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Appendix 1 Tender brief

Department of Health and Ageing RFT 129/01 02

PART B — STATEMENT OF REQUIREMENT

1. INTRODUCTION

The Department of Health and Ageing is seeking proposals from suitably qualified organisations to undertake a project to conduct an examination and report on the current state of injury prevention activity for Aboriginal and Torres Strait Islander people.

The report will inform the Aboriginal and Torres Strait Islander Injury Prevention Action Committee in the development of a National Aboriginal and Torres Strait Islander Injury Prevention Plan.

Background

Injury prevention is a comparatively new issue on the Aboriginal and Torres Strait Islander health agenda. It is not however a new experience for Aboriginal and Torres Strait Islander people. Injuries tend to be hidden among the wider health and social concerns confronting Aboriginal and Torres Strait Islander people.

Injury deaths from transport-related causes in middle age, drowning in adulthood, poisoning with non-pharmaceutical substances (particularly petroleum products and solvents) in early childhood, effects of fire in later adulthood, suicide in early adulthood and (particularly) interpersonal violence throughout adulthood are particularly prominent compared with the mortality experience of non-Aboriginal and Torres Strait Islander Australians (Harrison & Moller, 1994).

More specifically Australian Aboriginal and Torres Strait Islander people overall suffer 2.8 times the rate of fatal injuries of non-Aboriginal and Torres Strait Islander Australians with much higher differentials related to interpersonal violence (11 times the rate for non-Aboriginal and Torres Strait Islander people, poisoning by substances other than medications (17 fold higher) and burns and scalds.

For Aboriginal and Torres Strait Islander Australians the rate for hospitalisations, due to injuries, is threefold the rate of non-Aboriginal and Torres Strait Islander people. The greatest differentials are for injuries resulting from interpersonal violence (estimated to be 17 times higher) and burns and scalds (estimated to be five times higher) (MoIler, 1996 cited in Elkington, 1998).

Patterns of injury are also quite different, due to the proportion of Aboriginal and Torres Strait Islander people living in rural and remote areas, as are the risks associated with living in these environments. The differentials observed are similar to those seen in other Indigenous populations, such as Navajo Indians, but are more marked, possibly due to the interaction of Aboriginal and Torres Strait Islander status and poverty in Australia (Elkington, 1998).

A recent study of five small Aboriginal and Torres Strait Islander communities in Cape York Queensland (Gladman et al., 1997) has confirmed that official statistics under-represent the size of the differentials due to different patterns of treatment and different access to workers and motor vehicle compensation. This study has led to the development of local intervention strategies but these have yet to be formally evaluated. Alcohol has been identified as a key factor in injury among Aboriginal and Torres Strait Islander people. The report clearly provides evidence for the need for intervention, but provides only limited evidence of what works.

There is an urgent need to address injury to all Aboriginal and Torres Strait Islander people in all its manifestations, but in a way that acknowledges and takes account of Aboriginal and Torres Strait Islander peoples lifestyle preferences. A National Aboriginal and Torres Strait Islander Injury Prevention Plan will create a platform from which to identify and integrate injury prevention into existing programs and structures.

At present there are few programs which specifically address injury prevention at a community level. Other programs, which may have effect on injury rates, are not identified specifically as 'injury prevention', rather they are targeted at particular risk factors and therefore not captured in data bases or references to 'injury'. State and Territory, and the Commonwealth Government already provide a range of social and environmental programs targeted at risk factors that contribute to. Governments are conducting programs in the areas of substance misuse, violence, domestic violence, road safety, employment, environment and housing.

The challenge for a national plan for the prevention of injury will be to integrate prevention approaches, monitoring and surveillance into those programs and to maximise the available resources to meet the broad health aims for Aboriginal and Torres Strait Islander people.

2. CONTEXT

The National lnjury Prevention Plan: Priorities for Action 2001–2003 was endorsed by Australian Health Ministers in August 2001. That endorsement includes the requirement for a complementary Aboriginal and Torres Strait Islander Injury Prevention Plan to be developed. This is in recognition of the high incidence of injury in Aboriginal and Torres Strait Islander communities and the special needs of those communities.

The Aboriginal and Torres Strait Islander Working Group of the National Public Health Partnership (NPHP) has accepted the responsibility of developing an Aboriginal and Torres Strait Islander Injury Prevention Plan and has established the Aboriginal and Torres Strait Islander Injury Prevention Action Committee for that purpose.

The purpose of an Aboriginal and Torres Strait Islander Injury Prevention Plan will be to:

(a) assist and support Aboriginal and Torres Strait Islander people to identify the extent and nature of injury in their communities;

(b) facilitate and support the development of the necessary infrastructure and inter-agency cooperation and collaboration to enable Aboriginal and Torres Strait Islander communities to address the identified injury issues; and

(c) improve collaboration and cooperation of programs and services to reduce the severity and incidence Of injury to Aboriginal and Torres Strait Islander people.

This project represents the first stage in the development of an Aboriginal and Torres Strait Islander Injury Prevention and Safety Promotion Plan. The outcome of the project will inform the members of ATSIIPAC and assist in formulating their response.

3. OBJECTIVE

The objective of the project is to examine and report on the current state of injury prevention activity for Aboriginal and Torres Strait Islander people.

4. REQUIREMENT

It is expected that this project will be completed within three months of commencement. The project consists of two tasks. The consultant will be required to:

- conduct an examination of the current state of injury prevention in Aboriginal and Torres Strait Islander communities through:

  (a) an examination of existing literature including relevant international literature, particularly from North America and New Zealand;

  (b) an examination of unpublished research and existing projects; and

  (c) focused/limited consultation with Aboriginal and Torres Strait Islander organisations, communities and individuals, with experience in injury prevention or associated programs. These organisations will be identified by ATSIIPAC.

  Consultations may be by means other than face to face and should identify:

  (a) the views of communities before the program of interventions,

  (b) the views of communities after the programs of intervention,

  (c) their experiences, including problems and solutions,

  (d) what they learnt, and

  (e) what they need to do to sustain reduced injury rates.

- Provide a report to the Aboriginal and Torres Strait Islander Injury Prevention Action Committee. It is not required that a consultant will engage in any new research nor duplicate existing sources of information. The report will:

  (a) discuss the findings of the consultation process and literature review;

  (b) identify and collate existing information on the nature of the injury problem in Aboriginal and Torres Strait Islander communities;

  (c) define the scope of injury, including the amount, circumstances, effects and relevant influencing factors;

  (d) list existing injury prevention activities and programs (including those not identified as injury prevention but addressing factors such as substance misuse, environment, violence, etc); and

  (e) identify and report on opportunities to enhance injury prevention activities for Aboriginal and Torres Strait Islander people.

Appendix 2 Project team and reference group

The Aboriginal and Torres Strait Islander Injury Prevention Activity Project — commissioned by the Australian Government Department of Health and Ageing on behalf of ATSIIPAC— is being undertaken by four organisations:

- Yooroang Garang, School of Indigenous Health Studies, University of Sydney;
- Australian Indigenous Health*InfoNet*;
- New Directions in Health and Safety; and
- Cooperative Research Centre for Aboriginal and Tropical Health.

The four organisations have determined to work collaboratively, each designated particular areas of primary responsibility. The aim of the project is to examine and report on the current state of injury prevention activity in Aboriginal and Torres Strait Islander communities. The Australian Indigenous Health*InfoNet* has conducted the literature review. The literature summary has focused upon the scope of injury (including epidemiology) and injury prevention activity (including policy and programs) — both in Australia and internationally — to complement the consultations being concurrently conducted with selected Aboriginal and Torres Strait Islander organisations, communities and individuals by Yooroang Garang. The project report presented here presents existing information, the findings of the consultation process, literature review and information about 'promising practices' in the field. The knowledge gained during the project is intended to inform the forthcoming Aboriginal and Torres Strait Islander Injury Prevention and Safety Promotion Plan, which will accompany the National Injury Prevention Plan: Priorities for 2001–2003.

The Cooperative Research Centre for Aboriginal and Tropical Health (CRCATH) is managing the project, the team for which comprises:

- Dr Emma Kowal and Professor Tony Barnes, CRCATH — responsible for coordination and management of the project and reference group, editing and proofreading of the report;
- Professor Neil Thomson, Director, and Janette Brooks, Research Officer, Australian Indigenous Health*InfoNet* — responsible for the literature summary and the 'promising practices' database;
- Dr Kathleen Clapham and research assistants, Yooroang Garang, School of Indigenous Health Studies — responsible for the consultation process; and
- Mr Jerry Moller – analysis of literature summary and consultations, and compilation/writing of final future directions.

A reference group of eight members was formed to support the project team by providing expert guidance and contributions to the critical analysis:

- Ms Kerry Smith, Australian Government Department of Health and Ageing;
- Ms Robyn Martin, Area Director of Aboriginal Health, Mid North Coast, NSW Health Department;
- Ms Marilyn Lyford, Royal Life Saving Society, WA;
- Ms Pam Albany, Manager, Injury Prevention Policy Unit, NSW Health;

- Mr Richard Franklin, President, Australian Injury Prevention Network and Royal Life Saving Society, Australia;
- Associate Professor James Harrison, Director, AIHW National Injury Surveillance Unit;
- Dr Tarun Weeramanthri, Community Physician, Centre for Disease Control, NT Department of Health and Community Services;
- Ms Angela Clarke, Community Development Officer, VicHealth Koori Health Research and Community Development Unit, University of Melbourne; and
- Mr Condy Canuto, Indigenous Primary Health Care Unit, University of Queensland.

The project benefited greatly from the vast experience and expertise of the reference group members.

Appendix 3 Canberra Declaration

Injury 2000 NCIPC Declaration on Indigenous Injury Prevention November 2000 at the Injury 2000 Conference, Canberra.

Injury to Indigenous people in Australia has been shown to be three to ten times as common as to non-Indigenous people. Inadequate identification of Indigenous status in the major mortality and hospital collection and in road trauma statistics means that the published data severely underestimates the extent and nature of the problem.

Despite the significance of the problem there is no coherent and strategic approach to Indigenous injury prevention in Australia. Where injury has been clearly identified in Indigenous communities and information about the types of injury that occur, Indigenous peoples place injury as a high priority for prevention. Indigenous participants at the 4th National Injury prevention Conference and the Australian Injury prevention Network are committed to injury prevention being given the same status as the current health and social priorities for Indigenous people.

The causes of Indigenous injury vary markedly from place to place and show different age distributions compared with non-Indigenous injuries. Programs targeted at non-Indigenous injury are likely to have a limited impact and benefit to Indigenous peoples.

This conference recognises:

- that injury to Indigenous people is an important issue that has not received the attention and support it deserves; and
- Indigenous people must be given a real opportunity to assess the importance of injury and injury prevention as a priority.

This will require:

- the development of a strategic approach to the alarming rate of injury in the Indigenous Community.
- support for the proposed development of a Aboriginal and Torres Strait Islander Injury Prevention and Safety Promotion Plan, which should include:
  - readily accessible local data on Indigenous injury and its causes; and
  - practical information on possibilities for injury prevention and control; and
- where injury is agreed to be a priority, support to develop injury prevention approaches that are integrated with overall health and wellbeing programs.

Programs focusing on Indigenous injury prevention should be based on genuine partnerships with Indigenous peoples, the development of trust among all participants and the development of injury prevention skills among Indigenous people.

Resources for injury prevention must be allocated in a way that permits the priorities for intervention to be set locally rather than being targeted by uniform national programs that may not meet the needs of many areas.

There is a great need for improvement in the quality and relevance of Indigenous injury data. Nevertheless, the data that are available must form the basis for immediate action and developments of better data should not delay the commencement of intervention programs.

However, concurrent with intervention development, data on Indigenous injury should be improved to a standard that permits:

- an accurate picture of injury among Indigenous peoples to be readily available in all States and territories;
- Indigenous representation on the Executive of the Australian Injury Prevention Network; and
- Commonwealth support for Indigenous representation on the Strategic Injury Prevention Partnership.

That this declaration be forwarded by the president of the AIPN to the Chair of the National Public Health Partnership, Dr Andrew Wilson, cc Mr Brian Corcoran, Department of Health and Ageing. The purpose of this communication will be to request the matter of the development of a National Aboriginal and Torres Strait Injury Prevention Strategy (NA&TSIIPS) be tabled at the next meeting of the Public Health Partnership, and that a Working Group of the Public Health Partnership Indigenous Sub Committee be established to develop the NA&TSIIPS. Representation on this group should also be inclusive of Indigenous Injury Prevention Program workers with expertise in this field, the SIPP Indigenous representative and persons who have expertise in the area of injury prevention.

That the NA&TSIIPS be developed by September 2001 to ensure the agreed National Performance Indicator with regard to Injury Prevention is achieved.

That a commitment is clearly stated in the Public Health Partnership National Injury Prevention Strategy which ensures the development of the NA&TSIIPS by September 2001 which also clearly identifies resources to ensure the implementation of its strategies, and presents the AMHAC with the strategy in 2001.

That Injury Prevention is linked to the development of the Revised National Aboriginal Health Strategy.

Appendix 4 A summary of the literature on injury prevention for Aboriginal and Torres Strait Islander peoples[8]

Janette Brooks

Neil Thomson

April 2003

Australian Indigenous Health*InfoNet*

Perth

[8] This summary provided the basis for some of the material included in the body of the main report, so there will be some inevitable duplication of text.

Preface

The recent major review of information sources for injury prevention among Aboriginal and Torres Strait Islander Australians noted the small number of published reports about local injury prevention projects, and the difficulties in identifying relevant current projects (Harrison, Miller, Weeramanthri, Wakerman, & Barnes, 2001).

These issues are similar to those encountered also in attempting to document achievements in Aboriginal and Torres Strait Islander health, which was likened to describing an iceberg from a glimpse of its tip (Burns et al., 2002). As was noted in the preface to that report, many practitioners have implemented successful strategies based on well-established principles without considering the need to publish the results — at least in formal publications. Thus, the published literature is a bit like the tip of the iceberg. Of course, for a 'new' area like injury, it is true also that there may not have been a large number of projects implemented.

Full documentation of programs and projects that address injury among Aboriginal and Torres Strait Islander people — or even achievements in Aboriginal and Torres Strait Islander health — thus needs to go far beyond the literature easily accessible from routine literature searches. There is a real need to identify and collect the so-called 'grey literature' (New York Academy of Medicine, 2002b):

> 'that which is produced on all levels of government, academics, business and industry in print and electronic formats, but which is not controlled by commercial publishers'.

Based on the observations of Harrison and colleagues (Harrison et al, 2001), it was recognised that this literature review would need to focus mainly on the grey, rather than the mainstream, literature. But, the nature of grey literature means that librarians, and others, have had difficulty acquiring grey literature and making it accessible. It is difficult not only to identify relevant materials, but also to collect them. In short, the current literature review does not benefit from the full extent of the grey literature, as further work would need to be undertaken to identify and collect other relevant materials.

More generally, the demand from US public health and other practitioners and policy makers for the relevant grey literature has prompted libraries as prestigious as that of the New York Academy of Medicine to make special efforts to acquire and catalogue these materials from various organisations (New York Academy of Medicine, 2002b). That library produces also a quarterly *Grey Literature Report* to assist other librarians with their collections (New York Academy of Medicine, 2002a).

In the absence of a similar system for acquiring and cataloguing the relevant grey literature in Australia — for injury and any other public health issue — public health and other practitioners will be restricted in their capacity to plan adequately and evaluate interventions.

1 Methodology

The Australian Indigenous Health*InfoNet* Bibliography was the initial source of information about injury among Aboriginal and Torres Strait Islander peoples. The Bibliography includes details of around 6,800 items, including journal articles, books and book chapters, government and other reports, and theses. Searches of Science Direct, HealthSTAR, Australian Public Affairs Information Service (APAIS), Cumulative Index to Nursing and Allied Health Literature (CINAHL) and Medline were used to check the completeness of this bibliography.

The literature collected was separated into nine sections based upon project objectives, and categories of injury from Harrison and colleagues (Harrison, Miller, Weeramanthri, Wakerman, & Barnes, 2001) were utilised throughout the remainder of the literature collection until writing up of the literature review, when final headings were decided upon.

The identification and collection of further materials from the grey literature[9] was initiated also.[10,11] The use of Internet search engines, particularly Google (http://www.google.com.au/), was an important component of the strategy to identify and collect grey literature materials. As well, a database of relevant organisations and individuals was constructed, and emails were sent notifying them of the project and requesting assistance/input (particularly with the grey literature). Organisations contacted included: State and Territory government injury prevention units; the Australian Injury Prevention Network (AIPN); National Injury Research Unit, Flinders University of South Australia; Injury Research Centre, University of WA; Injury Control Council of WA (ICCWA); Centre of National Research on Disability and Rehabilitation Medicine, University of Queensland (CONROD); and the Centre for Accident Research and Road Safety Queensland (CARRS-Q) Queensland University of Technology. Members of the project reference group also assisted in the identification and collection of grey literature materials.

The Australian Indigenous Health*InfoNet* liaised closely with Yooroang Garang, School of Indigenous Health (the project member responsible for the consultations with selected Aboriginal and Torres Strait Islander organisations, communities and individuals) to ensure exchange of relevant information (particularly grey literature materials).

Details of relevant documents — both mainstream and grey literature — were recorded in a separate EndNote library.[12]

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[9] Grey literature was defined at the Fourth International Conference on Grey Literature as 'that which is produced on all levels of government, academics, business and industry in print and electronic formats, but which is not controlled by commercial publishers' (New York Academy of Medicine, 2002b). The grey literature may include: reports (progress and advanced reports, technical reports, statistical reports, etc.), theses, conference proceedings, technical specifications and standards, non-commercial translations, bibliographies, technical and commercial documentation, and official documents not published commercially (primarily government reports and documents).

[10] As a part of its operation, the Australian Indigenous Health*InfoNet* attempts to identify and collect grey literature materials, so it held already some materials related to injury.

[11] In view of the fact that only a small number of reports of local intervention programs are known to have been published ,and that it is difficult to identify relevant projects in progress (Harrison et al., 2001), this project decided to initiate further identification and collection of the grey literature — even though it was recognised that the process could not be completed within the restricted time frame of the project.

[12] Being a summary of the literature, this report does not include details of all materials identified and collected as a part of this project.

2 The nature of injury

2.1 Nature of injury

Injury affects everyone at some time in their lives and is a major health problem in Australia, accounting for 6% of all deaths, 47% of deaths in the 0 to 44 years age group, and 70% of deaths in young males (National Injury Prevention Advisory Council, 1999a). It is responsible for 400,000 hospital admissions and estimated direct medical costs of $2,600 million a year. Accordingly, injury prevention and control is a National Health Priority Area (NHPA).

Broadly speaking, injury is physical harm or damage to the body (Ashwell, Pinder, & Thomson, 1996; Ozanne-Smith & Williams, 1995). It may be intentional or unintentional. If intentional, the injury may be self-inflicted (for example, suicide) or inflicted by another (for example, assault, homicide, etc.). The harm can be as a result of an external force (for example, collision with a moving object or a moving person colliding with a stationary object) or energy (such as heat and electricity); external or internal contact with a harmful substance (for example, poisoning); or absence of essential elements (such as oxygen and heat). Normally, only harmful effects occurring over a short period of time are classified as injuries. For example, the harmful effects of smoking or alcohol are not classified as injury, but overuse injuries (such as sport or work-related injuries) are.

There is a variety of categorisations of injury, according to particular needs, but the underlying classifications are those of the World Health Organization, which codes events in terms of the nature and the external cause of the injury (World Health Organization, 1996). Most reporting of injury is in terms of the environmental events and circumstances as external causes of injury, poisoning and other adverse effects, the broad groups of which are:

1. Accidents: transport accidents (including motor vehicle accidents); and other external causes of accidental injury (including falls, burns and accidental poisoning);
2. Intentional self-harm (including suicide);
3. Assault (including homicide);
4. Event of undetermined intent;
5. Legal interventions and operations of war;
6. Complications of medical and surgical care;
7. Sequelae of external causes of morbidity and mortality; and
8. Supplementary factors related to causes of morbidity and mortality classified elsewhere.

These broad groups provide a useful starting point, but close analysis of specific aspects of injury needs to aggregate information in other ways. Examples are work-related injuries, injuries in the home and violence (including at least ‘Intentional self-harm’ and ‘Assault’, and, sometimes ‘Legal interventions and operations of war’). Another typology groups injury according to the intention of the external cause: intentional (generally intentional self-harm and assault) and non-intentional.

2.2 Issues in injury prevention

In view of the enormous scope of injury, it is not surprising that there are problems in developing unified and coordinated approaches to injury prevention. Many injuries involve the health sector, at least in terms of medical and/or hospital care, but responsibility for the factors contributing to the injury often lies with a sector other than health. The assessment and prevention of road injury, for example, is generally the responsibility of the transportation sector; that of workplace injuries, the labour sector; and that of assault-related injury, the justice sector.

The extent of involvement of the health sector has varied over time and between countries. The health sector in the United States, the leader in injury prevention, has had a long-term involvement in the prevention of road injury,[13] but it is only in the last twenty years that it has started to become more involved in assault-related injury, now viewed generally as one type of interpersonal violence (Christoffel & Gallagher, 1999; Waller, 1994). In the US, the National Center for Injury Prevention and Control (NCIPC) — a part of the Centers for Disease Control and Prevention (CDC) — now makes a major contribution in the areas of intimate partner violence, sexual violence and child maltreatment, but the justice sector still has prime responsibility for the overall assessment and prevention of interpersonal violence. Similarly, the CDC has a major involvement in work-related injury through its National Institute for Occupational Safety and Health, but prime responsibility for workforce issues generally lies with the Occupational Safety and Health Administration (OSHA).[14]

Generally, the involvement of the health sector in Australia in injury is less inclusive than in the US. Responsibility for the assessment and prevention of workplace injuries, for example, is almost entirely outside the health sector.[15] Similarly, the involvement of the Australian health sector in the assessment and prevention of road injuries is much less developed than it is in the US, even though a number of research bodies in Australia are major contributors to the area. The Australian health sector does have some involvement in some areas of interpersonal violence (such as domestic violence), but recent Commonwealth initiatives have had little, if any, health sector involvement. This appears to be the case also for recent Commonwealth initiatives in crime prevention, which have emanated from the Attorney-General's Department.

With such a variety of government sectors having responsibility for different areas of injury, it is hardly surprising that approaches to injury prevention are neither unified nor coordinated.

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[13] The National Highway Traffic Safety Administration (NHTSA), administratively within the transportation portfolio, is the Federal agency with principal responsibility for road safety activities in the US.

[14] OSHA, the equivalent of Australia's Department of Employment and Workplace Relations (DEWR), is the Federal agency with responsibility for the regulation and enforcement of occupational safety and health in the US.

[15] An exception is farm-related injury, largely because much of work this area is not covered by organised unions.

3 Injury among Aboriginal and Torres Strait Islander people

3.1 The assessment of injury among Aboriginal and Torres Strait Islander people (including coding issues)

Main sources of information about injury, and identification of Aboriginal and Torres Strait Islander people in these sources[16]

The main sources of information about injury are the deaths registration systems — maintained by State and Territory registrars of births, deaths and marriages, with the data collated, coded and reported by the Australian Bureau of Statistics (ABS) — and the hospital in-patient collections — maintained by the State and Territory health authorities, with the data collated, coded and reported by the Australian Institute of Health and Welfare (AIHW) (Harrison et al., 2001). More details about deaths attributed to injury are collected as part of coronial inquiries, and the developing National Coronial Information System is potentially a very valuable source of information about fatal injuries among Aboriginal and Torres Strait Islander people (Monash University National Centre for Coronial Information, 2002).[17] The other important data — required for the estimation of rates of injury deaths and episodes of hospitalisation — are those on the population.

The deaths and hospital in-patient collections reflect episodes of serious injury, but a large proportion of the total numbers of injuries is not covered by these collections. The recently developed BEACH collection — a survey of medical general practitioners — has the potential to document at least some of the less serious injuries.[18] As well as these current and potential sources, ad hoc studies focusing on injury will continue to provide in-depth information about injury in specific regions/communities.[19]

Each of these sources has the potential to provide useful information about injury among Aboriginal and Torres Strait Islander people — provided they are identified as such. Unfortunately, the levels of Aboriginal and Torres Strait Islander identification vary considerably, meaning that the estimation of national levels is not possible (Harrison et al., 2001).[20] For example, the ABS assessed the overall coverage of Aboriginal and Torres Strait Islander identification in the deaths registrations in 2001 as only 59%, with only the Northern Territory, South Australian and Western Australia having levels above the national average (Australian Bureau of Statistics, 2002).

In relation to the hospital in-patient collections, levels of Aboriginal and Torres Strait Islander identification were viewed as 'acceptable' only by the Northern Territory and South Australian health authorities (Australian Institute of Health and Welfare, 2002a). Slightly more than 1% of encounters in the first year of the BEACH survey were identified as Aboriginal and Torres Strait Islander, but the overall accuracy of identification is not known and the reasons for the identified Aboriginal and Torres Strait Islander encounters was not reported (Harrison et al, 2001).

In terms of population figures, the ABS has made substantial efforts in recent years to develop estimates of the Aboriginal and Torres Strait Islander population, but still acknowledges that the process is 'problematic and prone to uncertainty' (Australian Bureau of Statistics & Australian Institute of Health and Welfare, 2001). The ABS identifies the current estimates and projections as

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[16] This brief summary has been updated from Harrison et al. (2001), to which readers should refer for more details.

[17] The National Coronial Information System records contain information derived from police investigation reports; autopsy reports; supporting forensic medical reports (such as toxicology); and the Coroner's findings.

[18] A more targeted survey — of Indigenous community-controlled health services — would have the potential to produce even more useful information about injuries among Indigenous people not requiring hospitalisation.

[19] An example is the study of injury in remote Indigenous communities on Cape York (Gladman et al., 1997).

[20] Of course, much more is needed than national estimates, as important as they are for some purposes.

‘experimental’, and these are probably reasonable overall for national, State and Territory purposes. They are likely, however, to be less reliable for specific population sub-groups (such as young males) and for regional and local populations (Harrison et al, 2001).

Overall, the inadequate identification of Aboriginal and Torres Strait Islander status in the deaths registration systems and in the hospital in-patient collections means that the published data severely underestimates the burden of injury among Aboriginal and Torres Strait Islander people (Harrison et al., 2001). Relatively little is known about the overall prevalence, nature and cause of injury experienced by Aboriginal and Torres Strait Islander people, nor the impact injury has on the individual, family and community (Harrison et al., 2001).

Coding of injury

The 10th revision of the International Classification of Diseases (ICD-10) is now applied in Australia to code deaths and hospitalisation[21] (Harrison et al., 2001).

Despite its usefulness for broad epidemiological studies, the ICD categories have a limited capacity for describing the injury event. Many injuries in the Aboriginal and Torres Strait Islander population belong to categories where there is little detail (for example, falls). In addition, it is apparent that cultural aspects influence the way in which information about an injury-causing event is presented to investigators and/or clinicians, and the way this is coded (Moller, Dolinis, & Cripps, 1996). An example is a lack of clarity over how traditional Aboriginal and Torres Strait Islander punishment practices should be coded (that is, they could be coded as an accident, legal intervention or interpersonal violence, depending upon the perspective taken).

The overall size of the problem may be assessed, but a detailed understanding of the causes cannot be obtained by the use of the ICD system (Moller et al., 1996). Attempting to address these issues, Weeramanthri and Plummer (Weeramanthri & Plummer, 1994) proposed an alternative system to the ICD for the classification of cause of death. Their system emphasised the underlying — rather than the direct — causes of death. The ICD-9 classifications[22] were re-categorised to: land (diseases of the physical environment), body (so-called lifestyle diseases), spirit (diseases of poverty and cultural dislocation, including injury deaths), and smoking-related. The authors calculated proportional mortality ratios and fed back the results of this mortality analysis at feedback sessions and a workshop. No formal evaluation of this process was conducted, but informal feedback suggested that health information presented in this way was relevant and useful to the participating communities, and more closely resonated with the participants’ world views (Weeramanthri & Plummer, 1994).

3.2 Impact of injury among Aboriginal and Torres Strait Islander people[23]

Historically, few studies have been undertaken or data gathered specific to injury causation and impact among Aboriginal and Torres Strait Islander populations Australia-wide. Until a decade ago, there was also little attention directed to the prevention of injuries among Aboriginal and Torres Strait Islander people, despite the fact that injuries were known to contribute disproportionately to many of the health disadvantages they experienced (Reid & Trompf, 1991).

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[21] The 'Australian Modification' provides for more extensive coding on hospitalisation episodes.

[22] The ICD-9 was the classification version current at the time of this proposal.

[23] This section provides a brief summary of the current burden of injury among Indigenous people, but does not attempt a comprehensive historical review of the increasing awareness and evidence.

Largely due to the ground-breaking work of the National Injury Surveillance Unit (Harrison & Moller, 1994; Moller, 1996; Moller et al., 1996), there is little doubt now that the impact of injury is far greater among Aboriginal and Torres Strait Islander people than it is among non-Indigenous people.

For Aboriginal and Torres Strait Islander people living in Western Australia, South Australia and the Northern Territory in 1997–2001,[24] for example, injury was responsible for 531 male deaths and 243 female deaths (see Table 24). Compared with their non-Indigenous counterparts, these numbers of deaths were around three times the number expected for males and more than six times for females. Intentional self-harm was the leading specific cause of injury death among Aboriginal and Torres Strait Islander males (responsible for 26% of injury deaths), followed by motor vehicle accidents (17%) and deaths of pedestrians (12%). Among Aboriginal and Torres Strait Islander females, one-fifth of all injury deaths was the result of assault, with the major causes being motor vehicle accidents and deaths of pedestrians (each 14%) and intentional self-harm (13%). The numbers of deaths were much higher than the numbers expected from non-Indigenous rates for all injury categories and both sexes, but particularly high for pedestrian deaths (8 times higher for males and 33 times higher for females) and for assault (9 times higher for males and 22 times higher for females). It is noteworthy also that the numbers of deaths from intentional self-harm were higher than the numbers expected by similar ratios for Aboriginal and Torres Strait Islander males (2.2) and Aboriginal and Torres Strait Islander females (2.5).

Death rates from injury for Aboriginal and Torres Strait Islander males and females were higher than those for their non-Indigenous counterparts in every age group (see Table 25, over). An expression of the enormous impact of injury on Aboriginal and Torres Strait Islander females is the fact that their age-specific rates were higher generally than those for non-Indigenous males.

• Table 24 Numbers of Aboriginal and Torres Strait Islander deaths from injury and SMRs, by sex: WA, SA and the NT, 1997–2001

	Males		**Females**	
	Number	*SMR*	*Number*	*SMR*
All injury (V01–Y98)	531	3.2	243	6.4
Land transport (V01–V89)	172	3.3	78	6.7
Motor vehicle accidents (V10–V79)	90	2.3	35	3.8
Pedestrians (V01–V09)	62	8.0	33	32.5
Other land transport (V80–V89)	20	4.4	10	0.1
Intentional self-harm (X60–X84)	140	2.2	32	2.5
Assault (X85–Y09)	48	8.5	48	22.3
Other external causes (remainder of V01–Y98)	171	3.5	85	7.5

Source: Derived from data provided from the AIHW mortality database

Notes: 1 The SMRs (standardised mortality ratio) have been calculated by dividing the numbers of Aboriginal and Torres Strait Islander deaths for each sex by the numbers expected from the rates for non-Indigenous people of the same sex in WA, SA and the NT.

[24] These are the only jurisdictions with levels of Indigenous identification sufficiently high in the deaths registration systems to permit separate analysis. It should be recognised, however, that the levels and patterns of injury may be different for other jurisdictions, particularly those with different proportions of urban/rural/remote living Indigenous people.

• Table 25 Age-specific death rates for injury, by Aboriginal and Torres Strait Islander status and sex, and rate ratios: WA, SA and NT, 1997–2001

	Indigenous		Non-Indigenous		Rate ratios	
	Males	*Females*	*Males*	*Females*	*Males*	*Females*
0–4	50	58	18	9	2.8	6.5
5–14	25	23	7	3	3.8	6.7
15–24	213	75	75	21	2.8	3.5
25–34	295	83	90	21	3.3	3.9
35–44	260	129	72	22	3.6	5.8
45–54	155	104	53	16	3.0	6.5
55–64	178	45	44	19	4.1	2.3
65–74	187	85	63	31	3.0	2.8
75+	156	71	64	3	2.4	2.2

Source: Derived from data provided by the AIHW National Mortality Database and ABS low series population projections

Notes: 1 Rates are per 100,000 population

2 Rate ratios are the Aboriginal and Torres Strait Islander rates divided by the same-sex non-Indigenous rates

Aboriginal and Torres Strait Islander people were hospitalised for injuries across Australia in 1999–2000 at around twice the rate of non-Indigenous people (see Table 26) (Lehoczky, Isaacs, Grayson, & Hargreaves, 2002).[25] Assault was the leading cause of hospitalisation for both Aboriginal and Torres Strait Islander males and females, followed by accidental falls and exposure to inanimate mechanical forces. Other important causes of hospitalisation were transport accidents (particularly for Aboriginal and Torres Strait Islander males), complications of medical and surgical care, and intentional self-harm. Hospitalisation rates from injury for Aboriginal and Torres Strait Islander people were higher than those for non-Indigenous people in nearly every age group, particularly among adults aged less than 75 years.

• Table 26 Aboriginal and Torres Strait Islander hospitalisation for selected causes of injury/poisoning: numbers, age-standardised rates and rate ratios, by sex: Australia 1999–2000

Cause of injury/poisoning	Males			Females		
	Number	*Rate*	*Rate ratio*	*Number*	*Rate*	*Rate ratio*
Assault	1,949	10.7	7.9	2,103	10.5	36.5
Accidental falls	1,453	7.9	1.4	1,018	6.4	1.1
Exposure to inanimate mechanical forces	1,187	5.6	1.3	614	2.7	2.0
Transport accidents	858	4.0	1.1	394	1.8	1.0
Complications of medical/surgical care	635	5.0	1.4	844	6.2	2.0
Intentional self-harm	394	2.1	2.3	466	2.3	1.8
All causes	8,817	47.5	1.9	7,193	38.9	2.3

Source: Lehoczky et al., 2002

At a community level, the first evidence of the great impact of injury emerged from the work of the National Injury Surveillance Unit between 1994 and 1997. Until recently, the *Study of injury in five Cape York communities* (Gladman, Hunter, McDermott, Merritt, & Tulip, 1997) was the most comprehensive analysis of injury in Aboriginal communities in Australia. The study, which had been prompted by the observation that injury accounted for 51% of the excess deaths in the 15 to 44 years age group in the Cape York communities between 1989 and 1994, involved: narrative case studies; an epidemiological audit of injury in a community; and focus group sessions and comparison of injury events in two communities, one with an alcohol canteen and one without.

The twelve-month case note audit undertaken in the community which had a canteen selling beer only found that the 683 injuries sustained comprised 24% of all initial consultations and 34% of evacuations (Gladman et al., 1997). Almost half of all people experienced at least one injury during the twelve-month period, with the average number of injuries being 2.1 per person. Overall, the most frequent injury sustained was one to the head, comprising 35% of injuries to females and 23% of those to males. The numbers and proportions of upper limb injuries were much higher for males than females. The numbers, but not proportions, of lower limb injuries were also higher for males than females. Around one-half of all injuries sustained had some association with alcohol consumption, partly reflecting the very high proportion (93%) of people aged 15 years or older who were regular drinkers. More than 90% of alcohol-related injuries occurred on Thursday, Friday or Saturday. Of the alcohol-related injuries, 33% were the result of family violence and 38% of other assaults.

Partly in response to the Cape York study, a number of other community-level studies have been undertaken in recent years. These include ones at Woorabinda in Queensland, and in the Mid North Coast and Shoalhaven areas of NSW (Canuto, Craig, McClure, Young, & Shannon, 2000; Heslop, 2002; Mid North Coast Aboriginal Health Partnership, 2001; Royal & Westley-Wise, 2001; Shannon et al., 2001a; Shannon et al., 2001b). Each of these reports confirmed the substantial impact of injury in the specific communities/regions, and raised the awareness of injury in these communities/regions.

3.3 Factors contributing to injury among Aboriginal and Torres Strait Islander people

The development of injury prevention projects and programs depends on an understanding of the various factors contributing to specific injuries. Reflecting the great diversity of injury — and the diverse disciplinary and other characteristics of people involved in injury prevention — approaches investigating these factors range from the traditional epidemiological single risk factor approach to broad sociological methods.

Of course, our understanding of the factors contributing to health generally has broadened substantially in recent years, with health now acknowledged as depending on a complex interaction of socioeconomic, cultural, environmental and personal factors (biological and behavioural), and the nature and availability of health services (Australian Institute of Health and Welfare, 2000; World Health Organization, 2000). Socioeconomic factors, in particular, have been recognised as important 'determinants' of health (Marmot & Wilkinson, 1999).

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[25] The true difference between Indigenous and non-Indigenous hospitalisation rates is higher than this – due to the widespread but variable under-identification of Indigenous people in the hospital in-patient collections.

Acceptance of the very broad range of factors contributing to health has been applied increasingly to the health of Aboriginal and Torres Strait Islander Australians (Australian Bureau of Statistics & Australian Institute of Health and Welfare, 2001; Australian Institute of Health and Welfare, 2002b), thus providing a more appropriate foundation on which to develop effective intervention strategies.

To be as effective as possible, injury prevention strategies need to address a wide variety of factors contributing to injury events. The approach proposed by a major recent review of violence in Aboriginal and Torres Strait Islander communities (Memmott, Stacy, Chambers, & Keys, 2001), recognises the importance of a broad framework for considering these 'risk' factors.[26] In line with the recent research on the social determinants of health, this review classified the factors contributing to the various forms of violence in Aboriginal and Torres Strait Islander communities as:

1. precipitating causes — one or more particular events that trigger a violent episode by a perpetrator;
2. situational factors — which could include alcohol abuse, other people encouraging one or both of the antagonists to act, conflicting social differences between the antagonists, etc.; and
3. underlying factors — the deep historical circumstances of Aboriginal and Torres Strait Islander people which make them vulnerable, leading to their enacting or becoming the victim of violent behaviour (Memmott et al., 2001).

While recognising that this classification may not be as soundly based as one would like, it was seen as a guide for remedial and preventive programs (Memmott et al., 2001). The current impact and consequences of underlying factors could be addressed 'through the provision of land, housing, health services, education and employment, as well as processes of empowerment'.

Situational factors were seen as 'best tackled at a local level by a community council, cooperative or other Indigenous agency' (Memmott et al., 2001), through the provision of things like: shelters for women and children; sobering-up shelters; and properly facilitated alcohol awareness and consumption reduction programs. Precipitating factors were best addressed 'at the individual or one-to-one level' (Memmott et al., 2001). Counselling and other services for victims and perpetrators would need to be backed up with support from relatives and friends.

This broad approach to seeking causal factors is well established in the justice area, being a feature of the work of the Royal Commission into Aboriginal Deaths and Custody (Royal Commission into Aboriginal Deaths in Custody, 1991), and also in the area of self-inflicted injury (see, for example, (Hunter, 1991c; Hunter, Reser, Baird, & Reser, 2001; Radford et al., 1991; Radford et al., 1999; Tatz, 2001)). It is a feature also of an analysis of road injuries in South Australia (Brice, 2000), but does not appear to be as widely used in the more traditional injury prevention literature.

As with many other areas of epidemiology, injury epidemiology has started to realise that single-cause explanations of injury events are 'incomplete and misleading' (Christoffel & Gallagher, 1999), and that what is needed is a broader examination of the physical and social environment in which the injury occurred. This aspect has characterised much of the recent work examining self-harm among Aboriginal and Torres Strait Islander people, but has yet to permeate fully other areas of injury analysis.

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[26] Despite current concerns with traditional risk-factor epidemiology, 'risk factor' is still the most commonly used term within the health sector.

Bearing this in mind, the understanding of contributing factors is weak for most areas of injury, including injury among Aboriginal and Torres Strait Islander people (Harrison et al., 2001). Information allowing for the consideration of risk factors and mechanisms of injury is relatively scarce, and varies across the specific topic areas considered.

Most studies that have sought to identify risk factors have failed to explore the interplay of risk factors (for example, young males and alcohol, risk-taking, and exposures to hazardous environments). In order to explore how these factors influence each other, more longitudinal, in-depth research is required. Such research, with greater collaboration between fields of study, should also shed light upon a point in the chain of events that can offer the greatest opportunity for intervention (Harrison et al., 2001).

Despite the issues surrounding the identification of factors contributing to injury among Aboriginal and Torres Strait Islander people, the available literature suggests an interrelationship of cultural, environmental and lifestyle variables as main causes for the high incidence of injury. The following factors, collectively or through a multiplicity of variables, appear from the literature to account for the higher incidence of injury:

- marginalisation and disruption to traditional values, kinship and culture;
- loss of self-esteem and purpose leading to alcohol abuse/interpersonal violence;
- exposure to hazardous environment(s);
- at-risk home environment;
- risks associated with living in rural, remote or isolated communities;
- dependence on road transport for long distances;
- alcohol and substance abuse;
- violence;
- social and familial dysfunction;
- increased falls risks in the young and the elderly;
- risk behaviour, isolation and self-harm;
- low socioeconomic status;
- unemployment, poverty and dependence;
- inadequate equity and intervention levels; and
- reduced or limited access to health, community and social support services.

Much remains unclear about injury among Aboriginal and Torres Strait Islander populations, but enough is known to indicate that this issue intersects with other health and social issues (Harrison et al., 2001). The differentials observed are similar to those seen in other Indigenous populations (such as the Navajo Indians in the United States), but are more marked — possibly due to the interaction of Aboriginal and Torres Strait Islander status and poverty in Australia. The proportion of Aboriginal and Torres Strait Islander people living in rural and remote areas and the risks associated with these environments and differences in activities associated with cultural norms intersects closely with Aboriginal and Torres Strait Islander injury, as does drug use, particularly the use of alcohol. The effects of alcohol on Aboriginal and Torres Strait Islander injury are so profound that it is often seen as the sole cause of the problem.

The following section is structured along the lines used by Harrison and colleagues (2001) in considering information sources for injury prevention among Aboriginal and Torres Strait Islander Australians.

Alcohol and Injury

Alcohol is widely accepted to be the key risk factor for many types of injury, including road injuries, falls, fire injuries, drowning, machine injuries, suicide, assault and child abuse (English et al., 1995; Steenkamp, Harrison, & Allsop, 2002). The actual contribution of alcohol use to the various types of injuries varies, but the best international and national data suggests that unsafe alcohol use is responsible for: 37% of road injuries sustained by males and for 18% of those sustained by females; 34% of fall injuries; 44% of fire injuries; 34% of drownings; 7% of machine injuries; 12% of suicide among males and 8% among females; 47% of assaults; and 16% of cases of child abuse (English et al., 1995).[27]

The likely theoretical contribution of alcohol to Aboriginal and Torres Strait Islander injury has not been quantified, but, in view of the higher proportions of harmful/hazardous alcohol use among Aboriginal and Torres Strait Islander people (Australian Bureau of Statistics, 1999; Australian Bureau of Statistics & Australian Institute of Health and Welfare, 1999; Commonwealth Department of Human Services and Health, 1996), these are likely to be conservative estimates of the actual contributions of unsafe alcohol use to injury.

Many reports have identified alcohol as a major contributor to Aboriginal and Torres Strait Islander injury (see for example, the reports of the Royal Commission into Aboriginal Deaths in Custody (Royal Commission into Aboriginal Deaths in Custody, 1991) and the recent Gordon inquiry into family violence and child abuse in Aboriginal communities in Western Australia (Gordon, Hallahan, & Henry, 2002)), but few studies have attempted to focus on the actual impact.

Overall, the reliability of information on alcohol involvement in injury is uncertain, being complicated by numerous factors. These factors include reliable and accurate measurement of alcohol in the system of the individual at the actual time of the injury, and the fact that the person injured due to the effects of alcohol may not be the person who actually consumed the alcohol (Harrison et al., 2001). Partly as a result of these problems, the major health-related collections in Australia, death registrations and the hospital in-patient collection, provide few insights into the role of alcohol in injury.

Despite the lack of comprehensive data, the impact of alcohol on Aboriginal and Torres Strait Islander injury has been recognised as substantial, and reducing this impact is seen as imperative to address the issue of injury prevention (Harrison et al., 2001).

Volatile substance abuse

Inhalation of volatile substances (that is, glues, liquid solvents, petrol, aerosols and fire extinguisher propellants) for mind-altering effects is relatively common among young people in general, especially those from lower socioeconomic backgrounds (possibly due to its relative cost) (Harrison et al., 2001). Petrol sniffing is a common form of volatile substance abuse among Aboriginal and Torres Strait Islander communities, particularly those in remote parts of the country (Harrison et al., 2001). It appears to present more problems than other volatile substances, but little is known about the extent and impact of the other substances.

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[27] These proportions were estimated from a combination of the best epidemiological estimates of the greater risk of sustaining an injury among those people who had consumed unsafe levels of alcohol, and the population prevalence of unsafe alcohol consumption.

The short and long term effects of petrol sniffing may be profound and are not always restricted to the sniffer. The acute injuries/injury risk factors associated with petrol sniffing include aggression, violence, decreased morale, confusion, burns and (sometimes) sudden death (d'Abbs & Maclean, 2000).

Obtaining accurate data on petrol sniffing and the associated injuries, and evaluating interventions is difficult due to the 'semi-clandestine' nature of the activity, the fluctuating nature of patterns of use and its differential distribution among communities (d'Abbs & Maclean, 2000).

Road injury

Aboriginal and Torres Strait Islander Australians are over-represented in road injury mortality in all three Australian jurisdictions with adequate data — WA, SA and the NT (McFadden, McKie, & Mwesigye, 2000). In WA and SA, Aboriginal and Torres Strait Islander road deaths occur at nearly twice the rate of that of the non-Indigenous population (Harrison et al., 2001). In WA, Aboriginal and Torres Strait Islander people were responsible for 7% of road injury-related hospitalisation during 1988 to 1996 (and were 3% of the population at that time) (Cercarelli, 1999).

Road injury characteristics are notably different between Aboriginal and Torres Strait Islander and non-Indigenous people, with Aboriginal and Torres Strait Islander people being more likely to be involved in single vehicle crashes (Treacy, Jones, & Mansfield, 2002) and those involving pedestrians (Cercarelli, 1999). As well, relatively high proportions of crashes involving Aboriginal and Torres Strait Islander people have contributing factors (such as alcohol, over-loaded vehicles and non-use of seat belts) (Harrison et al., 2001). Crude death rates from motor vehicle crashes for Indigenous people in Australia are not dissimilar to those among First Nations populations in Canada, Maori in Aotearoa/New Zealand, and Native Americans in the USA (Brice, 2000).

A recent analysis of WA hospital in-patient data for the years 1971–1997 found that the rate of hospitalisation due to road injury for Aboriginal and Torres Strait Islander people (719.1 per 100 000 population per year) was almost twice as high as that for non-Indigenous people (363.4 per 100 000 population per year) (Cercarelli & Knuiman, 2002). Hospitalisation from road injury involving non-Indigenous people had decreased by 6.7% per three-year period since 1971, but hospitalisation for Aboriginal and Torres Strait Islander people had increased by 2.6% per three-year period. The increase was more pronounced for males, for people aged 0–14 years and over 45 years, and for people living in rural areas (Cercarelli & Knuiman, 2002).

Several factors are hypothesised to underlie the differentials observed in road injury between the Aboriginal and Torres Strait Islander and non-Indigenous populations. Certain risk factors are common to all persons living in remote or rural areas — greater exposure to long distances, higher speeds on unsurfaced roads, and less accessibility to emergency health services (Harrison et al., 2001). Around 70% of Aboriginal and Torres Strait Islander people live in rural and remote areas of Australia, so a greater proportion of the Aboriginal and Torres Strait Islander population than of the non-Indigenous population is exposed to these risks. Cercarelli and colleagues suggest also (Cercarelli, Ryan, Knuiman, & Donovan, 2000):

> … differences in lifestyle and culture in Aboriginal and Torres Strait Islander persons may exacerbate existing risks by reducing the appropriateness of current safety education programs.

The analysis of road injuries among Aboriginal and Torres Strait Islander people will need to go deeper than the usual identification of proximate factors (that is, seat belt use and intoxication), including attention to why relevant factors (such as non-compliance with seat belts and speed limits, and driving while intoxicated) are prevalent among Aboriginal and Torres Strait Islander people (Harrison et al., 2001).

There is currently limited literature on Aboriginal and Torres Strait Islander-specific road safety interventions and their subsequent evaluation. One of the most widely promoted and discussed interventions has been a change in legislation in the NT and then WA — outlawing the practice of riding in an open load-space without an approved roll frame fitted to the vehicle (North Queensland Indigenous Injury Prevention Partnership, 2002). Following the introduction of legislation in the Northern Territory, the proportion of road injury deaths occurring to open load space passengers fell from 10% (in 1990–1993) to 2.1% (in 1994–1997) (Harrison et al., 2001). The legislation is not restricted to Aboriginal and Torres Strait Islander people, but it has had a greater positive impact on Aboriginal and Torres Strait Islander injury rates due to the greater preponderance of riding in open load spaces by Indigenous people (Cercarelli & Cooper, 2000). Statistics such as these demonstrate the potential of routine injury statistics to provide some evidence of the impact of interventions (see Section 4 of this Appendix for further information about road safety projects).

The limited literature demonstrates clearly that road safety issues involving Aboriginal and Torres Strait Islander people need to be addressed urgently by health and transport authorities, with particular attention to the predisposing social factors. As Brice (2000) notes, prevention is inextricably linked to questions of causality. In his 2000 review, he argues that to consider road injury in relative isolation is 'misleading and inappropriate'. He attributes the consistent and large proportion of Aboriginal and Torres Strait Islander deaths from injury over the past two decades to '… significant social disturbance at the root of individual incidents' (Brice, 2000). Brice considers that (2000):

> … road trauma among Aboriginal and Torres Strait Islander people is as much a feature of class or social disadvantage as of culture or, for example, of popular notions of poor driving in sub-standard vehicles.

In his *National Road Safety Report,* Brice (2000) proposes eighteen recommendations on information availability and quality, potential action by government, community-based initiatives, collaboration between the government and community sectors, and research strategies.

Injury due to interpersonal or family violence

Despite the limitations of the available data, sufficient evidence is available to show that injury due to violence among Aboriginal and Torres Strait Islander people is an issue of serious concern (see Section 3.1 above). Almost all published comparative analyses have found that rates of violence are higher in the Aboriginal and Torres Strait Islander population than in the non-Indigenous population (Harrison et al., 2001).

Violence by Aboriginal and Torres Strait Islander people resulting in injury or death is more likely to be directed towards friends and family (that is, people known to the perpetrator) than to strangers (Harrison et al., 2001). For this reason, in addition to legal ramifications, the extent to which cases of interpersonal violence are revealed or recognised is uncertain. Obtaining accurate ICD-10 coding of incidents and assessing whether patterns of identification differ between Aboriginal and Torres Strait Islander and non-Indigenous people is equally uncertain. There is also some evidence

that Aboriginal and Torres Strait Islander males are less likely to seek treatment for injuries received as a result of violence than either Aboriginal and Torres Strait Islander females or non-Indigenous males.

Interventions aimed at reducing family violence among Aboriginal and Torres Strait Islander people are numerous, but a lack of formal evaluation and documentation has made reviewing and reaching definitive conclusions for future research and intervention difficult. In an attempt to address this issue, in 1998–1999, Memmott et al. (2001) were commissioned by the National Campaign against Violence and Crime (later re-named 'National Crime Prevention') in the Attorney-General's Department Canberra to undertake a national review of the extent and nature of Aboriginal and Torres Strait Islander violence in Australia, and existing programs and strategies to reduce such violence. The report of the review noted that '… the literature tends to be top-heavy with theory and discussion, and lacks empirical evidence on violence' (Memmott et al., 2001).

Suicide and intentional self-harm

Injury due to suicide and intentional self-harm began to receive greater attention in Australia in the late 1980s, initially in recognition of the increase in suicides among young people (particularly males). As part of the Royal Commission into Aboriginal Deaths in Custody, the high and increasing rates of suicide among Aboriginal and Torres Strait Islander people became apparent. Suicide and intentional self-harm subsequently became a prominent issue in Australia in the latter half of the 1990s, with particular attention directed to suicide among young Australian males (Indigenous and non-Indigenous).

Despite large scale strategies being implemented (for example, LIFE, NYSPS), the scope of the issue of suicide and intentional self-harm is still to be sharply defined or universally agreed. As noted by Harrison and colleagues (2001):

> depending on the perspective adopted, deliberate self-destruction, recklessly dangerous behaviours, self-mutilation, etc. may be seen as separate or related phenomena. Similarly, connections are found between this 'internally directed violence' and 'externally directed violence' manifesting as assault, etc.

In light of evidence on risk factors for suicide, Aboriginal and Torres Strait Islander people have certain characteristics suggesting that an elevated suicide risk might be expected — including widespread experience of social disruption during childhood, poverty and high rates of incarceration (Australian Bureau of Statistics & Australian Institute of Health and Welfare, 1999; Hunter, 1999; Tatz, 2001).

An increasing body of literature is available on suicide and self-harm among Aboriginal and Torres Strait Islander people, a large portion of which has been commissioned by Commonwealth government agencies under the auspices of various strategies. Several independent authors have analysed Aboriginal and Torres Strait Islander suicide and related behaviours in particular communities or regions of Australia. One of the main contributors to this field of inquiry is Professor Ernest Hunter, whose thoughtful and thorough work has focused on various aspects, including aetiology. Hunter stresses the need for suicide and self-harm among Aboriginal and Torres Strait Islander people to be analysed within its broad social and historical context, but recognises the importance of local and acute situational factors (Hunter, 1990; Hunter, 1991a; Hunter, 1991b; Hunter, 1991c; Hunter, 1995; Hunter et al., 2001).

Similarly, a detailed analysis of self-harm and suicidal ideation among Aboriginal and Torres Strait Islander and non-Indigenous female single parents in Adelaide considered a variety of potential contributory factors, including finance, housing, upbringing, experience of abuse, and interaction with police (Radford et al., 1991; Radford et al., 1999). The study found that suicide attempts were less frequent among the Aboriginal and Torres Strait Islander women than among non-Indigenous women, and concluded that self-harm was related more to class than Aboriginal and Torres Strait Islander status (Radford et al., 1999).

A more recent contribution is that of Professor Colin Tatz, whose in-depth analysis of suicide among Aboriginal youth in NSW and the ACT and Maori youth in New Zealand led him to conclude that 'Aboriginal suicide is different', and that the difference needs 'to be stressed, recognised, absorbed, appreciated and acted upon, if any prevention or alleviation strategies are to be attempted' (Tatz, 2001). He argues that suicide and attempted suicide among Aboriginal youth in NSW and the ACT is one facet of a 'new violence', and that mental illness, 'in the strict pathological sense', is rarely a factor. Health professionals need 'to become holistically knowledgeable about the wide variety of Aboriginal societies' and 'to comprehend more than a history of oppression and the legacies of colonialism'.

Thus, the factors contributing to suicide and intentional self-harm among Aboriginal and Torres Strait Islander people cover virtually the full spectrum of factors summarised earlier in this section (3.3). The relative contributions of each of these factors appear to vary according to local circumstances, so intervention strategies will need to be take account of these circumstances.

4 Government responses to injury among Aboriginal and Torres Strait Islander people

4.1 National initiatives

Injury is diverse, and so are the preventive policy responses to it. The pattern of injury policy activity is strongly influenced by Australia's federal structure. At a national level, and especially in the health sector, emphasis is on the coordination of Commonwealth, State and Territory activities and efforts. Examples are the National Health Priority Areas initiative (injury is one of six priority areas), and statistical description and monitoring, mainly through support for the Australian Institute of Health and Welfare (AIHW) National Injury Surveillance Unit.

In an attempt to provide a forum for leadership in injury prevention in Australia, the National Public Health Partnership Group established the Strategic Injury Prevention Partnership (SIPP) in August 2000 (National Public Health Partnership, 2000). SIPP, which supersedes a previous initiative, the National Injury Prevention Advisory Council, is responsible for implementing the *National Injury Prevention Plan: Priorities for 2001–2003* and for promoting a consistent, integrated approach to injury prevention (including monitoring and evaluation) across all areas of government. SIPP includes representatives from the health authorities in all jurisdictions, the Consumer Policy Division of Commonwealth Treasury, the Australian Institute of Health and Welfare and the Australian Injury Prevention Network.

A national statement on Aboriginal Injury and Safety Promotion was developed in 2000 at the National Injury Prevention Network conference in Canberra, where injury was also identified as a priority area for the National Public Health Partnership. The statement called for the development of a systematic approach to safety and injury prevention for Aboriginal and Torres Strait Islander people based on public health principles (Moller, 2002). The Australian Government Department of Health and Ageing is currently developing this approach, and it is expected that each State/Territory will develop complementary activities and policies.

The following material summarises some initiatives, reports, etc. of relevance to injury prevention among Aboriginal and Torres Strait Islander people.

General injury initiatives

National Health Priority Areas (NHPA) — National Health Priority Areas Report on Injury Prevention and Control 1997

(Commonwealth Department of Health and Family Services & Australian Institute of Health and Welfare, 1998)

As injuries remain a leading cause of death, illness and disability in Australia, particularly among Aboriginal and Torres Strait Islander people, injury prevention and control has been recognised by Health Ministers as a national health priority since 1986. The National Health Priority Areas report on Injury Prevention and Control 1997 updated the data and trends provided in the First Report on National Health Priority Areas. The report was a joint publication between the Commonwealth Department of Health and Family Services and the Australian Institute of Health and Welfare (AIHW) on behalf of the National Health Priority Committee. This Committee was chaired by the Commonwealth Chief Medical Officer with representation from all States and Territories, AIHW and the National Health and Medical Research Council.

Directions in Injury Prevention Report 1: Research needs

(National Injury Prevention Advisory Council, 1999a)

This report was the first publication of the National Injury Prevention Advisory Council (NIPAC) and the Department of Health and Aged Care. NIPAC had been established in 1997 to provide high level independent advice to the Department of Health and Aged Care and its Minister on ways to reduce the incidence and severity of injury. At the inaugural meeting of NIPAC it was decided that a thorough analysis of injury needs in research and development was required.

The report identifies the research base available and the next steps required to advance injury prevention activities. It focuses on three principal areas: major injury cause areas, special population groups of interest, and alcohol as a risk factor. Report 1 provides a brief overview on why injuries occur, incidence, what action is required and cost-effectiveness of interventions. It provides the basis for the second report *Directions in Injury Prevention Report 2: Injury prevention interventions — good buys for the next decade* (see below).

Report 2: Prevention interventions — good buys for the next decade

(National Injury Prevention Advisory Council, 1999b)

This report, based on the information contained in *Directions in Injury Prevention Report 1: Research Needs* (see above), sets out those areas which offer the best opportunities for investment in injury prevention.

Paradigm shift. Injury: from problem to solution — new research directions

(Strategic Research Development Committee of the National Health and Medical Research Council, 1999)

This report notes that the evidence base for injury prevention:

> requires contributions from a wide range of disciplines and involves a wider range of research paradigms than have traditionally been accepted within the core health research paradigms.

It recommends that the NHMRC develop a five-year strategy for injury research, involving:

- available program of Australian injury research;
- definition of detailed priorities for injury research and the development of an appropriate mix of investigator-driven and commissioned research; and
- allocation of a research quota for injury research and a strategy for utilising this quota for high quality relevant research.

National Injury Prevention Plan: Priorities for 2001–2003

(Strategic Injury Prevention Partnership, 2001)

The *National Injury Prevention Plan: Priorities for 2001–2003* represents a broad framework for national activity in the areas of high priority for immediate attention where the health sector can and should take a leading role. It is tightly focused on a manageable number of priorities for immediate action. Among the priority areas identified are interpersonal violence, intentional injury, self-harm and firearms, and injury as a result of alcohol misuse. Aboriginal and Torres Strait Islander Australians are one of the six priority populations.

National Aboriginal and Torres Strait Islander Health Strategy, Consultation Draft[28]

(National Aboriginal and Torres Strait Islander Health Council, 2000)

This consultation draft was based upon the *1989 National Aboriginal Health Strategy* and the evaluation of that strategy in 1994. Injury is discussed in a broader context, with its effects on mortality and morbidity rates presented. A reduction in the impact of injury and poisoning is highlighted as one of five specific aims of the strategy.

Road safety initiatives

The National Road Safety Strategy aims to dramatically reduce death and injury on Australian roads (Australian Transport Safety Bureau, 2001). This national strategy has been adopted by the Australian Transport Council, which comprises Commonwealth, State and Territory Ministers with transport responsibilities. In Australia's federal system of government, road safety strategy and policy measures are principally driven by the States, Territories and local government, which conduct their own programs. Accordingly, this strategy has been developed as a framework document, which recognises the individual governments will continue to develop and implement their own road safety strategies and programs. It is envisaged that all future road safety programs will be consistent with this strategy but reflect local imperatives.

Interpersonal violence

The Commonwealth government has initiated two programs addressing interpersonal violence — the National Crime Prevention Program and Partnerships Against Domestic Violence.

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[28] This document was superseded in June 2002 by the *National Strategic Framework for Aboriginal and Torres Strait Islander Health*, but a copy of this draft document was not available.

The National Crime Prevention Program, which was launched in 1997, aims 'to identify and promote innovative ways of reducing and preventing crime and the fear of crime' (Commonwealth Attorney-General's Department, n.d.). In recognising that crime is a serious social issue affecting the physical, social, emotional and financial wellbeing of Aboriginal and Torres Strait Islander individuals and the community as a whole, the program has provided funds in three areas: community night patrols, domestic violence, and general violence in Aboriginal and Torres Strait Islander communities.

Across Australia, night patrols have been identified as a significant crime and injury prevention strategy within Aboriginal and Torres Strait Islander communities (Commonwealth Attorney-General's Department, 2002). In 2002, the National Crime Prevention Program funded two night patrol projects, which incorporate many of the Commonwealth government's crime and violence prevention goals.[29]

Partnerships Against Domestic Violence works with State and Territory governments and the community 'to find better ways of preventing domestic and family violence' (Partnerships Against Domestic Violence, 2002). Partnerships Against Domestic Violence, which was launched by the heads of government at the National Domestic Violence Summit, is coordinated by a Commonwealth, State and Territory task force with a secretariat located in the Commonwealth Office of the Status of Women. Partnerships Against Domestic Violence conducts a wide range of projects across Australia to stimulate new activities and enhance existing work, including working with Aboriginal and Torres Strait Islander communities.

As part of its National Indigenous Family Violence Grants Program, Partnerships Against Domestic Violence budgeted $6 million over four years (1999–2003). In 2000, 30 Aboriginal and Torres Strait Islander organisations from across Australia were allocated $2.2 million for 31 projects addressing family violence, and a further 37 projects were funded in 2001 (Partnerships Against Domestic Violence, 2001c).[30] Details of some of these projects are provided in Volume II, Appendix D.

Initiatives addressing suicide and self-harm

The Commonwealth Government's National Youth Suicide Prevention Strategy, 1995–1999 (NYSPS) aimed to reduce rates of youth suicide and self-harming behaviours in Australian youth, and influence the way other programs, agencies and individuals deliver prevention programs to young people at risk (Commonwealth Department of Health and Aged Care, 2000c).

Of 70 projects funded under the NYSPS, the title or auspicing organisation of four indicates a focus on young Aboriginal and Torres Strait Islander people, and several others were located in or near substantial Aboriginal and Torres Strait Islander communities. Young Aboriginal and Torres Strait Islander people were declared the target group for the Here for Life program, the first national program in response to youth suicide, which began in 1995.

The strategy was evaluated at its conclusion in 1999 by the Australian Institute of Family Studies. The evaluation is published by the Institute in five separate reports — a main report and four supplementary technical reports (Mitchell, 2000a; Mitchell, 2000b; Mitchell, 2000c; Mitchell, 2000d; Mitchell, 2000e).

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[29] See Section 4.2 of this Appendix, particularly the subsection related to the Northern Territory, for further information about night patrols.

[30] Details of the funded projects are available on the Partnerships Against Domestic Violence website <http://www.padv.dpmc.gov.au/>.

It was found that the strategy had resulted in enhancements to the capacity of service systems to prevent suicide among young people (Mitchell, 2000e):

> The knowledge base about the complexity of causal factors and the effectiveness of various interventions has been expanded and information has been documented in forms that are accessible and user-friendly. Several promising primary prevention and early intervention programs have been developed or expanded, documented in manuals, and capacity to deliver these programs more widely has been built. Training in suicide prevention and a range of interventions has been provided to large numbers of professionals and training resources have been expanded and made more accessible.

No data were available to indicate whether or not the strategy had led to, or been associated with, significant outcomes at a population level — or with positive changes in individual or environmental risk and protective factors (Mitchell, 2000e). It was noted that the strategy represented only the earliest stage of a long-term reform process and, as such, changes in population health outcomes and impacts would not be expected to be observable for many years.

It was concluded that the strategy could not be considered to be a fully 'comprehensive nationally coordinated approach' to youth suicide prevention; rather, it was more accurately seen as a 'phase of developmental research' (Mitchell, 2000e). It was stated that if the goal of reducing rates of suicide and suicidal behaviour among young people is to be met, the strategy will need to be followed by the implementation of all the identified promising interventions across Australia. Nevertheless, a number of projects demonstrated positive outcomes for young people and significant impacts on target groups participating in trial programs, including Aboriginal and Torres Strait Islander youth.

Living is for Everyone (LIFE) is a framework for prevention of suicide and self-harm in Australia over the period 2001–2005 (Commonwealth Department of Health and Aged Care, 2000b). LIFE builds on the work of the NYSPS and includes three companion documents: Areas for Action, Learnings about Suicide, and Building Partnerships.

The LIFE Program aims to: reduce suicides, suicidal thinking, suicidal behaviour, injury and self-harm; enhance resilience in individuals, families and communities; and increase support to those affected. In addition, the program hopes to extend and enhance community and scientific understanding of suicide and its prevention.

LIFE has declared partnerships with Aboriginal and Torres Strait Islander peoples to be one of its six 'Action Areas'. While maintaining a focus on youth suicide, LIFE broadens the scope of activity to include prevention and intervention across the lifespan for Aboriginal and Torres Strait Islander and non-Indigenous people.

The CommunityLIFE Project is based on the LIFE framework, and aims to build community capacity for suicide prevention (Centre for Developmental Health TVW Telethon Institute for Child Health Research, 2002). This project has Aboriginal and Torres Strait Islander and non-Indigenous components.

Community-driven approaches are seen as particularly important for Aboriginal and Torres Strait Islander people, being recognised as an integral part of any successful intervention strategy. CommunityLIFE aims to make information about life promotion available and accessible, and to develop the mechanisms for providing support and practical assistance to Aboriginal and Torres Strait Islander communities.

Funding for the project is through the Australian Government Department of Health and Ageing. Overall responsibility for the project lies with the Centre for Developmental Health, Curtin University of Technology in WA, but management is via a consortium of representatives from around Australia (Sydney, Perth and Adelaide). The Aboriginal and Torres Strait Islander component of the project is overseen by NACCHO. Aboriginal and Torres Strait Islander elements will also be incorporated in the non-Indigenous (mainstream) project (Centre for Developmental Health TVW Telethon Institute for Child Health Research, 2002).

Other relevant initiatives[31]

The *Bringing them home* report, by the Human Rights and Equal Opportunity Commission, calls for: culturally-appropriate community-based and mainstream mental health services; the development of parenting programs; safeguards against the removal of children; diversion from custody programs and support for Aboriginal and Torres Strait Islander prisoners (National Inquiry into the Separation of Aboriginal and Torres Strait Islander Children from their Families Australia, 1997).

The Second National Mental Health Plan, developed to provide a national framework for future activity in mental health service reform, is a five-year (1998–2003) extension of the National Mental Health Plan (1992) (Commonwealth Department of Health and Aged Care, 2001b). It is envisaged that implementation of the second plan will contribute significantly to improved treatment, care and quality of life for Australians with mental illness, their families and the general community.

Though not specifically Aboriginal and Torres Strait Islander-focused, the plan does contain consultative mechanisms and links in the areas of Aboriginal and Torres Strait Islander mental health and suicide prevention.

The Stronger Families and Communities strategies provide funding for prevention and early intervention programs for families and communities, with particular benefits for those at risk of social, economic and geographic isolation (Commonwealth Department of Family and Community Services, 2002a; Commonwealth Department of Family and Community Services, 2002b).

There is an Aboriginal and Torres Strait Islander-specific component of the strategies, with a minimum of $20 million available across Australia for projects involving Aboriginal and Torres Strait Islander communities.[32]

Initiatives funded by the program include: Strengthening Indigenous Communities Pilots run by Palngun Wurnangat Incorporated, which identifies priority community needs and issues to develop integrated community-based solutions; and the Albany Aboriginal Corporation, which has established community action groups in a range of locations as a mechanism for Aboriginal and Torres Strait Islander families to come together to develop community plans.

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[31] This section overlaps, to some degree, with Volume II: Programs, Projects and Actions of this report.

[32] A meeting of Indigenous leaders and the Commonwealth Government in 2000 agreed that governments and Indigenous people should work together to develop and put in place programs aimed at supporting families and communities. It was agreed also that government activities in Indigenous communities should target the needs of children and young people, and empower Indigenous people to take responsibility within their families and communities for developing solutions to problems, particularly in the area of family violence.

4.2 State and Territory initiatives

Most injury-related regulation and enforcement, many prevention programs and some research is funded and undertaken at State/Territory level. National coordination produces some commonality, but there is considerable diversity in approaches and in the topics given priority.

Notable funding mechanisms are the Victorian Transport Accident Commission, which has allocated large sums for road injury research and prevention, and programs in several States based on the tobacco tax. Funding from the National Health and Medical Research Council is, in principle, available for injury research, but only a very small proportion has been allocated to projects on this topic.

State and Territory injury prevention initiatives implemented to date include the following.

New South Wales

The Aboriginal Health and Medical Research Council of NSW has agreed in principle to the development of a NSW strategy for injury prevention in Aboriginal and Torres Strait Islander communities (Moller, 2002). The strategy is expected to be developed in line with the proposal to build a national plan for injury prevention in Aboriginal and Torres Strait Islander communities, occurring under the directorship of the Aboriginal and Torres Strait Islander Working Group of the National Public Health Partnership.

Shoalhaven Aboriginal Injury Surveillance Project

(Royal & Westley-Wise, 2001)

This project attempted to document and describe the injury patterns and subsequent 'risk factors' of Aboriginal and Torres Strait Islander people living in the Shoalhaven, NSW. The data were assessed for usefulness and, through consultation with the Aboriginal and Torres Strait Islander community, opportunities to utilise the findings to plan injury prevention strategies were sought. A clearer picture of the issues facing the community emerged and key areas of preventive intervention were identified.

Pride, Respect and Responsibility: Mid North Coast Aboriginal Injury Surveillance Project Report

(Mid North Coast Aboriginal Health Partnership, 2001)

This Aboriginal and Torres Strait Islander injury surveillance project describes injury patterns and risk factors, and identifies responses to enable positive change among Aboriginal and Torres Strait Islander people living in the Mid North Coast region of NSW.

The project utilised hospital emergency department data, hospital separation data, and qualitative methods (such as event narratives, semi-structured interviews and focus groups).

Aboriginal Action Plan (2001–2006)

(Roads and Traffic Authority, 2001)

The Aboriginal Action Plan documents the NSW Roads and Traffic Authority's priorities on Aboriginal and Torres Strait Islander issues over the period 2001 to 2005. The Aboriginal Action Plan utilises the Aboriginal Employment and Equity Plan 1998–2003 and its achievements as foundations and models for further work in the area of Aboriginal and Torres Strait Islander injury prevention on the roads of NSW.

Victoria

Victorian Injury Prevention Program
(Department of Human Services, 2002)

The Victorian Injury Prevention Program is working towards developing strategies at the State and national levels to reduce the incidence of injury in the Australian population.

The Victorian Injury Prevention Program is located within the Public Health Group, Rural and Regional Health and Aged Care Services Division of the Department of Human Services. The program engages in a diverse range of activities including the provision of policy advice, the development of strategies, funding of various programs and projects, research support, stakeholder liaison, monitoring and evaluation. Its state-wide injury prevention strategy, Taking Injury Prevention Forward, makes no reference, however, to injury among Aboriginal and Torres Strait Islander people.

Queensland

Study of injury in Five Cape York Communities
(Gladman et al., 1997)

This project, probably the first to undertake a detailed investigation of injury at a community level, was funded by the National Injury Surveillance Unit and the Commonwealth Department of Health and Family Services. A brief summary of its findings is provided in Section 3.2 of this Appendix, 'Impact of injury among Aboriginal and Torres Strait Islander people'.

The Health Outcomes Plan, Injury Prevention and Control 2000–2004

Queensland Health is developing Health Outcomes Plans for each of the National Health Priority Areas, including injury. In parallel, it is developing strategic policy frameworks for population groups, with an initial focus on four groups — Aboriginal and Torres Strait Islander people being one of the four. The plans assemble the evidence base for strategies and aim to guide the Procurement Council in determining the best balance of services for the State.

Reducing the burden of injury in Queensland is a corporate priority, identified in Queensland Health's *Strategic Directions 2000–2010* and the accompanying strategic plan (Queensland Health, 1999). *The Health Outcomes Plan — Injury Prevention and Control 2000–2004: Background Paper* (Queensland Health, 2000) provides supporting evidence or a rationale for each strategy in the Health Outcomes Plan for Injury Prevention and Control (Queensland Health, 2001). The plan includes a comprehensive discussion of evidence-based strategies to reduce the incidence and impact of injury in Queensland, along with process, quality and outcome indicators.

The Aboriginal and Torres Strait Islander Women's Task Force on Violence
(The Aboriginal and Torres Strait Islander Women's Task Force on Violence, 2000)

The Aboriginal and Torres Strait Islander Women's Task Force on Violence was established in December 1998. Fifty Aboriginal and Torres Strait Islander women, representing communities throughout Queensland, participated in the formulation of a report to share their stories and stimulate and guide action (The Aboriginal and Torres Strait Islander Women's Task Force on Violence, 2000). The Queensland Government responded to the report with a report analysing the Task Force findings and auditing current Queensland Government family violence initiatives (Queensland Government, 2000).

Apunipima Family Violence Advocacy Project
(Apunipima Cape York Health Council, 2001)

The Apunipima Family Violence Advocacy Project was funded by the Aboriginal and Torres Strait Islander Commission for two-and-a-half years and achieved its outcome at the end of the 2000–01 financial year as scheduled. The main objective of the project was the development of a model to address family violence in Aboriginal and Torres Strait Islander communities across Australia. Other benefits were realised by the project, including the development of numerous resources and the conduct of workshops for the community. The project report, prepared by the Apunipima Cape York Health Council, contains recommendations to the government.

(See also Western Australian material, below, for further details on this project.)

North Queensland Indigenous Injury Prevention Partnership
(North Queensland Indigenous Injury Prevention Partnership, 2002)

This partnership involves a group of researchers and health professionals from around Queensland, led by Professor Ernest Hunter (University of Queensland) and Professor Robyn McDermott (Tropical Public Health Unit and James Cook University). The partnership, funded by the National Health and Medical Research Council, aims to establish and implement best-practice approaches to the prevention and management of injury.

Aboriginal and Torres Strait Islander Road Safety Remote Communities Project
(Powell, Odgaard, & Wright, 2001)

The Aboriginal and Torres Strait Islander Road Safety Remote Communities Project started in 1997 with funds provided for six years.

Numerous road safety activities are now occurring in remote Aboriginal and Torres Strait Islander communities of north Queensland, and some momentum appears to have been generated by the project (Powell et al., 2001):

> ‘there appears to be an increase in trust between Queensland Transport and the remote Indigenous communities of the Northern region with improved communication and the implementation of successful road safety initiatives’.

Outcomes of this project ‘… will influence future directions of road safety in Queensland’ (Powell et al., 2001).

Western Australia

Family Violence Advocacy Project
(Partnerships Against Domestic Violence, 2001b)

Family Violence Advocacy Projects (Aboriginal and Torres Strait Islander Commission) have been established at the Bega Garnbirringu Health Services in Kalgoorlie (and at Apunipima Cape York Health Council in Queensland).

Project teams have assisted agencies to develop appropriate strategies to address family violence in Aboriginal and Torres Strait Islander communities. The projects have developed best practice models of service delivery that may be replicated in other areas of Australia. These models indicate the services needed in rural and remote communities, as well as the links required between services, to effectively address family violence.

Model of Intervention at the Point of Violence
(Partnerships Against Domestic Violence, 2001a)

Model of Intervention at the Point of Violence, Aboriginal Family Violence, has developed effective models for delivering family violence services to Aboriginal and Torres Strait Islander communities in Western Australia. These include roles for service providers, specific strategies for mainstream agencies and implementation strategies for different regions.

Training for Service Delivery
(Partnerships Against Domestic Violence, 2001b)

Training for Service Delivery has developed training for workers from domestic violence services, including: victim support, children's services, perpetrator programs, Aboriginal and Torres Strait Islander services, and men's crisis services.

Development of Pilot Counselling Program for Mandated and Non-Mandated Aboriginal Men Responsible for Family Violence
(Partnerships Against Domestic Violence, 2001a)

A model is being piloted for counselling/intervention for Aboriginal and Torres Strait Islander men involved in family violence. It will be trialled in Perth and the Pilbara, and aims to identify time-limited intervention strategies that are culturally appropriate and cost-effective in reducing violent behaviour.

Drowning Prevention Program for Aboriginal Health Workers throughout Rural and Remote Western Australia
(Lyford, 2001)

Aboriginal and Torres Strait Islander people, particularly children, have much higher rates of drowning than non-Indigenous people. In an attempt to combat the high risk of drowning among Aboriginal and Torres Strait Islander people, a project was developed and implemented in WA in 2000 (funded by the Rural Health Support, Education and Training program).

The aim of the project was (Lyford, 2001):

> … to develop and implement a comprehensive training package for remote Aboriginal health workers with the ability to educate the community with appropriate health promotion and drowning prevention strategies.

Post-workshop (that is, training) questionnaires were administered, and results were positive. A video has also been produced to educate parents and carers on the prevention of drowning and injury around water (Lyford, 2001).

The Way Ahead — Road Safety Directions for Aboriginal Road Users in Western Australia
(Road Safety Council Taskforce, 2000)

The Way Ahead — Road Safety Directions for Aboriginal Road Users in Western Australia complements the current general five-year strategy, Future Directions for Road Safety in Western Australia 2000–2005, which aims to improve safety for all Western Australians, including Aboriginal and Torres Strait Islander people. The Way Ahead strategy specifically addresses issues known to impact heavily on Aboriginal and Torres Strait Islander people, with the aim of reducing the over-representation of Aboriginal and Torres Strait Islander people in road crashes in WA.

South Australia

Safe Living in Aboriginal Communities project
(Partnerships Against Domestic Violence, 2001d)

The Safe Living in Aboriginal Communities project aims to refine and test the effectiveness of the Family Well Being Counselling Training Course model. The South Australian Department of Education, Training and Employment and the Whyalla Aboriginal community developed the model, which provides a holistic approach to minimise family violence.

WorkCover Corporations Access and Equity Aboriginal and Torres Strait Islander Focus Group Strategic Plan 1999–2001
(Barnett, 1999)

The WorkCover Corporation manages the Occupational Health, Safety, Rehabilitation and Compensation system in South Australia. The Access and Equity Program involves ensuring that the workplace health and safety, and injury management system addresses the needs of Aboriginal and Torres Strait Islanders.

This strategic plan is the outcome of a project undertaken by WorkCover Corporation's Access and Equity Aboriginal and Torres Strait Islander Focus Group. In 1998, the Access and Equity Program established the Aboriginal and Torres Strait Islander Focus Group as a consultative structure. Representatives from relevant community, peak and government organisations are members of the focus group. The focus group provides a way for the corporation and Aboriginal and Torres Strait Islander communities to communicate with each other and participate in the workplace health and safety, and injury management system to improve access to services and culturally-appropriate outcomes for Aboriginal and Torres Strait Islander people.

Northern Territory

Living with Alcohol
(Stockwell et al., 2001)

Territory Health Services' response to injury has been to prioritise a major risk factor — alcohol — through programs such as Living with Alcohol. The program was introduced in April 1992, with funding obtained through a levy on liquor containing more than 3% alcohol by volume (Crundall et al., 2001). See Section 5.2 of this Appendix for further details of this program.

Night Patrols

Julalikari Night Patrol (Mugford & Nelson, 1996)

In an effort to break the cycle of violence associated with alcohol consumption in Aboriginal and Torres Strait Islander communities in the Northern Territory, voluntary community-based patrols were implemented in 1989.

This particular patrol targets the Aboriginal and Torres Strait Islander community of Tennant Creek. After two years of the program, alcohol-related crime and associated injury had decreased significantly (among other positive outcomes).

Tangentyere Night Patrol (Mugford & Nelson, 1996)

Night patrols in Tangentyere, Alice Springs commenced in 1990 and the Remote Area Night Patrol was formed in 1995. Positive results were reported.

In 1996, there were approximately 12 outlying communities in the Northern Territory with their own night patrols, funded by Territory Health Services and the Living with Alcohol program (Mugford & Nelson, 1996).

Approved roll-over device legislation

(Thompson, Dempsey, & Pearce, 2001)

In response to the high death and injury rates of passengers in open vehicles in the Northern Territory, legislation was enacted in 1994 to '… prohibit this form of travel unless the vehicle is fitted with an approved roll-over device and the driver drinks no alcohol' (Thompson et al., 2001).

In the two years before the legislation took effect (Thompson et al., 2001):

> … the Northern Territory Road Safety Council field officers and Motor Vehicle Registry staff worked with police and community councils in remote areas to promote the use of roll-over devices.

See Section 4.2 of this Appendix for further details.

Kick a Goal for Road Safety

(Autosafe–Windscreens O'Brien, 1999)

Aboriginal community police officers throughout the Northern Territory have taken a football approach to tackle the over-representation of Aboriginal people in road injury. A NT Road Safety team was formed to develop strategies to target critical issues in Aboriginal road safety. The team used the slogan 'Kick a goal for road safety'. The strategy was highly commended in the 1998 Windscreens O'Brien Autosafe Awards, and reported a decrease of 40% between 1998 and 1999 in road fatalities and serious injury among Aboriginal people in the Territory (Autosafe–Windscreens O'Brien, 1999).

Atunypa Wiru Minyma Uwankaraku: Good Protection for All Women
(Mugford & Nelson, 1996)

This domestic violence program, overseen by the Ngaanyatjarra Pitjantjatjara Yankunytjatjara (NPY) Women's Council in the NT, aims to develop strategies and service models to assist Aboriginal women living in remote communities around the Northern Territory, South Australian and Western Australian borders. This ongoing program commenced in 1994 and has had positive effects on communication, awareness, responses, and reporting of incidents to police (Mugford & Nelson, 1996).

5 Community and other responses to injury among Aboriginal and Torres Strait Islander people

5.1 Aboriginal and Torres Strait Islander injury prevention programs

There has been a number of responses recently to the injury prevention challenge, and how best to combine available models and demonstrate their effectiveness. One of the most notable is a multi-modal approach developed by a Queensland Aboriginal and Torres Strait Islander community with the collaboration of the University of Queensland and Queensland Health (Shannon et al., 2001a). The project proposed an approach for injury prevention that effectively combines the community development model for improving wellbeing in Aboriginal and Torres Strait Islander communities with the epidemiological model of injury control. This particular program explored the wide range of issues involved in initiating and developing a community-owned, multi-modal program for the reduction of injury in Aboriginal and Torres Strait Islander communities (Shannon et al., 2001a).

Another important focus in the area of injury prevention is on the risks of road crashes and road-related injuries in Aboriginal and Torres Strait Islander communities. These risks have been addressed by awareness campaigns: examples are the Aboriginal Community Road Safety Project (Ella, 1992) and the introduction of new laws — for example, the Open Load Space Project (Cercarelli & Cooper, 2000). Major achievements of these interventions have been a decrease in road injuries and deaths as a result of riding in open load spaces of vehicles and positive changes in Aboriginal and Torres Strait Islander community attitudes, knowledge and understanding of road safety issues (North Queensland Indigenous Injury Prevention Partnership, 2002). Aboriginal and Torres Strait Islander communities have welcomed these projects and are keen for them to continue (Cercarelli & Cooper, 2000). Programs such as these (which have undergone an evaluation) give reason to be optimistic about the future of injury prevention initiatives in other areas.

See also Section 4 of this Appendix for examples of community-based programs (funded nationally).[33]

5.2 Alternative and multi-sector approaches to injury prevention programs

Alcohol and injury

With alcohol being a major contributing factor to many injuries in Aboriginal and Torres Strait Islander communities, a reduction in the incidence of alcohol-related injuries and offences is a frequently used performance indicator. A reduction in injury rates, hospitalisation and engagement with the criminal justice system were achievements/performance indicators of programs that aimed to reduce the impact of problems arising from self-harm and interpersonal violence in rural and

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[33] As they received funding from the Commonwealth, the important community-based projects in the Cape York, Queensland (Gladman et al., 1997), and in the Mid North Coast and Shoalhaven areas of NSW (Heslop, 2002; Mid North Coast Aboriginal Health Partnership, 2001; Royal & Westley-Wise, 2001) are summarised in Section 4 of this Appendix.

remote WA — by the availability of sobering up shelters, for example (Bellottie & Boas, 2000). In the first year of operation of the sobering-up shelter in Wiluna (WA), there was a 33% reduction in alcohol-related injuries, a 90% reduction in arrests for damage offences, and a 67% reduction in arrests for assaults (Bellottie & Boas, 2000).

The restriction of trading hours for sale of 'take away' alcohol appears a useful strategy for reducing the negative effects of high alcohol consumption in small communities. Halls Creek in the Kimberley region of Western Australia implemented such a strategy and the results were evaluated. Consistent trends indicated a positive effect of restricted trading hours across a variety of health and social indicators, but concurrent programs that were running limited the conclusions (Douglas, 1998):

> 'A decrease in alcohol consumption was observed for each of the two years following the intervention. Overall, incidence of crime declined. Alcohol-related presentations to the hospital and presentations resulting from domestic violence decreased relative to the equivalent quarterly period prior to the intervention. There were short-term fluctuations observed, particularly with domestic violence, where presentations (of lesser severity) became more frequent during several quarters. Emergency evacuations as a result of injury showed a marked decrease'.

There are, of course, interventions that are very difficult to measure quantitatively in the short term, but which can still be seen as successful. An example is the Woorabinda pub intervention, which has been reported to have had substantial positive social benefits for the community (Canuto et al., 2000). With the pub closed on Sundays, it is now becoming known as family day within the community.

A comprehensive review conducted in 2000 of alcohol misuse interventions concluded that a broad range of strategies has been employed but with few being evaluated (Gray, Saggers, Sputore, & Bourbon, 2000). This led to a call for '… more rigorous evaluation studies in cooperation with Aboriginal community organisations' (Gray et al., 2000). Of those evaluated, the impact of most appeared limited. The limitations are hypothesised by the authors to be a product of poor resourcing and support. Supply reduction interventions, such as those mentioned above, were regarded as possibly the most effective intervention strategy to date.

A review of the effectiveness of alcohol restrictions in remote and regional Australia reported a '… modest but real impact on alcohol consumption and on indicators of alcohol related harm, especially violence' (d'Abbs & Togni, 2001). Such interventions (among others) were reported also to have strong and widespread community support.

Evaluations conducted on the Northern Territory's Living with Alcohol program also support the implementation of community-based alcohol-harm reduction initiatives. Findings included reductions in estimated alcohol-caused deaths from acute conditions (road deaths 34.5%, other 23.4%) and in road crash injuries requiring hospital treatment (28.3%) (Stockwell et al., 2001). In addition, there were substantial reductions in per capita alcohol consumption and self-reported hazardous and harmful consumption via surveys (Stockwell et al., 2001). These reductions were evident immediately from the outset of the introduction of the Living with Alcohol program and were largely sustained throughout the 4 years evaluated (Stockwell et al., 2001).

Substance abuse and injury

Most injury prevention efforts aimed at substance abuse focus upon alcohol, but 'other substances' (volatile substances, kava, illicit drugs) are covered in this section.

The link between alcohol use and injury is relatively well documented, and subsequently relevant injury prevention programs and their outcomes/impact on injury can be discerned. Unfortunately, the same cannot be said of 'other substances' and Aboriginal and Torres Strait Islander injury. Some literature is available on prevention programs for the abuse of these substances, but the link with injury and the subsequent effect of interventions on injury is barely discernible in the literature.

Volatile substances

The inhalation of volatile substances by Aboriginal and Torres Strait Islander people (particularly petrol and youth) has been the focus of much prevention activity (Gray, Sputore, Stearne, Bourbon, & Strempel, 2002). The goals of such activity are health-based, and the injury-related effects of inhalation and of the interventions are rarely documented. Recognition of the potential for increased risk taking and subsequent injuries due to intoxication have been documented (Crundall et al., 2001), but no literature was located pertaining to interventions that note injury prevention as a goal/measure of success.

Kava

Kava was introduced to Yirrkala in the Northern Territory as a substitute for alcohol in an attempt to reduce alcohol-related violence (Gray et al., 2002). As with volatile substances, the general health-related consequences of kava use have been presented in the literature, but the injury consequences have not been presented.

Illicit drugs

The literature about illicit drug use among Aboriginal and Torres Strait Islander people is quite limited, and focuses mainly on its prevalence and patterns of use (Gray et al., 2002). Attention does not appear to have been directed to the relationship between illicit drug use and injury.

The major review of Aboriginal and Torres Strait Islander drug and alcohol projects commissioned by the Australian National Council on Drugs identified 13 intervention projects targeting cannabis and 12 targeting heroin and/or amphetamines (Gray et al., 2002). Many of the projects included interventions of relevance to the factors contributing to injury, but none had injury prevention as its primary focus.

Injury due to interpersonal or family violence

A large number of violence programs throughout all States — that have or are being implemented, or were in planning for implementation during the 1990s (including community-based strategies) — are summarised in Chapters four and five of Memmott's comprehensive report on *Violence in Indigenous Communities* (Memmott et al., 2001). Included are details of the Kowanyama Community Justice Group, which aimed to deal with juvenile perpetrators of violence in a culturally-sensitive and community-approved way. The program has been credited with a one-third reduction in the numbers of juveniles appearing before the courts over 3 years (Harrison et al., 2001).

See Section 4.2 of this Appendix for further family violence programs

Suicide and intentional self-harm

The impact of colonisation includes a wide range of emotional, social and behavioural outcomes, including high suicide rates and mental health problems (Franks, 2001). Social and emotional wellbeing and injury prevention programs go 'hand in hand', as improvements in mental health are accompanied often with improvements in suicide rates, family violence, self-harm, etc.

Clusters of suicide in the Yarrabah (North Queensland) community during the early 1990s engendered a sense of crisis, which persisted for several years. A critical stage in reaction came with the community-based response of the Family Life Promotion Officer Program. This program achieved a shift from (Harrison et al., 2001):

> simply attempting to identify individuals at risk and dealing with crises as they developed to focusing on a condition of risk impacting the community as a whole.

Though a formal documented evaluation has not been found in the literature, the program has achieved positive results including: community acceptance of suicide as an issue demanding attention; introduction and development of Life Promotion Officers; closure of the community canteen; suicide case numbers decreased; and a steep decline in the numbers of presentations of threatened or actual self-harm to the Life Promotion Officer at Yarrabah (Harrison et al., 2001).

Another successful program has been Family Wellbeing, which is a course designed by and for Aboriginal and Torres Strait Islander Australians to promote personal empowerment (Harrison et al., 2001). It was implemented in Alice Springs in 1998 as part of a response to the increased number of suicides and attempted suicides in Aboriginal and Torres Strait Islander communities. An evaluation of the program documented its development and implementation, and focused on qualitative assessments of skills, satisfaction and attitudes of course participants (Tsey & Every, 2000). The evaluators concluded that there had been an improvement of participants' capacities in life skills and problem solving, and completion rates of the four stages of the wellbeing course gave a positive quantitative measurement of achievement (Tsey & Every, 2000).

Concern over the high rate of suicide among Aboriginal and Torres Strait Islander people on the south coast of NSW led to the development of a project aimed at preventing youth suicide in the Aboriginal and Torres Strait Islander communities of the Shoalhaven (Capp, Deane, & Lambert, 2001). Following extensive consultation with the Aboriginal and Torres Strait Islander community, a range of culturally-appropriate interventions was developed. The main focus was a series of community gatekeeper training workshops, which aimed to increase the potential of members of the community to identify and support people at risk of suicide and to facilitate their access to services. Evaluation of the workshops demonstrated an increase in participants' knowledge about suicide, greater confidence in identification of people who are suicidal and high levels of intentions to provide help (Capp et al., 2001).

From these examples of successful programs, the opportunity for achievements in related areas to contribute to Aboriginal and Torres Strait Islander injury prevention is quite clear.

See Section 4 of this Appendix for further details of programs addressing this issue.

5.3 Assessment of prevention programs

Most injuries follow predictable patterns of occurrence and are thus largely preventable (National Injury Prevention Advisory Council, 1999a). Unfortunately, in most areas of injury prevention the greatest barrier to implementing intervention programs lies with lack of knowledge about effective interventions (National Injury Prevention Advisory Council, 1999a). This lack of knowledge is due, at least partly, to the fact that the full extent of the differentials in injury between Aboriginal and Torres Strait Islander and non-Indigenous people has only recently been recognised. In addition, the heterogeneity of lifestyles, lack of resources for programs and their evaluation, and limited methods of evaluating programs targeting small communities have limited the scope, quality and relevance of evidence (National Injury Prevention Advisory Council, 1999a).

Information on evaluating the performance of injury prevention programs is extremely patchy (Harrison et al., 2001):

> ‘This is particularly the case for assessments of efficacy. Where jurisdiction-wide programs have been instituted or where numerous interventions have targeted the same topic, there does appear to be a growing body of information. Community-level interventions are quite numerous, especially in the topic areas of alcohol and, more recently, violence … most programs remain largely undocumented, and documented evaluations are rare. Formal documentation of community-level interventions aimed at issues other than alcohol misuse appears to be uncommon’.

Subsequently, there is a strong need for well-researched, action-orientated intervention development and evaluation research in partnership with Aboriginal and Torres Strait Islander people (National Injury Prevention Advisory Council, 1999a).

6 Addressing injury among other Indigenous people

6.1 Background: an international perspective

The United Nations estimates there are more than 300 million Indigenous people living in over 70 countries. Among them are the estimated 600,000 Indigenous peoples of New Zealand and Australia and 3.5 million native peoples of North America (including tribes in the United States, the First Nations of Canada, and the Inuit peoples of the Arctic) (Berger, 2002).

There are numerous commonalities among Indigenous peoples including (Berger, 2002):

> … cultures extending for thousands of years; experiences of exploitation, attempts at forced assimilation, and large scale neglect of human rights, health problems, and social needs; deeply held spiritual beliefs and practices; and increasing efforts to obtain international recognition and protection for their peoples and cultures.

Equally as important as the commonalities is the enormous diversity within individual countries, because there can be profound differences in lifestyle within individual groups. To address the rising motor vehicle injury rate among Indigenous people in Western Australia, for example, we need to know much more about the varied lifestyles of both the urban and rural populations.

Intentional and unintentional injuries represent around 11% of the global mortality and 13% of all disability adjusted life years lost every year (Krug, Butchart, & Peden, 2001). Recognising the magnitude of the problem, the World Health Organization (WHO) has recently taken important steps to increase its injury prevention activities. In March 2000, a Department for Injuries and Violence Prevention was created.

For certain mechanisms of injury, Indigenous peoples often have dramatically higher injury rates compared with the non-Indigenous population in their countries. New Zealand, North America, Canada and Australia are known to have some of the highest rates of injuries among their Indigenous peoples (Johnson, Sullivan, & Grossman, 1999).

The 1995 age-adjusted motor vehicle related death rate for the US Navajos was more than five times that of the white population in the United States (Cercarelli, 1999). For Indigenous people in Western Australia, the road injury hospitalisation rate was nearly twice that of the non-Aboriginal population (Cercarelli, 1999). In Northern Saskatchewan, Canada, where two-thirds of the population is Native (Woodland Cree, Dene, and Métis), suicide and homicide rates among 15- to 24-year-olds were three to five times greater than the remainder of the provincial population (Feather, Irvine, & Belanger, 1993). In the United States, the rate of fire-related deaths in one Indian Health Service (IHS) area was six times greater than the national average (Kuklinski, Berger, & Weaver, 1996).[34] All of the above reports suggest that poverty is an important factor in the majority of reported injury statistics.

Indigenous peoples in Australia, New Zealand, and the United States each have a different heritage and culture, but they share common experiences in their history. They are 'minority cultures in affluent nations dispossessed of their country and marginalised' (Ring & Firman, 1998). Maori and Native Americans have made rapid gains in health and life expectancy over the past two decades, but Australian Indigenous mortality shows little or no evidence of these gains for any of the major causes of excess deaths (including injury) (Ring & Firman, 1998).

Death rates for injury and poisoning among Native Americans and Alaskan Natives were one-and-a-half times the Australian Indigenous rates in the early 1970s, but US rates have now fallen to below the current Australian level (Ring & Firman, 1998). The decline in death rates from injury and poisoning in Native Americans has been attributed to changes in transport accidents, changes in homicide and suicide rates (Ring & Firman, 1998). For Australian Indigenous people in WA and the NT, there appear to have been some relatively small recent falls in homicides and transport accident deaths, but there is some evidence that suicide rates are rising (Ring & Firman, 1998).

The role of alcohol misuse as a contributing factor to high rates of injury among Indigenous peoples throughout the world is a complicated yet pervasive one. Among Navajo victims of pedestrian and hypothermia deaths, alcohol intoxication has been reported as frequent and severe (Gallaher, Fleming, & Berger, 1992). A national survey in Australia of Aboriginal peoples and Torres Strait Islanders found that over half identified alcohol abuse as the main health problem in their community (Condon & Cunningham, 1997).

[34] The IHS, an agency within the Department of Health and Human Services, is responsible for providing Federal health services to American Indians and Alaska Natives. The provision of health services to members of federally-recognised tribes grew out of the special government-to-government relationship, established in 1787, between the Federal government and Indian tribes. The IHS is the principal federal health care provider and health advocate for Indian people currently providing health services to approximately 1.5 million American Indians and Alaska Natives who belong to more than 557 federally recognised tribes in 35 states, each with its own culture, geography, and socioeconomic circumstances.

Several of the challenges in conducting studies concerning Indigenous peoples world wide are illustrated by the articles of Phelan and colleagues (Phelan et al., 2002) , by Cercarelli and Knuiman (2002) and by Berger (2002). One challenge is obtaining reliable numerator data by Indigenous status (Berger, 2002). Also, changes in access to medical care can alter hospitalisation rates (Berger, 2002):

> members of the Navajo Nation can be treated not only at United States IHS facilities, but private, self-pay, and governmental health insurance options allow many individuals access to health care facilities outside the IHS hospital discharge database.

Another difficulty seen throughout the literature is obtaining accurate denominator data (Berger, 2002):

> The Census Bureau in the United States has acknowledged that minority populations, including Native Americans, are routinely under-counted. It has proposed statistical corrections to make more accurate estimates, but political forces have prevented any such adjustment.

6.2 New Zealand

Injury has been long recognised as a leading cause of mortality and morbidity among Maori people in New Zealand: ‘fatalities in the Maori population due to injury, both intentional and unintentional, are a major concern’ (Broughton, 1999).

In New Zealand, injury is the leading cause of death for those aged 1 to 34 years (Langley, 1998). In childhood, injury accounts for approximately 60% of all deaths, and by adolescence and young adulthood injury (including suicides) accounts for approximately 80% of deaths (Coggan, Patterson, Brewin, Hooper, & Robinson, 2000). In the period 1985–1994, injury deaths among those under one year old totalled 73.9 per 100 000 among Maori, more than double the figure for New Zealand as a whole (33.2). Injury represents 5% of deaths for Maori children (Langley, 1998).

Maori males are a particular risk group. The Public Health Commission document, *Our Future Our Health, Hauora Pakari, Koiora Roa; The State of Public Health in New Zealand* (Public Health Commission, 1993) noted that ‘males, particularly Maori, have the highest mortality and hospitalisation rates from unintentional injuries’. Between 1987 and 1991 almost three-quarters of the Maori deaths in the 15–24 years age group were males — more than twice the proportion for Maori females (Broughton, 1999). The extent of the differential was due to the high number of young men dying as a result of motor vehicle crashes and higher rates of suicide and homicide (Broughton, 1999).

The prevention of injury has been identified as a public health priority in New Zealand. In 1994, the New Zealand Public Health Commission called for expressions of interest in a community-based injury prevention pilot based on the World Health Organization (WHO) Safe Community model for injury prevention (Coggan et al., 2000). This model is a community-based, all-age, all-injury prevention program, which recognises that those most able to solve community injury problems are the people who live in that particular community (Lindqvist, Timpka, & Schelp, 1999).

The Public Health Commission considered it important that an evaluation of the resulting pilot project, the Waitakere Community Injury Prevention Project (WCIPP), be conducted. The WCIPP is the first comprehensive evaluation of a community-based injury prevention project to be conducted in New Zealand.

The evaluation revealed that the Maori coordinator built a strong network of support for the Maori project, and pivotal to the success of this project was the development of a Maori perspective on injury prevention which supported Maori protocol and encompassed a holistic view of health and wellbeing (Coggan et al., 2000). This particular component of the WCIPP was an excellent model of a diverse injury prevention project, aspects of which could be transferred to other Indigenous communities within and beyond New Zealand (Coggan et al., 2000).

The community injury prevention model applied in the WCIPP appears to be an effective strategy for injury prevention. The findings also suggest that the WHO Safe Communities model worked well under the umbrella of a local government authority and, thus, adds support to the placement of future community injury prevention projects within local government (Coggan et al., 2000).

As part of its strategic plan, the Injury Prevention Research Unit (IPRU) of New Zealand has developed a working relationship with Maori via the Ngai Tahu Maori Health Research Unit. The unit is a partnership between Te Runanga o Ngai Tahu and the Dunedin School of Medicine of the University of Otago. The unit collects, collates, interprets and publishes information, data and statistics on Maori health. This working relationship is central to the IPRU's objective of undertaking research, which it hopes will lead to a reduction in injuries to Maori. The relationship between Te Runanga o Ngai Tahu and the Dunedin School of Medicine of the University of Otago seeks to raise the profile of injury as an important issue for Maori, and jointly develops strategies to address the issue.

6.3 United States

In the United States, American Indians and Alaska Natives (AIs/ANs) suffer from injury morbidity and mortality at higher rates than other races (Johnson et al., 1999). Research conducted by Wallace and colleagues identifies unintentional injury (of which motor vehicle-related injury was the greatest contributor) as the leading cause of death for American Indians and Alaskan Natives (Wallace, Sleet, & James, 1997). Together, unintentional injury (including injury due to motor vehicle crashes), homicide and suicide are the leading cause of death among males, and the second leading cause among both sexes combined (Wallace et al., 1997).

The severity and cost of injury hospitalisations to AIs/ANs have not been well described in the American literature. In many areas, where IHS hospitals care for most hospitalised patients, there is no billing for registered AIs/ANs and therefore no charges or costs are calculated (Johnson et al., 1999). Only those patients receiving care in contract health facilities outside of the IHS system (often the most severely injured) receive a bill (Johnson et al., 1999).

Beginning in 1982, the IHS Injury Prevention Program has assisted Indian communities with the development of injury prevention strategies (Robertson, 1986). In 1990 Congress began appropriating funds to the 12 IHS areas specifically for injury prevention programs and training (Johnson et al., 1999). Despite the huge burden of injury on the health of AIs/ANs, injury prevention constitutes a very small proportion of funds of the IHS budget (Johnson et al., 1999).

IHS injury prevention staff are involved in a wide variety of epidemiology, surveillance and injury prevention activities (Indian Health Service, 1996). They work closely with people from Indian tribes and the Alaska Native Corporations to develop community-based injury prevention programs (Indian Health Service, 1996). The IHS is expanding its injury prevention efforts beyond the original focus of motor vehicle injuries and is sharing its new directions (for example, in falls in the elderly, fire injuries, bike helmets and drowning) with tribal and urban health systems, and other organisations committed to supporting safe community initiatives for Indigenous people (Indian Health Service, 1996).

The majority of Native American reservations are located in rural areas, and Native Americans reside in relative poverty compared with US whites (Phelan et al., 2002). The rural environment and relative poverty that many Navajo children live in compared with other US children may place them at particular risk for motor vehicle related morbidity and mortality (Phelan et al., 2002).

In July 1988, the Navajo Nation enacted a primary enforcement safety belt use law and a child restraint law (Phelan et al., 2002). Early assessment of the efficacy of these occupant restraint laws revealed a dramatic effect on seat belt usage and hospitalisation rates for adult Navajos for the immediate three years after enforcement (Bill, Buonviri, & Bohan, 1992). The hospital discharge rates for Navajo children injured in motor vehicle crashes also decreased significantly, in association with the enactment and enforcement of a child occupant restraint law and seat belt law (Phelan et al., 2002).

The beneficial effects of child occupant restraint shown in Navajo children in this study may be replicable in other Native American tribes, as well as other Indigenous communities currently without child occupant restraint laws.

Effective injury prevention strategies, such as increasing occupant restraint use by passing tribal occupant restraint laws (or adopting the state law) combined with strict enforcement and road lighting projects to target pedestrian injuries are well documented in the literature. Unfortunately, this does not automatically transfer to practice. A 1995 survey of tribal traffic laws found that, of 174 tribes reporting, 63 still did not have a seat belt law and 56 did not have a child passenger restraint law (Wallace et al., 1997).

The literature available on American Indian and Alaska Native suicide and homicide indicates that violence is another particular threat to Indigenous populations. Relatively few prevention programs/resources exist, but the number has grown in recent years through federal and private foundation funding (for example, the Violence Prevention Programs funded by the IHS) (DeBruyn, Wilkins, Stetter-Burns, & Nelson, 1997).

There are an increasing number of promising programs being introduced to prevent Indigenous suicide — such as training school and community gatekeepers, educating the community, screening for suicide risk in schools and clinics, developing peer support projects, and restricting access to lethal means of suicide (Wallace et al., 1997).

The American Indian and Alaskan Native Community Suicide Prevention Center and Network of the Jicarilla Apache Tribe is a good example of a community-based program that has shown promising results in reducing suicides among youth and young adults (DeBruyn et al., 1997). The centre staff provide training and support to tribes who are interested in developing their own suicide prevention programs.

Another successful program has been the Phoenix Area Injury Prevention Program. This program has applied basic public health and epidemiological principles to injury control in American Indian communities (Dellapenna, 1999). Program components include injury surveillance, development of community-based coalitions to develop interventions, and consultation and training by technical experts in injury prevention (Dellapenna, 1999).

The passage of the *Indian Self-Determination and Education Assistance Act* in 1976 has led to the current trend for tribes taking responsibility for operating their own health care organisations (Kunitz, 1996). In order for this idea to be effective, tribal leaders will need to be informed of the injury epidemiology in their community, as well as effective available strategies for primary prevention and control (Johnson et al., 1999).

Successfully preventing injuries among people living in Native American communities appears to require a comprehensive, community-based approach, involving many partners and tailored to specific local settings. Injury prevention programs in tribal communities require special attention to the sovereignty of tribal governments and the unique cultural aspects of health care and communication. Successful programs in motor vehicle occupant safety, drowning prevention and fire safety — developed by the IHS and tribal governments — have adhered to these requirements.

6.4 Canada

The Canadian Constitution recognises three Aboriginal groups, Indians (First Nations), Inuit and Métis peoples, with each group being distinct in its heritage (First Nations and Inuit Health Branch, 2001). Languages, as well as cultural and spiritual practices, are unique to each group as well as within each group. As three separate peoples, values and culture are distinct from those of other Canadians. It is a historic lack of understanding, respect and support for these differences that has directly contributed to the marginalisation of Canada's Indigenous people. Today, a majority of Indigenous Canadians remain affected by poor socioeconomic conditions and, as such, are at disproportionate risk of injury.

The injury patterns of Canada's Aboriginal population are similar to those of the Canadian population as a whole, but rates are higher: rates of injury death are 3 to 6 times higher than the Canadian average (First Nations and Inuit Health Branch, 2001). Injury is responsible for approximately one-quarter of all deaths and over half the Potential Years of Life Lost in First Nations people (First Nations and Inuit Health Branch, 2001). For the Indigenous population of Canada, injuries currently remain the leading cause of death in all age groups from 1 to 64 years (Towner, 1999).

Aboriginal people are at a higher risk of being victims of motor vehicle accidents, drowning and fire than the Canadian population in general. Suicide is the most common cause of fatal injury, particularly among Indian youth. Motor vehicle accidents rank second, followed by homicides and drowning (Kuran, 2002).

According to the report of the Royal Commission on Aboriginal Peoples, the suicide rate among Aboriginals of all age groups is three times higher than that of non-Aboriginal people (Royal Commission on Aboriginal Peoples, 1996). Suicide is five to six times more common for Aboriginal youth than for non-Aboriginal youth, and males are responsible for 78% of all suicides (Royal Commission on Aboriginal Peoples, 1996). Among Inuit people in Canada, Greenland and Alaska, there has been a disturbing rise in suicide over the last three decades, with young single males accounting for the largest number of suicides (Health Canada Expert Working Group, 1994).

Motor vehicle accidents account for approximately 40% of unintentional injuries among Aboriginal people and are another area of focus for injury prevention in Canada. Aboriginal people are about four times more likely to die in a motor vehicle accident than non-Aboriginal people (Balmforth, 1998).

As also identified among Australian, New Zealand and American Indigenous peoples, the lack of seatbelt wearing is a problem in many communities — many Canadian Aboriginal people live in rural areas and enforcement rates are low for seatbelt wearing infractions on reserves (Balmforth, 1998). Alcohol also plays a major role in motor vehicle accidents in Canada. The National Survey on Drinking and Driving reported that more than 80% of the drivers had been drinking in fatal crashes that involved young Aboriginal males (Household Surveys Health and Welfare Canada, 1988).

Drowning accounts for the highest number of unintentional injury deaths among all children in Canada (Kuran, 2002). Drowning is the third most common cause of death among all Aboriginal people and, in some northern communities, the number of boating-related drownings exceeds the number of motor vehicle fatalities (Kuran, 2002).

Through partnerships and consultations with First Nations and Inuit peoples, Health Canada (the Canadian equivalent of the Australian Government Department of Health and Ageing) is currently working towards having Canada's Aboriginal peoples administer their own health programs and resources services (Advisory Committee on Population Health, 1999). Many First Nations and Inuit communities interested in assuming control over their own health services have negotiated transfer agreements with Health Canada.

In 1998–1999, Health Canada's First Nations and Inuit Health Branch commissioned an environmental scan, 'to gain insight into the current reality of injuries and injury-related activities among Canada's First Nations and Inuit population' (First Nations and Inuit Health Branch, 1999). The project identified that resources, attention and programming were inadequate to deal with the current levels of Indigenous injury.

In response to the environmental scan, the First Nations and Inuit Health Branch organised a focus group meeting from which the National First Nations and Inuit Injury Prevention Working Group (NFNIIPWG) was formed. The working group, which held its inaugural meeting in February 2000, supports mobilisation and action on injury among First Nations and Inuit at the national, provincial/territorial, regional and community levels (National First Nations and Inuit Injury Prevention Working Group, 2000).

Though the problem of injury has no boundaries and affects all Aboriginal people in Canada, there are historically-influenced, jurisdictional boundaries which influence legal, political and governing structures and agreements. These structures and agreements continue to challenge how Aboriginal people work together. In recognition of these barriers, the NFNIIPWG decided to concentrate and coordinate injury prevention efforts with a focus on First Nations and Inuit and support linkages and the sharing of lessons with all Aboriginal people (National First Nations and Inuit Injury Prevention Working Group, 2000).

To date, many injury prevention programs in Canada have focused on increasing awareness about the injury problem among Aboriginal people, developing culturally-appropriate resources and basic injury prevention skills among community-based practitioners. First Nations and Inuit Health Programs, First Nations and Inuit Health Branch, Health Canada, have supported the majority of programs, in whole or in part.

Listed below is a partial list of injury prevention programs, which have contributed to building momentum among First Nations and Inuit people across Canada (National First Nations and Inuit Injury Prevention Working Group, 2000):

- 1993–1994 (national training initiative) — three-day injury prevention workshop designed for Aboriginal practitioners and delivered across Canada — the purpose of the training was to increase awareness about the injury problem while offering practical community development tools;
- 1995 (practical reference document) *Injury prevention in First Nations populations* — this reference document was based on a 1993 study, which examined and critiqued the literature related to injury prevention projects within native communities;
- 1995 (practical reference guide) *Injury prevention: a guide for Aboriginal communities* — the guide was developed to 'walk' users through steps in the development and implementation of successful injury prevention programs at the community level;
- 1994–1995–1996 (injury surveillance project) Surveillance tool for Aboriginal communities — the overall goal of the project was to develop a surveillance tool that would be user-friendly, practical and appropriate for use by Aboriginal communities — the tool was designed so that communities could independently collect and analyse injury data specific to their community;
- 1996 (first national conference) First National Aboriginal Injury Prevention Conference — this was the first national injury prevention conference organised by Aboriginal practitioners, in partnership with the Alberta Injury Prevention Centre, (now known as the Alberta Centre for Injury Control and Research, ACICR) — the conference was designed to promote information sharing, networking, and learning through the presentation of success stories;
- 1999 (second national conference) Continuing the journey to safe Aboriginal communities — the focus of the second national conference, supported by the ACICR, was practical hands-on skills development workshops that provided a ten-step framework for participants to apply to any injury problem; and
- 1999 (electronic knowledge map, pilot project) *Aboriginal injury surveillance and prevention knowledge map* — the pilot project is focused on developing and testing the viability of an electronic information dissemination vehicle for injury.

Injury rates remain high, but they have improved over time: death rates decreased by 37% over the 1989–1993 period (First Nations and Inuit Health Branch, 2001). Most of this improvement was due to declines in unintentional injuries (such as drowning and motor vehicle accidents) as opposed to intentional injuries (such as suicide and homicide), which are perceived as a major problem in many communities.

The overall momentum for injury prevention among Aboriginal people has been growing in Canada, with government and non-government sectors recognising the need for a coordinated approach to support any programs undertaken. The current impact of injury prevention efforts in Canada is starting to emerge in the form of community-based and provincial/territorial level initiatives, but the impact is not uniform across First Nations and Inuit people, and much work is still needed.

6.5 Global Indigenous injury prevention

Traditional wisdom and the public health model have much to offer in addressing high rates of injury among Indigenous peoples (Berger, 1999):

> The vision of health as encompassing mind, body, and spirit — operating not just at the level of the individual, but also involving family, community, and society — is one that all of us might benefit by embracing.

The adoption of an international perspective to Indigenous injury prevention appears to be a sensible approach based upon the similarities uncovered in this literature review. Culturally-appropriate interventions implemented internationally need to be tailored to specific local settings and problems to reduce injury mortality among the global Indigenous population.

7 Lessons from the literature

7.1 The need for a holistic approach

The great diversity of injury — including as it does simple unintentional injuries, violence (both self-directed and interpersonal) and road injuries — and the complexity, yet similarity, of the factors contributing to injury among Indigenous people mean that a coordinated, holistic approach is needed.

Recognising the fact that injury is such an important contributor to the overall health burden experienced by Indigenous people — and the great costs to the health sector of treating injuries to Indigenous people — it is important that the health sector takes a leadership role in the development of a coordinated, holistic approach.[35] As part of the health sector's leadership role, it may be that advice from the key Aboriginal and Torres Strait Islander advisory group, ATSIIPAC, needs a more direct conduit to the AHMC and AHMAC.

7.2 The role of the Aboriginal and Torres Strait Islander community

It is widely acknowledged that the Aboriginal and Torres Strait Islander community must occupy a central role in all strategies and initiatives addressing any aspect of Aboriginal and Torres Strait Islander health, including injury.[36] The importance of this role — at all levels, national, regional and local — is reflected in a number of recent developments, including the development of Agreements on Aboriginal and Torres Strait Islander Health (Framework Agreements), which facilitate joint planning between governments and Aboriginal and Torres Strait Islander organisations. The Framework Agreements — between the Commonwealth government, State and Territory governments, ATSIC (or the Torres Strait Regional Authority in the Torres Strait Agreement) and the NACCHO State or Territory affiliate body — commit signatories to four key areas:

- increasing the level of resources allocated to reflect the level of need;
- joint planning;

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[35] As noted by Christoffel and Gallagher (1999), it may be that the health sector cannot 'claim the mantle' of primary responsibility and expertise in areas like crime prevention and road safety, but it is hard to see the relevant government ministries initiating the holistic approach required.

[36] It should be noted that, to date, injury and safety have rarely been included as a coherent issue. This reflects largely the fact that there is a dearth of people — among mainstream and Indigenous organisations and communities — sufficiently aware of safety and injury issues.

- improving access to both mainstream and Aboriginal and Torres Strait Islander specific health and health-related services; and
- improving data collection and evaluation.

The Framework Agreements also established a number of formal structures and processes to enable action to be undertaken at State/Territory and national levels. These include the National Aboriginal and Torres Strait Islander Health Council and planning forums (health forums) in each State and Territory.

The Framework Agreements have been acknowledged by NACCHO as enabling: improved intersectoral communication and collaboration in several States and Territories; joint Aboriginal and Torres Strait Islander health regional plans; and better resources for NACCHO and most of its State/Territory affiliates (Commonwealth Department of Health and Aged Care, 2000a). On the other hand, NACCHO noted also that:

- the national and State/Territory forums are frequently presented with policy and program decisions (rather than their being active participants in the decisions);
- the Aboriginal community-controlled sector is not an equal partner; and
- the agreements had not led to adequate, needs-based resources.

The important roles of the NATSIHC, established initially in 1996 and restructured in 1999, are to advise the Commonwealth Health Minister on Aboriginal and Torres Strait Islander health policy and planning, and to monitor the national implementation of the Framework Agreements (Australian National Audit Office, 1998). The NATSIHC includes representatives from each of the Framework Agreement partners (the Commonwealth, States and Territories, ATSIC, the Torres Strait Regional Authority and NACCHO) and from the National Health and Medical Research Council (ex-officio), the Congress of Aboriginal and Torres Strait Islander Nurses, and the Australian Indigenous Doctors Association. The NATSIHC also has as members, appointed by the Minister in their own right, an expert on Aboriginal and Torres Strait Islander substance use issues and two other experts on Aboriginal and Torres Strait Islander health.

In terms of national activities, NACCHO, as the national peak Aboriginal health body, also has an important role independent of its membership of the NATSIHC. Having a membership of around 100 Aboriginal community-controlled health services throughout Australia (operating in urban, rural and remote areas), NACCHO also (NACCHO, 2002):

- promotes, increases, develops, and expands the provision of medical and health services through local Aboriginal community-controlled primary health care services;
- liaises with governments, departments, and organisations within both the Aboriginal and non-Aboriginal community on matters relating to the wellbeing and health of Aboriginal communities;
- represents and advocates for Aboriginal communities in matters relating to health services, health research, health programs, etc;
- assists member organisations to provide Aboriginal people with medical services and other health services; and
- assesses the health needs of Aboriginal communities (through research, data analysis, surveys, etc), and taking steps to meet these needs.

The NACCHO affiliates serve similar roles at State/Territory level.

The important role of these national and regional bodies in the development and consideration of broad injury prevention strategies and programs is complemented at community level by local Aboriginal and Torres Strait Islander bodies, such as local councils (see, for example, Blagg, Ray, Murray, & Macarthy, 2000; Chantrill, 1997; Hunter et al., 2001; McClure, Shannon, Young, & Craig, 2001; Memmott et al., 2001).

Of course, reflecting the various sectors with an interest in various aspects of injury, the Aboriginal and Torres Strait Islander involvement at national and regional level will need to be wider than just health-oriented bodies. For a start, ATSIC has confirmed recently the importance it attaches to addressing family violence among Aboriginal and Torres Strait Islander people (Aboriginal and Torres Strait Islander Commission, 2003). It is beyond the scope of this review to canvass all relevant bodies, but organisations like the Secretariat of the National Aboriginal and Islander Child Care (SNAICC) (Secretariat of the National Aboriginal and Islander Child Care, 1996) and the Aboriginal legal services would appear to have clear roles.

As well as the vital role that Aboriginal and Torres Strait Islander organisations and bodies have in the development of injury prevention policies and strategies at all levels — national, regional and local — it is important also that they are involved in the crucial advocacy function in the implementation of these policies and strategies (Christoffel & Gallagher, 1999).

7.3 The multiple 'causes' of Aboriginal and Torres Strait Islander injury

Another important lesson from the literature is that the consideration and development of injury prevention strategies needs to go far beyond the causes identified by traditional 'risk factor' epidemiology (see, for example, Brice, 2000; Hunter et al., 2001; McClure et al., 2001; Memmott et al., 2001; and Tatz, 2001). Risk-factor epidemiology may well have played a crucial role in the initial work in the prevention of road injury, but even in that area it is seen now as insufficient by itself (Brice, 2000; Christoffel & Gallagher, 1999; Waller, 1994).

The ecological model proposed in the *World report on violence and health* provides one way of conceptualising the types of factors that need to be considered in the development of injury prevention strategies (Krug et al., 2002). This model involves four levels (Krug et al., 2002):

1. individual — biological and personal history factors that may contribute to a person being a victim or perpetrator of violence — as well as biological characteristics, relevant factors may include things like low educational attainment, history of aggression and/or abuse, and substance use;
2. proximal social relationships — those with family members, peers and intimate partners;
3. community — the immediate context in which social relationships are embedded — such as schools, workplaces and neighbourhoods; and
4. societal — social, cultural, educational, health and economic factors that influence levels and outcomes of violence.

There are, of course, other ways of conceptualising the types of factors contributing to injury, including that outlined in Section 3.3 of this Appendix in relation also to violence.[37] Regardless of which classification is used, however, it is important that the scope is wide enough to ensure that the analysis of 'causes' will reveal most of the factors that will need to be taken into account in the development of preventive strategies.

It is important also, that attention is directed — not necessarily in the same analysis — to the various ways in which preventive interventions can be made. Most attention is directed to primary prevention — approaches that aim to prevent injury before it occurs — but secondary and tertiary prevention interventions address different temporal aspects of injury events (Krug et al., 2002). Secondary interventions include things like first aid, pre-hospital care and trauma services, and tertiary interventions include approaches that focus on the long-term care (such as rehabilitation) of injured people.

7.4 The knowledge base for injury prevention

As noted in Section 3.1 of this Appendix, there are problems in terms of assessing the impact of injury among Aboriginal and Torres Strait Islander people, partly because of the inadequate identification of Aboriginal and Torres Strait Islander status in the deaths registration systems and in the hospital in-patient collections (Harrison et al., 2001). These problems with the numerator (the number of injury events) are accompanied by some uncertainty about Aboriginal and Torres Strait Islander population figures (the denominator), at least for specific population sub-groups (such as young males) and for regional and local populations (Harrison et al., 2001). As with other areas of Aboriginal and Torres Strait Islander health, there is a clear need to improve these basic statistics, which would enable better surveillance of the overall impact of injury on Aboriginal and Torres Strait Islander people.

These routine data sources need to be complemented with information about samples of cases, or in particular settings (Harrison et al., 2001). Such an approach was used for the analysis of deaths in South Australia from road injury (Brice, 2000), and should be facilitated with the further development of the National Coroners' Information System (Monash University National Centre for Coronial Information, 2003).

Of course, both mortality and hospitalisation data reflect only serious injury, and there is a need also for information requiring only 'ambulatory' treatment (such as in Aboriginal community-controlled health services, general practice clinics, emergency departments and the like) (Harrison et al., 2001). It may be possible to extend the coverage of the Service Active Reporting (SAR) scheme, operated by NACCHO and OATSIH, to collect better information about attendances for injury at Aboriginal community-controlled health services. Alternatively, consideration may need to be given to developing a BEACH-type survey for at Aboriginal community-controlled health services (Harrison et al., 2001; Wood & Thomson, 1987).

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[37] Much of the literature related to non-intentional injury emphasises also the need to look beyond the proximal causes (see, for example, Brice, 2000 (in relation to road injuries) and McClure et al, 2001 (injury in the community). The models proposed for classifying factors contributing to violence may need some adjustment to apply fully to non-intentional injury, but the general approach is consistent with the ideas being expressed in the literature examining that part of the injury spectrum.

The separate collection of information from hospital emergency departments and Aboriginal community-controlled health services should enable analysis of the various factors associated with injury among Aboriginal and Torres Strait Islander people, but there will still be a need for considerable expansion of special research studies as part of the proposed 'viable program of Australian injury research' (Strategic Research Development Committee of the National Health and Medical Research Council, 1999). Reflecting the great diversity in injury, and the need for both explanatory and evaluation research, this program would require (Strategic Research Development Committee of the National Health and Medical Research Council, 1999):

> contributions from a wide range of disciplines and involves a wider range of research paradigms than have traditionally been accepted within the core health research paradigms. Intervention strategies also require structures within the health system that differ from those required to provide clinical services.

Effective injury prevention requires also the sharing of knowledge about local injury programs and projects (Harrison et al., 2001). As noted above, the documentation of programs and projects addressing injury needs to go far beyond the literature easily accessible from the routine searches, as much of it exists in the so-called 'grey literature'. Addressing the need to share information about local injury programs and projects, Harrison and colleagues (2001) noted that the Australian Indigenous Health*InfoNet* could 'facilitate identification and documentation of these types of activity', and also be a means of conveying 'information effectively to particular audiences, particularly including information users in Indigenous communities'. The spread of 'good practice' for injury prevention in Aboriginal and Torres Strait Islander communities is also within the potential of the Health*InfoNet.*

As well as sharing information about local injury programs and projects, Aboriginal and Torres Strait Islander safety promotion and injury prevention would benefit by better access to the general evidence base relating to injury prevention. Such a component could be included as a part of a comprehensive knowledge base for Aboriginal and Torres Strait Islander safety promotion and injury prevention.

An extensive literature is developing around knowledge management and 'communities of practice' (CoP) (see, for example, McDermott, 1999; Tomoye, 2002; Wenger, McDermott, & Snyder, 2002; Wenger & Snyder, 2000). Much of this has been in the business sector, but the lessons are applicable to the health sector, including the field of safety promotion and injury prevention.[38]

7.5 Funding for injury prevention

Probably reflecting its somewhat belated recognition as a health priority area — and its intersectoral nature — funding has always been a problem for injury prevention in Australia (Commonwealth Department of Health and Family Services & Australian Institute of Health and Welfare, 1998; Strategic Research Development Committee of the National Health and Medical Research Council, 1999), but also in the United States (Christoffel & Gallagher, 1999). In view of the prominence of injury as a cause of death and hospitalisation (and its direct health care costs) for Aboriginal and Torres Strait Islander and non-Indigenous people, preventive strategies clearly justify greater funding levels.

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[38] As well as its work on 'good practice', the Health*InfoNet* has also developed, for the Intergovernmental Committee on Injecting Drug Use and Blood-borne Viruses among Indigenous People, a prototype for a CoP in that area. It is possible that a similar approach could be used for an Indigenous safety promotion and injury prevention CoP.

Apart from overall funding levels, another problem, at least for injury prevention among Aboriginal and Torres Strait Islander people, is the short-term nature of some of the funding. The area of family violence is a clear example. The welcome infusion by the Commonwealth Government of around $6m over four years has enabled development around the country of some promising projects addressing Aboriginal and Torres Strait Islander family violence (Partnerships Against Domestic Violence, 2002). But these are really demonstration projects, as ‘the next step is to embed them into a sustainable mainstream model of service delivery, to bring about sustainable reform across the wider service system’ (Partnerships Against Domestic Violence, 2002). The situation with regard to Aboriginal and Torres Strait Islander projects supported by the National Crime Prevention is less clear, but this too appears to be short-term funding (Commonwealth Attorney-General’s Department, n.d.).

What is needed for effective, sustainable injury prevention programs — not projects — for Aboriginal and Torres Strait Islander people is guaranteed, adequate, long-term funding.

7.6 Workforce implications

The need for a trained and competent workforce has been identified as a requirement for full implementation of the strategies and actions suggested in the National Injury Prevention Plan (Human Capital Alliance, 2002).

For implementation of the four public health-type injuries identified as priorities by the plan,[39] the injury prevention workforce was seen as being divided broadly between direct and indirect workers (Human Capital Alliance, 2002). Direct workers, who are involved in injury policy, research and practice, include academic specialists, program coordinators, and certain types of health practitioners and risk managers. Indirect workers include building surveyors, civil engineers, general practitioners, nurses and fitness leaders.

The general competencies required of direct injury prevention workers were seen as similar to those required to address any major public health issue, but with the need for specialist in-depth knowledge and experience about injury prevention strategies. There appeared, however, to be ‘a lack of accredited training courses that are specifically aimed at injury prevention and that bring all the aspects of injury control processes together’ (Human Capital Alliance, 2002).

The need for a trained and competent workforce will be required also for implementation of a National Aboriginal and Torres Strait Islander Injury Prevention Plan. If the plan is as holistic as the literature suggests it should be, the workforce will need to be broader than that required for implementation of the four public health-type injuries identified as priorities by the National Injury Prevention Plan. It is clearly a matter which will need close consideration, as neither the *Aboriginal and Torres Strait Islander health workforce, national strategic framework* (Standing Committee on Aboriginal and Torres Strait Islander Health, 2002), nor *Training re–visions: a national review of Aboriginal and Torres Strait Islander Health Worker training* (Curtin Indigenous Research Centre, 2003) directs any real attention to this aspect of the Aboriginal and Torres Strait Islander workforce.

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[39] The four priorities are: falls among older people; falls among children; drowning and near-drowning among children and adults; and poisoning among children.

7.7 Administrative and reporting arrangements

In view of the breadth of injury, and the various jurisdictional responsibilities (see Section 2.2 of this Appendix), consideration may need to be given to the administrative and reporting arrangements for development and implementation of a coordinated, holistic National Aboriginal and Torres Strait Islander Injury Prevention Plan.

Its development and implementation should be overseen by an ATSIIPAC, but the composition of this group may need to be broadened to take account of the many relevant areas outside the direct responsibility of the health sector. This would require representation from the Aboriginal and Torres Strait Islander affairs, justice, transportation, labour and, probably, education sectors.

With such a broadening of representation, ATSIIPAC's reporting too should be more general. Consideration would also need to be given to what level, and which body, ATSIIPAC should report.

Reflecting the leadership role that the health sector should play in the development and implementation of a coordinated, holistic National Aboriginal and Torres Strait Islander Injury Prevention Plan, the Population Health Division of the Australian Government Department of Health and Ageing appears the appropriate area for the provision of secretariat support for ATSIIPAC.