GOOD INVESTMENTS IN UNINTENTIONAL CHILD INJURY PREVENTION AND SAFETY PROMOTION – NSW, AUSTRALIA EDITION
PARTNER ORGANISATIONS

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Kidsafe NSW
Sydney Children’s Hospitals Network (SCHN)
Neuroscience Research Australia
European Child Safety Alliance
Australian Injury Prevention Network
The George Institute for Global Health
Institute for Trauma and Injury Management
NSW Child Death Review Team, NSW Ombudsman
Australian Health Services Research Institute, Centre for Health Service Development, University of Wollongong
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# CONTENTS

<table>
<thead>
<tr>
<th>Section</th>
<th>Page</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>ACKNOWLEDGEMENTS</strong></td>
<td>3</td>
</tr>
<tr>
<td>Table of contents</td>
<td>5</td>
</tr>
<tr>
<td>Foreword from the NSW Chief Paediatrician</td>
<td>6</td>
</tr>
<tr>
<td>Introduction</td>
<td>8</td>
</tr>
<tr>
<td>Contents of the guide</td>
<td>9</td>
</tr>
<tr>
<td><strong>SECTION 1: BACKGROUND</strong></td>
<td>10</td>
</tr>
<tr>
<td>1.1 Child injury in NSW</td>
<td>10</td>
</tr>
<tr>
<td>1.2 A public health approach</td>
<td>11</td>
</tr>
<tr>
<td><strong>SECTION 2: GOOD PLANNING PRINCIPLES</strong></td>
<td>14</td>
</tr>
<tr>
<td>2.1 Child-focused</td>
<td>16</td>
</tr>
<tr>
<td>2.2 Reaching the most vulnerable</td>
<td>16</td>
</tr>
<tr>
<td>2.3 Consultative</td>
<td>18</td>
</tr>
<tr>
<td>2.4 Holistic and sustainable</td>
<td>18</td>
</tr>
<tr>
<td>Planning checklist</td>
<td>20</td>
</tr>
<tr>
<td><strong>SECTION 3: GOOD PRACTICE AT-A-GLANCE</strong></td>
<td>22</td>
</tr>
<tr>
<td>Good practice for country infrastructure and capacity to support child injury prevention</td>
<td>23</td>
</tr>
<tr>
<td>Good practice for community-based child injury prevention</td>
<td>24</td>
</tr>
<tr>
<td>Good practice for child passenger safety</td>
<td>26</td>
</tr>
<tr>
<td>Good practice for child pedestrian safety</td>
<td>28</td>
</tr>
<tr>
<td>Good practice for child cyclist safety</td>
<td>30</td>
</tr>
<tr>
<td>Good practice for child quad bike, motorcycle and other off-road vehicle safety</td>
<td>33</td>
</tr>
<tr>
<td>Good practice for child water safety</td>
<td>35</td>
</tr>
<tr>
<td>Good practice for child sports safety</td>
<td>38</td>
</tr>
<tr>
<td>Good practice for child fall prevention</td>
<td>41</td>
</tr>
<tr>
<td>Good practice for burn and scald prevention in children</td>
<td>44</td>
</tr>
<tr>
<td>Good practice for poisoning prevention in children</td>
<td>48</td>
</tr>
<tr>
<td>Good practice for choking/strangulation prevention in children</td>
<td>49</td>
</tr>
<tr>
<td>Good practice for general child home safety</td>
<td>50</td>
</tr>
<tr>
<td><strong>SECTION 4: METHODOLOGY FOR CASE STUDIES</strong></td>
<td>62</td>
</tr>
<tr>
<td><strong>SECTION 5: GOOD PRACTICE CASE STUDIES</strong></td>
<td>64</td>
</tr>
<tr>
<td>New South Wales Child Death Review Team (NSW CDRT)</td>
<td>67</td>
</tr>
<tr>
<td>Safe Koori Kids Program</td>
<td>70</td>
</tr>
<tr>
<td>Buckle-up Safely: improving child restraint use among culturally and linguistically diverse groups</td>
<td>74</td>
</tr>
<tr>
<td>Buckle-up Safely: safe travel for Aboriginal children</td>
<td>78</td>
</tr>
<tr>
<td>Child Pedestrian Injury Prevention Project (CPIPP)</td>
<td>83</td>
</tr>
<tr>
<td>‘Sean’s Law’ – Quad Bike Legislation</td>
<td>86</td>
</tr>
<tr>
<td>Swimming Pool Fencing Legislation</td>
<td>90</td>
</tr>
<tr>
<td>Compulsory Protective Headgear In Cricket</td>
<td>93</td>
</tr>
<tr>
<td>Safedclub – Sports Risk-Management Program</td>
<td>96</td>
</tr>
<tr>
<td>The Concussion Awareness Training Tool (CATT)</td>
<td>99</td>
</tr>
<tr>
<td>‘Kids Don’t Fly’ – Residential Building Window Safety Campaign</td>
<td>103</td>
</tr>
<tr>
<td>Burnsafe program – school-based program</td>
<td>106</td>
</tr>
<tr>
<td>‘Hot Water Burns Like Fire’ Scalds Prevention Campaign</td>
<td>109</td>
</tr>
<tr>
<td>Safe Homes Safe Kids Program</td>
<td>114</td>
</tr>
<tr>
<td>REFERENCES</td>
<td>54</td>
</tr>
</tbody>
</table>

Sydney Children’s Hospitals Network 5
Injury is the leading cause of hospitalisation and death in childhood and adolescence. There has been increasing interest in collaborative approaches to ensuring that NSW and Australia have systems and outcomes as good as any in the world. It is ever more important to plan and implement truly effective strategies where the evidence exists and to promote future research into developing the evidence where it is lacking. It has been a privilege during my tenure as inaugural NSW Chief Paediatrician to help bring together policy makers, health professionals, practitioners and injury prevention researchers to coordinate efforts in reducing childhood injury deaths and serious injury in NSW.

It gives me great pleasure to introduce the *Child Safety Good Practice Guide: Good investments in unintentional child injury prevention and safety promotion – NSW, Australia Edition*. The first Child Safety Good Practice Guide was developed by the European Child Safety Alliance (ECSA) and a similar resource has been produced in Canada. Funding provided through Kids and Families at the NSW Ministry of Health, along with the ECSA partnership and a collaborative of highly-regarded organisations with a keen interest in childhood injury prevention, has enabled the Guide to be brought to NSW.

By partnering with ECSA, we have been able to harness the good work that has already been done in encouraging evidence-based practice in the area of childhood injury prevention. The excellent team that has worked to produce this NSW guide has ensured that the document is further updated and adapted to be highly relevant to the NSW setting. Their work is applauded and the resource they have produced is invaluable.

No matter what your professional background, I trust the *Child Safety Good Practice Guide: Good investments in unintentional child injury prevention and safety promotion – NSW, Australia Edition* will provide you with the motivation, understanding, evidence and real-life examples of what can be done to promote the safety of our precious children.

Best wishes,

Prof Les White AM, DSc
Injuries are the number one cause of death among children over the age of one. Each year in New South Wales (NSW) around 60 children (aged 0–17 years) die as a result of an unintentional injury and a further 20,000 are hospitalised. Effective action is essential to reduce the burden of injuries on children, their families and the whole community; and to ensure that resources made available for injury prevention are directed to measures that are most likely to work. Good use of evidence is central to achieving this, and knowing what works is at the heart of developing good policy and programs.


This current resource, ‘The NSW, Australia Guide’ has also been developed in partnership with ECSA. It further adapts the resource for the Australian environment and combines an update of the best available research evidence with the practical ‘real world’ expertise of Australian and international professionals.

The NSW, Australia edition of the Child Safety Good Practice Guide provides practitioners, decision makers, and legislators with an evidence-focused resource on which they can base their work, funding and recommendations. Its aim is to reduce unintentional childhood injuries that lead to hospitalisation or death, by providing a summary of ‘good practice’ to the extent it is known, for each of the leading causes of injury to children in NSW. It also raises some of the gaps in understanding and addressing child injury prevention to highlight these as important areas for investment.

For the purposes of this document, ‘a child’ is considered to be a person under the age of 18 years (although not all available data are neatly aligned with this cut-off) and ‘good practice’ is defined as a prevention strategy:

1. That has been evaluated and found to be effective (either through a systematic review or at least one rigorous evaluation) OR
2. Where rigorous evaluation is lacking but expert opinion supports the practice and data suggest it is an effective strategy (e.g., use of personal floatation devices (PFD) to prevent drowning) OR
3. Where rigorous evaluation is lacking but expert opinion supports the practice and there is a clear link between the strategy and reduced risk but a less clear link between the strategy and reduced injuries (e.g., secure storage of poisonings) AND
4. That has been implemented in a real world setting so that the practicality of the intervention has also been examined

INTRODUCTION

This NSW, Australia edition builds on previous work by child safety researchers from around the globe. It has been extensively updated to include the most current evidence available at the time of writing. The Guide has also brought together illustrative national and international case studies which are particularly relevant to the NSW context. These cover a range of approaches, population groups and causes of injury. It is acknowledged that knowing what has worked in one setting is not always enough. By presenting the transfer of research into practice and lessons learnt by practitioners along with case studies uniquely relevant to the Australian context, we intend to guide decision-making and provide illustrations of good practice in action. The aim of the case studies is to stimulate initial thought and discussion about why a strategy worked and to provide some guidance for transfer to new settings. Finally, the synthesis of existing knowledge presented in this resource allows the user to consider successful methods, consult locally to identify how best to translate these methods to the local context, and where there is a need to, similarly evaluate existing or proposed interventions for a particular injury risk.

*Advocate for Children and Young People (http://www.acyp.nsw.gov.au/) administers the Commission for Children and Young People Act 1998 No 146 which defines a child as a person under the age of 18 years.
This guide is divided into five sections to help injury stakeholders to promote good practice in planning and implementing strategies to address child injury. Note that the terms child injury prevention and child safety are used interchangeably.

Section 1 – Background introduces the problem of child injuries in NSW, the importance of evidence in working effectively to promote safety and reduce the toll of child injuries on the community.

Section 2 – Good planning principles provides information about approaches to effective planning which apply across the board to preventing all types of unintentional injuries. It describes a planning cycle based on transferring good practice from one setting to another. The approaches to achieving holistic and sustainable change, can be grouped in terms of three often complementary strategies, with many initiatives incorporating a combination of these strategies:

- Creating safe environments – Creating safe and supportive environments, both physical and socio-cultural environments
- Establishing effective policies and regulations – Establishing safety through public policies, standards and legislation
- Building capacity – Building capacity among individuals, agencies and communities to make safer choices through knowledge, awareness, skills and access

Section 3 – Priority topics at-a-glance provides a series of ‘at-a-glance’ tables that identify effective strategies (current good practice) as well as any gaps in the following areas of child injury prevention and safety promotion:

- activities in the area of system leadership, infrastructure and capacity
- general community-based injury prevention
- passenger safety
- pedestrian safety
- cyclist safety
- quad bikes and other off-road vehicles (new)
- water safety
- sports safety (new)
- fall prevention
- burn and scald prevention
- poisoning prevention
- choking/strangulation prevention, and
- general home safety

For each priority area, a table provides:

1. a series of evidence statements describing current good practice; together with an indication of whether a case study for that particular strategy has been identified and included later in the guide
2. suggestions for transferring and implementing the strategy

Each example of good practice is also colour-coded to provide an indication of which of the three approaches to safety promotion is the primary focus:

- Creating safe environments – ‘designing in’ safety into the environment through engineering, design and product safety (yellow)
- Establishing effective policies and regulations – establishing safety through public policies, standards and legislation (blue)
- Building capacity – building capacity to make safer choices via increased knowledge awareness, skills and access (pink)

These tables have been updated since the Canadian Guide (published in 2011) to include rigorous, published evidence up to 2016, including many Australian studies. In particular, transfer and implementation points have been updated and new tables on quad bike/off-road vehicle safety and sports safety have been added.

Section 4 – Case study methodology describes in detail the methods used for developing case studies.

Section 5 – Case studies provides a series of case studies illustrating the implementation of select strategies in the field of child injury prevention and safety promotion, along with lessons learned from their application. While most are Australian, two excellent international cases studies have been included because of their intersectional relevance to Australian children.
During the 12 months from 1 July 2014 through 30 June 2015, injuries were responsible for close to 188,000 visits to a hospital emergency department in NSW (representing a rate of approximately 117 emergency department visits per 1,000 children), and nearly 22,000 children (or 13 per 1,000 children) were admitted to hospital. Boys were 1.57 times more likely to be admitted to hospital for an injury than girls, and 1.45 times more likely to present to an Emergency Department. In 2014, 49 children died in NSW (approximately three deaths per 100,000) as a result of unintentional injuries.1

In 2014, 49 children died in NSW (approximately three deaths per 100,000) as a result of unintentional injuries.1

The leading causes of injury vary depending upon their severity. For 2014/15, falls was the leading cause of non-fatal injuries to children, responsible for 45% of all unintentional injury-related hospital admissions. ‘Exposure to inanimate mechanical forces’ was the second leading cause (21%) and road trauma (including motor vehicle occupant-, pedestrian- and pedal cycle-related incidents) was the third leading cause (13%) of unintentional injury hospital admissions to children in NSW. In 2014, consistent with previous years, the leading external cause of death for children in NSW was transport fatalities (23 children, 47% of unintentional fatal injuries), followed by suffocation or other threats to breathing which claimed the lives of 10 children (20% of fatal unintentional injuries) and drowning, responsible for nine deaths in children that year (18%).1

Sports injuries are the leading cause of injuries resulting in medical care to children aged 12-17 years according to a NSW school health survey. The survey found that 22.7% of all students reported that they had experienced a sports-related injury (excluding school sports and other activities at school) requiring medical attention in the previous six months.6

Progress in recent years:

If there is any good news in injury statistics, it is that on the whole, serious unintentional injuries to children have been decreasing in recent years. In NSW, two of the three leading causes of death due to unintentional injury have each approximately halved in terms of the number of children affected over the 15 years from 2000 to 2015. In NSW, the number of child deaths associated with transport events have seen five year averages decline from 64 for 2000–04 (4.01 per 100,000 children) to 47 for 2005–09 (2.93 per 100,000 children) to 31 for 2010–14 (1.87 per 100,000 children) per year, with 2014 experiencing the lowest number of transport related death (23 – 1.37 per 100,000 children) during that 15 year period.1

Similarly, for child deaths due to unintentional drowning there has been a significant decrease over this 15 year period: five year averages have declined from 21 for 2000–04 (1.32 per 100,000 children) to 15.2 for 2005–09 (0.95 per 100,000 children) to 12.8 for 2010–14 (0.77 per 100,000 children) per year; with 2014 showing a record low, during that 15 year period, of nine drowning deaths (0.53 per 100,000 children).1

However, there has been no evidence of a decrease in deaths associated with suffocation and other threats to breathing in recent years.

When examining unintentional injuries resulting in hospital admission, at a national level, since 1999 there has been some improvement in the rate of injury from poisoning by pharmaceuticals (down 6%) and marginal improvements for poisoning by non-pharmaceutical substances (down 4%); drowning (down 3%); and transport injuries (down 2%). However, there was no improvement in the rate of injury due to falls, exposure to heat, fire and smoke, and other unintentional injury.2

The potential to learn from successes in this field and apply this to areas that have yet to show significant declines is a major goal of this resource.
**CHILD INJURY IN NSW AT A GLANCE**

**INJURY RELATED HOSPITAL ADMISSIONS, JULY 2014 – JUNE 2015**

- **22,000** admitted to hospital
  - Boys were **1.57 times** more likely to be admitted to hospital

**INJURY RELATED EMERGENCY DEPARTMENT PRESENTATIONS, JULY 2014 – JUNE 2015**

- **188,000** visits to a hospital Emergency Department
  - Boys were **1.45 times** more likely to be admitted to hospital

**LEADING CAUSES OF DEATH DUE TO UNINTENTIONAL INJURY IN NSW, 5 YEAR AVERAGES, 2000 - 2014**

- **Transport**
  - 2000-04: 64
  - 2005-09: 47
  - 2010-14: 31

- **Drowning**
  - 2000-04: 21
  - 2005-09: 15.2
  - 2010-14: 12.8

- **Suffocation and other threats to breathing**
  - No decrease in deaths

**LEADING EXTERNAL CAUSES OF INJURY 2014/15**

- **Falls** 45%
- **Transport fatalities** 47%
- **Exposure to inanimate mechanical forces** 21%
- **Other** 15%
- **Drowning** 18%
- **Suffocation or other threats to breathing** 20%

**UNINTENTIONAL INJURIES RESULTING IN HOSPITAL ADMISSION IN AUSTRALIA, FROM 1999 - PRESENT**

- **Poisoning by pharmaceuticals**
  - Down 6%
- **Poisoning by non-pharmaceuticals**
  - Down 4%
- **Drowning**
  - Down 3%
- **Transport injuries**
  - Down 2%

- Falls, exposure to heat, fire and smoke and other unintentional injury
  - No improvement
The five steps in using evidence-based practice that constitute a public health approach to reducing childhood injuries are:

- **Define the problem** – Collect information about the magnitude, scope, characteristics and consequences of the injury issue. It is important to know who is most affected. Look to the literature, published reports and relevant databases for these data.

- **Identify risk and protective factors** – Based on the defined problem, identify the factors that increase or decrease the risk of injury. Consult the literature and consider the strength of the published studies. Sort these factors into things amenable to change and things that help to identify target groups.

- **Select an evidence-based intervention** – While based on ‘good intentions’, there are many more approaches to promoting child safety than there are effective ways to promote child safety. For example, one-off events such as skills-based bike safety fairs – without program elements designed to have increased access to helmets and build some permanence, (such as helmet give-aways), have been shown to have limited or no signs of effectiveness.5 In the current environment of scarce resources and competing issues, the injury prevention community needs to ensure that existing efforts and resources are focussed on effective evidence-based good practice. (Section 3 has taken the first step for you in providing examples of effective strategies that may be translated into your setting)

- **Document the activities** – So that you can be accountable as well as pass on to others what was involved, make sure you document your key activities – the strategies, the costs, the partners, the target group, the numbers reached and the lessons learned along the way.

- **Evaluate the impact** – It is essential that funds be dedicated to evaluation – part of evidence-based practice means contributing to the evidence. Undertake robust evaluation of the shorter-term impact of the program and, if possible, the longer-term intended program outcomes (such as injury rates). Assess indicators of the success of the intervention before the program is operational and at suitable intervals to assess short-term and long-term impact.

A public health approach to reducing childhood injuries means selecting, implementing and monitoring evidence-based good practice.7 Practitioners should consult the existing evidence and where possible, add to or create evidence where none exists. This will maximise the chance that resources are spent as effectively as possible, and that each program plays a part in building the knowledge base on what works in a particular aspect of child injury prevention.
Section 1 provided the framework for adopting an evidence-based approach to preventing child injuries. It is well recognised, however, that planning needs to be more than just accessing and understanding the research.\(^9\),\(^10\) In this section, we briefly cover the planning principles that will facilitate translating the existing research on the size and nature of the problem and what has already been shown through well-designed studies to be effective with some populations. The primary challenge for all program planners and policy makers is to consider the evidence in light of its potential application to the population of interest and identify what needs to be done to translate this evidence into practice.

Hanson et al.,\(^10\) in their editorial in the British Journal of Sports Medicine, use the figure below to illustrate the importance of not just understanding the research but the context – by engaging the community, the practitioners and the policy makers in the planning process.

When selecting and transferring evidence on good practice in child injury prevention, we need to take into account several principles of effective planning. Translating evidence to effective practice, it is important to take into account the context – that is, we need to be child-focused, to reach the most vulnerable and to be consultative. Translation to good practice means also looking at what we are doing to ensure our efforts can be effective, efficient and lasting.

**Figure 1: From research to good practice**
(Source: Hanson, Allegrante, Sleet and Finch, 2014)\(^10\)
2.1 CHILD-FOCUSED

When talking about child injury prevention and safety promotion, children and their parents or caregivers are the primary target groups. Although a specific intervention might involve advocating for policy change with decision makers, the main focus for child injury prevention and safety promotion is the children themselves and the adults who are their main caregivers.3–9 In order to keep our planning child focused, we need to:

- **Recognise the rights of the child.** Our efforts in this area are essential to supporting the UN Convention on the Rights of the Child, which specifies providing children with a safe environment as a fundamental right.11 The Convention stressed the responsibilities of society to protect children (from birth up to the age of 18 years) and provide them with appropriate support and services.12 While protecting children from harm, we should also recognise a child’s right to play, learn, grow and to be included and respected (free from discrimination)13

- **Redesign the environment with children in mind.** Most of the hazards in a child’s environment are due to things that have been designed by adults for adults. We need to keep children and their safety in mind when designing roads, houses, shopping centres, products and even the packaging of products.

- **Consider different developmental stages.** As children progress from total dependence to independence, they move through constantly changing developmental stages and competencies — affecting how they see and interact with the world. Strategies to keep children safe should be developed alongside an understanding of developmental stages and that these do not necessarily occur predictably at set ages.14

- **Create change through parents, carers and policy makers.** Part of keeping our efforts focused on children is recognising who influences a child’s world. Our efforts need to consider the awareness, skills, resources and reach of parents and carers, teachers, sporting coaches and other community decision-makers about known risk and protective factors, opportunities and barriers and about their own sphere of influence in the safety of children in our community.

2.2 REACHING THE MOST VULNERABLE

When investing in reducing the problem of injuries among children, it is important that we focus on the most vulnerable children in society. We have to avoid inadvertently widening the gap between those who have and those who don’t have ready-access to safer environments, products and information. We need to consider these children in terms of their access to our programs, products or policies. We need to know who the most vulnerable are in our communities and what unique needs they may have. We need to consider the proximity, affordability and accessibility of what we deliver and its cultural appropriateness, in order to develop strategies that engage the most vulnerable in our society. It is essential to acknowledge and understand the unique and complex factors at play when addressing injury prevention in vulnerable communities and social groups and to consult individuals within these groups as part of the planning and delivery.
ABORIGINAL CHILDREN

National data show rates of injury to Aboriginal and Torres Strait Islander children to be consistently higher than those of non-Aboriginal children, with high rates of hospitalisation and injury mortality.\textsuperscript{2, 15} Despite being only 5.5% of the Australian child population, Aboriginal children represented almost 18% of paediatric trauma fatalities between 2007 and 2011, with unintentional injury the leading cause.\textsuperscript{16} For the period 2010-14, the injury death rate among Indigenous Australian children was over 4.5 times as high as the rate for non-Indigenous children (14.0 compared to 3.0 per 100,000).\textsuperscript{5}

A systematic review of 39 studies into the inequalities in unintentional injuries between indigenous and non-indigenous children worldwide, found that burns, poisoning and transport injuries were the major contributors to the increased injury burden in indigenous children.\textsuperscript{17} Marmot,\textsuperscript{18} in discussing the significant gap in life expectancy between Aboriginal and non-Aboriginal Australians, highlighted the need to understand and address the huge role of societal disadvantage in determining health. Indigenous children may be put at increased risk of unintentional injury through living in an overcrowded home environment, economic deprivation, high stress levels and recurring domestic violence.\textsuperscript{19}

CHILDREN FROM SOCIO-ECONOMICALLY DISADVANTAGED COMMUNITIES

The likelihood of a child being killed or injured is associated with a variety of social determinants reflecting standards of living, opportunities for education and access to services. At the international level, evidence supports the position that regardless of whether a country is industrialised or less developed, vulnerable populations living in poor social conditions are at a disproportionate risk of injury.\textsuperscript{20} Similarly, declining socio-economic status (SES) significantly increases the risk of death, particularly from injuries relating to falls, suffocation or pedestrian-vehicle collisions.\textsuperscript{20} Socially deprived children are also at an increased risk of poor outcomes following an injury.\textsuperscript{21, 22}

A study of hospitalised unintentional injuries in NSW, found that while there was no clear relationship between SES and all injuries combined, there was a significant link for some major injury causes. Children in the more disadvantaged groups were more likely to be hospitalised for motor vehicle occupant, pedestrian, pedal cyclist, fire and burns and poisoning injuries.\textsuperscript{23} Data from NSW hospital admissions and emergency department presentations for 2014/15 support the contention that socio-economic disadvantage is linked with unintentional injury rates in children. The data reflect an increase in recorded hospital presentations due to injuries with increasing socio-economic disadvantage, except the most disadvantaged quintile – which has injury rates similar to those in the middle socio-economic quintile.\textsuperscript{5} The factors responsible for the lower presentation rates in the lowest quintile are not known. It is possible that access to a hospital (due to long distances or lack of transport), concerns about costs or dealing with health professionals may pose as barriers to seeking medical attention for this vulnerable group.

CHILDREN FROM NON-ENGLISH SPEAKING BACKGROUNDS

While data on injuries specific to children from culturally and linguistically diverse (CALD) backgrounds are scant, in planning to reduce the burden of injuries to children we need to recognise these groups do not have the same access to health and safety information which is primarily developed in English. It is important to consult with these community groups to ensure programs, policies and resources to promote child safety are culturally appropriate and understood (rather than simply translating documents).

In 2011 over four in 10 households in NSW had children in them, 31% of the population were born overseas, 27.5% spoke a language other than English at home and 3.9% were reported as having poor English proficiency.\textsuperscript{24} Within this group are children in Australia as refugees, which is relevant in terms of health literacy and health promotion strategies and also possibly increased rates of injury due to SES issues.
CHILDREN FROM RURAL AND REMOTE AREAS

There is ample evidence that the rate of injuries (among all age groups) increases with increasing remoteness. Australian data from 2011/12 indicates that the age-standardised rate of injury in children and young people increased with increasing remoteness.16 The rate of hospitalised injuries among children and young people from very remote regions was over two times higher than for this age group living in major cities.16 This pattern is shared by Aboriginal and non-Aboriginal children alike. The proportion of Aboriginal children and young people, aged 0–24 years, hospitalised as the result of an injury increased with increasing remoteness.25

The most recent Child Death Review Team report indicated that in 2014, consistent with previous years, the rate of death of children due to injuries in outer regional areas (11.44 per 100,000 children) was over twice the rate of deaths in inner regional areas (5.41 per 100,000 children) and was significantly higher than the rate in major cities (3.92 per 100,000).1 NSW hospital admissions data for 2014/15 indicated that children from remote areas had twice the rate of admission for unintentional injury (24 per 1,000 children) than children from major cities (12 per 1,000 children).3 While this is likely to reflect higher injury rates, it may also partially reflect differing admission practices and a lack of alternative health services in rural and remote areas.

There needs to be a concerted effort to increase access to safer environments, safer products, and to information about safer practices for children living in rural and remote areas.

2.3 CONSULTATIVE

Understanding the policy and social context in which you are working is important, not only to the evidence-based strategies that are selected, but also to the way they are implemented. Assessing the policy and social context through consultation is not a one-time exercise, but one of continuous adjustment and learning, in order to identify:

- if individuals, families and the community, see injury as an important issue
- if they see injury as preventable
- if there are champions to enlist or ‘naysayers’ that will need to be convinced
- what assets your community has that you can build upon
- whether you have the resources and political will and commitment to address the problem in the most effective way

Community consultation (or participatory research) will not only answer important questions that may determine the success or otherwise of your efforts, it also serves to engage the community and make the most of its energies, skills and resources. This type of action research is sometimes called ‘formative evaluation’ – undertaken to guide the planning of an intervention and development of materials or approaches. Formative evaluation will enable you to identify the barriers, facilitators and opportunities (including resources and skills) to having your initiative accepted, implemented and sustained. This also helps to achieve ‘buy-in’ of key partners in the program.

2.4 HOLISTIC AND SUSTAINABLE

The focus of planning needs to include the selection of strategies that will last beyond the effort put into their planning and implementation. This will often be shaped by a combination of the evidence available and the consultation process. There are three broad areas into which most strategies can be grouped, however programs that draw on a complementary mix of strategies are more likely to be sustained, as each strategy can serve to reinforce the others. For example, regulations requiring child-resistant fencing around new domestic swimming pools or pools on properties for sale, are an effective way to ensure that the strategy has permanence. However, without awareness-raising among pool owners about the legislation, compliance oversight by local government and appropriate standards for pool gates and fencing, this policy approach is likely to be ineffective.

This section briefly considers the three groups of strategies:

1. Creating safe environments
2. Establishing effective policies and regulations
3. Building capacity

1. Creating safe environments means addressing the physical and socio-cultural environments via the following approaches:

- Environmental modification – children are particularly vulnerable to injury because they live in a world over which they have little control and which is built around the needs of adults.26 Modification of the environment to make that world more ‘child-or parent-friendly’ is an accepted approach to reducing risk and can impact...
positively on everyone. These strategies are most effective when used in combination with legislation and educational activities. Examples of this type of strategy in the ‘at-a-glance’ section include playground equipment design and installation and area-wide measures to reduce pedestrian and cyclist risk (e.g. traffic calming)

- **Product modification** — similar to the issues in environmental modification, many products pose an added risk to children because they are designed around the needs of adults. Product modification is a more passive means than active adult supervision of reducing the risk around certain products. These strategies also become more effective when used in conjunction with legislation and educational activities. Examples of this type of strategy in the ‘at-a-glance’ section include factory-set temperatures on water heaters and child-resistant lighters

2. **ESTABLISHING EFFECTIVE POLICIES AND REGULATIONS** — ESTABLISHING SAFETY THROUGH PUBLIC POLICY SUCH AS REGULATIONS AND LEGISLATION:

- **Legislation, regulation and enforcement** — Legislation has proven to be the most powerful tool in the prevention of injury. Legislation is most effective when enforced and when used in combination with product or environmental modification and educational activities. Examples of this type of strategy in the ‘at-a-glance’ section include legislation around the use of child passenger restraints, bicycle helmets and child-resistant packaging

3. **BUILDING CAPACITY AMONG INDIVIDUALS, AGENCIES AND COMMUNITIES TO MAKE SAFER CHOICES THROUGH ENHANCED KNOWLEDGE, AWARENESS, SKILLS AND ACCESS INCLUDES:**

- **Behavioural choices** can be shaped by awareness of risks and choices, accessibility of these choices, as well as being guided by policies and regulations and the environment in which we live, work and play. Our capacity to make safer choices is a combination of awareness and opportunity which are, in turn, influenced by many other factors including education, culture, socio-economic status, incentives and the physical environment

- **Education and skills development** — The effectiveness of educational and skill development programs on their own is controversial and evidence is often lacking. However, if they are well-designed and we take into account the target population or if they are used in combination with other strategies, such as legislation or environmental or product modification, educational and skills development programs can be effective. An important aspect of making policies or environmental modifications as effective as possible in reducing injuries is often awareness-raising of the policy or environment that can enhance safety. An example of this type of strategy in the ‘at-a-glance’ section includes pedestrian skills training and supportive home visits to families of young children. Although more evaluation of supportive home visits is required, early studies have found this approach is particularly effective if the information provided is age-appropriate and visits are combined with provision of free safety equipment and broader promotional campaigns

- **Making safety more accessible and affordable** — Promoting safer choices alone is unlikely to be effective if these choices are difficult to access or costly. Usually the people at greatest risk of injury in a community are those who are least likely to be able to afford or easily access the products and environments that offer the greatest level of protection. Smoke detectors, bicycle helmets and child passenger restraints, for example, have known efficacy in reducing the risk of injury but strategies need to be developed to make them more accessible and affordable to the most vulnerable in society

- **Community-based interventions** — These interventions, which focus on changing community values and behaviours to reduce the risk of injury, may have particular relevance for children, as they often target the safety awareness, attitudes and behaviours of children and parents. The model of community-based injury prevention emphasises community participation and multidisciplinary collaboration and notes that those most able to solve local injury problems are those people who live in that particular community. Examples of this type of strategy in the ‘at-a-glance’ section include community-based bicycle helmet and child passenger restraint promotional campaigns
Following is a set of questions to consider in the initial planning phases – things to explore before investing in the injury prevention approach being considered.

<table>
<thead>
<tr>
<th>Question</th>
<th>YES</th>
<th>NO</th>
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<tbody>
<tr>
<td>Is there evidence of effective strategies in this area?</td>
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<tr>
<td>Have you consulted the evidence in Section 3 to see which strategies are backed by evidence from the literature?</td>
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<tr>
<td>Do you have evidence of the strategy being used for your target audience in another setting or being used in your setting but on a different issue?</td>
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<td>Are there specific characteristics of your target audience that might have to be taken into account – i.e. have you considered any differences to populations with which this approach has been evaluated?</td>
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<tr>
<td>Have you consulted with the community? Do you understand the characteristics of the people and community, including knowledge of their culture, religion, history, etc.?</td>
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<tr>
<td>Is the community ready to accept the strategy/intervention? For example, is the sporting community ready to accept a helmet rule for younger players?</td>
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<td>Are there opponents to the introduction of the intervention? Are people willing or unwilling to work outside their organisation’s mandate or immediate scope?</td>
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<td>Is the strategy/intervention focused enough? Is it clear to all what is involved and is it doable?</td>
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<td>Is it worth investing resources now or are there other strategies that provide an increased likelihood of success?</td>
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<td>Is the investment worth the likely outcome?</td>
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<tr>
<td>Do you have enough time as it relates to political, policy or funding cycles or to demonstrate successful implementation?</td>
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<td>Can you obtain financial support for a long enough period to implement the strategy and follow it up to assess impact? For example, is there likely to be a change in government that might impact what you are trying to achieve?</td>
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<td>Can the barriers be overcome?</td>
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<td>Are there champions for injury prevention or children (e.g., individuals, celebrities, elected officials, or non-government organisations (NGOs)) who can support or guide your efforts?</td>
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<td>Is there a bigger political/policy process you can link into (e.g., international declarations, charters or resolutions, national alcohol reduction policies or transportation strategies)?</td>
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<tr>
<td>If the community is not ready to accept the strategy/intervention is there an earlier step that would increase community readiness (e.g., an awareness campaign)?</td>
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<tr>
<td>Are there opportunities to involve the community and specific target audience in planning and implementing the strategy/intervention?</td>
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<td>Can you obtain political endorsement of the strategy to ensure life beyond a particular government?</td>
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<td>Can you obtain commitment to funding for a period long enough to demonstrate effectiveness in your setting?</td>
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<td>Is the strategy appropriate for the target audience?</td>
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<td>Will adaptations need to be made to take the specific target group into consideration?</td>
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SECTION 3:
GOOD PRACTICE
‘AT-A-GLANCE’
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<thead>
<tr>
<th>EVIDENCE STATEMENT</th>
<th>TRANSFER AND IMPLEMENTATION POINTS</th>
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<tbody>
<tr>
<td>Where capacity building activities, such as conferences, workshops and continuing education programs, have taken place, significant benefits for injury prevention work have been found.32, 33</td>
<td>• Training and other support mechanisms can be essential to facilitating the uptake and implementation of national policies at the local level.34</td>
</tr>
<tr>
<td>National/state leadership is needed to establish direction and develop a vision of the future, develop change strategies, align people, inspire, energise.34-37</td>
<td>• Managing change requires good leadership – to draw together and coordinate the component parts of effective injury prevention infrastructure and the resulting prevention strategies and to integrate outputs to ensure goals are met.34</td>
</tr>
<tr>
<td>The collection and dissemination of data is vitally important in the monitoring and evaluation of injury prevention programs and the development of policy and practice.32, 33, 36, 38-42</td>
<td>• The use of local surveillance systems is essential to target interventions, motivate participants and evaluate interventions.41, 42 • Data assist with the targeting of resources and activity to those identified with the greatest need.38, 39 • Collecting data for all age groups may make more sense than a single age group as it may help ensure data are always seen as relevant.43 • Building a data system on existing systems reduces workload.41 • In settings where vital statistics and hospital-based data are non-existent or unreliable, community surveys may be the only source of information.42 • Common barriers to surveillance include lack of commitment by involved individuals and agencies, privacy issues, lack of resources, lack of documented definitions, problems with data collection and recording mechanisms.38</td>
</tr>
<tr>
<td>Paediatric death review processes provide a unique opportunity to identify risk factors and possible prevention measures.43-45</td>
<td>• Most effective if multi-disciplinary teams using data from multiple sources • Paediatric death review processes are most useful if resulting recommendations are specific, actionable and assigned to responsible stakeholder44 • Capacity building activities for death review committee members, including education regarding evidence-based practices, can enhance the value of reviews to prevention efforts44 • While useful to all child injury issues, paediatric death review may be particularly useful when examining drowning, given the lack of information on incident circumstances from other data sources46</td>
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Case Example: NSW Child Death Review Team, NSW, Page 67.
# GOOD PRACTICE FOR COMMUNITY-BASED CHILD INJURY PREVENTION

<table>
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<tr>
<th>EVIDENCE STATEMENT</th>
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<tr>
<td><strong>CAPACITY</strong></td>
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| School based injury prevention education has the potential to increase safety-related knowledge and behaviour.\(^{47, 48}\) | • Large-scale educational programs can require considerable ongoing funding\(^{49}\)  
• These types of programs have been successfully implemented with the support of community-wide coalitions.\(^{49}\)  
• Large-scale system wide educational programs have great potential, particularly if endorsed by government, in that they can lead to longer-term sustainability than one-off programs.\(^{50}\)  
• It takes time to obtain buy-in and support from school administration and teachers.\(^{49}\)  
• School-based programs are more effective if supported by policy change and environmental modification to support behaviour change.\(^{47, 51}\) |
| Interactive education and training approaches have a significant impact on children’s safety related knowledge, attitudes and behaviours.\(^{51}\) | • Large-scale educational programs can require considerable ongoing funding.\(^{49, 51}\) |
| **CASE STUDY**       |                                    |
| Case Study: Safe Koori Kids Program, South-Western Sydney, NSW, Page 70. |                                    |
| Case study: BurnSafe Program, SA, Page 106. |                                    |
### Evidence Statement

**Environment**

Child passenger restraints lead to decreases in death and injury.\(^{52-54}\)

- Estimates of effectiveness of child passenger restraints relative to no restraint vary from 71%-95% for rear-facing restraints and 54%-60% for forward-facing systems.\(^ {55, 56}\)
- When used properly, child passenger restraints (child safety seats) reduce the risk of injury by 71% to 82%\(^ {57, 58}\) and reduce the risk of death by 28% when compared with those for children of similar ages in seat belts alone.\(^ {59}\)
- Keeping children rear-facing longer has been shown to increase protection by up to five times.\(^ {60}\)
- While the American Academy of Pediatrics recommends rearward facing to two years of age\(^ {61}\), evidence from Sweden supports rearward facing to four years.\(^ {60}\)
- Research has demonstrated that in children four to seven years of age, booster seats are estimated to reduce the risk of sustaining a clinically significant injury during a crash by 59%.\(^ {62-66}\) Booster seats reduce the risk of nonfatal injury among four to eight-year-olds by 45%, compared with seat belts alone.\(^ {67}\)
- Parental knowledge and availability, accessibility, cost, and ease of use of child passenger restraints will impact their uptake.\(^ {68, 69}\)

**Rear seating position is the safest place location for child passengers regardless of whether or not there is a passenger-side air bag present.**\(^ {62, 67, 70, 71}\)

- Children in the rear row(s) of the vehicle are one half to two-thirds less likely to sustain injury than those in the front.\(^ {67}\)
- Uptake of rear seating position for children can be increased through community-based educational campaigns.\(^ {72, 73}\)
- Research suggests efforts to encourage rear seating position for child passengers should address parents’ risk perception and their experiences of pressure to relax seating rules as well as provide strategies that support sound parental safety decisions.\(^ {74, 75}\)

**Seat belts lead to decreases in death and injury.**\(^ {52, 76-81}\)

- When used properly, seat belts can reduce deaths by 40–50% and serious injury by 45–55%.\(^ {80}\)
- Parental knowledge and seat belt availability and ease of use will impact their uptake.\(^ {68}\)

**Policy**

Legislation of safe child passenger restraints leads to increases in observed use.\(^ {69, 82}\)

- Level of enforcement will impact effectiveness by increasing usage.\(^ {39}\)
- Legislation is most effective when supported by educational activities.\(^ {39, 83}\)

Legislation requiring seat belt use in older children leads to increased use.\(^ {68, 82, 84}\)

- Level of enforcement will impact effectiveness.\(^ {38}\)
- Legislation is most effective when supported by educational activities.\(^ {39}\)

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**Transfer and Implementation Points**

**Environment**

- Child passenger restraints lead to decreases in death and injury.\(^ {52-54}\)

**Rear seating position is the safest place location for child passengers regardless of whether or not there is a passenger-side air bag present.**\(^ {62, 67, 70, 71}\)

**Seat belts lead to decreases in death and injury.**\(^ {52, 76-81}\)

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- Legislation requiring seat belt use in older children leads to increased use.\(^ {68, 82, 84}\)
## GOOD PRACTICE FOR CHILD PASSENGER SAFETY

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<tr>
<td>Community-based promotional campaigns delivered through settings such as schools, child care centres, and retail outlets are effective in increasing booster seat use in the short term.(^85,86)</td>
<td>• Important elements of community-based approaches are long-term strategy, effective focused leadership, multi-agency collaboration, involvement of the local community, appropriate targeting and time to develop a range of local networks and programs.(^30)</td>
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<tr>
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<td>• There is evidence to show that the effectiveness of these campaigns erodes over time.(^86)</td>
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<td>• Campaigns that rely more on local resources than traditional public agencies may be better received in rural communities.(^87)</td>
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<td>• There is evidence that multi-component interventions tailored to each community improve child passenger safety.(^88)</td>
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<td>• Interventions in Aboriginal communities should incorporate Aboriginal views of health, involve the community, utilise multiple strategies and be tailored to each community’s circumstances and culture.(^88)</td>
</tr>
<tr>
<td>Community-based intervention combining information dissemination on child passenger restraint safety with enhanced enforcement campaigns lead to increased use.(^68,69,82,85)</td>
<td>• Important elements of community-based approaches are long-term strategy, effective focused leadership, multi-agency collaboration, involvement of the local community, appropriate targeting and time to develop a range of local networks and programs.(^30)</td>
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<tr>
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<td>• Enforcement campaigns supported by school-based promotional activities have shown large increases in observed seat belt use.(^68)</td>
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<td>• It is important to note that the available evidence focuses on specific interventions with short-term outcomes (e.g. three month follow-up).(^85)</td>
</tr>
<tr>
<td>Community-based interventions combining child passenger restraint distribution, loaner programs or incentives with education programs lead to increased use.(^68,69,82,85)</td>
<td>• Important elements of community-based approaches are long-term strategy, effective focused leadership, multi-agency collaboration, involvement of the local community, appropriate targeting and time to develop a range of local networks and programs.(^30)</td>
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<td>• More intensive programs involving multiple elements and communication mechanisms are associated with more positive results.(^30)</td>
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<td>• A reliable, well-informed organisation is required to run a loaner program given the technical and maintenance checks on car seats.(^68)</td>
</tr>
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<td>• It is important to note that the available evidence focuses on specific interventions with short-term outcomes (e.g. three month follow-up).(^85)</td>
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Case Study: Buckle-Up Safely: Improving child restraint use among culturally and linguistically diverse groups, S and SW Sydney, NSW, Page 75.

Case Study: Buckle-Up Safely: safe travel for Aboriginal children, Shoalhaven, NSW, Page 78.
<table>
<thead>
<tr>
<th>Evidence Statement</th>
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<tbody>
<tr>
<td><strong>Environment</strong></td>
<td>• Area wide engineering solutions to reduce pedestrian risk (including pedestrian facilities and/or traffic calming infrastructure) lead to reduction in injuries and are cost effective.28, 82</td>
</tr>
<tr>
<td>Vehicular modifications appear to reduce the risk of pedestrian fatalities.28, 55</td>
<td>• Traffic calming has shown a 60% reduction in crashes in 30 km/hour (18.6 mph) zones.35 • Area-wide urban traffic calming schemes reduced the number of crashes resulting in injury by 15% (25% on residential streets and 10% on main roads).35 • Engineering modifications can be more effective when supported by educational and enforcement activities.39</td>
</tr>
<tr>
<td><strong>Policy</strong></td>
<td>• Vehicular modifications appear to reduce the risk of pedestrian fatalities.28, 55</td>
</tr>
<tr>
<td>Legislation/policy reducing vehicle speeds in residential areas leads to reduced injuries and changes in driver behaviour.82</td>
<td>• In the United Kingdom, introduction of 20 mph (32 km/hour) speed limit zones resulted in 70% reduction in fatal child pedestrian injuries.89 • Level of enforcement will impact effectiveness.38 • Legislation is most effective when supported by educational activities.39</td>
</tr>
<tr>
<td>Enforcement of legislation/policy reducing vehicle speeds in residential areas leads to reduction in injuries and changes in driver behaviour.70</td>
<td>• Level of enforcement will impact effectiveness.38 • Legislation is most effective when supported by educational activities.39</td>
</tr>
<tr>
<td>The countries with the best road safety record have national implementation plans which comprise a wide range of measures: low speed limits, speed reduction measures, promotion of secondary safety and publicity aimed at both children and their parents and drivers.35, 91</td>
<td>• Building on past policies or international agreements can lead to progress.35 • Political commitment at the highest level is necessary to make road safety a priority for government and society.92 • Media coverage is an important aspect of national safety campaigns.35, 38 • A combination of creating safe environments, establishing effective policies and regulations and building capacity is most effective.38</td>
</tr>
</tbody>
</table>
**Evidence Statement**

**Community-based education / advocacy programs to prevent pedestrian injuries in children 0–14 years result in a reduction in injuries.**

- Effective programs have shown injury reductions ranging from 12%–54%.\(^9^3\)
- Programs offering a comprehensive package that includes educational, social and environmental strategies are more likely to be successful.\(^9^1\)
- Greater amounts of resources and community commitment afforded to programs allow more complex and comprehensive strategies to be used, which in turn lead to greater success.\(^9^1\)

**Pedestrian skills training leads to increased knowledge and improved child pedestrian crossing skills.**

- Multi-faceted programs and those that involve parents are more likely to be successful.\(^2^8\)
- Practical roadside experience is an essential ingredient of pedestrian skills training.\(^2^8\)
- School-based training programs have some potential to teach children safe pedestrian skills, but only if they are well-designed, delivered in an effective manner and delivered at a developmentally appropriate level.\(^9^5\)

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**Table:**

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  • Programs offering a comprehensive package that includes educational, social and environmental strategies are more likely to be successful.\(^9^1\)  
  • Greater amounts of resources and community commitment afforded to programs allow more complex and comprehensive strategies to be used, which in turn lead to greater success.\(^9^1\) |
| Pedestrian skills training leads to increased knowledge and improved child pedestrian crossing skills.\(^2^8, 9^4, 9^5\) | • Multi-faceted programs and those that involve parents are more likely to be successful.\(^2^8\)  
  • Practical roadside experience is an essential ingredient of pedestrian skills training.\(^2^8\)  
  • School-based training programs have some potential to teach children safe pedestrian skills, but only if they are well-designed, delivered in an effective manner and delivered at a developmentally appropriate level.\(^9^5\) |
## Evidence Statement

<table>
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<tr>
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<tbody>
<tr>
<td>Use of bicycle helmets leads to reduction in injuries.82</td>
<td>Legislation of bicycle helmets leads to increased use and decreasing head injury rates in the populations for which it is implemented.28, 56, 98</td>
</tr>
<tr>
<td>Area wide engineering solutions and traffic calming measures (e.g., speed reduction zones) lead to reduction in child cyclist injuries and are cost effective.82</td>
<td>Evaluation of mandatory bicycle helmet laws in Canada show a 45% reduction in the rates of bicycle-related head injury in provinces with legislation and in New Zealand there was a 19% reduction in head injuries among cyclists during the first three years of legislation.35</td>
</tr>
<tr>
<td>Area wide engineering solutions to reduce cyclist risk (including cycling lanes and pathways) may lead to injury reductions.28</td>
<td>In several countries where legislation has been enacted it has not been done until high levels of helmet wearing have been attained in the population.97</td>
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<td>The effect of legislation is smaller when helmet law is not inclusive of all ages.97</td>
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<td>Legislation takes time to produce the desired effect following implementation56 and legislation is most effective when supported by educational activities.39</td>
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<td>The effect of legislation appears smaller in areas with a higher baseline proportion of helmet use and areas with high socioeconomic status.56</td>
</tr>
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<td></td>
<td>Level of enforcement will impact effectiveness.38</td>
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<td></td>
<td>Implementers of helmet legislation may wish to address concerns regarding decreased rider-ship following introduction of legislation as those not in favour of legislation have stated this as an argument against this strategy.100 Research from Canada suggests helmet legislation is not associated with a reduction in cycling.99</td>
</tr>
</tbody>
</table>

- Correctly fitted bicycle helmets reduce the risk of head and brain injury by 63–88%.92
- Parental knowledge and helmet availability, accessibility, cost and ease of use will impact both helmet use and proper use.96
- Reducing cost of helmets through give-away programs and discounts facilitates uptake and use.97
- Engineering modifications can be more effective when supported by educational and enforcement activities.39
- Legislation is most effective when supported by educational activities.39
- The effect of legislation appears smaller in areas with a higher baseline proportion of helmet use and areas with high socioeconomic status.56
- Level of enforcement will impact effectiveness.38

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*References in brackets.*
### Evidence Statement

#### Capacity

Community-based education / advocacy programs around child helmet wearing lead to increased helmet wearing.  

- Important elements of community-based approaches are long-term strategy, effective focused leadership, multi-agency collaboration, involvement of the local community, appropriate targeting and time to develop a range of local networks and programs.  
  
- Programs set in schools appear to be effective but possibly less so than community-based interventions.  
  
- Interventions providing education only are less effective than those also providing free helmets. There is insufficient evidence to recommend providing subsidised helmets.  
  
- Programs are more likely to be effective when they include provision of free helmets, are broad in scope as it relates to target audience and setting, involve parental participation and helmet wearing by riding partners (adults or other children).  
  
- Younger children and girls show the greatest effect from campaigns.  
  
- Interventions offered in healthcare settings can increase self-reported helmet wearing but at this time there is no evidence to indicate they increase actual use.  
  
- Successful interventions have included targeted and mass media education for children and parents, promotion and mandating of helmet wearing, seizure of bicycles of cyclists not wearing helmets and discounting the price of helmets, however it is not possible to isolate the effectiveness of each intervention.  

#### Cycling skills training has shown promise in increasing knowledge of cycling safety in the children who received training. At this time there is no evidence to suggest that the increased knowledge translates into a decrease in injury rate or improved bicycle handling ability.  

- For children to ride safely in traffic requires that they are knowledgeable about traffic rules, can read and interpret signs and have the necessary cognitive and motor skills.  
  
- The most comprehensive programs incorporate helmet education, traffic rules, safety guidelines, and on-bike training.  
  
- Interventions that repeat the message in different forms and contexts are also more likely to succeed. Therefore, community-based education programs that allow for repetition of bicycle safety messages, several opportunities for practice and parental involvement, may represent a more effective approach to improving bicycle safety in children.  
  
- It is possible that young children (under 10 years) may not be able to master the basic cognitive and motor skills necessary for the complex task of riding a bicycle on the road.

### Transfer and Implementation Points

<table>
<thead>
<tr>
<th>Evidence Statement</th>
<th>Transfer and Implementation Points</th>
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</thead>
</table>
| Community-based education / advocacy programs around child helmet wearing lead to increased helmet wearing. | - Important elements of community-based approaches are long-term strategy, effective focused leadership, multi-agency collaboration, involvement of the local community, appropriate targeting and time to develop a range of local networks and programs.  
  
- Programs set in schools appear to be effective but possibly less so than community-based interventions.  
  
- Interventions providing education only are less effective than those also providing free helmets. There is insufficient evidence to recommend providing subsidised helmets.  
  
- Programs are more likely to be effective when they include provision of free helmets, are broad in scope as it relates to target audience and setting, involve parental participation and helmet wearing by riding partners (adults or other children).  
  
- Younger children and girls show the greatest effect from campaigns.  
  
- Interventions offered in healthcare settings can increase self-reported helmet wearing but at this time there is no evidence to indicate they increase actual use.  
  
- Successful interventions have included targeted and mass media education for children and parents, promotion and mandating of helmet wearing, seizure of bicycles of cyclists not wearing helmets and discounting the price of helmets, however it is not possible to isolate the effectiveness of each intervention.  

Cycling skills training has shown promise in increasing knowledge of cycling safety in the children who received training. At this time there is no evidence to suggest that the increased knowledge translates into a decrease in injury rate or improved bicycle handling ability. | - For children to ride safely in traffic requires that they are knowledgeable about traffic rules, can read and interpret signs and have the necessary cognitive and motor skills.  
  
- The most comprehensive programs incorporate helmet education, traffic rules, safety guidelines, and on-bike training.  
  
- Interventions that repeat the message in different forms and contexts are also more likely to succeed. Therefore, community-based education programs that allow for repetition of bicycle safety messages, several opportunities for practice and parental involvement, may represent a more effective approach to improving bicycle safety in children.  
  
- It is possible that young children (under 10 years) may not be able to master the basic cognitive and motor skills necessary for the complex task of riding a bicycle on the road. |
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</tr>
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<tr>
<td><strong>ENVIRONMENT</strong></td>
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<tr>
<td>Use of motorcycle helmets leads to reduction in injuries.106</td>
<td>• Helmets reduce the risk of head injury by around 69% and death by around 42%.106</td>
</tr>
<tr>
<td>High visibility and reflective clothing and headlights or daytime running lights on motorcycles have been effective in increasing motorcyclist conspicuity or visibility.107 At this time there is no study directly linking conspicuity and reduction in injury.</td>
<td>• Campaigns promoting visibility and reflective clothing should ensure motorcycle riders are made aware that even if wearing high visibility and/or reflective clothing and that even if they have been seen by a car driver waiting at an intersection, it does not mean that the car driver will have appraised their approach speed accurately (especially at night).107</td>
</tr>
<tr>
<td><strong>POLICY</strong></td>
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<tr>
<td>Legislation requiring helmet use laws result in significant reductions in head injury frequency, and severity and deaths in motorcycle crashes.104, 109</td>
<td>• Research indicates that compulsory helmet wearing reduces the number of injuries to moped riders and motorcyclists by 20–30%.108 • Level of enforcement will impact effectiveness.38, 109 • Legislation is most effective when supported by educational activities.35, 39</td>
</tr>
<tr>
<td>There is evidence to support licencing policies that increase the age at which motor vehicle licences can be obtained as a means of reducing risk of injury in children and young people.110</td>
<td>• While no studies have been found which examine the impact of regulations that increase the age at which children and young people are permitted to operate a quad bike, motorcycle, or other off-road vehicle, there is evidence of an increased risk of crashing among younger drivers.110 It is highly likely that increasing the age at which young people are allowed to operate a quad bike or other off-road vehicles will reduce the risk of injury among young people. This is the case for young motor vehicle drivers.111</td>
</tr>
<tr>
<td><strong>CAPACITY</strong></td>
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<tr>
<td>Motorcycle rider skills training has shown promise in increasing knowledge and improving observed riding skills.28 At this time, study quality is so poor that it is not possible to draw any conclusions about the effectiveness of rider training on crash, injury, or offence rates.112</td>
<td>• On the basis of the existing evidence, it is not clear whether training or what type of training would reduce crashes, injuries, deaths or legal offences in motorcyclists. As a result, recommendations regarding the best rider training practice cannot be made.112 • It is likely that some type of rider training is needed to teach basic motorcycle handling skills and how to ride a motorcycle safely. Further rigorous research is needed to evaluate what would be most effective.112</td>
</tr>
</tbody>
</table>
## EVIDENCE STATEMENT

**ENVIRONMENT**

Expert opinion states that the use of a personal flotation device (PFD) for boating and other water recreational activities is a recommended strategy in the prevention of drowning.\(^{113}\)

**TRANSFER AND IMPLEMENTATION POINTS**

- It is estimated that 85% of annual boating-related drowning incidents could be prevented if the victim had been wearing a personal flotation device.\(^{114}\)
- Level of enforcement will impact effectiveness.\(^{38}\)
- Legislation is most effective when supported by educational activities.\(^{39}\)

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**ENVIRONMENT**

Expert opinion states that signs regarding safe behaviours displayed in clear and simple signage are an important strategy in the prevention of drowning.\(^{115}\)

**TRANSFER AND IMPLEMENTATION POINTS**

- Signage is most effective when supported by educational activities.\(^{115}\)
- International standardisation of symbols used on signs should help reduce tourist drowning incidents.\(^{115}\)
### Good Practice for Child Water Safety

<table>
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<tr>
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<tr>
<td><strong>Policy</strong>&lt;br&gt;Legislation requiring isolation fencing with secure, self-latching gates for all pools, public, semi-public and private including both newly constructed and existing pools leads to a reduction in drowning when enforcement provisions are included. 28, 116</td>
<td>• Private pools that are fenced and adequately maintained provide 95% more protection against a drowning event. 28&lt;br&gt;• Level of enforcement will impact effectiveness. 38&lt;br&gt;• Legislation is most effective when supported by educational activities. 39&lt;br&gt;• It is highly recommended that parents are strongly encouraged to continue close supervision of their children around pools. No protection system can replace parent supervision. 117</td>
</tr>
<tr>
<td><strong>Safety standards for swimming pools may lead to a reduction in drowning.</strong> 115</td>
<td>• Level of enforcement will impact effectiveness. 38&lt;br&gt;• Safety standards will be more effective when supported by educational activities. 19</td>
</tr>
<tr>
<td><strong>Lifeguards, when adequately staffed, qualified, trained and equipped, seem to be an effective strategy to prevent drowning.</strong> 113</td>
<td>• The presence of lifeguards may deter behaviours that could put swimmers at risk for drowning, such as horseplay or venturing into rough or deep water. 113&lt;br&gt;• Lifeguards should have appropriate training and hold a suitable current qualification. Re-qualification should be undertaken at regular intervals and practical rescue and resuscitation skills should be practiced frequently. 113&lt;br&gt;• It has been noted that initial introduction of lifeguard certification may impact availability of qualified lifeguards. 118&lt;br&gt;• Lifeguard observation points must have a clear and unobstructed view of the area of supervision including both the water and surrounding area. 113&lt;br&gt;• Lifeguards on duty should be easily identifiable at a distance and in a way that sets them apart from others at the beach or water recreational facility. 113&lt;br&gt;• Lifeguard organisations should develop written 'standard operating procedures' that include supervision requirements. 113</td>
</tr>
</tbody>
</table>
## EVIDENCE STATEMENT

**CAPACITY**

Community-based education / advocacy on PFD use leads to increased use.\(^28\)

Swimming lessons do not increase the risk of drowning in 1- to 4-year-olds and may actually provide a reduction in drowning risk in this age group.\(^{119, 120}\)

Water safety skills training including swimming lessons for children aged four years and older can improve swimming performance, however there is no evidence as to whether this is a sustained or enduring skill, nor as to whether it is transferable to various aquatic settings.\(^{12, 28, 29}\)

## TRANSFER AND IMPLEMENTATION POINTS

- It is estimated that 85% of annual boating-related fatal drowning could be prevented if the victim had been wearing a personal life jacket.\(^{114}\)
- Important elements of community-based approaches are long-term strategy, effective focused leadership, multi-agency collaboration, involvement of the local community, appropriate targeting and time to develop a range of local networks and programs.\(^{30}\)

- The current evidence is insufficient to support a recommendation that all one to four-year-old children receive swimming lessons.\(^{121}\) However, because this age group is at high risk of drowning, it is suggested that parents of these children consider starting swimming lessons or water survival skills training earlier based on an individual child’s frequency of exposure to water, emotional maturity, physical limitations and health concerns related to swimming pools.\(^{121}\)

- The earliest age at which swimming lessons show improvement in swimming ability is 24 months, but their learning period is much longer than that of older children.\(^{12, 28}\)

- Aquatic programs for infants and toddlers should not be promoted as a way to decrease the risk of drowning.\(^2, 121\)

- It is highly recommended that parents be strongly encouraged to continue close supervision of their children around water. Ability to swim does not replace the need for close parent supervision.\(^{117}\)

- Children are generally not developmentally ready for formal swimming lessons until after their fourth birthday.\(^{12, 121, 122}\)

- Children are highly sensitive to training, are able to retain most skills if lessons are continued and can use acquired skills in mastering more advanced swimming skills (e.g., diving).\(^{28}\)
## EVIDENCE STATEMENT

Wearing personal protective equipment can prevent a wide range of injuries in a variety of sports. Evidence exists to support the use of:

- Mouthguards
- Helmets in ice hockey, skiing, snowboarding, cycling, horse riding, baseball, and cricket.
- Wrist guards in snowboarding and skateboarding.
- Knee and elbow pads in in-line skating, skateboarding, and roller skating.
- Shin guards in soccer.
- Ankle braces and supports.
- Eye protection in racquet sports and fencing.

### Case Study: Compulsory Protective Headgear in Cricket, Sutherland Shire, NSW, Page 92.

While robust evidence on the value of mouthguards in reducing injuries is only currently available for boxing, it is recommended for a range of sports including football, boxing, ice hockey, and field hockey by the US National Collegiate Athletic Association and in up to 29 sports by the American Dental Association.

Protective equipment can only be effective if appropriately worn or used.

Effectiveness will depend on the level of enforcement.

Educational activities can improve effectiveness of regulations for engineering changes or rule changes.

## TRANSFER AND IMPLEMENTATION POINTS

Modified sports equipment can prevent a wide range of injuries in a variety of sports. Evidence exists to support the use of:

- Breakaway bases in baseball.
- Goal post padding in team sports.
- Anchored soccer goals.
- Softer baseballs.

Effectiveness will depend on the level of enforcement.

Educational activities can improve effectiveness of regulations concerning requirements for equipment standards.

Playing field maintenance (e.g., pre-game inspections and hazard removal and repairs,) can ensure playing environments are safe for participants.

Local government policies play an important role in maximising the safety for all users of sports facilities through their safety policies and practices.
### EVIDENCE STATEMENT

| POLICY | Rule changes (e.g., pitch count in baseball and bowling load limits in cricket) and introduction of Fair Play Rules (e.g., body-checking rules in ice hockey) can prevent sports injuries.  
| CAPACITY | Proprioceptive (balance) training (e.g. with wobble boards) can prevent ankle injuries.  
| CAPACITY | Pre-season conditioning and neuromuscular training programs can prevent lower limb injuries including hamstring, knee/ACL, and ankle injuries. Multi-component programs should include:  
| | - exercises to improve balance, strength and flexibility  
| | - plyometric exercises  
| | - activities to improve jumping and landing and change of direction/side stepping/cutting techniques.  
| | Safety education for participants and coaches can prevent sports injuries.  
| | National programs to educate coaches in injury prevention can improve uptake of injury prevention strategies.  
| | Injury prevention education works best when integrated into mandatory coach accreditation schemes and supported by sports governing bodies.  

| TRANSFER AND IMPLEMENTATION POINTS | Effectiveness will depend on the level of enforcement.  
| | Educational activities can improve effectiveness of regulations.  
| | Improvements in balance and ankle injury reduction are greater with higher levels of compliance.  
| | Uptake and compliance with exercise based intervention can be a challenge so it is important to focus on encouraging and supporting coaches to implement such programs as warm-ups to regular training sessions.  
| | The uptake of and compliance with these programs has generally been higher in girls than boys.  
| | Implementation strategies will be more effective if based on behaviour change theory.  
| | Behaviour of sports participants and coaches should be considered in the context of the environments and organisations in which they operate (e.g. clubs, leagues, community, political system, etc.).  
| | Injury prevention education works best when integrated into mandatory coach accreditation schemes and supported by sports governing bodies.  

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**GOOD PRACTICE FOR CHILD SPORTS SAFETY**

**Good Practice Guide**
**EVIDENCE STATEMENT**

**ENVIRONMENT**

- Window safety mechanisms to prevent children from opening windows, such as bars and position locking devices, are an effective strategy to prevent falls.\(^{28, 158}\)
- Regulations requiring window safety mechanisms on rental housing appears to be the most effective approach when working in areas of social deprivation.\(^{28}\)
- Parental knowledge and availability, accessibility, cost and ease of use of window safety mechanisms will impact their uptake.\(^{159, 160}\)


- Stair gates have been shown to assist in reducing falls down stairs in young children when used at the top of stairs in households.\(^{82}\)
- Parental knowledge and stair gate availability, accessibility, cost and ease of use will impact their uptake.\(^{82, 159, 160}\)
- Pressure gates should not be used at the top of stairs.\(^{161}\)
- Inequalities in rates of uptake and use may be reduced if stair gates are both supplied and installed.\(^{162, 163}\) However, addressing cost and installation only partially addresses economic disparities, thus further research is required to identify and address additional barriers.\(^{162}\)
- The most effective programs for stair gates include education, low cost or free equipment, a home safety inspection and fitting of the gate.\(^{164}\)

- Surfacing materials such as sand or wood chips to a depth of 23–31 cm (9 to 12 inches) can be recommended as effective injury prevention strategies in preventing playground equipment related fall injuries. Optimal equipment height to reduce risk of head injury is 1.5 m (5 feet).\(^{28, 165}\)
- Level of enforcement will impact effectiveness.\(^{38}\)
- Regular maintenance of surfacing materials is necessary to retain protective effect.\(^{28, 166}\)
- Standards are most effective when supported by educational activities.\(^{39}\)

**TRANSFER AND IMPLEMENTATION POINTS**

- Window bars have been shown to reduce deaths from window falls by 35%.\(^{28}\)
- Regulations requiring window safety mechanisms on rental housing appears to be the most effective approach when working in areas of social deprivation.\(^{28}\)
- Parental knowledge and availability, accessibility, cost and ease of use of window safety mechanisms will impact their uptake.\(^{159, 160}\)

- Parental knowledge and stair gate availability, accessibility, cost and ease of use will impact their uptake.\(^{82, 159, 160}\)
- Pressure gates should not be used at the top of stairs.\(^{161}\)
- Inequalities in rates of uptake and use may be reduced if stair gates are both supplied and installed.\(^{162, 163}\) However, addressing cost and installation only partially addresses economic disparities, thus further research is required to identify and address additional barriers.\(^{162}\)
- The most effective programs for stair gates include education, low cost or free equipment, a home safety inspection and fitting of the gate.\(^{164}\)

- Level of enforcement will impact effectiveness.\(^{38}\)
- Regular maintenance of surfacing materials is necessary to retain protective effect.\(^{28, 166}\)
- Standards are most effective when supported by educational activities.\(^{39}\)
### EVIDENCE STATEMENT

**POLICY**

Legislation banning baby walkers OR requiring product modification to remove the mobility issue permanently removes a larger portion of existing risk than parental supervision.\(^{28, 167}\)

- Level of enforcement will impact effectiveness.\(^{38}\)
- Legislation is most effective when supported by educational activities.\(^{39}\)

Enforcement of standards requiring safe depth of specified types of surfacing materials and regular maintenance of those materials is more effective than standards alone in reducing playground equipment related fall injuries.\(^{28, 165}\)

- Level of enforcement impacts effectiveness.\(^{38}\)
- Standards are most effective when supported by educational activities.\(^{39}\)
- Surfacing standards address risk of head injury, not injuries to arms and legs.\(^{28}\)

**CAPACITY**

Educational programs encouraging use of fall prevention safety devices such as window safety mechanisms to prevent children from opening windows and stair gates to prevent falls down stairs increase use of equipment.\(^{28, 158, 160}\) Few studies have linked increased use of equipment to a reduction in falls.\(^{168}\)

- Parental knowledge as well as availability, accessibility, cost, durability and ease of use of safety measures will impact their uptake.\(^{159, 160, 169}\)
- Provision and instalment of free equipment is more likely to increase use, particularly in lower income settings.\(^{158, 160}\) The most effective programs for fitted stair gates include education, low cost or free equipment, a home safety inspection and fitting of the gate and for window locks include education and a home safety inspection.\(^{164}\)
- Timing of education and developing materials and advice (style, language and examples) that suit target communities (e.g., low income, ethnic minority populations) are key to success.\(^{170}\)
- Effective provision of safety equipment involves ongoing support with installation and maintenance.\(^{170}\)
- Existence of supporting legislation and adequate enforcement can increase availability of funding for equipment schemes and uptake of safety measures in the home.\(^{170}\)
- Uptake and success of interventions depends on adjusting them according to practical limitations and parents’ cultural expectations. A particular barrier is parents’ inability to modify rented or shared accommodation.\(^{170}\)
- Barriers and facilitators for the target audience should be addressed when implementing injury prevention interventions. Common facilitators are related to the approach used, focused messages, minimal changes, deliverer characteristics, equipment accessibility, behaviour change and incentives. Common barriers include complex interventions, cultural, socio-economic, physical and behavioural barriers and deliverer constraints.\(^{171}\)

Educational programs discouraging use of baby-walkers can decrease possession or use of baby-walkers.\(^{164}\)

- Programs that involved the addition of ‘education only’ were found to be more effective than usual care.\(^{164}\)
<table>
<thead>
<tr>
<th>Evidence Statement</th>
<th>Transfer and Implementation Points</th>
</tr>
</thead>
<tbody>
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<td></td>
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| Product modification, specifically child-resistant cigarette lighters and self-extinguishing cigarettes, are primary prevention strategies where the technologies have been developed, tested and found to be effective and which would prevent many fires from starting if adopted. | - In the U.S.A., fire deaths associated with cigarette lighters dropped 43% with the adoption of child-resistant designs.  
- Regulations requiring product modifications and their enforcement will increase availability of safe products.  
- Parental knowledge and modified product availability, accessibility, cost and ease of use will impact their uptake. |
| **POLICY**         |                                    |
| Legislation regulating the temperature of hot water from household taps is effective in reducing scald injuries. | - Safe temperatures for hot water from household taps can be achieved by reducing temperature at the water heater or through the use of thermostatic mixing valves (TMVs).  
- Level of enforcement will impact effectiveness.  
- Legislation is most effective when supported by educational activities. |
| Legislation requiring a safe pre-set temperature for all water heaters has proved a more effective method of reducing scalds than education to encourage parents to turn down water heaters. | - Level of enforcement will impact effectiveness.  
- Legislation is most effective when supported by educational activities.  
- Cost-effectiveness estimates from Canada suggest that legislation to lower thermostat settings on domestic water heaters along with annual educational notices to utility customers would generate cost savings while reducing the morbidity from tap water scalds in children. |
| Legislation requiring installation of smoke detectors in new and existing housing when combined with multi-factorial community campaigns and discount coupons is an effective way to increase smoke detector use. | - Level of enforcement will impact effectiveness.  
- Legislation is most effective when supported by educational activities. |
# Good Practice for Burn and Scald Prevention in Children

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<td><strong>Policy</strong>&lt;br&gt;Legislation regulating flammability of sleepwear is effective in reducing burn injuries when enforced.(^{28})</td>
<td>• Legislation passed in the U.S.A. in 1972 resulted in a 75% reduction in burn unit admissions due to sleepwear related burns.(^{28})&lt;br&gt;• Level of enforcement will impact effectiveness.(^{38})&lt;br&gt;• Legislation is most effective when supported by educational activities.(^{39})</td>
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<tr>
<td>Legislation banning the manufacture and sale of fireworks combined with enforcement is the most effective way to restrict the supply.(^{28}) At this time there is no study directly linking restricted supply to injury reduction.</td>
<td>• Level of enforcement will impact effectiveness.(^{38})&lt;br&gt;• Legislation is most effective when supported by educational activities.(^{39})&lt;br&gt;• Supporting legislation is best targeted at primary and secondary school students and parents.(^{178})</td>
</tr>
<tr>
<td><strong>Capacity</strong>&lt;br&gt;Home safety interventions are effective in promoting safe hot tap water temperatures.(^{179})</td>
<td>• The more effective interventions were those that included home safety education, home safety assessments and discounted or free safety equipment including thermometers and thermostatic mixing valves.(^{179})&lt;br&gt;• Important elements of community-based approaches are long-term strategy showing commitment to the issue, effective focused leadership, multi-agency collaboration, involvement of the local community, appropriate targeting and time to develop a range of local networks and programs.(^{30})&lt;br&gt;• Barriers and facilitators for the target audience should be addressed when implementing injury prevention interventions. Common facilitators are related to the approach used, focused messages, minimal changes, deliverer characteristics, equipment accessibility, behaviour change and incentives. Common barriers include complex interventions, cultural, socio-economic, physical and behavioural barriers and deliverer constraints.(^{177})</td>
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### Evidence Statement

**Capacity**

Smoke detector give away programs have proven successful when high-risk neighbourhoods are targeted and multifaceted community campaigns have the specific objective of installation of working smoke detectors.⁶⁰

- Important elements of community-based approaches are long-term strategy showing commitment to the issue, effective focused leadership, multi-agency collaboration, involvement of the local community, appropriate targeting and time to develop a range of local networks and programs. ¹⁰
- The distribution of smoke alarms alone is insufficient for improving installation rates. Programs containing an education component showed more success. ¹⁶³
- Existence of supporting legislation and adequate enforcement can increase availability of funding for equipment schemes and uptake of safety measures in the home. ¹⁷⁰
- Addressing cost and installation only partially addresses economic disparities, more research is required to identify additional barriers. ¹⁷⁶
- Timing of education and developing materials and advice (style, language and examples) that suit target communities (e.g., low income, ethnic minority populations) are key to success. ¹⁷⁰
- Uptake and success of interventions depends on adjusting interventions according to practical limitations and parents’ cultural expectations. A particular barrier is parents’ inability to modify rented or shared accommodation. ¹⁷⁰
- Interventions integrated into wider health programs, where trusting relationships with householders are cultivated and/or where specific safety issues identified by a community are responded to show greater success in increasing smoke alarm installation rates. ¹⁶³

**Education / Advocacy**

Education / advocacy campaigns around fireworks are useful as supplemental efforts and can be used to build support for legislation. ²⁸

- Important elements of community-based approaches are long-term strategy showing commitment to the issue, effective focused leadership, multi-agency collaboration, involvement of the local community, appropriate targeting and time to develop a range of local networks and programs. ³⁰

**Fire Safety Skills Training**

Fire safety skills training increases knowledge and behaviour of both children and parents. ²⁸, ¹⁸⁰ At this time there is no study directly linking training to injury reduction.

- Programs using active participation by children in learning fire responses are more effective than those using passive methods. ¹⁸⁰
- When evaluating programs, actual demonstration of skills is likely a more reliable marker of children’s real response in fire situations than providing correct answers on a written test. ¹⁸⁰
- The addition of fear reduction techniques and teaching the rationale supporting the use of correct fire response behaviours may significantly improve skill retention. ¹⁸⁰
- Periodic repetition of material is required for maintenance of knowledge and skills. ¹⁸⁰
- The use of figures of authority in fire safety skills training (e.g., fire fighters) may increase knowledge gain. ¹⁸⁰
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| Secure storage for poisons removes a larger portion of poisoning risk than parental supervision and may be an effective means of preventing poisoning injury. | • Studies of how children access poisons suggest that the most vulnerable time is when the poisons are in use and that safe packaging alone cannot compensate for unsafe storage or use. This speaks to the need for improved safety of home storage of medications and improved home dispensing practice.  
• Changes to the fixed environment need to be supported by regulation and education for industry and the community, with clear labelling (and clear administration instructions) on the package, parental education and improved supervision, ongoing paediatric counselling, and increased accessibility and affordability. |
| Legislation of child-resistant packaging reduces the incidence of poisonings. | • Level of enforcement will impact effectiveness.  
• Legislation is most effective when supported by educational activities. |
| Education and the provision of home safety equipment are important components for increasing all poison prevention practices. There is a lack of evidence that interventions reduce poisoning rates. | • Parents should be provided with poison prevention education, cupboard/drawer locks and emergency contact numbers to use in the event of a poisoning (e.g. poison control centres).  
• More intensive poison prevention interventions that included modifying the environment (e.g. cupboard/drawer locks) were more effective than education alone.  
• Poison prevention practices should be tailored to the desired outcome. For example, if safe storage of household products and poisons is the desired outcome, adding home safety inspection and fitting of equipment to education and provision of low cost/free equipment is more likely to be effective. |
| Poison control centres result in considerable medical savings if the public is well informed regarding the use of their local poison control centre. | • Parental knowledge and availability, accessibility and ease of use of poison control centres will impact their use. Educational activities may assist in increasing parental knowledge. |
# Good Practice for Choking/Strangulation Prevention in Children

<table>
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| Product modification through legislation permanently removes a larger portion of existing choking/strangulation risk than parental supervision and is recommended for safe crib/cot design and other entrapment hazards. | • Level of enforcement will impact effectiveness.  
• Legislation is most effective when supported by educational activities.  |
| Product banning through legislation permanently removes a larger portion of existing choking/strangulation risk than parental supervision. | • Product banning through legislation is recommended for latex balloons, inedible material in food products, pull cords on window coverings (e.g., horizontal blinds) and drawstrings on children’s clothing.  
• Level of enforcement will impact effectiveness.  
• Legislation is most effective when supported by educational activities.  |
| Legislation that requires product warning labels to include an explanation of the specific hazard is more effective than nonspecific labels. | • A label merely stating, ‘For children ages three and up’ doesn’t adequately explain the risk to the parent.  
• Level of enforcement will impact effectiveness.  
• Legislation is most effective when supported by educational activities.  |
<table>
<thead>
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| Expert opinion states that non-voluntary building codes for new dwellings (legal standards to address hazards related to falls, fire injuries, other thermal injuries, collisions, entrapment, cutting and piercing, drowning, electrocution and poisoning [i.e., lockable cupboard]) lead to reduction in children’s exposure to hazards. | • The quality and quantity of the evidence varies across different hazards types and for different ages of children. It is weaker in some areas, such as for electrocution, because of the small number of incidents. What is clear is that within each hazard type the direction of the evidence is consistent as building codes reduce hazards. 188–191  
• Effectiveness of non-voluntary building codes is dependent on formulation, application and enforcement. 188–191  
• Building codes fall within the mandate of the housing ministries but their formulation should involve collaboration between sectors including health. 188–191  
• Need to consider capacity and mechanism for enforcement. 188–191  
• Building codes should be hazard-related regardless of the setting, take into account the specific needs of children and be understandable to those applying and enforcing the codes. 188–191 |
| Expert opinion states that non-voluntary building codes for existing dwellings (legal standards to address hazards related to falls, fire injuries, other thermal injuries, collisions, entrapment, cutting and piercing, drowning, electrocution and poisoning [i.e., lockable cupboard]) lead to reduction in children’s exposure to hazards. | • It is preferable if building codes apply to all dwellings because those that apply to only new dwellings are likely to miss the children most at-risk. 188–191  
• The quality and quantity of the evidence varies depending on hazard types and the age of children. It is weaker in some areas (e.g. electrocution), because of the small number of incidents. However, it is clear that within each hazard type the direction of the evidence is consistent. 188–191  
• Effectiveness of non-voluntary building codes is dependent on their preparation, application and enforcement. 188–191  
• Building codes fall within the mandate of the housing ministries but their preparation should involve collaboration between sectors including health. 188–191  
• Need to consider capacity and mechanism for enforcement. 188–191  
• Building codes should be hazard-related regardless of the setting, take into account the specific needs of children and be understandable to those applying and enforcing the codes. 188–191 |
**GOOD PRACTICE FOR GENERAL CHILD HOME SAFETY**

<table>
<thead>
<tr>
<th>EVIDENCE STATEMENT</th>
<th>TRANSFER AND IMPLEMENTATION POINTS</th>
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<tbody>
<tr>
<td><strong>CAPACITY</strong></td>
<td></td>
</tr>
<tr>
<td>Home safety education that is delivered one-to-one and face-to-face either at home or in a clinical setting, especially with the provision of safety equipment, is effective in increasing a range of safety practices and it may also reduce injury rates.82, 159, 160, 176, 192, 194</td>
<td>• Home safety interventions involving safety counselling were effective in increasing a wide range of safety practices including having a safe hot tap water temperature, a functional smoke alarm, having or practising a fire escape plan, storing medicines and cleaning products out of reach, having syrup of ipecac and the poison control centre number accessible, having a fitted stair gate, not using a baby walker and using socket covers on unused sockets.176</td>
</tr>
<tr>
<td>Case study: Safe Homes Safe Kids Program, Illawarra, NSW, Page 114.</td>
<td>• Availability, accessibility, cost, durability and ease of use of items recommended during home safety checks will impact their uptake.159, 160, 169, 194</td>
</tr>
<tr>
<td></td>
<td>• Providing free safety equipment increases use but evidence is less strong for discounted equipment.160</td>
</tr>
<tr>
<td></td>
<td>• Effective provision of safety equipment involves ongoing support with installation and maintenance.170</td>
</tr>
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<td></td>
<td>• Existence of supporting legislation and adequate enforcement can increase availability of funding for equipment schemes and uptake of safety measures in the home.170</td>
</tr>
<tr>
<td></td>
<td>• Timing of education and developing materials and advice (style, language and examples) that suit target communities (e.g., low income, ethnic minority populations) are key to success.170</td>
</tr>
<tr>
<td></td>
<td>• Uptake and success of interventions depends on adjusting interventions according to practical limitations and parents’ cultural expectations. A particular barrier is parents’ inability to modify rented or shared accommodation.170</td>
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<td></td>
<td>• Barriers and facilitators for the target audience should be addressed when implementing injury prevention interventions. Common facilitators are related to the approach used, focused messages, minimal changes, deliverer characteristics, equipment accessibility, behaviour change and incentives. Common barriers include complex interventions, cultural, socio-economic, physical and behavioural barriers and deliverer constraints.171</td>
</tr>
<tr>
<td></td>
<td>• There is no consistent evidence from existing studies that home safety interventions were less effective amongst children at greater risk of injury. This is encouraging as it suggests that home safety interventions should not widen existing inequalities in child home injury rates.176</td>
</tr>
</tbody>
</table>
EVIDENCE STATEMENT

Parenting programs are effective in reducing unintentional injury in children and can improve home safety, particularly in families who may be considered ‘at risk,’ such as some teenage or single mothers.\(^{195-199}\)

- Parenting interventions, most commonly provided on a one-to-one basis in the home as part of multi-faceted interventions to improve a range of child (and often maternal health) outcomes during the first two years of a child’s life, are effective in reducing self-reported or medically attended injury amongst young children.
- These programs are most often ‘home visiting’ programs, but can be provided in a variety of other settings, including in clinics and other community venues.\(^ {199}\)
- Barriers and facilitators for the target audience should be addressed when implementing injury prevention interventions. Common facilitators are related to the approach used, focused messages, minimal changes, deliverer characteristics, equipment accessibility, behaviour change and incentives. Common barriers include complex interventions, cultural, socio-economic, physical and behavioural barriers and deliverer constraints.\(^ {171}\)
- Supportive home visiting for families with young children can provide education regarding issues such as using window bars, stair gates, other home safety equipment and not using baby walkers, bath seats and other injury hazard producing equipment.\(^ {195-198}\)
- Availability, accessibility, cost and ease of use of safety equipment recommended during home safety checks will impact the uptake.\(^ {159, 160, 169, 194}\)

There is indirect evidence that individual level education/counselling in the clinical setting are effective measures to reduce many childhood unintentional injuries.\(^ {159, 200}\)

- Availability, accessibility, cost and ease of use of safety equipment recommended during education/counselling sessions will impact the uptake.\(^ {159, 160, 202}\)
- Those providing information also require initial and ongoing training to ensure content/material provided is up-to-date.\(^ {201, 202}\)

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**CAPACITY**

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</tr>
</tbody>
</table>
REFERENCES


100. Robinson DL. No clear evidence from countries that have enforced the wearing of helmets. BMJ 2006; 332(7543): 722–725.


We set out to provide a sampling of case studies to illustrate all facets of good practice and lessons learned, to assist those considering implementing a strategy in their own setting. While more injury prevention case studies were reviewed than are presented here, the reality is that many programs had not yet been examined with respect to their effectiveness and very few had been evaluated using a rigorous research design that includes a comparison group and assessment of behavioural and injury outcomes.

As a result, while many programs could not be included as case studies in this version, it is anticipated that as more programs receive adequate evaluation additional examples can be added in subsequent editions of the GPG. The selection of case studies presented in this guide highlight the importance of strong supporting evidence in successful policy and program decisions and investments.

Case studies were identified via:

1. A review of recent (up to December 2015) published studies of effective child injury prevention initiatives in Australia or relevant to Australian priority issues,
2. A consultation workshop with child injury prevention practitioners and researchers held during a regional injury prevention conference for Australasia
3. Recommendations from the Expert Advisory Group (see Acknowledgements), and from practitioners who were interviewed as part of the process of developing the case studies.

Case studies were sought and selected based on the following criteria:

- Initiative addresses issues of priority within Australia (based on injury burden).
- Initiative met one or all elements within our definition of good practice (Section 2)
- Initiative has been implemented and evaluated (both process and outcome evaluations completed) and were considered particularly relevant to Australia and found to be effective either in Australia or internationally. Alongside 12 Australian case studies, a case study from Canada and one from the USA have been included in this guide due to their relevance to the Australian context but the absence of a suitable local case study on the selected issues).
In addition to the selection criteria, where possible we also attempted to select case studies that reflected a range of:

- implementation levels (e.g., national, state, regional or local)
- implementation strategies (as outlined in Section 2.4)
- population groups at risk of child injury.

For each potential case study selected, available documentation was examined to confirm that it met the inclusion criteria. A standardised interview was conducted that sought and summarised this information before the draft case study was developed. A contact person was identified and drafted case studies were sent to the contact person for review, clarification and confirmation before being sent to the Expert Advisory Group for final review prior to inclusion in the Guide.
# Section 5: Good Practice Case Studies

<table>
<thead>
<tr>
<th>Program (Location)</th>
<th>Injury Priority Topic</th>
<th>Primary Strategy</th>
<th>Target Group (Yrs)</th>
<th>Evaluation</th>
</tr>
</thead>
<tbody>
<tr>
<td>Child Death Review Team (NSW)</td>
<td>All injuries – fatalities</td>
<td>Leadership Surveillance</td>
<td>0–17</td>
<td>Evidence-based policy; legislative changes achieved.</td>
</tr>
<tr>
<td>Safe Koori Kids Community Safety (Sydney, NSW)</td>
<td>All injuries</td>
<td>Capacity</td>
<td>8–12 Aboriginal children</td>
<td>Pre/post intervention assessment of child safety knowledge, attitudes and self-efficacy.</td>
</tr>
<tr>
<td>Buckle-Up Safely Child Passenger Safety (Sydney, NSW)</td>
<td>Passenger safety</td>
<td>Capacity</td>
<td>3–5 Low SES area, CALD</td>
<td>Cluster randomised controlled trial – assessed differences in knowledge and observed behaviour.</td>
</tr>
<tr>
<td>Pedestrian Safety (Perth, WA)</td>
<td>Pedestrian safety</td>
<td>Capacity</td>
<td>6–9</td>
<td>Controlled trial (two intervention groups, one control) survey and observation of pedestrian behaviour – 12-month and 24-month follow-up.</td>
</tr>
<tr>
<td>Quad Bike Safety Legislation (USA)</td>
<td>Off-Road Vehicles</td>
<td>Policy</td>
<td>0–16</td>
<td>Pre/post-legislation assessment of quad bike hospitalisations and fatality data.</td>
</tr>
<tr>
<td>Swimming Pool Fencing (NSW)</td>
<td>Drowning</td>
<td>Environment Policy Capacity</td>
<td>1–4</td>
<td>Not directly evaluated - legislation passed and evidence of reduced rates of drowning in at risk population.</td>
</tr>
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<td>Injury Priority Topic</td>
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<tr>
<td>Compulsory helmets for junior cricketers (Sutherland Shire, NSW)</td>
<td>Sports</td>
<td>Policy</td>
<td>7–15</td>
<td>Pre/post injury rates of head/face/neck injuries for junior batters.</td>
</tr>
<tr>
<td>SafeClub (Sydney, NSW)</td>
<td>Sports</td>
<td>Capacity</td>
<td>12–17</td>
<td>Controlled trial – pre/post and 12-month follow-up survey of club policies and practices.</td>
</tr>
<tr>
<td>Concussion Assessment Training Tool (Canada)</td>
<td>Sports</td>
<td>Capacity</td>
<td>5–17</td>
<td>Pre and three to four month post-test survey of parents, coaches and medical professionals of concussion knowledge and practices.</td>
</tr>
<tr>
<td>Kids Don't Fly – apartment window safety (NSW)</td>
<td>Falls</td>
<td>Environment Policy Capacity</td>
<td>0–7</td>
<td>Not directly evaluated - legislation passed, solid evidence from success of US campaigns, indications of reduced rate of admissions at a major children’s hospital.</td>
</tr>
<tr>
<td>BurnSafe Primary School Burns Prevention (South Australia)</td>
<td>Burns/scalds</td>
<td>Capacity</td>
<td>5–12 Focus on low SES areas</td>
<td>Pre/post and 12-month follow-up survey of knowledge of first-aid and burn prevention and self-reported behaviour:</td>
</tr>
<tr>
<td>Scalds Prevention Campaign (NSW)</td>
<td>Burns/scalds</td>
<td>Environment Policy Capacity</td>
<td>0–4</td>
<td>Pre/post changes in knowledge, practices, product sales and reduction in bed days due to severe-scalds among 0-4 year olds.</td>
</tr>
<tr>
<td>Safe Home Safe Kids Home Safety (Illawarra, NSW)</td>
<td>Home safety</td>
<td>Capacity</td>
<td>0–5 Aboriginal children</td>
<td>Surveys of participants to capture process and impact measures of knowledge, attitudes and practices.</td>
</tr>
</tbody>
</table>
NEW SOUTH WALES CHILD DEATH REVIEW TEAM (NSW CDRT)

New South Wales

POLICY BACKGROUND/DRIVING FORCE

The purpose of the NSW CDRT is to monitor, prevent and reduce the deaths of children in NSW. It was established under Part 5A of the Community Services (Complaints, Reviews and Monitoring) Act 1993 (‘the Act’), the team is tasked with keeping a register of child deaths in NSW, analysing data and trends, as well as undertaking research and making recommendations on legislation, policies, practices and services that aim to prevent and reduce the likelihood of child death.

From 1996–2010, the NSW CDRT operated under the NSW Commission for Children and Young People. After 2010, it was transferred to the office of the NSW Ombudsman.

The team produces annual reports that are presented to the NSW Parliament, detailing their analysis of child death data from the previous year; trends and patterns in the deaths of children over time, and providing their recommendations. These reports will be biennial from 2018. Additionally, the NSW CDRT produces special reports every three years, providing in-depth discussion, analysis and recommendations on area of special interest relating to child health, safety, injury prevention and death.

PARTNERS

The NSW CDRT regularly comprises approximately 20 members, representing a broad spectrum of organisations, government agencies and fields of expertise pertaining to child health, disease and injury prevention. These include, but are not limited to:

- NSW Ombudsman (Convenor)
- NSW Department of Education
- NSW State Coroner’s Office
- NSW Department of Attorney General and Justice
- NSW Ministry of Health
- NSW Department of Family and Community Services
- Aboriginal representatives
- Paediatricians and other physicians
- Academics

AIMS AND OBJECTIVES

The aims and objectives of the NSW CDRT are clearly outlined in Section 34D of the Act:

- To prevent and reduce the incidence of death of children in NSW
- To maintain a register of child deaths occurring in NSW
- To classify those deaths according to cause, demographic criteria and other relevant factors
- To undertake, alone or with others, research that aims to help prevent or reduce the likelihood of child deaths
- To make recommendations, arising from the maintenance of the register of child deaths and from its research, as to legislation, policies, practices and services for implementation by government and non-government agencies and the community to prevent or reduce the likelihood of child deaths
- To identify areas requiring further research by the NSW CDRT or other agencies or persons

KEY STEPS

1. Enactment of legislation that enabled the establishment of the CDRT and its responsibilities together with its power to access relevant data*
2. Recruitment of a team with a wide cross-section of expertise pertaining to child health, disease and injury prevention
3. Review of relevant records of child death by trained staff and expert members of the team
4. Ongoing analysis of records received from the NSW Registry of Births, Death and Marriages, the State Coroner’s Office, and a range of government and non-government agencies such as the Department of Family and Community Services, Healthcare providers (public and private) and the NSW Police Force
5. Quarterly NSW CDRT meetings to discuss policy issues and recommendations on areas highlighted in data analysis
6. Consultation with experts and published literature regarding policy issues and recommendations
7. Review data and recommendations and compile them into reports presented to parliament and released to the public

*Sydney Children’s Hospitals Network
EVALUATION

The NSW CDRT is an example of an initiative in leadership, infrastructure and capacity building. Uptake of previous recommendations is monitored by the team until they are satisfied with the action taken. This aims to ensure that recommended practices are incorporated into policy and strategy concerning child health, safety and injury prevention.

The Convenor of the NSW CDRT also meets annually with the NSW Parliamentary Committee on the Ombudsman, the Police Integrity Commission and the Crime Commission in a public inquiry process. This is a measure of accountability aimed at monitoring the processes and outcomes of the NSW CDRT.

The following is just one example of demonstrated uptake of the NSW CDRT’s evidence-based recommendations into policy and/or legislation:

Example: Medication packaging to prevent poisoning

In 2011, a child under the age of two accessed prescribed medication, dispensed by a hospital pharmacy and died from unintentional poisoning. The medication reportedly was not in child-resistant packaging despite being identified by the Therapeutic Goods Order No. 80 as requiring such packaging.

In response the NSW CDRT recommended that the Clinical Excellence Commission and partner agencies:

(a) Review the capacity of pharmacy software across NSW Health facilities to flag medicines requiring child-resistant packing during the dispensing process. A flag should alert pharmacists to medications that must be dispensed in child-resistant packaging, and act as a prompt to advise patients or parents that the medicine should not be removed from the child-resistant packing.

(b) Include in the Medication Safety Self-Assessment audit tool components to assess safety measures relating to use of child-resistant closures for medications and compliance with Therapeutic Goods Order No. 80.

Subsequently, the iPharmacy software used in NSW pharmacies to identify medication and print labels was updated to include the warning code ‘KIDCAP’ and to state the warning that such medications must be stored in child-resistant packaging. Information was also provided to pharmacies across NSW explaining the directive to provide medications labelled ‘KIDCAP’ in child-resistant packaging and to highlight to consumers the need to retain the product in this packaging. The Medication Safety Self Assessment audit tool was also updated to specifically include statements about the provision of medicines in child-resistant packaging and the use of iPharmacy to prompt this.

Many other areas have also been addressed through the NSW CDRT’s recommendations and acted upon by the relevant bodies. Such areas of success include reducing low-speed vehicle run-overs and strategies for the prevention of sudden unexpected death in infancy (SUDI) in children with a child protection history (the population that the NSW CDRT’s analysis found to be at particular risk).

LESSONS LEARNED

FACILITATORS

• Independence: Being situated in an independent organisation, with an independent Convenor and reporting direct to the NSW Parliament
• Strong legislation: Government and non-government agencies are required to provide relevant records to the NSW CDRT to enable thorough review
• A wide cross-section of expertise amongst the members of the NSW CDRT
• Access to expert advice from outside the NSW CDRT
• A devoted team of data analysts and staff to assist and support the NSW CDRT in meeting its obligations
• Networking and communicating with injury prevention groups and advocates
• Maintaining a clear and consistent dataset
BARRIERS

• Obtaining important and effective detail from available data in a timely manner so as to maintain the relevance of the issue
• Making clear links between injury prevention and death can be particularly difficult in the areas where fatal consequences are not immediately obvious or have not been widespread
• Maintaining confidentiality when reporting and making recommendations on areas in which there have been relatively few incidents
• The government is not bound to act on the recommendations by the CDRT
• The scope of the CDRT excludes the review of child hospitalisations that do not result in death

ADVICE ON TRANSFERABILITY

• Having a strong legislative framework and the full support of government behind a group such as the NSW CDRT is essential for its success
• Making evidence-based recommendations in a timely manner is important in maintaining relevance and ensures acceptance by decision makers
• An understanding of government and policy-making process is required to make effective recommendations

REFERENCES, ADDITIONAL INFORMATION


* In NSW this was the Children Legislation Amendment (Child Death Review Team) Act 2011.

RESOURCES

The NSW CDRT’s annual reports since 2010:

The NSW CDRT’s fact sheet on child deaths in private swimming pools:

CONTACTS

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cdrt@ombo.nsw.gov.au
URL
<table>
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<tr>
<th>POLICY BACKGROUND/DRIVING FORCE</th>
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| Injury is one of the leading causes of mortality among Aboriginal and Torres Strait Islander people. Most Aboriginal and Torres Strait Islander people live in major cities (35%) or regional areas (44%) and the lack of effective, sustainable and culturally appropriate interventions presents a significant barrier to improved health in this population. Consistently higher injury rates amongst Aboriginal and Torres Strait Islander children reveal that they have not benefited from the interventions which have been effective in reducing injury rates for non-Indigenous children. Preventing injuries to Aboriginal and Torres Strait Islander children and youth needs to go beyond the immediate physical injury to addressing the broader range of socio-cultural factors impacting on Indigenous populations, such as social disadvantage, poverty, alienation, and family and community dysfunction. However, our knowledge of the injury experience of Aboriginal and Torres Strait Islander people living in urban environments has not been reported widely; most of the research focus has been on remote areas. | Safe Koori Kids intervention was developed and delivered to Aboriginal and non-Aboriginal children across 11 primary schools in South-western Sydney, NSW, over a three-year period (2006–2008). Following evaluation, work on translation to policy was undertaken during 2009–10. Safe Koori Kids demonstrates a comprehensive approach to injury prevention in that: 1. It treats injury prevention as a priority 2. It is in a position to propose priorities in injury prevention within the community 3. It is receptive to and involved in initiatives resulting from its implementation 4. Evaluation is a key aspect in its implementation. Community consultation and the incorporation of culturally affirming and appropriate materials into the program make it an exemplary case study in the area of injury prevention in Aboriginal communities. Preventing injury in Aboriginal and Torres Strait Islander communities was a national health priority area for Commonwealth, State and Territory Governments at the period of implementation. Safety promotion and injury prevention policy overlaps with other important priority areas including mental health, social and emotional wellbeing, violence prevention, alcohol and drugs, housing and work safety. In combining health and education interventions for school-aged children, the program was also consistent with the National Safe Schools Framework and the recommendations of the Ministerial Council on Education, Employment, Training and Youth Affairs’ (MCEETYA) Taskforce on Indigenous Education. Safe Koori Kids was funded by Australian Institute of Aboriginal and Torres Strait Islander Studies (AIATSIS) for the formative research conducted in 2005–2006 and the National Health and Medical Research Council in 2006–2008 for the development, implementation and evaluation of the intervention. |}

<table>
<thead>
<tr>
<th>IMPLEMENTATION LEVEL</th>
<th>Regional</th>
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<tbody>
<tr>
<td>APPROACH</td>
<td>Building Capacity</td>
</tr>
<tr>
<td>SETTING</td>
<td>Primary Schools</td>
</tr>
<tr>
<td>DATE</td>
<td>2006–2008</td>
</tr>
<tr>
<td>TARGET GROUP</td>
<td>Primary school aged children, their parents, carers and teachers</td>
</tr>
<tr>
<td>EVIDENCE BASE</td>
<td>School-based injury prevention education has the potential to increase safety-related knowledge and behavior.</td>
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<tr>
<th>PARTNERS</th>
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<tr>
<td>• Primary schools in South Western Sydney</td>
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<tr>
<td>• Tharawal Aboriginal Corporation</td>
</tr>
<tr>
<td>• Parents/caregivers of Aboriginal children</td>
</tr>
<tr>
<td>• The Australian Health Services Research Institute (University of Wollongong)</td>
</tr>
<tr>
<td>• The George Institute for Global Health</td>
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<th>AIMS AND OBJECTIVES</th>
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<tr>
<td>The program aimed to increase understanding of the broad range of factors involved in injury in Aboriginal communities and to create a culturally acceptable and effective intervention program by addressing child and youth resilience.</td>
</tr>
</tbody>
</table>
**KEY STEPS**

1. Collecting qualitative and quantitative data on injury incidence and impact in the NSW Aboriginal population
2. Developing partnerships with Aboriginal and non-Aboriginal service providers across a range of government and non-government organisations within the region
3. Consulting community and selecting schools to participate in the program based on the number of Aboriginal students, formal support from the school and a formal expression of interest from local Aboriginal communities
4. Developing and designing a culturally appropriate safety curriculum, resources, game and website comprising five modules: ‘Survival’ (safety in the outside environment), ‘Getting Around’ (transport safety), ‘Playing It Safe’ (sports safety), ‘Living Together’ (home and school safety) and ‘Values and Respect’ (interpersonal relations, bullying and racism)
5. Training teachers to deliver safety curriculum at primary schools and providing resources to enhance the program such as the interactive Safe Koori Kids video game and funds for safety-themed excursions
6. Training local safety advocates and developing local safety projects
7. Delivering the safety curriculum to children aged eight to 12 years over a 10-week period
EVALUATION

A pre-test/post-test design was used to evaluate the effectiveness of the intervention in five of the 11 primary schools. These schools were chosen on the basis of high Aboriginal enrolments. Twenty-four teachers, 790 children (Aboriginal and non-Aboriginal) and a number of children’s parents and/or carers participated in the final stage of the program.

A questionnaire designed by the researchers and comprising 30 questions was administered to the 790 school children on two occasions. Questions were based on the knowledge, skills and attitudes taught across the five safety modules by the classroom teachers. The pre-test was administered by classroom teachers in weeks one to two of the second school term. The post-test was administered towards the end of the same term, nine to ten weeks later. The purpose of the questionnaire was to assess the change in the child’s self-efficacy and knowledge and attitudes towards safety.

A teacher questionnaire was also administered pre- and post-intervention to a total of 24 classroom teachers from the five schools. The purpose of the teacher questionnaire was to measure change in the teachers’ safety knowledge and attitudes to Aboriginal children and teaching practices in these areas, as well as the level of Aboriginal parental involvement in the program.

RESULTS

Results indicated there was a significant increase (p<0.05) in self-efficacy among children from pre- to post-intervention for both Aboriginal (6%) and non-Aboriginal children (2%). Safety knowledge among Aboriginal children increased from pre- to post-intervention by 17% (p<0.01) and non-Aboriginal children by 15%, (p<0.01). However, there were no significant improvements in attitudes towards safety (Aboriginal children 2%, p=0.288, non-Aboriginal children 1%, p=0.0721). Overall, Aboriginal children scored lower than non-Aboriginal children post intervention on self-efficacy (75% vs. 77%), knowledge (56% vs. 63%) and attitudes towards safety (79% vs. 84%). Teacher focus groups provided further evidence of the programs impact on children’s safety knowledge and attitudes.

LESSONS LEARNED

FACILITATORS

• Aboriginal involvement in all aspects of the Safe Koori Kids program was important in ensuring that the intervention would be both culturally acceptable and beneficial to Aboriginal communities
• A school-based, culturally-affirming safety intervention can have a positive impact on improved self-efficacy and knowledge about safety
• Innovative use of Aboriginal knowledge in the curriculum resonated with all children and the Aboriginal parents/carers
• The intervention showed considerable promise as a resource for increasing resilience in Aboriginal children through an increase in self-efficacy in relation to safety

BARRIERS

• There were no significant improvements in attitudes towards safety, indicating the difficulty of achieving fundamental attitudinal changes. More work needs to be done in this challenging area
• It can be difficult to get access to participants in an urban setting where there is relatively little community engagement
• Sustainability depends on obtaining support from State education departments and ongoing commitment by government, non-government and community sectors working together
• Results were not linked to any injury data, but these may be available through local health services
• Advice on transferability
• Intervention programs need to incorporate an understanding of the broad range of factors that increase the vulnerability of Aboriginal children living in urban areas
• Inter-sectoral collaboration and partnerships between researchers and local service providers and Aboriginal community organisations are essential components of program development in urban communities
REFERENCES, ADDITIONAL INFORMATION


RESOURCES

The Safe Koori Kids Website contains resources for children, parents and teachers. Two teaching resources can be downloaded: Safe Koori Kids Program Guide and a Resource Booklet which are intended for use by teachers in the classroom: http://projects.georgeinstitute.org/safekoorikids/

Safe Koori Kids Game: uow.edu.au/wic/safekoorikids/

CONTACTS

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Prior to the introduction of age-appropriate child restraint legislation in NSW in 2010, approximately 1,400 child passengers (up to eight years of age) were injured and 23 were killed each year in motor vehicle crashes. Appropriate and correctly-fitted child restraints had been shown to be highly effective in reducing child injuries. Despite this, few children (25-65%) were optimally fitted. In NSW, children of lower socio-economic status (SES) and from culturally and linguistically diverse (CALD) groups tended to be associated with lower levels of optimal fitting.

The Buckle-Up Safely program aimed to increase optimal use of child restraints in these focus areas through a multi-faceted program that included educator training and parent awareness and education. A two-hour professional development workshop and assistance in developing safe arrival and departure policies were provided to intervention centre staff by the Kids and Traffic Road Safety Education Program. Printed educational materials were made available in English and six community languages. Six to eight weeks later, program staff presented a safety information session to parents, including an educational video, demonstration of correct child restraint use and provided parents the opportunity to access subsidised restraints.

In 2009, nation-wide legislation was introduced, specifying and mandating the use of age-appropriate restraint types for children up to seven years of age. NSW introduced these new laws in 2010. The Buckle-Up Safely program aimed to supplement these legislative measures by providing a program to increase parent awareness of the legislation and distribution of the materials required to achieve such improvements, particularly in lower SES areas and in non-English speaking families. Training of pre-school/long day care centre staff to be able to deliver the program and its key messages ensured capacity development and sustainability. All families received a voucher for free restraint fitting and subsidised restraints were provided to those families requiring financial assistance.

The George Institute for Global Health
Neuroscience Research Australia
Kids and Traffic: Early Childhood Road Safety Education Program
Transport for NSW
Parents of children attending the childcare centres and preschools
Preschool and childcare centre directors and staff
Authorised local restraint fitters

To increase age-appropriate and correct use of motor vehicle child restraints, particularly among CALD population groups
To facilitate long-term behavioural change in the correct use of child restraints in these groups
KEY STEPS
1. Deliver educator training to staff of early childhood education centres through a workshop to provide the tools for staff to develop relevant policies and curriculum and distribute printed multilingual materials and strategies to engage with children and families on optimal child restraint use (resources were available in English, Chinese, Vietnamese, Arabic, Hindi, Turkish and Dinka).
2. Offer information session to parents with multilingual resources, presenting the dangers of suboptimal motor vehicle child restraint use and demonstrating correct use of restraints.
3. Offer free fitting of age-appropriate child restraints and subsidised purchasing of a restraint.

EVALUATION
Evaluation of the program was undertaken as a cluster randomised controlled trial. In March 2010, 27 early childhood education centres from lower SES areas of Sydney, NSW were randomly allocated to either control or intervention groups. Teacher workshops were delivered between May and July 2010 with parent sessions six to eight weeks later. Restraint distribution was completed by November 2010. Observations of children in cars and parent interviews on their use of child restraints were conducted by trained researchers. These final observations were made between September and December 2010 to measure the impact of the program. Control centres were offered the intervention upon completion of the trial.

RESULTS
A significantly higher level of optimal restraint use was observed post-intervention at intervention centres compared to control centres across all ages tested (43% vs. 31% of children, p< 0.01)\textsuperscript{1}. Particularly promising results were seen in non-English speaking families in the intervention centres compared to control centres (43% vs. 17%, p<0.02)\textsuperscript{1}.

LESSONS LEARNED
FACILITATORS
- The support of established networks such as the reputable organisation, Kids and Traffic, to introduce the program to the preschools and the NSW Restraint Fitting Station network.
- Pro-child safety attitude of early childhood educators.
- Optimising consistent messaging across the different program elements.
- A clear, illustrative audio-visual presentation demonstrating the safety benefits of child restraints.
- Supportive legislation aligned with the program’s objectives, which had recently been introduced.
- Availability of multilingual printed resources.
- Barriers.
- High turnover of staff in centres.
- Some difficulty in engaging time-poor families was experienced.
- The relatively high cost of restraints means that subsidies are not a sustainable element of the program unless an ongoing funding stream can be found.
- It is labour intensive to allocate, distribute and correctly install the appropriate restraint for each child in the program.
ADVICE ON TRANSFERABILITY

• Translation of materials into languages relevant to the families in question is essential in the engagement of non-English speaking families, where the highest rates of uptake were observed

• Working with established education and restraint fitting networks provides a reputable introduction to the program and is an effective way to identify, contact and establish rapport with early childhood education centres

• While training preschool and day care staff to be able to deliver the program was intended to help the program achieve self-sustainability, staff reported that the co-delivery of presentations by ‘outside’ specialists improved the number of parents attending the educational session

• Delivery of audio-visual presentations (with images of crash-test dummies) provides clear-cut and indisputable benefits of correctly fitted and age-appropriate child restraints, decreasing the opposition of most parents to the extra cost and effort of restraint use

• Ensure ongoing support to the centres to offset changes in staff, and to explore alternative methods of purchasing subsidised restraints to address financial barriers experienced by some families

• Consider parental representation from each centre on the steering committee to aid program implementation and uptake

REFERENCES, ADDITIONAL INFORMATION


RESOURCES

Buckle-Up! Child Car Restraints video: georgeinstitute.org/videos/buckle-up-child-car-restraints

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BUCKLE-UP SAFELY: SAFE TRAVEL FOR ABORIGINAL CHILDREN
Shoalhaven, NSW

BACKGROUND
Aboriginal and Torres Strait Islander people are over-represented in road-related deaths and serious injury – being 2.7 times more likely to die from such causes than other Australians. The greatest disparity is for Aboriginal and Torres Strait Islander children aged 0–4 years, who are four times more likely to die and two times more likely to suffer serious injury from road-related injury than other Australian children of the same age.1

Despite the safety benefits, studies have shown that many children are not seated in the right restraint or the restraint is used incorrectly. Further, parents have reported confusion about which restraints to use and how to use them.5

The Buckle-Up Safely (Shoalhaven) program was the adaptation of the Buckle-Up Safely program, successfully delivered in Southwest Sydney, for the Aboriginal community in the Shoalhaven (south coast) area of NSW. It was delivered in 2010 in three early learning centres where 31% of the children were of Aboriginal and Torres Strait Islander descent, higher than the national average of 3%. Aboriginal people led and were involved in all levels of this project. The Buckle-Up Safely Project received its principal support from the local Aboriginal Education Consultative Group. Findings were reported back to this group and each of the participating services.

The program involved: a two-hour educators’ professional development program and ongoing support, delivery of ‘hands-on’ parent information sessions, giving parents a Buckle-Up Safely bag containing resources, providing access to subsidised restraints and to an authorised child restraint fitting station with mechanics who distributed and fitted the restraints.

POLICY BACKGROUND/DRIVING FORCE
Legislation was introduced in Australia in 2009, mandating the use of age-appropriate restraints for children up to seven years of age.6 The law was enacted in New South Wales, Australia in 2010. The Buckle-Up Safely program aimed to supplement these legislative measures by providing a program to increase parent awareness and understanding of the legislation and distribution of the materials required to achieve such improvements. Sustainability of these efforts was sought by training pre-school/long day care centre staff to deliver the program and its key messages, as well as the provision of free restraint fitting and subsidised restraints to families, as required.

PARTNERS
- The George Institute for Global Health
- Neuroscience Research Australia
- Members of the Steering Committee including representatives of the local Aboriginal community
- Aboriginal Education Consultative Group (AECG)
- Kids and Traffic: Early Childhood Road Safety Education Program
- Transport for NSW
- Shoalhaven Municipal Council
- Authorised local restraint fitters
- Parents of children attending the early childhood learning centres
- Early childhood learning centre directors and staff

AIMS AND OBJECTIVES
- To increase the number of Aboriginal and Torres Strait Islander children correctly restrained in age-appropriate child car restraints
- To increase parents’ awareness and understanding of the legislation
- To increase community access to existing services and resources regarding safe travel of children in cars

<table>
<thead>
<tr>
<th>IMPLEMENTATION LEVEL</th>
<th>State</th>
</tr>
</thead>
<tbody>
<tr>
<td>APPROACH</td>
<td>Leadership, Surveillance</td>
</tr>
<tr>
<td>SETTING</td>
<td>New South Wales</td>
</tr>
<tr>
<td>DATE</td>
<td>1996 – Ongoing</td>
</tr>
<tr>
<td>TARGET GROUP</td>
<td>Parents and carers of children aged three to five years</td>
</tr>
<tr>
<td>EVIDENCE BASE</td>
<td>Community-based intervention combining child passenger restraint distribution, loaner programs or incentives with education programs lead to increased use1–3</td>
</tr>
</tbody>
</table>
KEY STEPS

1. Engaging with a lead community organisation to identify if the community would like to have the program and obtaining principal support from the community organisation
2. Bringing together an Advisory/Steering Committee with representatives from key local Aboriginal organisations to oversee the project and provide cultural advice
3. Identifying potential services and conducting a scope of local services relevant to the program
4. Providing educator training to staff of early childhood learning centres through a workshop, providing the tools for staff to deliver parent training, and distribute printed materials and strategies to engage with children and families on optimal child restraint use
5. Offering information sessions to parents, presenting the dangers of suboptimal motor vehicle child restraint use and demonstrating correct use of restraints
6. Offering free fitting of age-appropriate child restraints and subsidised purchasing of restraints
7. Providing feedback to each service and key community organisation on the progress of the program
8. Building in elements to increase sustainability of the program beyond the project life

EVALUATION

A pre-test/post-test trial was used to evaluate the pilot program. Three early childhood learning centres in Shoalhaven were invited and participated in the pilot study (the Shoalhaven group). Centres were selected based on the number of children attending, sufficient physical access for safe observation, and at least 20% of the families to be of Aboriginal origin.

Program effectiveness was measured by comparing restraint use between the Shoalhaven group and a control group of comparison centres not engaged in the program.

Children in the Shoalhaven group receiving the Buckle-Up Safely program were matched 1:1 with children from the control centres, on factors known to influence restraint use e.g. age of the child, language spoken at home and annual household income.

Trained local Aboriginal research assistants observed how the child was seated in the restraint and how the restraint was installed in the car as the children arrived at each preschool/day care. They also conducted face-to-face surveys with the parents.

Further, a pre-test/post-test survey was conducted within the Shoalhaven preschools receiving the Buckle-Up Safely program to measure any changes in self-reported restraint use.

RESULTS

Observed restraint use was measured for 71 families in the Shoalhaven group and 71 matched families in the control group. Overall, few children were optimally restrained – 39% of children from the Shoalhaven group were optimally restrained and 31% from the control group. After controlling for the age of the parent interviewed (whether or not they were < 35 years), the Shoalhaven Buckle-Up participants were over twice as likely to have their child more optimally restrained than children from the control group (95% CI: 1.09 – 3.90). Parents aged 35 years or younger were over three times more likely to have their child more correctly restrained (OR=3.29. 95% CI: 1.51 – 7.17).
LESSONS LEARNED

FACILITATORS

• Community consultation with Aboriginal leaders and parents
• Receiving community support and engagement
• A local steering committee advising the project
• The support of established networks such as the reputable organisation, Kids and Traffic, to introduce the program to the early childhood learning centres, and the NSW Restraint Fitting Station network
• Pro-child safety attitude of early childhood educators
• Optimising consistent messaging across the different program elements
• A clear, illustrative audio-visual presentation demonstrating the safety benefits of child restraints
• Supportive legislation, which had recently been introduced

• It is labour-intensive to allocate, distribute and correctly install the appropriate restraint for each child in the program
• As some of the more financially disadvantaged families had difficulty affording even the subsidised restraints, there were some delays in uptake of the restraints offered, and several were accessed after the evaluation data were collected, resulting in an under-estimate of the impact of the program

ADVICE ON TRANSFERABILITY

At the time of writing, the program had been expanded and was running in 12 communities across NSW. The key advice to others implementing this program includes:

• Build an engaged Steering Committee with representatives from key Aboriginal organisations and community stakeholders
• Have Aboriginal leadership at all levels of the project
• Appoint local people to manage the program.
• Focus on capacity building through training of Aboriginal community workers in how to provide advice and fit child car seats, and how to run the program at each site
• Ensure that those responsible for the transport of children (e.g. transport officers within community organisations, and case workers) are included in the training

• Work with the local community, to develop local resources based upon consistent messaging and appropriate images. This includes identifying suitable existing resources
• Work with established education and restraint fitting networks provides a reputable introduction to the program and decreases labour-intensiveness of identifying, contacting and establishing rapport with early childhood learning centres
• While training preschool and day care staff to be able to deliver the program was intended to help the program achieve self-sustainability, staff reported that the co-delivery of presentations by 'outside' specialists improved the number of parents attending the educational session
• Ensure ongoing support to the centres to offset changes in staff and to explore alternative methods of purchasing subsidised restraints to address financial barriers experienced by some families
• Consider parental representation from each centre on the steering committee to aid program implementation and uptake
REFERENCES, ADDITIONAL INFORMATION


RESOURCES

Please contact Kate Hunter (details below) for available resources, including flip charts, posters, height charts, and question and answer sheets.

CONTACTS

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CHILD PEDESTRIAN INJURY PREVENTION PROJECT (CPIPP)
Perth, Western Australia

BACKGROUND
In 2011, 537 pedestrians between the ages of 0 and 16 years were hospitalised in Australia. In the same year, there were 14 pedestrian deaths amongst the same age group. Between 2002–2011, the estimated personal injury recovery cost of on-road pedestrian injuries for children aged between 0–15 years in NSW alone was $391,559,221, indicating significant economic impact of child pedestrian injuries.

As pedestrians, children under the age of 11 are particularly vulnerable to injury due to several physical and developmental limitations. The field of view of a child is impaired by both their lower eye-level and a reduced capacity to process information in periphery of their visual field. The understanding that both sound and vision are important cues for pedestrians is normally developed at around eight years of age. Other limitations include attention deficits, lower visual acuity and a limited perception of distance, speed and risk. Kerbside children are also less visible to drivers.

The Child Pedestrian Injury Prevention Project (CPIPP) was developed in response to these vulnerabilities and the reasonably high rate of pedestrian injury within primary school-aged children. The intervention involved a whole school and community-based approach in an effort to change the road safety knowledge and behaviour of primary school-aged children, as well as the behaviour of their parents, teachers and the surrounding community over three years from 1995 to 1997.

<table>
<thead>
<tr>
<th>IMPLEMENTATION LEVEL</th>
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</tr>
</thead>
<tbody>
<tr>
<td>APPROACH</td>
<td>Creating Safe Environments and Building Capacity</td>
</tr>
<tr>
<td>SETTING</td>
<td>Primary schools</td>
</tr>
<tr>
<td>DATE</td>
<td>1995–1997</td>
</tr>
<tr>
<td>TARGET GROUP</td>
<td>Children aged six to nine years of age, parents and carers, teachers, community</td>
</tr>
<tr>
<td>EVIDENCE BASE</td>
<td>Community-based education/advocacy programs to prevent pedestrian injuries in children 0–14 years result in a reduction in injuries. Pedestrian skills training leads to increased knowledge and improved child pedestrian crossing skills</td>
</tr>
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</table>

At the beginning of each year, teachers of the participating year groups at the intervention schools were given a half-day training workshop for the CPIPP and asked to present nine 40-minute lessons throughout the year and send home nine home-based activities. The key elements in these lessons and activities focused on developing pedestrian skills in a real road environment.

Along with the educational aspect of the intervention, school policy, infrastructure and environment were targeted. Schools were helped to update and actively implement road safety policies and to establish a community road safety committee to lobby for environmental change such as reduced speed limits, traffic calming, designated drop-off and pick-up areas and marked safe routes to school.

Following the success of the CPIPP, an Early Child Pedestrian Injury Prevention Project was also developed. The findings and resources of these programs are now disseminated throughout Western Australia by the Western Australian Department of Education’s School Drug Education and Road Aware (SDERA) program in three resources called Smart Steps, Challenges and Choices and Getting It Together: A Whole-School Approach to Road Safety Education.

POLICY BACKGROUND/DRIVING FORCE
At the time of the original implementation of the CPIPP, there was no contemporary, evidence-based road safety curriculum in Western Australia. There was a school health education program that included elements of road safety, however this program was developed in the early 1980s and was in need of an update to reflect current good practice principles. The CPIPP was developed to fill this gap in child road safety education and focus on the road environment.

PARTNERS
• Collaboration for Evidence, Research and Impact in Public Health (CERIPH), Curtin University
• Kids and Traffic NSW
• VicRoads
• Main Roads, WA
• Western Australia Police
• Western Australian Department of Education
• Local primary schools, staff, parents and students
AIMS AND OBJECTIVES

• To improve children’s pedestrian safety knowledge
• To improve children’s road-related behaviours—crossing and playing
• To reduce pedestrian injury in children

KEY STEPS

1. Development of the program through consultation with published literature, stakeholders and families to produce a practical resource based on good practice principles
2. Half-day training of school staff in the delivery of the program and follow-up assistance with implementation given where sought
3. Delivery of the program to school children and parents through classes and take-home activities and resources
4. Modification of the physical and sociocultural environment through updated road safety policies and establishment of road safety committees

EVALUATION

The evaluation of the CPIPP was undertaken as a longitudinal quasi-experimental trial over three years (1995–1997). The outcomes measured were child pedestrian safety knowledge and safe pedestrian behaviour (road-crossing behaviour and road playing behaviour). Three local government areas in Perth, Western Australia were selected based on similar rates of child pedestrian injuries per 10,000 licenced motor vehicles per year. Each area was randomly allocated to one of three treatments:

1. A school- and home-based education program as well as the policy and environmental measures described above
2. The school- and home-based education program
3. A nutrition education program and the standard Western Australian health education program, which served as the control treatment

Trained project staff conducted the baseline survey in May 1995 to assess the students’ knowledge and self-reported behaviour. Post-test surveys were conducted in November of 1995, 1996 and 1997 following the delivery of that year’s intervention. The post-test surveys were accompanied by observational data obtained by project staff to unobtrusively verify the road-crossing behaviour of a subset of students (n=80). There were 1,603 students that successfully completed all stages of the intervention.

RESULTS

No significant difference was found between the two intervention groups. However significant positive results were found between the interventions and the control group in observed road crossing behaviour (p=0.013) and reported road playing behaviour (p<0.001) with similar effect sizes across the three years. No difference was found in pedestrian safety knowledge (p=0.084).

LESSONS LEARNED

FACILITATORS

• Partnership with stakeholders from the outset of the project, meaning that the resources were developed to integrate into current programs
• Providing regular cues to action for children at home and at school with resources such as stickers, fridge magnets, posters, etc.
• Training of teachers is key in highlighting the importance of an updated, practical pedestrian safety program for children
• Integration of pedestrian safety tasks into regular curricular classes, helping teachers to cover both the core curriculum and CPIPP material
• Engaging parents in the program activities to keep them informed of good practice regarding the safety of their children

84 Good Practice Guide
BARRIERS

- Busy classroom schedules meant that pedestrian safety lessons were competing for priority with the required curriculum.
- Enacting and actively enforcing policy change in schools can be slowed by bureaucratic processes.
- Advice on Transferability.
- It is important to highlight the core elements of the program to teachers to ensure they are not omitted. While teachers delivered approximately 70% of the program across the three-year period, around 30% was not delivered across this period. Essential safety elements and practical sessions from the program may have been missed over this period.
- Ongoing on-demand access to teacher training after the initial half-day delivery could assist teachers in recalling information, key points and strategies. Follow-up dissemination of training materials via the internet or smartphone/tablet applications with text and video was suggested.
- It helps to impress upon schools the need to identify and reduce the unique hazards in their environment. Greater progress in hazard reduction was seen in schools where staff and parents took an interest in environmental safety.

REFERENCES, ADDITIONAL INFORMATION


RESOURCES

More information on SDERA’s various road education programs and resources can be found at: det.wa.edu.au/sdera/detcms/navigation/road-safety/

CONTACTS

<table>
<thead>
<tr>
<th>Name</th>
<th>Prof Donna Cross</th>
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<tbody>
<tr>
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<td>Email</td>
<td><a href="mailto:donna.cross@telethonkids.org.au">donna.cross@telethonkids.org.au</a></td>
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</tbody>
</table>
Quad bikes, or off-road four-wheeled powered vehicles, are the leading cause of unintentional injury-related death on farms in Australia. Between 2001 and late-November 2015, 219 quad bike-related fatalities occurred, two thirds of which were on farms. Children aged 0–15 years of age accounted for 18.3% of these fatalities, amongst the highest of all age brackets.²

In NSW, in the five years leading up to 2010/11, 2,036 child hospitalisations occurred as a result of off-road vehicle injuries. From 2003–2012, 25 children died due to the same causes, six of which were quad bike-related.³

In NSW there is currently no legislation restricting children from accessing and operating quad bikes or mandating the use of protective equipment such as helmets or crush protection devices. However, results of coronial inquests in NSW and Queensland have led to recommendations to introduce such legislation.⁴ Due to the lack of Australian examples and the importance of quad bike injury prevention, this case study from the USA has been included as an example of successful injury prevention in this area.

**Policy Background/Driving Force**

In the years 2004–2005, in the state of Massachusetts (MA), USA, children represented 30% (935 events) of all recorded quad bike-related injuries (quad bikes are referred to as all-terrain vehicles, ATVs, in the USA).

Of these, 309 required surgical intervention, 206 were admitted to intensive care units and 35 suffered severe head trauma. These 35 patients incurred acute care costs of US $2.3 million combined and will each have an estimated US $4 million cost associated with rehabilitation and long-term care over their lives.⁵ Following the death of their eight-year-old son, Sean, from a quad bike accident, Mark and Katie Kearney approached Sean’s physician, Dr Peter Masiakos and proposed advocating for legislation to protect children from the dangers posed by quad bikes. After almost four years of campaigning and with the support of injury data, the medical community, key legislators, a coalition of community support and the successful precedent of a similar law in Nova Scotia, Canada, An Act to Regulate the Use of Off-Highway and Recreation Vehicles – ‘Sean’s Law’ – was passed on 31 July, 2010.⁶

**Partners**

- The Kearney Family
- Dr Peter Masiakos, Director of Pediatric Trauma Surgery, Massachusetts General Hospital
- MA Senator Steven Baddour
- MA Senate President Therese Murray
- Other MA legislators
- Major Medical Centres in the state of MA
- Environmental Groups (including the Audubon Society)
- The League of Women Voters
- The Trail Riders Association

**Aims and Objectives**

The introduction of Sean’s Law⁶ aimed to:

Reduce the risk and incidence of injuries and fatalities associated with the use of quad bikes, especially in children.

Specifically, Sean’s Law mandates that:

- No child under the age of 14 years may operate a quad bike
- Children between the ages of 14 and 16 years may use quad bikes with an engine size of no greater than 90 cubic centimetres and under close adult supervision
- All quad bike operators must wear protective headgear
- All quad bike operators born after January 1, 1991 must successfully complete an approved safety and responsibility course
- There be set punishments, including fines or imprisonment, for its violation

**Key Steps**

1. Gathering Injury Data: state data from the MA Department of Public Health were accessed and analysed to ascertain the human and economic cost of quad bike-related injuries and fatalities

2. Educating Legislators: it was essential to dispel misinformation supplied to legislators by the pro-quad bike lobby and demonstrate that current self-regulating strategies were ineffective in reducing paediatric injury
3. Building a Coalition: Advocating to a wide range of lobbyists and key legislators who would contribute input to the proposed legislation and rally support of voters and politicians in order to ensure the passage of the bill.

EVALUATION
Hospital data from the state of MA in the five years following the passing of Sean’s law was analysed to assess its impact on quad bike-related injury and fatality rates in children. For quad bike injuries in children and young people, the largest decline in injury rates was seen in the 0-14 year age group, with a 45% decrease. There were no quad bike-related fatalities in this age group during the years following the legislation’s introduction.7

LESSONS LEARNED

FACILITATORS
- The willingness of a family affected by a paediatric quad bike fatality to advocate for change lent the campaign a more compelling and personal element
- Support of a wide range of multi-sectoral lobby groups dedicated to a common goal
- Availability of state and national injury data to support the need for legislative change

BARRIERS
- The impact of decades’ worth of pro-quad bike lobby misinformation circulated to legislators had to be overcome
- Overcoming reticence to change was necessary as MA was the first state in the USA to address quad bike safety in this way. In keeping with societal position statements, the initial language in the legislation aimed to restrict quad bike access to all children under the age of 16 years. As this was debated, the age restriction was lowered to 14 years in order to bring opponents on side

ADVICE ON TRANSFERABILITY
- Support of a key legislator, in this case Senator Baddour, led to the formulation of a bill that was both able to address the issue and to appeal to political and public interest
- Sustained support of dedicated parties is essential when the process of change is lengthy

REFERENCES, ADDITIONAL INFORMATION

CONTACTS
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Drowning is one of the leading causes of mortality in children 0-4 years of age. Between July 2013 and June 2015 in NSW, 27 drowning with or without morbidity occurred in private swimming pools in this age group. This represents the highest drowning rate of any age group.

The years of life lost due to death and disability from drowning in private swimming pools alone have an estimated economic burden of more than $23 million. The financial impact of drowning in NSW therefore remains high.

A focus on the implementation of prevention strategies continues to be essential in reducing the child drowning rate.

**POLICY BACKGROUND/DRIVING FORCE**

Annual Drowning Reports from the Royal Life Saving Society of Australia and an ongoing study with the Sydney Children’s Hospitals Network (SCHN), has helped to provide a more comprehensive understanding of trends in child drowning and the effectiveness of prevention strategies in reducing the child drowning rate.

The Swimming Pools Act 1992 (NSW) was passed to protect children under the age of five from drowning in private swimming pools. Since then, this legislation has been amended and strengthened through the passing of the Swimming Pools Regulation 2008 (NSW), the Swimming Pools Amendment Act 2009 (NSW) and the Swimming Pools Amendment Act 2012 (NSW). These legislations set the requirements for pool fencing (as described in the Australian Standard AS1926.1 – 2012, pool safety inspections and other pool safety measures. The most recent changes (2012) to the legislation require:

- a) A NSW State Government Swimming Pools Register
- b) Pool owners must register their pools on the State Register
- c) Pool owners need to pass a safety inspection and obtain a compliance certificate before sale or lease of their property from 29 April, 2016

Isolation four-sided fencing separating the pool from the rest of the property, as recommended by the Australian Standards, has been shown to be superior in reducing drowning incidents in young children compared to fencing enclosing the property and pool. However, compliance with and enforcement of the Standards remain critical issues. Anecdotal evidence suggests that in many NSW local government areas, compliance at first inspection was less than 10%. Private swimming pools that are non-compliant with Australian Standards have been strongly linked with higher rates of child drowning.

**PARTNERS**

- Sydney Children’s Hospitals Network
- The Children’s Hospital at Westmead
  - Kids Health
  - Centre for Trauma Care, Prevention, Education and Research
- Sydney Children’s Hospital, Randwick
- John Hunter Hospital, Newcastle
- NSW Water Safety Council
- NSW Office of Local Government
- NSW Ministry of Health
- NSW Ministry for Police and Emergency Services
- The Royal Life Saving Society of Australia
- The Samuel Morris Foundation (drowning prevention and support organisation)
- The Swimming Pool and Spa Association of NSW and ACT

**AIMS AND OBJECTIVES**

- To restrict access to private swimming pools in NSW by unaccompanied young children
- To increase compliance with fencing requirements among pool owners in NSW
- To decrease the drowning rate among children aged 0-4 years in private swimming pools in NSW
KEY STEPS

1. Collection of available data in order to identify trends in drowning and to assess the effectiveness of drowning prevention strategies

2. Engagement of a wide range of community stakeholders, including policy makers, researchers, medical personnel, advocacy groups, industry representatives, pool inspectors and government employees to form a Swimming Pool Safety Working Group in order to coordinate efforts to reduce child drowning in home swimming pools and make recommendations in this regard

3. Development of clear and strong legislation in the area of pool safety in order to provide a strong framework for enforcement of environmental modification measures, such as pool fencing, and other drowning prevention strategies

4. Education and awareness campaigns to reinforce the importance of drowning prevention strategies and the responsibilities of the pool owner in order to increase compliance with the legislation

EVALUATION

A Cochrane systematic review of the literature identified three rigorous evaluations in the Australia/New Zealand region, giving good evidence that

a) pool fencing reduces risk of child drowning by approximately 70-80% in both above- and below-ground pools

b) four-sided isolation fencing is superior to three-sided fencing around pools at reducing the risk of child drowning incidents (OR 0.23, 95% CI 0.07 to 0.44).1

In addition to pool fencing legislation, strategies such as public education, secure gates, inspection and enforcement are recommended to ensure long-term success.3

While no formal evaluation has been conducted on the effectiveness of the NSW pool safety legislation, unpublished data from the NSW Ministry of Health suggests that there was a decrease in swimming pool related drowning of children aged 0–4 years in the years following the original legislation in 1992.12 The NSW Child Death Review Team data on child drowning shows that the death rates from drowning in this age group dropped by about 0.2 per 100,000 population in the years 2010–2014 in association with legislative amendments in 2008–2012.13 The NSW Swimming Pool Register shows that at least 340,000 pools existed in NSW in September 2015, with an extra 5,000 installed each year.14 This indicates that whilst there has been some success in reducing absolute death rates, the rate of drowning deaths per population at risk as a proportion of all children in NSW exposed to a household with a pool has likely decreased even more significantly.

FACILITATORS

• Supportive legislation regarding pool fencing standards

• Highly committed partners aiming to reduce child drowning in NSW

• Comprehensive data on drowning deaths and drowning with and without morbidity, including detailed information on the circumstances and strategies to prevent drowning

• Research indicating compliance with pool fencing legislation and the need to strengthen the legislation and compliance levels

BARRIERS

• Prior to the study, there was a lack of routine collection of drowning data that went beyond location, gender and age

• Limited funding for the evaluation of education campaigns

• Complex legislation leading to difficulty of compliance by pool owners and enforcement by council inspectors

• The need for policy makers to balance personal responsibility, education and regulation

• No current requirement for private swimming pools to undergo regular safety inspections in NSW. Current inspections in NSW are local council or owner-initiated
ADVICE ON TRANSFERABILITY

• Establish strong working relationships with external stakeholders
• Focus efforts on legislative changes, as these play a vital role
• Systematic collection of high-quality drowning morbidity and mortality data is essential as it informs the design and evaluation of drowning prevention programs
• Utilise child drowning data, as well as data on drowning with and without morbidity as circumstances differ between these two data sets
• Focus on programs that target capacity building, policy and environment changes as these have been critical in reducing drowning in NSW
• Implementation of regular, mandatory pool inspections would help to increase compliance and may reduce the drowning rate further - this has been seen in Western Australia, where compliance rates rose from 45% to 71% and toddler drowning deaths decreased by 46% in the eight years following the introduction of compulsory inspections.

REFERENCES, ADDITIONAL INFORMATION


RESOURCES


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In Australia, 60% of children between the ages of five and 14 years participated in some form of organised sporting activity outside of school in the year leading up to April 2012. In the same age group, approximately 10% of all males participated in the game of cricket. Cricket has been associated with some of the highest rates of sports injury amongst adult participants in Australia. However, these figures may not be indicative of the extent of child injury in cricket as there is a lack of research in this area. The varying factors between junior and senior cricketers such as skill, physical development, match duration and use of protective equipment may lead to different injury patterns between age groups. The intervention described in this case study was the first in the published literature to examine both the trends of child injuries in cricket over multiple seasons and the effect of mandating helmet use on these injury rates.

In 2004–2005, the Sutherland Shire Junior Cricket Association (SSJCA) made the use of helmets compulsory for all batters. This followed the introduction of mandatory injury data collection for the association which indicated a higher than expected occurrence of head and neck injuries. The effectiveness of this regulation was extrapolated from injury data by researchers at the NSW Injury Risk Management Research Centre.

**PARTNERS**
- Sutherland Shire Junior Cricket Association
- Local clubs within the SSJCA
- Junior members of the SSJCA clubs and their parents and caregivers
- NSW Injury Risk Management Research Centre, University of New South Wales (UNSW)

**AIMS AND OBJECTIVES**
To reduce the frequency of injuries to junior cricketers, both overall and in batters, through policy mandating the use of protective headgear.

**KEY STEPS**
1. Gather Support: There was a growing consensus amongst parents and clubs at SSJCA that injury reduction amongst players should be made a priority
2. Collect Injury Data: Software was designed to include the collection of injury data on SSJCA’s online database. To complement this tool, collection of such data was made mandatory for all clubs across the association
3. Identify Trends: The data was used to identify injury types of particular concern. Head injuries were found to be higher than expected
4. Discuss Policy Change: In April each year, all clubs within SSJCA meet to discuss the previous season and any changes for the following year. With the support of injury data showing high levels of head injuries, clubs embraced the idea of compulsory helmet policy
5. Introduce Policy Change: In the 2004-05 season, following two serious injuries to batters in the previous season, SSJCA introduced mandatory use of helmets for batters at all activities under the association (training, matches, gala days, etc.)

**EVALUATION**
Injury data was collected from all junior clubs participating in the SSJCA competition from the under-eight year’s age group (U8), U10, U12, U14 and U16 across three consecutive seasons from the 2002–2003 season. Policy mandating the use of helmets for all batters was introduced in the 2004–2005 season. There were 1,146, 1,261 and 1,215 registered players in the association across these seasons respectively. Match scorers recorded the occurrence of acute injuries, their circumstances and the details of the players.

De-identified data were provided by the SSJCA to the research team which were then analysed to determine the frequencies of different injury types, their distribution amongst players and the effect of the helmet regulations on injury rates.
RESULTS

There was a large reduction in the injury rates of batters between the 2002–2003 season (62% of all injuries, 95% CI 58%–69%) and the 2004–2005 season (36%, 95% CI 32%–40%). Even more striking was the decrease in head/neck/face injuries to batters which decreased from 62% (95% CI 49%–76%) to 35% (95% CI 22%–48%) to 4% (95% CI 0%–9%) across each of the three seasons.1

In addition to these results, qualitative feedback was also sought on the introduction of the policy. SSJCA committee members attended several matches across the association following the introduction to gauge parent responses. Overall attitudes to compulsory headgear were positive, with parents seeing helmets as a minor expense to ensure the safety of their children.

LES SONS LEARNED

FACILITATORS

• Consistent data collection and record keeping by the cricket association
• Positive response from parents who were keen to decrease injury risk for their children
• In-house design and development of injury collection software

BARRIERS

• Data was unable to determine whether players received multiple/recurrent injuries or their exposure time
• Initial reservation to introduce policy due to projected cost to clubs and parents, health concerns about helmet sharing and associated backlash
• Limited sample lends only limited power to the findings
• Only acute, immediate injuries were recorded, possibly leading to underrepresentation of injuries with delayed onset of symptoms

ADVICE ON TRANSFERABILITY

• Collecting injury data is key to establishing the need to implement policy change
• Having a strong, thorough process for instigating change is key to enacting policy within an association
• SSJCA draft proposed changes in April each year and discusses these with executive members of their clubs at a general meeting
• Feedback is taken and policies are reformulated and voted on. If acting in the interest of the sport, the SSJCA has power to make executive decisions

REFERENCES, ADDITIONAL INFORMATION


CONTACTS

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Sydney Children’s Hospitals Network
In Australia, 60% of children between the ages of five and 14 years participated in some form of organised sporting activity outside of school in the year leading up to April 2012. Injury rates amongst participants in some popular sporting activities have been estimated to lie between 10-25% and to incur high personal, economic and social costs.

In 1999 the Australian Injury Prevention Advisory Council was convened and advocated risk management in sport as a ‘good buy’ for the following decade. Following this recommendation, in 2003 the NSW Department of Sport and Recreation released the ‘It’s Your Business’ guide and program to provide guidelines to sporting organisations on governance strategies, legal obligations and risk-management and minimisation. However, during consultations it was reported that many clubs still needed some guidance in how risk-management strategies could be applied in a community sport.

Youthsafe developed the SafeClub program in partnership with the University of NSW Injury Risk Management Centre. Soccer was identified as the most suitable sport to trial the program due to its well-understood injury profile and documented poor safety policies and practices. The training program reflects a five-stage model of risk management: risk identification, risk assessment, risk management, implementation and evaluation. This framework has been advocated as the best approach in sports safety.

No previous evaluations of a risk-management intervention in sport were found in the reviewed literature. As such, SafeClub and its evaluation commenced building the evidence base for successful implementation of a risk management approach in promoting sports safety practices.

**PARTNERS**
- Youthsafe
- Soccer NSW
- NSW Health (Northern Sydney Area Health Service)
- NSW Sporting Injuries Committee
- Injury Risk Management Research Centre (UNSW)
- Regional Soccer Associations
- Community Clubs and committee members

**AIMS AND OBJECTIVES**
To improve the sports safety policies, infrastructure and practices of community sports clubs.

- Policy: have current and documented policies on sports safety, risk management and injury response procedures
- Infrastructure: Practical implementation of sports safety plan and safety resource building (e.g. injury data collection, safety budgets, safety committee/ordinator)
- Safety Practices: Measured effect of sports safety policy and infrastructure implementation

**KEY STEPS**
1. Develop a sports safety-focused risk management training program (three x two-hour sessions) based on adult-learning principles and injury-prevention
2. Recruit clubs at general meetings of regional or state sporting associations
3. Tailoring intervention sessions to maximise attendance and coverage of content based on time constraints of committee members; SafeClub was piloted as five sessions and cut down to three for this evaluation
4. Deliver the intervention to club committee members, identifying priority safety concerns, introducing principles of risk management and supplying framework and resources to develop sports safety plan
5. Request that participants try out, between training sessions, ideas discussed during the training and report on progress at their club
6. By the end of the training, encourage participating clubs to develop their own sports-specific, sustainable manual on sports safety

**IMPLEMENTATION LEVEL**
- Regional

**APPROACH**
- Building Capacity

**SETTING**
- Urban community soccer clubs

**DATE**
- 2005

**TARGET GROUP**
- Volunteer committee members of community sports clubs where the majority of members are children under the age of 18 years

**EVIDENCE BASE**
- A risk management approach to injury prevention can improve safety practices in sport.
EVALUATION

Evaluation of the SafeClub intervention was undertaken as a controlled pre-test/post-test controlled trial. Performance across the areas of club safety policy, infrastructure and overall safety was assessed with the use of the Sports Safety Audit Tool (SSAT)* modified based on key areas highlighted in the published literature concerning good practice in sport. Club committee members completed the audit tool at baseline, post-intervention (post-season) and at 12-months. 67 clubs successfully completed all three stages of assessment (27 intervention clubs vs. 40 control group clubs).1

Recruitment of clubs commenced by contacting Soccer NSW in order to find two pairs of suitably similar regional associations. From each pair, one was randomly allocated to the control and the other to the intervention. SafeClub was presented to the clubs at the annual general meetings of the associations in 2004 and each club was subsequently contacted by telephone to organise baseline data collection. The intervention was then delivered by the project officer in the form of three two-hour sessions, two weeks apart, in the middle of the 2005 soccer season. Post-intervention data was collected by the project officer via telephone survey following the end of the 2005 season and a 12-month follow-up was taken mid-season 2006.1

RESULTS

At baseline, no significant difference was found between intervention and control clubs in any of the three areas assessed. Clubs participating in the SafeClub program demonstrated significantly higher SSAT scores across all three areas at post-intervention assessment (13 out of 56 SSAT items received significantly higher positive scores from intervention clubs, p<0.001) with an even greater effect size at 12-month follow-up (30 out of 56 items, p<0.001). For example, at the 12-month follow-up 52% of intervention clubs vs. 20% of control clubs (p=0.006) had a documented policy on head injuries. There were no items on which control clubs scored significantly higher than intervention clubs at the post-test or 12-month follow-up.1

LESSONS LEARNED

FACILITATORS

• Support of a state-level sporting body (Soccer NSW) provided a top-down, internal incentive for club participation
• External funding meant that clubs did not have to commit their own funds in order to participate in the program
• A dedicated project officer ensured delivery of intervention and audit
• Flexibility of the SafeClub program allowed for each club to develop a tailored, relevant sports safety plan. This also means that the program and its principles of risk management should be readily transferable across a wide range of sporting codes

BARRIERS

• Difficulty securing continuous funding may prevent the sustainability of the program
• Delays in recruitment of clubs and difficulty in delivering the intervention due to volunteer committee members having insufficient time to commit to the intervention
• Competing priorities within clubs and sports associations may limit uptake

ADVICE ON TRANSFERABILITY

• Driving participation from a national or state level of government or sporting body ensures that SafeClub and risk management in sport are given priority
• Tying participation in SafeClub and sports risk management to incentives such as funding, legislation or reduced insurance premiums may improve and sustain participation
• Provision or set-up of a support network for clubs participating in SafeClub is seen as an important way of assisting clubs to sustain their participation
REFERENCES, ADDITIONAL INFORMATION


RESOURCES

* Sports Safety Audit Tool:


  SafeClub introductory video: youtube.com/watch?v=5Lz5Q4q7iYA


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BACKGROUND

Traumatic Brain Injury (TBI) affects an estimated 10 million people worldwide each year. In Australia, Europe and the USA, incidence of TBI leading to hospitalisation lies between 60-250 per 100,000, with 80-90% of these cases classified as mild.

Concussion, a subset of mild TBI, is a complex pathophysiological process resulting from trauma to the brain. Common symptoms of concussion include nausea, headaches, amnesia, confusion, blurred vision and loss of consciousness in a small proportion of cases.

Sport injuries account for approximately 20% of all TBI cases as reflected by hospital data. However, concussions resulting from sporting injuries are often not reported and so the true figure may be underestimated by a factor of six to 10. In Victoria, Australia the number of hospitalisations due to sports-related concussion increased by an average of 5.4% per year from 443 in 2002–03 to 621 in 2010–11, contributing about one third of the total increase in concussion hospitalisations. The average annual hospital costs of these sporting-related injuries is estimated at $1,993,867.

The Concussion Awareness Training Tool (CATT) was developed to help standardise concussion recognition, treatment, management and prevention in child and youth sports. It includes learner-directed training modules in concussion; diagnostic tools; links to parent, patient and clinical resources and information handouts, journal articles, related websites and videos and case studies. It contains three online toolkits for: Medical Professionals; Parents, Players and Coaches; and School Professionals. The CATT is updated monthly to reflect the constantly evolving research in the area of concussion management. Although developed in Canada, this case study has been included due to its worldwide availability and the high prevalence of concussion sports injuries in Australia.

POLICY BACKGROUND/DRIVING FORCE

In the lead up to the development of the CATT, there was growing attention in the media and the medical community concerning the dangers and potential consequences of brain injury including concussion. Examples include the death of British actress Natasha Richardson from undiagnosed head trauma sustained during a skiing lesson, long-term recovery from concussion by 2010 Olympian Sydney Crosby, continuing recovery from 2013 head trauma by Formula 1 racing champion Michael Schumacher and the concussion of former US Secretary of State Hilary Clinton which led to the 2014 Concussion Summit at the White House. Regular concussion stories from the American National Football and National Hockey Leagues as well as the Australian National Rugby League have also been constantly featured in the media.

The four meetings of the International Conference (2001, 2004, 2008, 2012) on Concussion in Sport have developed the Zurich Consensus Statement, which outlines good practice for recognition, treatment, management and return-to-activity policy of concussions in sport. This statement has informed the development of the CATT.

PARTNERS

- British Columbia Injury Research and Prevention Unit
- British Columbia Provincial Health Services Authority
- British Columbia Children’s Hospital Foundation
- Child Health British Columbia
- British Columbia Ministry of Health
- LIFT Philanthropy Partners, Canada
- GF Strong Rehabilitation Centre, Adolescent Complex Concussion Clinic

AIMS AND OBJECTIVES

- To develop an online accessible, evidence-based tool to raise concussion awareness in recognition, treatment, management and prevention among (1) Medical Professionals, (2) Parents, Players and Coaches, and (3) School Professionals
- To keep resources updated monthly
- To make this resource free of charge

THE CONCUSSION AWARENESS TRAINING TOOL (CATT)

British Columbia (BC), Canada

<table>
<thead>
<tr>
<th>IMPLEMENTATION LEVEL</th>
<th>The CATT was developed in BC for use worldwide</th>
</tr>
</thead>
<tbody>
<tr>
<td>APPROACH</td>
<td>Building Capacity</td>
</tr>
<tr>
<td>SETTING</td>
<td>Online access to concussion education and awareness training</td>
</tr>
<tr>
<td>DATE</td>
<td>2013 – Ongoing</td>
</tr>
<tr>
<td>TARGET GROUP</td>
<td>Children five to 17 years of age, parents and caregivers, school professionals, medical professionals and community</td>
</tr>
<tr>
<td>EVIDENCE BASE</td>
<td>Safety education for participants and coaches can prevent sports injuries1–3</td>
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KEY STEPS

1. Recruitment of key stakeholders in the area of concussion assessment
2. Development of content of the CATT modules based on good practice principles in the Zurich Consensus Statement and new emerging evidence-based published literature
3. Peer-review of CATT module content and reception of feedback
4. Revision of CATT modules based on feedback
5. Launch of the CATT modules through healthcare infrastructure, sports clubs and schools

EVALUATION

At the time of writing this guide, the Medical Professionals (MP) and Parents, Players and Coaches (PPC) modules of the CATT have been separately evaluated. Both evaluations were undertaken with pre-test/post-test designs. Baseline scores were taken prior to the intervention with a post-intervention survey taken three to four months after delivery of the CATT. The School Professionals module is currently undergoing evaluation.

A total of 59 medical professionals (34 physicians and 25 nurses) took part in the evaluation of the MP module. Recruitment took place in tandem with planners and authorities. Subjects included emergency/trauma physicians, general practitioners, paediatricians and nurses from several hospitals throughout BC. Participants were contacted via email, completed online registration and consent and the surveys were delivered via a secure online Canadian survey company. Survey scores for each participant were given for their:

1. attitude towards concussion as a health issue
2. knowledge of concussion good practice and symptomatology
3. clinical practice with regard to good practice in diagnosis and management of concussion

Thirty-five subjects participated in the PPC module. Participants were all current parents of children or youth participating in sports with partnered sports clubs from the Lower Mainland, Fraser Valley and Victoria areas of BC. Participants were recruited via emails from their child’s sports club. Registration, consent and administration of the surveys were completed in the same fashion as the MP module. Knowledge and attitude scores were assigned to participants based on their responses to the surveys.

RESULTS

Surveys of those who participated in the MP module evaluation demonstrated a significant increase in physician clinical practice (+10.84%, p=0.001), physician knowledge (+1.83%, p=0.057), nurse clinical practices (+15.88%, p=0.005) and nurse attitude (+2.05%, p=0.035) scores, suggesting significant improvement in these areas. Some statistically significant decreases were seen in physician attitude (-1.91%, p=0.041) and nurse knowledge (-1.08%, p=0.035).

Surveys of those who participated in the PPC module evaluation showed statistically significant positive change in knowledge scores amongst all participants and those who indicated that they had completed the PPC module (+6.8%, p=0.002 and +7.9%, p=0.007 respectively). No significant change was found in the attitude scores of parents.

LESSONS LEARNED

FACILITATORS

• Increasing international profile of concussion injuries and recognition of need for awareness and standardised care
• Support of government and stakeholders.
• Sufficient and continuous funding for the development of the CATT and its sustainability
• Focused and ongoing activities aimed at dissemination of the CATT and its content.
• Evaluation incorporated into project planning
BARRIERS

• The constantly evolving nature of research into concussion entails a shifting evidence base, requiring the tool to be regularly updated
• Incorporating perspectives from multiple stakeholders into new tools and materials can be difficult
• Delays were experienced in developing the web platform
• Difficulty recruiting sufficient numbers of participants for evaluation (survey fatigue), detracted from the statistical power of the evaluation
• Breaking down the barriers between organisations and working efficiently and effectively together can present difficulties

ADVICE ON TRANSFERABILITY

• It is important to have a systematic dissemination strategy to ensure effective distribution
• Working with key stakeholders in the area for each module/audience enhances success
• It is essential to take into consideration the needs and constraints of the intended audience and to deliver the educational resources in a way that is practical for them

REFERENCES, ADDITIONAL INFORMATION


RESOURCES

The Online Concussion Awareness Training Tool is available free of charge for medical professionals, school professionals and for parents, players and coaches. Supplementary resources may be found in the ‘Resources’ sections. Please see: cattonline.com

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In 2007, The Children's Hospital at Westmead (CHW) identified falls by children from residential buildings as an increasing cause of injury, often associated with serious and fatal outcomes. During the period 1998 to 2008, 91 children were admitted to CHW after falling from windows. Almost all of these children fell from a window in their own home. Of the children admitted to hospital over that period:

- 80% were under five years old;
- 80% had fallen more than two metres;
- 80% had significant/severe injuries;
- 60% were boys;
- 50% of falls were associated with furniture near the window;
- A significant number were rated with a high injury severity score (ISS).

**POLICY BACKGROUND/DRIVING FORCE**

In 1972, an education Campaign, ‘Children Can’t Fly’ was run in New York City (NYC). Free window guards were also distributed to at risk populations, with both strategies leading to a 50% reduction in hospitalisations. In 1976, a law was passed requiring all landlords of multi-storey properties in Harlem, NYC with resident children aged less than 10 years, to install window guards. This led to a 96% reduction in window fall admissions from 1979–1983.

NSW’s ‘Kids Don’t Fly’ falls prevention campaign was based on these two successful American campaigns, but developed to fit the NSW context, its strata and tenancy laws and the Building Code of Australia.

**AIMS AND OBJECTIVES**

To reduce the number of children falling from residential buildings in NSW, thereby reducing mortality and morbidity in children by:

- Raising awareness among parents and carers, landlords, owners’ corporations and NSW Housing of the dangers to young children of windows and balconies
- Building the capacity of major stakeholders to address child safety around including: window manufacturers (through the Australian Window Association), the Real Estate Institute of Australia and the Institute of Strata Title Management
- Gathering the support of the Australian Building Codes Board to undertake a review of the Building Code of Australia to specifically consider the issues associated with children falling from windows and balconies
- Obtaining support for a change to the Residential Tenancies Act 2010, requiring landlords to provide safety devices on openable windows located above the ground floor
- Obtaining support for changes to the Strata Schemes Management Act 1996, requiring owner’s corporations in residential buildings to have all common property openable windows above the ground floor fitted with safety devices
**KEY STEPS**

The campaign was conducted over two phases, spanning 2009–2013. The major steps during this time were:

1. Data collection by the hospital to provide qualitative evidence to back up anecdotal evidence from staff in the trauma unit on the size and nature of the problem
2. A symposium to gather interested parties and stakeholders resulting in knowledgeable and passionate individuals forming a working group. This group went on to identify the issues and determine steps to be taken
3. The Public Relations department from CHW sought media coverage following each new case or spate of new cases. Families who incurred a tragedy or near tragedy were often spokespeople
4. Relationships were developed with retailers, windows associations, window installers and safety product manufacturers
5. The working group lobbied the Australian Building Codes Board to mandate protective measures in all new buildings
6. The working group lobbied NSW parliament to effect change in the Residential Tenancies Act 2010 and the Schemes Management Act 1996 mandating landlords and owners’ corporations to retrofit protective measures on existing buildings. One Member of Parliament (Minister Anthony Roberts) was very supportive and helped to achieve this change

**EVALUATION**

To date, this initiative has not been formally evaluated in Australia. The evidence of the program’s success is drawn from the legislative changes that have now been passed nationally and in NSW and from the success of this approach in NYC in the 1970s and Boston in the 1990s, the increased availability of window guards and latches and an informal review of injury data.

The changes to the **Australian Building Code** that resulted from the campaign required that:

- In any new building, any openable bedroom window above the ground floor that has a fall of two metres or more to the surface below have protection to prevent children falling through them

The changes to NSW legislation that resulted from the campaign required that:

- By March 2018, all strata buildings with resident children in NSW must be fitted with devices that enable their windows to be locked at 12.5cm when the device is engaged
- Owners’ corporations must have such devices fitted on all common property windows above the ground floor to prevent children falling through them

In addition, child safety products (window latches and window guards) that were previously only available overseas are now available in Australia for consumers to retrofit onto existing windows.

Unpublished data from CHW between 2011–2015 shows that the number of children being admitted to hospital following a fall from a residential window has remained relatively low but consistent in number. The latest Census data shows that between 2006 and 2011, the number children aged less than 15 years living in flats, units or apartments rose 10%. This figure is estimated to have increased over the 2011–2015 period. Therefore, whilst the number of children admitted to CHW due to falls from a window has remained relatively constant since the campaign, the number of children living in apartment buildings has risen, indicating a decrease in incidence rates. It is believed that the number of children presenting to hospital following a fall will begin to decrease following the full implementation of the NSW legislation by March 2018.

**LESSONS LEARNED**

**FACILITATORS**

- Local data collected by the CTCPER was powerful in establishing the nature of the problem and the need to address the issue
- Utilising good practice by modelling a successful campaign from the USA with published evidence of its effectiveness, showing a dramatic (96%) reduction in hospital admissions
- A broad range of committed and credible individuals on the working group contributed knowledge, expertise and influence and to identify across multiple spheres
- Implementing public relations and awareness-raising strategies by using the media to share advice from experts and real life patient stories
BARRIERS

• Balconies remain a challenge as their design differs greatly, thereby not allowing a single safety solution
• Objections on aesthetic grounds are raised by owners corporations
• Delays between the enactment of legislation and changes to building stock
• The cost of window locks and their installation

ADVICE ON TRANSFERABILITY

• Gathering local detailed data is essential to provide drive and credibility
• Establishing a multi-skilled and committed working group brings a broad-spectrum of expertise and connections to the campaign
• Focusing on change to legislation for owned and rented residential stock in order to provide protection to a larger population
• Raising awareness within the community in order to engage with them on the issue

REFERENCES, ADDITIONAL INFORMATION


RESOURCES


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URL: kidshealth.schn.health.nsw.gov.au
BACKGROUND

Data from an AIHW report in 2006 showed that burns were among the top three causes of injury-related death in children. Of these deaths, 96% were recorded as unintentional. The BurnSafe Program was developed in response to this prominent issue, offering sessions to primary schools covering identification of burn, fire and safety hazards; risk-taking behaviours and decision making; awareness of the physical, social and psychological impact of burns; and effective first-aid.

Strategies employed in the program were based on evidence of effective burns prevention educational approaches including active participation by the children in the educational sessions, as well as repeated exposure to the first aid messages.

The sessions are run by BurnSafe educators employed by the Julian Burton Burns Trust. The educators have varying educational backgrounds all relating to training, education or health. The teaching of safety is part of the national curriculum for primary school children, so the program is designed to help schools meet this requirement.

PARTNERS

- The Julian Burton Burns Trust
- Primary school staff and students
- Burns Services at the Women's and Children's Hospital, Adelaide
- South Australian Fire and Emergency Commission (SAFECom) (funding partner)
- BHP Billiton (funding partner)
- Fay Fuller Foundation (philanthropic organisation)
- Local Fire Brigades
- Country Fire Service

AIMS AND OBJECTIVES

To reduce the incidence and impact of burn injuries through:

- Reducing at-risk behaviours for burn injuries such as scalds and camp fires
- Increasing knowledge of first aid for burn injuries

KEY STEPS

The following steps were instrumental in the development of the program:

1. Identifying the problem in terms of the data (size of the problem and key groups at risk)
2. Designing the program to address the key risk behaviours and so it met the curriculum needs of schools
3. Developing a set of take-home informational resources for the family: pamphlets, homes safety checklist, first aid fridge magnet, first aid banner pen
4. Running a pilot program with several schools before refining the final program to ensure its acceptability and effectiveness
5. Delivering the program in schools over one to three days
6. Using active participation to embed the knowledge around activities such as Stop, Cover, Drop and Roll for extinguishing a clothing fire and actively practicing the steps of correct first aid, taking into account different source options for cooling the burn
7. Maintaining the knowledge post-program by providing schools and teachers with lesson and activity ideas for extending and repeating the learning

EVALUATION

A pre-test/post-test student evaluation survey with 12-month follow-up has been conducted on approximately 5% of the 10,000 students who participate in the program each year. This includes questions on burns prevention and first aid knowledge and practices.

A question in the 12-month follow-up survey covers whether the take-home fridge magnet within the bag of program resources was used.

A process evaluation was conducted with teachers in terms of their satisfaction with the program and the extent to which it fits with the needs of the school and the teacher.
RESULTS

Over the five years to 2015, 1,855 students participated in pre- and post-session tests, and 608 students participated in a 12-month follow-up. At the pre-test, on average, 22% of students provided the correct first aid response of water for 20 minutes to cool the burn. At the immediate post-test this increased to 100% and was sustained at 77% at the 12-month follow-up. The steps of ‘Stop, Cover; Drop and Roll’ for extinguishing a clothing fire saw a pre-test knowledge of 43% (nominating all 4 steps), rising to 90% at the 12-month follow-up. The high level of pre-test knowledge may have been due to other burn prevention education in schools such as a visit from the local fire service.

Over the five years, 100% of teachers surveyed (n=1,843) stated they would highly recommend/recommend the program.

Analysis has included a comparison of responses concerning knowledge of the critical first aid steps for those who do and do not have the fridge magnet on their fridge. Of the 316 students who were asked about the correct steps of first aid and the display of the magnets:

• 89% of students stated that the burns first aid magnets were on display for their family at home
• 93% of students with a magnet on display knew to cool a burn with cool running water for 20 minutes compared to 60% of those students without the magnet

LESSONS LEARNED

FACILITATORS

• Ensuring the program fits with the curriculum needs of schools
• Conducting a pilot program with several schools before refining the program and its resources
• Approaching funders (SA government, a public company and a philanthropic organisation) with the already piloted program to increase funding success
• Using physical props in the presentations, such as kettles and activities where the students are actively involved, such as ‘Stop, Cover; Drop and Roll’ – these were better received than DVDs
• Collaboration with professionals involved in burns treatment to ensure all new methods and evidence is incorporated into the program
• Collaboration with educational and early learning professionals, the local fire brigades, and burns survivors in the development of the program
• Involvement and commitment by the head trauma surgeon to add credibility for some stakeholders and gain media interest

BARRIERS

• Difficulties in achieving sustainable funding as most sources are short-term
• Tendency for most participants to want to gloss over the essential first aid messages
• Tendency for people to assume burns are less serious than they are
• As seeking medical treatment for a potentially serious burn injury is one of the program’s messages, evaluation in terms of changes in number of cases of burn injuries presenting to hospital is difficult to measure

ADVICE ON TRANSFERABILITY

• Collaborating with partners and key informants including the hospital burns unit, fire services and educators in the development and delivery of the program and resources makes the program locally relevant and credible
• Incorporating sustainable features is key to the longevity of the program’s effects. These include:
  • Take-home fridge magnets with first aid messages
  • Promoting policy changes such as school canteen policies about not serving two-minute noodles, or draining all excess water from them before giving them to the children
  • Providing schools with a safety checklist to look at the school environment in terms of burn safety
REFERENCES, ADDITIONAL INFORMATION


RESOURCES
Details about the program: burnstrust.com.au/prevention/burnsafe-schools-program/
Teacher resources: burnstrust.com.au/prevention/burnsafe-schools-program/teacher-resources/
The ‘Cool Swipe’ app – a game with burn safety messages: itunes.apple.com/au/developer/julian-burton-burns-trust/id947151349
play.google.com/store/apps/developer?id=Julian+Burton+Burns+Trust
YouTube:
youtube.com/channel/UCCuOUCwWQvFBqctVqtaq3aCg

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Almost 90% of hot tap water scalds requiring admission to hospital occur in the home and over 90% are sustained in the bathroom. Scalds to young children are the fourth leading cause of hospital bed days due to injuries.

Prior to the campaign described in this case study (conducted during the early 1990s), The Australian Standard (AS/NZS 3500.4) for home hot water temperature stated that hot water must be stored at a minimum temperature of 60°C, to inhibit the growth of Legionella bacteria. This was based on claims about increased risk of infection with Legionella pneumophila associated with water temperatures below 60°C, however these claims were not supported by evidence. However, no regulation existed regarding the delivery temperature. At 60°C it takes only two to five seconds for all full thickness (third degree) burn. This meant that most home hot water delivery temperatures in Australia were delivering hot water that even a short exposure could result in a serious injury. The most vulnerable groups to tap hot water scalds were young children, older people and people with physical and cognitive impairments.

**PARTNERS**
- Burns Unit, The Children’s Hospital at Westmead (CHW)
- Kidsafe, NSW
- Sydney Children’s Hospital, Randwick
- NSW Office of Local Government
- Early Childhood Health Centres, NSW Ministry of Health
- Migrant Health Centre
- NSW Translation Authority
- The Master Builders Association
- NSW Plumbers Association
- Reliance Manufacturing Company (Queensland)

**AIMS AND OBJECTIVES**
To decrease the incidence and severity of scald injuries in children by:
- Increasing the proportion of households with young children with a bathroom hot water temperature of no more than 50°C
- Increasing the availability and number of household products with scalds minimising features
- Strengthening policy to support scalds prevention
- Improving the knowledge and skills of parents and carers of young children about scald injuries, prevention methods and first aid treatment

**IMPLEMENTATION LEVEL** State

**APPROACH** Creating Safe Environments, Establishing Effective Policies and Regulations, Building Capacity

**SETTING** Homes of young children (0–4 years)

**DATE** 1992 – Ongoing

**TARGET GROUP** Parents and carers of children aged 0–4 years, plumbers, electricians, hot water industry

**EVIDENCE BASE** Legislation regulating the temperature of hot water from household taps is effective in reducing scald injuries. Legislation is most effective when supported by educational activities.
KEY STEPS

The campaign was conducted over two phases, spanning 1992–1994. The major steps during this time were:

• Consultation with a wide range of stakeholders in hot water delivery – industry, trade groups, retailers and regulators (Australian Standards, NSW Ministry of Health, local government), as well as those responsible for the care of children (parents, carers and Early Childhood Health Centres) and the treatment of children with burn injuries (Burns Units, Children’s Hospitals)
• Advocate for investment in this area based on direct cost savings due to a reduction in hospital bed days – as well as a second, and rapidly growing target group of frail older people, who are also at high risk of hot tap water scalds in the bathroom
• Development of a social media campaign to reach parents and carers of young children with messages about measuring their hot water temperature, and taking steps to ensure its delivery in bathrooms is of no more than 50°C, as well as other scalds prevention messages
• Particular targeting of parents and carers from culturally and linguistically diverse backgrounds with messages about scalds prevention and effective first aid of burns and scalds and making information available in relevant languages
• Development of a NSW Ministry of Health policy to support the delivery of hot water temperature of no more than 50°C in homes as well as an Australian Standard (AS/NZS 3500.4)7 for new homes, and working with local councils to encourage the adoption of this new Australian Standard for all plans including residential bathrooms
• Education and awareness-raising among trade groups (particularly plumbers and electricians) to encourage them to promote services and products that will ensure safe hot water delivery temperatures in homes with young children – articles and advertorials were featured in trade journals including one with a 32 page lift-out

EVALUATION

The campaign evaluation comprised several components.6, 8

1. Process evaluation of the campaign strategies to assess its reach. This found that 80,000 hot water temperature testing cards and accompanying brochures were distributed through 450 Early Childhood Health Centres and 400 pharmacies. Approximately 24,000 were requested via the advertised telephone number. Nearly 2,000 coffee mugs and 80,000 magnets with scalds prevention messages were distributed
2. One pre-test and two post-test telephone surveys (using random digit dialling) were conducted with a sample of 800 NSW households. A comparison state was used at pre-test but could not be used as a valid control group at post-test due to implementation of a similar campaign
3. Sales data for tempering valves (which mix cold water with hot before its release in bathrooms)
4. Analysis of hospital separations data for scalds among children 0–4 years for the eight-year period 1988/9 to 1995/6
5. Examination of hospitalised tap water scalds as a proportion of all scalds for the decade following the campaign and change in regulation
RESULTS

- The telephone survey indicated a significant increase in knowledge by parents and carers regarding several scalds prevention messages and an increased proportion (from 8% to 24%) able to nominate tempering valves as a way to reduce hot water temperatures in the bathroom. Of this random sample, the 25% who reported receiving a brochure and temperature testing card were significantly more likely to take some action to reduce the risk of scalds, including reducing the temperature.

- One reported NSW sales figure for tempering valves increased by 42%—1000% following the campaign.

- Age-standardised data on hospital separations showed there was a 36% decrease in the hospital bed days due to serious scalds for the two years following the hot tap water phase of the campaign, as compared to the six years prior to the campaign. There was a 10% reduction in the total number of scald cases in children aged 0—4 years for this two-year period, and a 27% reduction in total bed days due to all scalds in the same age group.

- Based on direct medical costs associated with serious scalds to young children, it was estimated that the return on investment in the campaign was between $3.8 and $7.6 per dollar spent.

- In 1994 an amendment was passed to the Australian/New Zealand Standard AS/NZS 3500.4 which required all bathroom renovations and new homes to deliver hot water for bathing/showering purposes at no more than 50°C.

- For the period from 2006 to 2015, hot tap water scalds resulting in hospital admission in NSW for 1 or more days has continued to decline (n=65 for 2006—10, and n=40 for 2011—15) and the proportion of all scalds that are tap water scalds has also declined for these periods (13.3% and 9.9% respectively)*

LESSONS LEARNED

FACILITATORS

- Widespread consultation to identify the barriers and opportunities associated with the key policy, product and capacity building strategies for a comprehensive campaign targeting scalds in young children.

- Engagement of the head of the Burns Unit at CHW to act as a spokesperson for the campaign.

- Identifying the win-win strategies for manufacturers and retailers of scalds prevention products and for tradespeople working in this area.

- The development of the specifically designed temperature testing card which provided parents with an actual reading of their hot water temperature and campaign message about the recommended temperature.

- Early Childhood Health Centres in NSW were an important mechanism by which to reach young parents.

- Significant budget for the campaign and its evaluation which was returned several times over in terms of reduced hospital costs.

- Research indicating the approach of reducing hot water temperatures in bathrooms can significantly reduce severe scalds in young children.

BARRIERS

- Opposition from vested interest groups who saw the potential loss of market share if the campaign messages meant people would switch to gas hot water systems (as they were consumer adjustable) and use plastic plumbing pipes instead of copper (which is only possible at lower storage temperatures).

- Existing policies and regulations which encouraged hot water temperature storage temperatures above 60°C (believing falsely that this is required to eliminate Legionnaires disease).

- Enacting the Australian Standard AS2500.4 for all new and renovated bathrooms needed agreement by each local council.

ADVICE ON TRANSFERABILITY

- Where possible, achieve sustainable change through supportive policy and regulation and/or work to increase awareness of and compliance with appropriate current regulations.

- Focus efforts on the win-win strategies with industry/retailers/trade groups as they have the potential to significantly increase promotion, to reach target groups and sustain the interventions beyond the campaign.
• Seek out and mass produce the temperature testing cards which are an appealing cue to action for parents and grandparents, who often have no other means to identify their hot water temperature

• Focus on the communities at higher risk, such as those which are culturally and linguistically diverse as there are clear signs of improved knowledge among this group from the original campaign and a targeted campaign that followed this group.

REFERENCES, ADDITIONAL INFORMATION


* Data provided by NSW Agency for Clinical Innovation Statewide Burn Injury Service Data Registry, HREC reference number 2008/11/113.

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**SAFE HOMES SAFE KIDS PROGRAM**

**Illawarra Region**

**BACKGROUND**

Consistently higher injury rates amongst Aboriginal children reveal that Aboriginal children and families have not benefited from the interventions which have been effective in reducing injury rates for non-Aboriginal children. Intervention strategies in the Aboriginal community must go beyond traditional approaches and take into account the broader range of social, historical and cultural factors impacting on Aboriginal populations, but few culturally acceptable Aboriginal-led interventions have been evaluated.

The Illawarra Aboriginal Medical Service (IAMS) developed a home visiting safety program called Safe Homes Safe Kids which targets disadvantaged Aboriginal families with young children living in the Illawarra region of NSW. The Program operates as a home visiting model delivered by Aboriginal Family Workers in the parent/carer’s home.

The Aboriginal Family Workers aim to improve the safety and wellbeing of families with young children by providing information and resources, support with parenting, facilitating informal support groups and facilitating access to appropriate services. The service delivery they provide is flexible and offered in convenient settings, in order to engage clients who do not ordinarily access services. This involves building trusting relationships with clients. The Safe Homes Safe Kids program takes place in the home of parents and carers with young children.

Aboriginal Family Workers conduct home visits and provide intensive family assistance to vulnerable at-risk families, utilising a locally produced safety promotion package. The safety promotion package comprises locally developed safety education materials, a booklet with local artwork, as well as a kit of home safety devices intended to prevent injury to young children.

**POLICY BACKGROUND/DRI VING FORCE**

The IAMS has received funding for the Aboriginal Family Worker positions from the NSW Department of Family and Community Services (FACS) since 2005 under the Aboriginal Child Youth and Family Strategy (ACYFS). The ACYFS is a state-wide prevention and early intervention strategy that aims to provide Aboriginal children with the best start in life. The ACYFS places great emphasis on investment in the 0-5 year age range in keeping with the strong body of evidence demonstrating the importance of the early years in a child’s development, and the long-term effectiveness of supporting parents and children during these years. Aboriginal Family Workers in NSW Local Health Districts are employed to deliver services to families in accordance with this strategy. The ACYFS works in close partnership with Families NSW, and the NSW Aboriginal Maternal and Infant Health Strategy.

**PARTNERS**

- Illawarra Aboriginal Medical Service
- NSW Ministry of Health
- Parents/Caregivers

**AIMS AND OBJECTIVES**

The overarching aims of Safe Homes Safe Kids are to reduce child injury, and raise awareness about safety by promoting safety in the home environment. The specific objectives are:

- To provide education, information and advice in order to assist parents and carers in understanding their child’s development
- To heighten parents’ awareness of the dangers around the home
- To work in partnership with families to identify and achieve family goals
- To provide parenting information and advice
- To support families to develop practical life skills to assist them in raising their children and to build confidence in their parenting skills
- To establish and maintain specific and identified links within the local Families NSW child and family network that ensure vulnerable Aboriginal families can access services that suit their circumstances and needs
- To assist families by building connections with appropriate services, community supports and informal social networks with other families

<table>
<thead>
<tr>
<th>IMPLEMENTATION LEVEL</th>
<th>Regional</th>
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<tbody>
<tr>
<td>APPROACH</td>
<td>Creating Safe Environments and Building Capacity</td>
</tr>
<tr>
<td>SETTING</td>
<td>Urban family homes</td>
</tr>
<tr>
<td>DATE</td>
<td>2013–2015</td>
</tr>
<tr>
<td>TARGET GROUP</td>
<td>Parents and carers of Aboriginal children aged 0–5 years with a focus on first-time parents and teenage parents</td>
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<tr>
<td>EVIDENCE BASE</td>
<td>Home safety education that is delivered one-to-one and face-to-face either at home or in a clinical setting, especially with the provision of safety equipment, is effective in increasing a range of safety practices and it may also reduce injury rates</td>
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**EVIDENCE BASE**

Home safety education that is delivered one-to-one and face-to-face either at home or in a clinical setting, especially with the provision of safety equipment, is effective in increasing a range of safety practices and it may also reduce injury rates.
**KEY STEPS**

1. Train Aboriginal Family Workers to deliver the program and conduct home visits to distribute home safety kit and booklet
2. Establish a network of service providers (including Family and Community Services, health care professionals and counselling services) within the area and to work with Aboriginal Family Workers in referring appropriate families into the program
3. Home visits conducted by Aboriginal Family Workers to provide safety information booklet and home safety kit, helping the family install the included devices and answer any questions
4. Ensure Aboriginal Family Workers provide ongoing support through follow-up visits/phone calls and refer families other services as required

**EVALUATION**

A process, outcomes and impact evaluation was conducted to determine the effectiveness of the program. Additionally, a collaborative approach was taken to the evaluation and included formative components involving ongoing feedback and reflection between the researchers and the Aboriginal Family Workers to improve the implementation of the project.

The following impact and outcome measures were assessed through a combination of qualitative and quantitative methods:

- The degree to which the program achieved outcomes for individuals, clients and their families including:
  - Changes in the level of engagement of Aboriginal parents in the safety program
  - Improved client child safety knowledge and skills
  - Changes in attitudes of parents and/or carers towards child safety
  - Observable changes in the home safety environment
  - Improved uptake of child safety devices by clients
  - Improved attitudes of clients towards home and community safety
  - Increase in the prevention of child injury in the home and community
  - Sustained changes in the home safety environment of clients
  - Sustained family access to child and family services
  - The effectiveness of the intervention approach in the context of the IAMS
  - Longer term societal level impacts of the Program

Qualitative data were collected from interviews with 10 clients (parents and carers of Aboriginal children), 11 IAMS staff and 14 external stakeholders (health professionals and Family and Community Services). Quantitative program and client service data were collected (including IAMS reports, client feedback forms, home risk assessments, product checklist forms, and monthly reports of client’s contact with Aboriginal Family Workers and external family services) for 51 participants across 17 households over a 12-month period from October 2013-September 2014. Service mapping of 35 relevant organisations was undertaken to better understand how the Safe Homes Safe Kids program operates in the context of service delivery to children and families more generally within the Illawarra region.

**RESULTS**

Results indicated that the program clearly addressed an important need for a safety education program delivered by Aboriginal Family Workers for vulnerable families. Clients expressed a high degree of satisfaction with the Aboriginal Family Workers’ delivery of the program and the holistic model of service provision offered by the IAMS.

Improvements were recorded for each of the main participant. Key results were: increased engagement in safety programs; improved child safety knowledge (parents/carers, children, Aboriginal Family Workers); improved child safety skills (parents/carers, Aboriginal Family Workers); increased accessibility for parents/carers, children and families to services; improved attitudes to home and community safety.

There were also reports of child injuries being prevented and indicators of changes occurring in the home safety environment. The evaluation provided opportunities for collaboration between researchers and the IAMS, capacity building in injury prevention and research and evaluation skills for the Aboriginal Family Workers.
LESSONS LEARNED

FACILITATORS

• The cultural appropriateness of the program delivered by Aboriginal Family Workers meaning that clients were accepting of the home visiting component as an appropriate intervention
• The skills and knowledge of the Aboriginal Family Workers around the complex needs of Aboriginal families
• Multifaceted support from the family workers (referring clients to other services, providing assistance with transport, etc.)
• Flexibility of program delivery within the home, making them feel comfortable and confident to actively engage in the program and to gain child safety knowledge and skills alongside their families
• Delivery from the Illawarra Aboriginal Medical Service as part of a holistic service delivery model giving clients access to a network of internal health and welfare services that are delivered from a trusted service provider within the Aboriginal community

BARRIERS

• Availability of trained and experienced Aboriginal Family Workers
• Ability to recruit and retain experienced staff members that are able to cope in this sensitive area
• Costs associated with providing a home safety kit and booklet for families
• Low number of participating families, meaning quantitative data was not used in the final evaluation as it would have little statistical power

ADVICE ON TRANSFERABILITY

• Aboriginal Family Workers should develop skills in ongoing monitoring and evaluation activity aimed at making the program more sustainable in the future
• Creating a strong internal (within the IAMS) and external network of providers and services that the Aboriginal Family Workers are familiar with is important to assist with referrals both into the program and for referring families to other services they may need
• Regular feedback about the program from parents and carers, Aboriginal Family Workers and a network of service providers encourages client engagement in child safety programs and could lead to more innovative and improved practices

REFERENCES, ADDITIONAL INFORMATION


RESOURCES

The Safe Home Safe Kids kit and booklet are available through the Illawarra Aboriginal Medical Service. The safety kit comprises various safety devices such as non-slip bathroom accessories, cushioning, doors and locks, electrical covers and burn prevention covers. These are distributed to clients according to their needs. The home safety booklet has been designed with culturally appropriate pictures and covers the dangers that are present within different rooms of the home and the risks to children at different ages.

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Injuries are the number one cause of death for Australian children over the age of one.

Effective action is essential to reduce the burden of injuries on children, their families and the whole community; and to ensure that resources made available for injury prevention are directed to measures that are most likely to work.

The NSW, Australia edition of the Child Safety Good Practice Guide builds on the good work of the European Child Safety Alliance to provide practitioners, researchers, decision makers, and legislators with an evidence-focused resource to inform their work, funding and recommendations. It includes the most up-to-date summary of current “good practice” for each of the leading causes of injury to children in NSW, along with case studies that exemplify good practice principles in action.

“No matter what your professional background, I trust the NSW Child Safety Good Practice Guide will provide you with the motivation, understanding, evidence and real-life examples of what can be done to promote the safety of our precious children”

Professor Les White AM DSc
Inaugural NSW Chief Paediatrician