



**safe work australia**

# **NOTIFIED FATALITIES STATISTICAL REPORT**

**2009–10**



**March 2011**



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## SUMMARY OF FINDINGS

This report provides an analysis of work-related fatalities that occurred between 1 July 2009 and 30 June 2010 and were notifiable to jurisdictions under their workplace health and safety legislation.

### **All notified fatalities**

- > In 2009–10 there were 124 notified work-related fatalities — 111 workers and 13 bystanders.
- > Most fatalities were of men — 115 in total. There were 9 fatalities of women (including 4 bystanders).
- > Five industries accounted for seven out of every ten notified work-related fatalities — 23% of fatalities occurred at a workplace primarily engaged in Agriculture, forestry & fishing; 17% in Construction; 13% in Manufacturing; 11% in Transport & storage; and 5% in Mining.
- > The most common causes of the fatalities were *Vehicle incidents* (26 fatalities); *Falls from a height* (20); *Being hit by falling objects* (18); *Being hit by moving objects* (18); and *Contact with electricity* (12).
- > Of the 26 fatalities caused by *Vehicle incidents*, 10 fatalities occurred on public roads and 16 occurred elsewhere, including 6 fatalities during air travel. Since work-related traffic fatalities on public roads are usually investigated by the police and incidents involving aircraft are usually investigated by the Australian Transport Safety Bureau they are not generally notifiable to work health and safety jurisdictions. Consequently, the counts presented in this report are likely to under-report their occurrence.

### **Notified worker fatalities**

- > There were 40 fewer notified worker fatalities in 2009–10 (111) than in 2008–09 (151) — a decrease of 26%. This resulted in a 29% decrease in the overall worker fatality rate: from 1.4 fatalities per 100 000 workers in 2008–09 to 1.0 in 2009–10. This was both the lowest number of worker fatalities and the lowest rate recorded over the seven-year period 2003–04 to 2009–10.
- > The occupation group Intermediate production & transport workers contributed one-third of all notified worker fatalities (36 fatalities) for whom occupation was known.
- > Agriculture, forestry and fishing industry workplaces recorded 28 notified worker fatalities, the highest of all industries when assessed on the basis of workplace. Other industry workplaces with relatively high numbers of worker fatalities were Construction workplaces with 21 notified fatalities; Manufacturing workplaces with 16; and Transport & storage workplaces with 13.
- > Nearly one-third (30%) of all notified worker fatalities of known age were aged 55 years or older. In 2009–10 workers within this age group represented 16% of all employed Australians. This over-representation of older workers has been a consistent feature of work-related fatality notifications in every year since the collection commenced.



## INTRODUCTION

In 2009–10 Australian work health and safety jurisdictions reported a total of 124 work-related notifiable fatalities to Safe Work Australia. Of these fatalities, 111 were workers and 13 were bystanders (people who suffered a fatal injury as a result of someone else's work activity).

Most of the fatalities were of men: 9 fatalities were of women, and of those, 4 were bystanders. Because work-related fatalities were predominantly of men (a pattern consistently seen in all years of the data series), tables and graphs in this publication are not further disaggregated on the basis of sex.

Most vehicle incidents on public roads are investigated by the police, so those that are work-related may not be reported to work health and safety authorities. Because of this known limitation, notifications where the fatality was caused by a vehicle incident are identified as occurring on public roads or elsewhere. The reader should note that of the 26 fatalities resulting from *Vehicle incident*, 10 occurred on public roads (see Table 1). This component of vehicle related notifications is known to be an undercount.

## JURISDICTION TIME SERIES

Although the state and territory work health and safety authorities' jurisdictions are defined primarily by geographic boundaries, the Commonwealth jurisdiction, besides having responsibility for federal government employees wherever they are located, also regulates many Australia-wide employers that are self-insured, through Comcare, under Commonwealth workers' compensation legislation.

## NOTIFIABLE FATALITIES

Work health and safety legislation in each Australian state and territory requires work-related deaths to be notified to the relevant state or territory work health and safety authorities. Notifications cover workers (both employees and self-employed) who suffered a fatal injury at work and bystanders who suffered a fatal injury as a result of someone else's work activity. Notified fatalities that occurred while commuting to or from work and those resulting from suicide or natural causes (e.g. stroke or heart attack) are not included in this report.

Some of the information in this report, particularly for more recent notifications, is based on initial reports from authority inspectors. Consequently the number of notified fatalities and/or the circumstances involved may change at a later date after further investigation.

The compilation of notifications at the national level is complicated by differences across jurisdictions in the definition of a work-related death and the coverage of some incidents. In particular:

- > Several jurisdictions do not include work-related deaths caused by vehicle incidents on public roads in their notification systems. These fatalities are instead notified to and investigated by the police.
- > Aircraft crash fatalities are not notified to some work health and safety jurisdictions. These fatalities are instead notified to the relevant transport authority.

**Table 1 Notified fatalities by mechanism of fatality, Australia, 2009–10**

Mechanism of fatality	Worker	Bystander	Total
Vehicle incident <sup>(a)</sup> on public road	9	1	10
Vehicle incident <sup>(a)</sup> elsewhere	14	2	16
Other mechanism	88	10	98
<b>Total</b>	<b>111</b>	<b>13</b>	<b>124</b>

(a) Includes rollover of mobile mechanical equipment such as tractors, forklifts and construction vehicles.

the number of notified work-related fatalities have decreased markedly in more recent years in New South Wales, albeit from a particularly high year with 44 worker fatalities in 2005–06. Over the period 2003–04 to 2009–10, South Australia shows the clearest downward trend using a simple linear regression. The number of notified fatalities in Queensland consistently increased from 24 in 2003–04 to 35 in 2008–09, but then decreased in 2009–10 to 26.

## INDUSTRY

Table 2 shows the number of notified work-related fatalities during 2009–10 according to both the industry of the workplace and the industry of the

worker's employer. The industry of workplace identifies the main industrial activity conducted at the site where the incident leading to the fatality occurred. The number of fatalities based on the industry of employer is also expressed as a fatality rate (fatalities per 100 000 workers employed in that industry).

The Construction industry recorded 28 notified worker fatalities, the highest of all industries when assessed on the basis of the worker's employer. Other industries of employer with relatively high numbers of worker fatalities were Agriculture, forestry & fishing with 26 notified worker fatalities; Manufacturing with 15; and Transport & storage with 14.

**Table 2 Number of notified fatalities by industry, 2009–10**

Industry	Industry of workplace <sup>(a)</sup>			Industry of employer <sup>(b),(c)</sup>	
	Worker	Bystander	Total	Worker	Fatality rate <sup>(d)</sup>
Agriculture, forestry & fishing	28	1	29	26	6.9
Construction	21	0	21	28	2.8
Manufacturing	16	0	16	15	1.4
Transport & storage	13	1	14	14	2.7
Mining	6	0	6	6	3.5
Accommodation, cafes & restaurants	3	2	5	2	0.4
Property & business services	4	1	5	7	0.5
Retail trade	4	1	5	5	0.3
Wholesale trade	4	0	4	2	0.4
Cultural & recreational services	0	3	3	0	0
Government administration & defence	3	0	3	4	0.7
Health & community services	0	2	2	0	0
Personal & other services	1	1	2	1	0.2
Education	0	1	1	0	0
Communication services	0	0	0	1	0.5
Electricity, gas & water supply	0	0	0	0	0
Finance & insurance	0	0	0	0	0
<i>Private residence</i>	6	0	6	<i>na</i>	<i>na</i>
<i>Industry unknown or not applicable</i>	2	0	2	0	<i>na</i>
<b>Total</b>	<b>111</b>	<b>13</b>	<b>124</b>	<b>111</b>	<b>1.0</b>

na denotes 'not applicable'.

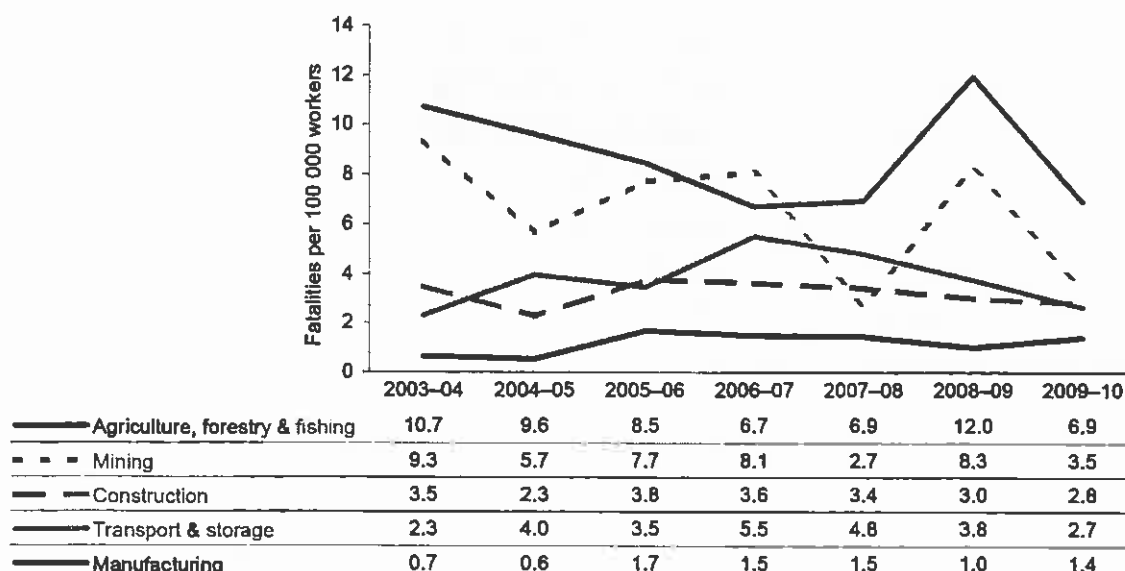
(a) *Industry of workplace* identifies the main industrial activity conducted at the workplace where the fatal incident occurred.

(b) *Industry of employer* identifies the main industry conducted by the employer of the fatally injured worker, which will sometimes differ from the *Industry of workplace* — for example, where a worker is employed under a labour hire arrangement (*Property & business services*) to provide services at a workplace.

(c) *Industry of employer* is not applicable for bystanders.

(d) Notified fatalities per 100 000 workers. Calculated using annual averages of employed people (civilians) from ABS quarterly industry labour force data and the number of Defence force personnel serving in Australia in 2008–09 — used as a substitute for 2009–10 numbers (*ABS Supercube E06-Aug94.srd 3 digit industry figures concorded from ANZSIC 2006 to 1993 industry divisions. Department of Defence Annual Report 2008–09*).

Figure 2 Worker fatality rate<sup>(a)</sup> by selected industry of employer, 2003–04 to 2009–10



(a) Calculated using annual averages of the number of employed people in each quarter (ABS Data Cube STE06Aug94). Data for the years 2008–09 and 2009–10 are concorded to ANZSIC1993 industry categories.

A notable decrease in fatalities was recorded at Agriculture, forestry & fishing workplaces, from 45 in 2008–09 to 28 in 2009–10: though this is still slightly higher than the 26 fatalities recorded in 2006–07 and 2007–08.

The number of fatalities in Manufacturing workplaces increased from 13 in 2008–09 to 16 in 2009–10: though this figure is lower than the number of fatalities recorded at Manufacturing workplaces in the three years prior to 2008–09.

Figure 2 shows the notified worker fatality rate from 2003–04 to 2009–10 for the five industries which incurred the highest rates of work-related fatality in 2009–10. In all years other than 2006–07, workers employed in the Agriculture, forestry & fishing industry experienced the highest fatality rate. The Mining industry has generally experienced the second highest fatality rate over the period, though in 2007–08 the relatively low number of fatalities resulted in the lowest rate over the seven-year period (2.7 per 100 000 workers).

The fatality rate experienced by workers in the Construction and Manufacturing industries over the seven year period are lower but more consistent: for both industries a slight declining trend can be observed from their highest rates experienced in 2005–06.

The fatality rate for workers employed in the Transport & storage industry decreased from a peak of 5.5 fatalities per 100 000 employees to 2.7 in 2009–10. However, because the police rather than work health and safety authorities generally investigate vehicle incidents on public roads the under-reporting of work-related public road crashes particularly impacts this industry. The extent of this under-reporting can be seen when comparing notified fatalities to the number of fatalities identified in the *Work-related Traumatic Injury Fatalities*<sup>1</sup> publication, which also looks at fatalities reported through the workers' compensation systems and Coroner's reports (sometimes with the aid of media reports); the 2007–08 publication identified 44 work-related fatalities in the Road freight industry.

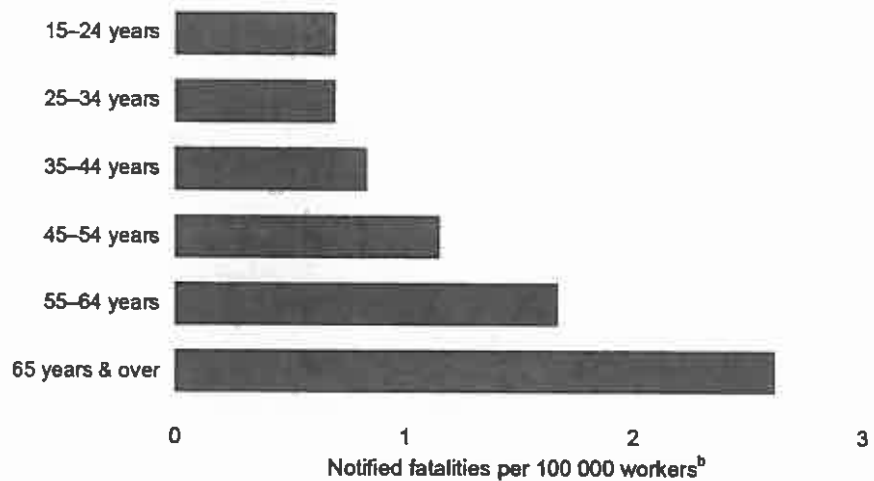
Currently the majority of notifications involving incidents on public roads are provided by Comcare because several national road transport companies self-insure under the Commonwealth work health and safety jurisdiction and they are required to notify all incidents to Comcare.

Because work-related fatalities involving vehicle incidents on public roads and those involving aircraft are known to be under-reported, Table 3 also presents the total number of worker fatalities and the fatality rate calculated excluding public road crashes and air crashes.

1. Safe Work Australia, *Work-related Traumatic Injury Fatalities, Australia 2007–08*.



Figure 5 Fatality rate of notified worker fatalities<sup>(a)</sup> by age, 2009–10



(a) Excludes bystanders.

(b) Fatality rates are calculated using annual averages of monthly figures for employed people (*ABS 6291.0.55.001 Labour Force, Australia, Detailed – Electronic Delivery, Table 01. Labour force status by social marital status, age and sex*).

groups 35–44 years (21 fatalities); 45–54 years (28 fatalities); and 55–64 years (25 fatalities). These three age groups accounted for 74 worker fatalities (67% of worker fatalities). There were 13 fatalities of young workers aged 15–24 years.

To compare differences in the risk of fatality between workers in each age group, the number of notified worker fatalities in each age group can be expressed as a rate against the number of workers in that age group (Figure 5). These fatality rates show that work-related fatalities were more likely to occur among older workers. The rates for workers aged 55–64 years and 65 years & over were 1.7 and 2.6 respectively per 100 000 workers, compared with a rate of 0.7 fatalities per

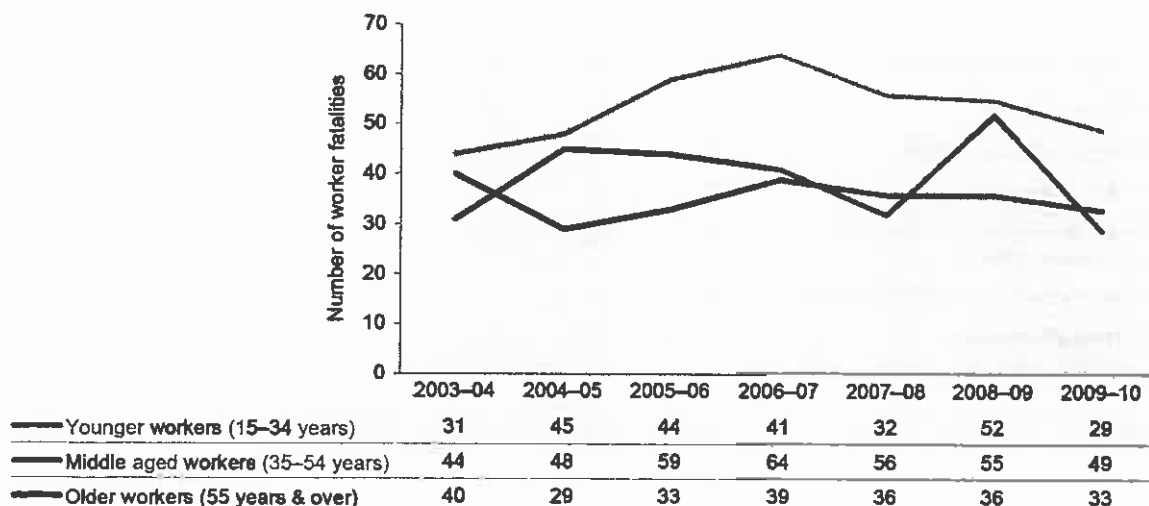
100 000 workers for both workers aged 15–24 years and those aged 25–34 years.

### AGE TIME SERIES

Figure 6 shows the number of worker fatalities by broad age group from 2003–04 to 2009–10. In all years the age of the deceased worker most commonly fell in the Middle aged group (35–54 years). In most years there were fewer fatalities of Older workers (55 years & over) compared with Younger workers (15–34 years): the exceptions being in 2003–04, 2007–08 and 2009–10.

Figure 7 shows the fatality rates by broad age group from 2003–04 to 2009–10. The graph shows that Older workers (aged 55 years & over)

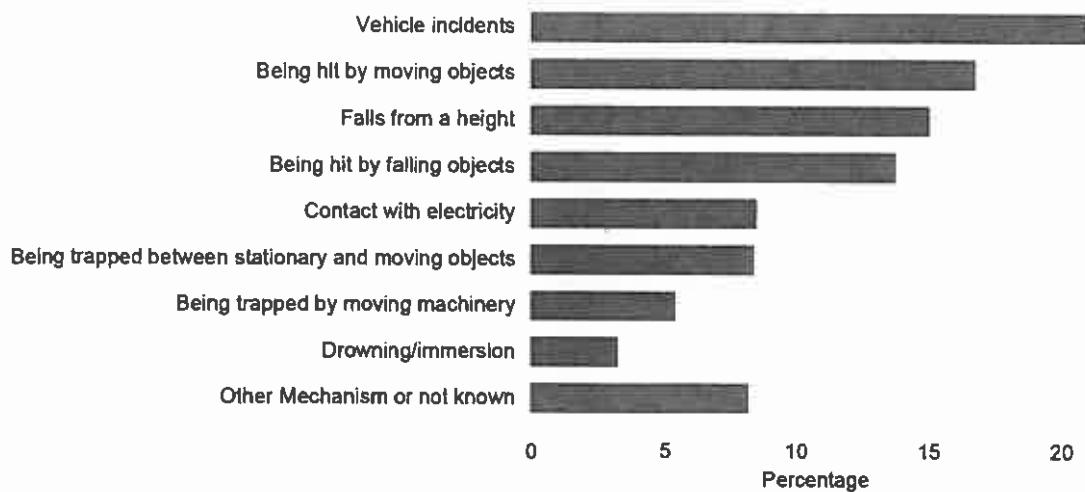
Figure 6 Number of notified worker fatalities<sup>(a)</sup> by broad age group, 2003–04 to 2009–10



(a) Only includes decedents of known age so the column totals do not add to the totals presented in Table 3 and elsewhere.



**Figure 8 Percentage of all notified worker fatalities<sup>(a)</sup>: the most common causes of fatality over the period 2003–04 to 2009–10**



(a) Based on a total of 932 worker fatalities notified over the seven-year period.

worker fatalities over the seven-year period — the table and graph show that *Being hit by moving objects* (17% of all worker fatalities over the seven-year period); *Falls from a height* (15% of all worker fatalities over the seven-year period); and *Being hit by falling objects* (14% of all worker fatalities over the seven-year period), are consistently the most common causes of work-related fatality. Over the seven-year period, these four causes of death alone were responsible for two-thirds of all notified worker fatalities.

## BYSTANDERS

Bystander fatalities are defined as deaths of members of the public, such as passers-by or visitors to workplaces — including children — who die as a consequence of another person's work activity. This can include people under the supervision of a worker providing guidance or instruction. Because of the relatively small annual number of notified bystander fatalities, their random nature, and jurisdictional legislative differences, the circumstances of bystander incidents can vary considerably year to year.

The number of Bystanders notified by the jurisdictions over the seven years has ranged between 8 in 2005–06 and 26 in 2008–09. In comparison, the more comprehensive methodology used to compile the number of Bystanders in the *Work-related Traumatic Injury Fatalities* publication identified 55 Bystander fatalities in 2007–08.

A total of 13 bystander fatalities were notified in 2009–10, including 2 children aged under 15 years. Of the 13 bystander fatalities, 4 were female and 9 were male. The bystander fatalities were widely dispersed across nine broad industries of workplace. However, there were 3 bystander fatalities at Cultural & recreational services workplaces; 2 at Accommodation, cafes & restaurants workplaces; and 2 at Health & community services workplaces (see Table 2).

Figure 4 (page 6) shows the age distribution of bystander fatalities in 2009–10: 2 were aged less than 15 years and 5 were aged 65 years and over.

Of the 13 bystander fatalities notified in 2009–10, 5 were caused by drowning (2 at swimming pools); 3 were caused by vehicle incidents; and 3 involved falls (2 of whom were elderly patients).





## SUMMARY OF WORKER FATALITY NOTIFICATION NARRATIVES

### **Vehicle incident:**

In 2009–10 there were 23 work-related notified fatalities of workers involving a vehicle incident (21% of all worker notifications). These comprised:

- > 6 deaths due to aircraft incidents, of which 2 involved crop spraying aircraft and 1 a helicopter undertaking stock mustering.
- > 6 deaths of truck drivers (4 incidents occurred on public roads and 2 on mine sites).
- > 4 deaths of drivers of cars or other light four-wheeled vehicles (all occurred on public roads).
- > 3 deaths of tractor drivers (1 on a public road and 2 on farms).
- > 3 deaths of drivers when their forklift truck overturned.

### **Falls from a height:**

There were 18 deaths of workers that fell from a height (16% of all worker notifications).

Of those 18 deaths, 7 occurred at Construction workplaces and of these:

- > 2 workers died because they fell from a building.
- > 2 workers died because they fell from scaffolding or planking.
- > 2 workers died because they fell from ladders.

The remaining 11 deaths occurred at workplaces other than Construction. These included:

- > 2 deaths that involved falls from or through roofs.
- > 2 deaths that involved falls from or through platforms.
- > 2 deaths that involved falls from elevating work platforms.

### **Being hit by falling objects:**

There were 17 worker fatalities caused by falling objects (15% of all worker notifications). These comprised:

- > 4 deaths that occurred when they, or their vehicle, was struck by a falling tree or branch.
- > 5 deaths that occurred while loading or unloading objects onto trucks.
- > 2 deaths when items in storage systems fell.

- > The remaining 6 deaths had few commonalities other than all involving the lifting/moving or the collapse of heavy plant or equipment.

### **Being hit by moving objects**

There were 17 deaths of workers hit by moving objects (15% of all worker notifications). This group can be usefully disaggregated into two categories:

#### **Pedestrian workers struck by vehicles:**

There were 10 worker deaths caused by a moving vehicle striking the person. Of these:

- > 5 deaths occurred when the worker was struck by a vehicle in the control of another person.
- > 5 deaths involved unattended vehicles. These included 2 deaths of farmers struck by their tractor; and 2 deaths of truck drivers struck by their truck or trailer.

#### **Being struck by moving objects other than vehicles:**

There were 7 deaths resulting from a worker being struck by a moving object other than a vehicle. These included:

- > 2 deaths that occurred while working with concrete pump hoses.

#### **Contact with electricity:**

There were 12 fatalities caused by the worker coming into contact with electricity (11% of all worker notifications). These included:

- > 4 deaths that occurred when equipment or vehicles touched high tension overhead power lines.
- > 4 deaths that occurred when live electrical cables were pierced.

#### **Being trapped between stationary & moving objects:**

There were 8 deaths where a worker was trapped between a moving object and a stationary object (7% of all worker notifications). These comprised:

- > 2 deaths where the worker was trapped against a structure while using an elevating work platform/boom lift.
- > The remaining 6 deaths had few commonalities other than most involving a worker being within the hazardous zone around heavy machinery or vehicles.