Child Accident Prevention Foundation of Australia
Western Australia

Kidsafe WA Childhood Injury Bulletin Annual Report: 2017 - 2018

Partner:

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

CONTENTS

Suggested Citation:

Sherlock E, Skarin D & Tsvetkov A. Kidsafe WA Childhood Injury Bulletin: Annual Report 2017-2018. Perth (WA): Kidsafe WA (AUS); 2018 Dec.

INJURIES AT A GLANCE

17,720

Children were seen in the Perth Children's Hospital Emergency Department (PCH ED) due to injury during the 2017-18 financial year.

48

Children per day were seen in PCH ED for an injury.

41%

Of injuries occurred in children under 5 years.

37%

Of injuries were due to a fall.

56%

Of the children injured were male.

25%

Of injuries were due to a blunt force.

4,030

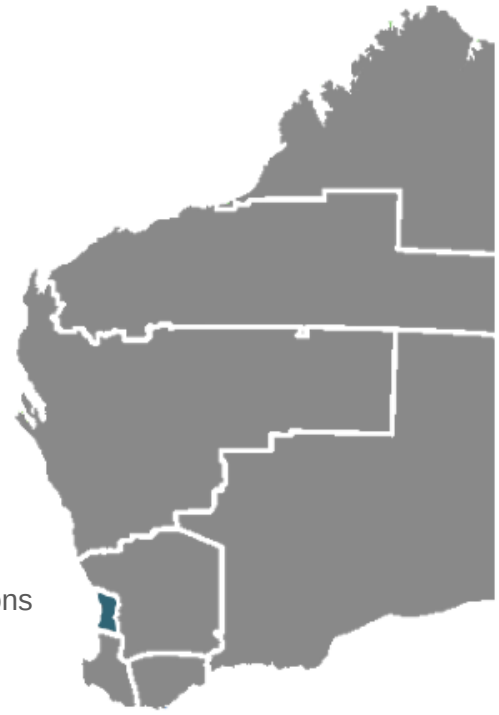
Injuries were sport-related.

14%

Of injuries occurred at home.

93%

Of injury presentations reside in the Metropolitan area.



INTRODUCTION

Kidsafe WA
Kidsafe WA is the leading independent not-for-profit organisation dedicated to promoting safety and preventing childhood injuries and accidents in Western Australia. Injuries are the leading cause of death in Australian children aged one to fourteen, accounting for nearly half of all deaths in this age group. More children die of injury than die of cancer, asthma and infectious diseases combined. Many of these deaths and injuries can be prevented. Kidsafe WA works in the community to educate and inform parents and children on staying safe at home, at play and on the road.

Perth Children's Hospital Injury Surveillance System
Perth Children's Hospital (PCH) is the sole tertiary paediatric hospital in Western Australia, acting as a key referral source for childhood injury and disease within the state. The PCH Injury Surveillance System is an electronic database that involves the systematic collection of all Emergency Department (ED) injury data. Data is collected by triage nurses who initially assess the child presenting to the ED; the data is then coded and validated by an Injury Surveillance Officer. This annual report provides a summary of all the Injury Surveillance System data collected at PCH between July 2017 and June 2018.

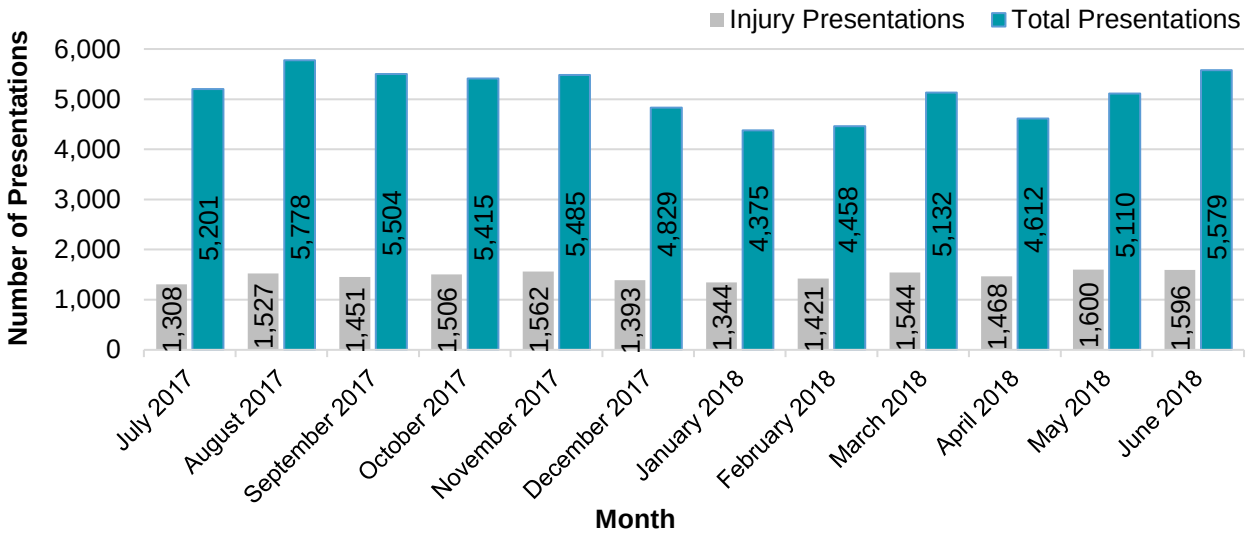
Over the last five years PCH ED attendance numbers have declined from over 70,000 children to just over 60,000 (Table 1).

Table 1: Total Presentations and Injury Presentations by Financial Year

Year	Total Presentations	Total Injuries	Injury as a % of Presentations
2017-2018	61,748	17,720	28.7%
2016-2017	60,716	17,939	29.5%
2015-2016	62,935	18,423	29.3%
2014-2015	68,279	19,854	29.1%
2013-2014	70,283	19,645	27.9%

During the 2017-2018 financial year a total of 61,478 children attended PCH ED, and of these presentations 28.7 percent (n=17,720) were due to injury (Figure 1).

Figure 1: Total Presentations and Injury Presentations by Month



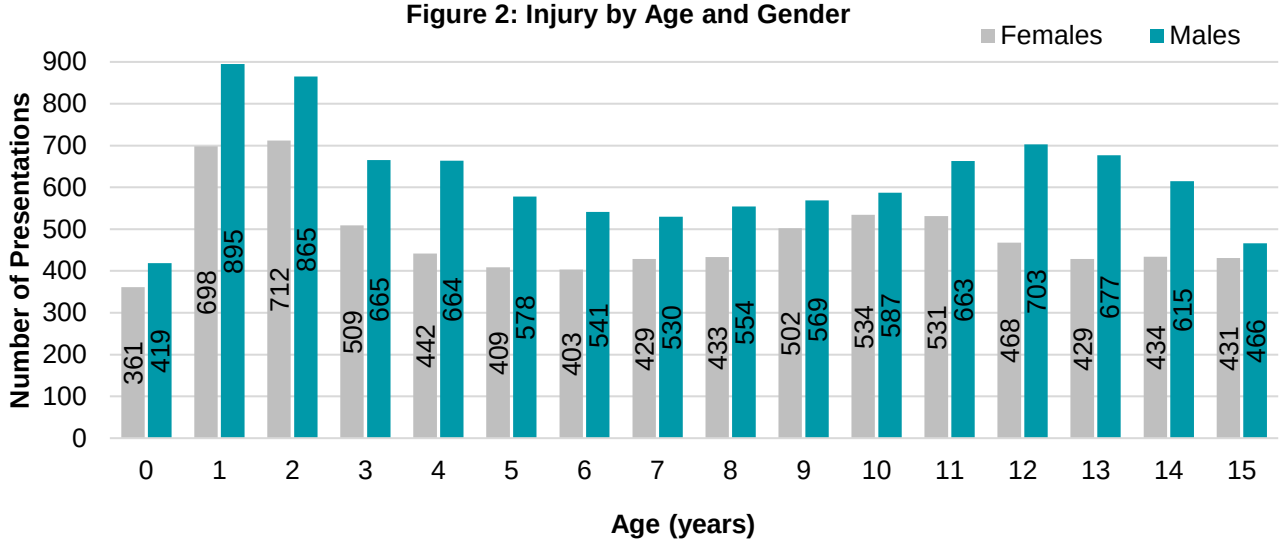
DEMOGRAPHICS

AGE AND GENDER

Children in the zero to five years age group are at higher risk of injury, accounting for 35.2 percent (n=6,230) of all injury presentations to PCH ED (Figure 2). Among this age group, toddlers aged both one and two years recorded the highest number of injuries, accounting for 9.0 percent (n=1,593) and 8.9 percent (n=1,577) respectively. There is a second peak seen amongst older children aged both 11 and 12 years accounting for 6.7 percent (n=1,194) and 6.6 percent (n=1,171) of injuries respectively. As children of this age are often developing their independence, it can often be difficult to find the right balance between allowing children to make their own choices and enforcing rules to keep them safe from serious injury.

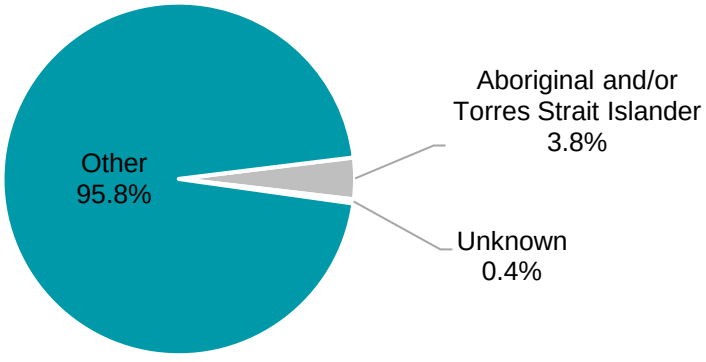
For all age categories males are overrepresented, accounting for a total 56.4 percent (n=9,993) of injuries. The remaining 43.6 percent (n=7,727) are female. The gender difference is more prominent in teenagers, with males accounting for over 60 percent of injuries among 12 and 13 year olds.

Figure 2: Injury by Age and Gender



Aboriginal and/or Torres Strait Islander children account for 3.8 percent (n=673) of injury presentations to PCH ED (Figure 3). Of Aboriginal children presenting to PCH ED with an injury, 24.7 percent (n=166) reside in a rural or remote location in Western Australia, which is a significantly higher proportion than the total population (4.4%, n=772).

Figure 3: Injury by Ethnicity



AREA OF RESIDENCE

Children residing in the Perth Metropolitan Area account for 93.3 percent (n=16,530) of injury presentations to PCH ED (Figure 4). Children residing in rural Western Australia account for 4.4 percent (n=772) with the remainder made up of children residing either interstate or overseas (n=331), or had their residence listed as unknown (n=87).

Figure 4: Injury by Area of Residence

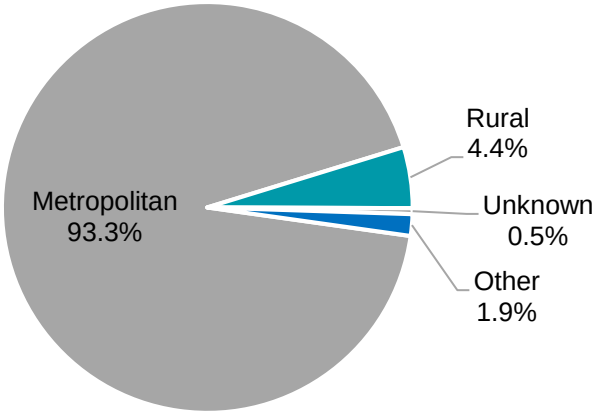
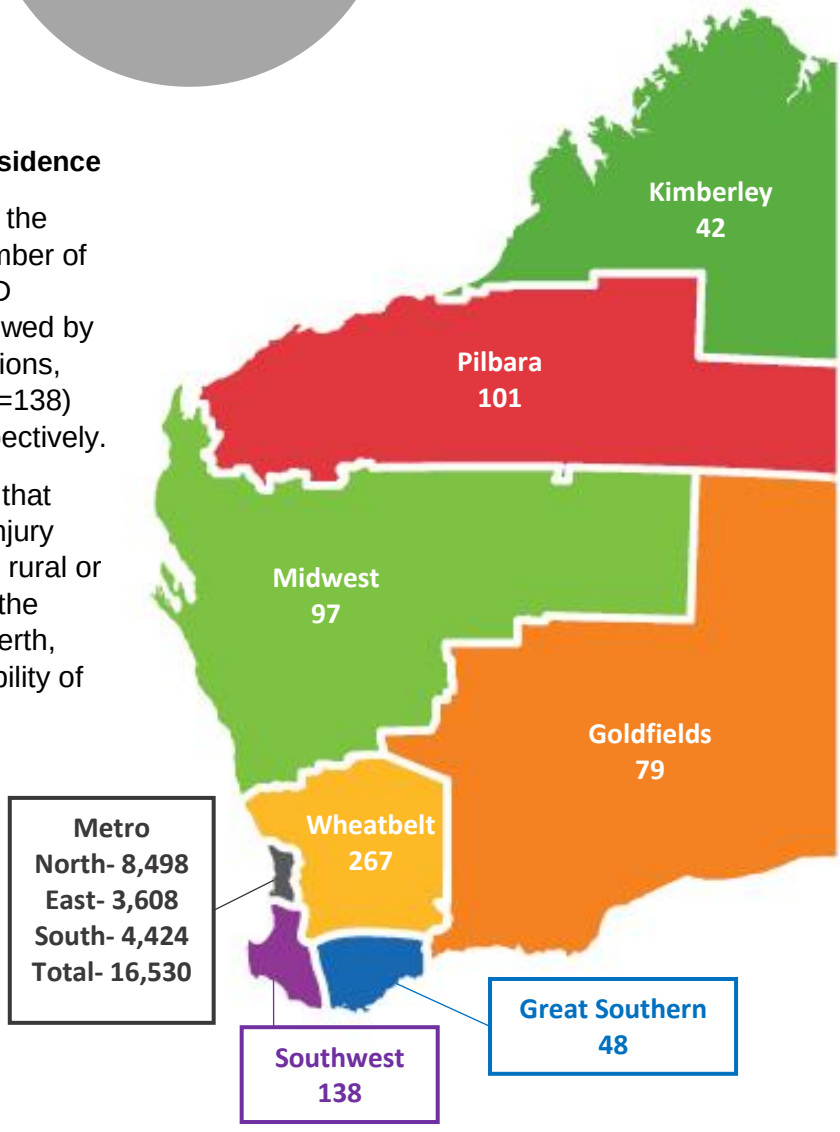


Figure 5: Injury by Area of Residence

Of the rural or remote regions, the Wheatbelt had the highest number of injury presentations to PCH ED (34.6%, n=267). This was followed by the Southwest and Pilbara regions, accounting for 17.9 percent (n=138) and 13.1 percent (n=101) respectively.

There are a number of factors that may influence the number of injury presentations to PCH ED from rural or remote regions. This includes the distance and accessibility to Perth, population size and the availability of local hospital facilities.



INJURY

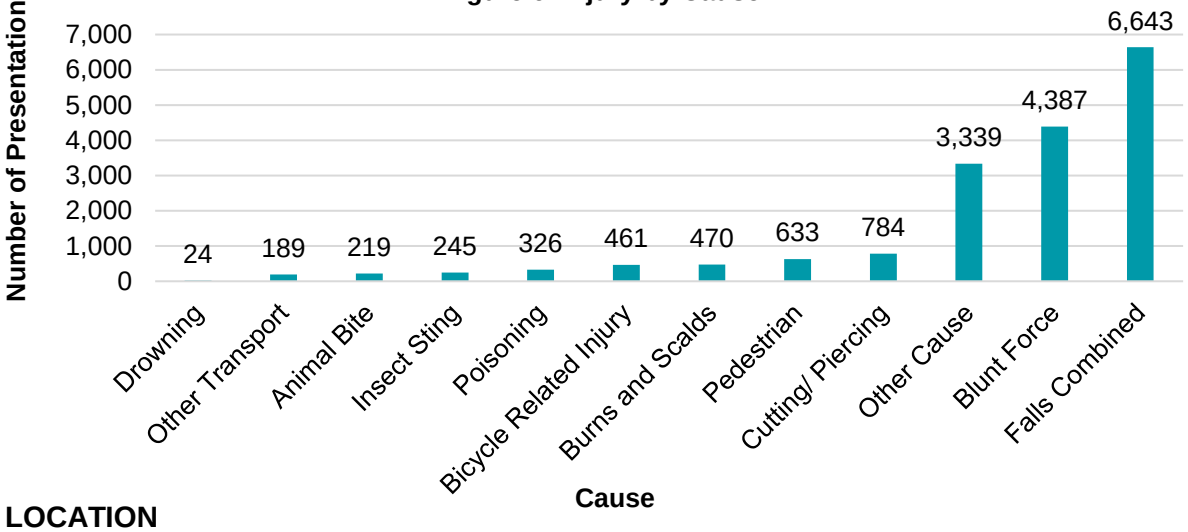
INTENT

The majority of injury presentations to PCH ED are due to unintentional circumstances (97.6%, n=17,297). Intentional self-harm (1.8%, n=326), injuries recorded as undetermined or other (0.3%, n=50) and alleged assault (0.2%, n=44) represented significantly less presentations.

CAUSE

The leading cause of injury presentations to PCH ED is falls, which account for 37.5 percent (n=6,643) of presentations (Figure 6). Following this is blunt force (24.8%, n=4,387), which refers to collision based injuries. Where the injury cause is unspecified or does not fit into an existing category, the cause is classified as other. Injuries with other cause account for 18.8 percent (n=3,339) of injury presentations.

Figure 6: Injury by Cause



LOCATION

The majority of injury presentations occurred in an unspecified location or one that does not fit into an existing category. These locations are referred to as other place which account for 65.4 percent (n=11,596) of injury presentations. Following other place is the home and school location accounting for 14.1 percent (n=2,501) and 11.2 percent (n=1,979) of injuries respectively (Figure 7a). Within the home, a large proportion of injuries occurred in an unspecified location (52.5%, n=1,313) (Figure 7b). Of the known injury locations within the home, injuries occurred most commonly in the outdoors (34.8%, n=413).

Figure 7a: Injury by Location

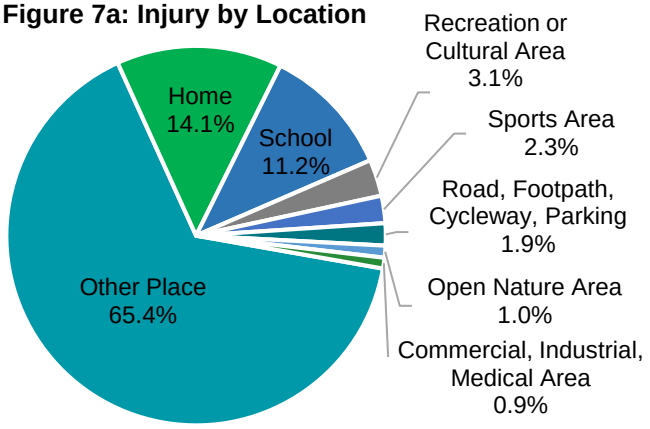
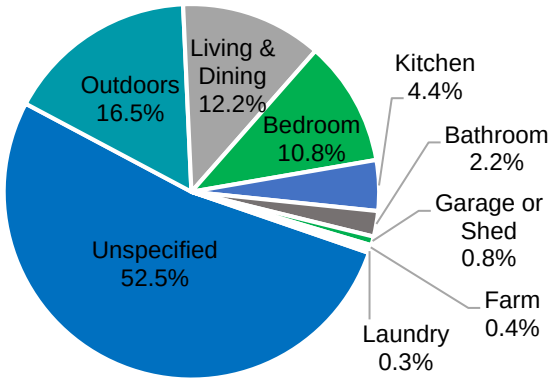


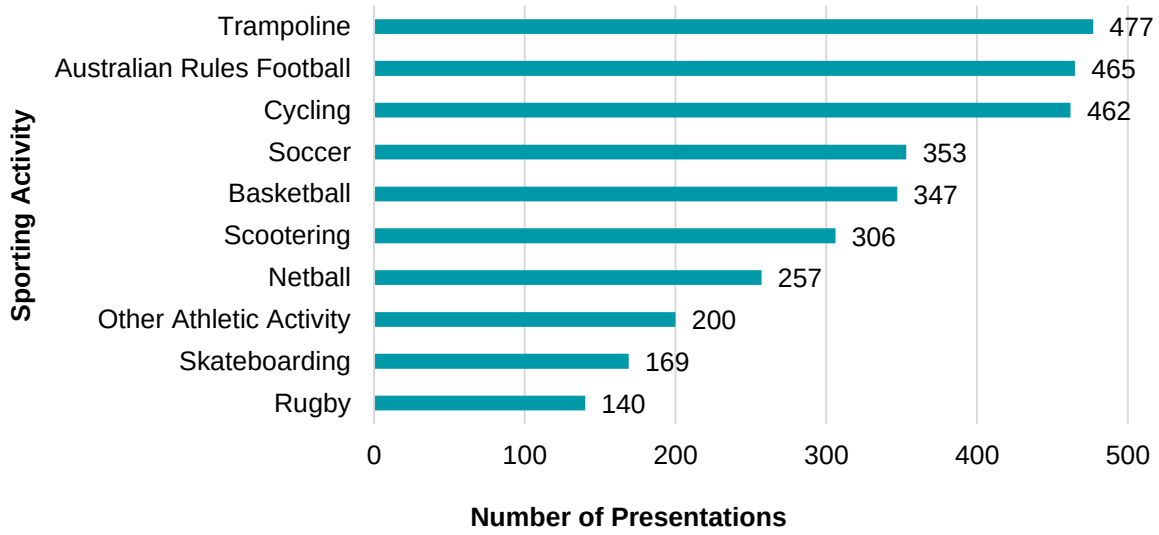
Figure 7b: Injury by Location



SPORTING ACTIVITY

Sporting activities were related to over a fifth of injury presentations to PCH ED (22.7%, n=4,029). The most common sporting activity associated with injury was trampolining, accounting for 11.8 percent (n=477) of sports injuries. This was followed by Australian Rules Football (11.5%, n=465), cycling (11.5%, n=462) and soccer (8.8%, n=353). Figure 8 shows the top ten sporting activities resulting in injury.

Figure 8: Injury by Sporting Activity



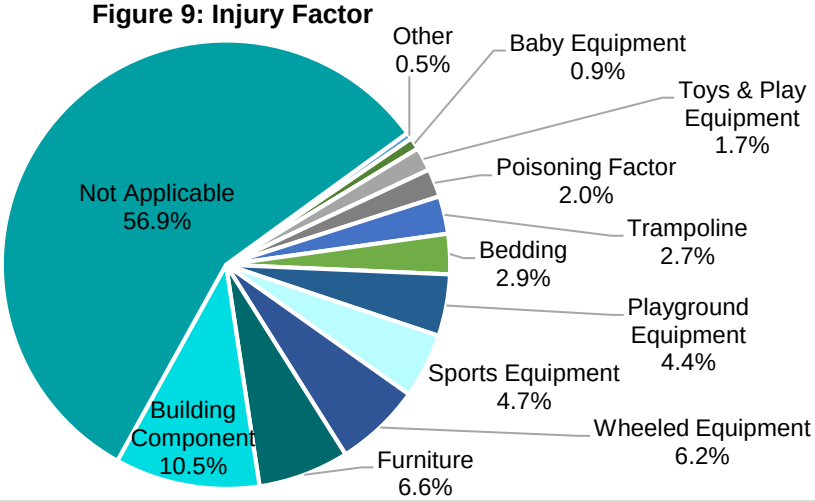
SAFETY EQUIPMENT

It was noted in a small proportion of injury presentations that safety equipment was used (1.0%, n=183). This includes items such as helmets, seatbelts and approved child car restraints. Less than 1.0 percent (n=71) of injury presentations noted that no form of safety equipment was used, and the remaining 98.6 percent (n=17,466) accounted for injuries where safety equipment was deemed not applicable or was unknown.

INJURY FACTOR

Just under half of all injuries had an associated injury factor (43.1%, n=7,630). The most common injury factors include building components such as doors, windows and fittings (10.5%, n=1,852), and furniture (6.6%, n=1,162) (Figure 9).

Figure 9: Injury Factor

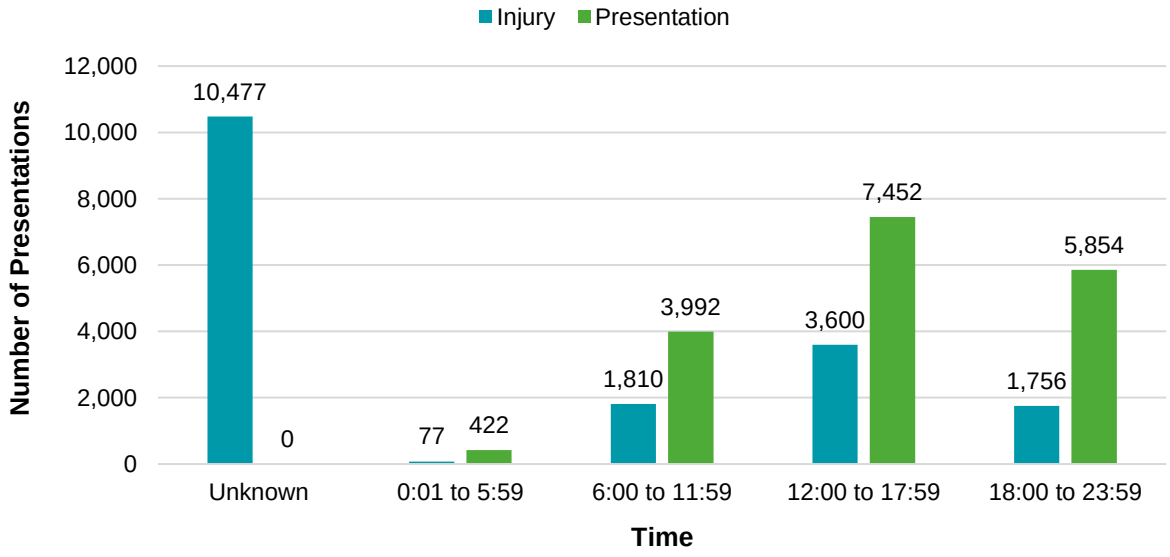


TREATMENT

TIME OF DAY

The time of a child's injury occurring and the time they presented to PCH ED are recorded during triage. Over half of all injuries are recorded with an unknown time of injury (59.1%, n=10,477) (Figure 10). Where injury time is known, the most common time for injury to occur is between 12:00 and 17:59 (20.3%, n=3,600) and 6:00 and 11:59 (10.2%, n=1,810). Time of presentation peaked between 12:00 and 17:59 (42.1%, n=7,452) and 18:00 and 23:59 (33.0%, n=5,854).

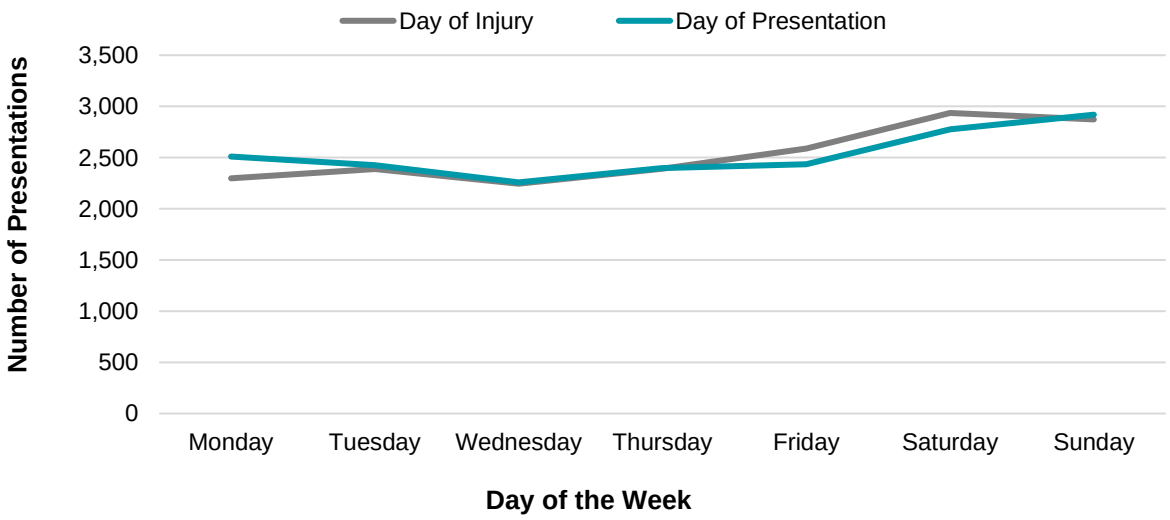
Figure 10: Time of Injury and Presentation



DAY OF THE WEEK

The day of injury and day of presentation are also recorded at triage. Saturday and Sunday have the highest number of injury occurrences accounting for (16.6%, n=2,936) and (16.2%, n=2,874) of injuries respectively and showed a similar pattern for injury presentations. Wednesday recorded both the lowest number of injury occurrences and presentations accounting for (12.7%, n=2,245) and (12.7%, n=2,258) respectively.

Figure 11: Day of Injury and Presentation



TRIAGE CATEGORY

The triage category reflects the level of medical urgency of a presentation (Table 2). The majority of injury presentations were semi-urgent (78.1%, n=13,832) followed by urgent (17.0%, n=3,021) and emergency (4.0%, n=704). Very few presentations are triaged as resus or non-urgent.

Table 2: Triage Category

Category	Seen within (minutes)
(1) Resus	0
(2) Emergency	10
(3) Urgent	30
(4) Semi-urgent	60
(5) Non-urgent	120

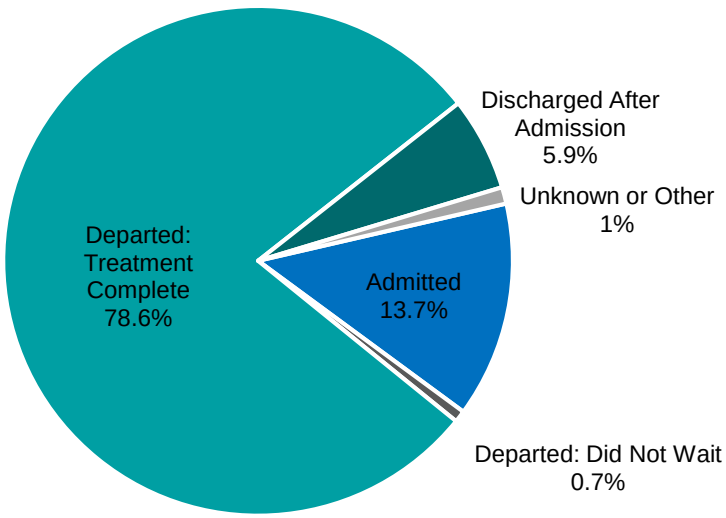
REFERAL SOURCE

Most children who present to PCH ED for an injury are referred by either themselves or a relative (84.8%, n=15,020). The remaining presentations are either referred by a general practitioner (7.0%, n=1,246) or another hospital (n=5.5%, 979). A small proportion of presentations are also recorded as other or were unknown.

OUTCOME OF ATTENDANCE

The majority of children who present to PCH ED with an injury are able to depart with their treatment complete (78.6%, n=13,920) (Figure 12). A further 13.7 percent (n=2,428) require admission to hospital, 5.9 percent (n=1,054) were discharged after being admitted and the small remainder either did not wait or the outcome of their attendance is unknown or other.

Figure 12: Outcome of Attendance



DISCUSSION

The Perth Children's Hospital is the leading paediatric hospital in Western Australia and is the reference centre for paediatric illness and injury for the state, however over the last five years PCH ED attendance numbers have declined from over 70,000 children to approximately 62,000. The decrease in presentations could be due to the introduction of new hospitals such as Fiona Stanley and/or an increase in children presenting to other hospitals such as the Joondalup Health Campus.

During the 2017-2018 financial year 17,720 children attended PCH ED due to an injury. While the number of injury presentations has decreased across the 5 years, the proportion of injuries in comparison to all other presentations has risen. This however changes in 2017-18, where there was a slight decrease from 2016-17.

Children under five years of age continue to be at greater risk of injury, accounting for over one third of injury presentations. Similarly males continue to be over-represented in injury presentations in comparison to females, with the gender difference greatest in teenagers.

Most injury presentations to PCH ED are due to unintentional circumstances, with falls and blunt force injuries remaining the leading causes. Just under a quarter of injuries are related to a sporting activity, with trampolining and Australian Rules Football continuing to be the most common sporting activity associated with injury.

The majority of children presenting to PCH ED are able to depart with their treatment complete, with less than 15 percent requiring hospital admission due to the injury.

The collection of injury data plays a vital role in the development of interventions designed to prevent or minimise childhood injury. It relies on an efficient and reliable computer system, and collaboration between nursing, clerical and medical staff within PCH ED. Analysis of this collected data can determine current injury trends and the effects of injury prevention programs. As in previous years, the injury data has missing time, location, and details about the use of safety equipment. This highlights the importance of ongoing triage nurse education. Kidsafe WA and PCH continue to provide education seminars to advocate and support staff in the collection of data.

RECOMMENDATIONS

- Continue to investigate opportunities for childhood injury surveillance data collection at additional hospitals.
- Ongoing injury prevention initiatives for all children, with specific focus on children under five years of age and teenagers.
- Continue to promote injury prevention initiatives that identify ways to reduce the risk of sporting injuries. Kidsafe WA have a number of resources that support parents, carers and coaches in preventing sporting injuries to children. These resources need to be further promoted to the Western Australian community.
- Further research into childhood sporting injuries, and factors mediating injury severity within different sports.
- Staff development sessions between Kidsafe WA and PCH triage nurses to raise awareness of the importance of child injury data collection and the role it plays in injury prevention.
- Ongoing production and dissemination of Kidsafe WA Childhood Injury Bulletins to support policy and interventions for child injury prevention.

Child Accident Prevention Foundation of Australia
Western Australia

www.kidsafewa.com.au