Kidsafe WA
Childhood Injury Bulletin

Child Accident Prevention Foundation of Australia
Western Australia

July 2026

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 and young people aged zero to seventeen, and 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.

Partnership with ECU
Kidsafe WA partnered with researchers at Edith Cowan University to examine the key causes of head injuries amongst children in Western Australia. The report utilised emergency department data from the Perth Children's Hospital (PCH), covering head injury presentations from July 2012 to June 2022. As Western Australia's only dedicated paediatric hospital, PCH provides specialist emergency care for children with serious illness and injury, receiving referrals from across the state. As children may also present to other hospitals and health services, these findings represent a snapshot of head injuries amongst children in WA. This bulletin provides an overview of head injury presentations associated with sporting activities. For an overview of all childhood head injuries at PCH ED, see *Kidsafe WA Childhood Bulletin: Head Injuries.*

Sport-related Head Injuries

A snapshot of injuries

- A total of **7,632** children presented to the PCH ED with a sport-related head injury between July 2012 and June 2022.
- Sport-related head injuries account for **15 percent** of all head injuries seen at PCH ED.
- **Males** accounted for 72 percent of sport-related head injuries (n=5,515).
- Sport-related head injuries were most common in children aged **10 to 14 years** (42%, n=3,175).
- Common activities associated with sport-related head injuries included **cycling**, **scootering**, **trampolining** and **Australian football**.
- **Blunt trauma** was the most common cause of sport-related head injury (43%, n=3,240).
- The most common types of sport-related head injuries were **open wounds** and **fractures**.
- Commonly reported locations for sport-related head injuries included at **home**, at a **sport or athletics area** and at **school**.

Partner:

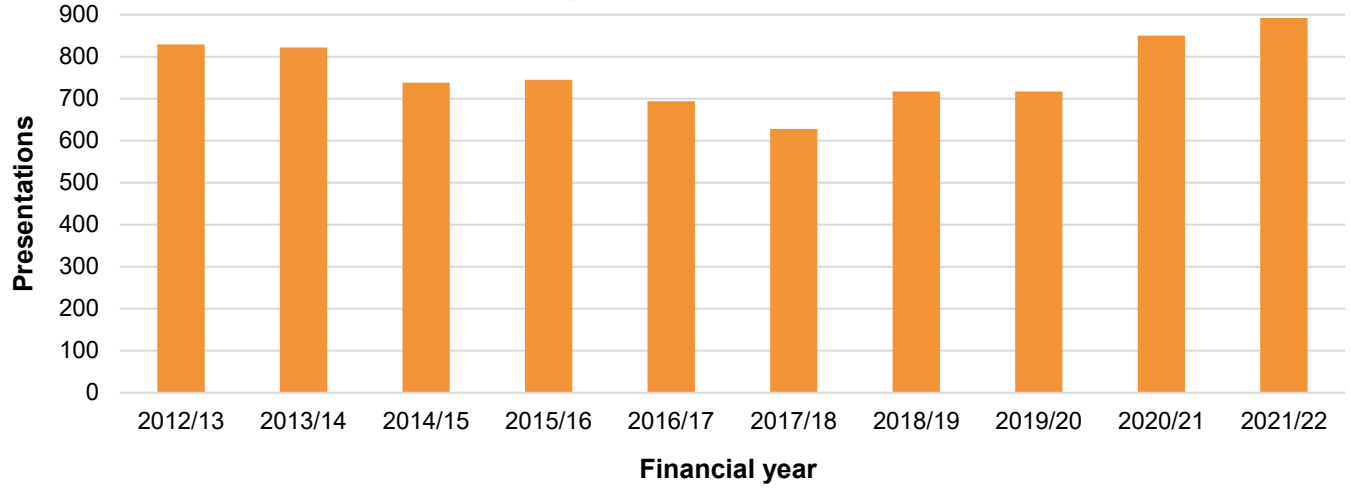
Government of **Western Australia**
Department of **Health**

Introduction

Sport and recreation play a vital role in childhood, supporting physical development, social connection and overall wellbeing. However, participation in these activities carries an inherent risk of injury, including serious head injury and concussion. As children grow older and gain greater independence, head injuries sustained during sport, outdoor play and recreational activities become increasingly common[1,2]. Understanding the circumstances in which these injuries occur is essential for developing effective prevention strategies to reduce the risk of harm while supporting safe participation in physical activity.

Between July 2012 and June 2022, 51,715 children presented to the Perth Children's Hospital Emergency Department (PCH ED) with a head injury. Of these presentations, 14.8 percent were associated with a sporting activity (n=7,632). Annual presentations remained relatively stable over the 10-year period, with a slight increase in the most recent years (Figure 1). Lower presentation numbers from 2017 to 2018 may reflect the relocation and transition of services from Princess Margaret Hospital to Perth Children's Hospital.

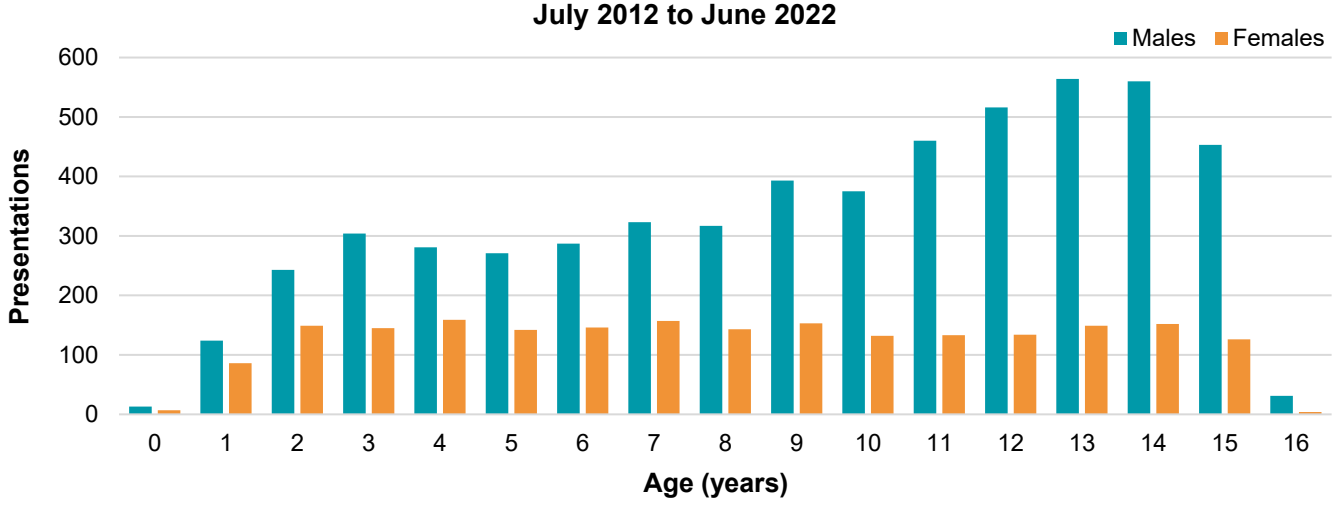
Figure 1: Sport-related Head Injuries by Financial Year; July 2012 to June 2022



Demographics

Sport-related head injuries were lowest during early childhood and gradually increased with age, with the highest presentations in children aged 10 to 14 years (41.6%, n=3,175). Males accounted for the majority of presentations across all age groups (72.3%, n=5,515), with females and other categories accounting for 27.7 percent (n=2,117) of cases. While male presentations were higher across all ages, the difference between males and females notably increased in older children. Female presentations remained relatively stable across all age groups, while male presentations increased with age and peaked in early adolescence (Figure 2).

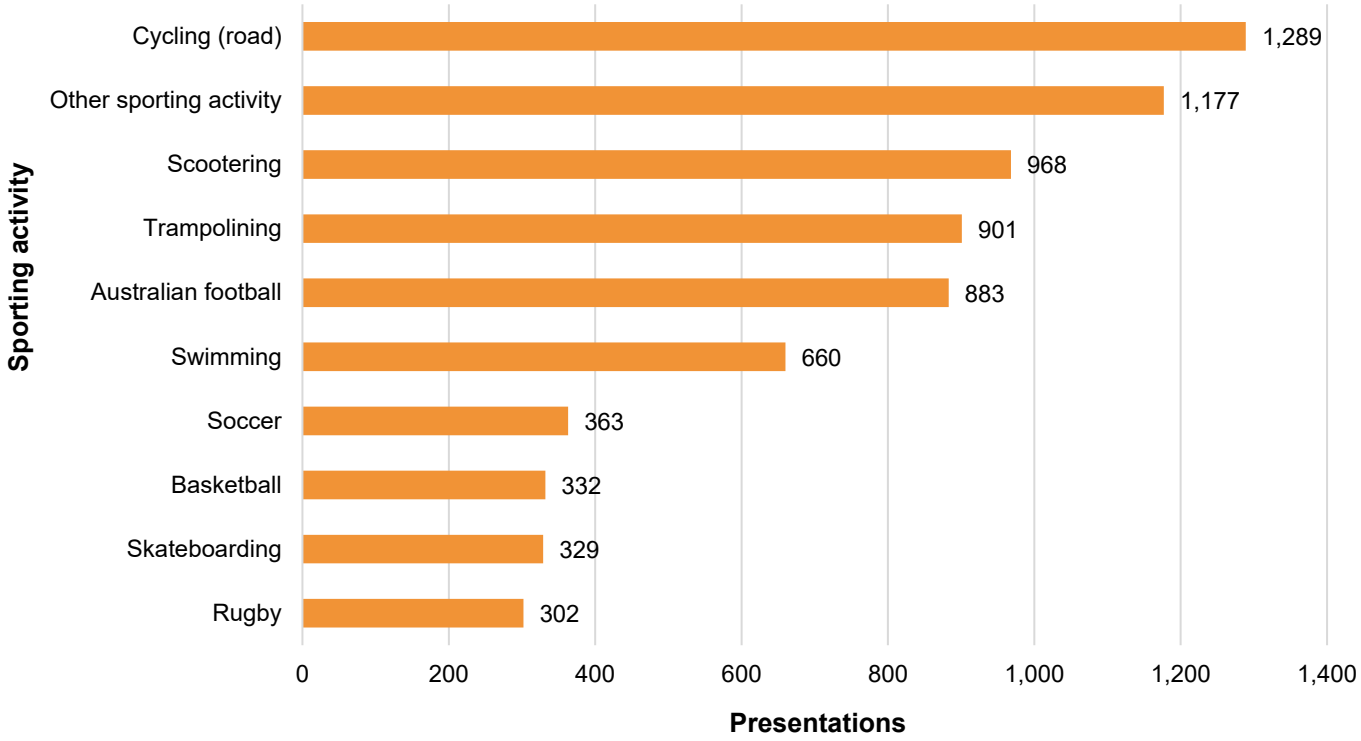
Figure 2: Sport-related Head Injury Presentations at PCH ED by Age and Sex; July 2012 to June 2022



Sporting Activity

Across all age groups, the sporting and recreational activities most commonly associated with head injuries were cycling (road) (17.9%, n=1,289), scootering (13.4%, n=968), trampolining (12.5%, n=901), Australian football (12.3%, n=883) and swimming (9.2%, n=660). Sporting activities that did not fit within a specific category, or were associated with low presentation numbers, were combined as 'other sporting category' (16.3%, n=1,177) (Figure 3). Importantly, a substantial proportion of sport-related head injuries occurred during informal play and recreation, highlighting that injury risks extend beyond organised sport settings.

Figure 3: Sport-related Head Injury Presentations at PCH ED by Sporting Activity; July 2012 to June 2022



Injury

Across all age groups, blunt trauma was the leading cause of sport-related head injury, accounting for 42.5 percent (n=3,240) of presentations. This was followed by pedestrian or cyclist injuries (36.3%, n=2,768) and falls (17.5%, n=1,336), with the remaining cases categorised as other causes (3.8%, n=288). The cause of head injury varied between age groups. Pedestrian or cyclist injuries were the leading cause amongst children aged 1 to 4 years (57.1%, n=852) and 5 to 9 years (45.5%, n=1,060), while blunt trauma was the most common cause of injury amongst children aged 10 to 15 years (54.7%, n=1,822).

The most common injury types associated with sport-related head injuries were open wounds (30.3%, n=2,309), other or unspecified injuries (29.0%, n=2,213) and fractures (16.8%, n=1,285). Although intracranial injuries (including concussion) were less common overall, they represented a notable proportion of sport-related head injuries, accounting for 9.6 percent (n=528) of cases in males and 7.7 percent (n=162) in females. Injury type also varied by reported sporting activity, with open wounds and fractures most commonly associated with cycling and scootering, and intracranial injuries most commonly associated with Australian football.

For the majority of sport-related head injury presentations, the location of the incident was recorded as 'other place' (64.9%, n=4,954). Of cases with a specified location (35.1%, n=2,678), 23.6 percent occurred at home (n=633), with 22.4 percent at a sports and athletics area (n=599) and 19.1 percent at school (n=512). Other specified locations included public roadways and footpaths (14.7%, n=395), public buildings (11.1%, n=298) and open nature areas (8.3%, n=222). These findings suggest that sport-related head injuries occur across a diverse range of environments and are not limited to formal sport settings.

Prevention

Sport-related head injuries in children occur across a broad range of activities and settings, with many injuries arising during informal play and recreation alongside organised sports. While prevention efforts across all levels of organised sport remain important, safety initiatives should also target play and recreational environments where children are also active. Prevention strategies should address the diverse contexts in which children are physically active, helping to reduce the risk of head injury while supporting safe participation in sports and physical activity.

Organised sports

- Ensure children always wear appropriate protective equipment when participating in sport, including a properly fitted helmet where relevant.
- Ensure children engage in age and skill appropriate sports, rules and competition levels.
- Promote a culture of safety and ensure coaches and parents are informed of any past head injuries.
- Educate children, parents and coaches about recognising and reporting concussion symptoms, including headaches, dizziness, confusion and nausea.

Informal play and recreation

- Ensure children wear a properly fitted helmet when riding bikes, scooters, skateboards and other wheeled devices.
- Encourage safe riding behaviour such as using pedestrian crossings, obeying traffic signals and staying alert near roads and vehicles.
- Ensure recreational equipment is well-maintained and used according to safety instructions.
- Ensure playgrounds have soft fall surfaces such as sand or mulch to protect against falls.
- Ensure trampolines meet the Australian Standard AS 4989 and always follow recommended installation and maintenance instructions.
- Supervise trampoline use and encourage one user at a time to reduce collision risk.
- Supervise children during informal play including activities involving bats, balls and other equipment.
- Provide a safe play area in the backyard away from driveways, vehicles and other hazards.

Recognising and managing concussion

Concussion can occur after a head injury, and symptoms may not appear immediately.
If concussion is suspected during sport, remove the child from play and seek medical attention.
For more information, see the *Australian Concussion Guidelines for Youth and Community Sport*.

Kidsafe WA supports families, schools and sporting organisations to create safer environments for children participating in sport and recreation activities. Through the *Let's Make Sport Safer* campaign, Kidsafe WA offers practical guidance, resources and education to help reduce the risk of injury and keep children active and enjoying sport safely. Learn more at www.kidsafewa.com.au/lets-make-sport-safer/.

References:

1. AIHW. *Head Injuries in Australia 2020-21* [Internet]. Canberra (ACT): AIHW; 2023 [cited 2026 May 28]. Available from: www.aihw.gov.au/reports/injury/head-injuries-in-australia-2020-21
2. Posa, I., Jamieson, K., Skarin, D. *Kidsafe WA Childhood Injury Report: Sport Injuries 2019-2024*. Perth (WA): Kidsafe WA; 2025 December.

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For further information please contact Kidsafe WA

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