



OCCUPATIONAL INJURIES AND DISEASES IN ALBERTA

Lost-Time Claims, Disabling Injury Claims
and Claim Rates

Young Workers
2006 to 2010



Summer 2011

**Government
of Alberta** ■

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HIGHLIGHTS

In 2010, both lost-time claims and disabling injury claims for young workers decreased from 2009.

- In 2010, the Workers' Compensation Board (WCB) – Alberta accepted 3,581 lost-time claims and 8,267 disabling injury claims from workers aged 15 to 24, a decrease of 11.6% and 3.0% from 2009.
- Young workers accounted for 14.7% of lost-time claims in 2010, 17.9% of the disabling injury claims and 15.6% of those in employment.
- By major industry sector, the Wholesale and Retail sector had the largest number of lost-time claims from young workers, and the Construction and Construction Trade Services sector had the largest number of disabling injury claims.
- The Agriculture and Forestry sector had the highest estimated lost-time injury claim and disabling injury claim frequency for young workers, at 4.27 per 100 young workers and 6.65 per 100 young workers.
- In 2010, young workers employed in the trades helpers, construction, and transportation labourers and related occupations group accounted for the highest proportion of lost-time claims and disabling injury claims, 15.4% and 18.0%. They represented 6.5% of all young workers in employment.
- Sprains, strains and tears continued to be the leading nature of injury, accounting for 45.6% of the disabling injury claims submitted by young workers. The back (including spine and spinal cord) was the most commonly injured body part, accounting for 20.8% of all disabling injury claims.
- The primary sources of injury causing disabling injury claims were persons, plants, animals and minerals, accounting for 20.6% of all disabling injury claims, followed by parts and materials, 16.9%. The most common type of event or exposure was bodily reaction or exertion, which accounted for 38.7% of disabling injury claims to young workers.
- In 2010, the median days-lost for young workers was five. This was lower than the median for all workers, seven days. The average days-lost increased to 16 days per claim in 2010, lower than the average for all workers, 23.
- In 2010, the WCB accepted eight occupational fatalities from young workers, representing 5.9% of all workplace fatalities accepted in Alberta.
- The WCB accepted 37 fatalities from workers aged 15 to 24 from 2006 to 2010. The Construction and Construction Trade services sector had the most with 15 fatalities. This was followed by the Transportation, Communication and Utilities sector with 7 fatalities.



A few notes about this report:

- This report presents 2010 data beside 2009 data to help with comparisons. Additional historical data are presented where possible.
- Information presented in this report is based on incidents that occurred during 2010 and accepted as lost-time or modified work claims by Workers' Compensation Board – Alberta (WCB) as of March 31, 2011.
- The person-years worked estimates in the OID 2010 Young Workers report have been provided by the WCB back to 2006. Previously, the person-years worked calculations had been done using a different methodology thus previous years OID Young Workers report numbers and rates will not be comparable.
- Injury claim rates based on a small number of person-years worked are too volatile to make valid comparisons over time. Therefore, claim rates are not calculated when there are fewer than 40 person-years worked.
- Estimates of year-over-year change for rates presented in this report are calculated using unrounded figures and may not match those produced from rounded figures. Percentages displayed in tables may also not total 100, due to rounding.
- Throughout the report, the lost-time claim rate is the number of lost-time claims per 100 person-years worked, the disabling injury rate is the number of disabling injury claims per 100 person-years worked. Fatality rates are expressed as the number of fatalities per million person-years worked.
- Analyses by industry are based on WCB industry classification and aggregation. For more information see the industry rate manual on the WCB website.
- Analyses by occupation group are based on the National Occupational Classification (NOC). The NOC provides a standard list of occupations across the country. For more information see <http://www5.hrsdc.gc.ca/NOC>.
- Occupational injuries and diseases listed throughout this report are based on the Z795 Coding of Work Injury or Disease Information produced by the Canadian Standards Association (CSA) for categorizing occupational injury and disease. For more information see <http://www.shopcsa.ca/onlinestore/GetCatalogItemDetails.asp?mat=2416404>.
- Terms, definitions and formulas used throughout this report are described in Appendix A.

YOUNG WORKERS SUMMARY

In 2010, the Workers' Compensation Board (WCB) – Alberta accepted 3,581 lost-time claims and 8,267 disabling injury claims from young workers.

In 2010, the Workers' Compensation Board (WCB) – Alberta accepted 3,581 lost-time claims and 8,267 disabling injury claims from young workers (those aged 15 to 24), a decrease of 11.6% and 3.0% from 2009. Claims from young workers accounted for 14.7% of all lost-time claims submitted and 17.9% of all disabling injury claims. The number of days-lost and transaction claim costs represented 9.8% and 9.0% of the totals respectively.

Table 1.1

Provincial and Young Workers Injury Figures – Alberta: 2010

	All Workers	Young Workers	% of Young Worker Claims
Lost-time claims	24,343	3,581	14.7%
Modified-work claims	35,365	6,556	18.5%
Lost-time claims involving modified-work	13,557	1,870	13.8%
Disabling injury claims	46,151	8,267	17.9%
Days lost (LTC)	570,826	56,059	9.8%
Transaction claim costs (LTC)	\$200,195,531	\$18,094,989	9.0%

Data Source: WCB Data, Prepared by Data Development and Evaluation

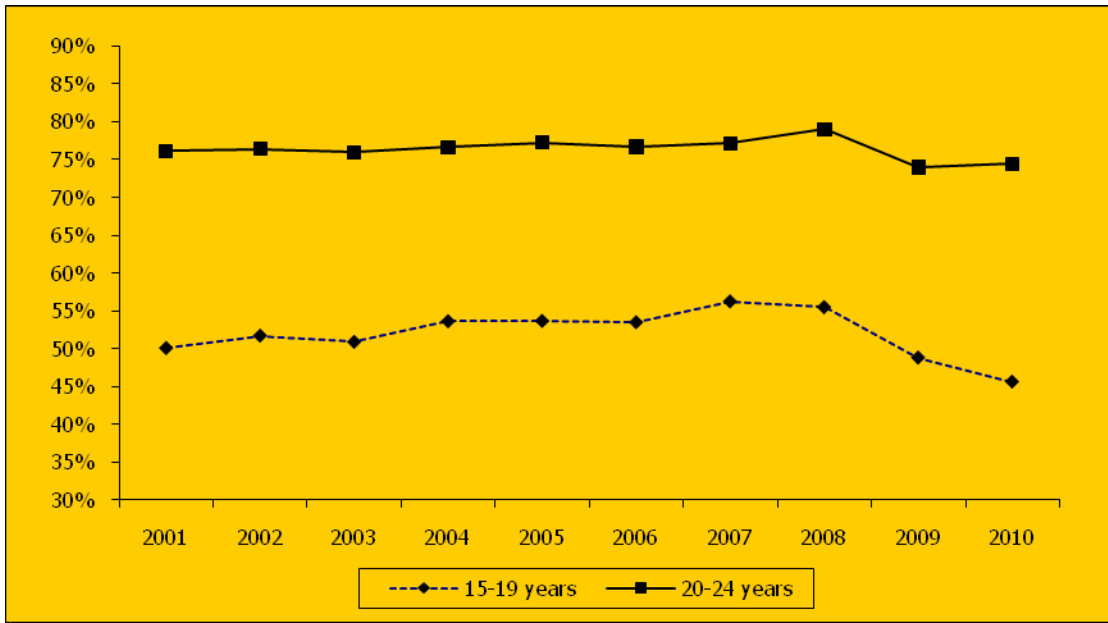
In 2010, the Labour Force Survey shows Alberta had the second highest proportion of young workers in its working age population of all provinces in Canada. Alberta also had the highest participation rate and the third lowest unemployment rate for young workers¹.

The employment rate for Alberta workers aged 15 to 24 decreased from 62.4% in 2009, to 61.2% in 2010 (see Chart 1.1).

¹ Statistics Canada Labour Force Survey (2010 Historical Review). For more information on young workers in the labour market, see Alberta Labour Force Profiles <http://www.employment.alberta.ca/BI/2660.html>

Chart 1.1

Employment Rates for Young Workers - Alberta: 2001 - 2010



Statistics Canada's Labour Force Survey (2010 Historical Review)

Young workers are often active in the education system and have lower education attainment and a higher likelihood of participating in part-time employment than workers of other ages. The proportion of youth employed in part-time positions was more than double their share of the working age population. In 2010, 32.8% of young workers were high school graduates, and 17.0% had completed post-secondary education². For all workers, 22.4% of those employed were high school graduates and 35.2% of Alberta's working population had completed post-secondary levels of education.

² Statistics Canada Labour Force Survey (2010 Historical Review). For more information on young workers in the labour market, see Alberta Labour Force Profiles <http://www.employment.alberta.ca/BI/2660.html>

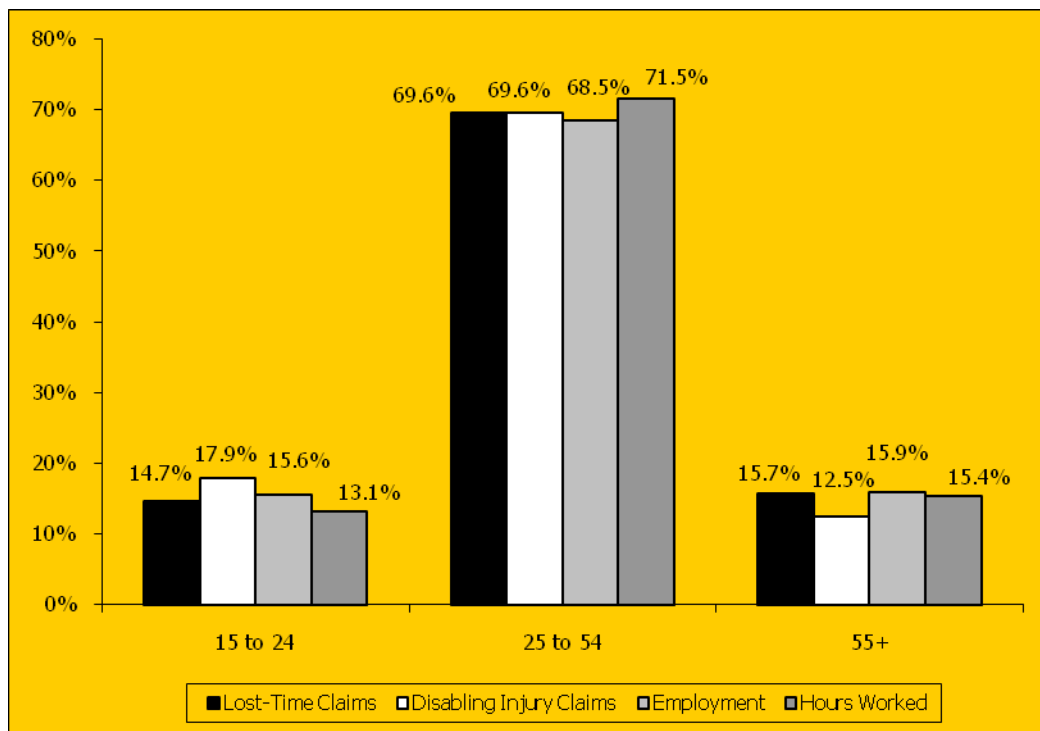
DEMOGRAPHICS OF INJURED WORKERS

In 2010, young workers represented 15.6% of those employed in Alberta and accounted for 14.7% of lost-time claims and 17.9% of disabling injury claims.

Compared to older workers, young workers display a higher likelihood of getting injured. In 2010, young workers accounted for 15.6% of those employed in Alberta and accounted for 14.7% of the total lost-time claims and 17.9% of disabling injury claims. In contrast, workers aged 55 and older represented 15.9% of those employed, 15.7% of the total lost-time claims and 12.5% of disabling injury claims (see Chart 2.1).

Chart 2.1

Proportion of Injury Claims, Employment and Hours Worked by Selected Age Groups – Alberta: 2010



Data Source: WCB Data, Prepared by Data Development and Evaluation, Statistics Canada's Labour Force Survey (2010 Historical Review)

Young workers accounted for 13.1% of the total actual hours worked in the province. Looking at actual hours worked can be a better indicator of the exposure to workplace hazards for more marginal groups in employment, due to differing levels of part-time employment in various industries. It indicates an even higher likelihood of injury for young workers compared to older age groups than employment counts would suggest.

In 2010, there were 929 lost-time claims and 2,146 disabling injury claims from young workers aged 15 to 19 (see Table 2.1). This was a decrease from 2009 by 14.1% and 3.2%.

For workers aged 20 to 24, the number of lost-time claims decreased by 10.7% to 2,652 in 2010. The number of disabling injury claims decreased by 2.9% to 6,121.

In 2010, the median days lost due to injuries or diseases for young workers was five days, two days fewer than the provincial median days lost of seven. The average days lost increased to 16 days lost per claim in 2010, lower than the average for all workers, 23 days lost.

Note 2.1

In a national study completed by the Institute for Work and Health (IWH) young workers were often found to accept workplace injuries as “part of the job” because they were frequent and minor. They determined that this perspective is, for the most part, the result of young workers’ perceived inability to improve or alter their working conditions. (Breslin et al., 2007).

Table 2.1

Proportion of Lost-Time Claims and Disabling Injury Claims by Age Group – Alberta: 2009 to 2010

Age	2009				2010			
	Lost-Time Claims	%	Disabling Injury Claims	%	Lost-Time Claims	%	Disabling Injury Claims	%
Under 15 Years	9	0.0%	14	0.0%	0	0.0%	5	<0.1%
15 - 19 Years	1,081	4.1%	2,216	4.7%	929	3.8%	2,146	4.7%
20 - 24 Years	2,971	11.4%	6,305	13.3%	2,652	10.9%	6,121	13.3%
25 - 34 Years	5,983	22.9%	12,345	26.0%	5,660	23.3%	12,071	26.2%
35 - 44 Years	5,745	22.0%	10,419	21.9%	5,368	22.1%	9,990	21.6%
45 - 54 Years	6,419	24.6%	10,499	22.1%	5,922	24.3%	10,068	21.8%
55+ Years	3,919	15.0%	5,741	12.1%	3,811	15.7%	5,747	12.5%
Unspecified	0	N/A	0	N/A	1	N/A	3	N/A
Total	26,127	100.0%	47,539	100.0%	24,343	100.0%	46,151	100.0%

Data Source: WCB Data, Prepared by Data Development and Evaluation

Gender

More claims from young workers were from men than women. In 2010, 67.8% of lost-time claims and 74.1% of disabling injury claims from young workers involved men, who accounted for 51.9% of those in employment in this age group. In contrast, women accounted for 32.2% of lost-time claims, 25.9% of disabling injury claims and 48.1% of those in employment (see Chart 2.2). For workers of all ages, men accounted for 64.7% of lost-time claims, 70.7% of disabling injury claims and 54.9% of those in employment, while women accounted for 45.1% of those in employment, 35.3% of the lost-time claims and 29.3% of the disabling injury claims.

Table 2.2

Lost-Time Claims and Disabling Injury Claims by Gender - Young Workers, Alberta: 2009 and 2010

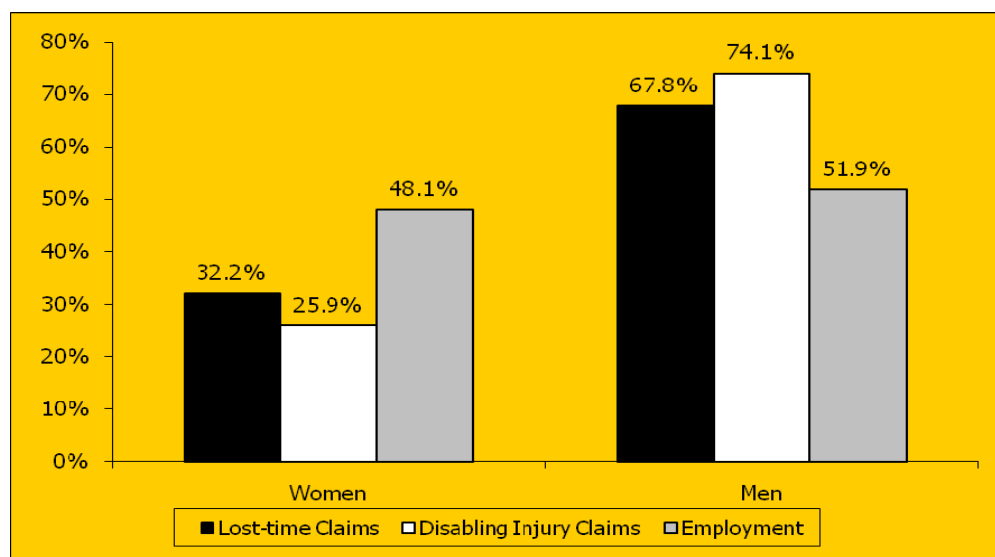
Gender	2009				2010			
	Lost-Time Claims	%	Disabling Injury Claims	%	Lost-Time Claims	%	Disabling Injury Claims	%
Women	1,331	32.8%	2,249	26.5%	1,152	32.2%	2,128	25.9%
Men	2,721	67.2%	6,250	73.5%	2,428	67.8%	6,100	74.1%
Unspecified*	0	N/A	22	N/A	1	N/A	39	N/A
Total	4,052	100.0%	8,521	100.0%	3,581	100.0%	8,267	100.0%

*Claims with no specified gender have been removed from the proportions.

Data Source: WCB Data, Prepared by Data Development and Evaluation

Chart 2.2

Lost-Time Claims and Disabling Injury Claims by Gender - Young Workers, Alberta: 2010



Data Source: WCB Data, Prepared by Data Development and Evaluation; Statistics Canada's Labour Force Survey (2010 Historical Review)

Occupation

In 2010, young workers employed in the trades helpers, construction, and transportation labourers and related occupations group³ submitted the highest proportion of lost-time claims and disabling injury claims, 15.4% and 18.0% respectively. They also represented 6.5% of all young workers in employment⁴. In contrast, 14.5% of workers were employed in the sales and service occupations group, yet they accounted for 12.0% of lost-time claims and 11.2% of disabling injury claims (see Table 2.3).

Table 2.3

Lost-Time Claims, Disabling Injury Claims and Employment by Selected Occupation Groups - Young Workers, Alberta: 2010

Occupation	Lost-Time Claims	Disabling Injury Claims	Employment
Trades Helpers, Construction, and Transportation Labourers and Related Occupations	15.4%	18.0%	6.5%
Sales & Service Occupations N.E.C.	12.0%	11.2%	14.5%
Construction Trades	7.3%	6.8%	3.3%
Machinists, Metal Forming, Shaping and Erecting Occupations	4.6%	5.3%	1.3%
Labourers in Processing, Manufacturing and Utilities	4.9%	6.5%	1.1%
Clerical Occupations	5.2%	5.9%	10.3%
Primary Production Labourers	2.6%	4.3%	2.3%
Retail Salespersons and Sales Clerks	7.4%	6.1%	10.3%
Mechanics	3.7%	3.3%	2.0%
Transportation Equipment Operators and Related Workers, Excl. Labourers	3.9%	3.6%	1.3%
Chefs and Cooks	3.9%	2.3%	2.9%
Stationary Engineers, Power Station Operators and Electrical Trades and Telecommunications Occupations	1.9%	2.9%	1.7%
Total Claims	3,581	8,267	314,500

Data Source: WCB Data; Statistics Canada, Labour Force Survey (Microdata Files), Prepared by Data Development and Evaluation.

³ Occupations were coded following the National Occupational Classification for Statistics. See page 4 for further information.

⁴ Statistics Canada Labour Force Survey (2010 Historical Review).

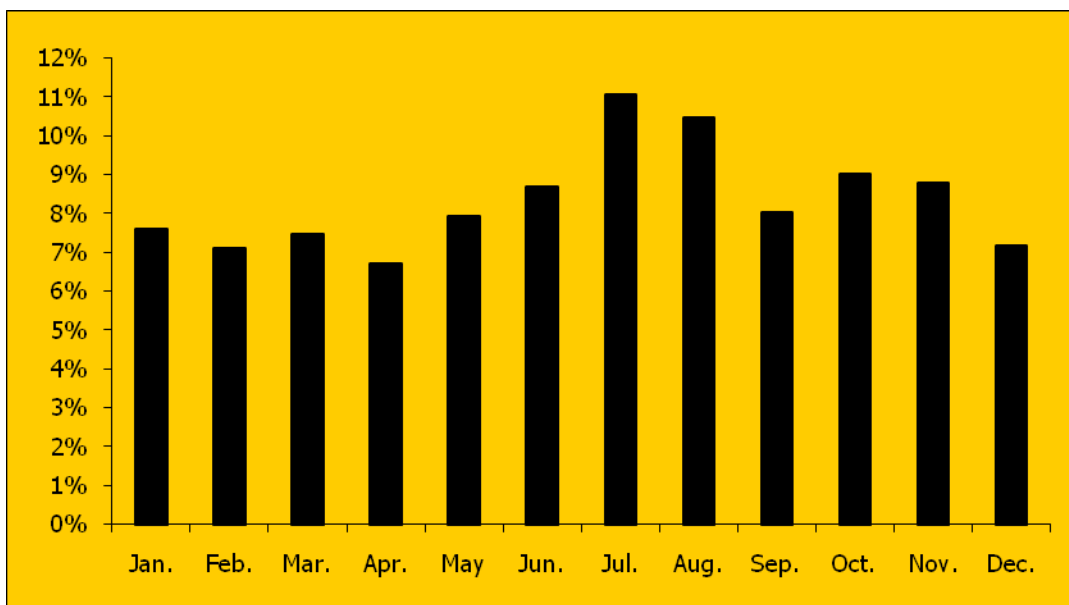
Disabling Injury Claims by Month of Injury

Disabling injury claims from workers aged 15 to 24 displayed an increase in the number of injuries occurring to young workers during the summer months.

The number of disabling injury claims submitted by workers aged 15 to 19 is greater in the summer months, with July and August accounting for 11.1% and 10.5% respectively of the total disabling injury claims from this age group from 2006 to 2010. For workers aged 20 to 24, disabling injury claims for July and August accounted for 9.6% and 8.9% respectively of the disabling injury claims from 2006 to 2010 (see Charts 2.3a and 2.3b).

Chart 2.3a

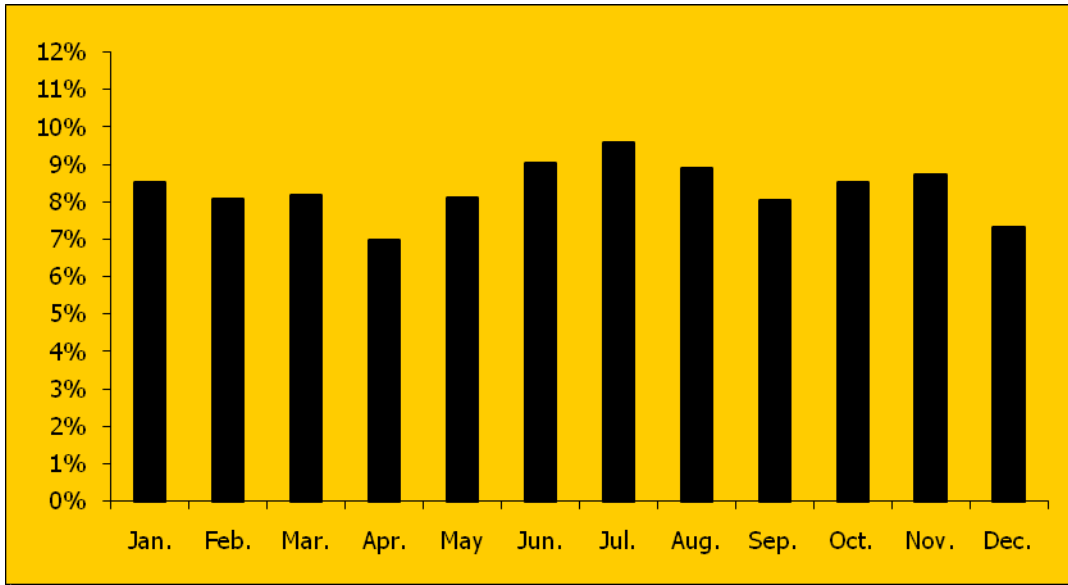
Proportion of Disabling Injury Claims by Month of Injury - Young Workers, Alberta: 2006 - 2010
15 to 19 Years:



Data Source: WCB Data, Prepared by Data Development and Evaluation

Chart 2.3b

Proportion of Disabling Injury Claims by Month of Injury - Young Workers, Alberta: 2006 - 2010
20 to 24 Years:



Data Source: WCB Data, Prepared by Data Development and Evaluation

INDUSTRY SECTOR ANALYSIS

In 2010, four major industry sectors accounted for 80.5% of the lost-time claims from young workers.

Major Industry Sector Analysis

In 2010, there were 965 lost-time claims from young workers in the Wholesale and Retail sector (see Table 3.1), representing 26.9% of all lost-time claims. This was followed by 845 in the Construction and Construction Trade Services sector, 621 in the Business, Personal and Professional Services sector, and 451 in the Public Administration, Education and Health Services sector. These sectors accounted for 23.6%, 17.3% and 12.6% of all lost-time claims from young workers respectively.

Table 3.1

Lost-Time Claims and Disabling Injury Claims by Major Industry Sector - Young Workers, Alberta: 2010

Major Industry Sector	15-19 Years		20-24 Years		Total (15-24 Years)	
	Lost-Time Claims	Disabling Injury Claims	Lost-Time Claims	Disabling Injury Claims	Lost-Time Claims	Disabling Injury Claims
Agriculture* and Forestry	7	11	27	42	34	53
Business, Personal and Professional Services	186	292	435	692	621	984
Construction and Construction Trade Services	162	423	683	1,691	845	2,114
Manufacturing, Processing and Packaging	97	263	269	855	366	1,118
Mining and Petroleum Development	14	63	61	397	75	460
Public Administration, Education and Health Services	91	135	360	549	451	684
Transportation, Communication and Utilities	42	127	182	478	224	605
Wholesale and Retail	330	777	635	1,308	965	2,085
Unspecified	0	55	0	109	0	164
All Industries	929	2,146	2,652	6,121	3,581	8,267

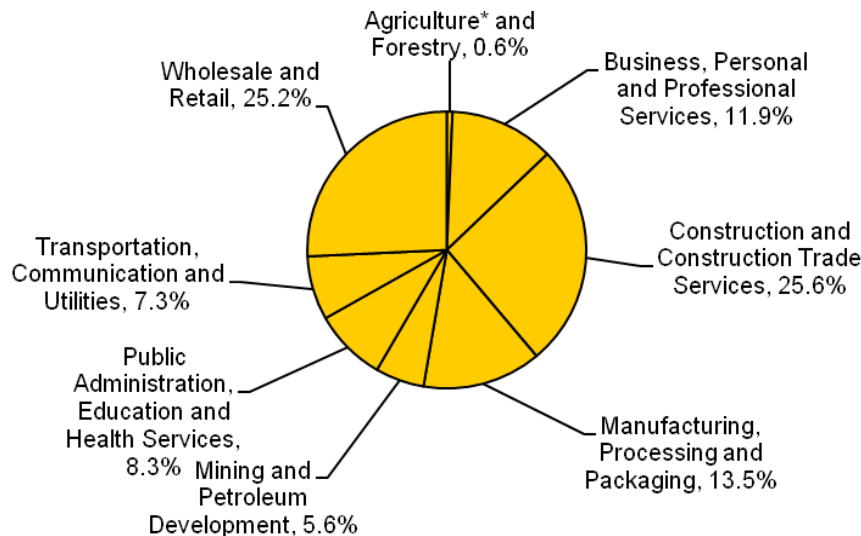
*Agriculture in Alberta is largely exempt from mandatory WCB coverage.
Data Source: WCB Data, Prepared by Data Development and Evaluation

For disabling injury claims a similar pattern exists. Four major industry sectors accounted for 76.2% of the disabling injury claims from young workers. The Construction and Construction Trade Services sector had the largest number of disabling injury claims with 2,114 or 25.6%, followed by the Wholesale and Retail sector, 2,085, the Manufacturing, Processing and Packaging sector, 1,118, and the Business, Personal and Professional

Services sector with 984 disabling injury claims from young workers (see Table 3.1). These three sectors accounted for 25.2%, 13.5%, and 11.9% of young workers' disabling injury claims respectively (see Chart 3.1).

Chart 3.1

Disabling Injury Claims by Industry Sector for Young Workers - Alberta: 2010



*Agriculture in Alberta is largely exempt from mandatory WCB coverage.
Data Source: WCB Data, Prepared by Data Development and Evaluation

The number of workers (or person-years worked estimates) calculated in the *Occupational Injuries and Diseases in Alberta Summary* and industry sector reports allow for an analysis of the number of claims to be made with the number of workers employed in an industry, and are useful for looking at the frequency of injury claims. Person-years worked estimates rely on information provided by employers to WCB (see Appendix A). As such, lost-time claims and disabling injury rates can only be produced at an industry level, and not for particular worker demographics, like age.

The Labour Force Survey however, does allow for employment information to be broken down by age, and can be applied to the injury claim data. Differences in coverage and industry classifications exist between the Labour Force Survey and the WCB industry classification, although it is useful for highlighting sectors where the data indicates a higher proportion or frequency of injury.

Table 3.2 presents the proportion of WCB lost-time and disabling injury claims from young workers compared to the proportion of young workers employed in each industry sector⁵. In most sectors, young workers had higher proportions of lost-time claims and

⁵ The Labour Force Survey uses a different industry classification to WCB, although there are similarities in structure. Proportions (of totals) have been used to evaluate information generated from both sources. See Appendix A for further information.

disabling injury claims than the proportion they represented in employment. The Agriculture and Forestry sector displayed the largest difference between proportion in employment and proportions of injury claims. Young workers accounted for 14.3% of lost-time claims, 17.6% of disabling injury claims and 8.1% of those in employment in 2010. Young workers in the Business, Personal and Professional Services sector accounted for 21.6% of lost-time claims, 22.6% of disabling injury claims and 19.3% of those in employment. In contrast, young workers in the Wholesale and Retail sector accounted for 20.5% of lost-time claims and 24.2% of disabling injury claims, lower than their 27.1% proportion of employment.

Table 3.2

Proportion of Lost-Time Claims, Disabling Injury Claims and Employment by Major Industry Sector – Young Workers (15-24 years), Alberta: 2010

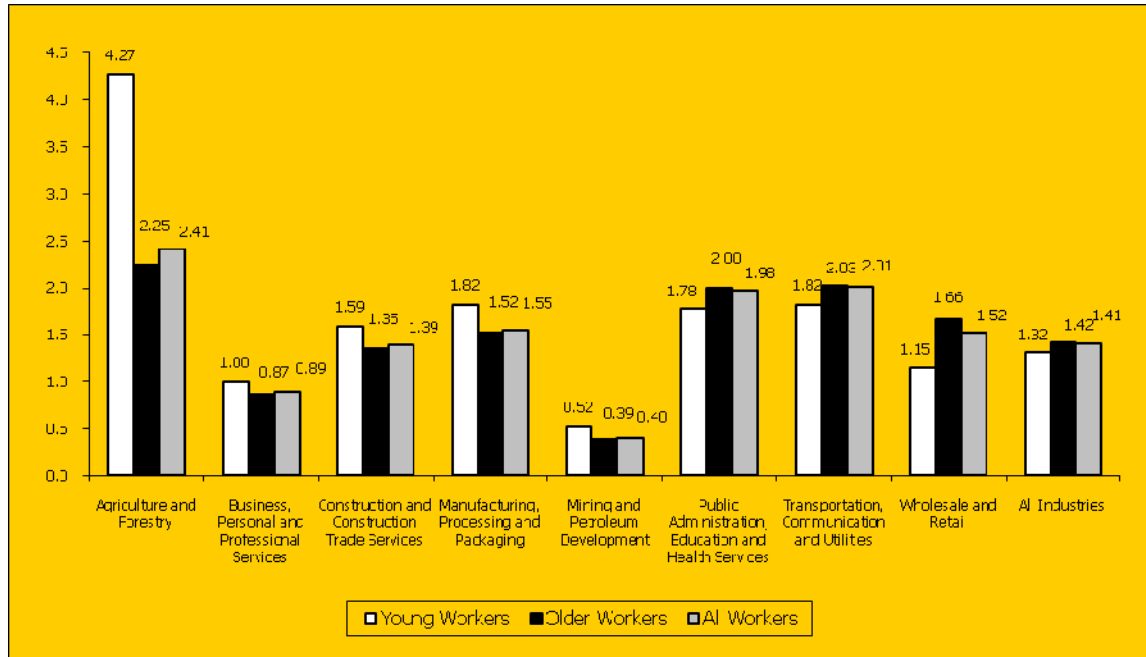
Major Industry Sector	Lost-Time Claims	Disabling Injury Claims	Employment
Agriculture and Forestry	14.3%	17.6%	8.1%
Business, Personal and Professional Services	21.6%	22.6%	19.3%
Construction and Construction Trade Services	19.1%	21.4%	16.7%
Manufacturing, Processing and Packaging	13.7%	15.5%	11.7%
Mining and Petroleum Development	12.0%	18.8%	9.3%
Public Administration, Education and Health Services	7.3%	8.4%	8.2%
Transportation, Communication and Utilities	8.4%	13.4%	9.2%
Wholesale and Retail	20.5%	24.2%	27.1%
All Industries	14.7%	17.9%	15.6%

Data Source: WCB Data, Statistics Canada's Labour Force Survey (2010 Historical Review), Prepared by Data Development and Evaluation

Charts 3.2 and 3.3 apply the proportion of young workers in employment for each major sector, to the WCB person-years worked figures, allowing for an estimation of injury frequency for young workers compared to other workers in a sector. Looking at the proportions in employment alongside injury claims, and estimating injury claim frequency rates shows that although the Wholesale and Retail Sector had the highest number of lost-time claims and disabling injury claims, the frequency of injury is lower than in many sectors.

Chart 3.2

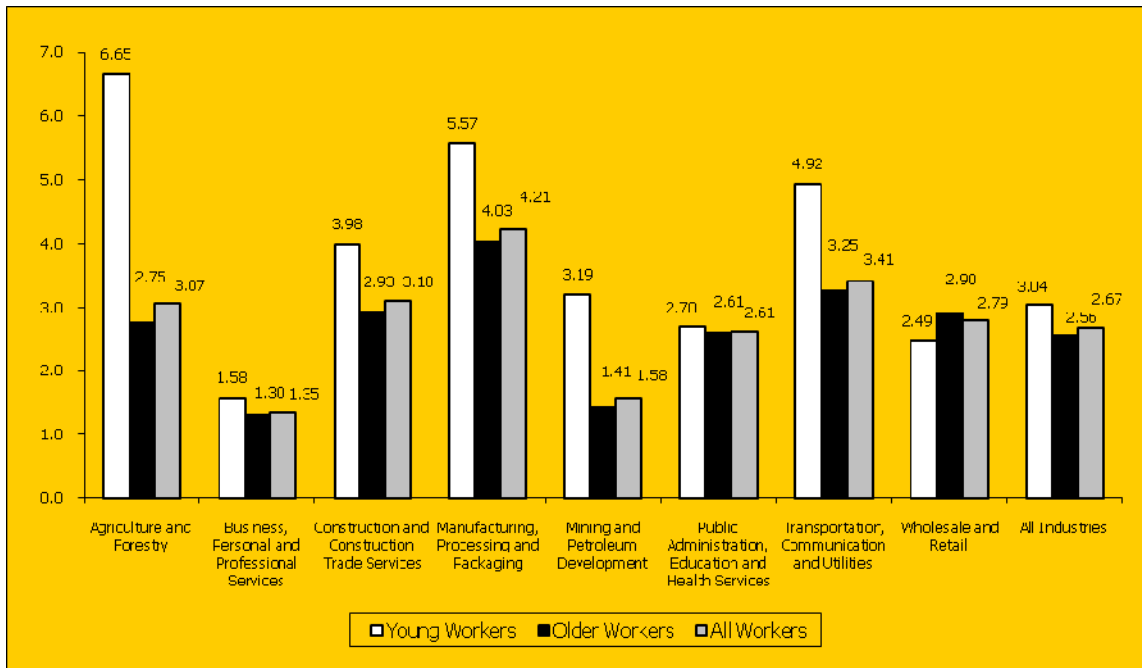
Estimated* Lost-Time Injury Frequencies for Young Workers – Alberta 2010



*Lost-time injury frequencies for young workers (those under 25 years) and older workers (those aged 25 and over) are calculated by applying the number of injury claims from young workers to a proportion of WCB person-years worked figures. The proportion is determined using information available from the Labour Force Survey on young workers employed in a particular industry sector. Data Source: Statistics Canada's Labour Force Survey (2010 Historical Review), Prepared by Data Development and Evaluation.

The lost-time claim and disabling injury claim rates can only be produced at an industry level, and not for particular worker demographics, like age. The estimations of injury frequencies are calculated for young workers in a particular industry sector instead. The Agriculture and Forestry sector had the highest estimated lost-time injury claim frequency at 4.27 per 100 young workers, compared to 2.25 per 100 older workers. This was followed by the Manufacturing, Processing and Packaging sector at 1.82 per 100 young workers, compared to 1.52 per 100 older workers (see Chart 3.2).

Disabling injury claim frequencies for young workers followed a similar trend. All sectors except the Wholesale and Retail sector had higher disabling injury claim frequencies for young workers than for older workers. The Agriculture and Forestry sector had the highest estimated disabling injury claim frequency for young workers, 6.65 per 100 young workers compared to 2.75 per 100 older workers. The Manufacturing, Processing and Packaging sector had an estimated frequency of 5.57 per 100 young workers, compared to 4.03 per 100 older workers (see Chart 3.3).

Chart 3.3**Estimated* Disabling Injury Frequencies for Young Workers – Alberta 2010**

*Disabling injury frequencies for young workers (those under 25 years) and older workers (those aged 25 and over) are calculated by applying the number of injury claims from young workers to a proportion of WCB person-years (worker) figures. The proportion is determined using information available from the Labour Force Survey on young workers employed in a particular industry sector. Data Source: WCB Data, Statistics Canada's Labour Force Survey (2010 Historical Review), Prepared by Data Development and Evaluation.

INJURY AND DISEASE ANALYSIS

Sprains, strains and tears continued to be the leading nature of injury with the trunk the most commonly injured body part. Bodily reaction or exertion was the most common cause for lost-time claims and disabling injury claims.

Nature of Injury or Disease

Nature of injury is used to identify the physical characteristics of the injury or disease. In 2010, for workers of all ages⁶, 93.4% of all the lost-time and 94.9% of disabling injury claims were traumatic injuries and disorders.

For young workers, 96.4% of lost-time claims and 96.9% of disabling injury claims were caused by traumatic injuries and disorders. For lost-time claims, the four most common traumatic injuries and disorders were sprains, strains and tears, 41.9%, open wounds, 14.2%, surface wounds and bruises, 14.2%, and other traumatic injuries and disorders, 12.1% (see Table 4.1).

Note 4.1

Throughout this section, the classifications used are based on the Canadian Standards Association (CSA) standards for categorizing occupational injury and disease information. The CSA standard is designed so that Nature of Injury and Part of Body categories are directly linked when classifying injuries. This is also true for the relationship between the Source of Injury and Type of Event categories.

⁶ See the *Occupational Injuries and Diseases in Alberta 2010 Summary*.

Table 4.1

Nature of Injury or Disease - Young Workers, Alberta: 2010

Nature of Injury	Lost-Time Claims	%	Disabling Injury Claims	%
Traumatic Injuries and Disorders	3,451	96.4%	8,008	96.9%
Sprains, Strains and Tears	1,499	41.9%	3,766	45.6%
Open Wounds	510	14.2%	1,232	14.9%
Surface Wounds and Bruises	510	14.2%	1,278	15.5%
Fractures and Dislocations	331	9.2%	617	7.5%
Burns	168	4.7%	246	3.0%
Other Traumatic Injuries and Disorders	433	12.1%	869	10.5%
Systemic Diseases and Disorders	100	2.8%	209	2.5%
Infectious and Parasitic Disorders	6	0.2%	6	0.1%
Symptoms, Signs and Ill-Defined Conditions	14	0.4%	26	0.3%
Other Diseases, Conditions and Disorders	10	0.3%	11	0.1%
Nature of Injury - Unknown	0	0.0%	7	0.1%
Total	3,581	100.0%	8,267	100.0%

Data Source: WCB Data, Prepared by Data Development and Evaluation

Part of Body Injured

For workers of all ages⁷, injuries to the trunk accounted for 38.8% of lost-time claims and 36.8% of disabling injury claims in 2010. For young workers, 31.5% of lost-time claims and 31.4% of disabling injury claims were due to injuries to the trunk. This was followed by upper extremities at 28.6% and 34.0% respectively.

Table 4.2

Part of Body Injured - Young Workers, Alberta: 2010

Part of Body Injured	Lost-Time Claims	%	Disabling Injury Claims	%
Trunk	1,128	31.5%	2,595	31.4%
Back, Including Spine, Spinal Cord	785	21.9%	1,720	20.8%
Other Trunk	343	9.6%	875	10.6%
Upper Extremities	1,023	28.6%	2,811	34.0%
Finger(s), Fingernail(s)	430	12.0%	1,261	15.3%
Wrist(s) and Hand(s) Except Finger(s)	415	11.6%	1,080	13.1%
Other Upper Extremities	178	5.0%	470	5.7%
Lower Extremities	819	22.9%	1,776	21.5%
Ankle(s) and Foot (Feet) Except Toes	419	11.7%	925	11.2%
Leg(s)	362	10.1%	770	9.3%
Other Lower Extremities	38	1.1%	81	1.0%
Head	360	10.1%	641	7.8%
Other Head Parts	216	6.0%	376	4.5%
Eye(s)	144	4.0%	265	3.2%
Multiple Body Parts	150	4.2%	261	3.2%
Neck, Including Throat	63	1.8%	131	1.6%
Body Systems	35	1.0%	49	0.6%
Part of Body - Unknown	2	<0.1%	2	<0.1%
Other Body Parts	1	<0.1%	1	<0.1%
Total	3,581	100.0%	8,267	100.0%

Data Source: WCB Data, Prepared by Data Development and Evaluation

⁷ See the *Occupational Injuries and Diseases in Alberta 2010 Summary*.

Source of Injury or Disease

Source of injury or disease describes the object or substance that the worker came into contact with that resulted in an injury or disease. Four primary sources of injury accounted for more than half of the total lost-time claims and disabling injury claims from young workers in 2010. For lost-time claims these sources were persons, plants, animals and minerals, 21.9%, structures and surfaces, 15.2%, parts and materials, 14.1%, and containers, 12.3% (see Table 4.3).

Table 4.3

Source of Injury or Disease - Young Workers, Alberta: 2010

Source of Injury	Lost-Time Claims	%	Disabling Injury Claims	%
Persons, Plants, Animals and Minerals	783	21.9%	1,706	20.6%
Person - Injured or Ill Worker	505	14.1%	1,269	15.4%
Person - Other Than Injured or Ill Worker*	141	3.9%	202	2.4%
Minerals - Metallic or Nonmetallic (except fuel)	14	0.4%	35	0.4%
Other Persons, Plants, Animals & Minerals	123	3.4%	200	2.4%
Parts and Materials	506	14.1%	1,393	16.9%
Structures and Surfaces	546	15.2%	1,064	12.9%
Containers**	442	12.3%	1,054	12.7%
Tools, Instruments and Equipment	382	10.7%	1,044	12.6%
Hand tools - Nonpowered	204	5.7%	568	6.9%
Hand tools - Powered	55	1.5%	137	1.7%
Other Tools and Equipment	123	3.4%	339	4.1%
Vehicles	253	7.1%	536	6.5%
Machinery	232	6.5%	463	5.6%
Furniture and Fixtures	142	4.0%	285	3.4%
Chemicals and Chemical Products	62	1.7%	107	1.3%
Other Sources	188	5.2%	451	5.5%
Source of Injury - Unknown	45	1.3%	164	2.0%
Total	3,581	100.0%	8,267	100.0%

*Person – other than injured or ill worker: classifies workplace injuries or illnesses inflicted by family members as well as non-family relations, including co-workers, former co-workers, and patients.

**Containers: classifies receptacles that are commonly used to hold, store or carry materials (examples: dishes, cups and glasses, luggage, etc.).

Data Source: WCB Data, Prepared by Data Development and Evaluation

Type of Event or Exposure

Type of event or exposure describes the incident or event that occurred at the time of the exposure that directly resulted in the injury or disease. The two most common types of events or exposures involving young workers were contact with objects and equipment, accounting for 35.0% of lost-time claims and 38.6% of disabling injury claims, and bodily reaction or exertion, 35.8% and 38.7% (see Table 4.4).

Table 4.4

Type of Event or Exposure - Young Workers, Alberta: 2010

Type of Event or Exposure	Lost-Time Claims	%	Disabling Injury Claims	%
Contact with Objects or Equipment	1,253	35.0%	3,194	38.6%
Struck by Object	707	19.7%	1,715	20.7%
Caught in Object	199	5.6%	623	7.5%
Struck against Object	204	5.7%	524	6.3%
Rubbed or Abraded	50	1.4%	112	1.4%
Other Contact with Object/Equipment	93	2.6%	220	2.7%
Bodily Reaction or Exertion	1,282	35.8%	3,196	38.7%
Overexertion	710	19.8%	1,758	21.3%
Bodily Reaction*	383	10.7%	921	11.1%
Repetitive Motion	76	2.1%	231	2.8%
Other Bodily Reaction/Exertion	113	3.2%	286	3.5%
Falls	528	14.7%	991	12.0%
Fall on Same Level	341	9.5%	647	7.8%
Fall to Lower Level	156	4.4%	270	3.3%
Other Falls	31	0.9%	74	0.9%
Exposure to Harmful Substances	246	6.9%	384	4.6%
Transportation Accidents	151	4.2%	286	3.5%
Assaults and Violent Acts	86	2.4%	116	1.4%
Assaults and Violent Acts by Person(s)	51	1.4%	65	0.8%
Other Assaults and Violent Acts	35	1.0%	51	0.6%
Fires and Explosions	23	0.6%	28	0.3%
Other Events or Exposures	0	0.0%	1	<0.1%
Type of Event - Unknown	12	0.3%	71	0.9%
Total	3,581	100.0%	8,267	100.0%

*Bodily reaction: injuries or illnesses resulting from a single incident of free bodily motion which imposed stress or strain on some part of the body.

Data Source: WCB Data, Prepared by Data Development and Evaluation

Days-lost due to Disability

Days-lost due to disability⁸ is intended to reflect the serious effects of occupational injury and disease as reflected by the number of days off work. The efforts of employers to introduce modified work programs also impact workdays lost.

In 2010, 50.0% of the lost-time claims from young workers had a days-lost of five days or less compared to 37.9% for all workers⁹. Claims by young workers with a days-lost of 31 or more days represented 13.6% of all lost-time claims, compared to 22.2% for all workers in the province (see Table 4.5). Lost-time claims from workers of all ages typically had longer time of absence, indicative of shorter recovery times for younger workers.

Table 4.5

Days-lost due to Disability - Young Workers, Alberta: 2009 - 2010

Days-lost due to Disability	2009		2010	
	Lost-Time Claims	%	Lost-Time Claims	%
1 - 5 Days	2,063	50.9%	1,789	50.0%
6 - 10 Days	621	15.3%	539	15.1%
11 - 15 Days	289	7.1%	264	7.4%
16 - 20 Days	160	3.9%	156	4.4%
21 - 30 Days	223	5.5%	191	5.3%
31 Days or more	544	13.4%	486	13.6%
Unspecified	152	3.8%	156	4.4%
Total	4,052	100.0%	3,581	100.0%

Data Source: WCB Data, Prepared by Data Development and Evaluation

⁸ The days-lost due to disability refers to the length of time, in days, for which the worker receives wage compensation from the WCB.

⁹ See the *Occupational Injuries and Diseases in Alberta 2010 Summary*.

OCCUPATIONAL FATALITIES

In 2010, the WCB accepted eight fatalities from workers aged 15 to 24, accounting for 5.9% of all 136 fatalities in the province.

Between 2006 and 2010, there were no occupational disease fatalities accepted by the WCB from workers who were aged 15 to 24 when the original incident or exposure occurred.

Table 5.1

Types of Occupational Fatalities Accepted by the WCB - Young Workers, Alberta: 2006 - 2010

Year	Motor Vehicle Incident		Workplace Incident		Total
	Number of Fatalities	%	Number of Fatalities	%	
2006	2	40.0%	3	60.0%	5
2007	4	50.0%	4	50.0%	8
2008	3	33.3%	6	66.7%	9
2009	3	42.9%	4	57.1%	7
2010	3	37.5%	5	62.5%	8
Total	15	40.5%	22	59.5%	37

Data Source: WCB Data, Prepared by Data Development and Evaluation

From 2006 to 2010, the WCB accepted 37 fatalities from workers aged 15 to 24. The Construction and Construction Trade Services sector had the most with 15 fatalities, the majority of these being workplace incidents (see Table 5.2). The Transportation, Communication and Utilities sector had seven fatalities. Agriculture and Forestry reported one young worker fatality over the past five years. However, much of the agricultural sector falls outside the jurisdiction of the WCB and is not included in these figures.

Table 5.2

Occupational Fatalities Accepted by the WCB by Industry Sector - Young Workers, Alberta: 2006 - 2010

Sector	Motor Vehicle Fatalities	Workplace Incident Fatalities	Total	%
Agriculture and Forestry	0	1	1	2.7%
Business, Personal and Professional Services	1	0	1	2.7%
Construction and Construction Trade Services	5	10	15	40.5%
Manufacturing, Processing and Packaging	1	1	2	5.4%
Mining and Petroleum Development	1	2	3	8.1%
Public Administration, Education and Health Services	2	1	3	8.1%
Transportation, Communication and Utilities	4	3	7	18.9%
Wholesale and Retail	1	3	4	10.8%
Unspecified	0	1	1	2.7%
Total	15	22	37	100.0%

Data Source: WCB Data, Prepared by Data Development and Evaluation

From 2006 to 2010, young workers aged 20 to 24 accounted for 29 occupational fatalities. Workers aged 15 to 19 accounted for eight occupational fatalities (see Table 5.3).

Table 5.3

Occupational Fatalities Accepted by the WCB by Age Group - Young Workers, Alberta: 2006 - 2010

Year	15-19 years	20-24 years	15-24 years
2006	2	3	5
2007	0	8	8
2008	2	7	9
2009	3	4	7
2010	1	7	8
Total	8	29	37

Data Source: WCB Data, Prepared by Data Development and Evaluation

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Institute for Work and Health. “Workplace injury or "part of the job"?: towards a gendered understanding of injuries and complaints among young workers”. 2007
<http://www.iwh.on.ca/workplace-injury-or-part-of-the-job-towards-a-gendered-understanding-of-injuries-and-complaints-amon>

APPENDIX A: TERMS, DEFINITIONS AND FORMULAS

Lost-Time Claim A lost-time claim (LTC) is a claim for an occupational injury or disease that causes the worker to have time away from work beyond the day of injury. Included are claims receiving reimbursement of full or partial lost wages due to occupational illness or injury, or payment for permanent loss of function.

Modified Work Claim A modified work claim is a claim for an occupational injury or disease where workers had their normal work duties altered to enable them to remain working without losing time from work. Also included are claims where injured workers are helped back into the workplace with modified duties after time lost due to injury or disease.

Disabling Injury Claim Disabling injury (DI) claims combine both lost-time and modified work 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.

Person-Years Worked Person-years worked are estimates provided by the 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.

Lost-Time Claim Rate The lost-time claim rate is calculated by dividing the number of lost-time claims by the person-years worked estimate, and multiplying the result by 100. The lost-time claim rate represents the probability or risk of an injury or disease to a worker during a period of one year's work, which will result in time lost from work. Comparisons of lost-time claim rates between industries, or between years, can be used to indicate increases, decreases, or differences in this risk.

$$\text{LTC Rate} = \frac{\text{Number of LTC's}}{\text{Person-years worked}} \times 100$$

Disabling Injury Rate The disabling injury rate is calculated by dividing the number of disabling injury claims by the person-years worked 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 lost-time claim 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 worked and includes claims made for both lost-time and

modified work.

$$\text{Disabling Injury Rate} = \frac{\text{Number of DI's}}{\text{Person-years worked}} \times 100$$

Lost-Time Injury Frequency	Lost-time injury frequencies for young workers (those under 25 years) and older workers (those aged 25 and over) are calculated by applying the number of injury claims from young workers to a proportion of WCB person-years worked figures. The proportion is determined using information available from the Labour Force Survey on young workers employed in a particular industry sector.
Disabling Injury Frequency	Disabling injury frequencies for young workers (those under 25 years) and older workers (those aged 25 and over) are calculated by applying the number of injury claims from young workers to a proportion of WCB person-years worked figures. The proportion is determined using information available from the Labour Force Survey on young workers employed in a particular industry sector.
Days-lost	The days-lost is the number of days following the injury or disease for which the worker was disabled and unable to perform normal work duties. This information is obtained for this report from data on compensation days paid on each claim from the WCB. Alberta Employment and Immigration obtains these data on March 31 of the year following the claim year, and does not update the information, even though many injured workers continue to be disabled beyond this date. As a result, the days-lost reported here underestimates the true impact of lost-time injury and disease.
Industry Coverage	This report focuses on all industry activity in Alberta covered by the WCB and by the provincial legislation for occupational health and safety. Most industry sectors are included but notable exceptions consist of the Government of Canada, and parts of the agriculture and finance sectors. Several professional groups (i.e. the teaching and medical professions) are also excluded as are some industries where WCB coverage is not compulsory.
WCB Accepted Fatality	An occupational 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.
Fatality Rate	The fatality rate is calculated by dividing the number of accepted fatalities by the person-years worked estimate and multiplying the result by one

million. The result is expressed as fatalities per million person-years worked. Fatalities that are found under the jurisdiction of the Government of Canada are excluded before the calculation of the fatality rate.

$$\text{Fatality Rate} = \frac{\text{Number of Fatalities}}{\text{Person-years worked}} \times 1,000,000$$

Labour Force Survey

The Labour Force Survey (LFS) is a household survey carried out monthly by Statistics Canada. The objectives of the LFS have been to divide the working-age population into three mutually exclusive classifications - employed, unemployed, and not in the labour force - and to provide descriptive and explanatory data on each of these categories. Data from the survey provide information on major labour market trends such as shifts in employment across industrial sectors, hours worked, labour force participation and unemployment rates.

For the most part, annual LFS data has been analyzed alongside injury and disease information to aid the understanding of injury risk or frequency by worker type. The LFS uses a different industry classification from WCB, although there are similarities in structure. Where possible, the two data sources are used comparably and proportions (of totals) have been used to evaluate information generated from both sources. Using proportions attempts to overcome obvious distortions in the numbers in employment from both sources, although the impact on the proportions from industry coverage differences is unclear. In certain instances, monthly LFS micro-data files have been combined and used to produce proportion estimates for the whole year for particular sub-groups of the population.

For further information on the LFS, please see <http://www.employment.alberta.ca/BI/2599.html>

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<http://www.employment.alberta.ca/SFW/2874.html>

Certificate of Recognition (COR) Program:

<http://www.employment.alberta.ca/SFW/334.html>