

INTRODUCTION

In 1997, the Labour Ministers Council, consisting of all Australian jurisdictions decided to establish a system of comparative performance monitoring (CPM) of the occupational health and safety (OHS) and workers' compensation programs operating in Australia. The New Zealand government decided, in 1998, that their programs should also be included in the project.

This is the second report of the CPM project. The first report was released in December 1998.

The second report builds on the 1998 report and contains a number of new performance indicators for both OHS and workers' compensation. Coverage of the New Zealand programs has extended and the report now contains a number of performance measures for the Seacare Scheme which covers certain seafarers employed on Australian ships.

The 1999 report provides valuable information on trends in performance measures across the jurisdictions. Trend data on an industry basis will assist users to identify those areas that need attention and, overtime, enable them to learn from improvements in other jurisdictions.

Comparative Performance Monitoring System

The high level objective of the CPM system is 'to reduce the incidence, severity and cost of workplace injury and disease through measuring comparative performance on:

- effective prevention of workplace injury and disease;
- consistent, cost effective compensation; and
- effective injury management.

CPM is an evolutionary process with performance indicators developed over time to measure performance against each element of the high level objective. Initially, the emphasis was on high level outcomes, however, this report includes a number of workers' compensation indicators that focus on the efficiency of the government agency providing the program. Further measures will be examined as CPM develops.

Performance Indicators

Trend data is now provided for the following performance indicators of the high level objective 'effective prevention of workplace injury and disease':

- compensated injury rates for both incidence and frequency;
- compensated fatality rates.

For the high level objective, 'consistent, cost effective compensation', a range of new indicators are included in the report. In the 1998 Report, measures for this objective were derived from the Australian Bureau of Statistics, *Labour Cost Survey* (LCS) to report on two workers' compensation indicators relating to cost to employers. As a further LCS is not scheduled at this stage, new indicators have been developed to provide comparable information on:

- average premium rates (an indicator of the outcome 'cost to employers');
- recognition of liabilities (an indicator of the outcome 'scheme viability'); and
- benefits to injured employee and other scheme costs (an indicator of the scheme efficiency and effectiveness).

Work has commenced on the high level outcome “adequacy of benefit”. In this report some examples are provided of the comparison of benefits across the scheme based on the existing legislative provisions.

Data

The data sources used to provide the performance information in this report are:

- the National Occupational Health and Safety Commission’s *National Data Set for Compensated Statistics* (NDS);
- the various workers’ compensation scheme’s data bases;
- the insurance companies that provide coverage in a number of schemes; and
- the Australian Heads of Workers’ Compensation Authorities’ *Return to Work Monitor*.

A number of qualifications need to be taken into account in respect of the data sources used and these are discussed in part A.

Part A

OCCUPATIONAL HEALTH AND SAFETY

Comparison of injuries resulting in compensated time off work
and compensated fatalities

INTRODUCTION

This part of the report provides a number of performance indicators for the objective: *effective prevention of workplace injury and disease*. Performance information has been drawn from the National Data Set for Compensated-Based Statistics (NDS) and covers:

- incidence of compensated workplace injuries; and
- incidence of compensated workplace fatalities.

This report builds on the first report published in December 1998 and contains a number of new performance indicators to provide an overview of occupational health and safety (OHS) outcomes across Australia and New Zealand.

This report provides valuable information on trends in performance measures across the various jurisdictions. Trend data on an industry basis is considered one of the main attributes of the comparative performance monitoring (CPM) project. It is intended that providing information in this way will assist users to focus on those areas that need attention and to learn from improvements.

Included in the report is a new basis for comparison termed 'frequency of injury'. The frequency rate uses the number of hours worked as the base for determining injury rates and, as a measure, overcomes some of the difficulties of comparing employees with differing working hours.

The report includes expanded industry sector data detailing outcomes in high risk industries over longer periods of time. In addition, outcomes are now provided for employees in the ACT Government sector (who are covered by the Commonwealth's Comcare scheme) and for employees covered by the Seacare scheme. At this stage no data is available for the ACT scheme that covers the private sector. This data is expected for the next report.

While the indicators presented in this report provide an overview of OHS outcomes, they do not provide detailed information about why different jurisdictions and industries are achieving different outcomes. More detailed analysis of the outcomes between the jurisdictions on an industry basis is required to gain an insight into factors that influence final outcomes included in this report. Preliminary work is underway on one cross-jurisdictional industry based study to examine factors that influence final outcomes.

The indicators presented in this report show how injury incidence and frequency rates vary between jurisdictions, industry sectors, by age, by size of business and over time.

The rates reported are for those injuries that are compensated by the workers' compensation schemes that provide coverage for employees at work. Injuries to workers not covered, for example, most self-employed persons, are not included in the rates.

The New Zealand rates exclude injuries to employees of accredited employers who, under that scheme, cover injuries for the first twelve months. It is estimated that New Zealand accredited employees account for approximately 20% of the workforce.

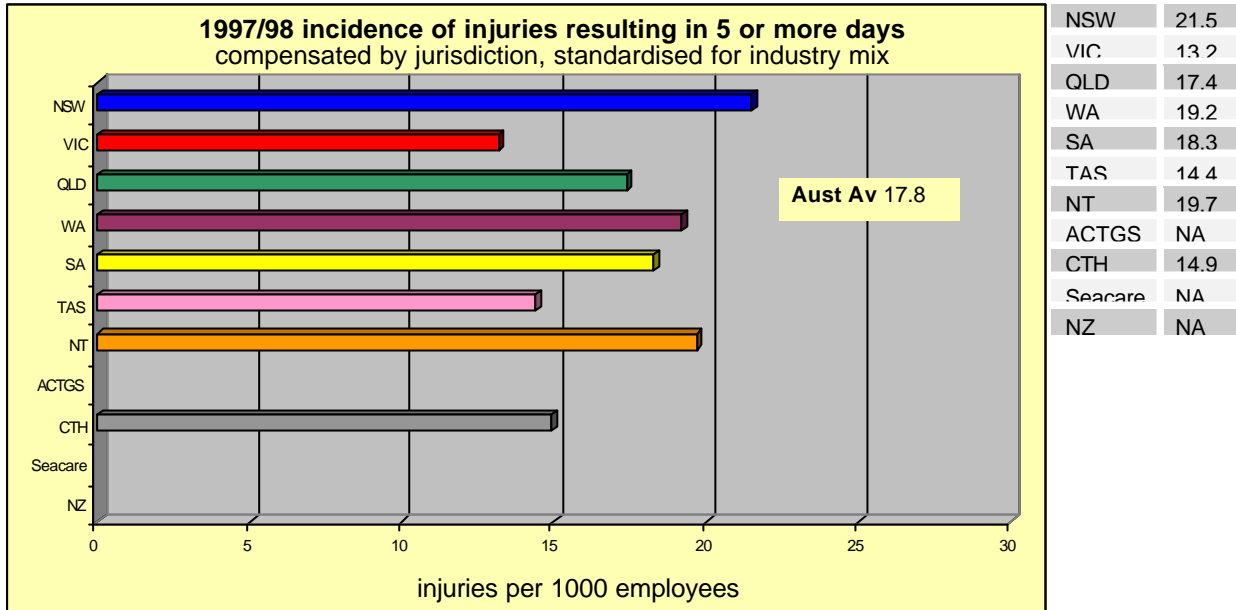
Comparison against Seacare scheme rates need to be considered in the context that this is an industry based scheme and does not, therefore, include cross-industry averages, as is the case with other jurisdictions.

The 1997/98 figures are preliminary figures that have been adjusted using growth factors. While final figures are not anticipated to differ significantly the adjusted figures may vary to those published by the various jurisdictions (refer to Appendix A for more detail).

Finally, care needs to be taken in using information drawn from workers' compensation claims statistics which may be affected by different scheme characteristics as indicators of overall OHS performance.

Incidence of Injuries

Figure 1a

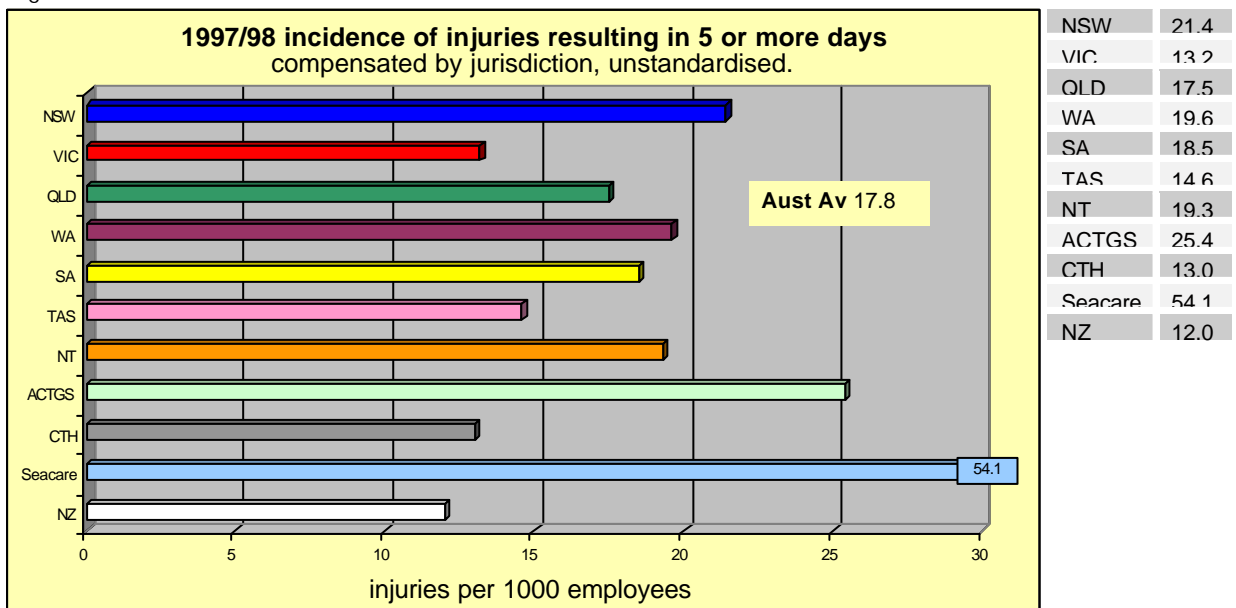


Figures 1a and 1b compare the rate of work-related injuries per 1000 employees that resulted in compensation for 5 or more days absence from work across Australian jurisdictions and New Zealand.

In 1997/98, in Australia (excluding the Seacare Scheme and the ACT Government sector (ACTGS), the incidence of injuries resulting in 5 or more days compensated was 17.8 per thousand employees (as compared to 19.0 per thousand employees in 1996/97). For New Zealand, in 1997/98 the incidence of injuries was 12.0, compared to 14.4 per thousand employees in 1996/97.

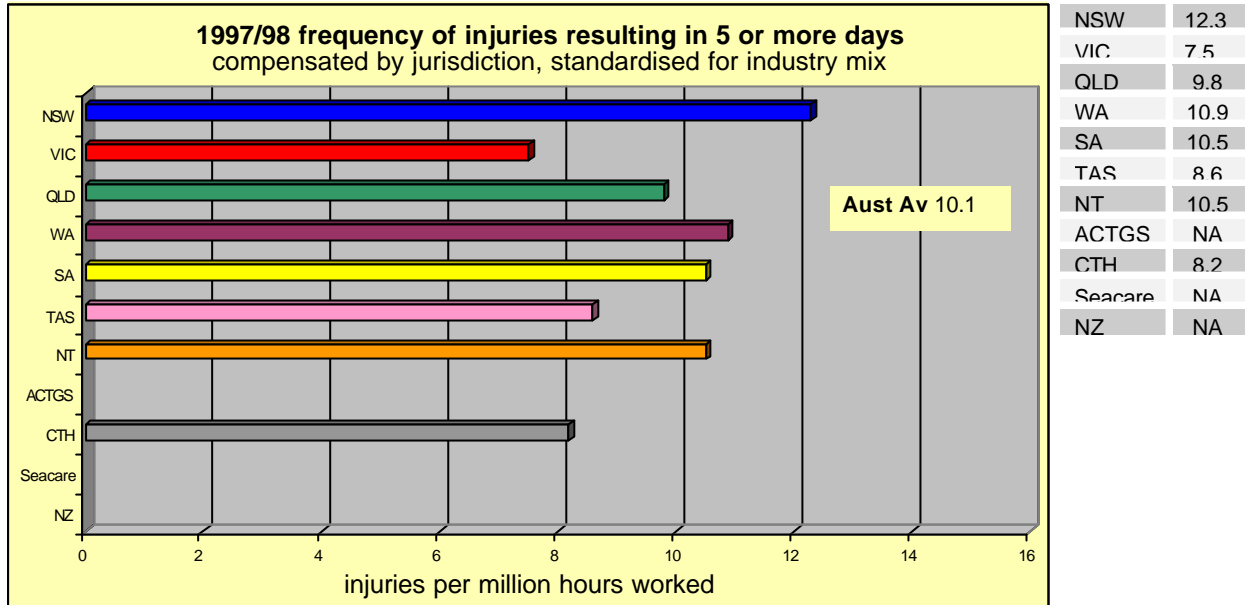
The differences between figures 1a and 1b are explained by standardisation of the industry mix for each jurisdiction. To enable a more valid performance comparison across jurisdictions, the data in **Figure 1a** has been standardised to take account of different risk profiles within Australian industry groups in different jurisdictions. At this stage New Zealand (NZ) data has not been included in the standardisation process. The ACTGS and Seacare are excluded due to the nature of the schemes.

Figure 1b



1997/98 frequency of injuries

Figure 2a



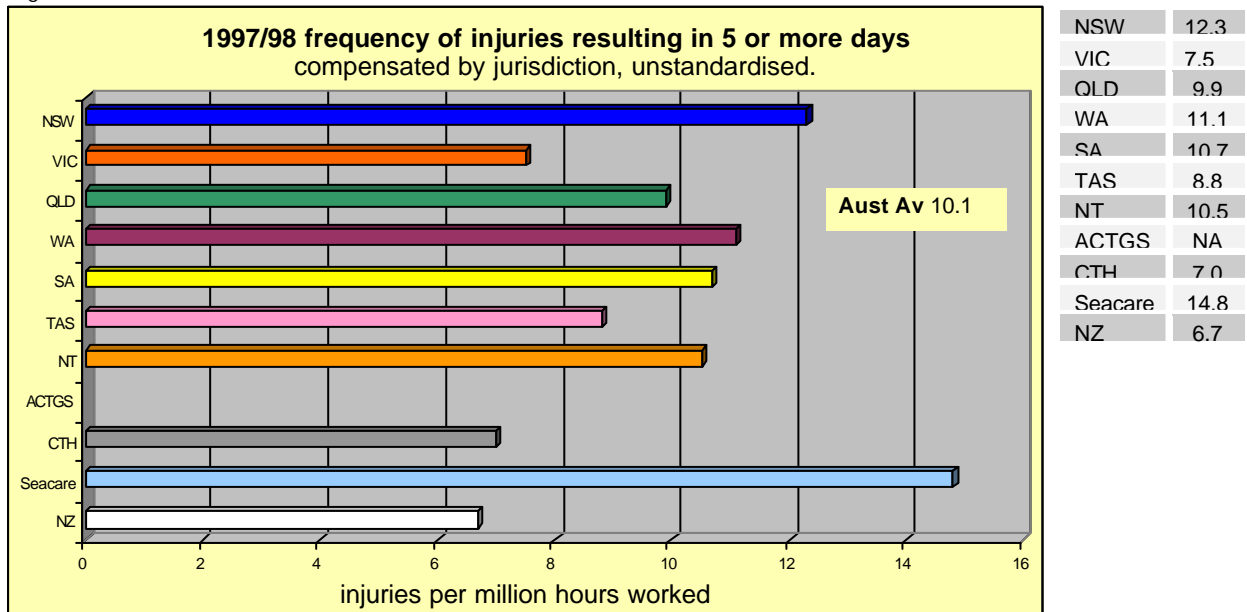
Figures 2a and 2b compare across the jurisdictions' frequency rates for injuries resulting in 5 or more days compensated. The rates are expressed in terms of the number of injuries per million hours worked.

In 1997/98, in Australia (excluding the Seacare Scheme and ACTGS), the frequency of injuries resulting in 5 or more days compensated was 10.1 per million hours worked (as compared to 10.6 per million hours worked in 1996/97). For New Zealand, in 1997/98 the frequency of injuries was 6.7, compared to 8.0 per million hours worked in 1996/97.

Frequency rates indicate the prevalence of injury, based on the number of hours worked for employees covered by workers' compensation. It is important to note that the results reported are based on 5 or more days lost. This compares to the more commonly understood lost time injury frequency rate being calculated on the basis of one day or more.

A comparison of frequency rates reveals that the frequency rates reflect the relative outcomes for incidence rates. The variations may be due to differing employment structures in respect of the proportion of full time and part time employees.

Figure 2b



Trends in workplace injuries

Figure 3a

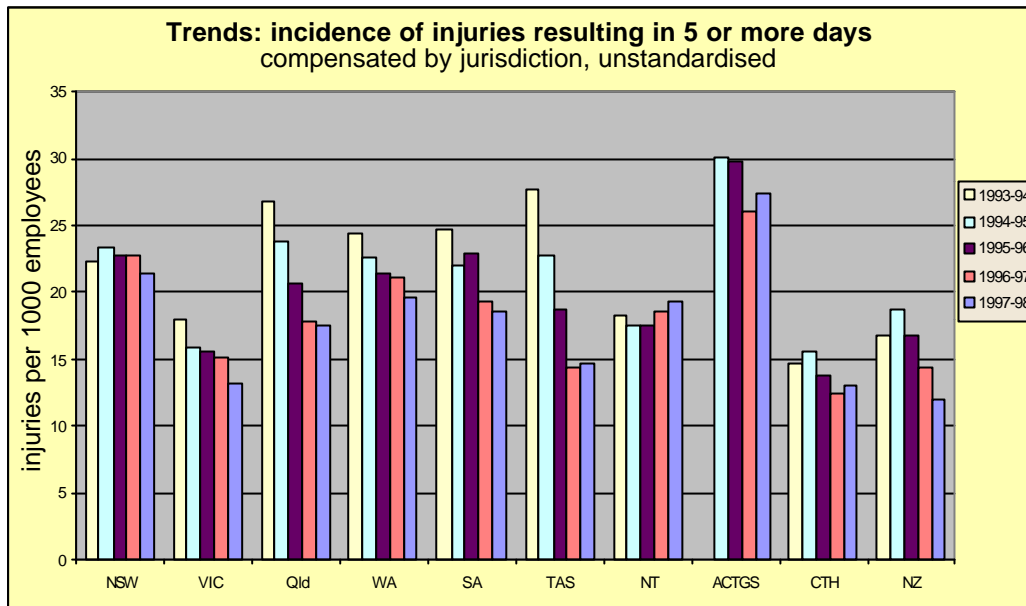


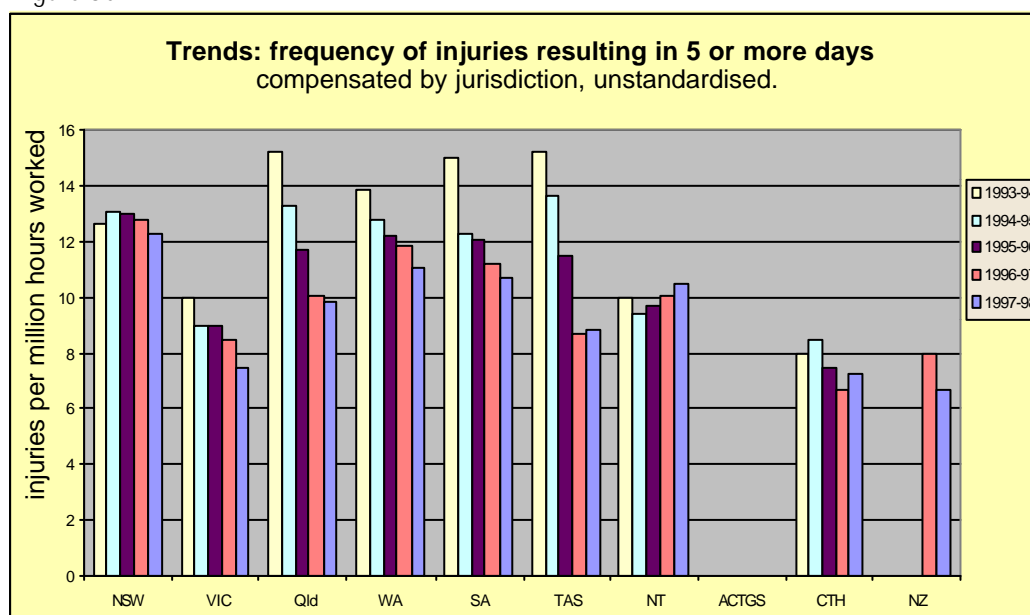
Figure 3a shows the trend, over a number of years, in injury incidence rates for each jurisdiction. While the quality of the data varies from year to year, the broad trends are considered sufficiently reliable to compare the performance of the jurisdictions.

In most jurisdictions, there has been a decline in the incidence of compensated injuries over the last 4 to 5 years. This may be attributed to a number of factors: improved emphasis on safety at the workplace; the impact of prevention activities by government agencies; declining employment levels in high risk industries (eg. mining) and expansion of employment in low risk industries (eg. finance sector); and changes in workers' compensation coverage, by the jurisdictions, that may have resulted in less injuries being claimed as work related.

However, from a national perspective, the overall level of workplace injuries appears to have peaked with a consistent decrease observed over the past five years.

Figure 3b shows the trend for the frequency of injury per million hours worked. The frequency trends are in line with the outcomes in incidence rates since 1993/94.

Figure 3b



Figures 4a to 4f

The following charts (**Figures 4a to 4f**) use final 1996/97 data to report on outcomes across the jurisdictions that resulted in 5 or more days, 30 or more days, and 60 or more days compensation. The charts show both the incidence and frequency of injuries for each jurisdiction.

The length of time for which compensation is paid to an employee can generally be related to the severity of the injury incurred. It is one of the most important factors that influences the well-being of an employee both in human and economic terms. The length of time that an employee is on compensation also affects the overall cost of the workers' compensation scheme and consequently the cost to the employer.

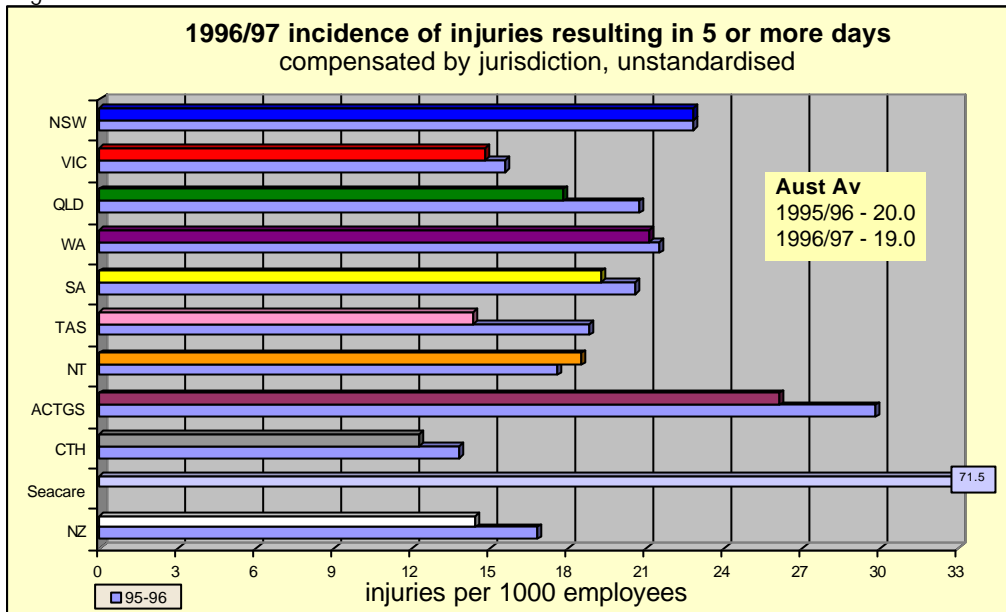
The charts show that for the Australian jurisdictions (excluding Seacare), in 1996/97:

- there were 19.0 compensated injuries per thousand employees that resulted in 5 or more days lost from work, and 10.6 compensated injuries per one million hours worked;
- the incidence of compensated injuries resulting in 30 or more days lost from work was 6.5 per thousand employees and the frequency was 3.7 compensated injuries per one million hours worked;
- at 60 days or more time lost from work, the incidence rate was 4.2 per thousand employees and the frequency rate was 2.4 compensated injuries per one million hours worked; and
- two jurisdictions, Queensland (QLD) and Northern Territory (NT), recorded a decrease in the proportion of longer duration claims in comparison to other jurisdictions.

In other words, 35 per cent of compensated injuries resulting in 5 days or more time lost were serious enough to require 30 or more days absence from work. Twenty-three per cent of these injuries required 60 or more days absence from work.

Lost time comparisons

Figure 4a



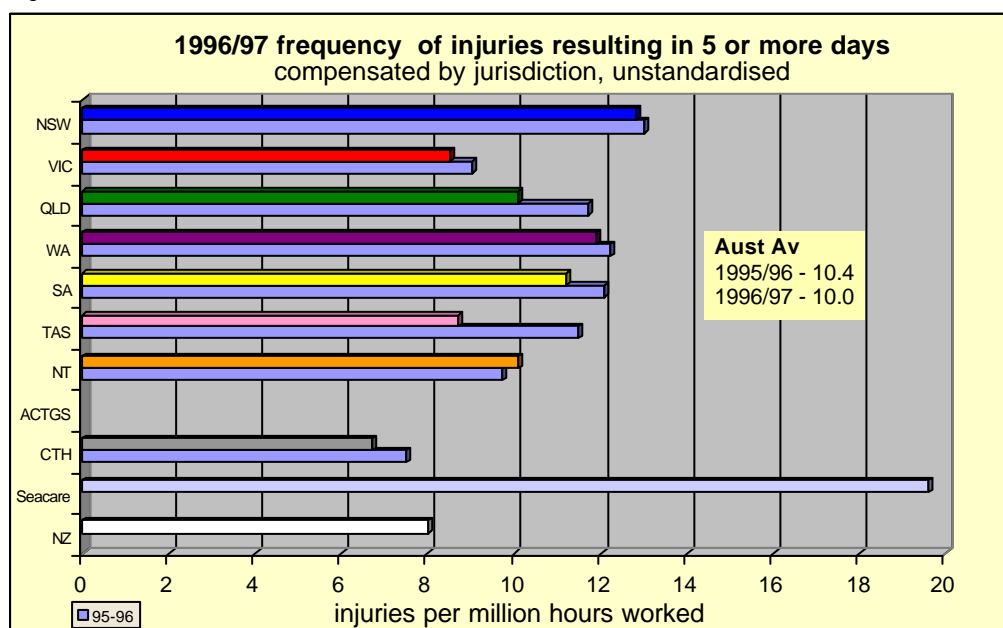
	95-96	96-97
NSW	22.8	22.8
VIC	15.6	14.8
QLD	20.7	17.8
WA	21.5	21.1
SA	20.6	19.3
TAS	18.8	14.3
NT	17.6	18.5
ACTGS	29.8	26.1
CTH	13.8	12.3
SEACARE	NA	71.5
NZ	16.8	14.4

Figure 4a indicates the rate of work-related compensated injuries for each jurisdiction that resulted in 5 or more days absence from work in 1996/97. It is to be noted in the following charts that, in comparison, Qld and NT have decreased their proportion of longer duration claims.

The chart also shows the incidence rate for NZ which has been made as comparable with Australian data as possible, by excluding disease claims, journey claims and claims with less than 5 days paid compensation. The NZ incidence rate (14.4) was below the Australian (excluding Seacare and ACTGS) national incidence rate of 19.0 per 1000 employees, although for most injuries resulting in 30 and 60 days absence from work New Zealand was above all Australian jurisdictions (including Seacare).

Figure 4b provides the frequency rate for injuries that resulted in 5 or more days absence from work in 1996/97.

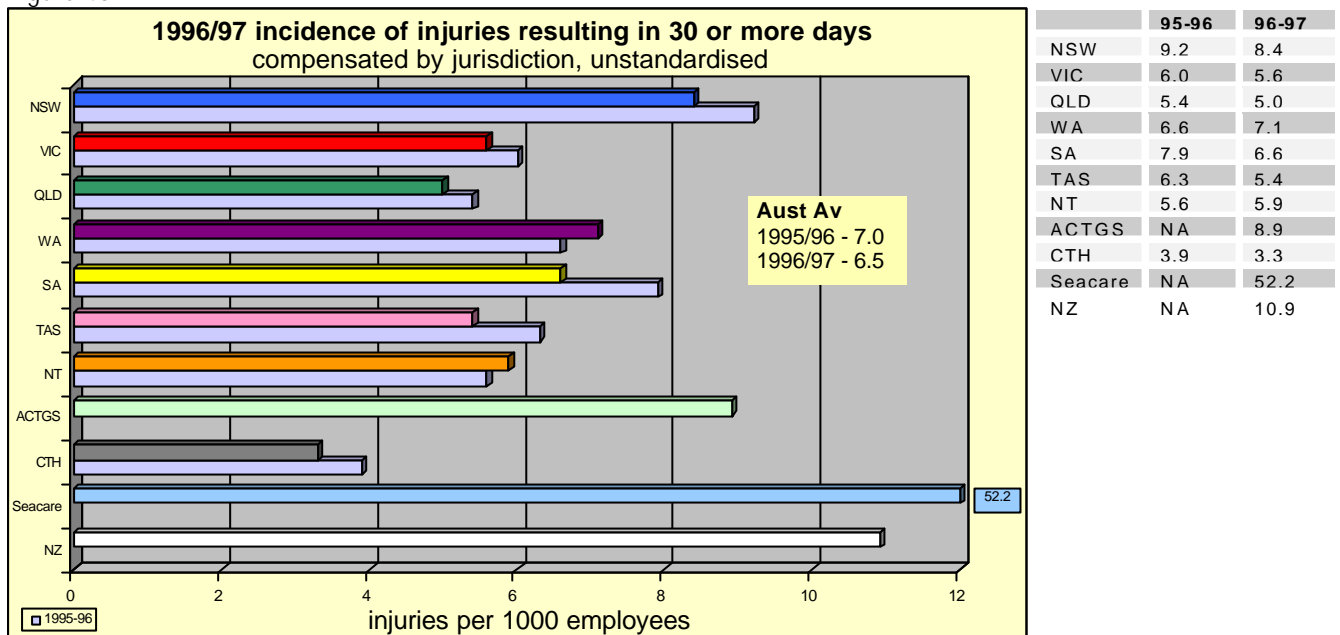
Figure 4b



	95-96	96-97
NSW	13	12.8
VIC	9	8.5
QLD	11.7	10.1
WA	12.2	11.9
SA	12.1	11.2
TAS	11.5	8.7
NT	9.7	10.1
ACTGS	NA	NA
CTH	7.5	6.7
SEACARE	NA	19.6
NZ	NA	8.0

Lost time comparisons

Figure 4c

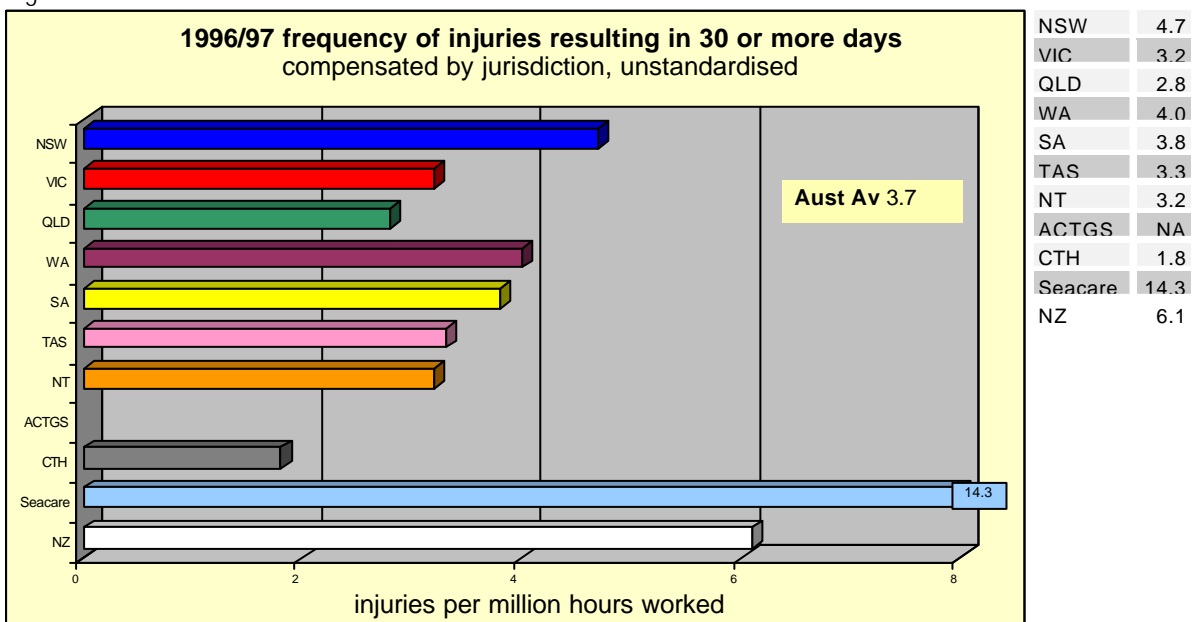


Figures 4c and 4d compare injuries resulting in 30 or more days compensated absence from work between jurisdictions. In 1996/97, the national average incidence of injuries (excluding the ACTGS and Seacare) resulting in 30 or more days compensation was 6.5 per 1000 employees. This is a reduction from the 1995/96 national average of 7.0 per 1000 employees. In 1996/97, the national average frequency of injuries resulting in 30 or more days compensation was 3.7 per million hours worked.

Since the previous report, the incidence rate dropped in most jurisdictions. South Australia (SA) exhibited the largest improvement with a 16.45% reduction. Tasmania (Tas) and New South Wales (NSW) also displayed substantial falls. Moderate increases were observed in both Western Australia (WA) and NT with incidence rates increasing by 7.5% and 5.4% respectively.

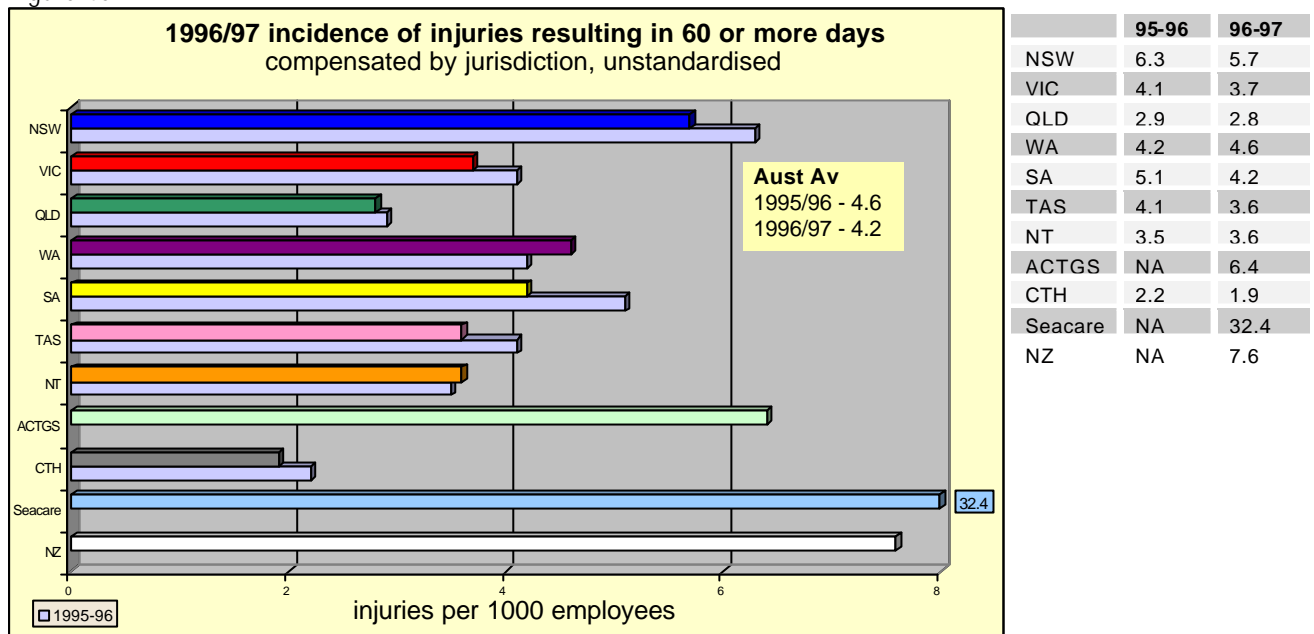
Generally, the outcomes for 60 days reflect those for 30 days. The comparative frequency rates exhibit similar proportions to the incidence rates.

Figure 4d



Lost time comparisons

Figure 4e

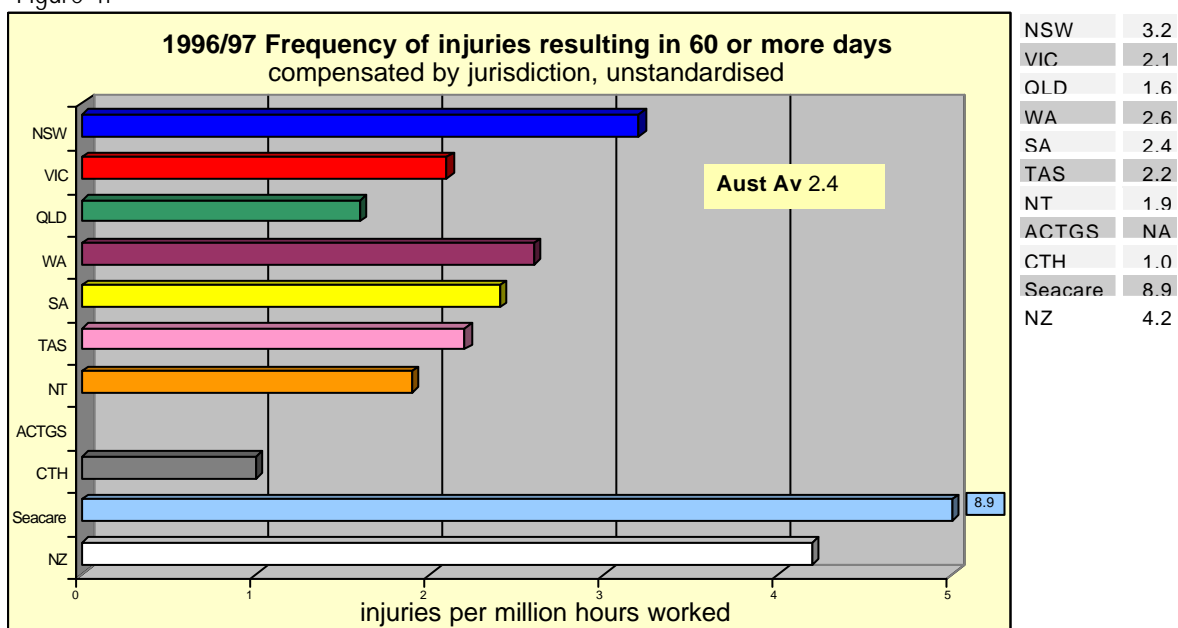


Figures 4e and 4f compare injuries resulting in 60 or more days compensated absence from work between jurisdictions. In 1996/97, the national average incidence of injuries resulting in 60 or more days compensation was 4.2 per 1000 employees. In 1996/97, the national average frequency of injuries resulting in 60 or more days compensated was 2.4 per million hours worked.

Since the previous report, the incidence rate dropped in six jurisdictions. SA exhibited the largest improvement with a 21.1% reduction.

Moderate increases were observed in both WA and NT with incidence rates increasing by 9.5% and 2.8% respectively.

Figure 4f



Industry groups - trends (incidence)

Figure 5a

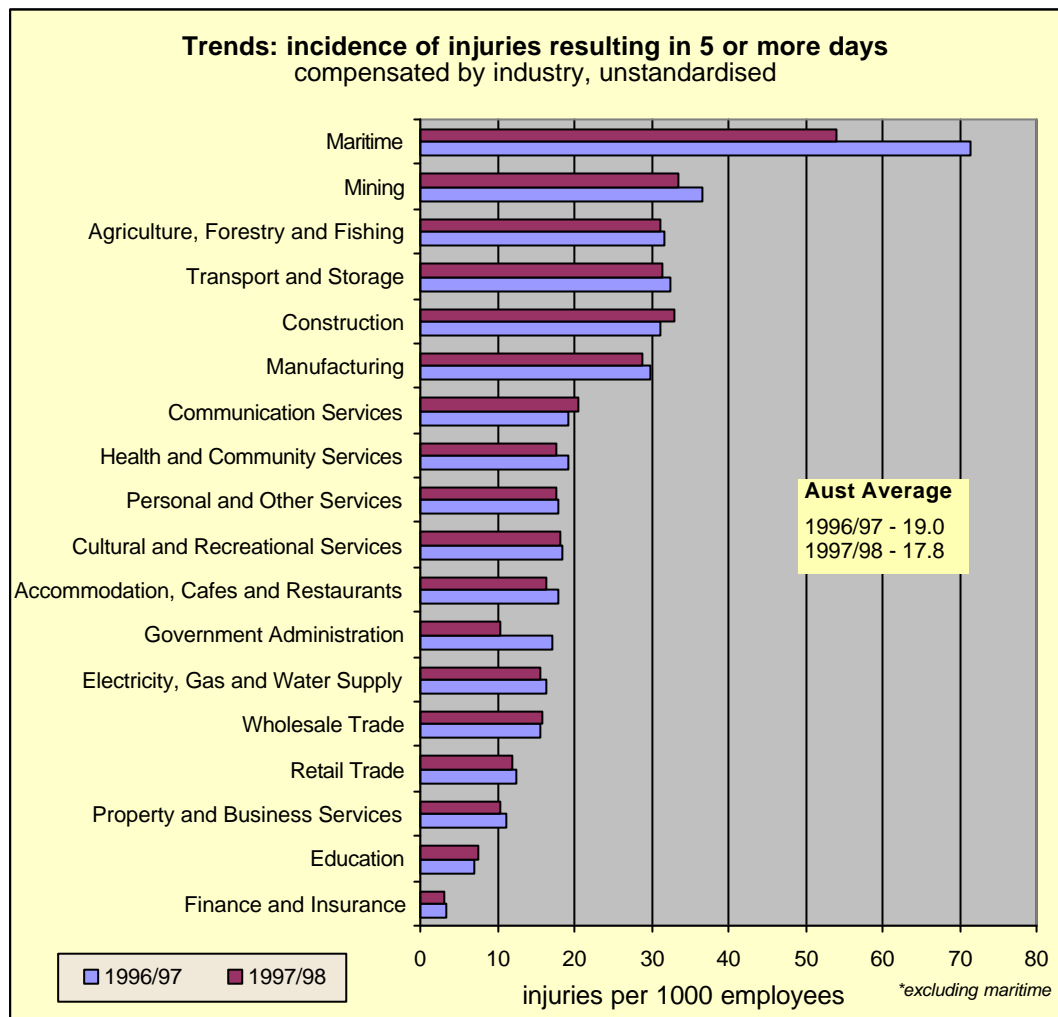


Figure 5a shows how the incidence of injuries varies across different industries for 1996/97 and 1997/98.

The industries with highest incidence of injuries are those industries that involve manual labour and the use of machinery. These industries include: maritime, mining, agriculture, forestry and fishing, construction, transport and storage, and manufacturing. Incidence of injury in these industries was twice the all-industry average.

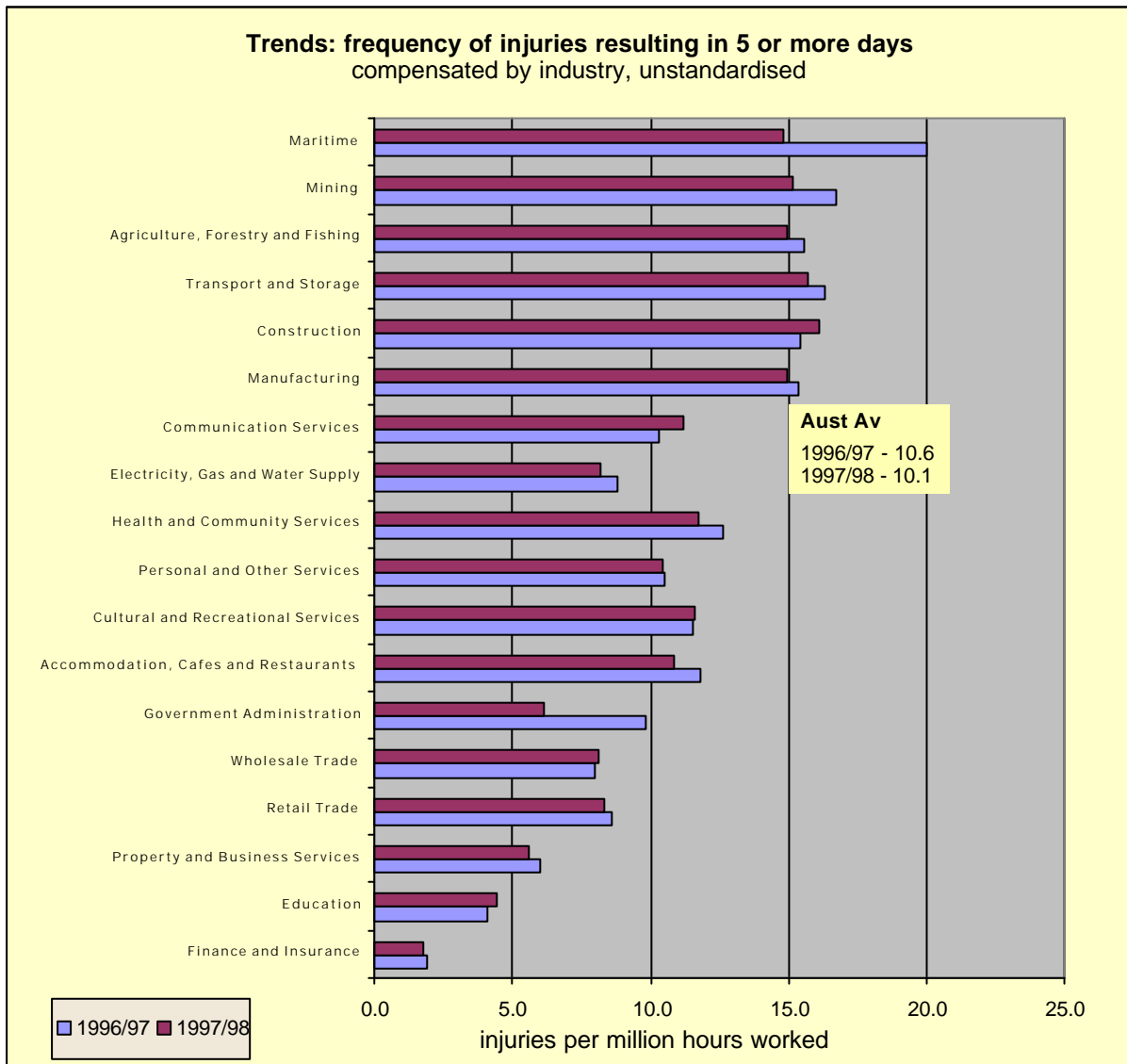
Incidence rates were lowest in the service-based industries: education, retail trade, and property and business services. Lowest of all was finance and insurance, with an incidence rate just one fifth of the Australian industry average. There were also some service industries with quite high incidence rates close to the Australian industry average. These include communication services, health and community services and personal and other services.

Note: The rates reported for the maritime industry in Figures 5a and 5b only represent that sector of the industry covered by the Seacare scheme. For more details on coverage under this scheme contact seacare@dewrsb.gov.au.

Figure 5b shows the national frequency rates per one million hours worked for 1996/97 and 1997/98. The frequency rates reflect the relative outcomes for incidence rates.

The Australian all industry frequency rate for 1996/97 was 10.6 per million hours worked.

Figure 5b



1996/97 - Industry group breakdown

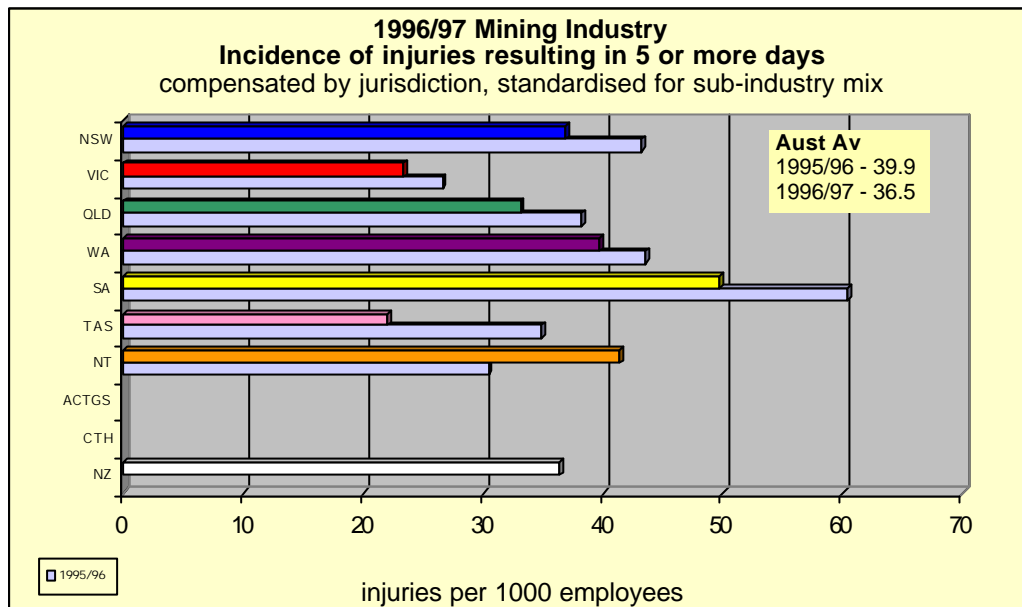
Figures 6a to 10f on the following pages give a more detailed breakdown of industry incidence rates and frequency rates by jurisdiction in 1996/97. Charts are provided for five industry groups that recorded the highest average incidence rates (excluding the maritime industry).

The industry data shown in the charts have been standardised to take account of different 'sub-industry' injury risk profiles within jurisdictions. For example, in mining some jurisdictions have a higher proportion of coal mining which has a higher incidence of injury than metal ore mining.

Mining industry

Figures 6a to 6f show injury rates within the mining industry across jurisdictions and over different timeframes. In NZ, the incidence of injury was 36.3 per 1000 employees.

Figure 6a



	95-96	96-97
NSW	43.3	36.9
VIC	26.6	23.4
QLD	38.3	33.1
WA	43.5	39.7
SA	60.4	49.8
TAS	34.9	22.1
NT	30.4	41.4
ACTGS	NA	NA
CTH	NA	NA
NZ	NA	36.3

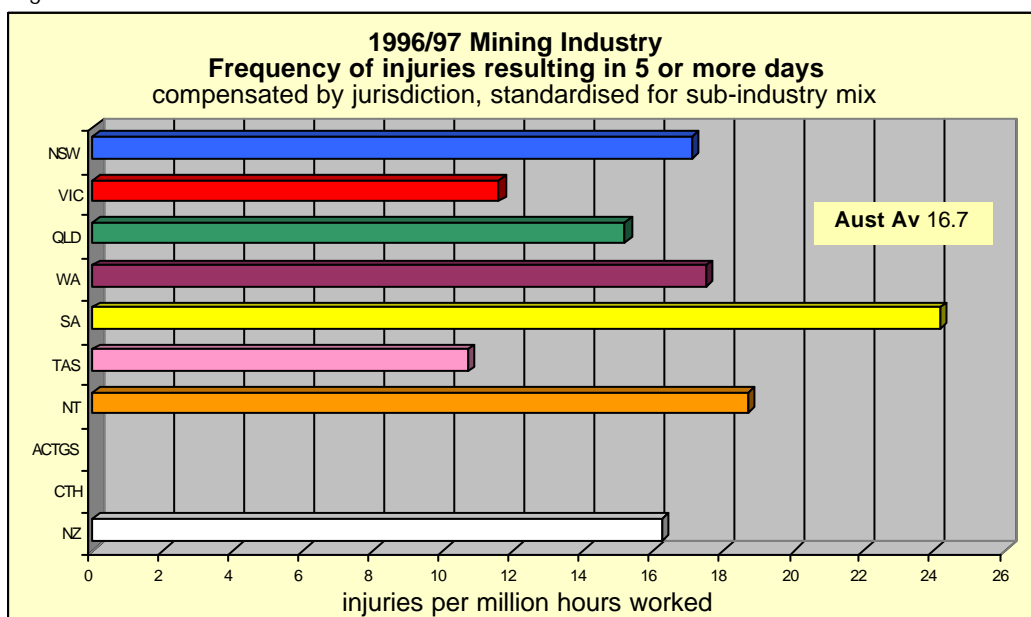
In 1996/97, the national average incidence of injury in the mining industry was 36.5 per 1000 employees, a reduction from the previous year's figure of 39.9 per 1000 employees. A decrease in incidence rates was observed in all jurisdictions except one. Tas and SA both experienced significant falls in incidence rate.

In 1996/97, the national average frequency of injury in the mining industry was 16.7 per million hours worked.

ACT data are unavailable for this figure and the remaining industry figures. The Commonwealth (C'wlth) has little or no activity in the mining industry and so does not appear in the charts.

The incidence rates are subject to considerable variation from year to year, particularly for the smaller jurisdictions.

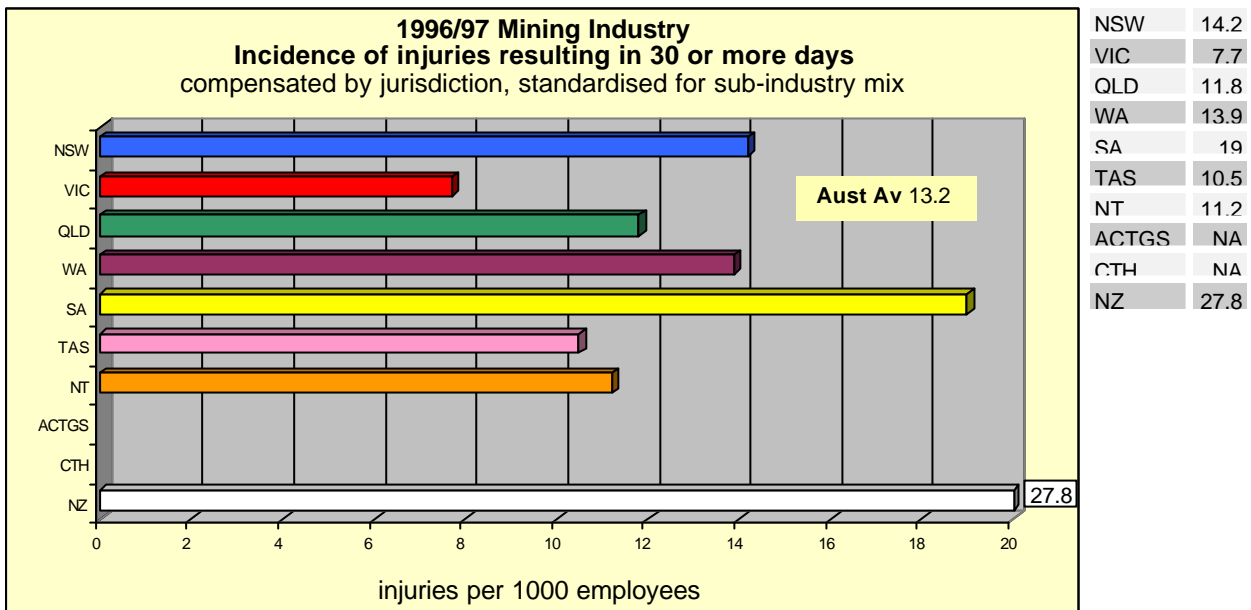
Figure 6b



NSW	17.1
VIC	11.6
QLD	15.2
WA	17.5
SA	24.2
TAS	10.7
NT	18.7
ACTGS	NA
CTH	NA
NZ	16.2

Mining industry

Figure 6c

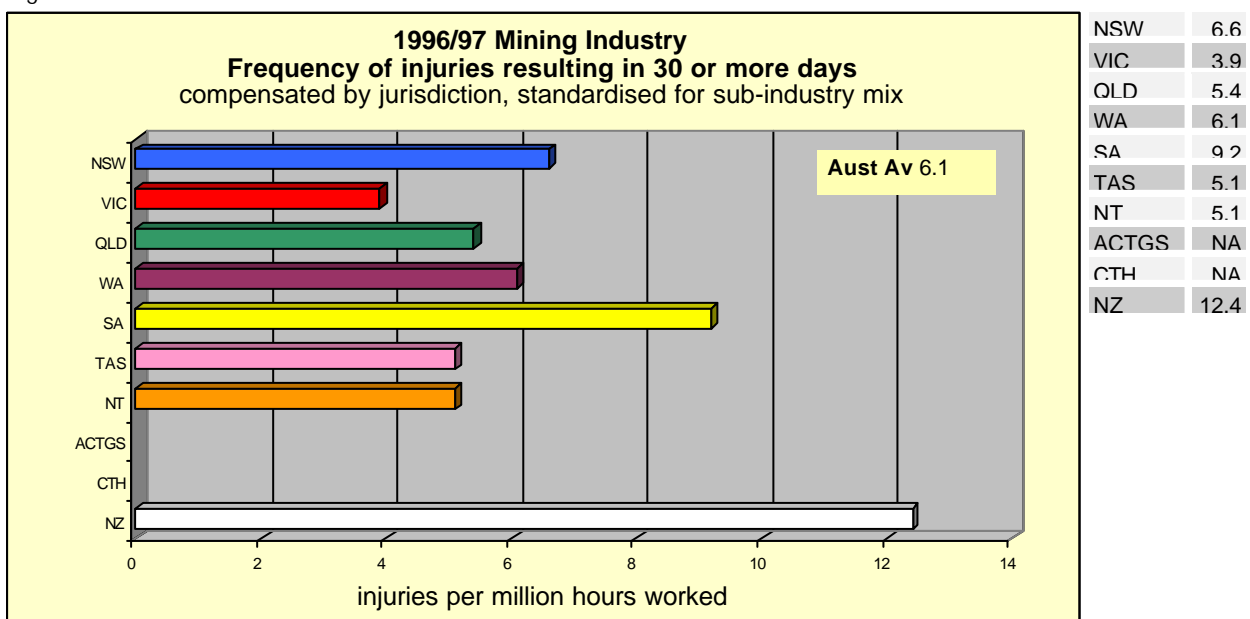


In 1996/97, the national average incidence of injury in the mining industry resulting in 30 or more days compensated was 13.2 per 1000 employees.

In 1996/97, the national average frequency of injury in the mining industry resulting in 30 or more days compensated was 6.1 per million hours worked

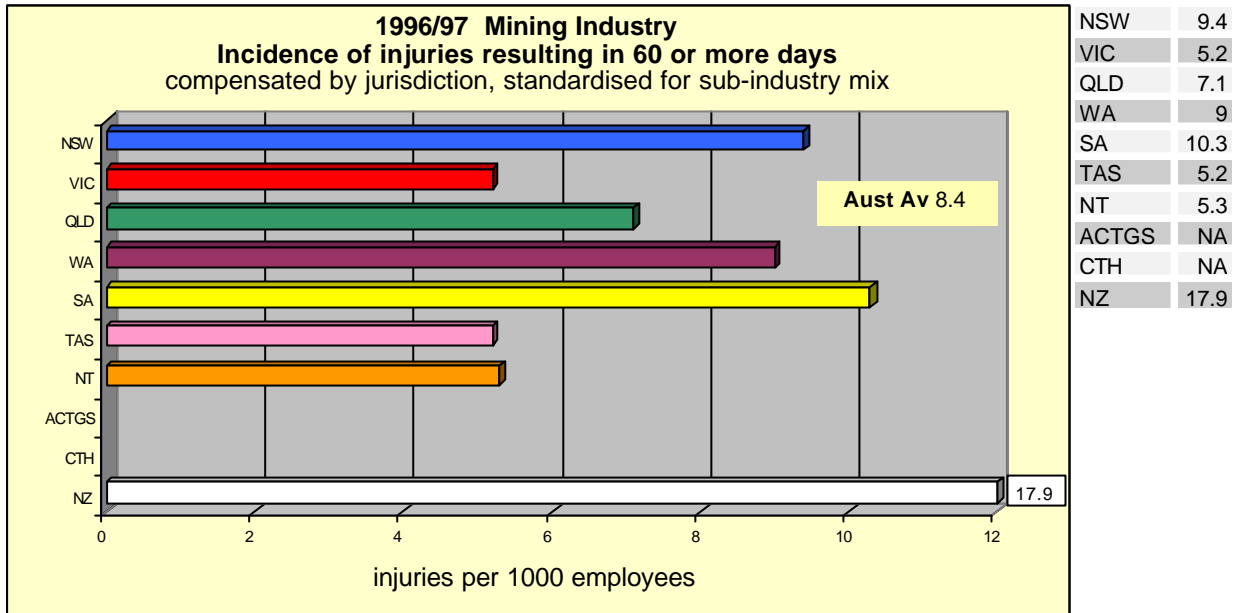
Rates for 30 or more days compensated and 60 or more days compensated are less affected by structural differences to employer excess provisions between the various workers' compensation schemes than are rates for 5 or more days compensated. They are still affected by structural differences relating to longer term claims, such as the availability of workers' compensation redemptions.

Figure 6d



Mining industry

Figure 6e

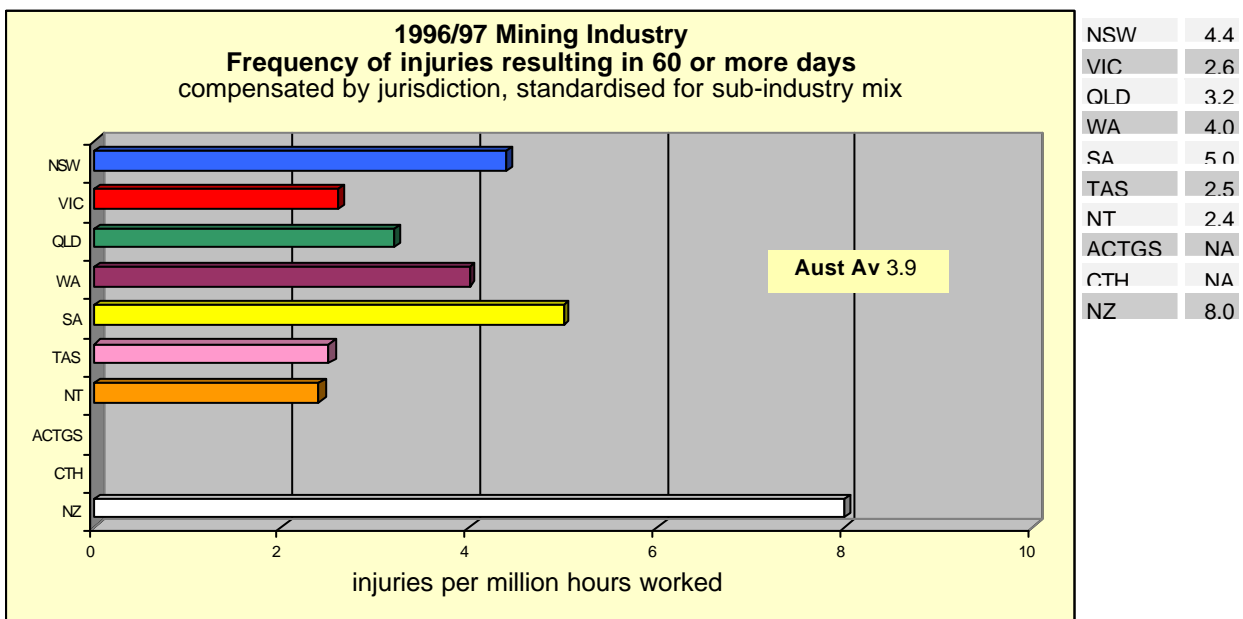


In 1996/97, the national average incidence of injury in the mining industry resulting in 60 or more days compensated was 8.4 per 1000 employees.

In 1996/97, the national average frequency of injury in the mining industry resulting in 60 or more days compensated was 3.9 per million hours worked.

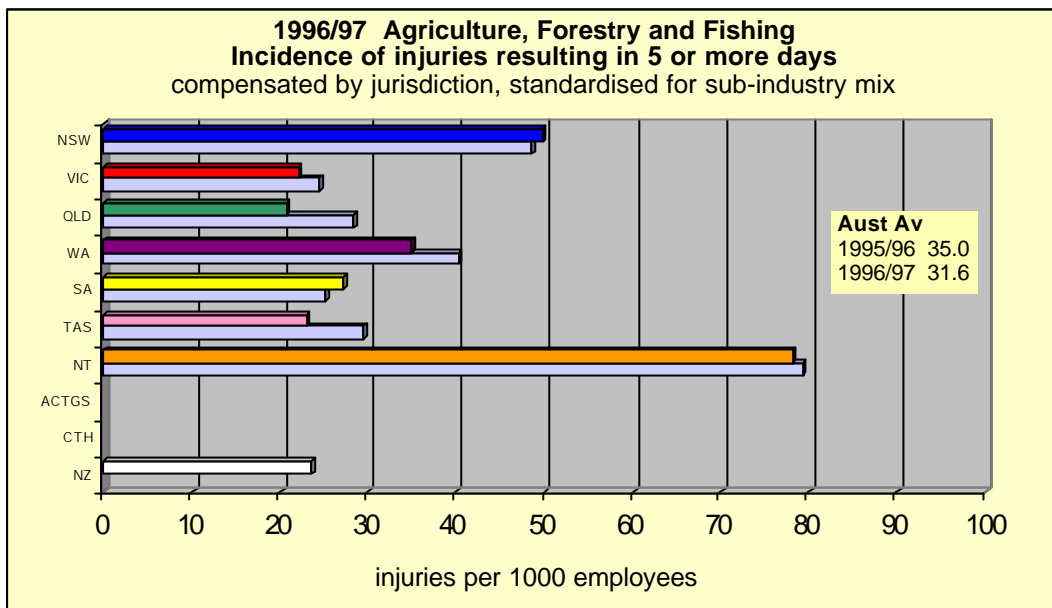
The relative performance of the various jurisdictions was similar for 30 and 60 days.

Figure 6f



Agriculture, Forestry and Fishing

Figure 7a



	95-96	96-97
NSW	48.5	49.7
VIC	24.4	22.1
QLD	28.4	20.7
WA	40.2	34.8
SA	25.2	27.1
TAS	29.5	23.1
NT	79.2	79.1
ACTGS	NA	NA
CTH	NA	NA
NZ	NA	23.7

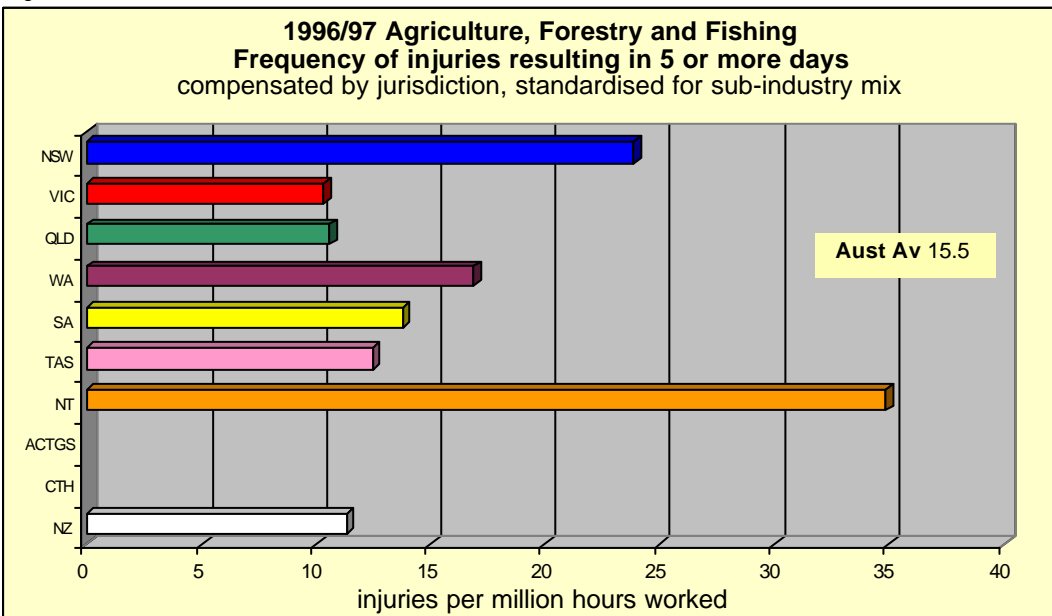
Figures 7a to 7f show injury rates within the agriculture, forestry and fishing industry across jurisdictions and over 5, 30 and 60 days.

In 1996/97, the national average incidence of injury in the agriculture, forestry and fishing industry was 31.6 per 1000 employees, a reduction from the previous year's figure of 35.0 per 1000 employees. A decrease in incidence rates was observed in the majority of jurisdictions, with increases only being experienced in NSW and SA.

In NZ the incidence of injury was 23.7 per 1000 employees.

In 1996/97, the national average frequency of injury in the agriculture, forestry and fishing industry was 15.5 per million hours worked.

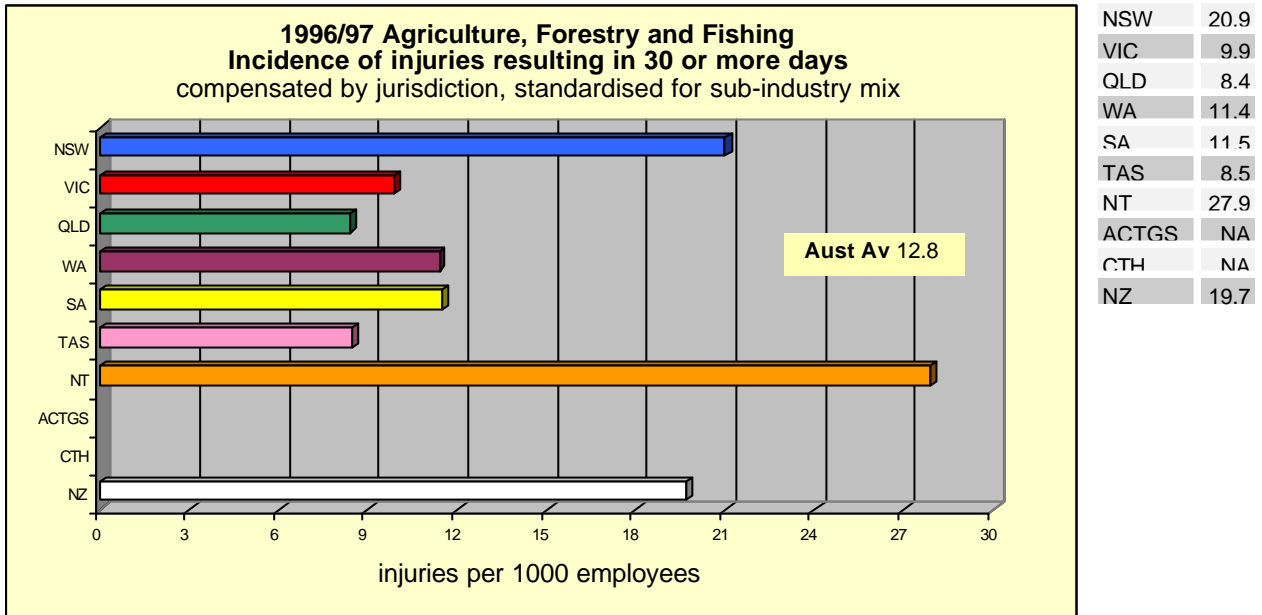
Figure 7b



NSW	23.9
VIC	10.4
QLD	10.6
WA	16.9
SA	13.8
TAS	12.5
NT	34.9
ACTGS	NA
CTH	NA
NZ	11.4

Agriculture, Forestry and Fishing

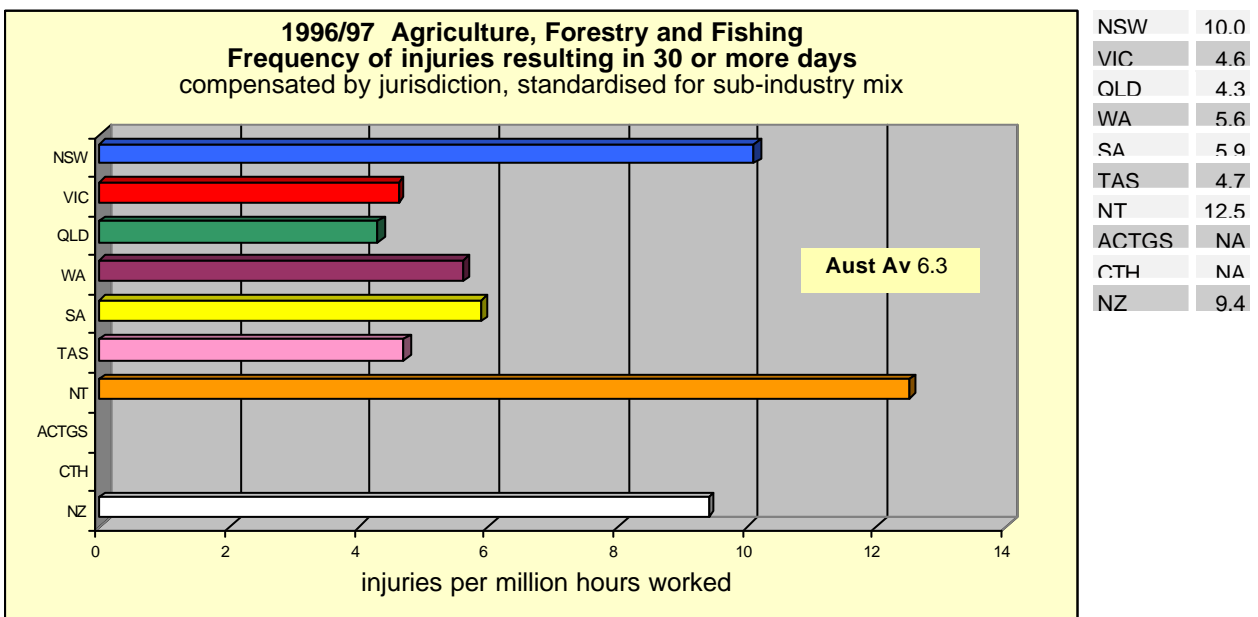
Figure 7c



In 1996/97, the national average incidence of injury in the agriculture, forestry and fishing industry resulting in 30 or more days compensated was 12.8 per 1000 employees.

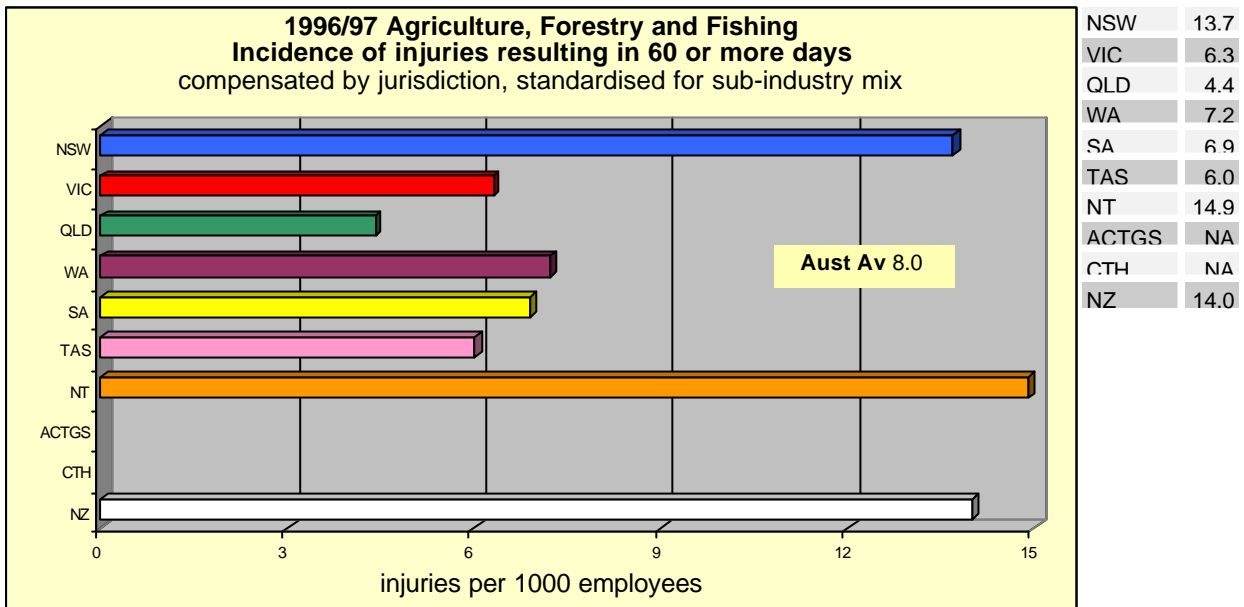
In 1996/97, the national average frequency of injury in the agriculture, forestry and fishing industry resulting in 30 or more days compensated was 6.3 per million hours worked.

Figure 7d



Agriculture, Forestry and Fishing

Figure 7e

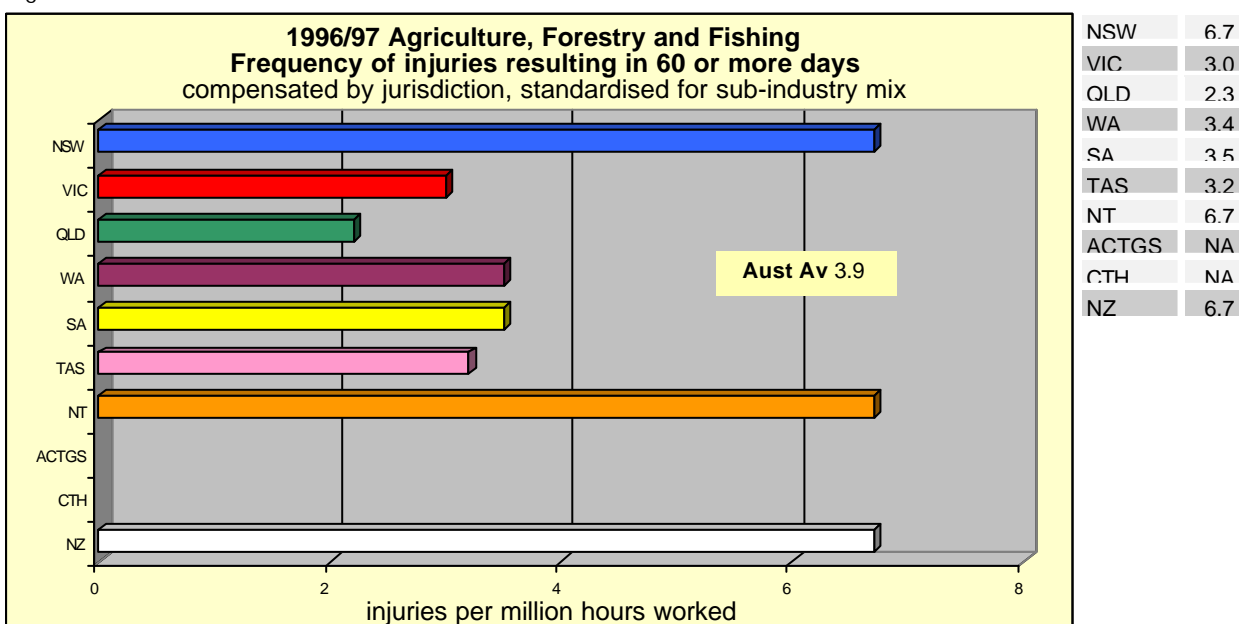


In 1996/97, the national average incidence of injury in the agriculture, forestry and fishing industry resulting in 60 or more days compensated was 8.0 per 1000 employees.

In 1996/97, the national average frequency of injury in the agriculture, forestry and fishing industry resulting in 60 or more days compensated was 3.9 per million hours worked.

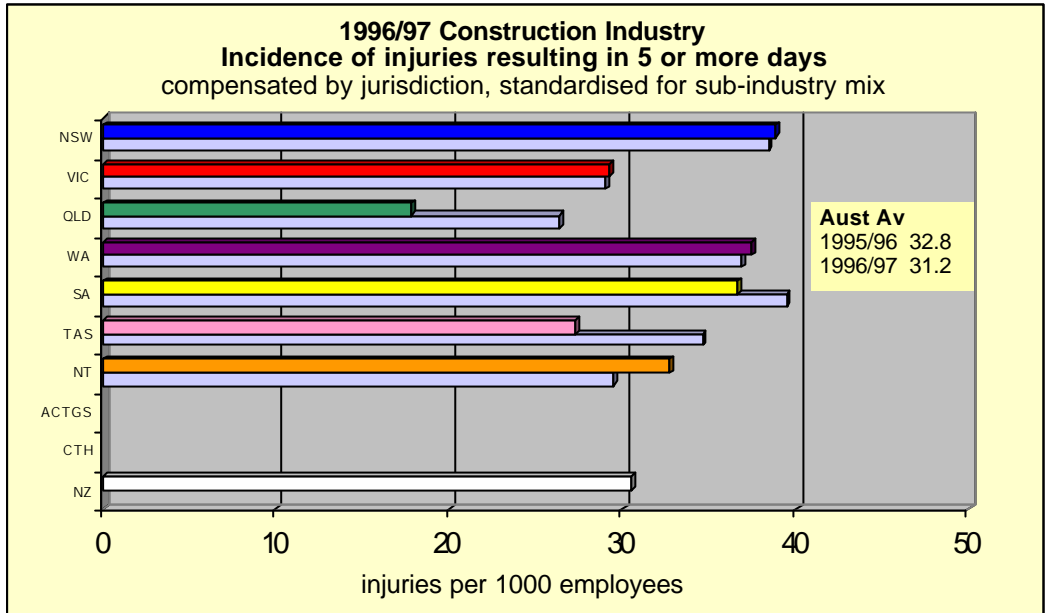
The relative performance of the various jurisdictions was similar for 30 and 60 days.

Figure 7f



Construction industry

Figure 8a



	95-96	96-97
NSW	38.4	38.9
VIC	29.0	29.2
QLD	26.3	17.8
WA	36.9	37.4
SA	39.5	36.7
TAS	34.6	27.3
NT	29.4	32.8
ACTGS	NA	NA
CTH	NA	NA
NZ	NA	30.5

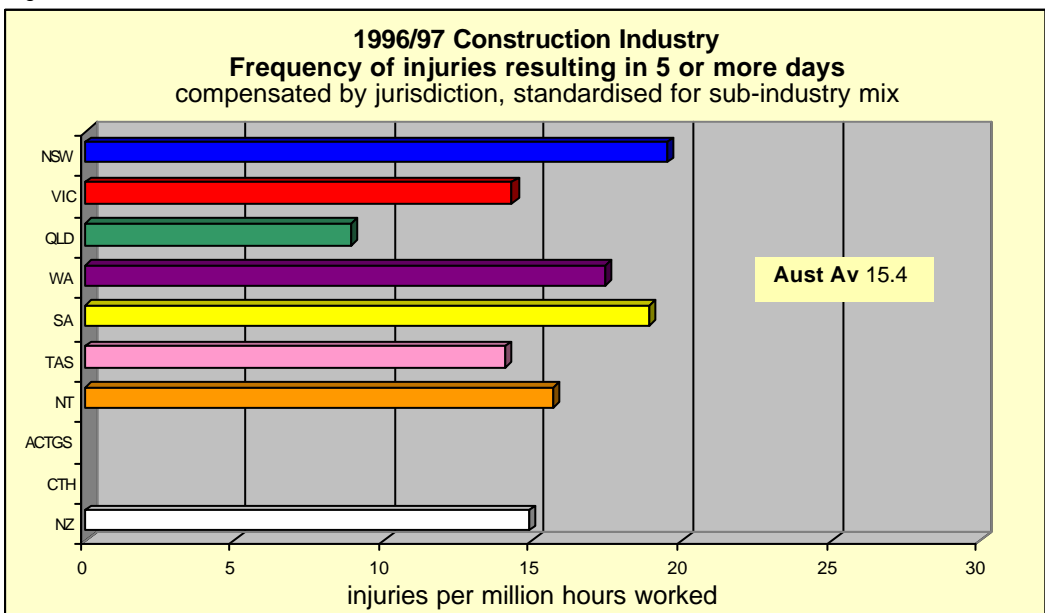
Figures 8a to 8f show injury rates within the construction industry across jurisdictions and over 5, 30 and 60 days.

In 1996/97, the national average incidence of injury in the construction industry was 31.2 per 1000 employees, a reduction from the previous year's figure of 32.8 per 1,000 employees. However, this reduction was heavily influenced by large falls in Qld and Tas. The majority of jurisdictions experienced a marginal increase in incidence rates.

In NZ, the incidence of injury was 30.5 per 1000 employees.

In 1996/97, the national average frequency of injury in the construction industry was 15.4 per million hours worked.

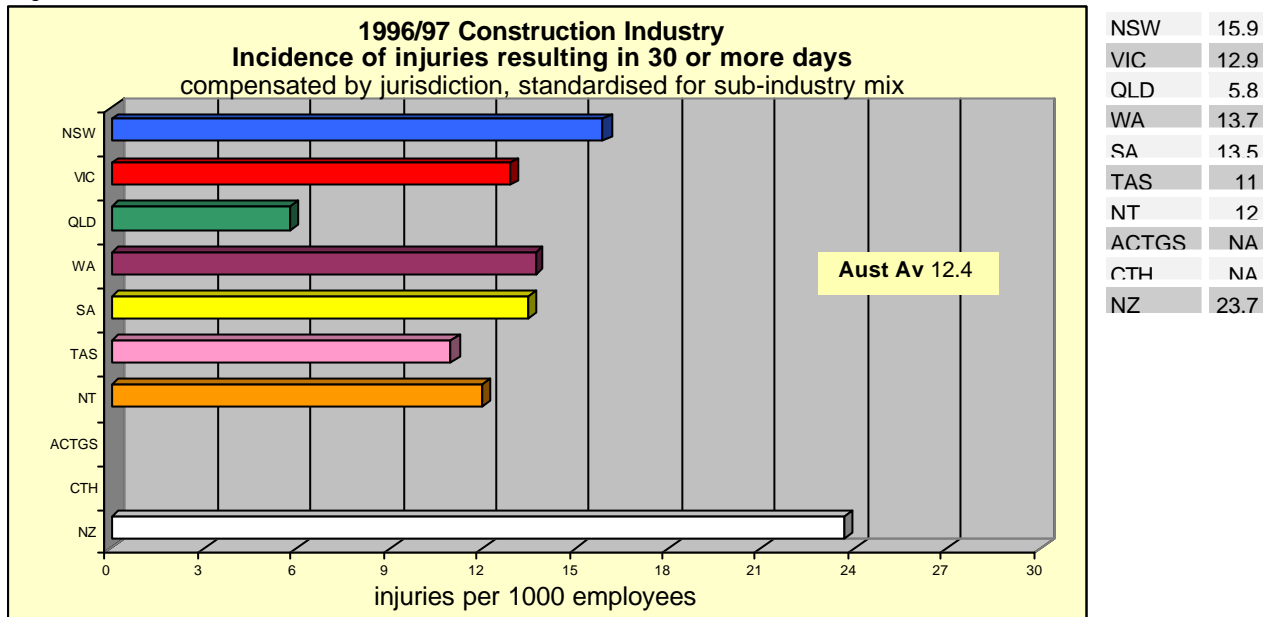
Figure 8b



NSW	19.5
VIC	14.3
QLD	8.9
WA	17.4
SA	18.9
TAS	14.1
NT	15.7
ACTGS	NA
CTH	NA
NZ	14.9

Construction industry

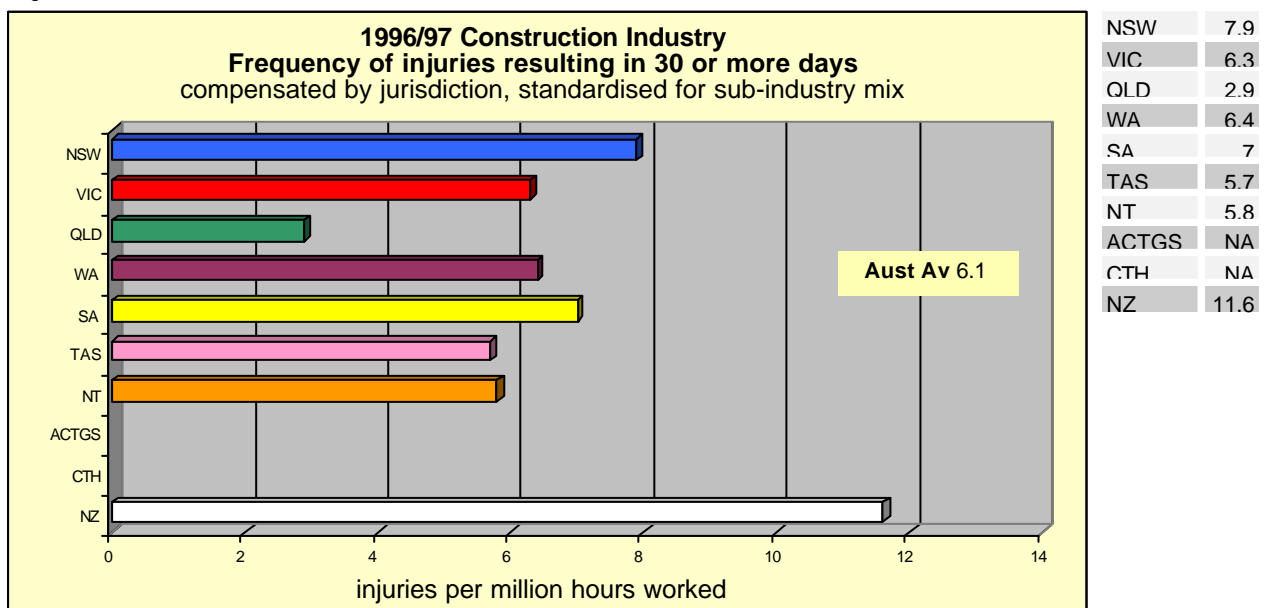
Figure 8c



In 1996/97, the national average incidence of injury in the construction industry resulting in 30 or more days compensated was 12.4 per 1000 employees.

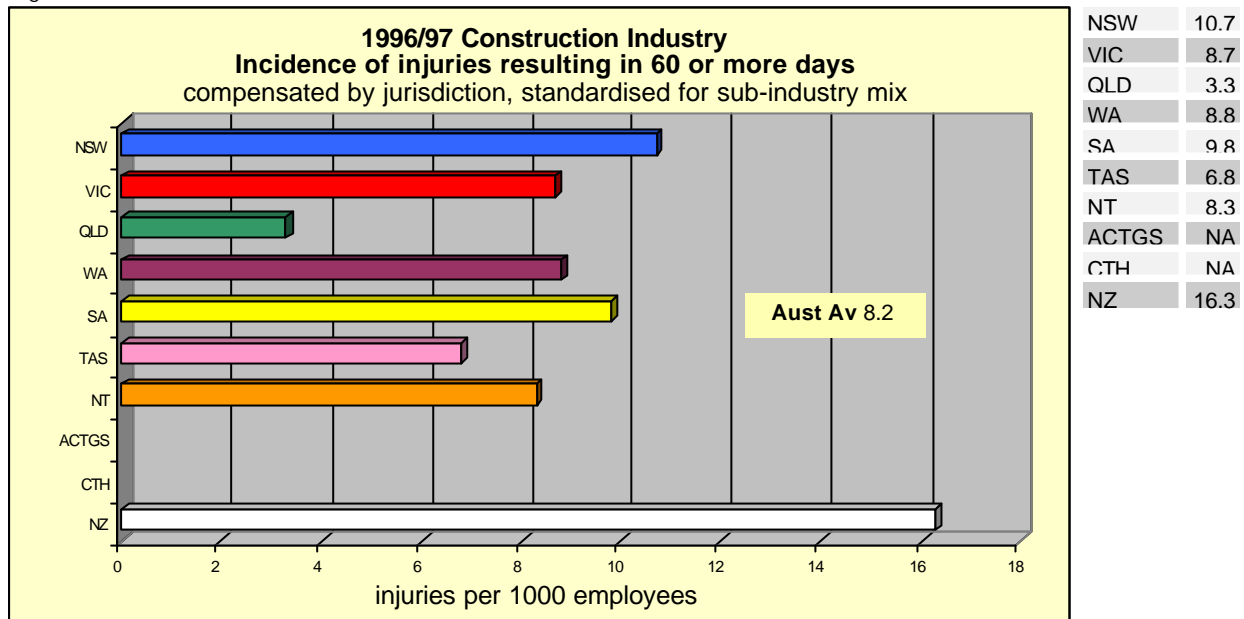
In 1996/97, the national average frequency of injury in the construction industry resulting in 30 or more days compensated was 6.1 per million hours worked.

Figure 8d



Construction industry

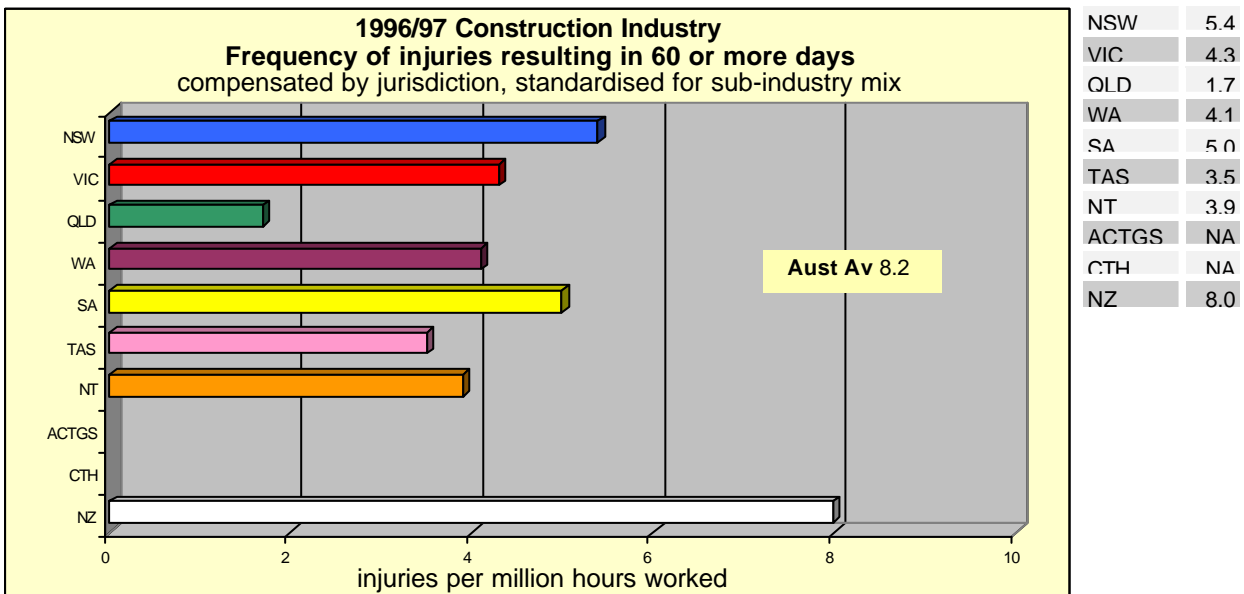
Figure 8e



In 1996/97, the national average incidence of injury in the construction industry resulting in 60 or more days compensated was 8.2 per 1000 employees.

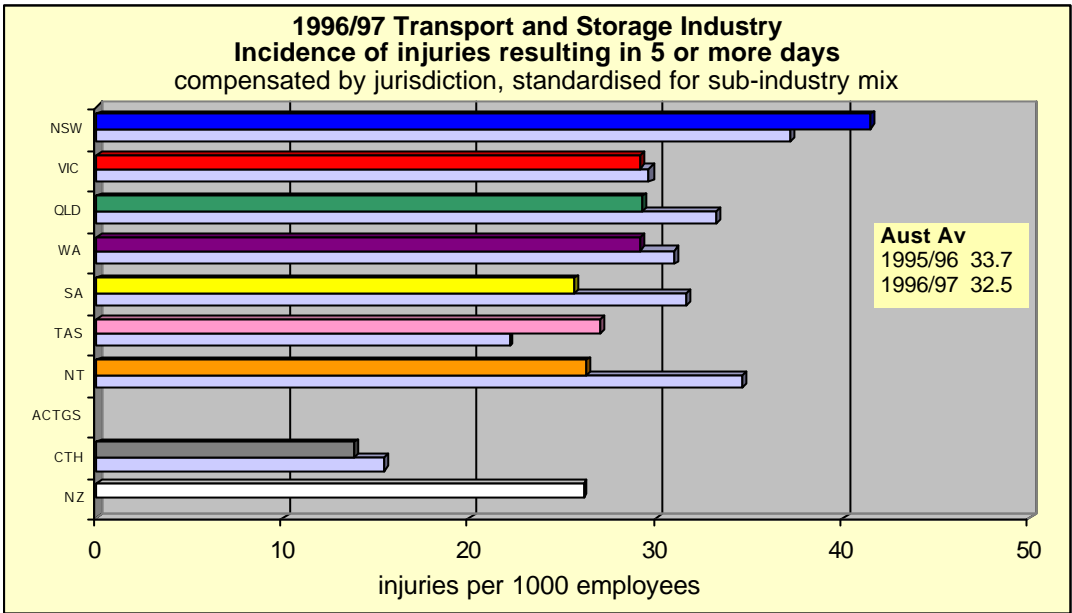
In 1996/97, the national average frequency of injury in the construction industry resulting in 60 or more days compensated was 4.0 per million hours worked.

Figure 8f



Transport and Storage industry

Figure 9a



	95-96	96-97
NSW	37.7	41.4
VIC	29.6	29.2
QLD	33.2	29.3
WA	30.9	29.2
SA	31.6	25.6
TAS	22.1	27.0
NT	34.6	26.3
ACTGS	NA	NA
CTH	15.4	13.8
NZ	NA	26.1

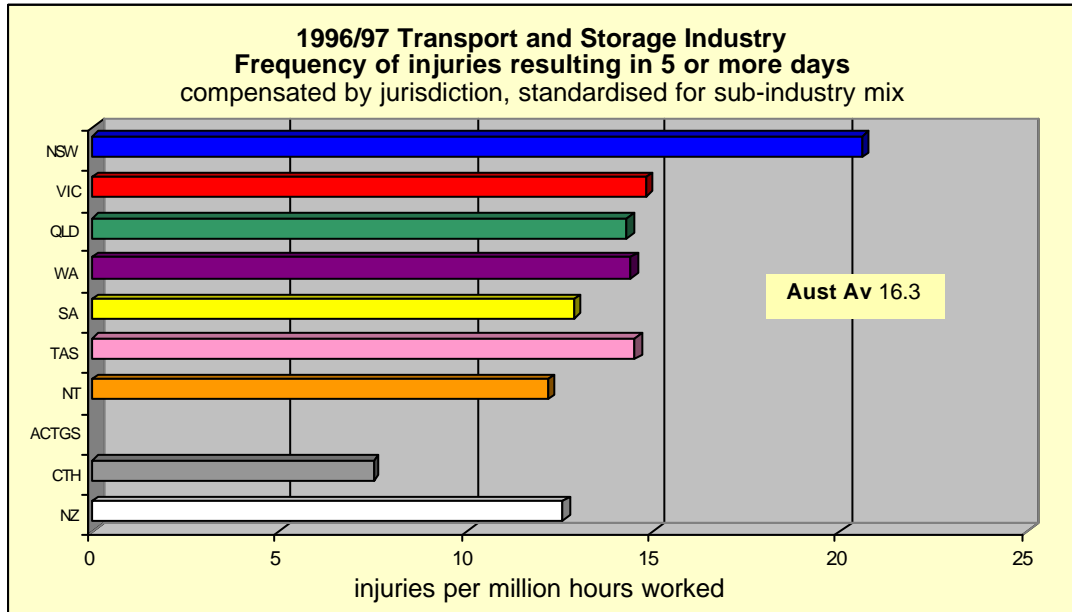
Figures 9a to 9f show injury rates within the transport and storage industry across jurisdictions and over 5, 30 and 60 days.

In 1996/97, the national average incidence of injury in the transport and storage industry was 32.5 per 1000 employees, a slight fall from the previous year's figure of 33.7 per 1000 employees. A decrease in incidence rates was observed in most jurisdictions, with an increase being registered only in NSW.

In NZ the incidence of injury was 26.1 per 1000 employees.

In 1996/97, the national average frequency of injury in the transport and storage industry was 16.3 per million hours worked.

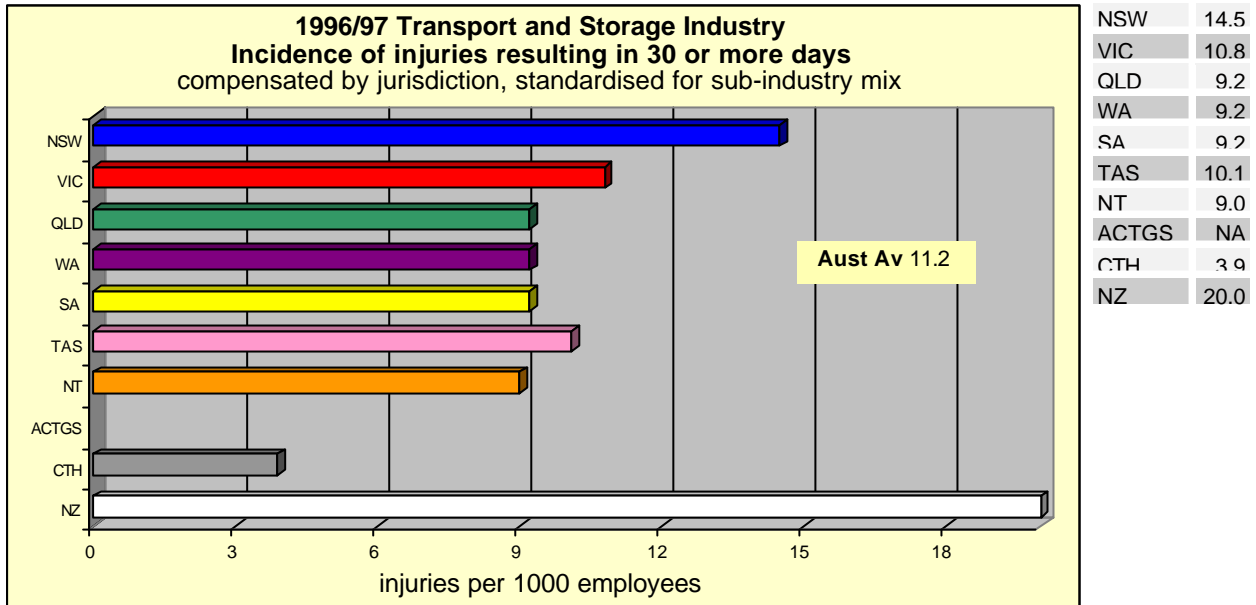
Figure 9b



NSW	20.6
VIC	14.8
QLD	14.3
WA	14.4
SA	12.9
TAS	14.5
NT	12.2
ACTGS	NA
CTH	7.5
NZ	12.6

Transport and Storage industry

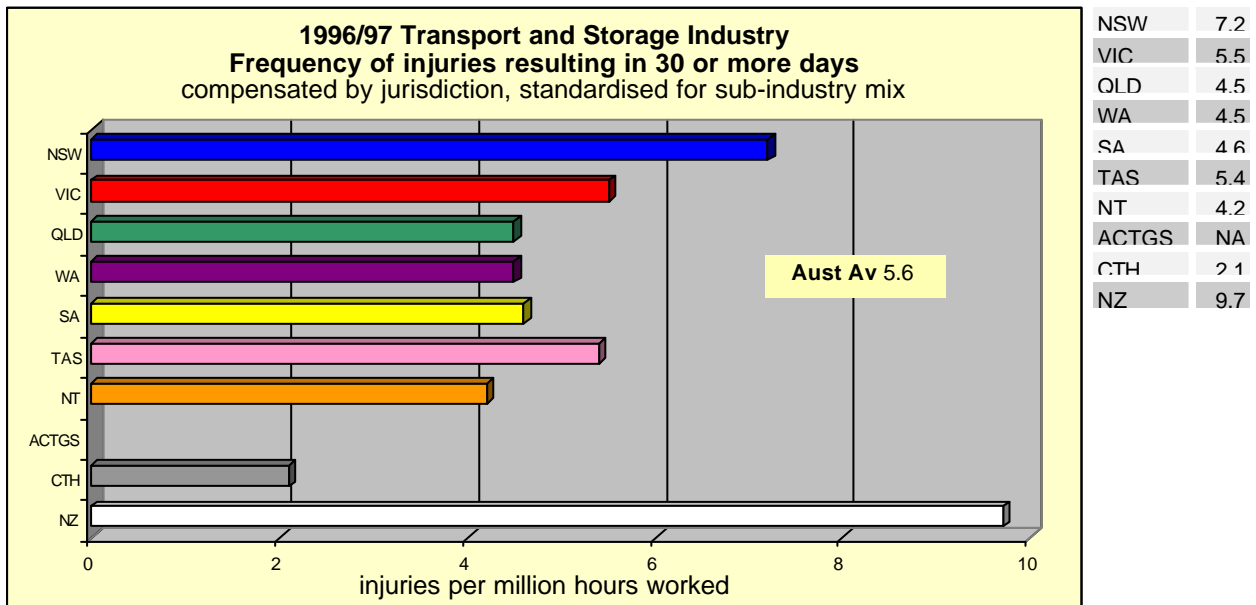
Figure 9c



In 1996/97, the national average incidence of injury in the transport and storage industry resulting in 30 or more days compensated was 11.2 per 1000 employees.

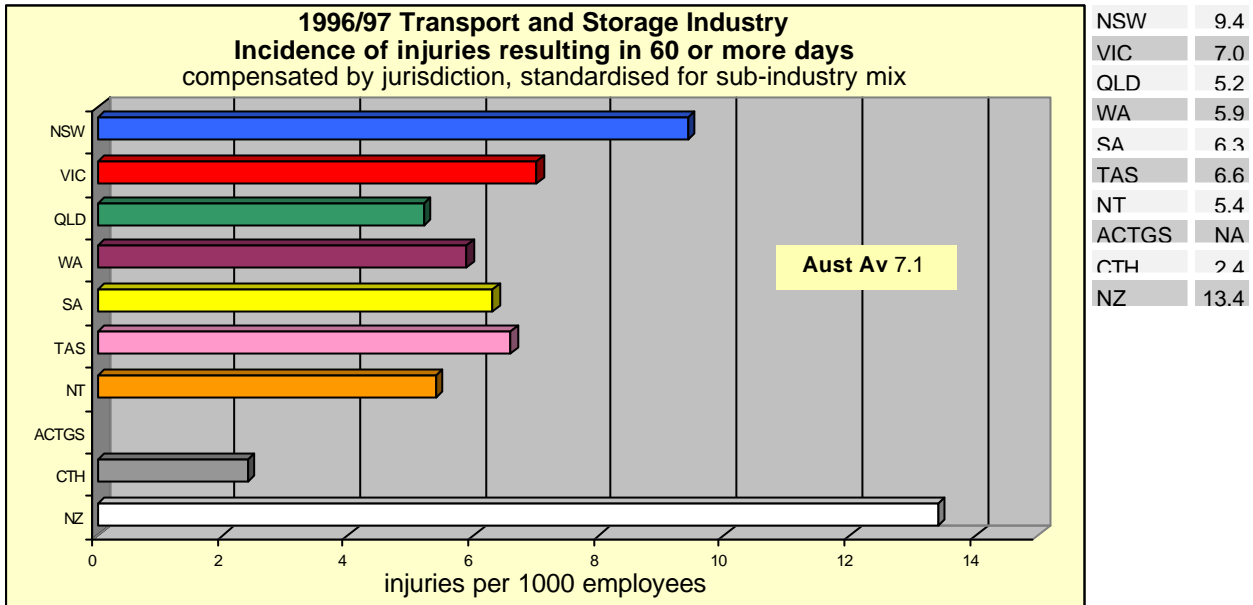
In 1996/97, the national average frequency of injury in the transport and storage industry resulting in 30 or more days compensated was 5.6 per million hours worked.

Figure 9d



Transport and Storage industry

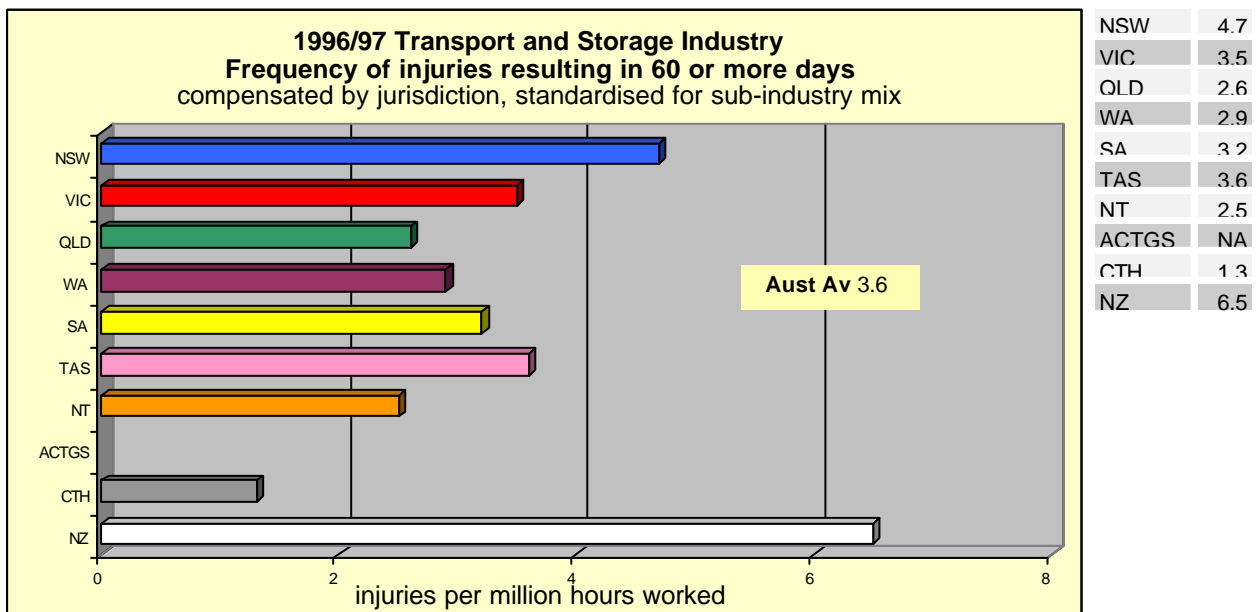
Figure 9e



In 1996/97, the national average incidence of injury in the transport and storage industry resulting in 60 or more days compensated was 7.1 per 1000 employees.

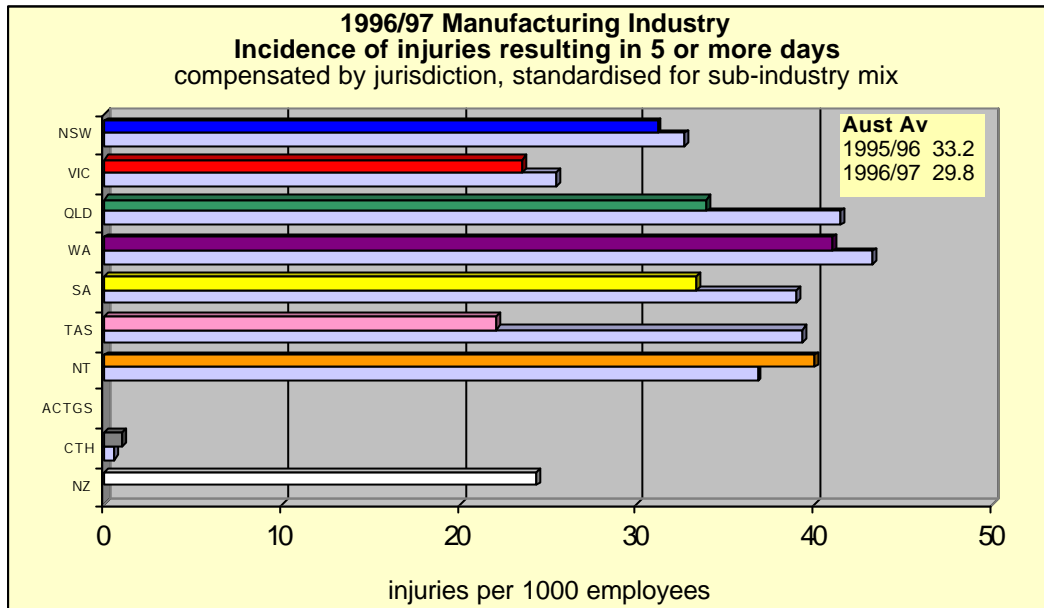
In 1996/97, the national average frequency of injury in the transport and storage industry resulting in 60 or more days compensated was 3.6 per million hours worked.

Figure 9f



Manufacturing industry

Figure 10a



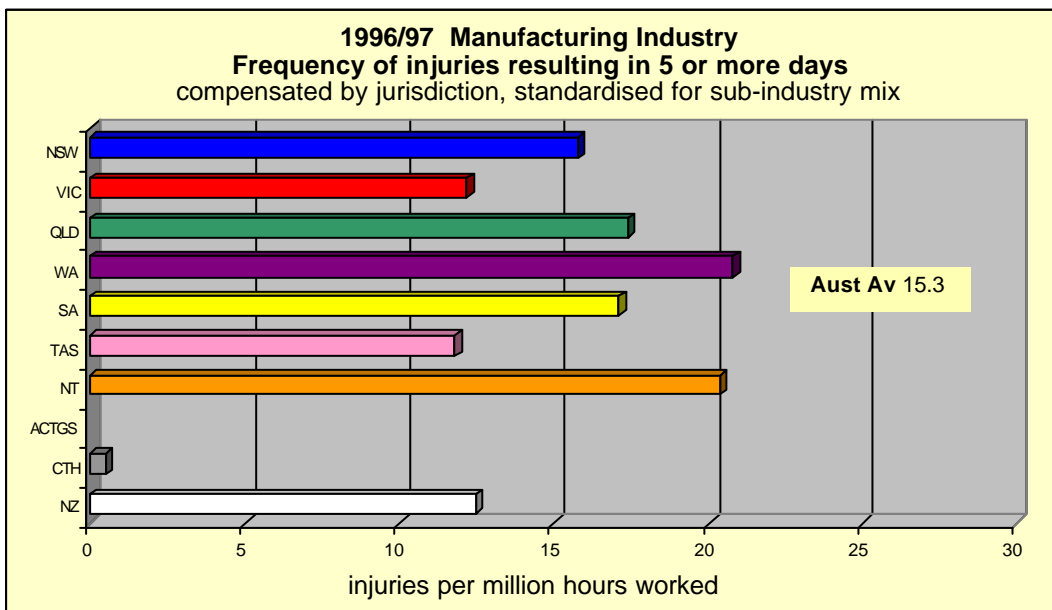
Figures 10a to 10f show injury rates within the manufacturing industry across jurisdictions and over 5, 30 and 60 days.

In 1996/97, the national average incidence of injury in the manufacturing industry was 29.8 per 1000 employees, a significant fall from the previous year's figure of 33.2 per 1000 employees. A fall in incidence rates was recorded in all jurisdictions bar the NT with Tas registering a fall from 39.3 to 22 per 1000 employees.

In NZ the incidence of injury was 24.3 per 1000 employees.

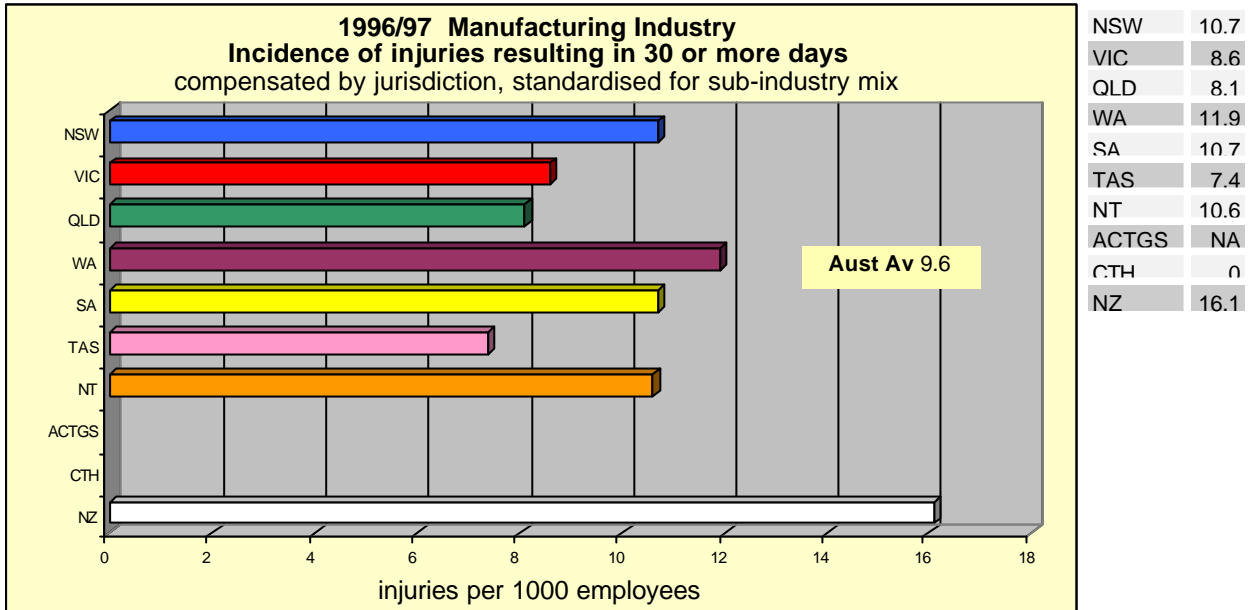
In 1996/97, the national average frequency of injury in the transport and storage industry was 15.3 per million hours worked.

Figure 10b



Manufacturing industry

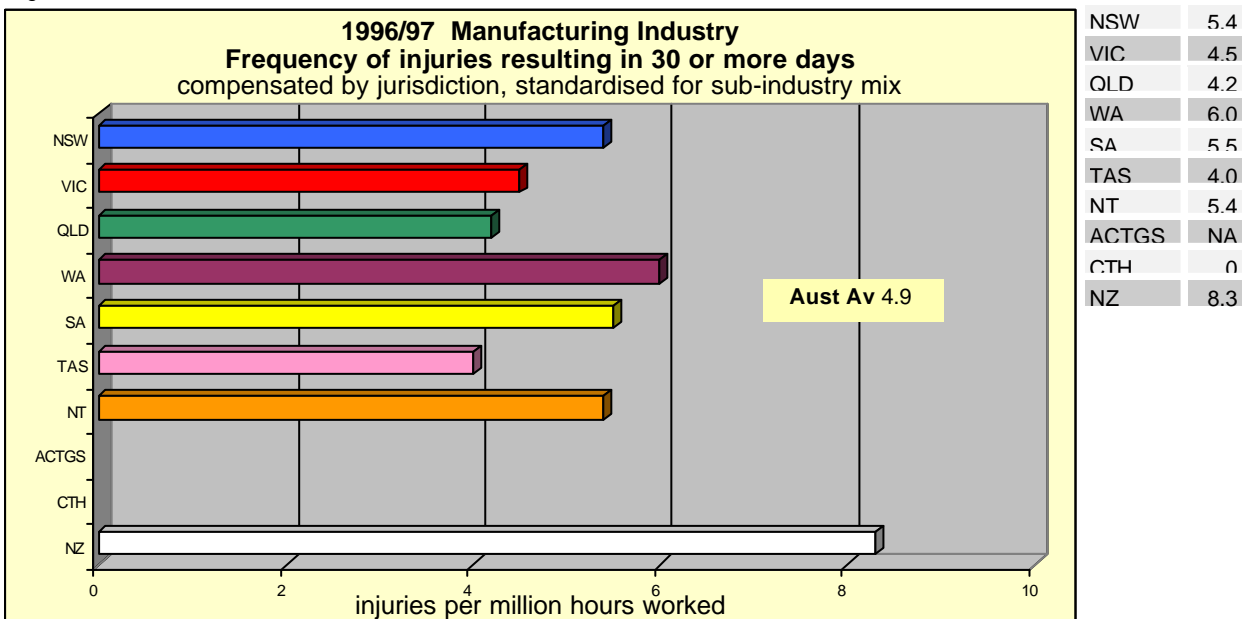
Figure 10c



In 1996/97, the national average incidence of injury in the manufacturing industry resulting in 30 or more days compensated was 9.6 per 1000 employees.

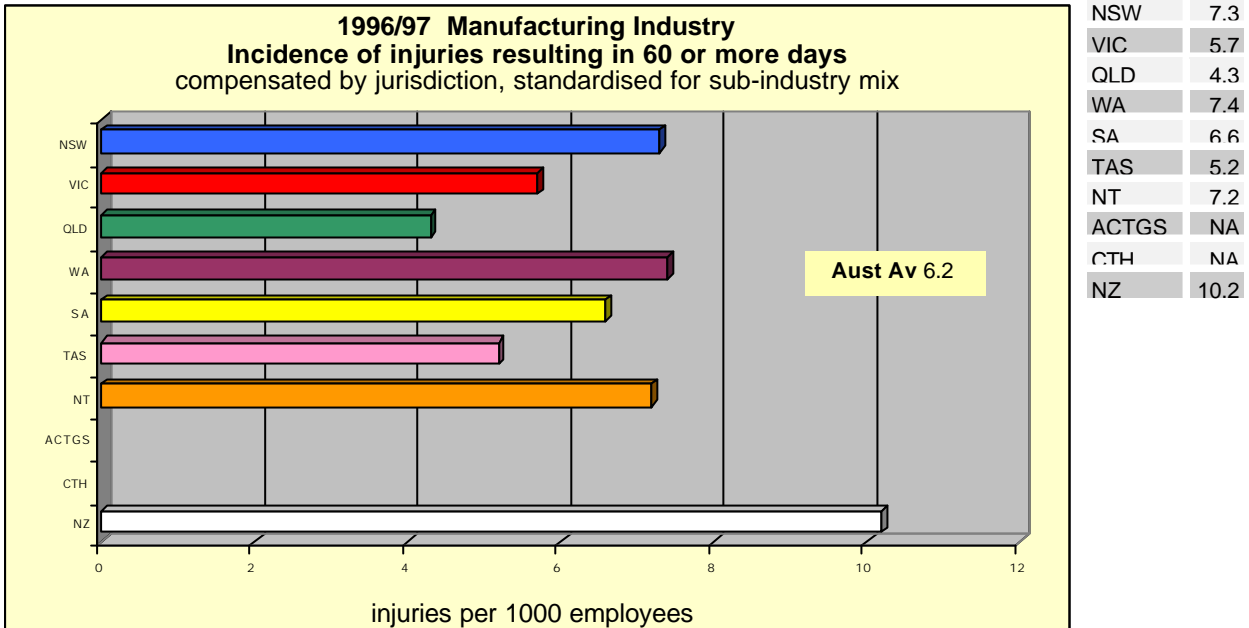
In 1996/97, the national average frequency of injury in the manufacturing industry resulting in 30 or more days compensated was 4.9 per million hours worked.

Figure 10d



Manufacturing industry

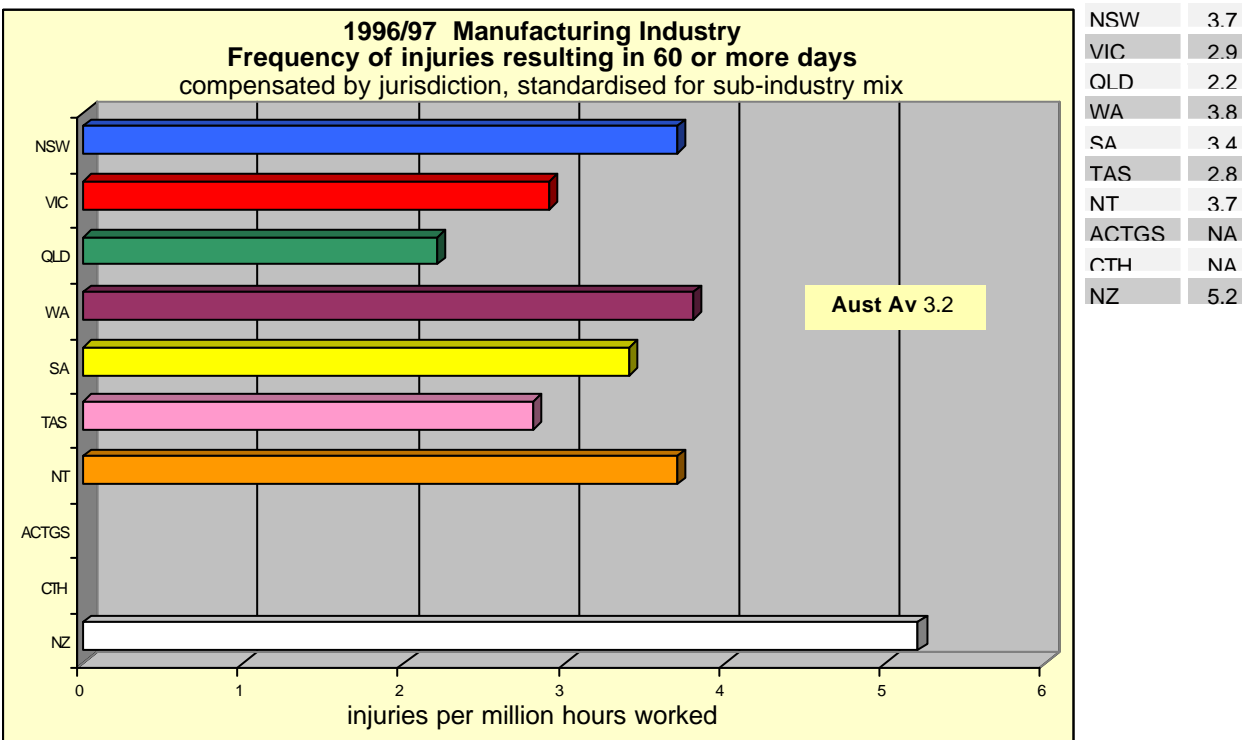
Figure 10e



In 1996/97, the national average incidence of injury in the manufacturing industry resulting in 60 or more days compensated was 6.2 per 1000 employees.

In 1996/97, the national average frequency of injury in the manufacturing industry resulting in 60 or more days compensated was 3.2 per million hours worked.

Figure 10f



Compensated injuries by age group

Figures 11a and 11b show the incidence and frequency rates of compensated injuries for all jurisdictions by 10 year age groups.

Nationally, the over 55 age group had the highest incidence and frequency rates compared to the other age groups; the highest being recorded in NSW, WA and NT. The age group with the highest rates in Tas, SA and Qld was the 25-34 age group, while the age group with the highest rates in C'wlth and Victoria (Vic) was the 35-44 age group. WA had the highest rate for the 15-24 age group followed by NT and NSW, while the C'wlth, Tas and Vic had the lowest rates for this age group.

Generally, the frequency rates reflected the incidence rates although there was slightly less variation between age categories.

Figure 11a

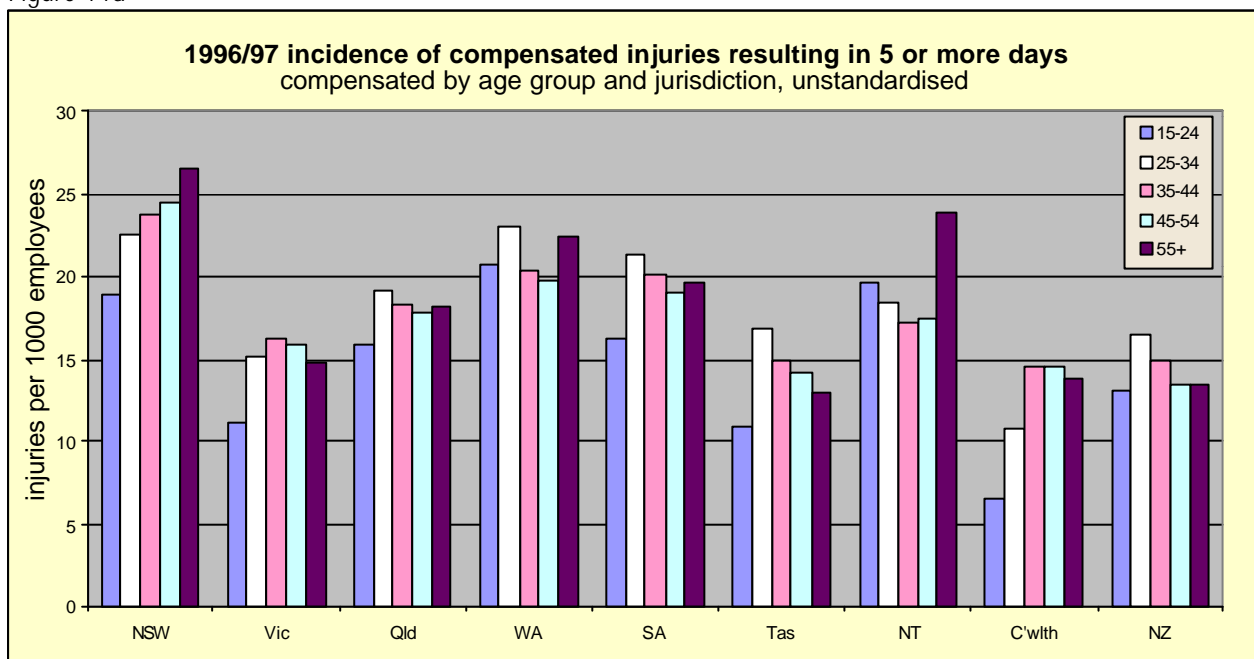
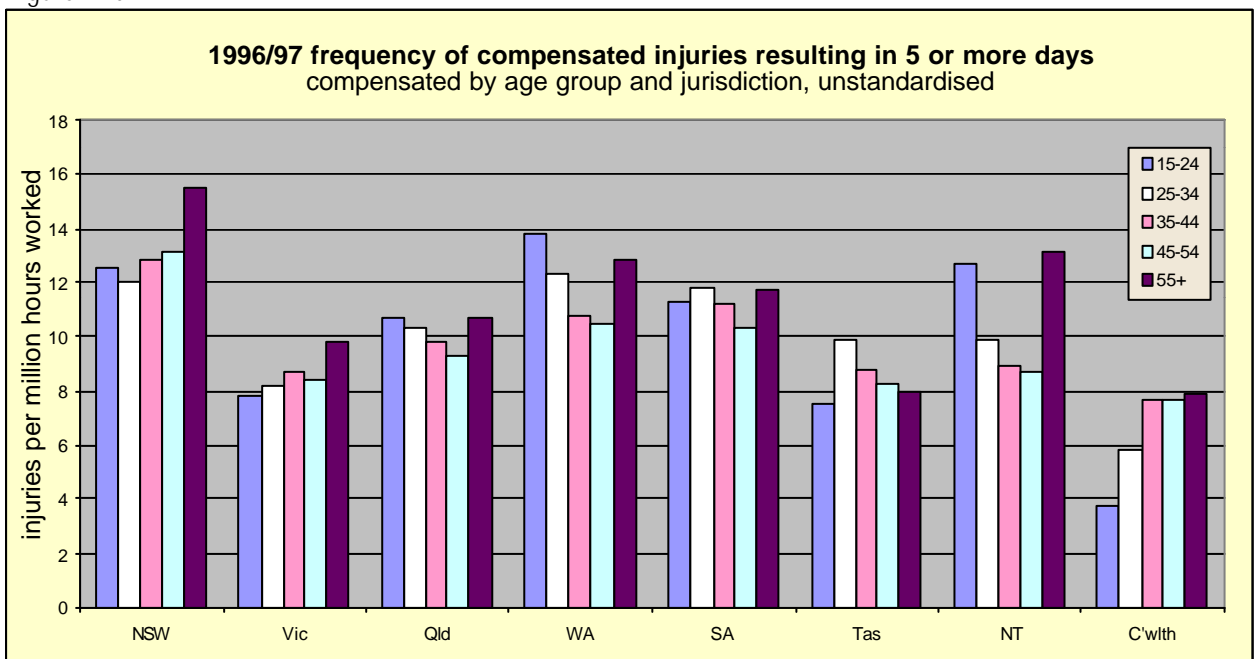
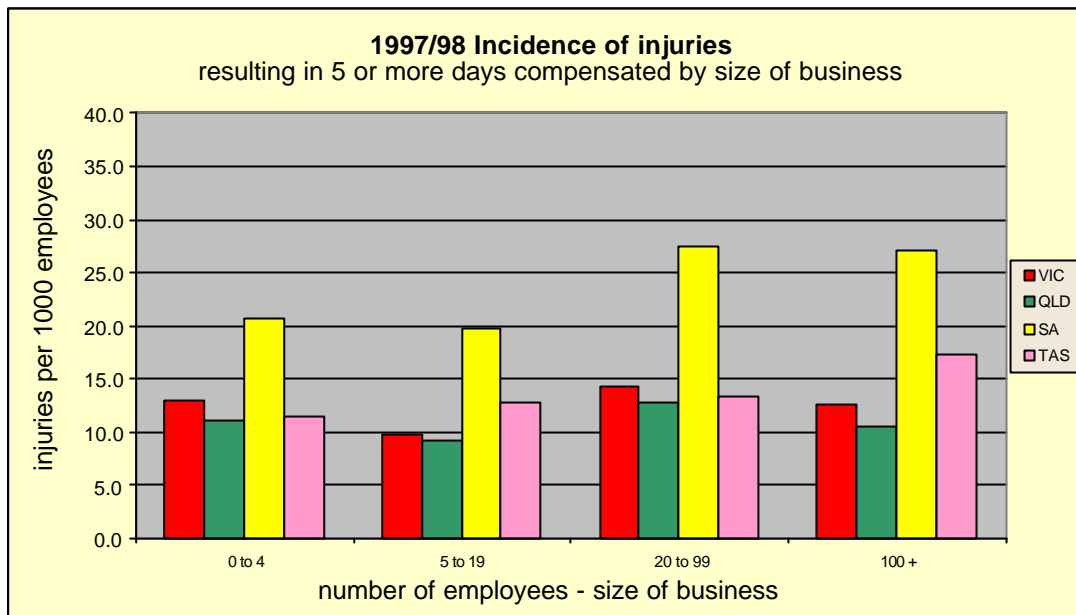


Figure 11b



Compensated injuries by size of business

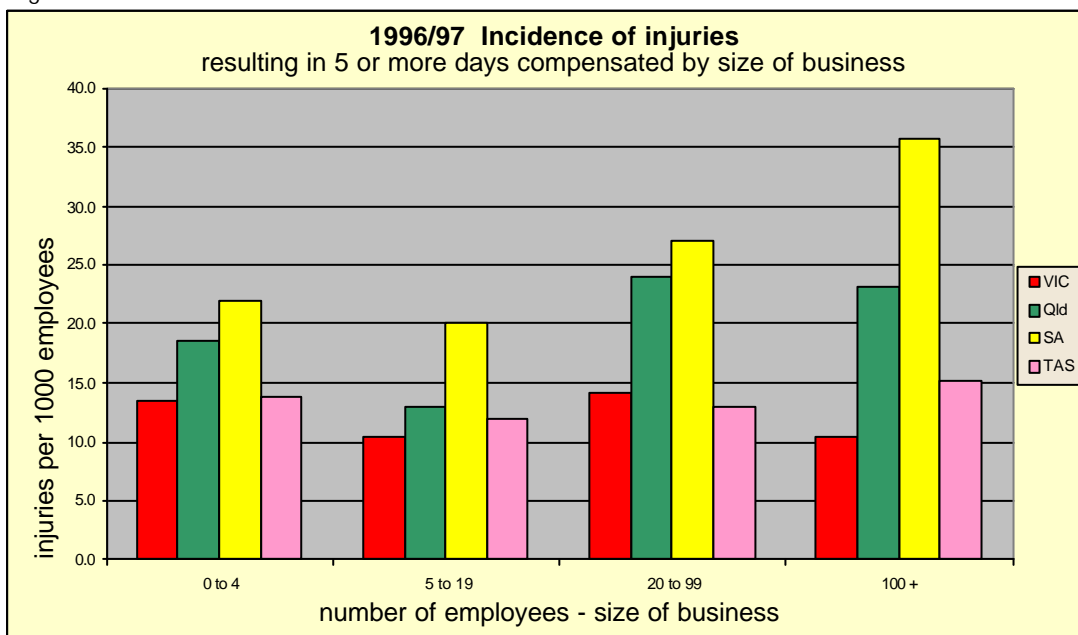
Figure 12a



Figures 12a and 12b provide a broad indication of how the incidence of compensated injuries varies across businesses with different numbers of employees. Not all jurisdictions collect this data, and the method of data collection also varies, with many jurisdictions collecting information at the enterprise rather than the workplace level. For these reasons caution should be exercised when making comparisons between jurisdictions.

Broadly, there has been an improvement in outcomes for most schemes in the majority of business size categories. The figures for SA and Tas illustrate that the incidence of compensated injury was higher in businesses with a larger numbers of employees, although in Vic and Qld such a pattern was not evident. Qld figures for the year 1997/98 are based on employee numbers at the enterprise level, declared annually by policy holders, and drawn from Workcover database records. As a result it should be noted that the estimated incidence rates for Qld are all below the Qld average incidence rate. However, it is the relativity between the rates that is of importance.

Figure 12b



Mechanism of injury

Figure 13

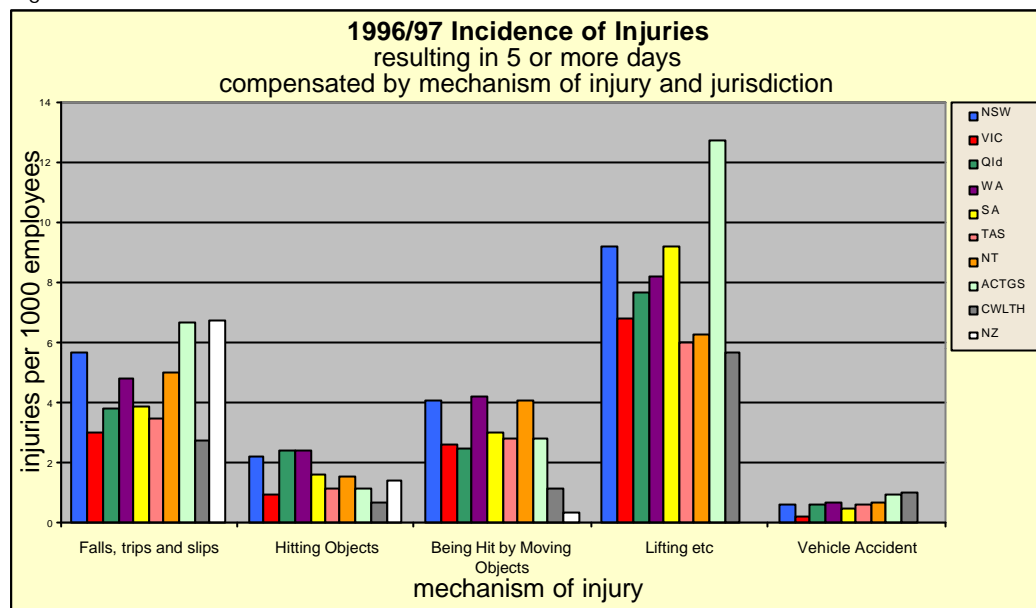


Figure 13 shows the incidence of injuries by five broad categories of mechanism of injury. Nationally, in 1996/97, lifting and other body stressing accounted for 41.7% of all injuries, 'Falls, slips and trips' accounted for 26.6% of injuries, and 'hitting objects' combined with 'being hit by moving objects' accounted for 24.8% of all injuries. This reveals only marginal changes from the preceding year.

Overall, for both periods, the incidence of injury by mechanism of injury across jurisdictions was broadly similar to the national pattern. Of note:

- NZ does not distinguish between work-related and non-work-related vehicle incidents;
- NT and WA had a relatively high proportion of injuries caused by 'hitting objects/being hit by objects'; and
- Qld incidence rates were close to the national average, however, Qld had a relatively low proportion of injuries caused by 'falls, slips and trips'.

Incidence of injury by mechanism of injury in individual industries broadly reflected the overall incidence of injury in each industry. Of note:

- industries with a high overall incidence of injuries had a comparatively low proportion of injuries caused by 'lifting/body stressing'. The only one of these industries with an above average proportion of 'lifting/body stressing' was manufacturing (43% of all manufacturing injuries), compared with the national average of 42%;
- service-based industries had high incidence rates in the 'lifting/body stressing' category, for example, and although Communications Services and Health and Community Services had average overall incidence rates, they had higher than average incidence rates in respect of 'lifting/body stressing' injuries;
- other service-based industries had a comparatively high proportion of injuries caused by 'falls, trips and slips' (ie. Accommodation, Cafes and Restaurants (28% of all injuries), Cultural and Recreational Services (35%) and Personal and Other Services (29%), while the national average was 23%); and
- in the 'lifting/body stressing' category, manufacturing and transport and storage had the highest incidence of injury (14 per 1000 employees). Agriculture, forestry and fishing had the highest incidence of injuries (13 per 1000 employees) caused by 'hitting objects/being hit by objects'. Mining and construction had the highest incidence of injuries (9.4 per 1000 employees) caused by 'falls, slips and trips'.

Bodily location of injury

Figure 14

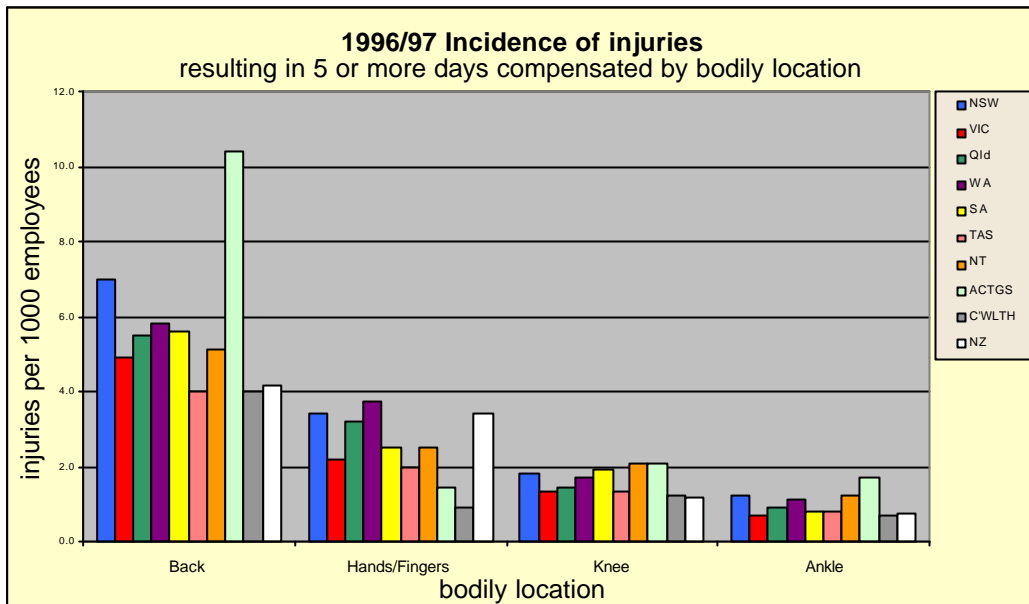


Figure 14 indicates the incidence of injuries categorised by the bodily location of the injury. The incidence rates and their relative proportions have remained generally unchanged over the two years for which data is available.

Nationally, 30% of all injuries were to the back. 15% of all injuries were to the hands/fingers.

Of the injuries caused by 'lifting/body stressing', nearly 60% were to the back, with another 30% to the upper and lower limbs. Of the injuries caused by 'falls, slips and trips', 25% were to the ankle/foot, 25% were to the upper and lower limbs, and 20% to the back. Of those injuries caused by 'hitting objects/being hit by objects', 60% of injuries were to the hands/fingers. The remaining injuries were widely distributed to the other parts of the body.

Fatalities

Figure 15a

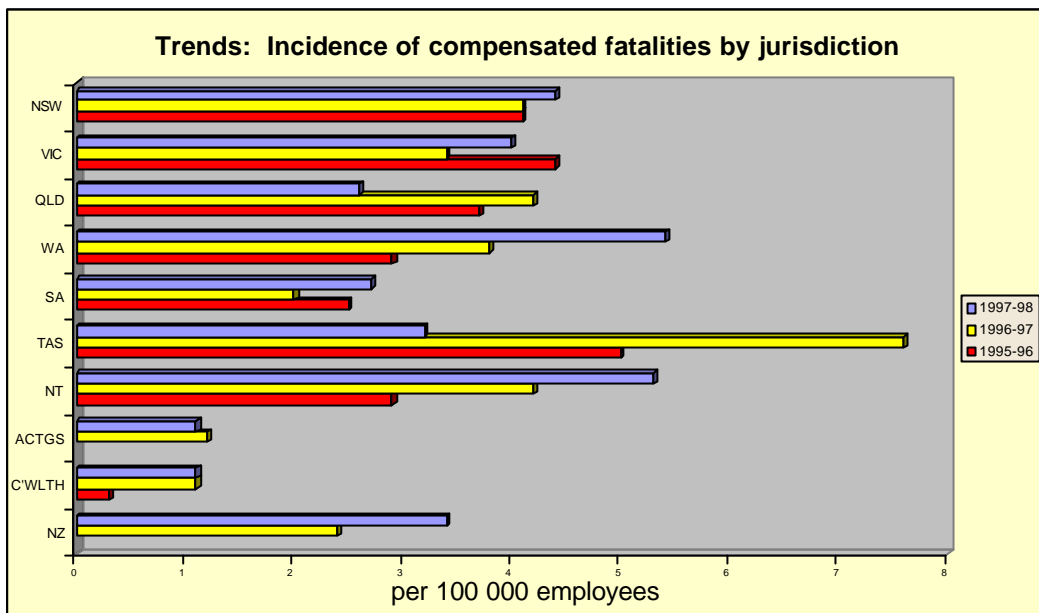


Figure 15a illustrates the incidence of traumatic fatalities in each jurisdiction in 1997/98 and the preceding two years. The incidence is per 100 000 employees, not per 1000 employees.

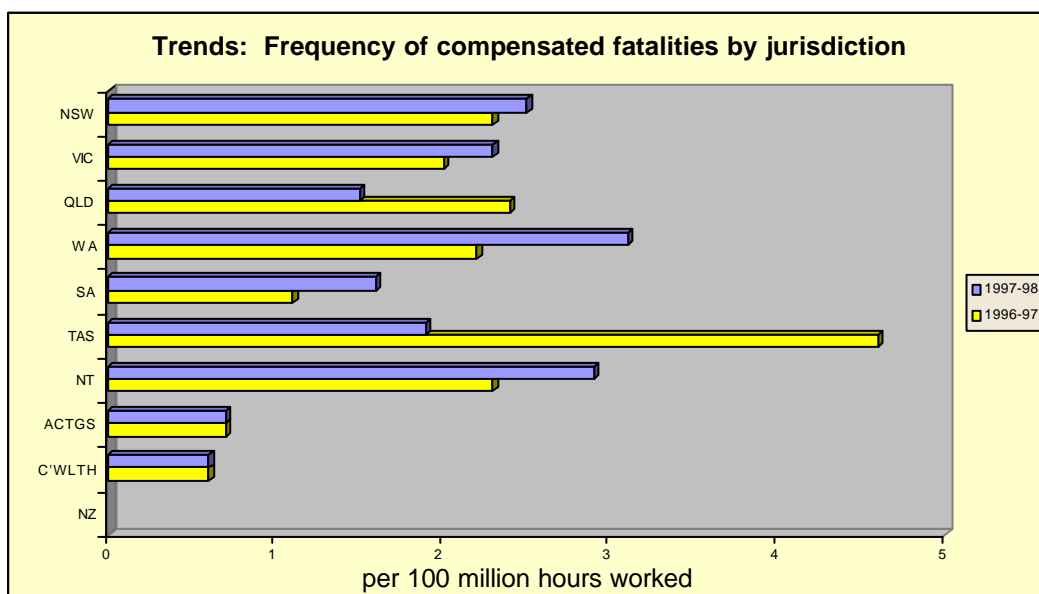
Figure 15b illustrates the frequency of traumatic fatalities in each jurisdiction over two years. The frequency rate is per 100 million hours worked, not per one million hours worked.

The actual number of compensated work-related fatalities in Australia was 270 in 1997/98, 269 in 1996/97 and 261 in 1995/96. The figure for 1997/98 includes fatalities in the ACT whereas the figures for preceding years do not. There were no fatalities recorded for the Seacare scheme over these periods.

As the number of incidents involving fatalities is low, it is difficult to compare data between jurisdictions or over time as the figures are too small to allow confident conclusions to be drawn. NZ data is sourced from the NZ Occupational Safety and Health fatality register.

Both charts exclude disease-related fatalities. More comprehensive information on work-related fatalities is expected to become available following the implementation of a National Coronial Information System.

Figure 15b



Fatalities by industry group - incidence

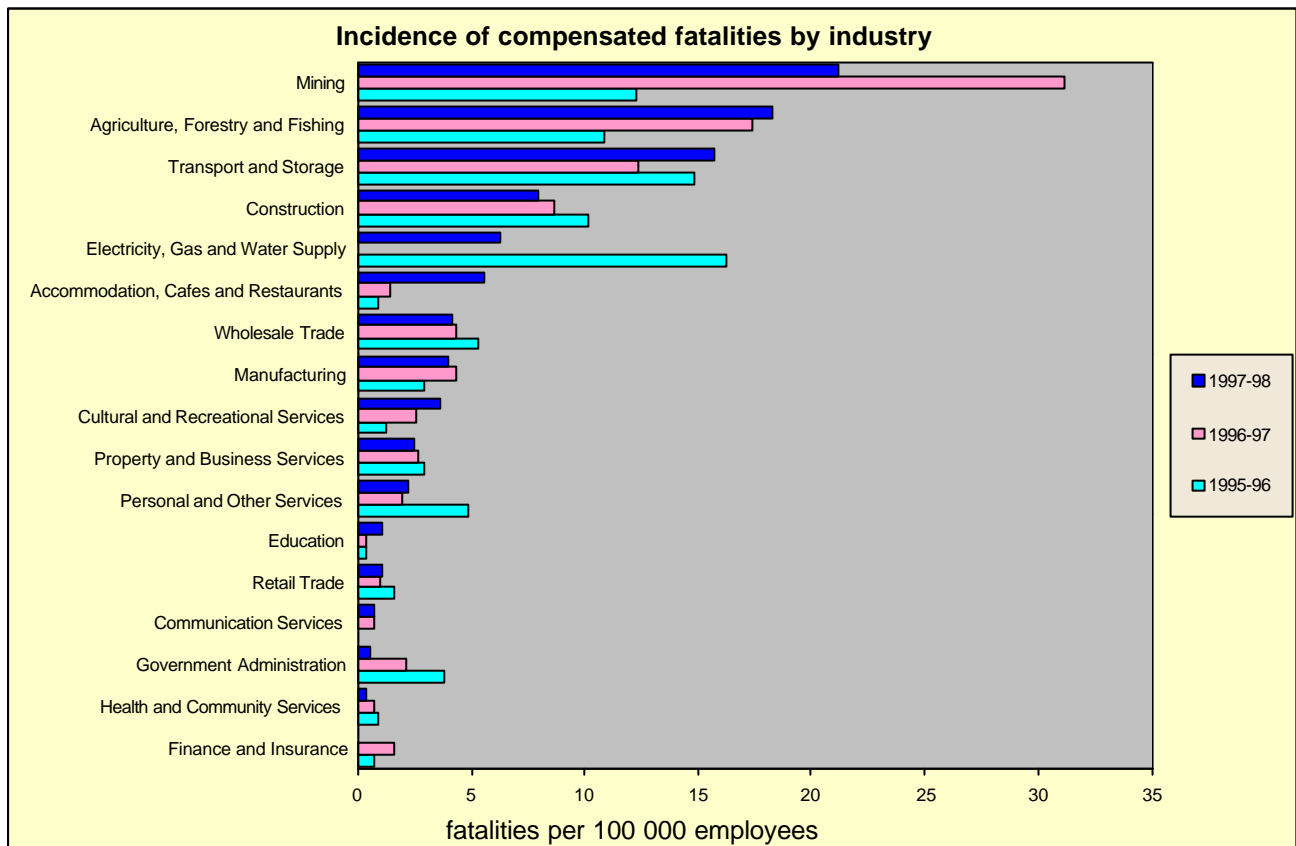
Figure 16a represents the number of traumatic fatalities per 100 000 employees, by industry grouping, over three successive periods.

Many of the higher risk industry sectors experienced an increase in the incidence of fatalities with mining and construction being the notable exceptions. In the lower risk categories no discernable trends emerged across industries.

As the number of incidents is low, fatality rates can be significantly affected by 'one-off' events. This is reflected in the substantial year-to-year movements in some industries.

Note: No fatalities compensated in certain industry groups.

Figure 16a



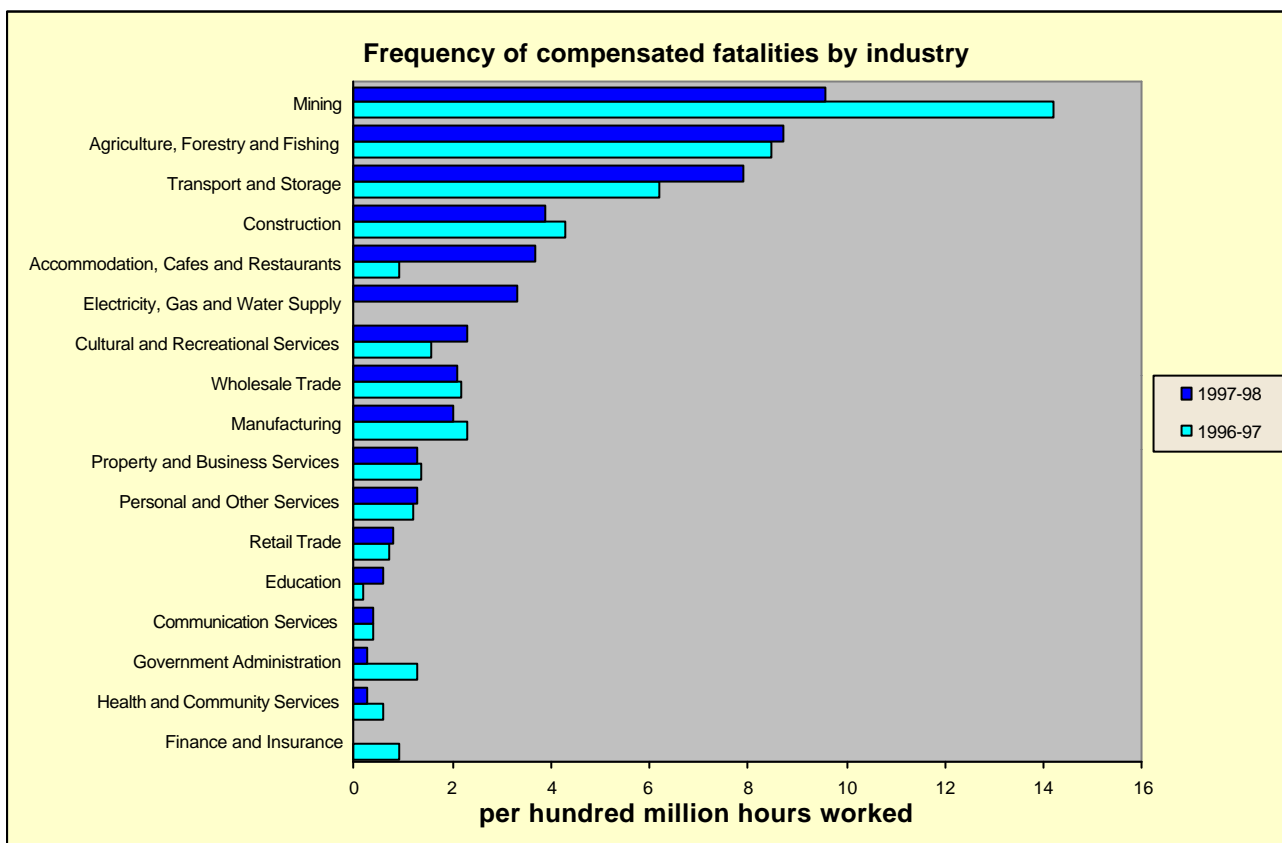
Fatalities by industry group - frequency

Figure 16b represents the number of traumatic fatalities per one hundred million hours worked, by industry grouping, in 1996/97 and 1997/98.

Broadly, the frequency rates reflect the incidence rates, however, some industries have a marginally different frequency compared to similar industry groups. For example, in 1997/98 the Accommodation, Cafes and Restaurants group exhibits a comparatively higher frequency reflecting a larger number of part time employees.

Again, given the relatively small frequency, the results can be changeable from year to year.

Figure 16b



APPENDIX A

Explanatory Notes

Data Qualifications

The injury rates contained in this report are based primarily upon National Data Set for Compensation-Based Statistics (NDS). The NDS uses reported workers' compensation claim numbers, and therefore, there will be some injuries that are not included in the published rates.

The principal exclusions are:

- injuries suffered by people who are not covered by workers' compensation schemes, such as the self-employed;
- members of the defence forces, because their compensation data is not a component of the NDS;
- seafarers (seafarer data was prepared by an independent consultant); and
- injuries that occurred while travelling to or from work (termed journey claims).

Importantly, despite the NDS collecting data on workplace disease, the information in this publication does not include workers' compensation claims for work-related diseases nor fatalities caused by work-related diseases. The reason for the exclusion is that given the long-latency period of many work-related diseases, Australian data on occupational diseases is considered incomplete. As a result of this exclusion, the injury and fatality rates in this report are proxy measures of the overall burden of work-related injuries and disease.

Fatalities resulting from injury are included in the NDS traumatic injury rates. Fatalities are also shown separately in figures 15 and 16 and it should be noted that incidence rates are shown per 100 000 employees and per 100 million hours worked respectively.

1997/98 Data

The NDS has established selection criteria that is used by each jurisdiction to determine eligible claims for submission to the database. The selection criteria, however, are subject to interpretation by the individual jurisdiction as to whether a claim is eligible for lodgement to the NDS. In some circumstances, the legislative basis of the scheme, or adopted practice by the scheme, may result in a claim/s being excluded by the jurisdiction even if they fall within the scope of the NDS.

A number of areas have been identified by various jurisdictions as possible areas of differences between the schemes, such as the inclusion/exclusion of part-time claimants, differences in the date of lodgement of claims, changes in the nature of injury classification of claim and the severity status or duty status from the time a claim was first lodged to the most recent date. All or some of these factors will influence the comparability of the CPM data drawn from the NDS.

To address these issues, it was necessary in 1999 to seek further actuarial assistance to improve the comparability of the NDS data for CPM purposes. In addition, the actuary was asked to provide 1997/98 "final" data for each Australian jurisdiction. The 1997/98 data provided by each of the Australian workers' compensation schemes for the purposes of this report is "preliminary" data in respect of claims lodged that year. To arrive at an estimate of the final number of claims that will be reported for 1997/98, it is necessary to develop growth factors to be applied to each scheme's data based on past experience.

The findings of the consultant actuary (William M Mercer) is at Appendix B. For a full copy of the report, contact cpm@dewrsb.gov.au

Data for 1996/97 used in this report represents finalisation of the preliminary data published in the 1998 CPM report.

Adjustment of Victorian Data

Due to the structure of the Victorian workers' compensation scheme, Victorian data reported to the NDS is not directly comparable with that of other jurisdictions. Victorian employers are normally required to cover the costs of work-related injuries that do not result in more than 10 days off work.

In order to compare Victorian claims data with that of other jurisdictions, adjustments had to be made to allow for under-reporting of injuries with between 5 and 10 days off work in Victoria. Actuarial advice was received for the first CPM report that determined an adjustment, or growth factor, which has been used to make Victorian data comparable. The growth factor was determined using other jurisdictions' claims rates, Victorian self-insurer claims rates and Victorian historical claims rates prior to the introduction of the 10 day excess to estimate under-reporting factors.

The number of claims at each duration of absence was expressed as a proportion of the number of claims involving time lost of that duration or greater. Trend lines were fitted using least squares regression to the proportion of claims at each duration. The analysis was undertaken at the industry division level as there is a greater degree of homogeneity in respect of claim duration.

A detailed report on the methodology used to adjust Victorian 5-10 day injury data is available by contacting cpm@dewrsb.gov.au.

The approach used to arrive at the Victorian figures for this report follows the methodology recommended by the actuary for the 1998 Report.

Standardisation

One factor which may influence variations in the incidence of injury between jurisdictions is the mix of industries making up the workforce in each jurisdiction. For figures 1a and 2a, results comparing overall jurisdictional incidence rates have been standardised to take into account different workforce compositions. Standardising the data allows more valid performance comparisons between jurisdictions and over time.

For figures 6a to 10f, data were also standardised to take account of sub-industry risk profiles. The number of claims, the workforce exposure and the incidence rates within these five industries were calculated at industry division and industry sub-division levels for each jurisdiction.

The number of claims, the workforce exposure and incidence rates were also calculated for the sum of all available jurisdictions (Australian total). Claims data for ACT WorkCover was not available below jurisdiction level, so ACT data were excluded from the Australian totals.

It was desirable to analyse the data in homogenous groups. This was a trade-off between greater depth of standardisation and the credibility of the results, as analysing the data below industry sub-division level generally resulted in small numbers of claims which fluctuated significantly from year to year.

The relative risks of each industry sub-division within the five industry divisions were examined over all the years for consistency and trends. Smoothing techniques were applied to the incidence rates where the incidence rates were volatile.

The indirect method of standardisation was used to allow for the different compositions of relative risks within an industry division for each jurisdiction. This method should provide a better comparison than the alternative direct method of standardisation, as there are small or insignificant industry sub-division populations in certain jurisdictions.

The indirect method of standardisation applies the incidence rate of each homogenous group of the total Australian population in the industry division to the population of each homogenous group in the industry division in each jurisdiction. The standardisation factor for each jurisdiction is then the ratio of the actual industry division claims in the jurisdiction to the expected industry division claims in the jurisdiction based on the total Australian incidence rates for each homogenous group.

In effect, the standardisation factor is a weighted average of the relative risks of each homogenous group in the total Australian population in the industry, with the proportion of a jurisdiction's population in each homogenous group in an industry used to 'weight' the relative risks.

The standardised incidence rate for each jurisdiction is then the product of the jurisdiction's standardisation factor and the Australian population incidence rate.

Definitions

Incidence Rate

The number of compensated injuries recorded for each jurisdiction or industry have been divided by the estimated number of employees in the jurisdiction or industry to achieve comparable figures.

Incidence rates for work-related injuries are shown per 1000 employees (per 100 000 employees for fatality rates).

Frequency Rate

The number of compensated injuries recorded for each jurisdiction or industry have been divided by the number of hours worked by employees in the jurisdiction or industry to achieve comparable figures. Frequency rates for work-related injuries are shown per million hours worked by employees (per 100 million hours for fatality rates.)

Injury

Includes all traumatic injuries that result in permanent disability or 5 or more days compensated. Fatal injuries are included in all injury rates. In 1996/97, the compensated fatality data for WA was revised by WorkSafe WA to match up with that WA Workcover's incident notification database. The 1997/98 data on fatalities includes all compensated fatalities for the period and this change in part accounts for the apparent increase in fatality rates in WA.

Employee

A person who works for a public or private employer full-time or part-time and receives remuneration in wages or salary, and who would normally be covered under workers' compensation legislation.

Commonwealth employees working in each State and Territory, including Australia Post and Telstra employees, have been included in Commonwealth figures rather than State and Territory results. At the request of ACT Workcover, ACT government employees have been extracted from Commonwealth results, even though these employees are covered by the Comcare scheme.

Industry

The 17 major industry groups included in this report are drawn from the *Australian and New Zealand Standard Industrial Classification* (ANZSIC).

APPENDIX B

Injury Incidence Rates Adjustment Factors

Extract from Report by William M. Mercer Pty Ltd, dated 13 December 1999 (report commissioned by Commonwealth/State/Territory CPM Working Party).

Approach

Discussions took place with each of the Australian workers' compensation authorities and self-insurers that provide data directly to the NDS. Each jurisdiction was asked to explain the process undertaken between lodgement of claims with employers through to submission of claims to the NDS, and to confirm a summary of the process.

Each jurisdiction was asked to provide a file containing all claims lodged from 1 July 1994 to 30 June 1998 that were required to be submitted to the NDS or that involve some time lost. Some jurisdictions were not able to provide any data.

For each jurisdiction, claim development factors, part-time adjustment factors and day of incident adjustment factors were calculated from the data provided, or estimated from other jurisdictions' data.

Documentation of Processes

The process undertaken by each jurisdiction relating to lodgement dates and selection criteria was obtained. Some of the main differences between the processes undertaken in each jurisdiction are as follows:

Treatment of Day of Incident

In most jurisdictions, the day of injury is included as the first day in calculating the period of absence. NT Work Health Authority, Telstra, Australia Post, Comcare Australia (prior to February 1999) and WorkCover Queensland (prior to July 1997), all exclude the day of injury in this calculation. WorkCover NSW includes that part of the day of injury from the time the injury occurred.

The exclusion of the complete day of injury reduces both the number of claims with five or more days of absence and the effective incidence rates.

Claim status measurement date

All jurisdictions apart from WorkCover NSW, WorkCover WA and NT Work Health Authority now extract the latest status of claims at 31 December following the lodgement year ending 30 June. A temporary incapacity claim with fewer than 5 days of absence at 30 June but with 5 or more days of absence by 31 December would be submitted to the NDS, reflecting the total absence accrued to 31 December.

The claims extracts of WorkCover WA and NT Work Health Authority generally reflect the status of claims one month prior, at 30 November.

In respect of WorkCover NSW, claims for each lodgement year are extracted following the September quarter and reflect the number of days of absence at 30 June. A temporary incapacity claim with fewer than 5 days of absence at 30 June but with 5 or more days of absence by 30 September would **not** be submitted to the NDS until the following year's submission.

The different effective extraction dates (mainly in respect of WorkCover NSW) reduces the number of claims with five or more days of absence reported at the preliminary NDS extraction date. With no adjustment, this would reduce the effective incidence rates.

Criteria for inclusion of temporary incapacity claims

There is some variation amongst the jurisdictions in the application of the definition of 5 days of absence for part-time claimants. For claimants who work less than 5 days per week, the majority of jurisdictions submit claims to the NDS where five or more actual days of absence have been incurred. For WorkCover NSW, Comcare Australia, Telstra and most of the Workplace Standards Tasmania insurers, claims are submitted to the NDS where the period of absence is greater than or equal to the claimant's normal working week.

The differences in the period of absence required for inclusion of part-time claimants will have a marginal, but measurable, impact on the comparison of incidence rates between jurisdictions.

Analysis Undertaken

Claim Development Factors

A claim development factor was calculated for each jurisdiction that provided data. Where no data was provided, a claim development factor was estimated from the data of other jurisdictions after allowing for differences in their processes.

For each lodgement year, the number of claims required to be submitted to the NDS for CPM purposes was calculated at each point in time. The ratio of the number of claims at any two different months will give a claim development factor across that period.

For the majority of jurisdictions, the number of claims at the end of the December following the end of the lodgement year and the following December will provide a measure of the Preliminary/Final Growth Factor.

For WorkCover NSW, the preliminary/final claim development factor was calculated with reference to the number of claims at the end of June in the lodgement year and the number of claims in December, eighteen months later. This results in a larger factor and compensates for the considerably earlier reporting of preliminary claims in NSW.

Part-time Factors

A part-time factor was calculated for each jurisdiction that provided data. Where no data was provided, a part-time factor was estimated from the data of other jurisdictions after allowing for differences in their processes.

A part-time factor was calculated to align the selection criteria for part-time claimants in each jurisdiction. The benchmark selection criteria was the interpretation adopted by the majority of jurisdictions, namely that five or more **actual** working days of absence must be incurred (over more than one week if necessary) for inclusion in the NDS.

Using each claimant's normal weekly hours, a number of working days per week for each claimant was assigned using probabilities.

For claimants working 5 days per week, the number of NDS claims for CPM purposes was calculated using the normal criteria of five working days of absence. For claimants working less than 5 days per week, a modified criteria was adopted. The ratio of the number of NDS claims for CPM purposes calculated using the normal criteria and the modified criteria produces the part-time factor.

Day of Injury Factors

A day of injury factor was calculated to align the criteria for determining 5 days of absence in each jurisdiction in terms of the day of injury.

Day of injury factors were calculated for jurisdictions where the day of injury is excluded or not wholly included in determining the period of absence.

The number of NDS Severity 3 claims for CPM purposes using a modified criteria of 4 or 4½ days of absence was calculated. This was expressed as a proportion of the total number of NDS claims for CPM purposes, to produce a day of injury factor.

Jurisdiction	Growth Factor (%)	Part Time Factor (%)	Day of Injury Factor (%)	Combined Factor (%)
NSW	10.5 [‡]	-2.0	2.0	10.5 [‡]
VIC	3.3	-	-	3.3
QLD*	2.0	-	-	2.0
WA*	2.0	-	-	2.0
SA	2.0	-	-	2.0
TAS	3.0	-1.8	-	1.2
NT*	2.0	-2.0	8.0	8.0
CTH	1.5	-0.5	4.0	5.0

‡ Minimum Growth factor for WorkCover NSW - refer below

* Estimated from other jurisdictions due to no data being available

Results

The table overleaf summarises the required adjustments to the number of claims submitted in respect of the 1997/98 lodgement year for each jurisdiction. In respect of some jurisdictions, no data was provided for analysis. Adjustments for these jurisdictions were estimated by applying the process undertaken in the jurisdictions to the claim development curves of other jurisdictions.

The three components of adjustment factors have been shown for each jurisdiction, as well as a combined factor, derived as the sum of the other factors.

Interpretation of Results

The growth factors, part-time factors and day of injury factors have been calculated based upon an analysis of previous years' data, and in the case of jurisdictions where data was not available, previous years' data of other jurisdictions. In some jurisdictions, the process may have changed significantly such that the derivation of the factors involved significant estimation.

The actual amount of adjustment to the number of claims is likely to differ from estimates derived from the factors. The factors are central estimates of the adjustments that should apply to claims in the 1997/98 lodgement year. There is a similar likelihood of the actual adjustments being above or below the adjustments produced by the factors.

The growth factors have been derived to apply to the 1997/98 lodgement year. The growth factors may not necessarily apply to other lodgement years, particularly if the process has changed in a jurisdiction.

No allowance has been made for possible changes in Nature of Injury classification, Severity Status or Duty Status from the time a claim was first lodged to the most recent date. This could be an additional source of growth, particularly for WorkCover NSW, due to claim status being measured 6 months earlier than most schemes.

An additional source of variation between schemes is the extent of inclusion of claims where liability has been denied. This issue is likely to be of varying significance, depending upon the jurisdiction, and is difficult to quantify. In light of these issues, the Growth Factor for WorkCover NSW could be viewed as a minimum factor.

The factors have been derived to apply to claims and incidence rates for each jurisdiction in total. The factors do not necessarily apply to any subset of a jurisdiction's claims, such as claims at an industry division level, claims resulting in 30 or more days compensated or claims subdivided by bodily location or mechanism of injury.

As an example, the part-time factors will not be reliable in industries where the proportion of part-time workers is significantly above or below the average proportion for the jurisdiction, such as Retail Trade or Mining. Similarly, the growth factors will not be reliable in industries where there is a propensity for delays in claims incurring their fifth working day of absence after initial notification.

Conclusion

The growth factors have been calculated using consistent methodology for each jurisdiction. This methodology is therefore an enhancement of the methodology that was applied in the previous CPM Report.

The issues raised above highlight the complexities in comparing certain aspects involving the fundamental design of the workers' compensation schemes. It is possible that other aspects affecting the comparability of growth factors will be identified which are issues of scheme design. These issues may need to be addressed in the longer term.