

Work-related injuries experienced by young workers in Australia, 2009–10



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SAFE WORK AUSTRALIA

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Foreword

Safe Work Australia uses workers' compensation claims data as its primary source of information to measure work health and safety performance in Australia. These data are collated as the National Data Set for Compensation-based Statistics (NDS). While the NDS has many strengths, it does not provide information on groups not well-covered by workers' compensation, including the self-employed or those workers who do not seek compensation for their injuries. Therefore while the NDS can provide good information on the types and circumstances of work-related injury, it cannot provide a total measure of the number of workers injured each year.

To address this situation, Safe Work Australia partially funded the Australian Bureau of Statistics' Work-Related Injuries Australia, 2009–10 survey (WRIS), results of which were published in November 2011. The WRIS collected information over the 2009–10 period on people aged 15 years and over who worked at some time in the last 12 months and experienced a work-related injury or illness in that period. A range of details about the most recent work-related injury or illness were collected.

As the WRIS is based on the personal recall of events, the information collected is not directly comparable to workers' compensation data where a doctor's opinion is required to identify an injury or disease as work-related and thus compensable.

The purpose of this publication is to provide a detailed account of the work-related injury experience of young workers in Australia. This report compares patterns within the WRIS data with compensation data gathered by each jurisdiction and assesses how well Australian workers' compensation data represents the work-related injury experience of young Australian workers. In addition this report details the work-related fatalities experienced by young workers across a three year period.

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Summary of findings

This report investigates the work-related injuries experienced by young workers in Australia through analysis and comparison of three distinct datasets - the Work-related Injuries Survey (WRIS), the National Dataset for Compensation-based Statistics (NDS) and Traumatic Injury Fatalities (TIF). The purpose of this publication is to provide a detailed account of the work-related injury experience of young workers in Australia and to assess how well Australian workers' compensation data represent the work-related injury experience of young workers.

This report shows that workers' compensation data do not provide a full account of all work-related injuries experienced by young workers and several differences between the WRIS and the NDS have been noted. In particular young workers had a higher incidence rate of work-related injury than older workers in the WRIS but in the NDS data older employees had a higher incidence rate of accepted workers' compensation claims. In addition while *Burns* accounted for a large proportion of work-related injuries experienced by young workers in the WRIS, *Burns* represented a very small proportion of accepted workers' compensation claims of young employees. Furthermore the WRIS showed that the Accommodation & food services industry had the second highest incidence rate of work-related injury for young workers, while in the NDS Accommodation, cafes & restaurants had a comparatively low incidence rate of accepted workers' compensation claims.

This report also highlights the importance of considering both incidence and frequency rates of injury for young workers due to large proportions of part time and casual employment in the younger age group. On a per worker basis young male workers have the highest incidence rate of work-related injury, whereas on a per hour worked basis young female workers have the highest frequency rate of work-related injury.

Despite incomplete coverage of young worker injuries and illness, workers' compensation data provides further valuable details on the circumstances surrounding work-related injury or illness claimed, including the bodily location of the most serious injury or illness and the object, subject or circumstance involved in an incident resulting in a work-related injury for which a workers' compensation claim is lodged and accepted.

Some of the key findings which can be taken from this investigation are:

- While Australian workers' compensation schemes covered 97% of young employees in 2009–10, almost two thirds of injured young employees did not apply for workers' compensation for their work-related injury. The majority of young employees who did not apply for workers' compensation felt that their injury was too minor to warrant a claim.
- WRIS data suggest young workers have a heightened risk of work-related injury in Australian workplaces relative to their older counterparts, with this risk greatest in the Manufacturing, Accommodation & food services and Health care & social assistance industries.
- Young workers experienced two thirds of all *Burns* injuries and one third of all *Cut/Open wound* injuries reported by Australian workers. Burns were most commonly experienced in the Accommodation & food services industry, while *Cut/Open* wounds were commonly experienced in the Construction and Retail trade industries.
- Two-thirds of young worker traumatic injury fatalities involved a vehicle.

1. Work-related injuries

In 2009–10 workers aged under 25 years (young workers) accounted for 20% of work-related injuries experienced by all Australian workers. This corresponds to an injury rate of 66.1 work-related injuries per 1000 workers - 18% higher than the rate for workers aged 25 years & over (older workers: 56.2 injuries per 1000 workers). While young male workers had higher incidence rates of work-related injury than their female counterparts, on a 'per hour' basis young female workers had a frequency rate of injury 13% higher than young male workers.

Status and type of employment

Half of all young employees worked under casual arrangements in 2009–10. When injuries are considered on a 'per hour' basis young female employees working as casuals recorded the highest frequency rate of injury - nearly twice the rate of their permanent counterparts and around 50% higher than casual male employees.

Young shift workers working on a full time basis had substantially higher incidence rates of work-related injury than their non-shift working counterparts. When hours worked were considered, young female part time shift workers had the highest frequency rate of work-related injury compared to their young male and older worker counterparts.

Industry of main job

One quarter of young workers worked in the Retail trade industry with another one fifth working in the Accommodation & food services industry. However, the highest incidence rate of work-related injury for young workers was in the Manufacturing industry (121.2 injuries per 1000 workers) - nearly twice the rate for older workers. The pattern was different when injury rates were considered on a per hour basis: the second highest employer of young workers, Accommodation & food services, had the highest injury rate of 101.6 injuries per million hours worked.

Occupation of main job

Of all occupation groups, young Technicians & trades workers recorded the highest incidence rate of work-related injury (113.8 injuries per 1000 workers). This was two-thirds higher than the rate recorded by older workers in this occupation. However when hours worked were taken into consideration young Community & personal service workers had the highest rate of injury of all occupation and age groups.

Types of work-related injury

Sprains/strains were the most common injury type among young and older workers. However, young workers were more likely than older workers to experience *Cut/open wound* and *Burns*. The type of injury experienced by young workers was influenced by both industry and occupation, with *Burns* most often experienced in the Accommodation & food services industry and Sales workers commonly experiencing *Sprains/strains*.

How injuries were incurred

Young workers were more likely than older workers to experience work-related injuries that resulted from *Hitting or being cut by an object* and *Contact with chemicals or other substances*. Injuries resulting from *Hitting or being hit or cut by an object* were the most common circumstance surrounding a work-related injury for young people working as Labourers, Technicians & trades workers and Community & personal service workers.

Workers' compensation

Almost two thirds of young workers did not apply for workers' compensation following their work-related injury, slightly higher than older workers (58%). Almost half of the young workers who did not apply for workers' compensation felt that their injury was too minor to lodge a claim.

2. Workers' compensation claims

In 2009–10 the incidence rate of all compensated injury and disease claims for young workers was 25% lower than the incidence rate recorded for older workers. However, when injury rates were calculated on a 'per hour' basis young and older workers had similar frequency rates of injury. Across the age groups, male workers had higher incidence and frequency rates of injury than their female counterparts.

Types of compensated injuries

A greater proportion of the claims made by young workers were for *Open wound* than for their older counterparts. Furthermore, young male workers had a greater proportion of claims for *Open wounds* than their female counterparts.

How injuries were incurred

A greater proportion of the claims made by young employees were due to *Being hit by moving objects* and *Hitting objects with a part of the body* than older workers.

Part of body most affected

In comparison to older workers a greater proportion of claims made by young employees involved their *Upper limbs*, with injuries to the *Hand, finger and thumb* the most common. Young employees had twice the proportion of claims for *Eye* injuries compared to their older counterparts.

Objects involved

Non-powered handtools, appliances & equipment and *Materials & substances* were involved in a greater proportion of claims made by younger employees than they were in older employees claims. These claims typically involved items such as crates, boxes and cartons and materials such as oil and fat.

Industry of employer

Within the industries that employ the greatest numbers of young employees, the Manufacturing industry recorded the highest incidence rate of compensated claims at 56.0 claims per 1000 employees. This was followed by the Construction industry (35.3) and Property & business services (22.7). In each of these industries young workers had higher incidence rates of accepted claims than older workers. With the exception of the Health & community services industry, young male employees had higher rates of injury than their female counterparts.

Occupation

The highest rates of accepted workers' compensation claims among young employees were recorded for Tradespersons & related workers, Labourers & related workers and Intermediate production & transport workers, with the order of these groups changing depending on whether rates were on a 'per employee' or 'per hour' basis. Young males had substantially higher rates of accepted claims than their female counterparts, with the exception of Intermediate clerical, sales & service workers.

Jurisdiction

Older employees had higher incidence rates of accepted claims than younger employees in all jurisdictions with the exception of the Northern Territory. The highest incidence rates of accepted workers' compensation claims for young employees were recorded in Western Australia (30.7 accepted claims per 1000 employees), South Australia (30.6) and New South Wales (29.6).

3. Traumatic injury fatalities

Over the period 2008–09 to 2010–11, 72 young workers died following a traumatic injury that occurred while working. The deaths of young workers comprised around 10% of all worker fatalities. Young males accounted for the majority of young worker fatalities. On a 'per worker' basis, young workers had a lower incidence rate of fatality than their older counterparts.

Industry

Together the Construction and Agriculture, forestry & fishing industries accounted for over half of all young worker fatalities in the three year period (19 and 18 fatalities respectively). Young workers had higher incidence rates of fatality than their older counterparts in the Agriculture, forestry & fishing and Manufacturing industries.

Occupation

Almost half of the young workers who died following a traumatic incident at work were Labourers (32 fatalities), with another 19% Technicians & trades workers (14 fatalities) and 11% Professionals (8 fatalities). Young workers had a higher incidence rate of fatality than older workers when working as Professionals.

Mechanism of incident

Almost half of the fatalities of young workers were due to *Vehicle incident* (34 fatalities), a collision involving a vehicle where the occupant of the vehicle is killed. The majority of these involved light vehicles and aircraft. *Being hit by moving objects* accounted for the second highest number of fatalities (7) with five of these incidents involving being hit by a vehicle.

State/territory of death

Over the period 2008–09 to 2010–11, nearly two fifths of young worker fatalities occurred in Queensland (27 fatalities). Most of the Queensland fatalities occurred in the Agriculture, forestry & fishing industry (9 fatalities) and the Construction industry (7 fatalities).

1 Work-related injuries

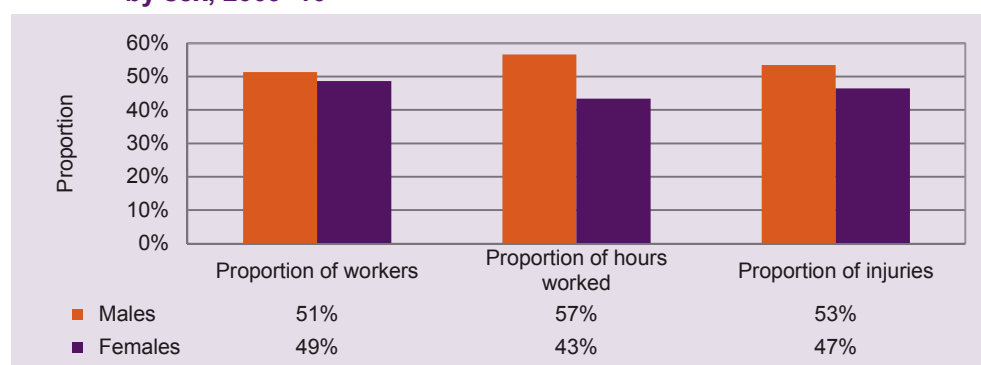
Young workers account for 20% of work-related injuries and 17% of workers

The Work-related Injuries Survey (WRIS) was included in the Australian Bureau of Statistics (ABS) Multipurpose Household Survey (MPHS) conducted throughout Australia in the 2009–10 financial year as a supplement to the ABS monthly Labour Force Survey (LFS). Data from the WRIS was published in *Work-related Injuries, Australia 2009–10* (cat. no. 6324.0). The WRIS collected information on the most recent work-related injury or illness experienced in the past 12 months. The sample of responses collected were weighted to reflect the Australian population.

Of the 12 million workers in Australia in 2009–10, 17% (1.88 million) were aged less than 25 years (young workers). In that same year 124 300 young workers experienced a work-related injury or illness. These injuries accounted for 20% of the injuries incurred by all workers in that year. This means that young workers experienced 66.1 work-related injuries per 1000 workers in 2009–10 which is 18% higher than the rate for workers aged 25 years & over (56.2).

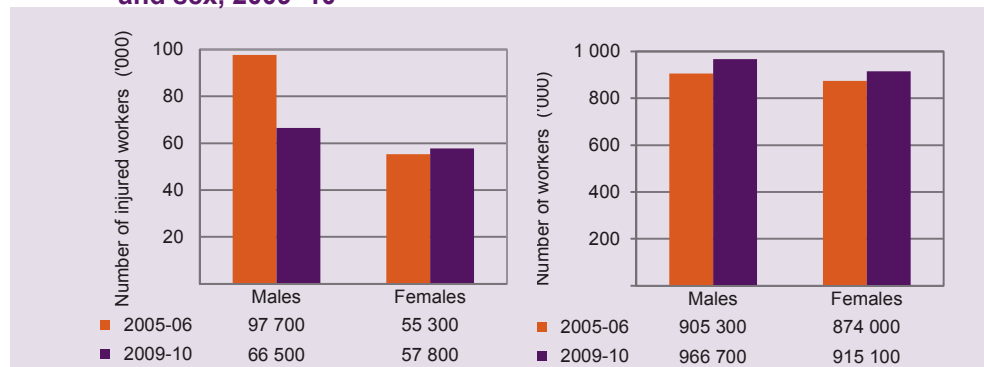
Figure 1 shows that while there were similar proportions of male and female workers in the Under 25 years age group, males generally worked longer hours and incurred a higher proportion of the injuries.

Figure 1: Young workers: proportion of injuries, workers and hours worked by sex, 2009–10



When injury rates are calculated it can be seen that both young male and female workers have substantially higher rates of injury than older workers. Figure 2 shows that young male workers recorded an incidence rate of injury 9% higher than young female workers and 21% higher than older male workers. When the hours worked are controlled, young female workers had a frequency rate of injury 13% higher than young males and 44% higher than older female workers.

Figure 2: Work-related injuries: incidence and frequency rates by age group and sex, 2009–10



1.1 Status in employment

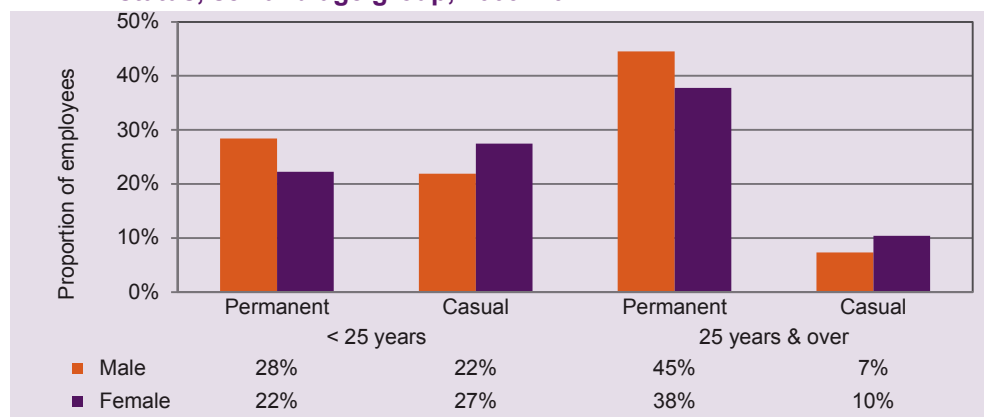
Half of all young workers worked under casual employment arrangements

Approximately 97% of young workers were employees in 2009–10. Employees are workers who receive remuneration in wages or salaries as opposed to Owner Managers who run their own business. This section presents data for employees only as robust survey results for Owner Managers are not available.

Within the Employee group, workers can be employed on a permanent basis and be entitled to paid leave, or be employed on a casual basis and not be entitled to paid leave.

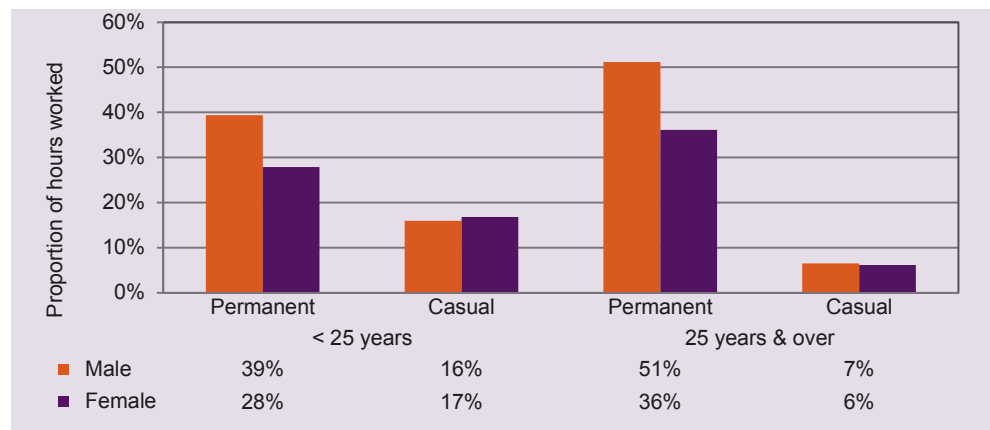
Figure 3 shows that half of all young employees worked as casuals in 2009–10 while the other half were employed on a permanent basis. This contrasts with older workers who were predominantly permanent employees. For young employees, males were more likely to be employed on a permanent basis whereas females were more likely to be working as a casual.

Figure 3: Australian workforce: proportion of employees by employment status, sex and age group, 2009–10



As casual employment often involves people working fewer than full-time hours, it is not surprising that Figure 4 shows that the proportion of hours worked by young permanent employees was higher than the proportion worked by young casual employees. While young females accounted for 26% more casuals than young males, there was little difference in their contribution to hours worked indicating fewer hours worked by casual females. A similar pattern was observed for workers aged 25 years & over.

Figure 4: Australian workforce: proportion of hours worked by employees by employment status, sex and age group, 2009–10



The differences in average hours worked can be seen in Figure 5. These data show that older male permanent employees worked the greatest number of hours per week on average (42 hours per week) followed by young male permanent employees (39). Young female casuals worked the fewest hours (17). There was no difference in average hours worked per week between young female workers and female workers aged 25 years & over working on a permanent basis (35 each).

Figure 5: Australian workforce: average hours worked per week by employment status, age group and sex, 2009–10

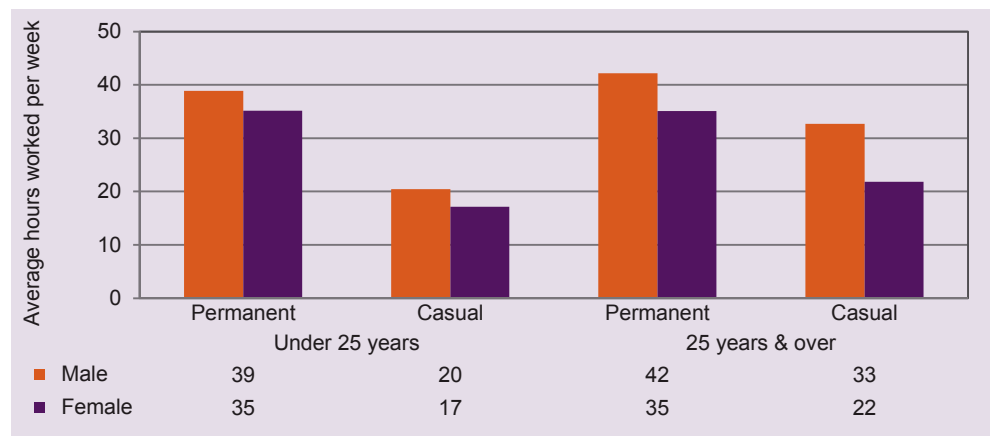


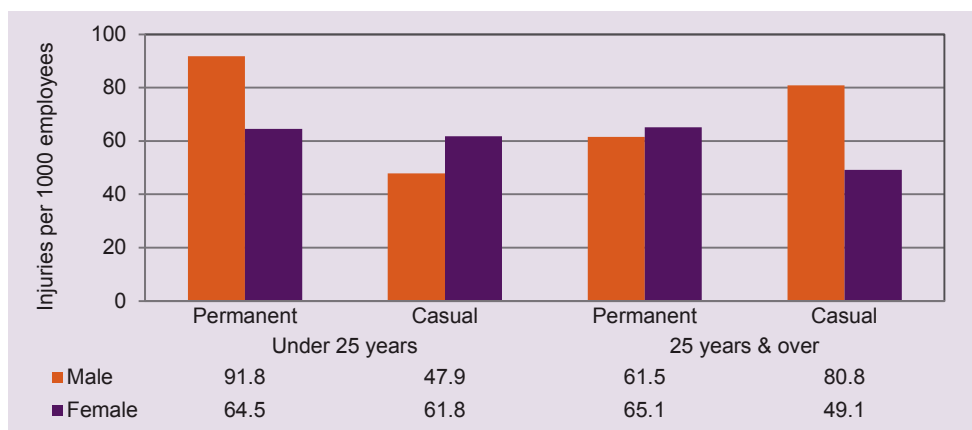
Figure 6 shows the incidence rates of injury for young and older permanent and casual workers. These data show that young male permanent employees had the highest incidence rate of work-related injury at 91.8 injuries per 1000 employees. This was 42% higher than their female counterparts (64.5) and 49% higher than older male permanent employees (61.5).

The lowest incidence rate of injury for young workers was recorded by casual male employees. At 47.9 injuries per 1000 employees, the rate for young casual males was nearly half the rate of permanent male employees (91.8) and two-thirds the rate of casual female employees (61.8).

This is quite a different pattern to employees aged 25 years & over with the highest incidence rate recorded by casual male employees and the lowest by casual female employees.

For young female workers incidence rates of injury do not appear to change depending on permanent or casual employment. Furthermore, incidence rates of injury for permanent and casual young female workers are similar for older permanent female workers, with older female casual workers having the lowest incidence rate of injury of all female workers.

Figure 6: Work-related injuries: incidence rates by employment status, age group and sex, 2009–10

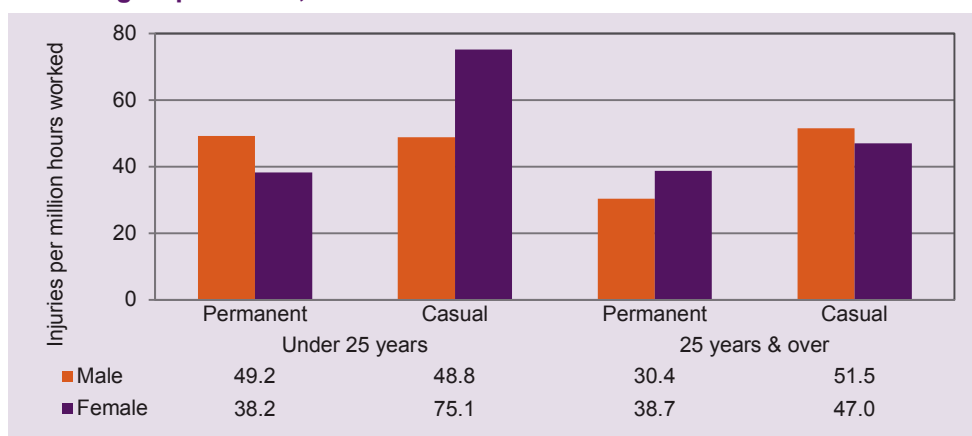


Young female casual employees had the highest frequency rate of work-related injury

When injury rates are calculated using hours worked a different pattern of injury emerges. Figure 7 shows that there is little difference in the frequency rate of injury of young male permanent and casual employees. A different pattern is observed for young female workers with those working as casuals recording the highest frequency rate of work-related injury: 75.1 injuries per million hours worked. This frequency rate is nearly twice the rate of their permanent counterparts (38.2) and around 50% higher than casual male employees (48.8).

The 25 years and over group recorded a different pattern again, with higher frequency rates of injury for both males and females when casually employed.

Figure 7: Work-related injuries: frequency rates by employment status, age group and sex, 2009–10



1.2 Type of employment

Young workers were more likely to work under shift arrangements than older workers

Table 1 shows that only half of young workers worked full time in 2009–10 compared with 74% of older workers. Males were more likely to work full time than females regardless of age. These data also show that young workers were more likely to work under shift arrangements than their older counterparts with nearly one-quarter (23%) of young workers working under shift arrangements compared with 15% of older workers. However, there was a lower proportion of young male full-time workers working under shift arrangements compared with their older counterparts.

It is not surprising that the highest proportion of hours worked for each sex and age group were worked by full time workers. There were similar proportions of hours worked for young and older workers in full time shift work but substantial differences between the age groups for those working full time but not under shift arrangements (62% of young workers compared with 73% of older workers).

In addition, older workers worked a higher number of average hours per week in full time employment than their younger counterparts, with male workers working more hours on average than female workers. Older workers also worked a higher number of hours on average when employed part time, with greater average hours worked per week for shift rather than non-shift workers.

Table 1: Australian workforce: percentage of workers, hours worked and average hours worked by type of employment, age group and sex, 2009–10

Type of employment		Under 25 years			25 years & over		
		Males	Females	Total	Males	Females	Total
Proportion of workers							
Full time	Total	62%	43%	52%	88%	56%	74%
	<i>Shift</i>	10%	8%	9%	14%	7%	11%
	<i>Non-shift</i>	52%	35%	43%	75%	49%	63%
Part time	Total	38%	57%	48%	12%	44%	26%
	<i>Shift</i>	11%	17%	14%	2%	6%	4%
	<i>Non-shift</i>	27%	41%	34%	10%	38%	22%
Total		100%	100%	100%	100%	100%	100%
Proportion of hours worked							
Full time	Total	82%	66%	75%	94%	72%	86%
	<i>Shift</i>	14%	12%	13%	14%	9%	12%
	<i>Non-shift</i>	68%	54%	62%	80%	63%	73%
Part time	Total	18%	34%	25%	6%	28%	14%
	<i>Shift</i>	6%	11%	8%	1%	4%	2%
	<i>Non-shift</i>	12%	23%	17%	5%	23%	12%
Total		100%	100%	100%	100%	100%	100%
Average hours worked per week							
Full time	Total	41.5	39.0	40.5	44.5	40.9	43.3
	<i>Shift</i>	42.7	38.4	40.9	44.4	40.1	43.1
	<i>Non-shift</i>	41.2	39.1	40.4	44.5	41.0	43.3
Part time	Total	14.4	14.9	14.7	20.3	19.9	20.0
	<i>Shift</i>	15.0	16.0	15.6	23.1	22.2	22.4
	<i>Non-shift</i>	14.2	14.5	14.3	19.8	19.5	19.6
Total		31.1	25.1	28.2	41.7	31.6	37.2

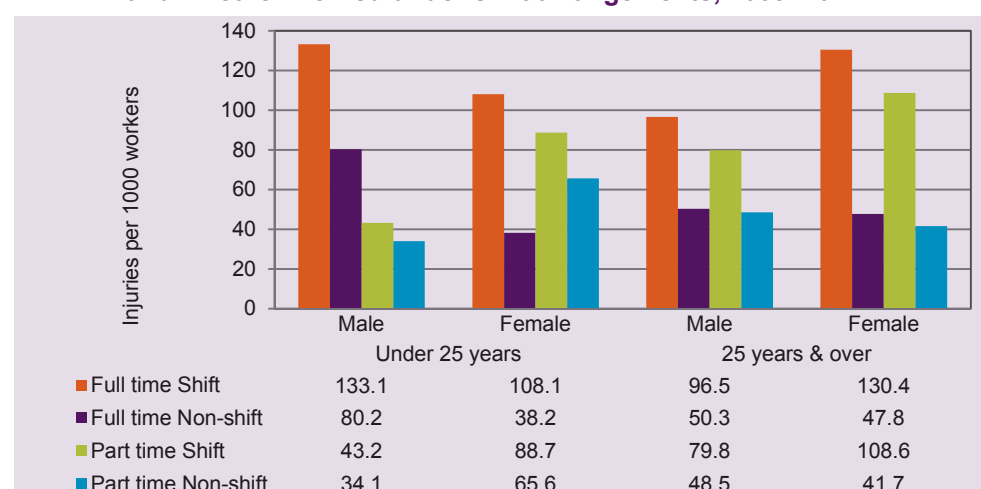
These proportions should be kept in mind when interpreting the injury rate data. The data in Table 2 show that full time workers had a higher incidence rate of work-related injury than part time workers in all categories except for young female workers who recorded a 42% higher incidence rate of injury when working part time than when working full time. This is consistent with the results shown in the previous section between permanent and casual workers. In all categories shift workers had higher incidence and frequency rates of injury than non-shift workers. Furthermore, young shift workers had higher frequency rates of injury than their older counterparts.

Table 2: Work-related injuries: percentage of workers, incidence and frequency rates of injury by type of employment, age group and sex, 2009–10

Type of employment	Under 25 years			25 years & over		
	Males	Females	Total	Males	Females	Total
Incidence rate						
Full time	88.8	50.9	73.8	57.4	58.7	57.8
Part time	36.8	72.3	57.6	53.2	51.2	51.7
Shift	85.1	94.8	90.2	94.6	120.4	105.4
Non-shift	64.4	53.0	58.9	50.1	45.1	47.8
Total	68.8	63.2	66.1	56.9	55.4	56.2
Frequency rate						
Full time	44.6	27.2	38.0	26.8	29.9	27.8
Part time	53.1	101.0	81.6	54.6	53.7	53.9
Shift	63.5	85.6	74.0	47.0	78.7	58.2
Non-shift	42.0	42.8	42.3	25.0	29.8	26.9
Total	46.1	52.4	48.8	28.4	36.5	31.5

As shown in Figure 8, the highest incidence rate of injury was recorded by young male workers working full time under shift arrangements, followed by female shift workers aged 25 years & over (133.1 and 130.4 injuries per 1000 workers, respectively). Within the young workers group, male full time workers had higher incidence rates of injury than their female counterparts regardless of whether or not they were working under shift arrangements.

Figure 8: Work-related injuries: incidence rates by full time/ part time status and whether worked under shift arrangements, 2009–10



This pattern was reversed for young workers working under part time arrangements. Female part time workers had much higher incidence rates of injury than their male counterparts regardless of whether or not they were working under shift arrangements. This pattern was not observed for older workers. Young male and female workers are likely to undertake different types of work and this may account for the pattern observed in the incidence rates of injury.

Irrespective of age and sex, full time shift workers had substantially higher incidence rates of injury than their non-shift working counterparts. A similar but less markedly different pattern was observed for part time shift workers relative to part time non-shift workers. As Table 2 shows, young shift workers had an incidence rate of injury 35% higher than non-shift workers, which was also the case for workers aged 25 years and over (55% higher).

Table 2 also showed when hours worked are controlled across the age groups and sexes, part time workers had substantially higher frequency rates of injury compared to full time workers. The greatest difference was observed for young female workers who had a frequency rate of 27.2 injuries per million hours worked when working full time but a frequency rate nearly four times higher when working part time (101.0). Similarly, shift workers have higher frequency rates of injury than non shift workers.

Figure 9 shows young female part time shift workers had the highest frequency rate of work-related injury (115.4 injuries per million hours worked) followed by their older counterparts (101.8). Part time shift workers had higher rates of injury per hour worked compared with their full time counterparts in all age and sex categories except for young male shift workers whose frequency rate of injury (60.0) was just lower than the frequency rate for full time shift workers (64.9).

These findings indicate the combination of part time jobs with shift arrangements may be associated with higher rates of work-related injury, particularly for young female workers. The next section will investigate whether the industry or occupation of the young worker has some impact on their rate of injury.

Young female part-time shift workers had the highest frequency rate of work-related injury

Figure 9: Work-related injuries: frequency rates by full time/ part time status and whether worked under shift arrangements, 2009–10



1.3 Industry of main job

One quarter of young workers worked in the Retail trade industry

Table 3 shows 24% of young workers worked in the Retail trade industry with a further 19% working in the Accommodation & food services industry. There were higher proportions of young females than young male workers in these industries (28% and 22% of young females respectively compared with 20% and 15% of young males).

The largest proportions of young male workers worked in the Retail trade industry (20%), followed by the Construction (16%) and Accommodation & food services (15%) industries. In contrast, the greatest proportion of workers aged 25 years & over worked in the Health care & social services industry (12%), with females accounting for the majority of these workers. For older male workers, the largest proportions worked in the Construction (14%) and Manufacturing (13%) industries.

Over half (53%) of young workers in the Retail trade industry worked in the Other retailing subdivision, which includes furniture, electrical, hardware, clothing, pharmaceutical retailing and department stores. A further 42% worked in the Food retailing subdivision, which includes supermarkets and grocery stores. Within the Accommodation & food services industry almost all young workers worked in the Food & beverage services subdivision, which includes Cafes, restaurants and takeaway food services, pubs, taverns and bars.

Table 3: Australian workforce: percentage of workers by industry of current main job, age group and sex, 2009–10

Industry of current main job	Under 25 years			25 years & over		
	Male	Female	Total	Male	Female	Total
Retail trade	20%	28%	24%	7%	11%	9%
Accommodation & food services	15%	22%	19%	4%	5%	4%
Construction	16%	1%	9%	14%	3%	9%
Manufacturing	13%	3%	8%	13%	6%	10%
Health care & social assistance	3%	11%	7%	5%	21%	12%
Professional, scientific & technical services	5%	6%	6%	8%	8%	8%
Other services	5%	5%	5%	4%	4%	4%
Education & training	2%	4%	3%	5%	13%	8%
Financial & insurance services	2%	4%	3%	4%	5%	4%
Administrative & support services	3%	3%	3%	3%	4%	3%
Transport, postal & warehousing	3%	1%	2%	8%	3%	6%
Arts & recreation services	2%	2%	2%	1%	2%	2%
Wholesale trade	2%	2%	2%	5%	3%	4%
Agriculture, forestry & fishing	3%	1%	2%	4%	2%	3%
Information media & telecommunications	2%	2%	2%	2%	2%	2%
Rental, hiring & real estate services	1%	2%	2%	1%	2%	2%
Public administration & safety	1%	2%	1%	7%	7%	7%
Mining	1%	1%	1%	2%	0%	2%
Electricity, gas, water & waste services	1%	1%	1%	1%	1%	1%
Total*	100%	100%	100%	100%	100%	100%

* Includes inadequately described.

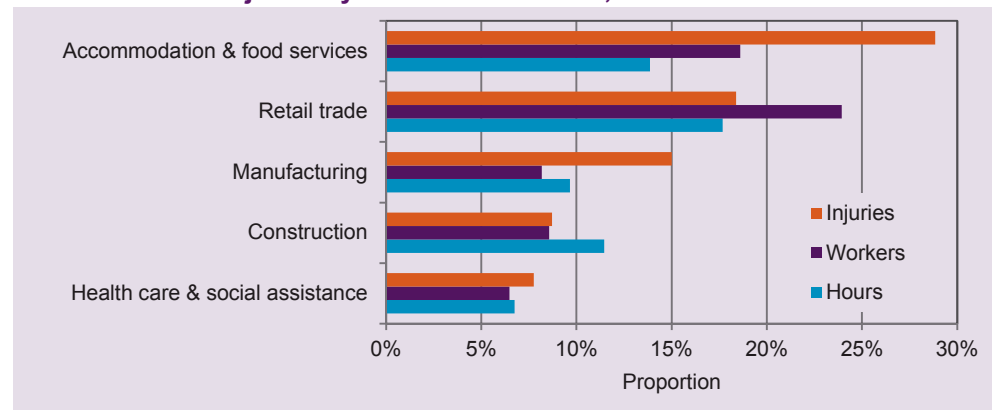
Further examination of work-related injuries by industry for young workers is restricted to the Retail trade, Manufacturing, Construction, Accommodation & food services and Healthcare & social assistance industries due to high relative standard errors associated with the other industries in the survey data. The five industries account for 66% of young workers and 78% of injuries incurred by young workers.

Almost 30% of injured young workers worked in the Accommodation & food services industry

Figure 10 compares the proportions of hours worked, workers and work-related injuries for young workers for the aforementioned industries. The Accommodation & food services industry accounted for the largest proportion of injured young workers (29%), followed by the Retail trade (18%) and Manufacturing industries (15%).

In the Accommodation & food services and Manufacturing industries young workers recorded much larger proportions of work-related injuries relative to proportions of workers or hours worked in these industries, indicating that there may be a high level of risk of injury in these two industries.

Figure 10: Young workers: proportion of hours worked, workers and work-related injuries by selected industries, 2009–10



The Retail trade industry accounted for the highest proportion of workers and hours worked by young workers though the smaller proportion for hours worked is an indication of lower average hours of work per week. In contrast, the proportion of hours worked in the Construction industry was higher than the proportion of workers indicating higher average hours worked per week.

Table 4 shows the average hours worked in the industries that employed the largest proportions of workers in 2009–10. These data show young workers work fewer hours on average than their older counterparts in all of these industries. The most substantial difference in average hours worked per week occurred in the Retail trade industry with young workers working on average 14.4 hours fewer per week than their older counterparts. This was closely followed by the Accommodation & food services industries where young workers worked 13 hours fewer per week on average than older workers. These two industries are also characterised by large proportions of workers undertaking part time or casual work.

Table 4: Australian workforce: average hours worked per week in selected industries of current main job by age group, 2009–10

Industry of current main job	Average hours worked per week	
	Under 25 years	25 years & over
Retail trade	20.8	35.2
Accommodation & food services	21.0	34.0
Construction	37.7	40.8
Manufacturing	33.3	39.6
Health care & social assistance	29.4	32.3

The Manufacturing industry recorded the highest incidence rate of work-related injury for young workers

Figure 11 shows that the highest incidence rate of injury for young workers was in the Manufacturing industry (121.2 injuries per 1000 workers), followed by the second highest employer of young workers, the Accommodation & food services industry (102.5). When compared with the rates of injury for older workers these two industries recorded the greatest differences. The injury rate for younger workers in the Manufacturing industry was nearly twice the rate for older workers while in the Accommodation & food services industry the rate for younger workers was 57% higher. Older workers had a higher incidence rate of injury than their younger counterparts in the Retail Trade industry.

Figure 11: Work-related injuries: incidence rates of work-related injury in selected industries and age group, 2009–10

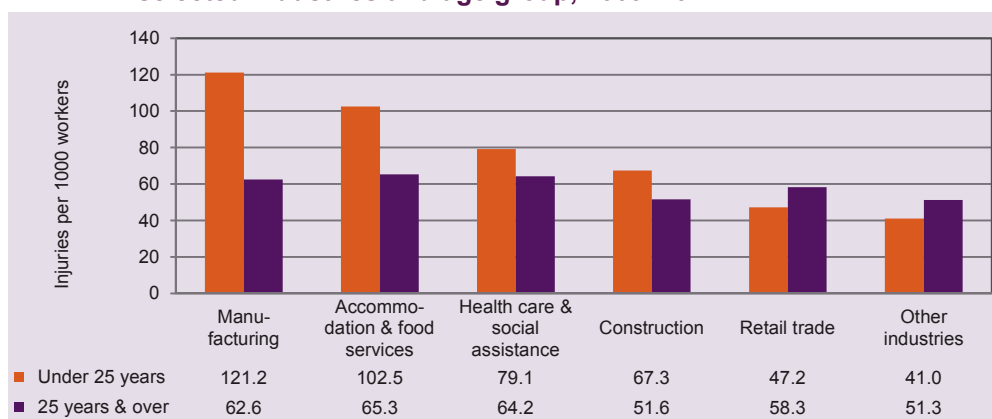


Figure 12 shows that when hours worked are controlled, the highest frequency rate of injury incurred by young workers occurred to those in the Accommodation & food services industry (101.6 injuries per million hours worked). This was followed by the Manufacturing (75.9 injuries) and Health care & social assistance (56.2 injuries) industries. In comparison to their older counterparts young workers had higher frequency rates of injury in all of the selected industries, with the greatest differences in the Accommodation & food services and Manufacturing industries. In the Manufacturing industry the frequency rate for young workers was twice the rate for older workers while in the Accommodation & food services industry the rate for young workers was one and half times the rate for older workers.

Figure 12: Work-related injuries: frequency rates of work-related injury for selected industries by age group, 2009–10



1.4 Occupation of main job

Almost one quarter of young workers worked as Sales workers

Table 5 shows the number and proportion of young workers by the occupation of their current main job. Almost one quarter of young workers worked as Sales workers (24%) in 2009–10, while 18% worked as Technicians & trades workers, 16% as Labourers and 13% as Community & personal service workers.

There was a different pattern of employment for male and female workers. The greatest proportion of young male workers were Technicians & trades workers (31%), while 23% worked as Labourers. In contrast, over one third (35%) of young female workers were Sales workers, 20% worked as Community & personal service workers and 19% as Clerical & administrative workers.

The distribution of older workers' occupations was quite different. The most common occupations for older workers were Professionals (24%), Managers (16%) and Clerical & administrative workers (16%).

Table 5: Australian workforce: proportion of workers by occupation of current main job, age group and sex, 2009–10

Occupation of current main job	Under 25 years			25 years & over		
	Males	Females	Total	Males	Females	Total
Sales workers	14%	35%	24%	5%	9%	7%
Technicians & trades workers	31%	4%	18%	21%	4%	14%
Labourers	23%	8%	16%	10%	7%	9%
Community & personal service workers	7%	20%	13%	5%	13%	8%
Clerical & administrative workers	5%	19%	12%	7%	27%	16%
Professionals	8%	9%	9%	21%	28%	24%
Machinery operators & drivers	8%	1%	4%	11%	1%	7%
Managers	4%	4%	4%	20%	11%	16%
Total*	100%	100%	100%	100%	100%	100%

* Includes inadequately described.

In the Sales workers occupation group over three quarters of young workers worked as Sales Assistants. In the Technicians & trades workers occupation group 26% of the young workers worked as Automotive & engineering trades workers and 25% worked as Construction trades workers. In the Labourers group, 30% of young workers worked as Other labourers (Freight handlers, deck & fishing hands, handypersons, rubbish

collectors, motor vehicle parts and accessories fitters), while 26% worked as Food preparation assistants. For those working in the Community & personal services group, over half (55%) worked as Hospitality workers and another quarter as Carers & aides (26%).

One third of work-related injuries incurred by young workers were experienced by Technicians & trades workers

Figure 13 shows information for the five occupation groups that accounted for the highest proportions of young workers. These data show that Technicians & trades workers experienced almost one third of all work-related injuries incurred by young workers, with a further 21% incurred by Community & personal service workers. Young technicians & trades workers worked almost a quarter of all hours worked by young workers and was also the second largest occupation of workers in this age group. Nevertheless, the proportion of injuries incurred by Technicians & trades workers is overrepresented relative to hours worked and the number of workers. A similar situation exists for Community & personal service workers but for Sales workers the proportion of injuries was similar to the proportion of hours worked but much lower than the proportion of workers.

Figure 13: Young workers: injuries, workers and hours worked by selected occupations, 2009–10

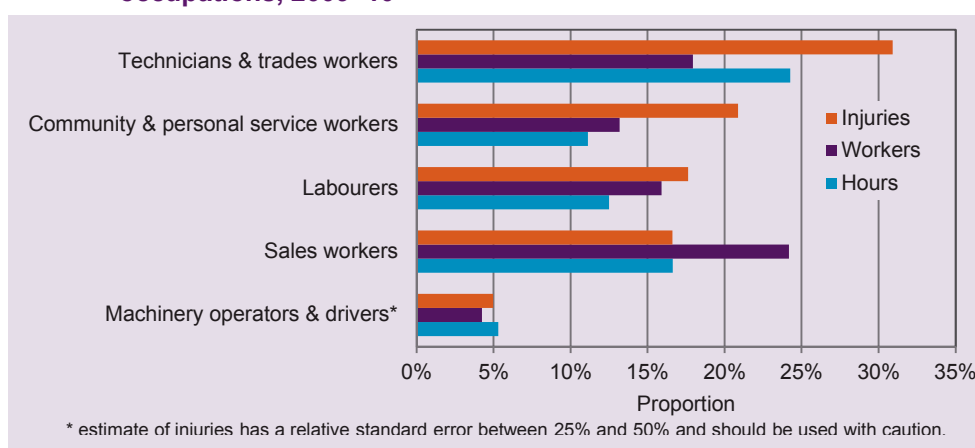


Table 6 shows that the greatest number of hours worked by young workers on average were in the Managers (38.9 hours per week), Technicians & trades workers (38.1) and Professionals (35.9) occupation groups. However, only relatively low numbers of young workers actually worked as Managers and Professionals.

Table 6: Australian workforce: average hours worked per week by occupation of current main job and age group, 2009–10

Occupation of current main job	Average hours worked	
	Under 25 years	25 years & over
Managers	38.9	44.1
Technicians & trades workers	38.1	40.1
Professionals	35.9	37.3
Machinery operators & drivers	35.1	42.1
Clerical & administrative workers	32.3	32.7
Community & personal service workers	23.8	30.9
Labourers	22.2	33.2
Sales workers	19.4	33.3
Total*	28.2	37.2

* Includes inadequately described.

The greatest differences between the age groups in hours worked were between Sales workers (13.9 difference in average hours worked per week) and Labourers (11.1 difference in average hours). Conversely, there was relatively little difference in the average hours worked per week between the age groups for Clerical & service workers (0.3 hours) and Professionals (1.3 hours).

Young Technicians & trades workers had the highest incidence rate of work-related injury

Figure 14 shows the incidence rates of injury for these same occupation groups. These data show that young Technicians & trades workers had the highest incidence rate of work-related injury (113.8 injuries per 1000 workers), 67% higher than the injury rate of older workers (68.0). This was closely followed by young Community & personal service workers (104.6) with a rate 35% higher than for older workers (77.6). For the other three occupation groups shown, older workers had higher incidence rates of injury, particularly for Labourers. For Labourers, older workers had an incidence rate of injury 29% higher than the rate for younger workers (94.1 and 73.2 respectively).

Figure 14: Work-related injuries: incidence rates of work-related injury for selected occupations by age group, 2009–10



Young Community & personal service workers had the highest frequency rate of work-related injury

Figure 15 shows that on a 'per hour' basis younger workers had higher frequency rates of injury for all occupation groups. Young Community & personal service workers had the highest frequency rate of injury, 91.6 injuries per million hours worked for young workers, which was 75% higher than the rate of older workers (52.4). There was also a large difference in rates between young and older Technicians & trades workers, where the frequency rate for young workers of 62.2 injuries per million hours worked was 76% higher than the rate of older workers (35.3). As with incidence rates, the frequency rates for Machinery operators & drivers were similar for both age groups.

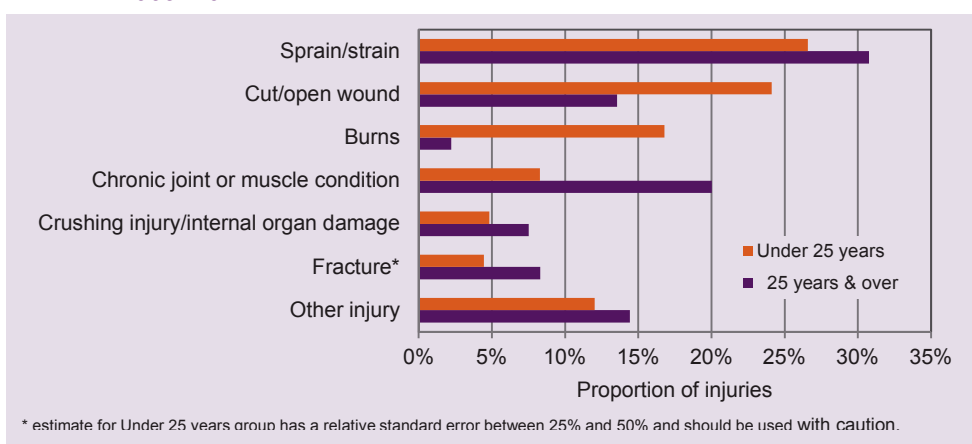
Figure 15: Work-related injuries: frequency rates of work-related injury for selected occupations by age group, 2009–10



1.5 Type of injury

Figure 16 shows that young workers were more likely than older workers to incur a *Cut/open wound* (24% of injuries) or *Burns* (17% of injuries) while *Sprain/ strain* accounted for the highest proportion of work-related injuries experienced by both young and old workers. For young workers this type of injury accounted for 27% of injuries while for older workers *Sprain/ strain* accounted for 31% of injuries. Older workers were more likely to incur *Chronic joint or muscle condition* (20%) than younger workers.

Figure 16: Work-related injuries: proportion by type of injury and age group, 2009–10

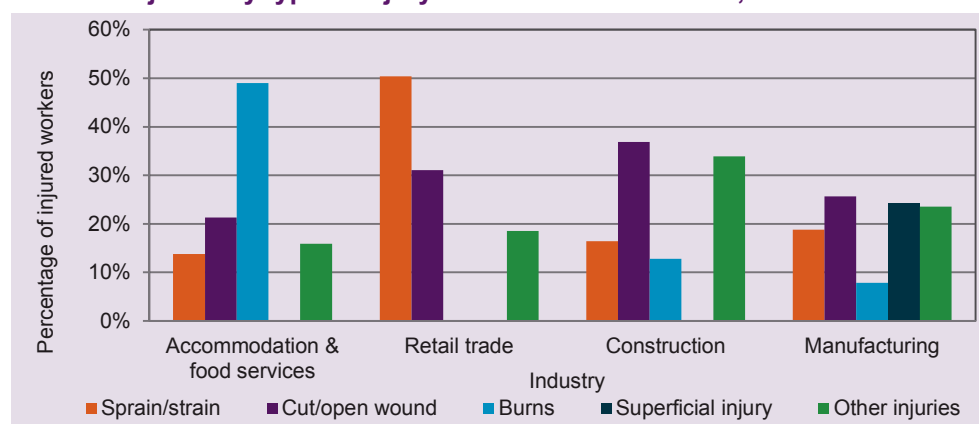


Young workers experienced 65% of all work-related *Burns* injuries and 30% of all *Cut/open wound* injuries

Of particular concern is that 65% of all *Burns* injuries and 30% of all *Cut/open wound* injuries were experienced by young workers when these workers comprise only 17% of the workforce.

The data show the type of injury experienced is influenced by the industry in which the worker is employed. However due to the limitations with the survey data reliable information can only be displayed for the four industries with the highest numbers of young workers. Figure 17 shows that the pattern of injuries were quite different for the four industries.

Figure 17: Work-related injuries incurred by young workers: Proportion of injuries by type of injury and selected industries, 2009–10



The predominant type of injury experienced by young workers in the Accommodation & food services industry was *Burns*, which accounted for almost half of all injuries in this industry. Further analysis within this industry showed that *Burns* were typically experienced in the Food & beverage services sector and the Cafes, restaurants & takeaway services sector. *Cut/open wound* accounted for a further 21% of injuries in this industry.

The predominant type of injury incurred by young workers in the Retail trade industry was *Sprains/strain*, which accounted for half of all injuries. This was followed by *Cut/open wound* accounting for almost one third of injuries (31%).

The predominant type of injury incurred by young workers in the Construction industry was *Cut/open wound*, which accounted for just over one third of injuries. Another one third of injuries were in the *Other injuries* category. This category includes fractures and chronic muscle conditions.

The Manufacturing industry displayed a completely different pattern of injuries among young workers to the other industries with no dominant type of injury. The Manufacturing industry was the only industry to record substantial numbers of *Superficial injuries* – nearly one quarter of injuries. Similar proportions were also recorded for *Cut/open wound* and *Other injuries*. *Sprain/strain* accounted for one fifth of injuries in this industry.

Nearly half of the work-related injuries incurred by young sales workers were *Sprains/strains*.

There is also a link between the occupation of the worker and the injury incurred. Due to the limitations with the survey data, reliable information can only be displayed for the four occupations with the highest numbers of young workers. Figure 18 does not show as distinctive a pattern as the industry data. An exception is the pattern of injury among Sales workers where nearly half of the injuries were *Sprain/strain*. Furthermore, 43% of young Labourers incurred *Other injuries* (fractures and chronic muscle conditions).

For young Technicians & trades workers the proportions were relatively similar across the injury types with a slightly higher proportion of injuries due to *Cut/open wound* than *Sprain/strain* and *Burns*.

Over one third of injuries to young workers in the Community & personal service workers occupation group, which includes Hospitality workers, were categorised as *Other injuries* where little information was available. Around one quarter of injuries experienced by young workers in this occupation group were *Cut/open wound* with a further one quarter involving *Burns*.

Figure 18: Work-related injuries incurred by young workers: Proportion of common injuries experienced in selected occupations, 2009–10

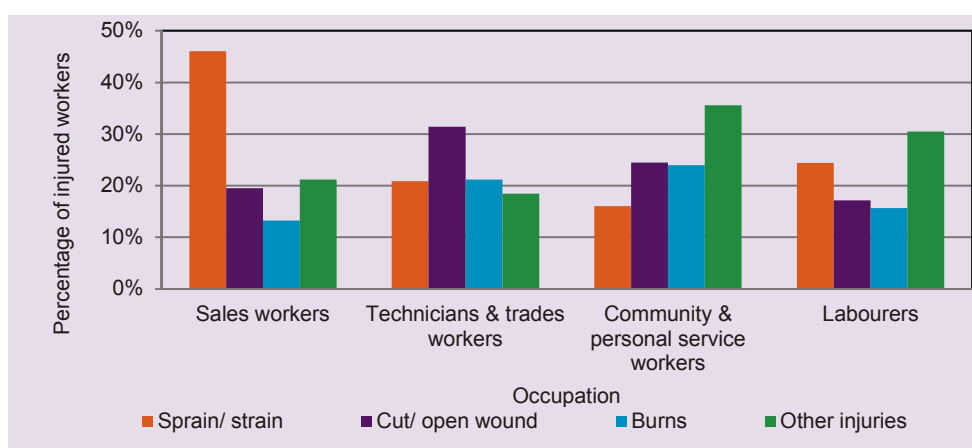


Figure 18 also shows that of the selected occupation groups, the Community & personal service workers occupation group recorded the greatest proportion of *Burns* injuries. However, in actual fact young workers working as Technicians & trades workers, which includes Food trades workers, accounted for the greatest number (and therefore percentage) of *Burns* injuries to young workers overall (39%).

Similarly, when examining patterns of *Cut/open wound* injuries across the selected occupation groups 40% were experienced by Technicians & trades workers (Motor mechanics, Panel beaters, Bricklayers, carpenters & joiners, Cooks, Chefs, Hairdressers), with another 21% experienced by Community & personal service workers (Carers & aides, Bar attendants & baristas, Cafe workers, Waiters).

When examining the data by sex, young male workers had greater proportions of injuries due to *Cut/open wound* (27% of injuries) and *Burns* (19% of injuries) than their female counterparts (21% and 14% of injuries respectively). Young female workers had a greater proportion of injuries due to *Sprain/strain* (31% compared with 23% for males). Given that over half of young male workers worked as Technicians & trades workers and Labourers while 35% of young female workers worked as Sales workers, these patterns of injury generally reflect the type of work undertaken by young male and female workers.

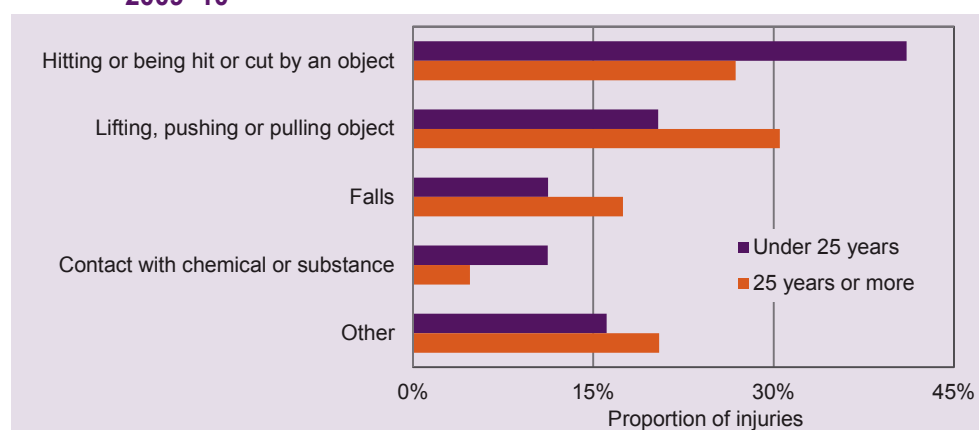
1.6 How the injury occurred

Over one third of work-related injuries experienced by young workers were due to *Hitting or being hit or cut by an object*.

Figure 19 shows that young workers were injured in different ways to older workers. Greater proportions of young workers' injuries were due to *Hitting or being hit or cut by an object* with 36% of injuries due to this mechanism of injury compared with 22% for older workers. This is consistent with the previous section where it was shown that young workers had greater proportions of injuries due to *Cut/open wound* than older workers.

Young workers also had greater proportions of injuries from *Contact with chemical or substance* than older workers. This is also consistent with the previous section where it was shown that greater proportions of young workers' injuries were due to *Burns* than they were for older workers.

Figure 19: Work-related injuries: How the injury occurred by age group, 2009–10



Differences between the sexes in terms of how work-related injuries occurred were observed within the young worker age group. Work-related injuries incurred by young male workers were most frequently due to *Hitting or being hit or cut by an object* (41%), followed by *Lifting, pushing or pulling object* (20%) and *Falls* (11%). Young female workers were more likely to incur a work-related injury due to *Hitting or being hit or cut by an object* (30%) followed by *Lifting, pushing or pulling object* (28%) and *Falls* (18%).

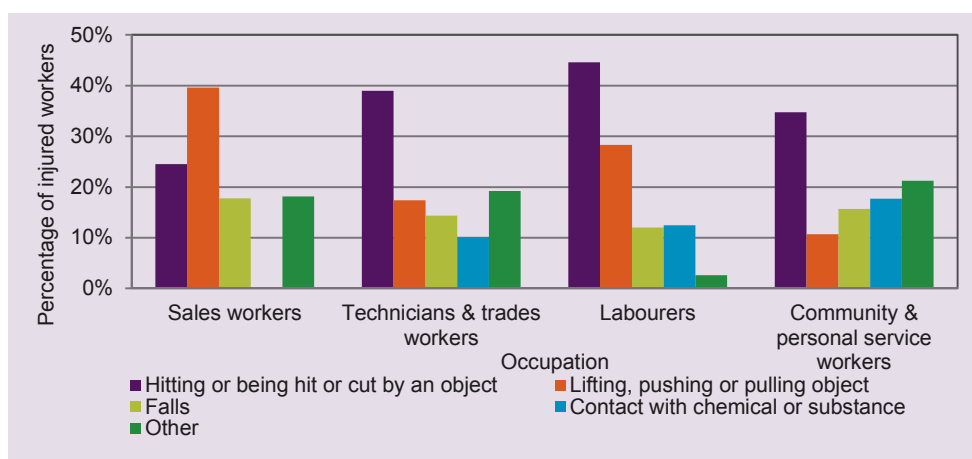
Young workers accounted for 40% of all injuries due to *Contact with chemical or substance* and 29% of *Hitting or being hit or cut by an object*

Across the age groups, young workers accounted for 40% of all injuries due to *Contact with chemical or substance* and 29% of *Hitting or being hit or cut by an object*. Although high relative standard errors do not allow the examination of how work-related injuries occurred in young workers by industry of current main job it is possible to examine patterns by occupation of current main job in a limited fashion. One third of injuries due to *Hitting or being hit or cut by an object* were incurred by Technicians & trades workers, followed by Labourers and Community & personal service workers (22% and 20%, respectively).

It is highly likely that these common types and causes of injuries that are sustained by young workers are inter-related. For instance, *Burns* in a fast food restaurant may be due to contact with hot objects such as fats and oils, while a *Cut/open wound* in a commercial kitchen may be due to cutting oneself with a knife.

Figure 20 shows that 39% of work-related injuries experienced by young Technicians & trades workers were caused by *Hitting or being hit or cut by an object* with another 17% caused by *Lifting, pushing or pulling object*. For young Community & personal service workers, the most common cause of injury was *Hitting or being hit or cut by an object* (35%) followed by *Contact with chemical or other substance* (19%). For young Sales workers, 40% of injuries were caused by *Lifting, pushing or pulling object*, followed by *Hitting or being hit or cut by an object* (24%). Almost half of all injuries incurred by young Labourers were due to *Hitting or being hit or cut by an object* (45%) followed by *Lifting, pushing or pulling object* (28%).

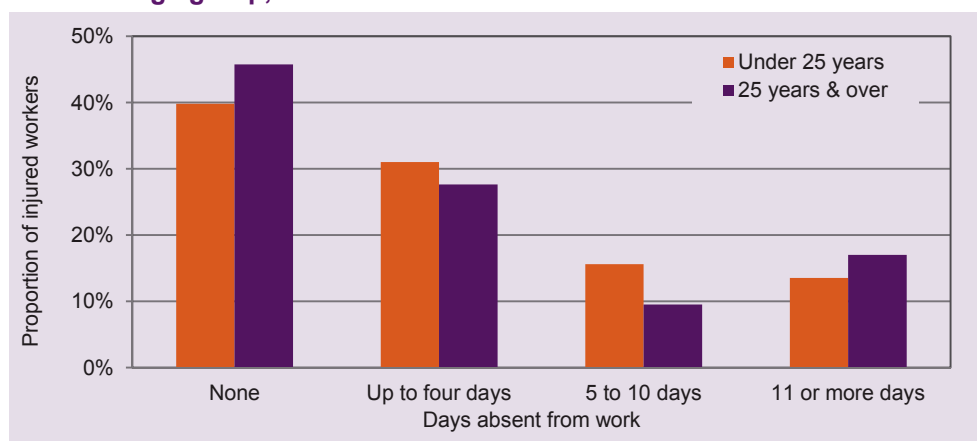
Figure 20: Work-related injuries incurred by young workers: proportion by occupation of current main job by selected causes of injury, 2009–10



1.7 Days absent from work

Figure 21 shows the duration of absence from work following an injury was broadly similar for young and older workers. These data show that in 2009–10, 40% of young workers and 46% of older workers did not take any time off work following their injury.

Figure 21: Work-related injuries: proportion by duration of absence from work and age group, 2009–10



The biggest difference was in the 5 to 10 days off work category, which was the duration of absence required following an injury for 16% of young workers but only 10% of older workers. Older workers however had a greater proportion of injuries in the 11 or more days absence category.

On first glance it could be said that younger workers had less time off work for injuries than older workers. There could be a number of factors contributing to this. The type of injury has a major impact on the time to recover with older workers having more chronic muscle conditions which have long recovery periods. Older workers may generally require longer absences to recover from injuries than younger workers. The higher proportion of part time workers among young workers is a third factor that could explain the difference in time off work. A period of 5 to 10 days off work for a part-time worker could involve three or four calendar weeks, whereas for older workers who are more often full time workers, this period of absence equates to 2 calendar weeks. Therefore young workers

may indeed require similar lengths of time to recover from injuries as older workers but because they work predominantly part-time fewer days absence are recorded.

Young male workers were more likely to take no time off work following a work-related injury than young female workers

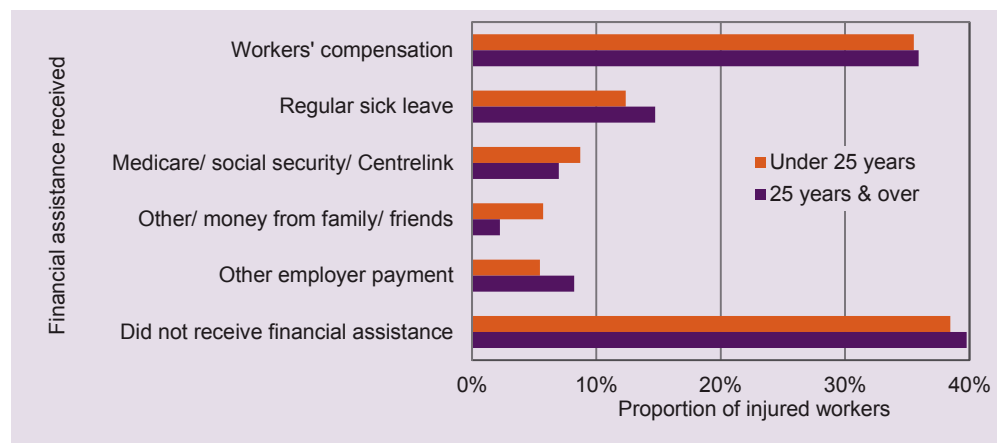
Young male workers were more likely to take no time off work following an injury than their female counterparts (45% and 33%, respectively). Consequently female workers recorded higher proportions for each period of time lost from work compared with male workers. This is likely to be linked to the type of injury incurred. Workers typically take longer to recover from a sprain or strain injury than from a cut and females recorded higher proportions of *Sprain/strain* injuries and males recorded higher proportions of *Cut/open wound* injuries.

1.8 Financial assistance received

Figure 22 shows there was little difference between young and older workers in terms of the types of the financial assistance received following an injury. It should be noted that for this data item, injured workers were able to nominate more than one type of financial assistance and hence the percentages do not add to 100%.

Although differences between young and older workers were small, young workers are less likely to use Regular sick leave or Other employer payments (annual leave or long service leave) than older workers. This is most likely linked to the lack of these types of leave when casually employed. Instead, young workers were more likely to receive assistance from family and friends for their injuries than were older workers.

Figure 22: Work-related injuries: proportion by financial assistance received and age group, 2009–10



These data also show that age has no bearing on whether or not you receive workers' compensation following a work-related injury with one third of both young and older workers receiving this type of assistance.

Young male workers received workers' compensation for their injury more often than young female workers

Analysis of the data by sex shows that young male workers received workers' compensation for their injury more often than female workers (41% and 29%, respectively). When sick leave and other employer payments were combined, male workers also received these benefits more often than their female counterparts (15% and 9%, respectively). Therefore young female workers were less likely to receive any form of financial assistance for their injury than young males (48% of females received no assistance compared to 30% of males).

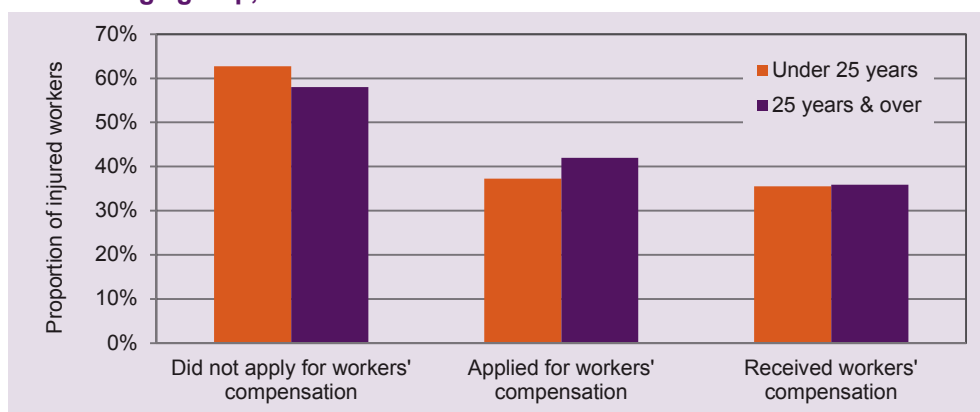
Of the young workers who did not receive any financial assistance, 73% did not take any time off work following their injury. This suggests the injury itself may not have been serious enough to warrant the pursuit of financial assistance.

1.9 Workers' compensation

Australian workers' compensation schemes covered the 97% of young workers who were employees in 2009–10. However, as Figure 23 shows 63% of young workers did not apply for workers' compensation for their work-related injury. This is higher than the proportion of injured older workers who did not apply for compensation (58%).

Nearly all young workers who applied for workers' compensation received it. In contrast, a larger proportion of older workers had their claim rejected (applied for compensation but did not receive it). As a result, overall similar proportions of young and older workers received workers' compensation for their injuries.

Figure 23: Work-related injuries: number by workers' compensation status and age group, 2009–10



Young male workers were more likely than their female counterparts to apply for workers' compensation (43% and 31%, respectively). This was also true for older workers, although to a lesser extent (males 44% and females 39%). There was no difference between young male and young female workers in terms of the proportion who received workers' compensation (96% and 94%, respectively). However older male workers appeared to be more likely than their female counterparts to receive workers' compensation for their injuries (88% and 81%, respectively).

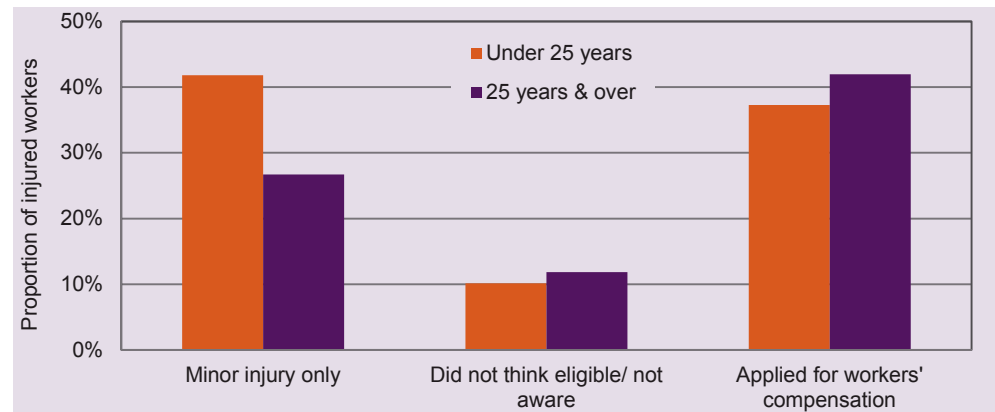
Figure 24 shows that 43% of the young workers who did not apply for compensation felt that their work-related injury was too minor to lodge a claim, with young female workers slightly more likely to cite this reason than males (46% and 40%, respectively). This is in agreement with the substantial number of young workers who did not take any time off work following their work-related injury. A further 10% of young workers who did not claim workers' compensation for their injury were either not aware of workers' compensation or did not think they were covered, with young female workers more likely to cite this reason than their male counterparts (13% and 7%, respectively).

In comparison to young workers 30% of older workers felt that their injury was too minor to lodge a claim for compensation. As with younger workers,

Almost half of injured young workers felt that their injury was too minor to warrant a workers' compensation claim

older females were more likely than older males to cite this reason (34% of older females compared with 28% for older males). Furthermore, a slightly higher proportion of older workers were not aware or did not think they were eligible for compensation (12%), with males and females equally likely to cite this reason (12% each).

Figure 24: Work-related injuries incurred by young workers: proportion by reason did not apply for workers' compensation and age group, 2009–10



Two thirds of young workers who did not apply for workers' compensation following their injury were female

Given that young female workers experienced a similar number of work-related injuries to their male counterparts it is important to understand why young female workers did not lodge claims for compensation. Upon further examination of the data there was no difference between the sexes in terms of feeling that their injury was not serious enough to warrant a workers' compensation claim (50% each). However, of the young workers who did not know about or did not think they were eligible for workers' compensation female workers comprised the majority (63%). This indicates that one of the reasons why young female workers are not claiming workers' compensation for their work-related injuries to the same extent as young males is they either do not know about or are not aware that they are covered by workers' compensation. An obvious direction for policy makers is to ensure education regarding rights to workers' compensation is accessible within workplaces where these young female workers are working, which is largely in the Retail trade and Accommodation & food services industries.

Duration of absence from work following a work-related injury can be used as an indicator of injury severity. Figure 25 shows that for young workers the proportion who received compensation increased with time lost up to 10 days but then fell when the time off from work exceeded 10 days. It is not clear why young workers did not claim workers' compensation for these more severe injuries. The reason the columns in Figure 25 do not add to 100% is that not all workers' compensation claims are accepted.

For injuries resulting in up to four days off work, over half (57%) of injured young workers did not apply for workers' compensation. Marked sex differences were present, with 61% of injured male workers receiving compensation for injuries resulting in up to 4 days off work compared to 24% of injured females. Overall 73% of young workers received workers' compensation for absences of 5 to 10 days. With each sex, and within this duration of time lost, 77% for young male workers and 69% for young female workers received workers' compensation.

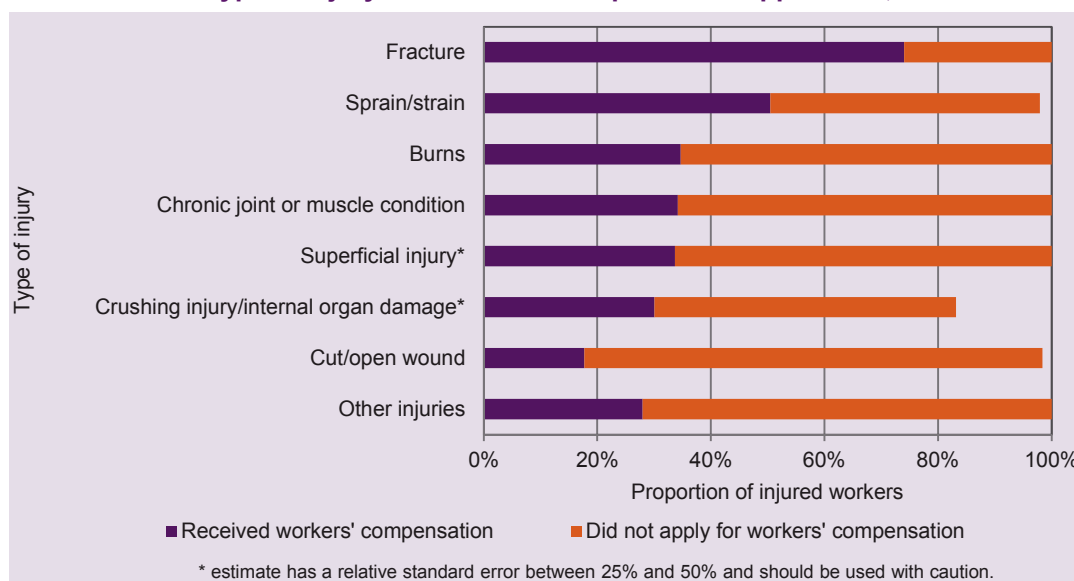
Figure 25: Work-related injuries incurred by young workers: proportion by duration of absence and workers' compensation application, 2009–10



A greater proportion of injured young workers applied for and received workers' compensation for *Fractures* than any other injury

Figure 26 shows (for each type of injury) the proportion of injured young workers who received workers' compensation. These data show that a greater proportion of injured young workers applied for and received compensation for *Fractures* than any other type of injury. This is likely to be linked to the ease in associating the injury to work and because these injuries require medical treatment, which incurs a cost other than lost wages. *Sprain/strain* was the next most compensated injury while *Cut/open wound* was the least compensated injury.

Figure 26: Work-related injuries incurred by young workers: Proportion by type of injury and workers' compensation application, 2009–10



The data presented thus far is from a nationally representative survey. To validate the results of the survey a comparison was undertaken with national workers' compensation data. The workers' compensation data show that 44 600 claims were lodged by young employees and accepted by workers' compensation authorities across Australia in 2009–10. This is consistent with the survey data, which estimates 44 200 young employees received workers' compensation in that year. Given the survey data are in close agreement with the workers' compensation data, we can have confidence in the patterns of injury reported so far in this report.

Figure 27 shows that the WRIS data by sex estimate a slightly greater number of compensated injuries for all female workers than what is recorded in the National Dataset for Compensation-based Statistics (NDS). This is offset by a slightly lower number for all male workers.

Figure 27: Work-related injuries incurred by young workers: number compensated by sex and data source, 2009–10

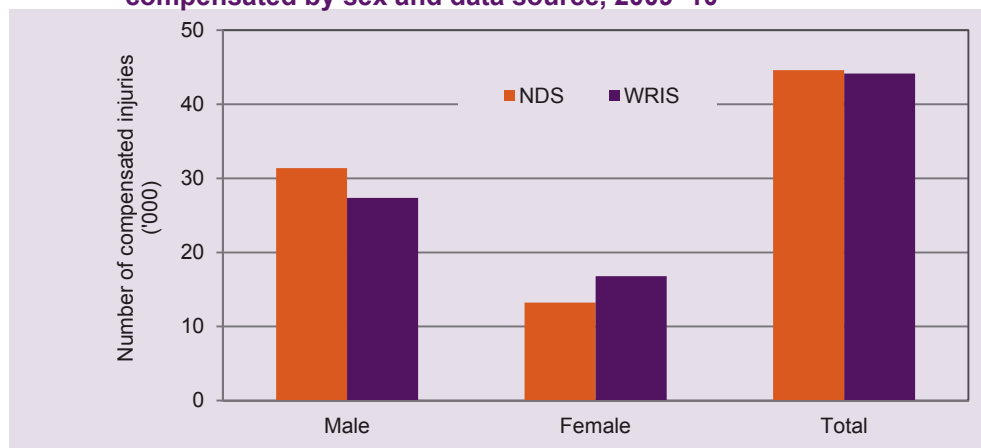
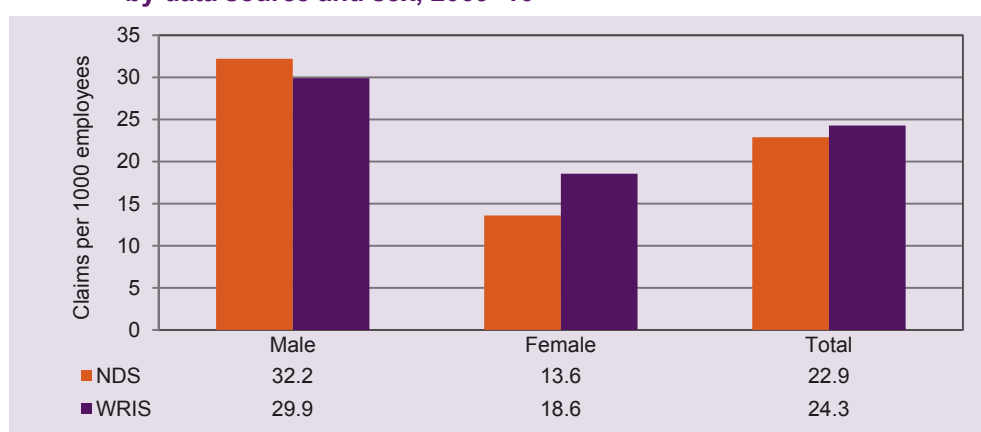


Figure 28 shows a comparison of incidence rates of injury from the two data sources. The incidence rates of injury of young workers overall calculated in each data source are very similar. However, the data by sex continues to show differences. The workers' compensation data confirm that male employees had higher incidence rates of compensated injury than their female counterparts. The difference by sex between the data sources seen in the number of injuries has translated to the same differences in incidence rates with the rate for young male employees being slightly lower in the WRIS data than the compensation data (29.9 claims per 1000 employees compared with 32.2). The difference for young female employees was much greater with 18.6 claims per 1000 workers in the WRIS compared with 13.6 in the NDS.

Figure 28: Work-related injuries incurred by young workers: incidence rate by data source and sex, 2009–10

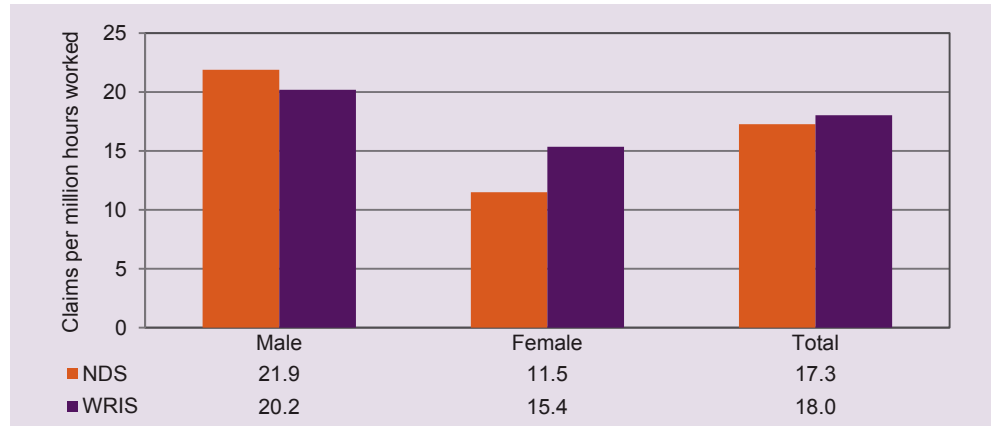


A similar pattern exists when hours worked are considered. Figure 29 shows the frequency rates for young male workers were similar in the two data sources but the frequency rates for females were quite different.

These findings indicate results from the WRIS relating to workers who claimed compensation for their work-related injuries should be treated with

caution. This should not be interpreted that any data by sex is unreliable. The WRIS is survey data based on a sample of responses that are factored to represent the population, which means the WRIS data can be interpreted as an estimate of patterns within Australian workers. Overall, there is a very good match between the WRIS estimates and the NDS workers' compensation data.

Figure 29: Work-related injuries incurred by young workers: frequency rate by data source and sex, 2009–10



2 Workers' compensation claims

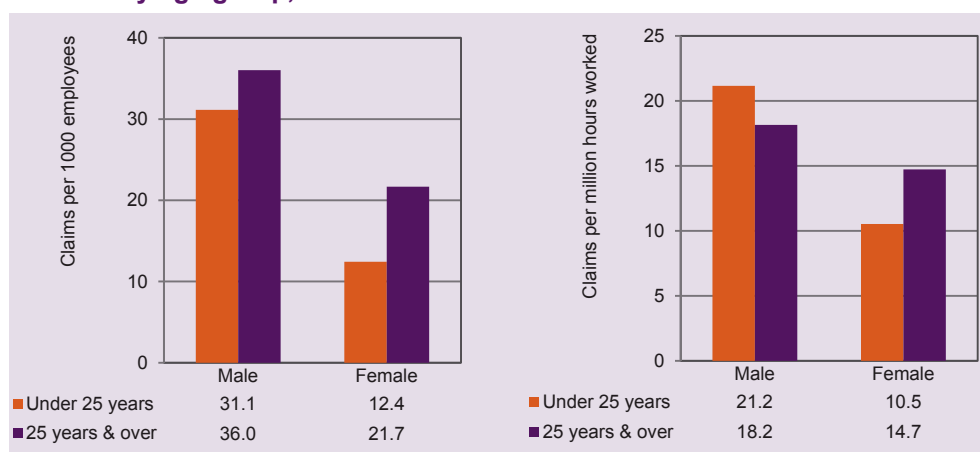
Although the analysis of the survey data shows that a large proportion of young workers injuries were not compensated by workers' compensation schemes, workers' compensation data can provide more details on the circumstances that surrounded the injury or illness. The following analysis uses workers' compensation data but excludes information on claims for injuries incurred while travelling to or from work (42 400 claims).

2.1 Rates of injury

In 2009–10 the incidence rate of compensated injury for young employees was 21.8 claims per 1000 employees, which was 25% lower than the 29.2 recorded for employees aged 25 years & over (older employees). However, when rates are calculated on a 'per hour worked' basis, frequency rates of injury for young and older employees were similar, 16.4 claims per million hours worked for young employees and 16.8 claims per million hours worked for older employees.

Figure 30 shows on a 'per employee' basis both male and female young employees had lower incidence rates of injury than their older counterparts. However, young male employees had a higher frequency rate of injury than older male employees while young females continued to record a lower frequency rate of injury than older female employees. This is in contrast to the rates of injury reported in the previous section using WRIS data.

Figure 30: Workers' compensation claims: incidence (claims per 1000 employees) and frequency (claims per million hours worked) rates by age group, 2009–10



2.2 Nature of injury or disease

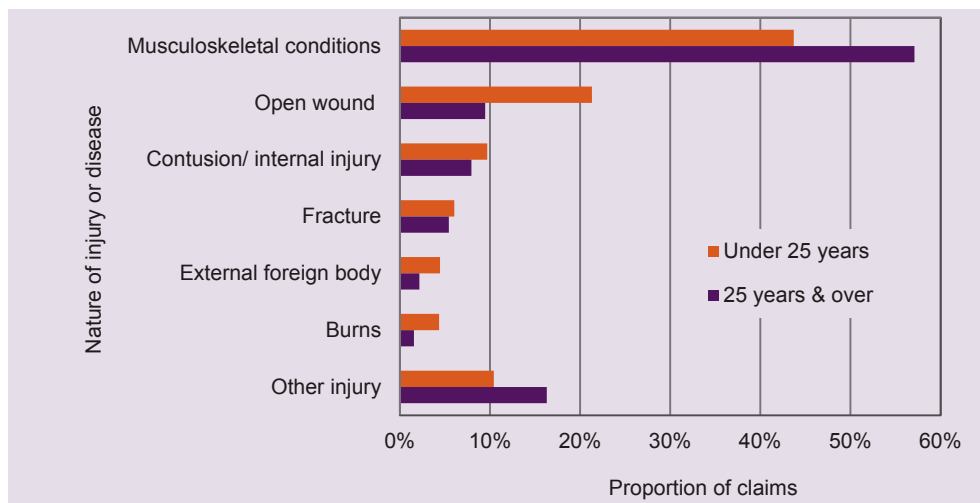
Musculoskeletal conditions were the most commonly compensated injury for young employees

The nature of injury or disease identifies the most serious injury or disease sustained by the employee (see Appendix 1 for more details). Figure 31 shows that *Musculoskeletal conditions* were the most commonly compensated injury for both young and older employees (37% and 45% respectively). However, young employees had a greater proportion of claims for *Open wound* compensated than their older counterparts. These patterns were also found within the WRIS data.

In the previous section the WRIS data showed a large proportion of injuries incurred by young workers were *Burns*. This is not seen in the workers' compensation data, where *Burns* account for only a very small proportion

of compensated injuries. This is consistent with the findings of the previous section where it was shown that over 60% of young workers with *Burns* did not apply for compensation.

Figure 31: Workers' compensation claims: proportion by nature of injury or disease and age group, 2009–10



There was not a great deal of difference between the sexes in terms of the types of injuries and illnesses that young employees received compensation for. However, a greater proportion of young male employees' compensated injuries were *Open wounds* than they were for young female employees (25% and 12%, respectively). Furthermore, young female employees were compensated for more *Musculoskeletal conditions* than young males (54% and 40% for females and males respectively).

2.3 Mechanism of injury or disease

Over one quarter of compensated injuries incurred by young employees were due to *Body stressing*

The mechanism of injury or disease identifies the action, exposure or event that was the direct cause of the most serious injury or disease. Workers' compensation claims data show marked differences between the age groups for a number of mechanisms of injury or disease. Consistent with the WRIS data, Figure 32 shows that young employees had a higher proportion of claims for *Being hit by moving objects* and *Hitting objects with a part of the body* than their older counterparts.

Figure 32: Workers' compensation claims: proportion by mechanism of injury or disease and age group, 2009–10

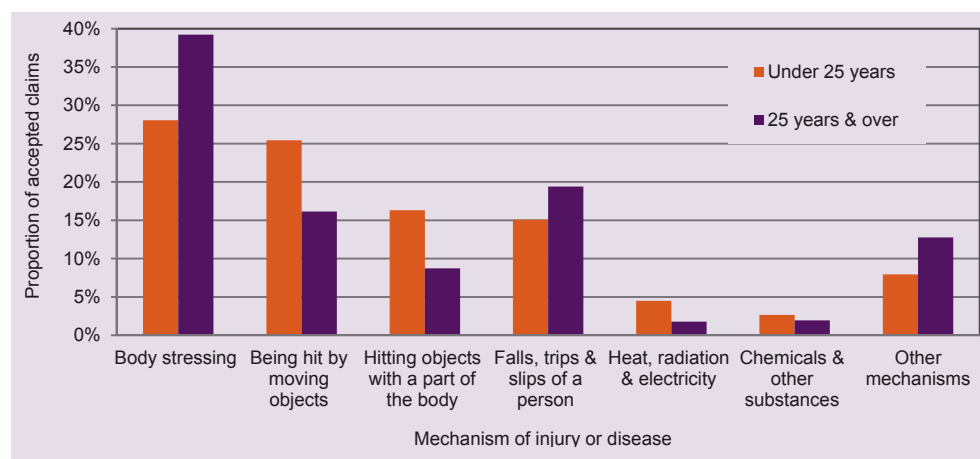


Table 7 shows mechanisms of injury at a more detailed level for young workers. These data show that within the *Body stressing* mechanism most claims were due to *Muscular stress while lifting, carrying, or putting down objects* with males and females recording similar proportions. Females were slightly more likely than their male counterparts to have a claim for *Muscular stress while handling objects other than lifting, carrying, or putting down* with 11% of claims from young females due to this mechanism and 9% from males.

Within the *Being hit by moving objects* mechanism, just over half of the claims from young males were coded to the subgroup also called *Being hit by moving objects*, which includes being hit by flying or projected objects or being hit by a vehicle. Just under one third of claims from young females were due to this mechanism.

There were other notable differences between young males and females. Males were more likely to be injured by *Hitting objects with a part of the body* than females, with 19% of claims from young males and 12% for young females caused by this mechanism. Females were more likely than males to be injured by *Falls, trips and slips of a person* and in particular for *Falls on the same level* with 14% of claims from young females and 7% for young males due to this latter mechanism.

Table 7: Workers' compensation claims of young employees: proportion by detailed mechanism of injury of disease and sex, 2009–10

Mechanism of injury or disease	Male	Female	Total
Body stressing	27%	33%	29%
Muscular stress while lifting, carrying, or putting down objects	14%	15%	14%
Muscular stress while handling objects other than lifting, carrying or putting down	9%	11%	9%
Muscular stress with no objects being handled	3%	5%	3%
Repetitive movement, low muscle loading	1%	3%	1%
Being hit by moving objects	29%	19%	26%
Being hit by moving objects	15%	6%	12%
Being hit by falling objects	6%	5%	6%
Being trapped between stationary & moving objects	4%	2%	3%
Being trapped by moving machinery	2%	1%	2%
Being assaulted by a person or persons	1%	2%	1%
Hitting objects with a part of the body	19%	12%	17%
Hitting moving objects	10%	5%	9%
Hitting stationary objects	8%	6%	8%
Falls, trips & slips of a person	14%	20%	16%
Falls on the same level	7%	14%	9%
Falls from a height	5%	5%	5%
Heat, radiation & electricity	4%	6%	5%
Contact with hot objects	3%	5%	3%
Contact with electricity	1%	1%	1%
Chemicals & other substances	3%	2%	3%
Vehicle incident	2%	2%	2%
Other mechanisms*	2%	5%	3%
Total	100%	100%	100%

* includes Sound and pressure; Biological factors; Mental stress; Slide or cave-in and Other & multiple mechanisms of injury.

2.4 Bodily location of injury or disease

Almost half of young employees' compensated injuries involved the *Upper limbs*

The location of injury or disease identifies the part of the body affected by the most serious injury or disease. Table 8 shows that a greater proportion of young employees' injuries involved the *Upper limbs* than their older counterparts (42% and 32% respectively). Within *Upper limb* injuries *Hand, finger & thumb* was the location of the greatest proportion of injuries. These data show that one quarter of all injuries to young workers involved the hand area. This is twice the proportion of injuries to hand that were experienced by older workers. Young males were particularly at risk of injury to their hands – 29% of accepted workers' compensation claims made by young male workers involved an injury to the *Hand, finger & thumb*.

The area of the body second most affected was the *Trunk*, and particularly the *Back*, with similar proportions for both age groups (18% for young workers and 20% for older workers). A slightly higher proportion of young female employees' injuries were to the *Back* than young male employees' injuries (21% and 17% respectively).

Table 8: Workers' compensation claims: proportion by bodily location of injury or disease* and age group, 2009–10

Bodily location of injury	Under 25			25 years & over		
	Male	Female	Total	Male	Female	Total
Upper limbs	44%	39%	42%	32%	33%	32%
Hand, fingers & thumb	29%	19%	26%	14%	10%	13%
Shoulder	5%	7%	6%	8%	10%	9%
Wrist	4%	7%	5%	3%	6%	4%
Forearm	3%	2%	3%	2%	2%	2%
Elbow	1%	2%	1%	3%	3%	3%
Trunk	20%	23%	21%	25%	23%	25%
Back	17%	21%	18%	20%	21%	20%
Abdomen & pelvic region	1%	1%	1%	3%	1%	2%
Chest	1%	1%	1%	2%	1%	2%
Lower limbs	18%	19%	18%	20%	19%	20%
Knee	5%	6%	5%	8%	7%	8%
Ankle	5%	5%	5%	4%	5%	5%
Foot & toes	4%	5%	4%	3%	3%	3%
Lower leg	2%	1%	2%	3%	2%	2%
Head	12%	7%	11%	12%	5%	10%
Eye	8%	2%	6%	4%	1%	3%
Cranium	1%	2%	2%	1%	1%	1%
Face	1%	1%	1%	1%	1%	1%
Neck	1%	3%	2%	2%	3%	3%
Other locations	4%	10%	6%	8%	16%	11%
Total	100%	100%	100%	100%	100%	100%

* Detailed Bodily location categories are only shown where notable. Therefore the sum of the sub-categories will not add to the total for the category.

While injuries to the *Lower limbs* accounted for 18% of claims made by young workers, the claims were split across a range of areas: *Knee*, *Ankle*, *Foot & toes* and *Lower leg*. These data show that young employees were slightly less likely than their older counterparts to incur a *Knee* injury (5% for younger workers compared with 8% for older workers). Similar proportions of young male and female injuries were at this location.

One in ten injuries to both young and older employees involved the *Head* with injuries to the *Eye* the most prevalent within this group. Young workers were twice as likely to incur an injury to the *Eye* as their older counterparts with 8% of injuries to young males involving the *Eye* compared with 4% for older males and 2% for young females.

These findings indicate that young employees may be at heightened risk of injuries to the hands and fingers or eyes in their workplaces relative to older workers.

2.5 Breakdown agency of injury or disease

The breakdown agency of injury or disease identifies the object, substance or circumstance that was principally involved in, or most closely associated with, the point at which things started to go wrong and that ultimately led to the most serious injury or disease. The WRIS did not collect this information.

The workers' compensation accepted claims data presented in Figure 33 show that a greater proportion young employees' work-related injuries were a result of incidents involving *Non-powered handtools, appliances & equipment* and *Materials & substances* than their older counterparts. In contrast, a greater proportion of older employees' injuries involved *Environmental agencies* than was seen for young employees.

Non-powered handtools, appliances & equipment were the most common breakdown agency involved in incidents resulting in an accepted claim for workers' compensation for both age groups.

Figure 33: Workers' compensation claims: proportion by breakdown agency of injury or disease and age group, 2009–10

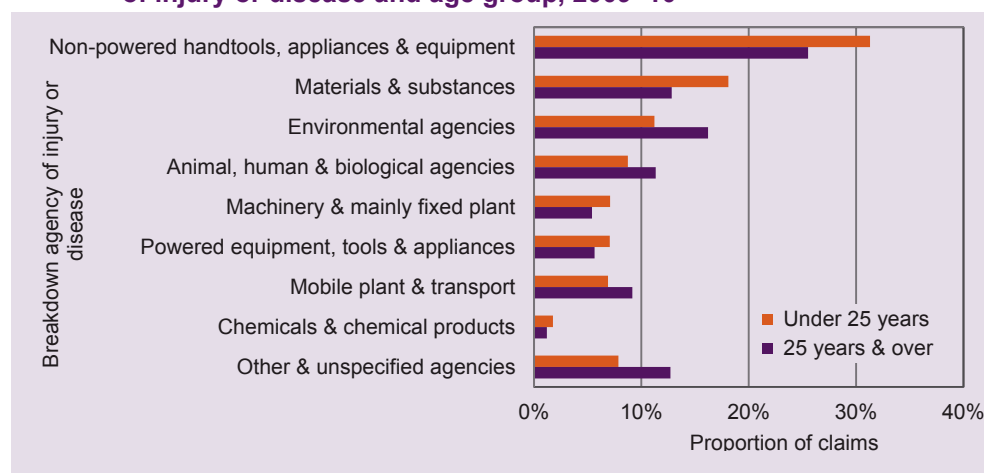


Table 9 shows the breakdown agencies at a more detailed level by sex. These data show considerable differences between the agencies that injure young male employees as opposed to those that injure young female employees. Greater proportions of young male employees' injuries involved powered equipment, plant or transport than of young female employees' injuries while greater proportions of young female employees' injuries were due to the environment they work in and the people they interact with.

As mentioned previously, *Non-powered handtools, appliances & equipment* were the most common breakdown agency. Approximately 31% of both young male and female employees' injuries involved this breakdown

agency. Within this breakdown agency, *Fastening, packing & packaging equipment* were involved in the greatest number of claims and accounted for 10% of claims for both male and female young employees. The majority of these claims involved *Crates, cartons, boxes, cases, drums, kegs, barrels, cans*. These data also show that a greater proportion of young male employees' injuries involved *Handtools, non-powered, edged* (7% of claims and mainly involving knives) than of young female employees' injuries while a greater proportion of young female employees' injuries involved *Furniture & fittings* (8% of claims and mainly involving storage equipment, doors and windows) than of young male employees' injuries.

Table 9: Workers' compensation claims from young employees: number by breakdown agency and sex, 2009–10

Breakdown agency	Male	Female	Total
Non-powered handtools, appliances & equipment	31%	31%	31%
Fastening, packing & packaging equipment	10%	10%	10%
Handtools, non-powered, edged	7%	4%	6%
Furniture & fittings	4%	8%	5%
Other non-powered equipment	3%	4%	4%
Other handtools	4%	1%	3%
Ladders, mobile ramps & stairways, & scaffolding	2%	1%	2%
Other utensils	1%	3%	2%
Materials & substances	21%	11%	18%
Other materials & objects	17%	7%	14%
Non-metallic minerals & substances	3%	1%	2%
Other substances	1%	3%	2%
Environmental agencies	9%	16%	11%
Outdoor environment	6%	6%	6%
Indoor environment	3%	10%	5%
Animal, human & biological agencies	6%	17%	9%
Human agencies	3%	11%	5%
Live four-legged animals	1%	4%	2%
Non-living animals	1%	1%	1%
Other live animals	1%	1%	1%
Machinery & mainly fixed plant	8%	4%	7%
Cutting, slicing, sawing machinery	3%	1%	3%
Conveyors & lifting plant	2%	1%	1%
Electrical installation	1%	0%	1%
Powered equipment, tools & appliances	8%	5%	7%
Workshop & worksite tools & equipment	5%	0%	4%
Kitchen & domestic equipment	1%	3%	1%
Office & electronic equipment	0%	2%	1%
Mobile plant & transport	8%	5%	7%
Road transport	4%	3%	4%
Other mobile plant	2%	2%	2%
Chemicals & chemical products	2%	2%	2%
Other & unspecified agencies	7%	10%	8%
Total	100%	100%	100%

Materials & substances were involved in 21% of young male employees' compensation claims but only 11% of young female employees' compensation claims. Within this group *Other materials & objects* accounted for most of the claims and included injuries involving oil and fat, felled logs, sawn timber, metal objects, broken glass and other fragments. Overall 17% of young male employees' workers' compensation claims were due to injuries from *Other materials & objects*.

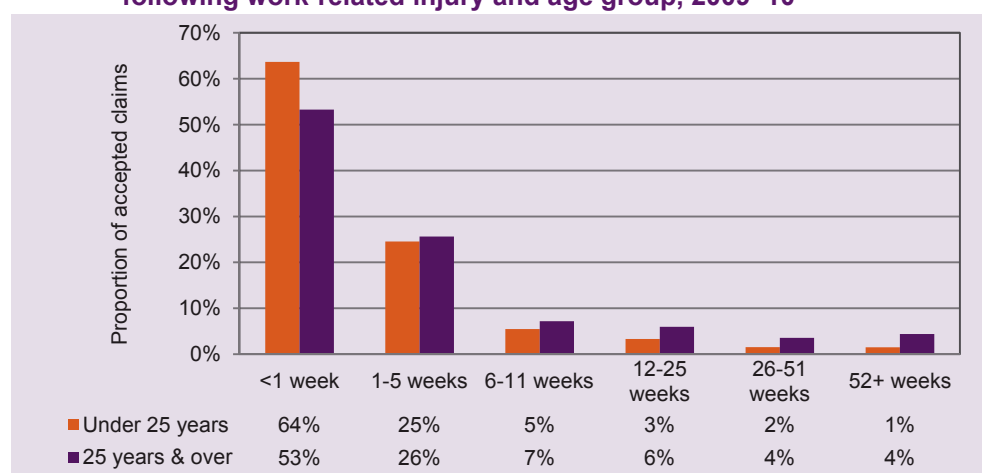
Environmental agencies includes both internal and external environmental hazards including the weather, road and ground surfaces, buildings and stairs. The proportion of claims from young women that cited this breakdown agency was nearly double the proportion of young men (16% and 9% respectively). Furthermore, young women lodged a greater proportion of claims than young men for incidents involving *Indoor environment* (10% and 3% respectively).

Animal, human & biological agencies were involved in 17% of young females' workers' compensation claims but only 6% of young males' workers' compensation claims. These claims predominantly involve *Human agencies*, which includes patients in hospitals or nursing homes or being assaulted by other people.

2.6 Duration of absence

The following data relate to the length of time lost from work that a worker was compensated for following a work-related injury. The amount of time may not be in a continuous period. Figure 34 shows that almost two thirds of young employees (64%) required less than one week off work following their work-related injury. In comparison, only 53% of older employees required the same period off work. A larger proportion of older employees required longer durations of time off work than their younger counterparts.

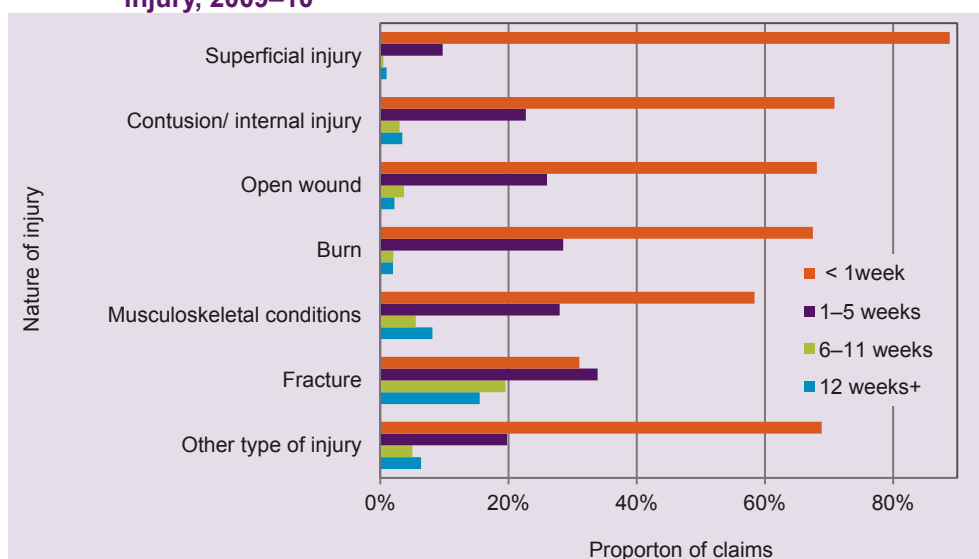
Figure 34: Workers' compensation claims: proportion by duration of absence following work-related injury and age group, 2009–10



It is not surprising that 89% of young employees with a *Superficial injury* required less than one week off work. However, for most types of injuries around 60% of claims involved less than one week off work (Figure 35).

Fractures was the only type of injury with a different pattern of time lost from work. *Fractures* required longer periods of absence from work, with 34% of young employees taking between 1 and 5 weeks off work, 20% taking between 6 and 11 weeks off and 16% taking 12 or more weeks.

Figure 35: Workers' compensation claims from young employees: proportion by duration of absence following work-related injury and type of injury, 2009–10



2.7 Industry of employer

Workers' compensation data are compiled using an earlier version of the industry classification than was used to compile the WRIS results shown in the first chapter of this report. There are substantial differences between the two versions of the industry classification, which affect two of the main industries that employ young workers. In the new version of the classification the takeaway food retailing sector has been moved from the Retail trade industry to the Accommodation & food services industry. This means the workers' compensation data presented in Figure 36 show a greater proportion of young employees in the Retail trade industry (32%) than shown in Figure 10 (24%). Another important difference in the employee estimates used with the workers' compensation data is that they take account of workers with more than one job. Around 5% of workers have more than one job and since they can be injured in either job, the workers' compensation employee estimates include counts of each job. This has also contributed to the higher proportion of employees in the Retail trade industry.

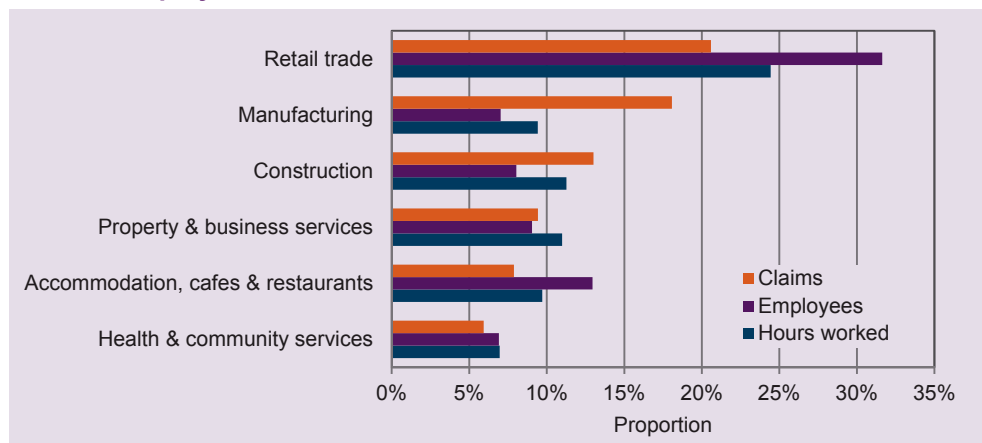
The Retail trade industry recorded the highest proportion of young employees, their hours worked and their workers' compensation claims

Figure 36 shows the Retail trade industry recorded the highest proportion of young employees (32%), their hours worked (24%) and their workers' compensation claims (21%). While the Accommodation, cafes & restaurant industry recorded the second highest proportion of employees (13%), the Property & business services and Construction industries recorded the second highest proportions of hours worked (11%). The Property & business services industry includes employees working under labour hire arrangements. This is another difference between the survey data and the workers' compensation data. In the survey data, the worker is shown against the industry of their current job whereas for the workers' compensation data it is the industry of their employer. Under labour hire arrangements, an employee is paid by their employer to work for someone else.

The Manufacturing industry recorded the second highest proportion of young employees' workers' compensation claims (18%) followed by the Construction industry (13%).

As shown in Figure 36, there was an over-representation of claims in the Manufacturing industry relative to the number of employees and hours worked, indicating a substantial risk of work-related injury to young employees in this industry.

Figure 36: Workers' compensation claims from young employees: proportion of claims, hours worked and employees by selected industries of employer, 2009–10



Half of all accepted claims from young employees in the Retail trade industry came from those working in the Food retailing subdivision

Table 10 shows a more detailed breakdown of workers' compensation claims by industry and sex. These data show that in the Retail trade industry half of all accepted claims lodged by young employees in this industry were made in the Food retailing subdivision, with almost two thirds of these claims occurring in the Supermarket & grocery stores industry group.

These data also show that 30% of claims from young female employees came from those employed in the Retail trade industry with 12% of claims from young females made by those working in the Supermarket & grocery stores sector specifically. Other industry sub-sectors accounting for high proportions of claims from young females were Specialised food retailing within the Retail trade industry (7%) and Hospitals & nursing homes within the Health & community services industry (7%).

In the Manufacturing industry 24% of young employees' were made by employees in the Food, beverage & tobacco manufacturing industry subdivision, with two thirds of these claims made by young employees in the Meat & meat product manufacturing sector. Other sectors accounting for high proportions of young employees' claims were Machinery & equipment manufacturing and Metal product manufacturing.

The greatest proportion of young male employees' claims (23%) were made by those working in the Manufacturing industry. Within this industry there were a number of sectors that contributed to the high proportion of claims including, Machinery & equipment manufacturing, Metal product manufacturing and Food, beverage & tobacco manufacturing.

Over two thirds of accepted claims lodged by young employees in the Construction industry occurred in the Construction trade services industry subdivision, with just under half of these claims in the Installation trade services industry group. The remainder of accepted claims in the Construction industry occurred in the General construction industry subdivision, with the majority of these occurring in the Building construction industry group. Nearly all claims made by young employees in this industry were made by young male employees.

The industry sub-sector with the highest proportion of young male employees' workers' compensation claims (9%) was Other business services within the Property & business services industry, which includes labour hire staff and cleaning services staff. This was followed by Installation trade services within the Construction industry (6%).

Table 10: Workers' compensation claims from young employees: proportion by industry of employer and sex, 2009–10

Industry division, sub-division & group	Males	Females	Total
Retail trade	17%	30%	21%
Food retailing	8%	20%	11%
Supermarket & grocery stores	5%	12%	7%
Specialised food retailing	3%	7%	4%
Personal and household good retailing	4%	10%	5%
Furniture, houseware & appliance retailing	2%	1%	2%
Department stores	1%	3%	1%
Other personal & household good retailing	1%	2%	1%
Clothing & soft good retailing	np	2%	1%
Motor vehicle retailing and services	5%	1%	4%
Manufacturing	23%	5%	18%
Food, beverage & tobacco manufacturing	5%	3%	4%
Machinery & equipment manufacturing	6%	1%	4%
Metal product manufacturing	6%	np	4%
Construction	18%	1%	13%
Construction trade services	12%	1%	9%
Installation trade services	6%	np	4%
Building completion services	3%	np	2%
General construction	5%	1%	4%
Building construction	4%	np	3%
Non-building construction	2%	np	1%
Property & business services	11%	6%	10%
Business services	10%	6%	9%
Other business services	9%	4%	7%
Accommodation, cafes & restaurants	5%	14%	8%
Cafes & restaurants	3%	7%	4%
Pubs, taverns & bars	1%	3%	2%
Accommodation	1%	3%	2%
Clubs (hospitality)	1%	2%	1%
Health & community services	1%	18%	6%
Community services	np	7%	2%
Health services	1%	11%	4%
Hospitals & nursing homes	1%	7%	2%
Other industries	24%	25%	25%
Total all industries	100%	100%	100%

np - not publishable as number too small to be useful

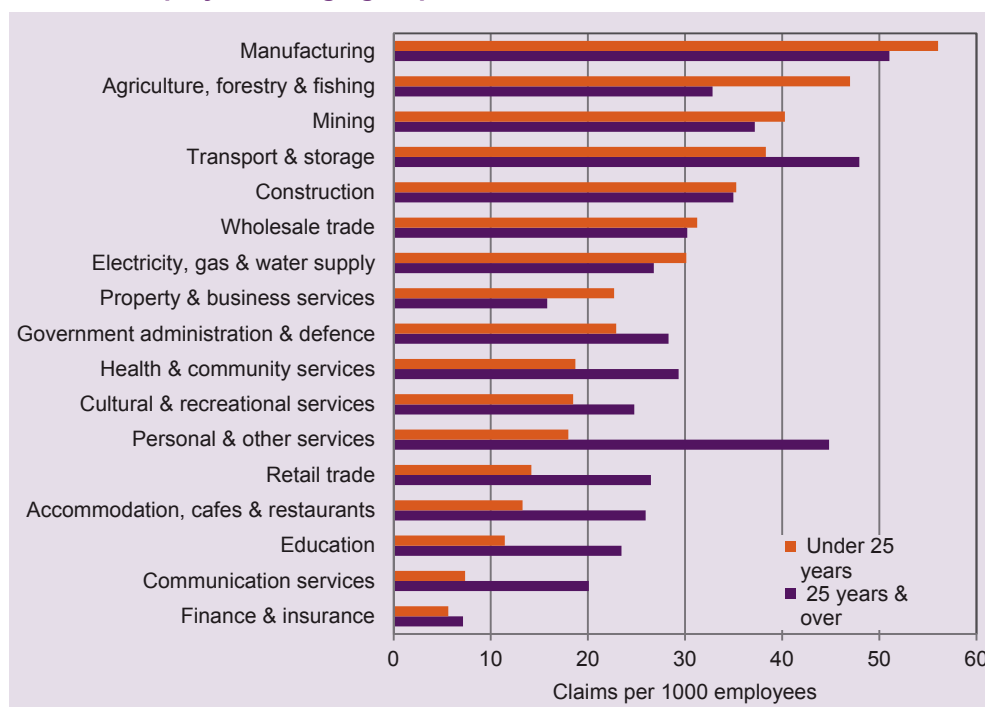
The highest incidence rate of compensated claims for young workers was recorded in the Manufacturing industry

To undertake a comparison of the likelihood of an injury, rates of injury should be calculated. On a 'per employee' basis the highest rates of workers' compensation claims were among young people employed in the Manufacturing (56.0 claims per 1000 employees), Agriculture, forestry & fishing (47.0), Mining (40.3) and Transport & storage (38.3) industries.

Figure 37 shows that with the exception of the Transport & storage industry, young employees had higher rates of injury in these industries than their older counterparts.

The WRIS data indicated that the Manufacturing industry had the highest incidence rate of young worker injury of all the industries. However, the WRIS data for the Agriculture, forestry & fishing, Mining and Transport & storage industries were too unreliable for analysis due to the small numbers involved. The workers' compensation data show that while these industries accounted for less than 5% of young employees, the rate of injury for these workers was very high.

Figure 37: Workers' compensation claims: incidence rate by industry of employer and age group, 2009–10

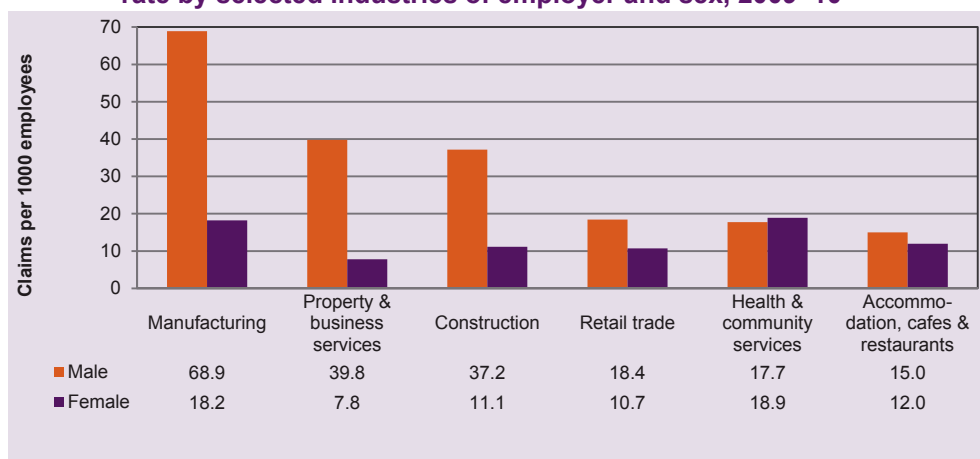


Young male employees had higher incidence rates of compensated claims in most industries than their female counterparts

There were some key differences between young male and female employees in terms of incidence rates of claims in some industries. Young male employees tended to have higher incidence rates of injury than their female counterparts in most industries (Figure 38). In particular, young males had considerably higher incidence rates of injury than young females in the Manufacturing, Property & business services and Construction industries. It should be noted that the incidence rate of claims for young male employees in the Manufacturing industry (68.9 claims per 1000 employees) is more than twice the overall injury rate for young males of 31.1 and higher than the overall incidence rate of claims recorded for older employees in the Manufacturing industry (51 claims per 1000 employees).

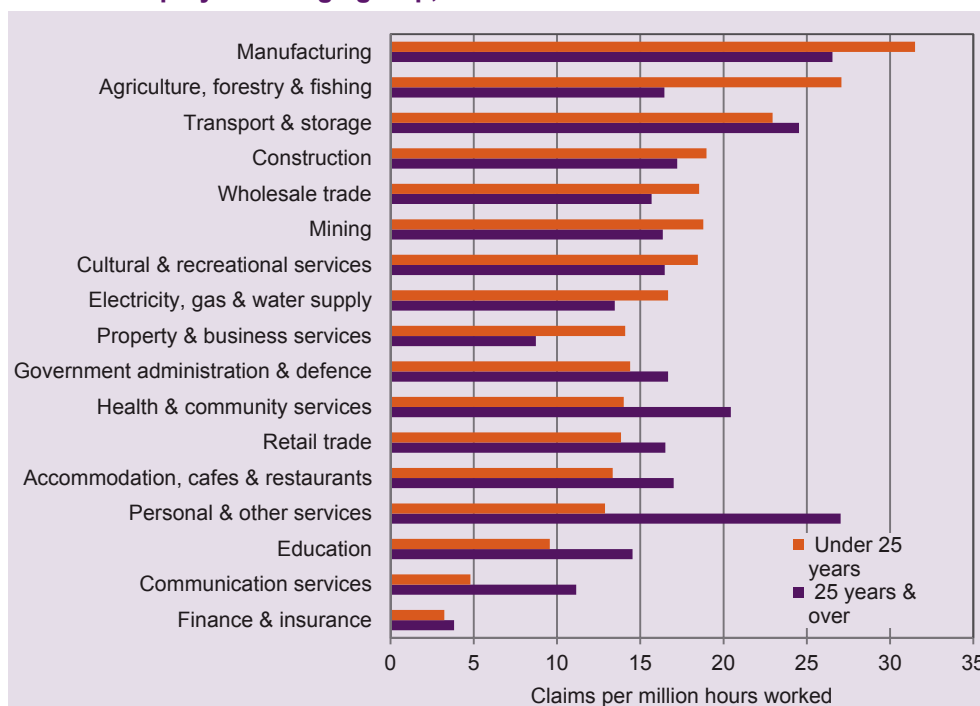
The highest incidence rate of claims among young female employees was in the Health & community services industry, with 18.9 claims per 1000 employees. This was just higher than the rate for young males (17.7). In the Accommodation, cafes & restaurants industry where many young females work, young female employees recorded 12.0 injuries per 1000 employees, which was slightly lower than the overall rate for young females of 12.4.

Figure 38: Workers' compensation claims from young employees: incidence rate by selected industries of employer and sex, 2009–10



When the rate of accepted workers' compensation claims were calculated on a 'per hour' basis - the frequency rate - a similar result was found. The same industries as previously mentioned, with the exception of the Mining industry, had the highest frequency rates of injury for young and older employees. With the exception of the Transport & storage industry, Figure 39 shows that young employees also have higher frequency rates of injury in these industries compared to their older counterparts.

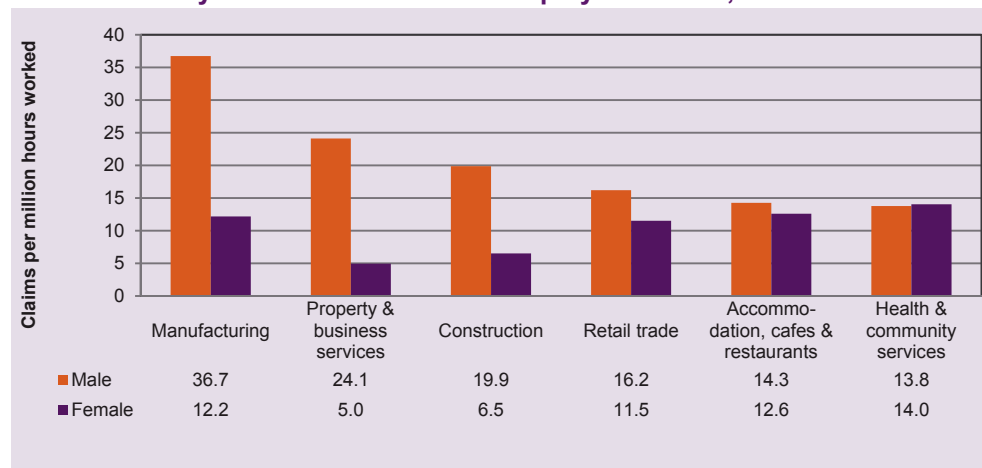
Figure 39: Workers' compensation claims: frequency rate by industry of employer and age group, 2009–10



Consistent with the pattern by incidence rates, young male employees had higher frequency rates of injury than their female counterparts in most industries. Of the industries where most young people are employed, the Health & community services industry was the only one where young females had a higher frequency rate of injury than young males though the difference was slight (14.0 claims per million hours worked by females compared with 13.8 for males).

Figure 40 shows that young males recorded the highest frequency rate of compensated injury in the Manufacturing industry where there was 36.7 claims per million hours worked. This was 73% higher than the overall frequency rate of workers' compensation claims for young males (21.2).

Figure 40: Workers' compensation claims from young employees: frequency rate by selected industries of employer and sex, 2009–10



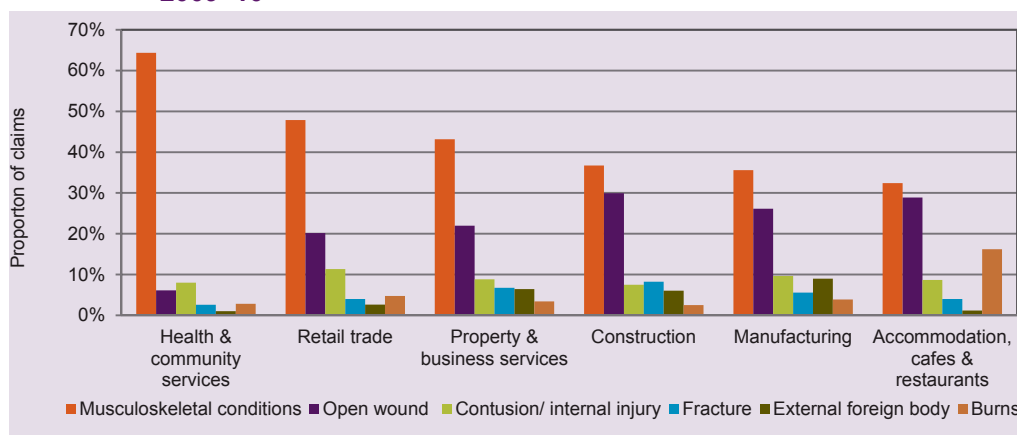
Musculoskeletal conditions accounted for two thirds of compensated claims in the Health & community services industry

The types of injuries experienced by young workers differed depending on what industry they were working in. It was shown previously that *Musculoskeletal conditions* accounted for 44% of claims from young workers. However, the proportion of claims for this type of injury in some industries was much higher. Figure 41 shows that in the Health & community services industry *Musculoskeletal conditions* accounted for 64% of claims and in the Retail trade industry they accounted for 48% of claims.

While *Musculoskeletal conditions* accounted for the highest proportion of claims in the six industries most relevant to young workers, *Open wounds* was nearly as prevalent in the Accommodation, cafes & restaurants and Construction industries accounting for 29% and 30% of claims respectively.

As was seen in the WRIS data, *Burns* were a particular issue in the Accommodation, cafes & restaurants industry accounting for 16% of claims. The Accommodation, cafes & restaurants industry accounted for 29% of all *Burns* claims with the Retail trade industry accounting for a further 22%.

Figure 41: Workers' compensation claims from young workers: proportion by selected industries of employer and selected nature of injury, 2009–10



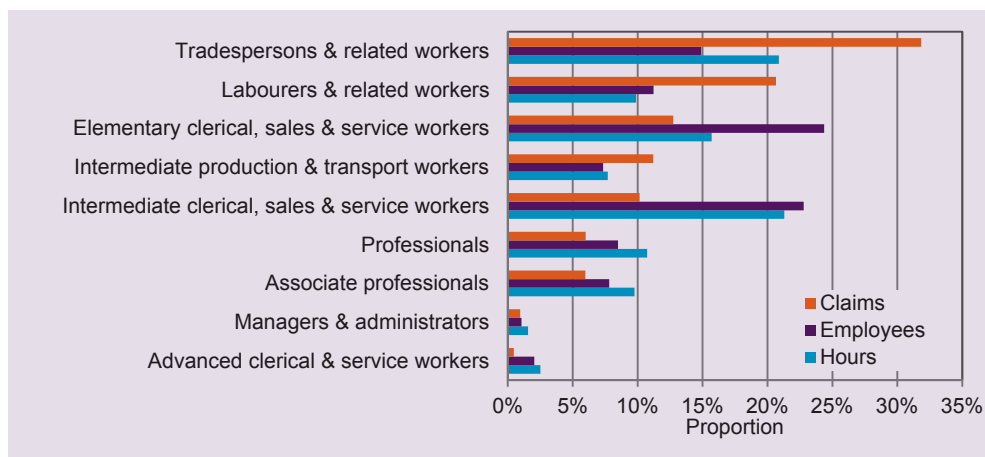
2.8 Occupation

Like the data for industry, the WRIS data on occupation was coded using a revised version of the Australian and New Zealand Standard Classification of Occupations (ASCO, 2006). However, the workers' compensation data are still coded using the old classification (ASCO, 2nd Edition). Unfortunately, the major changes to the names and structure of the occupation groups makes comparison with the WRIS data too difficult.

Young Tradespersons & related workers accounted for a third of young employees' accepted workers' compensation claims

Figure 42 shows that young employees were most often employed as Elementary clerical, sales and service workers (24%) or Intermediate clerical, sales & service workers (23%) though they worked the greatest number of hours as Intermediate clerical, sales & service workers (21%) and Tradespersons & related workers (21%). These data also show Tradespersons & related workers accounted for almost one third (32%) of claims made by young employees and Labourers & related workers accounted for a further 21%.

Figure 42: Workers' compensation claims from young workers: proportion of claims, hours worked and employees by selected occupations, 2009–10



The pattern of young employees' workers' compensation claims differed by occupation. Table 11 shows that the highest proportion of young male employees' workers' compensation claims were made by those working as Tradespersons & related workers (42%) and Labourers & related workers (23%). However, as was seen in the WRIS data, the pattern of workers' compensation claims for young females is quite different. Approximately one quarter (26%) of claims were made by young females working as Intermediate clerical, sales and service workers and 24% were made by Elementary clerical, sales and service workers.

Of the claims lodged by young females working as Intermediate clerical, sales and service workers, over one-third were made by young females working as Carers & aides (child care workers, teachers' assistants, nurses' aides). Furthermore, around one-fifth of workers' compensation claims made by young female employees working as Hospitality workers (waiters, bar attendants) and Clerks & receptionists.

Of the claims lodged by young females working as Elementary clerical, sales & service workers, nearly two-thirds (72%) were made by Sales assistants, with this occupation group accounting for 17% of all claims lodged by young females.

For young males working as Tradespersons & related workers the claims were spread across a range of sectors with Structural construction tradespersons accounting for the highest proportion (19%) of claims within this occupation group and 8% of all claims lodged by young males.

Table 11: Workers' compensation claims from young employees: proportion by occupation of and sex, 2009–10

Occupation division and group	Male	Female	Total
Tradespersons & related workers	42%	7%	32%
Electrical & electronics tradespersons	8%	np	6%
Structural construction tradespersons	6%	np	5%
Mechanical engineering tradespersons	6%	np	5%
Automotive tradespersons	5%	np	4%
Plumbers	4%	np	3%
Food tradespersons	3%	2%	3%
Fabrication engineering tradespersons	3%	np	2%
Labourers & related workers	23%	15%	21%
Process workers	7%	3%	6%
Miscellaneous labourers & related workers	5%	1%	4%
Agricultural & horticultural labourers	3%	3%	3%
Elementary food preparation & related workers	2%	5%	3%
Mining, construction & related labourers	4%	np	3%
Cleaners	1%	1%	1%
Elementary clerical, sales & service workers	8%	24%	13%
Sales assistants	5%	17%	8%
Miscellaneous elementary sales workers	1%	5%	2%
Elementary service workers	2%	2%	2%
Intermediate production & transport workers	14%	5%	11%
Miscellaneous intermediate production & transport workers	6%	3%	5%
Road & rail transport drivers	2%	np	2%
Mobile plant operators	2%	np	1%
Intermediate clerical, sales & service workers	4%	26%	10%
Carers & aides	1%	10%	3%
Hospitality workers	1%	6%	3%
Clerks & receptionists	1%	5%	2%
Miscellaneous intermediate service workers	1%	3%	1%
Associate professionals	4%	10%	6%
Hospitality & accommodation managers	1%	3%	2%
Professionals	4%	11%	6%
Miscellaneous professionals	2%	3%	3%
School teachers	0%	2%	1%
Nursing professionals	0%	3%	1%
Managers & administrators	1%	1%	1%
Advanced clerical & service workers	np	1%	np
Total all occupations	100%	100%	100%

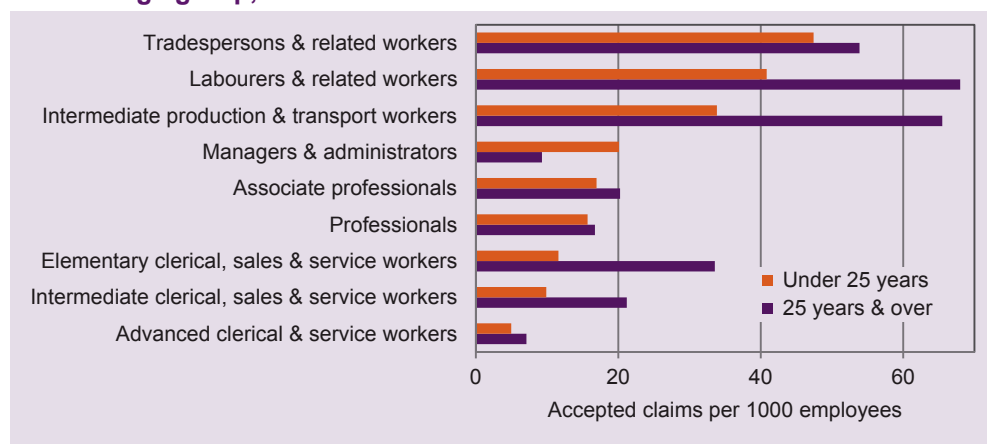
np - not publishable as number too small to be useful

Of the claims made by young male Labourers & related workers, one-third were made by Process workers (meat, fish and poultry workers and factory hands) with this subgroup accounting for 7% of all claims lodged by young males. Other sectors that accounted for large proportions of claims made

by young males were Miscellaneous labourers & related workers (5% of all claims from young males) and Mining, construction & related labourers (4% of all claims from young males).

Figure 43 shows that for all major occupation groups, employees aged 25 years & over had higher incidence rates of injury than their younger counterparts. The only exception was the Managers occupation group (19.9 claims per 1000 employees for young workers and 9.2 for older workers) but this occupation accounted for only 1% of claims from young employees overall. Substantial differences in the incidence rate of workers' compensation claims between the two age groups were observed in the Intermediate production & transport workers, Labourers & related workers and Elementary clerical, sales & service workers occupations.

Figure 43: Workers' compensation claims: incidence rate by occupation and age group, 2009–10



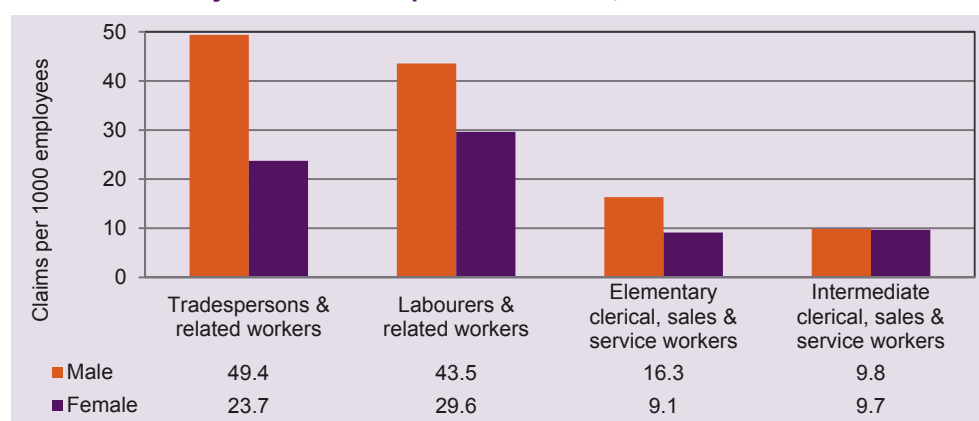
In most occupations young male employees tended to have higher incidence rates of accepted workers' compensation claims than their female counterparts

There were sex differences between young male and female employees in terms of the incidence rate of accepted claims within occupations - in most occupations young male employees tended to have higher incidence rates of workers' compensation claims than their female counterparts.

Figure 44 shows the incidence rates by sex for the four occupation groups with the highest numbers of young workers. These data show that young male Tradespersons & related workers had a considerably higher incidence rate of accepted claims than their young female counterparts, with 49.4 claims per 1000 employees more than double the rate for females (23.7) and 59% higher than the overall rate for young males. However this occupation is predominantly male - 88% of the young Tradespersons & related workers were male and this occupation group accounted for one-quarter of all young male employees.

The occupation associated with the highest incidence rate of workers' compensation claims made by young female employees was Labourers & related workers, with a rate of 29.6 claims per 1000 employees. This rate was more than double the rate for young females overall (12.4). One third of young female employees were working as Elementary clerical, sales & service workers and a further one third as Intermediate clerical, sales & service workers but young females in these occupation groups recorded the lowest incidence rates of workers' compensation claims of these selected occupations.

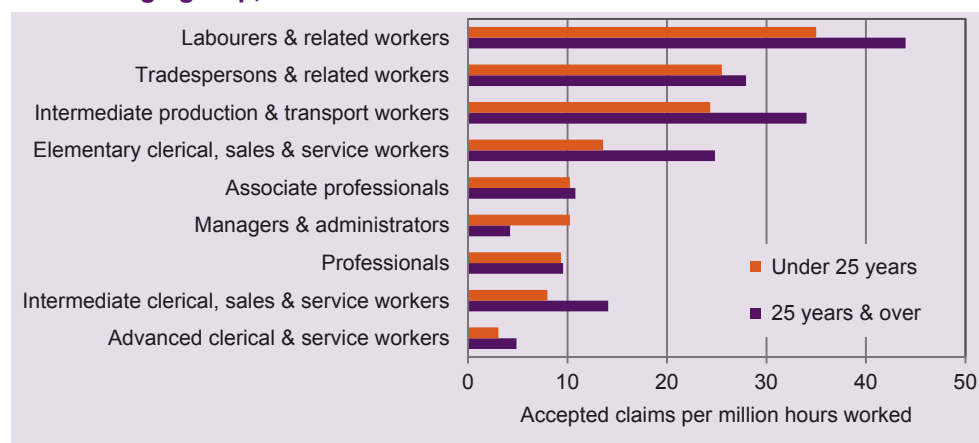
Figure 44: Workers' compensation claims from young employees: incidence rates by selected occupations and sex, 2009–10



Young Labourers & related workers had the highest frequency rate of workers' compensation claims among young employees

When frequency rates of workers' compensation claims were calculated, the highest rate of claims among young employees was recorded by Labourers & related workers (34.1 claims per million hours worked), Tradespersons & related workers (25.0) and Intermediate production & transport workers (24.0). In contrast to the findings of the WRIS, employees aged 25 years & over had higher frequency rates of claims than their younger counterparts for all occupation groups with the exception of Managers & administrators (Figure 45). This latter group recorded a frequency rate of 10.1 claims per million hours worked by young employees, which is nearly two and a half times the rate for older workers (4.2). However, only 1% of young workers were employed as Managers & administrators.

Figure 45: Workers' compensation claims: frequency rate by occupation and age group, 2009–10



When frequency rates were examined by sex for young employees, the difference between young female and male injury rates while working as Labourers & related workers has decreased, with 35.2 claims per million hours worked compared with 30.4 for female employees. In fact, the frequency rates for males and females were closer for all of the selected occupation groups. Figure 46 suggests that per hour of work, young males and females in the same occupation had similar rates of claims, except while working as Tradespersons & related workers and Elementary clerical, sales & service workers where male workers had higher rates of accepted claims.

Figure 46: Workers' compensation claims from young employees: frequency rates by selected occupations and sex, 2009–10

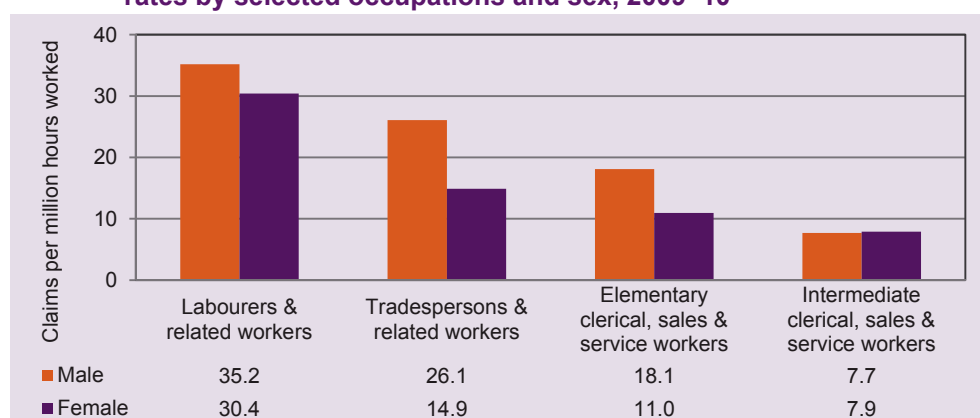
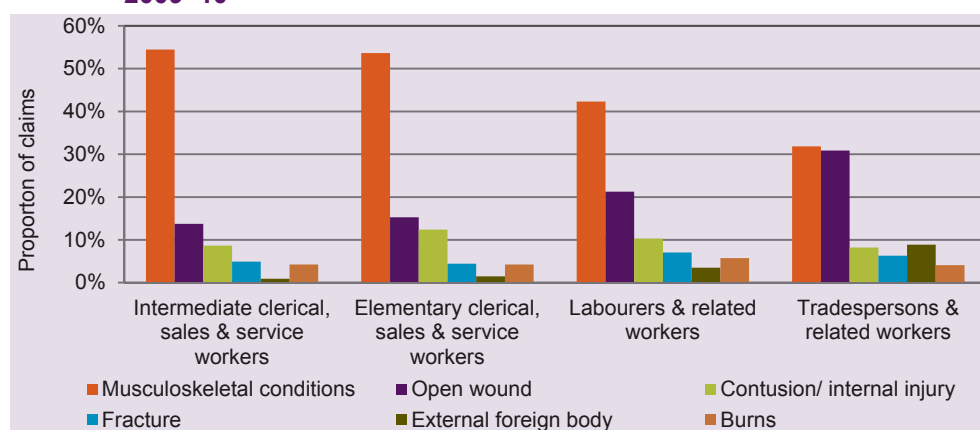


Figure 47 shows that *Musculoskeletal conditions* was the most common type of injury incurred by young employees in the main occupation groups and accounted for 54% of claims from Intermediate clerical, sales & service workers and Elementary clerical, sales & service workers.

Of the four occupation groups shown, the pattern of injury for young Tradespersons & related workers was different to the others with a lower proportion of claims due to *Musculoskeletal conditions* (32%) and the highest proportion of claims due to *Open wound* (31%). These employees also recorded more injuries from *External foreign body* (9%) than the other occupation groups. This type of injury includes choking and inflammation or scratches on eyes due to a foreign body.

Figure 47: Workers' compensation claims: proportion of claims by selected occupations and selected nature of injury for young workers, 2009–10



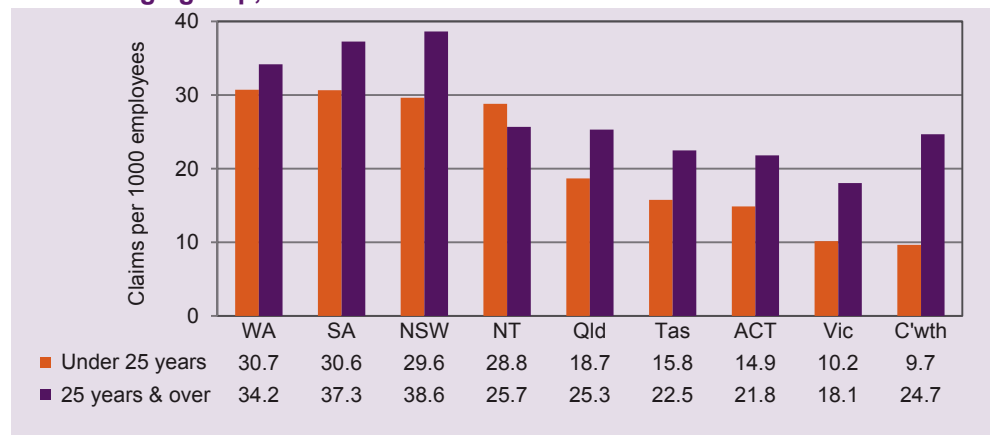
2.9 Jurisdiction

The highest incidence rates of compensated claims for young employees were recorded in Western Australia, South Australia and New South Wales

Looking at the claims data by workers' compensation jurisdiction shows that incidence rates of accepted workers' compensation claims were lower for young employees than for older employees in all jurisdictions except the Northern Territory.

The highest incidence rate of compensated claims for young employees occurred in Western Australia (30.7 claims per 1000 employees) closely followed by South Australia (30.6), New South Wales (29.6) and the Northern Territory (28.8). Figure 48 shows that these jurisdictions also recorded the highest incidence rates of accepted workers' compensation claims for older employees, although in a different order.

Figure 48: Workers' compensation claims: incidence rates by jurisdiction and age group, 2009–10



However, a valid jurisdictional comparison should take into account the different employer excesses that exist across the jurisdictions. When a standard definition of a serious claim is applied, the highest incidence rates for young employees were recorded by the Northern Territory, Tasmania and Queensland. A serious claim includes fatalities, permanent incapacity and temporary incapacity where compensation is paid for one or more weeks. The data presented earlier in this section is all accepted workers' compensation claims irrespective of time lost. In 2009–10, 38% of claims were classed as serious. Figure 49 shows that the lowest rate for young employees was recorded by Victoria with 5.6 serious claims per 1000 employees. A rate for the Commonwealth is not shown due to the small number of serious claims made by young employees in this jurisdiction.

Figure 49: Serious workers' compensation claims from young employees: incidence rates by jurisdiction, 2009–10

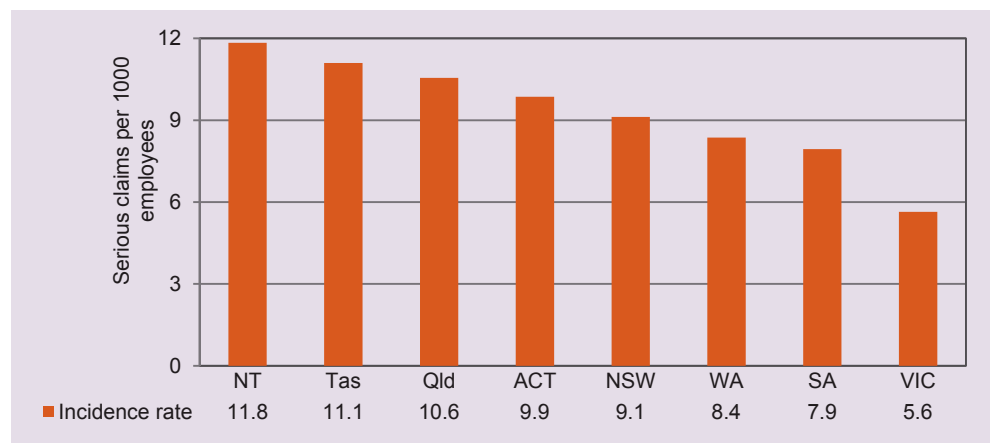


Table 12 shows the incidence rates of injury by jurisdiction for the six industries that employ the most young employees. These data show that incidence rates of serious injury in the Manufacturing industry were highest in Tasmania (24.5 serious claims per 1000 employees), Queensland (24.2) and the Northern Territory (23.4). Victoria recorded the lowest Manufacturing rate (15.7).

The Construction industry showed the greatest variation between jurisdictions for serious claim rates of young employees. The highest rate was in the Australian Capital Territory (36.9 claims per 1000 employees), which was nearly double the rate of the next jurisdiction, Queensland (20.0). South Australia recorded the lowest rate (5.5).

Table 12: Workers' compensation claims: incidence rates by industry and jurisdiction, 2009–10

Jurisdiction	Manufacturing	Construction	Property & business services	Health & community services	Retail trade	Accommodation, cafes & restaurants	All industries
New South Wales	21.7	18.3	5.4	8.6	5.1	7.8	9.1
Victoria	15.7	14.1	5.3	5.2	3.0	2.2	5.6
Queensland	24.2	20.0	16.5	9.5	5.4	6.6	10.6
Western Australia	18.9	18.0	6.4	9.0	4.7	3.7	8.4
South Australia	18.1	5.5	24.0	9.7	4.3	3.0	7.9
Tasmania	24.5	18.9	20.6	np	5.9	np	11.1
Northern Territory	np	13.9	np	np	np	np	11.8
Australian Capital Territory	np	36.9	np	np	6.8	7.4	9.9
Total	20.0	16.9	9.3	8.1	4.5	5.4	8.3

np - not publishable as number of serious claims < 30.

Within the Property & business services industry South Australia recorded the highest incidence rate of serious claims with 24.0 serious claims per 1000 employees followed by Tasmania with 20.6. This industry covers workers in the labour hire sector who are employed to work in someone else's business. Relatively low rates of serious compensated claims in this industry were recorded in Victoria (5.3), New South Wales (5.4) and Western Australia (6.4).

The incidence rates of serious compensated claims in the other three industries were similar across the jurisdictions where rates could be shown. Victoria recorded the lowest rate of serious claims in all of these industries.

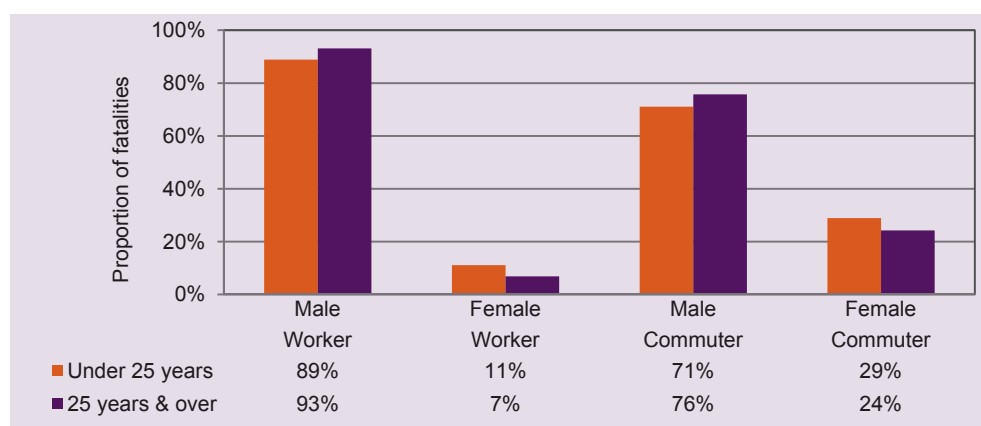
3 Traumatic injury fatalities

72 young workers died following a traumatic work-related injury during the period 2008–09 to 2010–11

During the years 2008–09 to 2010–11, 72 young workers died following a traumatic injury at work with a further 83 young workers dying as a result of a traumatic injury incurred on their way to or from work. The deaths of young workers comprised around 10% of all worker fatalities and 25% of all commuter fatalities.

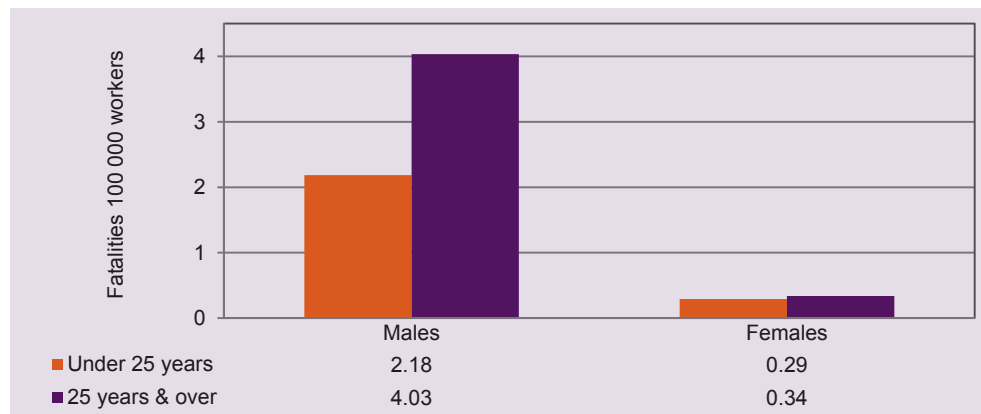
Figure 50 shows that 89% of the deaths of young workers and 71% of the deaths of young commuters were young males. These are slightly lower percentages than the proportion males represent out of older worker deaths in each category (93% of older worker fatalities and 76% of older commuter fatalities).

Figure 50: Traumatic injury fatalities: number by sex and age group, 2008–09 to 2010–11 combined



On a per worker basis, younger workers had a lower incidence rate of traumatic injury fatality than their older counterparts (1.27 fatalities and 2.38 fatalities per 100 000 workers respectively). Figure 51 shows the fatality rates for workers by sex. These data show that young males have a fatality rate that is nearly half the fatality rate of older male workers. The fatality rate for young female workers is only slightly lower than the rate for older female workers.

Figure 51: Traumatic injury fatalities: incidence rate by sex and age group, 2008–09 to 2010–11 combined



3.1 Industry

One quarter of young worker fatalities occurred in the Construction industry, with another quarter occurring in the Agriculture, forestry & fishing industry

Over the three years 2008–09 to 2010–11 half of the young workers who died as a result of a work-related traumatic injury worked in either the Construction industry (19 fatalities) or the Agriculture, forestry & fishing (18 fatalities) industry. A further 13 young worker fatalities occurred in the Manufacturing industry.

These two industries were also responsible for large proportions of fatalities among older workers. Table 13 shows that one quarter of the fatalities of older workers also occurred in the Agriculture, forestry & fishing industry with 16% in the Construction industry. The Transport & storage industry accounted for a further one quarter of work-related fatalities of older workers, however this industry accounted for just 4% of fatalities of young workers.

Table 13: Traumatic injury fatalities: number and proportion by industry, age group and sex, 2008–09 to 2010–11 combined

Industry	Under 25 years				25 years & over			
	Number of fatalities			% of Total	Number of fatalities			% of Total
	Female	Male	Total		Female	Male	Total	
Construction	0	19	19	26%	0	105	105	16%
Agriculture, forestry & fishing	4	14	18	25%	11	144	155	24%
Manufacturing	0	13	13	18%	1	54	55	8%
Administrative & support services	0	3	3	4%	5	21	26	4%
Financial & insurance services	3	0	3	4%	0	3	3	0%
Public administration & safety	0	3	3	4%	2	21	23	4%
Transport, postal & warehousing	1	2	3	4%	4	152	156	24%
Arts & recreation services	0	2	2	3%	0	10	10	2%
Mining	0	2	2	3%	2	21	23	4%
Other services	0	2	2	3%	3	9	12	2%
Education & training	0	1	1	1%	1	7	8	1%
Information media & telecommunications	0	1	1	1%	1	3	4	1%
Retail trade	0	1	1	1%	3	14	17	3%
Wholesale trade	0	1	1	1%	2	17	19	3%
Other industries	0	0	0	0%	7	36	43	7%
Worker total	8	64	72	100%	42	614	656	100%

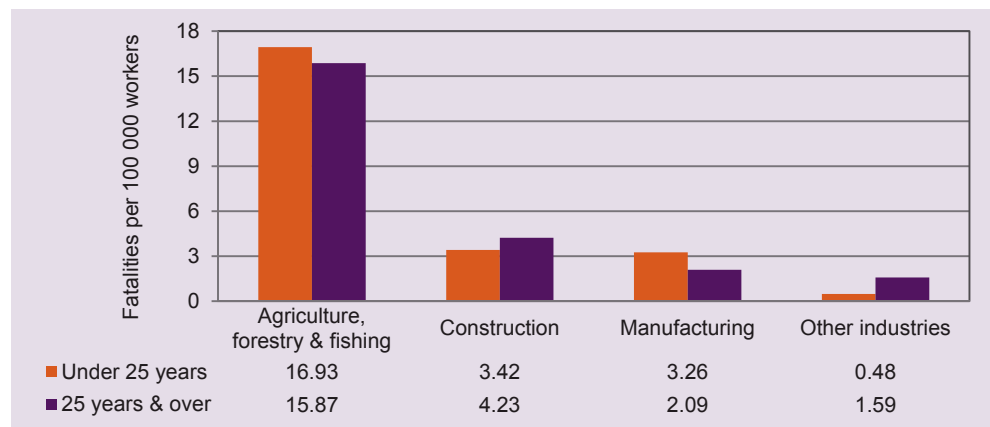
Of the young worker fatalities in the Construction industry, 4 occurred in the Electrical services sector. These incidents involved 2 young men dying when their van hit a tree, 1 dying when his vehicle crashed into a truck and 1 was electrocuted while installing an electrical panel. There were also 3 fatalities in the House construction industry with 2 men dying when their van veered into an embankment while another young man was electrocuted while installing insulation. Other Construction industry deaths include 2 fatalities each in the Other heavy & civil construction, Plumbing Services and Road & bridge construction.

In the Agriculture, forestry & fishing industry 10 workers died while farming livestock with the majority of these incidents involving vehicles.

In the Manufacturing industry 4 young men died while working in the Meat processing sector. One worker died when his arm was caught in a conveyer belt resulting in a crushing injury, 1 died due to a knife wound to the head, 1 died when the forklift he was operating rolled and 1 died following a fall from a horse.

Despite the differences in proportions of fatalities by industry, Figure 52 shows that the fatality rates for the three industries with the highest number of fatalities for young workers were similar for both age groups. These data indicate that young workers have a slightly higher risk of dying at work in the Agriculture, forestry and fishing industry compared with their older counterparts and a slightly lower risk while working in the Construction industry. The difference is more pronounced in the Manufacturing industry with young workers recording a fatality rate 36% higher than for older workers though the rate of 3.26 fatalities per 100 000 young workers was the lowest of the three industries shown.

Figure 52: Traumatic injury fatalities: incidence rate by age group and selected industries, 2008–09 to 2010–11 combined



3.2 Occupation

Almost half of the young workers who died following a traumatic injury at work were Labourers

Of the 72 young workers who died following a traumatic injury between 2008–09 and 2010–11, almost half (44%) were Labourers and 20% were Technicians & trades workers. Together these occupation groups accounted for almost two thirds of young worker traumatic injury fatalities.

Table 14 shows that the pattern of fatalities by occupation for young workers is quite different to the pattern of fatalities for older workers. While both age groups recorded similar proportions of fatalities among Technicians & trades workers and Professionals, older workers recorded substantially higher proportions of fatalities involving Machinery operators & drivers and Managers. This is linked to the number of workers in each of these occupations with few young workers employed as Machinery operators & drivers or Managers.

Labourers accounted for 16% of young workers yet accounted for 44% of their fatalities. Among older workers, Labourers accounted for 9% of workers and 16% of fatalities. This indicates this occupation is associated with a higher risk of fatality for both age groups but particularly for young workers.

Table 14: Traumatic injury fatalities: number and proportion by occupation, age group and sex, 2008–09 to 2010–11 combined

Occupation	Under 25 years				25 years & over			
	Number of fatalities			% of Total	Number of fatalities			% of Total
	Female	Male	Total		Female	Male	Total	
Labourers	4	28	32	44%	6	98	104	16%
Technicians & trades workers	-	14	14	19%	1	114	115	18%
Professionals	1	7	8	11%	6	59	65	10%
Machinery operators & drivers	-	6	6	8%	8	212	220	34%
Community & personal service workers	-	5	5	7%	5	19	24	4%
Clerical & administrative workers	3	-	3	4%	4	7	11	2%
Sales workers	-	3	3	4%	3	10	13	2%
Managers	-	1	1	1%	9	95	104	16%
Worker total	8	64	72	100%	42	614	656	100%

Of the 32 young labourers who were killed, 9 were Crop farm workers, 4 were Livestock farm workers, 3 were Building & plumbing labourers and 3 were Other construction & mining labourers. Of the 32 young labourer fatalities, 22 (69%) involved a vehicle.

Of the 14 Technicians & trades workers who died following a traumatic injury incurred while at work 3 were Metal fitters & machinists, 2 were Electricians, 2 were Plumbers and 2 were Structural steel & welding trades workers.

Despite the substantial difference in proportions of Labourer fatalities by age group, Figure 53 shows that the fatality rates for Labourers were similar. For young workers, the fatality rate of 3.54 deaths per 100 000 young Labourers was nearly three times the fatality rate for all young workers (1.27). For older workers, the fatality rate of 3.95 deaths per 100 000 older Labourers was less than twice the fatality rate for all older workers.

These data also show that older Technicians & trades workers recorded a fatality rate more than twice that of younger Technicians & trades workers but that younger professionals had a higher fatality rate than their older counterparts.

Figure 53: Traumatic injury fatalities: incidence rate by age group and selected occupations, 2008–09 to 2010–11 combined



3.3 Mechanism of incident

Two thirds of young worker traumatic injury fatalities involved vehicles

Two-thirds of the fatalities of young workers (47 deaths) involved vehicles, including 19 deaths from vehicle crashes on public roads. Public road deaths accounted for 26% of deaths of young workers and 32% of deaths of older workers.

As shown in Table 15, almost half (47% - 34 deaths) of the traumatic injury fatalities of young workers during the three years 2008–09 to 2010–11 were due to a *Vehicle incident*, which is a crash where the occupant of the vehicle is killed. Of these, 16 involved a light vehicle, 9 involved aircraft (7 of which were passenger aircraft), 3 involved motorbikes and 3 involved quad bikes. In addition 5 of the 7 deaths due to *Being hit by moving objects* involved a vehicle.

Fatalities due to *Being trapped by moving machinery* involved an array of machinery including conveyers, lathes and truck trays. Fatalities due to *Contact with electricity* involved wiring, fuse boxes, underground powerlines and arc welding equipment.

As shown in Table 15 *Vehicle incident* accounted for the greatest proportion of work-related traumatic injury fatalities for both age groups. However *Falls from a height* accounted for the second highest proportion of fatalities (13%) followed closely by *Being hit by moving objects* (12%) for workers aged 25 years & over.

Table 15: Traumatic injury fatalities: number and proportion by mechanism, age group and sex, 2008–09 to 2010–11 combined

Mechanism	Under 25 years				25 years & over			
	Number of fatalities			% of Total	Number of fatalities			% of Total
	Female	Male	Total		Female	Male	Total	
Vehicle incident	5	29	34	47%	21	227	248	38%
Being hit by moving objects	1	6	7	10%	6	73	79	12%
Being trapped by moving machinery	0	6	6	8%	0	20	20	3%
Contact with electricity	0	6	6	8%	0	28	28	4%
Falls from a height	0	4	4	6%	3	80	83	13%
Being hit by falling objects	0	3	3	4%	2	61	63	10%
Drowning	0	3	3	4%	0	16	16	2%
Rollover of non-road vehicle	1	2	3	4%	3	27	30	5%
Being trapped between stationary and moving objects	0	2	2	3%	2	30	32	5%
Exposure to environmental heat	1	1	2	3%	1	2	3	1%
Being assaulted by a person or persons	0	1	1	1%	2	6	8	1%
Hitting moving objects	0	1	1	1%	0	2	2	0%
Other Mechanisms					2	42	44	7%
Worker total	8	64	72	100%	42	614	656	100%

3.4 State/territory of death

Almost two-fifths of young worker traumatic injury fatalities occurred in Queensland

Table 16 shows that over the three year period 2008–09 to 2010–11 nearly two fifths of the young worker fatalities occurred in Queensland. This is a much higher proportion of fatalities than seen for older workers, where Queensland accounted for one quarter of the fatalities.

The proportion of young worker deaths in Queensland was more than twice that of New South Wales and Victoria with these states recording similar proportions (18% and 17% respectively). There was no obvious reason

for the larger number of young worker deaths in Queensland compared to the other states, with incidents involving vehicles accounting for around 60% of deaths in all three regions. For workers aged 25 years & over, the highest number of traumatic injury fatalities occurred in New South Wales (28%), followed by Queensland (24%) and Victoria (20%). Of the fatalities of young workers that occurred in Queensland, 9 were in the Agriculture, forestry & fishing industry, 7 were in the Construction industry and 6 in the Manufacturing industry. Of those occurring in New South Wales 4 were in the Construction industry and 2 each in the Administrative & support services and Manufacturing industries.

Table 16: Traumatic injury fatalities: number and proportion by state/ territory of death, age group and sex, 2008–09 to 2010–11 combined

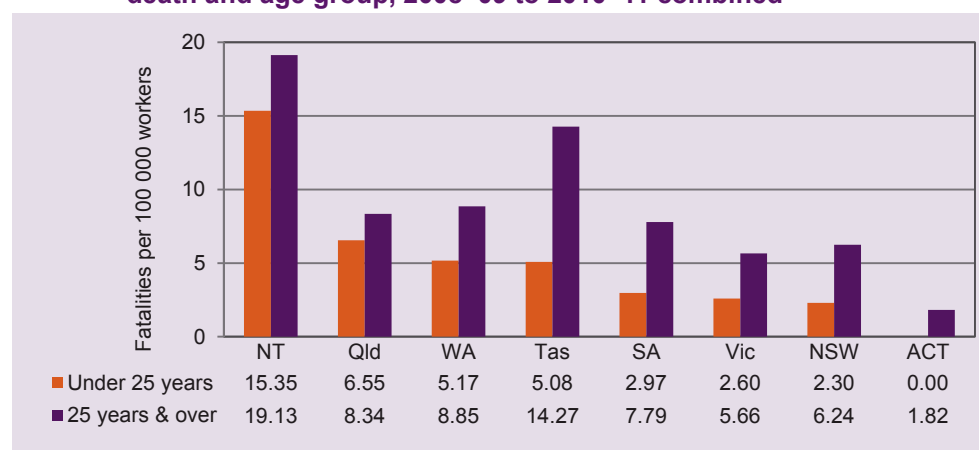
State/ territory	Under 25 years				25 years & over			
	Number of fatalities			% of Total	Number of fatalities			% of Total
	Female	Male	Total		Female	Male	Total	
Queensland	1	26	27	38%	7	148	155	24%
New South Wales	2	11	13	18%	8	174	182	28%
Victoria	1	11	12	17%	10	120	130	20%
Western Australia	3	8	11	15%	9	78	87	13%
South Australia	1	3	4	6%	2	50	52	8%
Northern Territory	0	3	3	4%	2	17	19	3%
Tasmania	0	2	2	3%	4	24	28	4%
Australian Capital Territory	0	0	0	0	0	3	3	0%
Worker total	8	64	72	100%	42	614	656	100%

The Northern Territory recorded the highest incidence rate of traumatic injury fatalities of young workers - three to five times higher than the other states and territories

When fatality incidence rates are calculated, Queensland had a fatality rate for young workers of 6.55 deaths per 1000 workers. Figure 54 shows that Queensland was not the highest, with the Northern Territory recording 15.35 deaths per 1000 workers, three to five times higher than all other states and territories. The Northern Territory also recorded the highest fatality rate for older workers (19.13).

These data show that fatality rates for young workers were lower than the fatality rates for their older counterparts in all states and territories though the difference in Tasmania was the most noticeable. While Tasmania recorded the second highest fatality rate for older workers, it recorded the fourth highest rate for young workers.

Figure 54: Traumatic injury fatalities: incidence rate by state/ territory of death and age group, 2008–09 to 2010–11 combined



Explanatory Notes

1 Work-related injuries

The work-related injuries statistics in the first chapter of this report were compiled from data collected in the Multipurpose Household Survey (MPHS) conducted throughout Australia in the 2009–10 financial year as a supplement to the ABS monthly Labour Force Survey (LFS) and published in *Work-related Injuries, Australia 2009–10* (cat. no. 6324.0).

The publication *Labour Force, Australia* (cat. no. 6202.0) contains information about survey design, scope, coverage and population benchmarks relevant to the monthly LFS, which also applies to the MPHS. It also contains definitions of demographic and labour force characteristics.

1.1 Collection methodology

ABS interviewers conducted personal interviews by either telephone or at selected dwellings during the 2009–10 financial year. Each month a sample of approximately 1300 dwellings were selected for the main MPHS sample and approximately 1300 to 1400 additional dwellings were selected for the extra MPHS sample. After the LFS had been fully completed for each person in the household a usual resident aged 15 years and over was selected at random and asked the additional MPHS questions in a personal interview.

1.2 Scope

The scope of the LFS is restricted to people aged 15 years and over and excludes the following:

- members of the permanent defence forces
- certain diplomatic personnel of overseas governments, customarily excluded from census and estimated population counts
- overseas residents in Australia, and
- members of non-Australian defence forces (and their dependants).

In addition the 2009–10 MPHS excluded the following:

- people living in very remote parts of Australia, and
- people living in non-private dwellings such as hotels, university residences, students at boarding schools, patients in hospitals, residents of homes (e.g. retirement homes, homes for people with disabilities), and inmates of prisons.

1.3 Sample size

The initial total sample for the Work-related Injuries topic consisted of approximately 38 655 private dwelling households. The number of completed interviews obtained from these private dwelling households (after taking into account the scope, coverage and sub-sampling exclusions) was 28 554.

1.4 Estimation methods

Weighting is the process of adjusting results from a sample survey to infer results for the total in scope population. To do this a 'weight' is allocated to each sample unit. The survey was benchmarked to the estimated civilian population aged 15 years and over living in private dwellings in each state and territory, excluding the scope exclusions listed above. The process of weighting ensures that the survey estimates conform to person benchmarks by state, part of state, age and sex. These benchmarks are produced from estimates of the resident population derived independently of the survey.

1.5 Reliability of estimates

Estimates from the survey data are subject to sampling and non-sampling errors:

- Sampling error is the difference between the published estimate and the value that would have been produced if all dwellings had been included in the survey.
- Non-sampling errors are inaccuracies that occur because of imperfections in reporting by respondents and interviewers, and errors made in coding and processing data. These inaccuracies may occur in any enumeration, whether it be a full count or a sample. Every effort is made to reduce the non-sampling error to a minimum by careful design of questionnaires, intensive training and supervision of interviewers, and effective processing procedures.

1.6 Comparability with monthly LFS statistics

Due to differences in the scope and sample size of the MPHS and that of the LFS, the estimation procedure may lead to some variations between labour force estimates from this survey and those from the LFS.

2 Workers' compensation claims

2.1 Scope and coverage

The claims statistics presented in this publication are compiled annually from accepted claims made under the state, territory and Australian Government workers' compensation Acts which form part of the National Data Set for Workers' Compensation Statistics (NDS). The data shown for 2009–10 refer to all accepted claims for which payments were made (apart from payments for goods and services, like medical treatment) lodged from 1 July 2009 to 30 June 2010.

The claims statistics in this report do not cover all cases of occupational injuries and diseases for the following reasons:

- Claims arising from a journey to or from work are excluded.
- While general state, territory and Australian Government workers' compensation legislation provides coverage for the majority of employees, some specific groups of workers are covered under separate legislation. Claims lodged by police in Western Australia and military personnel of the Australian Defence Forces are not included in the claims data.
- Workers' compensation schemes do not generally provide coverage to self-employed workers, resulting in an understatement of the number of work-related injuries and diseases of workers employed in industries where self-employed workers are common. These industries include Agriculture, forestry & fishing; Construction; and Road transport. Large proportions of Managers & administrators and Tradespersons & related workers are also self-employed. Estimates of jobs and hours used as denominators in calculating incidence and frequency rates include only those worked by employees eligible for workers' compensation.

2.2 Type of occurrence data

Details of the 'description of the occurrence' reported on the workers' compensation claim have been coded using the Type of Occurrence Classification System, Second Edition, May 2002 (TOOCS2.1). Throughout this publication, TOOCS categories appear in italics.

The five variables used to describe the type of occurrence are:

- Nature of Injury or Disease
- Bodily Location of Injury or Disease
- Mechanism of Injury or Disease
- Breakdown Agency of Injury or Disease
- Agency of Injury and Disease

See the **Glossary** for the definitions of these variables.

2.3 Denominator data used to calculate incidence and frequency rates

Estimates of the number of employees and hours worked for each Australian workers' compensation jurisdiction are supplied annually by the ABS. The ABS provides two sets of estimates for each jurisdiction: one split by sex, age and industry and the second by occupation. This restricts presentation of incidence and frequency rates to the categories that ABS data support i.e. it is not possible to calculate rates by occupation within an industry.

The denominator data are derived principally from the LFS, adjusted to account for differences in scope between the LFS and workers' compensation coverage. The largest adjustment is for workers who have more than one job. Because a person holding two or more jobs (a multiple jobholder) may lodge a workers' compensation claim with respect to an illness or injury incurred in any of those jobs, a count of jobs is a more appropriate denominator than a count of persons in calculating incidence rates. The multiple jobholder adjustment adds around 5% to the number of employees in the LFS. Other adjustments aim to ensure correct industry of employer coding for employees working under labour hire arrangements.

While the ABS is able to adjust the employee estimates to account for the industries where the second job was worked, it is unable to adjust the hours worked in a similar manner. All hours worked have been allocated to the industry of the main job.

Differences in movements between incidence and frequency rates occur because of differences in the two measures. The employee estimate is a head count of all employees who were employed during the reference period. This measure does not take into account the proportion who were not at work and therefore not at risk on any given day. The frequency rate, however, is a measure of exposure per actual hour of work. This measure also controls for the fact that many workers work on a part-time basis.

3 Traumatic injury fatalities

The traumatic injury fatalities statistics in this report are compiled from workers' compensation claims, information on fatalities that are notified to work health and safety authorities in each jurisdiction under their work health and safety legislation and data from the National Coronial Information System. In addition, the media and accident investigation reports from the Australian Transport Safety Bureau relating to plane crashes, train crashes and maritime incidents are used to supplement information found in each of the datasets. Data on fatalities are published annually in the *Work-related Traumatic Injury Fatalities, Australia* reports and can be found on the Safe Work Australia website.

3.1 Inclusions

The data on traumatic injury fatalities covers fatalities due to work-related injuries and explicitly excludes deaths attributable to disease and other natural causes. Among conditions specifically included as injuries are those arising from poisonous plants and animals, environmental conditions (e.g. frostbite), allergic reactions and embolisms. Heart attacks and strokes are regarded as natural causes but where available information shows that a work-related injury directly triggered a fatal heart attack or stroke, the fatality is included.

3.2 Exclusions

Deaths due to natural causes and disease

Natural causes include heart attacks, strokes and diseases.

Deaths due to complications of surgical and medical care

Although the death of patients who die as a result of medical negligence or malpractice are in principle Bystander fatalities, deaths arising from such iatrogenic injuries are specifically excluded from this collection.

Suicide

The scope of this project excludes deaths resulting from self-harm because it is difficult to assess the extent of the connection between work and a decision to take one's own life, even when detailed information is available.

Deaths of persons undertaking criminal activity

Work-related injury fatalities exclude deaths of persons fatally injured while undertaking criminal activities, such as gaining illegal entry into a building or work site.

3.3 Calculation of fatality rates

Fatality rates are calculated as the number of deaths divided by the number of workers in the reference period from the LFS.

3.4 Type of occurrence data

Details of the 'description of the occurrence' for fatalities have been recorded using the Type of Occurrence Classification System, Third Edition, (May 2008) (TOOCS3.1). Throughout this publication, TOOCS categories appear in italics.

The variables used to describe the type of occurrence are:

Mechanism of Injury or Disease

Breakdown Agency of Injury or Disease

Agency of Injury and Disease

See the **Glossary** for the definitions of these variables.

Glossary

1 Work-related injuries

Current main job

The job that a person was working in during the reference week in which most hours were usually worked.

Days or shifts absent from work

Includes all work hours spent on medical consultation, hospitalisation and rest due to the injury or illness. The days or shifts absent do not have to be consecutive.

Employers

People who operate their own unincorporated economic enterprise or engage independently in a profession or trade, and hire one or more employees.

Employees

People who work for a public or private employer and receive remuneration in wages, salary, a retainer fee from their employer while working on a commission basis, tips, piece rates, or payment in kind, or people who operate their own incorporated enterprise with or without hiring employees.

Employment types

Classification of employed people according to the following employment type categories on the basis of their main job (that is, the job in which they usually work the most hours):

- Employees (excluding owner managers of incorporated enterprises):
 - with paid leave entitlements;
 - without paid leave entitlements;
- Owner managers:
 - owner managers of incorporated enterprises;
 - owner managers of unincorporated enterprises;
- Contributing family workers.

Employment status

Employed people were classified by whether they were employees, employers, own account workers or contributing family workers. This publication reports on injuries incurred by employees.

Financial assistance

Monetary assistance received from any party to cover medical expenses or income loss, incurred due to their work-related injury or illness.

How injury occurred

The action, exposure or event that was the direct cause of the injury, or how the injury was sustained. See Appendix 1.

Industry

A group of businesses or organisations that perform similar sets of activities in terms of the production of goods or services. The industry of the employee has been classified in accordance with the *Australian and New Zealand Standard Industrial Classification* (ANZSIC), 2006 (ABS Cat. No. 1292.0).

Occupation

A collection of jobs that are sufficiently similar in their main tasks to be grouped together for the purposes of classification. The occupation of the employee has been classified in accordance with the *Australian and New Zealand Standard Classification of Occupations* (ANZSCO), First Edition, 2006 (ABS Cat. No. 1222.0).

Owner managers of incorporated enterprises

People who work in their own incorporated enterprise, that is, a business entity that is registered as a separate legal entity to its members or owners (also known as a limited liability company).

Owner managers of unincorporated enterprises

People who operate their own unincorporated enterprise, that is, a business entity in which the owner and the business are legally inseparable, so that the owner is liable for any business debts that are incurred. Includes those engaged independently in a trade or profession.

Paid leave entitlements

The entitlement of employees to either paid holiday leave and/or paid sick leave in their job.

Relative Standard Errors (RSEs)

All WRIS data presented in this report conform with the ABS guidelines regarding data quality. Unless otherwise marked, all data presented have RSEs below 25%. Data with RSEs above 50% have not been published. Comprehensive information about RSEs can be found in the WRIS publication.

Shift arrangements

A system of working whereby the daily hours of operation at the place of employment are split into at least two set work periods (shifts), for different groups of employees.

Time lost from work

Includes all work hours spent on medical consultation, hospitalisation and rest due to the injury or illness. The days or shifts absent do not have to be consecutive.

Type of injury

Refers to the main injury sustained. See Appendix 1.

Work-related injury or illness

Any injury or illness or disease that first occurred in the last 12 months, where a person suffers either physically or mentally from a condition that has arisen out of, or in the course of, employment. The injury or illness was considered to be in scope of the survey if the respondent first became aware of it in the last 12 months, even though the cause of the injury or illness may have occurred outside the 12 month reference period. Included are injuries or illnesses that occurred while commuting to and from work,

outside the place of work but while on work duty, or during work breaks. Information was collected about the respondent's most recent work-related injury or illness if there was more than one work-related injury or illness in the reference period.

Work-related Injuries Survey

The ABS as part of its Multi-purpose Household survey collected data on work-related injuries from July 2009 to June 2010. Statistics from this topic were published in *Work-related Injuries* (Cat No. 6324.0). The publication presented information about persons aged 15 years or over who worked at some time in the last 12 months and experienced their most recent work-related injury or illness in that period.

Worked full time

People who usually worked 35 hours or more per week in the job in which the work-related injury or illness occurred.

Worked part time

People who usually worked less than 35 hours or more per week in the job in which the work-related injury or illness occurred.

2 Workers' compensation claims

Includes all workers' compensation claims lodged for a work-related injury or disease that were accepted and received compensation, with the exception of claims for injuries occurring to or from work (journey claims).

Age

The age of the employee at the time of injury or the date when the disease was first reported to their employer.

Breakdown agency of injury or disease

The object, substance or circumstance principally involved in, or most closely associated with, the events that culminated in the most serious injury or disease.

Disease

A condition resulting from repeated or long term exposure to an agent or event. The concept aligns with the definition of occupational disease as resolved by the 16th International Conference of Labour Statisticians: 'a disease contracted as a result of an exposure over a period of time to risk factors arising from work activity' (International Labour Organization 1998).

Employee

A person who works for a public or private employer and receives remuneration in wages, salary, a retainer fee from their employer while working on a commission basis, tips, piece-rates, or payment in kind; or a person who operates his or her own incorporated enterprise with or without hiring employees.

Frequency rate

The number of serious claims per million hours worked by employees. Frequency rates are calculated using the following formula:

$$\frac{\text{number of serious occupational injury and disease claims} \times 1\,000\,000}{\text{number of hours worked by employees}}$$

Incidence rate

The number of serious claims per thousand employees. Incidence rates are calculated using the following formula:

$$\frac{\text{number of serious occupational injury and disease claims} \times 1000}{\text{number of employees}}$$

Industry

The industry shown in the claims section is the industry of the establishment that formally employs the claimant, classified to the ANZSIC 1993 edition (ABS Cat. No. 1292.0).

As we are measuring industry of employer, a claim made by a person employed under labour hire arrangements is coded to the Contract staff services industry class (ANZSIC code 7862) which is part of the Property & business services industry division. Industry of employer will be different to Industry of workplace for a range of workers.

Injury

A condition resulting from a single traumatic event where the harm or hurt is immediately apparent, for example, a cut resulting from an accident with a knife or burns resulting from an acid splash. The concept aligns with the definition of occupational injury as resolved by the 16th International Conference of Labour Statisticians 'any personal injury, disease or death resulting from an occupational accident' which is defined in turn as 'an unexpected and unplanned occurrence, including acts of violence, arising out of or in connection with work which results in one or more workers incurring a personal injury, disease or death' (International Labour Organization 1998).

Location of injury or disease

The bodily location of injury/disease is intended to identify the part of the body affected by the most serious injury or disease.

Mechanism of injury or disease

The action, exposure or event which directly caused the most serious injury or disease incurred by the employee.

Nature of injury or disease

The nature of injury/disease is intended to identify the most serious injury or disease sustained or suffered by the worker. The injury or disease is generally physical although the classification includes categories for mental illness.

Occupation

The occupation of the employee making the claim as coded to the ASCO 2nd Edition (ABS Cat. No. 1220.0).

Time lost

Time lost figures shown in this publication are measured in working weeks lost from work and exclude estimates of future absences. Time lost from work comprises the total period of time for which compensation was paid — the time lost is not necessarily continuous, and may occur over a number of separate periods. Where an employee returns to work on a part-time basis they may continue to receive pro-rata payments and the total number of hours for which compensation has been paid is included in calculating time lost.

Working week

The number of working weeks lost is calculated by dividing the amount of time lost by the hours usually worked per week by the employee. Claims requiring one working week or more of time off count as serious.

3 Traumatic injury fatalities

Commuter fatality

The death of a person who dies as a result of injuries sustained while travelling to or from work, including those whose injury results from another's work activity.

Employed

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, whether they employ others or not; and those who work without pay for a family business or farm. It excludes people whose only work is voluntary.

Employee

A person who works for a public or private employer and receives remuneration in wages, salary, a retainer fee from their employer while working on a commission basis, tips, piece-rates, or payment in kind; or a person who operates his or her own incorporated enterprise with or without hiring employees.

Industry

A grouping of businesses that carry out similar economic activities. Fatalities data in this publication have been coded to the ANZSIC 2006 (ABS Cat. No. 1292.0) and unless specified are shown at the industry division level.

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.

Occupation

A set of jobs with similar sets of tasks. Fatalities data in this publication have been coded to the ANZSCO 2006 (ABS cat. no. 1220.0) First edition and unless specified are shown at the major group level.

Mechanism of injury or disease

The action, exposure or event that directly caused the most serious injury or disease incurred by the employee.

Nature of injury or disease

The Nature of injury or disease classification provides the framework for coding the most serious injury or disease sustained or suffered by the worker.

Worker fatality

The death of a person who dies as a result of injuries sustained while at work, including those whose injury results from another's work activity.

Appendix 1: Injury Classifications

1. Work-Related Injuries Survey

Type of injury

The Work-Related Injuries Survey coded the circumstances of the injury using a simplified TOOCS. The relevant injury types used in this publication are:

Burns

Electrical burns, chemical burns, cold burns, hot burns, friction burns, combination burn or burns not elsewhere classified

Chronic joint or muscle condition

Arthritis

Disorders of the joints

Disorders of the spinal vertebrae and intervertebral discs

Disorders of muscle, tendons and other soft tissues (e.g. Occupational overuse syndrome and repetitive strain injury if this is the only description given)

Acquired musculoskeletal deformities (e.g. flat feet, mallet finger, hammer toe)

Crushing injury/internal organ damage

Internal injury of chest abdomen and pelvis

Injury with intact skin surface and crushing injury (e.g. bruises, haematomas)

Traumatic amputation including loss of eyeball

Cut/open wound

Open wound not involving traumatic amputation (e.g. broken tooth, cuts, punctures, dog bites, tearing away of fingernail, serious wounds containing glass, metal or other foreign body)

Fracture

Breaking of a bone, cartilage, etc.

Sprain/strain

Sprains and strains of joints and adjacent muscles

Acute trauma sprains and strains

Sprains and strains of cartilage

Dislocations

Other injury

In this publication, this item is the total of

Stress or other mental condition

Stress, anxiety or depression or nervous breakdown

Effects of witnessing traumatic events or the effects of involvement in a hold-up

Victim of harassment

Hyperventilation (hysterical, psychogenic) or hysterical symptoms

Phobias or obsessional and compulsive symptoms

Short term shock

Superficial injury - covers minor injuries such as:

Needle stick puncture

Abrasions, grazes, friction burns or blisters

Scratch injury from a foreign body in eye

Splinter or other foreign body in places other than eye

Other type of injury

Responses that could not be included into one of the categories above such as asthma, cancer, concussion or heart attack

How work-related injury or illness occurred

Contact with a chemical or substance

Single contact with chemical or substance
Immediate allergic reactions to a substance
Splash with acid
Caustic or corrosive substances in the eyes
Contact dermatitis
Swallowing chemical substances
Exposure to smoke from a bush fire, chemical fire etc.

Falls

A fall from ground level to below ground level
Landing awkwardly after a jump from a height
Falling off an animal
A fall down stairs etc.
All slips, trips, stumbles, steps and jumps, even if a fall does not follow
Falls of short distances such as off a curb or into a gutter
Falls up stairs
Fall with no further description

Hitting, being hit or cut by an object

Hitting stationary objects or moving objects (e.g. cutting oneself while using a knife or other tool)
Rubbing and chafing from wearing footwear or clothes, using tools or handling objects
Being hit by falling objects
Being bitten by an animal
Being bitten by a snake
Being trapped by moving machinery or equipment or between stationary and moving objects
Exposure to mechanical vibration (e.g. from chain saws)
Being assaulted by a person or persons

Lifting, pushing, pulling object

Muscular stress while lifting, carrying or putting down objects
Single or multiple events
Lifting or carrying resulting in stress fractures
Repetitive movement, high muscle loading
Muscular stress while handling objects
Single or multiple events
Pushing or pulling objects
Throwing or pressing objects
Stress fractures from handling objects
Continually shovelling
Climbing ladders causing upper and lower limb injuries
Muscular stress with no objects being handled
Bending down, reaching, turning and twisting movements where no objects are being handled
Stress fractures without objects being handled (e.g. from running)
Continually twisting neck with no object being handled

Other mechanisms

In this publication this item is the total of:

Repetitive movement with low muscle loading

Occupational overuse and repetitive movement occurrences
Prolonged standing, working in cramped or unchanging positions
Working in cramped or unchanging positions
Prolonged standing causing varicose veins

Exposure to mental stress

Exposure to a traumatic event
Exposure to workplace or occupational violence (e.g. victim of assault or threatened assault by

a person or persons, being a victim of or witnessing hold-ups etc.)
Being a victim of sexual, racial, or other verbal harassment
Work pressure (e.g. mental stress arising from work responsibilities, conflict with peers, performance counselling)
Attempted suicide
Other mental stress factors

Other mechanisms

Those responses that could not be included into one of the categories above such as contact with hot food/drink/beverages, exposure to extreme weather, jumping on objects, struck by lightning or sunburn

Vehicle accident

Any accident or incident on a private road, farm, mine site or footpath involving a vehicle where the most serious injury is sustained as a result of that accident or injury

A vehicle catching on fire after the accident

Any accident or incident in a factory, mine or car park involving a fall from a moving vehicle

Long term exposure to sound

Long term exposure to workshop or factory noise, sharp sudden sounds, or low frequency (subsonic pressure) sounds

Long term contact with chemicals or substances

Acquired allergic reactions

Slow poisoning, as with lead or other heavy metals

Long term inhalation of dust or fibres, as with asbestos fibres

Exposure to cigarette smoke

Insect and spider bites and stings

Contact with poisonous parts of plant or marine life (e.g. blue ringed octopus, bluebottles, stone fish etc.)

Other and unspecified contact with chemical or substance

2. Workers' compensation claims

Nature of injury or illness

The nature of injury classification for workers' compensation claims is similar to the Type of injury classification as described for the Work-related Injuries Survey with the following notations:

Contusion/crushing injury as defined in Crushing injury/internal organ damage

External foreign body formally called *Foreign body on external eye, in ear or in respiratory, digestive or reproductive systems* in the TOOCS 2.1 manual.

Musculoskeletal conditions

In the worker' compensation section of this publication, this item is the total of

Sprain/strain as defined above

Diseases of the Musculoskeletal system and connective tissue as defined above

Mechanism of injury or illness

The mechanism of injury classification for workers' compensation claims is similar to the classification for How the work-related injury or illness occurred classification as described for the Work-related Injuries Survey with the following notations :

Body stressing

is the same as Lifting, pushing, pulling object plus the addition of Repetitive movement with low muscle loading

The combination of **Being hit by moving objects** and **Hitting objects with a part of the body**

is the same as Hitting, being hit or cut by an object

Falls, trips & slips of a person

is the same as Falls

Chemicals & other substances

is the addition as Contact with a chemical or substance plus Long term contact with chemicals and substances

Heat, radiation and electricity

includes sunburn, drowning and contact with electricity

Other mechanisms

includes Biological factors, Mental stress, Sound and pressure and Other and unspecified mechanisms of injury

Bodily location of injury or illness

The Bodily location of injury classification is intended to identify the part of the body affected by the most serious injury or illness.

Breakdown Agency of injury or illness

The Breakdown Agency of injury classification is intended to identify the object, substance or circumstance that was principally involved in, or most closely associated with, the point at which things started to go wrong and which ultimately led to the most serious injury or illness.

Enquiries

For further information regarding the contents of the publication contact:

The Data & Analysis Section

Safe Work Australia

1300 551 832

