

2017

Workplace Injury,  
Disease and  
Fatality Statistics  
Provincial Summary

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# 1. Introduction

Alberta Occupational Health and Safety (OHS) provides legislation, policy development and program delivery to ensure safe and healthy workplaces for Albertans. OHS partners with employers, industry safety associations, workers, unions and other key stakeholders to prevent worker injury, disease, and death. In addition, OHS educates stakeholders, raises public awareness, and conducts workplace inspections and serious incident investigations to obtain compliance with OHS legislation.

This report provides statistical information of workplace injuries, diseases and fatalities in Alberta for 2017. It contains highlights, tables and graphical representations of the results. The 2017 Workers' Compensation Board-Alberta (WCB) data and results of the Labour Force Survey conducted by Statistics Canada are used in this analysis.

These statistics and those that may be released by WCB will not be identical due to methodological and coverage differences. The most recent five-year snapshot of WCB data is used in the analysis which may result in historical data in this report differing from previous reports.

Further considerations:

- Due to an administrative process, there may be differences between the year when a fatality claim was accepted by the WCB and the year when the worker died. This report provides results based on both approaches.
- Throughout this report, percentages may not be equal to 100 due to rounding.

## 2. Highlights

### 2.1 Injury claims, injury rates and person-years (Table 1)

- The provincial lost-time claim rate increased by 3.8 per cent to 1.37 from 1.32 per 100 person-years worked in 2016.
- The provincial disabling injury rate increased by 6.9 per cent to 2.62 from 2.45 per 100 person-years worked in 2016.

- The number of lost-time claims increased by 5.7 per cent; modified work claims increased by 8.1 per cent; and the combined measure of disabling injury claims increased by 8.6 per cent from 2016. The highest increase in disabling injuries was observed in the Public sector, followed by Wholesale and Retail sector.
- Estimated person-years for Alberta increased in 2017 by 1.4 per cent from 2016.

## 2.2 Major sectors (Table 2)

- Estimated person-years for Alberta increased in all major sectors, except for:
  - Construction and Construction Trade Services; and
  - Wholesale and Retail.
- The highest increase in disabling injuries was in the Public sector, followed by Wholesale and Retail sector.
- Both lost-time claim and disabling injury rates for all major sectors increased from 2016 to 2017, except Agriculture and Forestry which decreased 17.4 per cent and 14.0 per cent, respectively
- The Mining and Petroleum Development sector had the lowest lost-time claim rate at 0.36, while Provincial and Municipal Government, Education and Health Services had the highest at 2.24.
- Manufacturing, Processing and Packaging had the highest disabling injury rate at 3.24 in 2017 and Mining and Petroleum Development had the lowest disabling injury rate at 1.18.
- Injury rates (i.e., lost-time claim rate and disabling injury rate) for Business, Personal and Professional Services and Mining and Petroleum Development sector have been below the provincial average for the last three years.

## 2.3 Demographics (Table 3 – 12)

- Workers aged 45 to 54 had the highest lost-time injury frequency rate at 1.56 in 2017. In contrast, workers aged 55 to 64 had the highest lost-time injury frequency rate in 2016. Lost-time injury frequency rate for all workers regardless of their age groups increased in 2017 (see Table 3).
- Young workers (15 to 24 years old) had the highest disabling injury frequency rate in the last two years (see Table 4).
- Men were at a higher risk of getting injured than women. Men had lost time and disabling injury frequency rates, at 1.49 and 3.11, respectively in 2017; while women had a lost-time injury frequency rate of 1.23 and a disabling injury frequency rate of 2.03 (see Tables 5-6).

- Workers aged 65 years and over had the highest number of fatalities and fatality frequency rate in the last two years (see Tables 7-10).
- Men were at a higher risk of experiencing an occupational fatality than women (see Tables 11-12).

## 2.4 Characteristics of injuries and diseases (Table 13 – 16)

- Bodily reaction or exertion was the most frequently cited cause of disabling injury at 45.3 per cent (see Table 13).
- The leading nature of disabling injury was traumatic injuries and disorders at 93.8 per cent (see Table 14).
- The trunk was the most commonly injured body part, accounting for 36.8 per cent of the disabling injury claims (see Table 15).
- The two primary sources of disabling injuries were persons, plants, animal and minerals (29.1 per cent), and structures and surfaces (18.2 per cent) (see Table 16).

## 2.5 Occupational fatalities – by year of acceptance (Figure 3 - 4)

- The number of fatality claims accepted by WCB increased by 15.2 per cent from 144 in 2016, to 166 in 2017 (see Figure 3). More than one third of them were reported by Construction and Construction Trade Services sector.
- The provincial fatality rate increased by 14.1 per cent from 78 per million person-years worked in 2016 to 89 per million person-years worked in 2017.
- Among the major sectors, Agriculture and Forestry observed the highest fatality rate in 2017 (see Figure 4).

## 2.6 Occupational fatalities – by year of death (Figure 5 – 6)

- In 2017 134 workers died. This is a decrease of 5.6 per cent from 142 in 2016 (see Figure 5). This is also different from the trend of occupational fatalities by year of acceptance, which increased in 2017.
- The provincial fatality rate, by year of death, decreased by 6.5 per cent in 2017, from 77 per million person-years worked in 2016 to 72 per million person-years worked in 2017 (see Figure 5).

## 3. Tables, Charts and Figures

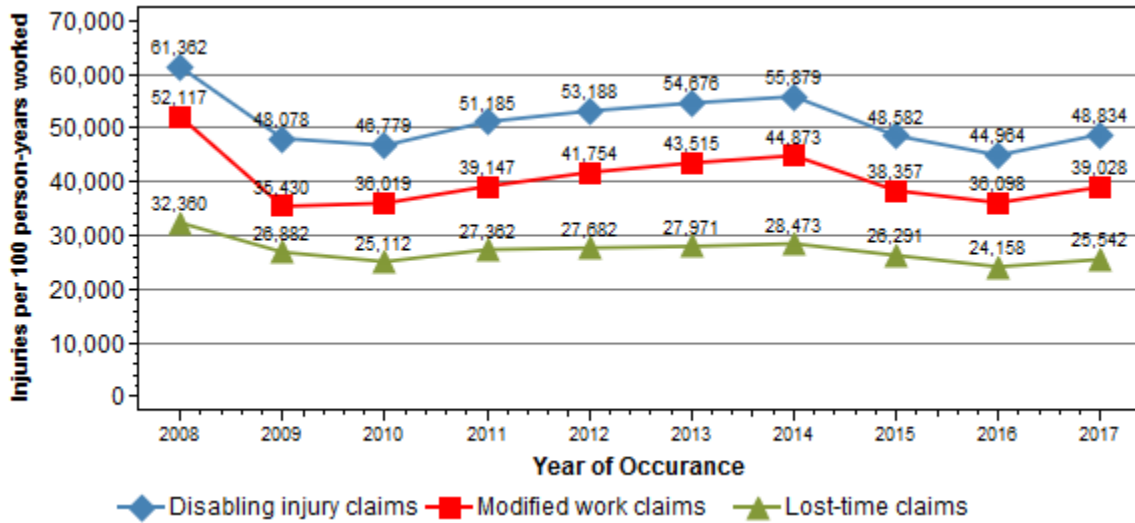
### 3.1 Injury claims, injury rates and person-years

Table 1 – Injury Claims, Rates and Person-years: 2015 to 2017

	2015	2016	2017	Change 2015 to 2016 (%)	Change 2016 to 2017 (%)
Person-years	1,988,633	1,836,559	1,862,169	-7.6↓	1.4↑
Lost-time Claims	26,291	24,158	25,542	-8.1↓	5.7↑
Lost-time Claim Rate	1.32	1.32	1.37	0.0	3.8↑
Modified Work Claims	38,357	36,098	39,028	-5.9↓	8.1↑
Disabling Injury Claims	48,582	44,964	48,834	-7.4↓	8.6↑
Disabling Injury Claim Rate	2.44	2.45	2.62	0.4↑	6.9↑

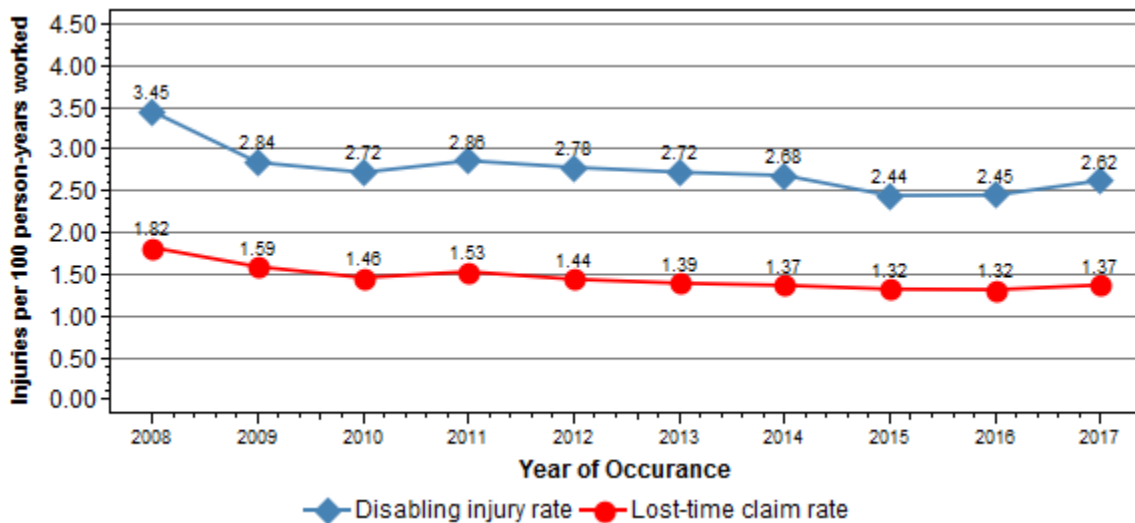
- Workplace injuries in Alberta increased in 2017. A total of 25,542 lost-time claims were identified by WCB, an increase of 5.7 per cent from 2016. Modified work claims increased by 8.1 per cent, from 36,098 in 2016 to 39,028 in 2017. As a result, disabling injury claims increased to 48,834, 8.6 per cent higher than in 2016.
- The person-years worked estimates increased by 1.4 percent to 1,862,169 between 2016 and 2017.

Figure 1 - Injury Claims, 2008 to 2017



- Between 2008 and 2010, both disabling injury and lost-time claims showed a downward trend, while the number of modified claims slightly increased by 1.7 per cent between 2009 and 2010.
- Over the period between 2010 and 2014, all injury claims showed an upward trend. The trend reversed between 2014 and 2016.
- All injury claims increased in 2017.

Figure 2- Injury Rates, 2008 to 2017



- The disabling injury and lost-time claim rates increased in 2017, but were the third lowest observed in the past ten years.



## 3.2 Major sectors

Table 2- Injury Claims and Claim Rates, by Major Industry Sector, 2016 to 2017

Major Industry Sector	Measure	2016	2017	Change 2016 to 2017 (%)
Agriculture and Forestry	Person-years	16,668	20,834	25.0↑
	Lost-time Claims	450	465	3.3↑
	Lost-time Claim Rate	2.70	2.23	-17.4↓
	Modified Work Claims	349	384	10.0↑
	Disabling Injury Claims	572	615	7.5↑
	Disabling Injury Claim Rate	3.43	2.95	-14.0↓
Business, Personal and Professional Services	Person-years	340,488	340,767	0.1↑
	Lost-time Claims	3,345	3,539	5.8↑
	Lost-time Claim Rate	0.98	1.04	6.1↑
	Modified Work Claims	3,971	4,288	8.0↑
	Disabling Injury Claims	5,314	5,791	9.0↑
	Disabling Injury Claim Rate	1.56	1.70	9.0↑
Construction and Construction Trade Services	Person-years	343,269	336,326	-2.0↓
	Lost-time Claims	3,876	3,858	-0.5↓
	Lost-time Claim Rate	1.13	1.15	1.8↑
	Modified Work Claims	7,431	7,592	2.2↑
	Disabling Injury Claims	8,860	9,089	2.6↑
	Disabling Injury Claim Rate	2.58	2.70	4.7↑
Manufacturing, Processing and Packaging	Person-years	168,121	173,017	2.9↑
	Lost-time Claims	1,761	1,939	10.1↑
	Lost-time Claim Rate	1.05	1.12	6.7↑

	Modified Work Claims	4,755	5,007	5.3↑
	Disabling Injury Claims	5,251	5,601	6.7↑
	Disabling Injury Claim Rate	3.12	3.24	3.8↑
Mining and Petroleum Development	Person-years	143,525	156,261	8.9↑
	Lost-time Claims	437	565	29.3↑
	Lost-time Claim Rate	0.30	0.36	20.0↑
	Modified Work Claims	1,117	1,685	50.9↑
	Disabling Injury Claims	1,247	1,848	48.2↑
	Disabling Injury Claim Rate	0.87	1.18	35.6↑
Provincial and Municipal Government, Education and Health Services	Person-years	346,586	354,659	2.3↑
	Lost-time Claims	7,353	7,950	8.1↑
	Lost-time Claim Rate	2.12	2.24	5.7↑
	Modified Work Claims	7,268	7,888	8.5↑
	Disabling Injury Claims	10,245	11,225	9.6↑
	Disabling Injury Claim Rate	2.96	3.17	7.1↑
Transportation, Communication and Utilities	Person-years	137,836	143,051	3.8↑
	Lost-time Claims	1,980	2,228	12.5↑
	Lost-time Claim Rate	1.44	1.56	8.3↑
	Modified Work Claims	3,177	3,397	6.9↑
	Disabling Injury Claims	3,855	4,290	11.3↑
	Disabling Injury Claim Rate	2.80	3.00	7.1↑
Wholesale and Retail	Person-years	340,068	337,253	-0.8↓
	Lost-time Claims	4,461	4,630	3.8↑
	Lost-time Claim Rate	1.31	1.37	4.6↑

	Modified Work Claims	7,854	8,602	9.5↑
	Disabling Injury Claims	8,962	9,826	9.6↑
	Disabling Injury Claim Rate	2.64	2.91	10.2↑

- In 2017, lost-time claim rates increased in all major industry sectors, except for Agriculture and Forestry.
- Mining and Petroleum Development continued to have the lowest lost-time claim rate in 2017 at 0.36. Provincial and Municipal Government, Education and Health Services had the highest lost-time claim rate in 2017 at 2.24 per 100 person-years worked, closely followed by Agriculture and Forestry at 2.23 per 100 person-years worked.
- The disabling injury rate declined in Agriculture and Forestry in 2017, while it increased in all other major industry sectors.
- The Manufacturing, Processing and Packaging sector continued to have the highest disabling injury rate at 3.24 per 100 person-year worked and the Mining and Petroleum Development sector continued to have the lowest at 1.18 per 100 person-years worked.

### 3.3 Demographics

**Table 3 - Lost-Time Claims, Injury Frequency Rate and Employment by Age Group, 2017**

Age	Lost-time claims	% of lost-time claims	People in employment (thousands)	% in employment	Lost-time injury frequency rate
15 to 24 years	3,307	12.9%	293.8	12.8%	1.38
25 to 34 years	5,808	22.7%	569.1	24.9%	1.25
35 to 44 years	5,589	21.9%	539.5	23.6%	1.27
45 to 54 years	5,660	22.2%	446.4	19.5%	1.56
55 to 64 years	4,248	16.6%	346.7	15.2%	1.50
65 years and over	924	3.6%	91.5	4.0%	1.24
Other	6	0.0%	N/A	N/A	N/A
Total	25,542	100.0%	2,287.0	100.0%	1.37

- The risk of occupational injury and disease varies by age. Adult workers (45 to 54 years old) had the highest lost-time injury frequency rate in 2017, at 1.56 per 100 person-years

worked. In 2016, older workers (55 to 64 years old) had the highest lost-time injury frequency rate.

**Table 4 - Disabling Injury Claims, Injury Frequency Rate and Employment by Age Group, 2017**

Age	Disabling injury claims	% of disabling injury claims	People in employment (thousands)	% in employment	Disabling injury frequency rate
15 to 24 years	7,159	14.7%	293.8	12.8%	2.99
25 to 34 years	12,197	25.0%	569.1	24.9%	2.63
35 to 44 years	10,915	22.4%	539.5	23.6%	2.48
45 to 54 years	9,974	20.4%	446.4	19.5%	2.74
55 to 64 years	7,238	14.8%	346.7	15.2%	2.56
65 years and over	1,342	2.7%	91.5	4.0%	1.80
Other	9	0.0%	N/A	N/A	N/A
Total	48,834	100.0%	2,287.0	100.0%	2.62

- In 2017, young workers (15-24 years old) continued to have the highest disabling injury frequency rates at 2.99 per 100 person-years worked.

**Table 5 - Lost-Time Claims, Injury Frequency Rate and Employment by Gender, 2017**

Gender	Lost-time claims	% of lost-time claims	People in employment (thousands)	% in employment	Lost-time claim injury frequency rate
Men	15,110	59.2%	1,247.6	54.6%	1.49
Women	10,432	40.8%	1,039.4	45.4%	1.23
Total	25,542	100.0%	2,287.0	100.0%	1.37

- The risk of occupational injury and disease varied by gender. Men had the higher lost-time injury frequency rate than women in 2017, at 1.49 per 100 person-years worked.

**Table 6 - Disabling Injury Claims, Injury Frequency Rates and Employment by Gender, 2017**

Gender	Disabling injury claims	% of disabling injury claims	People in employment (thousands)	% in employment	Disabling injury frequency rate
Men	31,612	64.7%	1,247.6	54.6%	3.11
Women	17,218	35.3%	1,039.4	45.4%	2.03
Unspecified	4	0.0%	N/A	N/A	N/A
Total	48,834	100.0%	2,287.0	100.0%	2.62

- In 2017, men had a disabling injury frequency rate of 3.11 per 100 person-years worked and women had a disabling injury frequency rate of 2.03 per 100 person-years worked, indicating men were more likely to be at higher risk of getting injured compared to women.

**Table 7 - Occupational Fatalities (based on year of acceptance) by Type and Age group, 2017**

Age	Motor Vehicle Incidents		Workplace Incidents		Occupational Disease		Total	
	Counts	%	Counts	%	Counts	%	Counts	%
15 to 24 years	3	60.0%	2	40.0%	0	0.0%	5	100.0%
25 to 34 years	6	37.5%	10	62.5%	0	0.0%	16	100.0%
35 to 44 years	13	65.0%	7	35.0%	0	0.0%	20	100.0%
45 to 54 years	2	15.4%	10	76.9%	1	7.7%	13	100.0%
55 to 64 years	7	26.9%	11	42.3%	8	30.8%	26	100.0%
65 years and over	2	2.4%	6	7.1%	77	90.6%	85	100.0%
Other	1	100.0%	0	0.0%	0	0.0%	1	100.0%
Total	34	20.5%	46	27.7%	86	51.8%	166	100.0%

- Based on year of acceptance, workers aged 65 years and over experienced highest number of fatalities in 2017. The largest proportion (90.6 per cent) of the fatality incidents in this age group of workers were occupational disease-related, usually diagnosed many years after the initial or crucial exposure to the toxic substance.

**Table 8 - Occupational Fatalities (based on year of death) by Type and Age group, 2017**

Age	Motor Vehicle Incidents		Workplace Incidents		Occupational Disease		Total	
	Counts	%	Counts	%	Counts	%	Counts	%
15 to 24 years	3	60.0%	2	40.0%	0	0.0%	5	100.0%
25 to 34 years	5	33.3%	10	66.7%	0	0.0%	15	100.0%
35 to 44 years	13	76.5%	4	23.5%	0	0.0%	17	100.0%
45 to 54 years	1	12.5%	7	87.5%	0	0.0%	8	100.0%
55 to 64 years	7	35.0%	8	40.0%	5	25.0%	20	100.0%
65 years and over	1	1.5%	4	5.9%	63	92.6%	68	100.0%
Other	1	100.0%	0	0.0%	0	0.0%	1	100.0%
Total	31	23.1%	35	26.1%	68	50.7%	134	100.0%

- Based on year of death, workers aged 65 years and over experienced highest number of fatalities in 2017, and 92.6 per cent of the deaths were due to occupational disease.

**Table 9 - Occupational Fatalities (based on year of acceptance) and Employment by Age Group, 2017**

Age	Occupational fatalities	% of occupational fatalities	People in employment (thousands)	% in employment	Fatality frequency rate
15 to 24 years	5	3.0%	293.8	12.8%	21
25 to 34 years	16	9.6%	569.1	24.9%	35
35 to 44 years	20	12.0%	539.5	23.6%	46

45 to 54 years	13	7.8%	446.4	19.5%	36
55 to 64 years	26	15.7%	346.7	15.2%	92
65 years and over	85	51.2%	91.5	4.0%	1,141
Other	1	0.6%	N/A	N/A	N/A
Total	166	100.0%	2,287.0	100.0%	89

- Based on the year of acceptance, workers aged 65 years and over had the highest fatality frequency rate in 2017, followed by those aged 55 to 64 years. Workers aged 15 to 24 years had the lowest fatality frequency rate in this reporting year.

**Table 10 - Occupational Fatalities (based on year of death) and Employment by Age Group, 2017**

Age	Occupational fatalities	% of occupational fatalities	People in employment (thousands)	% in employment	Fatality frequency rate
15 to 24 years	5	3.7%	293.8	12.8%	21
25 to 34 years	15	11.2%	569.1	24.9%	32
35 to 44 years	17	12.7%	539.5	23.6%	39
45 to 54 years	8	6.0%	446.4	19.5%	22
55 to 64 years	20	14.9%	346.7	15.2%	71
65 years and over	68	50.7%	91.5	4.0%	913
Other	1	0.7%	0	0	0
Total	134	100.0%	2,287.0	100.0%	72

- Based on year of death, workers aged 65 years and over continued to have the highest fatality frequency rate in 2017.

**Table 11 - Occupational Fatalities (based on year of acceptance) and Employment by Gender, 2017**

Gender	Occupational fatalities	% of occupational fatalities	People in employment (thousands)	% in employment	Fatality frequency rate
Men	158	95.2%	1,247.6	54.6%	156
Women	8	4.8%	1,039.4	45.4%	9
Total	166	100.0%	2,287.0	100.0%	89

- Based on year of acceptance, men were at higher risk of occupational fatalities than women in 2017.

**Table 12 - Occupational Fatalities (based on year of death) and Employment by Gender, 2017**

Gender	Occupational fatalities	% of occupational fatalities	People in employment (thousands)	% in employment	Fatality frequency rate
Men	127	94.8%	1,247.6	54.6%	125
Women	7	5.2%	1,039.4	45.4%	8
Total	134	100.0%	2,287.0	100.0%	72

- Based on year of death, men continued to be at higher risk of occupational fatalities than women in 2017.

### 3.4 Characteristics of injuries and diseases

**Table 13 - Type of Event or Exposure, 2017**

Type of Event or Exposure	Lost-Time Claims	%	Disabling Injury Claims	%
Bodily Reaction or Exertion	10,471	41.0%	22,114	45.3%
Overexertion	5,038	19.7%	10,759	22.0%
Bodily Reaction	3,125	12.2%	6,299	12.9%
Repetitive Motion	966	3.8%	2,348	4.8%



Other Bodily Reaction/Exertion	1,342	5.3%	2,708	5.5%
Contact with Objects or Equipment	5,262	20.6%	11,745	24.1%
Struck by Object	2,689	10.5%	5,735	11.7%
Struck against Object	1,047	4.1%	2,138	4.4%
Caught in Object	815	3.2%	2,238	4.6%
Rubbed or Abraded	191	0.7%	394	0.8%
Other Contact with Object/Equipment	520	2.0%	1,240	2.5%
Falls	5,242	20.5%	8,613	17.6%
Fall on Same Level	3,547	13.9%	5,949	12.2%
Fall to Lower Level	1,466	5.7%	2,232	4.6%
Other Falls	229	0.9%	432	0.9%
Exposure to Harmful Substances	1,873	7.3%	2,410	4.9%
Transportation Accidents	1,361	5.3%	2,034	4.2%
Assaults and Violent Acts	1,107	4.3%	1,499	3.1%
Assaults and Violent Acts by Person(s)	714	2.8%	949	1.9%
Other Assaults and Violent Acts	393	1.5%	550	1.1%
Fires and Explosions	48	0.2%	64	0.1%
Other Events or Exposures	143	0.6%	301	0.6%
Type of Event - Unknown	35	0.1%	54	0.1%
Total	25,542	100.0%	48,834	100.0%

- In 2017, 'bodily reaction or exertion' was the most common cause for both lost-time and disabling injury claims in Alberta, and accounted for 41.0 per cent of the lost-time claims and 45.3 per cent of the disabling injury claims.

**Table 14 - Nature of Injury or Disease, 2017**

Nature of Injury	Lost-Time Claims	%	Disabling Injury Claims	%
Traumatic Injuries and Disorders	23,391	91.6%	45,792	93.8%
Sprains/Strain	12,459	48.8%	25,630	52.5%
Superficial Wounds	2,391	9.4%	5,126	10.5%
Fractures and Dislocations	2,462	9.6%	3,707	7.6%
Open Wounds	1,810	7.1%	4,178	8.6%
Burns	612	2.4%	953	2.0%
Other Traumatic Injuries and Disorders	3,657	14.3%	6,198	12.7%
Systemic Diseases and Disorders	1,446	5.7%	2,221	4.5%
Infectious and Parasitic Diseases	80	0.3%	83	0.2%
Neoplasms, Tumors and Cancer	17	0.1%	17	0.0%
Abnormal Symptoms, Conditions and Disorders	140	0.5%	192	0.4%
Multiple Diseases, Conditions and Disorders	5	0.0%	5	0.0%
Other Diseases, Conditions and Disorders	429	1.7%	456	0.9%
Nature of Injury - Unknown	34	0.1%	68	0.1%
<b>Total</b>	<b>25,542</b>	<b>100.0%</b>	<b>48,834</b>	<b>100.0%</b>

- In 2017, 'traumatic injuries and disorders' continued to be the leading nature of injury, accounting for 91.6 per cent of the lost-time claims and 93.8 per cent of the disabling injury claims.
- The three most common traumatic injuries and disorders in 2017 were:
  - Sprains/strain;
  - Other traumatic injuries and disorders; and
  - Superficial wounds.

**Table 15 - Part of Body Injured, 2017**

Part of Body Injured	Lost-Time Claims	%	Disabling Injury Claims	%
Trunk	9,285	36.4%	17,994	36.8%
Back, Including Spine, Spinal Cord	5,554	21.7%	10,505	21.5%
Other Trunk	3,731	14.6%	7,489	15.3%
Upper Extremities	5,293	20.7%	13,033	26.7%
Finger(s), Fingernail(s)	1,714	6.7%	4,616	9.5%
Wrist(s) and Hand(s) Except Finger(s)	2,152	8.4%	5,135	10.5%
Other Upper Extremities	1,427	5.6%	3,282	6.7%
Lower Extremities	5,042	19.7%	9,362	19.2%
Leg(s)	2,488	9.7%	4,667	9.6%
Ankle(s) and Foot (Feet) Except Toes	2,278	8.9%	4,231	8.7%
Other Lower Extremities	276	1.1%	464	1.0%
Head	2,720	10.6%	3,700	7.6%
Other Head Parts	2,250	8.8%	2,914	6.0%
Eye(s)	470	1.8%	786	1.6%
Multiple Body Parts	1,625	6.4%	2,613	5.4%
Neck, Including Throat	674	2.6%	1,142	2.3%
Body Systems	850	3.3%	920	1.9%
Part of Body - Unknown	53	0.2%	70	0.1%
<b>Total</b>	<b>25,542</b>	<b>100.0%</b>	<b>48,834</b>	<b>100.0%</b>

- The 'trunk' was the most commonly injured body part, accounting for 36.4 per cent of the lost-time claims and 36.8 per cent of the disabling injury claims in 2017. This was followed by injuries to the 'upper extremities', 26.7 per cent of the disabling injury claims, and 'lower extremities', 19.2 per cent of disabling injury claims.

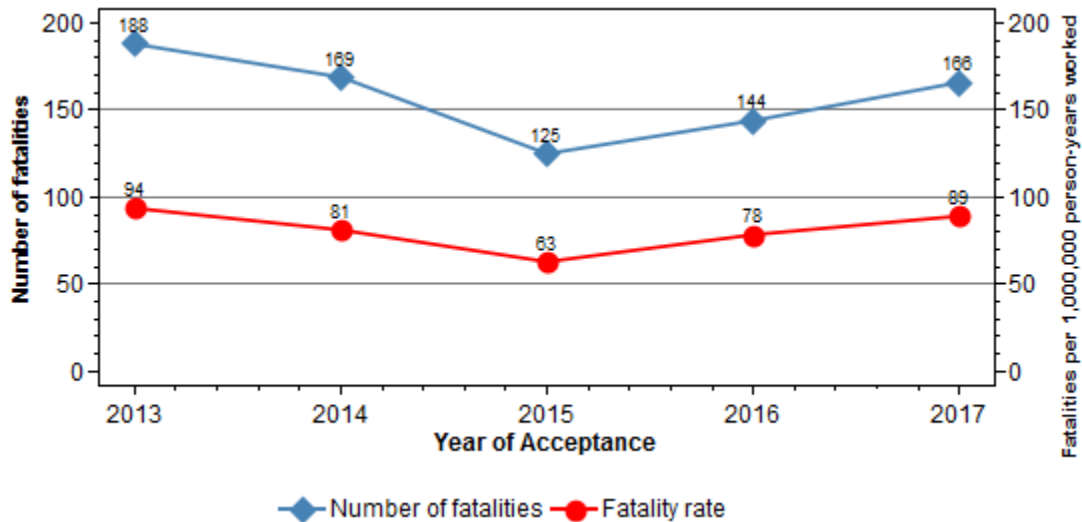
**Table 16 - Source of Injury or Disease, 2017**

Source of Injury	Lost-Time Claims	%	Disabling Injury Claims	%
Persons, Plants, Animals and Minerals	7,881	30.9%	14,204	29.1%
Person-Injured or Ill Worker	4,701	18.4%	9,653	19.8%
Person-Other Than Injured or Ill Worker	2,134	8.4%	3,034	6.2%
Minerals - Metallic or Non-metallic (except fuel)	85	0.3%	180	0.4%
Other Persons, Plants, Animals and Minerals	961	3.8%	1,337	2.7%
Structures and Surfaces	5,328	20.9%	8,905	18.2%
Parts and Materials	2,145	8.4%	5,477	11.2%
Containers	2,345	9.2%	5,221	10.7%
Vehicles	2,149	8.4%	3,697	7.6%
Tools, Instruments and Equipment	1,881	7.4%	4,295	8.8%
Hand Tools - Non Powered	795	3.1%	2,073	4.2%
Hand Tools - Powered	174	0.7%	433	0.9%
Other Tools, Instruments and Equipment	912	3.6%	1,789	3.7%
Machinery	1,041	4.1%	2,157	4.4%
Furniture and Fixtures	899	3.5%	1,623	3.3%
Chemicals and Chemical Products	275	1.1%	438	0.9%
Other Sources	1,548	6.1%	2,741	5.6%
Source of Injury - Unknown	50	0.2%	76	0.2%
<b>Total</b>	<b>25,542</b>	<b>100.0%</b>	<b>48,834</b>	<b>100.0%</b>

- The two primary sources of disabling injuries were ‘persons, plants, animal and minerals’ (291 per cent), and ‘structures and surfaces’ (18.2 per cent). These two sources also accounted for 30.9 per cent and 20.9 per cent of lost-time claims, respectively.

### 3.5 Occupational fatalities - by year of acceptance

Figure 3 - Occupational Fatality Claim and Fatality Rate by Year of Acceptance, 2013 to 2017



- The number of fatality claims increased by 15.2 per cent from 144 in 2016 to 166 in 2017.
- The estimated person-years in 2017 increased by 1.4 per cent from 1,836,559 in 2016 to 1,862,169 (see **Error! Reference source not found.**).
- The estimated occupational fatality rate based on year of acceptance in 2017 was 89 fatalities per million person-years worked, a 14.1 per cent increase from 78 in 2016.
- The provincial average fatality rate over the past five years was 81 fatalities per million person-years worked with a downward trend between 2013 and 2015.

**Table 17 - Occupational Fatalities by Year of Acceptance and Type, 2013 to 2017**

Year	Motor Vehicle Incidents		Workplace Incidents		Occupational Disease		Total	
	Counts	%	Counts	%	Counts	%	Counts	%
2013	37	19.7%	52	27.7%	99	52.7%	188	100.0%
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%
5-year total	152	19.2%	231	29.2%	409	51.6%	792	100.0%

- In 2017, occupational diseases continued to be the leading cause of worker death, accounting for 51.8 per cent of all occupational fatality claims, followed by ‘workplace incidents’ at 27.7 per cent.
- Occupational disease and workplace incidents were the two major contributing factors to the increase of fatalities from 2016 to 2017.

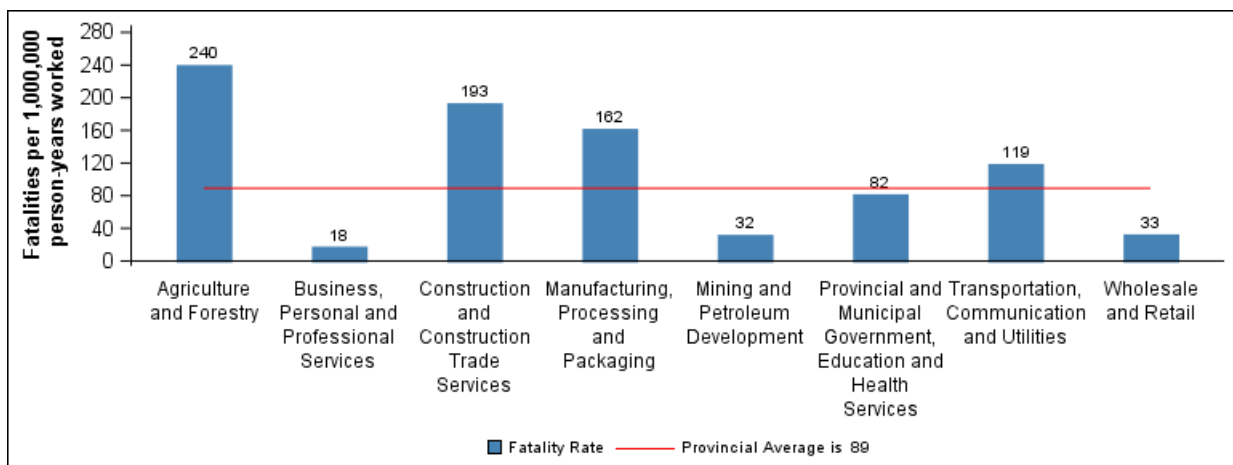
**Table 18 - Occupational Fatalities by Year of Acceptance and Major Industry Sector, 2013 to 2017**

Major Industry Sector	2013	2014	2015	2016	2017	Total	Percentage
Agriculture and Forestry	1	3	0	5	5	14	1.8%
Business, Personal and Professional Services	6	5	7	5	6	29	3.7%
Construction and Construction Trade Services	72	71	42	51	65	301	38.0%
Manufacturing, Processing and Packaging	33	21	19	19	28	120	15.2%
Mining and Petroleum Development	18	16	9	14	5	62	7.8%
Provincial and Municipal Government, Education and Health Services	26	21	19	15	29	110	13.9%

Transportation, Communication and Utilities	23	20	20	25	17	105	13.3%
Wholesale and Retail	5	11	8	7	11	42	5.3%
Unspecified	4	1	1	3	0	9	1.1%
Total	188	169	125	144	166	792	100.0%

- The Construction and Construction Trade sector recorded the most fatality counts each year for the past five years. It accounted for 38 per cent of overall fatalities over the five-year period. In 2017 there were 65 (39.7 per cent) fatality claims accepted in this industry sector.

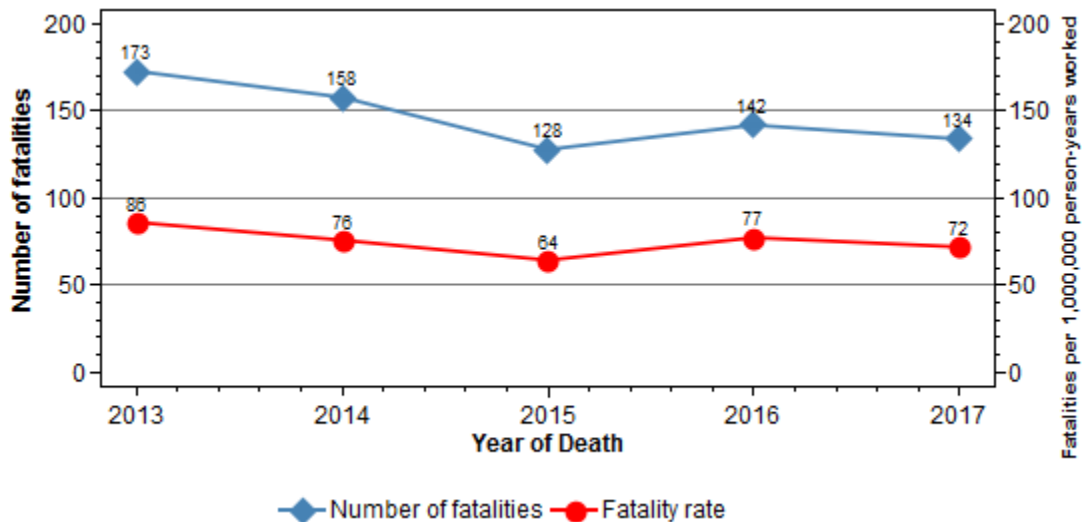
**Figure 4 - Occupational Fatality Rate (based on year of acceptance) by Major Industry Sector, 2017**



- Agriculture and Forestry had the highest fatality rate at 240 deaths per a million person-years worked compared to all major industry sectors.
- Fatality rates were lower than the provincial average in the following four major sectors:
  - Business, Personal and Professional Services;
  - Mining and Petroleum Development;
  - Wholesale and Retail; and
  - Provincial and Municipal Government, Education and Health Services.

### 3.6 Occupational fatalities - by year of death

Figure 5 - Occupational Fatality Claim and Fatality Rate by Year of Death, 2013 to 2017<sup>1</sup>



- Based on the year of death, the number of fatality claims decreased by 5.6 per cent in 2017 from 142 in 2016.
- Based on year of death, the provincial fatality rate decreased by 6.5 per cent in 2017 from 77 in 2016.

Table 19 - Occupational Fatalities (based on year of death) by Type, 2013 to 2017

Year	Motor Vehicle Incidents		Workplace Incidents		Occupational Disease		Total	
	Counts	%	Counts	%	Counts	%	Counts	%
2013	36	20.8%	51	29.5%	86	49.7%	173	100.0%
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	28	19.7%	37	26.1%	77	54.2%	142	100.0%
2017	31	23.1%	35	26.1%	68	50.7%	134	100.0%
5-year total	147	20.0%	219	29.8%	369	50.2%	735	100.0%

<sup>1</sup> The total number of fatalities is updated for accuracy/correctness until March 31, 2018.



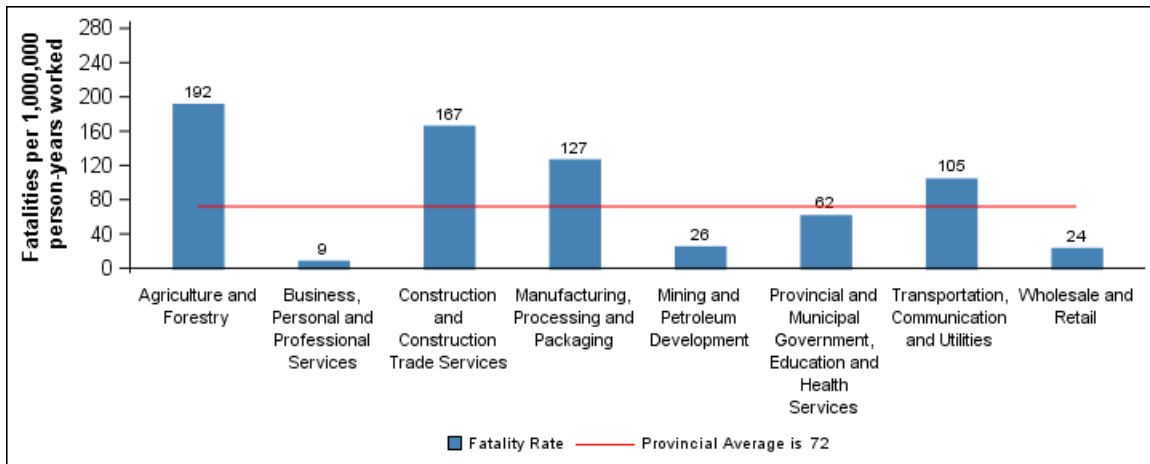
- In 2017, occupational disease (50.7 per cent) continued to be the leading cause of worker death, followed by workplace incidents at 26.1 per cent.
- Death resulting from motor vehicle incidents increased by 10.7 per cent, while death due to other two causes declined from 2016 to 2017.

**Table 20 - Occupational Fatalities by Year of Death and Major Industry Sector, 2013 to 2017**

Major Industry Sector	2013	2014	2015	2016	2017	Total	Percentage
Agriculture and Forestry	1	3	0	6	4	14	1.9%
Business, Personal and Professional Services	5	5	7	7	3	27	3.7%
Construction and Construction Trade Services	67	68	41	50	56	282	38.4%
Manufacturing, Processing and Packaging	28	18	20	18	22	106	14.4%
Mining and Petroleum Development	15	21	5	13	4	58	7.9%
Provincial and Municipal Government, Education and Health Services	25	16	21	15	22	99	13.5%
Transportation, Communication and Utilities	27	17	22	23	15	104	14.1%
Wholesale and Retail	4	9	10	8	8	39	5.3%
Unspecified	1	1	2	2	0	6	0.8%
<b>Total</b>	<b>173</b>	<b>158</b>	<b>128</b>	<b>142</b>	<b>134</b>	<b>735</b>	<b>100.0%</b>

- The Construction and Construction Trade Services sector accounted for 38.4 per cent of occupational fatalities over the last five years; this industry sector accounted for 41.8 per cent of fatalities in 2017.

**Figure 6 - Occupational Fatality Rate by Year of Death and Industry Sector, 2017**



- Based on the year of death, Agriculture and Forestry incurred the highest fatality rate among all major industry sectors in 2017.
- Fatality rates were lower than the provincial average in both 2016 and 2017 for the following three major industry sectors:
  - Business, Personal and Professional Services;
  - Wholesale and Retail; and
  - Provincial and Municipal Government, Education and Health Services.
- The fatality rate for Mining and Petroleum Development sector was above the provincial average in 2016, but lower than the provincial average in 2017.
- Fatality rates were above the provincial average in both 2016 and 2017 for the following four major industry sectors:
  - Agriculture and Forestry;
  - Construction and Construction Trade Services;
  - Manufacturing Processing and Packaging; and
  - Transportation, Communication and Utilities.

## Appendix: Terms and definitions

**Disabling injury claims** combine both the lost-time and Modified work concepts to produce an overall figure where an occupational injury or disease disables the worker causing either time-lost from work or for their normal work duties to be modified.

The **disabling injury rate** is calculated by dividing the number of disabling injury claims by the person-year estimates, and multiplying the result by 100. The disabling injury rate represents the probability or risk of a disabling injury or disease to a worker during a period of one-year of work. The disabling injury rate is similar to the LTC rate although it covers a broader range of injuries, including those that are less severe in nature (do not require time away from work). The rate represents the number of claims per 100 person-years and includes claim made for both lost-time and Modified work.

A **fatality** is the death of a worker which resulted from a work-related incident or exposure and which has been accepted by the WCB for compensation. A fatality is counted in the year it is accepted. A **latent fatality** consists of a worker who was involved in a workplace incident or exposure, or a motor vehicle incident that did not become a fatality until a much later date, often years later. Usually, other contributing factors also cause a latent fatality, although these contributing factors are the result of the initial injury or exposure.

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 found under the jurisdiction of the Government of Canada are included in the calculation of the fatality rate.

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

A **lost-time claim** 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 are included, as are payments for permanent loss of function.

The **lost-time claim rate** is calculated by dividing the number of lost-time claims 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. Comparisons of LTC rates between industries, or between years, can be used to indicate increases, decreases, or differences in this risk.

A **modified work claim** is a claim for an occupational injury or disease where a worker had their normal work duties altered enabling them to remain in the workplace without losing time. Also included are claims where injured workers were helped back into the workplace with modified duties after time lost due to injury or disease.

The **people in employment** refer to those individuals in the working-age population who held jobs, regardless of employment status, in a reporting period. It is estimated by Statistics Canada through the Labour Force Survey.

One **person-year estimate** is equivalent to one full-time worker working for one year, and can be assumed to equal 2,000 hours worked.

The **workplace injury or disease codes** used in this report are provided by the WCB.