

WORK-RELATED INJURIES IN AUSTRALIA, 2005–06

Agriculture, forestry
and fishing industry

OCTOBER 2009



safe work australia

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Foreword

Safe Work Australia principally uses workers' compensation claims data to measure occupational health and safety (OHS) performance in Australia. The claims data are collated in the *National Data Set for Compensation Based Statistics* (NDS) and are published annually in the *Compendium of Workers' Compensation Statistics, Australia*. This publication is a key reference documenting patterns of work-related injuries and diseases incurred by Australian workers and the cause of that injury or disease. For the purposes of this report, the expression 'work-related injury' will be used to represent all work-related conditions, including work-related diseases.

While the NDS is a valuable tool for monitoring OHS, it does not provide information on work-related injuries for groups not well covered by workers' compensation schemes, such as self-employed workers. It is estimated that workers' compensation schemes, and therefore the NDS, covered only 88%¹ of the workforce in 2005–06. In addition, the NDS does not contain information on some types of employment conditions, such as shiftwork or access to paid leave entitlements. Finally, the NDS is unable to provide any information on work-related injuries where workers' compensation was not sought. Therefore, although the NDS generally provides a good picture of the characteristics of work-related injuries, it underestimates the true number of work-related injuries occurring each year.

To address this situation, the National Occupational Health and Safety Commission (now known as Safe Work Australia) agreed to contribute funding towards a national survey of work-related injuries run by the Australian Bureau of Statistics (ABS) as part of the Multi-purpose Household Survey. The *Work-Related Injuries Survey* (WRIS) was conducted for the period 2005–06 with results released in December 2006. In this survey, participants aged 15 years and over, were asked to recollect and relate a range of details about their most recent work-related injury or illness, no matter how minor, that occurred within the last 12 months. The survey collected information on labour force characteristics (e.g. industry, occupation) and personal demographics (e.g. age, sex) which are useful when making comparisons to the NDS. The WRIS also collected information on employment arrangements, such as whether the worker worked under shift arrangements, worked part-time or had access to paid leave. This type of information is not collected in the NDS. Importantly, the WRIS also collected information about whether or not workers' compensation was sought, and if not, why not.

Unless otherwise stated, all data presented in this report have relative standard errors (RSEs) less than 25%. Data with RSEs greater than 50% have generally been suppressed. Unfortunately, this has, on occasions, limited the scope of the reports.

This report is one in a series of industry based reports that explore the types and causes of work-related injury and how these compare to those in the NDS.

¹ The percentage of employees is calculated from the Australian Bureau of Statistics, *Work-related Injuries Australia* (Cat. No. 6324.0)

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Summary of findings

The following key findings are contained in this report.

- Agriculture, forestry and fishing workers experienced 109 injuries per 1000 workers in 2005–06 which was 60% higher than the rate for all Australian workers.
- Agriculture, forestry and fishing workers aged 35–44 years experienced the highest age-specific incidence rate: 190 injuries per 1000 workers. This was almost three times higher than the rate for all Australian workers aged 35–44 years. Agriculture, forestry and fishing workers aged 55 years and over experienced a similar incidence rate to that for all Australian workers.
- Around half of the workers in the Agriculture, forestry and fishing industry were employees with the remainder being Employers and Own account workers. Employees experienced an overall incidence rate of 121 injuries per 1000 employees, nearly 30% higher than the rate of 94 injuries per 1000 Employers/ Own account workers. This difference is related to the older age profile of Employers and Own account workers and the lower incidence rates of injury in the older age groups.
- Only one in five injured employees in the Agriculture, forestry and fishing industry applied for workers' compensation. This is half the rate at which all injured Australian employees applied for compensation. One in three of those injured Agriculture, forestry and fishing employees who did not apply for compensation did so because they thought they were not eligible.
- A *Sprain/strain* was the most common type of injury incurred by Agriculture, forestry and fishing workers: accounting for one in three injuries.
- *Hitting or being hit or cut by an object* and *Lifting, pushing or pulling an object* were the two most common causes of injury to Agriculture, forestry and fishing workers.
- Despite half the serious injuries incurred by Agriculture, forestry and fishing employees not being claimed under workers' compensation, the survey data corroborates the information obtained from workers' compensation data on the types of injuries incurred and the way in which they occurred.

General Trends

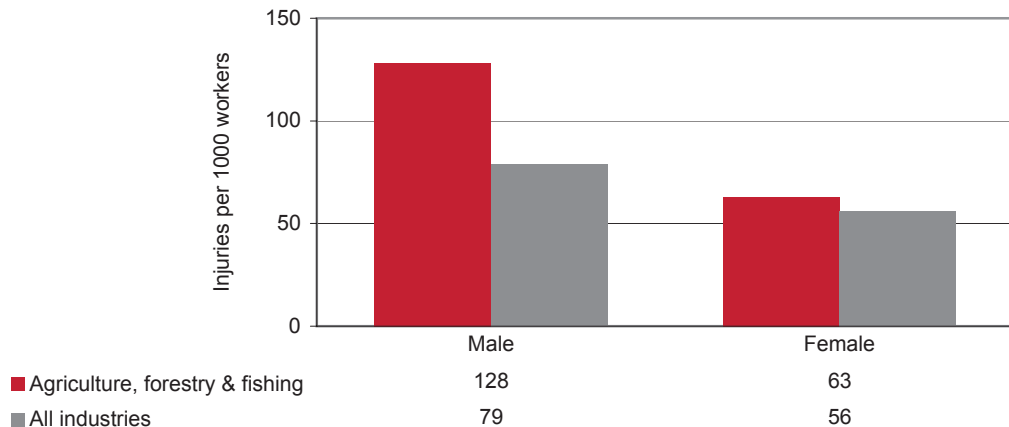
There were 381 000 workers in the Agriculture, forestry and fishing industry in 2005–06, and around 41 500 of these workers experienced a work-related injury. This equates to an incidence rate of 109 work-related injuries per 1000 workers: nearly 60% higher than the rate for all Australian workers of 69 injuries per 1000 workers.

A study undertaken by the Australian Safety and Compensation Council of workers' attitudes to safety in the Agriculture, forestry and fishing industry revealed that these workers see injury as a normal part of working life¹. These workers may see their injuries as unremarkable, and not report them when surveyed. This report will investigate this aspect as well as others.

Sex

In 2005-06, two-thirds of Agriculture, forestry and fishing workers were male. This was much higher than the percentage of men in the Australian workforce as a whole (55%). Figure 1 shows that the incidence rate for male Agriculture, forestry and fishing workers was twice the rate recorded by female workers, 128 injuries per 1000 male workers compared to 63 injuries per 1000 female workers. Of note is that the rate for male workers in the Agriculture, forestry and fishing industry was over 50% higher than the Australian rate whereas the rate for female workers was only slightly higher than the Australian rate.

Figure 1 Work-related injuries in the Agriculture, forestry and fishing industry: Incidence rate by sex



Age

The age profile of workers in the Agriculture, forestry and fishing industry is shown in Figure 2. These data show that workers in this industry are older than in the Australian workforce as a whole. But is this different age profile contributing to higher incidence rates in the Agriculture, forestry and fishing industry?

¹ Australian Safety and Compensation Council, *Beyond Common Sense, A report on the barriers to adoption of safety in the agriculture industry*

Figure 2 Workers in the Agriculture, forestry and fishing industry: Percentage by age

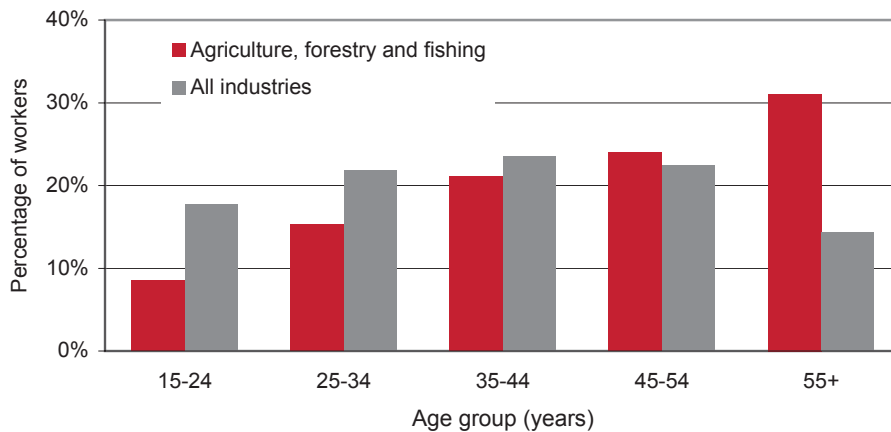
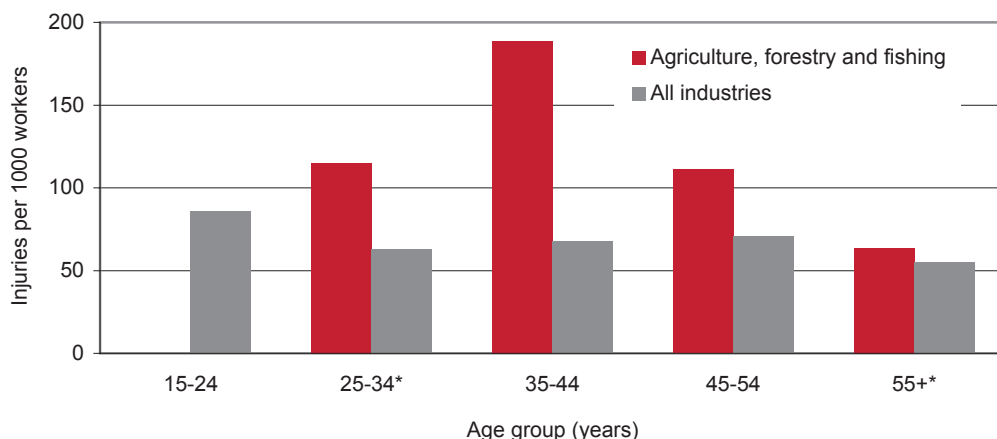


Figure 3 shows the incidence rates by age group for the Agriculture, forestry and fishing industry did not follow the same pattern as seen in the Australian data. While caution needs to be undertaken when using these data, due to the high relative standard errors, these data indicate that the incidence of work-related injuries in the Agriculture, forestry and fishing industry was highest for workers aged 35–44 years. The incidence rate of 190 injuries per 1000 workers was almost three times higher than the Australian rate for the same age group.

Since the Agriculture, forestry and fishing industry recorded an overall incidence rate nearly 60% higher than the Australian rate, it is not surprising that the incidence rates by age were also significantly higher than the Australian incidence rates.

These data also indicate that workers aged 55 years and over had a rate of injury similar to the Australian rate. This result was not expected since data on work-related fatalities indicates a very high fatality rate among older agricultural workers².

Figure 3 Work-related injuries in the Agriculture, forestry and fishing industry: Incidence rate by age



* The number of Agriculture, forestry and fishing workers who experienced a work-related injury in the 25–34 years and 55 years+ age groups had RSEs of more than 25% but less than 50%. These results should be used with caution. The number of workers aged 15–24 years who experienced a work-related injury was too small to report.

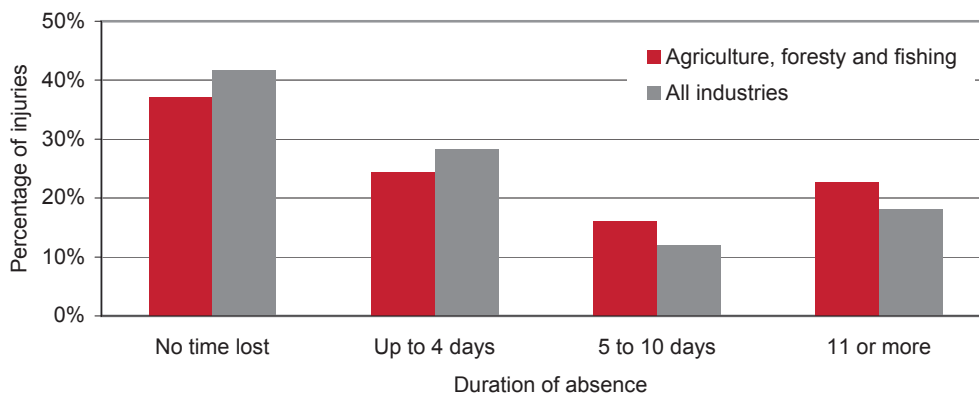
² Australian Safety and Compensation Council, *Work-related Traumatic Injury Fatalities, Australia 2005-06*

Duration of absence from work

Figure 4 shows that more than one-third of injuries incurred by workers in the Agriculture, forestry and fishing industry involved no time lost from work. This was a lower percentage than that recorded in the Australian data, which had 42% of injuries involving no time lost. In contrast, 23% of injuries in the Agriculture, forestry and fishing industry required eleven or more days off work, compared to 18% of injuries for all industries.

It was suggested in the Introduction to this report, that since Agriculture, forestry and fishing workers see injury as a normal part of working life they may not have recalled minor work-related injuries when surveyed. The data in Figure 4 however does not suggest any substantial bias in this area, though it does suggest that Agriculture, forestry and fishing workers incurred more serious injuries.

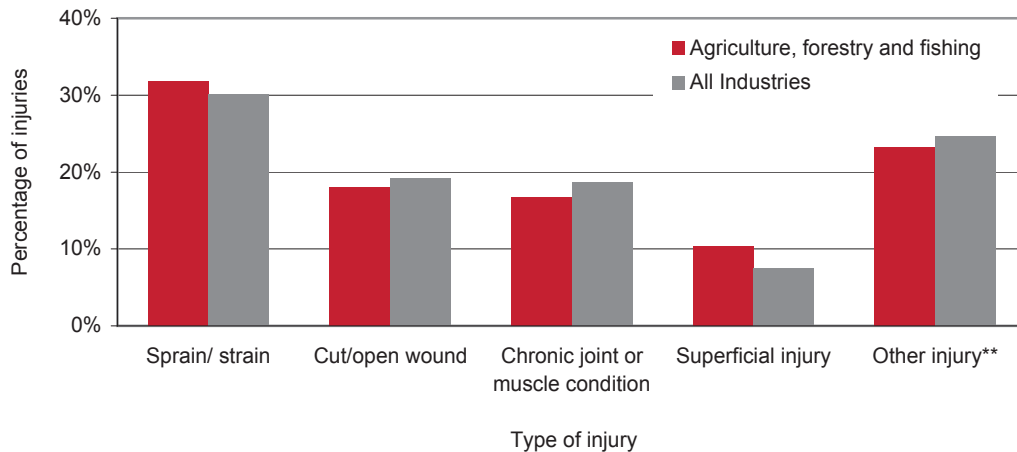
Figure 4 Work-related injuries in the Agriculture, forestry and fishing industry: Percentage by duration of absence from work



Type of injury

The most common type of work-related injury experienced by Agriculture, forestry and fishing workers was *Sprains and strains* (32% of all injuries). This was followed by *Cuts and open wounds* (18%), *Chronic joint or muscle conditions* (17%) and *Superficial injuries* (10%). Figure 5 shows that the injury type profile of the Agriculture, forestry and fishing industry closely matched the profile of the Australian data indicating that despite the different tasks undertaken, workers in the Agriculture, forestry and fishing industry incurred the same types of work-related injuries as the workers in the Australian workforce as a whole.

Figure 5 Work-related injuries in the Agriculture, forestry and fishing industry: Percentage by type of injury*



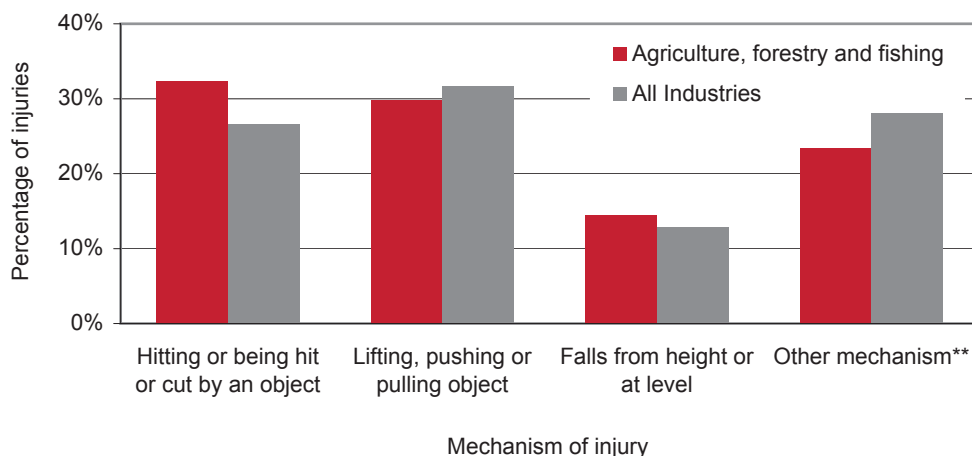
* WRIS data for *Superficial injury* has RSEs of between 25% and 50%. These results should be used with caution

** *Other injury* includes *Fracture; Crushing injury, internal organ damage or amputation; and Stress or other mental condition.*

Mechanism of injury

Figure 6 shows that the most common means by which Agriculture, forestry and fishing workers were injured was *Hitting or being hit or cut by objects* (32% of all injuries). This percentage was higher than the percentage of Australian workers with injuries due to this cause. Other common mechanisms of injury in the Agriculture, forestry and fishing were *Lifting, pushing or pulling objects* and *Falls*. The percentage of injuries in the Agriculture, forestry and fishing industry due to these mechanisms of injury were similar to the profile of the Australian data.

Figure 6 Work-related injuries in the Agriculture, forestry and fishing industry: Percentage by mechanism of injury



* WRIS data for *Falls from height or at level* and *Other mechanism* have RSEs of between 25% and 50%. These results should be used with caution.

** *Other mechanism* includes *Repetitive movement; Prolonged standing, working in cramped or unchanging position; Vehicle accident; Exposure to mental stress; Long term exposure to sound; and Contact with chemical or substance.*

Employment status

Workers can be grouped into three Employment status categories:

- Employees: people who work for an employer and receive remuneration, or people who operate their own incorporated enterprise;
- Employers: people who operate their own unincorporated economic enterprise and hire one or more employees; and
- Own account workers: people who operate their own unincorporated economic enterprise and hire no employees.

Employees are covered by workers' compensation, while Employers and Own account workers are not. The WRIS reported that 53% of workers in the Agriculture, forestry and fishing industry were Employees. This was much lower than the Australian percentage (88%).

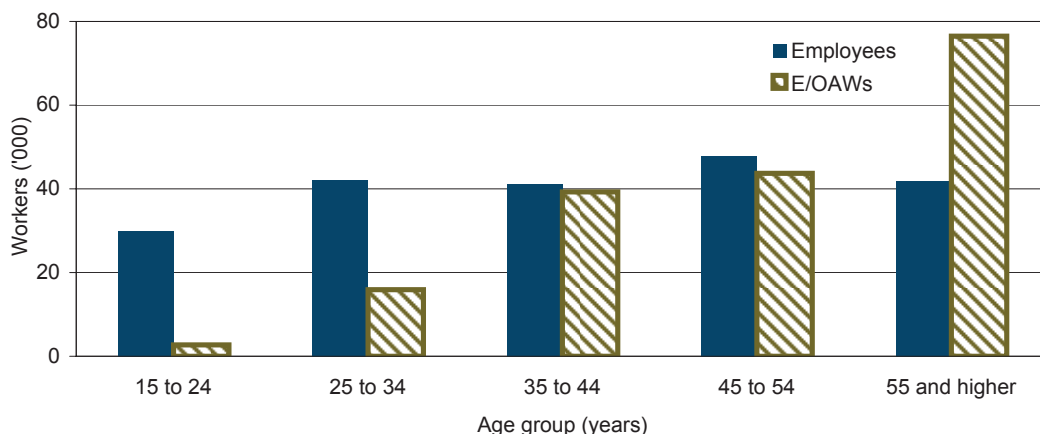
The following analysis has combined Employers with Own account workers with this group referred to as E/OAWs.

Analysis of the injuries shows that Employees recorded an incidence rate of 121 injuries per 1000 workers, about 30% higher than the incidence rate amongst E/OAWs of 94 injuries per 1000 workers.

Figure 7 shows the worker profile split by age and Employment status. These data show that while Employees were fairly evenly spread across the age groups 25 years and over, E/OAWs were predominantly older, with almost two-thirds aged 55 years or over.

The display of incidence rates by employment status is not possible for all age groups due to high relative standard errors. However the data suggests there is no major difference in incidence rates for any of the age groups. Therefore, it would appear that the lower overall incidence rate recorded by E/OAWs is linked to the much higher number of E/OAWs in the 55 years and over age group which recorded one of the lowest incidence rates of injury.

Figure 7 Workers in the Agriculture, forestry and fishing industry: Number by age and employment status*



* The number of E/OAWs aged 15 to 24 was too small to report.

Comparison with the NDS

There are some significant differences in the scope of information published in the WRIS compared to the NDS which need to be addressed prior to undertaking a comparison.

The published NDS data only includes information on serious injuries: those requiring an absence from work of one week or more or where a permanent incapacity or death has occurred. The WRIS data includes all injuries.

To undertake an analysis both datasets need to be scoped to only include injuries with similar periods of time lost. For the NDS, the data has been restricted to only include claims where strictly one or more weeks of time lost has been recorded. For the WRIS, the data has been restricted to only include injuries which required five or more days absence from work. The term 'serious injury' will be used to represent this restricted scope.

The second important issue is that the NDS only includes injuries incurred by employees, whereas the WRIS includes injuries incurred by all workers. When the WRIS was further restricted to only include injured employees it showed that in the Agriculture, forestry and fishing industry there were 9900 employees who incurred a serious injury. Of these, 3900 applied for workers' compensation with just about all receiving it. When comparing this to the 4700 serious claims recorded in the NDS, the numbers were similar enough to feel confident with the WRIS data. This also means that some lower level analysis can be undertaken despite the fact that the small numbers involved have high relative standard errors associated with them.

These scoped data indicate that the WRIS recorded an incidence rate of 49 serious injuries per 1000 employees which was twice the incidence rate calculated from the NDS published data of 25 serious injuries per 1000 employees. This difference means that around 6000 Agriculture, forestry and fishing employees had an injury which kept them from work for five or more days for which they did apply for workers' compensation.

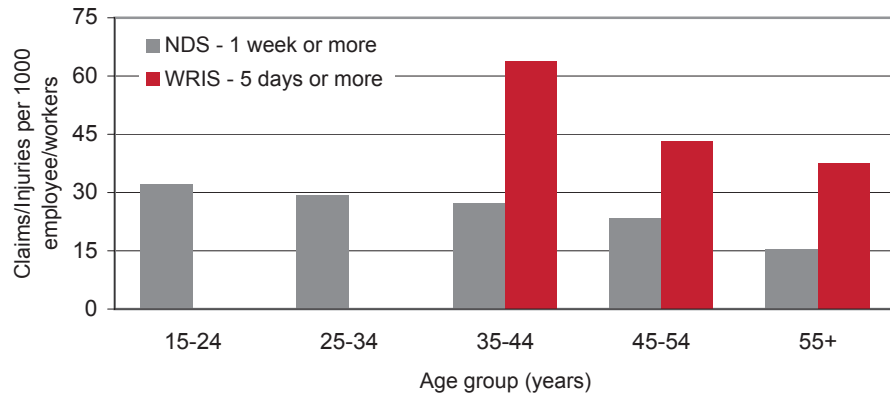
The following analyses draws comparisons between the serious injuries incurred by all workers in the WRIS with the NDS serious claims rather than restricting the WRIS data to just employees. This will allow conclusions to be drawn as to whether the NDS represents the pattern of injuries incurred by all workers in this industry. However, due to the small sample size in the WRIS, the WRIS data should only be used as indicative of trends.

Age

Figure 8 shows that when the data for serious injuries were compared by age, the two datasets showed a similar pattern of decreasing incidence rates with increasing age. Due to the small sample size for employees aged between 15 and 34 years in the WRIS, incidence rates for these ages have not been shown. The WRIS data for the older age groups also have high relative standard errors but have been shown to provide trend information. These data however, should be used with caution.

Figure 8 also shows that the relative difference between the NDS and WRIS incidence rates was fairly constant for the age groups where both datasets are shown. Therefore, the NDS can be said to provide a reasonable profile of the relativities of incidence rates by age, though the rates from the NDS are half the rate of injury recorded in the WRIS.

Figure 8 Serious work-related injuries in the Agriculture, forestry and fishing industry: Incidence rates by age*

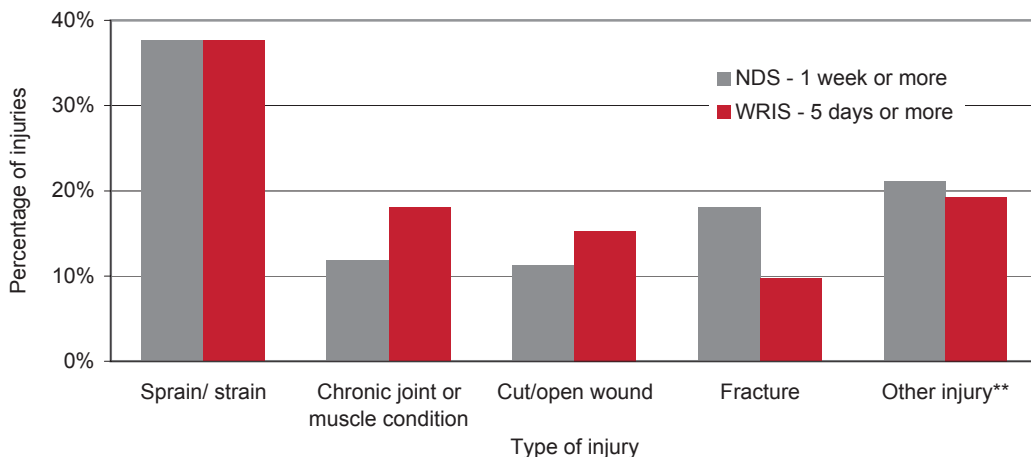


* The WRIS data have RSEs of up to 50% and should be used with caution.

Type of injury

Figure 9 shows a similar profile in the two datasets for the percentage distribution by the type of injuries incurred. Both datasets recorded *Sprains and strains* as the most common type of serious injury incurred, making up 38% of all serious injuries. The next three most significant types of serious injury were *Chronic joint or muscle condition*, *Cuts and open wounds* and *Fractures* though their contribution to each dataset differed. *Chronic joint or muscle condition* and *Cuts and open wounds* were more common in the WRIS than in the NDS, while *Fractures* were more common in the NDS than in the WRIS. This may indicate that injured workers claimed workers' compensation more often for *Fractures* than for *Chronic joint or muscle condition* and *Cuts and open wounds*. However, the number of *Fractures* reported by the WRIS was too small to draw conclusions from.

Figure 9 Serious work-related injuries in the Agriculture, forestry and fishing industry: Percentage by type of injury*



* The WRIS data have RSEs of up to 50% and should be used with caution.

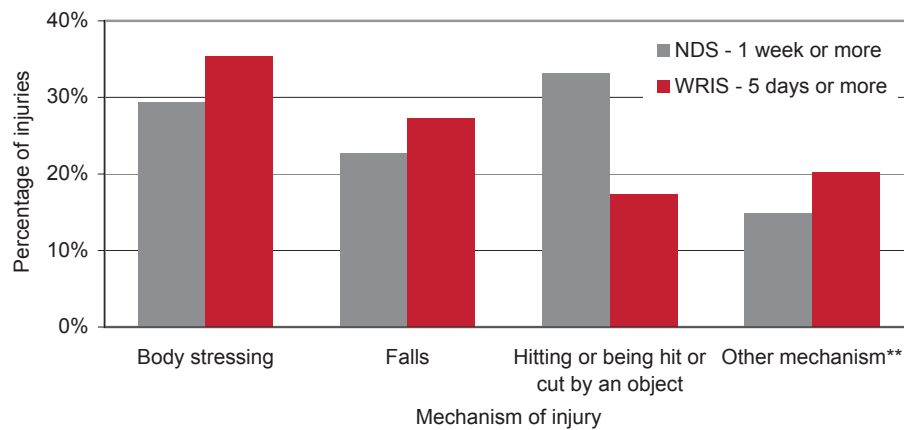
** Other injury includes *Superficial injury*; *Crushing injury*, *internal organ damage or amputation*; and *Stress or other mental condition*.

Mechanism of injury

The WRIS and NDS use different classification systems for recording the mechanism of injury. For this analysis, the NDS mechanism of *Body stressing* has been compared to the combination of the WRIS mechanisms of *Lifting, pushing or pulling object, Repetitive movement* and *Prolonged standing, working in cramped or unchanging position*.

The WRIS and NDS datasets showed similar profiles for mechanism of injury, with *Body stressing* and *Falls* the most common mechanisms of serious injury. While the NDS data showed a much higher percentage of injuries than the WRIS due to *Hitting or being hit or cut by objects*, this may be due to the small sample of the WRIS. Alternatively, it may indicate that injured workers claimed workers' compensation more often for injuries from *Hitting or being hit or cut by objects* than from *Body stressing* and *Falls*.

Figure 10 Serious work-related injuries in the Agriculture, forestry and fishing industry: Percentage by mechanism of injury*



* The WRIS data have RSEs of between 25% and 50% and should be used with caution.

** *Other mechanism* includes *Vehicle accident; Exposure to mental stress; Long term exposure to sound; and Contact with chemical or substance*.

These analyses indicate that the NDS provides a good picture of the types of serious injuries incurred by workers in the Agriculture, forestry and fishing industry, with the possible exception of an overstatement of the prevalence of injuries caused by hitting objects.

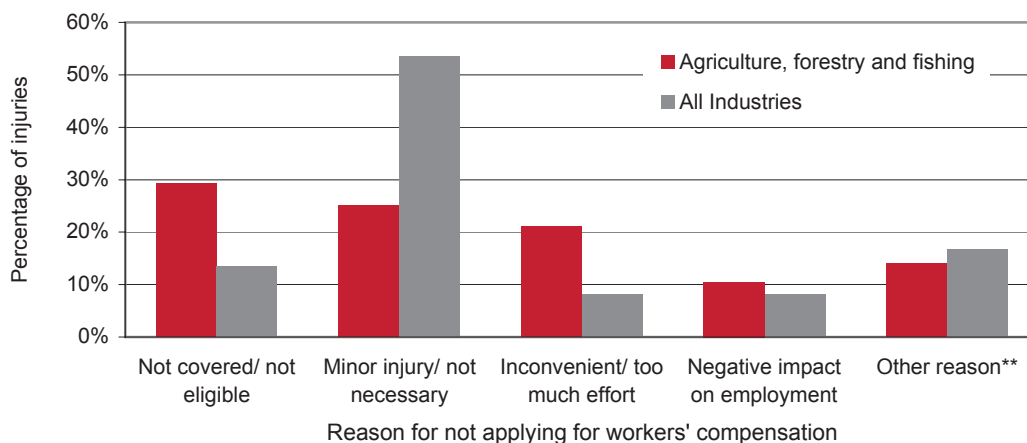
Main reason for not applying for workers' compensation

Seven out of nine employees (78%) in the Agriculture, forestry and fishing industry who experienced a work-related injury did not apply for workers' compensation. This is considerably higher than the 62% of all Australian employees who did not apply for compensation.

The major reason for not applying for workers' compensation was that the employee believed that they were not covered or were not eligible for workers' compensation. This reason was given by almost one-third of all Agriculture, forestry and fishing employees, whereas only one seventh of all Australian employees gave this reason. This is most likely linked to the fact that half the workers in the Agriculture, forestry and fishing industry are not employees and hence are not entitled to workers' compensation. The previous section also showed that many employees did not apply for workers' compensation.

Figure 11 shows that the next most commonly cited reason for not applying for compensation was *Minor injury or not necessary*. This reason was cited by only a quarter of employees in the Agriculture, forestry and fishing industry whereas it was cited by more than half of the injured Australian employees who did not apply for compensation. Figure 4 showed that Agriculture, forestry and fishing workers had a slightly higher percentage of injuries that involved some time off from work than the Australian data, which only explains part of this difference. The rest is explained by the higher percentage of Agriculture, forestry and workers citing *Inconvenient or too much effort* as the main reason for not applying for compensation.

Figure 11 Work-related injuries to employees: Percentage by reason for not applying for workers' compensation*



* The WRIS data have RSEs of greater than 25%. These results should be used with caution.

** Other reason includes *Employer agreed to pay costs* and *Did not know*.

Conclusion

The Agriculture, forestry and fishing industry has a larger percentage of Employers and Own account workers than other any industry. These workers are not eligible for workers' compensation, so their injuries are not included in the published information on serious injuries from the NDS. But, in spite of the fact that the NDS excludes almost half of the workers in the Agriculture, forestry and fishing industry, the WRIS confirms that the NDS provides a reasonable picture of the types of serious injuries incurred and how they occurred, with the possible exception of an overstatement of the prevalence of injuries caused by hitting objects.

The Agriculture, forestry and fishing industry had a much higher percentage of older workers than the full Australian workforce. However, there was no evidence to suggest these older workers had higher rates of injury than the full Australian workforce.

While Employees in the Agriculture, forestry and fishing industry recorded a substantially higher incidence rate than Employers and Own account workers, this was linked to the different proportions of workers in each age group. When the data by age were analysed no difference was found between these groups of workers.

The WRIS showed that the percentage of injured workers who applied for compensation was much lower in the Agriculture, forestry and fishing industry than in the full Australian workforce. The low percentage of injured workers who claimed workers' compensation explains why the WRIS incidence rate is double the NDS rate for serious claims. The main reason that employees did not apply for compensation was because they believed that they were not covered or not eligible for compensation. This suggests that Agriculture, forestry and fishing employees are not particularly well informed of their rights to workers' compensation.

Explanatory Notes

Definitions

ABS	Australian Bureau of Statistics
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.
Employers	People who operate their own unincorporated economic enterprise or engage independently in a profession or trade, and hire one or more employees
E/OAWs	Employers and Own account workers
Incidence rate	The number of injuries per 1000 workers
NDS	National Data Set for Compensation Based Statistics
Mechanism of injury	The mechanism of injury is the action, exposure or event that was the direct cause of the injury, or how the injury was sustained.
Type of injury	Refers to the type of injury sustained
Own account workers	A person who operates his or her own unincorporated economic enterprise or engages independently in a profession or trade, and hires no employees.
Serious injuries	Injuries that resulted in at least five days absence from work in the WRIS or one working week in the NDS.
WRIS	ABS Work-related injury survey (ABS Cat. No. 6324.0)

Industry classification

The industry of the worker has been classified in accordance with the Australian and New Zealand Standard Industrial Classification (ANZSIC), 1993 edition (ABS Cat. No.1292.0).

Mechanism of injury classification

The mechanism of injury classification is based on the Type of Occurrence Classifications System (TOOCS). Refer to Appendix 1 in ABS Cat. No.6324.0 for a detailed breakdown of each mechanism of work-related injury.

Type of injury classification

In the WRIS this variable is referred to as 'Work-related injury or illness'. This variable's classification is based on the Nature of injury classification in the Type of Occurrence Classifications System (TOOCS). Refer to Appendix 1 in ABS Cat. No. 6324.0 for a detailed breakdown of each type of work-related injury.

Relative Standard Errors (RSEs)

All data presented in this report conform with the ABS guidelines regarding data quality. Unless otherwise noted, 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 ABS Work- related injuries publication (ABS Cat. 6324.0)

Inquires

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