

RESEARCH AND PLANNING FOR INJURY PREVENTION

GUEST EDITORIAL

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The January–February 2002 issue of the *NSW Public Health Bulletin* (Volume 13, Issues 1–2) examined the large and growing public health problem of injury resulting from falls. This issue, April 2002, presents articles describing research methods and findings that have shaped, and will continue to shape, planning for injury prevention. A future issue of the Bulletin will explore farm and other work-related injuries.

Injuries are a diverse group of health outcomes that place an enormous burden on health care costs, quality of life, and even the lifespan of the residents of NSW. Injuries can be defined as damage to the body resulting from acute or chronic exposure to energy, or the absence of essential elements of life such as oxygen and warmth. Sources of energy include mechanical, chemical, thermal, and radiation energy. Injuries can be unintentional (or ‘accidental’) or intentional (as in self-harm or violence). The level of severity can range from barely noticeable to fatal.

It is this diversity of cause and outcome that makes the measurement and management of injury difficult and potentially contributes to its relatively low public health profile.

As for diseases, there are, however, characteristics of injuries that allow them to be grouped, which provide a starting point for planning prevention strategies:

- the distribution of injury is **predictable** across a population;
- injury results from **an interplay of factors** that relate to the **host** (person at risk), the **agent** of energy (or vector), and the **environment** in which the host and agent come together;
- injury is the outcome of a **sequence of events**—with opportunities to eliminate or reduce the effect of injury being to be found before, during, and after the potential event.

In this issue of the Bulletin we consider the burden of injury in NSW. We look at the patterns of injury, at the groups that are at risk of injury in our population, at some of the mechanisms of

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injury, and at how all this information is currently being used to guide planning for injury prevention.

Schmertmann and Williamson's article provides an overview of the size and nature of the problem of injuries in NSW. It reports that each year injuries are responsible for approximately 2500 deaths and more than 178,000 hospitalisations. Their analysis of the data highlights the burden of intentional injuries (such as suicide and violence) particularly in males. Table 3 of their article illustrates how the groups that are at higher risk vary when the data are examined by injury mechanism and injury outcome. These findings have implications for the planning of prevention strategies.

The article by Potter-Forbes presents the methodological challenges associated with economic costing of injury at a population level. With NSW estimates of 1.48–1.68 billion dollars in direct health care costs due to injuries—and hospital separations data able to pinpoint the major contributors to this cost—these methodologies can be utilised to inform advocacy for investment in injury prevention.

Good information systems and investment in evaluation are the cornerstones for planning effective injury prevention strategies. In Williamson's article, we see how

the NSW Injury Risk Management Research Centre is contributing to our rapidly growing knowledge-base of injury research in NSW. Sefton's article covers the evaluation methods being employed in NSW Safe Community Pilot Projects, where the focus is on risk management at local levels—finding local solutions for local risks.

Two articles examine specific types of injuries or groups at risk: Williamson and Schmertmann explore drowning and near-drowning among children; Heslop describes the results from a study of injuries to Aboriginal people in the Mid-North Coast Area. Through two other brief reports, we are presented with examples of initiatives in planning for injury prevention: the NSW Water Safety Task Force, and the response of the NSW Motor Accidents Authority to the *NSW Child Death Review Team 1998–99 Report* with regard to the requirements for action to prevent child deaths and injuries in driveways.

Through all the issues in this ongoing Bulletin series on injury in NSW, we are provided with a wealth of information that can inform local, regional, and statewide planning in injury prevention. With injuries affecting all age groups, all socioeconomic groups, and all geographic areas, well-planned interventions are a sound investment for public health. ☒

A BRIEF OVERVIEW OF INJURY IN NEW SOUTH WALES

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Injury is a leading cause of morbidity and mortality in NSW. Each year, an estimated 2500 NSW residents die as the result of an injury, and more than 178,000 are hospitalised. In 1999, injury was the leading cause of death among NSW residents aged 1–44 years, and injury and poisonings were the sixth most common cause of death and the fourth most common cause of hospitalisation. This article provides a brief overview of the patterns and circumstances of injury in NSW, using information presented in the *NSW Injury Profile*, which is produced annually by the NSW Injury Risk Management Research Centre.

METHODS

Case definitions

The case definitions of injury mechanism, injury mortality, and injury morbidity used in the *NSW Injury Profile* are described below:

Injury mechanism

Injuries are usually classified in terms of their cause and intent. An injury mechanism (represented by an E-code selected from the *International Classification of Disease*) is defined as the external object or circumstance that caused the injury, such as a motor vehicle crash. The intent can be accidental, intentional, or undetermined. Intentional injuries are usually grouped together on the basis that they were either self-inflicted or inflicted by another person or persons.

Seven major mechanisms of injury are analysed in the *NSW Injury Profile*: drowning, falls, fire-burns, interpersonal violence, motor vehicle crashes, poisonings, and suicide. All intentionally self-inflicted injuries were grouped into the suicide injury mechanism and all injuries intentionally inflicted by another were grouped into the interpersonal violence mechanism. Analysis of injuries resulting from complications of medical and/or surgical care (commonly referred to as 'adverse events') is also presented.