Kidsafe WA
Childhood Injury Bulletin

Child Accident Prevention Foundation of Australia
Western Australia

June 2022

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 among Australian children aged zero to fourteen, accounting for nearly half of all deaths in this age group. More children die of injury than of cancer, asthma and infectious diseases combined. However, many of these deaths and injuries can be prevented. Kidsafe WA works 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 only paediatric hospital in Western Australia and is the referral centre for paediatric illness and injury within the state. Each year approximately 64,000 children present to the PCH Emergency Department (ED). The PCH ED Injury Surveillance System is designed to capture data related to all children who present with an injury. This bulletin summarises blunt force related-injuries occurring during the five year period between July 2016 and June 2021.

Blunt Force Injuries

A snapshot of blunt force injuries

- A total of **24,102** blunt force injury presentations to PCH ED.
- **Males** accounted for 61.5 percent (n=14,816) of presentations.
- Children aged **10 to 14 years** accounted for the highest number of blunt force injuries (40.2%, n=9,682), followed by children aged **0 to 4 years** (27.3%, n=6,576).
- **Category 4 - Semi-urgent** (84.7%, n=20,407) was the most commonly allocated triage category for blunt force injuries.
- 98.2 percent (n=23,678) of child blunt force injuries were deemed **unintentional**.
- **Sports activities** were associated with 27.5 percent (n=6,632) of blunt force injuries.
- **Australian Rules Football** (25.1%, n=1,666) was the most common sports for a child to acquire a blunt force injury.
- **Building components** such as doors and windows were a factor in 18.2 percent (n=4,392) of blunt force injuries.
- **Schools** were the most common location for blunt force injuries (11.7%, n=2,832).
- The majority of blunt force injury presentations to PCH ED were **discharged** from hospital with treatment complete (90.6%, n=21,847).

Partner:

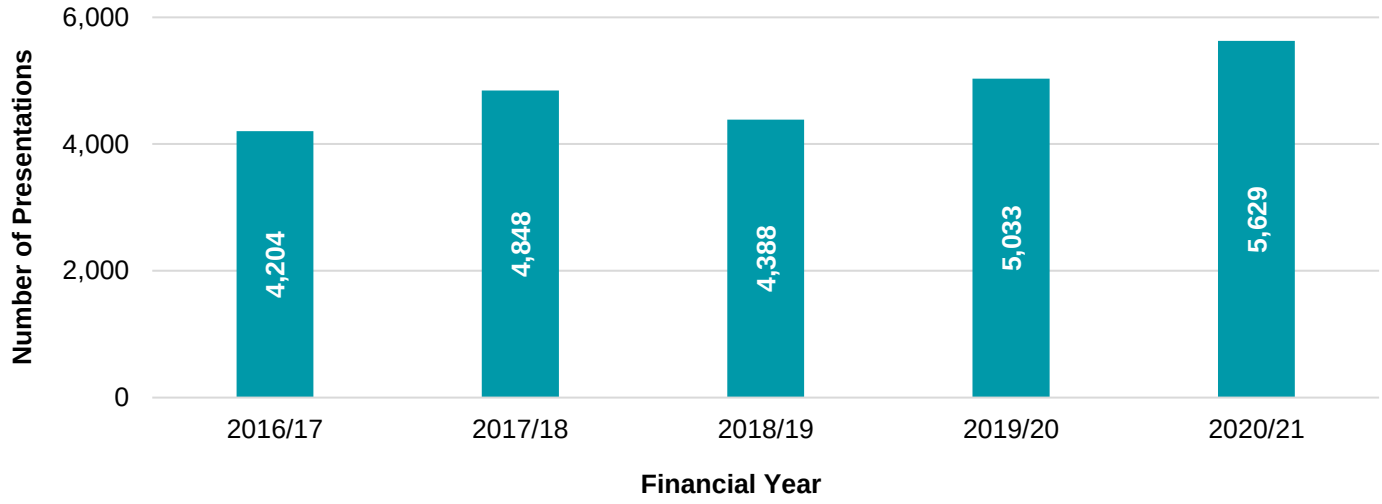
Government of **Western Australia**
Department of **Health**

Introduction

Blunt force injuries have been identified as one of the top causes of injury hospitalisation in Australian children aged 0 to 17 years. In Australia, between 2019 and 2020 12,732 children were hospitalised for a blunt force injury where they made contact with an object[1]. Blunt force injuries can occur from a variety of causes throughout childhood development; however with preventative measures the severity and prevalence injury rates can be reduced.

Between July 2016 to June 2021, 24,102 children presented with a blunt force injury to the Perth Children's Hospital Emergency Department. This accounts for 25.3 percent of all injury presentations during the five year time period (Figure 1). A gradual increase is seen over time from 23.4 percent in 2016/17 to 25.5 percent in 2020/21 when looking at injuries from blunt force as a proportion of total injury presentations to PCH ED.

Figure 1: Blunt Force Injuries

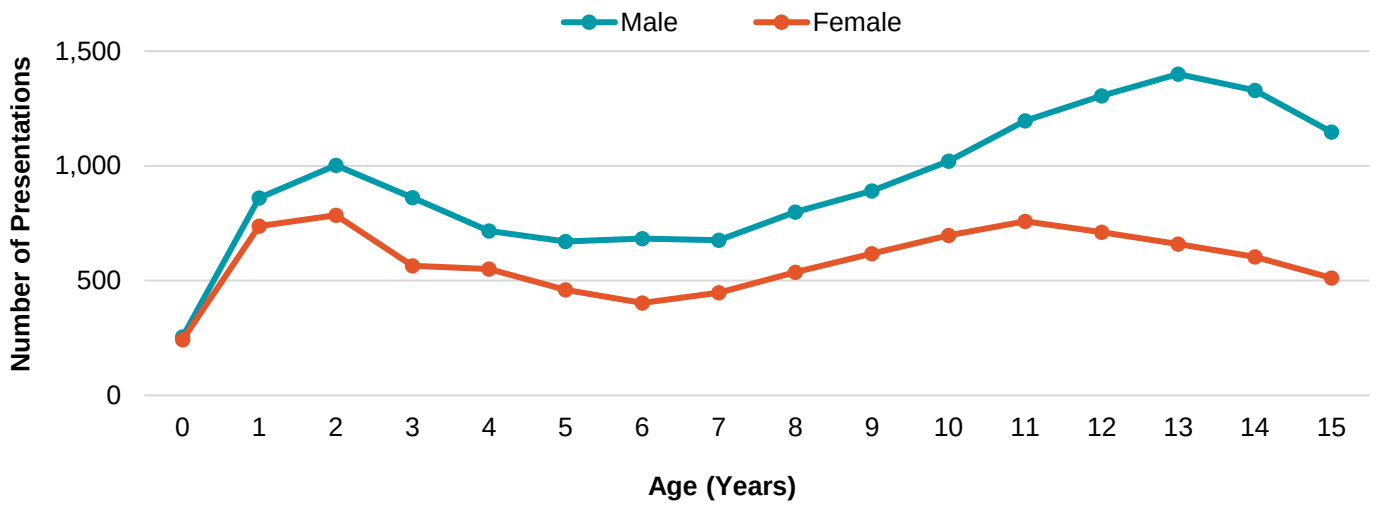


Demographics

Blunt force injuries are significantly more common among males than females accounting for 61.5 percent (n=14,816) of injuries, with females accounting for the remaining 38.5 percent (n=9,286). Peak injury rates are seen in young adolescence aged between 12 and 14 years, with males particularly more at risk. (Figure 2.) A small rise in blunt force injuries is also seen amongst Toddlers between 1 and 3 years of age.

Aboriginal and Torres Strait Islander children account for 3.2 percent (n=775) of all blunt force injury presentations to PCH ED. Most children who presented with a blunt force injury resided within the Perth Metropolitan Area (85.1%, n=20,499), while 12.9 percent (n=3,106) resided in regional Western Australia.

Figure 2: Blunt Force Injuries by Age and Gender

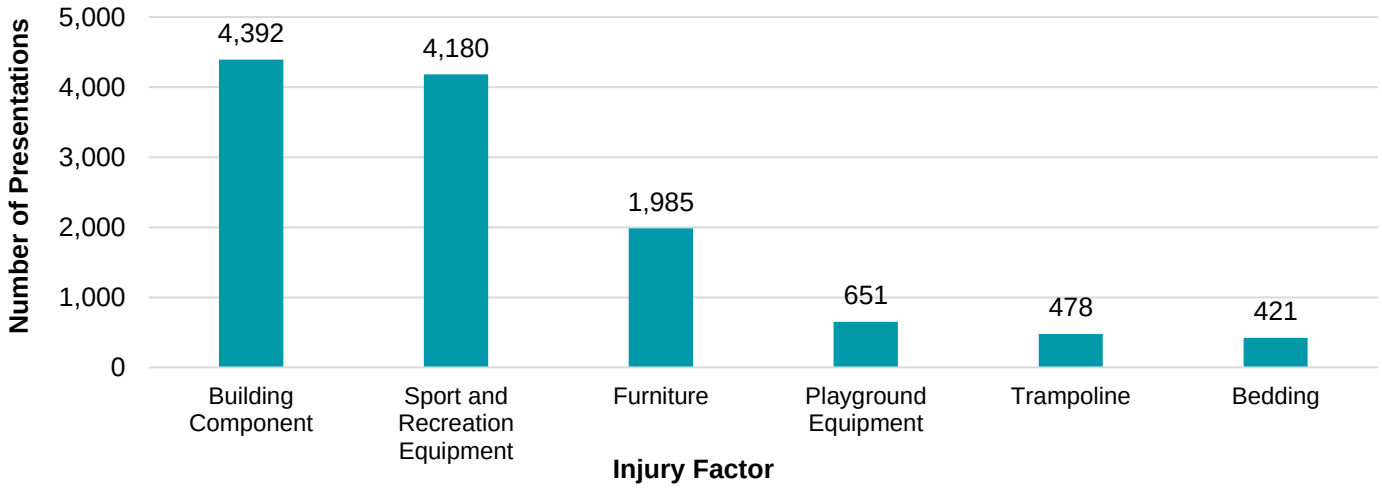


Injury

A triage category between one and five is allocated to every child that attends PCH ED. This is based on the urgency of the medical attention required, with one being the most urgent and five being least urgent. Category 4 – Semi-urgent (84.7%, n= 20,407) was the most commonly allocated triage category for blunt force injuries. This was followed by category 3 – Urgent (13.2%, n=3,176), category 2 – Emergency (1.9%, n=460) and category 1 – Resus (0.1%, n =30). Almost all of the blunt force injury presentations to PCH ED were unintentional (98.2%, n=23,678).

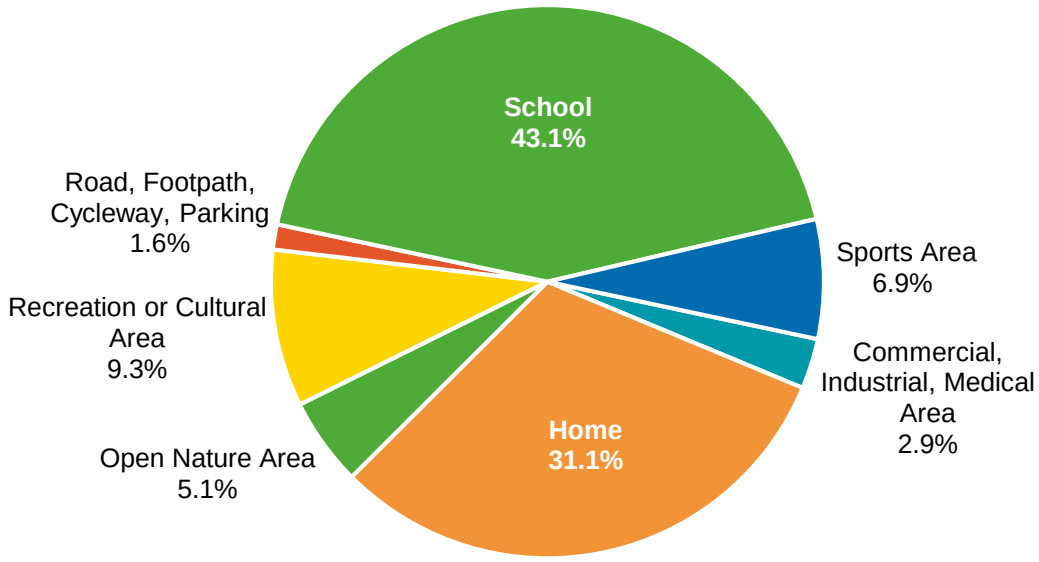
Sports activities were associated with over a quarter of blunt force injuries (27.5%, n=6,632). Of those sports, Australian Rules Football (25.1%, n=1,666), Soccer (13.1%, n=869) and Basketball (11.5%, n=764) were the most common sports for a child to acquire a blunt force injury. Sports balls were an injury factor in 13.7% (n=3,296) of all blunt force injuries, while other sport and recreational equipment made up a further 1.6 percent (n=393). Building components such as doors and windows were a factor in 18.2 percent (n=4,392) of blunt force injuries. Furniture such as tables, chairs and couches were also a common factor (8.2%, n=1,985) as well as playground equipment (2.7%, n=651) and trampolines (2.0%, n=478) (Figure 3). Almost half (47.4%, n=11,434) of all blunt force injuries did not have an associated injury factor.

Figure 3: Bunt Force Injuries by Injury Factor



The location of most blunt force injuries was unknown (72.7%, n= 17,532). Of the known locations (27.3%, n=6,570), schools were the most common location for blunt force injuries to occur accounting for 43.1 percent (n=2,832) of the presentations. This was followed by the home (8.5%, n=2,043) and recreational and cultural areas (2.5%, n=609) (Figure 4).

Figure 4: Blunt Force Injuries by Known Location



Most children attended the ED based on concerns of themselves or a relative (90.6%, n=21,847). This was followed by referrals by a general practitioner (4.7%, n=1,130) and other hospitals (2.6%, n=636). The majority of blunt force injury presentations to PCH ED were discharged from hospital with treatment complete (90.4%, n=21,785). A further 7.7 percent (n=1,855) of children were admitted to hospital for additional treatment. The remaining children either left at their own risk, did not wait for treatment or were referred to another department or hospital.

Prevention

Blunt force injuries are caused by a collision with another person or an object. The following preventative measures can assist in reducing the risk of blunt force injuries:

At Home:

- Actively supervise your child and stay close when your child is playing near or around the house, furniture or equipment.
- Use corner protectors on benches, coffee tables and other sharp cornered furniture.
- Secure top heavy furniture such as televisions, bookshelves and chest of draws to the walls to avoid these toppling onto children.
- Position furniture so there is ample space for young children to get around when crawling or learning to walk.
- Ensure there are no trip hazards by making sure floor coverings are in good condition and placing grips under rugs.
- Ensure glass doors are protected by safety film or made of safety glass and install decals or stickers to stop children walking into them.
- Use chocks, wedges or catches to keep internal doors from slamming shut.

During Sports and Recreational Activities:

- Ensure young children are participating in modified sports appropriate for their age such as AusKick, Kanga Cricket and NetSetGo.
- Ensure children participate in training sessions before playing in competitive games.
- Ensure appropriate protective equipment is worn for your chosen sport. This may include mouthguards, eyewear, helmets, protective padding, footwear and gloves
- When using bicycles and other small wheeled devices, ensure that they are the right size for your child and that they always wear a helmet.
- Ensure trampolines and other playground equipment meet Australian Standards, and are in good condition.
- Ensure that there is only one person at a time jumping on the trampoline.
- Use safety features such as pads to cover the frames and springs of the trampoline and a net/enclosure.
- Provide a clear area around and underneath the trampoline. The area should be clear from obstacles such as concrete, rocks, building structures, fences, moveable play equipment, toys and bikes.
- Always supervise children when they are playing, and teach them how to use all equipment safely.
- Ensure your child is using playground equipment that is suitable for their age and stage of development.
- Ensure playground equipment in your backyard is adequately spaced away from hard objects such as fences, trees and other play equipment.

References:

1. Australian Institute of Health and Welfare. (2022). *Contact with objects.* Retrieved from https://www.aihw.gov.au/reports/injury/contact-with-objects

Suggested citation:
Posa, I, McKenna, J, Skarin, D. Blunt Force Injuries. Perth (WA): Kidsafe WA (AU); 2022 June. Report No.: 48.

For further information please contact Kidsafe WA

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