



Industry Critical Risk Exposure

**Insights into the workplace health and safety critical risks
that can be fatal or seriously harm workers**

Injury data is provided to assist with protecting workers from harm within the manufacturing, retail, wholesale and road transport/warehousing 'industry'.



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1.

Purpose of the report

This report provides insights into the current state of critical risks across the 'industry'. The report summarises the findings of an 'industry' survey in addition to an analysis of injury data and associated costs obtained from ACC. The document also provides potential focus opportunities for 'industry'.

Critical risks, hazards and associated risks have the potential to cause significant harm or loss of life. ShopCare is focussing on where there is the greatest potential for loss of life. Across the 'industry' there is a limited view on critical risks, solutions and worker exposure to them. Example:

- The lack of data, information and insights that prevents businesses to pinpoint focus areas within the full burden of harm/true cost of harm
- 'Industry' is yet to identify all critical risks, and to determine priority within each sector
- 'Industry' is not forthcoming in sharing knowledge regarding critical risks and possible controls

This leads to every business trying to identify risks and solutions, often re-inventing the wheel in the process. This can lead to slow progress within the 'industry' whilst exposing workers to high risk to injury or possibly loss of life. ShopCare is here to assist and support you to understand the critical risks specific to your business, and to identify best practice health and safety.

ShopCare has partnered with businesses and safety leaders to develop a series of reports and webinars to assist in creating a clear view of the critical risks in your business. Knowing which activities in your business have the greatest potential to severely harm your people, and understanding if these risks are well controlled, is pivotal to creating a safer workplace.

ShopCare conducted a survey which collected information on what the businesses consider to be their critical risks. It is possible that an external assessment could suggest other critical risks that the sectors could consider adding to their lists, such as psychosocial harm and/or serious/fatal ill health due to long term exposure. The purpose of this survey was to increase understanding of the 'current state' to identify the best ways to help the sectors develop and improve.





2.

Scope of the report

The scope of the “Industry Critical Risk Exposure” report will focus on information and data collected on the retail, manufacturing, wholesale and road transport/warehousing sectors and seek to cover ACC critical risk cause injury data which includes days off work due to a ‘severe injury’; critical risks & controls collected from the ‘industry’; WorkSafe fatality data and Stats NZ worker employment and median wage data.

The view on data points concerning AEP members are currently limited within ACC. ShopCare only included data relating to non-AEP members. This report will not be a true reflection of total ‘industry’ that includes both AEP and non-AEP members.

This report does not intend to review non-critical risks although for a full picture of harm in any given sector, ShopCare recommends that any business should consider both their critical and non critical risks to understand the full burden of harm.

Scope output

The results of this insights report will be used to build a body of knowledge that can be shared across the sectors to help businesses better identify and manage their critical risks. This report develops our knowledge of the critical risks our ‘industry’ faces by:

- Identifying critical risks per ‘industry’ sector based on a survey of ‘industry’ members within each sector
- Highlighting which risks are causing most injuries and fatalities by sector

- Explaining the impacts associated with these risks in terms of lost workdays, cost of claims and how these differ by sector
- To identify gaps in our knowledge/data that require further investigation
- Reminding businesses about their obligations to eliminate or minimise risks and the consequences of failing to do so
- What ShopCare is doing to share knowledge regarding critical risks
- Introduce businesses to ShopCare activities that supports the mitigation of risks and prevention of harm
- How ‘industry’ can use ShopCare’s resources and services to help your organisation meet its health and safety obligations





3.

Definitions of key terminology

Critical risk

Threats and hazards that pose the most strategically significant risk (including fatality), as a result of (i) their probability or likelihood and of (ii) the national significance of their disruptive consequences, including sudden onset events (example: earthquakes, industrial accidents, terrorist attacks), gradual onset events (example: pandemics), and steady-state risks (notably those related to illicit trade or organised crime).

Source: shopcare.org.nz/glossary

Control

An action is taken to eliminate or minimise health and safety risks so far as is reasonably practicable.

Source: shopcare.org.nz/glossary

The 'industry'

Includes the following sectors: retail; manufacturing, wholesale and road transport.

Note:

- Manufacturing sector includes distributors and merchandising
- Road transport sector includes postal and warehousing

Hierarchy of Controls (HOC)

The hierarchy of risk control shows ways of controlling risks, ranked from the highest level of protection and reliability to the lowest.

Source: shopcare.org.nz/glossary

Bowtie method

Is a risk evaluation method that can be used to analyse and demonstrate causal relationships in high-risk scenarios.

Source: cgerisk.com/knowledgebase/The_history_of_bowtie

Accredited Employer Programme (AEP)

The AEP offers significant levy reductions to employers who take responsibility for their own workplace health and safety and the management of work-related injuries. AEP effectively allows you to act on behalf of ACC, managing work-related injuries for your employees and providing entitlements under the Accident Compensation Act 2001.

The AEP encourages businesses to take responsibility for their own injury management, which includes rehabilitation, claim management of employees' work injuries and workplace health and safety.

Source: acc.co.nz/for-business/understanding-your-cover-options/accredited-employers-programme/

Weekly Compensation Injury Claims (WC Injury Claims)

ACC claims where customers have been paid Weekly Compensation after being off work for a week or more.

'Severe injury'

For the purpose of this report: any injury relating to a critical risk where the worker could not return to work for more than 5 working days.



4.

Executive summary

Protecting the safety and wellbeing of workers and people who interact with your business is important. It is the right thing to do, is a requirement under the “Health, Safety at Work Act 2015” and it helps you build a more resilient and successful business.

Understanding critical risks is essential for all businesses. This understanding helps ensure you are focusing on managing the most important risks and is key to protecting people. These risks can have the most serious consequences, including causing loss of life, serious or permanent harm as well as the financial implications on the business and ACC.

Until now there has been no industry wide view on the best way to do that, or even what the current critical risks, and their impacts are. Many businesses in the manufacturing, retail, wholesale and transport sectors are already taking steps to manage their critical risks.

ShopCare sees an opportunity to add value by identifying, developing, and sharing good practice for controlling the critical risks common in manufacturing, retail, wholesale and transport. This will save individual businesses time and costs and will help the sectors improve their health and safety performance.

Overall, fatalities are in a slow decline, but the road transport sector still has the highest number of fatalities as well as an average of 188 days off work in 2021 per WC Injury Claim. This is the time required by a transport worker on average to recover from a ‘severe injury’ sustained at work. Industry average days off work per WC Injury Claim in 2021 is 134 days.

ShopCare has identified the 7 most common critical risks from businesses that took part in our industry survey. They are:

1. Site traffic management
2. Hazardous substances
3. Light passenger vehicle driver safety
4. Working at heights
5. Mobile plant and equipment
6. Machine safety and guarding
7. Transportation (heavy vehicles/trucks)

“Executive summary” continues on the next page.



“ Total industry claims that result in a worker being off work for a week or more are responsible for approximately 78% of the cost to ACC of critical risk work-related claims. ”



Between 2016 and 2020, the average critical risk ACC claim growth rate was 7.8% even though the workforce employed in the industry over the same period had an overall decline rate of -0.99%. **That said, the idea of more workers equaling higher potential risk is valid. In this case there is still an upward trend of serious harm injury even though the workforce numbers are declining.**

Manufacturing sustained the most injuries relating to critical risks, followed by retail and then road transport/warehousing. When observing the costs to ACC the order changes slightly. Manufacturing still has the highest cost due to number of injuries closely followed by road transport and then retail.

The Covid-19 influence during the year ending March 2021 meant less workers at work due to lockdowns, however we injured 9631 workers relating to critical risks. This is only 869 less than the prior year of 10,500. 1177 (12%) of those workers could not return to work for over a week due to the ‘severity’ of the injury. Over the two years the value of each claim went up from \$3,514 to \$3,727 and overall total claim value went from \$36.9M to \$35.9M. Total industry claims that result in a worker being off work for a week or more are responsible for approximately 80% of the cost to ACC critical risk work-related claims.

On average, the potential minimum expenditure on production costs in the form of wages to business is calculated at \$20,636 per claim (WC Injury Claims) and a total of \$24.3M lost in wages for the industry. Note that this excludes the true cost of harm to employers that include time spent on injury management and rehabilitation, wages for cover workers to meet KPI’s and lost productivity and income.

Road transport has the highest average days off work per WC Injury Claim, the minimum cost to the employer potential wage lost is \$28,952.

The industry full burden of harm or true cost of harm has yet to be determined and will provide businesses the insights and the opportunities to leverage within their critical risk journey of creating safe workplaces. In order to calculate the full burden or true cost of harm businesses could engage with ShopCare.

From a survey conducted (Figure 7/page 13) shows that time management, financial resources and front-line leaders and workers simultaneously are the main challenges for businesses in regards to improving critical risk management and governance. This combination of 3 will make it difficult for any business to achieve the desired results of keeping workers safe and engaged.

Across all sectors “Struck by person/animal” is a critical risk claim by cause that stood out. Further investigation is required but speculate if there is any link to violent and aggressive behaviour towards workers especially those workers who have customer facing positions. For further in-depth view of sector injuries by cause and diagnosis please refer to the appendix 2.

ShopCare is focused to assist and support the industry with a current workstream dedicated to critical risks and controls. ShopCare offers multiple opportunities to engage, share and transfer knowledge events and initiatives that cater to the needs of the industry. More descriptive breakdowns... throughout this report.

Join us to connect people to people and people to solutions.



5.

Total industry view of fatalities, industry critical risks, related injuries, and 'severe injuries'

To understand the critical risks across these sectors ShopCare has identified where the fatalities and serious harm occurs. A survey was conducted with businesses employing more than 130,000 workers, to understand what the sectors considered to be their critical risks. Injury data from ACC and NZ stats was collated and analysed.

5.1. Industry fatalities

> Figure 1 below, shows the road transport sector is where the most fatalities have occurred since 2016.

2021 the lower number of road transport fatalities could be due to less vehicles on the road, less truck drivers on the road and overall, less workers working except for those who were deemed essential business.

> Over the years the number of fatalities within the industry has not dropped significantly even with an increased focus on critical risks.

> Fatalities represented in this document are not health related.

Figure 1. **Work-related fatalities by sector**

Key: Manufacturing (orange), Retail (light blue), Wholesale (grey), Road Transport (dark grey)

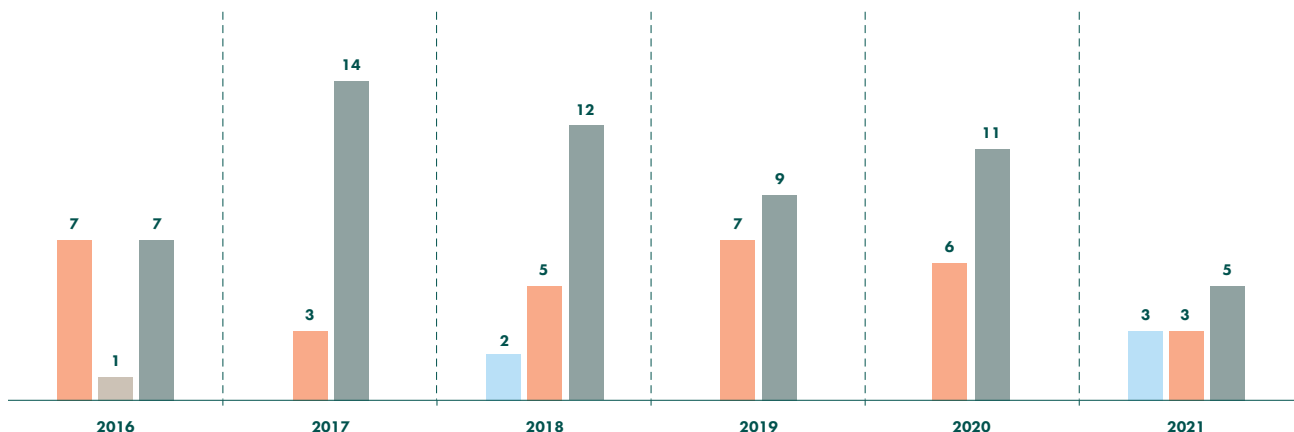


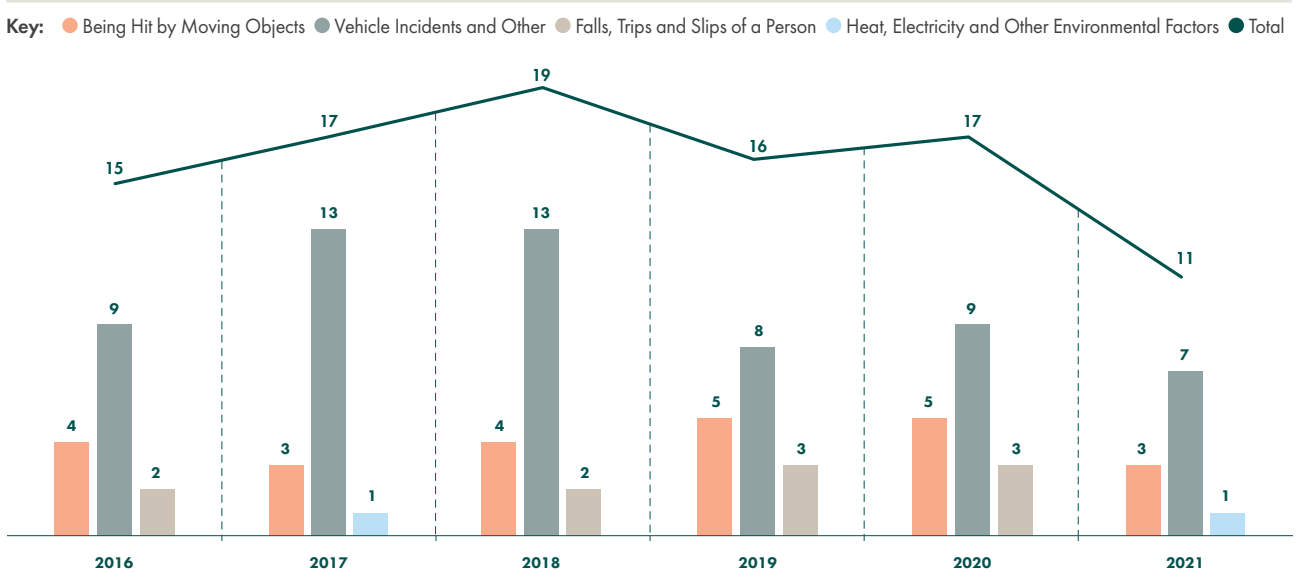


Figure 2 points out that the “Vehicle incidents and other” cause had the most fatalities in the sectors. In the year ending March 2021 there were less worker lives lost. Further research/analysis would be required to understand the contributing factors.

Possible areas for research:

- Fatigue/distraction
- Impact of Covid-19
- Driver safety/competency/chain of responsibility, etc.

Figure 2. **Industry fatalities by cause**



5.2. Critical risks – survey of industry

During 2020 and 2021 ShopCare carried out a survey of the industry asking businesses what their critical risks and controls were. It is important to note that the survey collected information on what the businesses themselves consider to be their critical risks. The purpose of this survey was to increase understanding of the ‘current state’ to identify the best ways to help the sectors develop and improve.

The survey was conducted with businesses employing a total of more than 130,000 workers. A number of business were hesitant or did not respond to the call. It is possible that an external assessment could suggest other critical risks that the businesses could consider in their review, such as psychosocial harm and/or serious/fatal ill health due to long term exposure.



What the survey tells us

The survey responses identified the seven most common critical risks across three sectors (retail, manufacturing, and road transport):

1. Site traffic management
2. Hazardous substances
3. Light passenger vehicle driver safety
4. Working at heights
5. Mobile plant and equipment
6. Machine safety and guarding
7. Transportation (heavy vehicles/trucks)

Table 1. **Seven most common critical risks (retail, manufacturing and road transport)**

No.	Critical risks	Threats
1.	Site traffic management	<ul style="list-style-type: none"> • Vehicle vs pedestrian • Vehicle vs vehicle • Vehicle vs fixed objects
2.	Hazardous substances	<ul style="list-style-type: none"> • Handling of hazardous & flammable substances • Asbestos • Chemical • Transport of hazardous & flammable substances • Anhydrous ammonia refrigeration, & other gases
3.	Light passenger vehicle driver safety	<ul style="list-style-type: none"> • High and low-speed vehicle vs vehicle • High and low-speed vehicle vs pedestrian • Grey fleet
4.	Working at heights	<ul style="list-style-type: none"> • Falling from heights
5.	Mobile plant and equipment	<ul style="list-style-type: none"> • Loading & unloading of trucks and MPE • Working with MPE • High & low-speed vehicle vs vehicle • Vehicle vs pedestrian • Vehicle vs terrain
6.	Machine safety and guarding	<ul style="list-style-type: none"> • Entanglement/amputation/crushing • Automated equipment/robotics
7.	Transportation (heavy vehicles/trucks)	<ul style="list-style-type: none"> • High & low-speed vehicle vs vehicle • Dock operations • Vehicle vs pedestrian • Fatigue/impairment

Note: The critical risks are listed from most to least common across the industry.

Within each critical risk, the responses highlighted are the exposure to threats.

The survey responses also shows the alignment of critical risks across businesses within each sector.

➤ **While there was some variation between the sectors, there is considerable consistency across the three.**

Examples of critical risks and threats that are most common across the sectors are:

Critical risks	Threats
Site traffic management/mobile plant and equipment	Vehicle vs pedestrian
On road driver safety (light passenger, commercial)/transport trucks	Low and high speed events vehicle vs vehicle



Most common critical risks identified by sectors

The following chart provides a visual representation of the proportion of businesses within each of the three sectors that are aligned in their critical risks.

Figure 3. **Most common critical risks identified by sectors**



Note: 100% indicates all business surveyed in that sector had identified that critical risk.

All critical risks identified by sectors

From Figure 1 it showed that the road transport sector has the most fatalities. From the survey sample pool road transport has a very low representation of identifying light passenger vehicle driver safety as a critical risk (Figure 3), this could be due to potentially having mitigated the risk or have not yet identified it as a critical risk.

Some businesses within the industry are yet to share and be open about their critical risks within their business. This could be for a variety of reasons, examples could include:

- They have not identified or have incomplete critical risks
- They feel that critical risks within their business are confidential and/or competitive
- Businesses might believe it could have a negative impact on their reputation or tendering applications by having certain types of critical risks

There is no competitive advantage when it comes to safety currently and all information provided to ShopCare is deemed confidential unless stated otherwise. Sharing is helpful to all in developing a clear and transparent view of the industry.





Table 2 provides a visual representation of all the critical risks identified for the road transport, retail and manufacturing sectors sample pool.

Table 2. Critical risks	Manufacturing Sector	Retail Sector	Road Transport Sector
Site traffic management	✓	✓	✓
Light passenger vehicle driver safety	✓	✓	✓
Hazardous substances	✓	✓	✓
Working at heights	✓	✓	✓
Machine safety and guarding	✓	✓	
Mobile plant and equipment	✓	✓	✓
Transportation (heavy vehicles/trucks)	✓	✓	✓
Electricity high voltage	✓	✓	
Fire/explosions	✓	✓	
Permit to work activities	✓	✓	✓
Exposure (temperature, sound, vibration, etc.)	✓	✓	
Warehousing/racking	✓	✓	✓
Personal safety and security	✓	✓	✓
Contractor management	✓	✓	✓
Construction and earth moving works	✓	✓	
Emergency events (natural disasters, etc.)	✓		✓
Fatigue/impairment	✓		✓
High pressure substances	✓		
Psychosocial harm	✓	✓	
Drugs and Alcohol at work	✓	✓	
Overhead work (falling objects)	✓		
Working outdoors (UV radiation)	✓		

> From the sample pool responses collected it is noted that even though psychosocial harm is widely spoken about across New Zealand as a priority and focus area, unfortunately not many businesses have identified it as a critical risk.

> We were also expecting to see long-term exposure health related critical risks to be well represented and higher in table 2. Examples: Exposure to fumes, dust, etc.



The extended list of critical risks identified by sectors

The following circular rose bar charts represent a breakdown of each sectors sample pool of critical risks collected during the survey. The bars follow a descending hierarchy from a strong representation of critical risks identified within a sector to the least.



Figure 4. Road transport critical risk categories

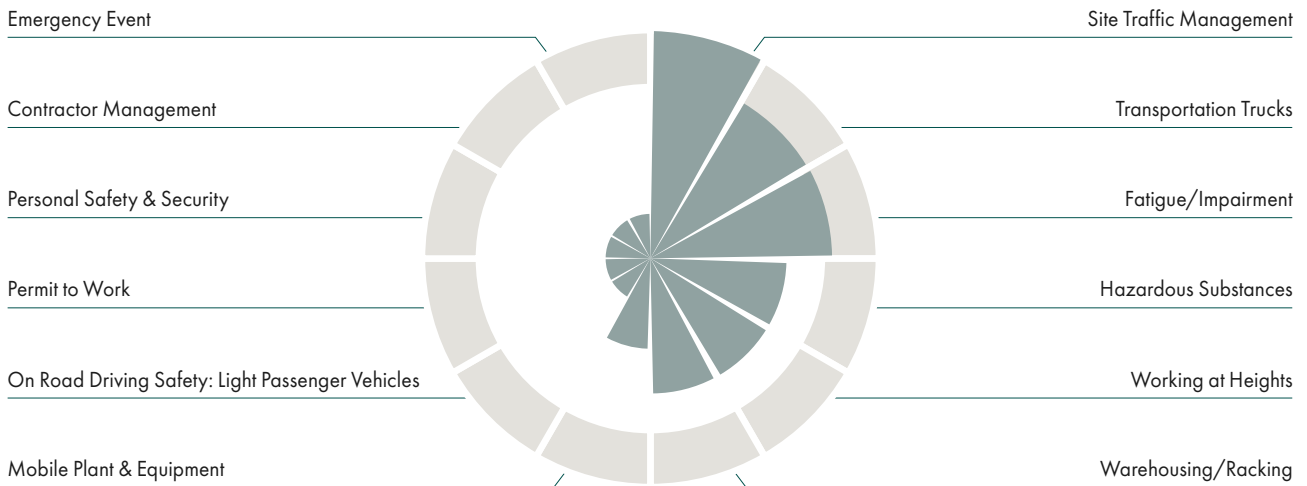


Figure 5. Retail critical risk categories

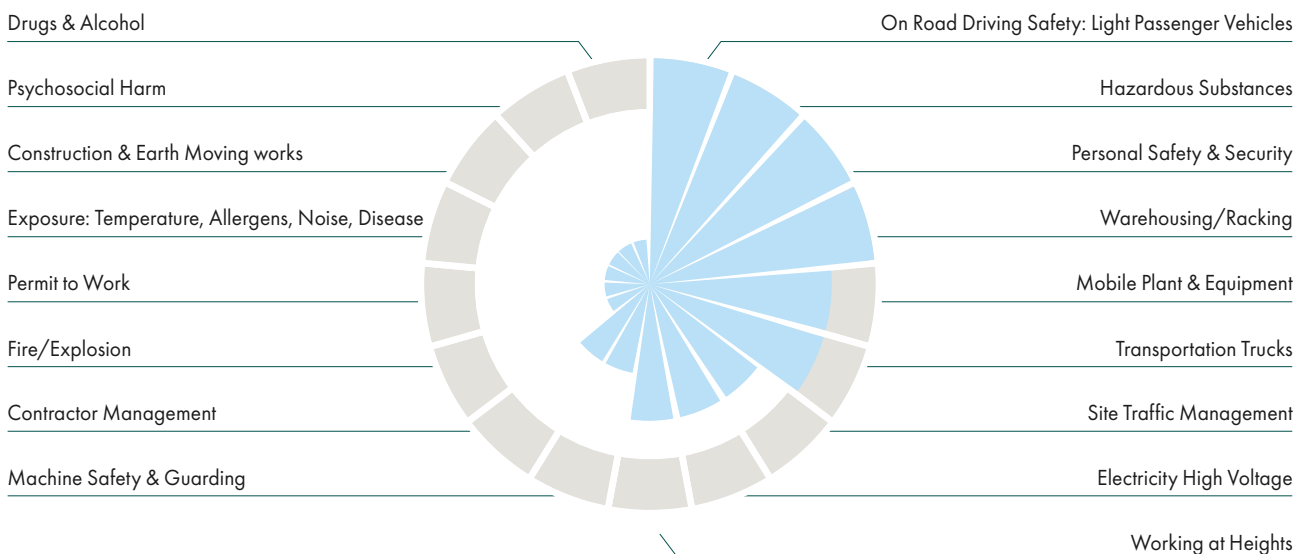
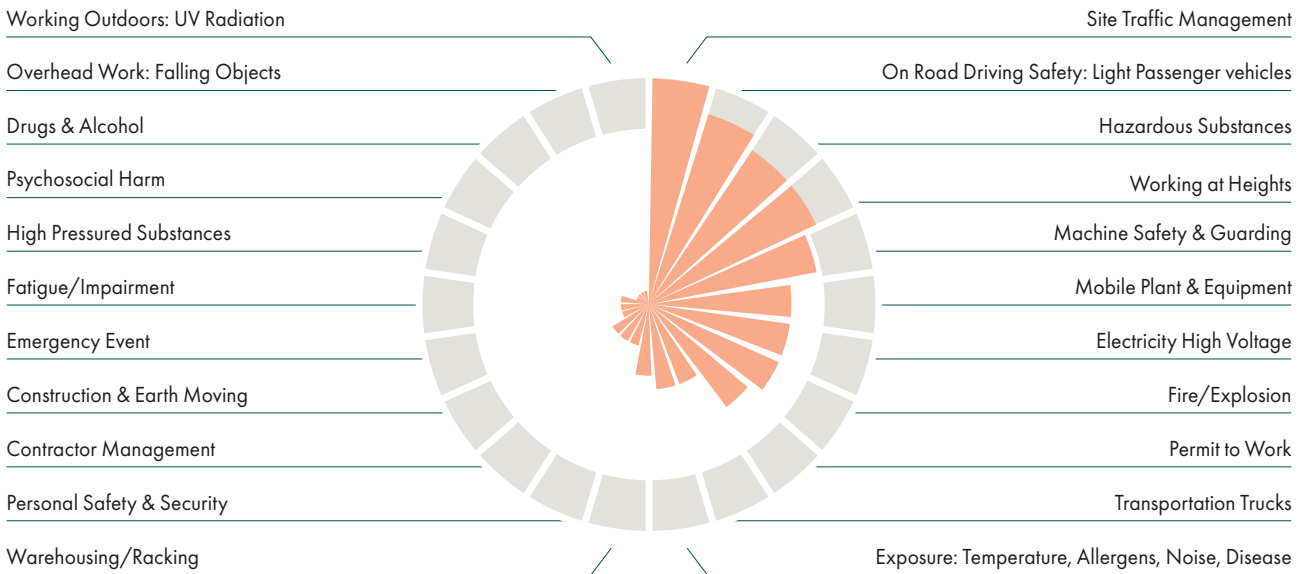




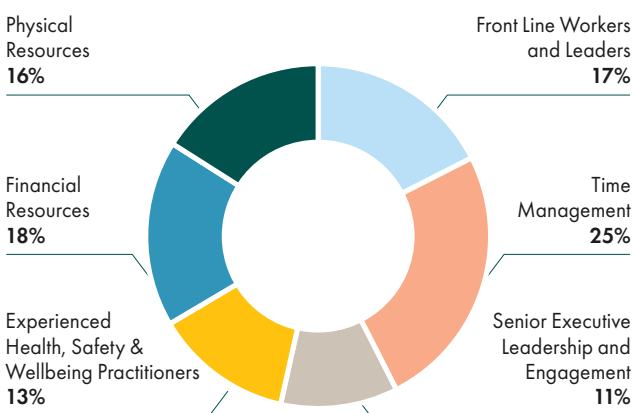
Figure 6. **Manufacturing critical risk categories**



5.3. The challenges within businesses to improving critical risk management and governance

ShopCare posed a multi answer question to participants that asked what they deemed the challenges are they face within their businesses to improving critical risk management and governance. Business on average experience 3 challenges simultaneously to improve critical risk management and governance. Figure 7 provides a breakdown of the results.

Figure 7. **Industry challenges within business to improving critical risk management and governance**



> Figure 7 shows that:

- Time management
- Financial resources
- Front-line leaders and workers

are the main challenges for businesses in regards to improving critical risk management and governance. This combination of 3 will make it difficult for any business to achieve the desired results of keeping workers safe and engaged.

A follow up multi answer question posed to participants was, "What future topics would businesses want to know more about?". Results from the question is as follows:

- 72% of respondents – worker engagement/creating a HSW culture
- 60% of respondents – critical risk long term exposure
- 58% of respondents – chain of responsibility in practice
- 49% of respondents – saving lives and reducing costs through effective HSW management
- 47% of respondents – violent and aggressive behaviour, keeping your workers safe



5.4. Injury data – analysis

ShopCare partnered with ACC to analyse and interpret anonymised injury data to transform it into insights of value to the industry. Figure 8 shows a breakdown of critical risk work-related accepted claims, average days off work and the potential lost wages to business when sustaining such a claim.

➤ Note that ACC claim data in this report focuses on ACC accepted claims relating to critical risk causes and ‘severe injuries’ by diagnosis. Not all critical risk claims result in a ‘severe injury’ at work. Depending on the ‘severity’ of the injury sustained will determine if a worker will receive weekly compensation from ACC and also, whether they can return to work within 5 working days. “Weekly Compensation Injury Claims” (WC Injury Claims) equals more than 5 work days (week) off.

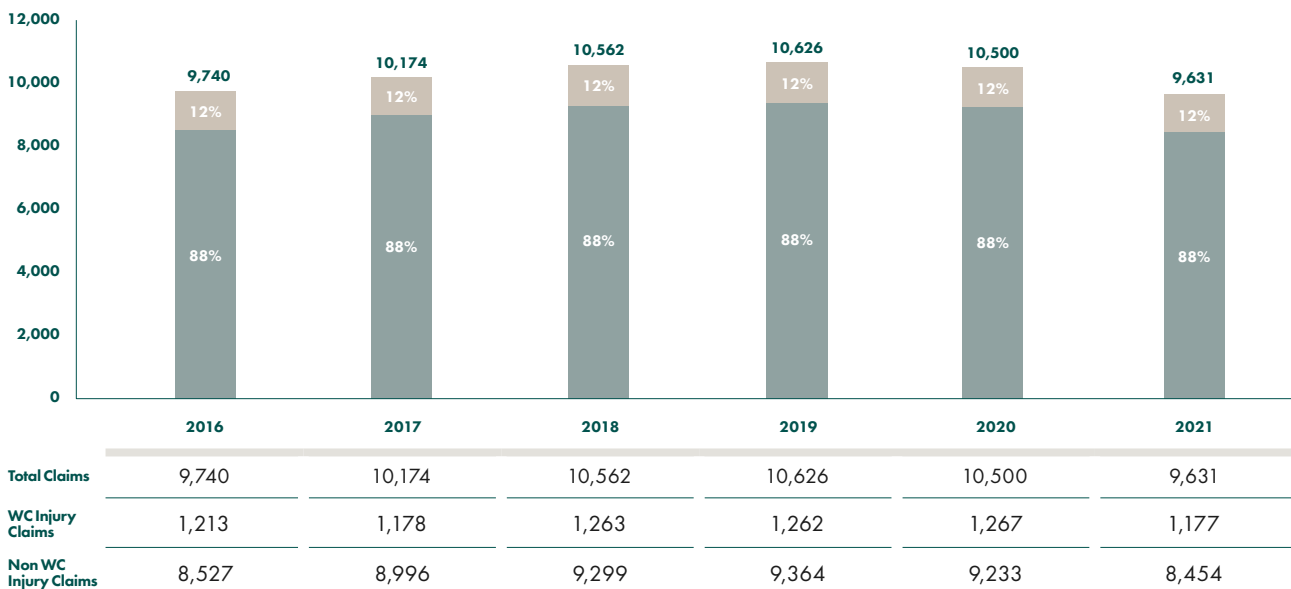
Note: ACC data provided description: Please refer to appendix 3 – About the data collected.

5.4.1. Number of ACC critical risk related accepted claims

Figure 8 shows a comparison between the total number of workers who sustained an injury relating to critical risks and the number of workers who were off work for more than a week due to the ‘severity’ of those injuries. Example: between April 2020 and March 2021, the industry sustained 9631 injuries from critical risk events and 1177 (12%) of those workers could not return to work for over a week due to the ‘severity’ of the injury.

Figure 8. **Number of industry accepted critical injury claims vs Weekly Compensation Injury Claims (WC Injury Claims)**

Key: ● WC Injury Claims ● Non WC Injury Claims



In a Covid-19 year (year ending March 2021) with many people working from home the industry still sustained 9,631 critical risk related injury claims, this is only 869 claims less than the previous year with no restrictions. That is 9,631 workers being injured due to critical risk at work.

The data does not include AEP businesses injury data or industry near miss data relating to critical risks. It can be assumed the number of critical risk injury events is understated.

* Accredited employer program (AEP) section 3 – Definitions of key terminology.



“ The increase in injury claims is not simply being driven by an increase in the workforce population. ”



Over the past 6 years the average percentage of critical risk work related claims that result in a worker being off work for more than a week are:

Manufacturing	6% = 1 in every 16
Wholesale	17% = 1 in every 6
Retail	18% = 1 in every 5
Road transport/warehousing	17% = 1 in every 6

Workers sustaining a critical risk related injury who will spend more than a week off work to rehabilitate.

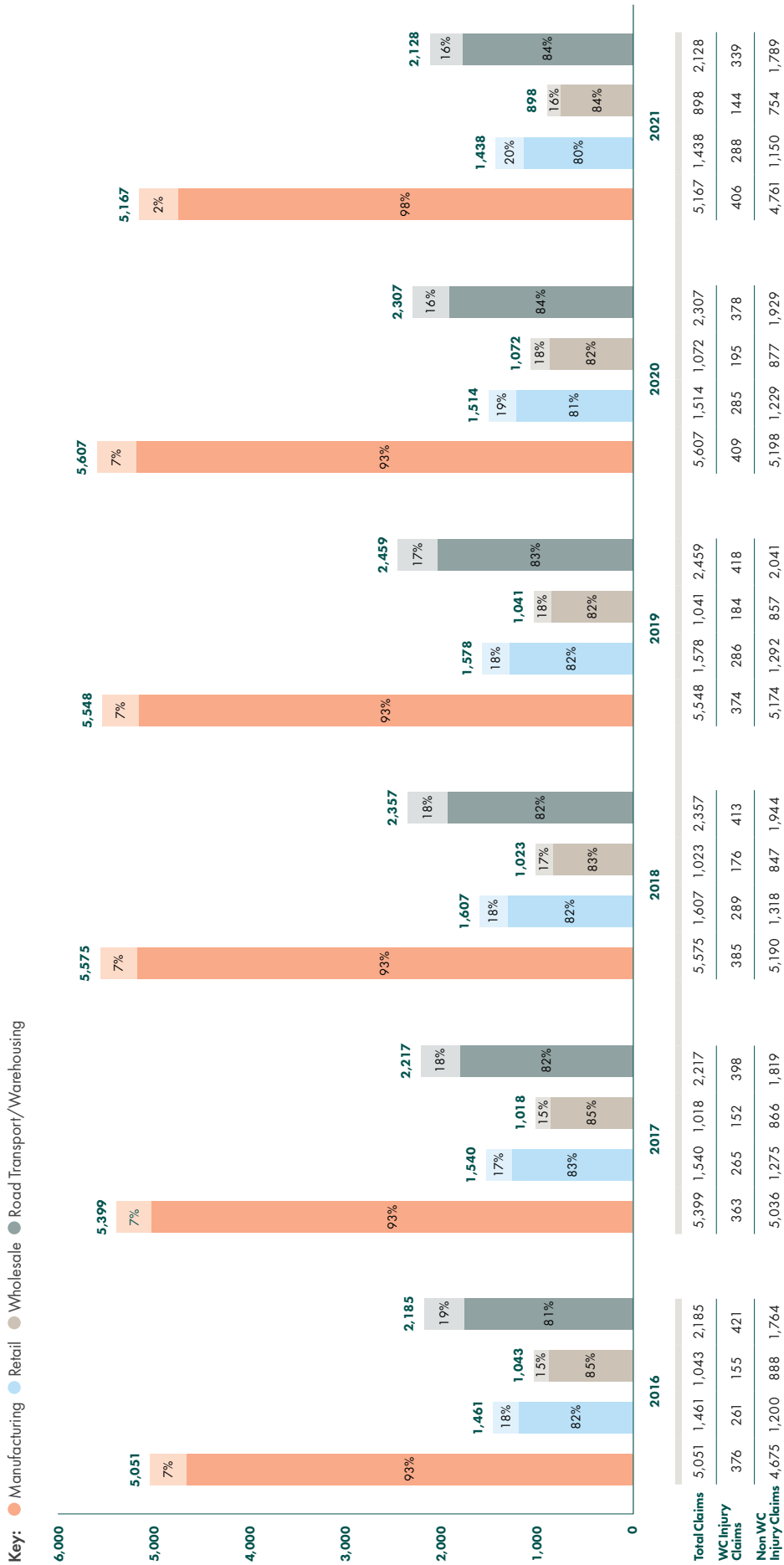
Figure 9 illustrates “Stats NZ” workforce employment numbers, it shows that between 2016 and 2020 the average workforce in these sectors declined by -0.99% versus ACC data of the average critical risk injury claim growth is 7.8% for the same period.

Figure 9. The industry workforce vs the industry critical risk claims





Figure 10. Number of accepted critical injury claims vs WC Injury Claims by sector





5.4.2. Days off work due to 'severe injury'

Figure 11 shows the total number of days per year workers could not attend work due to injury. The days shown are only for claims where the worker could not return to work within 5 working days. This is the time workers are required to rehabilitate for five days or more and businesses need to provide cover for productivity.

Figure 11. **Number of working days paid for accepted non-AEP WC Injury Claims**

Key: ● Manufacturing ● Retail ● Wholesale ● Road Transport/Warehousing ● Total Industry

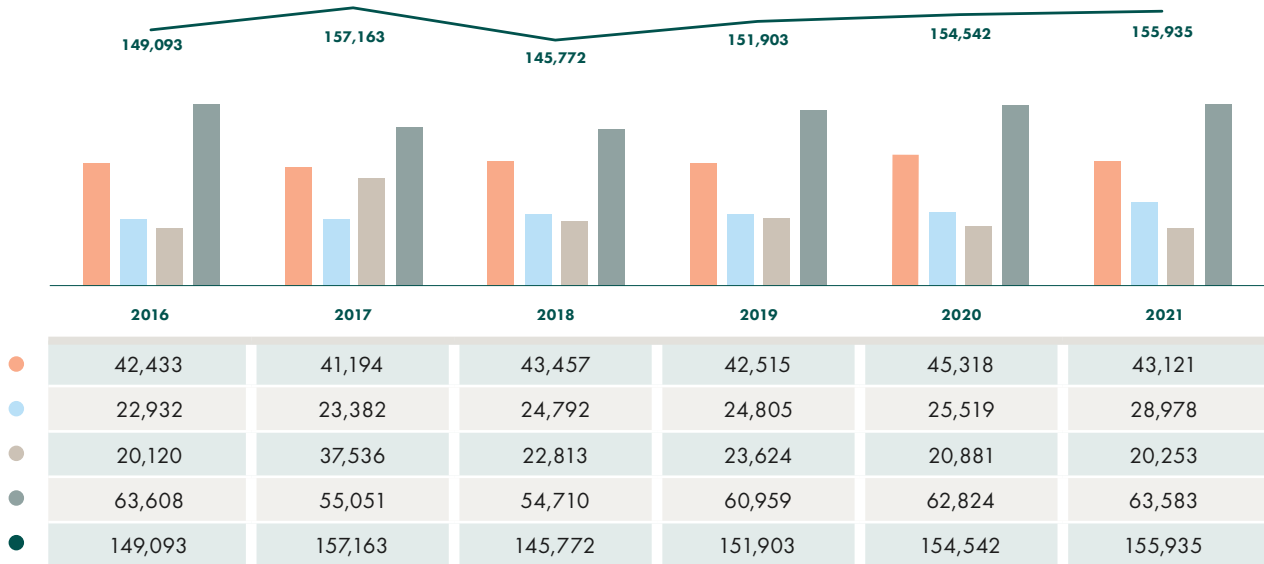
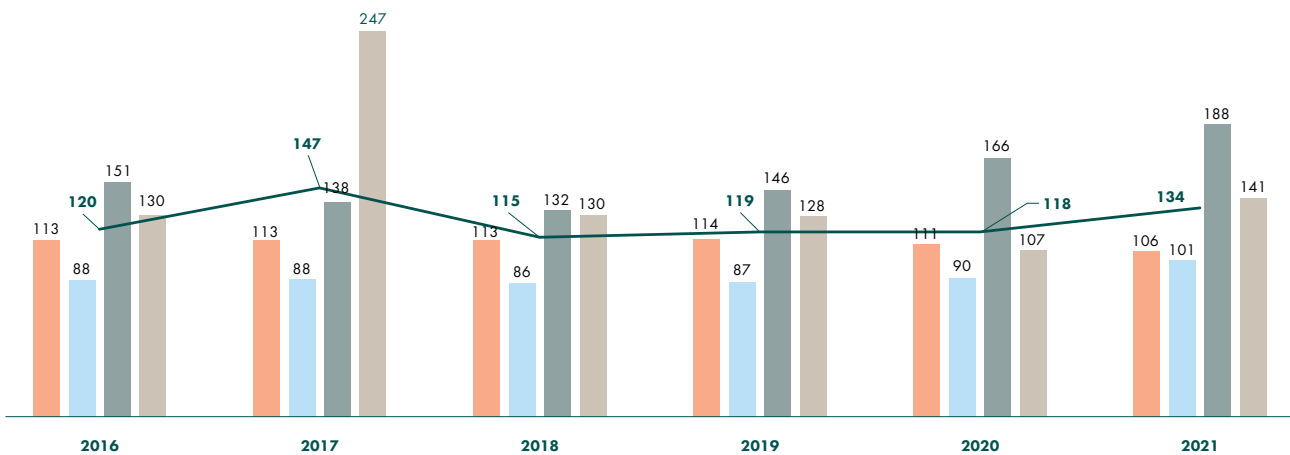


Figure 12 provides a by industry sector breakdown of the average calculated days off work per WC Injury Claim.

Figure 12. **Average days off work from a WC Injury Claim**

Key: ● Manufacturing ● Retail ● Road Transport ● Wholesale ● Total Industry



Average days off work per WC Injury Claim in **2021** is **134 days**. (The days a worker requires to rehabilitate, and/or business must cover or source another worker):

Manufacturing	106	days off work to rehabilitate from injuries
Retail	101	days off work to rehabilitate from injuries
Road transport	188	days off work to rehabilitate from injuries
Wholesale	141	days off work to rehabilitate from injuries



6.

The cost of critical risk related injury claims

This section is an industry overview of the cost of injury claims related to critical risk and the 'severity' due to days off work. The analysis of cost is outlined in two parts. Firstly, the cost of claims to ACC and secondly the potential cost to businesses sustaining such an injury. Note it can be assumed the cost to business to be much higher as this report did not include internal cost of managing claims and covering for production.

6.1. Financial costs to ACC

Total industry claims that result in a worker being off work for a week or more are responsible for approximately 78% of the cost to ACC for critical risk work-related claims. Example: the road transport sector sustained a cost to ACC of \$14.6M in total but the claims cost to ACC for workers off work for a week or more is \$12.4M (85%).

Figure 13 shows the costs to ACC for non-AEP work related claims that are linked to critical risks.

Figure 13. Industry cost of accepted work-related WC injury non-AEP claims

Key: ● WC Injury Cost ● Non WC Injury Cost ● Total Cost

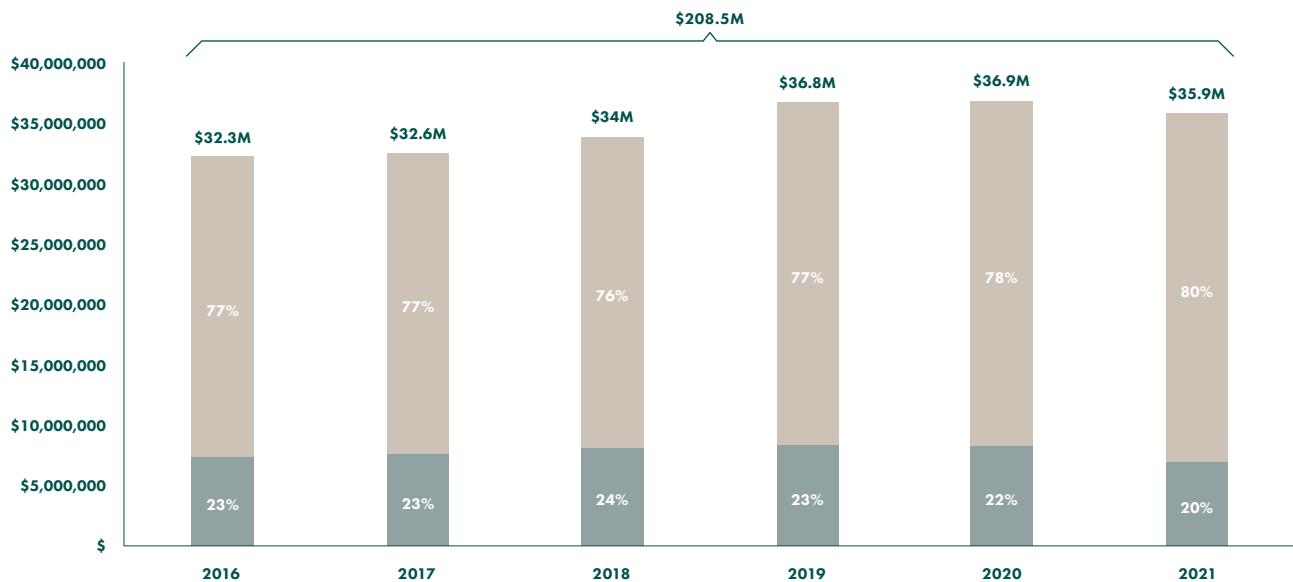
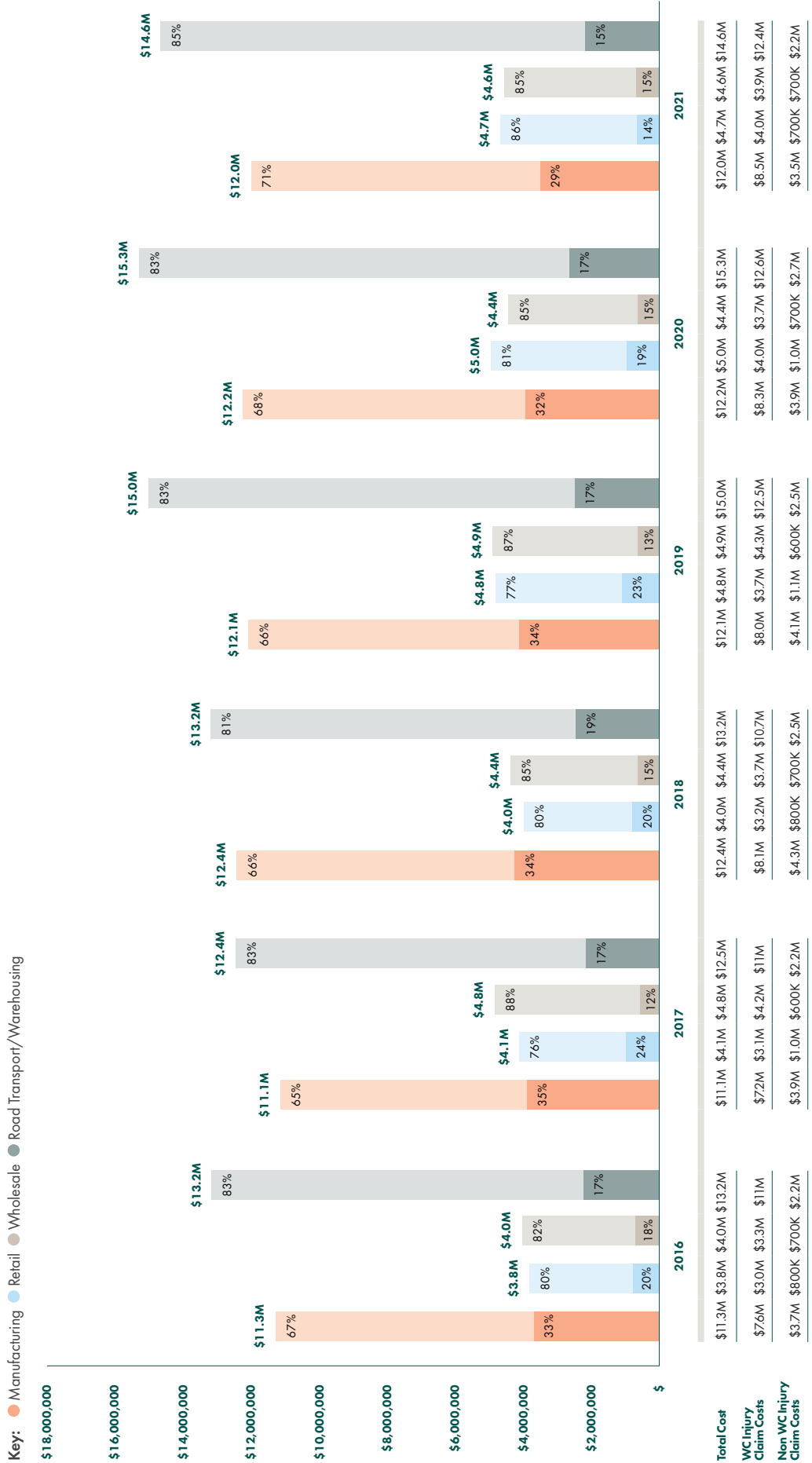




Figure 14 provides a by sector breakdown of the cost of accepted work-related WC injury non-AEP claims. It is noted that Road Transport/Warehousing has the highest cost to ACC. Note: although manufacturing sustained more injuries than the other sectors the road transport/warehousing sector has 59% less critical risk injuries than that of the manufacturing sector. Road transport/warehousing sector has ACC claim costs 18% more than the manufacturing sector due to the 'severity' of these injuries and time off work the cost are much higher.

The 'severity' and complication of the injuries that has a direct effect on the cost to ACC and to the business in terms of levy costs.

Figure 14. Cost of accepted work-related WC injury non-AEP claims by sector





6.2. Financial costs to business

Stats New Zealand data on weekly median wage income over the periods between 2016 and 2021 was used to inform this section. ACC days off work data was used to calculate the potential average loss in wages to business.

Table 3. WC Injury Claims impact on total industry

Description	2016	2017	2018	2019	2020	2021
Weekly Compensation Injury Claims (WC Injury Claims)	1,213	1,178	1,263	1,262	1,267	1,177
Average median daily wage	\$120 p/d	\$125 p/d	\$135 p/d	\$141 p/d	\$133 p/d	\$154 p/d
Average days off due to work related WC Injury Claim	120	147	115	119	118	134
Potential average loss of wages to business per claim. (Critical risk injury per WC Injury Claim)	\$14,400	\$18,375	\$15,525	\$16,779	\$15,694	\$20,636
Potential average loss of wages to business per year. (Potential average loss of wages x total WC Injury Claims per year)	\$17.5M	\$21.6M	\$19.6M	\$21.2M	\$19.9M	\$24.3M

Note: This excludes injury management costs by personnel, loss of productivity costs any other indirect costs.
p/d - per day.

Note Table 3 does not show the reality of the loss to business from a financial and productivity point of view as the true cost of harm data and insights are yet to be determined. ShopCare's view of true cost of harm includes:

- Cost to ACC
- Direct and indirect cost to business (examples: supervisor time managing worker rehabilitation, mobile costs, extra resource to cover workload, etc)
- Any treatment cost not covered by ACC to business or the injured worker, for example: on going treatment, or additional recommended treatment to support the worker physically and psychologically

- Psychological and emotional impacts (including long term) and effects in a personal and professional capacity for all affected by the injury

➤ Note that overall WC Injury Claims has decreased over the past 2 years, but the cost has increased by more than 7%.

Table 4 is a summary of total industry average days off work due to WC Injury Claims and the minimum potential loss to business.

Table 4. Average days off work vs lost production (injured worker wages) per WC Injury Claim to business

Sector	2016	2017	2018	2019	2020	2021
Manufacturing sector (Days lost = Wage lost to business)	113 Days \$13,560	113 Days \$14,125	113 Days \$15,255	114 Days \$16,074	111 Days \$14,763	106 Days \$16,324
Retail sector (Days lost = Wage lost to business)	88 Days \$10,560	88 Days \$11,000	86 Days \$11,610	87 Days \$12,260	90 Days \$11,970	101 Days \$15,554
Road transport/warehousing sector (Days lost = Wage lost to business)	151 Days \$18,120	138 Days \$17,250	132 Days \$17,820	146 Days \$20,586	166 Days \$22,078	188 Days \$28,952
Wholesale sector (Days lost = Wage lost to business)	130 Days \$15,600	247 Days \$30,870	130 Days \$17,550	128 Days \$18,048	107 Days \$14,231	141 Days \$21,714



Table 5 is a summary of total industry sectors average days off work to 'severe injury' per weekly compensation injury claim (WC Injury Claim) and the minimum potential loss to business.

Table 5. Summary of total industry sectors average days off work

Sector	Diagnosis	Average WC Injury Claim Days per Year	Average WC Injury Claims per Year	Average Cost to ACC per Year	Average Cost to Business per Year
Manufacturing	Inhalation/ingestion specific occasion	233 days	3	\$140,829	\$99,472
	Concussion/brain injury	158 days	20	\$540,505	\$421,807
	Amputation/enucleation	124 days	35	\$618,951	\$582,300
	Deafness	120 days	3	\$63,732	\$48,667
	Fracture/dislocation	100 days	270	\$5,130,654	\$3,649,432
	Burns (burn, corrosive injury, scald)	60 days	36	\$285,102	\$293,917
	Foreign body in orifice/eye	29 days	5	\$18,869	\$19,980
	Dental injuries	17 days	3	\$11,385	\$5,805
	Total	101 days	375	\$6,810,029	\$5,121,382
Retail	Amputation/enucleation	124 days	14	\$194,682	\$239,310
	Inhalation/ingestion specific occasion	124 days	3	\$34,688	\$50,040
	Concussion/brain injury	122 days	33	\$514,693	\$543,757
	Fracture/dislocation	84 days	209	\$2,416,342	\$2,357,392
	Burns (burn, corrosive injury, scald)	24 days	9	\$26,259	\$28,687
	Foreign body in orifice/eye	24 days	3	\$15,319	\$10,237
	Total	88 days	271	\$3,201,985	\$3,229,425
Road transport/ warehousing	Concussion/brain injury	164 days	35	\$897,473	\$772,627
	Burns (burn, corrosive injury, scald)	141 days	5	\$85,768	\$101,205
	Amputation/enucleation	136 days	13	\$397,745	\$238,657
	Fracture/dislocation	117 days	269	\$5,755,539	\$4,249,147
	Deafness	61 days	2	\$25,504	\$12,420
	Foreign body in orifice/eye	16 days	2	\$7,040	\$4,320
	Inhalation/ingestion specific occasion	10 days	1	\$1,657	\$1,327
	Dental injuries	7 days	1	\$1,108	\$945
	Total	122 days	328	\$7,171,837	\$5,380,650
Wholesale	Concussion/brain injury	144 days	18	\$434,793	\$348,952
	Fracture/dislocation	114 days	121	\$2,128,807	\$1,858,005
	Amputation/enucleation	110 days	10	\$201,931	\$143,190
	Burns (burn, corrosive injury, scald)	38 days	6	\$44,754	\$28,575
	Foreign body in orifice/eye	10 days	3	\$3,800	\$4,095
	Total	112 days	157	\$2,814,086	\$2,382,817



6.3. Summary table of key critical risk statistics

Table 6. Summary of key measures (all numerical values are averages for the period of 2015- 2021)

Description	Manufacturing	Wholesale	Retail	Road Transport/ Warehousing	Total Industry
Most common critical risk category	Site traffic management	Site traffic management	Driver safety: light passenger vehicles	Site traffic management	Site traffic management
Fatality average per annum	5	0	1	10	16
Average number of critical risk injury claims per annum	5,391	1,016	1,523	2,276	10,206
Average number of WC Injury Claims per annum (Claims relating to off work for a week or more)	386	168	279	395	1,228
Average number of days off work per weekly compensation claim	112 Days	147 Days	90 Days	154 Days	126 Days
Total average critical risk claims cost to ACC for the period 2015 -2021.	\$71M (\$11.8M p/y)	\$27.1M (\$4.5M p/y)	\$26.4M (\$4.4M p/y)	\$83.7M (\$14M p/y)	\$209M (\$34.8M p/y)
Potential average critical risk WC Injury Claim cost to business per annum	\$5.8M (112 days x 386 WC Injury Claims x \$135 wage p/d)	\$3.3M (147 days x 168 WC Injury Claims x \$135 wage p/d)	\$3.4M (90 days x 279 WC Injury Claims x \$135 wage p/d)	\$8.2M (154 days x 395 WC Injury Claims x \$135 wage p/d)	\$20.9M (126 days x 1,228 WC Injury Claims x \$135 wage p/d)

Note: p/d - per day, p/y - per year.





7.

Critical risk insights and conclusions

Moving the dial

Employment numbers are on a decline and critical risk injuries are on a rise. From the data collected and consulting with industry it indicates that NZ industry sectors have not moved the dial significantly. Some of these causes could be related to:

- Lack of resources (physical and financial)
- Language barriers
- Not engaged executive leadership
- Critical risks that have not been identified yet

The sharing of information and engaged executives

Some businesses within the industry are yet to share and be open about their critical risks within their business. This will allow better industry transparency and create awareness and opportunities to engage and support each other to resolve critical risks sooner than later.

Businesses should stop seeing health, safety, and wellbeing (HSW) as a competitive advantage. Is HSW good for business and productivity? Absolutely yes, no question about it.

Example: a medium to large fleet provider had identified planned maintenance and installation of onboard technology as two of the main controls for a particular critical risk. By identifying this risk and potential control the business had an initial investment signed off by the executive board and within two years this road transporter has managed a return on investment of approximately 50% annual savings on repair and maintenance cost. This business introduced a control that assisted with prevention and safeguarding of their workers by reducing the risks of operating vehicles.

The power of an engaged executive leadership combined with passionate HSW practitioners and workers all striving to reduce risks overall to the worker and business is what will make New Zealand a safer place for all.



True cost of harm

The quantum of critical and non-critical risk injury costs to business is financially and psychologically much greater than we think.

- Is the true cost of harm sustainable?
- Are executives taking ownership of the true cost of harm?

ShopCare in partnership with industry will be determining the true costs of harm. Visibility of the true costs of harm must have an impact on how the leadership of businesses view HSW.

This visibility should drive an increase in engagement of preventative, sharing strategies and initiatives that reduce risks.

By reducing the risks and injuries we as New Zealand businesses will also play our part in reducing the cost to ACC. This will free up more funds from ACC to spend on other areas (example: prevention) that are also critical to all New Zealanders.

Long term harm

What is clear from our findings is that future investigation into the critical risk nature of long term exposure to workers is vital. Example: road transport drivers' serious injury/health related risk due to being exposed to vehicle fumes and/or vibration over long period of time. This will be a focus point for WorkSafe and the industry in the coming years.



8.

ShopCare industry leadership

8.1. Critical risk workstream road map

We will continue to collect information from a diverse cross-section of the industry on what they consider to be their critical risks.

Collaborate with industry to increase dataset and Sharing Sessions

We are also gathering information and HSW data about businesses and how they are managing their critical risks, this is done by requesting businesses to share their data and critical risks controls with ShopCare via providing information or attending one of our "Critical Risks Sharing Sessions". This is an engaged way for industry to come together at an arranged time and share their relevant experiences.

Develop case studies to share proven practice

ShopCare also shares critical risk controls with industry via case studies with engaged businesses.

Create industry bowties for each critical risk

ShopCare will also facilitate industry to develop critical risk bowtie's (risk management process) starting with the most common critical risks identified for industry. This will then be further developed into "Hierarchy of Control" resources that are easy to read and to utilise.

Deliver guidance on appropriate controls

- Other events include ShopCare hosting relevant subject matter events and experts, example: "Critical Risk Management and Governance: What does good look like?" webinar including the development of standardised guidance on risk control processes. This will speed up the process of businesses identifying and controlling critical risks, thus indirectly saving valuable lives
- ShopCare's overall critical risk workstream also includes the calculating of the true cost of harm (physical, psychological and financial) with an industry led project team. With a greater understanding of the true cost of harm, businesses are more likely to introduce injury prevention strategies within their respective environment and the see the value in sharing HSW best practices as non-competitive
- In support of the critical risk work stream, ShopCare is to conduct work in regard to providing guidance to the industry approach of early notification and intervention of pain. This may assist in curbing any discomfort before it becomes an injury claim. ShopCare also seeks to develop an industry approach to injury management and rehabilitation. This work is aimed at preventing injuries by addressing discomfort. Secondly by effectively managing the rehabilitation process of the worker this will reduce time off work

We would like to thank everyone who has shared their information and their support with this stream of work. Following is the ShopCare critical risk workstream road map for a more visual representation.

Road map

Critical Risks Workstream



Sharing Sessions

Hosting of critical risks topics and controls sessions. Connecting people to people and people to solutions



Critical Risk Management

Industry bowtie collaboration sessions for retail, manufacturing, supply chain and transport sectors



Industry View

- 1st view of industry Critical Risks & Controls
- Industry Critical Risk Exposure Report
- Identifying industry opportunities to action



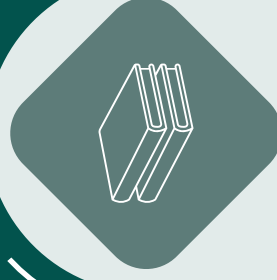
Awareness & Education

- Critical Risks Management and Governance Webinars
- Critical risks awareness industry video



Resources

- Critical risks hierarchy of control resources
- Collaboration between AA Motoring NZ and ShopCare delivered a comprehensive light passenger vehicle driver safety resource





9.

HSW industry opportunities to lean into

Unless business does something different, do not expect a different result. What is your business going to do differently?

There are several opportunities available to businesses within the industry. All businesses need to identify and understand the risks most likely to cause serious harm or a fatal event.

Understanding risks is vital in the duty of care obligation within the "Health and Safety at Work Act 2015" it specifically states that businesses are to eliminate risks to health and safety or minimise risks to health and safety "as far as is reasonably practicable".

Identify your critical risks and develop and implement effective controls

If your business has yet to identify their critical risks, please make sure to:

- Identify critical risks and ensure that preventative control measures are in place to prevent harm
- Develop a process for assessing the efficacy of the controls that are in place and actively monitor each critical risk
- Investigate all near misses related to a critical risk based on its potentiality, not the actuality
- Business executive leadership (officers) need assurance that critical risks are being managed. This can be done by reviewing critical risks regularly (annually or no later than every two years)

Connect with ShopCare for support and collaboration – we connect to others like you:

- Participating in ShopCare's critical risk "Sharing Sessions". This is an invaluable opportunity to share some great work and learn from others in the industry on how they have dealt with certain critical risks
- Providing agreed upon data that will be anonymised to start building a transparent view and industry dashboard. Contribute to the data and information collection

- Participate in online events. Example: the "Critical Risks Management and Governance" webinar
- Attend and participate in the industry led critical risk session. Example: the "Industry bowtie sessions"
- Engage with ShopCare to assist you in developing critical risk case studies that can be shared with wider industry
- Engage with ShopCare critical risk and control resources as they become available

Other ShopCare opportunities for sharing and engaging:

- Early notification and early intervention initiative
- Injury management and rehabilitation initiative
- ShopCare website/resource page

Who should connect and lean in?

We welcome any person with a passion for health, safety, and wellbeing.

- Executives
- Senior leaders
- Legal advisors
- HSE practitioners
- Fleet managers

There is no lack of opportunities available to the industry, they just need to reach out and connect with us. We like making new connections and would love to engage with you on this topic or any other related HSW topic.



Appendix





Appendix /

1. ShopCare's view of potential industry critical risks by sector

After discussion with industry and reviewing the reports insights, this is ShopCare's view on the top critical risk categories. This by no means was to be a comprehensive list of all critical risks but rather the most likely ones to occur. These critical risk categories are in no particular order.

Table 7. **Top critical risk categories**

Manufacturing	Wholesale	Retail	Road Transport
Site traffic management	Site traffic management	Site traffic management	Site traffic management
Hazardous substances	Hazardous substances	Hazardous substances	Hazardous substances
Mobile plant and equipment	Mobile plant and equipment	Mobile plant and equipment	Mobile plant and equipment
Fire/explosion	Fire/explosion	Fire/explosion	Fire/explosion
Light passenger vehicle driver safety	Light passenger vehicle driver safety	Light passenger vehicle driver safety	Light passenger vehicle driver safety
Psychosocial harm	Psychosocial harm	Psychosocial harm	Psychosocial harm
Exposure to hazardous working environment	Exposure to hazardous working environment	Contractor management	Exposure to hazardous working environment
Permit to work (confined space entry, etc)	Fatigue/impairment	Fatigue/impairment	Fatigue/impairment
Working at heights	Transportation (heavy vehicles/trucks)	Racking	Racking
Electrocution		Personal safety/security	Personal safety/security
		Transportation (heavy vehicles/trucks)	Transportation (heavy vehicles/trucks)



Appendix /

2.

Industry high/serious risk data by sector

The following appendices contain the breakdown and analysis of ACC injury claim data by:

- Injury cause – examples: hit by a vehicle, explosion, etc.
- Injury diagnosis – examples: amputation, hearing loss, etc.

Below each sector chart are the key causes and injury diagnosis (risks) for business to consider:

Appendix 2.1. **Manufacturing**

Appendix 2.2. **Retail**

Appendix 2.3. **Wholesale**

Appendix 2.4. **Road transport/warehousing**

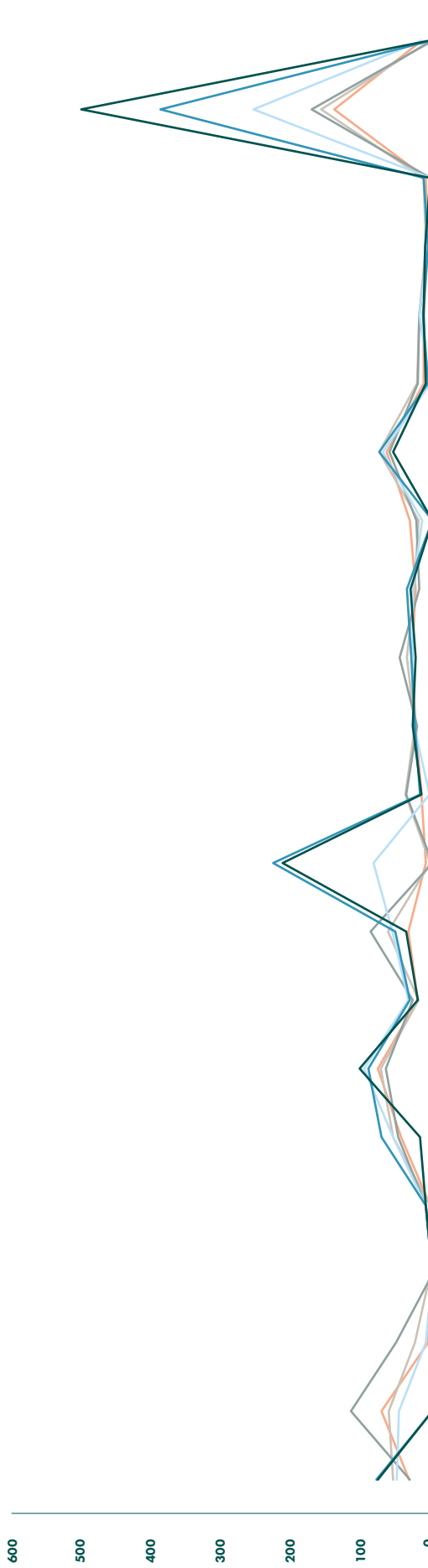




Appendix / 2.1. Manufacturing

Number of manufacturing accepted work-related non-AEP claims, by cause

Key: ● 2016 ● 2017 ● 2018 ● 2019 ● 2020 ● 2021



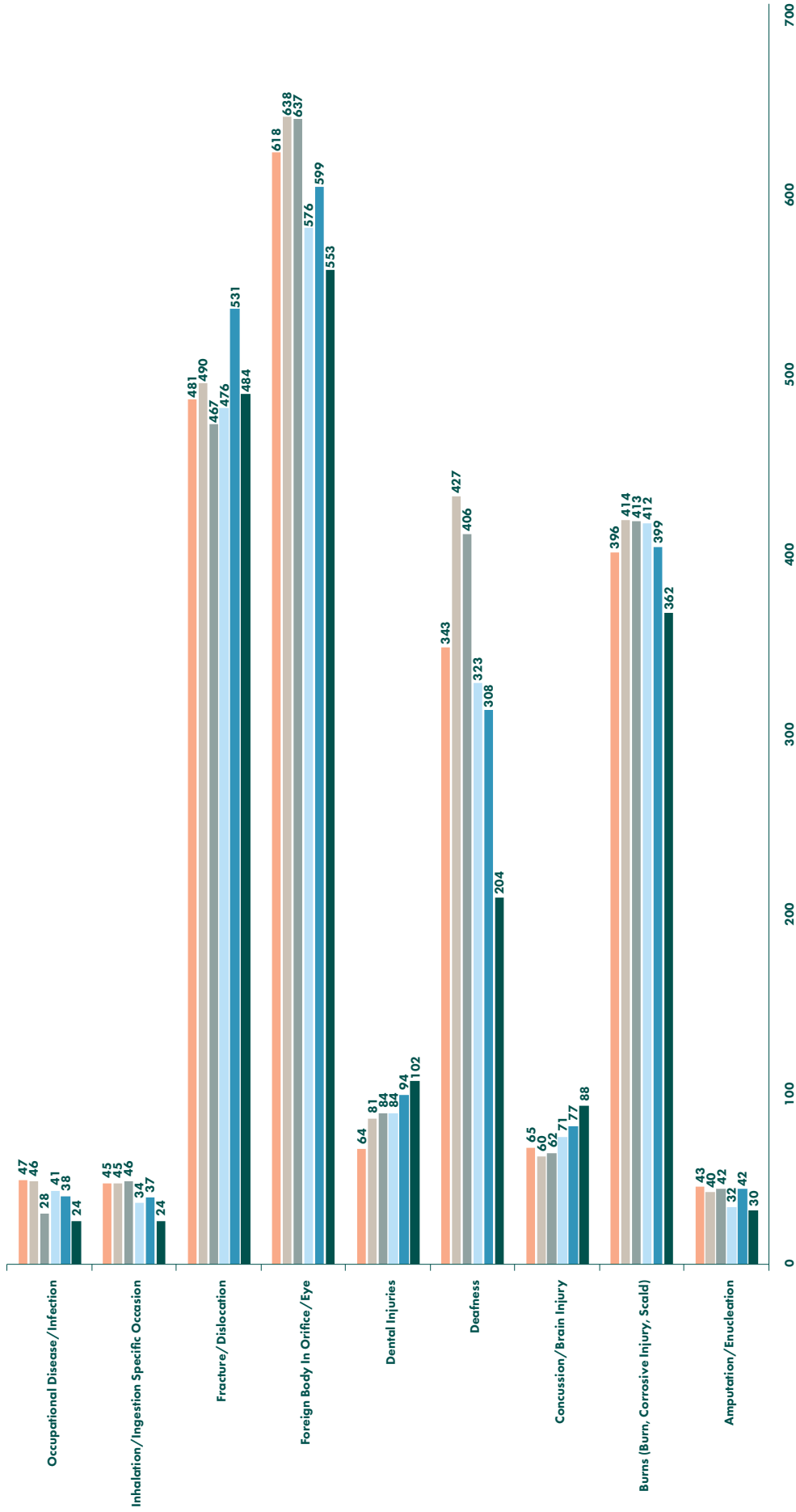
Boiling (violent & inadvertent)	33	56	32	51	80	77
Collapse of stack/bulk goods	72	62	116	47	0	0
Collapse/overturning/inundation	6	25	52	9	0	0
Criminal act	0	3	0	0	0	0
Driving into hole/object etc	3	3	9	9	9	9
Electrical shock/short circuit	44	56	48	56	72	17
Explosion/blasting/implosion	78	73	66	97	91	103
Fire	21	19	28	34	32	20
Flooding/overflow of liquid	34	63	88	57	53	37
Folding/collapse	9	3	0	84	227	213
Inadvertent machine/vehicle movement	15	38	37	4	17	15
Loss of consciousness/sleep	24	25	22	26	25	28
Loss of control of vehicle	29	36	46	28	30	24
Lurching/jerks in vehicles etc	24	26	18	28	36	31
Mechanical malfunction	32	19	23	14	0	0
On road motor vehicle events	65	75	61	70	75	56
Oral ingestion of fungi	12	22	21	3	6	9
Recoil/ejection	12	18	18	18	13	12
Shooting	6	9	6	6	6	10
Skid	9	12	3	3	12	3
Struck by person/animal	140	158	172	255	388	501
Swerving/evasive action	15	3	0	15	3	6

Key causes to consider for your business are:

- Struck by person/animal
- Folding/collapse
- Explosion/blasting/implosion causes

Number of manufacturing accepted work-related non-AEP claims, by injury diagnosis

Key: ● 2016 ● 2017 ● 2018 ● 2019 ● 2020 ● 2021



The injury diagnosis (risks) to consider would be:

- Foreign body in orifice/eye
- Fracture/dislocation
- Burns
- Deafness



Appendix / 2.2. Retail

Number of retail accepted work-related non-AEP claims, by cause

Key: ● 2016 ● 2017 ● 2018 ● 2019 ● 2020 ● 2021



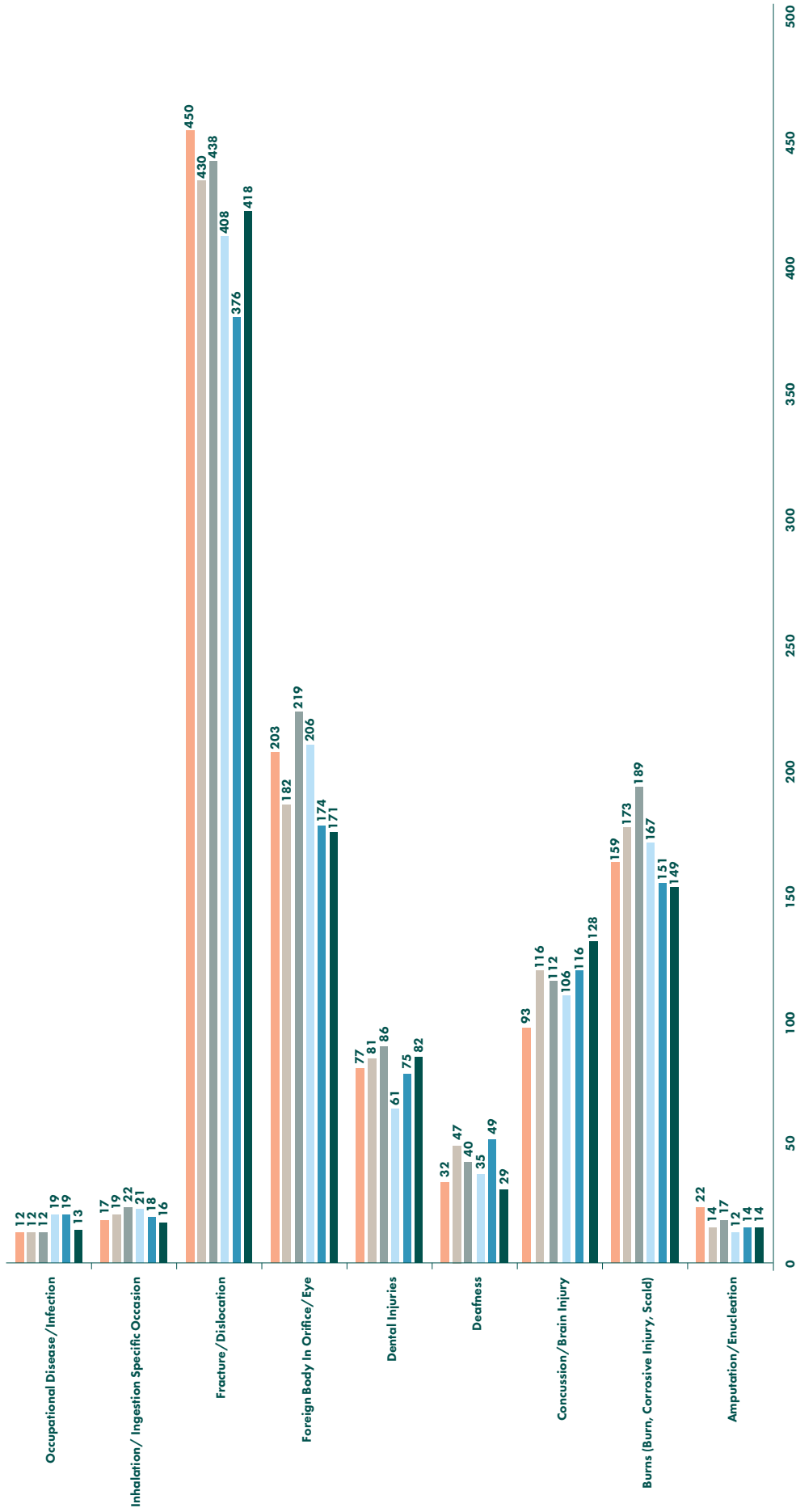
Key causes to consider for your business are:

- Struck by person/animal
- Folding/collapse
- Explosion/blasting/implosion causes



Number of retail accepted work-related non-AEP claims, by injury diagnosis

Key: ● 2016 ● 2017 ● 2018 ● 2019 ● 2020 ● 2021



The injury diagnosis (risks) to consider would be:

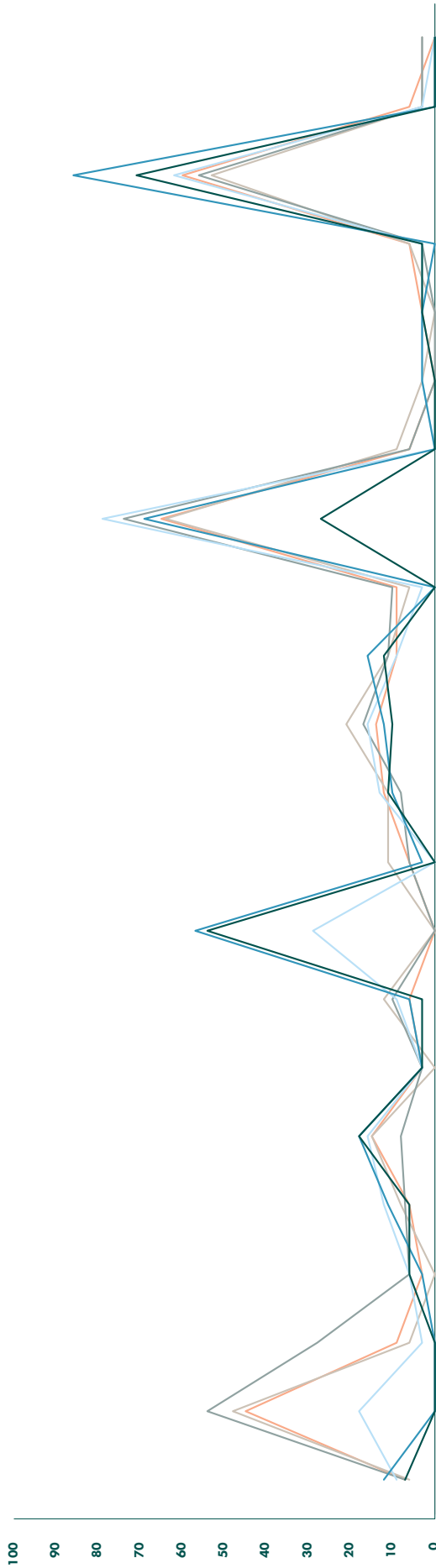
- Fracture/dislocation
- Foreign body in orifice/eye
- Burns
- Dental injuries



Appendix / 2.3. Wholesale

Number of wholesale accepted work-related non-AEP claims, by cause

Key: ● 2016 ● 2017 ● 2018 ● 2019 ● 2020 ● 2021



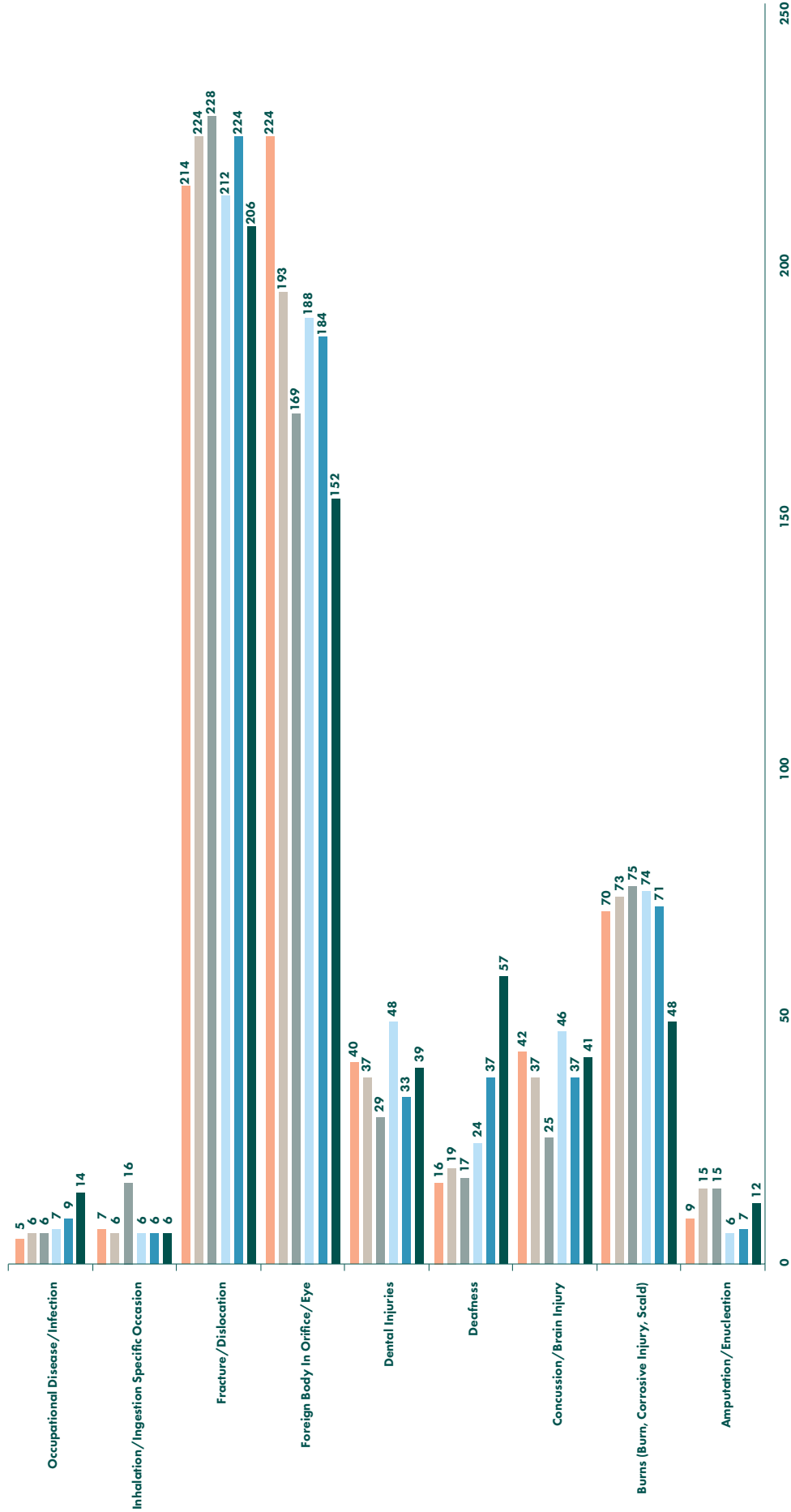
Key causes to consider for your business are:

- Struck by person/animal
- Folding/collapse
- On road motor vehicle events



Number of wholesale accepted work-related non-AEP claims, by injury diagnosis

Key: ● 2016 ● 2017 ● 2018 ● 2019 ● 2020 ● 2021



The injury diagnosis (risks) to consider would be:

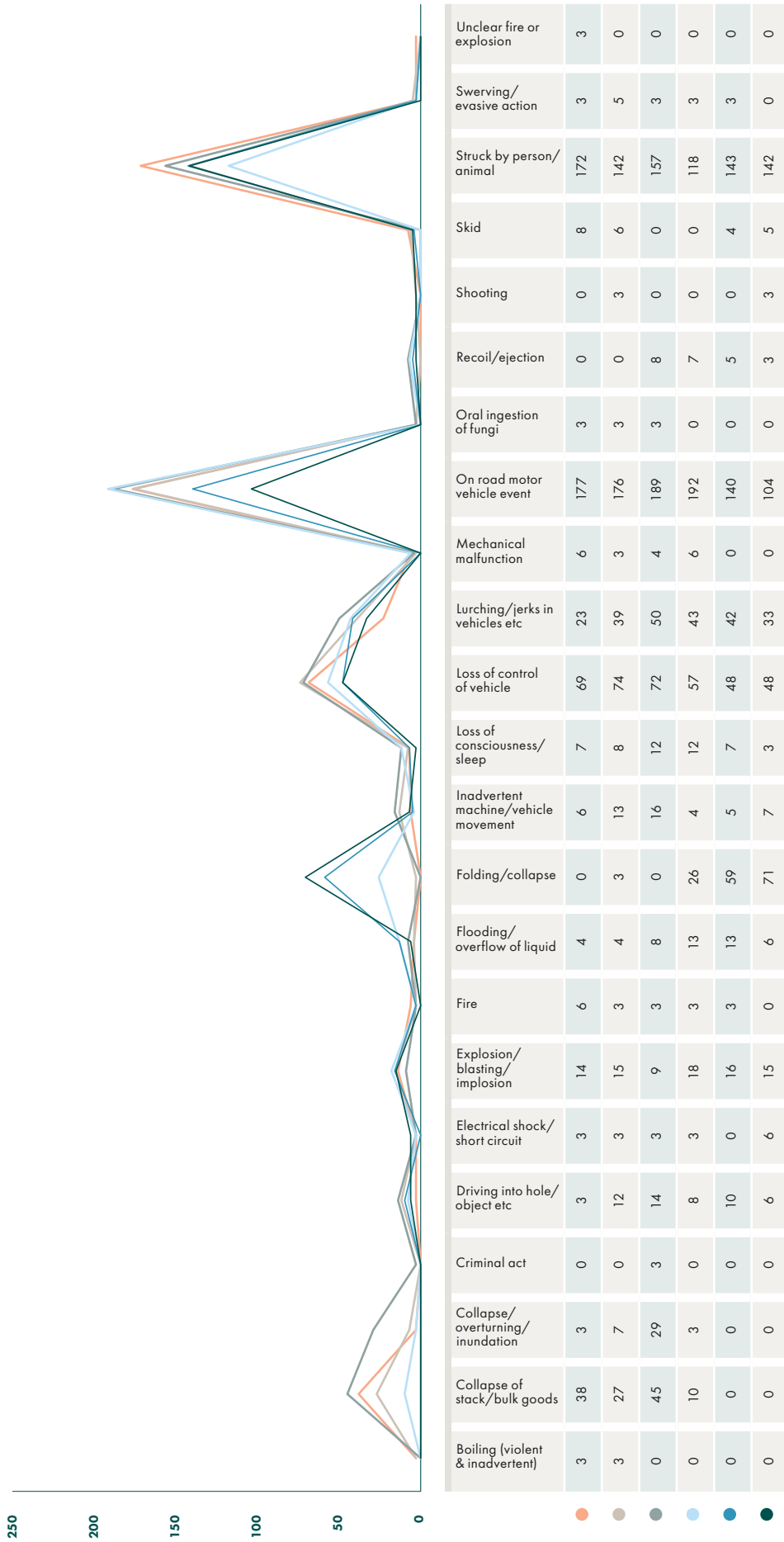
- Fracture/dislocation
- Foreign body in orifice/eye
- Deafness
- Burns
- Concussion/brain injury



Appendix / 2.4. Road transport/warehousing

Number of road transport/warehousing accepted work-related non-AEP claims, by cause

Key: ● 2016 ● 2017 ● 2018 ● 2019 ● 2020 ● 2021



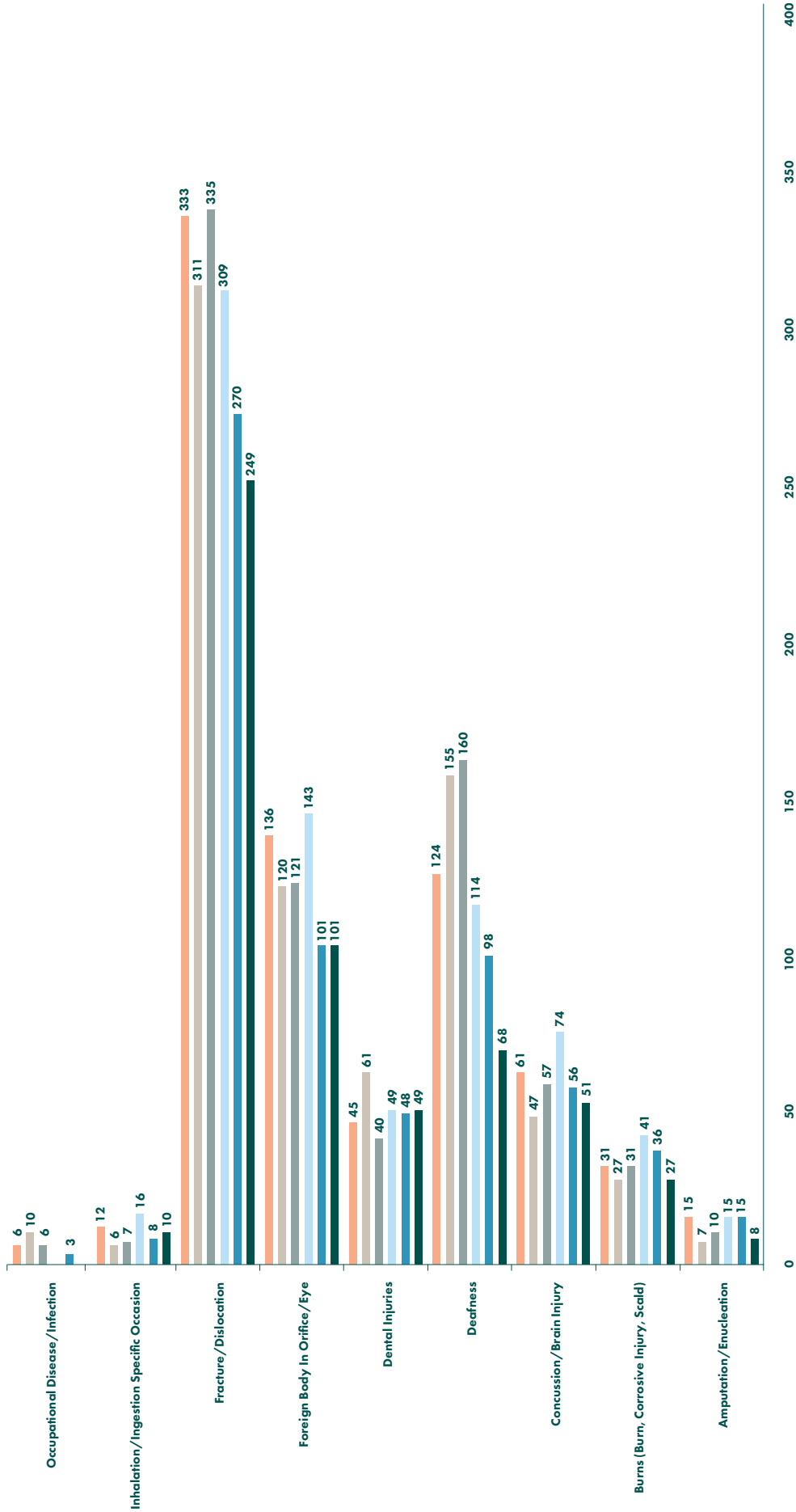
Key causes to consider for your business are:

- Struck by person/animal
- On road motor vehicle events
- Folding/collapse



Number of road transport accepted work-related non-AEP claims, by injury diagnosis

Key: ● 2016 ● 2017 ● 2018 ● 2019 ● 2020 ● 2021



The injury diagnosis (risks) to consider would be:

- Fracture/dislocation
- Foreign body in orifice/eye
- Deafness
- Concussion/brain injuries



Appendix /

3.

About the data collected

1. Data Sources:

- ACC – Non-AEP injury Data (businesses who are not part of the ACC accredited employer programme)
- WorkSafe NZ – Fatalities data (does not include health fatalities due to long periods of exposure to harm. (example: vehicle exhaust fumes)
- Stats NZ Tatauranga Aotearoa (Stats NZ) – Industry Employment and Median wage data
- Survey to the sample pool of businesses: information collected from retail, manufacturing, supply-chain, and road transport sectors, regarding what they considered their critical risks and controls are

2. Data shown in the report is for 12-month periods running from April to March the following year. Example: April 2020 to March 2021 which includes the periods of Covid-19 national and regional lockdowns and working from home events. All data represented is for complete years.

3. ACC data collected from businesses is classified under the main sector of the business. Example: a claim was received from a warehouse worker in a transport business, this claim will be classified under transport and not warehousing. Most of the business who have multiple divisions like transport, warehousing, and manufacturing. The data will be collected under the main business sector.

4. All graphs were constructed using data sources detailed in point 1.

5. The data does not include AEP businesses injury data or industry near miss data relating to critical risks. Thus, the conclusion is the number of critical risk injury events is understated.

6. The data collected from businesses represent businesses with multiple divisions and thus is classified within this report as follows:

- General manufacturing businesses that include:
 - Merchandising
 - Distribution
 - Warehousing
 - Road transport
- General retail stores
- General road transport businesses that include:
 - Warehousing, postal and courier services
- General wholesale business that includes:
 - Road transport
 - Warehousing
 - Distribution



Appendix /

4.

Acknowledgements and about the author



ShopCare would like to thank every business within the retail, manufacturing, supply chain and road transport sectors across New Zealand, who leaned in and have engaged with ShopCare’s critical risk workstream.



He Kaupare. He Manaaki.
He Whakaora.
prevention. care. recovery.

ShopCare would like to thank ACC for all their assistance and constant engagement around the topic of critical risks with the inclusion of providing data relevant to the retail, manufacturing, supply chain and transport sectors. We also want to acknowledge and thank ACC for the time taken to review this document.



ShopCare acknowledges and thanks WorkSafe New Zealand Data Centre for easy access to data relating to fatalities within the retail, manufacturing, supply chain and road transport sectors.



ShopCare acknowledges and thanks Stats NZ for the easy access to data relating to worker employment and median wage data relating to the retail, manufacturing, supply chain and road transport sectors.

About the author

ShopCare Business Manager, **Wesley van Deventer** is a business specialist that has expertise in the field of health, safety, security and environment with 14 years’ international experience leading strategy, compliance, and business improvement. He has worked across a mix of low to high-risk environment industries, specialising in strategy, critical thinking, and ideation, including identifying opportunities through robust analytical and insights management, which has led him to steer business to the overall growth and return on investments.



Appendix /

5. About ShopCare

We connect people to solutions to create safer workplaces.

ShopCare is a health, safety, and wellbeing association, working to accelerate the reduction of work-related death, injury and ill-health in the manufacturing, transportation, retail, and supply chain sectors. We are supported by industry members and ACC.

How?

ShopCare works with business to drive safety leadership, increase awareness, and positively change behaviours.

We support the implementation of key initiatives, and help businesses understand key risks and identify best practice procedures.

Our strategic priorities

- Understand the causes and cost of harm
- Identify industry risks and share control measures
- Identify and action key levers of change
- Develop relationships, collaborate, and influence



Critical risks & controls project

This project increases industry awareness of critical risks, how to identify them and implement the most suitable controls.

In the first ever local review in our industry, we have identified the most common critical risks along with proven controls.

We want to add to this valuable resource and welcome your contributions. Contact Wes at wes@shopcare.org.nz.

Get involved with these industry led initiatives

Email info@shopcare.org.nz or visit shopcare.org.nz for more information.

6. Disclaimer

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