

CYPIP



Children & Young People
Injury Prevention Working group

NSW child and young person unintentional injury prevention



acyp.
Office of the Advocate for
Children & Young People

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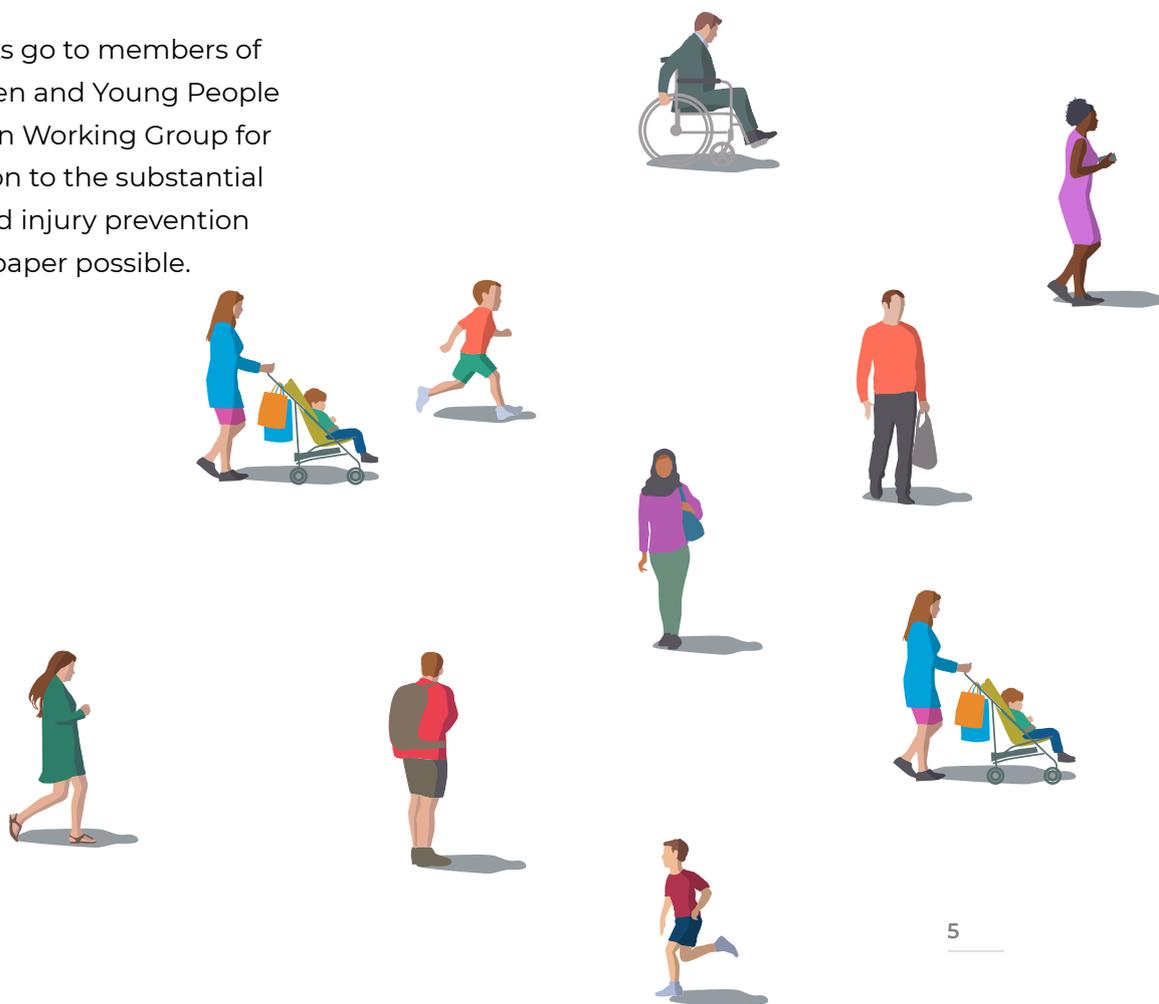
Foreword



This desk review has been produced to provide a broad overview of the existing research and best practice with respect to unintentional childhood injury prevention in a local and international context with the aim to identify priorities for child and young person injury prevention in NSW.

This paper reflects on current evidence with respect to the prevalence and management of unintentional child and young person injury. It derives its content from international baseline research by the World Health Organization (WHO) and UNICEF as well as identifying existing Australian and NSW specific injury prevention research.

Particular thanks go to members of the NSW Children and Young People Injury Prevention Working Group for their contribution to the substantial research on child injury prevention that made this paper possible.



The members of the NSW Children and Young People Injury Prevention Working Group are drawn from a cross section of academia, government and non-government organisations. The group seeks to facilitate the reduction of risk, severity and frequency of unintentional injury to children and young people aged 0-24 years in NSW.

The purpose of the Working Group is to:

- Provide a forum for the discussion of children and young people injury prevention priorities in NSW;
- Facilitate member collaboration on children and young people injury prevention projects;
- Identify priority areas for action on unintentional injury to children and young people, and
- Guide the direction of children and young people injury prevention planning, research and policy in NSW.

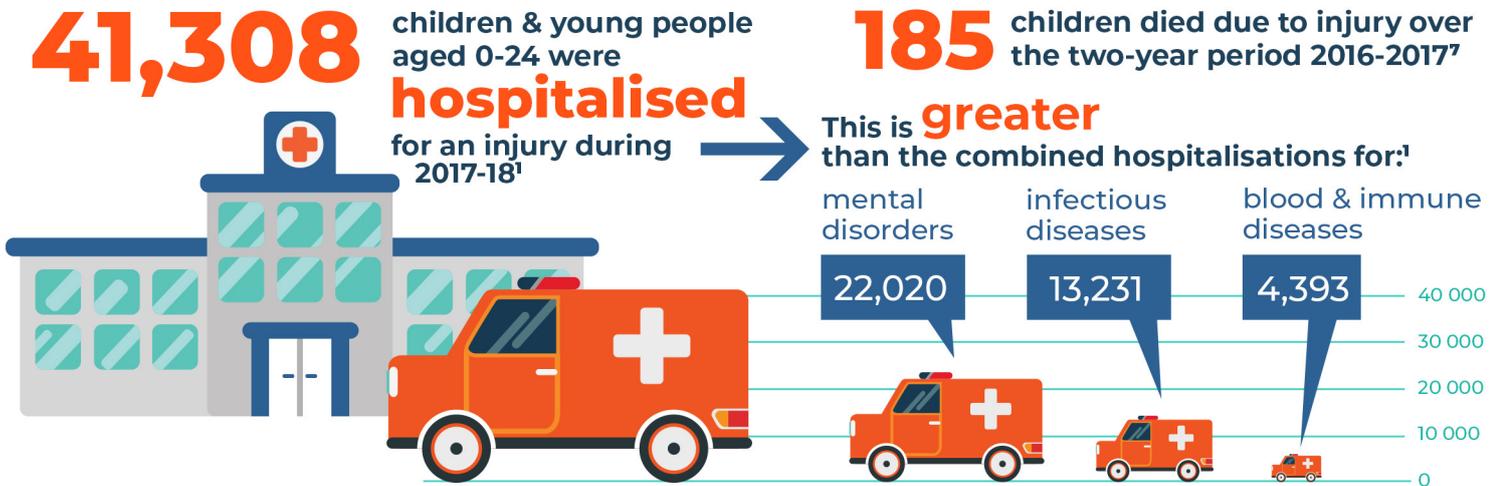
The Working Group seeks to build on significant work already done and utilise recent research into the prevalence of unintentional injury to children and young people in NSW. Individually, members of this Working Group already monitor, deliver and support existing unintentional injury prevention initiatives. By bringing individuals together for the purposes of communication and collaboration this Working Group can be used to advance the children and young people unintentional injury prevention agenda in NSW.

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It is appropriate to particularly acknowledge the research of Associate Professor Rebecca Mitchell (Macquarie University), Professor Rebecca Ivers (UNSW), Professor Kate Curtis (USyd) and Professor Kathleen Clapham (UoW) which continues to examine and promote children and young people unintentional injury in NSW and Australia.

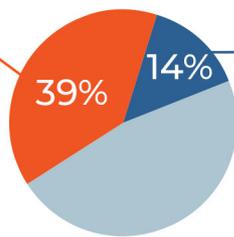
Statistics on child and young person injuries

in NSW



Causes of Injury

for children aged 0-17, **falls** were the **most common** cause of hospitalisations²



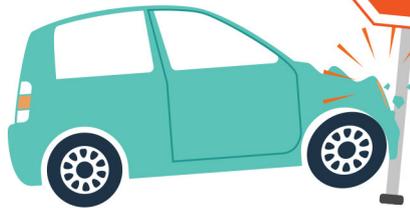
Road transport injuries

were also a common cause of hospitalisations for injury

drivers under the age of 25 are up to

5x

more likely to be involved in a motor vehicle crash resulting in death or serious injury⁶

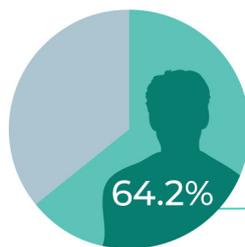


workplace injuries are also significant; **more than**

15,000 young workers are injured each year³



At-risk Groups



males make up nearly **two-thirds** of injury hospitalisations amongst those 0-24¹

Financial Cost

average cost in Australia of an injury hospitalisation for a child 16 years or younger is **\$3,119**,⁵ and young workers collectively receive **\$60 million** in workers' compensation each year.³

¹ Centre for Epidemiology and Evidence. HealthStats NSW. Sydney: NSW Ministry of Health. Available at: www.healthstats.nsw.gov.au

² AIHW: Harris CE & Pointer SC 2012. Serious childhood community injury in New South Wales 2009-10. Injury research and statistics series no. 76. Cat. no. INJCAT 152. Canberra: AIHW

³ Safework NSW, Safety in the workplace for young workers: Snapshot of workers, up to 25 years old https://www.safework.nsw.gov.au/_data/assets/pdf_file/0014/430610/young-workers-infographic-.pdf

⁴ Möller, H, Ivers, R, Clapham, K, Jorm, L. 'Are we closing the Aboriginal child injury gap? A cohort study' Aust N Z J Public Health, 2019; 43(1): 15-18. <https://onlinelibrary.wiley.com/doi/full/10.1111/1753-6405.12866>

⁵ Mitchell, RJ, Curtis, K, Foster, K. 'A 10-year review of child injury hospitalisations, health outcomes and treatment costs in Australia' Injury Prevention 2018; 24: 344-350

⁶ NSW Centre for Road Safety, Results of the NSW Intelligent Speed Adaptation Trial: Effects on road safety attitudes, behaviours and speeding, 2010

⁷ NSW Child Death Review Team 2019. Biennial report of the deaths of children in New South Wales: 2016 and 2017. NSW Ombudsman, Sydney:

https://www.ombo.nsw.gov.au/_data/assets/pdf_file/0020/71237/Biennial-report-of-the-deaths-of-Children-in-NSW_2016-17.pdf

Introduction

Injuries to children and young people can have a range of immediate consequences, up to and including death, as well as having ongoing impacts. The WHO recognises childhood injury¹ as the biggest threat to the survival of children over five years old worldwide². It acknowledges, however, that death is not the most common outcome of childhood injury. Non-fatal injuries are estimated to affect between 10 and 30 million children and young people each year³.

In addition to the immediate consequences of the injury, an injured child or young person may face ongoing physical limitations, neurodevelopmental problems, chronic pain and associated psychological issues⁴.

The Convention on the Rights of the Child emphasises a child's right to the highest attainable level of health and safety. In Australia, a signatory to the Convention, unintentional injury is the leading cause of death for children aged 1 to 16 years⁵.

Approximately 1,500 per 100,000 children and young people in Australia are hospitalised due to injury each year. In a retrospective epidemiological analysis of injury-related hospitalisation involving children and young people aged 16 years or less, researchers found that the incidence of injury had not shown a significant change in ten years between 2002 and 2012⁶. Reducing the incidence and severity of injuries to children and young people continues to be a matter of national concern⁷.



New South Wales (NSW) has recognised the need to prioritise injuries to children and young people and in 2014, held the NSW Paediatric Injury Management and Research Forum (the Forum) under the joint auspices of the NSW Research Alliance for Children’s Health (RACH), NSW Kids and Families, and the Population Health Research Collaborative (PHRC) of the Sydney Children’s Hospitals Network. It identified a number of priorities to guide the strategic direction of injury prevention in NSW moving forward including:



The creation of a child and young person injury prevention leadership group:

Establishing a cross-sector steering group to lead priority setting, identifying and defining strategies for the field of paediatric injury in NSW



The identification of evidence-based priorities:

The collation and analysis of datasets for the surveillance, monitoring and benchmarking, including opportunities to identify emerging issues and highlight dangerous products, equipment and settings by the steering group



Improved data collection and analysis:

The emphasis on ensuring the availability of high-quality, timely service-related data is collated and available to inform further development of services for acute and ongoing management of children and young people surviving serious injury



Promotion of the need for funding and awareness raising:

Develop funding mechanisms that will facilitate and support research initiatives and cross sector collaborations that will progress the research required to inform policy for injury prevention in NSW⁸.



Since the Forum, unintentional injury to children and young people has been the focus of substantial research and analysis, much of it focused on how NSW currently seeks to prevent unintentional injury and what can be done to decrease its impact for children and young people living in NSW.

Meanwhile, “injury, poisoning and other external causes” remains the leading cause of emergency department visits among 0-17yr olds in NSW⁹ and across Australia childhood injury rates have not decreased, thereby ensuring child injury remains a “costly and tragic public health issue in Australia”¹⁰.

This paper will directly reference this research and seek to summarise the strengths, gaps and best practices relating to the prevention of child and young person injuries and what opportunities have been identified for improving injury prevention efforts in NSW.

**What
strengths
have been
identified?**



NSW injury professionals

The injury prevention agenda in NSW has a wide range of experts dedicated to promoting awareness and developing strategies and policies that better manage injury in children and young people.

Many of these experts are members of the NSW Children and Young People Injury Prevention Working Group¹¹, as well as the Childhood Injury Prevention Alliance and are also working with the Federal Government on the new National Injury Prevention Strategy to reduce risk of injury for Australian children.

There has also been a strong history of NSW cross-government collaboration around injury prevention.

For example, the Ministry of Health and the then Roads and Traffic Authority funded the trial of the WHO Safe Communities in 3 locations in NSW which implemented numerous injury prevention initiatives for children and young people¹².

A further example is the cross-government collaboration through the NSW Water Safety Taskforce. This had membership across most government agencies, along with NGOs and had a focus on children and young people.

The Taskforce used evidence from research conducted to amend the NSW Swimming Pool legislation, trialled backyard swimming pool compliance checks, and professional development for child injury prevention activities for community health care workers.

In 2014, NSW Health Paediatric Injury Management and Research Forum participants, which included over 100 clinicians, researchers and planners, believed that NSW “major paediatric trauma centres perform at, or close to, international best practice...”¹³.

Participants felt that NSW practitioners demonstrated “a strong research tradition focused on quality improvement”¹⁴.

The Forum also identified a willingness of professionals to “facilitate ongoing collaboration and develop leadership on injury into the future”¹⁵.

The Injury Prevention Research Reference Group was formed to progress the recommendations of the Forum. The Group met over the next 3 years and funded a number of important projects focusing on injury prevention specific to the population of children and young people.

Injury prevention research

Nationally, the significance of unintentional childhood injury prevention was acknowledged by the publication of the first national report on childhood injury in Australia in 2017¹⁶. It has been further emphasised by the Federal Government through its commitment in the May 2018 budget to fund a national childhood injury prevention plan¹⁷.

Recently, NSW has also benefited from focused research on the characteristics of childhood injury and the strategic options for research, data and stakeholder coordination in this area. This has led to ongoing improvements in interventions that aim to minimise childhood injury.

“Medical advances, pre-hospital intervention and trauma management, legislative change and the introduction of safety initiatives (such as swimming pool fencing, helmet use, child proof

medicine containers, non-flammable clothing, hot water tempering) and mechanical safety advances (including motor vehicle safety assisted technologies, such as rear view cameras) have all contributed to increasing the survival of children following traumatic injury and/or in the reduction of the severity of the injury sustained”¹⁸.



NSW best practice examples

In 2016, the Sydney Children’s Hospitals Network, in conjunction with partners including NSW Health, Kidsafe and Neura, published the Child Safety Good Practice Guide that detailed examples of good investments in unintentional child injury prevention and safety promotion¹⁹. Many of these examples of best practice were of campaigns active in NSW and included the following:

- **Safe Koori Kids program**
South Western Sydney
 - **Buckle Up Safely: Improving child restraint use among culturally and linguistically diverse groups**
Southwest and Western Sydney
 - **Buckle Up Safely: Safe travel for Aboriginal children**
Shoalhaven NSW
 - **Swimming Pool Fencing Legislation**
NSW
 - **Compulsory Protective Headgear in cricket**
Sutherland Shire, NSW
 - **Safeclub Sports risk management program**
Greater Sydney
 - **“Kids don’t fly” , Residential building window safety campaign**
NSW
 - **“Hot Water Burns Like Fire” Scalds Prevention campaign**
NSW
 - **Safe Homes Safe Kids program (Aboriginal focused)**
Illawarra region
- This list is not comprehensive and does not include initiatives that, although evidence-based and validated to be best practice, have not received funding to be implemented.
- For example, the NSW Government’s Graduated Licensing Scheme (GLS) supports new drivers under 25 years of age gain experience and become safer drivers. It spreads the learning process over four years and provides additional supports and restrictions for new drivers²⁰.
- Research has demonstrated its value in preventing road-related youth injuries and deaths²¹.
- The list also does not include initiatives that may be effective in preventing injuries, but where measurement of impact is problematic.
- For example, playground standards that address surfacing materials and optimal equipment height are recognised as good practice²². However, determining the effectiveness of playground standards in Australia is difficult because of the range of factors that need to be taken into consideration for a comprehensive evaluation, such as child or young person characteristics, supervision, type/maintenance of surfacing, equipment, and exposure factors²³.

Injury prevention data collection

NSW has 10 contributing partners to the Australia New Zealand Trauma Registry, a major part of the Australian Trauma Quality Improvement Program²⁴ which “is currently a collaboration of over 30 major trauma centres across Australia and New Zealand whose mission is to improve survival, enhance the quality of trauma care, and optimise recovery by shared data and shared knowledge”²⁵.

The following NSW trauma centres submit de-identified datasets for assessment including details of the injury event, the nature of the injuries that were sustained, the treatment received and the discharge status of the patient:

- The Children’s Hospital at Westmead
- John Hunter Hospital
- John Hunter Children’s Hospital
- Liverpool Hospital
- Royal North Shore Hospital
- Royal Prince Alfred Hospital
- St George Hospital
- St Vincent’s Hospital
- Sydney Children’s Hospital
- Westmead Hospital

Currently, New South Wales Institute of Trauma and Injury Management is implementing the NSW Trauma Outcomes Registry and Quality Evaluation (TORQUE) to monitor health outcomes post-serious injury in NSW up to 12 months post-discharge²⁶.

Data detailing hospitalisations caused by unintentional injury and poisoning to children and young people can be sought from HealthStats (NSW Health), an interactive, web-based application that allows users to freely access data and tailor reports about the health of the New South Wales (NSW) population.

And a data set managed by Transport for NSW, Centre for Road Safety (CRS) set links road trauma data from NSW Health, emergency and inpatient, NSW Ambulance, the State Insurance Regulatory Authority (SIRA), icare (Insurance & Care NSW), the NSW Police Force and NSW Mortality Data²⁷.

The data linkage allows CRS to identify the number of serious injuries (hospitalised people) from crashes on NSW public roads. The data also includes all emergency departments presentation associated with MVCs. By linking data the cohort is more comprehensively described and complete.

Nationally this work is unique. Despite these efforts, many gaps remain in preventing unintentional injury of children and young people. Circumstances identified as requiring further attention are discussed below.

**What gaps
have been
identified?**

Despite the significant social and economic impact of unintentional childhood injury to communities around the world, the WHO concluded that childhood injury as a public health priority has been neglected on an international scale²⁸. The WHO's World Report into Child Injury Prevention resolved that the magnitude of the problem compels concerted effort on a multi-sectoral scale by every nation²⁹.

Significant research³⁰ into both NSW's and Australia's children and young people injury prevention efforts and systems identified a number of significant gaps in current practice that created barriers to decreasing the instances and impact of injury on children, young people and their families.

Gaps in data surveillance systems

Australian researchers have repeatedly detailed the challenges they face seeking to identify the causes, characteristics, treatment and disability rates of children and young people subject to injury. One challenge is that information about injuries to children and young people is often derived from multiple administrative data collections, none of which were specifically designed to conduct injury surveillance³¹.

In 2017, Mitchell & Testa identified 12 data collections related to injury morbidity and mortality in NSW alone³².

However, they found that these data collections were not always ideal for injury surveillance purposes finding that some data variables, for example the location and activity at the time of an injury, were not being accurately recorded³³.

None of the identified databases (apart from the National Coronial Information System) “effectively captured all the information recommended by (the WHO) for injury surveillance”³⁴.

These gaps “make it difficult to gain a complete picture of the scale of childhood injury and disease prevention... (and) reduce capacity for direct comparisons between NSW and other jurisdictions”³⁵.

An additional challenge when seeking information about injury of children and young people is that data relating

to children and young people can be subsumed within whole population’s data.

Data collection may also have different classifications or variables and age categorisation will vary across organisations³⁶.

Researchers have recommended that a Federal injury surveillance system be created to target the collection of injury specific information and address these data gaps³⁷.

Further, the lag time between when data is collected and when it is made accessible can cause “data collection (to) lose currency as time progresses”³⁸.

Researchers have recommended establishing a routine injury surveillance system using real time access to hospital record data which would be critical to monitoring and responding to childhood injury in an evidence informed way³⁹.

Coordination of stakeholders / children & young people injury prevention infrastructure

In analysing the existing mechanisms that surround childhood injury prevention, researchers found that although there were a “wide range of frameworks and policies that address childhood injury...⁴⁰” and that “significant work (was) being undertaken by a large number of effective and varied groups...”⁴¹, there was “no formal coordination mechanism within NSW”⁴². Researchers noted a lack of clarity as to who has responsibility for coordination and leadership of child injury prevention in NSW⁴³.

An additional number of significant barriers to coordination of children and young people injury prevention were identified⁴⁴ including:

- Injury being a complex category with multiple mechanisms, causes and contributing factors;
- Lack of clear and consistent leadership from Government
- Funding challenges
- Data availability and access
- Working in silos
- Research challenges and
- Community attitudes.

What gaps have been identified? —

In relation to best practice childhood injury prevention, researchers identified a pattern of collaboration in Canada, New Zealand and the United States amongst others⁴⁵. It was suggested that to be effective in implementing evidence-based strategies Australia needed to create a national injury prevention framework and implementation plan⁴⁶. NSW was also found to have “considerable scope for a NSW focused strategy”⁴⁷.

Subsequent to these findings, there has been great strides in injury focused organisational strategies at both the Federal and State level in 2018:

In May 2018:

The Federal Government announced it would develop a new National Injury Prevention Strategy to reduce the risk of injury for Australian children.

The Strategy “will identify priorities across a range of groups and settings, with a focus on Aboriginal and Torres Strait Islander communities. The strategy aims to reduce deaths and hospitalisations due to injury, and ongoing repercussions like physical or mental impairment⁴⁸”.

The Childhood Injury Prevention Alliance (CHIPA) has begun working with the Preventative Health Policy Branch at the Federal Department of Health⁴⁹.

In July 2018:

The NSW Children & Young People Injury Prevention Working group held its first meeting at the offices of the Advocate for Children and Young People (ACYP) with ACYP acting as secretariat. In consultation with NSW Department of Health and the CDRT, leading government, non-government and academic representatives were invited to sit on the Working Group.

In accordance with the Terms of Reference, the goal of this group is to “facilitate the reduction of risk, severity and frequency of unintentional injury to children and young people aged 0-24 years in NSW”.

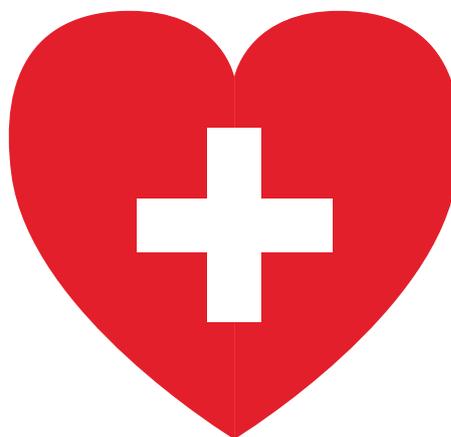
The Working Group also seeks to provide a forum for the discussion of child and young person injury prevention priorities in NSW; facilitate member collaboration on child and young person injury prevention projects; identify priority areas for action on unintentional injury to children and young people; and guide the direction of child and young person injury prevention planning, research and policy in NSW.

Funding for injury prevention research and service delivery

Insufficient resourcing directed at injury prevention data collection, analysis, infrastructure and coordination has been cited as a common challenge for injury prevention professionals on an international scale⁵⁰. Domestic researchers mirrored international concern about the lack of consistent funding and support for injury research⁵¹, noting that if research was effectively promoted it could influence government and non-government stakeholders and attract additional funding⁵².

A lack of secure funding was also identified as an ongoing barrier to data collection and analysis, coordination and long term meaningful change⁵³. Researchers held that NSW needed a clear mechanism to bring people together that is “funded, supported and sustained over time”⁵⁴.

The WHO emphasised that “well targeted investment of financial resources is needed to tackle the problem of child injuries”⁵⁵. The economy of such investment is demonstrated by the estimate that, for example, “enforcement of simple measures like bicycle helmets would results in \$29 (saving) for every \$1 spent”⁵⁶.



Overrepresentation and service delivery targets in children and young people injury

Whilst current data collections may not have been designed for the purpose of injury monitoring and prevention, they have proved to be an important source of information about the burden of children and young people injury, especially given the lack of any other injury monitoring system in NSW. The analysis to date does suggest there are areas of priority that require further investigation or targeted prevention efforts. This section acknowledges the overrepresentation of some groups in injury statistics:

Injury and age

The Bureau of Health Information (NSW) published Healthcare Performance across the life span: Volume 2: Utilisation and experiences of care of children and young people aged 0-17 years and divided the groups into four age sets – 0-12 months; 1-4 years; 5-12 years and 13-17 years⁵⁷. The category of “Injury, poisoning and other external causes” was the most common reason for an emergency department visit for the age groups 1-4; 5-12 and 13-17 . A further breakdown of leading causes of injury in these age brackets, or by singular age years up to 24, would be of great value and would allow different injury prevention strategies to be designed for different age groups with the aim to more accurately target the children and young people at most risk⁵⁸.

Injury and gender

The Good Practice Guide identified that 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 department⁵⁹. The disparity between male and female injury was also found to be increasing significantly in the later years of childhood by Mitchell, Curtis and Foster who noted that this was “likely to be a consequence of their higher risk taking compared to females”⁶⁰.

Children and young people injury and socioeconomic factors:

Worldwide, vulnerable populations living in poor social conditions and experiencing socio-economic disadvantage are at disproportionate risk of injury and at increased risk of poor outcomes following injury⁶¹.

A NSW study found that children in more disadvantaged groups were more likely to be hospitalised for particular injury types including as a motor vehicle occupant, as a pedestrian, as a (pedal) cyclist, with burns and poisoning injuries⁶².

Injury and Aboriginal children:

Research has found that Aboriginal children and young people suffer a disproportionately high burden of unintentional injury. Aboriginal children aged 0-13 years are 1.6 times more likely than non-Aboriginal children to be hospitalised for unintentional injury⁶³.

Aboriginal children were found to have an elevated risk of hospitalisation for poisoning, exposure to fire and heat and transport-related injuries than non-Aboriginal children⁶⁴. Further research indicates that overall unintentional injury hospitalisation rates for Aboriginal children as well as inequalities between Aboriginal and non-Aboriginal children are not being reduced⁶⁵.

Disturbingly, “while the injury mortality rate for non-Aboriginal children in NSW has halved over the past 15 years the rate for Aboriginal children has remained the same”⁶⁶.

Injury and culturally and linguistically diverse (CALD) communities:

There is little data on the impact of injury on children and young people from culturally and linguistically diverse (CALD) backgrounds. However, restricted access to culturally appropriate health and safety information can impact health literacy thereby making this population more vulnerable⁶⁷.

For example, the Water Safety Advisory Council recognises that CALD communities are a high risk group for drowning partly because there is a lack of culturally appropriate drowning prevention and water safety resources and education⁶⁸.

Injury and location/ geography:

Children and young people living in rural areas have higher injury related hospitalisations than children and young people that reside in more urban areas of NSW⁶⁹

- Children and young people living in rural areas are more likely than urban residents to be hospitalised for injuries relating to:
- Motorcycle, motor vehicle and heavy vehicle crashes and other land transport incidents;
- Animate mechanical forces;
- Threats to breathing;
- Electric current, radiation, extreme ambient air temperature and pressure;
- Smoke, fire and flames;
- Venomous animals and plants; and
- Forces of nature⁷⁰.

Uniquely, children and young people in rural areas are more likely to be injured “while completing work tasks, as a bystander to the work activities of others or while participating in recreational activities”⁷¹.

**What has been
identified as
best practice?**



International

The WHO identifies **six** basic principles for successful child injury prevention strategies deduced from examples of successful international interventions. The WHO recommends countries employ:

1

Legislation and regulations, and their enforcement

2

Product modification

3

Environment modification

4

Supportive home visits

5

The promotion of safety devices

6

Education and the teaching of skills⁷²

In addition, the WHO encourages countries to make better efforts in understanding the epidemiology of injuries to children and young people by improving data collection and surveillance, addressing the shortage of child injury medical professionals and researchers, coordinating a multi-sectoral approach to child injury prevention, realising the cost effectiveness of investing in injury prevention strategies and increasing educational awareness of the impact of injury on children, young people, their families and communities⁷³.

The WHO encourages countries to learn from member States that have successfully reduced the number of child injuries and deaths through a range of multi-sectoral approaches:

Sweden

Since 1950, Sweden has seen a reduction in child injuries by almost 80% for boys and over 30% for girls and uses a range of approaches including environmental planning, improved road safety, improved product safety and standards, improved health care services for children and safety measures at home and school⁷⁴.

Canada

The Public Health Agency of Canada introduced an emergency department-based injury surveillance program with the aim to complement existing sources of information on injury mortality and hospitalisation. As a result, the program was able to produce detailed data on all injuries associated with baby walkers which led to a prohibition on their sale, import and advertising⁷⁵.

What has been identified as best practice?

International standards development organisations, such as the International Organization for Standardisation (ISO) and the International Electrotechnical Commission (IEC), work with their members to create documents that specify requirements, guidelines or characteristics that, used consistently, seek to ensure that materials, products, processes and services are fit for purpose⁷⁶.

Noting that “preventing injuries is a shared responsibility”, the Guidelines for child safety in standards and other specifications (2014) seek to present a balanced approach to risk reduction in the design, manufacturer, production and use of a variety of products⁷⁷.

The WHO also recognises the value and effectiveness of engaging children and young people in injury prevention both to promote injury prevention among their families and peers but also to refrain from engaging in their own high-risk behaviours⁷⁸.

The value of decision makers and planners consulting with children and young people is highlighted because, as “young children’s behaviour differs from that (of) adults...”, they experience spaces and products designed for adults in ways adults may not expect⁷⁹. Education and teaching of skills is a critical principle that underlies most of the successful child injury prevention programs around the world⁸⁰ and both children and adults need to be engaged in such efforts.



Australia

In Australia, examples of good practice were featured in the Good Practice Guide and included these injury prevention techniques:

Child restraints

South-western and Western Sydney

In NSW, children of lower socioeconomic groups and culturally and linguistically diverse groups tended to be associated with lower levels of optimum fitting of child restraints in vehicles. The “Buckle Up Safely: Improving child restraint use among culturally and linguistically diverse groups” campaign sought to facilitate long term behaviour change particularly among the CALD population group. A significantly higher level of optimum restraint use was observed post intervention⁸¹.

Swimming pool fences

NSW

The Swimming Pool Act 1992 (NSW) was passed to protect children under the age of five from drowning in private swimming pools. This and subsequent legislation, which include the use of pool fencing, safety inspections and other pool safety measures, has likely contributed to the decline in drowning deaths⁸².

Window safety

NSW

In 2007, the Children’s Hospital at Westmead identified falls from windows as an increasing cause of serious and fatal child injury. Modelled on successful American campaigns, the “Kids Don’t Fly” falls prevention campaign was adapted to suit residential buildings in NSW. The campaign required major efforts including data collection, education of medical professionals, general public media coverage for education and information purposes and a Parliamentary lobbying group. Results of the campaign, spanning 2009-2013, are still to be assessed.

The Good Practice Guide reinforced the value of authorities implementing strong planning and implementation approaches as recommended by the WHO, emphasising the importance of the following groups of strategies:

1

Creating safe environments

modifying the environment and products to reduce risk, in combination with legislation and educational activities, and modifying products.

2

Establishing effective policies and regulations

utilising public policy to enforce legislation in combination with product or environmental modification and educational activities.

3

Building capacity

making education and skills development accessible and affordable, particularly targeting vulnerable populations, to change individual and community behavioural choices⁸³.

Regulation

A number of Australian laws and regulations currently exist aimed at reducing injury to children, young people and the wider population.

Examples of these include:

- Requirements for the use of size and age appropriate child car restraints
- The wearing of helmets when cycling
- Home pool fencing requirements
- Control of hot water delivery temperature in domestic and certain other settings

Reducing the risk of injury, particularly to children and young people, from consumer products remains problematic. Standards Australia coordinates the development of Australian Standards to ensure that products are designed and manufactured to minimise the risk of injury to consumers, however, the Standards developed are voluntary unless referenced in legislation or made a mandatory standard under Australian Consumer Law.

Bans and mandatory standards are often only implemented “when evidence indicated a risk of serious injury, illness or death associated with the product”⁸⁴.

While mandatory standards apply to many products made specifically for the use of children and young people such as baby bath aids, baby walkers, bunk beds, child restraints, nightwear for children, prams, bicycle helmets and toys, there remain opportunities for better regulation of product safety into the future.



National plan

The WHO's World Report on Child Injury Prevention recommended that each country should "develop and implement a child injury prevention policy and a plan of action"⁸⁵.

In 2018, the Australian Federal Government announced funding for a new National Injury Prevention Strategy with the aim to "reduce deaths and hospitalisations due to injury, and ongoing repercussions like physical or mental impairment"⁸⁶. The announcement notes that the strategy will prioritise, across a range of groups and settings with high rates of injury, Aboriginal and Torres Strait

Islander children and young people who are overrepresented in injury hospitalisation statistics.

NSW has the opportunity to coordinate with the group creating the national plan of action to create a complementary framework specific to the needs and requirements of children and young people in NSW.

Childhood Injury Prevention Advocacy networks

The WHO encourages "a broad range of groups – from international agencies through to children themselves" to build networks and partnerships to collectively promote for safer environments, standards and behaviours⁸⁷. Australia has strong advocacy networks including the following:

The Australian Injury Prevention Network (AIPN)

Was established in 1996 as the peak national body advocating for injury prevention and safety promotion in Australia. In 2017, the network extended its activities to New Zealand and became the Australasian Injury Prevention Network⁸⁸. The AIPN acts as a peak body for injury prevention practitioners, researchers and medical professionals and seeks to set and promote goals and objectives as supported by their members.

In 2018, a high profile team of clinicians, researchers, child injury prevention (and health promotion) practitioners, industry partners and funders created the Childhood Injury Prevention Alliance (CHiPA) with the aim to highlight "the urgent need for coordinated action in light of the (10 year review of the characteristics and health outcomes of injury related hospitalisation of children in Australia report) outlining the causes, characteristics, treatment costs and survival rates of childhood hospitalised injury"⁸⁹.

In NSW, the Children and Young People Injury Prevention Working Group is made up of injury prevention specialists, non-government organisations and Government agencies and seeks to :

- Provide a forum for the discussion of child and young person injury prevention priorities in NSW;
- Facilitate member collaboration on child and young person injury prevention projects;
- Identify priority areas for action on unintentional injury to children and young people, and
- Guide the direction of child and young person injury prevention planning, research and policy in NSW.



The Working Group acknowledges the efforts of previous NSW injury prevention advocacy groups and produced this desk review to provide a broad overview of the existing research and best practice with respect to unintentional childhood injury prevention in a local and international context. The Working Group is currently unfunded.

Opportunities to address gaps in unintentional injury prevention efforts in NSW



A significant amount of resources have recently been dedicated to assessing the strengths, gaps and best practice in children and young people injury prevention as practiced in NSW and throughout Australia.

The research reviewed for this paper commonly identified the following as opportunities for improvement in children and young people injury prevention practice in NSW...

Better, more timely and more detailed data collection

Address data collection gaps:

- Obtain long-term data on outcome from injury
- Support the introduction of the national minimum dataset for injury surveillance in mortality and morbidity data collections.
- Improve injury surveillance systems and other sources of quantitative and qualitative data, to provide adequate information for Aboriginal and Torres Strait Islander injury prevention and safety promotion.
- Support the development and maintenance of information on alcohol involvement in serious injuries.
- Include unique patient identifiers (already in use in Tasmania), the date of injury, time of injury, and exact location of the incident within hospitalisation data collections to assist in identification of repeat injury admissions and data linkage, and geocoding of the incident location, respectively.
- Add narrative text to complement coded data in injury data collections in an attempt to obtain further information regarding the circumstances of the injury incident.
- Address national population-based injury surveillance gaps, especially in relation to 'minor injury', by improving the usefulness of emergency department, ambulance, and survey collections for injury surveillance.
- Obtain and record better data on injuries – ambulance, emergency department, admitted patients

Improve access to exiting data:

- Improve data accessibility for injury surveillance researchers through the development of a national injury data warehouse.
- Enable timely access to quality injury data and its analysis.
- Provide greater access to information and data that will aid the planning of injury prevention and safety promotion for rural and remote communities.

Facilitate analysis and linkages between existing data:

- Provide technical guidance material for injury surveillance researchers regarding the analysis and interpretation of injury surveillance data collections.
- Integrate with NSW ITIM database for longer term outcomes
- Develop standardised indicators that permit comparison of injury prevention strategies in different settings.
- Facilitate data linkage practices in Australia between data collections that collect information on injury risk factors and collections that record information on injury outcomes.

Improved multi-sectoral coordination

- Formalised division of Ministry of Health required to oversee, coordinate and implement injury prevention, as in Victoria, WA and Qld
- Link and share data between government agencies
- Reinvigorate the existing MOU between NSW Government agencies or create a revitalised MOU with agreed principles for agencies to work together on children and young people injury prevention activities, such as injury prevention project where multi-agencies can work together with specific actions.
- Ensure Working Group is supported to advance injury prevention in NSW

Use research to inform creation of targeted campaigns, projects or plans aimed at reducing the overrepresentation of vulnerable groups in injury statistics

- Playgrounds account for up to 50% of hospitalised childhood falls. There is no single intervention holistically addressing both the uptake of the voluntary Australian Standard providing specific guidance on playground design (AS4685) and consumer use of playgrounds available in Australia.

This critical gap is inhibiting Australia's ability to effectively counter the continually increasing number of childhood hospitalisations due to playground falls and should be addressed. Ensure that a comprehensive and systematic approach towards dissemination of injury surveillance information is adopted that involves a variety of media.

- Aboriginal children and young people; rural and regional children and young people, and socioeconomic groups

Legislative or regulatory improvements

- Helmet use enforcement
- Helmets for scooters (as in SA)
- Australian Standard on playground design (AS4685) enforcement, base this on good practice guide
- Identifying existing voluntary safety standards to make mandatory
- Creation of a NSW injury prevention framework aligned with national injury prevention framework

Funding / cost benefit / cost effectiveness analysis

- Of Helmets on scooters
- Of playground standards and behaviour change
- Evaluate kids don't fly campaign
- Pool fencing
- Conduct a cost-effectiveness analysis as part of the multi-agency injury prevention project.
- Cost of pill testing vs cost of medical care for adverse reactions/ deaths.

Conclusion



As noted in the introduction, in 2014, NSW injury prevention experts identified a number of priorities that would contribute to a decrease in injury to children and young people in NSW. The significance of, and commitment to, the issue is demonstrated by the achievements since this time which include:

- The Child Death Review Team's publication of a two phase research project that detailed the existing infrastructure for childhood injury and disease prevention in NSW (phase one) and strategic directions for coordination of child injury prevention initiatives in NSW (phase two), and
- A national review of the characteristics and health outcomes of injury-related hospitalisations of children and young people in Australia.
- A stocktake of NSW data sources relevant to children and young people injury
- The establishment of a NSW Children and Young People injury Prevention Working Group
- The publication of the NSW Child Safety Good Practice Guide documenting good practice planning and case studies

Despite these achievements, injury prevention professionals face a number of challenges to decreasing injury to children and young people including:

- A lack of consistent funding for research to inform children and young people injury prevention policy and practice
- Lack of funding for implementation and/or up-scaling of proven injury prevention measures
- The inconsistency and the complexity involved in accessing injury data
- The lack of a real time injury specific surveillance data collection system
- The overrepresentation of vulnerable populations in hospitalisation data
- The lack of evaluation of strategies implemented
- The absence of a cooperative/collective gaps analysis with respect to the existence and effectiveness of current NSW injury prevention programs, policies and campaigns
- The lack of a funded body supported by Government to coordinate injury prevention in NSW

Injury prevention specialists and peak bodies require additional support to meet these challenges and reduce the number of children and young people who suffer due to the impact of unintentional injury in NSW.

Bibliography



- **Active and Safe: Preventing unintentional injury to Aboriginal children – guidelines for policy and practice 2018**

this paper was written by three Working Group members (Kathleen Clapham, Kate Hunter and Rebecca Ivers) and complements the Child Safe Good Practice Guide (below). It lists current state of knowledge, identifies what works and what doesn't work in program development and lists culturally appropriate resources including best practice. It also highlights areas of unintentional injury prevention to Aboriginal children and young people where most benefit can occur.

- **10 year review of the characteristics and health outcomes of injury -related hospitalisations of children in Australia 2017**

(Mitchell, Curtis, Foster)

Concluded that child injury hospitalisation rates have not decreased over a ten year period; falls and sporting events were the most common injury mechanisms and activity. Home was the most common specified place. A higher proportion of injured children resided in areas of socioeconomic disadvantage. The logistics of linking national data were convoluted and time consuming. It concluded that as a priority injury prevention strategies need to target developmental stages and surveillance (data) should be in real time.

- **Childhood injury prevention: Strategic directions for coordination in NSW, prepared by the Centre for Health Service Development 2017**

(NSW Child Death Review Team)

Drawing on comparable systems nationally and internationally (including Sweden, US and Canada), as well as expert stakeholders views, the report identifies strategic directions for coordination of initiatives in NSW. Key themes include the need for effective policy leadership, strong data and information systems, research and knowledge translation networks and coalitions, collaborations and partnerships. It recommends greater collaboration with injury researchers and practitioners.

- **Hospitalised injury in NSW: A geographic comparison 2016**

(Mitchell)

demonstrates incidence rates for injury in urban and rural residents in age group 0-19 years.

- **Inequalities in Hospitalised Unintentional Injury between Aboriginal and Non-Aboriginal children in NSW 2016**

(Clapham, Ivers et al)

Evidence that Aboriginal children suffer a disproportionately high burden of unintentional injury and different leading injury mechanisms.

- **Child safety good practice guide 2016**

(Sydney Children's Hospital and NSW Health)

This guide features good planning principles, good practice for injury types based on transfer and implementation points (Public health model evidence based approach), good practice case studies (National and international programs), identification of vulnerable populations, a planning checklist

- **A scan of childhood injury and disease prevention infrastructure in NSW, prepared by the Centre for Health Service Development 2015**

(NSW Child Death Review Team)

This report seeks to provide an initial overview of the current infrastructure for childhood injury and disease prevention in NSW. It features frameworks and policies, data collections and regular reports and childhood injury and disease prevention structures and activities. This report confirmed there was a need for stronger leadership and coordination in NSW.

- **Stocktake of data sources for childhood injury in NSW 2015**

(Mitchell and Testa)

This report provides a stocktake of existing populations based data collections that are capable of providing information on injury mortality or morbidity in NSW involving children and young people aged 25 years or less. For the most part, population level information is obtained from collections that were not designed specifically to conduct injury surveillance.

Appendix A:

*Poll of Children
and Young People
on Injury Prevention*

In June 2019 ACYP undertook a poll of a thousand children and young people from across NSW. This poll asked children and young people about injuries they had experienced and about any injury prevention education they had undertaken. The poll contained a number of insights to guide further initiatives with regards to injury prevention education.

Vulnerability

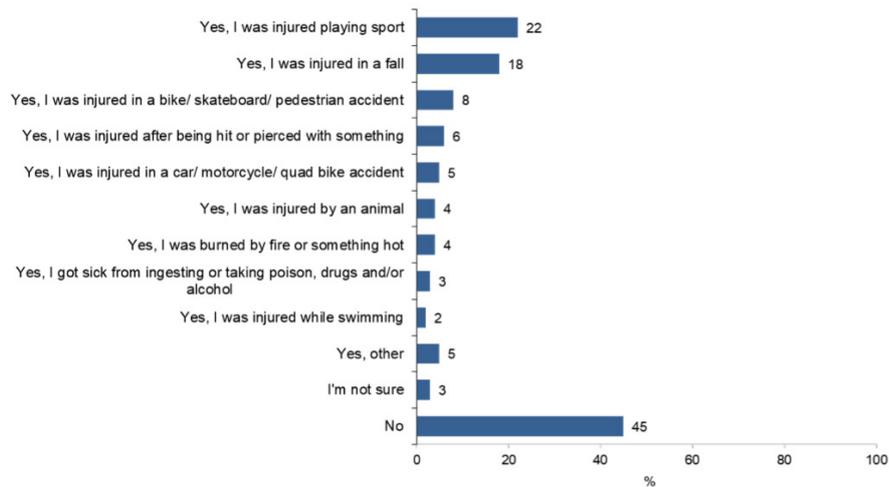
- 52% of children and young people reported having had injury that needed to be treated by doctor or hospital emergency department
- Injuries were more common for Aboriginal children and young people (71%) and for children and young people with a disability (70%)
- Injuries were less common for children and young people speaking a language other than English at home (44%)

Severity

- 13% of children and young people who had been injured reported still often noticing the effects of their injury
- Older children and young people (aged 22-24) were more likely to report still often noticing effects of injury (23% verses 8-14% for other age groups)
- Aboriginal children and young people were more likely to report still often noticing effects of injury (28%) as were children and young people with a disability (23%)

Causes

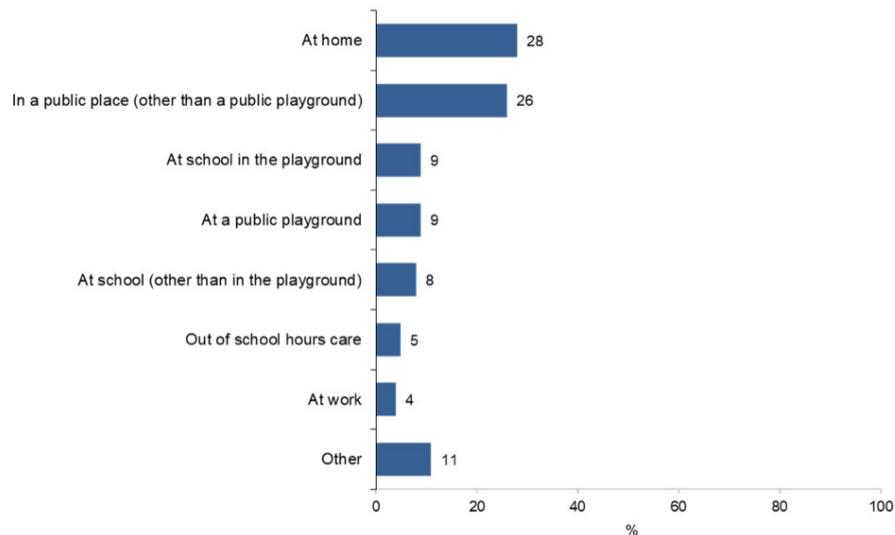
- Sport and falls were two most common types of injury across all ages and groups
- For males the third most common injury was bike/skateboard/pedestrian accidents.



Base: total n=1,081
Q4: Have you ever had an injury and had to attend an emergency department or doctor for immediate treatment?

Location

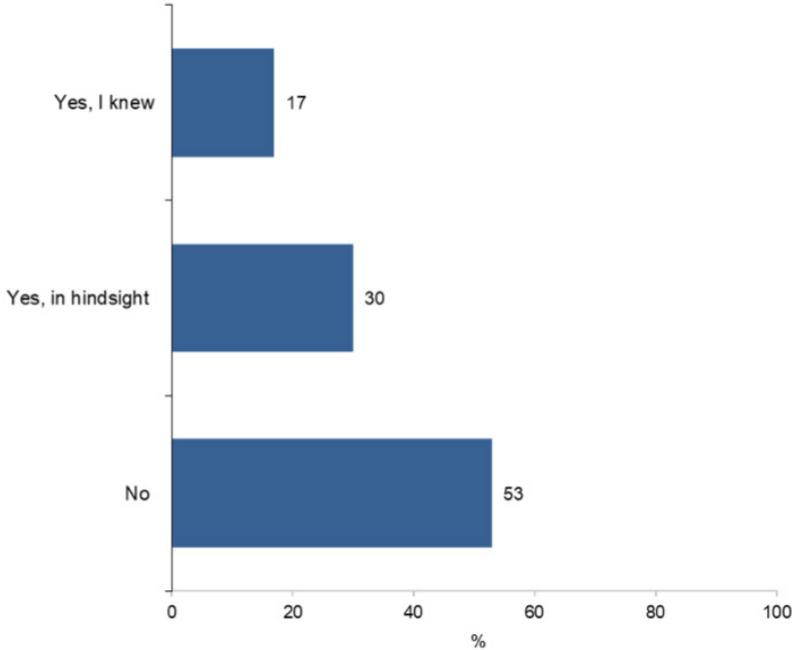
- Home was the most common location for an injury (28%)
- Also common was injuries in playgrounds (18%, 9% in school playgrounds, 9% in public playgrounds)



Base: total n=584
Q6: Where did the injury happen?

Awareness of risk

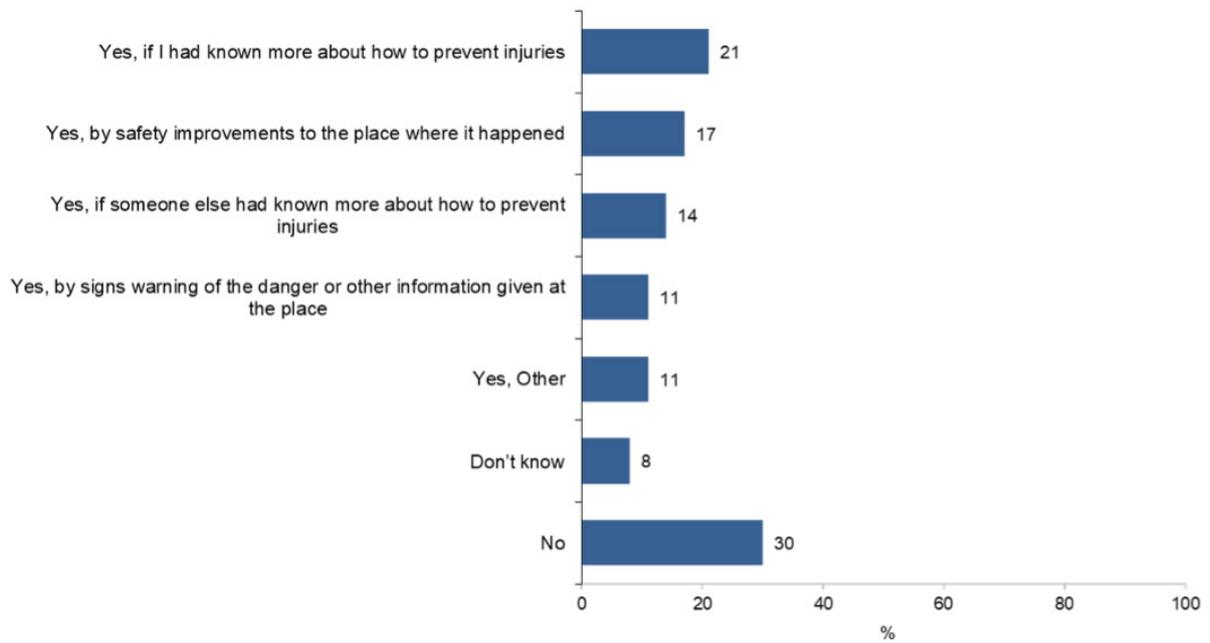
- Some young people were aware at the time that they were undertaking a dangerous activity.
- Others now acknowledge that the activity was dangerous, but did not know at the time.



Base: total n=584
Q8: Did you think you were doing something dangerous at the time you were injured?

Prevention

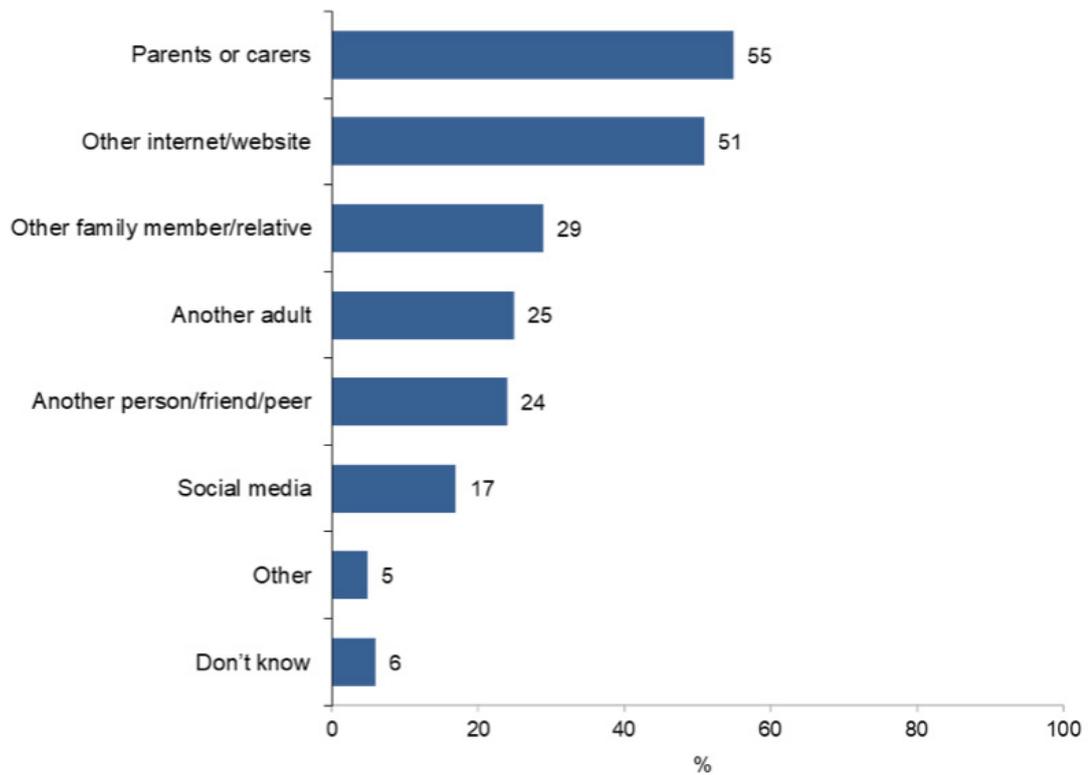
- Of those children and young people who had had an injury, 62% felt that the injury could have been avoided
- 21% of those injured felt that it could have been avoided if they had known more about preventing injuries
- 14% of those injured) felt that it could have been avoided if someone else had known more about preventing injury



Base: total n=584
Q9: Do you think the injury could have been avoided?

Information seeking

- Children and young people were most likely to seek information on injury from parents/carers and the internet (excluding social media).

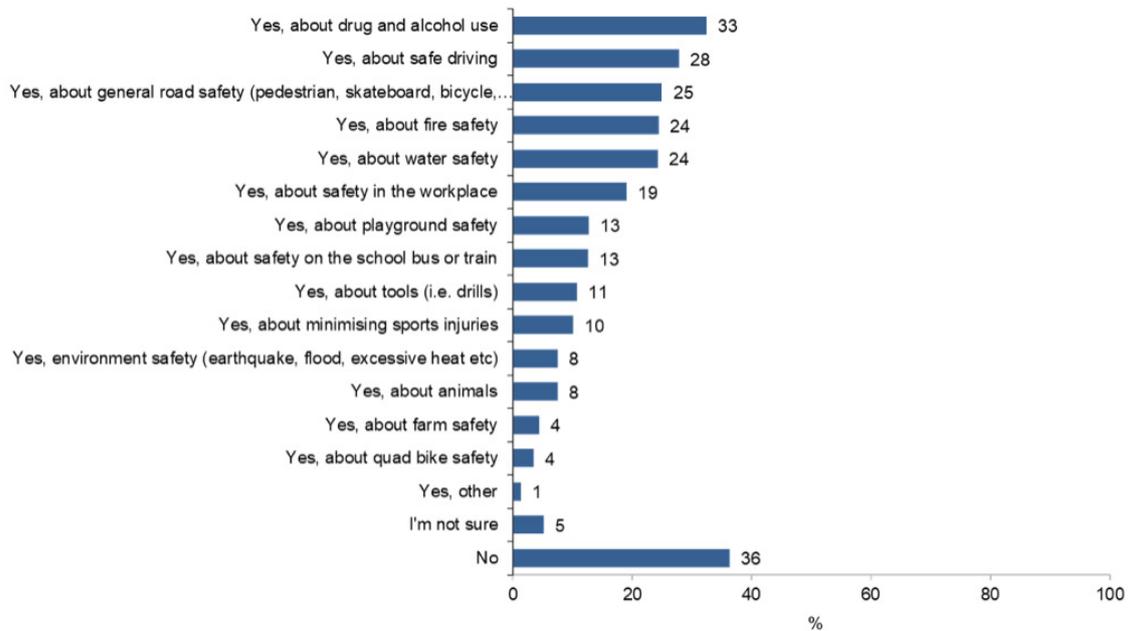


Base: total n=1,081

Q10: If you wanted to get information on injury prevention, where would you go?

Injury prevention education

- 58% of children and young people reported having attended an injury prevention class/seminar/lesson
- Most common were drug and alcohol use, safe driving, and road safety as pedestrian/bike rider/skateboarder/passenger
- Despite playgrounds being a common site of injury, only 13% of children and young people had received playground safety education.
- Despite sports injuries being the most common type of injury, only 10% of children and young people had received education on sports injuries.



Base: total n=1,081
 Q11: Have you ever attended an injury prevention class, seminar, lesson or other information session?

Effectiveness of injury prevention education:

- Of the children and young people that had attended a safety-based information session, 64% felt that the session told them something new about preventing injuries and 84% thought that the class made them more aware of the risk of injury.
- Of the Aboriginal children and young people that had attended a safety-based information session only 39% felt that the session told them something new about preventing injuries, and only 63% thought that the class made them more aware of the risk of injury..

Appendix B:

*Children and Young
People Injury Prevention
Working Group (CYPIP)*

Terms of reference

Goal

The members of the NSW Child and Young Person Injury Prevention Working Group (Working Group) seek to facilitate the reduction of risk, severity and frequency of unintentional injury to children and young people aged 0-24 years in NSW.

Objective

The purpose of the Working Group is to:

- Provide a forum for the discussion of child and young person injury prevention priorities in NSW;
- Facilitate member collaboration on child and young person injury prevention projects;
- Identify priority areas for action on unintentional injury to children and young people, and
- Guide the direction of child and young person injury prevention planning, research and policy in NSW.

Background

The Working Group seeks to build on significant work already done and utilise recent research into the prevalence of unintentional injury to children and young people in NSW. Individually, members of this Working Group already monitor and support existing unintentional injury prevention initiatives. By bringing individuals together for the purposes of communication and collaboration this Working Group can be used to advance the child and young person unintentional injury prevention agenda in NSW.

Membership will be drawn from a cross section of academia, government and non-government organisations.

Meetings

The Working Group will aim to meet quarterly and these meetings will be supported by the Office of the Advocate for Children and Young People. Additional meetings can be scheduled as necessary.

Initial deliverables of the Working Group

- a) Create a quick reference guide that features existing injury data sets in NSW for the information of Working Group members;
- b) Create a reference guide that maps existing and planned unintentional injury prevention initiatives across NSW Government and other agencies for children and young people;
- c) Create a scoping document that outlines strengths, opportunities and best practice in child and young person injury prevention for the purposes of informing the direction/ priorities of the Working Group, and
- d) Create communication products that could be used to promote the priorities of the Working Group.

Recent childhood injury prevention research

The Working Group acknowledges the substantial and ongoing contribution of researchers to matters associated with childhood injury prevention in NSW and will use this research to inform the Working Group's priorities. Recent publications include:

- A 10 year review of the characteristics and health outcomes of injury-related hospitalisation of children in Australia, May 2017
- A scan of childhood injury and disease prevention infrastructure in NSW, October 2015
- A stocktake of data sources for childhood injury in NSW, December 2015
- Child Safety Good Practice Guide, 2016
- Childhood injury prevention: Strategic directions for coordination in NSW, November 2017

This document can be adapted at any time by agreement of the Working Group

List of Members' Organisations and Agencies:

- Advocate for Children and Young People
- Children's Healthcare Network
- Department of Education and training
- Department of Planning and Environment (Government Architect)
- George Institute
- Headsafe
- Kids Foundation
- Sydney Children's Hospitals Network - Kids Health
- Kidsafe
- Macquarie University
- Ministry of Health
- Neuroscience Australia (Neura)
- Office of Sport
- Office of Transport Safety Investigations
- Ombudsman
- Safework NSW
- State Insurance Regulatory Authority
- Sydney Trains
- Sydney Uni
- University of Wollongong
- University of NSW
- Youthsafe

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