



Supporting notes for the State of Workplace Health and Safety in New Zealand

June 2011

These notes give further background and technical information on the indicators in the State of Workplace Health and Safety report (the SoWHS). They are summary notes, not intended to replace originating data and explanatory/technical notes.

→ Fewer Injuries and Fatalities

Chartbook work-related injuries

■ Source

Chartbook of work-related fatal and serious non-fatal injury rates, New Zealand Injury Prevention Strategy (NZIPS) website: <http://www.nzips.govt.nz/resources/publications.php>

■ Citation

A Chartbook of the New Zealand Injury Prevention Strategy (NZIPS) Serious Injury Outcome Indicators: 1994-2009, Gulliver P, Cryer C, Davie G. OR089, Injury Prevention Research Unit (University of Otago) Wellington: NZIPS Secretariat, ACC.

■ Technical: Chartbook

First published in 2006, the Chartbook was developed for NZIPS by the Injury Prevention Research Unit (IPRU) to provide a measure of New Zealand's progress in reducing injury since 2003 (the start of NZIPS). There are also separate Chartbooks for Māori and children aged 0-14 years.

From 2011 Statistics NZ will publish the Chartbook annually as the official measure of frequency and

rates of fatal injury and serious non-fatal injury in New Zealand. As Injury Information Manager, Statistics NZ is improving the quality and accessibility of injury information, aiming for a shared understanding and interpretation of injury rates (Statistics NZ Official Injury Information Plan 2010-12, (2010)).

The Chartbook measures "all" injuries, and injuries across each of the six NZIPS priority areas (workplace injuries; assault; suicide and deliberate self-harm; falls; motor vehicle traffic crashes; and drowning/near drowning). These account for at least 80% of New Zealand injury deaths and serious injuries. The indicators are the most valid available, but some, including work-related, are deemed "provisional" because the injury count could be impacted by other factors, e.g. policy changes or reporting behaviour. The focus is on injuries with serious consequences, i.e. fatal injury and injuries which have a 6% or greater chance of death.

The work-related fatal injury indicators are from ACC fatal injury claims, and the work-related serious non-fatal indicators combine ACC and hospital data (i.e.



having a work-related ACC claim and being admitted to hospital]). The data is high-level only, not granulated by industry, age, or occupation.

There is an unavoidable time delay, as ACC claims can be received later than the event year. The moving average means fatal injury data are another year behind.

■ **Technical: Unofficial projections**

To bridge the time delay inherent in other sources of injury data, projected trends for more recent years are estimated by:

- using fatal injuries notified to the Department of Labour in the current year to indicate the pattern of fatalities, and

- obtaining an update from the IPRU of fatal and serious non-fatal injury data, to estimate if there is any likely change in frequency/rate for more recent years.

The updated data provided by the IPRU did not cover a full calendar year – only 10–11 months were available – so estimates of full year data have been made using comparisons with previous years' data.

The SoWHS does not use “serious harm” notifications to the Department of Labour as an official measure of work-related injury. The Health and Safety in Employment Act 1992 defines the legislative criteria for when notification is required, and the notifications trigger departmental inquiries into incidents.

Estimated projections of fatal and serious non-fatal injuries

■ **Source**

The dotted lines on the Chartbook graphs are estimated projections, based on updated data provided to the Department of Labour on special request by the IPRU.

■ **Technical: estimated projections**

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ACC work-related injury claims

■ **Source**

Statistics NZ Injury Information Portal: http://www.stats.govt.nz/browse_for_stats/health/injuries.aspx

■ **Citation**

Statistics NZ annual 'Injury Statistics – Work-related claims' Hot off the Press releases and supporting tables.

■ **Technical**

Last published in October 2010, this report is produced annually by Statistics NZ, based on data from ACC claims for work-related injury and work-related illnesses compensated by ACC. It includes claims by calendar year from 2002, with provisional data for the latest year because claims for that year can still be updated and filed. Provisional years capture claims filed 3 months from the end of the calendar year, final years capture all claims filed within 15 months. Fatal injury claims are recorded in the year the injury took place, not the year of death (which differs from ACC reporting).

The Data is sorted by payment types into:

- All work-related injury and work-related illnesses compensated by ACC, recorded by frequency and

rate per 1,000 FTE (full time equivalent workers; calculated by combining all full time plus half the part-time workers)

- Entitlement claims (including claims for weekly compensation, rehabilitation payments and fatal injury), recorded by frequency and rate per 1,000 FTE
- Fatal injury claims, recorded by frequency and rate per 100,000

The data are broken down by sex, age, ethnicity, industry, occupational group, employment status, region, type/location of injury, and claim costs (noting that ~10% of claims do not identify industry). These breakdown figures allow more detailed analysis, noting that the data are not directly comparable with the Chartbook. Entitlement claims, at ~14% of all injuries, give an indication of more serious claims (which is different from the medical diagnosis used in the Chartbook serious non-fatal data).

The data is likely to under-report, e.g. it does not cover treatment provided only at hospital emergency departments, where costs are bulk funded by ACC directly to district health boards and recorded against individual claims.

International Work-Related Fatalities / 100,000 people

■ Sources and citation

This is a composite measure compiled for the SoWHS, so does not have a formal citation. The data comes from the Chartbook and the International Labour Organisation (ILO) database on labour statistics (LABORSTA): <http://laborsta.ilo.org/STP/guest>

■ Technical

The New Zealand rate is the official rate of fatal injuries published in the Chartbook. The international comparisons are from the ILO Yearbook of Labour Statistics – Rates of occupational injuries, by industry.

Data has been provided from 2002 to 2008 to coordinate with the Chartbook. New Zealand provides ACC claims data annually to the ILO, but has not provided a fatal injury rate during this period.

Country selection is based on choosing countries with whom New Zealand usually seeks to be compared in policy work on labour standards.

■ Comment

Genuine international comparison is almost impossible due to many differences in how jurisdictions record information (e.g. different rates – by workers, insured, FTEs), who they count (e.g. Australian data does not

include self-employed), and different industry profiles (and their relative levels of safety). The difficulties of international injury comparison are summarised in the report: International Comparisons of Injury, Connor J, Langley J, Cryer C. September 2007, Injury Prevention Research Unit (University of Otago).

One international comparative study used a robust method for international comparisons, although the study is now fairly dated: Comparison of work related fatal injuries in the United States, Australia, and New Zealand: method and overall findings, Feyer et al, Injury Prevention Journal (2001), pp7:22-28. This found that New Zealand had the highest average annual fatality rate at 4.9 (per 100,000 workers), Australia had an intermediate rate at 3.8, and the United States had the lowest rate at 3.2. However, “much of the difference between countries was accounted for by differences in industry distribution”. Of note, New Zealand had a far higher proportion of workers engaged in agriculture, fishing and forestry. The study noted that while Australian and New Zealand data is more comparable, the United States data collection method likely underestimates the occurrence of work related fatal injuries.

Priority Sector ACC entitlement claims / 1,000,000 hours worked

■ Sources

Injury statistics: Statistics NZ Injury Information Portal; Household Labour Force Survey (HLFS) data compiled from 2003 for the Department of Labour.

■ Citation

This is a composite measure drawn from Statistics NZ data sources: the frequency of ACC entitlement claims in Statistics NZ's annual 'Injury Statistics – Work-related claims' releases for the following industries: Agriculture, Forestry and Fishing; Construction; and Manufacturing; and the hours worked from the Household Labour Force Survey (HLFS).

■ Technical

This measure has been set up to track high-level performance of the five “priority” sectors in the Workplace Health and Safety Strategy National Action Agenda (Agriculture, Forestry, Fishing, Construction, and Manufacturing), as these sectors have consistently high rates of injury. Tracking data granulated by industry is not as statistically robust as the Chartbooks, but does give an indication of performance.

Data is tracked from 2003 to 2008 to coordinate the two sources of data.

Entitlement claims (used as an indicator of more serious injuries) are granulated by industry to level

1 of the Australia New Zealand Standard Industry Classification index (ANZSIC). ANZSIC level 1 codes aggregate the “sectors” of agriculture, forestry and fishing. Some of the datasets at ANZSIC level 2 (for both entitlement claims by industry and hours worked) were too small for statistically robust comparison.

There are limitations in the data, as the industry is not known for about 10% of entitlement claims.

The hours worked denominator makes the rate more sensitive to people working variable hours or where there are high numbers of part-time workers. Statistics NZ uses FTE rates in its tables, which has a similar effect but is slightly less sensitive. For comparison with FTE rates, approximately a million hours worked per year equates to approximately 500 FTE.

■ Comment

The overall rate of entitlement injury claims has remained steady in 2008, but when looked at by industry the rate increased for each of the priority sectors. Provisional 2009 data is not showing the same increase.

Employment in the priority sectors was severely affected by the economic downturn in 2009. Growth remains fragile and is also likely to be affected by the February 2011 Christchurch earthquake. Updated labour market information is on the Department of Labour's website.

→ Less Occupational Disease

NOHSAC Burden of Occupational Disease

■ Source

National Occupational Health and Safety Committee (NOHSAC) website:

<http://ohsnetnz.org.nz/reports.shtml>

■ Citation

The burden of occupational disease and injury in New Zealand: Technical Report, Driscoll T, Mannetje A, Dryson E, Feyer A-M, Gander P, McCracken S, Pearce N, Wagstaffe M. NOHSAC: Wellington, 2004

■ Technical/ Comment

Monitoring occupational disease is difficult as there is often a long latency period between exposure and onset and attributing causation to work-related factors can be difficult. There is currently no effective ways of measuring incidence or prevalence, but the Department of Labour is developing an occupational disease surveillance system, due to be piloted by December 2011. The Department is also developing an occupational disease action plan as part of the National Action Agenda.

ACC Claims for Work-Related Disease

■ Source

Statistics NZ Injury Information Portal: http://www.stats.govt.nz/browse_for_stats/health/injuries.aspx

■ Citation

Statistics NZ annual 'Injury Statistics – Work-related claims' Hot off the Press releases and supporting tables.

■ Technical/ Comment

For details of the 'Work-related claims' publication, see notes for the Fewer Injuries and Fatalities outcome area above.

This figure is not likely to be a reliable indicator of the incidence of work-related illness and disease. It is presumed to undercount the true scale of disease, for reasons noted in the section above.

Statistics NZ Survey of Working Life (2008)

■ Source

From Statistics NZ website: http://www.stats.govt.nz/browse_for_stats/work_income_and_spending/employment_and_unemployment/survey-of-working-life.aspx

■ Citation

Statistics NZ Survey of Working Life, run as a supplement to the Household Labour Force Survey (HLFS) in the March 2008 quarter.

■ Technical

To date, Survey of Working Life results are only available from one quarter, but planning for a repeat is underway.

The Survey of Working Life surveyed 14,510 employees - all employed respondents to the March 2008 HLFS were asked to take part. The objective is to provide reliable statistical data to monitor changes in the employment conditions, working arrangements and job quality of employed people in New Zealand, and to better understand the reasons for and implications of employment patterns.

→ Lower Economic Cost

Leading estimates of the annual cost of the work toll

■ Sources / citations

The Economic and Social Costs of Occupational Disease and Injury in New Zealand: Access Economics (2006). NOHSAC Technical Report. Available at: <http://ohsnetnz.org.nz/reports.shtml>

Volume 1: Risk Landscape Workplace Health and Safety: NZIER (2008). Report to the Department of Labour

New Zealand estimates of the total social and economic cost of "all injuries": O'Dea, D. and Wren, J. (2010). Technical report prepared for NZIPS evaluation. Available at: <http://www.nzips.govt.nz/resources/publications.php>

■ Technical

There is no single, widely accepted method for estimating the costs of work-related injury and disease. The three estimates presented here are the most recent and comprehensive estimates available, but each one covers different aspects of the work toll and uses very different methodologies. Each one represents a single snapshot

Specific details of the methodologies used can be found in the respective reports, but for this report the overall cost estimates have been broken down into three categories to enable some degree of comparison:

- › Direct costs – includes factors such as medical and rehabilitation costs, compensation for lost earnings and lost productivity.
- › Indirect costs – covers the costs of suffering and premature death, based on 'value of a statistical life' studies. These costs are essentially intangible,

and are both contentious and highly variable.

- › Disease costs – a proportion of the total cost in each report is attributed to occupational illnesses and disease, with the exception of the NZIPS report which only deals with injury.

The NOHSAC and NZIER estimates are expressed in 2005 dollars, and the NZIPS estimate in 2008 dollars.

■ Comment

The Department of Labour estimates the full social and economic cost to be about \$16 billion annually. The Department and ACC are currently working on developing a revised methodology for estimating costs that can be used by both agencies as a consistent figure. Once this revised estimate has been completed, it is envisaged that this will become the new headline indicator for this outcome area. It will also be able to regularly repeated, to enable longer-term trends to be determined.

ACC work-related claim costs

■ Source

ACC annual reports from 2002 to 2010, available at: [http://www.acc.co.nz/publications/index.htm?ssBrowseSubCategory=Reports and strategy](http://www.acc.co.nz/publications/index.htm?ssBrowseSubCategory=Reports%20and%20strategy)

■ Citation

Accident Compensation Corporation, Annual Report (various years)

■ Technical

Claim costs are calculated by combining work-related rehabilitation and compensation expenditure, as listed in the financial statements of each financial year's annual report. Rehabilitation includes all vocational and social rehabilitation; medical, hospital and dental treatment; public health care costs and conveyance for treatment. Compensation includes income maintenance; independent allowances; lump sum payments and death benefits.

For the years 2001/02 through to 2005/06, the figure used is a combination of the Employers Account and the Self-employed Work Account. On 1 April 2007, the Employers and Self-employed Work accounts were

merged into the Work Account. The 2006–07 figure combines the two different account configurations. The remaining three years are calculated using the Work Account only.

The figures have been adjusted for inflation by using the Reserve Bank of New Zealand's online inflation calculator, available at: <http://www.rbnz.govt.nz/inflationcalculator/default.aspx>. This allows costs to be shown in constant 2001/02 dollars and enables more accurate comparisons to be made.

■ Comment

Expenditure has risen steadily since 2001/02, in contrast with a declining number of claims made over the same period.

The graph also shows a noticeable dip in the 2005/06 financial year. The ACC Annual Report notes that in large part this is due to a 2005 amendment to the Accident Compensation Act 2001, which changed the way gradual process claims were funded. As a result, \$86.2 million was transferred from the Employers and Self-employed Work accounts into the Residual Claims Account.

ACC compensated days lost due to work-related injury

■ Source

ACC administrative data, submitted to the International Labour Organisation. Available at: <http://laborsta.ilo.org>

■ Citation

International Labour Organisation, ILO Yearbook of Labour Statistics

■ Technical

This indicator of lost time is based on ACC claims involving weekly compensation payments. ACC does not compensate workers for the first week off work following an injury, so the full impact of days lost is likely to be significantly higher than this figure.

A figure showing the days lost per FTE is also included to provide an indication of the scale of lost time injuries, and to control for changes in worker numbers over time.

Durable return to work rate following injury claim

■ Source

Return to Work Monitor (RTW) report for New Zealand 2009/10, prepared for ACC and the Department of Labour. Available at: http://www.hwca.org.au/reports_rtw.php

Citation Australia and New Zealand Return to Work Monitor 2009/10: Heads of Workers' Compensation Authorities (2010)

■ Technical

The RTW report surveys workers in Australia and New Zealand who submitted a claim for work-related injury between seven and nine months after the injury occurred. It is limited to workers whose injuries resulted in 10 or more days of paid compensation.

The report defines "durable" return to work as the proportion of workers who had returned to paid work and were still working when interviewed. It also measures a "non-durable" rate of those who had worked since their injury but were no longer employed.

NZIER estimated total cost by industry

■ Source

NZIER Risk Landscape report

■ Citation

Volume 1: Risk Landscape Workplace Health and Safety: NZIER (2008). Report to the Department of Labour

■ Technical

See notes for the "Leading estimates of the annual cost of the work toll" indicator.

■ Comment

The NZIER estimates also include a breakdown of the total cost of injuries and illness by industry group. While these are subject to the same methodological limitations as the overall estimates, they show that the National Action Agenda's priority sectors make a disproportionately high contribution to costs, as they do for injuries and fatalities.

→ Improved Industry and Employee Engagement

Statistics NZ surveys of health and safety management

■ Source / Citations

Business Operations Survey. Statistics New Zealand, 2005 and 2009. Available at: http://www.stats.govt.nz/browse_for_stats/businesses/business_growth_and_innovation/business-operations-survey-info-releases.aspx

Survey of Working Life. Statistics New Zealand, 2008. Available at: http://www.stats.govt.nz/browse_for_stats/work_income_and_spending/employment_and_unemployment/SurveyOfWorkingLife_HOTPMar08qtr.aspx

■ Technical

The Business Operations Survey is an annual survey run by Statistics New Zealand since 2005. It collects a wide range of information from about 6,000 businesses, made up of a broad cross-section of businesses with six or more employees. It consists of various modules that are run on an alternating basis. The indicator used here is from the Business Practices module, which has been run twice, in 2005 and 2009.

The National Action Agenda's priority sectors (agriculture, forestry, fishing, manufacturing and construction) were more likely to have these practices in place than businesses across all industries combined. A similar trend is evident in the responses to the Survey of Working Life.

■ Comment

More businesses reported that they had processes to manage health and safety than any of the other practices asked about in the Business Operations survey.

The National Action Agenda's priority sectors (agriculture, forestry and fishing; manufacturing; construction) were more likely to have these practices in place than businesses across all industries combined. A similar trend is evident in the responses to the Survey of Working Life.

NZIPS safety culture survey

■ Source

Survey available at: <http://www.nzips.govt.nz/resources/publications.php>

■ Citation

Monitoring the New Zealand Injury Prevention Strategy: The General Public's Attitudes and Beliefs towards Injury in New Zealand, Technical Report. Research New Zealand, February 2011.

■ Technical

The survey was run for the first time in 2007 to obtain baseline results, and has been repeated twice, in 2009 and 2011. The survey interviewed a representative sample of 1000 people to provide measures of New

Zealanders' views on safety and injury prevention, particularly in relation to five key injury areas: the workplace; the road; the home; sport and recreation; and the water.

■ Comment

An increased acknowledgement that most accidents and injuries in NZ are preventable has been chosen as one of the three key performance indicators for this survey. 53% of respondents felt this is the case in the workplace, which was slightly higher than for the other four priority areas. While this indicator was higher in 2009 (57%) and in 2007 (60%), the percentage for each year was still higher than in other priority areas.

Industry leadership

■ Source

Department of Labour administrative data

■ Comment

The Business Leaders' Health and Safety Forum, launched in July 2010, brings together leaders of major New Zealand businesses to contribute to and to make a commitment towards improving New Zealand's

workplace health and safety record. The number is correct as at 13 May 2011.

One of the actions under the National Action Agenda is to establish and partner with leadership groups in each of the priority sectors. The Construction Safety Council is the first such partnership, with others to be established as the Sector Action Plans for the remaining sectors are developed.

Health and safety representative training

■ Source

ACC and Department of Labour administrative data

■ Comment

ACC administers funding for health and safety

representative training, which is delivered by third party organisations including the Council of Trade Unions, Business NZ and IMPAC. The reduction in numbers in the 2009/10 financial year is the result of a reduction in government funding.

Statistics NZ business operations survey

■ Source

Statistics New Zealand survey, available at: http://www.stats.govt.nz/browse_for_stats/businesses/business_growth_and_innovation.aspx

■ Citation

Business Operations Survey. Statistics New Zealand, 2006.

■ Technical

See note for the "Statistics NZ surveys of health and safety management" indicator above.

The 2006 survey included the 'employment practices' module. To date, this is the only time that the module has been run.

■ Comment

Health and safety training was reported as the most common type of training offered by employers to their employees, ahead of trade, professional/technical and computer training. 86% of businesses responded that they had offered some kind of training, and 77% of this group offered health and safety training – which equates to 66% of the total sample.

In terms of employment practices offered to employees, participation in health and safety was the second most commonly reported practice, after flexible break times.

Businesses in the priority sectors were more likely offer both health and safety training and participation than across all industries combined. Construction rated highest in both categories.

Research NZ survey of health and safety in SMEs

■ Source

Special report: Small Business in New Zealand – Myths and realities. Research New Zealand, 2008.

■ Technical

Small businesses are defined in the report as those with 19 or fewer employees.

■ Comment

The survey asked what kinds of difficulties were encountered when setting up businesses – health and safety was mentioned by the highest proportion (39%) of respondents, ahead of human resources, financial systems and dealing with other Government departments.

→ Increased Response to Government Activity

Response to Department of Labour Activity / Department Enforcement & Engagement Activity / Accessing Government Information

■ Source

Various measures drawn from Department of Labour administrative data

■ Comment

The Department released its Enforcement Policy in 2009, setting out the focus of its enforcement, namely poorer performing workplaces and more serious health and safety breaches. The Department is currently in the process of matching its systems to this focus, which is likely to be reflected in the next State of Workplace Health and Safety report.

Participation in ACC Incentive Programmes / Accessing Government Information / Government Leading by Example

■ Source

Measures drawn from ACC administrative data

■ Comment

The Partnership Programme is more suitable for businesses with higher numbers of employees. Despite the small number of contracts in place, as at April 2010 it covered approximately 15% (~324,000) of FTEs. The Workplace Safety Management Programme (WSMP) incentive scheme has been increasing, through increased participation and some movement from the Partnership Programme. The WSMP provides a levy discount incentive for improved safety, catering for the businesses where self-management of ACC entitlements may not be cost effective for them. The Workplace Safety Discount (WSD) scheme is aimed at small businesses in the priority sectors only. It is relatively new and participation is increasing.