

19 Conclusions and recommendations

This report has presented demographic profiles of the 15 most common injury mechanisms causing death in NSW. Only nine of these injury mechanisms were associated with a statistically significant declining trend in death rates over the period 1986 to 2002, indicating that many remain as serious public health problems for the people of NSW.

As with earlier reports for the period 1995–1999 (Schmertmann and Williamson, 2002), suicide was the leading cause of injury death during 1998–2002 and males accounted for the majority of deaths overall. A comparison across age groups showed that the causes of injury death varied as age increased but that two injury mechanisms, namely suicide and motor vehicle transport, are the leading causes of death across several age groups.

This report presents only a fragment of the overall burden of injury on NSW society, as death is the most serious consequence of injury. Non-fatal injuries are treated at general practitioner clinics, ambulance services, poison information services, emergency departments, hospitals and through allied health services (e.g. dentists, physiotherapists). Unfortunately, routine injury data collection systems do not cover all of these levels and many questions about the true impact of injury on the people of NSW remain unanswered.

To the extent possible, this report has highlighted aspects of the 15 injury mechanisms that should receive focus as research and intervention priorities. Recommendations for improving the existing data collections and for enhancing these with additional information are listed below.

19.1 Improved data systems

A number of injury mechanisms would benefit from improved data collection and/or coding systems to allow a specific cause of injury death to be identified. While detailed information regarding injury deaths is available from coronial files and potentially from other data sources (e.g. Australian Transport Safety Bureau), access to these data sources often requires special approval. Furthermore, these data collections may not be as easy to use as the ABS data presented in this report which were coded using a standard coding system.

In order to improve the quality of death data obtained from the ABS, improvements in data collection and/or data coding systems are recommended for the following injury mechanisms:

Suicide

Hanging, strangulation or suffocation was the leading method used to commit suicide. Differentiation of methods within this broad group is needed as different age groups may use one of the three methods more often than do other age groups.

Falls

The majority of falls by the elderly were classified as *other and unspecified* and more information regarding the circumstances of these falls is needed in order to design effective prevention programs. Further investigation is required as to whether it is a lack of information on the death certificate that prevents a more accurate code from being assigned or if there is a lack of codes to properly describe the fall event that occurred. Information from this investigation could be used to draft new codes for inclusion in the next revision of the ICD and/or improve notations made by the person filling out the death certificate.

Suffocation

The majority of suffocation deaths were classified as *other and unspecified* and more information regarding the circumstances of these suffocation deaths is needed. Further investigation is needed to determine whether it is a lack of information on the death certificate that prevents a more accurate code from being assigned or if there is a lack of codes to properly describe the suffocation event that occurred. Information from this investigation could be used to draft new codes for inclusion in the next revision of the ICD and/or improve notations made by the person filling out the death certificate.

Aircraft

Powered aircraft accounted for nearly half of all air transport deaths, but the nature of the aircraft itself (i.e., size) and the purpose of the flight is unknown from this data (i.e., recreation, business). Furthermore, 52% of all air transport deaths were coded *other and unspecified* aircraft type. These unknown variables indicate the need for more information regarding the circumstances of air transport deaths.

In regards to the air transport deaths coded as *other and unspecified*, further investigation is needed to determine whether it is a lack of information on the death certificate that prevents a more accurate code from being assigned or if there is a lack of codes to properly describe the air transport event that occurred. Information from this investigation could be used to draft new codes for inclusion in the next revision of the ICD and/or improve notations made by the person filling out the death certificate.

Consideration could also be given to the development of additional codes to provide more information about the nature of the flight (i.e., recreation, business).

Machinery

The majority of the deaths caused by machinery were classified as *other and unspecified* types, indicating a need for better data collection and classification of machinery-related deaths.

Further investigation should determine whether it is a lack of information on the death certificate that prevents a more accurate code from being assigned or if there is a lack of codes to properly describe the machinery-related death that occurred. Information from this investigation could be used to draft new codes for inclusion in the next revision of the ICD and/or improve notations made by the person filling out the death certificate.

Firearm (unintentional)

The majority of firearms deaths were classified as *other and unspecified* firearm. In order to effectively address the problem of injury deaths caused by unintentional firearm usage, more information is needed regarding deaths due to other and unspecified firearm use.

Further investigation should determine whether it is a lack of information on the death certificate that prevents a more accurate code from being assigned or if there is a lack of codes to properly describe the unintentional firearm-related death that occurred. Information from this investigation could be used to draft new codes for inclusion in the next revision of the ICD and/or improve notations made by the person filling out the death certificate.

19.2 Additional data analysis/collection

Additional analysis and/or collection of data is recommended for the following injury mechanisms in order to develop targeted interventions:

Suicide

Research efforts should focus on increasing knowledge regarding the risk factors for suicide. Further study may be needed into age-related and other factors influencing the choice of method used, and to compare these in males and females.

Motor vehicle transport

The motor vehicle transport death rate trend decreased significantly between 1986 and 2002. However, children, young adults and older people appear to still be at increased risk. Pedestrians in traffic had the second highest motor vehicle transport death rate of all road-user classes assessed and males continued to constitute a significant proportion of all motor vehicle transport deaths.

To address these issues, research into road safety should focus on the following areas in NSW:

- young people aged 15–24 years as occupants (and/or drivers) in traffic situations
- older people (65+ years) as occupants (and/or drivers) in traffic situations
- pedestrians in traffic situations, especially children aged 5–9 years and older people

Poisoning

More research is needed to identify the factors associated with poisoning due to the use of pharmaceuticals by people aged 45+ years (i.e., unintentional poisonings) and narcotics and hallucinogens by people aged 25–44 years (i.e., overdoses) in NSW.

Fire/burns

While the fire/burn death rate has declined significantly since 1986, death caused by fire/burn events is still a serious public health problem for people of all ages in NSW, occurring mainly in private dwellings. In order to address this public health problem, the circumstances and place and type of residences where deaths are occurring in NSW should be investigated, including the presence of a functioning smoke alarm.

Interpersonal violence

Interpersonal violence is a serious public health problem for many people in NSW. Factors contributing to interpersonal violence, including the role played by alcohol and drugs, should be investigated. The high numbers of firearms deaths should also be investigated given government action to reduce availability of firearms.

Struck by/struck against

Being struck by or struck against another person or object accounted for 60% of all struck by/struck against deaths. The specific factors that caused these types of deaths and the types of injuries that resulted should be investigated. If patterns are found in terms of the types of environments or situations in which fatal injury due to being struck by/against a person or object is likely, those findings would provide useful information to people at risk in potentially dangerous situations.

Drowning

As drowning in children under age five years often occurs in the child's own home, more research needs to be done to identify the factors that put children in this age group at risk of drowning, including the role of parental supervision and safety precautions.

Suffocation

These results indicate that suffocation is a serious public health problem for very young children and older people in NSW. Children aged less than one year are most at risk while in bed (e.g. own cot, parents bed) and older adults are at risk while eating. Further research is needed to study the factors contributing to suffocation deaths in these age groups.

Rail transport

Rail transport is a leading cause of injury death in NSW, particularly for male pedestrians who are involved in rail transport incidents. Further research should focus on identifying factors contributing to rail transport deaths in male pedestrians.

Complications of care

Complications of care are mostly a problem for people aged 65+ years who may experience a number of hospital stays for various medical conditions. Research could focus first on the factors leading to these medical conditions, and second, on reducing the likelihood of complications associated with these medical conditions.

Natural and environmental factors

Natural/environmental factors account for only a small proportion of deaths each year. Future research could focus on the factors that make older people more susceptible to excess temperatures.