

Safe Work Australia

Work-related Traumatic Injury Fatalities, Australia /

2020

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Foreword

This report provides statistics about people who traumatically die each year from injuries that arose through work-related activity¹.

Injury is defined as a condition coded to 'External causes of morbidity and mortality' and 'Injury, poisoning and certain other consequences of external causes' in the International Statistical Classification of Diseases and Related Health Problems, Tenth Revision, Australian Modification (ICD-10-AM).

The scope of this collection includes all persons:

- who were traumatically, fatally injured, and
- whose injuries resulted from work activity or exposures, and
- whose injuries occurred in an incident that took place in Australian territories or territorial sea.

The report includes:

- workers who died, irrespective of how they were engaged (includes unpaid volunteers, family workers, persons undertaking work experience and defence force personnel killed), and
- persons who died as a result of someone else's work activity (bystander fatalities).

The collection specifically excludes those who died:

- of iatrogenic injuries—those where the worker died due to medical intervention
- due to natural causes such as heart attacks and strokes, except where a work-related injury was the direct cause of the heart attack or stroke
- as a result of diseases, such as cancers
- by self-inflicted injuries (suicide), and
- commuting to or from work.

The data presented in this report is based on the information available about the fatalities as at September 2021 when the 2020 dataset was finalised. A series of electronic tables are also available on the Safe Work Australia website that provide the full time series (2003 to 2020) for key data variables.

Historical data are updated as additional information from finalised coroners' reports and additional workers' compensation claims becomes available.

For explanatory notes on the data for this publication, refer to <https://www.safeworkaustralia.gov.au/resources-and-publications/statistical-reports/explanatory-notes-traumatic-injury-fatalities-database>.

Effects from COVID-19

While people who die from work-related diseases, including COVID-19, are outside the scope of this report, there were complex effects from the pandemic that affected Australia's Work Health and Safety environment during 2020. The statistics in this report should be considered in that broader context particularly when comparing with data over previous periods. See the [COVID-19 and Safe Work Australia data](https://www.safeworkaustralia.gov.au/resources-and-publications/statistical-reports/covid-19-and-safe-work-australia-data) report for an explanation of these issues (available <https://www.safeworkaustralia.gov.au/resources-and-publications/statistical-reports/covid-19-and-safe-work-australia-data>).

¹ See Glossary for explanation of 'traumatic injury'

Key findings

Worker fatalities

/ in 2020

Worker fatalities in 2020



194

workers were
fatally injured
at work



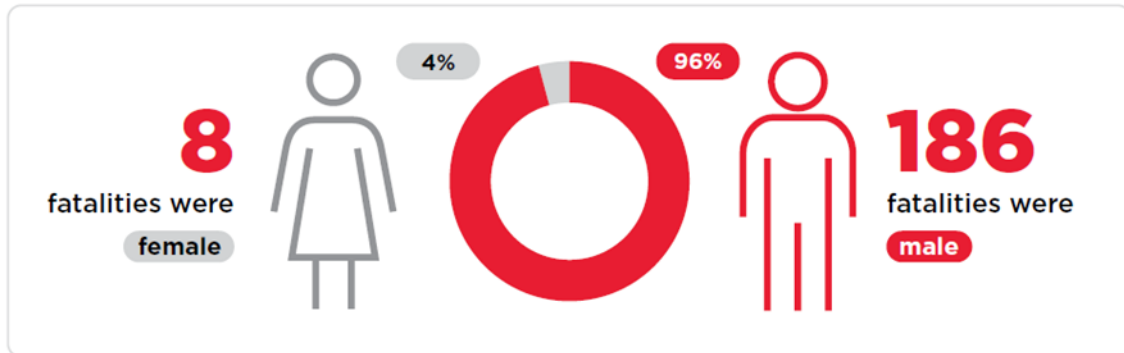
Fatality rate

1.5 per 100,000
workers



decreased by 50%

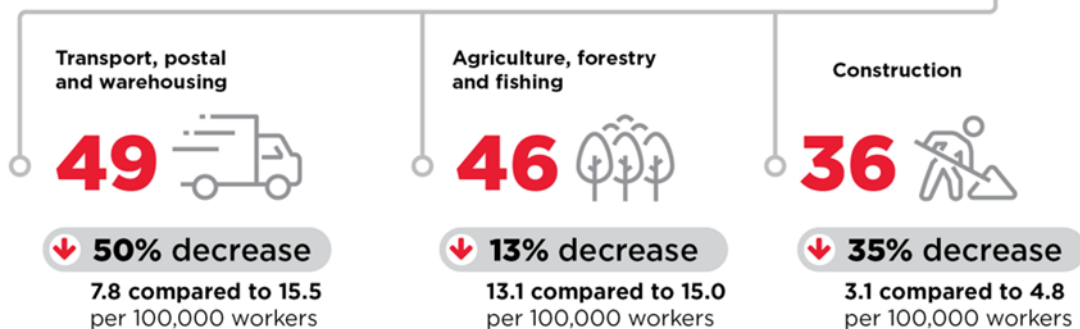
from a peak of 3.0 per
100,000 in 2007



Industry fatalities in 2020



68% of fatalities were in three industries



these industry **fatality rates** have **decreased since the peak in 2007**



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Worker fatalities

/ in 2020

Causes of worker fatalities in 2020

vehicle collision



41%

(80 workers)

hit by moving objects



13%

(25 workers)

falling from height



11%

(22 workers)



3 out of 4 fatalities involved a vehicle

Causes of bystander fatalities in 2020



Vehicle collision

65%

(22 bystanders)



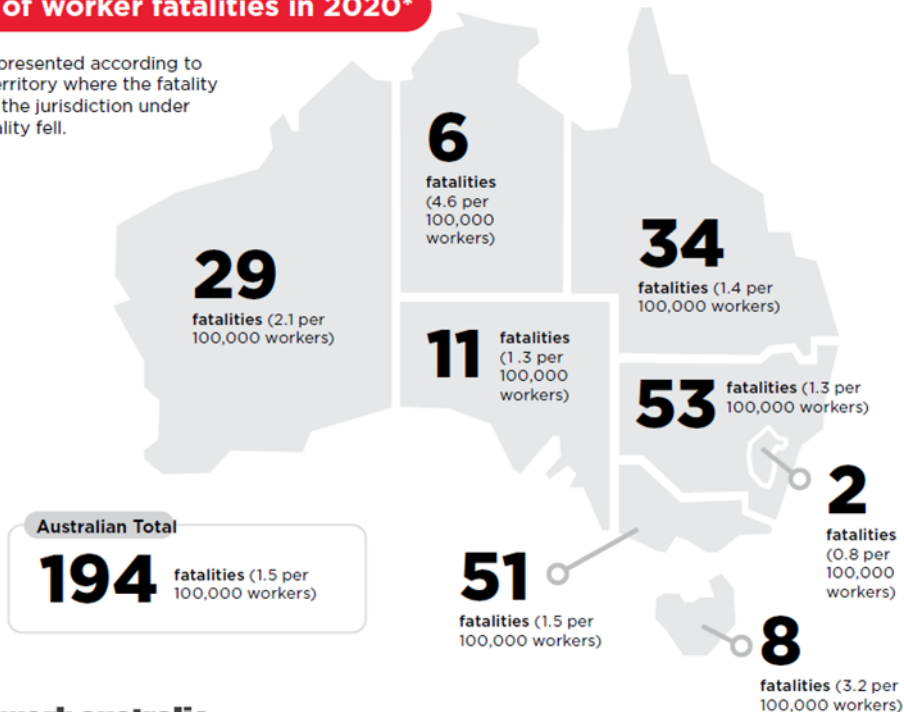
Being hit by moving objects

21%

(7 bystanders)

Location of worker fatalities in 2020*

* Fatalities are presented according to the state or territory where the fatality occurred, not the jurisdiction under which the fatality fell.



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Section 1:

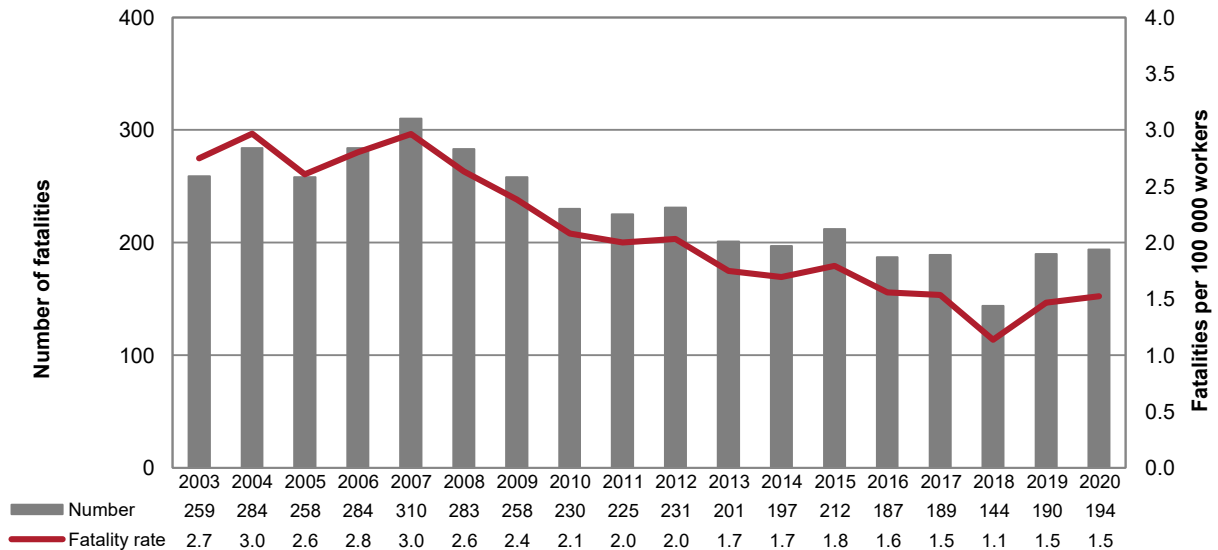
Worker fatalities

1.1. Fatalities and fatality rate

There were 194 worker fatalities in 2020 due to injuries sustained in the course of a work-related activity. Overall, the number of fatalities has been trending downward since 2007 (Figure 1). The highest number of work-related injury fatalities was recorded in 2007 when there were 310 deaths.

Similarly, the fatality rate (the number of fatalities per 100,000 workers) has decreased by 50% since the highest rate recorded in 2007. In 2007 the fatality rate was 3.0 fatalities per 100,000. This has decreased to 1.5 fatalities per 100,000 workers in 2019 and 2020. The lowest recorded fatality rate of 1.1 fatalities per 100,000 workers was recorded in 2018.

Figure 1: Worker fatalities: number of fatalities and fatality rate (per 100,000 workers), 2003 to 2020

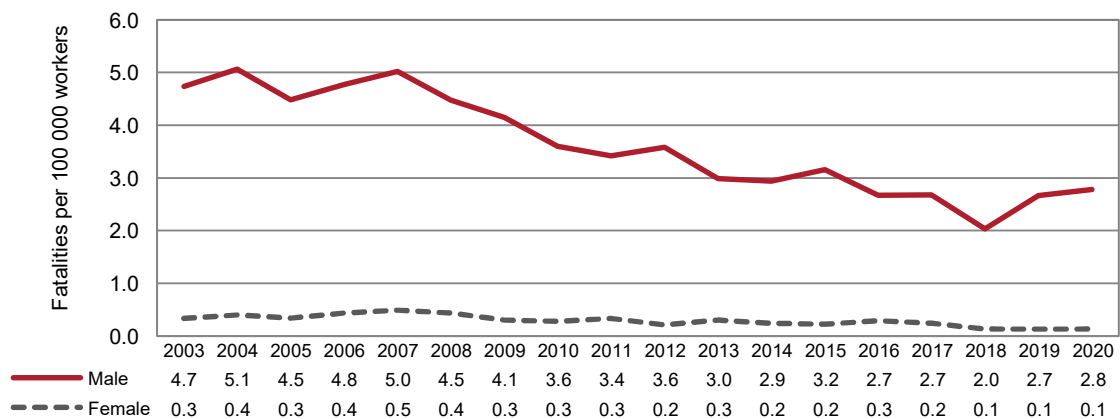


1.2. Gender²

The vast majority of workers killed from work-related activities are men (96%; 186 fatalities in 2020). The male fatality rate has remained relatively steady around 2.6 fatalities per 100,000 male workers in the past 5 years (Figure 2). This rate is almost half of that recorded in 2007 when the fatality rate for male workers was 5.0 fatalities per 100,000 male workers.

Over the same period, the fatality rate for female workers has decreased, from 0.5 fatalities per 100,000 female workers in 2007 to 0.1 fatalities per 100,000 female workers between 2018 to 2020.

Figure 2: Worker fatalities: fatality rate (per 100,000 workers) by gender, 2003 to 2020



² See Glossary for more detail on gender.

1.3. Age group

The distribution of fatalities by age has remained relatively consistent over the past 5 years (Table 1). As in previous years, workers aged 55-64 years accounted for more deaths in 2020 than any other age group (28%).

In 2020, workers aged 65 and over had the highest fatality rate at 5.3 fatalities per 100,000 workers (almost four times the overall worker fatality rate of 1.5 fatalities per 100,000 workers) and workers aged 55 to 64 had the second highest fatality rate at 2.9 fatalities per 100,000 workers (Table 2). Considerably fewer young people (aged under 25 years) were fatally injured in 2020. Compared to the 5 year average, the 2020 fatality rate among this group halved (0.4 fatalities per 100,000 workers compared with 0.8).

Table 1: Worker fatalities: number by age group, 2016 to 2020

Age group	2016	2017	2018	2019	2020	5 yr total
Under 25	16	16	19	15	8	74
25-34	33	32	24	26	30	145
35-44	24	33	26	36	34	153
45-54	40	36	27	33	36	172
55-64	48	48	31	48	55	230
65 & over	26	24	17	32	31	130
Total	187	189	144	190	194	904

Figure 3: Worker fatalities: proportion by age group, 2016 to 2020

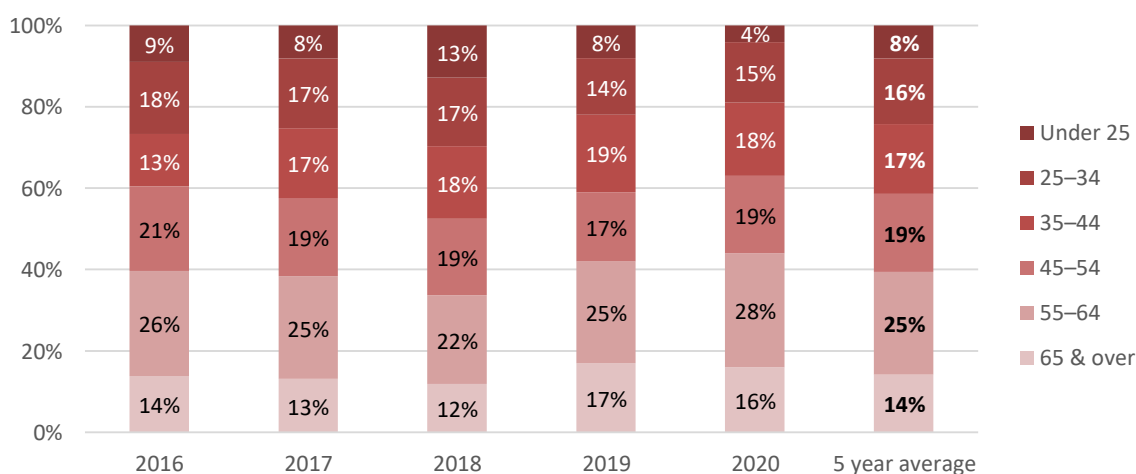


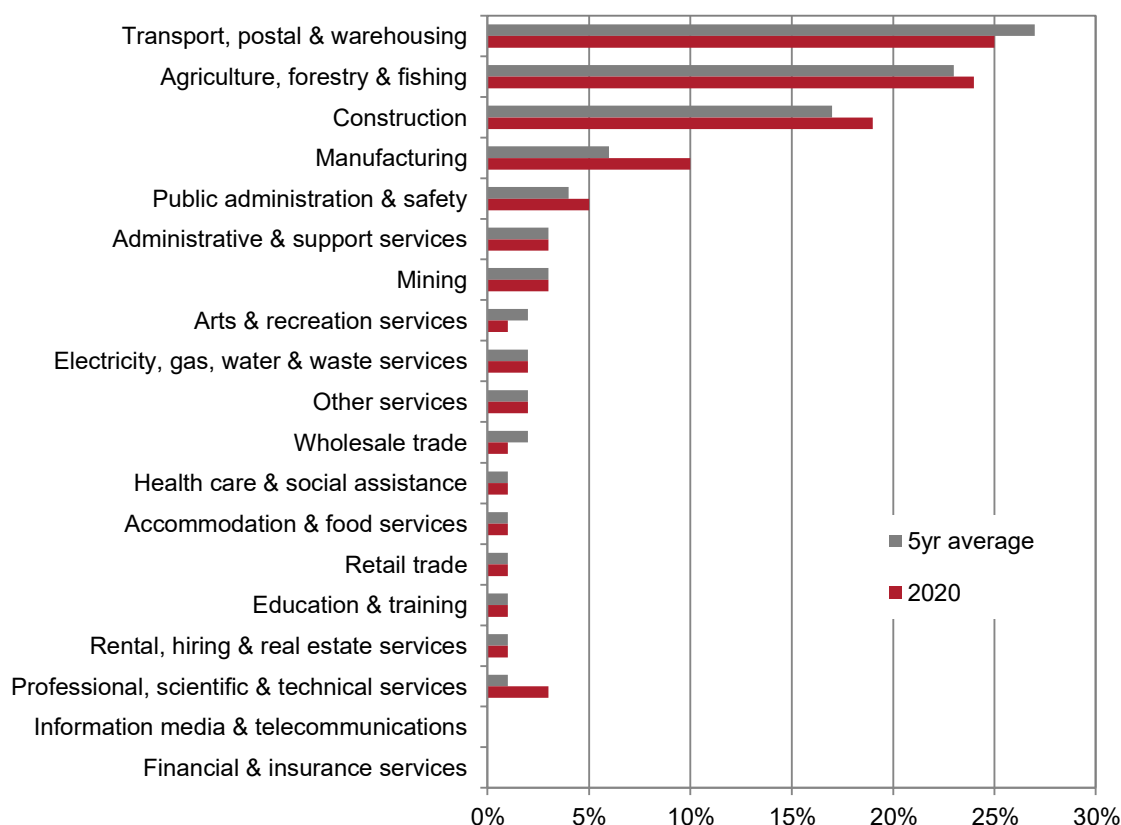
Table 2: Worker fatalities: fatality rates (per 100,000 workers) by age group, 2016 to 2020

Age group	2016	2017	2018	2019	2020	5 yr average
Under 25	0.9	0.9	1.0	0.8	0.4	0.8
25-34	1.2	1.1	0.8	0.8	1.0	1.0
35-44	0.9	1.2	1.0	1.3	1.2	1.1
45-54	1.6	1.4	1.0	1.3	1.4	1.3
55-64	2.7	2.6	1.7	2.5	2.9	2.5
65 & over	5.7	4.9	3.1	5.4	5.3	4.9
Total	1.6	1.5	1.1	1.5	1.5	1.4

1.4. Industry

In 2020, almost half (49%) of the worker fatalities occurred in two industries (Figure 4). Transport, postal and warehousing fatalities accounted for 25% (49 fatalities), closely followed by fatalities in the Agriculture, forestry and fishing industry (46 fatalities; 24%).

Figure 4: Worker fatalities: proportion by industry of employer, 2020 and 5 year average (2016 to 2020) (sorted by 5 year average proportion)



Fatality rates, expressed as the number of fatalities per 100,000 workers, are best used when comparing data across industries. This is because it reflects the number of fatalities per number of workers employed in the industry, thus improving comparisons between industries of different sizes (Figure 5 and Table 3).

In 2020, the Agriculture, forestry and fishing industry recorded the highest fatality rate with 13.1 fatalities per 100,000 workers). While this is very similar to the 5 year average of 12.9 fatalities per 100,000 workers, this is an increase of 39% since 2019. Despite the Transport, postal and warehousing industry having the highest number of workers fatalities in 2020, the industry recorded the second highest fatality rate when accounting for the number of workers in the industry (at 7.8 fatalities per 100,000 workers). Further information about the Road Transport and Agriculture sub-industries (which are the areas of the industries with the highest rates) can be found in sections 1.5.1 and 1.5.2 respectively.

The third highest fatality rate in 2020 was the Construction industry. While this industry had a much lower fatality rate than the top two industries, at 3.1 fatalities per 100,000 workers in 2020, this rate was 15% higher than the 5 year average for this industry. More information about this industry can be found in section 1.5.3.

Manufacturing is also a priority industry under the *Australian Work Health and Safety Strategy 2012–2022* and accounted for the fourth highest proportion of 2020 worker fatalities (10%). When accounting for the number of workers in this industry the rate is much lower than other industries (at 2.2 fatalities per 100,000 workers).

Interpreting fatality rates and averages

As fatality rates are sensitive to the number of workers in each industry, industries that have relatively fewer workers (such as the Electricity, gas, water and waste services industry) may show volatility even when small variations in the number of fatalities are recorded. Therefore, the actual number of fatalities should also be considered when interpreting the fatality rates for smaller industries (see Table 3 for numbers and fatality rates for all industries).

When considering numbers and rates of fatalities, it is also important to consider the 5 year average as figures can fluctuate each year.

Figure 5: Worker fatalities: fatality rates (per 100,000 workers) by industry of employer, 2020 and 5 year average (2016 to 2020) (sorted by 5 year average fatality rate)

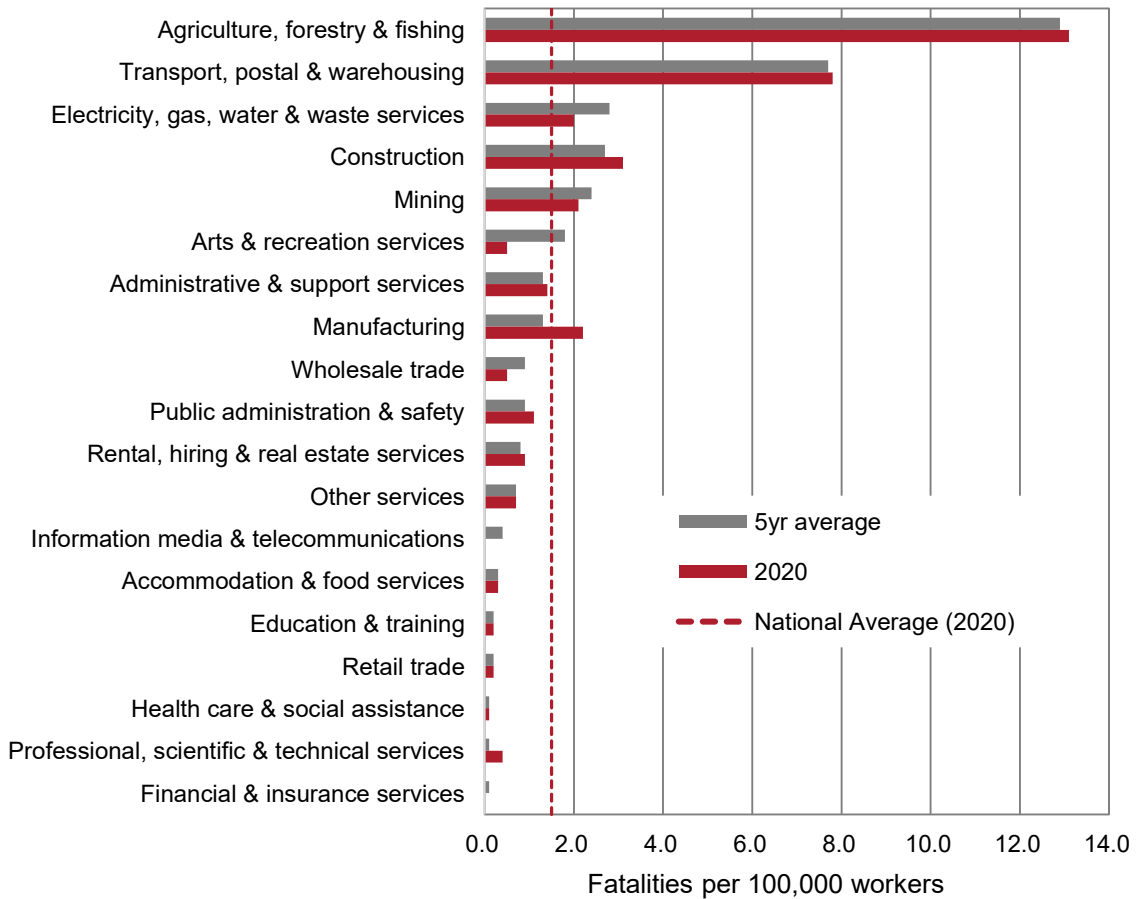


Table 3: Worker fatalities: number of fatalities and fatality rates (per 100,000 workers) by industry of employer, 2019, 2020 and 5 year average (2016 to 2020) (sorted by 5 year average fatality rate)

Industry of employer	Number of fatalities			Fatality rates		
	2019	2020	5yr average	2019	2020	5yr average
Agriculture, forestry & fishing	31	46	42	9.4	13.1	12.9
Transport, postal & warehousing	60	49	49	9.0	7.8	7.7
Electricity, gas, water & waste services	6	3	4	3.8	2.0	2.8
Construction	28	36	31	2.4	3.1	2.7
Mining	7	5	6	2.9	2.1	2.4
Arts & recreation services	5	1	4	2.0	0.5	1.8
Administrative & support services	7	6	6	1.5	1.4	1.3
Manufacturing	13	19	12	1.5	2.2	1.3
Wholesale trade	7	2	4	1.8	0.5	0.9
Public administration & safety	13	10	7	1.5	1.1	0.9
Rental, hiring & real estate services	1	2	2	0.5	0.9	0.8
Other services	6	3	4	1.2	0.7	0.7
Information media & telecommunications	0	0	1	0.0	0.0	0.4
Accommodation & food services	2	2	2	0.2	0.3	0.3
Education & training	2	2	2	0.2	0.2	0.2
Retail trade	0	2	2	0.0	0.2	0.2
Health care & social assistance	1	1	2	0.1	0.1	0.1
Professional, scientific & technical services	1	5	1	0.1	0.4	0.1
Financial & insurance services	0	0	<1	0.0	0.0	0.1
Total	190	194	181	1.5	1.5	1.4

Note: values of '<1' represents that there have been fatalities in the past 5 years, but the rounded average is less than 0.5.

1.5. Priority industries

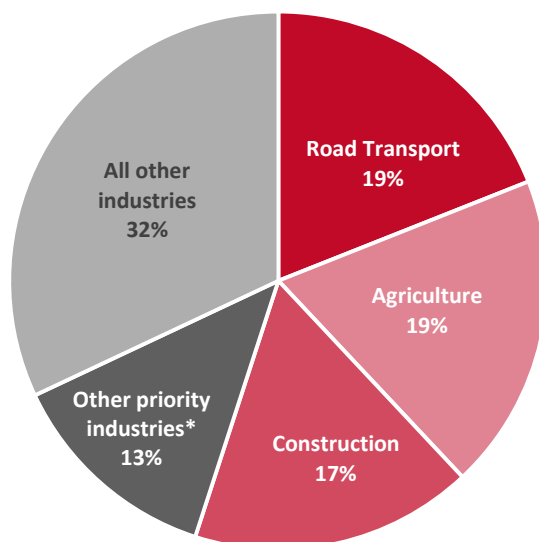
The *Australian Work Health and Safety Strategy 2012–2022* (Australian Strategy) provides a framework to drive improvements in work health and safety (WHS) in Australia. It promotes a collaborative approach between the Commonwealth, state and territory governments, industry and unions and other organisations to achieve the vision of healthy, safe and productive working lives. The Australian Strategy identifies national priority industries and conditions to help direct prevention activities to where they are needed the most.

The following priority industries have high numbers and rates of fatalities and/or injuries, or are by their nature hazardous:

- 1 Agriculture
- 2 Road transport
- 3 Manufacturing
- 4 Construction
- 5 Accommodation and food services
- 6 Public administration and safety, and
- 7 Health care and social assistance.

Figure 6 shows that three priority industries—Agriculture, Road transport and Construction — accounted for 55% of worker fatalities between 2016 and 2020.

Figure 6: Worker fatalities: proportion of fatalities by priority industry of employer, 2016 to 2020 (combined total)



Note: *'Other priority industries' include Manufacturing, Accommodation and food services, Public administration and safety, and Health care and social assistance.

The priority industries are classified using the Australian and New Zealand Standard Industrial Classification (2006) and include a combination of divisions and subdivisions.

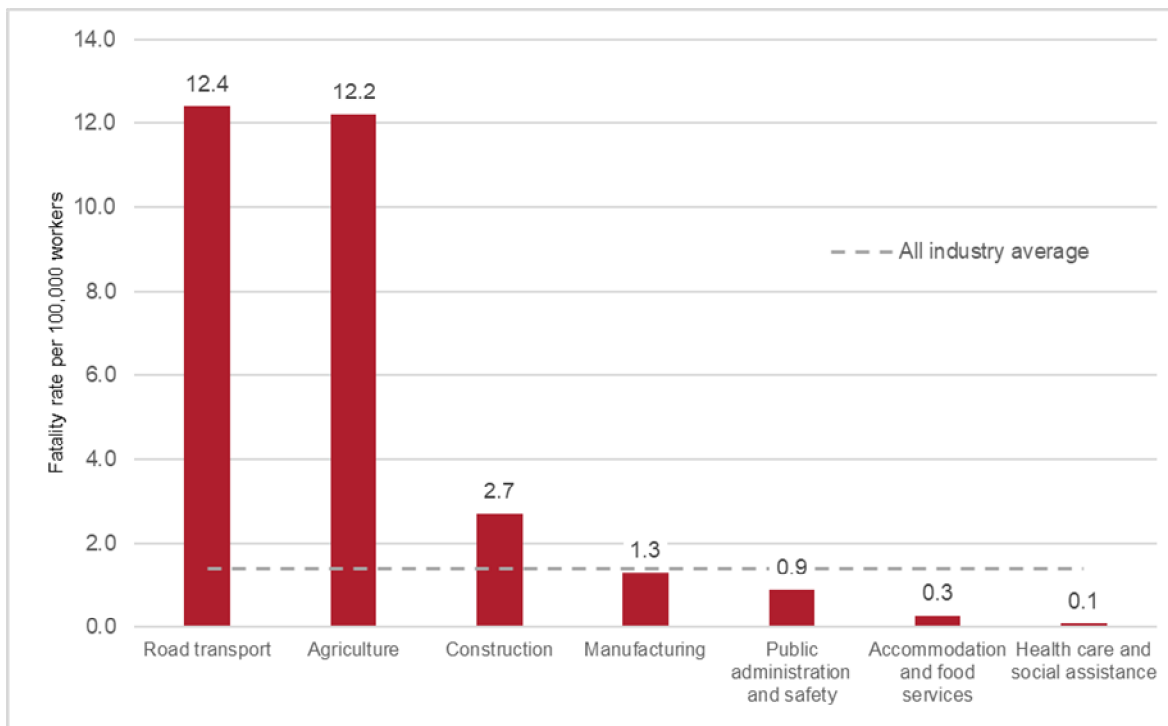
The percentages shown in this table have been rounded to the nearest whole number; therefore the sum of percentage figures for each column may not equal the total.

As noted previously, the fatality rates should also be considered when comparing different sized industries.

Figure 7 shows the Road Transport, Agriculture and Construction industries had the highest fatality rates. The 5 year average fatality rate for the Road Transport industry was 12.4 fatalities per 100,000. This was closely followed by the Agriculture industry at 12.2 fatalities per 100,000 workers. The next highest was the Construction at 2.7 fatalities per 100,000 workers. Given these higher rates, this report examines these three priority industries in further detail.

Industries such as Manufacturing, Accommodation and food services, Health care and social assistance and Public administration and safety have low fatality rates but are included as priority industries due to high non-fatal injury rates. For information on non-fatal injuries in these industries, refer to the latest *Australian Workers' Compensation Statistics* report.

Figure 7: Worker fatalities: fatality rates (per 100,000 workers) by priority industry of employer, 2016 to 2020 (5 year average fatality rate)



1.5.1. Priority industry: Road transport

Over the period from 2016 to 2020, there were 175 worker fatalities in the Road transport industry, which accounts for 19% of all worker fatalities over the period. The vast majority (167 fatalities; 95%) occurred in the Road freight transport sub-division, with 8 fatalities (5%) in the Road passenger transport industry.

The majority of fatalities (76%) in the Road transport industry over the 5 years to 2020 were due to vehicle collisions³ — 128 in the Road freight transport industry and 5 in the Road passenger transport industry (Table 4). Being hit by moving objects⁴ caused a further 13 fatalities in the Road freight transport industry.

Table 4: Worker fatalities in Road transport industry groups by mechanism of incident, 2016 to 2020 (combined total)

Industry group and mechanism of incident	No. of fatalities	% of fatalities
Road freight transport	167	95%
Vehicle collision	128	73%
Being hit by moving objects	13	7%
Being hit by falling objects	9	5%
Being trapped between stationary and moving objects	6	3%
Explosion	3	2%
Other mechanisms	8	5%
Road passenger transport	8	5%
Vehicle collision	5	3%
Other mechanisms	3	2%
5 year total	175	100%

Note: The percentages shown in this table have been rounded to the nearest whole number; therefore the sum of percentage figures for each column may not equal the total.

Table 5 shows that 165 worker fatalities (94%) in the Road transport industry involved a vehicle, with the majority (140 fatalities) occurring while the worker was in a moving vehicle. A further 8 fatalities occurred while the worker was loading or unloading a vehicle, and 7 occurred while the worker was conducting repairs or maintenance on a vehicle.

Table 5: Worker fatalities: Road transport by vehicle involvement and activity of the deceased, 2016 to 2020 (combined total)

Vehicle involvement/Deceased activity	No. of fatalities	% of fatalities
Vehicle involved	165	94%
Driving/moving freight/people	140	80%
Loading/unloading	8	5%
Repair/maintenance	7	4%
Other	10	6%
No vehicle involved	10	6%
5 year total	175	100%

Note: The percentages shown in this table have been rounded to the nearest whole number; therefore the sum of percentage figures for each column may not equal the total.

³ See Glossary for explanation of 'vehicle collision'

⁴ See Glossary for explanation of 'Being hit by moving objects'

1.5.2. Priority industry: Agriculture

Over the last 5 years (2016 to 2020), there were 171 worker fatalities in the Agriculture industry, which is 19% of all worker fatalities over the period.

Within the Agriculture industry subdivision, the Sheep, beef cattle and grain farming industry group accounted for over half (57%) of the fatalities over the 5 years (Table 6).

Workers aged 65 and over accounted for a third (34%) of fatalities in the Agriculture industry. This is double the proportion of fatalities across all industries (14%) over the same period and age group. This is due in part to the composition of the agriculture workforce which has a higher proportion of older workers.

Table 6: Worker fatalities: Agriculture industry groups by age group, 2016 to 2020 (combined total)

Agriculture industry group	Under 25	25–44	45–64	65 & over	5 year total
Sheep, beef cattle & grain farming	6	14	43	34	97
Other crop growing	1	6	5	6	18
Fruit & tree nut growing	1	3	8	5	17
Other livestock farming	2	2	8	3	15
Dairy cattle farming	2	1	5	3	11
Mushroom & vegetable growing	0	2	2	4	8
Other agriculture subdivision	0	0	2	3	5
5 year total	12	28	73	58	171

The most common mechanism of incident⁵ causing worker fatalities in the Agriculture industry over the 5 years was vehicle collisions⁶, which caused 27% of fatalities (Table 7). This was followed by Being hit by moving objects⁷ (17%) and Being trapped by moving machinery and Rollover of non-road vehicles (both 8%).

⁵ See Glossary for explanation of 'mechanism of incident'

⁶ See Glossary for explanation of 'vehicle collision'

⁷ See Glossary for explanation of 'Being hit by moving objects'

Table 7: Worker fatalities: Agriculture by mechanism of incident, 2016 to 2020 (combined total)

Mechanism of incident	No. of fatalities	% of fatalities
Vehicle collision	47	27%
Being hit by moving objects	29	17%
Being trapped by moving machinery	13	8%
Rollover of non-road vehicle	13	8%
Falls from a height	12	7%
Being hit by falling objects	12	7%
Being trapped between stationary and moving objects	10	6%
Being hit by an animal	7	4%
Contact with hot objects	5	3%
Contact with electricity	5	3%
Other mechanisms	18	11%
5 year total	171	100%

Note: The percentages shown in this table have been rounded to the nearest whole number; therefore the sum of percentage figures for each column may not equal the total.

Over the 5 years to 2020, the majority of fatalities (70%) in the Agriculture industry involved a vehicle (Table 8). The most common vehicles involved were tractors (26%) and quad bikes (13%).

Table 8: Worker fatalities: Agriculture by vehicle involvement and type of vehicle, 2016 to 2020 (combined total)

Vehicle involvement and type of vehicle	No. of fatalities	% of fatalities
Vehicle involved	119	70%
Tractor	45	26%
Quad bike/ATV	22	13%
Ute or car	10	6%
Truck	10	6%
Aircraft	7	4%
Forklift	3	2%
Motorbike	6	4%
Other vehicles	16	9%
No vehicle involved	52	30%
5 year total	171	100%

Note: The percentages shown in this table have been rounded to the nearest whole number; therefore the sum of percentage figures for each column may not equal the total.

1.5.3. Priority industry: Construction

Over the 5 year period from 2016 to 2020, there were 154 worker fatalities in the Construction industry in Australia. The majority of these (58%) occurred in the Construction services industry sub-division (Table 9). Younger workers aged under 25 accounted for 13% of fatalities in the Construction industry, compared with only 8% of fatalities across all industries during the 5 year period (Table 10).

Table 9: Worker fatalities: Construction industry sub-divisions and groups, 2016 to 2020 (combined total)

Industry sub-divisions and groups ⁸	No. of fatalities	% of fatalities
Construction Services	89	58%
Building installation services	23	15%
Other construction services	19	12%
Building structure services	19	12%
Land development & site preparation services	16	10%
Building completion services	12	8%
Building Construction Total	46	30%
Residential building construction	26	17%
Non-residential building construction	20	13%
Heavy & Civil Engineering Construction Total	19	12%
Construction 5 year total	154	100%

Note: The percentages shown in this table have been rounded to the nearest whole number; therefore the sum of percentage figures for each column may not equal the total.

Table 10: Worker fatalities: Construction industry and all industries by age group, 2016 to 2020 (combined total)

Age group	Construction industry – No. of fatalities	Construction industry – % of fatalities	All industries – % of fatalities
Under 25	20	13%	8%
25–34	22	14%	16%
35–44	17	11%	17%
45–54	35	23%	19%
55–64	45	29%	25%
65 & over	15	10%	14%
5 year total	154	100%	100%

Note: The percentages shown in this table have been rounded to the nearest whole number; therefore the sum of percentage figures for each column may not equal the total.

For occupations within the Construction industry, Labourers (both Construction & mining and Miscellaneous) accounted for 38% of fatalities (59 fatalities) from 2016 to 2020 (Table 11). Electricians (13 fatalities) and Bricklayers, carpenters and joiners (12 fatalities) accounted for a further 16% of Construction industry fatalities.

⁸ See Glossary for explanation of 'industry' classifications

Table 11: Worker fatalities: Construction industry occupations, 2016 to 2020 (combined total)

Occupation minor groups	No. of fatalities	% of fatalities
Construction and Mining Labourers	32	21%
Miscellaneous Labourers	27	18%
Electricians	13	8%
Bricklayers, and Carpenters and Joiners	12	8%
Truck Drivers	10	6%
Floor Finishers and Painting Trades Workers	9	6%
Mobile Plant Operators	8	5%
Electronics and Telecommunications Trades Workers	6	4%
Stationary Plant Operators	6	4%
Glaziers, Plasterers and Tilers	6	4%
Plumbers	5	3%
Other occupations	20	14%
Construction 5 year total	154	100%

Note: The percentages shown in this table have been rounded to the nearest whole number; therefore the sum of percentage figures for each column may not equal the total.

In terms of mechanism of the fatalities⁹, between 2016 and 2020, Falls from a height was the main cause of fatalities in both the Construction services and Building construction industry sub-divisions, resulting in 48 deaths across the Construction industry (Table 12).

Table 12: Worker fatalities: Construction industry sub-divisions by mechanism of incident, 2016 to 2020 (combined total)

Construction sub-division and mechanism	No. of fatalities	% of fatalities
Construction services	89	58%
Falls from a height	28	18%
Vehicle collision	16	10%
Contact with electricity	12	8%
Being hit by falling objects	12	8%
Being hit by moving objects	9	6%
Being trapped between stationary and moving objects	4	3%
Slide or cave-in	2	1%
Being trapped by moving machinery	2	1%
Other mechanisms	4	3%
Building construction	46	30%
Falls from a height	19	12%
Being hit by falling objects	10	6%
Vehicle collision	4	3%
Being hit by moving objects	4	3%
Contact with electricity	4	3%
Being trapped by moving machinery	2	1%
Other mechanisms	3	2%
Heavy & civil engineering construction	19	12%
Being hit by moving objects	9	6%
Vehicle collision	4	3%
Slide or cave-in	2	1%
Being hit by falling objects	2	1%
Other mechanisms	2	1%
Construction 5 year total	154	100%

Note: The percentages shown in this table have been rounded to the nearest whole number; therefore the sum of percentage figures for each column may not equal the total.

⁹ See Glossary for explanation of 'mechanism of incident'

Fatalities from Being hit by falling objects (24 fatalities) and Vehicle collisions¹⁰ (24 fatalities) were also common mechanisms of worker fatalities across the Construction industry (Table 13).

Table 13: Worker fatalities: Construction industry by mechanism of incident, 2016 to 2020 (combined total)

Construction industry and mechanism	No. of fatalities	% of fatalities
Falls from a height	48	31%
Being hit by falling objects	24	16%
Vehicle collision	24	16%
Being hit by moving objects	22	14%
Contact with electricity	16	10%
Being trapped between stationary and moving objects	6	4%
Other mechanisms	14	9%
Construction 5 year total	154	100%

Note: The percentages shown in this table have been rounded to the nearest whole number; therefore the sum of percentage figures for each column may not equal the total.

Table 14 shows that almost a third (29%) of fatalities in the Construction industry involved falls from a building or other type of structure (e.g. the roof). This was followed by falls from a ladder (21%).

Table 14: Worker fatalities: Construction industry, falls from a height fatalities by breakdown agency, 2016 to 2020 (combined total)

Falls from a height: Breakdown agency	No. of fatalities	% of fatalities
Buildings and other structures	14	29%
Ladders	10	21%
Openings in floors, walls or ceilings	6	13%
Scaffolding	4	8%
Other agencies	14	29%
Construction 5 year total - falls from a height	48	100%

Note: The percentages shown in this table have been rounded to the nearest whole number; therefore the sum of percentage figures for each column may not equal the total.

¹⁰ See Glossary for explanation of 'vehicle collision'

1.6. Gig Workers

The safety of workers performing gig work has been an area of increasing concern. In 2019, Safe Work Australia expanded its data collection to identify injury fatalities of gig workers.

There are limitations to this data. Information about whether a worker had been performing work obtained via a digital platform at the time of an injury fatality is often not available. A worker may operate their own business as an independent contractor obtaining work both through traditional arrangements as well as via one or more digital platforms. Given the sources from which work-related injury fatality data are collated (e.g. policy reports, coronial data), this level of detail is often not readily available.

The gig worker fatalities identified in the Traumatic Injuries Fatalities dataset to date relate to food delivery.

Over the past 2 years, Safe Work Australia has identified 9 gig workers that have died working for food delivery platforms (Table 15). Of those, all workers were using a two wheeled vehicle and were involved in a collision with another vehicle (e.g. truck, car, bus).

Table 15: Worker fatalities: gig workers and vehicle type, 2019 and 2020

Worker vehicle type	No. of fatalities	% of fatalities
Scooter	4	44%
Pushbike	3	33%
Motorbike	2	22%
Total	9	100%

Note: The percentages shown in this table have been rounded to the nearest whole number; therefore the sum of percentage figures for each column may not equal the total.

These gig workers primarily worked in Transport, postal and warehousing, were male and between the ages of 25 and 44.

1.7. Occupation

In 2020, 67 Machinery operators and drivers were killed, accounting for the largest proportion (35%) of all worker fatalities by occupation (Table 16). This is lower than in 2019 (when 39% of workers killed were Machinery operators and driver) but its closely in line with the 5 year average (34%). The majority (76%) of the 67 Machinery operators and drivers killed were Road and rail drivers.

Labourers accounted for a further 21% of fatalities in 2020 (41 fatalities), followed by Managers (18%; 35 fatalities). Compared to previous years, the number of fatalities among Managers is 35% higher in 2020 than the 5 year average. This was primarily driven by deaths of Farmers and Farm Managers.

Table 16: Worker fatalities: number of fatalities by major and select sub-major occupation groups, 2019, 2020 and 5 year average (2016 to 2020)

Occupation	Number of fatalities		
	2019	2020	5yr average
Machinery operators and drivers	74	67	62
Road and Rail Drivers	62	51	49
Mobile Plant Operators	6	8	7
Machine and Stationary Plant Operators	6	8	6
Labourers	31	41	41
Other Labourers	18	20	17
Farm, Forestry and Garden Workers	5	10	12
Construction and Mining Labourers	7	6	9
Factory Process Workers	1	3	2
Managers	25	35	26
Farmers and Farm Managers	23	30	23
Chief Executives, General Managers and Legislators	1	4	1
Technicians and trades workers	29	26	25
Construction Trades Workers	6	7	7
Electrotechnology and Telecommunications Trades Workers	9	5	7
Automotive and Engineering Trades Workers	8	3	4
Other Technicians and Trades Workers	2	4	3
Professionals	9	11	12
Design, Engineering, Science and Transport Professionals	7	11	9
Community and personal service workers	19	11	11
Protective Service Workers	11	10	6
Clerical and administrative workers	2	1	1
Sales workers	1	2	1
Total	190	194	181

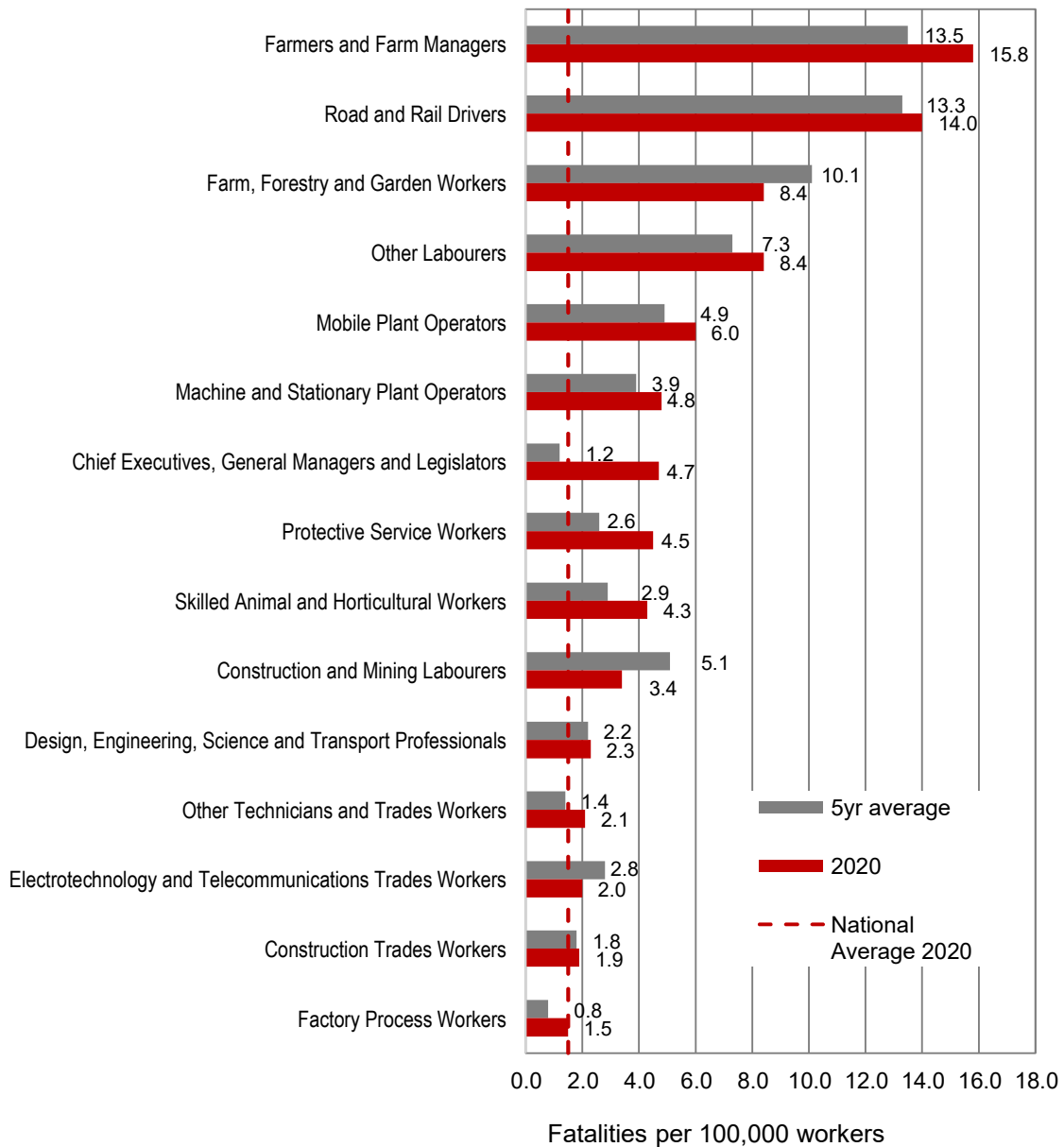
Note: Not all sub-groups have been included for each sub-major occupation group. Only sub-major occupations with a 2020 fatality rate higher than the national 2020 fatality rate of 1.5 fatalities per 100,000 workers have been included.

The averages shown in this table have been rounded to the nearest whole number; therefore the sum of the figures for the 5yr average column may not equal the total average.

Similar to industry, fatality rates are best used when comparing data across occupations to take account of the relative number of workers within each occupational category.

Figure 8 presents 2020 and 5 year average (2016 to 2020) fatality rates for the ‘sub-major’ classification tier of occupations. Only sub-major occupations with a 2020 fatality rate higher than the national 2020 average fatality rate of 1.5 fatalities per 100,000 workers are shown. Farm and Farm Managers had the highest rate in 2020 with 15.8 fatalities per 100,000 workers, followed by Road and rail drivers (14.0 fatalities per 100,000 workers). Both of these occupations recorded rates higher than their 5 year average (up 17% and 5% respectively).

Figure 8: Worker fatalities: rates (per 100,000 workers) by selected occupations, 2020 and 5 year average (2016 to 2020)



1.8. Mechanism of incident

The mechanism of incident¹¹ refers to the overall action, exposure or event that describes the circumstances that resulted in a worker fatality. Three mechanisms accounted for 65% of worker fatalities in 2020; Vehicle collisions¹², Being hit by moving objects¹³ and Falls from a height (Table 17).

In 2020, 41% of worker fatalities were due to a Vehicle collision, which is slightly above the 5 year average of 39%. Vehicle collisions includes incidents where an occupant of a vehicle is killed following a collision with another vehicle or a stationary object. Vehicles include not only road vehicles such as cars and trucks, but also machines such as aircraft, boats, loaders, tractors and quad bikes.

Being hit by moving objects and Falls from a height accounted for the next highest proportion of worker fatalities in 2020 (13% and 11% respectively). Being hit by moving objects includes fatalities involving pedestrians hit by vehicles, as well as being hit by other moving equipment or objects.

Table 17: Worker fatalities: number and proportion by mechanism of incident, 2019, 2020 and 5 year average (2016 to 2020) (sorted by 5 year average)

Mechanism of incident	Number of fatalities			% of fatalities		
	2019	2020	5 yr average	2019	2020	5 yr average
Vehicle collision	84	80	70	44%	41%	39%
Being hit by moving objects	14	25	23	7%	13%	13%
Falls from a height	21	22	23	11%	11%	13%
Being hit by falling objects	21	17	17	11%	9%	9%
Being trapped between stationary and moving objects	9	11	8	5%	6%	4%
Being trapped by moving machinery	10	13	8	5%	7%	4%
Contact with electricity	8	7	6	4%	4%	3%
Rollover of non-road vehicle	4	6	4	2%	3%	2%
Drowning	5	2	5	3%	1%	3%
Slide or cave-in	3	1	2	2%	1%	1%
Contact with hot objects	2	0	2	1%	0%	1%
Being hit by an animal	0	3	2	0%	2%	1%
Other mechanism	9	7	10	5%	4%	6%
Total	190	194	181	100%	100%	100%

Note: The percentages shown in this table have been rounded to the nearest whole number; therefore the sum of percentage figures for each column may not equal the total.

¹¹ See Glossary for explanation of 'mechanism of incident'

¹² See Glossary for explanation of 'vehicle collision'

¹³ See Glossary for explanation of 'being hit by moving objects'

1.9. Breakdown agency

The breakdown agency identifies the object, substance or circumstance principally involved at the point at which things started to go wrong and ultimately led to a worker fatality.

The breakdown agency category of Mobile plant and transport, which includes objects such as cars, tractors and excavators, accounted for over half (58%) of fatalities in 2020 (Table 18).

Environmental agencies, which includes objects such as buildings (e.g. roof and other fixed structures of the building) and vegetation, was the second most common breakdown agency in 2020, accounting for 14% of worker fatalities.

Table 18: Worker fatalities: number and proportion by breakdown agency, 2019, 2020 and 5 year average (2016 to 2020) (sorted by 5 year average)

Breakdown agency	Number of fatalities			% of fatalities		
	2019	2020	5 yr average	2019	2020	5 yr average
Mobile plant & transport	105	113	100	55%	58%	55%
Environmental agencies	24	27	25	13%	14%	14%
Machinery & (mainly) fixed plant	25	23	18	13%	12%	10%
Non-powered handtools, appliances & equipment	18	10	14	9%	5%	8%
Animal, human & biological agencies	8	11	9	4%	6%	5%
Materials & substances	6	7	7	3%	4%	4%
Powered equipment, tools & appliances	3	2	3	2%	1%	2%
Chemicals & chemical products	1	1	2	1%	1%	1%
Other & unspecified agencies	0	0	1	0%	0%	1%
Total	190	194	181	100%	100%	100%

Note: The percentages shown in this table have been rounded to the nearest whole number; therefore the sum of percentage figures for each column may not equal the total.

The following sections analyse selected mechanisms of incidents in conjunction with breakdown agencies, providing an overview of types of high-risk work that can result in worker fatalities. For a comprehensive overview of breakdown agency coding, see the [Type of Occurrence Classification System \(TOOCS\), 3rd Edition](#).

1.10. Vehicle involvement and collisions

Safe Work Australia's Traumatic Injury Fatalities database collects two sources of information relating to vehicles:

- Whether a vehicle was principally involved in the incident leading to a worker fatality, referred to as 'vehicle involvement'
- 'Vehicle collision', where a vehicle crash occurred and an occupant of the vehicle was killed¹⁴

Over the 5 year period from 2016 to 2020, 65% of worker fatalities (589 fatalities) involved vehicles (Table 19). Of these, just under half (279 fatalities) occurred on a public road¹⁵. The majority (87%) of worker fatalities involving vehicles on public roads were the result of a Vehicle collision (242 fatalities).

Table 19: Worker fatalities: number of fatalities with vehicle involvement by public road status, and proportion of fatalities involving a vehicle of all fatalities, by mechanism of incident, 2016 to 2020 (combined total)

Mechanism of incident	On a public road	Not on a public road	Total fatalities involving a vehicle	% of all fatalities
Vehicle collision	242	107	349	39%
Being hit by moving objects	27	55	82	9%
Being hit by falling objects*	1	34	35	4%
Being trapped between stationary and moving objects	2	28	30	3%
Falls from a height	1	21	22	2%
Rollover of non-road vehicle	1	20	21	2%
Other mechanisms	5	45	50	6%
5 year total	279	310	589	65%

* Being hit by falling objects includes fatalities where the worker was unloading/loading the vehicle and was hit by falling stock or was hit by the vehicle while conducting maintenance underneath it.

Not on a public road includes incidents involving a vehicle or self-propelled plant that occurred at a worksite, on a private road or a public area that is not a public road. These incidents include plane crashes and incidents involving watercraft as well as vehicle crashes on farming properties.

Note: The percentages shown in this table have been rounded to the nearest whole number; therefore the sum of percentage figures for each column may not equal the total.

¹⁴ See Glossary for more detail on 'Vehicle collisions'

¹⁵ See Glossary for explanation of 'Public road incident' and 'Non-public road incident'.

The number of worker fatalities resulting from a vehicle collision in 2020 (80 fatalities) was higher than the 5 year average (70 fatalities).

In 2020, over two thirds (70%; 56 fatalities) of the 80 workers who died in a vehicle collision died in a vehicle collision involving a single vehicle (Table 20). Almost half of those single vehicle collisions (25 fatalities) involved a heavy vehicle. There were 24 worker fatalities in 2020 due to multi-vehicle collisions.

Table 20: Worker fatalities due to vehicle collision: number by type of collision and type of vehicle, 2016 to 2020 (sorted by 5 year average)

Type of collision	2016	2017	2018	2019	2020	% of 2020	% of 5yr average
Single vehicle collision	46	45	27	53	56	70%	65%
Heavy vehicle	21	20	15	29	25	31%	32%
Aircraft	7	13	5	8	14	18%	13%
Light vehicle	12	3	3	11	4	5%	9%
Quad bike	4	5	1	2	0	0%	3%
Motorbike/scooter	0	3	1	1	1	1%	2%
Other single vehicle	2	1	2	2	12	15%	5%
Multi vehicle collision	31	20	16	31	24	30%	35%
Two heavy vehicles	11	6	10	14	5	6%	13%
Two light vehicles	9	4	0	3	1	1%	5%
Occupant in a light vehicle killed in collision with a heavy vehicle	5	5	1	2	2	3%	4%
Occupant in a heavy vehicle killed in collision with a light vehicle	4	1	4	3	2	3%	4%
Other multi-vehicle collision	2	4	1	9	14	18%	9%
Total – vehicle collision	77	65	43	84	80	100%	100%

Note: The percentages shown in this table have been rounded to the nearest whole number; therefore the sum of percentage figures for each column may not equal the total.

1.11. Being hit by moving objects

In 2020, 25 workers were killed as a result of Being hit by moving objects¹⁶ (Table 21). This is higher than what was reported in 2019 (where 14 workers were killed by Being hit by moving objects). These fatalities involve workers who were not occupants in a vehicle – vehicle occupant fatalities are analysed separately in *Section 1.10. Vehicle involvement and collisions*.

The majority of fatalities resulting from Being hit by moving objects in 2020 (76%) were caused by Mobile plant and transport (Table 21). Within the Mobile plant and transport category, most fatalities were caused by Trucks, semi-trailers and lorries. Higher proportions of fatalities were caused by Trucks, semi-trailers and lorries in 2020 compared to the 5 year average (40% compared to 22%).

This was followed by Cars, station wagons, vans, utilities (accounting for 16% of 2020 worker fatalities), and Tractors, agricultural or otherwise and Self-propelled plant (both accounting for 8%). The proportion of fatalities caused by Tractors, agricultural or otherwise was much lower in 2020 than the 5 year average.

Table 21: Worker fatalities due to being hit by moving objects: number by breakdown agency, 2016 to 2020 (sorted by 5 year average)

Breakdown agency	2016	2017	2018	2019	2020	% of 2020	% of 5 yr average
Mobile plant & transport	13	18	17	9	19	76%	65%
Trucks, semi-trailers, lorries	2	7	4	3	10	40%	22%
Tractors, agricultural or otherwise	3	4	5	3	2	8%	15%
Cars, station wagons, vans, utilities	2	4	2	2	4	16%	12%
Self-propelled plant	5	1	3	1	2	8%	10%
Other mobile plant & transport	1	2	3	0	1	4%	6%
Machinery & (mainly) fixed plant	2	4	2	2	2	8%	10%
Powered equipment, tools & appliances	2	3	1	2	0	0%	7%
Materials & substances	1	3	2	0	0	0%	5%
Environmental agencies	0	1	0	1	3	12%	4%
Non-powered handtools, appliances & equipment	0	3	1	0	1	4%	4%
Animal, human & biological agencies	1	2	0	0	0	0%	3%
Chemicals & chemical products	0	0	1	0	0	0%	1%
Other & unspecified agencies	1	0	0	0	0	0%	1%
Total – Being hit by moving objects	20	34	24	14	25	100%	100%

Note: The percentages shown in this table have been rounded to the nearest whole number; therefore the sum of percentage figures for each column may not equal the total.

Not all sub-groups have been included for each breakdown agency.

¹⁶ See Glossary for explanation of 'being hit by moving objects'

1.12. Falls from a height

In 2020, 22 workers died as a result of a Fall from a height; a slight increase from 21 fatalities in 2019, but still lower than the 5 year average of 23 fatalities (Table 22). Over the last 5 years, Falls from a height most commonly involved falls from a Ladder (17%), Roof (15%), Openings in floors, walls or ceilings (7%), horses, donkeys and mules (6%).

Table 22: Worker fatalities due to falls from a height: number by breakdown agency and selected sub-groups, 2016 to 2020 (sorted by 5 year average)

Breakdown agency	2016	2017	2018	2019	2020	% of 2020	% of 5yr average
Environmental agencies	10	11	7	5	10	45%	38%
Roof	4	3	4	1	5	23%	15%
Openings in floors, walls or ceilings	2	3	0	1	2	9%	7%
Non-powered handtools, appliances & equipment	10	6	4	10	6	27%	32%
Ladders	6	4	1	5	3	14%	17%
Scaffolding	2	0	0	2	1	5%	4%
Mobile plant & transport	3	6	1	1	5	23%	14%
Trucks, semi-trailers, lorries	1	2	1	0	1	5%	4%
Tractors, agricultural or otherwise	0	3	0	0	0	0%	3%
Excavators, backhoes, other digging plant	1	0	0	1	1	5%	3%
Animal, human & biological agencies	1	3	1	2	0	0%	6%
Horses, donkeys, mules	1	3	1	2	0	0%	6%
Machinery & (mainly) fixed plant	1	1	2	2	1	5%	6%
Elevating work platforms	0	0	1	1	1	5%	3%
Other & unspecified agencies	1	0	2	0	0	0%	3%
Materials & substances	0	1	0	1	0	0%	2%
Total - Falls from a height	26	28	17	21	22	100%	100%

Note: The percentages shown in this table have been rounded to the nearest whole number; therefore the sum of percentage figures for each column may not equal the total.

Not all sub-groups have been included for each breakdown agency.

1.13. Location

Based on the location where the fatality occurred, five out of eight states and territories (Victoria, Western Australia, Northern Territory, Tasmania and the Australian Capital Territory) all recorded higher fatality numbers and rates in 2020 compared to the 5 year average. Whereas New South Wales, Queensland and South Australia all recorded lower numbers and rates of fatalities in 2020 compared to the 5 year average (Table 23).

Please note, jurisdictional responsibility for a fatality may be different to the state or territory where the fatality occurred (see Table 25 for a breakdown by jurisdiction).

Table 23: Worker fatalities: number and rate (per 100,000 workers) by location of death, 2019, 2020 and 5 year average (2016 to 2020)

State/Territory	Number of fatalities			Fatality rates		
	2019	2020	5yr average	2019	2020	5yr average
New South Wales	65	53	56	1.6	1.3	1.4
Queensland	41	34	41	1.6	1.4	1.7
Victoria	35	51	38	1.0	1.5	1.2
Western Australia	21	29	20	1.6	2.1	1.5
South Australia	15	11	14	1.8	1.3	1.7
Northern Territory	7	6	5	5.4	4.6	4.0
Tasmania	6	8	5	2.4	3.2	2.1
Australian Capital Territory	0	2	1	0	0.8	0.4
Total	190	194	181	1.5	1.5	1.4

Based on the location of where the fatality occurred, over the 5 years to 2020, the Transport, postal and warehousing industry accounted for the highest number of worker fatalities in New South Wales, Western Australia and South Australia (Table 24). Whereas the Agriculture, forestry and fishing industry accounted for the highest number of worker fatalities in Queensland, Victoria and Tasmania.

Table 24: Worker fatalities: number by location of death and industries with the highest number of fatalities, 2016 to 2020 (combined total)

Industry of employer	New South Wales	Queensland	Victoria	Western Australia	South Australia	Northern Territory	Tasmania	National total
Transport, postal & warehousing	81	54	41	28	28	6	8	246
Agriculture, forestry & fishing	52	65	47	14	18	6	9	211
Construction	51	27	36	20	8	5	4	154
Manufacturing	21	10	15	7	4	0	1	58
Public administration & safety	16	3	11	3	1	3	0	37
Administrative & support services	6	12	3	4	2	0	1	28
Mining	3	9	1	10	2	2	1	28
Arts & recreation services	3	5	6	4	0	2	0	21
Electricity, gas, water & waste services	6	2	8	4	1	0	0	21
Wholesale trade	6	3	8	1	0	0	0	18
Other industries	35	14	15	6	6	3	2	82
5 year total	280	204	191	101	70	27	26	904

Note: The Australian Capital Territory was not included separately due to the low number of fatalities, however, the total includes the Australian Capital Territory.

As noted above, worker fatalities may not necessarily fall within the jurisdictional responsibility of the state or territory where the fatality occurred. In addition, while the model WHS safety laws apply many jurisdictions separately count fatalities at a physical workplace from those that occur on public roads. As a result, Table 25 breaks down the 2020 worker fatalities by jurisdiction and public road status¹⁷.

The jurisdiction with the highest number of worker fatalities in 2020 was New South Wales, with 46 worker fatalities (Table 25). Of these, 30 did not occur on a public road. This was followed by Victoria (44 fatalities of which 26 did not occur on a public road) and Western Australia (28 fatalities of which 19 did not occur on a public road). Aircraft incidents resulted in seventeen worker fatalities in 2020.

Table 25: Worker fatalities: number by jurisdiction and public road status, 2020

Jurisdiction*	Not on a public road	On a public road	Total
New South Wales	30	16	46
Victoria	26	18	44
Western Australia	19	9	28
Queensland	18	9	27
Aircraft incidents**	17	0	17
South Australia	8	2	10
Tasmania	7	1	8
Commonwealth***	4	3	7
Northern Territory	5	0	5
Australian Capital Territory	2	0	2
2020 total	136	58	194

* Jurisdictions may include a number of different regulatory authorities.

** The Commonwealth jurisdiction refers to that which falls within the Commonwealth *Work Health and Safety Act 2011* administered by Comcare. Commonwealth jurisdiction fatalities have been reported in previous reports by location of death only.

*** Worker fatalities involving aircraft incidents are not tabulated against jurisdictions.

¹⁷ See Glossary for explanation of 'Public road incident' and 'Non-public road incident'.

Section 2:

Bystander fatalities

2.1 Bystander fatalities by mechanism of incident

The actions of a worker or a fault in a workplace resulted in the deaths of 34 members of the public (referred to as bystanders) in 2020. Almost two thirds of these (65%) were due to a vehicle collision¹⁸ (Table 26). Being hit by moving objects¹⁹ accounted for a further 21% of bystander fatalities in 2020. In many of these cases, the moving object was a vehicle.

Table 26: Bystander fatalities: number by mechanism of incident, 2016 to 2020 (sorted by 5 year average)

Mechanism of incident	2016	2017	2018	2019	2020	% of 2020	% of 5yr average
Vehicle collision	25	45	49	18	22	65%	62%
Being hit by moving objects	13	13	10	7	7	21%	19%
Drowning	6	0	1	3	3	9%	5%
Falls from a height	1	4	0	4	0	0%	3%
Falls on the same level	0	1	1	3	0	0%	2%
Other mechanisms	8	4	4	4	2	6%	9%
Total	53	67	65	39	34	100%	100%

Note: The percentages shown in this table have been rounded to the nearest whole number; therefore the sum of percentage figures for each column may not equal the total.

There are a number of complexities in identifying bystander fatalities. Sufficiently detailed information on the circumstances of all parties to the death is often unavailable, bystanders cannot seek compensation through workers' compensation and notifications depend on the work health and safety legislation of the jurisdiction, meaning occurrences may not be detected to the same degree as worker fatalities. Estimates of bystander fatalities in this report should therefore be regarded as an undercount and changes in the data over time interpreted with caution.

2.2 Bystander fatalities by age group

Over the last 5 years, there have been 37 work-related bystander fatalities involving children 14 years of age and under (14% of bystander fatalities) and 57 fatalities involving people aged 65 years or older (22% of bystander fatalities).

Vehicle collisions¹⁵ accounted for the highest number of work-related bystander fatalities across all age groups (Table 27). This was followed by Being hit by moving objects¹⁶. When counted together, these two mechanisms accounted for over 70% of fatalities in each age group (i.e. 70% of fatalities aged 14 and under, 77% of fatalities aged 15 to 24, 86% of fatalities aged 25 to 44, 90% aged 45 to 64 and 74% of those aged 65 and over).

Table 27: Bystander fatalities: number by age group, 2016 to 2020 (combined total)

Mechanism of incident	14 & under	15–24	25–44	45–64	65 & over
Vehicle collision	17	20	48	50	24
Being hit by moving objects	9	3	8	12	18
Drowning	2	4	3	1	3
Falls from a height	1	0	1	2	5
Falls on the same level	1	0	0	1	3
Other mechanisms	7	3	5	3	4
5 year total	37	30	65	69	57

¹⁸ See Glossary for explanation of 'vehicle collision'

¹⁹ See Glossary for explanation of 'Being hit by moving objects'

Section 3:

Data sources & Glossary

3.1 Data sources

The Traumatic Injury Fatalities database uses information from three datasets:

- National Data Set for Compensation-based Statistics (NDS), constructed using accepted workers' compensation claims
- Notifiable Fatalities Collection (NFC), constructed using work-related fatalities that are notified to Australian work health and safety authorities
- National Coronial Information System (NCIS), constructed using deaths reported to Australian coroners

These datasets are also supplemented by monitoring of work-related fatalities in Australian media by Safe Work Australia. Labour Force Survey data, conducted by the Australian Bureau of Statistics (ABS category number 6202.0), is used to calculate fatality rates. For more information on Safe Work Australia datasets, refer to <https://www.safeworkaustralia.gov.au/resources-and-publications/statistical-reports/explanatory-notes-traumatic-injury-fatalities-database>.

3.2 Glossary

Being hit by moving objects

Part of the TOOCS Mechanism classification used to describe the action of an object hitting a person. This includes pedestrians hit by vehicles as well as being hit by other moving equipment or objects.

Breakdown agency

A part of the TOOCS classification which identified the object, substance or circumstance principally involved at the point at which things started to go wrong and ultimately led to a worker fatality.

Bystander fatality

The death of a person who dies from injuries sustained as a result of another person's work activity and who was not engaged in a work activity of their own at the time of the injury. A traffic incident death is only classified as a bystander fatality when attributable to someone else's work activity. Typically, this means the driver of a work vehicle is at fault. Cases where fault could not be determined with sufficient confidence are excluded.

Employed person

The denominators used in calculating fatality rates in this report are based on ABS estimates of Employed persons, as defined in Labour force, Australia (ABS cat no 6202.0). This population includes employees (who work for an employer); self-employed persons (regardless of whether they employ others or not); and those who work without pay for a family business or farm. It excludes persons whose only work is voluntary.

Employer

The term 'employer' in this publication includes a broad range of establishments that engage workers (including unpaid volunteers, family workers, self-employed persons, contractors, persons undertaking work experience and defence force personnel killed).

Fatality rate

The number killed as a result of work-related injury expressed as a per-capita rate against the relevant population at risk of work-related injury. In this report the rate is expressed as the number of fatalities per 100,000 Employed persons: for brevity this is usually expressed as 'fatalities per 100,000 workers'. The number of workers is derived from the average of all persons employed over the four quarters of the year for each sex, age group, industry, occupation, or state or territory. Labour Force Survey data, conducted by the Australian Bureau of Statistics (ABS category number 6202.0), is used to provide the number of workers to calculate fatality rates. See the [Explanatory notes](#) for further details.

Gender vs sex

Sex refers to the biological differences between men and women, while gender refers to the social identification of sex. Safe Work Australia's fatality data is based on multiple data sources, some of which are reported by gender and some which are reported by sex. There are no work-related fatalities in the Traumatic Injury Fatalities dataset which have been identified as non-binary.

Industry / Industry of employer

A grouping of businesses that carry out similar economic activities. Fatalities data in this publication have been coded to the Australian and New Zealand Standard Industrial Classification (ANZSIC) 2006 (ABS cat. no. 1292.0) by **industry of employer**. This describes the economic activities of the establishment where the deceased worked, not necessarily the activities undertaken at the workplace where the fatality occurred. The term 'employer' in this publication includes a broad range of establishments that engage workers (including unpaid volunteers, family workers, self-employed persons, contractors, persons undertaking work experience and defence force personnel killed).

ANZSIC utilises four levels of industry classification—division, subdivision, group and class—and unless specified in this report, industries are presented at the division level. More information about these classifications are available on the [Australian Bureau of Statistics website](#).

Injury

A condition coded to 'External causes of morbidity and mortality' and 'Injury, poisoning and certain other consequences of external causes' in the International Statistical Classification of Diseases and Related Health Problems, Tenth Revision, Australian Modification (ICD-10-AM).

Mechanism of incident

The action, exposure or event that best describes the circumstances that resulted in the most serious injury, coded to the TOOCS classification.

Non-public road incident

An incident involving a vehicle or self-propelled plant that occurred at a worksite, on a private road or a public area that is not a public road. These incidents include plane crashes and incidents involving watercraft as well as vehicle crashes on farming properties.

Occupation

A set of jobs with similar sets of tasks. Fatalities data in this publication have been coded to the Australian and New Zealand Standard Classification of Occupations (ANZSCO) (ABS cat. no. 1220.0) First edition. ANZSCO utilises four levels of occupational classification—major, sub-major, minor and unit groups—and unless specified in this report, occupations are presented at the major group level. More information about these classifications are available on the [Australian Bureau of Statistics website](#).

Public road incident

An incident on a public road involving any vehicle or self-propelled plant. Incidents involving vehicles at worksites, farming properties or on private roads are excluded.

Rollover of non-road vehicle

Part of the Mechanism classification used to identify when a vehicle that is not normally a road vehicle overturns. This includes tractors being used on farm properties and other self-propelled plant.

Traumatic injury

A condition coded to 'External causes of morbidity and mortality' and 'Injury, poisoning and certain other consequences of external causes' in the International Statistical Classification of Diseases and Related Health Problems, Tenth Revision, Australian Modification (ICD-10-AM). This includes injuries arising from poisonous plants and animals, environmental conditions (e.g. frostbite), allergic reactions, and embolisms. However, it excludes deaths attributed to disease and other natural causes.

Type of occurrence classification system (TOOCS)

A suite of four classifications to code the way an injury occurred, comprising the Nature of injury/disease classification, the Bodily location of injury/disease classification, Mechanism of incident classification, and the Agency of injury/disease classification. Version 3.1 is used for coding the data presented in this report. Fatalities are only coded by Mechanism and Agency.

Vehicle collision

Part of the TOOCS Mechanism of incident classification that identifies fatalities that occurred as a direct result of a vehicle collision. In the TOOCS classification, this category is called Vehicle Incident but has been renamed in this report to vehicle collision to assist with reader understanding. Vehicle collisions include all fatalities involving a moving vehicle (rail, road, water, or air) crashing, colliding, or running out of control; with the exception of people who are struck by (or struck against) a vehicle when not travelling in one, which are included as 'Being hit by moving objects'. Vehicle collisions that occur on public roads are further classified as a public road incidents. Rollovers of road vehicles and quad bikes are also included in this category.

Worker fatality

The death of a person who dies from injuries sustained while at work, including those workers whose injury was caused by another's work activity. Workers include employees, self-employed persons, volunteers and contributing family workers.