

INJURY ISSUES MONITOR



Injury in the Northern Territory

A recently released report, *The Health and Welfare of Territorians*, provides a picture of the nature and extent of injury in the Northern Territory (NT). Two chapters of the report, in particular, deal with this subject, that of the role played by alcohol, one of the identified major risk factors. Extracts from the chapters *Injury and violence* by Sandra Thompson, Karen Dempsey and Michael Pearce, and *Alcohol misuse* by Ian Crundall have been used to construct the following article.

Epidemiology of injury in the Northern Territory

Injury represents a higher proportion of deaths in the Territory than elsewhere in Australia. Although the Territory has a smaller proportion of elderly people dying of chronic diseases such as heart failure or cancer, the age-adjusted rates of injury related death are also higher. This holds true even when allowance is made for statistical variations arising from the Territory's relatively small population base. This small population is also spread over a large land area, and there are almost twice as many injury deaths in Australia's most remote areas as elsewhere.¹

The four leading causes of injury in the Territory are road transport accidents, homicide, suicide and drowning (see *Table 1 overleaf*).

Burden of injury

The age-standardised admission rate for injury in the NT greatly exceeds that for Australians overall, and the NT Aboriginal rate also exceeds the rate for Aboriginal Australians (see *Graph 1 overleaf*).

In terms of bed days, the 1997 burden of injury on health expenditure in the Territory is represented by the total 27,312 hospital bed days attributable to injury (12.2% of all bed days in the NT during 1997).

Many injuries also require prolonged periods of convalescence, sick leave, rehabilitation and ongoing health care, and may result in enduring disability. In short, injury amounts to a substantial cost for the NT. Moreover, some serious injuries such as rape, often do not result in hospitalisation, and are not recorded in the official statistics.

In 1995, more years of life were lost before the age of 65 due to injury than because of any other single cause of death. Nearly three times more than cardio-

vascular disease, the second most common cause of death.

The Territory's approach to injury prevention

Alcohol is well known to be a major risk factor underlying a high proportion of injury-related deaths. Based on this knowledge, the *Territory Health Services'* response to injury has been to give priority to addressing this major risk factor, specifically through programs such as *Living with Alcohol*.² The *Living with Alcohol* program was introduced in April 1992 with funding obtained through a levy on liquor containing more than 3% alcohol by volume.³

Alcohol and injury

In Australia as a whole, alcohol is a significant contributor to injury. Estimates are that alcohol contributes to:

- 37% of road injuries among males and 18% among females;
- 44% of fire injuries;
- 34% of drownings;
- 7% of occupational and machine injuries; and
- hazardous or harmful alcohol use is

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Alcohol-related injury and young males

A forthcoming NISU report explores the relationship between alcohol and the injuries sustained by young Australian males. The report has been prepared by Malinda Steenkamp and James Harrison, in collaboration with Steve Allsop who was the previous Director of the National Centre for Education and Training on Addiction.

This report aims to describe what is known about the occurrence of alcohol-related injury (ARI) in young males; to outline current knowledge about reducing ARI in young males; to highlight important gaps in the data; and to indicate ways forward.

Most knowledge about alcohol and injury in young males comes from the

transport arena and, to a lesser extent, from research on violence. Transport, self-harm, falls, and violence are notable contributors to ARI deaths and hospitalisations. Leisure and recreation, violence, and 'other' household activities seem to make up a large proportion of ARI not resulting in death or hospitalisation. Research indicates that ARI peaks in young males aged 20-24 years and there seems to be a specific subgroup of young males that display a cluster of risk behaviour.

Few interventions specifically address ARI in young males. Current evidence comes mainly from the traffic arena

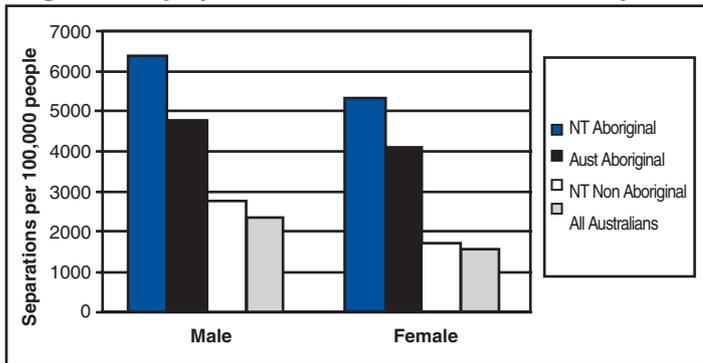
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Injury in the Northern Territory

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Figure 1: Injury admission rates, Northern Territory 1997



Note: Age-adjusted average annual hospital separation (admission) rates per 100,000 people, standardised to Australian 1991 population.

Source: NT 1997—Epidemiology Branch, Territory Health Services. Australia 1995/96—National Injury Surveillance Unit.

estimated to be the cause of 34% of fall injuries.⁴

Excessive alcohol consumption is also a major factor in assaults, homicides, brawls and violence against women.^{5,6,7}

Although the true extent of its cost can only be guessed at, in 1990 alcohol-related harm was estimated to have cost the NT \$150 million—5% of GDP and two to three times higher than for the rest of Australia.^{8,9}

There is some evidence to suggest that restricting alcohol sales in communities can reduce the number of visits to local hospital accident and emergency departments for alcohol-related injuries;^{10,11} and the number of emergency evacuations resulting from injury.¹⁰ A number of such restrictions have been enacted over the last decade in the NT.

Alcohol consumption and drinking patterns

Alcohol has a strong history in the NT, back to pioneering days, and continues to be a mainstay in the life of most Territorians.³

The rate of alcohol consumption in the Northern Territory is twice the national average—in 1996/97, the average *per capita* consumption of absolute alcohol in the Territory was 15.55 litres compared with the national average of 7.61 litres.¹¹

There has been some change in the patterns of drinking. For example, a drop in the consumption since 1998/99 of pure alcohol and a concurrent increase in the preference for low alcohol beverages. It also seems apparent that the nature of the Territory and the substance use choices of Territorians present different risks than occur in many other parts of the country.

Effect of alcohol on road transport accidents

In the period 1979-1995, road transport injuries were the leading cause of injury deaths (39%) in the Territory, and accounted for almost half the injury deaths for Aboriginal males (44%) and for non-Aboriginal females (47%).¹²

The three main contributing factors identified by the Territory's Road Safety Council are alcohol, excessive speed and a failure to use restraints.¹³

For 1997 NT road transport deaths where the BAC was known, the proportion who had a BAC over the legal limit of 0.05% was 2 in 6 motorcyclists, 4 in 6 drivers, 5 in 6 pedestrians. Two thirds of the pedestrians had a BAC of 0.2% or higher.¹³

Police data show alcohol was involved in 14% of road crashes in 1997, compared with about 20% at the start of the decade. There is, however, considerable variation between regions.

Homicide and excessive alcohol consumption

Homicide accounts for a larger proportion of injury deaths in the NT than in Australia overall. Death rate ratios calculated by the Epidemiology Branch for three five year periods 1981-85, 1986-90 and 1991-95 show that homicide rates in the NT were excessive for all groups, but particularly for Aboriginal people. Excessive alcohol consumption is known to be a major contributor to homicide.^{14,15}

Achievements

As already mentioned above, the consumption of pure alcohol has fallen substantially in the NT from an average of around 18.7 litres per person at the start of the 1990s. From 1990/91 to 1997/98, there was an overall reduction of 3.7 litres or 20%. At the same time as consumption of pure alcohol declined, there was a substantial increase in the market share held by low alcohol beer.

A recent evaluation of the *Living with Alcohol Program* shows that, in the four-year period following its introduction, there were 35% fewer road crashes resulting in non-fatal injuries requiring hospitalisation, a mean reduction of 14% in road crash injuries not requiring hospitalisation, and a mean reduction of 39% in alcohol-related road crash deaths.¹⁵

Copies of the above report are available from the Northern Territory University Bookshop, PO Box U476, NT 0815, Tel: 08 8946 6497; Fax: 08 8946 6656; E-mail: bookshop@ntu.edu.au

Table 1: Causes of injury deaths 1979 to 1995

	Per cent		
	NT Aboriginal	NT non-Aboriginal	Australia
Male			
Road transport	44.1	36.9	35.7
Suicide	4.7	22.4	28.4
Other	18.3	19.2	17.4
Accidental falls	2.8	4.0	8.0
Drowning	8.9	9.2	5.4
Homicide	19.4	7.5	3.6
Fire, burns, scalds	1.7	0.8	1.6
Total	100.0	100.0	100.0
Number of deaths	639	1,030	93,422
Female			
Road transport	30.4	46.8	33.6
Accidental falls	4.0	5.5	22.6
Suicide	1.2	13.2	19.1
Other	22.9	17.4	14.4
Homicide	33.6	7.7	5.2
Drowning	4.7	9.4	3.0
Fire, burns, scalds	3.2	0.0	2.1
Total	100.0	100.0	100.0
Number of deaths	253	235	39,365

Note: 'other' includes off-road transport, poisoning, misadventure during medical or surgical care, accidents caused by natural and environment factors, suffocation and foreign bodies, and sports injuries.

Source: Epidemiology Branch, Territory Health Services.

National Falls Prevention for Older People Initiative

National forum

Over two hundred researchers, practitioners and policy makers gathered in Sydney at the end of May for a two day forum on falls prevention for older people. The forum was jointly sponsored by the Commonwealth Department of Health and Aged Care, NSW Health and the Victorian Department of Human Services. The keynote speaker was Dr Mary Tinetti, Chief of Geriatrics and Director of the Program on Ageing at the Yale School of Medicine. Dr Tinetti is a leading expert in the area of falls and fall injury risk identification and prevention.

The forum provided the opportunity for a lively exchange of information and views, and feedback from participants has been very positive.

Falls in residential aged care

Reported falls rates among older people in residential aged care settings have varied widely, with most studies reporting rates in the 30-50 per cent range (NARI, 2000). Therefore, the Department is developing a strategy for action in the residential aged care setting.

The Centre for Education and Research on Ageing (CERA), is the



Mary Tinetti, Keynote speaker at the National forum

successful tenderer for a consultancy project advertised late last year. CERA is working with the Research Centre for Vocational Education and Training, and Health Outcomes International Pty Ltd. This team will undertake wide consultation within the sector with the objectives of identifying the current state of falls prevention activities and identifying opportunities for increasing the uptake of such activities. In acknowledgment of the

good practice already occurring in many sectors of the industry, the project team will identify existing models for promotion.

The final project report is due towards the end of the year. The results of this analysis will inform the Department's approach to working with the residential aged care sector to support the implementation of best practice in falls prevention.

The consultancy team is keen to talk with general practitioners who provide care in aged care facilities and any facilities that have set up falls prevention programs. For more information, contact the project manager, Chris Shanley at the Centre for Education and Research into Ageing (CERA), Tel: 02 9767 7812 or E-mail: cshanley@medicine.usyd.edu.au

Farm injuries

Deputy Prime Minister John Anderson last month announced that Farmsafe Australia will receive \$887,000 over three years to implement its *National Child Safety on Farms Strategy*. The *Strategy* proposes a framework to address the issue of child injury on farms, through eight streams of activity to support its aim of reducing the incidence and death of children aged 0-14 years on Australian farms. Farmsafe Australia is a coalition of fifteen agencies with an interest in, and a commitment to, injury prevention for the farming sector. The project will be managed by the Injury Prevention Section.

Injury Prevention Section's website

The Injury Prevention Section website has recently been updated, and can be found at:

www.health.gov.au/pubhlth/strateg/injury/index.htm

For further information contact Alison Sewell, Director of the Injury Prevention Section, Tel: 02 6289 7186, E-mail: alison.sewell@health.gov.au



Participants in the Panel Discussion (L to R): Sam Smart (Older Women's Network), Stephen Lord (Prince of Wales Medical Research Institute), Ian Cameron (University of Sydney), Catherine Thompson (Victorian Department of Human Services' Aged Care Branch), James Harrison (Research Centre for Injury Studies)

Alcohol-related injury and young males

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where drink-driving has been addressed. Evidence shows a decline in alcohol-related motor vehicle crashes overall. A comprehensive strategy, which employed legislation, RBT, and ongoing reinforcement through the media, was the key. Other promising approaches to reduce alcohol-related road crashes in young males include low blood alcohol level laws, focusing on a sub-group of high-risk drivers, administrative *per se* laws, and installing ignition interlock devices.

Evidence about other approaches to reduce alcohol-related harm is increasing. Some strategies are to reduce alcohol availability by decreasing liquor outlet density and banning alcohol in some communities. Responsible beverage service practices and environmental strategies are useful, but seem most

effective when combined with other approaches. Evidence from community trials aimed at reducing ARI is not unequivocal, but multi-pronged strategies seem most effective. Brief interventions are useful too.

The risk of injury is often associated with other health risks, which in turn are linked with alcohol use. Young people often engage in risk behaviour and involvement in one risk behaviour increases involvement in others. Interventions should address risk behaviour as a complex of health compromising behaviours. A combination of school-based programs, community wide cessation campaigns for adults, and a strong media component seem most successful.

ARI in young Aboriginal males

deserves specific attention. These young males seem to be at increased risk for experiencing alcohol-related problems. A number of approaches have been employed to reduce ARI in Aboriginal people, but the impact on young males is unknown.

There is no simple solution to reduce ARI in young males. Community level interventions that incorporate a number of different effective approaches seem to offer most promise. Another useful avenue may be to pursue a focus on a syndrome of risk behaviour, rather than just on alcohol use.

Further information about this report is available from Malinda Steenkamp at RCIS, Tel: 08 8374 0970; E-mail: malinda.steenkamp@nisu.flinders.edu.au

Mapping to ICD-10

Malinda Steenkamp, RCIS

The transition from ICD-9(-CM) to ICD-10(-AM) holds many challenges, especially for those of us who work with data coded to external causes of injury and poisoning.

Until 1998, national deaths data were coded according to the 9th Revision of ICD. From the beginning of 1999, deaths are coded according to ICD-10. Also, up to 30 June 1998, hospital data were coded according to a clinical modification of ICD-9 (ICD-9-CM). A first version of the Australian modification of ICD-10 (ie ICD-10-AM) was introduced at various stages in the different jurisdictions. From 1 July 1998, NSW, NT, Victoria and Tasmania coded hospital separations data according to ICD-10-AM. The other four jurisdictions coded data to ICD-10-AM from 1 June 1999. (The 2nd version of ICD-10-AM was released on 1 July 2000 and the 3rd version of ICD-10-AM is now in advanced draft form.)

For external causes of injury and poisoning, it is our experience that mapping ICD-9(-CM) to ICD-10(-AM) at the three-digit level is problematic. One way in which we, at RCIS, approach this problem is to first code ICD-9 into a set of broader

categories and then to do the same with ICD-10. We then use these broader categories to represent trends over time. The table below presents one example of the groupings we use.

There are some problems with this approach. One is that the ICD-10-AM External cause code range that refer to falls (W00–W19) is not equivalent to the ICD-9-CM (E880–E888) range for falls. This is because there are no equivalents for the ICD-9-CM codes E887 (Fracture, cause unspecified) and E888 (Other and unspecified fall). We are looking into alternative ways to handle this, e.g. monitoring fall-related injury by using certain diagnosis codes (such as hip fractures) as proxies.

Initial analysis of 1999 deaths data has shown two other problem areas as well. That is, there were marked variations in age-standardised rates for deaths resulting from poisoning and deaths due to other unintentional events.

We will investigate these further and will provide more information in future issues.

For further information, contact Malinda Steenkamp at RCIS, Tel: 08 8374 0970; E-mail: malinda.steenkamp@nisu.flinders.edu.au

Labels	ICD-9 Codes	ICD-10 Codes
Transportation	E800-E848	V01-V99
Drowning	E910	W65-W74
Poisoning, pharmaceuticals**	E850-E858	X40-X44
Poisoning, other substances**	E860-E869	X45-X49
Falls*	E880-E888	W00-W19
Fires/burns/scalds	E890-E899; E924/0,8,9	X00-X19
Other unintentional**	E900-E909; E911-E923; E924/1; E925-E929	W20-W64, W75-W99, X20-X39, X50-X59, Y85, Y86, Y89.9
Intentional, self inflicted	E950-E959	X60-X84, Y87.0
Intentional, inflicted by another	E960-E978; E990-E999	X85-Y09, Y87.1, Y35-Y36, Y89.0, Y89.1
Undetermined intent	E980-E989	Y10-Y34, Y87.2
Medical misadventure, complications, etc.	E870-E879; E930-E949	Y40-Y84, Y88.0-Y88.3

* Please note that specified ranges are not equivalent. ** Please note that specified ranges may not be equivalent.

ICECI Version 1 is here!

Monitor 17 reported on developments around the International Classification of External Causes of Injury (ICECI). We are glad to report that the first version of the *ICECI Data Dictionary (ICECI 1.0)* was released at the meeting of the International Collaborative Effort on Injury Statistics, held in Washington on 2-3 April 2001.

This followed the ICECI draft that was tested in 1999. During this testing phase, 39 experts from 27 organisations in 13 countries coded case scenarios,¹⁷ several international experts in the field of (a subset of) injuries reviewed the codes, and 60 experts from 30 organisations in 14 countries conducted actual field tests.¹⁸ In addition, parts of ICECI were tested in the USA¹⁹ and Europe.²⁰ Results from these activities were incorporated into *ICECI 1.0*.

ICECI 1.0 is currently only available in English, but preparations are being made for translation into French and Spanish. Current dissemination of the document is mostly in electronic form, with limited distribution of paper copies. It will be available for downloading as *pdf* and Word files from the ICECI website.

ICECI is not yet an official WHO classification. However, it is being developed in close liaison with the committees and processes that manage the International Classification of Diseases (ICD), with a view to endorsement in due course, as a WHO "Related Classification".

The ICECI website will be launched in mid 2001. This website will contain the most recent versions of the data elements, updates about testing and the comparability with ICD-10, contact information for key persons working on ICECI, developments concerning derivatives of ICECI, relevant background information about ICECI, availability of

translations, and relevant links. A link to the ICECI site will be added to the NISU site as soon as possible.

The next big task for the ICECI Coordination and Maintenance Group (ICMG—the successor to the ICECI Technical Group) is to develop an alphabetical index. This will be developed within the WHO Office in a joint project of the Violence and Injury Program (VIP) and Classification, Assessment, Surveys and Terminology (CAS), in coordination with the ICMG.

ICECI 1.0 is a 'pick and choose' multi-axial classification system. As such, it proposes a series of recommended data elements that can be used to collect information about a variety of external cause related topics at varying levels of detail. That is, the number of data elements and modules, as well as the level of detail to be recorded for each data element or module, can be selected to meet local needs and resources.

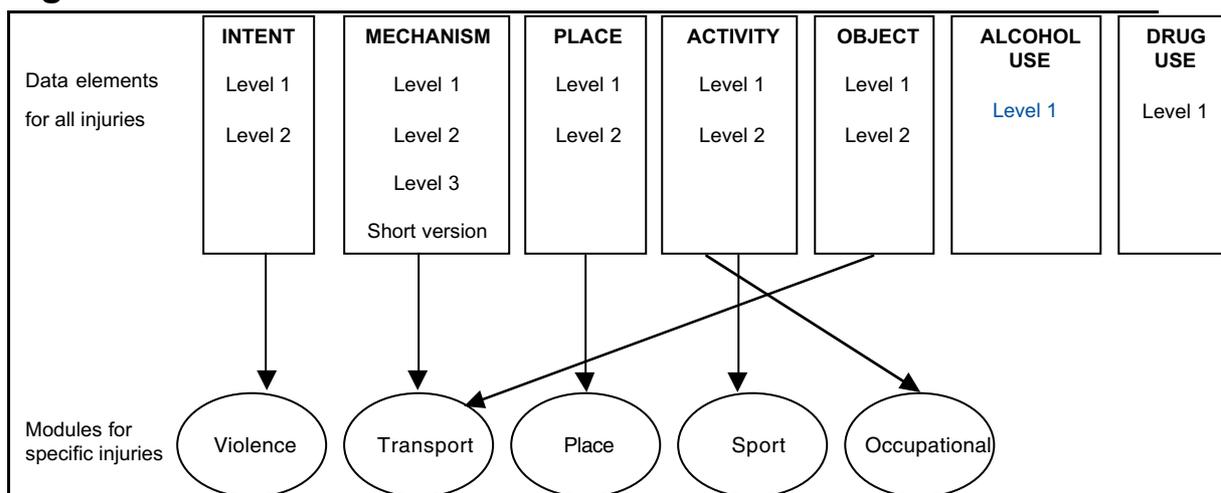
ICECI 1.0 consists of a core set of data elements, as well as several modules (**Figure 1**).

ICECI will undergo continuous development, as practical experience leads to recommendations for improvements and adjustments in coding and guidelines. Each data element and module has its own stage of development.

During 2001/02 NISU will bring the ICECI to wider attention, and seek views on the roles for the classification in Australia.

Please send questions and suggestions (especially those concerning improvement of ICECI) to iceci@consafe.nl You can also contact James Harrison or Malinda Steenkamp at RCIS, Tel: 08 8374 0970, E-mail: james.harrison@nisu.flinders.edu.au or malinda.steenkamp@nisu.flinders.edu.au

Figure 1: Structure of ICECI



Come join the AIPN!

Malinda Steenkamp, Treasurer, Australian Injury Prevention Network

I'd like to take this opportunity to encourage anyone out there, who is not already a member, to join the Australian Injury Prevention Network (AIPN). Why? Well, there are many good reasons:

AIPN is Australia's peak national body for all-age, all-cause injury prevention and control

It's a non-government organisation with membership from all sectors of the injury community. The AIPN facilitates the minimisation of injury-related harm throughout Australia and for all vulnerable population groups by co-ordinating the expertise of injury prevention researchers, practitioners and policy makers.

The Network was formed in January 1996 in order to establish a framework for collaboration between injury researchers, practitioners and policy makers. The AIPN is incorporated in Victoria. Membership is individual, corporate or community-based. AIPN operates through an elected Executive Committee of eight people, supplemented by co-opted members and a secretariat.

Membership isn't expensive

The annual membership fee is \$60.00, which compares very favourably with subscriptions to other professional organisations.

Members enjoy many valuable benefits

- You'll receive four newsletters each year containing updates on

both AIPN activities, and injury developments more generally.

- You'll belong to an E-mail discussion list that connects you to injury colleagues around Australia and makes it possible to exchange ideas and information on topics you're particularly interested in.
- AIPN members receive reduced rates for national injury prevention conferences. (The next one is coming up in Warrnambool during September.)
- And you'll have access to a set of policy position statements, generated and endorsed by the membership, for use in your advocacy activities.

AIPN has an active and skilled Executive Committee

The Executive Committee works hard to improve benefits and services to members, as well as to ensure that the AIPN grows as the peak organisation for injury prevention in Australia. Examples of current developments include:

- An initiative aimed at increasing the involvement of Indigenous people.
- An offer of two student bursaries to support attendance at the *Injury 2001* conference in Warrnambool in September this year.

- An investigation of the feasibility and acceptability of publishing an Australian injury prevention journal.
- Updates and improvements to the AIPN website are underway.
- After a recent review of AIPN finances, steps are being taken to save money on bank fees, etc.
- The AIPN Strategic Plan has been reviewed and updated (a copy of the Plan can be obtained from the secretary).
- AIPN's constitution is currently under review and more information will be provided to members ahead of the AGM to be held in September at the Warrnambool conference.

How to join

AIPN's membership operates on a financial year basis. The new membership period will be for the financial year 2001/2002. A membership form can be obtained from the secretariat and subscriptions are due by 31 August 2001.

If you're already a member ... and need to renew

We encourage current members to renew their subscription. Your membership of and participation in the AIPN is vital in ensuring that we grow as the peak organisation for injury prevention in Australia. We look forward to your support of and participation in the work of the AIPN in the coming year.

For more information, please contact Chris Costa, AIPN secretariat, Injury Control Council of Western Australia, Tel/fax: 08 9420 7212, E-mail: ccosta@iccwa.org.au; Marilyn Lyford, AIPN Secretary, Royal Life Saving Society Australia (WA Branch), Tel: 08 9383 9988, E-mail: mlyford@rlsswa.com.au; Malinda Steenkamp, AIPN Treasurer, Tel: 08 8374 0970, E-mail: malinda.steenkamp@nisu.flinders.edu.au; or Richard Franklin, AIPN President, Australian Centre for Agricultural Health and Safety, Tel: 02 6752 8215, E-mail: rfranklin@doh.health.nsw.gov.au

The AIPN website can be found at:
www.nisu.flinders.edu.au/AIPN



The AIPN Executive: Front row, L to R: Fran McFadzen, Richard Franklin (President), Aleks Natora
Back row, L to R: Marilyn Lyford (Secretary), James Harrison, Malinda Steenkamp (Treasurer), Jan Shield
(Public Officer), Pam Albany

EDITOR'S NOTE: Our previous edition of the Monitor carried an article by Malinda Steenkamp on the subject of Injury in South Africa. RCIS was fortunate, recently, to receive a visit from Dr Surachai Saranrittichai from the Khon Kaen General Hospital in the north east of Thailand. Dr Surachai impressed us greatly with his presentation of the results of a program of injury prevention initiatives that have been implemented in Khon Kaen Province over recent years. We therefore asked Surachai to prepare an article for this edition of the Monitor so that a wider audience might share in learning about the experiences of a developing country in addressing its injury problems.

Preventing injury in Thailand

Surachai Saranrittichai and Witaya Chadbunchachai

Department of Surgery, Khon Kaen Regional Hospital

Epidemiology of injury in Thailand

Injury is a major cause of death in Thailand. Its importance as a health issue has grown since 1985 because the number of traffic accidents has steadily increased. Between 1984 and 1995, the annual frequency of traffic accidents increased by 411%. Over the same period, the number of traffic-related deaths increased from 2,908 to 16,727, and the number of injured patients from 8,812 to 43,541. Traffic accidents accounted for 47% (nearly half) of all injury deaths in 1995.²¹

The majority of people who died as the result of traffic accidents were aged between 15 and 55 years. Such substantial losses of population among those of working age has not only a major social impact, but also negatively impacts on Thailand's economic development. It has been estimated by Thailand's Development Research Institute (TDRI) that the economic loss from deaths due to traffic accidents was 60-90 billion Baht (AUD\$2.6-3.8 billion), around 16.5% of the national budget in 1993. A further estimate from TDRI is that around 100,000 people become disabled each year as the result of transport accidents.

The sources of data on injury for Thailand as a whole are quite good—good coverage of hospitalisations and deaths data are compiled by the Ministry of Public Health.

In some respects, the medical services available in Thailand are comparatively good. For example, the majority of Thai citizens are covered by a medical insurance scheme.²¹ However, there are substantial and important gaps within the health care system. An example that would come as a surprise to many Australians is that Thailand has not traditionally had an ambulance service to transport patients, such as trauma victims, to hospital.

Tackling the problem

One Thai hospital has been at the heart of attempts to address the injury problem. The Hospital is located in Khon Kaen Province, which covers an area of about 10,900 km² in the north east of the country, and has a population of around 1.7 million. It is a dynamic and thriving area which, until the currency was devalued in 1997, was experiencing one of the fastest growth rates in Thailand. It is estimated that around 150,000 people live in the Province's major city, the municipality of Khon Kaen. Khon Kaen City is a place of contrasts where the old and the new are integrated into one society which seems to function very well. The city is also home to the Khon Kaen Regional Hospital.

A dramatic increase in trauma patients in the late 1980s resulted in an increasing proportion of such patients being transferred to Khon Kaen Regional Hospital from surrounding community hospitals and nearby provincial hospitals which were ill-equipped to deal with such cases. Although the Ministry of Public Health set up a referral system, it soon became apparent that all was not well. Specifically, a study conducted in 1987/1988 found a number of problems in relation

to the transfer of head injured patients. These included: more than half of the head injured patients being transferred without accompanying information such as vital and neurological signs; incorrect medical care being given to patients by health personnel; more than 35% of the patients not being intubated during the transfer; and more than 15% having to make their own way to Khon Kaen Regional Hospital.

In response to such problems, a range of interventions were put in place. For example, a trauma registry was established, and an extensive trauma audit was conducted between April 1994 and December 1995. An improved system of inter-hospital communication was set up, as was a mass casualty control network. And last but not least, a determined focus was made on the prevention of injury. This latter response spurred the establishment, in 1991, of The Khon Kaen Provincial Safety Committee (KKPSC). The Committee is structured, and operates, according to the principles embodied in the World Health Organization's community development model.²² Chaired by the Provincial Governor, this multi-sectoral committee is composed of the chiefs of a variety of organisations.

Khon Kaen's motorcycle helmet initiative

A major intervention under the auspices of the KKPSC has been the introduction of crash helmets for motorcyclists. Statistics derived from hospitals around the Country had indicated that: 80% of all transport-related trauma patients were motorcyclists; 50% had head and facial injuries; and 95% of those who died, did so as the result of head and brain injury.²³ A helmet-wearing requirement known as the *Anti-knock Helmet Act* was introduced in the city of Khon Kaen on 1 January 1996. Prior to its introduction, a major publicity campaign was held to inform people—During December 1995 people in



Motorcyclists in Khon Kaen

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Preventing injury in Thailand

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the province were informed through the mass media, schools and university, as well as brochures and a community exhibition board that the *Act's* introduction was imminent and that wearing a helmet was an important life-saving measure. During the first month of the *Act's* operation, publicity was continued and warnings were issued to people who were not complying. From the beginning of February, enforcement commenced. This entailed the imposition of a fine and confiscation of the motorcyclist's licence which could be redeemed by payment of the fine at the police station. Strict law enforcement was used at the beginning in the hope that it could be relaxed later, once helmet wearing had become an established behaviour.

The results of the helmet wearing law have been dramatic, both in terms of helmet wearing rates and injury reduction. Surveys of helmet wearing show that the daytime wearing rate for motorcycle riders increased from 10% in December 1995 to 95% by December 1996. Night-time wearing rates remain more a problem—only a 30% increase was seen over the year. The wearing rates also increased for pillion passengers (from 5% to 70-80% daytime rates; night-time rates increased only 10-30%).

It has been estimated that the *Helmet Act* has resulted in an annual reduction of around 100,000 in the number of motorcyclists injured. Specifically, the Trauma Registry at Khon Kaen Hospital found a decrease of 56% (25 to 113 cases) in the number of head injured patients admitted in the 6 months before and 6 months after the *Helmet Act* was introduced. There was a 24% decrease in fatalities over the same period. These achievements compared very favourably with other municipalities. There was a 15% increase in head-injured patients and an 8% increase in deaths for cases admitted to Khon Kaen Hospital from other municipalities where the helmet wearing law did not apply. Improvements were also observed in relation to other kinds of injury. Khon Kaen experienced a decrease of 40% while no noticeable decrease was observed for injuries that occurred outside the municipality.

The *Anti-knock Helmet Act* has since been extended across Thailand as a whole.

Emergency medical services system development project

Another much needed intervention has been the introduction of a system of pre-hospital care. In 1993, 95% of injured people were brought to Khon Kaen Hospital by their family or by people

at the accident site. The remainder were transported to hospital by a police officer.

The first ambulance station was opened in March 1993, followed by a second early in 1994. A 24-hour information and communication centre was opened at Khon Kaen Hospital.

Training has also been introduced. Khon Kaen Hospital offers a regular short-term course to train Level 1 Emergency Medical Technicians (EMTs). A college-based 2-year course for Level 2 EMTs is also now in operation.



Instruction of Emergency Medical Technicians

Other initiatives

Other initiatives in Khon Kaen have included an accident prevention project among workers in an industrial factory and a traffic sign improvement project. A major project aimed at developing a Trauma Centre Complex in Khon Kaen is currently underway, with assistance from Japanese experts. The complex will incorporate an integrated trauma service, an ambulance station, a command-control centre, an emergency training centre and injury research centre.

Overall outcomes:

Overall, the effect of the initiatives put in place by the Khon Kaen Provincial Safety Committee has been most impressive. For example, between 1995 and 1996 Khon Kaen Regional Hospital experienced:

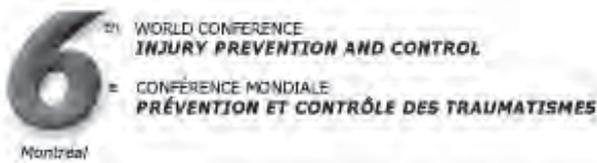
- a 19.2% (n=1,283) decrease in admissions for all types of injury.
- a reduction of 31.6% (n=955) in traffic accident admissions.
- a 34.4% (n=872) reduction in motorcycle accident admissions.
- a 26.5% (n=221) reduction in motorcycle head injury admissions.¹¹

Over the same period, the tendency in other provinces has been for the number of injuries and injury related deaths to rise. While a few areas did experience a reduction, it was of a small magnitude only.

Further information about any of the above is available from Dr Surachai Saranrittichai at the Department of Surgery, Khon Kaen Regional Hospital, Srichan Road, Amphur Muang, Khon Kaen, 40000, Thailand, Fax: 66-43-337958; E-mail: Saran@kknet.co.th



Khon Kaen's ambulance station



Get those abstracts in!

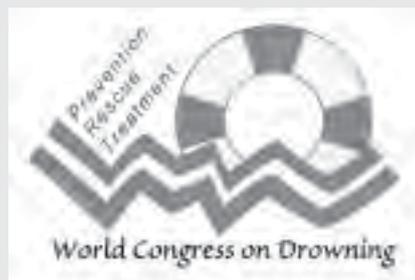
You have until 15 September 2001 to get your abstract in for the next World Injury Conference. Contributions are being sought in relation to the six major themes around which the 3-day conference has been organised. These are:

- Road Safety
- Occupational Safety
- Sport, Leisure, Home, Institutional and Product Safety
- Suicide Prevention
- Violence Prevention
- Post-Trauma Care and Rehabilitation

For further details about what is encompassed by these themes, and abstract submission guidelines, you can visit the Conference website:

www.trauma2002.com

Alternatively, you can contact the Secretariat at 511 place d'Armes, Suite 600, Montréal QC H2Y 2W7 CANADA, Tel: +514 848 1133, Fax: +514 288 6469, E-mail: trauma@coplanor.qc.ca



First ever World Congress on Drowning Call for abstracts

Monitor 13 carried an article about a world-wide response to the problem of drowning. The culmination of this initiative is the World Congress on Drowning, Prevention, Rescue and Treatment to be held in Amsterdam from 26-28 June 2002.

Abstracts are invited for the Congress, with a submission deadline of 1 October 2001.

Full details are available at the Congress website:

www.drowning.nl

or from the Secretariat, C/- Consumer Safety Institute, PO Box 75 169, 1070 AD Amsterdam, The Netherlands. Tel: +31 20 511 45 14; Fax: +31 20 511 45 10; E-mail: Secretariat@drowning.nl



Registration forms are now available for Injury Prevention 2001

You can download a copy of the form, in *pdf* format, from the Conference website:

www.injuryprevention2001.com

Or you can request a copy from the Injury Prevention 2001 Conference Secretariat, Glenormiston College, PMB 6200, TERANG, Victoria 3264, Tel: 03 5557 8200; Fax: 03 5557 8268; E-mail: injury-prevention@unimelb.edu.au

The Conference will focus on: farm safety, indigenous safety, personal safety, rural occupational health and safety, safe communities, safe sport and travel safety. It will be of particular interest to health and injury prevention professionals and researchers, farmers, graziers and farm workers, medical practitioners and other health and safety professionals, government officers.

Editor's Note

The *Injury Issues Monitor* is the journal of the Research Centre for Injury Studies at the Flinders University of South Australia. The Centre incorporates the National Injury Surveillance Unit (NISU).

Letters to the Editor are welcome.
Editor: Renate Kreisfeld

Mark Oliphant Building, Laffer Drive, Bedford Park, SA 5042, Tel: 08 8374 0970; Fax: 08 8374 0702; E-mail: renate.kreisfeld@nisu.flinders.edu.au



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South Australia



ISSN No 1039-4885
AIHW Cat. No. INJ36



Commonwealth Department of
Health and
Aged Care

Something to read ...?

Suicide and the media: a critical review



This report provides an up-to-date review of the world literature on the complex issue of whether media reporting of a suicide can influence others to suicide and the manner in which this influence may occur. The report was produced by Jane Pirkis of the University of Melbourne and Warwick Blood of the Australian National University for the Media Reference Group, a subcommittee of the National Advisory Council to the National Suicide Prevention Strategy. Copies of both the full report and an executive summary are available for downloading, in *pdf* format, from: auseinet.flinders.edu.au/pubs/misc

National Coronial System Data Dictionary

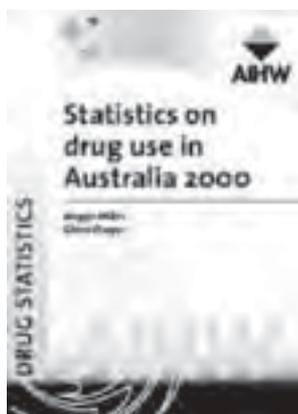
The Monash University National Centre for Coronial Information recently released the first version of the *Data Dictionary for the National Coronial Information System* (NCIS). The *Data Dictionary* is intended as a reference tool which provides a complete list of all NCIS core data items, including a uniform definition and explanation of the data item. Also included are statements of the type of information required and a description of the base classifications used, including their source and user guidelines.

The *Data Dictionary*, initially

conceived by NISU staff, was subsequently developed by them in conjunction with staff of the National Occupational Health and Safety Commission.

Copies of the *Data Dictionary* can be downloaded from the MUNCCI website: www.vifp.monash.edu.au/ncis Information about printed copies is available from MUNCCI, Tel: 03 9684 4414

Statistics on Drug Use in Australia 2000



This report, the ninth in a series, provides readers with a comprehensive summary of major drug use statistical collections, with references to sources of more detailed information. Data are presented on drug use patterns (including trends and attitudes to use), drugs and health, special population groups and crime and law enforcement. New to this edition are chapters on drug avoidance behaviours, polydrug use and international comparisons. This report and others in the Drug Statistics Series will be useful resources for policy-makers, planners and researchers interested in drug-related matters.

The 82 page report (Cat no PHE-30) can be downloaded, in *pdf* format, from the AIHW's website: www.aihw.gov.au Printed copies are available, free of charge, from the Department of Health and Aged Care's publications ordering section: Tel: 02 6289 8654; E-mail: phd.publications@health.gov.au

Mental Health Services in Australia 1998-99

Mental Health Services in Australia 1998-99 - National Minimum Data Sets - Mental Health Care provides detailed statistics on the characteristics and hospital care of admitted patients with a mental health related diagnosis and/or who were treated in specialised psychiatric services during 1998-99. For the first time data on Australia's community based mental health services are presented. These data, and data on psychiatric hospitals, include the number of services and beds in Australia, and key statistics on staffing and expenditure. The report also outlines data developments for collecting more comprehensive mental health service information.

The report can be downloaded, in *pdf* format, from the AIHW website: www.aihw.gov.au Printed copies can be purchased for \$21.50 from Ausinfo, Tel: 02 6215 2222; E-mail: webadmin@dofa.gov.au

Australian Hospital Statistics 1999-00

This is the latest in the Institute's series of reports providing annual summaries on characteristics of Australia's public hospitals and on the hospital care of the nearly six million people admitted annually to public and private hospitals in Australia. Information on Australia's hospitals includes the numbers of hospitals and hospital beds, and key statistics on the resources, expenditure and revenue of public hospitals and on the services they provide. Data on a range of hospital performance indicators are also reported. Detailed statistics are presented on the characteristics and hospital care of admitted patients, including their age, sex and diagnoses, and the procedures they underwent. Information on all reported procedures and external causes of injury and poisoning are reported for the first time.

The report can be downloaded, in *pdf* format, from the AIHW website: www.aihw.gov.au Printed copies can be purchased for \$32.50 from Ausinfo, Tel: 02 6215 2222; E-mail: webadmin@dofa.gov.au

Note: where available, Internet addresses have been provided below for conference websites. For those meetings that don't have their own website, detailed descriptions of the events are normally available at our website: www.nisu.flinders.edu.au/events/

The Character, Impact and Prevention of Crime in Regional Australia

2-3 August 2001

Townsville, Queensland

Contact: Marianne James, Australian Institute of Criminology, Tel: 02 6260 9242; Fax: 02 6260 9201; E-mail: marianne.james@aic.gov.au Website: www.aic.gov.au

SWAN IX Trauma Conference

3-4 August 2001

Sydney

Contact: Thelma Allen, Liverpool Health Service, Tel: +61 2 9828 3927/8; Fax: +61 2 9828 3926; E-Mail: thelma.allen@swhsahs.nsw.gov.au Website: www.swhsahs.nsw.gov.au/livtrauma

2001 National Indigenous Women's Health Conference

8-10 August 2001

Brisbane

Contact: ICSA, Tel: 07 4945 7122; Fax: 07 4945 7224; E-mail: icsa2@bigpond.com.au

2nd International Medical Rescue Conference

20-22 August 2001

Gold Coast, Queensland

Contact: ILS Conference, c/- Surf Life Saving Australia, Tel: +61 2 9597 5588; Fax: +61 2 9599 4809; E-Mail: ilsconf@slsa.asn.au Website: www.slsa.asn.au

Australian Best Practices in Drug & Alcohol Programs Conference

20-22 August 2001

Gold Coast, Queensland

Contact: ICSA, Tel 07 4945 7122; Fax: 07 4945 7224; E-mail: icsa2@bigpond.com.au

4th Nordic Safe Community Conference

21-24 August 2001

Denmark

Contact: WHO Collaborating Centre on Community Safety Promotion, Tel: +46 8 517 779 48; E-mail: moa.sundstrom@soc.med.sll.se

National Speed and Road Safety Conference

23-24 August 2001

Adelaide

Contact: Plevin and Associates Pty Ltd, Tel: 08 8379 8222; Fax: 08 8379 8177; E-mail: speed@plevin.on.net Website: www.plevin.on.net/Speed/home.htm

Road Safety: gearing up for the future

31 August 2001

Perth

Contact: John Doak, Events and Project Consultant, Transport Office of Road Safety, 441 Murray Street, Perth WA 6000; E-mail: jdoak@transport.wa.gov.au

National Australian Conference on Shaken Baby Syndrome

3-4 September 2001

Sydney

Contact: Dr Michael Ryan, Westmead Children's Hospital, Sydney, Tel: 02 9845 2434; Website: www.dontshake.com

15th Annual California Conference on Childhood Injury Control

4-7 September 2001

San Diego, California, USA

Contact: David Lawrence, California Center for Childhood Injury Prevention, Tel: +1 619 594 3691; Fax: +1 619 594 1995; Website: www.cccip.org

Health Care in Perspective 2001

16-19 September 2001

Hobart

Incorporating the 13th National Casemix Conference. Contact: Casemix Conference Secretariat, Fax: 02 6285 1336; E-mail: conference@conlog.com.au Website: www.health.gov.au/casemix/conf.htm

7th Indo-Pacific Congress on Legal Medicine and Forensic Sciences

16-21 September 2001

Melbourne

Contact: Congress Secretariat, Tel: +61 3 9459 4299; Fax: +61 3 9457 3622; E-mail: inpalms@nifs.com.au Website: www.vifp.monash.edu.au/inpalms2001/

1st Asia Pacific Forum on Quality Improvement in Health Care

19-21 September 2001

Sydney

Contact: Julie Goodrick, Commonwealth Department of Health and Aged Care, Fax: +61 2 6289 8470; E-mail: julie.goodrick@health.gov.au Website: web.bma.org.uk/forms.nsf/confweb/JBEY-4RGKC3

XXI Congress of the International Association for Suicide Prevention

22-26 September 2001

Chennai, India

Contact: Congress Secretariat, Tel: +91 44 4470312; Fax: +91 44 4473611; E-mail: info@iasp2001.org Website: www.iasp2001.org

33rd Public Health Association of Australia Annual Conference

23-26 September 2001

Sydney

Contact: Conference Secretariat, Tel: 02 6285 2373; Fax: 02 6282 5438; E-mail: conference@phaa.net.au Website: www.phaa.net.au

45th Annual Conference of the Association for the Advancement of Automotive Medicine (AAAM)

24-26 September 2001

San Antonio, Texas, USA

Contact: AAAM, Tel: +1 847 390 8927; Fax: +1 847 390 9962; E-mail: AAAM1@aol.com Website: www.carcrash.org

Injury Prevention 2001

25-28 September 2001

Warrnambool, Victoria

Incorporating both the 4th National Farm Injury Prevention Conference and the 5th National Injury Prevention & Control Conference.

Contact: Injury Prevention 2001 Conference Secretariat, Tel: +61 3 5557 8200; Fax: +61 3 5557 8268; E-mail: injury-prevention@unimelb.edu.au Website: www.injuryprevention2001.com

Using Evidence to Design Effective Programs

26 September 2001

Sydney

Contact: Capital Conferences, Tel: +61 2 9252 3388; Fax: +61 2 9241 5282; E-mail: sallys@capcon.com.au Website: www.icsbhs.org/evidence.html

1st WHO Safe Community Conference on Cost Calculation and Cost-effectiveness in Injury Prevention and Safety Promotion

30 September to 3 October 2001

Viborg County, Denmark

Contact: Viborg Amt, WHO Safe Community Conference 2001, Tel: +45 8727 1987; Fax: +45 8660 2311; E-Mail: ukhkk@vibamt.dk Website: www.vibamt.dk/conference2001

Australasian College for Emergency Medicine 18th Annual Scientific Meeting

30 September to 4 October 2001

Hobart

Contact: Penny Archer or Ben Thiessen, Conference Design Pty Ltd, Tel: 03 6224 3773; Fax: 03 6224 3774; E-mail: mail@cdesign.com.au Website: www.cdesign.com.au/acem2001

Australian Rehabilitation and Assistive Technology Association Conference 2001

2-4 October 2001

Brisbane

Contact: ARATA 2001 Conference Secretariat, Tel: 07 3858 5530; Fax: 07 3858 5510; E-mail: arata2001@im.com.au Website: www.arata.org.au

Best Practice Interventions in Corrections for Indigenous People

8-9 October 2001

Sydney

Contact: Margaret Cameron, Australian Institute of Criminology, Tel: 02 6260 9242; Fax: 02 6260 9201; E-mail: margaret.cameron@aic.gov.au Website: www.aic.gov.au

9th International Cochrane Colloquium

9-13 October 2001

Lyon, France

Contact: Bertrand Favre, 9th International Cochrane Colloquium, Tel: +33 4 72 77 45 50; Fax: +33 4 72 77 45 56; E-mail: receptif@package.fr

Police and Partnerships in a Multi-Cultural Australia: Achievements and Challenges

25-26 October 2001

Brisbane

Contact: Julie Dixon, Australian Institute of Criminology, Tel: 02 6260 9229; E-mail: julie.dixon@aic.gov.au Website: www.aic.gov.au

Injury Prevention Network of Aotearoa New Zealand 2001 Conference

31 October to 2 November 2001

Wellington, New Zealand

Contact: The Conference Organiser, Weaving the Strands Conference, Tel: +64 04 473 8044; Fax: +64 04 473 8042; E-mail: ipnconference@avenues.co.nz

The National Indigenous Substance Abuse Conference

19-20 November 2001

Sydney

Contact: ICSA Tel: 07 4945 7122; Fax: 07 4945 7224; E-mail: icsa2@bigpond.com.au

Mental Health and Criminal Justice Workshops

21- 22 November 2001

Melbourne

Contact: Julie Dixon, Australian Institute of Criminology, Tel: 02 6260 9229; E-mail: julie.dixon@aic.gov.au Website: www.aic.gov.au

2nd National Sports Injury Prevention Conference

22-24 November 2001

Sydney

Contact: NSW Sport & Recreation, Email: info@dssr.nsw.gov.au Website: www.dssr.nsw.gov.au

Road Safety Research, Policing & Education Conference

26-28 November 2001

Brisbane

Contact: Road Safety 2000 Secretariat, Tel: +61 7 3858 5554; Fax: +61 7 3858 5510; E-mail: rs2000@im.com.au

37th Annual Conference of the Ergonomics Society of Australia Inc.

28-30 November 2001

Sydney

Contact: International Conferences & Events (ICE) Australia Pty Ltd, Tel: 02 9544 9134; Fax: 02 9522 4447; E-mail: ergonomics@iceaustralia.com
Website: www.ergonomics.org.au

5th International Conference on Fatigue and Transportation

11-15 March 2002

Fremantle, Western Australia

Deadline for abstracts: 1 February 2002

Contact: Secretariat, Congress West Pty Ltd, Tel: +61 8 9322 6906; Fax: +61 8 9322 1734; E-Mail: conwes@congresswest.com.au

11th International Conference on Safe Communities

7-9 May 2002

Rainy River District of Northwestern Ontario, Canada

Contact: Doug Langtry, Rainy River Valley Safety Coalition, Tel: +807 274 2823; Fax: +807 274 2823; E-mail: who2002@hotmail.com

International Symposium on Urban Safety

8-9 May 2002

Montreal, Canada

Contact: Michelle Cote, Montreal Urban Community Police Department, Tel: +514 280 3440; Fax: +514 280 3069; E-mail: michelle.cote@spc.umc.qc.ca

1st International Seminar on Women's Safety—Making the links

9-11 May 2002

Montreal, Canada

Contact: Anne Michaud, Comite International Femmes et Securite Urbaine, Tel: +514 396 3521; E-mail: cfsu@qc.aira.com

Canadian Injury Research Network meeting

11 May 2002

Montreal, Canada

Participation is open to interested researchers and stakeholders from other countries.

Contact: Dr Lynne Warda, Tel: +204 787 1908; Fax: +204 787 2070; E-mail: Lwarda@escape.ca

Training Workshop on Coalition Building and Mobilizing for Safety

11 May 2002

Montreal, Canada

Contact: Wendy Cukier, Tel: +416 979 5000 ext. 6740; Fax: +416 979 5249; E-Mail: wcukier@acs.ryerson.ca

Course on Safety Promotion and Injury Control: Principles in Research and Evaluation Methods

11-18 May 2002

Montreal, Canada

Contact: Celine Farley, University of Montreal, Tel: +514 343 6111 ext. 2950; E-mail: farleyce@magellan.umontreal.ca

Course on Safety Promotion in Local Communities: Planning and implementation methods and tools

11-18 May 2002

Montreal, Canada

Contact: Renee Levaque, Tel: +418 666 7000 ext. 454; Fax: +418 666 2776; E-mail: renee.levaque@ssss.gouv.qc.ca

People's Right to Safety Charter Workshop

11 May 2002

Montreal, Canada

Contact: Tapan Bose, South Asia Forum for Human Rights, Tel: +977 1 541026; Fax: +977 1 527852; E-mail: right_to_safety@rediffmail.com

6th World Conference on Injury Prevention and Control

12-15 May 2002

Montreal, Quebec, Canada

Deadline for abstracts: 15 September 2001
Contact: Conference Secretariat, Tel: 514 848 1133; Fax: 514 288 6469; E-mail: trauma@coplanor.qc.ca
Website: www.trauma2002.com/

Measuring the Burden of Injury Conference

16-17 May 2002

Montreal, Canada

Contact: Suzanne Tylko, Transport Canada Crashworthiness Division, Tel: +613 998 1951; Fax: +613 990 2913; E-mail: tylko@tc.gc.ca

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