



# **L&I Catastrophic Claims**

## **Gap Analysis**

*September 15, 2014*

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## Executive Summary

The Department of Labor and Industries (L&I) is dedicated to helping injured workers heal and return to work by reducing disability and engaging in continuous innovation to incentivize delivery of the best, evidence-based, high-quality care for the workers we serve. Our public service mission and strategic focus on paying for value have earned L&I national leadership recognition in identifying patient needs and testing and implementing clinically proven services that reduce harm and prevent disability. In March 2014, L&I chartered an analysis of catastrophically injured workers to ensure that L&I is providing the highest quality, evidence-based services available to help injured workers heal and return to work or function.

The gap analysis contains a discussion of the current state of L&I and the health care delivery system for catastrophic injuries, including key strengths; a review of catastrophic claims data; a review of gaps identified or perceived by staff and health care providers; and a set of potential countermeasures for consideration.

Washington State has a robust trauma care and health care delivery system, along with strong community partnerships across public and private institutions including purchasers and providers. Examples include:

- 1990 trauma care system legislation put in place a comprehensive system that includes a strong injury prevention component as well as the designation of rehabilitation services for post-acute care
- Harborview Medical Center, a regional level 1 trauma center, and St. Luke's Rehabilitation Institute, the largest inpatient rehab hospital in the West

L&I is a recognized leader in innovative, evidence-based purchasing that has led to reduced disability; has broad community engagement; and has specific catastrophic response procedures. Examples include:

- Statutory union of purchasing and regulatory authority with exclusive responsibility to all workers in the State of Washington
- Engagement of business, labor, and providers through statutory committees (e.g. IIMAC<sup>1</sup>, IICAC<sup>2</sup>, ACHIEV<sup>3</sup>) to focus on high-quality, evidence-based care

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<sup>1</sup> Industrial Insurance Medical Advisory Committee

<sup>2</sup> Industrial Insurance Chiropractic Advisory Committee

<sup>3</sup> Advisory Committee on Healthcare Innovations & Evaluation

- COHE – a successful collaborative relationship with providers that aligns payment with evidence-based care, care coordination, clinical leadership and produces reduced disability
- Since 2007, L&I has a joint hospital/L&I catastrophic response plan that ensures successful initiation of L&I benefits, adequate discharge planning and nurse case management referrals

L&I's catastrophic claims data indicates recent, significant reduction in annual claims, from a high of over 400 per year, to just over 200 in 2013. The median cost of a catastrophic claim is \$113,457, and the median cost of claims in the highest quartile is \$384,026. 84% of the claims and 65% of the highest cost claims (correlates with severity) were closed.

L&I identified gaps and potential countermeasures in three areas: communication and coordination; data systems; and access to care.

**Gap:** Improved communication, care coordination, and planning

*Examples:*

1. The communication pathways between the claims manager, unit occupational nurse consultant, regional occupational nurse consultant, discharge planners, nurse case manager, employers, attending physician and other treating providers are not always clear
2. There is no designated assist call number for discharge planning and needed durable medical equipment. Providers found it challenging to reach individuals within L&I empowered to make adjudicative decisions with sufficient rapidity to avoid needless morbidity and escalating levels of medical care due to unmet, time-sensitive needs for injured workers
3. Continuity of prescription medications at patient discharge is sometimes interrupted

*Example Recommendations:*

1. Develop policies/interventions that anticipate the long-term treatment needs for catastrophically injured workers
2. Improve the resources and tools required for safe/effective transitions across the care continuum
3. Focus attention on discharge planning, especially medications

**Gap:** Need for improved data systems

*Examples:*

1. L&I does not routinely perform patient satisfaction surveys
2. L&I does not routinely gather and analyze data on catastrophically-injured workers

*Example Recommendations:*

1. Directly perform patient satisfaction surveys regarding the quality, timeliness, and professionalism of the services catastrophically-injured workers receive
2. New tracking fields in OHMS (Occupational Health Management System)
3. Additional research and analytical coordination with other state healthcare payers, and with maintainers of major, nationally-funded data sets, e.g., the three model systems registries

**Gap:** Improved access to evidence-based medical care

*Examples:*

1. Mental health care for catastrophically injured workers may be utilized too little or too late
2. Lack of access to providers with expertise to address complex needs of these injured workers
3. L&I's statutory approach to vocational rehabilitation constrains L&I patients' access to evidence-based vocational rehabilitation available to patients with other insurance

*Example Recommendations:*

1. Develop and utilize distance learning technologies, such as telehealth consultations
2. Build upon relationships with academic centers of excellence, and establish more formal mechanisms for evaluation and ongoing monitoring of patients after discharge
3. Improve implementation of known science in return-to-work efforts specific to catastrophic injury types

**Conclusion:** The analysis identified gaps that reflect both L&I-specific arrangements, and broader trends in health care delivery. L&I has key strengths and current tools to address the alterable gaps we found, including sources of high-quality, evidence-based medical information; lean process management; and legislative, business, and labor mechanisms/oversight to continue to deliver high-quality, innovative care to injured workers. As a trusted public health institution, and through our agency's design, statutory obligations, mission, relationships and track record, we are well-equipped to continue our successful history of turning challenges into new sources of excellence in care.

## **Current State: Washington State Innovator Environment**

The gap analysis began with a review of the context under which catastrophic care is delivered and paid for – Washington State’s health care environment. Washington is home to some of the most innovative and transformational efforts in the nation to improve health and health care and lower costs, which have only been strengthened by an infusion of energy and resources upon passage of the Affordable Care Act.

*Collaborations* - Washington’s purchasers, labor organizations, providers, quality improvement organizations, local jurisdictions, and health plans are leaders in performance measurement, clinical practice transformation, and innovative payment and delivery methods, ensuring focus on value rather than volume.<sup>4</sup>

*Legislative and Executive Commitment* - Multiple bi-partisan legislative initiatives beginning in 2005 engage public and private purchasers in paying for, and health providers in providing, care that reflects patient preference and is of proven value; requiring the use of evidence-based standards of care.<sup>5</sup> This has resulted in first in the nation, legislatively required programs such as the Prescription Drug Program and Health Technology Assessment Program, which require agencies to pay for health care that is proven safe, effective, and cost-effective after evaluation of high-quality evidence by a panel of local, practicing clinicians. The suite of evidence-based medicine initiatives to use better information and pay for what works also includes collaboration with the broader health care community under programs like the Bree Collaborative which involve provider leaders, insurers, public purchasers, and quality organizations. These programs result in provision of care that reflects patient preference; are of proven value; and use evidence-based standards of care.<sup>6</sup>

*Trauma Care Coordination* - Washington State recognized the burden posed by severe traumatic injuries and, in another example of leadership, adopted far-reaching legislation that called for the development of a comprehensive statewide trauma care system. The key components of this 1990 legislation, the Trauma Care Systems Act, include:

- Clear lines of authority and responsibility
- Designation of Trauma Care and Trauma Rehabilitation services
- Verification of pre-hospital trauma services
- Field triage criteria development

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<sup>4</sup> See Healthier Washington Plan ([http://www.hca.wa.gov/hw/Documents/SHCIP\\_InnovationPlan.pdf](http://www.hca.wa.gov/hw/Documents/SHCIP_InnovationPlan.pdf))

<sup>5</sup> See Blue Ribbon Report ([http://www.leg.wa.gov/JointCommittees/HCCA/Documents/Final\\_Report.pdf](http://www.leg.wa.gov/JointCommittees/HCCA/Documents/Final_Report.pdf))

<sup>6</sup> <http://www.hta.hca.wa.gov/> ; <http://www.rx.wa.gov/> ; <http://www.hta.hca.wa.gov/aim.html> ; [http://www.informedmedicaldecisions.org/washington\\_state\\_legislation.html](http://www.informedmedicaldecisions.org/washington_state_legislation.html)

- Regional planning and implementation
- Cost containment considerations
- Integration of trauma/injury prevention
- Trauma registry development and
- Establishment of regional quality assurance/improvement programs

Washington's trauma care system aims to assure that the required resources are available and the necessary infrastructure is in place to deliver the "right" patient to the "right" facility in the "right" amount of time. It is a comprehensive system that includes a strong injury prevention component as well as the designation of rehabilitation services for post-acute care.

*Trauma Care Delivery* - The Washington State Department of Health designates trauma services levels, in acute, pediatric, and rehabilitation services. Providers apply and compete for trauma service designation. (See WAC 246-976-700 for Trauma Service Standards.)

Washington has world class health care delivery organizations. For example: Harborview Medical Center (Seattle), a Level 1 trauma center,<sup>7</sup> is a regional center of trauma care and expertise, serving patients both within and beyond Washington's borders. L&I's analysis indicates many catastrophically injured workers are either admitted directly to or transported to Harborview following serious injury. St Luke's Rehabilitation Institute in Spokane is the largest inpatient rehabilitation hospital west of the Mississippi River, and similarly serves patients from both Washington and from our region.

These institutions and the collaborative relationships L&I has with the individuals who care for our patients there are a wellspring of the clinical, research, and public health expertise that remains invaluable to our success at delivering high-quality, evidence-based care to Washington.

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<sup>7</sup> See appendix A for a listing of Washington State Department of Health trauma designated facilities.

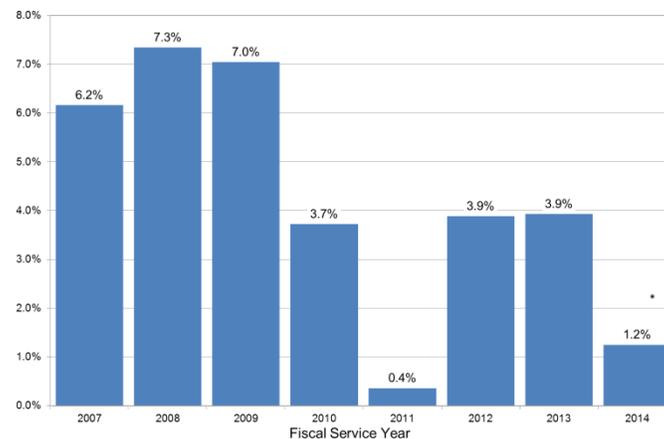
## Current State: L&I Environment

### *L&I's Leadership and Collaboration*

L&I's model for successful healthcare innovation is fueled by a statutory union of a public mission of responsibility for all workers in Washington State combined with purchasing and regulatory authority for the care of injured workers. With the mandate of state legislation, under the oversight of our business, labor and medical provider advisory committees, the Department of Labor and Industries is a leader respected for the community-wide evidence-based interventions, such as nationally leading reductions in opioid overdose and deaths. These achievements are made possible by our network of collaborative relationships with the academic and community members who share our commitment to improving the public good.

### *L&I Health Care Purchasing*

By focusing on achieving high-quality health outcomes through evidence-based policy, L&I not only improves injured workers' ability to heal, but consistently leads in innovative purchasing of evidence-based and cost-effective services. Labor and Industries outperforms state-purchasers and commercial carriers on the Results Washington Goal of constraining annual state-purchased health care cost growth to one percent less than the national health expenditure trend. Our annual medical cost growth since 2010 has been under four percent, and our cost growth projected for 2014 is under two percent, all while remaining a highly competitive payment source to providers.



\*Projection based on the latest four quarter average growth

Our innovative purchasing strategies are replicated nationally (e.g. opioid guidelines) and highlighted in the recently submitted Washington State Health Innovation Plan<sup>8</sup> as evidence that Washington state is an innovation leader (e.g., Center for Occupational Health and Education (COHE) cited as a currently implemented value-based purchasing strategy).

### *L&I's Proven Strategy for Disability Reduction*

COHE is the proven vehicle chosen by the legislature, under 2011 Worker Compensation Reform to expand prevention of disability, improvement in worker outcomes, and management of medical costs. Its combination of coordinated care, clinician leadership, and aligning payments with quality of care instead of quantity is an exemplar of the consequences of L&I's reliance on scientifically-valid evidence, community relationships, and status as innovative public health institution to pay for what works and prevent disability. A 2011 study found that injured workers seeing COHE-trained providers had 20 percent fewer time-loss days (30 percent fewer days for low-back injuries), reducing disability for the workers and saving \$500 per claim in the first year.<sup>9</sup>

The hallmark of the COHE innovation is the capacity of L&I as a purchaser and regulator of all health care delivered to injured WA workers to incent the providers of WA to improve the quality of healthcare delivered to our citizens. As a part of COHE expansion, L&I has also scoped, developed, and implemented an Occupational Health Management System (OHMS) to support COHE collaboration and best practice tracking and reporting. As a web-based computer information system that will provide front-end case-management tools to help coordinate services for injured workers, OHMS includes:

- Administration and reporting tools for use by COHE providers and health service coordinators and other external participants in emerging best-practice programs and pilots
- Role-based access to care-coordination services, best-practice activities, provider support, COHE support and management, and analysis and reporting

### *L&I's Community Collaboration*

Our statutory committees serve as vehicles to engage the worker's compensation community in the development and roll out of interventions to provide best-quality care to injured workers.

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<sup>8</sup> <http://www.hca.wa.gov/shcip/Pages/default.aspx>

<sup>9</sup> Wickizer TM, Franklin G, Fulton-Kehoe d, et al. Improving quality, preventing disability, and reducing costs in workers' compensation healthcare: A population-based intervention study. *Med care* 2011; 49: 1105-11.

As a venue for business, labor and provider leaders to advise on L&I healthcare programs, the Advisory Committee on Healthcare Innovation and Evaluation (ACHIEV) provides L&I with input and advice related to:

- Continue monitoring and advise on Provider Network implementation
- Finalize rules and policies on Top Tier eligibility and incentives for payment for quality
- Review “Risk of Harm” criteria
- Support COHE expansion statewide
- Advise on development and piloting of new occupational health best practices
- Support self-insured participation in COHEs and/or other healthcare initiatives

Our statutory Industrial Insurance Medical Advisory Committee (IIMAC) advises L&I on practice guidelines, coverage criteria, and reviews coverage decisions, technology assessments, and health-care rules. IIMAC members are nominated by statewide clinical groups, specialty societies, and/or associations. Our Industrial Insurance Chiropractic Advisory Committee (IICAC) advises L&I on providing safe, effective, and cost-effective chiropractic treatments for injured workers.

### **L&I’s Catastrophic Claim Analysis**

The Department’s analysis included both qualitative and quantitative components. The qualitative analysis comprised interviews with both internal and external persons with experience in the management of catastrophically-injured workers. These interviews were designed to elicit information about “evidence-based best practices” and “current services, resources, and any perceived gaps [in catastrophic injury management]”. Internal persons interviewed included adjudicative staff such as claims managers, and pension adjudicators, as well as medical staff including pharmacy, physician, and occupational nurse consultant staff. External persons interviewed included clinical providers and their support staff; nurse case managers; managers from two of Washington State’s Centers for Occupational Health and Education; and a vendor with activity in case management and insurance business.

The quantitative analysis included identification of fundamental information about catastrophic injuries for which L&I is responsible, such as the type and number of such injuries and their costs. In addition to basic demographic information about catastrophic claims, the quantitative analysis was also informed by information gathered through the qualitative evaluation.

## Quantitative Claim Analysis

### *Catastrophic Data Summary*

Annual rates of catastrophic injuries have shown significant decline: a peak in of 415 in 2007, to 227 in 2013. A total of 2670 catastrophic claims (those with 4 or more days of hospitalization) from 2005 to 2013 were identified. Claims were categorized into six primary injury types including: Burns, Spinal cord injuries, Amputations, Brain injury, Multiple trauma, and Other.

Multiple trauma is by far the largest group of injuries, accounting for nearly 75% of the claims. The next highest category is traumatic brain injury with 10% of claims. All other groups account for 5% or less: burns, spinal cord injury, multiple amputations, and other. Most catastrophically injured workers are male (84%).

Reviewing 2005 to 2011 claims, 1858 (84%) of claimants had closed claims, and 361 (65%) of the most expensive quartile (correlated with most severe injury) of those claimants had closed claims. Median costs for a catastrophic claim was \$113,457. Because claim costs for catastrophic injuries vary, L&I also looked at the median costs for the highest 25% of claims, which was \$384,026.

As would be anticipated with a serious medical event, the majority of medical costs (about 45%) occur in the first six months; with nearly 75% incurred in the first 2 years. Conversely, about 10% of wage replacement benefits are expended in the first 6 months, with the majority incurred over the life of the claim.

### *Claim Identification and Inclusion Methods*

We sought to include in the analysis a sufficient number of claims to facilitate evaluation of trends and patterns that occur throughout all portions of convalescence for not only the injury groupings spelled out in the charter for this evaluation (severe burns, spinal cord injuries, amputations, multiple trauma, and traumatic brain injury), but also those workers with injuries that fall outside these categories, yet are also serious events requiring higher levels of medical care. We also sought to include in this evaluation claims that were recent enough to reflect and inform current management of catastrophic injuries.

We identified a cohort of catastrophically injured workers from L&I administrative data using the following criteria:

- 1) Labor and Industries had accepted liability
- 2) Date of injury was from January 1, 2005 through December 31, 2013

3) Labor and Industries had paid for an inpatient hospitalization that began within 24 hours of the date of injury

4) Duration of initial hospitalization plus any transfer hospitalizations without intervening discharge was at least 4 days

Using these criteria, we identified 2670 unique claims.

We assigned each claim a primary injury type using primary diagnosis ICD-9 code submitted with the bills for initial hospitalization. This approach relies on the treating institution's determination of which of multiple diagnoses is primary.

We assigned to each claim and primary diagnosis combination an injury category that reflected the injury types anticipated by the charter for this project:

1. Burns
2. Spinal cord injuries
3. Amputations
4. Brain injury or pathology
5. Multiple trauma
6. Other

**Table 1: Catastrophic Injuries by Type, WA Department of Labor and Industries, 2005-2013**

Injury Type	2005	2006	2007	2008	2009	2010	2011	2012	2013	Total
Burns	16 (5%)	19 (5%)	22 (5%)	23 (6%)	24 (9%)	11 (4%)	10 (5%)	11 (5%)	8 (4%)	144 (5%)
Spinal cord injury	18 (5%)	11 (3%)	16 (4%)	18 (5%)	5 (2%)	5 (2%)	6 (3%)	10 (4%)	7 (3%)	96 (4%)
Amputation	13 (4%)	9 (2%)	10 (2%)	11 (3%)	8 (3%)	7 (3%)	10 (5%)	10 (4%)	6 (3%)	84 (3%)
Brain injury/pathology	31 (9%)	45 (12%)	39 (9%)	41 (12%)	20 (8%)	23 (9%)	21 (10%)	20 (9%)	23 (10%)	263 (10%)
Multiple trauma	249 (73%)	285 (73%)	310 (75%)	248 (70%)	184 (72%)	185 (75%)	157 (73%)	158 (70%)	174 (77%)	1950 (73%)
Other	14 (4%)	20 (5%)	18 (4%)	13 (4%)	16 (6%)	15 (6%)	10 (5%)	18 (8%)	9 (4%)	133 (5%)
Total Number of claims	341 (100%)	389 (100%)	415 (100%)	354 (100%)	257 (100%)	246 (100%)	214 (100%)	227 (100%)	227 (100%)	2670 (100%)

While there is high confidence in this code based classification, resource limitations prevented validation through a structured approach with individual file review. To validate the case definition of our cohort we determined whether a given claim was a reportable traumatic condition according to the Washington State Department of Health's

list of ICD codes.<sup>10</sup> We found that 2533 out of 2670 claims—95%—bore primary diagnoses that were reportable according to the Department of Health, an indication of the serious nature of the injuries sustained by workers in this cohort.

Demographic information, including gender and primary language, about these injured workers is summarized below.

**Table 2: Number of Claims by Injury Type by Gender, WA Department of Labor and Industries, 2005-2013**

<b>Injury Type</b>	<b>Female</b>	<b>Male</b>	<b>Total</b>	<b>% Female</b>	<b>% Male</b>
Burns	11	133	144	8%	92%
Spinal cord injury	4	92	96	4%	96%
Amputation	9	75	84	11%	89%
Brain injury/pathology	22	241	263	8%	92%
Multiple trauma	353	1597	1950	18%	82%
Other	33	100	133	25%	75%
<b>Total</b>	<b>432</b>	<b>2238</b>	<b>2670</b>	<b>16%</b>	<b>84%</b>

**Table 3: Language Preferences, WA Department of Labor and Industries, 2005-2013**

<b>Language</b>	<b>Number of Claims</b>	<b>% of Claims</b>
Korean	9	0.3%
Russian	19	1%
Spanish	381	14%
Vietnamese	7	0.3%
Chinese	7	0.3%
Other	12	0.4%
Not defined	2235	84%
<b>Total</b>	<b>2670</b>	<b>100%</b>

<sup>10</sup> Washington State Department of Health Trauma Registry collects data on seriously injured patients and provides data reporting and analysis. Data must be reported to the Washington Trauma Registry (WTR) for all patients with a discharge ICD9-CM diagnosis code of 800-904, or 910-959, or 994.1 (drowning), 994.7 (asphyxiation), or 994.8 (electrocution).

For additional information on the Washington State Trauma Registry Inclusion Criteria, including a detailed list of the discharge diagnosis codes for registry inclusion, see appendix B.

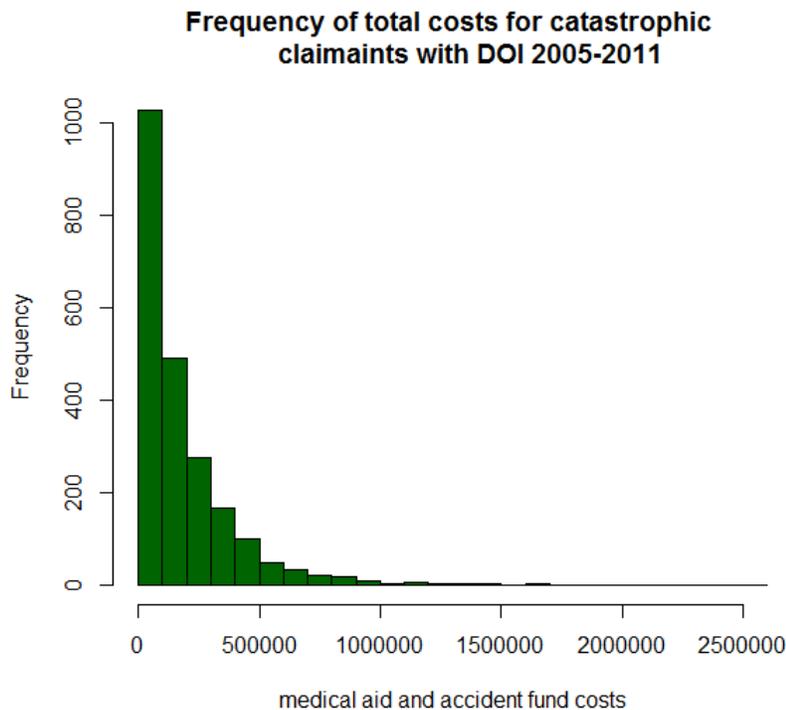
### *Catastrophic Claim Costs*

We also analyzed the costs associated with these claims. To assure adequate time for costs to develop, we generally limited the cost analysis to claimants with a date of injury from January 1, 2005 through December 31, 2011. For service-specific cost data, we included medical costs for expenses that were present in the agency billing databases with a service date between a given claimant's date of injury and June 30, 2014. For aggregate medical aid and accident fund costs, we included medical aid and accident fund expenses that were present in agency actuarial databases and had a paid date between a given claimant's date of injury and June 30, 2014.

There were 2216 claimants with a date of injury between 2005 and 2011:

**Table 4: Medical Aid, Accident Fund and Total Cost by Time Period, WA Department of Labor and Industries, 2005-2011**

	<b>0-6 Months</b>	<b>6-24 Months</b>	<b>24 Months to end</b>	<b>All periods</b>
Medical Aid Costs	\$98, 707, 782	\$72, 314, 318	\$54, 208, 458	\$225, 230, 558
Accident Fund Costs	\$15, 652, 543	\$51, 509, 456	\$121, 588, 530	\$188, 750, 528
Total	\$114, 360, 325	\$123, 823, 774	\$175, 796, 988	\$413, 981, 086

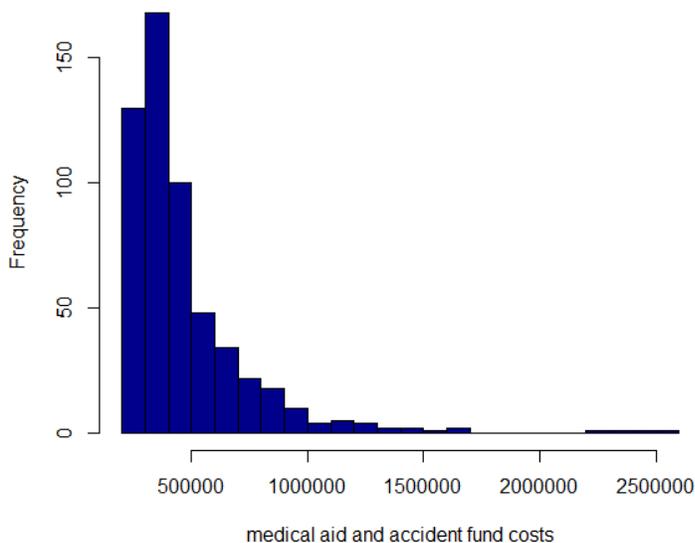


We also performed this same analysis for the most expensive quartile (554) of claimants.

**Table 5: Medical Aid, Accident Fund and Total Cost for Top Quartile of Claimants by Time Period, WA Department of Labor and Industries, 2005-2011**

	<b>0-6 Months</b>	<b>6-24 Months</b>	<b>24 Months to end</b>	<b>All Periods</b>
Medical Aid costs	\$47, 129, 924	\$42, 829, 578	\$44, 583, 502	\$134, 543, 004
Accident Fund Costs	\$8, 186, 075	\$23, 096, 894	\$96, 288, 854	\$127, 571, 824
Total	\$55, 315, 999	\$65, 926, 472	\$140, 872, 356	\$262, 114, 828

**Frequency of total costs for upper quartile of catastrophic claimants with DOI 2005-2011**



We analyzed the median accident fund, medical aid, and total costs per claim for both groups as well:

**Table 6: Median Cost for Claims, WA Department of Labor and Industries, 2005-2011**

	<b>Medical Aid</b>	<b>Accident Fund</b>	<b>All Claim Costs</b>
Median cost for the claims with DOI 2005-2011	\$59, 715	\$43, 415	\$113, 457
Median cost for the top quartile of claimants	\$166, 347	\$195, 804	\$384, 026

Finally, we determined that as of June, 2014, 1858 (84%) of claimants with a DOI from 2005-2011 had closed claims, and 361 (65%) of the most expensive quartile of those claimants had closed claims as of June, 2014.

## Current Catastrophic Claims Process

### Joint Hospital and L&I Catastrophic Response Plan

In 2007, L&I identified that it did not have effective methods established to ensure quick notification of catastrophic injuries. It also did not have established procedures for responding to catastrophically injured workers and their families who may be unfamiliar or concerned about how to interact with the Industrial Insurance system following an injury. To address these issues, a catastrophic injury coordination plan was developed.

Under this plan, when the department was notified of a catastrophic case, through an employer, provider, family, Center of Occupational Health and Education (COHE) staff or inpatient hospital utilization review, the central office Occupational Nurse Consultant (ONC) Supervisor was notified and would make a referral to the regional ONC.

Since 2007, the catastrophic injury coordination plan has been further refined and is described in the Joint Hospital and L&I Catastrophic Response Plan. See appendix C and D.

The Catastrophic Response plan includes elements to ensure successful and appropriate claim initiation so that benefits may be paid in a timely manner, and elements to ensure better transition following initial hospital discharge.

### Initiation of L&I benefits

**Harborview or other admitting hospital** notifies the covering regional ONC using a template fax.

The template includes the following information:

- Date of admission
- Claim number from the Report of Accident (ROA)
- General description of the injury and diagnosis
- Mechanism of injury
- If the patient transferred, date of transfer and facility transferred to
- Hospital patient number
- Patient demographics (Name, Age, Phone Number, City, Language)
- Employer information (Name, Employer Address, Location of incident/accident, phone number)
- Floor - unit number and service

The **regional ONC** receives an admission notification from Harborview or other hospital. After receipt of the hospital admission notification, the regional ONC provides the following services:

- Assures that a signed Report of Accident (ROA) is sent to the department
- Assures that the medical section is completed and sent to the department if not initially on ROA
- Makes initial contact with the injured worker and/or family based on the type and severity of injury

- Informs hospital discharge planner of the name and phone number for the assigned claim manager and Unit ONC, if known
- Obtains initial medical records when indicated, and sends the records to file
- Refers all out of state catastrophic claims to the Unit 7 ONC for coordination of care
- Evaluates potential for early return to work activities for less severe injuries
- Enters appropriate information in the claims management system (RLOG) detailing all information received
- Sends an email containing the information listed above to the following L&I staff via the LNI DL Catastrophic Claim distribution list:
  - Claims Operation Manager and Administrative Assistant (process owner)
  - Central Office ONC Manager
  - Regional ONC Supervisor
  - Coordinator for Utilization Review
  - Claims Initiation Manager
  - Employer Services
  - Imaging Unit
  - Pension Unit Supervisor
  - Claims Administration

The **L&I utilization coordinator** receives notification of hospital admissions from Qualis Health. L&I contracts with Qualis Health for utilization review for all inpatient hospitalizations, selected outpatient surgical procedures, physical medicine and advanced imaging studies. If a claim has not been submitted, providers are instructed to complete a Report of Accident (ROA) and fax the ROA to the hot claims desk. The coordinator sends a hospital admission alert to the Division of Occupational Safety and Health so that investigation of the cause of the catastrophic injury can be investigated. An alert is also sent to the Central Office ONC Manager.

The following steps are then initiated:

**Claims initiation** keys information from the ROA and delivers the ROA to imaging.

**Imaging** scans and indexes the ROA.

**Employer Services** assigns the employer, assigns the risk class and calls the hospital if they reject a claim.

**Claims administration** assigns a senior level claims manager (level 3), expedites claim adjudication and calls the hospital if the claim is rejected.

**Central office ONC Manager** receives notification of hospital admissions. After receipt of the hospital admission, the ONC manager:

- Sends an email notification to the appropriate regional ONC and LNI Catastrophic Claim distribution list on all non-initiated claims for new injuries requiring hospitalization
- Identifies the need for additional review to determine causal relationship of diagnosis to work activities

- Monitors all notifications for claim allowance and forwards e-mail notification to the assigned Unit ONC in case there is need for assistance with discharge planning or nurse case management services (NCM)

The **Regional ONC or Unit ONC** may assist the claim manager in determining causal relationship of medical conditions. They also may respond to questions regarding coverage decisions. All ONC activities and recommendations are documented in the claims computer system on the RLOG screen. If there is a need for ongoing regional ONC activities, such as Early Return to Work (ERTW) or NCM monitoring, the regional ONC remains in e-mail or phone contact with the claims manager and unit ONC to clarify activities and avoid duplication of work. At the conclusion of regional ONC activities, the regional ONC provides a closing report via e-mail or phone to the unit ONC.

## Hospital Discharge Planning

The **Unit ONC** assists with hospital discharge planning. The unit ONC:

- Responds to requests from hospital discharge planners or providers for home health care, skilled nursing facility admission, durable medical equipment, or intravenous (IV) antibiotics
- Staffs the claim with claim manager and discusses anticipated medical needs
- Reviews the claim and assigns outside Nurse Case Manager (NCM), if necessary, to assist with complex discharge needs on catastrophic injuries such as spinal cord injury, and monitors NCM activities in achieving goals. The unit ONC may conduct telephonic case management for the stable catastrophic injury claims

## Nurse Case Management

Nurse Case Management (NCM) is a collaborative process used to meet an injured worker's healthcare and rehabilitative needs. The NCM works with the attending provider, injured worker, claims manager, occupational nurse consultant and other healthcare providers to facilitate the timely delivery of medical services and identify barriers to functional recovery.

The external **Nurse Case Manager (NCM)** assists the injured worker and family with transfer of care to providers in the injured workers community. The NCM coordinates with the unit and/or regional ONC, claims manager, injured worker and providers to set up all appropriate medical equipment and home health care. The NCM remains in contact with the injured worker, claims manager and unit ONC until all required services are in-place and there are no additional goals to be met. The NCM may be assigned to a new catastrophic claim for a few months to a year depending on the stability of the injured worker and their home situation. It is not unusual to reassign a NCM to assist a catastrophically injured worker when there is a significant change in the medical condition or home situation.

### NURSE CASE MANAGEMENT REFERRAL CRITERIA

#### I. Primary Injury – Related Catastrophic DX

- Spinal cord injuries with paralysis
- Amputated limbs
- Hospitalization for open and closed head injuries

- Major degloving injuries
- Hospitalization for major burns
- Multiple trauma/fractures

## II. Secondary Diagnosis Complicating Recovery

- Psychiatric conditions
- Drug/alcohol abuse
- Neurological/cardiovascular conditions
- Non-healing wound/wound infection (chronic osteomyelitis)
- Chronic Pain Syndrome

## III. Barriers to successful claim resolution

- Coordination of return to work plan
- Unclear or no treatment plan from the AP
- Frequent hospitalizations (2 or more admissions in a year for the same condition)

Complete details of nurse case management referral criteria and process and L&I billing rules are contained in the appendix E.

**Table 7: Number of Catastrophic Claims Receiving Nurse Case Management, WA Department of Labor and Industries, 2005-2011**

Type of Injury	Number of Injured Workers who Received Nurse Case Management Services	% of Injured Workers who Received Nurse Case Management Services
Burns	6	4.8%
Spinal Cord	30	38.0%
Amputations	5	7.3%
Brain Injury	32	14.5%
Multiple Trauma	39	2.4%
Other	6	5.6%
All Types	118	5.3%

The median cost per claim for case management services was \$4,082. The median length of time from date of injury to the first date of nurse case management services was 137 days.

## Home Modifications

Workers with catastrophic conditions may be eligible for home modification benefits. A home modification may be considered when:

- The claim is open or in pension status
- A catastrophic condition is accepted under the claim and
- The requested home modifications are reasonable and necessary to meet the worker's needs for safety, mobility, and activities of daily living

A home modification cannot exceed the State's Average Annual Wage (SAAW). For each reasonable and necessary home modification, the law allows a worker to receive up to 100 percent of the SAAW in effect at the time the modification is approved. If the cost of the modification exceeds the maximum benefit, the worker must adjust their request to stay within the available amount or show proof of funding to cover the additional cost. Home modifications are limited to one residence. Only one home can be modified. Additional modification of the same home may be considered. If a worker has received permanent home modifications and moves to a new residence, the worker is responsible for all modifications and home durable medical equipment for any new residences.

**Table 8: Number of Catastrophic Claims Receiving Home Modification, WA Department of Labor and Industries, 2005-2011**

Type of Injury	Number of Injured who received Home Modification
Burns	4 (3.2%)
Spinal Cord	22 (27.8%)
Amputations	2 (2.9%)
Brain Injury	5 (2.3%)
Multiple Trauma	22 (1.3%)
Other	0 (0%)
All Types	55 (2.5%)

## Vehicle Modifications

Only workers with amputation or paralysis may be eligible for vehicle modification benefits. A vehicle modification may be considered when:

- The claim is open or in statutory pension status
- Amputation or permanent paralysis is accepted under the claim
- The requested vehicle modifications are reasonable and necessary and
- The condition interferes with the worker's ability to operate or be transported in a motor vehicle

The law allows a worker to receive up to 50 percent of the SAAW in effect at the time the reasonable and necessary modification is approved. See RCW 51.36.020: Transportation to treatment -- Artificial substitutes and mechanical aids -- Modifications to residences or motor vehicles.

## **Job Modifications**

Workers with catastrophic conditions may be eligible for job modification benefits. Payment for job modifications cannot exceed \$5,000 per job or job site. The \$5,000 does not include the cost of professional consultative services. A job modification may be authorized for more than one job or employer. Each job or work location is considered a separate modification and is eligible for the maximum allowable of \$5,000.

## **Statutory Pension Including for Spinal Cord Injury**

A worker is entitled to a pension by law (called a statutory pension) when he or she as a result of an industrial injury or occupational disease, becomes a paraplegic or quadriplegic or, or suffers the loss of:

- Both legs
- Both arms
- One leg and one arm or
- Total eyesight

See RCW 51.08.160: Permanent total disability.

A department pension adjudicator determines whether an injured worker meets the criteria for a statutory pension and meets the requirements for benefits to continue. For paraplegics and quadriplegics, this includes an evaluation about the degree of paralysis present. Claims that appear to meet the criteria for statutory pension are referred to the pension adjudicator when the worker finishes both rehabilitative care and vocational services and reaches maximum medical improvement.

## **Gap Analysis and Possible Countermeasures:**

The qualitative and quantitative analysis outlined three categories of need for catastrophically injured workers: improved communication, care coordination and planning; improved data systems; and improved access to evidence-based medical care.

## **Continue Improvement in Communication, Care Coordination and Planning:**

Like all payers in the American healthcare system, Labor and Industries must deliver excellence in an environment characterized by a diversity of providers, businesses, institutions, specialists, and languages. The frequency of handoffs and transitions of care increase with the complexity of patients' medical needs, including those of catastrophically injured workers. These are concerns for our society in general as the larger transformation of America's healthcare system to implement new models of care that promote improved communication and coordination speaks to. In Washington State, the implementation and ongoing work of our COHEs is a particularly salient

example of our agency's work to meet the evolving communication, care coordination and planning needs of all our workers.

Our evaluation of catastrophically injured workers identified how the medical needs of these workers differ in ways that may require particular consideration and focus as we continue to broaden access to COHE services across our state.

**Communication.** The communication pathways between the claims manager, unit occupational nurse consultant, regional occupational nurse consultant, discharge planners, nurse case manager, employers, attending physician and other treating providers are not always clear. Providers perceive inadequacy of communication between injured worker, claims manager, ONC and community human resources, particularly if they perceive they need to communicate quickly to assure high-quality care. Providers also report difficulty identifying the correct contact at the place of employment which can lead to delays in completion of the report of accident and can be a barrier to recovery.

**Frequent Changes in the assigned Claims Manager.** There is a loss of continuity with the transfer to a new claims manager. A new claims manager does not have knowledge of claim history nor the relationship and trust of the injured worker and providers. This is compounded by the lack of a claim summary of key information that would help the transfer of knowledge and history of the claim to the new claims manager, particularly as these claim files are commonly lengthy as a consequence of the complexity of the medical needs of these catastrophically injured workers.

**Continuity of Unit ONC.** Changes in the claims manager assignment often results in a change in the unit assignment. ONCs are assigned by claims unit. Currently, when a claim transfers to a different unit, the unit ONC also changes. The exception is when the initial assigned ONC requests to continue to follow the claim and indicates this through a priority note (RLOG) in the claims management system.

**Attending Physician.** Commonly there are multiple providers or specialists who are involved with treating the injured worker, making it unclear as to who is the attending physician. Department staff are sometimes uncertain as to whom they should direct their provider communications.

**Assist Call Number.** There is no designated assist call number for discharge planning and needed durable medical equipment (e.g. wheelchair, bed, shower chair). Providers do not know whom to contact when they have administrative and billing issues related to the management of catastrophically injured workers. Providers found it challenging to reach individuals within L&I empowered to make adjudicative decisions with sufficient rapidity to avoid needless morbidity and escalating levels of medical care due to unmet, time-sensitive needs for injured workers.

**Continuity of Prescription medications at patient discharge.** When injured worker, family, or skilled nursing facility goes to fill prescriptions – the prescription may be denied or there may be delays in getting the medication authorized. Reasons for denial may be:

- The drug is outside of the L&I drug formulary and the claims manager has not entered authorization for the medication
- Opioids beyond 6 weeks have not been authorized by the claims manager
- The prescribing provider is out of state and does not have an L&I provider number
- There are multiple treating providers who are prescribing

**Medical Records.** The department often lacks complete medical records or does not receive medical records in a timely fashion. Providers perceive there are administrative delays with the scanning of incoming faxes and medical documents.

**Nurse Case Management Services.** There is a lack of standard criteria for when an external nurse case manager should be used. Providers and internal staff perceive inadequacies at care transitions, e.g. transition from the skilled nursing facility to home in rural areas in Eastern Washington.

**Language and Cultural Barriers.** Language and cultural barriers for ESL patients continue to be barriers to helping injured workers heal and return to work.

**L&I Benefit Information.** Although benefit information is available, there remain barriers to accessing and disseminating plain-language information about L&I's benefits. For example, providers and workers are unclear as to what benefits are available for vehicle and home modifications.

**Timely Completion and Receipt of Report of Accident (ROA).** Concerns remain regarding delays in receipt of Report of Accident (ROA) from hospitals that are not part of the catastrophic response plan. Legal barriers exist to obtaining a legally correct ROA, which is required for a claim to be allowed and services to be paid.

**Table 9: Median Length of Time from Date of Injury (DOI) to Receipt of Report of Accident (ROA), WA Department of Labor and Industries, 2005-2013**

Year of Injury	Median Length of Time in Days From DOI to Receipt of ROA
2005	7
2006	7
2007	7
2008	5
2009	5
2010	4
2011	3
2012	3
2013	3

**Lack of Legal Guardian.** Injured workers are not always medically capable of completing or signing the report of accident. For example, the worker may be non-responsive or in a coma. This is compounded when the injured worker has no family or L&I has not been successful in locating the family. It is at times unclear who the legal guardian is or who can consent to treatment.

**Lack of a Life Care Plan for the Worker.** Annual maintenance needs and evaluations are often not received or needs unmet for injured workers with closed or pensioned claims yet need ongoing assistance.

**Inadequate Discharge and Post-Pension Planning.** This is especially a concern when the injured worker returns to the community, particularly in rural areas and eastern Washington.

**Discharge Options for Claims with Head Injuries.** For certain patients with head injuries, the support needs post-discharge may be identified, but here aren't adequate discharge options to meet those needs.

## Possible Countermeasures:

The countermeasures that address the communication and coordinated care planning needs of these injured workers are readily addressable through L&I's statutory advisory committees (e.g. IIMAC, IICAC, and ACHIEV), as well as by using the COHE framework already implemented and under expansion in our state. Through these outlets, we will continue the collaboration with nationally-recognized experts who have assisted the agency in delivering the innovative changes that give rise to our state's reputation for advancing best-practices and evidence-based decision making in our healthcare system. Some countermeasures may be readily developed and implemented in the short-term through internal changes, while others will necessarily require the assistance of the same Washington institutions and groups whose work with L&I have enabled advances in our state.

Examples of possible countermeasures and areas requiring further collaborative activity:

- Address proper initiation of benefits and internal alignment with resources appropriate for the medical severity of these claims
- Improve continuity with the L&I nurse consultant and claim manager
- Develop policies and interventions (e.g. life care planning or other structured plans) that anticipate the long-term proper and necessary treatment needs of catastrophically injured workers, particularly for claimants eligible for statutory pensions and other high severity catastrophic claims
- Assure injured workers and their families have proper coordination with resources that meet not only their medical, but their full bio-psychosocial needs, e.g. social security disability coordination

- Focus particular attention on discharge planning, including prescription appropriateness and coordination. Increase use of field ONCs and NCMs to improve appropriateness, efficiency and effectiveness for ongoing care coordination. Establish standard criteria for when an external NCM should be used
- Addressing difficulties in arranging travel between the site of living and the sites of intervention
- Establish an assist call number for time-sensitive adjudicative decisions that reduce the chance of unnecessary medical complications or escalations in care
- In collaboration with attending providers, conduct ONC review of medical information at discharge and at periodic intervals (e.g. every 90 days) for identification of barriers to recovery
- Improve the resources and tools required for safe and effective transitions across the continuum of care
- Develop and modify payment schemes to promote alignment with quality care in this unique population of workers

## Improved Data Systems

L&I routinely uses scientifically-valid evidence and data as a cornerstone of our evidence-driven approach to continuously evaluating and delivering high-quality care to our injured workers. The richness of our internal and interagency data sources have traditionally permitted us to analyze data in ways that promote public health and would not be possible without our exclusive responsibility to injured employees in Washington. And our strong relationships with the Washington academics and researchers at institutions such as the University of Washington (UW) give us access to cutting-edge developments in medicine and public health and strong evaluation science capacity. We have both the infrastructure and experience with analytical frameworks and human resources required to translate quantitative information into the public policies that continue to keep Washington State a leader in healthcare delivery and public health.

Our catastrophic injury analysis recognizes that these injured workers have unique needs that we can meet by incorporating data and analysis about this population into one or more data sources even beyond internal L&I resources. Examples include:

- New tracking fields in OHMS, the front-end case-management tool we are developing as a result of the 2011 Worker Compensation Reforms legislation
- Additional research and analytical coordination with the Washington State Department of Health trauma registry
- Additional research and analytical coordination with other state payers of healthcare
- Additional research and analytical coordination with major, nationally-funded data sets, such as the three Model systems registries (for burns, spinal cord injuries, and traumatic brain injury) maintained by the Washington state clinicians and researchers who keep UW active as a center for all three registries and welcome collaboration with L&I to promote the

health and welfare of patients with these injuries.<sup>11</sup> Such efforts could include “the need to create a gold standard for the method of tracking [return to work] variables”<sup>12</sup> in the return to work studies in burns research, for example

Although the institutions that care for catastrophically injured workers commonly perform patient satisfaction surveys, L&I does not routinely perform such surveys (specific to catastrophically injured workers), which would provide data directly to the agency regarding the quality, timeliness, and professionalism of the services catastrophically injured workers receive.

We also heard from providers that L&I should continue in its efforts to increase electronic versions of the paperwork they use to communicate with the agency about the injured workers they care for. Additionally, the internal system L&I uses for electronic claim file access has a document organization that is a barrier to rapid information retrieval. Consistent with Governor Inslee’s state-wide initiative to use Lean process improvement to enable efficient processes, L&I has several Lean initiatives underway, and access to the resources needed to analyze, strategize, and deliver improvements in communications and document retrieval.

### **Improved Access to Evidence-Based Medical Care:**

Although the scientific underpinnings of 21<sup>st</sup> century medicine continues to grow in size and complexity, Labor and Industries has used our statutory advisory committees, and resulting close relationships with the providers, researchers, academics, and institutions of Washington State to keep abreast of new developments in medical science and healthcare delivery, enabling us to be responsive to the changing healthcare needs of the populations we serve. As we routinely do with other topics that require detailed knowledge of the clinical and scientifically-valid research basis to make effective policy decisions and align payments with only the quality care that works, this evaluation of catastrophically injured workers—much like analyses before it—sits at the start of an established process at L&I to take the complex needs of these patients and develop the policies and interventions that reflect the evidence-based best-practices all workers in our state deserve access to.

L&I has historically amplified the positive impact of a rigorous evidence-based approach by using a collaborative approach to turn medical science into evidence-based policy. The arrangements we have with our COHEs, and with renowned academic institutions and hospitals—including UW, Harborview Medical Center, and St. Luke’s Rehabilitation Institute—have enabled us to provide for our injured workers. Such centers of excellence represent the ongoing institutional resources we will similarly rely upon to address the needs of our catastrophically injured workers, through the same variety of both formal and informal mechanisms we typically use to innovate.

**Access to Care.** There are a limited number of providers with expertise in the ongoing management of catastrophic claims, most noticeably for those injured workers living in rural areas, and in eastern Washington, and living out of state.

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<sup>11</sup>Please see <http://www.msktc.org/>. The University of Washington is one of only four Burn Model Systems nationwide.

<sup>12</sup> Mason, ST, P Esselman, R Fraser, K Schomer, A Truitt and K Johnson. 2012. Return to Work After Burn Injury: A Systematic Review. *J Burn Care Res.* 33: 101-109.

**Early Psychological Support and Use of Mental Health Services.** There may be numerous psychological problems associated with rehabilitation for a worker with a catastrophic injury. Each worker will respond differently to an injury and trauma. Reactions may include alarm, pain, anxiety, loss, grief, denial, and anger. For example, amputees may experience psychological factors, such as stress and depression, which could influence the severity of phantom limb pain. Since psychological adjustment determines success of rehabilitation, it is important for workers and family members to have access to and receive early psychological support and mental health services consistent with the severity and type of their injury.

Family members and other caregivers who are key social supports to the injured worker may need support for respite care. Head injured patients may have very different psychological needs than severe burn victims. Our data (below) reveals that the majority of catastrophically injured patients do not receive mental health services from psychiatrists or psychologists, and when services are delivered, it is late in the case.

**Table 10: Percentage of Catastrophic Injury Claims Receiving Mental Health Services, WA Department of Labor and Industries, 2005-2011**

Type of Injury	Number of Injured who received mental Health Services	% of Injured Workers who received Mental Health Services	Median Length of Time from Date of Injury to First Date of Service of Mental Health Service	Average Length of Time from Date of Injury to First Date of Service of Mental Health Service
Burns	55	44%	44 days	203 days
Spinal Cord	51	65%	60 days	252 days
Amputations	36	53%	130 days	286 days
Brain Injury	143	65%	129 days	224 days
Multiple Trauma	451	28%	361 days	483 days
Other	20	19%	110 days	301 days
All Types	756	34%	224 days	384 days

**Lack of Providers with Expertise in the Treatment of Workers with Traumatic Brain Injuries.** There are access concerns for rehabilitation of patients with traumatic brain injury. We currently require CARF accreditation for these facilities, and presently there are few. For example, workers may not get needed baseline and follow-up neuropsychological testing. They also may not receive timely speech, cognitive, vision, or mental health therapies. Signs and symptoms for mild head injuries are frequently missed in multiple trauma cases, causing delays in evaluation and treatment. For certain patients with head injuries, the support needs post-discharge may be identified, but there aren't adequate discharge options to meet those needs.

**Home Care.** The quality of care of services received by injured workers in the worker's home environment by contracted entities is of uncertain quality and effectiveness. There is perceived inadequacy of all skilled services for injured workers offered by home health providers.

**Standards for Durable Medical Equipment.** Prosthetic and durable medical equipment providers have a financial profit interest that may be in conflict with what is medically necessary. They may recommend the “Cadillac” product rather than what is medically necessary or equipment replacement when a repair may be cost effective.

**Standards for Attendant Care and Skilled Nursing Facilities.** For example, under what circumstances does the department pay for 24 hour attendant care versus coverage of a skilled nursing facility.

**Vocational Policies and Procedures.** System barriers exist that prevent vocational service providers from getting involved with catastrophic claims earlier. Vocational providers tend to back away from claims that are medically unstable. Vocational rehabilitation is perceived by provider sources of excellence of care in the community to be a therapeutic intervention, with additional rehabilitation often required after return to work for patients with catastrophic injuries. This is not a model that was anticipated by L&I’s current statutory approach to vocational rehabilitation, which presently constrains L&I patients’ access to evidence-based vocational rehabilitation available to patients with other insurance.

## Possible Countermeasures:

- Develop and utilize distance learning technologies to improve care for workers, and to improve capacity and expertise for health care providers, for example, we will explore the use of tele-health consultations
- Build upon relationships with academic centers of excellence. For example, the University of Washington Traumatic Brain Injury Model, Harborview Medical Center Regional Burn Center; the University of Washington Rehabilitation Program for workers with amputations, and establish more formal mechanisms for evaluation and ongoing monitoring of patients after discharge
- Review by ONC and/or NCM of medical information and use of screening methods to assess workers for signs and symptoms of mental health conditions and other psychosocial needs
- Early screening and evaluation for mental health needs by health care providers
- Improve early screening for traumatic brain injury (TBI)
- Conduct ongoing satisfaction surveys of catastrophically injured workers and/or their family members about their experience with our system and to formally obtain their feedback on the quality of care they receive
- Identify and develop relationships with other community resources to help meet the needs of injured workers and their families. For example, coordination with other local health care resources, such as the state vocational rehabilitation agency
- Improving implementation of known science in return-to-work efforts specific to catastrophic injury types
- Updating standards for durable medical equipment, attendant care and skilled nursing facilities

## Conclusions

L&I sits within a progressive health care environment within Washington State, focused on community collaboration to identify high value care that is aligned with patient values.

L&I's purpose is not just to pay for services, but to tirelessly use evidence-based approaches to research, design and implement programs and services needed to advance the public health for our society. We confront, anticipate, innovate, and lead, not just react.

Our agency's design, statutory obligations, mission, governmental and community relationships, and most importantly our successful track record demonstrate why we are so well-equipped to address the gaps we identified that more directly reflect L&I's current approach to assisting these injured workers, rather than broader trends. These concerns and needs reflect agency processes, resources, statutes, policies, recommendations and approaches that we can and will change. Where we require additional medical information, we have the statutory committees, relationships and communication with the content experts required to inform required improvements. Where we have process or efficiency needs, we utilize Lean process improvement. And where we require statutory, rule, or policy changes, we have the legislative, business, and labor relationships and mechanisms required to continue our achievements in delivering high-quality, innovative care to help injured workers heal and return to work.

The gaps we identified in this analysis of catastrophically injured workers are as much a reflection of the Department of Labor and Industries' present and recent structure and approach to managing these claims as they are of the broader forces at work on health and healthcare delivery in our society. We identified a variety of needs for our catastrophically injured workers that are not exclusive to this population. Far from it, our analysis touches upon several known, important challenges for our healthcare system that are the subject of intense national activity that aims to refine our understanding of these problems, develop and then implement new solutions. Known challenges regarding the safety and effectiveness of handoffs in a system that is often decentralized and fragmented; facilitating access to services for a population with diverse language and cultural backgrounds; or assuring access to primary and specialty care in underserved regions are complex and confront all payers of healthcare, public and private, large and small, in Washington and nationally.

L&I's role as a trusted public health institution and successful history of turning challenges into new sources of excellence in care position the agency not only to address these gaps, but to incorporate the knowledge gained from our response into the next models and innovations that continue to make Washington a national leader in healthcare delivery.

## Appendix A: DOH List of Trauma Hospitals

### Washington State Department of Health Trauma Services

Region	Trauma Designation			Facility	City
	Adult	Pediatric	Rehab		
Central ↓	I	I P		Harborview Medical Center	Seattle
	III			Multicare Auburn Medical Center	Auburn
	III			Evergreen Hospital Medical Center	Kirkland
	III			Overlake Hospital Medical Center	Bellevue
	III			Valley Medical Center	Renton
	IV			Highline Medical Center	Burien
	IV			Northwest Hospital & Medical Center	Seattle
	IV			St. Francis Hospital	Federal Way
	V			St. Elizabeth Hospital	Enumclaw
				I R (joint rehab) Harborview Medical Center University of Washington Medical Center	Seattle
			I P R Seattle Children's Hospital	Seattle	
East ↓	II	II P		Providence Sacred Heart Medical Center & Children's Hospital	Spokane
	III			Deaconess Hospital / ROCKWOOD HEALTH SYSTEM	Spokane
	III			Providence Holy Family Hospital	Spokane
	III	III P		St. Joseph Regional Medical Center	Lewiston, ID
	III			Valley Hospital / ROCKWOOD HEALTH SYSTEM	Spokane Valley
	IV			Newport Hospital & Health Services	Newport
	IV			Providence Mount Carmel Hospital	Colville
	IV			Providence St. Joseph's Hospital	Chewelah
	IV			Pullman Regional Hospital	Pullman
	IV			Tri-State Memorial Hospital	Clarkston
	V			East Adams Rural Hospital	Ritzville
	V			Ferry County Memorial Hospital	Republic
	V			Garfield County Memorial Hospital	Pomeroy
	V			Lincoln Hospital	Davenport
	V			Odessa Memorial Healthcare Center	Odessa
	V			Othello Community Hospital	Othello
V			Whitman Hospital & Medical Center	Cofax	
			I R St. Luke's Rehabilitation Institute	Spokane	
North ↓	III			Island Hospital	Anacortes
	II		II R	PeaceHealth St. Joseph Medical Center	Bellingham
	II	III P	II R	Providence Regional Medical Center Everett	Everett
	III			Skagit Valley Hospital	Mt Vernon
	III			Whidbey General Hospital	Coupeville
	IV			Cascade Valley Hospital	Arlington
	IV			Swedish/Edmonds	Edmonds
	IV			PeaceHealth United General Medical Center	Sedro-Woolley
	IV			Valley General Hospital	Monroe
	V			Peace Island Medical Center	Friday Harbor
North Central ↓	III	III P		Central Washington Hospital	Wenatchee
	IV			Coulee Medical Center	Grand Coulee
	IV			Lake Chelan Community Hospital	Chelan
	IV			Mid-Valley Hospital	Omak
	IV			North Valley Hospital	Tonasket

## Appendix A: DOH List of Trauma Hospitals– Continued

Washington State Trauma Services

Region	Trauma Designation			Facility	City
	Adult	Pediatric	Rehab		
North Central				Three Rivers Hospital	Brewster
	IV			Samaritan Hospital	Moses Lake
	V			Cascade Medical Center	Leavenworth
	V			Columbia Basin Hospital	Ephrata
	V			Quincy Valley Medical Center	Quincy
				II R	Wenatchee Valley Hospital – Rehabilitation Center
Northwest	III			Harrison Medical Center	Bremerton
	III			Olympic Medical Center	Port Angeles
	IV			Forks Community Hospital	Forks
	IV			Jefferson Healthcare Hospital	Port Townsend
	IV			Mason General Hospital	Shelton
South Central	III		II R	Kadlec Regional Medical Center	Richland
	III	III P		Trios Health	Kennewick
	III	III P	II R	Providence St. Mary Medical Center	Walla Walla
	III			Walla Walla General Hospital	Walla Walla
	III		II R	Yakima Regional Medical & Cardiac Center	Yakima
	III	III P		Yakima Valley Memorial Hospital	Yakima
	IV			Kittitas Valley Healthcare	Ellensburg
	IV		II R	Lourdes Medical Center	Pasco
	IV			Prosser Memorial Hospital	Prosser
	IV			Sunnyside Community Hospital	Sunnyside
	IV			Toppenish Community Hospital	Toppenish
	V			Dayton General Hospital	Dayton
Southwest	II		II R	PeaceHealth Southwest Medical Center	Vancouver
	III			PeaceHealth St. John Medical Center	Longview
	IV			Klickitat Valley Hospital	Goldendale
	IV			Ocean Beach Hospital	Ilwaco
	IV			Skyline Hospital	White Salmon
West	II			Madigan Army Medical Center	Fort Lewis
	II			Tacoma Trauma Center (joint)	St. Joseph Medical Center Tacoma General Hospital
		II P		Mary Bridge Children's Hospital & Health Center	Tacoma
	III		I R	Multicare Good Samaritan Hospital	Puyallup
	III			Grays Harbor Community Hospital	Aberdeen
	III		II R	Providence St. Peter Hospital	Olympia
	IV			Capital Medical Center	Olympia
	IV			Providence Centralia Hospital	Centralia
	IV			St. Anthony Hospital	Gig Harbor
	IV			St. Clare Hospital	Lakewood
	V			Summit Pacific Medical Center	Elma
	V			Morton General Hospital	Morton
	V			Willapa Harbor Hospital	South Bend
				II R	St. Joseph Medical Center

## Appendix B: Washington State Trauma Registry Inclusion Criteria

### Washington State Trauma Registry Inclusion Criteria

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*(Effective December 17, 2009)*

Data must be reported to the Washington Trauma Registry (WTR) for all patients with a discharge ICD9-CM diagnosis code of 800-904, or 910-959, or 994.1 (drowning), 994.7 (asphyxiation), or 994.8 (electrocution) AND any one or more of the following:

- All patients (any diagnosis) for whom the full or modified Trauma Resuscitation Team was activated; or
- All trauma patients who were dead on arrival at your facility; or
- All trauma patients who died in your facility; or
- All trauma patients transferred out to another facility by EMS/ambulance; or
- All trauma patients transferred in from another facility by EMS/ambulance; or
- All trauma patients flown from the scene to your facility; or
- All pediatric (age 0-14) trauma patients admitted to your facility; or
- All adult (age 15+) trauma patients admitted to your facility with length-of-stay more than 2 days (48 hours)

**Note:** *The diagnosis codes above include all subcodes; e.g., 806 includes 806.00-806.99.*

While **isolated hip fractures/femoral neck fractures** (ICD9-CM 820 with no other significant injuries noted) in elderly patients are included in registry requirements, WAC 246-976-420, *DOH does not require you to report those injuries at this time. It is applicable to patients 65 and older.*

Patients with diagnoses of **foreign bodies** (ICD9-CM 930-939) are required to be included in the registry **only if** there is a resulting injury. In these cases, the resulting injury should be coded in addition to the foreign body.

**Transfers:** Patients sent from one hospital to another hospital via private vehicle (non-ambulance) are not considered transfers for the purpose of inclusion. It is expected that patients with serious injuries will be transferred via ambulance, and that private vehicles are used only for patients with minor injuries.

**Admitted to your facility:** Patients moved from the emergency department (includes observation units and short stay units) to any bed in the hospital are considered admitted to the facility.

**Readmissions:** The Trauma Registry does not require readmission records for the same injury. Only the initial episode of care (first admission) is required. Exception: If a patient is discharged home from the emergency department and is subsequently admitted for a missed diagnosis of the same injury, both records should be included.

Trauma services may include additional patients that do not meet the state inclusion criteria. However, hospital comparative reports, regional quality improvement reports, and other state-prepared reports will only reflect records that meet the state criteria. This helps assure comparability across facilities and regions.

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## Appendix B: Washington State Trauma Registry Inclusion Criteria – Continued

A detailed list of the discharge diagnosis codes for registry inclusion is provided below. Refer to ICD9-CM documentation for all sub-object detail. **Required ICD9-CM Injury Diagnoses:**

800 Fx of vault of skull	847 Sprains and strains of other and unspecified parts of back
801 Fx of base of skull	848 Other and ill-defined sprains and strains
802 Fx of Face bones	849 Unspecified site of sprain and strain
803 Other and unqualified skull fxs	850 Concussion
804 Multiple fx involving skull or face with other bones	851 Cerebral laceration and contusion
805 Fx of vertebral column without mention of spinal cord injury	852 Subarachnoid, subdural, and extradural hemorrhage following injury
806 Fx of vertebral column with spinal cord injury	853 Other and unspecified intracranial hemorrhage following injury
807 Fx of rib(s), sternum, larynx, and trachea	854 Intracranial injury of other & unspecified nature
808 Fx of pelvis	860 Traumatic pneumothorax and hemorrhage
809 Ill-defined fx of bones of trunk	861 Injury to heart and lung
810 Fx of clavicle	862 Injury to other & unspecified intrathoracic organs
811 Fx of scapula	863 Injury to gastrointestinal tract
812 Fx of humerus	864 Injury to liver
813 Fx of radius and ulna	865 Injury to spleen
814 Fx of carpal bone(s)	866 Injury to kidney
815 Fx of metacarpal bone(s)	867 Injury to pelvic organs
816 Fx or one or more phalanges of hand	868 Injury to other intra-abdominal organs
817 Multiple fxs of hand bones	869 Internal injury to unspecified or ill-defined organs
818 Ill-defined fx of upper limb	870 Open wound of ocular adnexa
819 Multiple fxs involving both upper limbs, and upper limb with rib(s) and sternum	871 Open wound of eyeball
820 Fx of neck of femur (or hip fx) (optional)	872 Open wound of ear
821 Fx of other and unspecified parts of femur	873 Other open wound of head
822 Fx of patella	874 Open wound of neck
823 Fx of tibia and fibula	875 Open wound of chest wall
824 Fx of one or more tarsal and metatarsal bones	876 Open wound of back
825 Fx of calcaneus	877 Open wound of buttock
826 Fx of one or more phalanges of foot	878 Open wound of genital organs (external) including traumatic amputation
827 Other, multiple, and ill-defined fx of lower limb	879 Open wound of other and unspecified sites, except limbs
828 Multiple fxs involving both lower limbs, lower with upper limb, & lower limb(s) with rib(s) & sternum	880 Open wound of shoulder and upper arm
829 Fx of unspecified bones	881 Open wound of elbow, forearm, and wrist
830 Dislocation of jaw	882 Open wound of hand except finger(s) alone
831 Dislocation of shoulder	883 Open wound of finger(s)
832 Dislocation of elbow	884 Multiple & unspecified open wound of upper limb
833 Dislocation of wrist	885 Traumatic amputation of thumb (complete) (partial)
834 Dislocation of finger	886 Traumatic amputation of other finger(s) (complete) (partial)
835 Dislocation of hip	887 Traumatic amputation of arm & hand (complete) (partial)
836 Dislocation of knee	890 Open wound of hip and thigh
837 Dislocation of ankle	891 Open wound of knee, leg (except thigh), & ankle
838 Dislocation of foot	892 Open wound of foot except toe(s) alone
839 Other, multiple, and ill-defined dislocations	893 Open wound of toe(s)
840 Sprains and strains of shoulder and upper arm	894 Multiple & unspecified open wound of lower limb
841 Sprains and strains of elbow and forearm	895 Traumatic amputation of toe(s) (complete) (partial)
842 Sprains and strains of wrist and hand	896 Traumatic amputation of foot (complete) (partial)
843 Sprains and strains of hip and thigh	897 Traumatic amputation of leg(s) (complete) (partial)
844 Sprains and strains of knee and leg	900 Injury to blood vessels of head and neck
845 Sprains and strains of ankle and foot	
846 Sprains and strains of sacroiliac region	

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## Appendix B: Washington State Trauma Registry Inclusion Criteria – Continued

- 901 Injury to blood vessels of thorax
- 902 Injury to blood vessels of abdomen & pelvis
- 903 Injury to blood vessels of upper extremity
- 904 Injury to blood vessels of lower extremity and unspecified sites
- 910 Superficial injury of face, neck, & scalp except eye
- 911 Superficial injury of trunk
- 912 Superficial injury of shoulder and upper arm
- 913 Superficial injury of elbow, forearm, and wrist
- 914 Superficial injury of hand(s) except finger(s) alone
- 915 Superficial injury of fingers
- 916 Superficial injury of hip, thigh, leg, and ankle
- 917 Superficial injury of foot and toes(s)
- 918 Superficial injury of eye and adnexa
- 919 Superficial injury of other, multiple, and unspecified sites
- 920 Contusion of face, scalp, and neck except eye(s)
- 921 Contusion of eye and adnexa
- 922 Contusion of trunk
- 923 Contusion of upper limb
- 924 Contusion of lower limb and of other and unspecified sites
- 925 Crushing injury of face, scalp, and neck
- 926 Crushing injury of trunk
- 927 Crushing injury of upper limb
- 928 Crushing injury of lower limb
- 929 Crushing injury of multiple and unspecified sites

For ICD9-CM 930-939, foreign bodies are required only if an injury results. In these cases, the resulting injury diagnosis should also be coded along with the foreign body diagnosis.

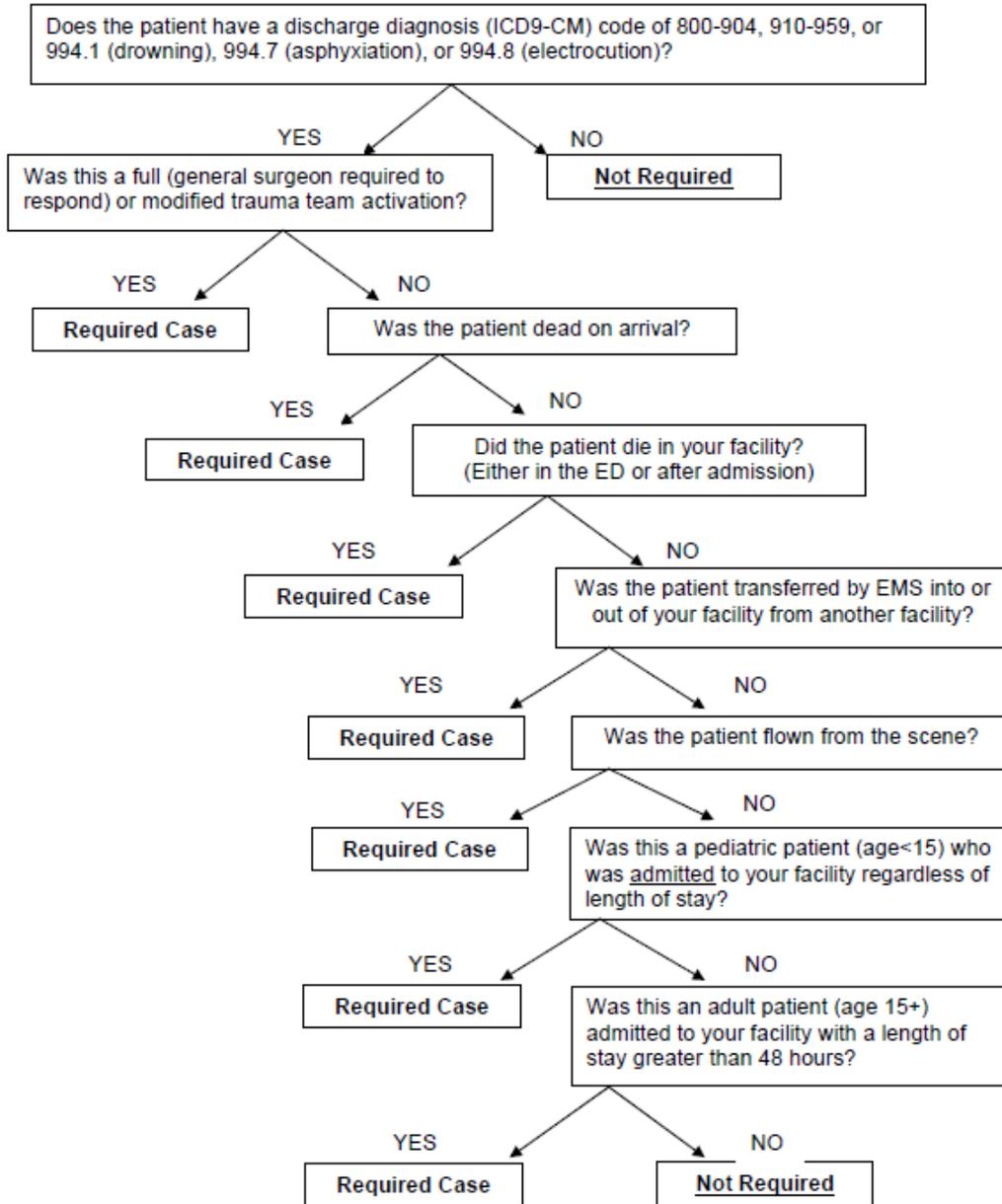
- 930 Foreign body on external eye

- 931 Foreign body in ear
- 932 Foreign body in nose
- 933 Foreign body in pharynx and larynx
- 934 Foreign body in trachea, bronchus, and limb
- 935 Foreign body in mouth, esophagus, & stomach
- 936 Foreign body in intestine and colon
- 937 Foreign body in anus and rectum
- 938 Foreign body in digestive system, unspecified
- 939 Foreign body in genitourinary tract
- 940 Burn confined to eye and adnexa
- 941 Burn of face, head, and neck
- 942 Burn of trunk
- 943 Burn of upper limb, except wrist and hand
- 944 Burn of wrist(s) and hand(s)
- 945 Burn of lower limb(s)
- 946 Burns of multiple specified sites
- 947 Burn of internal organs
- 948 Burns classified according to extent of body surface involved
- 948 Burn, unspecified
- 950 Injury to optic nerve and pathways
- 951 Injury to other cranial nerve(s)
- 952 Spinal cord injury without evidence of spinal bone injury
- 953 Injury to nerve roots and spinal plexus
- 954 Injury to other nerve(s) of trunk, excluding shoulder and pelvic girdles
- 955 Injury to peripheral nerve(s) of shoulder girdle and upper limb
- 956 Injury to peripheral nerve(s) of pelvic girdle and lower limb
- 957 Injury to other and unspecified nerves
- 958 Certain early complications of trauma
- 959 Injury, other early complications of trauma
- 994.1 Drowning and nonfatal submersion
- 994.7 Asphyxiation and strangulation
- 994.8 Electrocution & nonfatal effects of electric current

Appendix B: Washington State Trauma Registry Inclusion Criteria – Continued

Washington State Trauma Registry Inclusion Criteria

Effective December 17, 2009



## Appendix C: Catastrophic Response Plan

### Joint Hospital and L&I

#### Catastrophic Response Plan

1. Hospital will notify the regional ONC by fax of injured workers that were admitted to the hospital for more than 24-hours (likely to be a catastrophic claim).
2. The hospital will fax prepared template to the regional ONC with the following information (if available):
  - a. Date of admission
  - b. Claim number from ROA
  - c. General description of the injury and diagnosis
  - d. Mechanism of injury and diagnosis
  - e. Any ROA number that was initiated by the transferring facility
  - f. Name of transferring facility
  - g. Hospital patient number
  - h. Patient demographics (name, age, phone number, city language)
  - i. Employer information (name/location of company and accident, phone number)
  - j. Floor – unit number and service
  - k. Hospital emergency department notes and registration sheet
    - o L&I fax numbers (360) 902-4292, (360) 902-4565, (360) 902-4566, (360) 902-4567, (360) 902-5230, (360) 902-6100, (360) 902-6252, (360) 902-6460
  - l. ROA initiated by hospital – fax to the hot claims desk (360) 902-4980
    - o The fax cover sheet should be marked “HOT CLAIM”.
3. The ONCs will create an RLOG note for all the claims in which they received notification.
  - o Rlog notes should say “Catastrophic injury coordination” as title.
  - o If other L&I staff receive a phone call regarding a potential catastrophic claim, staff should create the RLOG message in LINIIS, even if the ROA has not been received.
4. Based on the information provided by the hospital, the regional ONC will determine whether the claim meets Labor and Industries definition of a catastrophic claim. (See end of document)
5. For claims involving fatalities or those claims meeting Labor and Industries’ definition of a catastrophic claim, the regional ONC will send an e-mail, containing the same information (if known) as provided by the hospital, to the following L&I staff via the LNI DL Catastrophic Claim – Regional ONC distribution list:
  - a. Vickie Porter and administrative assistant (the catastrophic claim process owner)
  - b. LaVonda McCandless (central office ONC)
  - c. Regional ONC supervisor
  - d. Debbie Carlson (coordinator for utilization review and Qualis).
    - o Debbie will follow up with Qualis and the provider on non-initiated claims. The individuals listed in the e-mail from the regional ONC will receive confirmation from Debbie once the ROA is received.

## Appendix C: Catastrophic Response Plan – Continued

- e. Mildred Baker. She manages the claims initiation unit. The e-mail from the regional ONC will allow her to flag the report of accident (if available) and expedite the keying the information over other hot ROAs.
  - f. Claims Administration - Wanda Smid and Dennis Scott
    - They will make sure the claims are monitored for arrival of the ROA, assignment of employer and risk class and then assignment to the appropriate CM to adjudicate.
    - If they feel this is a high-profile case, please e-mail the Insurance Services Program Manager or designee.
  - g. Regional ONC in worker's region
  - h. Employer services (Cindy Morgan and Anna E. Coleman)
  - i. Imaging unit (Thomas Thomas)
  - j. Carrie Boyd, Pension Unit Supervisor
  - k. If the claim is a fatality, the regional ONC should also e-mail LNI RE Fatality Claims Pension Adjudicators, (in Outlook the e-mail address is under resources).
  - l. If the claim is already assigned to a CM, copy the ONC who covers the CM's unit.
6. For catastrophic claims, the regional ONC will call the injured worker/family to determine whether they are receptive to receiving information (personally or via phone) about industrial insurance. The regional ONC's are careful to make sure injured worker/family members understand benefits are contingent upon claim acceptance.
- o If needed, the ONCs will provide a packet of information regarding Labor and Industries.
  - o Travel reimbursement. If the regional ONC or the central office ONC knows the injured worker has a follow-up appointment at the hospital it should be documented in RLOG, this will help with the authorization to reimburse travel expenses.
7. Options if the regional ONC is going to personally visit the injured worker
- If the claim is not yet authorized it may be helpful if the ONC contacts the claim manager and or central office ONC (if assigned) to determine any additional information needed for claim acceptance.
  - Prior to visiting the injured worker it may be helpful to contact the social worker at the hospital regarding potential issues.
  - If the ONC comes across any issue raised by the IW/family they are not able to resolve please notify the folks listed in your initial e-mail distribution list. Folks on the list may be able to provide support to you and IW/family.

### Definition of Catastrophic Claims

**Hospital** - Any injured worker who is admitted to the hospital (inpatient - 24 hours or more). All of the conditions mentioned in L&I's policy below would require at least 24 care.

**Labor and Industries (L&I)** - Hospitalized open and closed head injuries, spinal cord injuries with paralysis, hospitalized burns, multiple trauma/fractures, major crush injuries, major degloving injuries, amputations, severe chemical exposure requiring

## Appendix C: Catastrophic Response Plan - Continued

hospitalization or a new claim resulting in hospitalization for psychiatric issues. Hospitalizations for potential catastrophic injuries could be included.

### Discharge Authorization Recommendation Options

Depending on needs and timeframes, the hospital can find the appropriate central office Occupational Nurse Consultant (ONC) to authorize discharge services by contacting:

1. The on-call regional ONC
2. The central office ONC
3. The claims administration's office assistant line (360) 902-5880 and ask them for the appropriate contact information of the central office ONC.

## Contact Information

### Administrative Assistants for DSA

DSA 1 (Fran Miller) - Pam Gillespie	(360) 902-4478
DSA 2 (Vickie Porter) - Sandi Leighton	(360) 902-9191
DSA 3 (Carole Horrell) – Christy Gonzaga	(360) 902-9192
DSA 4/9 (Jacque Guffey) - Tracey Thorson	(360) 902-9194
DSA 5/7 (Mary Burbage) - Pam Gillespie	(360) 902-4478
DSA 6 (Brenda Heilman) - Jessica Hartman	(360) 902-9195

### Central office program leads assigned to help resolve catastrophic claims

#### Employer Services:

Anna E. Coleman	(360) 902-5634
Cindy Morgan	(360)902-6331

#### Claims Administration:

Wanda Smid	(360) 902- 4369
Dennis Scott	(360) 902-6104

#### Claims Initiation:

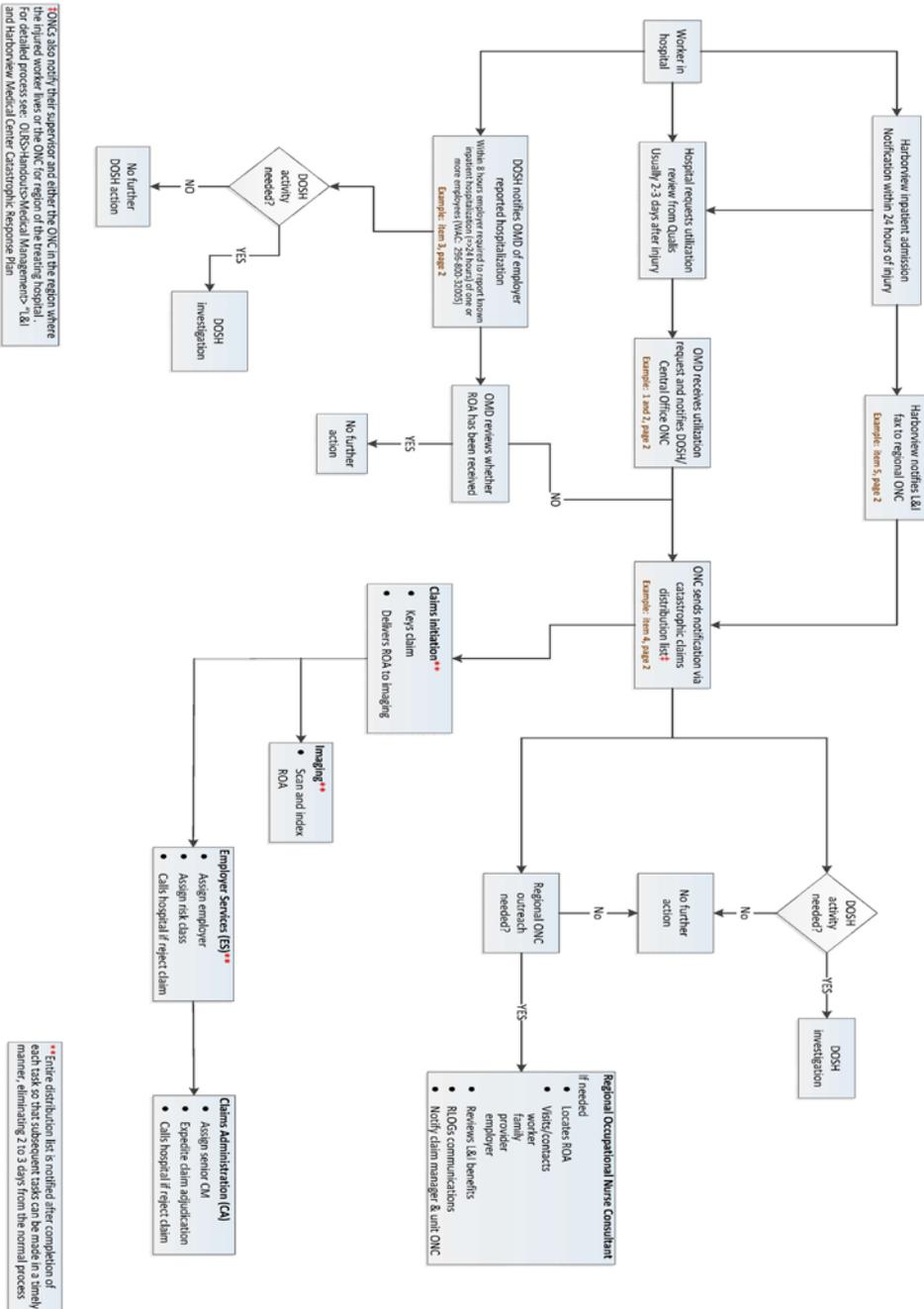
Mildred Baker	(360) 902-4872
---------------	----------------

#### Imaging:

Ray Dyas	(360) 902-6493
Thomas Thomas	(360) 902-5823

## Appendix D: Flow Chart – Coordination Between Insurance Services and DOSH

### State Fund Injured Workers and Inpatient Hospital Admissions Coordination Between Insurance Services and DOSH See page 2 for supporting documentation





## Appendix E: NCM Referral Criteria

# Nurse Case Management (NCM)

This card provided courtesy of the Occupational Nurse Consultant Unit  
QRC/Med Mgmt/Nurse Case Mgmt.docx 9-13

### WHAT IS THE NURSE CASE MANAGEMENT PROGRAM?

- ❖ Nurse Case Management (NCM) is a collaborative process used to meet an IW's healthcare and rehabilitative needs.
- ❖ The NCM works with the AP, IW, CM, ONC and other healthcare providers to facilitates the timely delivery of medical services and identifies barriers to functional recovery.
- ❖ NCM services are provided by an RN with a case management certification.
- ❖ NCM written reports, with actions taken, progress toward goals, and recommendations, are provided to claims managers every 30 days.

### HOW CAN NURSE CASE MANAGER INTERVENTION HELP IN CLAIMS RESOLUTION?

1. **Identify medical problems/red flags** from information gathered by on-site visits.
2. **Make recommendations on management and resolution** of health problems.
3. Assist claims manager with **development and coordination of action plan** on complex, time-intensive cases.
4. Reduce complications by coordination of discharge plan on catastrophic injuries from medical/rehabilitation facility to place of residence.
5. Promote return to work by **early identification of barriers to functional recovery**.
6. **Improve customer service** by increased communication between the worker, health care provider, employer and department representative.

### REFERRAL CRITERIA

#### I. Primary Injury – Related Catastrophic DX

Spinal cord injuries with paralysis  
 Amputated limbs  
 Hospitalization for open and closed head injuries  
 Major ~~degloving~~ injuries  
 Hospitalization for major burns  
 Multiple trauma/fractures

---

#### II. Secondary Diagnosis Complicating Recovery

Psychiatric conditions  
 Drug/alcohol abuse  
 Neurological/cardiovascular conditions  
 Non-healing wound/wound infection (chronic osteomyelitis)  
 Chronic Pain Syndrome

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#### III. Barriers to successful claim resolution

Coordination of return to work plan  
 Unclear or no treatment plan from the AP  
 Frequent hospitalizations (2 or more admissions in a year for the same condition)

## Appendix E: NCM Referral Criteria – Continued

<b>REFERRAL PROCESS</b>	
<b>Process for Nurse Care Management Referral</b>	<b>Billing Process</b>
<ol style="list-style-type: none"> <li>1. ONC reviews claim to determine if NCM is able to impact claim.</li> <li>2. ONC discusses assignment of NCM with CM. A joint decision is made with the CM and the ONC if a NCM should be assigned.  Goals are determined. A joint decision is made by the CM and the ONC on initial goals. ONC will contact NCM to determine availability to accept a new referral and discuss initial goal for NCM intervention.</li> <li>3. The CM will send the Mail <a href="#">32 letter</a> (Medical Case Management Services letter) to the injured worker.</li> <li>4. The ONC will send the NN letter with the authorization dates.</li> <li>5. Claim Manager will grant NCM 90 day access to CAC.</li> <li>6. Written summary reports of progress in meeting identified goals will be provided monthly by the nurse case manager.</li> <li>7. The ONC will monitor the NCMs activities and revise goals as appropriate.</li> <li>8. CM and ONC will review progress in meeting goals and will decide when the goals have been met or when the referral is no longer needed.</li> </ol>	<ol style="list-style-type: none"> <li>1. <b>Authorizing NCM services in AUTH</b>  <b>ST TP CODE RANGE DATE RANGE</b> A K 111 MMDDYY MMDDYY The package covers procedures 1220M– 1225M; phone calls, visits, case planning, travel/wait, (all at 6 minutes per unit) mileage, expenses (see covered/non-covered expenses under 3) and 4).</li> <li>2. <b>Authorization is for:</b> <ol style="list-style-type: none"> <li>a. 50 hours. Extension by another 25 hours is an option after staffing with NCM, CM and ONC.</li> <li>b. More than 75 hours contingent on review and approval by CM and ONC.</li> </ol> </li> <li>3. <b>Covered NCM expenses:</b> <ul style="list-style-type: none"> <li>• Mileage current rate for mileage reimbursement.</li> <li>• Parking, ferry, toll fees, and cab with prior CM approval.</li> <li>• Meals and lodging with prior CM approval and at per diem rate.</li> <li>• Airfare with prior CM approval.</li> <li>• Mileage &gt; 600 miles round trip with prior CM approval.</li> <li>• Fees for obtaining medical records per department request and at current maximum allowable rate per page.</li> </ul> </li> <li>4. <b>Non-covered NCM expenses:</b> <ul style="list-style-type: none"> <li>• NCM training, e.g., training on office policies and procedures.</li> <li>• Supervision such as supervisor-nurse visits, case reviews or conferences.</li> <li>• Postage, printing or photocopying costs (with exception of medical reports per department requests).</li> <li>• Telephone/fax equipment.</li> <li>• Time spent on clerical activity including processing referrals, file set up, typing, copying, mailing, etc.</li> <li>• Travel time to a post office or a fax machine.</li> <li>• Wait time exceeding 16 hours.</li> <li>• Fees related to legal work. Legal fees may be charged to requesting party, but not claim.</li> <li>• Any other administrative cost not specifically mentioned above.</li> </ul> </li> </ol>

## Appendix F: Additional Data Analysis

**Table A: Frequency of Catastrophic Injury Claims by Accident County, WA Department of Labor and Industries, 2005-2013**

COUNTY	FREQUENCY	PERCENTAGE
KING	820	30.7%
PIERCE	223	8.4%
SPOKANE	159	6.0%
SNOHOMISH	157	5.9%
YAKIMA	134	5.0%
CLARK	98	3.7%
WHATCOM	80	3.0%
BENTON	71	2.7%
THURSTON	70	2.6%
GRANT	68	2.5%
SKAGIT	54	2.0%
LEWIS	52	1.9%
GRAYS HARBOR	43	1.6%
KITSAP	43	1.6%
CHELAN	38	1.4%
COWLITZ	36	1.3%
FRANKLIN	36	1.3%
CLALLAM	30	1.1%
ALL OTHER WA COUNTIES	248	9.3%
NOT SPECIFIED	144	5.4%
INVALID COUNTY CODE	66	2.5%
TOTAL	2670	100%

## Appendix F: Additional Data Analysis - Continued

**Table B: Frequency of Catastrophic Injury Claim by Hospital, WA  
Department of Labor and Industries, 2005-2013**

<b>HOSPITAL</b>	<b>FREQUENCY</b>	<b>PERCENTAGE</b>
HARBORVIEW MEDICAL CENTER	1078	40.37%
PROVIDENCE SACRED HEART MEDICAL	146	5.5%
ST JOSEPH MEDICAL CENTER	81	3.0%
PEACEHEALTH SOUTHWEST MEDICAL	79	3.0%
TG ALLENMORE	75	2.8%
ST JOSEPH HOSPITAL BELLINGHAM	59	2.2%
KADLEC MEDICAL CENTER	55	2.1%
ST PETER HOSPITAL	55	2.1%
OVERLAKE HOSPITAL MEDICAL CTR	53	2.0%
VALLEY MEDICAL CENTER	52	1.9%
YAKIMA REGIONAL	51	1.9%
PROVIDENCE REGIONAL MEDICAL CTR	48	1.8%
CENTRAL WASHINGTON HOSPITAL	47	1.8%
DEACONESS MEDICAL CTR	45	1.7%
YAKIMA VALLEY MEMORIAL HOSPITAL	43	1.6%
EVERGREENHEALTH INPATIENT/OUTPATIENT	34	1.3%
SKAGIT VALLEY HOSPITAL	28	1.0%
DEACONESS MEDICAL CENTER	25	0.9%
GRAYS HARBOR COMMUNITY HOSPITAL	23	0.9%
SWEDISH MEDICAL CENTER	23	0.9%
OTHER - WA HOSPITALS	388	14.5%
OTHER - NOT SPECIFIED	182	6.8%
<b>TOTAL</b>	<b>2670</b>	<b>100.0%</b>

## Appendix F: Additional Data Analysis – Continued

**Table C: Total Costs by Injury Type, WA Department of Labor and Industries, 2005-2011**

<b>Injury Type</b>	<b>Total cost of claims</b>
Burns	\$18,393,562
Spinal cord injury	\$46,472,152
Amputation	\$13,878,588
Brain injury/pathology	\$58,638,822
Multiple trauma	\$266,766,759
Other	\$9,831,204
<b>Total</b>	<b>\$413,981,086*</b>

\* Subtotals don't add to the true total due to rounding error.

**Table D: Total Inpatient Hospital Costs by Injury Type, WA Department of Labor and Industries, 2005-2011**

<b>Injury Type</b>	<b>Total Inpatient Hospital Cost of Claims</b>
Burns	\$6,356,850
Spinal cord injury	\$10,120,237
Amputation	\$2,119,161
Brain injury/pathology	\$14,376,278
Multiple trauma	\$54,552,806
Other	\$2,161,153
<b>Total</b>	<b>\$89,686,485</b>

## **Appendix G: Acknowledgements**

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