A Social Health Atlas of Compensable Injury in South Australia

John Glover
Sarah Tennant
Kristin Leahy
and Elizabeth Fisher

November 2006

Government of South Australia
tracsa Trauma and Injury Recovery
WorkCover CORPORATION

Copyright

National Library of Australia Cataloguing-in-Publication entry

Glover, John, 1945- .
A social health atlas of compensable injury in South Australia.

ISBN 0 7308 9585 8 (pbk).

1. Personal injuries - South Australia - Atlases. 2. Liability insurance claims - South Australia - Statistics. 3. Liability insurance claims - South Australia - Atlases. 4. Crash injuries - South Australia - Atlases. 5. Crash injuries - South Australia - Statistics. 6. Workers compensation - South Australia - Statistics. 7. Workers compensation - South Australia - Atlases. 8. Accident insurance claims - South Australia - Atlases. I. Public Health Information Development Unit (S. Australia). II. Trauma Recovery and Accident Centre of SA. III. Title.

363.1099423

This report was produced by the Public Health Information Development Unit (PHIDU), The University of Adelaide, for TRACsa: trauma and injury recovery with funding from the Motor Accident Commission (MAC) and the WorkCover Corporation of SA (WorkCover). The views expressed in this report are solely those of the authors and should not be attributed to TRACsa or the Treasurer, or WorkCover or the Minister for Industrial Relations.

Suggested citation:

Glover J, Tennant S, Leahy K and Fisher E. *A Social Health Atlas of Compensable Injury in South Australia*. Adelaide: PHIDU, The University of Adelaide, 2006.

For copies of this document, please contact:

TRACsa
Phone: 08-8212-0676

Enquiries about or comments on statistical aspects of this publication should be addressed to:

PHIDU, The University of Adelaide, South Australia 5005
Phone: 08-8303 6237 or e-mail: PHIDU@publichealth.gov.au

Published by the Public Health Information Development Unit, The University of Adelaide

Printed by Openbook Australia

Foreword

Social health atlases are widely used as a planning and educational resource in the South Australian and national health sectors. They assist people from different fields of interest to share a better understanding of the relative size and distribution of health outcomes, the factors that contribute to these outcomes and service use.

A Social Health Atlas of Compensable Injury in South Australia has been produced by the Public Health Information Development Unit at the University of Adelaide. It was commissioned by TRACsa with funding from the Motor Accident Commission (MAC) and WorkCover. It is the first health atlas to bring population data on compulsory third party (CTP) and workers' compensation claims together with information on social, economic and demographic characteristics, health status and health service utilisation.

Each year in South Australia approximately 10,000[1] people are injured on our roads and around 46,500[2] people experience a work related injury or illness. Recovering from the physical and/or psychological injury can be difficult. However, evidence shows that the challenge becomes even greater when they make a compensation claim.

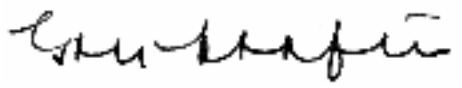
Despite the obvious benefits of compensation, people who are injured and have to "navigate" their way through compensation schemes have significantly poorer outcomes than people with similar injuries who remain outside compensation settings.[3] This holds true whether they are seeking or receiving compensation through South Australia's common law, fault based CTP scheme or our no-fault workers' compensation scheme.

Understanding this, in December 2005 the South Australian Government established TRACsa – a new centre of excellence on recovery from road trauma, with funding from MAC. TRACsa also works closely with WorkCover SA to ensure a consistent approach to best practice care wherever possible and appropriate across both the CTP and workers' compensation schemes.

To be effective, TRACsa's strategies and interventions will need to be based on available evidence and have the support of a wide range of community groups and government agencies. They must take account of the broader context within which health and community services are provided and accessed, and of the way regional economies and labour markets impact on people's opportunities to return to work and the community.

Mapping data reveals that not all regions of South Australia face the same challenges and highlights the need for a range of responses. In developing our strategies we will need to pay careful attention to targeted and customised programs.

A Social Health Atlas of Compensable Injury in South Australia adds greatly to our knowledge of injured people in compensation settings. It will be a valuable source of information for TRACsa as we work with service providers to develop best practice models and programs to achieve the best possible personal, social and economic wellbeing for injured persons, their families and friends, their employers and our State. We at TRACsa trust that you will find this atlas a valuable resource.



The Hon Greg Crafter
TRACsa Board Chair

[1] Baldock MRJ and McLean AJ. (2005) 'The Economic Cost of the Road Toll on South Australia'. Centre for Automotive Safety Research. CASR Report Series, SASR009 (Table 2.1).
[2] Australian Bureau of Statistics. (2001) 'Work Related Injuries in Australia', ABS Cat # 6324.0 (Table 2).
[3] See for example Compensable Injuries and Health Outcomes published by the Royal Australasian College of Physicians, Sydney 2001.

Acknowledgements

The authors wish to thank the following people for their assistance in producing this report:

- Dan Tyson, Lucinda Glover and Andrew Andrews at TRACsa;
- Eleni Labadas, Jim Gaetjens and Margaret Swincer at WorkCover;
- Craig Kloeden from the Centre for Automotive Safety Research, The University of Adelaide, who provided data on road crashes; and
- Libby Whitehorn and John Hamam from Allianz Australia Insurance Ltd.

The TRACsa and WorkCover staff mentioned also reviewed the draft report and provided valuable comment.

Finally, we express our appreciation to Liz Furler, Executive Director, TRACsa, for the opportunity to undertake this work.

Notwithstanding these contributions, the responsibility for the analysis and interpretation presented in the report remains with the authors.

Executive summary

This Atlas is an initiative of TRACsa: trauma and injury recovery, with funding from the Motor Accident Commission (MAC) and WorkCover Corporation of South Australia (WorkCover). It describes injuries arising from trauma on the roads and at work, using data from MAC and WorkCover, in the context of the socioeconomic and demographic characteristics of the population.

Presenting the data in maps and graphs highlights the associations that exist between injury, illness or death from road crashes and work-related accidents, and the socioeconomic status and health status of the population as a whole. Variations in the geographic distribution of the injured party across the State by remoteness are also highlighted.

The strength of these associations make clear that a health program response to the management of people with injuries arising from trauma on the roads and at work is both legitimate and warranted. They also emphasise the need for an organised population health response to the phenomenon of compensable injuries arising from trauma on the roads and at work; and the need to coordinate with other health and community service providers, across both public and private sectors, to achieve maximum impact of investment by MAC and WorkCover in primary and secondary prevention activities.

Compulsory Third Party Insurance scheme

The Motor Accident Commission has advised that the most representative data for analysis of both claims and costs were those from the 2002/03 financial year; therefore, other than for some trend data to 2004/05 for claims, the analysis has been restricted to that year.

Overview

After a period of relative stability, the number of claims opened under the Compulsory Third Party Insurance scheme has decreased markedly in recent years, to be down by around one third over the seven year period from1997/98 to 2004/05. The decline from 2002/03 to 2003/04 is believed to reflect a number of factors, falling into two broad categories. The first group of factors includes the introduction of a number of significant legislative and regulatory road safety measures, including (but not limited to) the 50 km/h speed limit in many urban locations from March 2003 (which is believed to have impacted on the number of injury crashes being reported by the South Australian Police and on subsequent claims in 2003/04 and later years (MAC Annual Report 2003/04)), speed camera demerit points and speed detection on red lights. Secondly, a change in the CTP Claims Manager from 1 July 2003, and subsequent changes in some administrative practices (from 1 July 2004, claims were opened only after a direct approach from an injured party, rather than as previously on advice of a vehicle owner or driver that there may have been an injury), also resulted in a reduction in the number of claims in 2004/05 and later years.

The majority (82.2%) of costs under the Compulsory Third Party Insurance scheme are generated by a relatively small proportion (20%) of claims, with 95.1% of costs coming from 35% of claims. This is to be expected, as crashes resulting in catastrophic injuries are less common but involve larger costs in terms of medical services and compensation.

Claims are also categorised as relating to 'WAD injuries' or 'Other injuries'. WAD Injuries' refers to a group of injuries best described as 'Whiplash Associated Disorders and non-specific painful conditions of the neck, shoulder and back' (see the Glossary for additional details). 'Other injuries' effectively refers to all non-WAD injury cases, and includes those injuries deemed and classified by the CTP claims manager as having sufficient medical evidence to demonstrate the indisputable existence of an injury attributable to a road accident.

The rate of claims in 2002/03 for WAD injuries was almost three (2.80) times that for Other injuries. However, total costs for these WAD injuries were only 16% higher ($117.6m) than those for Other injuries ($101.2m), resulting in an average cost per WAD injury claims less than half (42%) of the average cost of Other injury claims.

Notably more claims were made in each year by females; however, the average cost per claim was much higher for males than for females, although the gap has varied somewhat over the years.

The majority (85.1%) of claims for each year from 1997/98 to 2002/03 were opened within three months of the date of the crash, and a further 10.2% of claims between three and six months. Over half (57.9%) of all claims made between 1999/00 and 2002/03 were finalised within six months of the claim being lodged.

The average cost per claim increased by 8.8% over the period from 1999/00 to 2002/03; however, this overall increase included a decline (11.0%) from 1999/00 to 2001/02, followed by a marked increase (21.7%) in 2002/03. The pattern of movements in average costs for males and females varied over these years, although both had higher average costs in the latest period.

Geographic variations

The rate of claims opened in Adelaide in 2002/03 was 73% greater than in country South Australia: higher rates were recorded in Adelaide for both Other injury (37% higher) and WAD injury (2.43 times higher) claims. The total cost of finalised claims in Adelaide was more than five (5.19) times the cost of claims by country residents, compared with the distribution of the population between metropolitan and country areas of 3 to 1. The average incurred cost per claim was the same for both metropolitan and country areas.

The geographic distribution of claims at the Statistical Local Area (SLA) level across Adelaide in 2002/03 has a number of similarities to that of the socioeconomically disadvantaged population: the results of a correlation analysis support this contention. Average incurred costs per finalised claim in Adelaide show a more diverse pattern, bearing little relationship to the pattern of disadvantage. In country South Australia, there is a concentration of high rates of claims in SLAs nearer to Adelaide; for average cost per claim, the pattern shifts notably, generally outward and away from Adelaide, with the highest rates occurring in some of the most remote areas of the State.

Socioeconomic status

When areas within Adelaide are allocated to five groups based on the average socioeconomic status of the area's population, the rate of claims is 44% higher in the most disadvantaged areas, compared with the least disadvantaged areas. However, average incurred costs are slightly (6%) lower in the most disadvantaged areas. In country South Australia, the reverse is the case, with 16% fewer claims and 26% higher average incurred costs in the most disadvantaged areas.

Remoteness

The rate of claims opened in 2002/03 declined with increasing remoteness, being 61% lower in the most remote areas of the State than in the Major Cities areas (Adelaide). However, the reverse was true for average incurred cost per finalised claim, with the cost per claim in the most remote areas over twice (2.29 times) that in Adelaide.

Age and sex, by injury category

Over half of claims (53.1%) and incurred costs (59.1%) were paid out to people aged 15 to 39 years; 85% of average costs were incurred at ages 15 to 54 years.

Claims rates for WAD injuries were higher for females than for males. The rates of Other injury claims opened across the State were higher in Adelaide than country South Australia, other than in the 20 to 24 years and 85 years and over age groups. For WAD injury claims opened, rates were generally much higher for people in Adelaide than in country South Australia and especially high across the 15 to 29 year age groups.

The cost of finalised Other injury claims was higher than for WAD injury claims for most age groups. Costs for finalised Other injury claims were also generally higher for males than for females, in particular at ages below the 55 to 59 year age group; the highest costs per claim for WAD injury for both males and females were in the 30 to 64 year age groups. Costs of finalised claims for WAD injuries were higher in country South Australia across most age groups; and costs for Other injury claims were higher in Adelaide at almost all ages.

For claims involving Other injuries, there was a moderate correlation between their geographic distribution and the distribution of the socioeconomically disadvantaged population in Adelaide, and a strong

correlation between costs per finalised claim and socioeconomic disadvantage. There was no such relationship evident at the SLA level in country South Australia for claims opened; however, there was a weak correlation between costs per finalised claim and areas of least socioeconomic disadvantage.

The distribution of these two measures for WAD injuries shows no consistent correlation with socioeconomic disadvantage, other than a weak association in country South Australia with cost per finalised claim.

Workers' compensation

The majority of the analysis for workers' compensation is based on data from 2004/05 and covers registered employers (employers registered with WorkCover SA, whose workers' compensation claims are managed by WorkCover's claims agent); similar details for self-insured employers (employers who are responsible for managing and funding their own workers' compensation claims) are not available. In this atlas, services were analysed for only the two major provider groups of general medical practitioners and physiotherapists.

Overview

All employers (registered and self-insured)

The number of new workers' compensation claims through all employers (both registered and self-insured) decreased by 21.1% over the years from 1997/98 to 2003/04; this is a marked decrease, 3,851.8 claims per 100,000 population in 2003/04, compared with 5,081.1 in 1997/98. There were similar decreases in claims for both registered and self-insured employers. In 2004/05, 64.7% of workers' compensation claims made under WorkCover provisions in South Australia were from registered employers.

Registered employers

Income maintenance claims (i.e. claims with time lost from work of more than ten days) represent under one fifth (19.4%) of claims in 2004/05, but account for over four fifths (84.0%) of costs.

One fifth of workers' compensation claims accounted for 90.8% of costs; and just over one third (35%) of claims accounted for the vast majority (98.1%) of costs.

Almost three quarters (74.6%) of claims were made by males. Similarly, a majority of services provided to claimants by a general medical practitioner (71.3%) were for males. While males also used a majority of physiotherapy services, the proportion was lower, at just under two thirds (64.2%).

Geographic variations

The geographic distribution of those people making workers' compensation claims in Adelaide in 2004/05 closely follows the pattern of socioeconomic status. The correlation analysis supports this contention, showing a strong association between workers' compensation claims (and selected services – general medical practitioner and physiotherapy services – utilised under workers compensation claims) and indicators of socioeconomic disadvantage. There is also a clear, step-wise increase in the rates for claims and services by general medical practitioner and physiotherapists, with rates rising substantially from the least disadvantaged areas to the most disadvantaged areas.

Related datasets

Road traffic accidents

The majority of road traffic accidents in 1994 and 2002 (83% and 83.5%) occurred in Adelaide. In both of these years, over 80% of accidents in Adelaide resulted in property damage only, with the remaining accidents requiring treatment by a private doctor or at hospital, or admission to hospital. In country South Australia, around three quarters of road traffic accidents resulted in property damage only, a slightly lower proportion than in Adelaide.

Hospital admissions

Data from the Department of Health SA show there were 9,044 admissions to hospitals in South Australia funded under compensation schemes in 2003/04, representing 1.6% of all admissions. Admissions covered by workers' compensation (all workers' compensation, not just claims through WorkCover) accounted for three times the level of admissions for motor vehicle third party personal claims; however, both types of admission accounted for a similar proportion of bed days, reflecting the longer hospital stays of those involved in motor vehicle accidents.

Deaths by external cause

Motor vehicle accidents accounted for 26.1% of deaths from all external causes (and the majority (97%) of transport accident deaths). Deaths of occupants of cars accounted for over half (58.0%) of the transport accident deaths, or 15.6% of deaths from all external causes, with a further 4.4% of all causes deaths being of pedestrians (106 deaths), and motor cycle riders accounting for 3.0% (72 deaths).

Contents

Page

List of tables Page

List of figures

Page

List of maps Page

Glossary

Compensation schemes

Compulsory Third Party Insurance scheme

Claims

- Injury category

  'WAD injury' refers to a group of injuries best described as 'Whiplash Associated Disorders and non-specific painful conditions of the neck, shoulder and back'. This injury category terminology (as adopted in this document) is derived from the 'non-demonstrable' injury category historically used by the CTP claims manager for internal operational purposes. Each CTP claim was coded as either 'demonstrable' or 'non-demonstrable' in the CTP claims database, which is the primary data source for the present analysis. Historically, the claims manager classed a CTP claim as 'non-demonstrable' where the underlying pathology was unknown, or was unable to be determined with existing medical knowledge and technology. An analysis of the CTP claims database shows that the overwhelming majority of 'non-demonstrable' injuries relate to whiplash or similar soft-tissue disorders.

  'Other injury' effectively refers to all non-WAD injury cases. This category includes those injuries deemed and classified by the CTP claims manager as having sufficient medical evidence to demonstrate the indisputable existence of an injury attributable to a road crash. This broad category of injuries includes lacerations, fractures, internal organ injuries, head injuries, spinal injuries etc.

- Finalised (closed) claims

  A claim is finalised when all costs of a claim have been identified and there are no further expected claim payments or claims recoveries. Includes claims where no payments applied; medical and hospital payments only; and payments for general damages where there is no outstanding payment for legal fees.

- Opened claims

  The total number of current claims at any given point in time. This would include all claims including those opened for recovery only unless specifically stated. This number relates to the current, active claims portfolio.

Costs

- Incurred cost

  The total amount paid for finalised claims.

- Average incurred cost per finalised claim

  This is the incurred cost (for finalised claims) divided by the number of finalised claims.

- Heads of Damage

  The term 'heads of damage' can be defined to mean 'types of loss (harm), against which damages are awarded in order to arrive at the total settlement' In the SA CTP Insurance scheme, there are several specific 'heads of damage' that fall within the broad sub-categories 'Claimant Benefits' (non-economic loss, economic loss, treatment costs, other costs), and 'Claims Costs' (plaintiff and defence legal costs).

Workers' compensation (data from WorkCover Corporation)

Claims

- All claims: In the time series presented in *Chapter 2: Context* and *Chapter 4: Workers' compensation claims*, claims data reflect the year in which the injury occurred. The detailed analysis presented for 2004/05 is based on claims with an injury in 2004/05, where a payment was made in that year.

- Income maintenance claims: are claims with time lost from work of more than ten days.

Workers' compensation *... cont*

Employer type

- Registered employers: employers registered with WorkCover SA whose workers' compensation claims are managed by WorkCover's claims agent and funded by WorkCover.
- Self-insured employers: employers who are responsible for managing and funding their own workers' compensation claims.

Selected services

Details are shown of services provided by two major primary provider groups, general medical practitioners (GPs) and physiotherapists. For each primary provider group, only services and costs from the principal provider have been utilised in this analysis. The principal provider on each claim is the provider who delivered the highest number of services.

Deaths

- External cause of death: Deaths from external causes are attributed to the event leading to the fatal injury, rather than to the nature of the injury which is coded separately.

Geographic areas

- Country South Australia: the rest of the State, outside of Adelaide.
- Adelaide: the area from Gawler in the north to Sellicks Hill in the south, bounded by the Adelaide Hills to the east (including Stirling/Aldgate, but not Mount Barker) and in the west by the sea.
- SLA (Statistical Local Area): The SLA is a spatial unit within the Australian Standard Geographical Classification (ABS 2001), the geographical classification defined by the ABS for coding data to areas within Australia. In country areas of South Australia, SLAs are of the same size as local government areas; in almost all instances in Adelaide, SLAs are smaller than LGAs.

Hospital admissions and bed days

- Admissions: The technical term describing a completed hospital episode (i.e. the discharge, death or transfer of a patient) is a 'separation'. In this Atlas, the more commonly used term of 'admission' has been used. Details are of admissions to hospitals in South Australia.
- Bed days refer to the total number of days spent in hospital for these admissions.
- External cause of injury: the event, circumstance or condition associated with the occurrence of injury.

Measures of socioeconomic disadvantage

- IRSD: Index of Relative Socio-Economic Disadvantage

  The geographic distribution of the population in Adelaide can be summarised using the Index of Relative Socio-Economic Disadvantage (IRSD), produced by the Australian Bureau of Statistics (Map 2.1). The IRSD is a summary measure of socioeconomic disadvantage based on information collected at the 2001 Census of Population and Housing: contributing variables include unemployment, single parent families, education level attained, and income. It is an area-based measure, in that it is calculated for areas for which the ABS holds the Census data; however, all of the variables used in producing the index reflect characteristics of the population in those areas, or of the dwellings in which they live. The average index score is 1000, with scores below 1000 indicating greater relative disadvantage, and scores above 1000 indicating greater relative advantage.

- Quintiles of area of socioeconomic disadvantage

  The data are also presented to show variations by socioeconomic status of the SLA of the address of residence of the person about whom the event is recorded (SLA of the claimant, driver involved in a road crash, etc). To do this, each SLA in Adelaide was allocated to one of five categories (quintiles) based on its Index of Relative Socio-Economic Disadvantage (IRSD) score. Quintile 1 comprises (approximately) twenty per cent of the population living in the SLAs in Adelaide with the highest IRSD

scores, and Quintile 5 comprises the twenty per cent of the population in SLAs with the lowest IRSD scores. The average rate (or standardised ratio or percentage) was then calculated for each of the five quintiles. For example, the average rate of claims was calculated for the least disadvantaged SLAs (Quintile 1), for the most disadvantaged SLAs (Quintile 5) and for each of the intervening quintiles (Quintiles 2 to 4). These rates were then graphed. This exercise was repeated for SLAs in country South Australia (excluding Gawler).

Rates

Most rates are age-standardised rates per 100,000 population (and, for costs, per 100,000 claims). The process of age standardisation, using the indirect method, has been undertaken where it was considered that variations in the age distribution of the population for any variable could affect the analysis, as this adjustment largely removes variations in rates between areas where such variations arise solely as a result of the age structure.

Symbols

- \- represents zero, or less than half the final digit
- .. not applicable

1. Purpose

The goal of improving health and social outcomes for people injured on the roads and in the workplace requires a joint effort by the Motor Accident Commission (MAC) and WorkCover, as they administer respectively the compulsory third party (CTP) and workers' compensation schemes through which many injured people who receive compensation access the health and community services they require. In turn, MAC and WorkCover together need effective partnerships with service providers, community groups, professional peak organisations, relevant government departments and academic bodies; not only because they have both a direct and indirect influence on the services provided in the compensation sectors, but because they provide or shape the mainstream services people turn to for care and support throughout their lifetimes, and they provide services to injured people who are not eligible for compensation. For such partnerships to be effective, a shared understanding is required; of the issues to be tackled, and the context within which solutions must be found. The purpose of this Atlas is to facilitate this shared understanding.

In commissioning the Atlas, TRACsa is committed to

- Promoting public awareness of the issues relating to compensable injuries arising from trauma on the roads and at work, based on sound data from a range of sources;
- Securing acceptance among a wide range of interested parties that a health program response to caring for people with compensable injuries arising from trauma on the roads and at work is both legitimate and warranted;
- Promoting understanding of the social, economic and structural/systemic factors that contribute to patterns of health, injury, disability and service use in this area among a wide range of interested parties;
- Promoting understanding and acceptance among a wide range of interested parties of the need for:
  - an organised population health response to the phenomenon of compensable injuries arising from trauma on the roads and at work;
  - coordination and integration of services provided in the compensation sectors with other relevant services (both public and private) in the mainstream health and community services sectors, wherever possible and appropriate;
- A dialogue with the Health Portfolio about the nature and extent of health related activities occurring in the compensation sectors, and collaboration to achieve common policy and program objectives;
- Planning and implementation of strategies and services which are targeted to suit local circumstances and needs.

In addressing the purpose, as stated above, the Atlas describes injuries arising from trauma on the roads and at work, using data from the Motor Accident Commission and WorkCover, in the context of the socioeconomic and demographic characteristics of the population. A particular focus is the relationship between the geographic distribution of the injured party in relation to the distribution of the population as a whole by a range of characteristics, including their socioeconomic status and health status.

The Atlas includes the following chapters:

Chapter 2: Context, containing a statistical overview of the compensable sector, followed by a summary of the socioeconomic and health status of the State's population, describing geographic variations across Adelaide and country South Australia.

Chapter 3: A description of the level of activity and geographic variations in claims and cost of finalised claims under the Compulsory Third Party Insurance scheme.

Chapter 4: A description of the level of activity and geographic variations in workers' compensation scheme claims.

Chapter 5: Analyses of other relevant datasets - road traffic accidents, compensable admissions, deaths from external causes and health and welfare occupations, by region.

Chapter 6: A Summary chapter.

Appendix: The appendix includes a range of supporting information, including keys to the areas mapped in the Atlas.