



Government of **Western Australia**  
Department of **Health**



# Aboriginal Injury Priorities: An overview of the evidence, best practice and prevention programs in Western Australia

Compiled by: Alison Kay, Injury Control Council of WA Inc.

## *Disclaimer*

*The content of this Overview is made up of research and information that was available to the Injury Control Council of WA (iCCWA) at the time of preparation. Although care has been taken to ensure the accuracy of the information provided, iCCWA takes no responsibility for any errors, omissions or changes to information that may occur. This document is solely an overview, and is not intended to be a comprehensive document of Unintentional Aboriginal Injury Priorities. It may unintentionally exclude information such as statistics, prevention programs or initiatives and legislation. iCCWA acknowledges that there may be contributors to the prevention of unintentional Aboriginal injuries outside of the organisations and programs listed.*

## Inclusions

Aboriginal injuries to be included in this analysis are all unintentional injuries, including alcohol-related injuries, which resulted in Emergency Department attendances, hospital admissions or death. Due to the complex nature of intentional self-harm, suicide, domestic and interpersonal violence, these injuries and deaths will be excluded. A full list of included injuries by the International Classification of Disease (ICD-10-AM)<sup>1</sup> codes is listed in Appendix A. From this point, 'all unintentional injuries' is defined as only those that are included in this review.

## Background

A review of injury prevention purchasing priorities for the Department of Health, Western Australia in 2010 identified several areas of injury that are especially topical in Aboriginal populations. Priorities included: drowning and near drowning; poisoning; falls; and burns and scalds. In these injury areas, Aboriginal people experience higher rates of injury than non-Aboriginal people.

Further, in 2010, purchasing recommendations were made around the following areas:

- Examining the causes and solutions of off-road injuries in rural and remote areas, and for Aboriginal people;
- Promoting water safety in Aboriginal communities and CaLD groups; the role of alcohol in injury, including for Aboriginal people;
- Promote early identification of falls risk by developing and promoting falls risk assessment programs for at-risk populations, including Aboriginal people;
- Promote awareness of risk factors and injury prevention strategies for both elderly people and carers, including health professionals, with a particular focus on Aboriginal people;
- Examine the role that open fires play in burns and scalds, particularly in Aboriginal communities, and provide appropriate educational interventions; and
- Improve health professionals' knowledge of injury priorities and effective injury prevention programs, including for Aboriginal people. (1)

Qualitative data gathered from Aboriginal health workers found that their major injury concerns were domestic violence, interpersonal violence outside the home, road safety issues, including child pedestrian safety, injury arising from poor housing and environments, and drug- and alcohol-related issues. (2) This data is generally consistent with the morbidity and mortality data available from the Department of Health WA. Injury in Aboriginal people is closely linked to other issues, such as alcohol, socioeconomic status, risk-taking behaviour and isolation. When considering prevention strategies, these factors are important determinants of health to consider.

The *National Aboriginal and Torres Strait Islander Safety Promotion Plan 2004-2014* outlined several priority activities Australia-wide for the future direction of Aboriginal injury prevention. These priorities included:

- Building collaborative working relationships between all levels of governments, organisations and community groups working with Aboriginal people to address injury;
- Increase knowledge and skills in relation to injury prevention in Aboriginal communities;
- Provide enough resources to build and enhance workforce capacity;
- Support policies addressing social, environmental and behavioural factors effecting injury prevention;
- Improve surveillance systems and collection of quantitative and qualitative data;
- To create and sustain a local focus on injury prevention; and
- To develop a whole of government focus that supports sustainable programs preventing injury. (3)

---

<sup>1</sup> ICD is the international standard diagnostic classification for general epidemiological data, health management purposes and clinical use. It is used to classify diseases and other health problems from morbidity and mortality datasets.

# Epidemiology

## Hospitalisations

From 2000-2007, Aboriginal people in Western Australia experienced hospitalisation and death rates from community injuries 3.6 times higher than non-Aboriginal people. (4) The greatest discrepancy between Aboriginal and non-Aboriginal persons occurred in the 35-44 year age group for males, and 25-34 year age group for females. In these age groups Aboriginal males were hospitalised at rates 4.5 times greater than their non-Aboriginal counterparts and Aboriginal females were hospitalised around 7 times the rate of non-Aboriginal females. (5) Additionally, Aboriginal persons hospitalised for injuries were significantly younger than non-Aboriginal persons. Of all injury-related hospitalisations among Aboriginal people, 45% were between the ages of 25 and 44. In non-Aboriginal people, the highest injury-related hospitalisation rates occur amongst those aged 65+. (5)

**State:** In Western Australia the top five causes of unintentional injury-related hospitalisations for Aboriginal people from 2004-2010 were:

- Accidental falls;
- Exposure to mechanical forces;
- Transport accidents;
- Other external causes of accidental injury; and
- Exposure to smoke, fire, flames and hot substances.

For further clarification of these injuries, see Appendix A. In 2010, all unintentional injuries in Aboriginal people resulted in 7,347 hospital bed days and cost \$13,665,666. In addition to the top causes of hospitalisation, other injuries that contributed to the total bed days and cost of unintentional injuries in Western Australia during this time period were: accidental poisoning; exposure to venomous plants, animals, forces of nature; accidental drowning, submersion, or threats to breathing; and exposure to electricity, radiation, extreme temperature/pressure. (6)

**Regional Comparison:** In metropolitan areas of WA the top five causes of unintentional injury-related hospitalisations for Aboriginal persons from 2004-2010 were accidental falls, exposure to mechanical forces, transport accidents, other external causes of accidental injury and accidental poisoning. Metropolitan areas experienced lower or similar rates of hospitalisation for all causes of injury when compared to the rates of the State.

**(7)**

In country regions from 2004-2010 the top five causes of injury for Aboriginal people were accidental falls, exposure to mechanical forces, transport accidents, other external causes of accidental injury, and 'exposure to smoke, fire, flames, and hot substances'. In these regions, the rates of hospitalisation due to the top five causes of injury were all significantly higher than the rates in the State. 'Exposure to venomous plants, animals and forces of nature' was also experienced at significantly higher rates than the State. (8)

## Emergency Department (ED) Attendances

**State:** In WA from 2007-2010 'injuries, poisoning and toxic effects of drugs', together with burns was the number one cause of Aboriginal people presenting to ED. There were a total of 67,890 ED attendances by Aboriginal people for these causes. In 2010 alone there were 24,289 presentations at an estimated cost of \$6,416,810. The age group most affected by these causes are 25-44 year olds, followed by 15-24 year olds. Age specific rates are greatest amongst those aged 15-44, and those aged 80+ years. **(9)**

**Regional Comparison:** In country regions of WA 'injuries, poisoning and toxic effects of drugs', together with burns was also the number one cause of presentation to ED. In 2010 there were 11,953 ED attendances in 2010 for these causes, costing an estimated \$3,170,614. This comprised 70% of all ED attendances across the State from 2007-2010 for these causes. **(10)** In metropolitan areas, however, burn injury ED presentation rates were 2.1 times greater when compared to the State, while 'injuries, poisoning and toxic effects of drugs' were 0.44 times the rate of the State. Burn injury ED presentation rates were significantly lower in country areas when compared to the State, while 'injuries, poisoning and toxic effects of drugs' were significantly greater than the State rate. **(11)**

## Deaths

Injury was the second most common cause of death for Aboriginal males and the fourth most common for Aboriginal females from 2001 to 2005. Aboriginal male death rates from injury were 3 times greater than those of non-Aboriginal males, while Aboriginal female death rates were 6 times those of non-Aboriginal females. **(12)** The leading causes of death for Aboriginal males and females in WA for this same time period were transport accidents (27% and 30%, respectively). In Western Australia, the top five causes of unintentional injury-related deaths for Aboriginal people from 1998-2007 were transport accidents, other unintentional injuries, falls, accidental poisoning and accidental drowning. **(13)**

**By region:** In metropolitan areas the top cause of unintentional injury-related deaths for Aboriginal persons from 1998-2007 was transport accidents, with numbers of all other causes of injury-related deaths too low to be released. **(13)**

In country regions of the state, from 1998-2007, the top five causes of injury-related deaths for Aboriginal persons were transport accidents, other unintentional injuries, falls, accidental poisoning and accidental drowning. In these regions the rates of deaths due to these causes were not significantly different from the rates in the State<sup>2</sup>. **(13)**

---

<sup>2</sup> Caution should be exercised when interpreting injury-related death rates for Aboriginal people, however, as numbers are often low and therefore rates may not be reliable.

## Injury Types

**Transport Accidents:** Aboriginal people account for 9% of all deaths and 8% of all hospitalisations from transport accidents in WA, despite making up only ~3.8% of the population. (14) They are 2.1 times more likely to be hospitalised and 2.9 times more likely to die from this cause than non-Aboriginal people. More than half of these deaths were caused by motor vehicle crashes, and 33% by pedestrian injuries. (15) A majority of transport accident injuries and deaths occur in regional areas. (16) (17) Risk factors include: a high proportion of Aboriginal people living in remote areas; greater travel distances; high speeds; poor road conditions; high prevalence of un-roadworthy cars; low compliance with seat belt laws and licencing; overcrowding of vehicles; and drink driving. (18)

**Falls:** Aboriginal people are 1.3 times more likely to be hospitalised, and 2.7 times more likely to die, as a result of a fall than non-Aboriginal people. (19) (20) From 2001-2010 in WA there were 602 hospitalisations as a result of a fall for Aboriginal people aged 65-85+ years. (20) The highest aged standardised rate of falls hospitalisations for people aged 15-85+ years was in the Pilbara region with 2,015.9 per 100,000. (21) In 2010 Aboriginal falls-related hospitalisations accounted for 2,037 bed days, which cost an estimated \$3.6 million. (21) Risk factors for falls in Aboriginal people include: high prevalence of diabetes; kidney disease; poor nutrition; poor cardiovascular health; and physical inactivity. (22)

**Exposure to Mechanical Forces:** Aboriginal people are 2.8 times more likely to be hospitalised for this cause than non-Aboriginal people. A majority of hospitalisations from this cause occurs in country regions of the state, and males are at higher risk of injury for this cause than females. (23)

**Other External Causes of Accidental Injury:** The rate of hospitalisation for 'other causes of accidental injury' is 2.4 times greater in Aboriginal people than in non-Aboriginal people. The age group most affected by these injuries is 25-44 year olds, while 60% of these injuries occurred in males and 78% occur in country health regions. (24)

**Burns:** Aboriginal people in Western Australia are at greater risk of being hospitalised as a result of burns injuries than non-Aboriginal people, with hospital separation rates over 5 times higher<sup>3</sup>. (25) Risk factors include alcohol and drug use, high risk taking behaviour, prevalence of campfires and open cooking fires.

**Poisoning:** The rate of accidental poisoning deaths and hospitalisations for Aboriginal people is 2.4 times and 2.3 times greater, respectively, than for non-Aboriginal people. The highest death rate in this time period occurred in Aboriginal males aged 30-34. (26)

**Accidental Drowning:** Aboriginal people are 3.6 times more likely to die from drowning than the general population. Further, the rates are even higher in remote areas around Australia than metropolitan or rural areas, while 65% occur in adults (>=15 years), and 72% are male. (27) (28) Risk factors include a high proportion of Aboriginal people living in remote areas, with greater exposure to unpatrolled water bodies, prevalence of alcohol and reduced parent supervision of children near water bodies. (29) (30)

---

<sup>3</sup> More than 7% of burn injuries in Aboriginal people are estimated to be the result of interpersonal violence. (31) (32)

## Best Practice Guidelines

The National Aboriginal and Torres Strait Islander Safety Promotion Strategy (2005) outlined several principles that are essential in the development and implementation of Aboriginal injury prevention programs. (3)



## Scope of Current Activities, WA

Issue	Organisation	Program	Description
Transport Accidents	Transport South Australia	'Keep our kids safe: buckle them up' posters	
	National Aboriginal Road Safety	'Corrugations to highways' video	
	WA Local Government Association	Aboriginal child car restraint information workshop	Tackles non-use of seatbelts and child car restraints among some Aboriginal people in the Pilbara region of Western Australia.
		Indigenous Road Safety Working Group	Will examine indigenous road safety in the south west Narrogin/Wagin area of WA.
		Community road safety grants program	Funding for projects aligning with 'Towards Zero WA Road Safety Strategy 2008-2020'. <sup>4</sup>
		Awareness campaign of travelling in load spaces	Targets Aboriginal communities to be aware of illegality of riding in the back of utes.
	Office of Road Safety	Your License Is Your Life: Indigenous Drink Driving & Licensing Kit	Educational materials on licensing & drink driving for Indigenous people.
		Indigenous alcohol interlock demonstration project	Trial program using alcohol interlock to reduce drink driving repeat offenders.
		Indigenous unlicensed/ drink driving project	To identify and progress initiatives to reduce drink-driving amongst Indigenous people in rural and remote WA.
		Port Hedland and Newman community alcohol-related road trauma project	Education, enforcement, environment and evaluation of drink driving in the Pilbara.
		Indigenous Road Safety advertisements	Advertising produce by Aboriginal people for Aboriginal people in the Kimberley.

- <sup>4</sup> Between 2004/05 and 2010/11, funded programs included: Fitzroy Family Festival; Ardyaloon Road Safety and health Lifestyle Expo; National Indigenous Tertiary Education Student Games; Yaandina Child Restraint Assistance Program; Red dirt Driving Academy; Warmun Community BMX Bike Park; Be Safe Be Seen Wyndham Pedestrian Project; among others.

		Indigenous Licensing Program Initiatives	Increased speed of processing licensing transactions in remote areas; addressing barriers to licensing in Indigenous people; increased delivery of driver's license theory testing in remote communities; vehicle inspections;
	Department of Transport	Keys for Life pre-driver education program	Targets Aboriginals aged 15-20 years to educate on road safety.
	School Drug Education and Road Awareness	Safe Driver Education	Provides training for students to pass provisional licence test, road safety workshops and supervisors for students to gain practice.
	Clontarf Aboriginal College	Driver support program	Assists Aboriginal people in obtaining a drivers licence.
	East Kimberley Community Development Employment Project program	Indigenous driving training and defensive driving training program	Helps young Indigenous people to prepare for their learners permit test. Defensive Driver theory program is also available.
	Police and Community Youth Centre – Kensington	Indigenous storybook	Allows Indigenous people to share their public health experiences in a friendly, non-threatening way.
	Public Health Advocacy Institute of Western Australia – Curtin University	Muttacar Sorry Business	Performance-based way of addressing key elements of road trauma in Aboriginal populations, such as alcohol use, risk taking behaviours and overcrowding, which, when combined with specific social issues, create a tragically high level of road trauma amongst Indigenous populations.
	Yirra Yaakin Theatre	Aboriginal Driving Training Course	Provides an opportunity for Aboriginal people to participate in defensive driving and hazard perception training.
	City of Armadale and Armadale Police Station Aboriginal Police Liaison Officers	Regrets short film project	Reckless decision-making, including drink driving.
	Wongutha Christian Aboriginal Parent-directed School	Indigenous Road Safety advertising	A not-for-profit media and events organisation based in Broome, which delivers and produces television and radio services to the Kimberley region of WA around Drink Driving, Speeding, Seat Belts and Fatigue.
	Goolarri Media	Remote Pools Program	Provision of swimming pool facilities within remote Aboriginal communities in North-West WA to improve health, social and educational outcomes for the community.

			This also includes the successful “No School, No Pool” program.
<b>Water Safety</b>	Royal Life Saving Society	Remote Pool Swimming Lessons	Held swimming lessons at the Remote Community Pool for students (mostly Aboriginal) aged 4-14 to build water confidence and water safety knowledge.
		Keep Watch & Watch Around Water	Indigenous focused resources and strategies for increasing awareness of water safety with particular reference to young children in both urban and regional areas. Keep Watch also continues to strengthen the program by conducting young mother’s group’s safety presentation talks with Indigenous mothers.
		Don’t Drink & Drown	“Don’t Drink Guri & Drown” is made specifically for the Kimberley, while “Don’t Drink Grog & Drown” is made for the Pilbara. Each of these programs has specific resources and methods for implementation to suit the Indigenous community in these areas.
		Remote Aboriginal Swimming Pool Projects	Provision of swimming pool facilities within remote Aboriginal communities in North-West WA to improve health, social and educational outcomes for the community. This also includes the successful “No School, No Pool” program.
		Swim For Fruit Program	Encourages participation in physical activities amongst children in remote Aboriginal communities in the North-West of WA through lap swimming programs with fruit provided as an incentive for participation.
		Indigenous Training & Traineeships	Providing training and traineeship opportunities within the Sport & Recreation industry within metropolitan and regional areas of WA.
		Keep Watch & Watch Around Water	We have specifically Indigenous focused resources and strategies when it comes to increasing awareness of water safety with particular reference to young children in both urban and regional areas. Keep Watch also continues to strengthen the program by conducting young mother’s groups safety presentation talks with Indigenous mothers.
		Learn to Swim	Programs designed specifically to meet the needs of Aboriginal and CaLD people to encourage them to learn to “Swim & Survive”.

		Fire Safety in your home, Aboriginal resource	Culturally relevant fire safety resource booklet for Aboriginal people.
<b>Burns</b>	Fire & Emergency Services Authority	'Fire safety in your home' brochure	Culturally relevant brochure to educate Aboriginal families in fire hazards and steps to prevent fires and burns.
<b>General Injury Prevention</b>	Rural Health Education Foundation	'Living Safely: Preventing Accidents & Injury in Indigenous Communities' documentary	Highlights successful projects and initiatives in Indigenous Communities. Education tool to describe injury amongst Indigenous people and identify possible causes; recognise need for family approach to injury prevention; and implement successful strategies to improve injury prevention programs.

## Stakeholder Consultation

### What really matters to your organisation?

#### 1. Cultural awareness

There was a general consensus amongst the stakeholders that increased cultural awareness amongst service providers, funding bodies and health workers was critical when working with Aboriginal people. This was seen by stakeholders as helping to facilitate flexible funding arrangements for more innovative initiatives, while allowing for culturally secure indicators of program success.

Acknowledging that a 'traditional (Western) model does not fit or work' was an important concept to many stakeholders. Another stakeholder mentioned that understanding the 'fatalistic' approach to life by Aboriginal people was important, as well as understanding that some injuries are accepted by the community as customary law and payback.

Adoption of new communications strategies with working with Aboriginal people was also suggested, with one stakeholder stating that 'old and out-dated patterns of communication' are not effective.

A holistic approach to health in general, and injury prevention, was highlighted by several stakeholders as important.

#### 2. Up skill and empower Aboriginal people and communities

Educating and up skilling Aboriginal health workers and community members in injury prevention was seen as important to many stakeholders. This method of engaging the Aboriginal community in injury prevention was suggested as being more sustainable and also effective in creating employment for Aboriginal people, such as with the creation of additional roles for Aboriginal liaison officers in metropolitan hospitals. Empowering the Aboriginal community to 'take care of themselves' was also mentioned.

Engaging with the Aboriginal community to determine what the current level of knowledge and understanding of injury prevention is was identified by some stakeholders as being an important starting point. Further, engagement with Aboriginal researchers and communities to develop peer-led and developed strategies was also mentioned.

## **To Keep: Which programs/initiatives/policies are working well that we need to keep doing?**

### **1. Develop campaigns to target Aboriginal people**

Several campaigns that were designed to specifically target Aboriginal people, and/or involved Aboriginal communities in the development, were identified by stakeholders as being successful. Those mentioned include the Office of Road Safety's advertising campaign, the Injury Control Council of WA's Map of Loss program, Royal Life Saving's Remote Aboriginal Swimming Pools Project (RASP), Aboriginal Stay On Your Feet® resources and the Prevent Alcohol and Risk-related Trauma in Youth (P.A.R.T.Y.) program.

## **To Fix: What needs to be modified in order to work well or should be stopped, as it is not working?**

### **1. Lack of cultural understanding**

Increasing cultural awareness by service providers, clinicians and funders was mentioned by several stakeholders. This included broad hospital staff awareness and wider agency awareness. Cultural awareness training should include elements on how to 'practice' better when working in Aboriginal communities, according to one stakeholder.

### **2. Coordinated Approach**

Coordination and collaboration between organisations and agencies providing injury prevention services to Aboriginal communities was cited by several stakeholders as area in need of improvement. This included connecting data with practitioners, coordinated advocacy approaches and the development of tailored messages.

## **To start: What should we be doing in the future?**

### **1. Holistic approach**

Several stakeholders suggested that a holistic approach to injury prevention in Aboriginal communities is necessary in the future. This included the linking of services, health and non-health, in order to address many of the determinants of injury. Suggested linkages include the Western Australia Police, Department of Justice and the StrongFamilies program.

Some stakeholders stated that a directory of 'who's who' in injury prevention would be beneficial in creating these links and partnerships between organisations working in injury prevention or with Aboriginal communities. Another suggestion was that funding across a range of government departments would facilitate adopting a holistic approach to injury prevention.

## **2. Develop culturally appropriate programs**

Developing a greater understanding of Aboriginal people and their culture was cited by several stakeholders as being an important element for the future of injury prevention in Aboriginal communities. This included supporting cultural awareness training for service providers and expanding the cultural liaison service in metropolitan hospitals. Further, 'thinking outside the box' was recommended by several stakeholders, as well as adopting a 'harm minimisation' approach to many areas of injury prevention and justice. The latter suggestion was made in reference to the unique circumstances that remote communities may face, such as large geographic distances to travel with limited licensed drivers and a reduced level of economical access to appropriate child restraints or five-star safety vehicles to travel in.

One respondent stated that given the burden of injury in Aboriginal populations compared with the general population, there is a need for "better funding, more time and integrated, whole of population approaches that are culturally sensitive."

## **3. Empower Aboriginal people in primary and secondary injury prevention**

Providing the skills and support to Aboriginals to be responsible, to a degree, for injury prevention and harm minimisation in their own communities was mentioned by several stakeholders as important. In particular, stakeholders suggested using a telemedicine approach to teach community members how to do first aid and be first responders in their communities. Another suggestion was to host a community event to develop a community-driven safety management plan.

One stakeholder stated that "There seems to be little in the way of LOCAL resources that are culturally appropriate in the area of unintentional injury to Aboriginal people. I would be very interested in using local resources in this area."

For a list of all workshop attendees, see Appendix B.

## Appendix A

### Exposure to mechanical forces (W20-W64)

#### 1. ICD-10 Codes W20-W49: Exposure to inanimate mechanical forces

All exclude: assault (X92-Y09), contact or collision with animals or persons (W50-W64), exposure to inanimate mechanical forces involving military or war operations (Y36.-, Y37.-), intentional self-harm (X70-X83).

Code	Description	Inclusion/Exclusion
W20	Struck by thrown, projected or falling object	Excludes: Falling object in; machinery accident; transport accident; object set in motion by explosion, firearm or struck by thrown sports equipment.
W21	Striking against or struck by sports equipment	Excludes: Assault by sports equipment, or struck by sports equipment with subsequent fall.
W22	Striking against or struck by other objects	Includes: Walked into wall, lamppost, furniture, automobile airbag, or by other objects.
W23	Caught, crushed, jammed or pinched in or between objects	Excludes: Injury caused by cutting or piercing instruments, firearms malfunction, lifting and transmission devices, machinery, non-powered hand tools or transport vehicle.
W24	Contact with lifting and transmission devices, not elsewhere classified	Excludes: Transport accidents.
W25	Contact with sharp glass	Excludes: Slipping, tripping and stumbling with subsequent striking against sharp glass, or striking against sharp glass with subsequent fall.
W26	Contact with knife, sword or dagger	
W27	Contact with non-powered hand tool	Includes: Contact with garden tool, scissors, needle, kitchen utensil, paper-cutter or other hand tool.
W28	Contact with powered lawn mower	
W29	Contact with other powered hand tools and household machinery	Excludes: Commercial machinery, hot household appliance or electric current.
W30	Contact with agricultural machinery	Includes: Animal-powered farm machine. Excludes: Agricultural transport vehicle accident, explosion of grain store and electrical current.
W31	Contact with other and unspecified machinery	Excludes: Contact with agricultural machinery, machinery in transport under own power or being towed, and electrical current.
W32	Accidental handgun discharge and malfunction	
W33	Accidental rifle, shotgun and larger firearm discharge and malfunction	
W34	Accidental discharge and malfunction from other and unspecified firearms and guns	
W35	Explosion and rupture of boiler	Excludes: Explosion and rupture of boiler on watercraft.
W36	Explosion and rupture of gas cylinder	Includes: Aerosol can, air tank, pressurised-gas tank and other gas cylinder.
W37	Explosion and rupture of pressurized tire, pipe or hose	
W38	Explosion and rupture of other specified pressurized devices	
W39	Discharge of firework	
W40	Explosion of other materials	Excludes: Assault by explosive material, explosion involving legal intervention, military or war operations or intentional self-harm.
W42	Exposure to noise	
W45	Foreign body or object entering through skin	Includes: Nail, paper, lid of can or other foreign body or object entering through skin.
W46	Contact with hypodermic needle	
W49	Exposure to other inanimate mechanical forces	Excludes: Those involving military or war operations. Includes: Exposure to abnormal gravitational forces;

	hair, string/thread, rubber band or other specified object causing external constriction.
--	---

## 2. ICD-10-AM codes W50-W64: Exposure to animate mechanical forces

Code	Description	Inclusion/Exclusion
W50	Accidental hit, strike, kick, twist, bite or scratch by another person	Excludes: Assault by bodily force, struck by objects.
W51	Accidental striking against or bumped into by another person	Excludes: Fall due to collision with another person; assault.
W52	Crushed, pushed or stepped on by crowd or human stampede	
W53	Contact with rodent	Includes: Contact with saliva, faeces or urine of rodent.
W54	Contact with dog	Includes: contact with saliva, faeces or urine of dog; bitten or struck by dog.
W55	Contact with other mammals	Excludes: Animal being ridden.
W56	Contact with nonvenomous marine animal	Excludes: contact with venomous marine animal.
W57	Bitten or stung by nonvenomous insect and other nonvenomous arthropods	
W58	Contact with crocodile or alligator	
W59	Contact with other nonvenomous reptiles	
W60	Contact with nonvenomous plant thorns and spines and sharp leaves	
W61	Contact with birds (domestic) (wild)	Includes: Contact with excreta of birds.
W62	Contact with nonvenomous amphibians	
W64	Exposure to other animate mechanical forces	

## Other External Causes of accidental injury

### ICD-10-AM Codes X50-59: External Causes of Accidental Injury

Code	Description	Inclusion/Exclusion
X50	Overexertion and strenuous or repetitive movements	Includes: Lifting (heavy objects, weights); marathon running; rowing.
X51	Travel and motion	Prolonged stay in weightless environment: weightlessness in spacecraft (simulator).
X52	Lack of food	Includes: Inanition; insufficient nourishment; starvation. Excludes: Neglect or abandonment, insufficient intake of food and water due to self-neglect, self-neglect.
X53	Lack of water	Includes: dehydration, inanition Excludes: Neglect or abandonment
X54	Unspecified privation	Includes: Destitution
X57	Accidental exposure to other and unspecified factors	
X58	Exposure to other specified factors	
X59	Exposure to unspecified factor causing fracture or other and unspecified injury.	

## Appendix B: Aboriginal Injury Prevention Priorities Workshop Attendees

Organisation	Name
Burn Injury Research Unit, University of Western Australia	Janine Duke
Burns Service of WA	Tania McWilliams
Department of Commerce	Kate McGurk
Department of Health	Erica Davison
Department of Health	Sylvia Griffiths
Department of Health, Aboriginal Environmental Health	Matt Lester
Department of Health, Health Networks	Karina Moore
Injury Control Council of Western Australia (ICCWA)	Deb Costello
Injury Control Council of Western Australia (ICCWA)	Shaun Nannup
Injury Control Council of Western Australia (ICCWA)	Juliana Summers
Injury Control Council of Western Australia (ICCWA) Board	Rina Cercarelli
Kidsafe WA	Jessica Richards
Kidsafe WA	Scott Phillips
Office of Road Safety	Emma Hawkes
WA Local Government Association, RoadWise	Louise Russell-Weisz
Royal Life Saving Society of WA	Greg Tate
Safety in Workplaces	Gavin Waugh
Royal Perth Hospital, State Trauma Unit	Sudhakar Rao
Royal Perth Hospital, State Trauma Unit	Maxine Burrell
WA Police, Community Diversity Unit	Wanita Bartholmeusz
WA Police, Community Diversity Unit	Sue Reid
Western Australia Country Health Services (WACHS), Wheatbelt	Jessamie Godsell
Facilitator	Rebecca Cotton

## Bibliography

1. **Cercarelli, Dr Rina.** *Defining Injury Prevention Purchasing Priorities for the Injury Prevention Unit, Department of Health, Western Australia.* Perth : Department of Health , 2010.
2. *Community-based Indigenous Injury Prevention Projects.* **Clapham, Kathie.** 30, 2004, Injury Issues Monitor, p. 16.
3. **National Public Health Partnership (NPHP).** *National Aboriginal and Torres Strait Islander Safety Promotion Strategy.* Canberra : NPHP, 2005.
4. **T Ballestas, J Xiao, S McEvoy, P Somerford.** *The Epidemiology of Injury in Western Australia, 2000-2008.* Perth : Department of Health, WA, 2011.
5. **Australian Institute of Health and Welfare.** *Aboriginal and Torres Strait Islander Health Performance Framework 2010 report: Western Australia.* Canberra : AIHW, 2011.
6. **Epidemiology Branch in collaboration with the Cooperative Research Centre for Spatial Information .** *Overview of the major causes of hospitalisations due to injury and poisoning for State Aboriginal residents.* Perth : Epidemiology Branch, 2012.
7. **Epidemiology Branch (PHI) in collaboration with the Cooperative Research Centre for Spatial Information (CRC-SI).** *Overview of the major causes of hospitalisations due to injury and poisoning for Metropolitan area Aboriginal residents.* Perth : Department of Health WA, 2012.
8. —. *Overview of the major causes of hospitalisations due to injury and poisoning for Aboriginal people who live in Country Region.* Perth : Department of Health WA, 2012.
9. —. *Health status report on Aboriginal Injuries, poisoning and toxic effects of drugs ED attendances for the State.* Perth : WA Department of Health, 2012.
10. —. *Health status report on Aboriginal Injuries, poisoning and toxic effects of drugs ED attendances for the Country regions.* Perth : WA Department of Health, 2012.
11. —. *Health status report on Aboriginal injuries, poisoning and toxic effects of drugs ED attendances for the Metropolitan area.* Perth : WA Department of Health, 2012.
12. **N Thomson, A MacRae, J Burns, M Catto, O Debust, I Krom, R Midford, C Potter, K Ride, S Stumpers, B Urquhart.** Summary of Australian Indigenous health, 2010. [Online] Australian Indigenous HealthInfoNet, August 5, 2010. [Cited: January 26, 2012.] <http://www.healthinfonet.ecu.edu.au/health-facts/summary>.
13. **Epidemiology Branch in collaboration with the Cooperative Research Centre for Spatial Information.** *Overview of mortality due to injury and poisoning among Aboriginal residents of the State.* Perth : Epidemiology Branch, 2012.
14. **Australian Human Rights Commission.** A statistical overview of Aboriginal and Torres Strait Islander peoples in Australia. *Australian Human Rights Commission.* [Online] 2008. [Cited: June 15, 2012.] [http://www.hreoc.gov.au/social\\_justice/statistics/index.html#Heading34](http://www.hreoc.gov.au/social_justice/statistics/index.html#Heading34).

15. **N Thomson, I Krom, K Ride.** Summary of road safety among Indigenous peoples. [Online] Australian Indigenous HealthInfoNet, October 1, 2009. [Cited: February 2, 2012.] <http://www.healthinfonet.ecu.edu.au/related-issues/road-safety/reviews/our-review>.
16. **Epidemiology Branch (PHI) in collaboration with the Cooperative Research Centre for Spatial Information.** *Health status report on Aboriginal transport accidents hospitalisations for the State.* Perth : Government of Western Australia, Department of Health, 2012.
17. **Epidemiology Branch in collaboration with the Cooperative Research Centre for Spatial Information.** *Health status report on Aboriginal transport accidents deaths for the State.* Perth : Epidemiology Branch, Department of Health, 2012.
18. **Brice, BA.** *Australian Indigenous road safety: a critical review and research report, with special reference to South Australia, other Indigenous populations, and countermeasures to reduce road trauma [draft].* Adelaide : Transport SA, 2000.
19. **Epidemiology Branch (PHI) in collaboration with the Cooperative Research Centre for Spatial Information (CRC-SI).** *Comparison of falls mortality rates for Aboriginals and non-Aboriginal people who live in the State for persons aged 18-85+ years.* Perth : Department of Health WA, 2012.
20. —. *Comparison of falls hospitalisations rates for Aboriginals and non-Aboriginal people who live in the State for persons aged 65-85+ years.* Perth : Department of Health WA, 2012.
21. —. *Comparative report on falls related Aboriginal hospitalisations in Health Regions areas for persons aged 15-85+.* Perth : Department of Health WA, 2012.
22. **Department of Health Western Australia.** *Falls Prevention for Aboriginal People: A tool for Aboriginal Health Workers and Aboriginal Communities.* Perth : Department of Health WA, 2010.
23. **Epidemiology Branch (PHI) in collaboration with the Cooperative Research Centre for Spatial Information (CRC-SI).** *Comparison of Exposure to mechanical forces hospitalisations by external causes rates for Aboriginals and non-Aboriginal people who live in the State.* Perth : WA Department of Health, 2012.
24. —. *Comparison of Other external causes of accidental injury hospitalisations by external causes rates for Aboriginals and non-Aboriginal people who live in the Country regions.* Perth : WA Department of Health, 2012.
25. **Epidemiology Branch, Department of Health and Cooperative Research Centre for Spatial Information.** *Comparison of fire, burns and scalds hospitalisations rates for Aboriginals and non-Aboriginal people who live in the State for persons aged 15-85+ years.* Perth : Epidemiology Branch, 2012.
26. **Epidemiology Branch, Department of Health WA.** *Area Comparisons - Accidental poisoning hospitalisations by external causes.* Perth : Department of Health, 2012.
27. **Epidemiology Branch in collaboration with the Cooperative Research Centre for Spatial Information.** *Comparison of accidental drowning mortality rates for Aboriginals and non-Aboriginal people who live in the State .* Perth : Epidemiology Branch, 2012.

28. **Harrison, Yvonne LM Helps and James E.** *Reported injury mortality of Aboriginal and Torres Strait Islander peoples in Australia, 1997-2000.* Canberra : Australian Institute of Health and Welfare, 2004.

29. **Australian Water Safety Council.** *Australian Water Safety Strategy 2008-2011.* Sydney : Australian Water Safety Council, 2008.

30. *Environmental Health: Drowning.* **Fenner, P.** 11, s.l. : Australian Family Physician, 2000, Vol. 29.

31. **Department of Health, Western Australia.** *Burn Injury Model of Care.* Perth : Health Networks Branch, Department of Health, 2009.

32. **Rimajova, G Arena S Cardova A Gavin P Palamara M.** *Injury in Western Australia: A review of best practice, stakeholder activity, legislation and recommendations for selected injury areas.* Perth : Injury Research Centre, School of Population Health, University of Western Australia, 2002.