
Workplace Injury, Disease and Fatality Statistics

Provincial Summary 2018

Labour and Immigration, Government of Alberta

Date of publication: September 2019

Title of publication: Workplace Injury, Disease and Fatality Statistics - Provincial Summary 2018

ISBN 978-1-4601-4679-8

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Introduction

Alberta Occupational Health and Safety (OHS) enables healthy and safe workplaces through evidence-based prevention, education and enforcement. As part of this mission, OHS prepares an annual report of workplace injury, disease and fatality statistics for Alberta. This report provides:

- analysis of provincial occupational injury and disease information;
- estimates of injury and disease risk at the provincial level including, where available, risk by injury or disease type, industry sector and population demographics;
- comparative historical data, where available; and
- supplemental data (Appendix A), brief descriptions of OHS programs and initiatives (Appendix B) and a terms and definitions glossary (Appendix C).

Source data for this report include:

- claims identified by Workers' Compensation Board – Alberta (WCB) as of March 31, 2019; and
- 2018 results of the Labour Force Survey conducted by Statistics Canada.

Data and analysis in this report provide a picture of some workplace injury and illness patterns in Alberta. This information can help Alberta Labour and Immigration and stakeholders explore and initiate improved prevention measures.

It is important to note that:

- this report only covers employers registered with WCB;
- industry data is based on WCB industry classifications;
- workplace injury and disease codes in this report are from WCB;
- person-years worked are estimated by WCB. This is a measure for length of workers' exposure within a workplace and is not an equivalent of number of workers;
- due to administrative processing times, the year when WCB accepts a fatality claim may not be the same year the fatality occurred. In this report fatality statistics are based on the year of death. Fatality data based on year of acceptance is shown in Appendix A;
- per cent displayed in tables may not total to 100 due to rounding;

- per cent changes in lost-time claim (LTC) and disabling injury (DI) rates are calculated using raw data, therefore the results may differ from comparing the rates directly due to rounding; and
- the term 'people in employment' refers to individuals in the working-age population who held jobs, regardless of employment status, in a reporting period.

1. Key findings

1.1 Workplace injuries and diseases

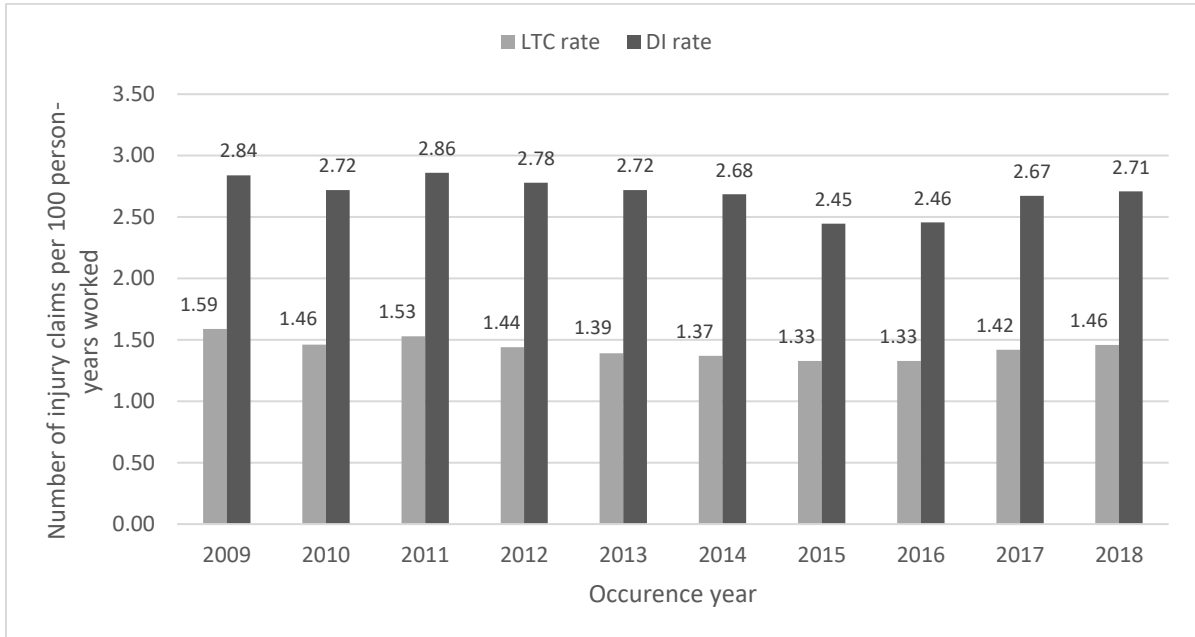


Figure 1: Workplace injury and disease rates, Alberta, 2009 to 2018

Data source: WCB data, prepared by OHS

Two basic measures of workplace injury and disease risks are LTC and DI rates. These rates represent the number of injury or disease claims per 100 person-years worked. DIs include LTCs and modified-work claims. The LTC rate of Alberta workplaces increased from 1.42 in 2017 to 1.46 in 2018. The DI rate increased from 2.67 in 2017 to 2.71 in 2018.

Compared to 2009, the current LTC rate decreased 8.2 per cent (1.59 in 2009 versus 1.46 in 2018); and the DI rate decreased 4.6 per cent (2.84 in 2009 versus 2.71 in 2018).

Several factors can contribute to changes in LTC and DI rates, including but not limited to:

- changes in workplace health and safety culture;
- enhanced OHS compliance;
- improved support for modified-work arrangements; and
- industry-led initiatives to improve workers' health and safety.

1.2 Occupational fatalities

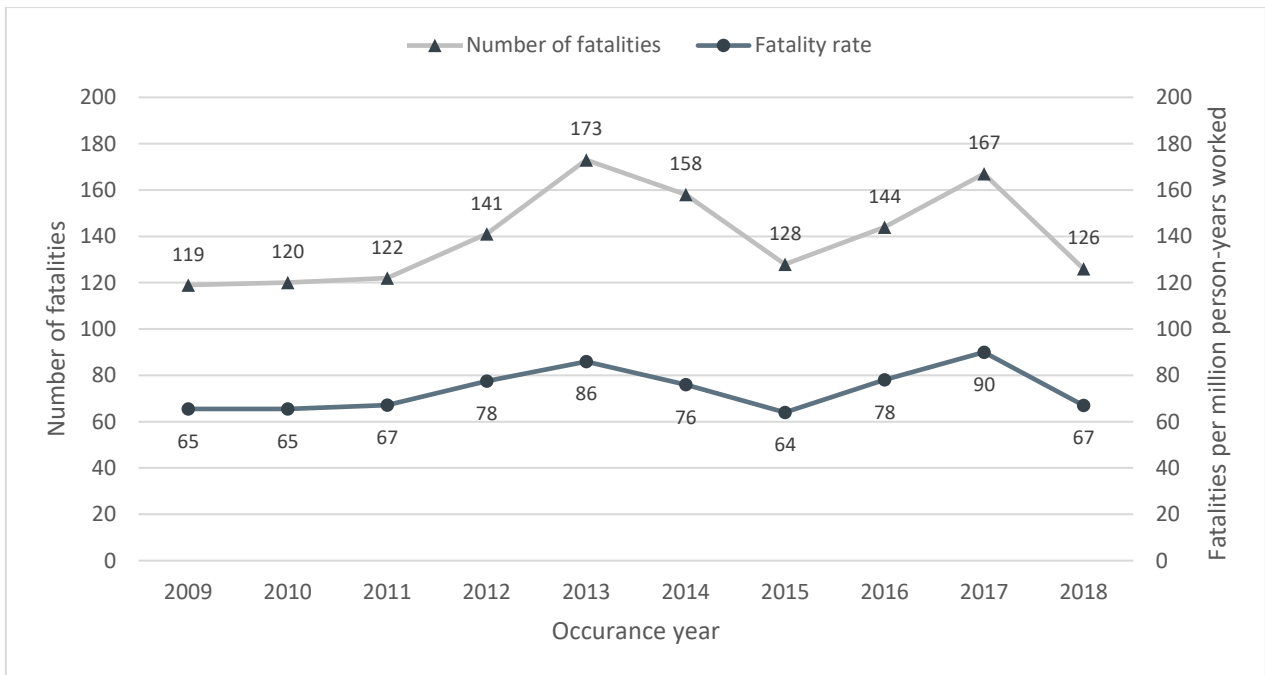


Figure 2: Occupational fatality claims and fatality rate by year of death, 2009 to 2018

Data source: WCB data, prepared by OHS

In 2018, the number of occupational fatalities was 126, down 24.6 per cent from 167 in 2017. The fatality rate is the number of fatalities per million person-years worked. The fatality rate decreased from 90 in 2017 to 67 in 2018. Occupational fatalities are classified into three general types: motor vehicle incidents, workplace incidents and occupational disease. The proportion of fatalities by type in 2018 was:

- Occupational diseases – 45.2 per cent;
- Motor vehicle incidents – 21.4 per cent; and
- Workplace incidents – 33.3 per cent.

2. Provincial summary

2.1 Provincial figures

Table 1: Injury claims, rates and person-years, 2016 to 2018

	2016	2017	2018	Change 2016 to 2017 (%)	Change 2017 to 2018 (%)
Person-years	1,836,560	1,846,168	1,884,405	0.5↑	2.1↑
LTCs	24,414	26,182	27,463	7.2↑	4.9↑
LTC rate	1.33	1.42	1.46	6.7↑	2.8↑
Modified-work claims	36,172	39,573	40,361	9.4↑	2.0↑
DIs	45,103	49,337	51,033	9.4↑	3.4↑
DI rate	2.46	2.67	2.71	8.8↑	1.3↑

Data source: WCB data, prepared by OHS

The person-years worked increased by 2.1 per cent to 1,884,405 between 2017 and 2018.

After five years of decreasing, both LTC and DI rates showed an increase from 2016 to 2018.

- The LTC rate increased from 1.42 in 2017 to 1.46 in 2018.
- The DI rate increased from 2017 to 2018, it was less than between 2016 and 2017.

New OHS legislation, effective June 1, 2018, may have clarified the responsibility of workers and employers to report on the job injuries, and this may have affected injury-reporting practices. A higher claim volume, coupled with a slight increase in covered workers, resulted in higher injury rates. The implications of these effects of OHS legislation implementation may continue for some time, but will likely stabilize in the future.

3. Major industry sectors summary

3.1 Injury rates by major sectors

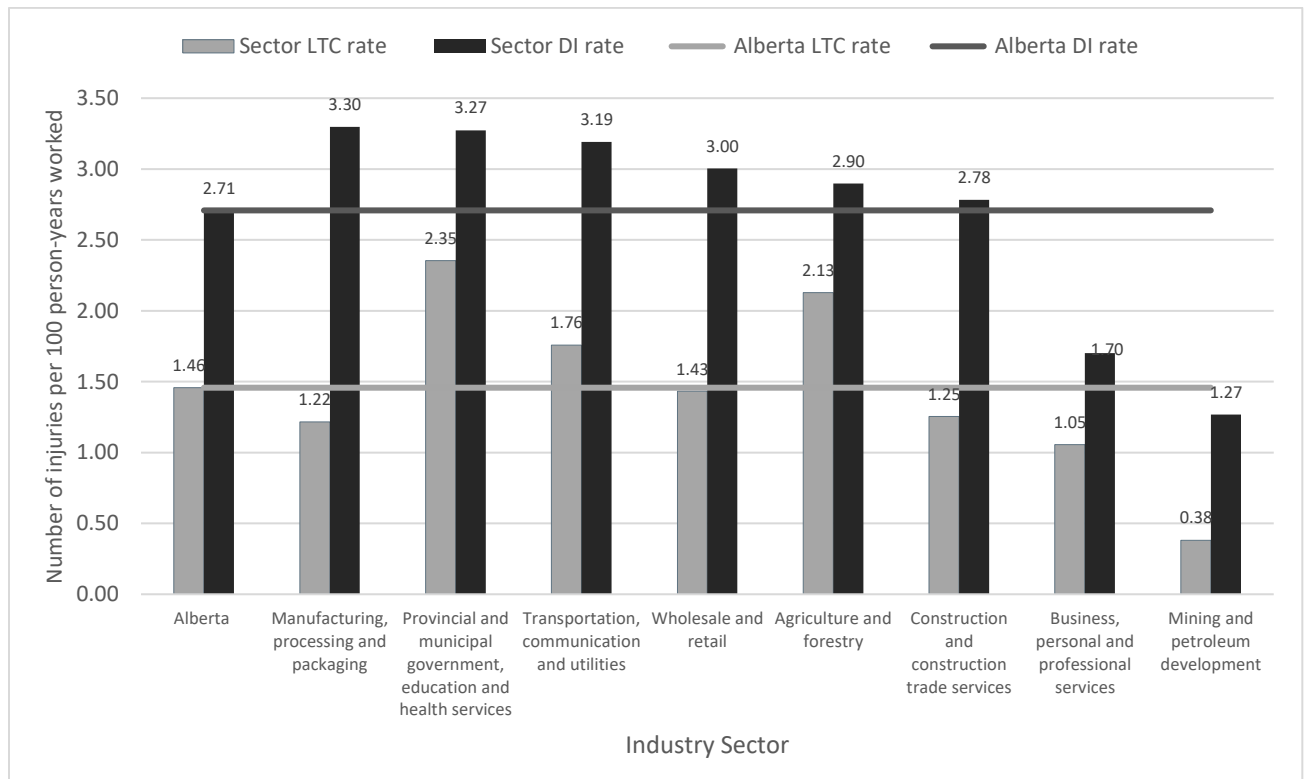


Figure 3: Number of injuries per 100 person-years by major industry sector, 2018

Data source: WCB data, prepared by OHS

In 2018, most major industry sectors experienced increases in the number of person-years worked (see Appendix A).

- The highest increase in person-years worked was in agriculture and forestry at 8.4 per cent, followed by transportation, communication and utilities at 7.8 per cent.
- Wholesale and retail showed no increase.

DI and LTC rates for 2018:

- Manufacturing, processing and packaging had the highest DI rate at 3.30, closely followed by provincial and municipal government, education and health services at 3.27.
- Mining and petroleum development had the lowest LTC and DI rate at 0.38 and 1.27 respectively.

- The provincial and municipal government, education and health services experienced the highest LTC rate at 2.35.
- Most claims for the provincial and municipal government, education and health services sector and the business, personal and professional services sector involved women (see Appendix A).

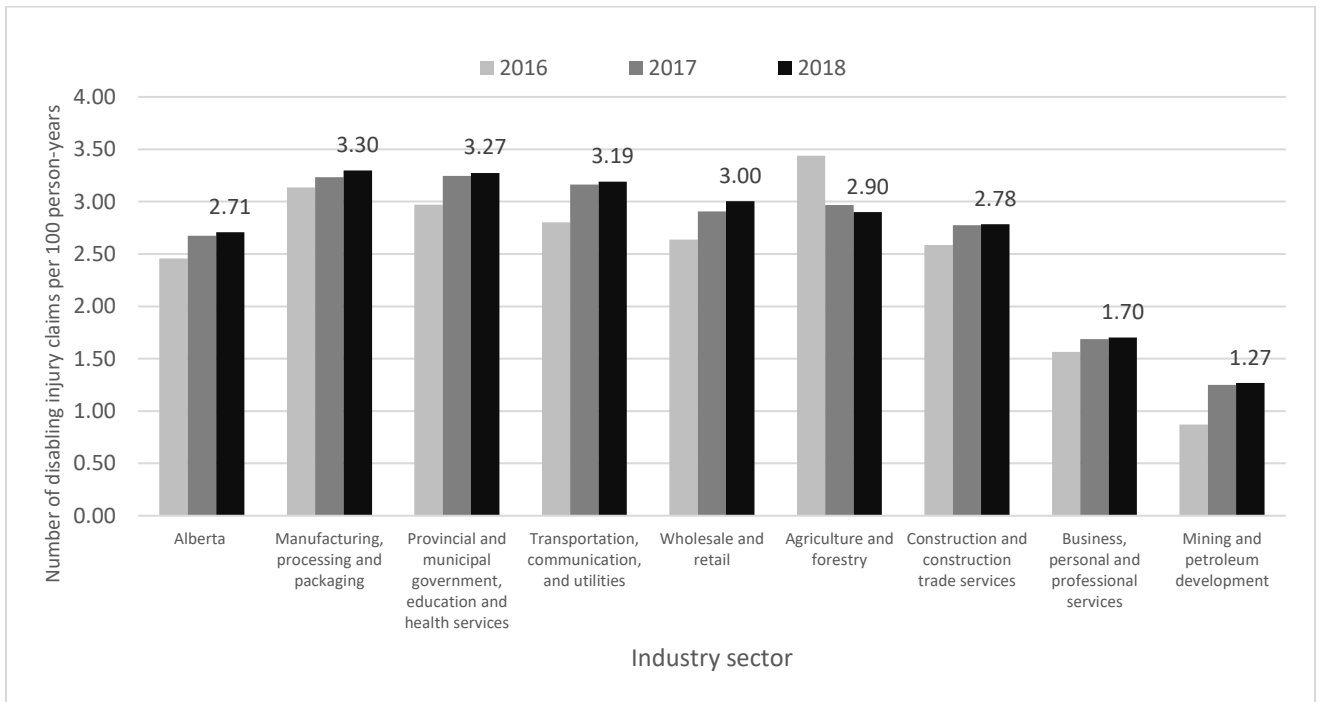


Figure 4: Disabling injury rate by major industry sector, 2016 to 2018

Data source: WCB data, prepared by OHS

Trends in DI and LTC rates:

- Most of the industry sectors showed upward trends in DI rates from 2017 to 2018 except for agriculture and forestry.
- LTC rates in all sectors increased over the last three years, except for agriculture and forestry. Two sectors with stable LTC rates over the last two years are mining and petroleum development and business, personal and professional services (see Appendix A).
- Mining and petroleum had the lowest DI and LTC rates for the past three years.

The risk of occupational injury and disease varied by industry sector. These variations likely reflect the different workplace exposures associated with occupations in these sectors. For instance, welders and related machine operators experienced the largest number of injuries and diseases in manufacturing, processing and packaging, followed by workers in food, beverage and production processing (data not shown).

4 Demographics of injured workers

4.1 Injured worker characteristics by age and gender

Canada's Labour Force Survey results show 2,330,700 workers employed in Alberta in 2018. For all age categories, males represented the majority of workers at 54.3 per cent, and females accounted for 45.7 per cent.

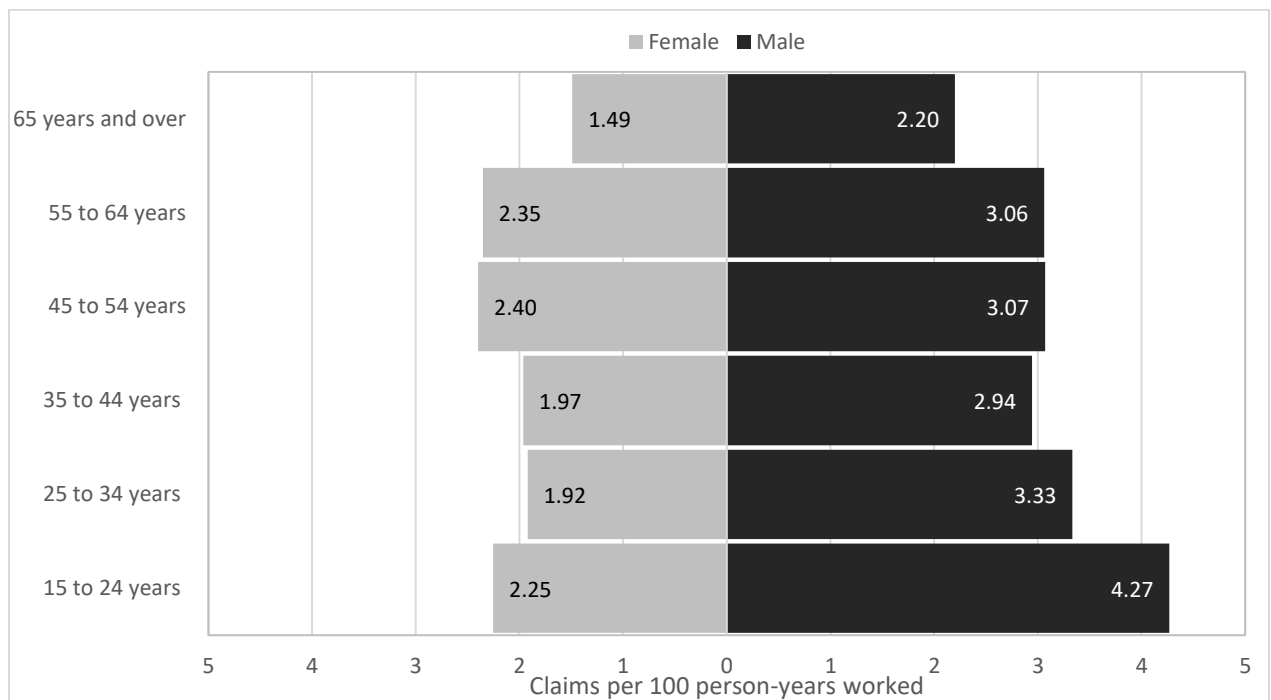


Figure 5: Disabling injury frequency rate by age and gender, 2018

Data Source: WCB data, Statistics Canada's Labour Force Survey (2018 Historical Review); Prepared by OHS

The risk of occupational injury and disease varied by gender and age groups.

- Overall, men had a DI frequency rate of 3.20 per 100 person-years worked and women had a DI frequency rate of 2.12 per 100 person-years worked.
- Young workers had the highest DI frequency rate at 3.30, followed by those aged 45 to 54 with a DI rate of 2.76. The lowest DI frequency rates were observed among 35 to 44 and 65 years and over age groups.
- Older workers (55 to 64 years old) had the highest LTC frequency rate at 1.68 per 100 person-years worked, followed by those aged 45 to 54 at 1.57 (see Appendix A).

- In most age groups, males experienced a higher LTC frequency rate than females; however, females aged 45 to 54 experienced a slightly higher rate than males by 0.6 per cent (see Appendix A).
- Males had higher DI frequency rate than females in all age groups. Young males (15 to 24 years old) had the highest DI frequency rate at 4.27, while accounting for 6.3 per cent of those in employment.
- The DI frequency rate peaked in the 15 to 24 age group in males, while in the 45 to 54 age group in females.

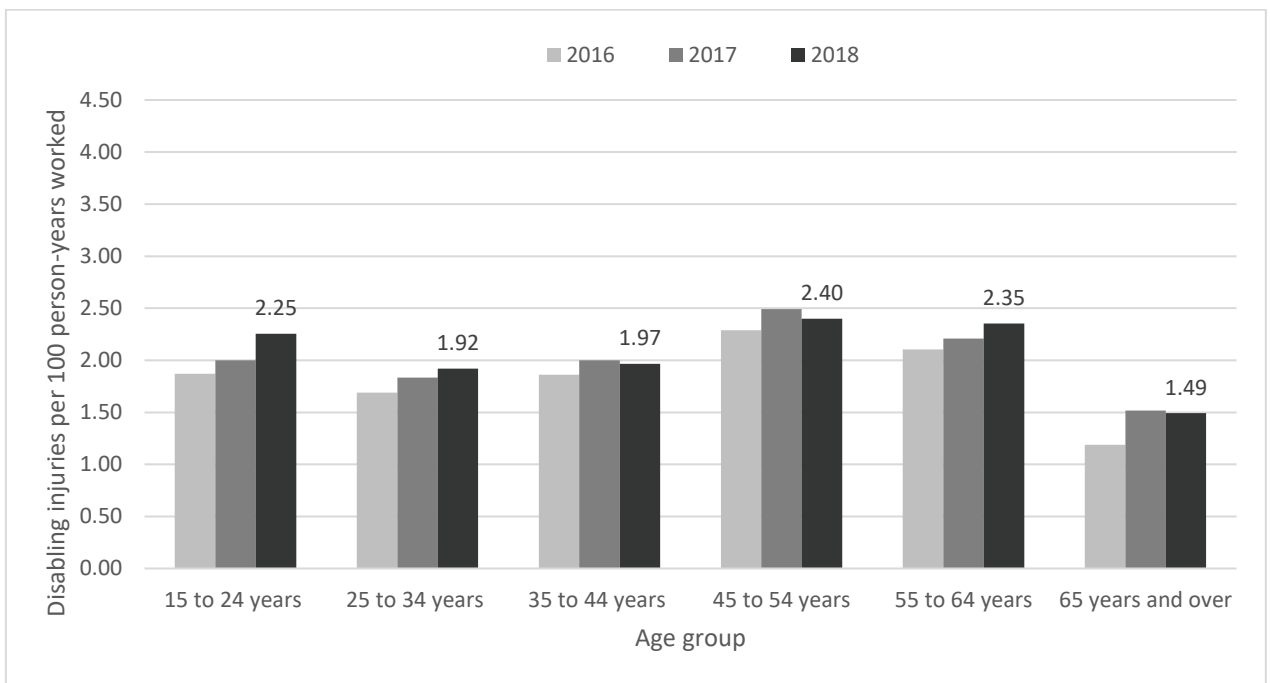


Figure 6: Disabling injury frequency rate by age, females, 2016 to 2018

Data Source: WCB data, Statistics Canada's Labour Force Survey (2018 Historical Review); Prepared by OHS

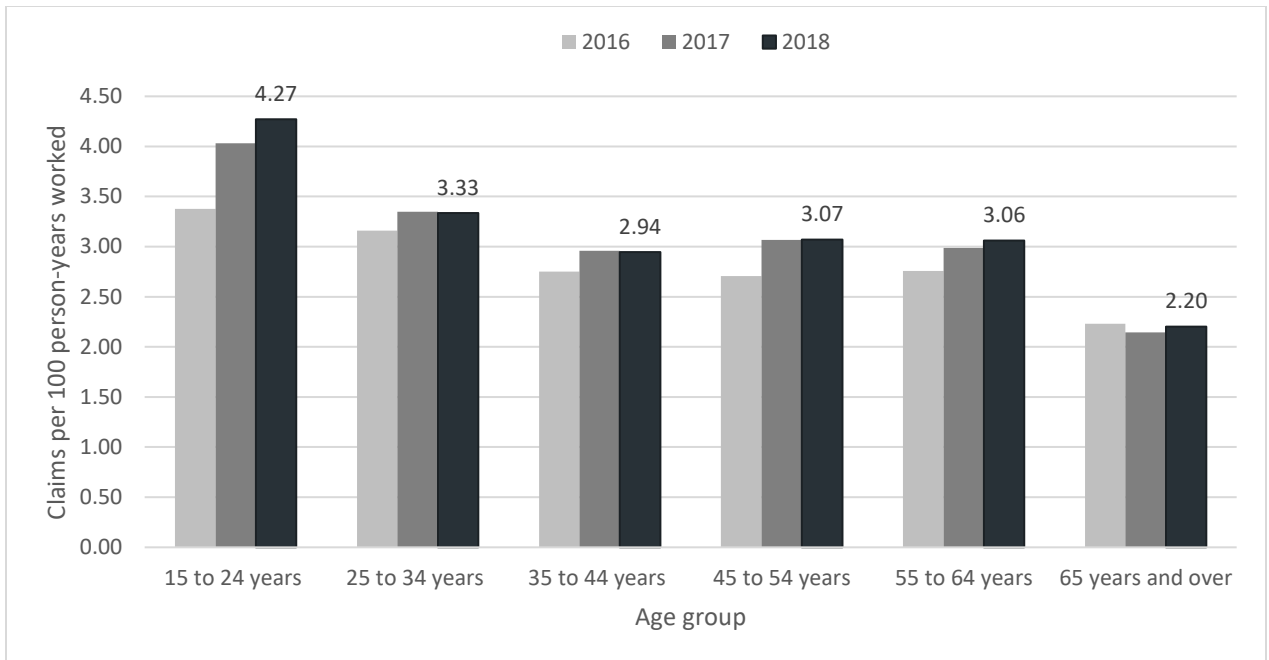


Figure 7: Disabling injury frequency rate by age, males, 2016 to 2018

Data Source: WCB data, Statistics Canada's Labour Force Survey (2018 Historical Review); Prepared by OHS

Trends in DI and LTC frequency rates by gender and age groups:

- From 2016 to 2018, DI frequency rate increased the most over the past three years within 15 to 24 age group, for both genders.
- The DI frequency rates for males and females increased over time for all age groups except for 65 years and over male group. The rate of increase is lower from 2017 to 2018 as compared to 2016 to 2017.
- The LTC frequency rates of males and females over time had similar trends for all age groups (see Appendix A). The LTC frequency rate for females age 45 to 54 years female went down from 1.59 in 2017 to 1.47 in 2018 (see Attachment A).

5. Characteristics of injuries and diseases

Table 2: Disabling injuries by type of event or exposure, 2016 to 2018

Type of event or exposure	2016	2017	2018
Bodily reaction or exertion	20,906	22,360↑	22,532↑
Overexertion	10,651	10,835↑	10,970↑
Bodily reaction	5,950	6,342↑	6,535↑
Repetitive motion	2,088	2,440↑	2,310↓
Other bodily reaction/exertion	2,217	2,743↑	2,717↓
Contact with objects or equipment	11,036	11,789↑	12,016↑
Struck by object	2,101	2,149↑	2,083↓
Struck against object	5,502	5,752↑	5,844↑
Caught in object	1,993	2,239↑	2,275↑
Rubbed or abraded	353	398↑	353↓
Other contact with object/equipment	1,087	1,251↑	1,461↑
Falls	7,354	8,668↑	9,521↑
Fall on same level	2,135	2,246↑	2,191↓
Fall to lower level	4,991	5,987↑	6,744↑
Other falls	228	435↑	586↑
Exposure to harmful substances	2,448	2,565↑	2,641↑
Transportation accidents	1,772	2,046↑	2,119↑
Assaults and violent acts	1,244	1,527↑	1,759↑
Assaults and violent acts by person(s)	777	965↑	1,122↑

Type of event or exposure	2016	2017	2018
Other assaults and violent acts	467	562↑	637↑
Fires and explosions	57	63↑	72↑
Other events or exposures	286	317↑	326↑
Type of event - unknown	0	2↑	47↑
Total	45,103	49,337↑	51,033↑

Data Source: WCB data, Prepared by OHS

Overexertion, bodily reaction and fall to lower level were the leading causes of workplace injuries and diseases in 2018. Although the total number of injuries increased in 2018, the distribution of causes remained stable between 2016 and 2018.

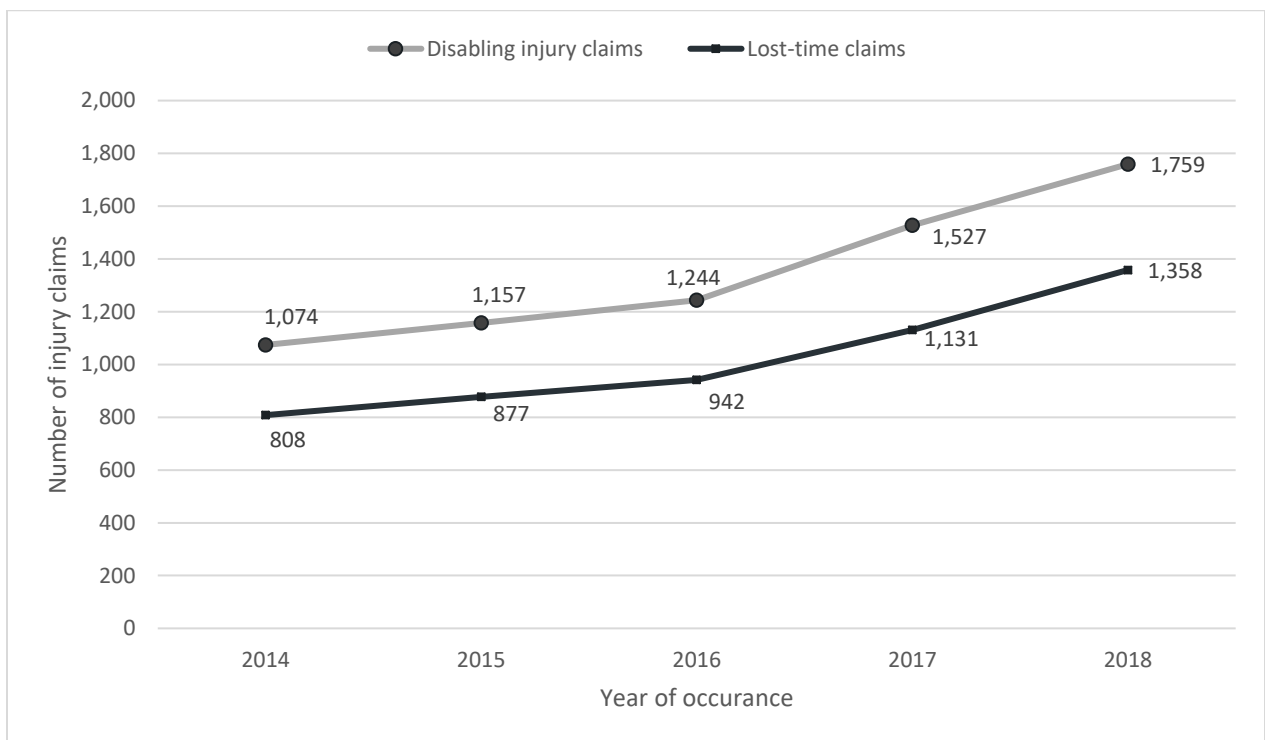


Figure 8: Workplace violence and harassment claims, 2014 to 2018

Data Source: WCB data, Prepared by OHS

Through a data review in 2018, Alberta Labour and Immigration identified exposure to workplace violence and harassment as one of the areas that required attention in order to improve the health and safety of workers in Alberta. Figure 8 shows an increasing trend in Alberta from 2014 to 2018 with the highest number of injury claims in 2018.

The distribution of workplace violence and harassment related injury claims by industry sector, age and gender has remained consistent since 2014 (data not shown). The provincial and municipal government, education and health services accounted for more than 66 per cent of all claims. Female workers and those 25 to 34 years of age experienced the highest percentage of these injuries.

Table 3: Disabling injuries by nature of injury or disease, 2016 to 2018

Nature of injury	2016	2017	2018
Traumatic injuries and disorders	42,142	46,091 ↑	47,745 ↑
Sprains/strain	23,728	25,848 ↑	26,463 ↑
Superficial wounds	4,559	5,154 ↑	5,432 ↑
Open wounds	3,999	4,189 ↑	4,240 ↑
Fractures and dislocations	3,385	3,696 ↑	3,732 ↑
Burns	853	952 ↑	981 ↑
Other traumatic injuries and disorders	5,618	6,252 ↑	6,897 ↑
Systemic diseases and disorders	2,069	2,377 ↑	2,060 ↓
Infectious and parasitic diseases	201	84 ↓	167 ↑
Neoplasms, tumors and cancer	40	24 ↓	21 ↓
Abnormal symptoms, conditions and disorders	192	202 ↑	195 ↓
Multiple diseases, conditions and disorders	1	5 ↑	3 ↓
Other diseases, conditions and disorders	426	495 ↑	769 ↑
Nature of injury - unknown	32	59 ↑	73 ↑
Total	45,103	49,337 ↑	51,033 ↑

Data Source: WCB data, Prepared by OHS

There was a total of 47,745 traumatic injuries and disorders reported to WCB Alberta in 2018. The most common types of traumatic injuries and disorders among the injuries reported were:

- Sprains and strains at 55.4 per cent.
- Superficial wounds and open wounds at nearly 20.3 per cent.
- Other traumatic injuries and disorders at 14.5 per cent. These normally involved multiple traumatic injuries.

Table 4: Disabling injuries by part of body injured, 2016 to 2018

Part of body injured	2016	2017	2018
Trunk	16,818	18,156↑	18,674↑
Back, including spine, spinal cord	9,769	10,529↑	10,737↑
Other trunk	7,049	7,627↑	7,937↑
Upper extremities	11,835	13,141↑	13,441↑
Finger(s), fingernail(s)	4,286	4,619↑	4,561↓
Wrist(s) and hand(s) except finger(s)	4,478	5,195↑	5,296↑
Other upper extremities	3,071	3,327↑	3,584↑
Lower extremities	8,814	9,410↑	9,903↑
Leg(s)	4,404	4,706↑	4,920↑
Ankle(s) and foot (feet) except toes	3,989	4,239↑	4,478↑
Other lower extremities	421	465↑	505↑
Head	3,363	3,776↑	3,929↑
Other head parts	2,603	2,989↑	3,219↑
Eye(s)	760	787↑	710↓
Multiple body parts	2,504	2,659↑	2,687↑
Neck, including throat	968	1,151↑	1,189↑
Body systems	765	985↑	1,108↑
Part of body - unknown	36	59↑	102↑
Total	45,103	49,337↑	51,033↑

Data Source: WCB data, Prepared by OHS

Of disabling claims in 2018, the trunk was the most commonly injured body part (36.6 per cent), followed by injuries to the upper extremities (26.3 per cent) and lower extremities (19.4 per cent).

- The majority of all back injuries resulted from overexertion (46.9 per cent) or bodily reaction (27.6 per cent) (data not shown).
- The two largest proportions of claims for injuries on upper extremities in 2018 were for sprains, strains (30.5 per cent) and open wounds (25.6 per cent) (data not shown).
- Struck by an object (19.7 per cent) and overexertion (14.7 per cent) were the two leading causes of disabling injury claims to the upper extremities (data not shown).

Over half of the injuries and diseases to the lower extremities were sprains, strains and tears (57.5 per cent) and superficial wounds (14.4 per cent) (Data not shown).

- Injuries to the lower extremities resulted most often from bodily reaction (34.3 per cent) and falls (26.0 per cent).

Table 5: Disabling injury by source of injury or disease, 2016 - 2018

Source of injury	2016	2017	2018
Persons, plants, animals and minerals	13,126	14,425↑	14,695↑
Person-injured or ill worker	8,893	9,819↑	9,948↑
Person-other than injured or ill worker	2,808	3,066↑	3,282↑
Minerals - metallic or non-metallic (except fuel)	200	195↓	170↓
Other persons, plants, animals and minerals	1,225	1,345↑	1,295↓
Structures and surfaces	7,806	8,969↑	9,894↑
Parts and materials	5,060	5,520↑	5,597↑
Containers	5,079	5,246↑	5,370↑
Vehicles	3,277	3,720↑	3,832↑
Tools, instruments and equipment	4,101	4,320↑	4,351↑
Hand tools – non powered	1,956	2,078↑	2,232↑
Hand tools – powered	435	433↓	429↑
Other tools, instruments and equipment	1,710	1,809↑	1,690↓

Source of injury	2016	2017	2018
Machinery	1,966	2,164↑	2,167↑
Furniture and fixtures	1,559	1,635↑	1,596↓
Chemicals and chemical products	435	463↑	497↑
Other sources	2,059	2,168↑	2,241↑
Source of injury – unknown	635	707↑	793↑
Total	45,103	49,337↑	51,033↑

Data Source: WCB Data, Prepared by OHS

Over the past three years, the leading source of injuries was person-injured or ill worker, followed by structures and surfaces, and parts and materials. Where person-injured or ill worker was identified as the source of injury, female workers and workers in the nurse aides, orderlies group represented the greatest percentage of these disabling injury claims in 2018 (data not shown).

6. Occupational fatalities

The number of occupational fatalities in 2018 was 126; of these:

- 57 were the result of occupational disease; and
- 69 were the result of traumatic incidents:
 - 27 were the result of motor vehicle incidents; and
 - 42 were the result of workplace incidents.

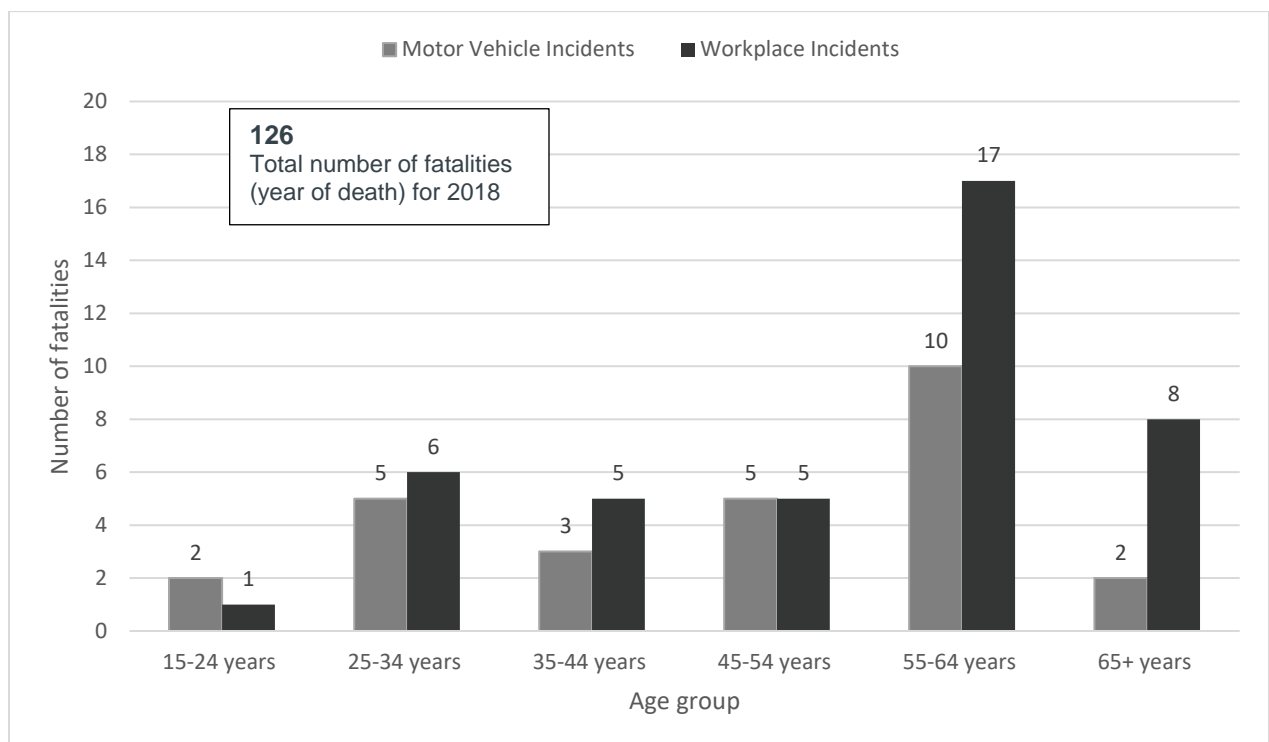


Figure 9: Occupational fatalities by type and age group, 2018

Data Source: WCB Data, Prepared by OHS

Occupational fatalities in Alberta were not evenly distributed across age groups. For 2018, workers aged 15 to 24 years had the lowest number of fatalities and the 55 to 64 age group had the highest number of fatalities.

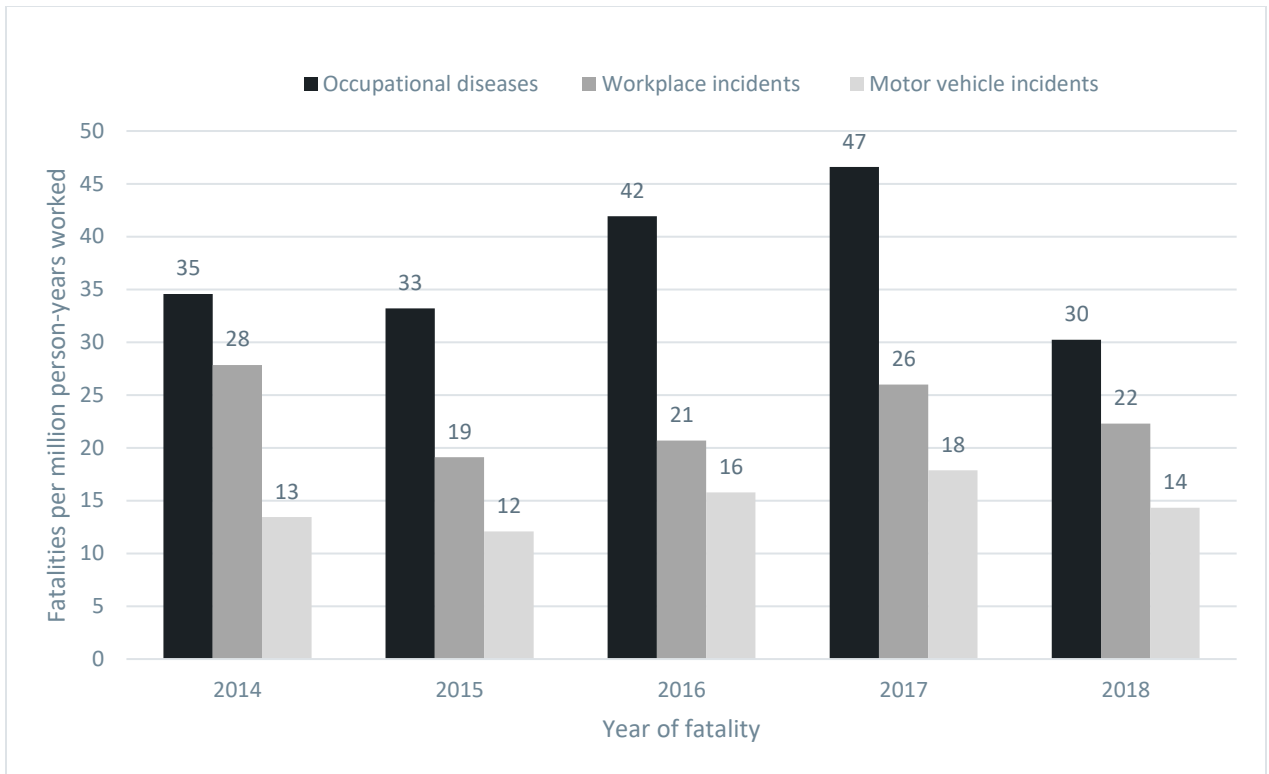


Figure 10: Fatality rates by type of incident, 2014 to 2018

Data Source: WCB Data, Prepared by OHS

In the past five years (2014 to 2018), work-related fatality rates have fluctuated.

- Occupational diseases accounted for the highest fatality rates as compared to workplace and motor vehicle incidents.
- Fatality rates for all types of incidents peaked in 2017 and then dropped in 2018.

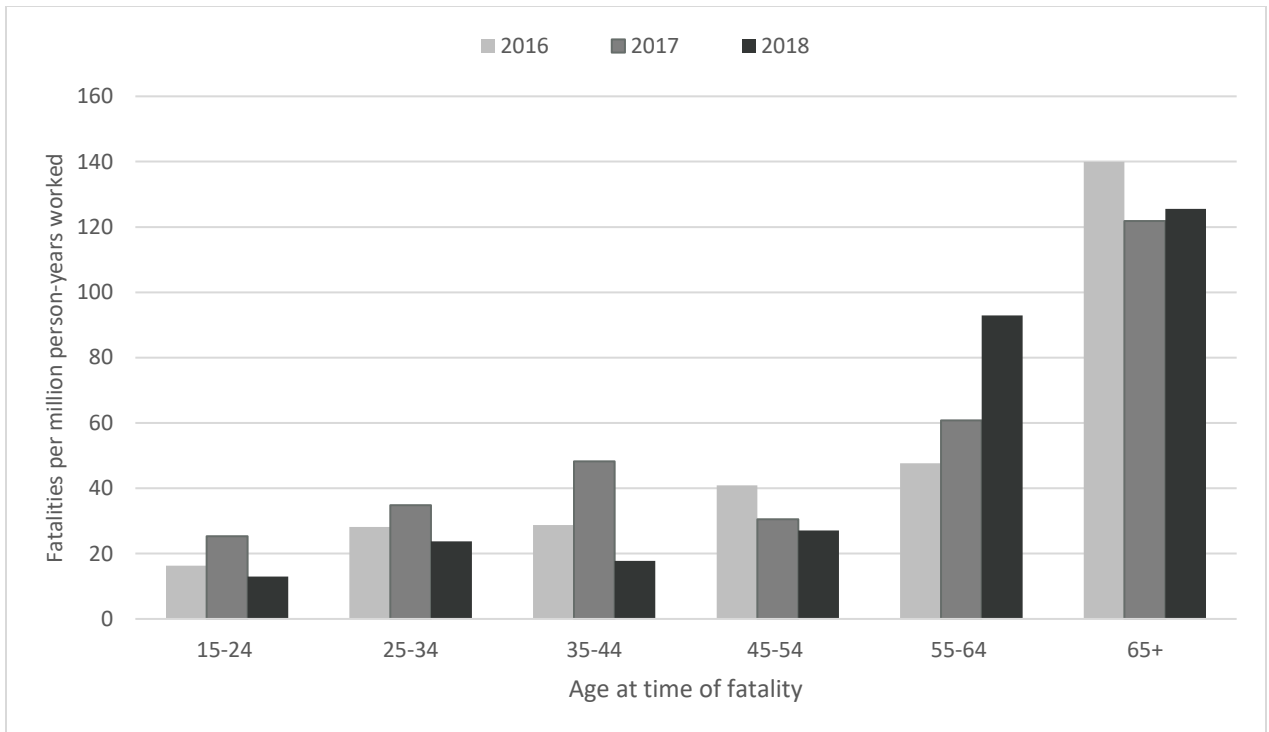


Figure 11: Occupational fatality frequency rates due to workplace traumatic incidents or motor vehicle incidents by age group, 2016-2018

Data Source: WCB Data, Prepared by OHS

In order to better reflect current workplace hazards, occupational disease fatalities are not represented in Figure 11.

- Workers aged 65 years and over continued to have the highest fatality frequency rate for all three years, followed by those aged 55 to 64 years.
- While young workers had the highest DI and LTC frequency rates, they have the lowest fatality rates over the last three years.

On average, from 2015 to 2018, the highest number of fatalities by occupation were (data not shown):

- Transport truck drivers – 12.8 per cent; and
- Welders and related machine operators – 5.3 per cent.

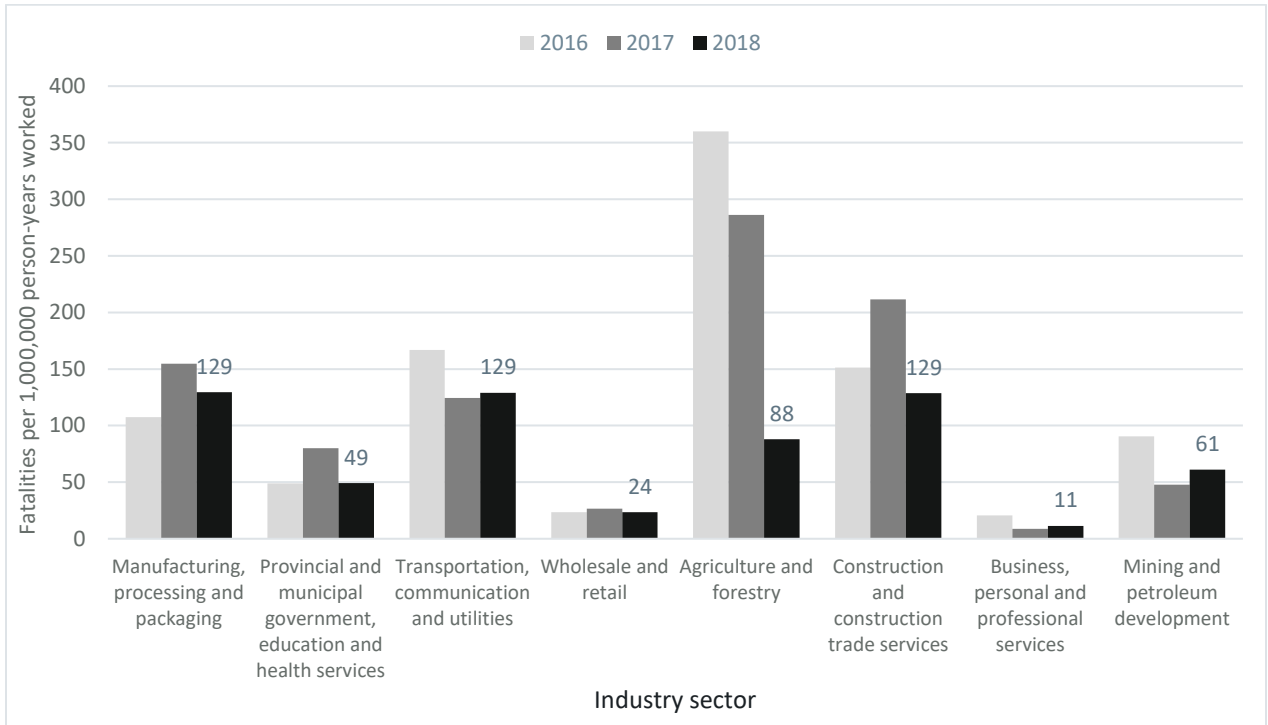


Figure 12: Fatality rate by major industry sector, 2016 to 2018

Data Source: WCB Data, Prepared by OHS

In 2018, the construction and construction trade services had the highest fatality rate. The largest increase in the fatality rate was in the business, personal and professional services sector, which also had the lowest fatality rate over the last three years.

Five sectors saw a decrease in their fatality rate between 2017 and 2018.

- The largest decline was in agriculture and forestry, followed by the construction and construction trade services sector.

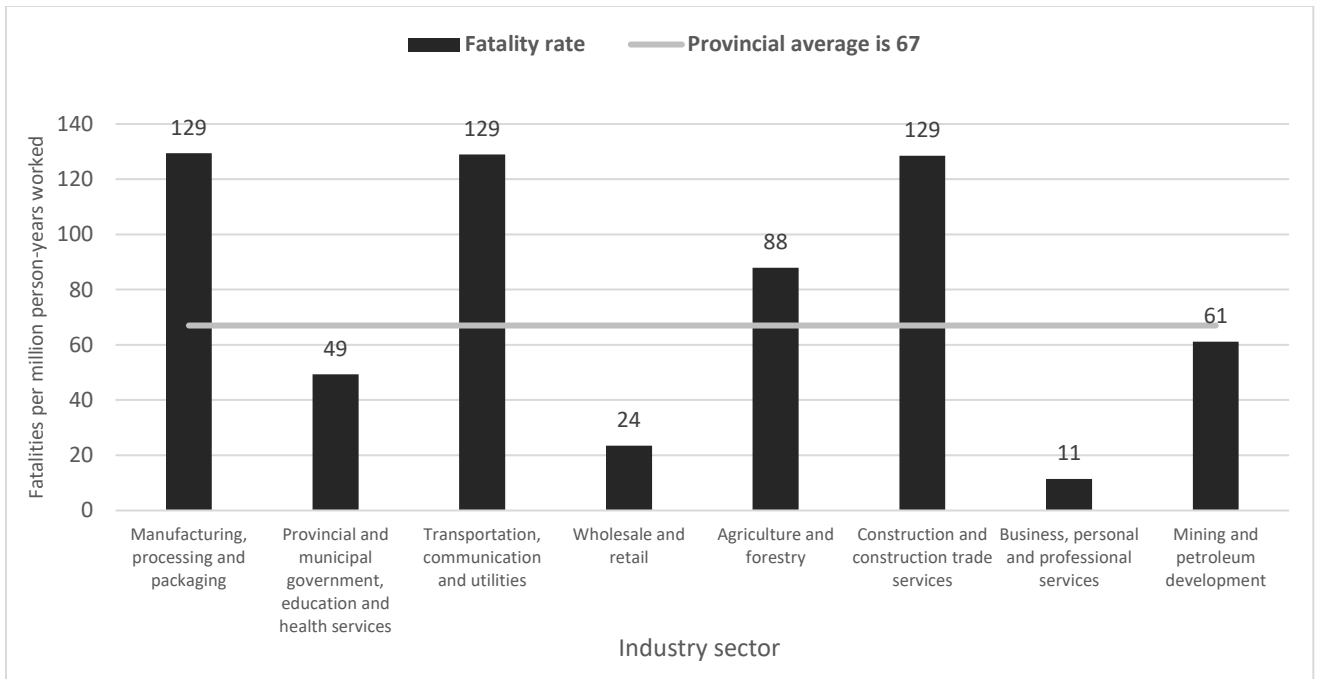


Figure 13: Occupational fatality rate by major industry sector, 2018

Data Source: WCB Data, Prepared by OHS

In 2018, fatality rates varied across industry sectors, which may be due to different types of work activities.

- The provincial fatality rate was 67 fatalities per million person-years worked.
- Rates were lower than the provincial average in the following four sectors: mining and petroleum development, provincial and municipal government, education and health services, wholesale and retail and business, personal and professional services.
- The following sectors had the highest fatality rates: construction and construction trade services, manufacturing, processing and packaging; and transportation, communication and utilities sectors.

Appendix A: Supplemental data

Table 6: Injury claims and claim rates by major industry sector, 2016 to 2018

Major industry sector	Measure	2016	2017	2018	Change 2016 to 2017 (%)	Change 2017 to 2018 (%)
Agriculture and forestry	Person-years	16,668	20,972	22,733	25.8↑	8.4↑
	Lost-time claims	454	475	484	4.6↑	1.9↑
	Lost-time claim rate	2.72	2.26	2.13	-16.8↓	-6.0↓
	Modified-work claims	351	391	404	11.4↑	3.3↑
	Disabling injury claims	575	622	659	8.2↑	5.9↑
	Disabling injury claim rate	3.45	2.97	2.90	-14.0↓	-2.3↓
Business, personal and professional services	Person-years	340,488	346,442	349,591	1.7↑	0.9↑
	Lost-time claims	3,364	3,589	3,687	6.7↑	2.7↑
	Lost-time claim rate	0.99	1.04	1.05	4.9↑	1.8↑
	Modified-work claims	3,985	4,353	4,313	9.0↑	-0.9↓
	Disabling injury claims	5,330	5,843	5,947	9.6↑	1.8↑
	Disabling injury claim rate	1.57	1.69	1.70	7.7↑	0.9↑
Construction and construction trade services	Person-years	343,838	330,736	334,515	-3.8↓	1.1↑
	Lost-time claims	3,937	3,966	4,197	0.7↑	5.8↑
	Lost-time claim rate	1.15	1.20	1.25	4.7↑	4.6↑
	Modified-work claims	7,440	7,703	7,735	3.5↑	0.4↑
	Disabling injury claims	8,885	9,178	9,309	3.3↑	1.4↑
	Disabling injury claim rate	2.58	2.78	2.78	7.4↑	0.3↑

Major industry sector	Measure	2016	2017	2018	Change 2016 to 2017 (%)	Change 2017 to 2018 (%)
Manufacturing, processing and packaging	Person-years	167,551	174,476	177,729	4.1↑	1.9↑
	Lost-time claims	1,793	2,004	2,160	11.8↑	7.8 ↑
	Lost-time claim rate	1.07	1.15	1.22	7.3↑	5.8 ↑
	Modified-work claims	4,754	5,051	5,164	6.2↑	2.2↑
	Disabling injury claims	5,253	5,641	5,859	7.4↑	3.9↑
	Disabling injury claim rate	3.14	3.23	3.30	3.1↑	2.0↑
Manufacturing, processing and packaging	Person-years	167,551	174,476	177,729	4.1↑	1.9↑
	Lost-time claims	1,793	2,004	2,160	11.8↑	7.8 ↑
	Lost-time claim rate	1.07	1.15	1.22	7.3↑	5.8 ↑
	Modified-work claims	4,754	5,051	5,164	6.2↑	2.2↑
	Disabling injury claims	5,253	5,641	5,859	7.4↑	3.9↑
	Disabling injury claim rate	3.14	3.23	3.30	3.1↑	2.0↑
Mining and petroleum development	Person-years	143,525	146,648	147,172	2.2↑	0.4↑
	Lost-time claims	458	592	561	29.3↑	-5.2↓
	Lost-time claim rate	0.32	0.40	0.38	26.5↑	-5.6↓
	Modified-work claims	1,120	1,673	1,716	49.4↑	2.6↑
	Disabling injury claims	1,252	1,835	1,865	46.6↑	1.6↑
	Disabling injury claim rate	0.87	1.25	1.27	43.4↑	1.3↑
Provincial and municipal government, education and health services	Person-years	346,586	350,074	365,106	1.0↑	4.3↑
	Lost-time claims	7,405	8,103	8,594	9.4↑	6.1↑
	Lost-time claim rate	2.14	2.31	2.35	8.3↑	1.7↑
	Modified-work claims	7,297	8,095	8,316	10.9↑	2.7↑

Major industry sector	Measure	2016	2017	2018	Change 2016 to 2017 (%)	Change 2017 to 2018 (%)
	Disabling injury claims	10,290	11,364	11,953	10.4↑	5.2↑
	Disabling injury claim rate	2.97	3.25	3.27	9.3↑	0.9↑
Transportation, communication and utilities	Person-years	137,836	136,595	147,310	-0.9↓	7.8↑
	Lost-time claims	2,001	2,277	2,589	13.8↑	13.7↑
	Lost-time claim rate	1.45	1.67	1.76	14.8↑	5.4↑
	Modified-work claims	3,185	3,434	3,647	7.8↑	6.2↑
	Disabling injury claims	3,864	4,320	4,700	11.8↑	8.8↑
	Disabling injury claim rate	2.80	3.16	3.19	12.8↑	0.9↑
Wholesale and retail	Person-years	340,068	340,225	340,249	0.0↑	0.0↑
	Lost-time claims	4,480	4,709	4,873	5.1↑	3.5↑
	Lost-time claim rate	1.32	1.38	1.43	5.1↑	3.5↑
	Modified-work claims	7,864	8,686	8,856	10.5↑	2.0↑
	Disabling injury claims	8,969	9,887	10,217	10.2↑	3.3↑
	Disabling injury claim rate	2.64	2.91	3.00	10.2↑	3.3↑

Data Source: WCB Data, Prepared by OHS

Table 7: Disabling injuries by gender and major industry sector, 2014 to 2018

Major Industry Sector	Female	%	Male	%	Total
Agriculture and forestry	167	25.3	492	74.7	659
Business, personal and professional services	3,298	55.5	2,649	44.5	5,947
Construction and construction trade services	851	9.1	8,456	90.9	9,307
Manufacturing, processing and packaging	995	17.0	4,864	83.0	5,859
Mining and petroleum development	142	7.6	1,723	92.4	1,865
Provincial and municipal government, education and health services	8,051	67.4	3,901	32.6	11,952
Transportation, communication and utilities	815	17.3	3,885	82.7	4,700
Wholesale and retail	3,886	38.0	6,329	62.0	10,215

Data Source: WCB Data, prepared by OHS

Table 8: Lost-time claims, injury frequency rates and employments by gender, 2018

Gender	Lost-time claims	% of lost-time claims	People in employment (thousands)	% in employment	Lost-time claim injury frequency rate
Men	16,211	59.0	1,264.7	54.3	1.59
Women	11,252	41.0	1,066.3	45.7	1.31
Total	27,463	100.0	2,331.0	100.0	1.46

Data Source: WCB Data, Statistics Canada's Labour Force Survey (2018 Historical Review); Prepared by OHS

Table 8: Lost-time claim injury frequency rates by gender and age groups, 2016 to 2018

Age Group	Male			Female		
	2016	2017	2018	2016	2017	2018
15 to 24 years	1.47	1.71	1.79	1.05	1.09	1.26
25 to 34 years	1.37	1.44	1.49	1.01	1.08	1.12
35 to 44 years	1.34	1.39	1.42	1.15	1.21	1.25
45 to 54 years	1.46	1.64	1.66	1.47	1.59	1.47
55 to 64 years	1.64	1.70	1.77	1.40	1.45	1.57
65 years and over	1.64	1.54	1.51	0.85	1.02	1.04
Overall	1.45	1.54	1.59	1.19	1.27	1.31

Data Source: WCB Data, Statistics Canada's Labour Force Survey (2018 Historical Review); Prepared by OHS

Table 10: Occupational fatalities (based on year of death) by type and age group, 2018

Age	Motor vehicle incidents		Workplace incidents		Occupational disease		Total	
	Counts	%	Counts	%	Counts	%	Counts	%
15 to 24 years	2	66.7	1	33.3	0	0.0	3	100.0
25 to 34 years	5	45.5	6	54.6	0	0.0	11	100.0
35 to 44 years	3	33.3	5	55.6	1	11.1	9	100.0
45 to 54 years	5	38.5	5	38.5	3	23.1	13	100.0
55 to 64 years	10	32.3	17	54.8	4	12.9	31	100.0
65 years and over	2	6.5	8	13.6	49	83.1	59	100.0
Total	27	21.4	42	33.3	57	45.2	126	100.0

Data Source: WCB Data, Prepared by OHS

Table 11: Occupational fatalities (based on year of death) by type, 2014 to 2018

Year	Motor vehicle incidents		Workplace incidents		Occupational disease		Total	
	Counts	%	Counts	%	Counts	%	Counts	%
2014	28	17.7	58	36.7	72	45.6	158	100.0
2015	24	18.8	38	29.7	66	51.6	128	100.0
2016	29	20.1	38	26.4	77	53.5	144	100.0
2017	33	19.8	48	28.7	86	51.5	167	100.0
2018	27	21.4	42	33.3	57	45.2	126	100.0
5-year total	141	19.5	224	31.0	358	49.5	723	100.0

Data Source: WCB Data, prepared by OHS

Table 12: Occupational fatalities (based on year of death) by major industry sector, 2014 to 2018

Major industry sector	2014	2015	2016	2017	2018	Total	%
Agriculture and forestry	3	0	6	6	2	17	2.4
Business, personal and professional services	5	7	7	3	4	26	3.6
Construction and construction trade services	68	41	52	70	43	274	37.9
Manufacturing, processing and packaging	18	20	18	27	23	106	14.7
Mining and petroleum development	21	5	13	7	9	55	7.6
Provincial and municipal government, education and health services	17	23	17	28	18	103	14.3
Transportation, communication and utilities	17	22	23	17	19	98	13.6
Wholesale and retail	9	10	8	9	8	44	6.1
Total	158	128	144	167	126	723	100.0

Data Source: WCB Data, prepared by OHS

Table 13: Occupational fatalities (based on year of acceptance) by type, 2014 to 2018

Year	Motor vehicle incidents		Workplace incidents		Occupational disease		Total	
	Counts	%	Counts	%	Counts	%	Counts	%
2014	29	17.2	59	34.9	81	47.9	169	100.0
2015	23	18.4	36	28.8	66	52.8	125	100.0
2016	29	20.1	38	26.4	77	53.5	144	100.0
2017	34	20.5	46	27.7	86	51.8	166	100.0
2018	30	18.5	56	34.6	76	46.9	162	100.0
5-year total	145	18.9	235	30.7	386	50.4	766	100.0

Data Source: WCB Data, prepared by OHS

Table 14: Occupational fatalities (based on year of acceptance) by major industry sector, 2014 to 2018

Major industry sector	2014	2015	2016	2017	2018	Total	%
Agriculture and forestry	3	0	5	5	4	17	2.2
Business, personal and professional services	5	7	5	6	4	27	3.5
Construction and construction trade services	71	42	51	65	59	288	37.6
Manufacturing, processing and packaging	21	19	19	28	28	115	15.0
Mining and petroleum development	16	9	14	5	12	56	7.3
Provincial and municipal government, education and health services	22	20	18	29	25	114	14.9
Transportation, communication and utilities	20	20	25	17	21	103	13.4
Wholesale and retail	11	8	7	11	9	46	6.0
Total	169	125	144	166	162	766	100.0

Data Source: WCB Data, prepared by OHS

Appendix B: OHS programs and initiatives

Alberta OHS works to prevent work-related injuries, illnesses and fatalities through development of a regulatory framework, compliance action and the provision of information to work site parties. For the most current information on the *Occupational Health and Safety Act*, Regulation and Code please see www.alberta.ca/ohs-act-regulation-code.aspx. For information on enforcement programs please see www.alberta.ca/ohs-compliance-enforcement.aspx.

In 2019, OHS introduced a prevention initiative that outlines priorities for the OHS system. The purpose is to facilitate system alignment and coordinated actions, and to evaluate and provide updates on the impacts of initiative actions. Read about the OHS prevention initiative at www.alberta.ca/occupational-health-and-safety-prevention-initiative.aspx.

OHS continues to encourage health and safety awareness for both employers and workers through educational and promotional materials available on the OHS resource portal at ohs-pubstore.labour.alberta.ca. Webinars are also available at www.alberta.ca/ohs-webinars.aspx.

OHS publishes OHS eNews to share news about resources and events. Go to www.alberta.ca/health-safety-eneews.aspx to subscribe to this monthly publication.

Appendix C: Terms and definitions

Disabling injury (DI) claims combine both the lost-time and modified-work concepts to produce an overall metric. This metric represents where an occupational injury or disease disables the worker, causing either time-lost from work or requiring their normal work duties to be modified.

The **DI rate** is calculated by dividing the number of DI claims by the person-year estimates and multiplying the result by 100. The DI rate represents the probability or risk of a disabling injury or disease to a worker over one year of work. The DI rate is similar to the LTC rate, but it covers a broader range of injuries, including those that do not require time away from work. The rate represents the number of claims per 100 person-years and includes claims made for both lost-time and modified-work.

The **DI/LTC/fatality frequency rates** presented in this report are calculated using different methodology and information than lost-time claim, disabling injury and fatality rates. Frequency rates are calculated by applying the number of injury or fatality claims from workers of a specific demographic to a proportion of WCB person-years worked figures. The proportion is determined using Labour Force Survey information on workers employed.

A **fatality** is the death of a worker caused by a work-related incident or exposure and accepted by WCB for compensation.

The **fatality rate** is calculated by dividing the number of accepted fatalities by the person-years estimate and multiplying the result by one million. The result is expressed as fatalities per million person-years. For the purpose of this report, fatalities that are under the jurisdiction of the Government of Canada are included in the calculation of the fatality rate.

A **lost-time claim (LTC)** is a claim for an occupational injury or disease, which disables the worker beyond the day of injury. All claims receiving reimbursement of full or partial lost wages, or payments for permanent loss of function are included.

The **LTC rate** is calculated by dividing the number of LTCs by the person-year estimate and multiplying the result by 100. The rate represents the probability or risk of injury or disease to a worker during a one-year work period.

A **modified-work claim** is a claim for an occupational injury or disease where altering normal work duties allows the worker to remain in the workplace without losing time. This includes claims where injured workers were helped back into the workplace with modified duties after time lost due to injury or disease.

The **person-years worked** are estimates calculated from wage and payroll data provided by account holders to WCB. One person-year is equivalent to one full-time worker working for one year and can be assumed to equal 2,000 hours worked.