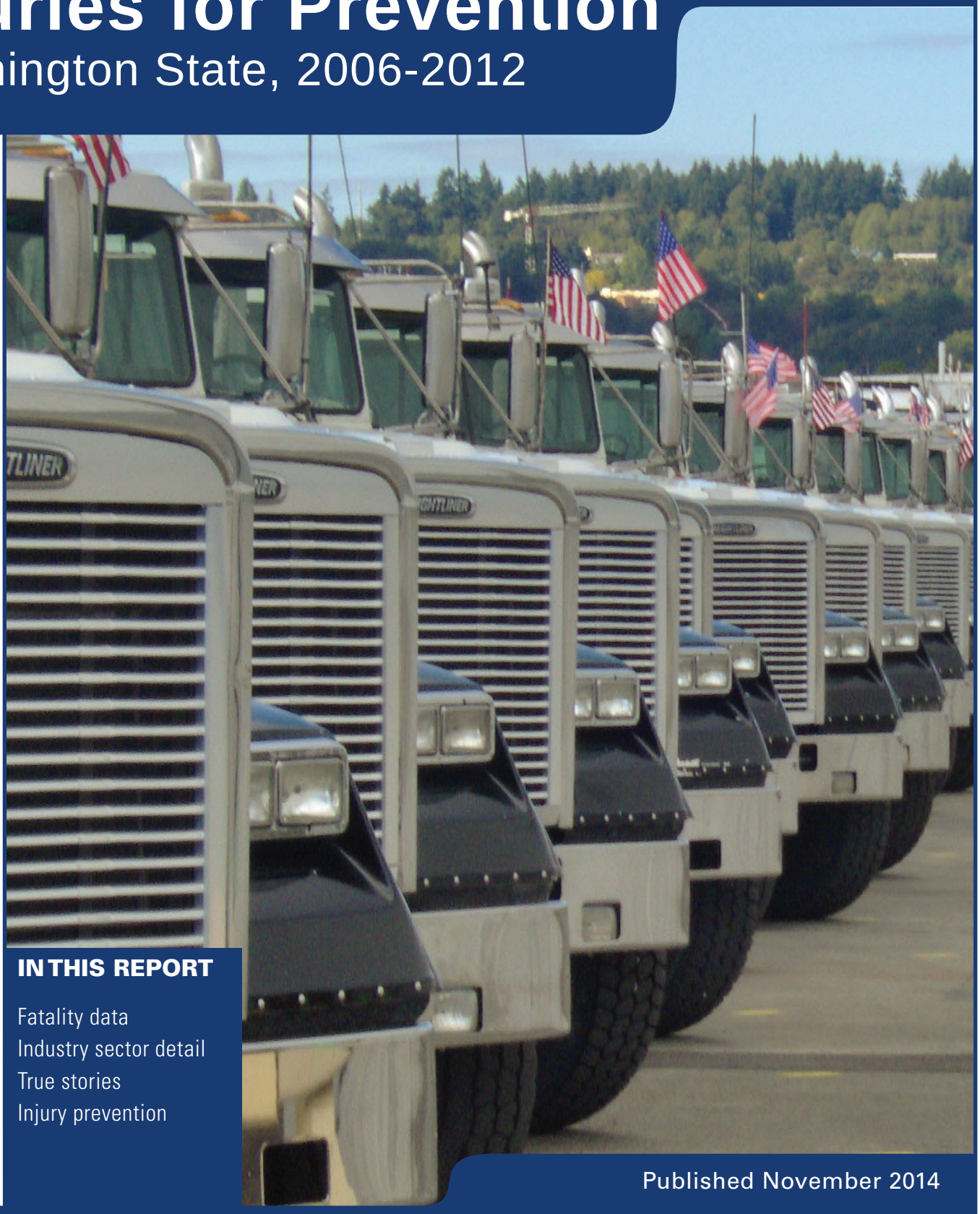
Trucking Industry: Examining Injuries for Prevention

Washington State, 2006-2012

General Freight, Less than Truckload ◆ Waste Hauling
General Freight, Truckload ◆ Couriers & Messengers
Specialized Freight ◆ Specialized Freight, Movers



IN THIS REPORT

- Fatality data
- Industry sector detail
- True stories
- Injury prevention

Published November 2014

Each year 1 out of every 13 truck drivers has a work-related injury that results in a lost work time workers' compensation claim.

This report provides employers, supervisors, employees, and safety and health professionals in the trucking industry with information on claims, claim rates, costs, common injury causes and prevention ideas.

Introduction

The trucking industry has some of the highest costs and rates of injury of all industries combined. This report provides injury data by type and industry sector so injury prevention resources can most effectively target and mitigate injuries.

Injuries to valuable trucking industry workers can be mitigated by targeting hazard prevention resources on the most common injury types and sources.

This report uses Washington State workers' compensation data to summarize the most common sources of injury by industry sub-sector. It includes tips to prevent injuries from strain, sprain or over-exertion, falls from elevation and the same level, struck by or against injuries and vehicle-related injuries.

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EXECUTIVE SUMMARY

2006-2012

The trucking industry in Washington State is a vital player in the state and country wide economies, moving virtually everything we produce and consume. Despite increased regulations for the hours of service and increased monitoring with the new Carrier Safety Administration (CSA) rules, trucking remains one of the most hazardous industries in North America.

The purpose of this report is to highlight injury data from the trucking industry in Washington State and to provide guidance to industry safety professionals on ways to address hazards. Data for injuries comes from the Washington State Department of Labor & Industries, the state's sole source for workers' compensation. Data covers calendar years 2006 through 2012 and focuses on both accepted and compensable (more than medical with a component of time-loss, kept on salary, etc.) claims.

While truck drivers have a disparate burden of injuries in the industry, the few but costly office/management injuries should not be ignored.

This report is organized to provide you with an overview of the methods and data that we used to produce the facts and figures, followed by a review of the fatalities that occurred in the trucking industry during this study period. The data is grouped by trucking sectors and within each sector we focus on common injury types and occupations. In order to create a concise description of large and varied industry sectors, we have grouped some trucking sectors and occupations together. Trucking sectors are defined by using the North American Industrial Classification (NAICS) codes and include: General Freight Trucking, Truckload (TL); General Freight Trucking, Less than Truckload (LTL); Specialized Freight, except Movers, Movers, and Couriers and Messengers. Definitions of how we did this can be found both in the beginning methods section and in the appendix. A description of all of the detailed occupations that make up the four large groups we used throughout this report (drivers, material handlers, vehicle service technicians and management) can also be found in the appendix. Data in terms of direct costs are mentioned briefly in each injury type within each trucking sector, but are detailed by sector, occupation and injury type in the appendix.

As with many other industries in Washington State and nationally, strain, sprain or overexertion injuries comprise the highest count, injury rate and costs among the injury groups presented in this report. Falls from elevation and falls from same level are also frequent and costly injuries in the trucking industry during the study time period. In order to further delve into the injuries that we see occurring in trucking, we ranked the injury type and then ranked time-loss days and used these rankings to determine what activity was occurring during the commission of these injury events. These are represented by what we call the Prevention Index Plus (PIP) and convey scenarios for injuries as they were occurring. We hope that this more detailed method allows safety and health professionals to consider their processes and to improve the safety of trucking industry workers.

While we have provided recommendations for mitigating or eliminating injuries in the trucking industry, much more work must be completed to keep workers within the trucking industry safe and working.

Table of Contents

Defining the industry	6
Data sources and calculations	8
Definitions and methods	9
Injury definitions	10
Occupation definitions	12
Fatalities	14
Occupational non-fatal injuries, all sectors combined	18
Injury types, all sectors combined	24
Strain, sprain or overexertion injuries	26
Fall from elevation	28
Fall on the same level	30
Struck by or against	32
Vehicle-related injuries	34
All other injuries	36
Breaking it down by sector	38
General freight, less than truckload	40
General freight, truckload	48
Specialized freight	56
Specialized freight, movers	64
Waste collection	72
Couriers and messengers	80
Appendices	88
A. Occupation definitions	90
B. Median cost of workers' comp claims by occupation and sector	92
C. Percent of comp injuries by sector and occupation by injury type	96
Contact information	98

Defining the industry

For this report the Washington State trucking industry includes employers with Washington State Labor & Industries (L&I) business accounts classified in one of the following North American Industrial Classification System (NAICS) codes:

General Freight, Less than Truckload (LTL)
NAICS 484110 Local
NAICS 484122 Long-Distance, Less than Truckload

General Freight, Truckload (TL)
NAICS 484121 Long-Distance, Truckload

Specialized Freight
NAICS 484220 Local (e.g. agricultural products, boat hauling, bulk liquids, dump trucking, livestock)
NAICS 484230 Long-Distance (e.g. automobile carrier, bulk liquid, hazardous materials, refrigerated product)

Specialized Freight, Movers
NAICS 484210 Used Household & Office Goods Moving

Waste Collection
NAICS 562111 Solid Waste Collection
NAICS 562112 Hazardous Waste Collection
NAICS 562119 Other Waste Collection

Couriers and Messengers
NAICS 492110 Couriers
NAICS 492210 Local Messengers and Local Delivery

Industry sectors by size

Figure 1. Washington State trucking industry sectors reported by size

* Percent of the trucking industry group state fund and self insured.

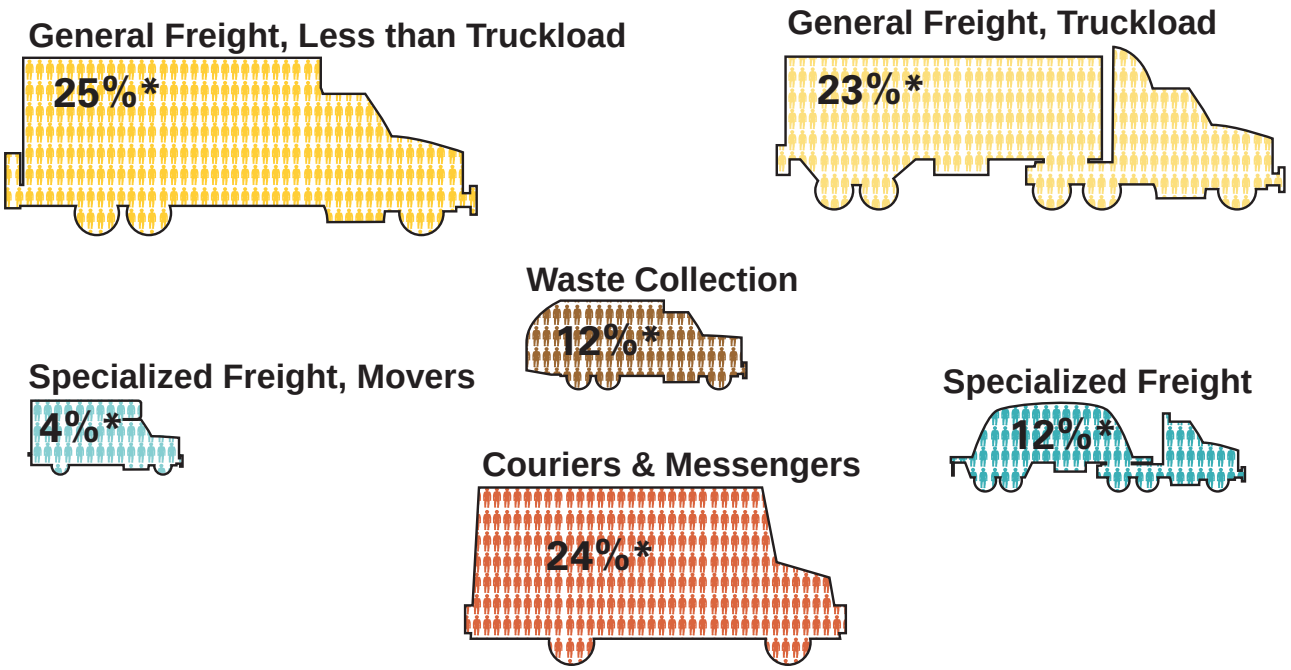


Table 1. The Washington State trucking industry by sector and average number of employees per year, 2006-2012.

Industry sector	Average number of employees per year**
General Freight, Less than Truckload	8,100
General Freight, Truckload	7,400
Specialized Freight	4,000
Specialized Freight, Movers	1,400
Waste Collection	4,100
Couriers and Messengers	7,900
All Trucking	33,000
All Self Insured and State Funded Employers	2,200,000

** Employers report hours worked by employees to L&I. We use these hours to estimate a full-time equivalent employee (FTE). A FTE is 2000 hours for one work year. One 'employee' above is equal to one FTE.

Injury data sources

The workers' compensation data for this report is provided by the Washington State Department of Labor & Industries (L&I). L&I is the sole provider of workers' compensation coverage in Washington State unless companies are able to self-insure. L&I covers approximately two-thirds of the workers in Washington State. The report includes accepted claims from 2006 through 2012.

Workers' compensation claims are divided into two main groups: medical-only and lost work time. Medical-only claims involve only the medical cost to treat the injured worker, but no time off for work is given. Lost work time (compensable) claims include injuries with four or more days of lost work time compensation, total permanent disability, fatality or being kept on salary by their employer. Unless otherwise stated all data for costs, injury counts and lost work time are for State Fund compensable claims.

Data for this report were extracted on April 5, 2014. Injuries which occurred during the study period may, after the extraction date, become lost work time claims and have increased costs. This is called "development." Therefore, future data extractions for the same time period may reflect slightly increased costs and claim counts.

The L&I workers' compensation database includes a complete count of the Self-Insured lost work time claims, but not all the cost associated with the claim are reported. For this report we primarily used compensable State Fund claims. Unless otherwise noted, the tables, charts, graphs, and discussion use State Fund compensable data.

Owner-operators are not required to have workers' compensation coverage so their injury experience is not captured in this report. Truck drivers working in non-trucking industries are not included in this report. Log carriers are included in the forestry and fishing industry and are not captured in this report. Under-reporting of injuries to workers' compensation systems is known to occur. Therefore injury rates in this report are likely an underestimate of the true burden of occupational injury in the trucking industry.

Employers report hours worked by employees to L&I. We used these hours to estimate a full-time equivalent employee (FTE). A FTE is 2000 hours for one work year. We used median costs in this report to more accurately reflect the expected costs associated with a claim group.

The Washington State Fatality Assessment and Control Evaluation (FACE) program provided the trucking fatality data.

How prevention targets are ranked

We hope the information in this report will assist you in making informed decisions for ranking injury prevention activities. Usually injury prevention efforts are claim count focused. We felt that the more severe injuries, those that generally cause higher medical costs and higher time-loss, should receive equal weight when determining where to focus prevention activities.

Throughout this report, we applied a Prevention Index Plus (PIP) to target the type of events and sources of injuries that when taken together were the 1) most costly in terms of medical cost, 2) had the highest number of workers' compensation claims and 3) the highest time-loss. The rankings were added together and divided by three and then ranked and sorted by industry sector. Combining these three factors together enables us more clearly define the areas to target for safety analysis and intervention.

Caveats: The results are not reported in industry sectors where the event/type and source groups provided too small of a number.

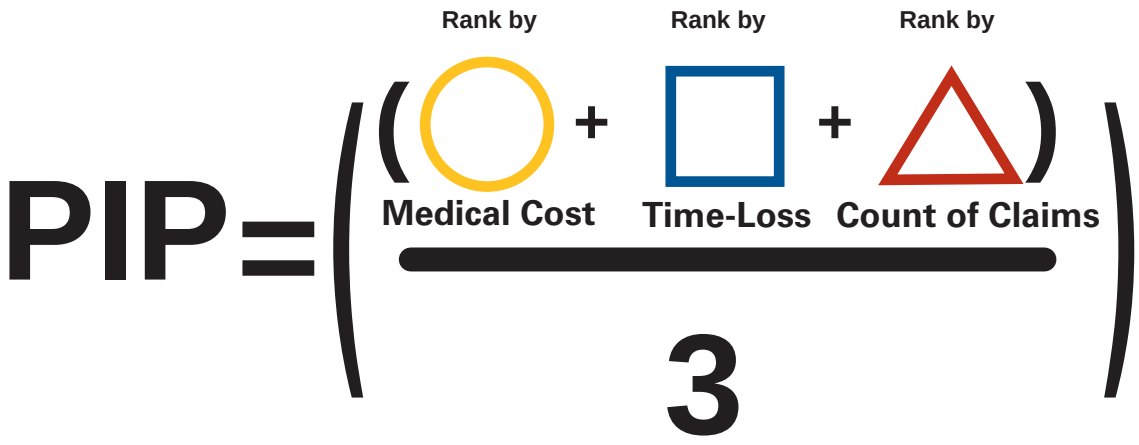
Throughout this report the following symbols will be used to designate highest ranks:

Highest in time-loss: □

Highest in medical cost: ○

Highest count of claims: △

Figure 2. Depicts the Prevention Index Plus (PIP) calculation.



What are the most common injury types?

This report groups the claims into six main injury type categories.

1. **Strain, sprain or overexertion**
2. **Fall from elevation**
3. **Fall on the same level**
4. **Struck by or against**
5. **Vehicle-related**
6. **All other**

What is a 'Strain, Sprain or Overexertion?'

For the purpose of this report we'll refer to injuries as "strain, sprain or overexertion" when the worker injury results from non-impact overexertion or bodily reaction that affects nerves, tendons, muscles, or supporting body structure that can happen overtime.

What is a 'Fall from Elevation?'

A 'Fall from Elevation' worker injury results from falling from an elevated work surface to a lower level.

What is a 'Fall on the Same Level?'

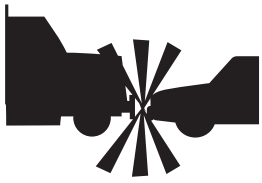
A 'Fall on the Same Level' worker injury results from falling to the work surface on which they are working.

What is a 'Struck By or Against' injury?

A 'Struck By or Against' worker injury results from impact between a worker and an object. Either the object or worker can be moving or stationary.

What is a 'Vehicle-related' injury?

A 'Vehicle-related ' worker injury results from a collision or non-collision involving a vehicle in normal operation.



What is an 'Other' injury?

The 'Other' injuries are all those not classified above.

This report groups claims into four main occupation type categories.*

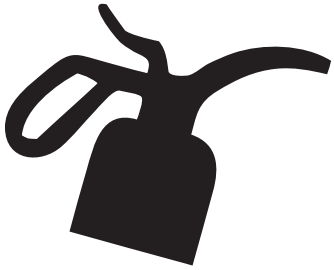
Drivers

Includes occupations such as Couriers and Messengers, Truck Drivers and Sales Workers, Heavy and Tractor-Trailer Truck Drivers, Refuse and Recyclable Material Collectors.

Material Handlers

Includes occupations such as Shipping, Receiving and Traffic Clerks, Stock Clerks and Order Fillers, Material Moving Workers, Packers and Packagers.

*** Complete definitions are in the appendix on pages 90-91.**



Vehicle Service

Includes occupations such as General and Operations Managers, Industrial Machinery Mechanics, Maintenance and Repair Workers, Cleaners of Vehicles and Equipment.

Managers

Includes occupations such as Chief Executives, Transportation, Storage and Distribution Managers, Bookkeeping, Accounting and Auditing Clerks, Secretaries, Receptionists and Customer Service Representatives. First-Line Supervisors of Transportation and Material Moving Machine and Vehicle Operators.

FATALITIES

Over the study period there was:

One fatal injury for every 4,430 full-time employees in the trucking industry.

Our goal is to prevent every fatality.

Table 2. The number of fatalities in the Washington State trucking industry by industry sector, 2006-2012.

Industry subgroup	Deaths
General Freight, Less than Truckload	12
General Freight, Truckload	23
Specialized Freight	8
Waste Collection	9
Couriers and Messengers	0
Total	**52**

TRUE STORIES

A truck driver delivering packages stepped out from behind his truck and was struck by an oncoming vehicle.

The driver of a garbage truck was killed when another vehicle ran a red light, striking her truck head-on. The victim was not wearing a seatbelt and was ejected out of the truck through its front window.

From 2006 through 2012 there were 52 trucking fatalities in Washington State.*

The rate 22.57 per 100,000 FTE.

On average 1 out of 4,430 full-time employees were fatally injured.

Over 73% of truck driver fatalities were vehicle-related. Almost 48% of these were categorized as loss of vehicle control, without a collision with another vehicle on the highway.

Six died from being struck by either their own or another vehicle while on foot. Seven were struck by, crushed by or caught in other objects. Four died from falls.

All but 1 of the 52 work-related deaths were among men.

The average age of the fatally injured workers was 46 years old. Of the 52 fatalities, 47 were truck drivers.

On average, the trucking industry accounts for 10% of work-related fatalities in Washington State.

*The Washington State Fatality Assessment and Control Evaluation (FACE) program provided the trucking fatality data.

TRUE STORIES

A fuel-tanker truck driver died when his truck struck a vehicle that had crashed on an interstate highway. The victim's truck then left the highway and crashed.

Two semi-tractor trailer trucks collided at a roadway intersection. The driver of one of the trucks was thrown from his vehicle and died at the scene. The driver of the other truck was not seriously injured.

A truck driver was walking back to his truck when he fell and was run over by a truck. The incident happened outside the gate of a port facility where the victim and other truck drivers had been waiting to enter the facility.

OCCUPATIONAL INJURIES

Figure 3. Depicts number of employees by sector with an accepted, compensable claim per total FTE's reported from 2006-2012.

1 out of every 19 trucking industry employees had an accepted, compensable claim during 2006-2012.

This is more than twice the rate of compensable claims in all other industries.

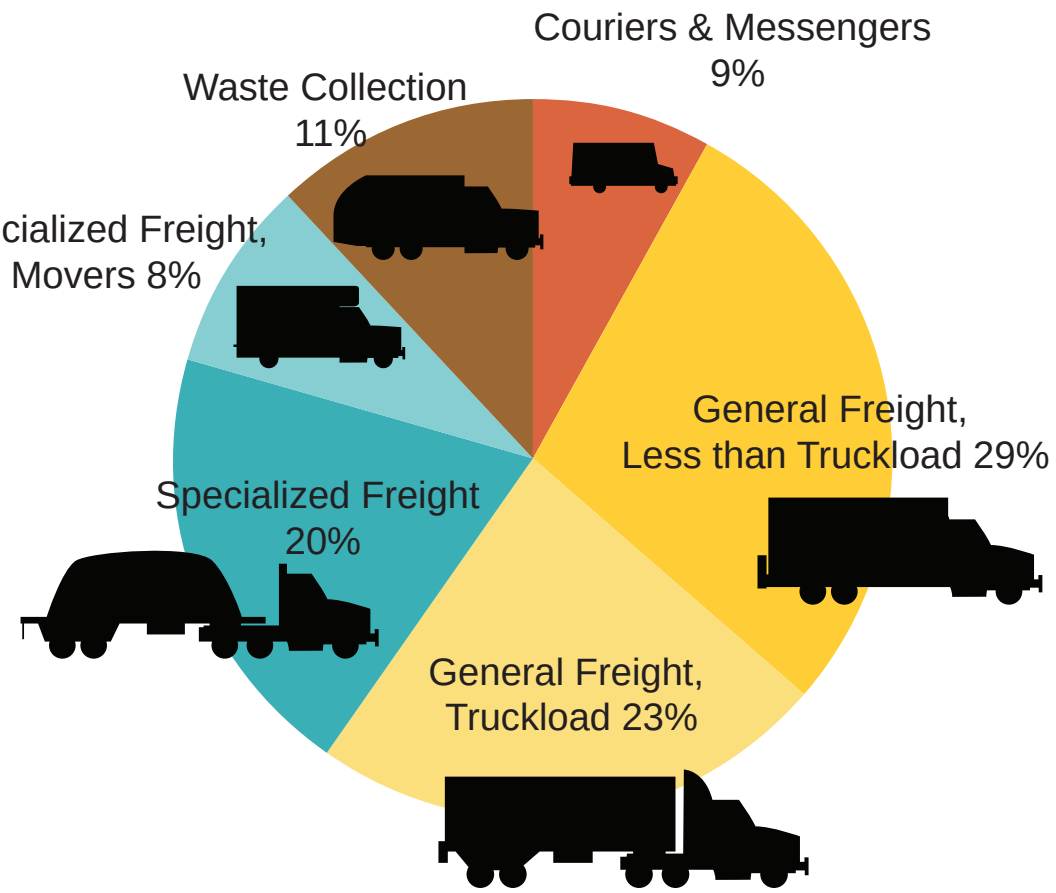
Non-fatal injuries to Washington's trucking industry workforce

For the 33,000 workers employed in the trucking industry each year from 2006 through 2012, there were:

- **6,903 lost work time claims; that's 987 claims per year**
- **1.5 million days of lost work; that's over 8 million hours of lost work or 612 workers not working each year**

The total workers' compensation cost for these injuries was more than $316 million or the cost of an additional lane on Interstate 5 from Seattle to Joint Base Lewis/McCord (approximately 45 miles).*

Figure 4. Percent of compensable claims by trucking industry sector, 2006-2012.



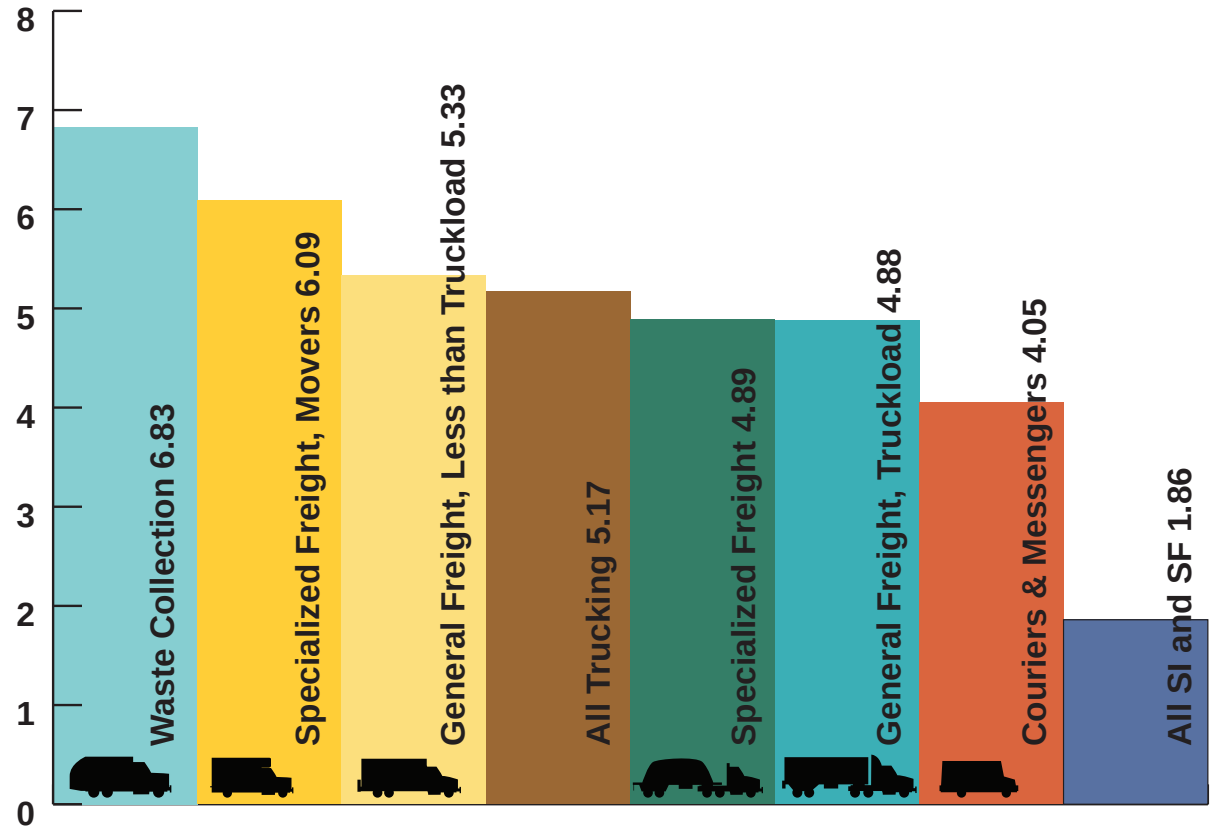
*Calculated using data from American Road & Transportation Building Association. http://www.artba.org/about/transportation-faqs/

Figure 5. Percent of State Fund compensable claims by occupation, 2006-2012.

Drivers make up 73% of compensable claims during the study period (Figure 5).

Figure 6 shows rates of time-loss injury claim rates for each trucking sector. For all sectors combined, 5.2 for every 100 workers were off work 4 or more days due to a work-related injury.

Figure 6. Compensable claims rate per 100 full-time equivalent (FTE) for each trucking sector 2006-2012



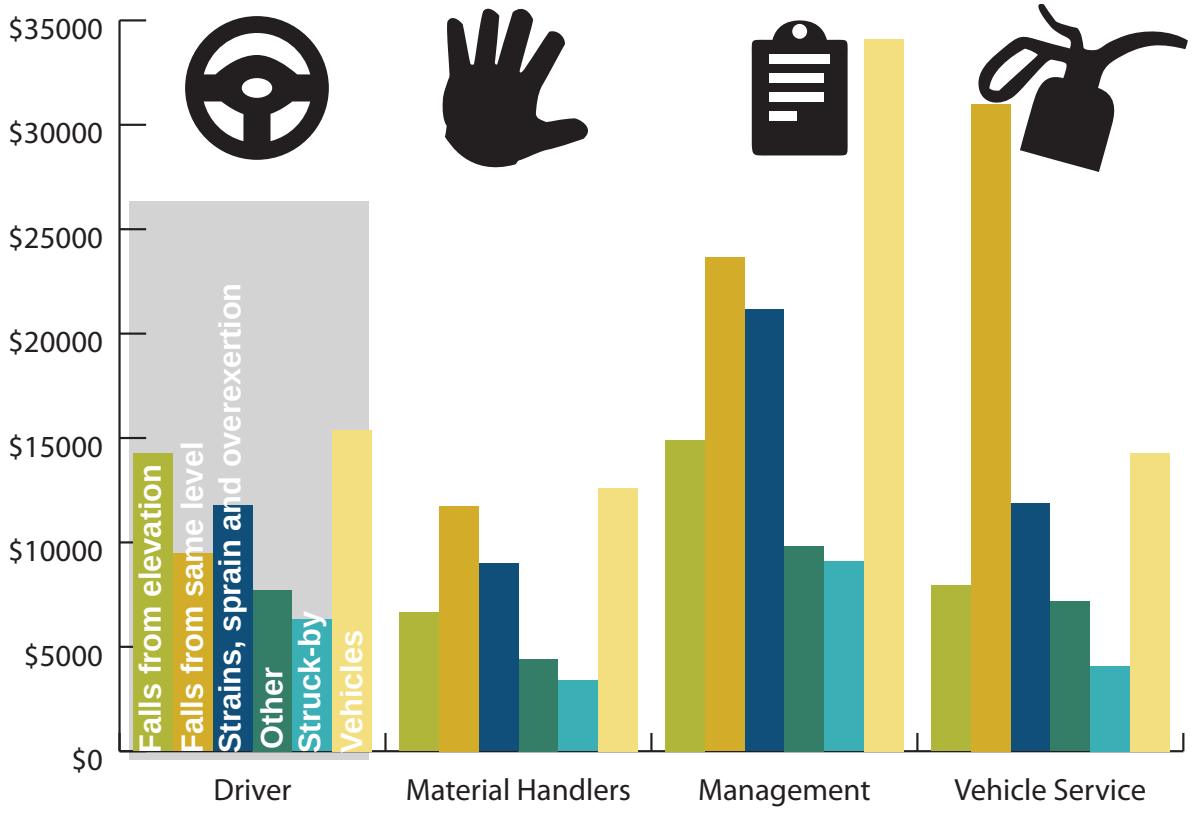
Occupational non-fatal injuries

The highest median costs:

As Figure 7 depicts, management occupations, while having the fewest number of claims, had the highest median costs in vehicle-related compensable claims ($34,110) and strain, sprain or overexertion claims ($21,161).

Vehicle service technicians had the highest median costs in fall on the same level injuries ($31,005).

Figure 7. Median cost of claims by occupation - all trucking sectors, 2006-2012

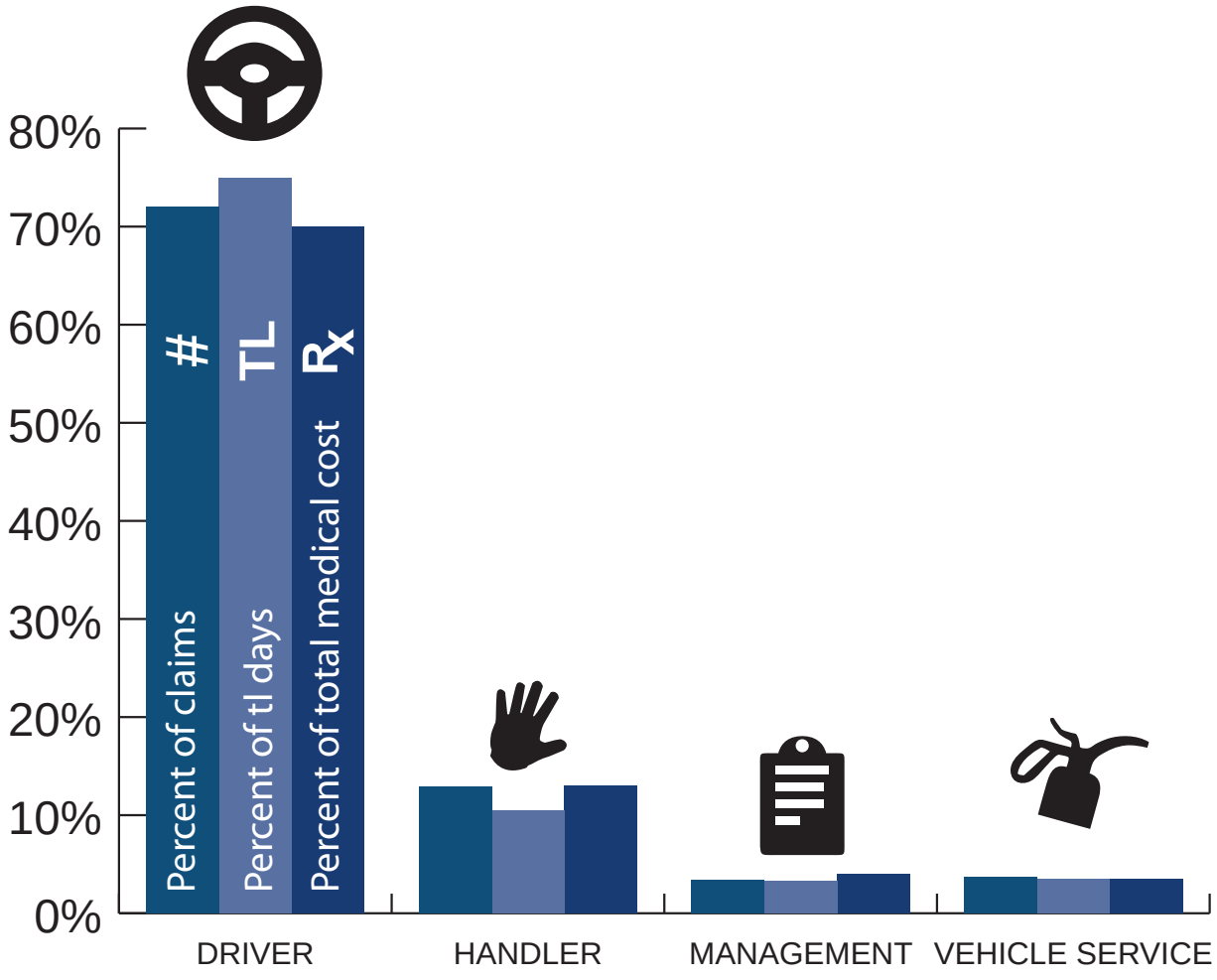


Occupational non-fatal injuries

Who is getting injured?

As Figure 8 shows, over 70% of injuries during this period resulted in injuries to drivers, accounting for over 70% of the cost and over 75% of the time-loss days.

Figure 8. Percent of compensable claims, time-loss days and medical cost by occupation



Type of injuries

The top injury combinations (looking at both injury type and the source of the injury) are:

1. **Overexertion (ranked first in average time-loss days)**
2. **Sprains to knees, shoulders and backs**
3. **Falling which result in sprains or broken bones**
4. **Severe fall from elevation (ranked first in average medical costs)**

TRUE STORIES

Slowly over the years my shoulder has been hurt due to the nature of flatbed tie down work such as tightening down the load with a winch bar.

Bent over to unlatch roll door on trailer and felt stabbing pain.

As I pulled down on back door of the truck, the handle broke and I fell backwards about 5 feet injuring my wrist, elbow, shoulder and hip.

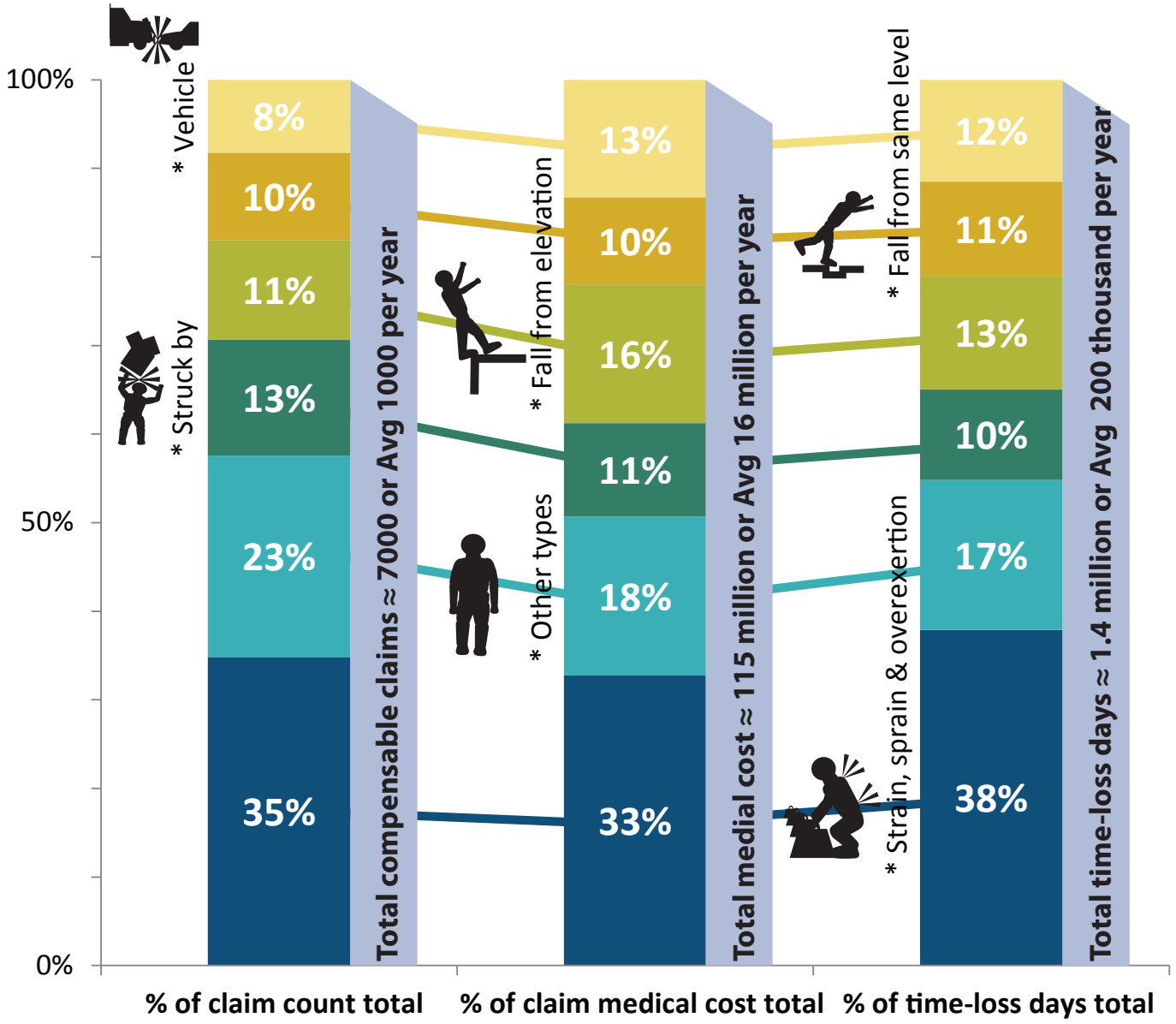
My hand slipped while pulling the 5th wheel and I fell to the ground injuring my hand when I tried to catch myself.

Injury types

Figure 9 depicts the 5 most common injury types by the claim count, medical costs and time-loss days in the Washington trucking industry (State Fund compensable claims).

Strain, sprain or overexertion claims accounted for 35% of claims, 33% of medical costs and 38% of time-loss among all compensable claims in trucking from 2006-2012.

Figure 9. Percent of State Fund non-fatal compensable claims by count, medical cost and time-loss days by type of injury, 2006-2012.



Colors depict different injury types and associated percent of total.

- **Accounted for nearly 35% of all compensable claims**
- **Cost over $107 million**
- **Resulted in over 576,000 days of time-loss, that's equal to 3.3 million hours of lost time**
- **Nearly 71% of these injuries were to drivers**

Median medical costs for strain, sprain or overexertion compensable claims were around $5,500 for most occupational groups but for management occupations, even though they are the smallest group, their median medical costs were about $10,500 (Figure 10).

Figure 10. Compensable claim median cost and medical cost for fall from elevation injuries by occupation, 2006-2012

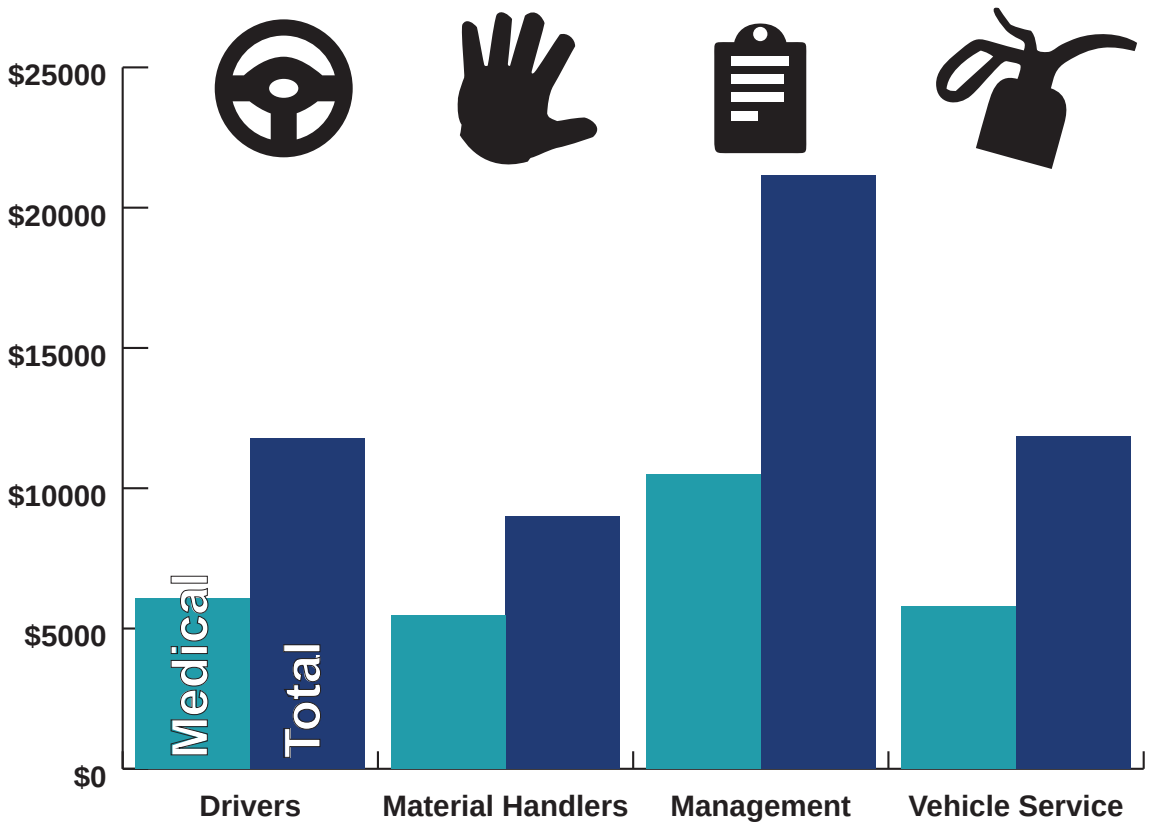
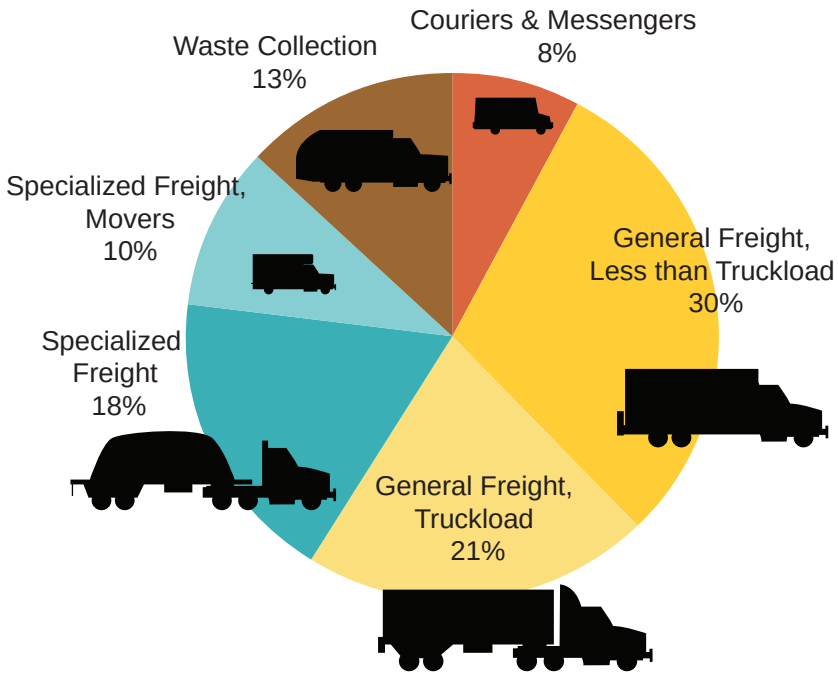


Figure 11. Percent of Strains and Sprains injuries by trucking sector



30% of strain, sprain or overexertion injuries happened in General Freight Trucking, Less than Truckload.

Some of the most common injury activities in this category were:

- **Connecting/disconnecting the trailer to the truck**
- **Opening stuck trailer doors**

TRUE STORIES

I injured my lower back when I pulled the fifth wheel pin handle to disconnect the trailer from the tractor.

I pulled a muscle in my arm when I used the strap to pull a stuck semi trailer door down.

I was lifting wet cardboard and putting it in the recycle truck and I felt some pain in my back.

Excess lifting of heavy packages while loading trucks.

On-going lifting and gripping caused numbness and pain in right arm and hand.

I was putting snow chains on my semi and felt a very painful pop in my arm.

- 10% of all injuries in trucking
- 16% of all medical costs
- Cost over $47 million
- Median cost was over $12,000
- Accounted for over 194,600 days of lost time, (that's about 550 full-time workers not working because of injuries)
- 76% of all fall from elevation compensable claims were for drivers

Drivers had the highest median claim cost ($14,170) for fall from elevation compensable claims (Figure 12).

Figure 12. Compensable claim median cost and medical cost for strain, sprain and overexertion injuries by occupation, 2006-2012

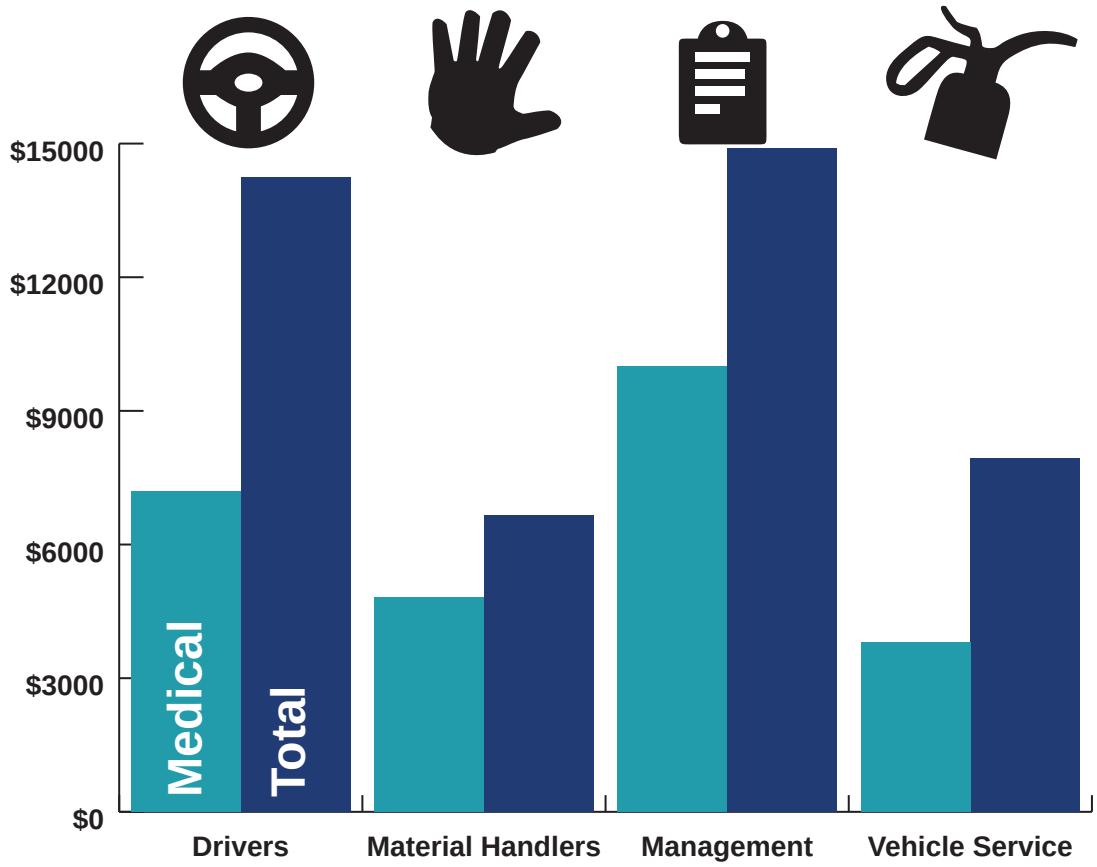
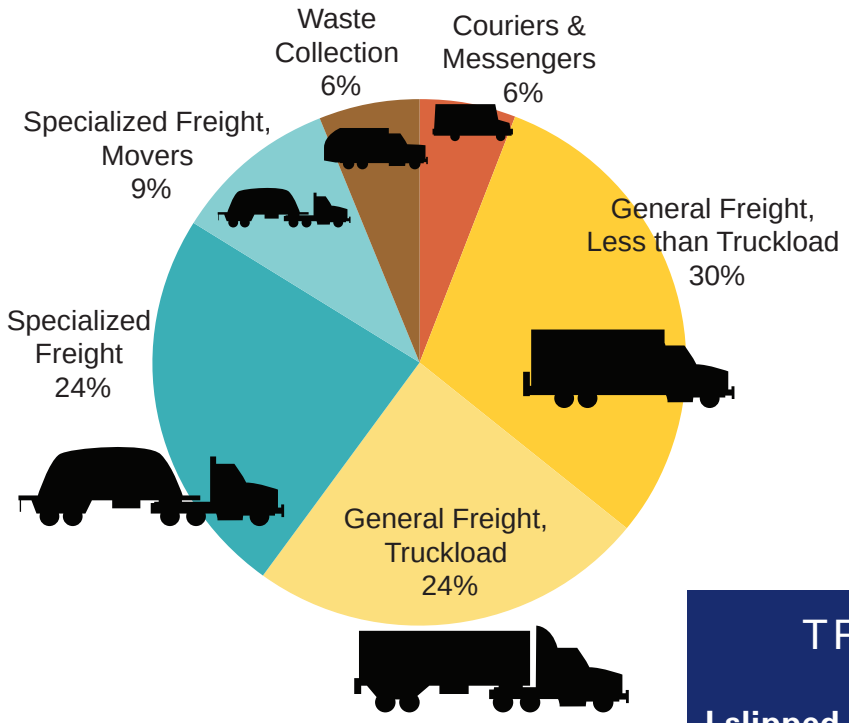


Figure 13. Percent of fall from elevation injuries by trucking sector



Less than Truckload, General Freight trucking had the highest number of fall from elevation claims (30%), followed closely by Truckload, General Freight (24%) and Specialized Freight, Except Used Goods (24%).

Some of the most common injury activities in this category were:

- **Entering/exiting the truck cab**
- **Falling off the back of the trailer or the liftgate**
- **Missing a step or getting foot caught in rung of ladder – attached to truck or freestanding**
- **Ladders slipping out from underneath a worker**

TRUE STORIES

I slipped climbing out of cab over truck, my foot got hung up on the step and I lost my hold on the rail.

I slipped on icy truck steps, grabbing the hand rail pulled and twisted my shoulder. Finally, I landed on the ground.

I was blown off the truck in heavy wind, hit my head and received a concussion.

I fell off the trailer step while getting down, spraining my ankle.

I slipped on the tanker truck ladder while ascending.

While climbing down the ladder on the trailer, I slipped on ice and fell approximately 7 feet to the ground. My back foot caught in the ladder so I landed upside down.

- **Accounted for 10% of all compensable claims in trucking**
- **Median cost of $10,700**
- **Over 162,600 days of time-loss**

While drivers have the highest count of fall on the same level injuries (they are the largest occupational group), vehicle service technicians had by far the highest median claim cost and medical portion cost, among the occupational groups. Drivers had the lowest median claim cost among all the occupational groups (Figure 14).

The highest median cost for both claim total (medical and time-loss payments) and medical costs alone were for vehicle service technicians, ($31,005 and $13,050 respectively) (Figure 14).

Figure 14. Compensable claim median cost and medical cost for fall on the same level injuries by occupation, 2006-2012

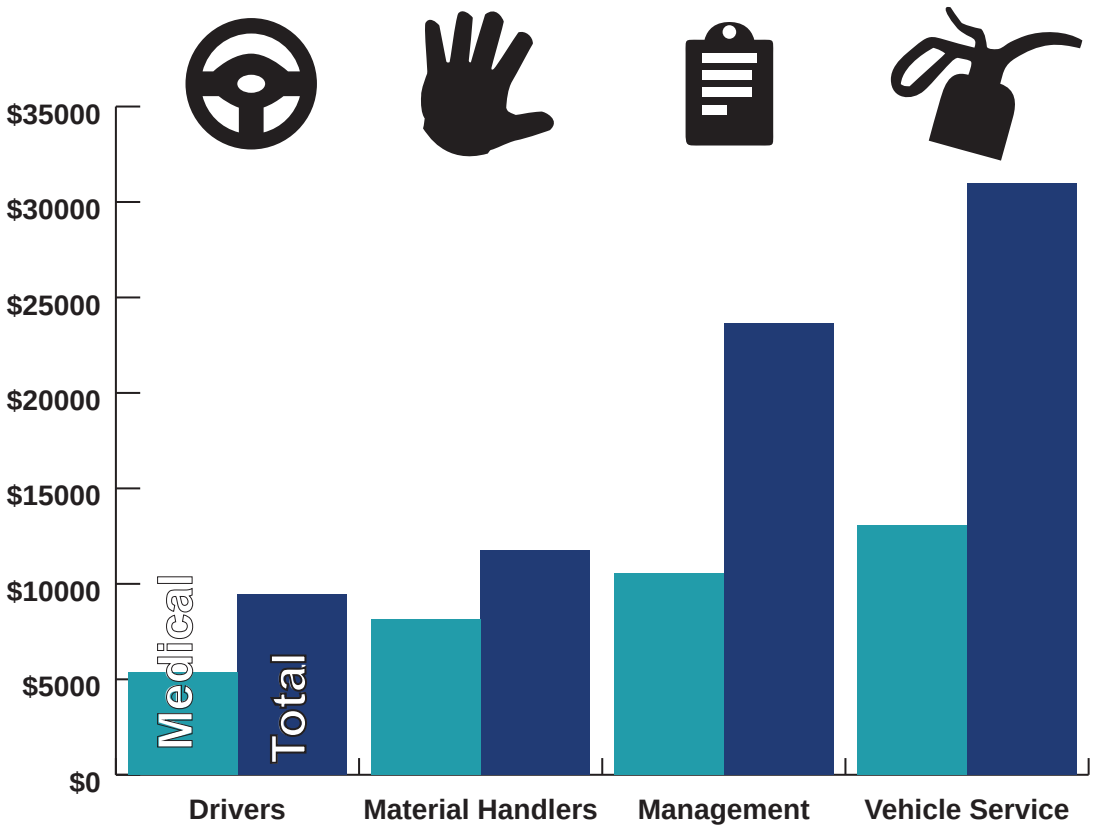
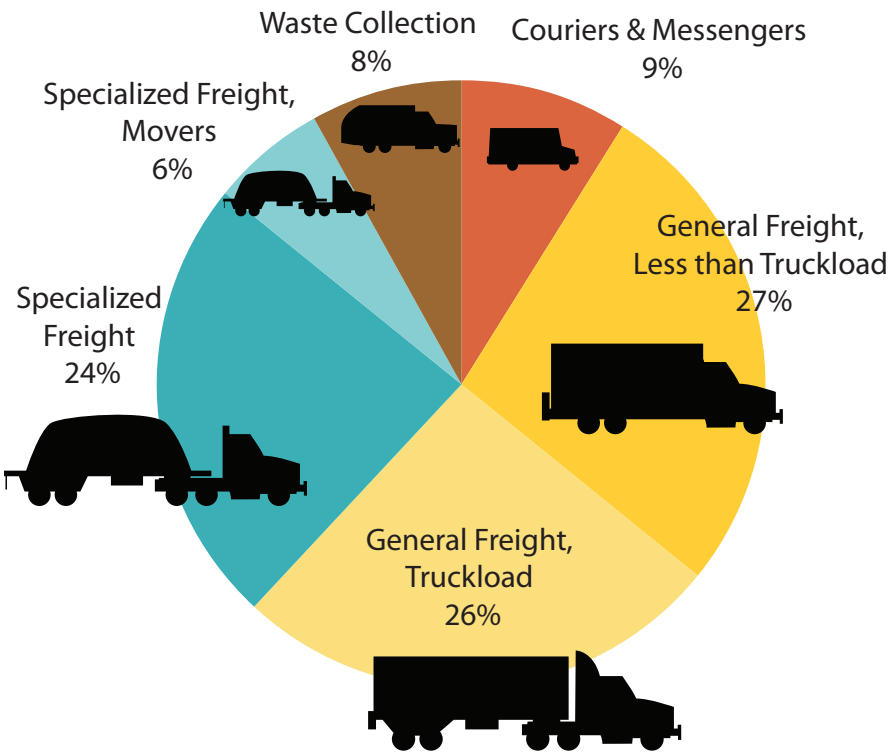


Figure 15. Percent of Fall on the same level injuries by trucking sector



Fall on the same level compensable claims were close to an even split between Specialized Freight, General Freight, Truckload and General Freight, Less than Truckload (Figure 15).

Some of the most common injury activities in this category were:

- **Slips and trips around the job site, no inclement weather**
- **Exiting the cab or trailer – slipping on step or landing on uneven ground**
- **Slips and trips due to inclement weather while walking around truck or job site**
- **Slips and falls on walkboards or ramps**
- **Slips and trips on debris**

TRUE STORIES

I was walking back to unhook the dolly and slipped and fell on the snow and ice.

The cable broke while I was untying bins and I fell on my back.

I tripped over a dock plate and did a face-plant on the steel. My shoulder was injured also.

I slipped while coming down a walk board in wet conditions.

While walking in a dark gravel lot, I stepped in a hole, twisted my ankle and fell.

- 13% of all compensable claims in trucking
- Cost over $32 million
- Accounted for over 157,000 days of work time lost
- Drivers made up only 64% of struck by compensable injuries

Median medical costs by occupation

The median cost for management occupations' struck by or against injuries was over $9,000. The median medical cost for drivers was about $3,400. The lowest median medical cost for struck by injuries was for material handlers at about $2,000 (Figure 16).

Figure 16. Compensable claim median cost and medical cost for struck by or against injuries by occupation, 2006-2012

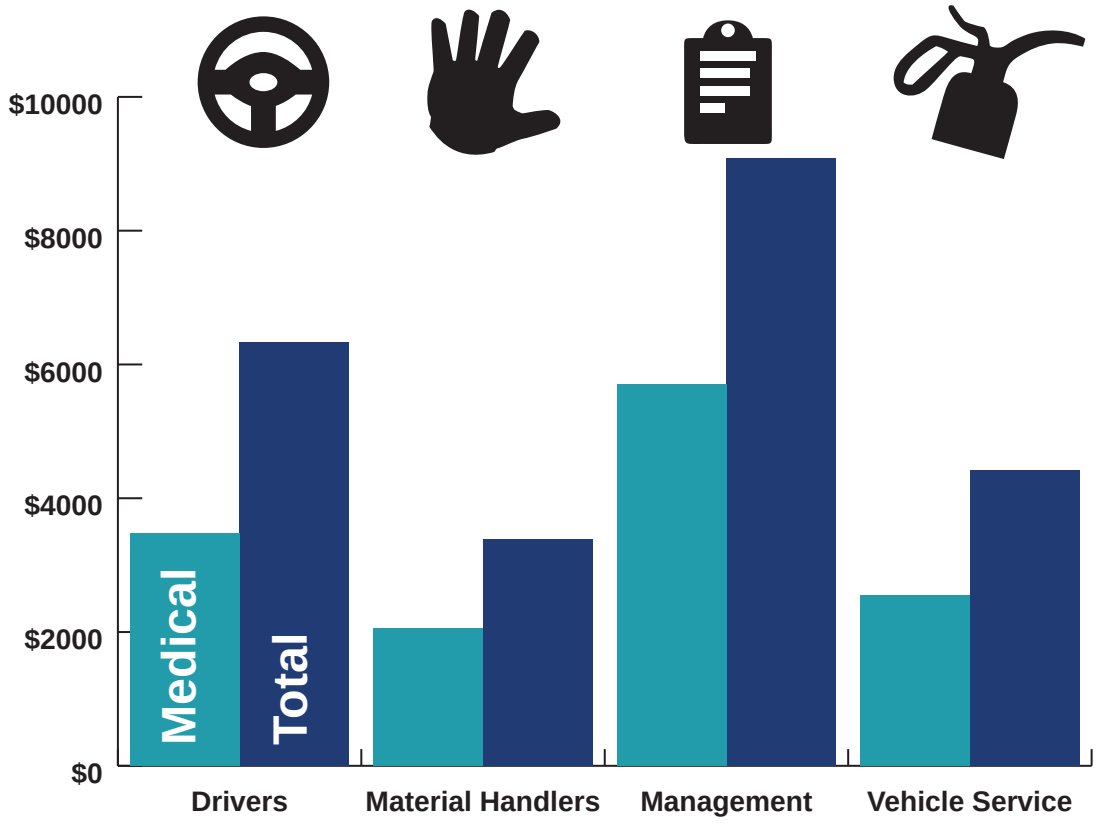
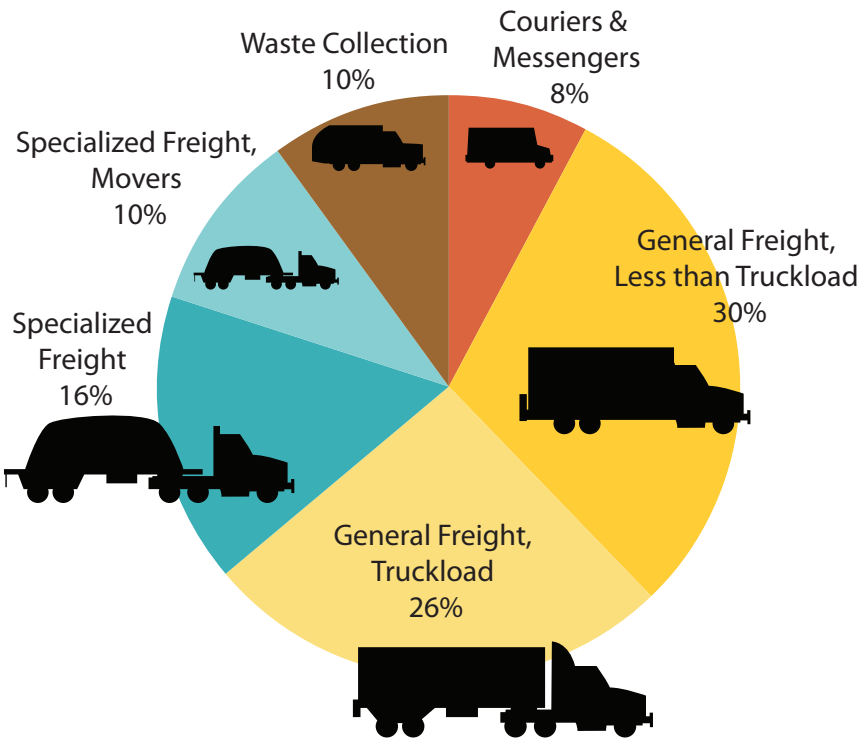


Figure 17. Percent of struck by or against injuries by trucking sector



Struck by or against injuries were pretty evenly divided between Less than Truckload and Truckload, with Less than Truckload having the highest proportion (30%).

The most common injury activity in this category was:

- **Unloading cargo – either pallets fell on workers or other unsecured cargo fell on workers.**

TRUE STORIES

I was unloading the trailer at a customer site when a case of heavy product fell from the top of the load hitting me in the shoulder.

I was unloading freight. As I turned to put a box on the rollers the wall of boxes behind me fell on top of me.

As I opened the rear door on the trailer the top pallet fell out on top of me.

While delivering boxes I slipped and fell dropping boxes that weighed about 100 lbs. on my hand. Bones in my hand were fractured.

- **Accounted for 8% of all injuries in trucking**
- **Cost over $42 million dollars**
- **Made up 13% of compensable injuries in trucking**
- **Accounted for over 164,000 days of time-loss**

As depicted in Figure 18, drivers, as expected, make up the largest occupation with the vehicle-related compensable claims. But management occupations had much higher median claim costs than any other occupational group for their few, but expensive claims (median cost $34,110).

Figure 18. Compensable claim median cost and medical cost for vehicle injuries by occupation, 2006-2012

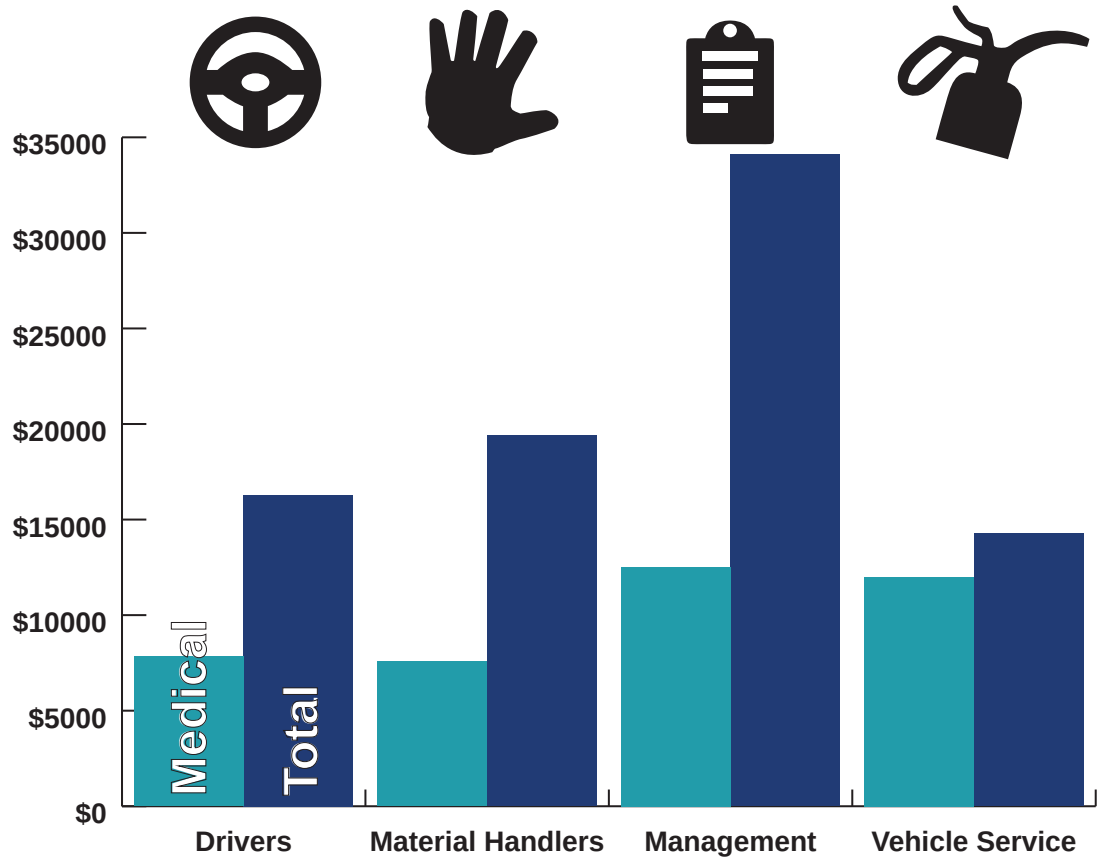
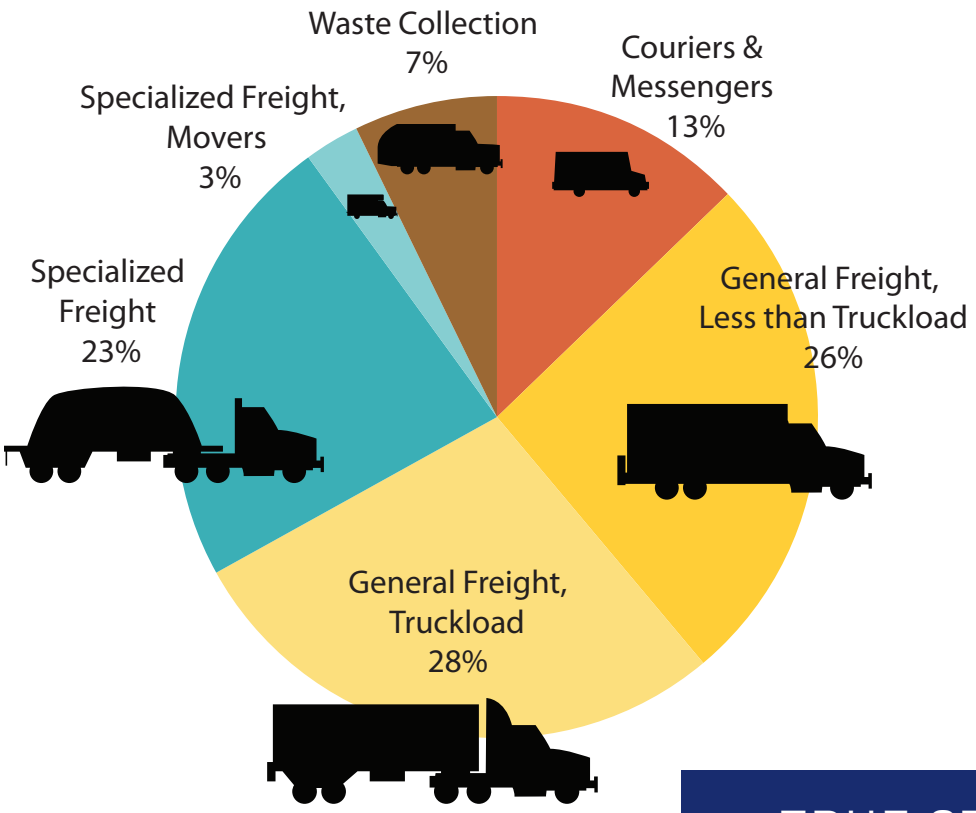


Figure 19. Percent of vehicle injuries by trucking sector



Less than Truckload, Truckload and Specialized Freight all had similar percentages for vehicle-related injuries. These three sectors made up 77% of the vehicle-related injuries during 2006-2012 in the trucking industry.

The highest ranked injury activities for vehicle injuries were:

- **Crash, no other vehicle**
- **Being hit by another truck**

TRUE STORIES

Jack-knifed semi on black ice.

A deer jumped out in front of me on the highway, I swerved to miss it and rolled my truck.

Because of the heavy fog I didn't see the stop sign until the last minute and hit a dirt pile.

It was really bad, windy weather when the truck started rolling over on right side.

A gust of wind picked up and tipped over the trailer and truck onto the driver's side then it skid for about 50 yards.

Other injuries include a mixed bag of non-specific injury occurrences. While they account for almost 23% of the injuries during this study period, there is little to say about these injuries because the causes were so varied.

In general though, other injuries occurred mostly as “bodily motion” injuries such as being jarred or jerked around or painful tweaks from lifting, pushing or pulling too hard on objects.

Drivers accounted for about 73% of ‘Other’ injuries with a median cost of about $7,700 per claim (Figure 20).

Figure 20. Compensable claim median cost and medical cost for other injuries by occupation, 2006-2012

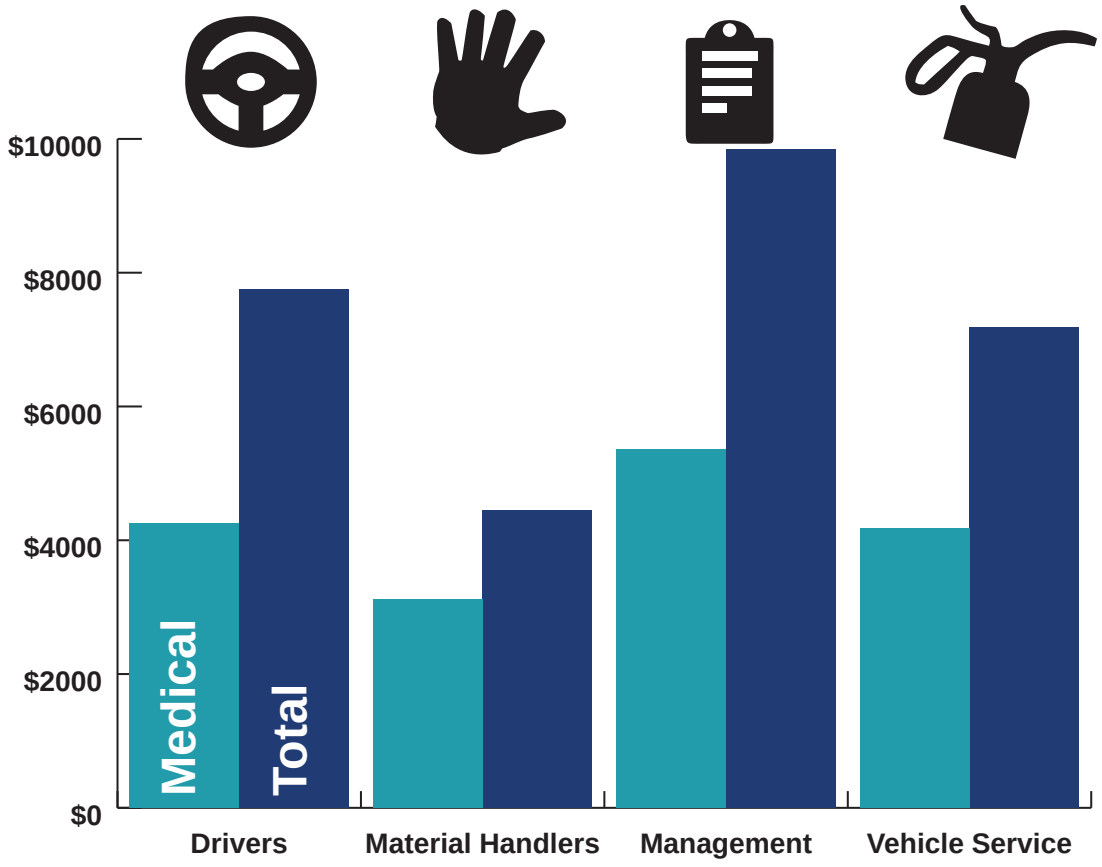


Figure 21. Percent of other injuries by trucking sector

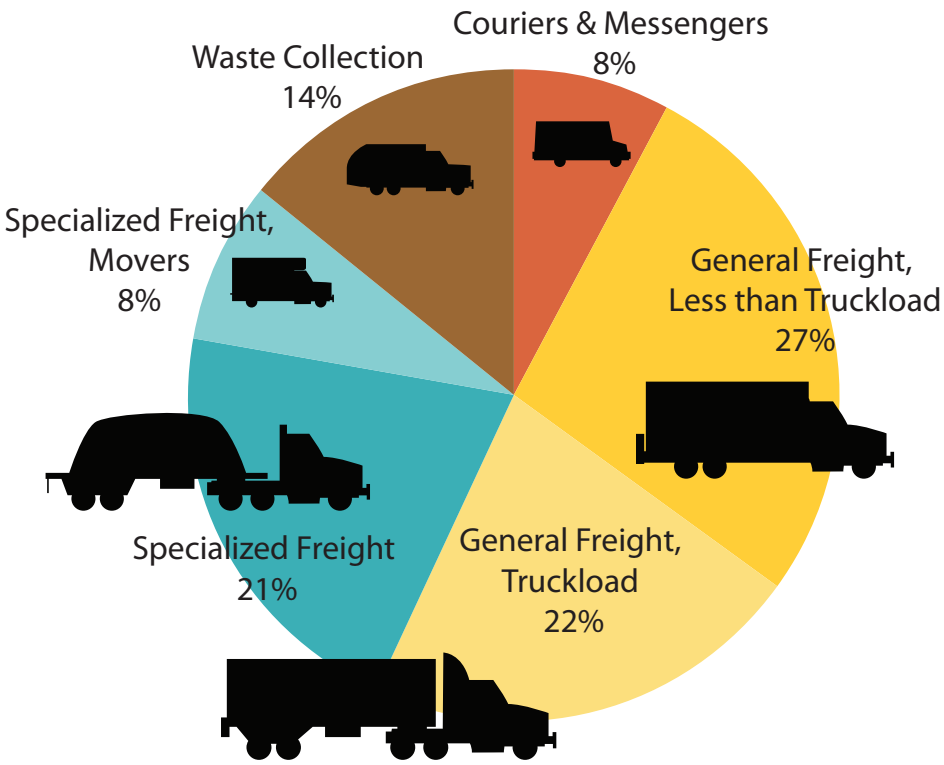


Figure 21 depicts General Freight, Less than Truckload at the highest percentage of other injury types at 27%. At 14%, Waste Collection claimed the highest percentage of injury types for its sector, just nosing out strain, sprain or overexertion which was shown at 13% (p. 27, Figure 11).

TRUE STORIES

Bent down to open door on the back of the trailer, it would not open. Then I used the hook to try to pull the door. I immediately felt something in my lower back pull.

Driving flatbed truck and handling winch bar and straps loading and unloading injured back.

BREAKING IT DOWN

BY INDUSTRY SECTOR

- 1,981 State Fund compensable injuries
- Cost over $92 million
- Over 447,000 days of time-loss
- A compensable rate of 5.3 per 100 FTE or 1 in 19 employees

Figure 22. Compensable Claims By Age Group

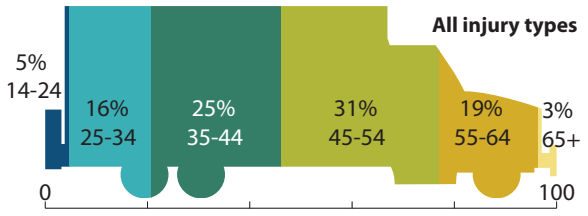
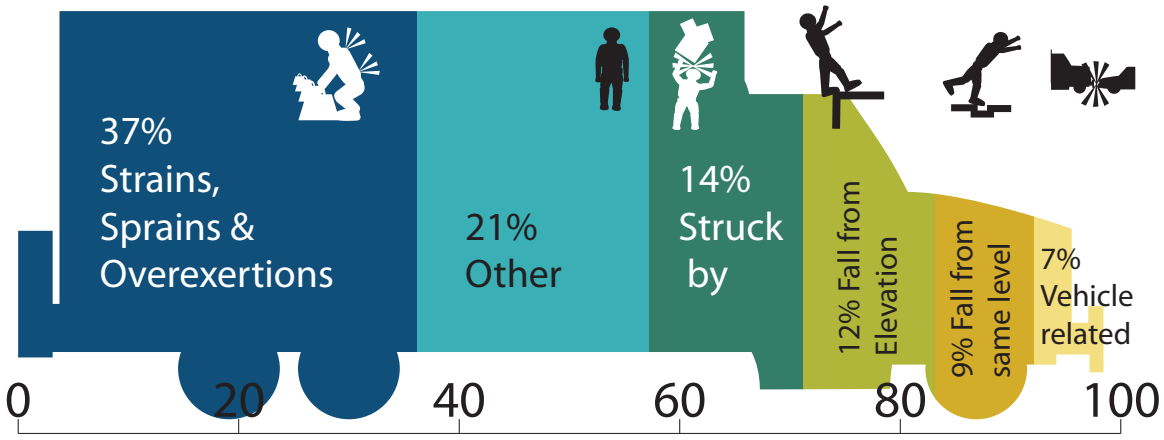
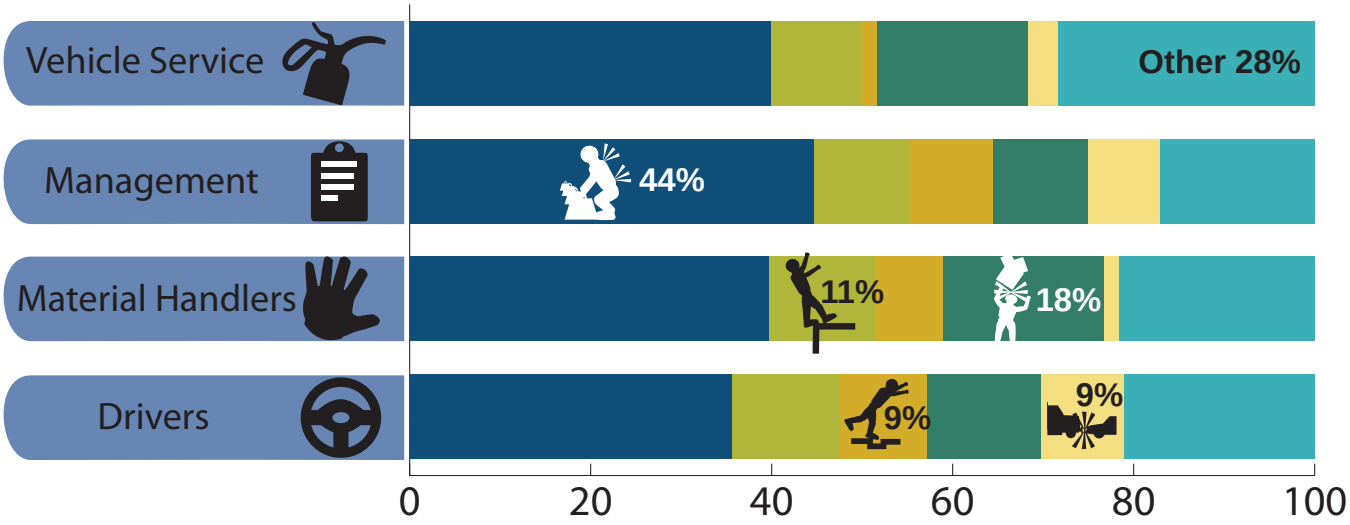


Figure 23. Percent of compensable injuries by type, General Freight Trucking LTL, 2006-2012



Strain, sprains or overexertion injuries were the most common compensable claims in the Less than Truckload (LTL) sector of General Freight trucking, with more than double the percentage of the next identifiable injury type — struck by or against injuries.

Figure 24. Percent of injury type by occupation, General Freight Trucking - LTL 2006-2012



Strain, sprain or overexertion injuries were by far the most common among all occupations, making up almost half of all management occupational group injuries from 2006-2012.

Management made up only 4% of the total number of claims in LTL, but their median claim cost was much higher for both total and medical claim cost (see appendix B for details).

Table 3. Most common type and source combination of injuries in General Freight LTL, ranked by intervention priority

Description	PIP Rank
Bending, twisting body, fell while entering/exiting cab or trailer, lifting heavy loads	1
Falls from ladders	2
Falls on uneven or covered surfaces	3
Lifting heavy objects	4
Slips, trips and falls due to ice, snow and rain; also oily surfaces	5

*PIP prioritizes injury types by ranking three important factors and averaging. The PIP ranks the count of injuries, the type (e.g., fall from elevation, struck by), and the number of time-loss days. Highest time-loss = □, Highest medical cost = ○, Highest count of claims = △ are noted with these symbols, when available.

Prevention Targets

Employers

- Invest in cabs with adequate hand holds. Don't make your employees reach across, twist or otherwise enter/exit the cab in awkward angles.
- Provide trailers with handholds (preferably on both sides) to prevent drivers from riding the door down, or twisting awkwardly to grab the side of the trailer to help in their descent.
- Provide drivers with the tools they need to do their job safely – pallet jacks, forklifts, extra workers to help unload.
- Discuss what equipment/assistance is available for drivers to use at the customer site when scheduling a job.
- Engineer away the need for ladders if possible.
- Maintain your yard including lighting, pothole maintenance, ice removal, etc.

Drivers

- Use 3 points of contact when entering or exiting the cab or trailer. Make sure not to twist your torso when entering/exiting.
- Use mechanical devices to lift heavy loads or ask for help.
- Wear appropriate footwear with non-slip treads.
- Report hazards such as broken equipment or spills.
- Wear well-fitting gloves with non-slip surface to maintain your grip and protect your hands.
- Use a flashlight or headlamp during dark conditions.

- **Cost over $34 million**
- **Resulted in over 181,000 days of time-loss**
- **37% of the total time-loss for LTL**

Figure 25. Compensable Claims By Age Group

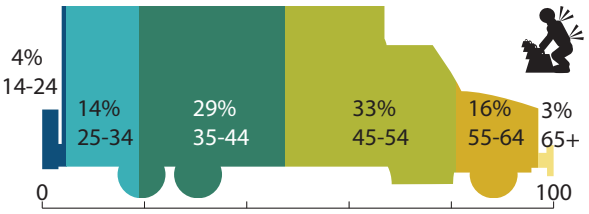


Table 4. Most common strain, sprain or overexertion by type and source combination of injuries in General Freight LTL, ranked by intervention priority.

Description	PIP Rank
Bending, twisting body, while entering/exiting cab or trailer, material handling	1
Neck, back and upper extremity – forceful exertion – lifting heavy objects: cargo, dock plates, forcing open trailer doors	2
Arm, shoulder and neck injuries due to stuck landing gear, fifth wheel or trailer door	3
Pushing/pulling loaded pallet jacks	4
Slip, or fall out of cab or back of trailer	5

*PIP prioritizes injury types by ranking three important factors and averaging. The PIP ranks the count of injuries, the type (e.g., fall from elevation, struck by), and the number of time-loss days. Highest time-loss = □, Highest medical cost = ○, Highest count of claims = △ are noted with these symbols, when available.

Prevention Targets

Employers

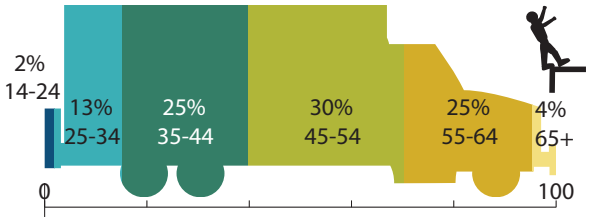
- Make sure to invest in cabs with adequate hand holds. Don't make your employees reach across, twist or otherwise enter/exit the cab using awkward angles.
- Provide trailers with handholds (preferably on both sides) to prevent drivers from riding the door down, or twisting awkwardly to grab the side of the trailer to help in their descent.
- Regularly maintain fifth wheel releases, landing gear, trailer doors, pallet jacks and dock plates.
- Provide drivers with the tools they need to do their job safely – pallet jacks, forklifts, extra workers to help unload.
- Discuss what equipment/assistance is available for drivers to use at the customer site when scheduling a job.
- Have warehouse loaders double check loading order with dispatch schedule to limit the amount of rearranging of the load that must be done by drivers.

Drivers

- Report maintenance issues right away and mark broken equipment out-of-service.
- Use mechanical devices to lift heavy loads or ask for help.

- **Cost over $13.7 million**
- **Resulted in over 63,000 days of time-loss**
- **Median costs per claim ranged from $17,000 for drivers, to over $48,000 for vehicle service technicians**

Figure 26. Compensable Claims By Age Group



Fall from elevation compensable claims for LTL were primarily drivers (72%), with material handlers second at 15% of all fall from elevation injuries.

Table 5. Most common fall from elevation by type and source combination of injuries in General Freight LTL, ranked by intervention priority.

Description	PIP Rank
Falling or slipping off of a ladder	1
Slipped entering or exiting cab or trailer	2
Walking down a ramp	3
Falling off truck or trailer (not while exiting)	4
Falling while climbing or walking up or down stairs	5

*PIP prioritizes injury types by ranking three important factors and averaging. The PIP ranks the count of injuries, the type (e.g., fall from elevation, struck by), and the number of time-loss days. Highest time-loss = □, Highest medical cost = ○, Highest count of claims = △ are noted with these symbols, when available.

Prevention Targets

Employers

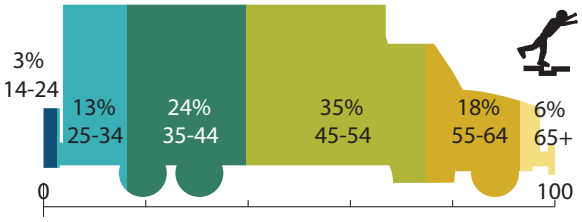
- Engineer solutions to prevent the need to climb ladders if possible.
- Make sure to invest in cabs with adequate hand holds. Don't make your employees reach across, twist or otherwise enter/exit the cab in an unbalanced posture.
- Provide trailers with handholds (preferable on both sides) to prevent drivers from riding the door down, or twisting awkwardly to grab the side of the trailer to help in their descent.
- Require truck drivers to hand off keys to the forklift driver or material handler while loading occurs.

Drivers

- Wear proper footwear and check your tread periodically.
- Always use 3 points-of-contact when entering/exiting the cab or other parts of the truck or trailer.
- Don't rush on ladders.
- Report any broken or worn stairs or ladders immediately.
- Stay alert while walking up or down steps and make sure at least one hand is free to help steady yourself. During common tasks like these, we forget how easy it is to lose our balance, especially when rushing.

- **182 compensable claims**
- **Cost $8.7 million**
- **Resulted in 47,000 days of time off work**

Figure 27. Compensable Claims By Age Group



Of the identifiable occupations, drivers had the lowest median claim cost ($9,233) while management occupations had the highest ($14,219), though management accounted for only 4% of the General Freight LTL fall from same level compensable claims.

Table 6. Most common Fall on the same level by type and source combination of injuries in General Freight LTL, ranked by intervention priority.

Description	PIP Rank
Slips and trips because of equipment or other object in the way, tripping while walking to or from truck	1
Slipped and fell on uneven ground, on ice or slippery surface, or slipped while carrying objects or while twisting and bending to get objects out of truck	2
Tying down/strapping cargo in trailer, slipped and fell	3

*PIP prioritizes injury types by ranking three important factors and averaging. The PIP ranks the count of injuries, the type (e.g., fall from elevation, struck by), and the number of time-loss days. Highest time-loss = □, Highest medical cost = ○, Highest count of claims = △ are noted with these symbols, when available.

Prevention Targets

Employers

- Train workers to walk delivery path at a customer site to limit the risk of tripping over hazards in the yard when their view is blocked by a load.
- Maintain your yard with proper lighting and pothole repairs.
- Provide plenty of new straps and tie downs and require regular material inspections by drivers.
- Add stair tread maintenance to your fall seasonal schedule to make sure steps are safe during winter ice or rain.

Drivers

- If your view will be blocked while loading or unloading, then walk the route first to observe and move any hazards that might be in your way.
- Don't use your phone or review paperwork while walking. Find a safe place for these activities so that you won't be a distracted walker.
- Wear proper footwear and check your treads regularly.
- Inspect tie down straps for wear.
- Always have a flash light or headlamp and use them at dusk and night.

- **267 compensable claims**
- **Cost $9.2 million**
- **41,100 days of lost work**

Management occupations had the highest median claim cost ($20,468) and highest median medical portion of the claim ($10,312), even though they had the fewest struck by or against claims among the occupational groups.

Figure 28. Compensable Claims By Age Group

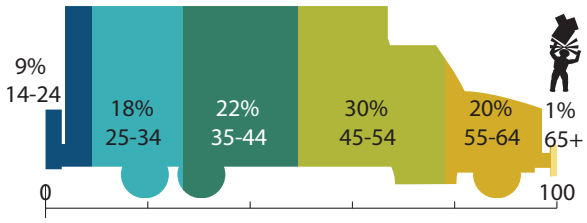


Table 7. Most common struck by or against by type and source combination of injuries in General Freight LTL, ranked by intervention priority.

Description	PIP Rank
Struck by pallets	1
Struck by load while trying to secure, or struck by loose freight	2
Struck by freight while unloading it	3

*PIP prioritizes injury types by ranking three important factors and averaging. The PIP ranks the count of injuries, the type (e.g., fall from elevation, struck by), and the number of time-loss days. Highest time-loss = □, Highest medical cost = ○, Highest count of claims = △ are noted with these symbols, when available.

Prevention Targets

Employers

- Train all new hires on the proper method to secure the load.
- Teach smart pallet stacking. Crushable boxes should not go on the bottom of the pallet.
- Train drivers on the right method for opening the trailer doors. For double doors stand behind opposite door while opening so if the load has shifted they'll be protected.
- Make sure material handlers know the proper way to load and secure freight in the trailer.
- Good housekeeping practices include safe stacking of cargo and empty pallets in the warehouse.

Drivers

- Take the time to properly secure all cargo. Double check the work of others.
- Don't try to catch falling freight.
- Stay out of the way of the forklift driver. Stay in your cab or go to a safe location.

- **145 compensable claims**
- **Cost over $12 million**
- **About 48,000 days of lost work.**

The overwhelming majority (88%) of vehicle-related claims occurred to drivers. Material handlers had the lowest median claim cost ($35,000).

Figure 29. Compensable Claims By Age Group

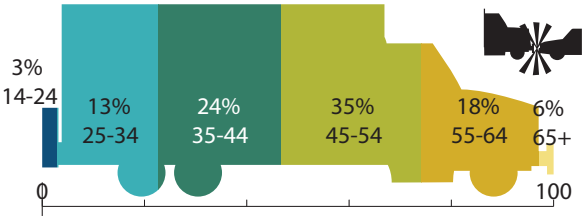


Table 8. Most common vehicle-related by type and source combination of injuries in General Freight LTL, ranked by intervention priority.

Description	PIP Rank
One moving and one stopped vehicle on the roadway, such as rear-ended.	1
Collision between two vehicles moving in the same direction.	2
Collision between two vehicles moving in different directions	3
Jack-knifed with no collision, or roll-over.	4

*PIP prioritizes injury types by ranking three important factors and averaging. The PIP ranks the count of injuries, the type (e.g., fall from elevation, struck by), and the number of time-loss days. Highest time-loss = □, Highest medical cost = ○, Highest count of claims = △ are noted with these symbols, when available.

Research shows that fatigue and driving while drowsy are among the top reasons for single vehicle crashes.[1, 2]

Prevention Targets

Employers

- Allow drivers to use sick leave when they need to.
- Monitor dispatch to assure drivers aren't being pressured to drive beyond hours of service.
- Give drivers enough time to safely complete their work.

Drivers

- Get plenty of rest. Call in sick when you need to.
- Bring healthy snacks with you so you won't be tempted to choose foods that will make you lethargic. Stay hydrated.
- Talk to your doctor if you are waking throughout the night or feeling fatigued during the day.

1. Bunn, T. L., S. Slavova, T. W. Struttmann, and S. R. Browning. 2005. "Sleepiness/fatigue and distraction/inattention as factors for fatal versus nonfatal commercial motor vehicle driver injuries." Accid Anal Prev 37(5): 862-9.
2. Robb, G., S. Sultana, S. Ameratunga, and R. Jackson. 2008. "A systematic review of epidemiological studies investigating risk factors for work-related road traffic crashes and injuries." Injury Prevention 14(1): 51-58.

General injury prevention

Employers

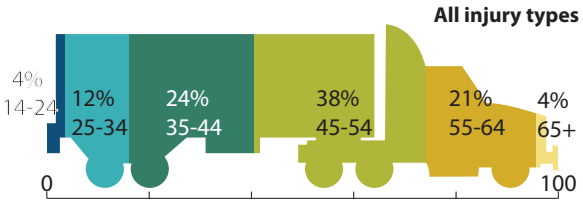
- Encourage drivers to report hazardous conditions at customer sites.
- If your driver is injured at a customer site, follow up with the customer to be sure it won't happen again.
- Provide and maintain adequate lighting.
- Maintain terminal yard and dock areas so that surfaces are even and free of slip and trip hazards such as potholes, ice, snow, rubbish and liquid spills.
- Clearly mark floor transitions at dock edge.
- Have truck drivers hand over their keys while loading occurs.
- The average cost of pallet straps and void fillers run about $500. Invest in the correct securement devices to keep your workers and your cargo safe.
- Make sure to schedule time into the drivers day to inspect and re-inspect cargo securement. The extra few minutes could save you a lot of time, money and pain.
- Prevent incentives to drive drowsy by switching your payment to hourly, and eliminate by-the-mile and by-the-load payment structures.
- Build a safety culture that makes driving drowsy as taboo as driving drunk.
- Schedule realistically. Routes, shipments, seasons and cargo as well as many other issues create different delivery estimates. Keep these factors in mind when scheduling drivers' work.
- If you have to, raise the cost of doing business with your company. An industry-leading company with less churn and happier/safer employees is a more successful company, in any industry. People want to associate themselves with industry leaders.

Drivers

- Always wear sturdy shoes with good traction.
- Stay vigilant about hidden hazards.
- Before inspecting your truck and trailer, inspect the area around them for slip, trip and fall hazards.
- Report debris, spills or other hazards to the yard manager
- Keep your work area clear of debris and spills. If you make the mess, clean it up immediately or you may hurt yourself or a co-worker.
- Report broken equipment to your employer.
- Wear your high-visibility clothing.

- **1,595 compensable claims**
- **Cost over $79 million**
- **Accounted for over 367,000 days of time-loss**
- **A compensable rate of 4.9 per 100 FTE or 1 in 21 employees**

Figure 30. Compensable Claims By Age Group



The most common injuries were strain, sprain or overexertion injuries (31%), followed by 'Other.' Other injuries were most commonly slips without falling and hyperextending or twisting a lower extremity.

As expected, drivers in the Truckload (TL) sector had the most compensable claims by count. Unlike LTL, there were far fewer material handler claims, most likely due to the smaller proportion of material handlers in the TL sector.

Figure 31. Percent of compensable injuries by type, General Freight Trucking TL 2006-2012

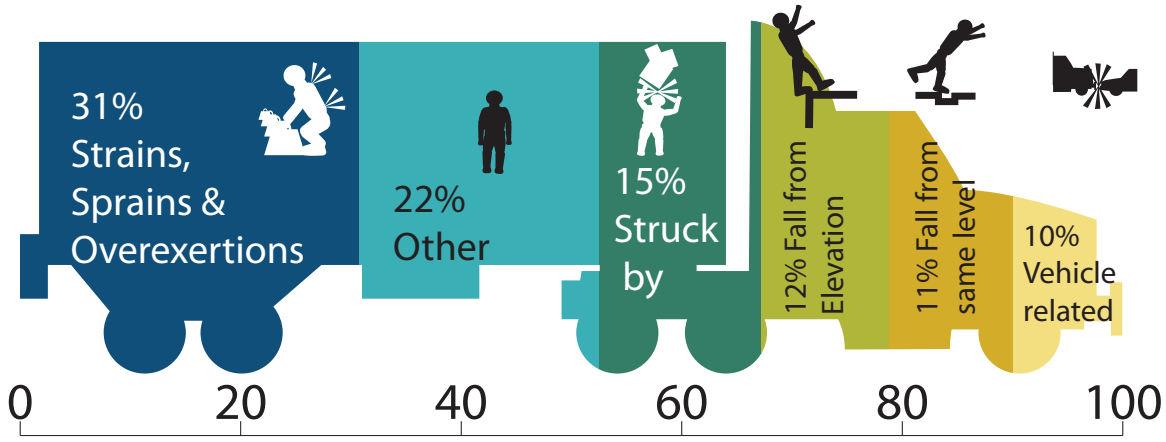
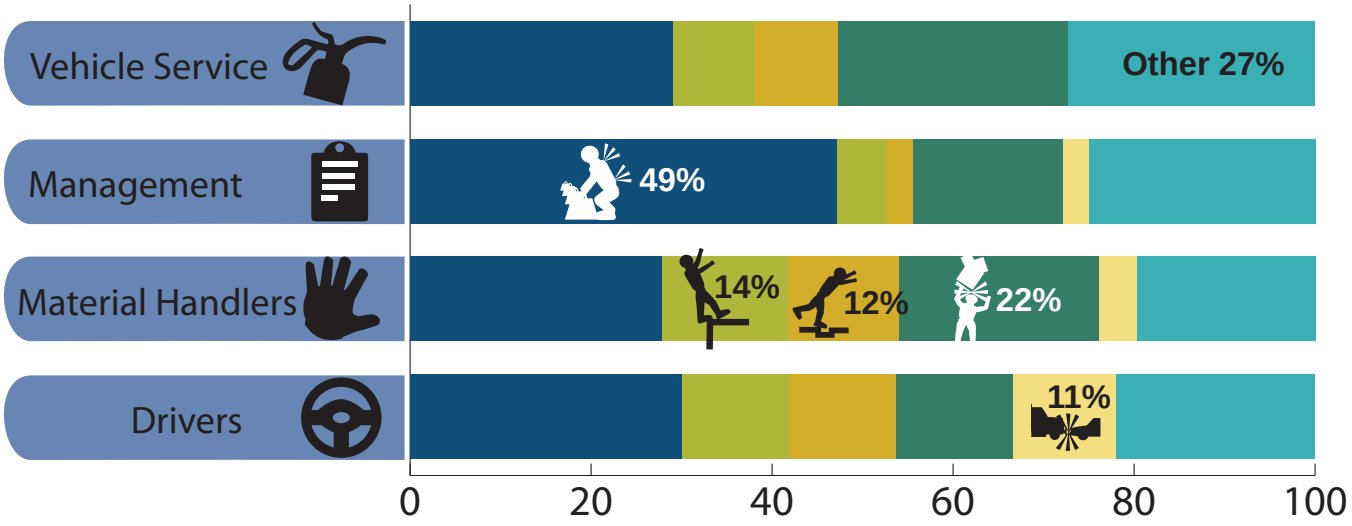


Figure 32. Percent of injury type by occupation, General Freight Trucking - TL 2006-2012



Strains, sprain or overexertion injuries accounted for almost half of all compensable claims in management occupations. Don't forget about office staff when you plan your safety training.

Table 9. Most common type and source of injuries combination in General Freight Truckload, ranked by intervention priority

Description	PIP Score
Falling out the back of trailer/flatbed/other truck part	1
Ingress/egress, walking around truck/trailer especially in icy, wet or slick conditions	2
Rollover - icy roads, speed, objects on roadway	3
Rollover - wind gusts, or to avoid a collision	4
Fell off load or fell off trailer while loading	5

*PIP prioritizes injury types by ranking three important factors and averaging. The PIP ranks the count of injuries, the type (e.g., fall from elevation, struck by), and the number of time-loss days. Highest time-loss = □, Highest medical cost = ○, Highest count of claims = △ are noted with these symbols, when available.

The injury types with the highest median costs are vehicle-related ($14,753), strain, sprain or overexertion ($14,235), and fall from elevation injuries with a median cost of $12,626.

Prevention Targets

Employers

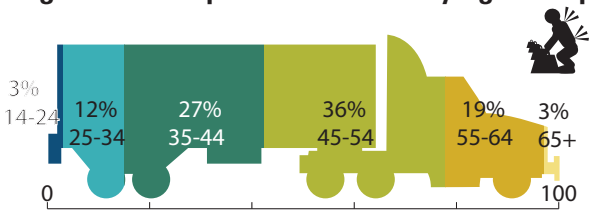
- The severity of strain, sprain and overexertion injuries can be positively impacted by early reporting and implementing prevention strategies. This cannot be emphasized strongly enough. Encourage your employees to let you know if they are feeling pain, before the damage becomes severe.
- Make sure to invest in cabs with adequate hand holds. Don't make your employees reach across, twist or otherwise enter/exit the cab in awkward angles.
- Provide trailers with handholds (preferable on both sides) to prevent drivers from riding the door down, or twisting awkwardly to grab the side of the trailer to help in their descent.
- Provide drivers with the tools they need to do their job safely – pallet jacks, forklifts, extra workers to help unload.
- Discuss what equipment/assistance is available for drivers to use at the customer site when scheduling a job
- Engineer away the need for ladders if possible.

Drivers

- Always use 3 points of contact when entering or exiting the cab or trailer and on ladders.
- Use mechanical lifting aids or ask for help.
- Don't allow your phone or paperwork to become a distraction while walking.

- **496 compensable claims**
- **Cost over $24 million**
- **121,000 days of lost time**

Figure 33. Compensable Claims By Age Group



Like LTL, the majority of compensable strain, sprain or overexertion claims are for drivers (78% for General Freight, TL), although unlike LTL, material handlers are a much smaller percentage of strain, sprain or overexertion claims (7% in TL versus 17% in LTL).

Table 10. Most common strain, sprain or overexertion by type and source combination of injuries in General Freight, Truckload, ranked by intervention priority.

Description	PIP Rank
Cumulative trauma - overuse, e.g., lifting, using hay hooks, cranking landing gear.	1
Traumatic incidents to upper extremities, e.g., pulling curtain on van when stuck; pulling 5th wheel release that was jammed.	2
Pushing and pulling heavy objects - e.g., loaded pallet jacks, heavy pallet jacks that were stuck because of uneven ground.	3
Lifting heavy objects e.g., moving boxes, metal containers, misc. cargo.	4
Traumatic injury e.g., low back from loading cargo or low back from moving stuck curtain.	5

*PIP prioritizes injury types by ranking three important factors and averaging. The PIP ranks the count of injuries, the type (e.g., fall from elevation, struck by), and the number of time-loss days. Highest time-loss = □, Highest medical cost = ○, Highest count of claims = △ are noted with these symbols, when available.

Prevention Targets

Employers

- Keep equipment, especially trailer doors, 5th wheel releases and curtains well maintained.
- Provide drivers with the tools they need to do their job safely – pallet jacks, forklifts, extra workers to help unload. For uneven truck/trailer bed and for delivering to unpaved yards, consider investing in pallet jacks with bigger wheels.
- Encourage early reporting if your employees are feeling pain, before the damage becomes severe.

Drivers

- Use mechanical lifting aids or ask for help.
- Report maintenance issues immediately.
- Report symptoms and injuries to your employer immediately.

- **187 claims**
- **Cost over $13 million**
- **Over 53,000 days of time-loss**

Drivers had the largest number of fall from elevation compensable claims (82%), followed distantly by material handlers (9%).

Figure 34. Compensable Claims By Age Group

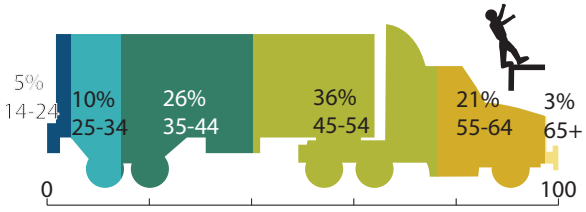


Table 11. Most common fall from elevation by type and source combination of injuries in General Freight, Truckload, ranked by intervention priority.

Description	PIP Rank
Fall from non-moving vehicle - exiting cab or trailer; fell off wheel or load.	1
Fall from non-moving vehicle - e.g., while tarping load, fell off back of trailer, not while exiting	2
Fall from non-moving vehicle - e.g., slipped off tire, slipped off ramp fell to ground	3
Fall from ladder	4
Fall down stairs	5

*PIP prioritizes injury types by ranking three important factors and averaging. The PIP ranks the count of injuries, the type (e.g., fall from elevation, struck by), and the number of time-loss days. Highest time-loss = □, Highest medical cost = ○, Highest count of claims = △ are noted with these symbols, when available.

Prevention Targets

Employers

- Engineer solutions to prevent the need to climb ladders if possible.
- Make sure to invest in cabs with adequate hand holds so employees don't need to reach across, twist or otherwise enter/exit the cab in awkward angles.
- Provide trailers with handholds (preferable on both sides) to prevent drivers from riding the door down, or twisting awkwardly to grab the side of the trailer to help in their descent.
- Schedule enough time for drivers to do their jobs (e.g. tarping, load securement) so that they don't need to rush.
- Require footwear with good treads.

Drivers

- Wear proper footwear and check your tread periodically.
- Always use 3 points of contact and don't rush on ladders.
- Take the time to perform your job safely.

- **181 compensable claims**
- **Cost over $7.8 million**
- **Resulted in 38,600 days of lost work**

Figure 35. Compensable Claims By Age Group

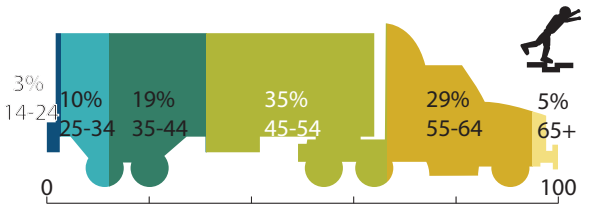


Table 12. Most common falls on same level by type and source combination of injuries in General Freight, Truckload, ranked by intervention priority.

Description	PIP Rank
Fall to ground - e.g., slipped on ice while walking around truck; slipped on fuel spill	1
Fall on the same level - e.g., slipped while in trailer, fell on slippery substance in bay	2
Slips and trips while walking in yard, tripped due to things on the ground, bad housekeeping	3
Slips and trips while on dock or ramp	4
Slipped/tripped on sidewalk, hole in the ground	5

*PIP prioritizes injury types by ranking three important factors and averaging. The PIP ranks the count of injuries, the type (e.g., fall from elevation, struck by), and the number of time-loss days. Highest time-loss = □, Highest medical cost = ○, Highest count of claims = △ are noted with these symbols, when available.

Prevention Targets

Employers

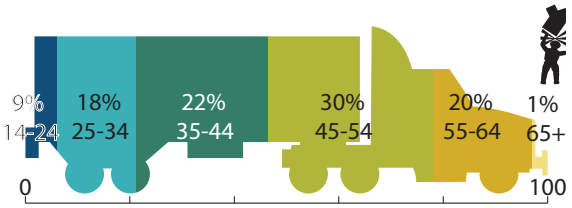
- De-ice yard and walkways frequently during severe weather.
- Install canopies over the bay doors to prevent rain and snow from accumulating in the bay.
- Train workers to walk delivery path at a customer site to limit the risk of tripping over hazards in the yard when their view is blocked by a load.
- Maintain your yard with proper lighting and pothole repairs.

Drivers

- Don't use your phone or review paperwork while walking. Find a safe place so that you won't be a distracted walker.
- Wear proper footwear and check your treads regularly.
- Report hazards such as potholes.
- If your view will be partially blocked while loading or unloading, then walk the route first to limit the risk of tripping over hazards in the yard.

- **233 compensable claims**
- **Cost almost $9 million**
- **Over 39,000 of lost work time.**

Figure 36. Compensable Claims By Age Group



Like many other injury types, management occupations are fewer in numbers, but are higher in median claim cost. For struck by or against injuries, management occupations had a median claim cost of $13,645 with drivers coming in second with a median claim cost of $7,917.

Table 13. Most common struck by or against claims by type and source combination of injuries in General Freight, Truckload, ranked by intervention priority.

Description	PIP Rank
Stepped on objects on floors, walkways	1
Contact with objects - e.g., slipped and hit hand on landing gear, truck step	2
Struck against object - e.g., putting chains away, stood and hit head	3
Struck against semitrailer/trailer/truck e.g., hit knee climbing into trailer	4
Stepping off truck/trailer landed on rock, twisted - knee or ankle	5

*PIP prioritizes injury types by ranking three important factors and averaging. The PIP ranks the count of injuries, the type (e.g., fall from elevation, struck by), and the number of time-loss days. Highest time-loss = □, Highest medical cost = ○, Highest count of claims = △ are noted with these symbols, when available.

Prevention Targets

Employers

- Develop and monitor a housekeeping policy. A small bit of broken pallet can cause a large and expensive injury.
- Train drivers to safely maneuver around and under their trucks. Provide carpet and tarp scraps for drivers to kneel down beside trailer and truck.

Drivers

- Watch where you are walking. Keep phone calls, texting or filling out paperwork to times when you are safely in the cab or in a safe spot in the yard.
- Stay out of the way when forklifts are working.
- Request training on how to properly work around and under the truck and trailer.
- Look twice for hazards before stepping out of your cab.
- Wear high visibility clothing.
- Always set your parking brake.

- **152 compensable claims**
- **Cost $11.1 million**
- **Almost 49,000 days of lost work**
- **Median claim cost for drivers was over $14,000**

Drivers suffered vehicle-related injuries more than any other occupation in General Freight, Truckload, with over 92% of the compensable vehicle-related injuries.

Figure 37. Compensable Claims By Age Group

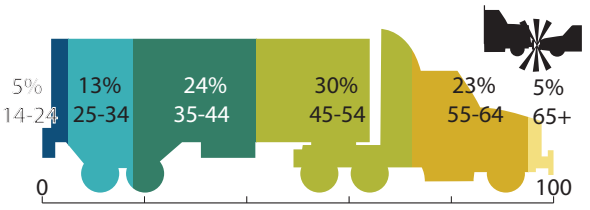


Table 14. Most common vehicle-related claims by type and source combination of injuries in General Freight, Truckload, ranked by intervention priority.

Description	PIP Rank
Highway accident, unspecified	1
Motor vehicle collision, e.g., truck stopped and hit by another car; truck hit stationary object on road	2
Truck ran off highway, no collision	3
Highway collision, e.g., truck swerved to avoid 4 wheeler	4
Semi-truck roll over	5

*PIP prioritizes injury types by ranking three important factors and averaging. The PIP ranks the count of injuries, the type (e.g., fall from elevation, struck by), and the number of time-loss days. Highest time-loss = □, Highest medical cost = ○, Highest count of claims = △ are noted with these symbols, when available.

Prevention Targets

Employers

- Allow drivers to use sick leave when they need to.
- Monitor dispatching to assure drivers aren't being pressured to drive beyond hours of service.
- Give drivers enough time to safely complete their work.

Drivers

- Get plenty of rest. Call in sick when you need to.
- Bring healthy snacks with you so you won't be tempted to choose foods that will make you lethargic. Stay hydrated.
- If stopped on the side of roadway, make sure to properly use flares, cones or other devices to make your truck more visible.
- Leave plenty of room between you and the vehicle ahead of you while on the road.
- Wear your seatbelt.

General injury prevention

Employers

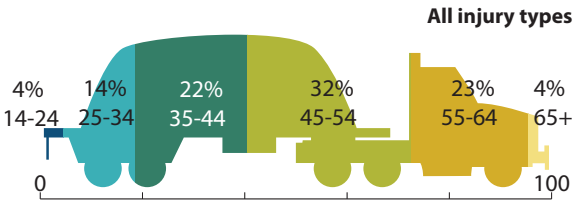
- Keep up on preventative maintenance of the trailer door, handles, straps, fifth wheel release and footholds.
- Have a policy and system to report equipment or truck maintenance issues and keep trucks out of use until maintenance is complete.
- Train workers on and enforce that they leave landing gear at the correct height.
- Monitor dispatch to assure drivers aren't being pressured to drive beyond hours of service.
- Inspect and provide regular maintenance to steps, trailers and material handling equipment.
- Ask workers to share injury prevention ideas.

Drivers

- Report maintenance issues right away.
- Riding the door does not save you time. Always use 3 points of contact to exit the trailer. Use the strap to close the door separately when you are on the ground.
- Before you exit, look twice for hazards such as debris, ice or water that might make the ground treacherous.
- Use a fist grip instead of the spin technique to crank the landing gear.
- Don't turn your back on traffic when outside the truck.
- When entering/exiting the cab:
    - Use three points of contact
    - Face towards the cab
    - Use the steps, do not jump or slide
    - Check for slippery areas on your steps and the ground below
    - Check for potholes or uneven ground
    - Wear appropriate footwear
- Always wear your high visibility clothing, footwear with good traction and gloves.
- Take time to work safely.

- 1,390 compensable claims
- Cost almost $80 million
- Over 361,000 days of time-loss
- A compensable rate of 4.9 per 100 FTE or 1 in 20 employees

Figure 38. Compensable Claims By Age Group



Vehicle-related injuries had the highest median cost ($21,137) for Specialized Freight workers, followed by fall from same level ($13,038).

Figure 39. Percent of compensable injuries by type, Specialized Freight Trucking TL 2006-2012

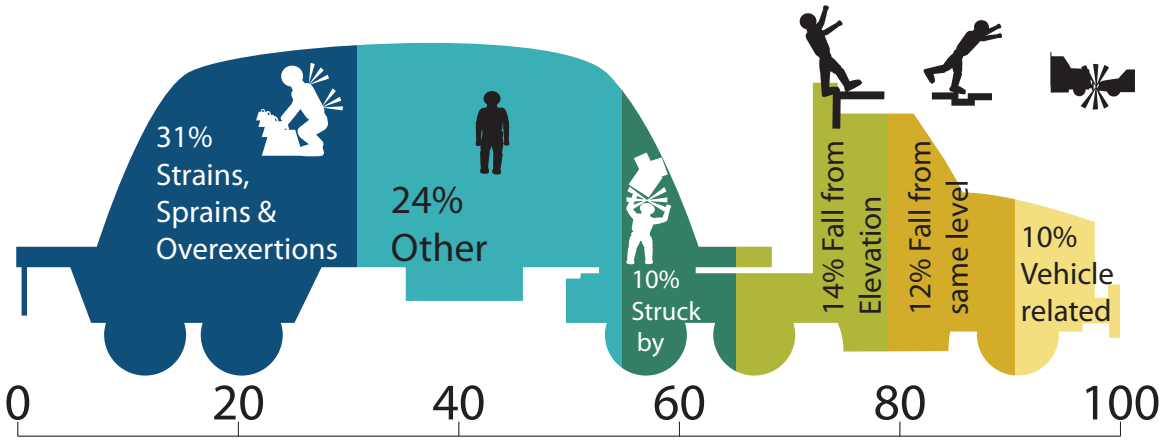
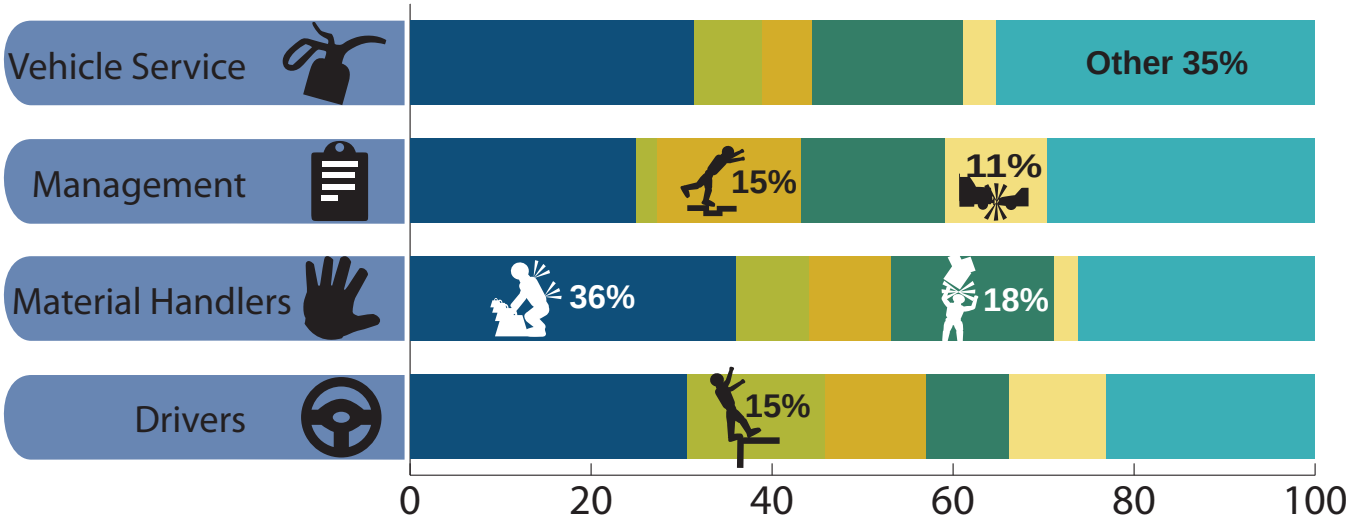


Figure 40. Percent of injury type by occupation, Specialized Freight Trucking TL 2006-2012



The top five type/source for injuries in Specialized Freight are very similar to TL in General Freight trucking. Two things that stand out for Specialized Freight however are the cumulative trauma injuries and jackknife and roll-overs.

Table 15. The top five injury type and source of injury combination in Specialized Freight, ranked by intervention priority were:

Description	PIP Rank
Falling out the back of trailer/flatbed/other truck part	1
Cumulative trauma - upper and lower extremities	2
Jackknife or rollover - load shift, icy roads, wind gusts	3
Slips, trips and fall - carrying objects	4
Entering/exiting cab/trailer uneven surfaces at landing, ice	5

*PIP prioritizes injury types by ranking three important factors and averaging. The PIP ranks the count of injuries, the type (e.g., fall from elevation, struck by), and the number of time-loss days. Highest time-loss = □, Highest medical cost = ○, Highest count of claims = △ are noted with these symbols, when available.

Prevention Targets

Employers

- Provide trailers with handholds on both sides to prevent drivers from riding the door down, or twisting awkwardly to grab the side of the trailer to help in their descent.
- The severity of strain, sprain and overexertion injuries can be positively impacted by early reporting and implementing prevention strategies. This cannot be emphasized strongly enough. Encourage your employees to let you know if they are feeling pain, before the damage becomes severe.
- Make sure to invest in cabs with adequate hand holds. Don't make your employees reach across, twist or otherwise enter/exit the cab in awkward angles.
- Discuss what equipment/assistance is available for drivers to use at the customer site when scheduling a job
- Engineer away the need for ladders if possible.

Drivers

- Always use 3 points of contact when entering or exiting the cab or trailer and on ladders.
- Report pain early to your employer and physician. Early intervention can decrease the severity of injuries to muscles, tendons, joints and other soft-tissue.
- Use ratchet binders instead of lever binders.
- Don't allow your phone or paperwork to become a distraction while walking.
- Scan the steps and ground below before exiting the cab to note any possible hazards (ice, water, potholes, oily sheen).
- Always carry and use a flashlight or head lamp after dusk so you can see where you are walking or what you are stepping down onto. This will help others to see you too.

- **431 compensable claims**
- **Cost over $23 million**
- **116,000 days of lost time**

While having the fewest number of compensable claims, those in the management occupational group had the highest median cost for strain, sprain and overexertion injuries at $26,382.

Figure 41. Compensable Claims By Age Group

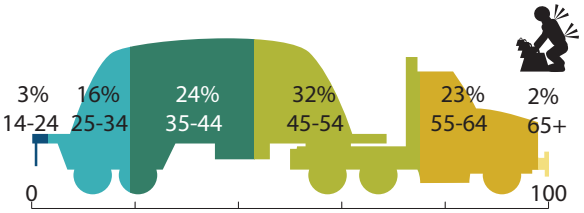


Table 16. Most common strain, sprain or overexertion by type and source combination of injuries in Specialized Freight, ranked by intervention priority.

Description	PIP Rank
Bodily motion - twisted lower extremity getting out of truck, twisted knee landed in pothole	1
Bent over while performing a task; fell and caught self with arm, hurt arm	2
Repetitive motion - hands, arms, shoulders	3
Unhooking trailer, pulling on 5th wheel release	4
Overexertion - lifting heavy objects e.g., hose over head	5

*PIP prioritizes injury types by ranking three important factors and averaging. The PIP ranks the count of injuries, the type (e.g., fall from elevation, struck by), and the number of time-loss days. Highest time-loss = □, Highest medical cost = ○, Highest count of claims = △ are noted with these symbols, when available.

Prevention Targets

Employers

- Provide trailers with handholds (preferable on both sides) to prevent drivers from riding the door down, or twisting awkwardly to grab the side of the trailer to help in their descent.
- Use forklifts to put tarps on top of the load.
- The severity of strain, sprain and overexertion injuries can be positively impacted by early reporting and implementing prevention strategies. Encourage your employees to let you know if they are feeling pain, before the damage becomes severe.
- Provide mechanical aids whenever possible to limit strain. Re-organize activities for drivers and material handlers to limit the need for bending, twisting and awkward angles. Don't forget to include management occupations in your safety training programs.

Drivers

- Report pain early to your employer and physician. Early intervention can decrease the severity of injuries to muscles, tendons, joints and other soft-tissue.
- Avoid manual lifting by using mechanical aids or ask for help.

- **190 claims**
- **Cost almost $15 million**
- **50,000 days of lost time**
- **86% of injuries were to drivers**

Figure 42. Compensable Claims By Age Group

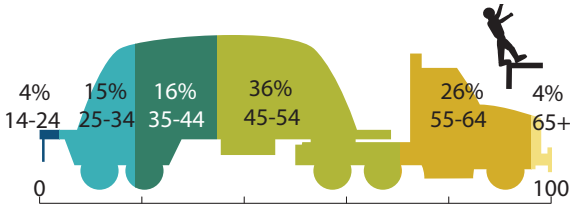


Table 17. Most common fall from elevation by type and source combination of injuries in Specialized Freight, ranked by intervention priority.

Description	PIP Rank
Falling from non-moving truck - fell out of cab or back of trailer while getting out	1
Fall from elevation - stepping out of cab; fall from top of load;	2
Fall from elevation - not specified	3
Fall from truck - tire, 5th wheel area	4
Fall to lower level - fell from top of load, fell off machinery	5

*PIP prioritizes injury types by ranking three important factors and averaging. The PIP ranks the count of injuries, the type (e.g., fall from elevation, struck by), and the number of time-loss days. Highest time-loss = □, Highest medical cost = ○, Highest count of claims = △ are noted with these symbols, when available.

Prevention Targets

Employers

- Provide trailers with handholds on both sides to prevent drivers from riding the door down, or twisting awkwardly to grab the side of the trailer to help in their descent.
- Train drivers in safer ways of tarping to limit the time walking over covered (hidden) loads.
- Work with customers to limit tarping loads by identifying cargo that doesn't need to be tarped.
- Engineer away the need for ladders if possible.

Drivers

- Always use 3 points of contact when entering or exiting the cab or trailer and on ladders.
- Slow down and take time to complete your work.
- Be aware of gaps in freight under the tarp. Create a system to help you identify gaps, e.g. carry a chalk pen and mark all gaps on the tarp while you are unrolling.

- **161 compensable claims**
- **Cost over $9 million**
- **44,000 days of lost time**
- **75% of these injuries were to drivers**

Figure 43. Compensable Claims By Age Group

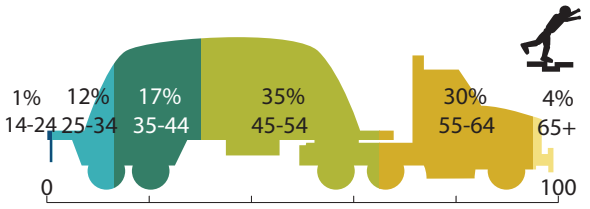


Table 18. Most common falls on same level by type and source combination of injuries in Specialized Freight, ranked by intervention priority.

Description	PIP Rank
Fall to ground due to ice, water, fuel, etc.	1
Fell in trailer, on equipment - due to ice, snow, etc.	2

*PIP prioritizes injury types by ranking three important factors and averaging. The PIP ranks the count of injuries, the type (e.g., fall from elevation, struck by), and the number of time-loss days. Highest time-loss = □, Highest medical cost = ○, Highest count of claims = △ are noted with these symbols, when available.

Prevention Tips

Employers

- Develop a plan to deal with severe weather and fuel spills.
- Engineer methods to keep product from leaking or spilling.
- Provide dry mops or absorbent pads so drivers can keep their trailers safe.
- Keep your yard well lit, fill potholes and maintain safe walkways.
- Encourage drivers to report hazards found at customer sites and work with customers to make sure they are fixed or mitigated.

Drivers

- Inspect your straps for wear.
- Carry a dry mop to clean up slick surfaces in your trailer or use absorbent pads.
- Carry non-clumping kitty litter to sprinkle on slick surfaces or over spills if you cannot clean them up.
- Don't allow your phone or paperwork to become a distraction while walking.
- Report walking hazards to your employer immediately.
- If your view will be limited by a package or hand truck delivering, walk the route first and note any obstacles.
- Wear footwear with a good tread.

- **146 compensable injuries**
- **Cost $8 million**
- **Resulted in over 35,000 days of lost work**

Figure 44. Compensable Claims By Age Group

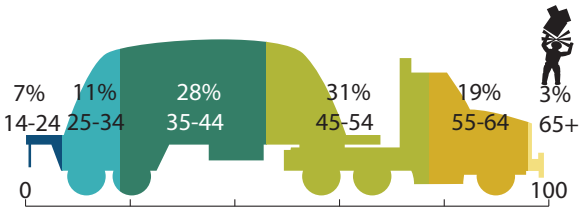


Table 19. Most common struck by or against injuries by type and source combination of injuries in Specialized Freight, ranked by intervention priority.

Description	PIP Rank
Struck by cargo - e.g., box not secured on dolly, fell on driver	1
Struck against truck or other equipment - slip and hit against truck	2

*PIP prioritizes injury types by ranking three important factors and averaging. The PIP ranks the count of injuries, the type (e.g., fall from elevation, struck by), and the number of time-loss days. Highest time-loss = □, Highest medical cost = ○, Highest count of claims = △ are noted with these symbols, when available.

Prevention Tips

Employers

- Provide load securement training.
- Train material handlers on correct warehouse storage and stacking.
- Double check route schedule and load according to delivery route to limit the driver's need to rearrange cargo.

Drivers

- Double check that cargo is properly secured and sequentially ordered during your pre-trip.
- Stay away from your truck's trailer when a forklift loads/unloads.
- Take advantage of designated safe work areas or break rooms while loading/unloading occurs.
- If you must direct loading or unloading, have a plan with the forklift driver and a safe area to stand.
- Watch for tripping/slipping hazards such as ice, oil, debris or potholes.
- Don't allow your phone or paperwork to become a distraction while walking.
- Wear high visibility clothing.

- **129 compensable claims**
- **Cost $9.5 million**
- **Over 48,000 days of lost work**
- **Drivers suffered 88% of the vehicle-related compensable injuries in Specialized Freight.**

Figure 45. Compensable Claims By Age Group

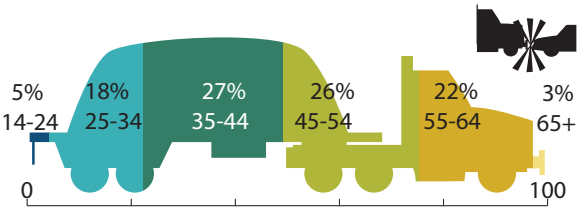


Table 20. Most common vehicle-related claims by type and source combination of injuries in Specialized Freight, ranked by intervention priority.

Description	PIP Rank
Rubbed, abraded or vibration - holding steering wheel in wind gusts, equipment failure jerked arm	1
Jack-knife or overturned, no collision	2
Ran off the highway, no collision	3
Jack-knife highway vehicle incident - unspecified	4
Highway crash, unspecified	5

*PIP prioritizes injury types by ranking three important factors and averaging. The PIP ranks the count of injuries, the type (e.g., fall from elevation, struck by), and the number of time-loss days. Highest time-loss = □, Highest medical cost = ○, Highest count of claims = △ are noted with these symbols, when available.

Prevention Tips

Employers

- Assure proper maintenance of equipment based on your use, which may be different than manufacturer intervals.
- Provide regular brake maintenance.
- Assure drivers aren't being pressured to drive when tired or sick.
- Don't over-schedule drivers or otherwise encourage the need to rush.

Drivers

- Adjust driving to road or weather conditions and reduce speed in windy conditions.
- Minimize in-cab distractions and don't drive tired.
- Eat healthy foods, get plenty of sleep and stay well hydrated.
- Leave plenty of stopping space between yourself and the vehicles around you.
- Request training for driving in all weather conditions.
- Wear your seatbelt.

General injury prevention

Employers

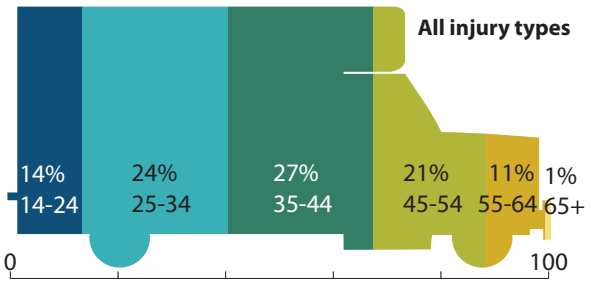
- Invest in tarping stations.
- Provide and encourage the use of ratchet binders instead of lever binders.
- Encourage drivers to report hazardous conditions at customer sites.
- If your driver is injured at a customer site, follow up with the customer to be sure it won't happen again.
- Provide and maintain adequate lighting.
- Maintain terminal yard and dock areas so that surfaces are even and free of slip and trip hazards such as potholes, ice, snow, rubbish and liquid spills.
- Maintain delivery bays. Keep cones and mops available to clean up any water accumulation.
- The average cost of pallet straps and void fillers run about $500. Invest in the correct securement devices to keep your workers and your cargo safe.
- Make sure to schedule time into the drivers day to inspect and re-inspect cargo securement. The extra few minutes could save you a lot of time, money and pain.
- Prevent incentives to drive drowsy by switching your payment to hourly, and eliminate by-the-mile and by-the-load payment structures.
- Build a safety culture that makes driving drowsy as taboo as driving drunk.
- Schedule realistically. Routes, shipments, seasons and cargo as well as many other issues create different delivery estimates. Keep these factors in mind when scheduling drivers' work.
- If you have to, raise the cost of doing business with your company. An industry-leading company with less churn and happier/safer employees is a more successful company, in any industry. People want to associate themselves with industry leaders.

Drivers

- Use ratchet binders instead of lever binders.
- Ask a forklift driver to put the tarp on the load. Then have a partner help cover the load.
- Regularly inspect your straps and bindings for wear.
- Check load order before leaving the dock. If cargo is out of order for delivery have the forklift driver reorder it before you leave.
- Before inspecting your truck and trailer, inspect the area around them for slip, trip and fall hazards.
- Report debris, spills or other hazards to the yard manager.
- Mark the location of voids when tarping.
- Report broken equipment to your employer.
- Wear your high-visibility clothing and sturdy shoes with good traction.

- **578 compensable claims**
- **More than $18 million in claim costs**
- **Over 100,000 days of time-loss**
- **A compensable rate of 6.1 per 100 FTE or 1 in 16 employees**

Figure 46. Compensable Claims By Age Group



Unlike all other trucking sectors where drivers have disproportionately more claims, in Specialized Freight, Moving, drivers and material handlers had similar number of claims – with drivers having 45% of these claims and material handlers had 43% of the compensable claims in the Moving sector.

The majority of injuries in the Specialized Freight, Moving sector, include strain, sprain or overexertion injuries, caused by heavy lifting.

The highest median claim and medical portion of the claim cost were for fall on the same level with a median claim cost of $16,563 and median medical portion at $8,904.

Figure 47. Percent of compensable injuries by type, Specialized Freight, Movers 2006-2012

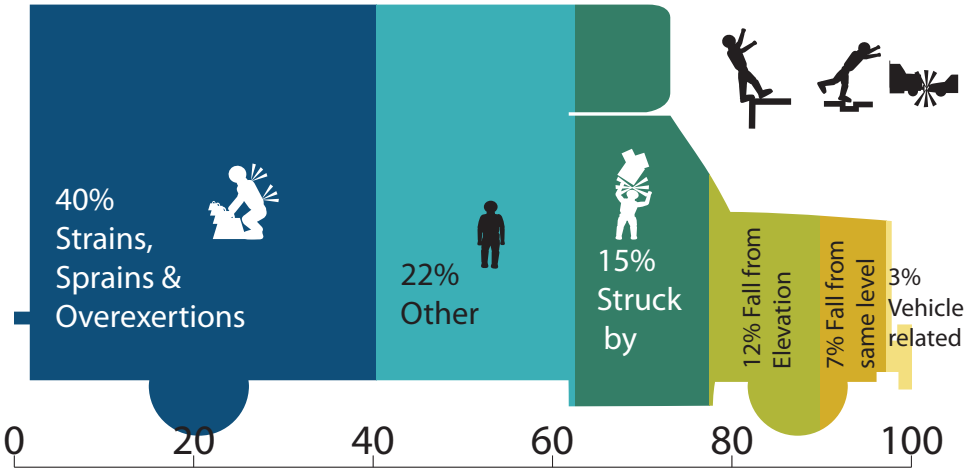
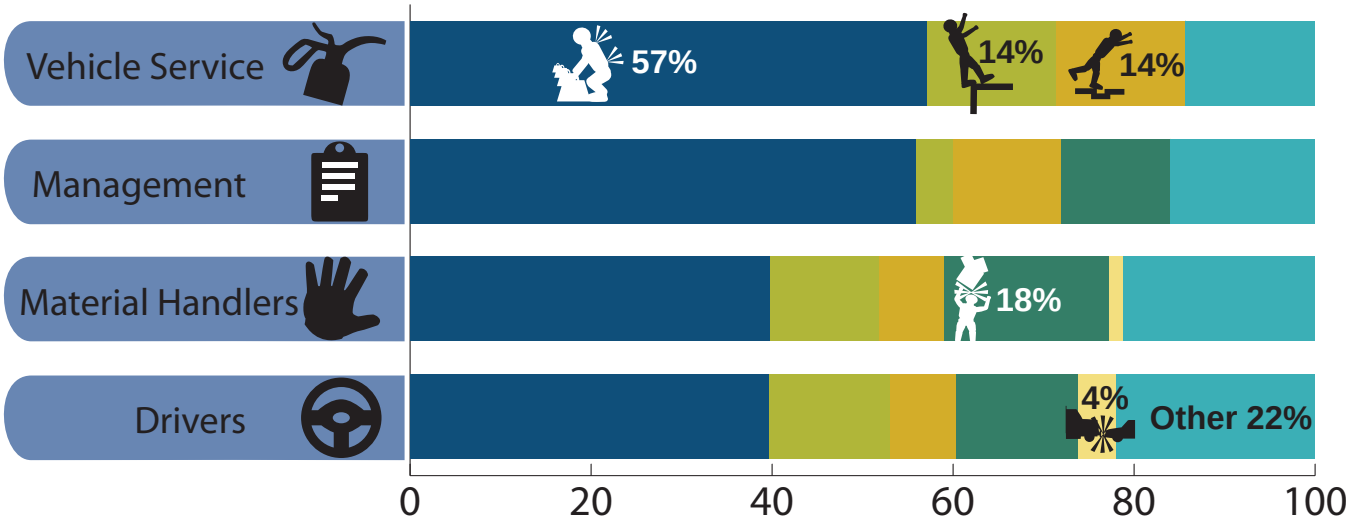


Figure 48. Percent of injury type by occupation, Specialized Freight, Movers 2006-2012



The highest median claim cost were vehicle service technicians ($19,629), the lowest for material handlers ($4,852)

Table 21. The top five injury type and source of injury combination in Movers, ranked by intervention priority.

Description	PIP Rank
Bending, reaching and/or twisting - examples include: twisting while carrying something heavy or injuring back while climbing in/out of truck	1
Lifting heavy furniture	2
Lifting heavy boxes, either from the ground or twisting	3
Fell from trailer or truck to the ground	4
Walking up stairs, backwards off ramp - while holding heavy objects, slipped, tripped or landed wrong	5

*PIP prioritizes injury types by ranking three important factors and averaging. The PIP ranks the count of injuries, the type (e.g., fall from elevation, struck by), and the number of time-loss days. Highest time-loss = □, Highest medical cost = ○, Highest count of claims = △ are noted with these symbols, when available.

Prevention Tips

Employers

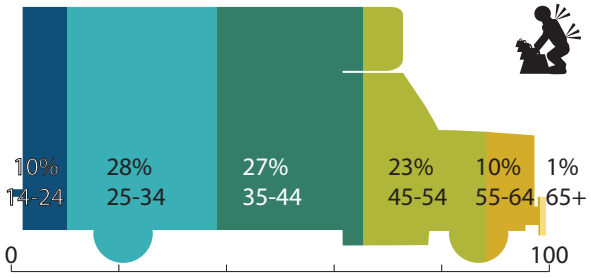
- Complete a hazard assessment sheet for each job.
- Walk through the job site with your team to address hazards.
- Emphasize communication during team lifts.
- Check all ramps and walkboards for damage prior to each job.
- Make sure there are enough workers to safely lift heavy items. Use lifting aids whenever possible.
- The severity of strain, sprain and overexertion injuries can be positively impacted by early reporting and implementing prevention strategies. This cannot be emphasized strongly enough. Encourage your employees to let you know if they are feeling pain, before the damage becomes severe.

Drivers

- Discuss any hazards you notice with your team.
- Discuss in advance how you and your lifting partner will communicate when to lift and any problems.
- Double check that walkboards and ramps are properly attached.
- Report pain early to your employer and physician. Early intervention can decrease the severity of injuries to muscles, tendons, joints and other soft-tissue.

- **234 compensable claims**
- **Cost over $8.8 million**
- **Over 52,000 days of lost work**

Figure 49. Compensable Claims By Age Group



'Other' occupations had the highest median cost and medical portion of their claim than any other occupational group. It should be noted that the 'Other' occupational category had only 13 compensable claims during this period. 'Other' occupations include packaging and filling machine operators, accountants and auditors, and sales managers.

Table 22. Most common strain, sprain or overexertion by type and source combination of injuries in Movers, ranked by intervention priority.

Description	PIP Rank
Overexertion lifting heavy furniture	1
Bending, climbing, twisting	2
Overexertion lifting heavy boxes	3
Overexertion lifting entertainment center/armoire	4
Overexertion lifting pianos	5

*PIP prioritizes injury types by ranking three important factors and averaging. The PIP ranks the count of injuries, the type (e.g., fall from elevation, struck by), and the number of time-loss days. Highest time-loss = □, Highest medical cost = ○, Highest count of claims = △ are noted with these symbols, when available.

Prevention Tips

Employers

- Walk through the job site with your team to address hazards.
- Make sure there are enough workers to safely lift heavy items. Use lifting aids whenever possible. Emphasize communication during team lifts.
- The severity of strain, sprain and overexertion injuries can be positively impacted by early reporting and implementing prevention strategies. Encourage your employees to let you know if they are feeling pain, before the damage becomes severe.

Drivers

- Discuss any hazards you notice with your team.
- Discuss in advance how you and your lifting partner will communicate when to lift and any problems.
- Don't lift heavy items by yourself.

- **71 compensable claims**
- **Cost $1.5 million**
- **6,000 days of lost work**

Only drivers and material handlers had more than 4 claims in this injury group. Drivers had the highest median cost ($9,414). Material handlers median compensable claim cost was ($4,062).

Figure 50. Compensable Claims By Age Group

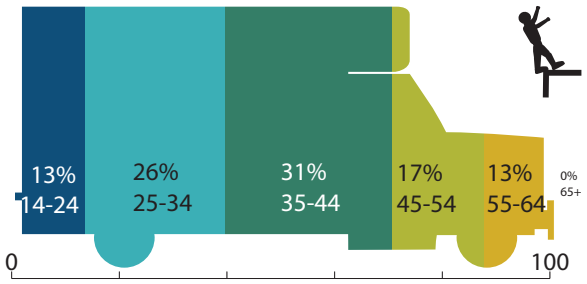


Table 23. Most common fall from elevation by type and source of injuries combination in Movers, ranked by intervention priority.

Description	PIP Rank
Fall from trailer	1
Fall off ramp or walkboard	2
Fall off truck - cab exiting or handle broke on trailer door	3
Fall down stairs - while carrying objects	4

*PIP prioritizes injury types by ranking three important factors and averaging. The PIP ranks the count of injuries, the type (e.g., fall from elevation, struck by), and the number of time-loss days. Highest time-loss = □, Highest medical cost = ○, Highest count of claims = △ are noted with these symbols, when available.

Prevention Tips

Employers

- Prepare for jobs by having enough workers and time to get the job done safely.
- Walk through the job site with your team to address hazards.
- Check all ramps and walkboards for damage prior to each job.
- Train employees to not over-stack cargo on hand trucks and watch where they are going.

Drivers

- Discuss any hazards you notice with your team.
- Double check that walkboards and ramps are properly attached.
- If you can't see your feet or the ground in front of you, get a spotter, walk very slowly and carefully or re-think how you are transferring the particular cargo.
- Don't rush.

- **43 compensable claims**
- **$1.8 million**
- **Almost 10,000 days of time-loss**

Only drivers and material handlers had more than 4 compensable claims for this injury group. Material handlers had significantly higher median costs for both the medical portion ($16,181) and the overall cost of compensable claims (median $29,208) during this period.

Figure 51. Compensable Claims By Age Group

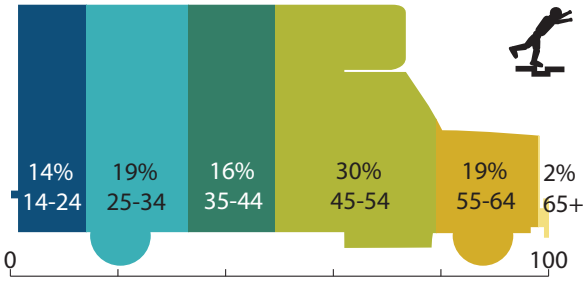


Table 24. Most common fall on the same level by type and source combination of injuries in Movers, ranked by intervention priority.

Description	PIP Rank
Slipped on ramp, wet conditions	1
Tripped or slipped on various surfaces - dock plate, debris in the way	2
Slipped on wet ground	3

*PIP prioritizes injury types by ranking three important factors and averaging. The PIP ranks the count of injuries, the type (e.g., fall from elevation, struck by), and the number of time-loss days. Highest time-loss = □, Highest medical cost = ○, Highest count of claims = △ are noted with these symbols, when available.

Prevention Tips

Employers

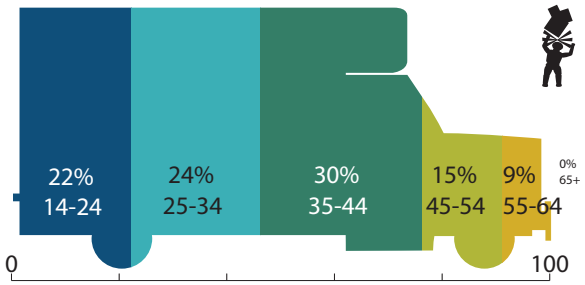
- Walk through the job site with your team to address hazards.
- Inspect ramps before each job. Mark “out of service” any that need re-treading or are missing hooks.
- Train drivers to park trucks to provide the least ramp angle and safest access.
- Provide squeegees and towels to dry walkboards and truck beds.

Drivers

- Discuss any hazards you notice with your team.
- Wear footwear with good treads. Heavy labor may require frequent shoe or boot replacement.
- Avoid walking through grass or other areas where the ground surface is obstructed. There may be dips, holes or other obstacles there that may trip you up.
- Use more caution during inclement weather. Slow down as slippery surfaces take more time to traverse than clear, dry surfaces.

- **87 compensable claims**
- **Cost $2.7 million**
- **Over 59,000 days off work**

Figure 52. Compensable Claims By Age Group



Drivers and material handlers made up 93% of the compensable struck by or against claims for Movers. Struck by or against injuries for drivers and material handlers had median costs around $3,000 ($3,426 for drivers and $2,984 for material handlers).

Table 25. Most common struck by or against injuries by type and source combination of injuries in Movers ranked by intervention priority.

Description	PIP Rank
Struck by falling furniture	1

*PIP prioritizes injury types by ranking three important factors and averaging. The PIP ranks the count of injuries, the type (e.g., fall from elevation, struck by), and the number of time-loss days. Highest time-loss = □, Highest medical cost = ○, Highest count of claims = △ are noted with these symbols, when available.

Prevention Tips

Employers

- Walk through the job site with your team to address hazards.
- Train workers on correct load securement to prevent load shift.
- Train workers on proper lifting techniques including team lifting and how to use shoulder dolly/forearm lifting straps.
- Inspect ramps before each job. Mark “out of service” any that need re-treading or are missing hooks.
- Train drivers to park trucks to provide the least ramp angle and safest access.

Drivers

- Discuss any hazards you notice with your team.
- Double check load securement. Have a partner assist when loosening large, bulky items that might have shifted in transit.
- Avoid walking through grass or other areas where the ground surface is obstructed. There may be dips, holes or other obstacles there that may trip you up while carrying heavy furniture.
- Don’t catch falling freight.

- **15 compensable injuries**
- **Cost $900,000**
- **Over 5,000 days of lost time**

Drivers accounted for over two-thirds of the vehicle-related compensable claims for Movers, with median compensable claim costs of about $24,700.

Figure 53. Compensable Claims By Age Group

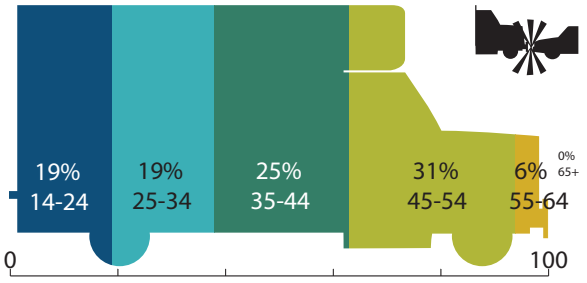


Table 26. Most common vehicle-related claims by type and source combination of injuries in Movers, ranked by intervention priority.

Description	PIP Rank
Hit by car while in truck	1

*PIP prioritizes injury types by ranking three important factors and averaging. The PIP ranks the count of injuries, the type (e.g., fall from elevation, struck by), and the number of time-loss days. Highest time-loss = □, Highest medical cost = ○, Highest count of claims = △ are noted with these symbols, when available.

Prevention Tips

Employers

- Provide drivers with appropriate safety devices, e.g. cones, flashers, for when they are stopped to unload.
- Train drivers to check all lights, especially brake lights during their pre-trip inspection.

Drivers

- Leave plenty of room between your vehicle and other vehicles on the road.
- When parked for loading and unloading, use hazard lights or cones to distinguish your parked vehicle from other moving vehicles on the road.
- Park your truck away from traffic if possible.
- Wear your seatbelt.

General injury prevention

Employers

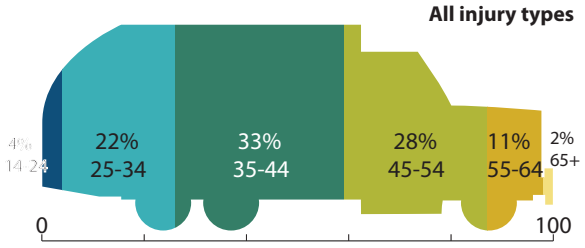
- Complete a hazard assessment sheet for each job.
- Walk through each job site addressing hazards as a team.
- Ask workers to point out the hazards they observe and work together to mitigate the risk.
- Don't understaff moves. Make sure there are enough workers to lift the heaviest items.
- Purchase or equip your hand trucks with brakes.
- The average cost of pallet straps and void fillers run about $500. Invest in the correct securement devices to keep your workers and your cargo safe.
- Make sure to schedule time into the driver's day to inspect and re-inspect cargo securement. The extra few minutes could save you a lot of time, money and pain.
- Build a safety culture that makes driving drowsy as taboo as driving drunk.
- If you have to, raise the cost of doing business with your company. An industry-leading company with less churn and happier/safer employees is a more successful company, in any industry. People want to associate themselves with industry leaders.

Drivers

- Inspect walk boards to be sure they are properly secured.
- Walk through the job first, note hazards and discuss mitigation techniques with your team.
- Discuss in advance how you and your lifting partner will communicate when to lift and any problems.
- Always wear sturdy shoes with good traction.
- Use hand trucks when possible to avoid hand carrying. Otherwise, team lift heavy objects.
- Stay vigilant about hidden hazards.
- Avoid walking through grass or other areas where the ground surface is obstructed. There may be dips, holes or other obstacles there that may trip you up while carrying heavy furniture.
- Before inspecting your truck and trailer, inspect the area around them for slip, trip and fall hazards.
- Keep your work area clear of debris and spills. If you make the mess, clean it up immediately or you may hurt yourself or a co-worker.
- Report broken equipment to your employer.
- Report pain early before it becomes a chronic condition.

- **768 compensable injuries**
- **Cost almost $28 million**
- **Resulted in over 122,000 days of time-loss**
- **A compensable rate of 6.9 per 100 FTE or 1 in 15 employees**

Figure 53. Compensable Claims By Age Group



Management occupations had the highest median compensable claim cost ($24,595) for strain, sprain, or overexertion followed by drivers (median $16,586) for falls from elevation.

Vehicle-related injuries had by far the highest median claim costs among all compensable claims in Waste Collection ($22,340), whereas fall from elevation had the highest median medical cost ($8,490).

Strain, sprain or overexertion accounted for 42% of all compensable claims (Figure 54.)

Material handlers had the highest percent of falls from elevation (12%).

Figure 54. Percent of comp injuries by type, Waste Collection 2006-2012

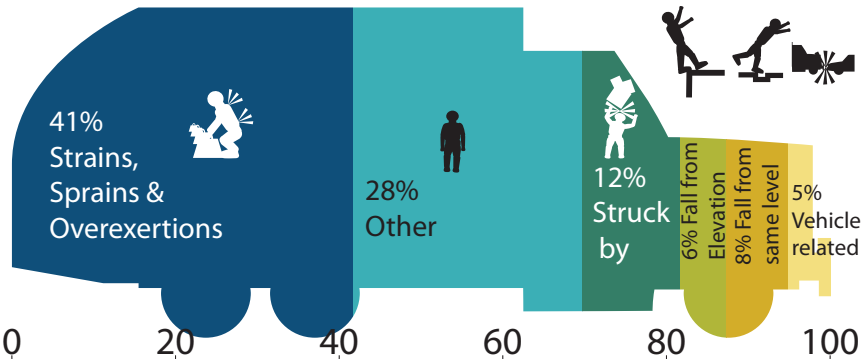


Figure 55. Percent of injury type by occupation, Waste Collection 2006-2012

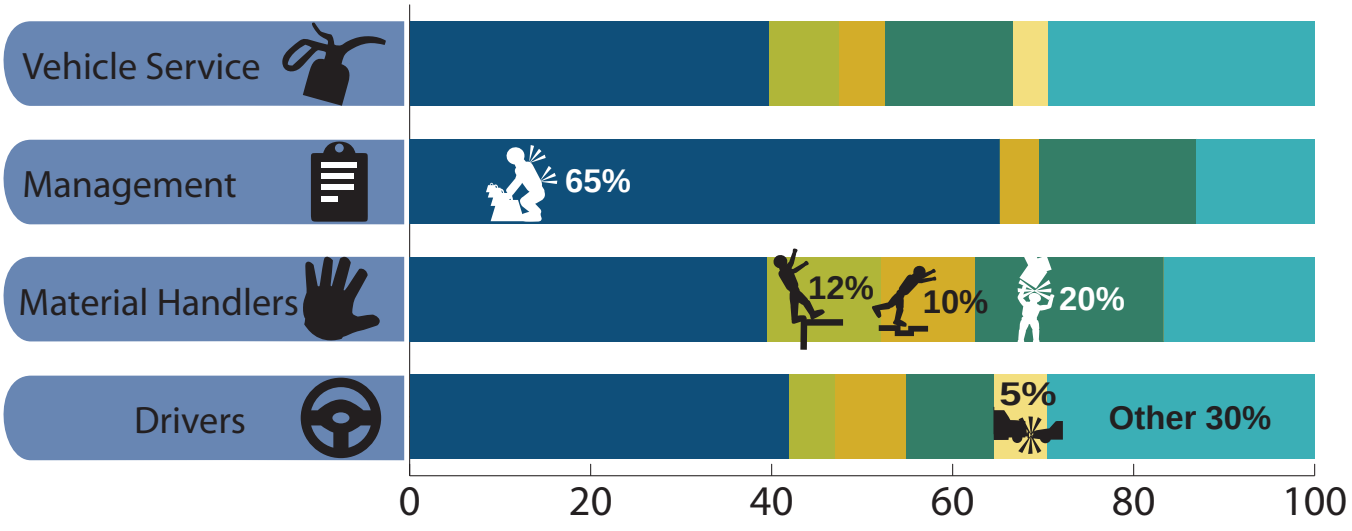


Table 27. The top five injury type and source of injury combination in Waste Collection, ranked by intervention priority were:

Description	PIP Rank
Cumulative trauma for example: carpal tunnel syndrome, hand/wrist/ shoulder tendonitis	1
Falling from vehicle - cleaning out trailer; falling off of truck part to ground	2
Falling to same level - walking around truck, slips, pushing or pulling heavy objects	3

*PIP prioritizes injury types by ranking three important factors and averaging. The PIP ranks the count of injuries, the type (e.g., fall from elevation, struck by), and the number of time-loss days. Highest time-loss = □, Highest medical cost = ○, Highest count of claims = △ are noted with these symbols, when available.

Prevention Tips

Employers

- The severity of strain, sprain and overexertion injuries can be positively impacted by early reporting and implementing prevention strategies. This cannot be emphasized strongly enough. Encourage your employees to let you know if they are feeling pain, before the damage becomes severe.
- Remind drivers not to lift overweight containers. It's better to anger a customer than injure a worker. Take time to educate customers on overweight containers.
- Provide safer equipment when requested. Workers of different heights may require adjustments to their equipment to make it safe for them.

Drivers

- Always use 3 points of contact.
- Wear footwear with a good tread and check it often.
- Test the weight of a bin or container before committing to lift it.
- Don't lift overweight containers. Report them to your supervisor.
- If you must move large commercial containers on unlevel ground, consider requesting multiple small containers instead of one large container.
- Report pain early to your employer and physician. Early intervention can decrease the severity of injuries to muscles, tendons, joints and other soft-tissue.
- Don't allow your phone or paperwork to become a distraction while walking.

- **322 compensable injuries**
- **Cost over $13.5 million**
- **64,500 days of lost time days**

Management occupations had significantly higher median compensable claim costs ($24,595) compared to drivers ($10,663), material handlers ($7,663) or vehicle service technicians ($16,453).

Figure 56. Compensable Claims By Age Group

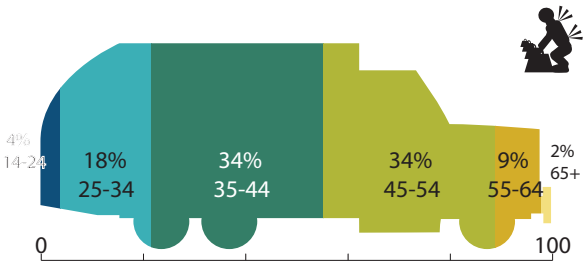


Table 28. Most common strain, sprain or overexertion by type and source of injuries combination in Waste Collection, ranked by intervention priority.

Description	PIP Rank
Repetitive movement, not elsewhere classified	1
Repetitive movement, pushing and pulling	2
Repetitive movement - e.g., gripping and hand force	3
Overexertion - lifting garbage/recycling cans	4
Bodily reaction - stepping off and twisting, hurting lower extremities	5

*PIP prioritizes injury types by ranking three important factors and averaging. The PIP ranks the count of injuries, the type (e.g., fall from elevation, struck by), and the number of time-loss days. Highest time-loss = □, Highest medical cost = ○, Highest count of claims = △ are noted with these symbols, when available.

Prevention Tips

Employers

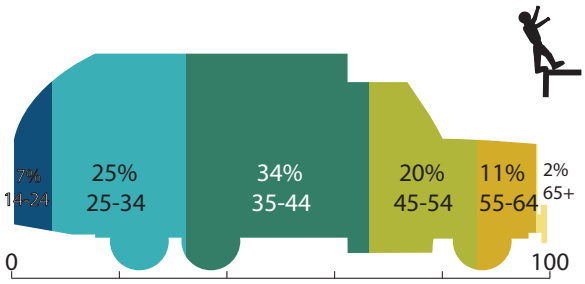
- Consider moving to automated can lift systems to eliminate the need for drivers to continually lift cans.
- Remind drivers not to lift overweight containers. It's better to anger a customer than injure a worker. Take time to educate customers on overweight containers.
- The severity of strain, sprain and overexertion injuries can be positively impacted by early reporting and implementing prevention strategies. Encourage your employees to let you know if they are feeling pain, before the damage becomes severe.

Drivers

- Test the weight of a bin or container before committing to lift it.
- Don't lift overweight containers. Report them to your supervisor.
- If you must move large commercial containers on unlevel ground, consider requesting multiple small containers instead of one large container.
- Wear non-slip, well-fitting gloves to protect your hands and to reduce exposure of hands to over-gripping handles.
- Immediately report pain to your employer and physician.

- **43 compensable injuries**
- **Cost over $2 million**
- **Over 10,000 days of lost work**

Figure 57. Compensable Claims By Age Group



Drivers accounted for over 65% of the compensable fall from elevation claims in Waste Collection. Drivers also had the highest median claim cost ($16,586), which is much higher than median medical claim cost for vehicle service technicians ($8,089) and material handlers ($7,426).

Table 29. Most common fall from elevation by type and source combination of injuries in Waste Collection, ranked by intervention priority.

Description	PIP Rank
Jumping from the cab	1
Fall from vehicle - truck part or trailer	2
Fall from ladder	3
Fall from vehicle to ground, unspecified	4

*PIP prioritizes injury types by ranking three important factors and averaging. The PIP ranks the count of injuries, the type (e.g., fall from elevation, struck by), and the number of time-loss days. Highest time-loss = □, Highest medical cost = ○, Highest count of claims = △ are noted with these symbols, when available.

Prevention Tips

Employers

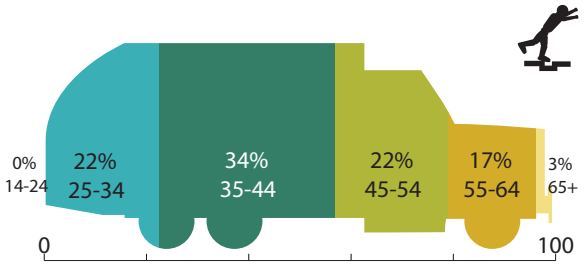
- Train drivers how to safely exit the cab using 3 points of contact.
- When possible find alternatives to using ladders such as using forklifts to lift materials.

Drivers

- Always use 3 points of contact to enter and exit the cab and on ladders.
- Wear footwear with a good tread and check it often.
- Be aware of your surroundings. Know how far away the edge of the truck is at all times.

- **58 compensable injuries**
- **Cost over $2 million**
- **Over 6,700 days of lost work**

Figure 58. Compensable Claims By Age Group



Drivers accounted for 76% of all fall on the same level compensable claims in Waste Collection, but material handlers had the highest median claim cost ($8,972), although they only account for 10% of the compensable fall on the same level claims.

Table 30. Most common fall from the same level by type and source combination of injuries in Waste Collection, ranked by intervention priority.

Description	PIP Rank
Slipped on ice or gravel	1
Fell while dumping garbage or recycling	2
Slipped on ice or water while near truck	3
Slipped onto or against truck	4

*PIP prioritizes injury types by ranking three important factors and averaging. The PIP ranks the count of injuries, the type (e.g., fall from elevation, struck by), and the number of time-loss days. Highest time-loss = □, Highest medical cost = ○, Highest count of claims = △ are noted with these symbols, when available.

Prevention Tips

Employers

- Remind workers to check their boot treads often for wear.

Drivers

- Always use 3 points of contact.
- Wear footwear with a good tread and check it often.
- Don't allow your phone or paperwork to become a distraction while walking.

- **91 compensable injuries**
- **Cost over $2.0 million**
- **Over 11,000 days of lost time**

58% of compensable claims for struck by injuries were drivers, who had a median compensable cost of $6,381.

Figure 59. Compensable Claims By Age Group

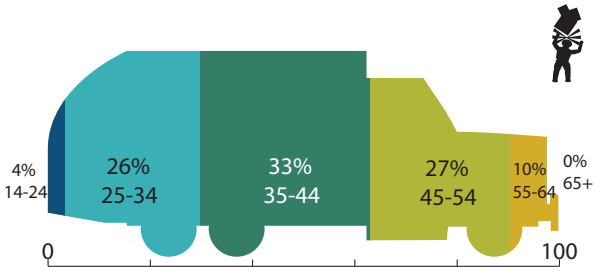


Table 31. Most common struck by or against injuries by type and source combination of injuries in Waste Collection ranked by intervention priority.

Description	PIP Rank
Struck by a door	1
Struck by objects	2

*PIP prioritizes injury types by ranking three important factors and averaging. The PIP ranks the count of injuries, the type (e.g., fall from elevation, struck by), and the number of time-loss days. Highest time-loss = □, Highest medical cost = ○, Highest count of claims = △ are noted with these symbols, when available.

Prevention Tips

Employers

- Remind workers that they are more important than their cargo so they shouldn't try to catch falling cargo.
- Provide high visibility clothing.

Drivers

- Don't try to catch falling objects.
- Wear your high visibility clothing.
- Don't turn your back on on-coming traffic.

- **37 compensable injuries**
- **Cost almost $2.6 million**
- **Almost 8,500 days of lost work**

Only driver claims are represented in the table below as they are the only occupation with 5 or more compensable claims.

Figure 60. Compensable Claims By Age Group

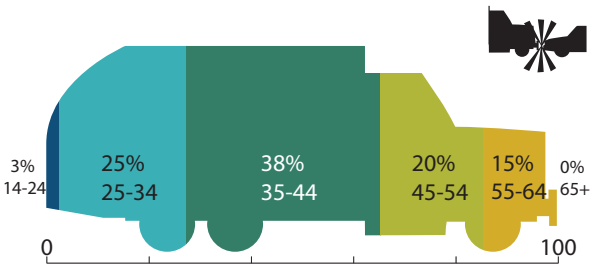


Table 32. Most common vehicle-related claims by type and source combination of injuries in Waste Collection, ranked by intervention priority.

Description	PIP Rank
Jack-knife, overturned, no collision	1
Highway traffic collision	2
Vibration from truck, riding down bumpy road related injuries	3

*PIP prioritizes injury types by ranking three important factors and averaging. The PIP ranks the count of injuries, the type (e.g., fall from elevation, struck by), and the number of time-loss days. Highest time-loss = □, Highest medical cost = ○, Highest count of claims = △ are noted with these symbols, when available.

Prevention Tips

Employers

- Make sure new drivers have experience driving in conditions similar to their route before sending them out.
- Meet with new drivers regularly to discuss near misses and other traffic issues they may not have experienced before.
- Develop a culture where driving drowsy is as taboo as driving drunk.
- Have a sick leave program in place and encourage workers to use it when needed.

Drivers

- Wear your seatbelt.
- Leave plenty of room around you.
- Talk to your supervisor about any concerns or training needs. It's better to ask for training then to get injured.
- If you are ill or fatigued, call in sick.

General injury prevention

Employers

- Encourage drivers to report hazardous conditions at customer sites.
- If your driver is injured at a customer site, follow up with the customer to be sure it won't happen again.
- Provide and maintain adequate lighting.
- Maintain terminal yard and dock areas so that surfaces are even and free of slip and trip hazards such as potholes, ice, snow, rubbish and liquid spills.
- The average cost of pallet straps and void fillers run about $500. Invest in the correct securement devices to keep your workers and your cargo safe.
- Make sure to schedule time into the driver's day to inspect and re-inspect cargo securement. The extra few minutes could save you a lot of time, money and pain.
- Prevent incentives to drive drowsy by switching your payment to hourly, and eliminate by-the-mile and by-the-load payment structures.
- Build a safety culture that makes driving drowsy as taboo as driving drunk.
- Schedule realistically. Routes, shipments, seasons and cargo as well as many other issues create different delivery estimates. Keep these factors in mind when scheduling drivers' work.
- If you have to, raise the cost of doing business with your company. An industry-leading company with less churn and happier/safer employees is a more successful company, in any industry. People want to associate themselves with industry leaders.

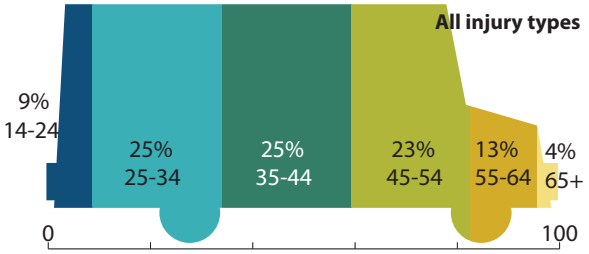
Drivers

- Always wear sturdy shoes with good traction.
- Stay vigilant about hidden hazards.
- Before inspecting your truck and trailer, inspect the area around them for slip, trip and fall hazards.
- Report debris, spills or other hazards to the yard manager
- Keep your work area clear of debris and spills. If you make the mess, clean it up immediately or you may hurt yourself or a co-worker.
- Report broken equipment to your employer.
- Wear your high-visibility clothing.

COURIERS AND MESSENGERS

- **591 compensable claims**
- **Costs $19.5 million**
- **Over 114,000 days of lost time**
- **A compensable rate of 4.1 per 100 FTE or 1 in 25 employees**

Figure 61. Compensable Claims By Age Group



Strain, sprain or overexertion injuries were the most common compensable claims for Couriers and Messengers accounting for 34% of compensable injuries during this time period (Figure 62). Falls on same level (10% of compensable claims) had the highest median cost ($20,653).

Drivers accounted for 77% of compensable claims and had the highest median medical costs ($8,444) for fall on the same level.

Figure 62. Percent of compensable injuries by type, Couriers and Messengers 2006-2012

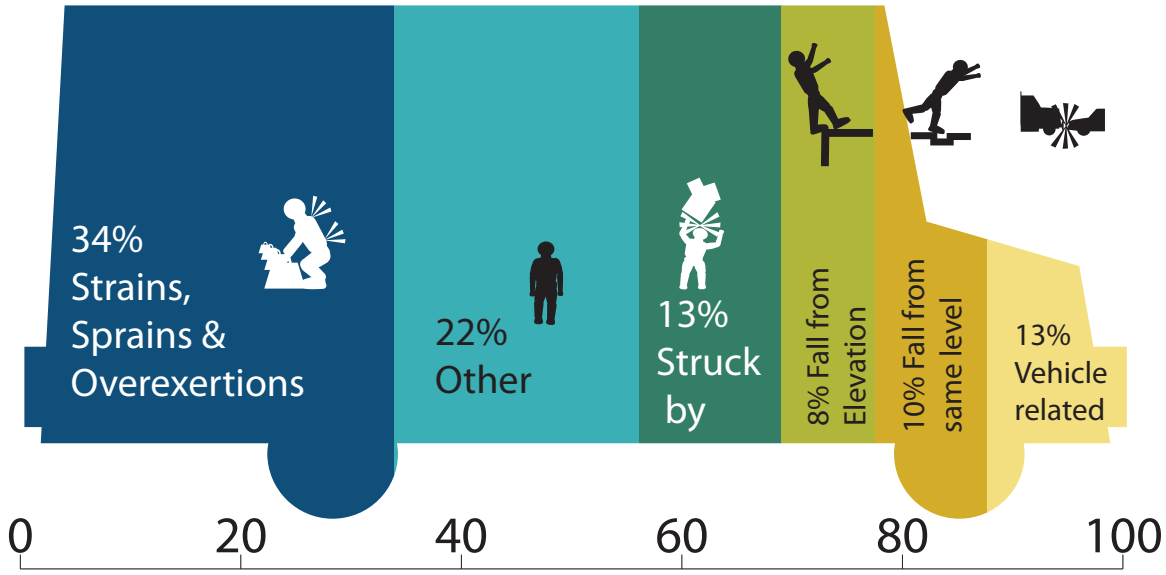


Figure 63. Percent of injury type by occupation, Couriers and Messengers 2006-2012

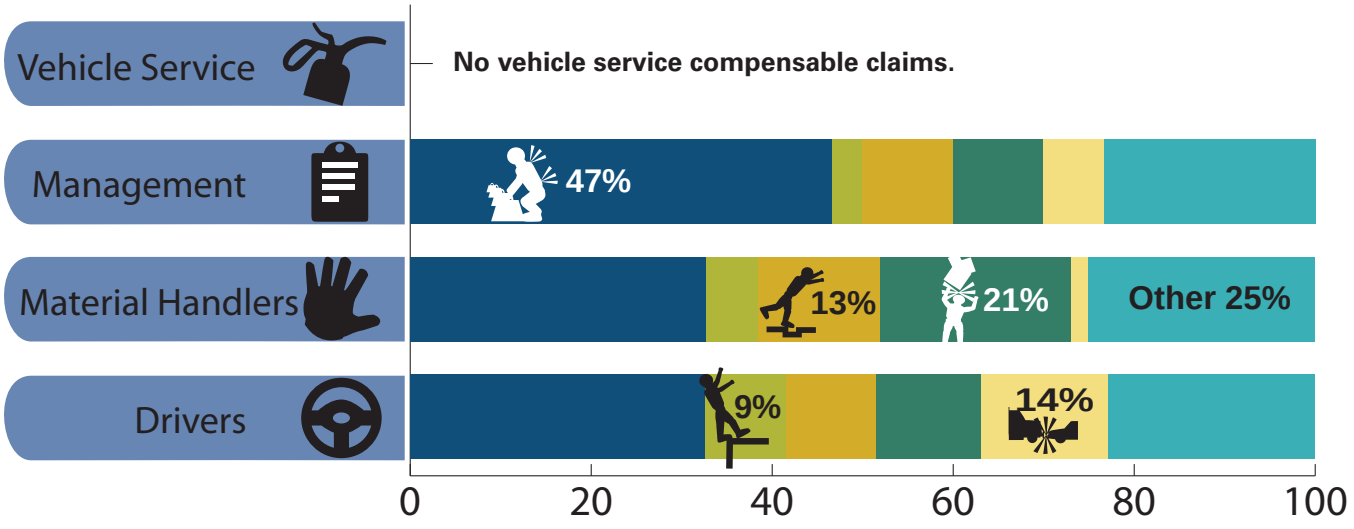


Table 33. The top five injury type and source of injury combination in Couriers and Messengers, ranked by intervention priority were:

Description	PIP Rank
Falling off the back of the truck, or missed a step and fell	1
Slipped or tripped while carrying packages	2
Slipped while walking – ice or wet ground	3
While getting in to or out of cab/truck; twisted lower extremity – knees, ankles, and feet	4
Overexertion — back, upper extremity (shoulders, neck, and arms) from lifting heavy boxes	5
Motor vehicle crash – being hit from behind	5

*PIP prioritizes injury types by ranking three important factors and averaging. The PIP ranks the count of injuries, the type (e.g., fall from elevation, struck by), and the number of time-loss days. Highest time-loss = □, Highest medical cost = ○, Highest count of claims = △ are noted with these symbols, when available.

Prevention Targets

Employers

- Invest in trucks with adequate hand holds at appropriate heights.
- Provide mechanical assist to drivers to reduce heavy lifting.
- Allow enough time for drivers to complete their routes.
- The severity of strain, sprain and overexertion injuries can be positively impacted by early reporting and implementing prevention strategies. This cannot be emphasized strongly enough. Encourage your employees to let you know if they are feeling pain, before the damage becomes severe.

Drivers

- Always use 3 points of contact.
- Wear footwear with a good tread.
- Since packages can disrupt your vision, scan the area for ice, debris, or potholes before carrying your package.
- Report pain early to your employer and physician. Early intervention can decrease the severity of injuries to muscles, tendons, joints and other soft-tissue.

- **201 compensable claims**
- **Cost over $6 million**
- **Over 40,000 days of lost work**

Drivers represent 76% of the strain, sprain or overexertion compensable claims in this sector. Although management occupations accounted for only 7% of the injuries of this type, they had the highest median claim cost ($17,327).

Figure 64. Compensable Claims By Age Group

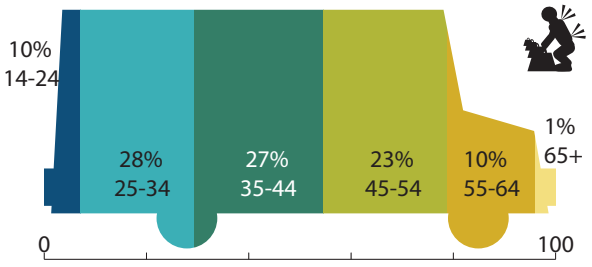


Table 34. Most common strain, sprain or overexertion by type and source combination of injuries in Couriers and Messengers, ranked by intervention priority.

Description	PIP Rank
Bodily reaction - twisting leg, getting in/out of truck	1
Overexertion lifting heavy boxes	2
Overexertion lifting heavy objects, not boxes	3
Bending, reaching or twisting	4

*PIP prioritizes injury types by ranking three important factors and averaging. The PIP ranks the count of injuries, the type (e.g., fall from elevation, struck by), and the number of time-loss days. Highest time-loss = □, Highest medical cost = ○, Highest count of claims = △ are noted with these symbols, when available.

Prevention Tips

Employers

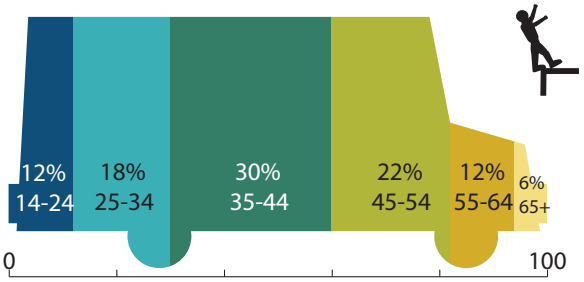
- Invest in trucks with adequate hand holds at appropriate heights.
- Provide mechanical assist devices to reduce heavy lifting.
- Make sure cargo is loaded in the order to be delivered.
- Pre-trip leased trucks or trailers and do not lease them if the maintenance is poor such as doors that don't open and close smoothly.
- The severity of strain, sprain and overexertion injuries can be positively impacted by early reporting and implementing prevention strategies. This cannot be emphasized strongly enough. Encourage your employees to let you know if they are feeling pain, before the damage becomes severe.

Drivers

- Pre-trip your equipment in addition to your truck. Mark damaged equipment out-of-service.
- Report pain early to your employer and physician. Early intervention can decrease the severity of injuries to muscles, tendons, joints and other soft-tissue.

- **50 compensable claims**
- **Cost over $1.8 million**
- **Over 10,000 days of lost work**

Figure 65. Compensable Claims By Age Group



Only driver claims are represented here as they are the only occupation with more than 5 compensable claims. Median claim cost for drivers was $8,801.

Table 35. Most common fall from elevation by type and source combination of injuries in Couriers and Messengers, ranked by intervention priority.

Description	PIP Rank
Fall from vehicle - back of truck or cab	1
Fall down stairs	2
Fall from vehicle - missed a step or fell off liftgate	3

*PIP prioritizes injury types by ranking three important factors and averaging. The PIP ranks the count of injuries, the type (e.g., fall from elevation, struck by), and the number of time-loss days. Highest time-loss = □, Highest medical cost = ○, Highest count of claims = △ are noted with these symbols, when available.

Prevention Tips

Employers

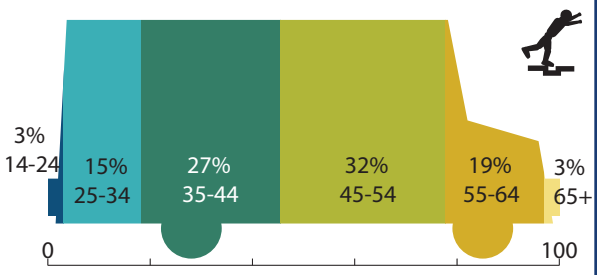
- Invest in trucks with adequate hand holds at appropriate heights.
- Inspect truck steps in late summer/early fall for wear and refinish or repair before winter weather arrives. Re-inspect periodically throughout the winter.

Drivers

- Report worn steps to your employer.
- Wear footwear with good treads.
- Don't rush into or out of your truck.

- **60 compensable claims**
- **Cost over $2.7 million**
- **Over 15,700 days of time-loss**

Figure 66. Compensable Claims By Age Group



Only driver and material handler claims are represented in the table below as they are the only occupations with more than 5 compensable claims. Median claim cost was $22,594 for drivers and $1,422 for material handlers.

Table 36. Most common fall from the same level by type and source combination of injuries in Couriers and Messengers, ranked by intervention priority.

Description	PIP Rank
Slip and trip while carrying packages	1
Slips and trips while walking or getting out of cab - water, ice	2

*PIP prioritizes injury types by ranking three important factors and averaging. The PIP ranks the count of injuries, the type (e.g., fall from elevation, struck by), the number of time-loss days. Highest time-loss = □, Highest medical cost = ○, Highest count of claims = △ are noted with these symbols, when available.

Prevention Targets

Employers

- Invest in trucks with adequate hand holds at appropriate heights.
- Allow enough time for workers to complete their routes.

Drivers

- Wear appropriate footwear with good tread.
- Don't rush.
- Look twice for slick surfaces, debris or potholes before exiting your vehicle.
- If you regularly deliver during dusk or darkness, ask customers to turn on exterior lighting. Many will be glad to do what they can to keep you safe.
- Visually inspect the delivery path for obstacles that might be blocked from view when carrying packages.
- Using a hand truck will help keep you steady and keep your view less obstructed.

- **76 compensable injuries**
- **Cost over $1.9 million**
- **13,000 days of lost work**

71% of struck by or against claims were for drivers with a median claim cost of $5,956.

Figure 67. Compensable Claims By Age Group

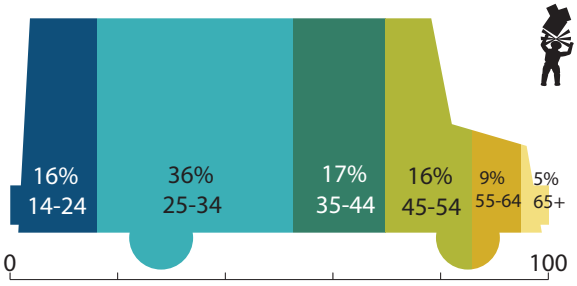


Table 37. Most common struck by or against injuries by type and source combination of injuries in Couriers and Messengers ranked by intervention priority.

Description	PIP Rank
Boxes and crates falling on worker	1

*PIP prioritizes injury types by ranking three important factors and averaging. The PIP ranks the count of injuries, the type (e.g., fall from elevation, struck by), and the number of time-loss days. Highest time-loss = □, Highest medical cost = ○, Highest count of claims = △ are noted with these symbols, when available.

Prevention Targets

Employers

- Train drivers and material handlers on proper load securement.

Drivers

- Double check that your load is secure during your truck's pre-trip inspection.
- Don't try to catch falling freight.

- **74 compensable claims**
- **Cost $3.5 million**
- **Over 15,000 days of lost work**

Drivers accounted for 86% of vehicle-related claims with a median claim cost of $13,564.

Figure 68. Compensable Claims By Age Group

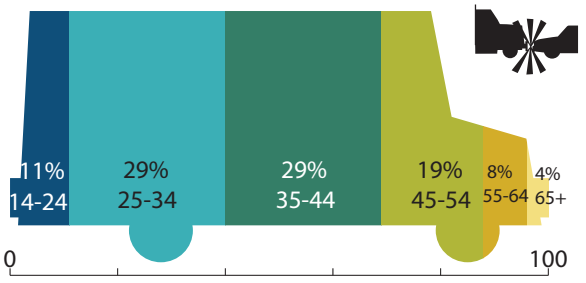


Table 38. Most common vehicle-related claims by type and source combination of injuries in Couriers and Messengers, ranked by intervention priority.

Description	PIP Rank
Crash between vehicles moving in the same direction – rear-ended	1
Vehicle crash, unspecified	2
Motor vehicle crash in an intersection	3
Hit or fell off of bike	4

*PIP prioritizes injury types by ranking three important factors and averaging. The PIP ranks the count of injuries, the type (e.g., fall from elevation, struck by), and the number of time-loss days. Highest time-loss = □, Highest medical cost = ○, Highest count of claims = △ are noted with these symbols, when available.

Employers

- Make sure new drivers have experience driving in conditions similar to their route before sending them out.
- Meet with new drivers regularly to discuss near misses and other traffic issues they may not have experienced before.
- Develop a culture where driving drowsy is as taboo as driving drunk.
- Have a sick leave program in place and encourage workers to use it when needed.

Drivers

- Be sure to check all lights especially brake lights during your pre-trip.
- Don't be afraid to call in sick if overly tired or ill.
- Leave plenty of space around your vehicle.
- Wear your seatbelt.
- Minimize in-cab distractions.

General injury prevention

Equipment maintenance:

- Have a regular schedule where everything (including hand trucks) are checked for wear and tear.
- Inspect truck steps in late summer/early fall for wear and refinish or repair before winter weather arrives. Re-inspect periodically throughout the winter.
- Fix equipment BEFORE it is used again. Tag broken equipment and put it out of service immediately.
- Add equipment checks to your pre-trip inspection.

Employers

- Invest in trucks with adequate hand holds at appropriate heights.
- The severity of strain, sprain and overexertion injuries can be positively impacted by early reporting and implementing prevention strategies. This cannot be emphasized strongly enough. Encourage your employees to let you know if they are feeling pain, before the damage becomes severe.
- Allow enough time for drivers to complete their routes.

Drivers

- Always use 3 points of contact.
- Wear footwear with a good tread.
- Since packages can disrupt your vision, scan the area for ice, debris, or potholes before carrying your package.
- Use a hand truck when possible. It'll keep you steadier and obstruct your view less than carrying boxes.
- Don't rush.
- Look twice before exiting your truck for debris, slick surfaces or pot holes.
- Report pain early to your employer and physician. Early intervention can decrease the severity of injuries to muscles, tendons, joints and other soft-tissue.

APPENDIX

APPENDIX

This report groups the claims into four main occupation type categories by Standard Occupational Class 2000 (2000 SOC).

Driver

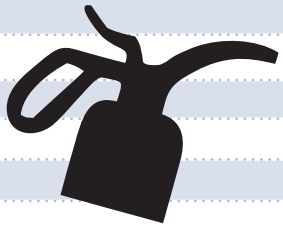
2000 SOC	Description
435021	Couriers and Messengers
435052	Postal Service Mail Carriers
533021	Bus Drivers, Transit and Intercity
533022	Bus Drivers, School or Special Client
533030	Driver/Sales Workers and Truck Drivers
533031	Driver/Sales Workers
533032	Heavy and Tractor-Trailer Truck Drivers
533033	Light Truck or Delivery Services Drivers
533041	Taxi Drivers and Chauffeurs
533099	Motor Vehicle Operators, All Other
537080	Refuse and Recyclable Material Collectors
537081	Refuse and Recyclable Material Collectors
537111	Mine Shuttle Car Operators

Material Handlers

2000 SOC	Description
435011	Cargo and Freight Agents
435053	Postal Service Mail Sorters, Processors, and Processing Machine Operators
435071	Shipping, Receiving, and Traffic Clerks
435081	Stock Clerks and Order Fillers
435111	Weighers, Measurers, Checkers, and Samplers, Record keeping
452041	Graders and Sorters, Agricultural Products
452092	Farmworkers and Laborers, Crop, Nursery, and Greenhouse
452093	Farmworkers, Farm, Ranch, and Aquacultural Animals
454022	Logging Equipment Operators
454029	Logging Workers, All Other
472061	Construction Laborers
519061	Inspectors, Testers, Sorters, Samplers, and Weighers
519199	Production Workers, All Other
536099	Transportation Workers, All Other
537021	Crane and Tower Operators
537032	Excavating and Loading Machine and Dragline Operators
537051	Industrial Truck and Tractor Operators
537062	Laborers and Freight, Stock, and Material Movers, Hand
537064	Packers and Packagers, Hand
537121	Tank Car, Truck, and Ship Loaders
537199	Material Moving Workers, All Other

Vehicle Service

2000 SOC	Description
111021	General and Operations Managers
493023	Automotive Service Technicians and Mechanics
493031	Bus and Truck Mechanics and Diesel Engine Specialists
493042	Mobile Heavy Equipment Mechanics, Except Engines
493093	Tire Repairers and Changers
499041	Industrial Machinery Mechanics
499042	Maintenance and Repair Workers, General
499043	Maintenance Workers, Machinery
499099	Installation, Maintenance, and Repair Workers, All Other*
514121	Welders, Cutters, Solderers, and Brazers
519192	Cleaning, Washing, and Metal Pickling Equipment Operators and Tenders
537061	Cleaners of Vehicles and Equipment



Management

2000 SOC	Description
111011	Chief Executives
113071	Transportation, Storage, and Distribution Managers
119199	Managers, All Other
172199	Engineers, All Other
411011	First-Line Supervisors/Managers of Retail Sales Workers
411012	First-Line Supervisors/Managers of Non-Retail Sales Workers
412031	Retail Salespersons
413099	Sales Representatives, Services, All Other
414012	Sales Representatives, Wholesale & Manufacturing, Except Technical & Scientific Products
419091	Door-to-Door Sales Workers, News and Street Vendors, and Related Workers
431011	First-Line Supervisors/Managers of Office and Administrative Support Workers
433021	Billing and Posting Clerks and Machine Operators
433031	Bookkeeping, Accounting, and Auditing Clerks
433051	Payroll and Timekeeping Clerks
434051	Customer Service Representatives
434171	Receptionists and Information Clerks
435032	Dispatchers, Except Police, Fire, and Ambulance
436011	Executive Secretaries and Administrative Assistants
436014	Secretaries, Except Legal, Medical, and Executive
439021	Data Entry Keyers
439061	Office Clerks, General
439199	Office and Administrative Support Workers, All Other*
451011	First-Line Supervisors/Managers of Farming, Fishing, and Forestry Workers
471011	First-Line Supervisors/Managers of Construction Trades and Extraction Workers
472073	Operating Engineers and Other Construction Equipment Operators
491011	First-Line Supervisors/Managers of Mechanics, Installers, and Repairers
511011	First-Line Supervisors/Managers of Production and Operating Workers
531021	First-Line Supervisors/Managers of Helpers, Laborers, and Material Movers, Hand
531031	First-Line Supervisors/Managers of Transport & Material-Moving Machine & Vehicle Operat.

Median costs of claims by occupation and industry sector

General Freight, Truckload

Occupation	Variable	Median	Lower Quartile	Upper Quartile
Drivers	Claim cost	$10,710	$2,963	$46,444
	Time-loss dollars paid	$3,081	$540	$14,962
	Medical dollars paid	$5,443	$1,732	$18,871
Material handlers	Claim cost	$8,720	$1,984	$27,917
	Time-loss dollars paid	$1,336	$136	$7,196
	Medical dollars paid	$5,252	$1,557	$14,802
Management occupations	Claim cost	$18,791	$5,803	$37,930
	Time-loss dollars paid	$1,532	$-	$7,839
	Medical dollars paid	$8,967	$3,586	$19,366
Other occupations	Claim cost	$11,327	$3,505	$45,814
	Time-loss dollars paid	$2,769	$296	$12,907
	Medical dollars paid	$6,854	$1,935	$24,853
Vehicle service technicians	Claim cost	$6,479	$2,081	$46,327
	Time-loss dollars paid	$1,521	$441	$14,412
	Medical dollars paid	$3,642	$1,386	$21,484

General Freight, Less than Truckload

Occupation	Variable	Median	Lower Quartile	Upper Quartile
Drivers	Claim cost	$10,405	$2,866	$41,159
	Time-loss dollars paid	$2,651	$374	$12,741
	Medical dollars paid	$5,554	$1,772	$18,361
Material handlers	Claim cost	$6,111	$1,555	$32,460
	Time-loss dollars paid	$1,105	$203	$6,998
	Medical dollars paid	$4,375	$1,036	$15,688
Management occupations	Claim cost	$15,406	$3,742	$46,098
	Time-loss dollars paid	$1,377	$99	$10,322
	Medical dollars paid	$9,764	$2,808	$22,289
Other occupations	Claim cost	$10,585	$2,480	$37,092
	Time-loss dollars paid	$2,271	$230	$10,083
	Medical dollars paid	$5,760	$1,733	$17,987
Vehicle service technicians	Claim cost	$4,673	$1,981	$19,114
	Time-loss dollars paid	$577	$-	$4,336
	Medical dollars paid	$3,780	$1,682	$11,994

Median costs of claims by occupation and industry sector

Specialized Freight

Occupation	Variable	Median	Lower Quartile	Upper Quartile
Drivers	Claim cost	$10,708	$3,018	$51,569
	Time-loss dollars paid	$2,774	$361	$17,995
	Medical dollars paid	$5,521	$1,777	$20,269
Material handlers	Claim cost	$9,458	$2,027	$31,682
	Time-loss dollars paid	$2,369	$354	$8,777
	Medical dollars paid	$5,667	$1,331	$14,515
Management occupations	Claim cost	$15,291	$6,156	$35,298
	Time-loss dollars paid	$3,229	$1,478	$10,934
	Medical dollars paid	$9,276	$3,746	$18,817
Other occupations	Claim cost	$9,063	$2,772	$52,646
	Time-loss dollars paid	$2,315	$159	$19,337
	Medical dollars paid	$6,193	$2,190	$16,955
Vehicle service technicians	Claim cost	$11,832	$4,740	$65,108
	Time-loss dollars paid	$1,409	$281	$15,032
	Medical dollars paid	$6,555	$2,535	$31,590

Specialized Freight, Movers

Occupation	Variable	Median	Lower Quartile	Upper Quartile
Drivers	Claim cost	$7,451	$1,868	$28,032
	Time-loss dollars paid	$1,679	$218	$7,832
	Medical dollars paid	$4,176	$1,340	$12,976
Material handlers	Claim cost	$4,852	$1,487	$24,015
	Time-loss dollars paid	$1,091	$127	$5,008
	Medical dollars paid	$3,336	$1,153	$11,547
Management occupations	Claim cost	$11,126	$2,732	$30,543
	Time-loss dollars paid	$889	$86	$5,263
	Medical dollars paid	$8,617	$2,007	$14,422
Other occupations	Claim cost	$7,072	$2,672	$29,081
	Time-loss dollars paid	$3,106	$366	$6,135
	Medical dollars paid	$3,764	$1,360	$14,272
Vehicle service technicians	Claim cost	$19,629	$8,654	$37,951
	Time-loss dollars paid	$526	$-	$4,166
	Medical dollars paid	$17,219	$4,488	$20,557

Median costs of claims by occupation and industry sector

Couriers and Messengers

Occupation	Variable	Median	Lower Quartile	Upper Quartile
Drivers	Claim cost	$7,364	$2,401	$29,795
	Time-loss dollars paid	$1,463	$170	$9,095
	Medical dollars paid	$4,427	$1,704	$13,664
Material handlers	Claim cost	$5,679	$1,464	$18,797
	Time-loss dollars paid	$1,017	$170	$4,533
	Medical dollars paid	$3,371	$1,292	$8,539
Management occupations	Claim cost	$16,316	$5,767	$58,650
	Time-loss dollars paid	$2,668	$733	$16,263
	Medical dollars paid	$7,116	$3,699	$22,502
Other occupations	Claim cost	$5,705	$2,550	$19,423
	Time-loss dollars paid	$1,074	$51	$5,986
	Medical dollars paid	$3,698	$1,683	$11,909
Vehicle service technicians	Claim cost	$-	$-	$-
	Time-loss dollars paid	$-	$-	$-
	Medical dollars paid	$-	$-	$-

Median costs of claims by occupation and industry sector

Waste Collection

Occupation	Variable	Median	Lower Quartile	Upper Quartile
Drivers	Claim cost	$7,290	$2,425	$31,647
	Time-loss dollars paid	$2,505	$604	$11,786
	Medical dollars paid	$3,997	$1,274	$14,148
Material handlers	Claim cost	$6,979	$2,172	$19,205
	Time-loss dollars paid	$1,257	$255	$7,122
	Medical dollars paid	$4,049	$1,212	$10,996
Management occupations	Claim cost	$10,618	$2,256	$42,737
	Time-loss dollars paid	$3,123	$900	$9,077
	Medical dollars paid	$5,281	$1,239	$17,670
Other occupations	Claim cost	$7,024	$2,495	$34,567
	Time-loss dollars paid	$2,536	$534	$18,928
	Medical dollars paid	$4,649	$1,300	$14,136
Vehicle service technicians	Claim cost	$11,160	$2,155	$34,012
	Time-loss dollars paid	$1,972	$196	$10,594
	Medical dollars paid	$4,608	$1,477	$12,498

Percent of compensable injuries by sector and occupation in each injury type

General Freight, Truckload

Occupation	Falls from elevation	Falls from same level	Strain, sprain or over-exertion	Other injuries	Struck by or against	Vehicle related
Drivers	84.0	76.7	75.6	81.5	71.1	86.5
Material handlers	6.0	11.7	8.5	10.0	14.5	1.4
Management occupations	2.0	5.0	7.0	5.4	4.0	2.7
Other injuries	8.0	6.7	9.0	2.3	10.5	9.5
Vehicle service technicians	0.0	0.0	0.0	0.8	0.0	0.0

General Freight, Truckload

Occupation	Falls from elevation	Falls from same level	Strain, sprain or over-exertion	Other injuries	Struck by or against	Vehicle related
Drivers	71.9	74.7	68.5	70.9	64.8	86.9
Material handlers	15.3	12.6	16.5	16.0	20.2	3.5
Management occupations	3.8	3.9	4.6	3.1	3.0	4.1
Other injuries	6.4	8.2	7.1	6.0	8.6	4.1
Vehicle service technicians	2.6	0.6	3.3	4.1	3.4	1.4

Specialized Freight

Occupation	Falls from elevation	Falls from same level	Strain, sprain or over-exertion	Other injuries	Struck by or against	Vehicle related
Drivers	86.3	75.2	76.8	74.5	67.8	87.6
Material handlers	4.7	6.2	9.5	8.7	13.7	2.3
Management occupations	0.5	4.4	2.6	3.9	4.8	3.9
Other injuries	6.3	12.4	7.2	7.2	7.5	4.7
Vehicle service technicians	2.1	1.9	3.9	5.7	6.2	1.6

Percent of compensable injuries by sector and occupation in each injury type

Specialized Freight, Movers

Occupation	Falls from elevation	Falls from same level	Strain, sprain or over-exertion	Other injuries	Struck by or against	Vehicle related
Drivers	49.3	44.2	44.0	44.5	40.2	66.7
Material handlers	42.3	41.9	42.7	41.4	52.9	26.7
Management occupations	1.4	7.0	6.0	3.1	3.5	0.0
Other injuries	5.6	4.7	5.6	10.2	3.5	6.7
Vehicle service technicians	1.4	2.3	1.7	0.8	0.0	0.0

Couriers and Messengers

Occupation	Falls from elevation	Falls from same level	Strain, sprain or over-exertion	Other injuries	Struck by or against	Vehicle related
Drivers	84.0	76.7	75.6	81.5	71.1	86.5
Material handlers	6.0	11.7	8.5	10.0	14.5	1.4
Management occupations	2.0	5.0	7.0	5.4	4.0	2.7
Other injuries	8.0	6.7	9.0	2.3	10.5	9.5
Vehicle service technicians	0.0	0.0	0.0	0.8	0.0	0.0

Waste Collection

Occupation	Falls from elevation	Falls from same level	Strain, sprain or over-exertion	Other injuries	Struck by or against	Vehicle related
Drivers	65.1	75.9	72.7	76.0	58.2	83.8
Material handlers	14.0	8.6	5.9	3.7	11.0	0.0
Management occupations	0.0	1.7	4.7	1.4	4.4	0.0
Other injuries	7.0	6.9	7.1	8.3	14.3	8.1
Vehicle service technicians	14.0	6.9	9.6	10.6	12.1	8.1

Key words

Trucking industry, occupational injuries, workers' compensation, general freight, truck transportation, specialized freight, movers, couriers and messengers service, waste management and remediation services, waste haul, trucking, safety, injuries, injury prevention

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SHARP
Safety & Health Assessment & Research for Prevention

TIRES
Trucking Injury Reduction Emphasis

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