outcomes as well as medical costs among catastrophic claims occurring before the implementation of nurse case management (July 1, 2014 to June 30, 2015) to those in the first year of nurse case management (July 1, 2016 to June 30, 2017). Claims occurring between July 1, 2015 and June 30, 2016 will also be evaluated for trends.
- Compare groups of subjects (in terms of demographics, injury type/severity, geographic location) that were accepted by nurse case management firms and those that were not accepted.
- Assess subject function at baseline and at six, 12, and 18 months post-injury using the World Health Organization Disability Assessment Questionnaire and the Community Integration Questionnaire.
- Assess patient expectation of recovery at baseline and at six, 12, and 18 months post-injury with the Functional Recovery Questionnaire, and determine how these expectations may be related to return to work.
- Compare functional improvements, patient satisfaction, and medical costs between patients provided different types of nurse case management at six 12, and 18 months post-injury.

⁵ Instruments to be used include a variety of scales specific to injury type, as well as the Patient Health Questionnaire (PHQ-9) and the Community Integration Questionnaire.

Goals for 2018

L&I is committed to continuing to improve care for catastrophically injured workers and ensuring that they receive the highest quality care and timely and effective claim resolution.

In 2018, L&I expects to make continued progress on the Comprehensive Catastrophic Care Management Project and meet the following goals of the project:

- L&I's internal catastrophic care team will continue to manage catastrophic claims. The team is now operational, with ongoing goals to enhance injured workers' experiences and improve the overall function of both the NCM firms and the overall project. L&I will continue to use its Occupational Health Management System, a web-based computer system that provides front-end case-management tools to help coordinate care to track claims. Internal staff will work together as needed to modify and improve this system to meet the evolving needs of this project.
- L&I will continue to work with the contracted external NCM firms as they seek to manage care and improve outcomes for catastrophically injured workers in appropriate cases. Firms will submit progress reports on case management processes and outcomes, and L&I will evaluate work products to ensure they meet the standards detailed in each individual NCM contract. L&I will make continuous improvements in NCM assignment, communication, and contracting as the department awaits the outcome of the UW study.
- L&I will prioritize findings identified in the Care Coordination Gap Analysis that will enable the department to provide more effective care coordination for injured workers.
- L&I's two existing Centers of Excellence will continue to see severely injured workers with burns and amputations. The department will collaborate with these centers as needed to assist in providing exemplary services to these individuals. L&I expects to develop additional Centers of Excellence specializing in other specific types of catastrophic injuries.
- The prospective evaluation pilot project will enroll newly injured workers through May 2018. The contracted NCMs as well as the UW study team will continue to evaluate these workers through 2018. L&I staff will communicate regularly with the research team regarding newly injured workers that meet the criteria to participate in the prospective evaluation. These functional outcome measures will be used to better understand the effectiveness of the various NCM firms, as well as the overall success of the project in improving injured worker outcomes.

Conclusion

Appropriate clinical input on workers' compensation claims is critical to ensure that injured workers receive timely, appropriate medical care and avoid unnecessary or harmful treatment. L&I is a national leader in health policies and strategies that guide workers to evidence-based care and keep our medical costs and growth below national trends.

By increasing care coordination, establishing a dedicated internal team of experienced staff, partnering with experienced firms to manage care for catastrophically injured workers, establishing Centers of Excellence, and comparing worker outcomes achieved using these types of care, L&I is consistently improving outcomes for workers with catastrophic injuries.

L&I's 2017 achievements are the foundation for additional work in 2018 and beyond to reduce disability for injured workers by improving the medical care they receive.