



Washington State Department of  
Labor & Industries

# **Comprehensive Catastrophic Care Management Pilot Project**

*2022 Final Report to the Legislature*

January 2023

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# Executive Summary

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The Washington State Department of Labor & Industries (L&I) is pleased to provide this seventh and final annual report on the progress of the Catastrophic Care Management pilot program for January through –November, 2022. In addition, it includes lessons learned and activities that are being integrated into the day to day work of the program to continue improving services to these workers and others whose injuries are not considered catastrophic.

The goal of this pilot is to improve care coordination for catastrophically injured workers so that they receive the highest quality care and timely and effective claim resolution. Through this pilot, a specialized clinical team determines if an injury meets the catastrophic designation and, if so, refers the worker to a nurse case manager (NCM). The most serious and rare cases – those considered not survivable - were not referred for nurse case management.

During the 2022 reporting period of January 1—November 30, 2022 the department identified 33 injured worker claims as catastrophic and all were assigned to a nurse case manager within this pilot project. Furthermore, from the start of the period in which L&I began systematically identifying catastrophic claims through November 30, 2022 a total of 554 claims accepted by L&I met the criteria for catastrophic injury.

## Goals and Accomplishments

During the pilot, the department identified four fundamental goals. Accomplishments for each of those goals include:

1. Increased use of **external nurse case management** services for catastrophic claims.
  - Continued the use of NCMs for catastrophically injured workers, ensuring effective care coordination as injured workers transition from acute care to the recovery phase.
  - Completed evaluation of NCM services provided by contracted firms.
2. Continued refining work of the **L&I clinical referral team** created to manage catastrophic claims.
  - Engaged with key claims and bill paying personnel and with regional occupational nurse consultants (ONCs) to provide more efficient care coordination.
  - Referred 35 catastrophically injured workers between December 1, 2017 and November 30, 2022 to the [Progressive Goal Attainment Program® \(PGAP\)](#) and assigned an activity coach. Of those, 26 attended an initial assessment and 20 completed PGAP intervention. PGAP combines reactivation with cognitive behavioral therapy.
  - Continued to use the Occupational Health Management System (OHMS) to improve catastrophic claim tracking and management.
3. Continued engagement with established **Centers of Excellence** for catastrophic injuries.
  - Worked with the Centers of Excellence for burns and amputations to create a care collaboration and specialty assistance resource in Washington.

4. Conducted a **formal evaluation** of catastrophic care nurse case management.
  - Contracted with the University of Washington (UW) to conduct a study to assess functional gains, community integration, and mental and social functioning of injured workers. This evaluation was completed by UW in October 2020. The study made the following general conclusions:
    - There is a high level of worker satisfaction with NCM services.
    - Workers who received NCM services had more severe injuries than workers who did not receive NCM services. There were no changes in the average duration of time loss or average health care costs after implementation of the NCM pilot for catastrophic injuries beyond the actual cost of NCM.
    - There was wide variation in the costs associated with various firms providing nurse case management.
    - The findings were critical in designing an RFP for acquisition of new nurse case management firm services, with one important finding being the high prevalence of chronic pain in this population.
  - The published evaluation can be reviewed on the University of Washington Environmental & Occupational Health Sciences Research page located [here](#).

L&I will continue to build upon the significant progress and achievements made during the duration of the pilot which created a new standard of care for catastrophically injured workers. Below is a high-level summary of lessons learned by the department as a result of the legislative support provided by this pilot:

- According to the UW evaluation, worker satisfaction and recovery improved when NCM resources are dedicated to injured workers' claims.
- External NCM are beneficial to catastrophically injured workers, and the department is continuing their use by extending contracts with external firms and increasing the number of firms contracted with to seven.
- NCMs are especially beneficial when injured workers transition from the acute to the recovery phase. They assist in acquiring durable medical equipment and organizing home and vehicle modifications; by anticipating these needs, the NCM ensures crucial transitions may be made efficiently.
- Early identification of catastrophically injured workers, through improved communication by ONCs with providers, results in better care coordination and immediate intervention earlier in the claim.
- In collaboration with Harborview Medical Center, two Centers of Excellence at UW clinics were established to provide specialty care and care coordination for workers with amputations and severe burns.
- Using a central claims unit dedicated to supporting catastrophically injured workers, and systematically tracking catastrophic claims has resulted in claim staff developing greater expertise in addressing the unique needs of catastrophically injured workers.

# Introduction

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Through the workers' compensation system, L&I is dedicated to helping injured workers heal and return to work. The quality of care and care coordination provided to catastrophically injured workers is a major factor in promoting healing, improving return to work outcomes, and preventing disability for these workers.

Washington's workers' compensation system provides benefits to workers who suffer from an occupational disease or work-related injury. Within this system, L&I pays for medical treatment, provides wage replacement and other benefits for disabled injured workers.

One small segment of injured workers served by L&I are those who are catastrophically injured on the job. The 2016 state supplemental budget 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, as well as timely and effective claim resolution.

The pilot project addressed gaps identified in a 2014 L&I evaluation of the care received by catastrophically injured workers. It also provided a more integrated and formalized role for L&I staff with clinical expertise in the medical management of catastrophic claims to help L&I ensure the highest quality health outcomes and reduce disability and lost work days for catastrophically injured workers.

## **What is a catastrophic injury?**

For the purposes of this pilot project, the identification of a catastrophic injury is an injury that:

- Requires hospitalization within 24 hours of the onset of a work-related injury, and
- Requires at least four consecutive days of hospitalization.

This definition was updated to recognize and incorporate clinical evaluation by trained medical professionals. This resulted in crucial interventions for workers with critical or long term needs. If the injury meets the criteria described above, the L&I clinical team does further medical review to determine whether nurse case management is warranted based on the nature and severity of the injury.

This report summarizes the progress made toward accomplishing the pilot project goals.

# Pilot Project Review and Summary

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L&I has been systematically identifying and proactively monitoring catastrophic claims since 2015. The process for determining whether a case is a catastrophic injury includes an initial medical review by the agency’s clinical review team. This team consists of occupational nurse consultants and a medical program specialist.

The clinical review team identifies catastrophic claims within days of a worker’s hospitalization, and immediately assigns the case to a “catastrophic team” consisting of a claim manager and an occupational nurse consultant (ONC). As a result, communication about the claim, including an assessment of the worker’s clinical needs, occurs earlier and more consistently. Claims are proactively monitored with oversight by an L&I ONC.

During the 2022 reporting period of January 1—November 30, 2022, the department identified 33 injured worker claims as catastrophic and all were assigned to a nurse case manager within this pilot project.

From the start of the period in which L&I began systematically identifying catastrophic claims through November 30, 2022, a total of 554 claims accepted by L&I met the criteria for catastrophic injury. Of these, more than half (52 percent) were “multiple trauma,” meaning they involved significant injuries to more than one area of the body. The remaining injury types included brain injuries, major burns, spinal cord injuries, amputations, and “other” types of injury. The “other” category identifies claims not represented by the more prevalent injury types. Examples of “other” catastrophic injuries are severe respiratory distress caused by chemical exposure, anaphylaxis, internal organ damage, and single-limb injuries with significant tissue damage.

Initially, the project adopted a five-point Comprehensive Catastrophic Care Management plan to improve the care of Washington’s most severely injured workers. The agency later determined that one of the plan’s goals represents the broader objective of the project, and so the plan was reorganized to the following:

**Broad Objective:** *Improve outcomes and quality of care, as well as prevent disability for injured workers through catastrophic care coordination by:*

1. Increasing use of **external nurse case management** services for catastrophic claims.
2. Creating an **internal L&I referral team** to medically manage catastrophic claims.
3. Establishing **Centers of Excellence** for catastrophic injuries.
4. Conducting a **formal evaluation** of the catastrophic care management pilot.

## EXTERNAL NURSE CASE MANAGEMENT (NCM)

The department has found that assigning NCMs to workers with catastrophic injuries can improve workers' experiences with both the department and their health care providers, which positively impacts L&I's efficiency with claim management and medical authorizations.

After successfully procuring seven NCM firms with a new RFP in 2021, L&I began referring catastrophic cases to these firms in May 2021. Three of the prior contracted firms successfully rebid, and L&I welcomed an additional four firms to the Catastrophic Pilot Project. This is the highest number of firms that the agency has contracted with since the start of the pilot.

These contracts ensure the availability of nurse case management for catastrophically injured workers through 2024, with the option to extend to 2030. In keeping with the prior contracting cycle, L&I offered two payment models for reimbursement of NCM services; out of the seven contracts, six firms elected the hourly model and one firm elected a value based payment model.

### Hourly rate case management

As of May 2021, L&I began referring catastrophically injured workers to six firms that bill based on a negotiated hourly rate. These six firms are: Broadspire, EK Health, Genex, Nurseworks NW, Rainier Case Management Inc., and Stubbe and Associates. Work activities are assigned to each firm's NCMs and are overseen by L&I's catastrophic project staff and unit ONCs.

### Value-based case management

In May 2021, L&I also began referring catastrophically injured workers to a case management firm that bills L&I based on the estimated value of services provided—Comagine Health. This value-based system includes a negotiated lump sum amount paid out periodically, as the worker completes each phase of recovery. This is part of the department's commitment to exploring a variety of reimbursement models.

### Nurse case management referrals

Table 1 shows referrals made by L&I to NCM firms in the first contract cycle (2015-2021). This table captures historical data from the outset of this pilot project. The table shows the number of claims referred to and accepted by each firm.

**Table 1: NCM firm referrals and costs from 2015-2021**

External Firm	Referred	Accepted	Average Length of NCM	Average NCM Costs	Average Cost to Assume Risk	Additional Costs Borne By
Stubbe	87	73	12 Months	\$14,000	NA	L&I
Rainier	71	52	12 Months	\$20,000	NA	L&I
Comagine	24	11	19 Months	\$73,000	NA	L&I
Paradigm	*34	18	29 Months	\$68,100 **\$13,300	***\$245,000	Paradigm

\*L&I declined the proposed case rate on 16 cases and reassigned them to another firm if NCM services were still necessary.

\*\* Refers to the average NCM cost to claim for work done by Paradigm on 11 declined cases over the initial 40 days. For the remaining five cases that were declined but received some initial services, Paradigm has not submitted bills.

\*\*\*This number now excludes NCM costs, which has resulted in a lower average than in 2018<sup>1</sup>.

\*\*\*\*This table does not include referrals to Coventry, an NCM firm whose contract expired in 2019.

Table 2 outlines all catastrophic referrals under the new contracts made from May 2021 through November 2022. This table excludes referrals transferred between firms.

**Table 2: New Contract NCM firm referrals from May 2021 to November 2022**

External Firm	Accepted
<b>Broadspire</b>	2
<b>Comagine</b>	5
<b>EK Health</b>	1
<b>Genex</b>	10
<b>Nurseworks NW</b>	19
<b>Rainier</b>	4
<b>Stubbe</b>	18

<sup>1</sup> Comprehensive Catastrophic Care Management Project 2018 Report to the Legislature (<http://www.lni.wa.gov/Main/AboutLNI/Legislature/PDFs/Reports/2018/CatastrophicCareManagementReport.pdf>)



## L&I REFERRAL TEAM CLAIM MANAGEMENT

L&I's catastrophic team, a dedicated internal team of claim managers and ONCs, handles catastrophic injury claims with the help of expanded technology systems that track and provide an information management tool for the claims.

### Changes resulting from the pilot project

Prior to this pilot project, email notification of a catastrophic claim was common practice, with no centralized way to monitor claims or consider the unique needs of these severely injured workers. There was no mechanism to proactively manage or address care coordination, medications, or discharge planning. Furthermore, there were no specific standards to identify and manage severely injured workers. When a claim transferred to a different unit and claim manager, it lost continuity because the ONC also changed.

This project sought to determine methods and normalize practices for early identification and centralized care management for workers that met the department's classification of catastrophic injury. Now, the L&I clinical team meets weekly to address claim issues or concerns. The catastrophic team is also in frequent contact with NCM firms to address injured worker care. L&I reviews nurse case management reports to ensure quality and timeliness. Specific changes are now in place:

- **Early identification:** L&I uses a centralized system to track and monitor catastrophic claims, and a catastrophic "flag" functions within the claim management system.
- **Immediate action:** The ONC and CM are notified of new claims at the same time. This allows the ONC to take immediate action and to ensure that discharge planning can occur to assist with care needed after discharge. Transitions between the hospital, in-patient rehab, and home can be especially difficult for the worker and their family. This makes nurse case management intervention especially crucial and beneficial during this period.
- **Proactive management:** Upon initial assignment of the catastrophic claim, the clinical team reviews the claim and assigns a nurse case manager to work directly with the injured worker in their community. The catastrophic team oversees and actively manages newly identified catastrophic claims.

### Have these changes made a difference in care and recovery?

*A recent case highlights the way effective intervention mitigates potential barriers to recovery:*

A worker suffered deep, full-thickness burns to their arms, chest and head when a grill they were igniting caught fire. Due to the severity of their burns and the length of treatment, this worker needed a specialty provider to aid in their recovery. Unfortunately, this worker's location and language needs made it difficult to find this type of provider in their area.

The assigned NCM immediately began identifying the appropriate specialty provider who could also meet the worker’s language needs. When she was able to find one, she contacted that provider and walked them through the process of acquiring an L&I provider number and enrolling them in the provider network.

Due to this NCM’s dedication, she was able to surmount a barrier to the worker’s recovery and provide them with a much needed specialty service that met their language needs.

### Catastrophic claim data

Table 3 shows catastrophic claims, by injury type, that were identified and referred to L&I’s catastrophic team, 2015-2022. Due to the department’s publication schedule of January 1, each report contains 11 months of data, January through November of the calendar year. The next report updates to include December’s numbers. The table below excludes December 2022 catastrophic numbers due to this publication schedule.

**Table 3: Catastrophic claims by primary injury type, 2015-2022**

Year	Major Burn	Spinal Cord Injury	Amputation	Traumatic Brain Injury	Multiple Trauma	Other	Undetermined	Total
<b>4Q15</b>	6	1	0	9	28	1		45
<b>2016</b>	11	10	3	21	76	20		141
<b>2017</b>	5	9	7	13	68	14		116
<b>2018</b>	5	6	4	13	54	19	3	104
<b>2019</b>	3	6	1	13	18	3		*44
<b>2020</b>	0	4	4	9	15	1		*33
<b>2021</b>	1	1	6	8	21	1		*38
<b>2022</b>	6	3	3	4	12	5		*33
<b>Total</b>	<b>37</b>	<b>40</b>	<b>28</b>	<b>90</b>	<b>292</b>	<b>64</b>	<b>3</b>	<b>554</b>

\*In early 2019, clinical input was added to the review for catastrophic criteria resulting in fewer catastrophic cases per year.

## CATASTROPHIC CARE COORDINATION

In 2015, the agency began mapping the various roles in care coordination throughout the care continuum and in different health care facilities. Through this practice, L&I refined its communication network with hospitals, clinics, and field ONCs. Worker injury and healthcare information was more efficiently transferred to the department, and catastrophically injured workers were able to be identified earlier in the claims initiation process. In 2019, the clinical team began

assigning NCMs to all catastrophic cases for at least 90 days. This helped to assign crucial resources early—nurse case management, Centers of Excellence, and activity coaching referrals.

Table 4 shows the total number of claims for catastrophically injured workers from 2016-2022 and those assigned to a NCM, underscoring the work to improve care coordination and medical services among these workers. Since 2019, all catastrophic claims have been assigned these additional resources to improve care coordination.

**Table 4: Catastrophic nurse case management assignment for 2016-2022**

	2016	2017	2018	2019	2020	2021	2022
<b>Number of catastrophic claims</b>	141	116	104	44	33	38	33
<b>Number of catastrophic claims assigned a NCM</b>	87	40	37	44	33	38	33
<b>Number of catastrophic claims not assigned a NCM</b>	54	76	64	0	0	0	0

Since completing a discharge planning gap analysis in 2017, L&I has continued working to:

- Provide a seamless transition from acute care to the recovery and community-based case management phases.
- Reduce emergency department visits after initial hospitalization
- Reduce hospital re-admissions.
- Improve worker satisfaction by reducing barriers to care.

L&I connects the ONC field nurse team with catastrophically injured workers hospitalized in their assigned areas, expediting care coordination and discharge planning. Field nurses assigned to Harborview Medical Center update the L&I Division of Safety and Health (DOSH).

## CENTERS OF EXCELLENCE

A Center of Excellence (CoE) provides expert services by physicians, a multi-disciplinary team, and other health care professionals. They must be able to respond to the complex challenges of referrals and provide post-consultation care coordination, planning, and other services. These services may include tracking, program evaluation, outcomes review, and analysis. L&I implemented CoEs to assist catastrophically injured workers with burns and amputations, but soon recognized that these services needed to be expanded to assist workers with burns and amputations that are not considered catastrophic.

L&I and Harborview Medical Center partnered to establish the CoE for Burn Care as a resource in Washington that is instrumental in providing care collaboration and specialty assistance. The CoE for Burn Care was created in February 2017. As of November 2022, it has provided care for 201 catastrophically and non-catastrophically injured workers. The CoE for Amputation Care, also at Harborview Medical Center, was established in January of 2016. It has provided care for 58 catastrophically and non-catastrophically injured workers as of November 2022. Table 5 shows the number of catastrophic and non-catastrophic injuries treated by the two Centers of Excellence. Non-catastrophic injuries far outnumber catastrophic ones, indicating the value of the CoEs in the less severe, but more common injuries.

**Table 5: Center of Excellence care types and frequency-2017-2022**

Center of Excellence	Non-Catastrophic Injuries	Catastrophic Injuries
Burn Care	183	18
Amputation Care	35	*23

\*The number of catastrophic amputations shown in this table is higher than in Figure 2 because some amputations were classed as “multiple trauma” or “other” in Figure 3.

These Centers of Excellence receive national recognition for leadership in research, training and practice. The CoEs coordinate 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 injuries.

## EVALUATION OF CATASTROPHIC NURSE CASE MANAGEMENT (NCM)

In 2020, L&I and the University of Washington completed a four-year prospective study of catastrophic nurse case management provided by contracted firms. Before developing the evaluation plan, L&I conducted a rigorous retrospective analysis of past cases to understand trends in return to work and disability among catastrophically injured individuals.

### Overview of the University of Washington evaluation

The University of Washington (UW) delivered a final evaluation report to L&I in October 2020. The report included findings on worker satisfaction with NCM, worker recovery progress, and the impacts of NCM on medical costs and time loss. The report also included an economic analysis of outcome-based nurse case management, as well as a pre-/post- analysis.

The four major conclusions of the evaluation are:

- **High level of worker satisfaction:** Comments from injured workers during study interviews indicated they greatly appreciated and benefitted from the assistance they received from NCM.
- **Injury severity:** Workers who received NCM services had more severe injuries than workers who did not receive NCM services.

- **Health care impact:** There were no changes in the average duration of time loss or in average health care costs after implementation of the NCM pilot for catastrophic injuries, beyond the actual cost of NCM. Most of the health care costs are incurred in the first few weeks after injury; therefore, it is unlikely that NCM would have a large impact on the total health care costs.
- **Nurse case management cost variation:** Costs associated with the contracted firms providing nurse case management had a wide range of variation. These costs did not directly correlate to the level of worker satisfaction or duration of nurse case management assigned to the claim.

The report is available to the public and is published [on the University of Washington Environmental & Occupational Health Sciences Research pages](#).

## Nurse Case Management (NCM) Annual and Semi-Annual Report Findings

As a part of the contracts L&I executed in 2021 the new nurse case management firms committed to submitting annual and semi –annual reports in January and July throughout the duration of the contracts. These reports are intended to continue to serve as a way for the department to collect and review data for catastrophic nurse case management.

As of December 2022, each firm has submitted two semi-annual reports and one annual report. These reports contain data on:

- **Level of worker, family, and/or caregiver satisfaction with NCM services:**
  - All firms reported high levels of worker satisfaction.
  - NCM firms reported a variety of ways that the level of satisfaction with NCM services is collected including:
    - Formal worker surveys, where a short series of questions is provided to the worker or their family member.
    - Verbal or written feedback from the worker on their satisfaction levels outside of a survey.
- **Number of unplanned hospital readmissions:**
  - One firm reported two unplanned hospital readmissions, while remaining firms reported no unplanned hospital readmissions.
- **Nurse case management quality improvement efforts:**
  - Firms report regular quality improvement checks on referrals. These checks include monthly case conferences with firm nursing leadership to review worker progress and to provide guidance with overcoming obstacles the nurse or worker may experience with medical care and recovery.
    - Note: The majority of firms maintain accreditation and certification through URAC (Utilization Review Accreditation Commission)
  - **NCMs completed training in specific areas to gain expertise in caring for catastrophically injured workers, some of these areas are:**
    - Traumatic brain injuries(TBI)

- Spinal cord injuries
- Amputations
- Opioids and alternative pain controls
- Depression
- Suicide risks
- Long COVID
- Healthcare information ethics and HIPPA
- Effective case management practices:

With this information, the department hopes to identify any additional gaps in service and also to implement continuous improvement of care coordination services for workers in Washington. The new NCM contracts solidify the legacy of these improvements for years to come.

# Creating a New Standard of Care

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Throughout the final year of the pilot, L&I remained focused on its primary purpose—to *improve outcomes and quality of care, as well as prevent disability for injured workers through catastrophic care coordination*. Below is a high-level summary of significant accomplishments made by the department as a result of the legislative support provided by this pilot:

- Established a claims unit staffed by claims managers dedicated to supporting workers designated as having catastrophic injuries.
- Created a medical review team consisting of occupational nurse consultants, a clinical nurse specialist, an assistant medical director, and a medical program specialist for the purpose of reviewing and identifying workers with catastrophic injuries.
- Developed criteria for the evaluation of workplace injuries to have a baseline for identifying the types of injuries that meet catastrophic criteria.
- Assigned nurse case managers to workers designated as catastrophic for the purposes of aiding with worker recovery, transitions from the acute to recovery phase, and acquisition of durable medical equipment and home modification.
- Contracted with five nurse case management firms from 2016-2021 to ensure adequate geographic coverage for equitable care for workers across the state of Washington.
- Subsequently contracted with seven nurse case management firms from 2020 into the foreseeable future to ensure adequate geographic coverage for equitable care for workers across the state of Washington.
- Worked with Harborview Medical Center to establish two Centers of Excellence for burns and amputations to assist with providing care to workers with specialty needs.
- Worked with the University of Washington (UW) on an evaluation of nurse case management services provided to workers with catastrophic injuries. This evaluation was captured in a report that was finished and submitted by UW to the department in October of 2020 and outlines findings on worker satisfaction with NCM, worker recovery progress, and the impacts of NCM on medical costs and time loss.
- Created information technology tools for the purpose of tracking catastrophic injury metrics in Washington, and supporting the assignment of nurse case management services to worker's with catastrophic injuries.

# Conclusion

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## **A broader application of lessons learned**

As noted in prior reports, L&I intends to apply these findings to a broader range of claims with the intention of continuing to benefit workers whose injuries are catastrophic, while also addressing the needs of those with less severe injuries.

## **The Future of the Catastrophic Program**

L&I believes that the Comprehensive Catastrophic Care Management Pilot Project has made a significant positive impact on administration, communication, and medical authorization for these and potentially other claims. During 2022, L&I concluded the pilot and incorporated lessons learned into our daily operations. These new standard practices mean workers are better served and supported.

Delivering evidence-based nurse case management services assures injured workers receive timely, appropriate medical care, avoiding unnecessary treatment. Expanding the use of NCM to more claims – including those not meeting the definition of “catastrophic” will also benefit more workers.

All of the key elements of this pilot contributed to its success—improving care coordination through a dedicated internal team of experienced staff, collaborating with experienced NCM firms to manage care for catastrophically injured workers, contracting with Centers of Excellence, and evaluating worker outcomes achieved using these types of care. The department is dedicated to consistently improving outcomes for workers with catastrophic injuries.