Kidsafe WA
Childhood Injury Bulletin

Child Accident Prevention Foundation of Australia
Western Australia

June 2021

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. 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 63,000 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 provides a summary of injuries related to small-wheeled devices occurring during the five year period between July 2015 and June 2020.

Small-Wheeled Devices

A snapshot of injuries related to small-wheeled devices

- Between July 2015 and June 2020, there were a total of **2,736** small-wheeled device-related injury presentations to PCH ED.
- **Males** represent the greatest number of small-wheeled device-related injuries, accounting for 64.1 percent (n=1,755) of presentations.
- Children aged **10 to 14 years** of age accounted for the highest number of small-wheeled device-related injuries (48.2%, n=1,318) followed by children aged **5-9 years** (37.2%, n=1,019).
- **Sports area** was the most common location for small-wheeled device-related injury to occur (37.7%, n=305).
- Only 5.6 percent (n=152) of children injured while riding a small-wheeled device were reported as **wearing a helmet**.
- **Scootering** is the most common activity leading to small-wheeled device-related injuries (53.1 %, n=1,452) followed by **skateboarding** (35.2%, n=963).
- The most commonly allocated triage category for small-wheeled device-related injury was **category 4 - Semi-urgent** (82.6%, n=2,261).
- Of all small-wheeled device-related injury presentations to PCH ED, 86.3 percent (n=2,361) were **discharged** from hospital with treatment complete.

Partner:

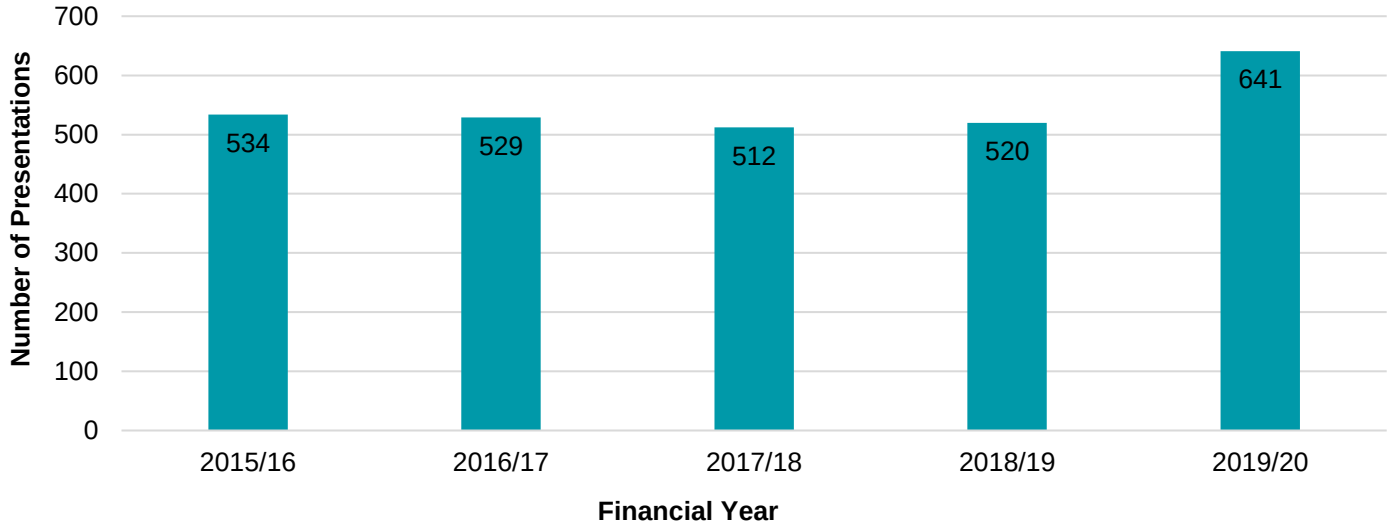
Government of **Western Australia**
Department of **Health**

Introduction

The use of bicycles and small-wheeled devices are popular methods of childhood recreation[1]. Small-wheeled devices or wheeled pedestrians refer to non-motorised transportation equipment such as skateboards, scooters, roller blades and roller skates. In Australia, between 2002 to 2012, 24,458 injury-related hospitalisations in children aged 0 to 16 occurred as a result of falls involving roller skates, skateboards, scooters and other small-wheeled pedestrian devices[2].

Between July 2015 and June 2020, there were 2,736 small-wheeled device-related injury presentations to the Perth Children's Hospital Emergency Department, accounting for 3.0 percent of all injury presentations during the five year period (Figure 1). An increase in the presentation of small-wheeled device-related injuries from July 2019 to June 2020 may be attributed to COVID-19 pandemic and community lockdown that resulted in school closures and an increase in recreational time.

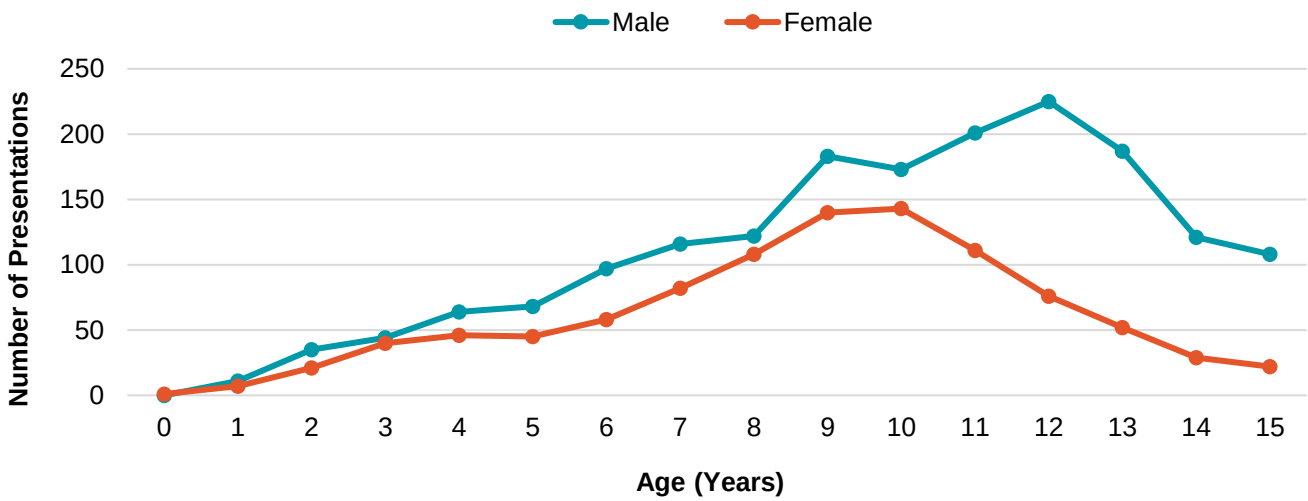
Figure 1: Small Wheeled Device-related Injuries



Demographics

Males record higher rates of small-wheeled device-related injury presentations compared to females between ages 0 to 15 accounting for 64.1 percent (n=1,755) of injuries, with females the remaining 35.9 percent (n=981). From the age of one, males present with more small-wheeled device-related injuries than females. As age increases so too does the injury gap between genders, peaking at 12 years of age (Figure 2). This is attributed to a tendency for males to participate in greater risk taking behaviours and higher levels of physical activity than females of similar ages[3].

Figure 2: Small Wheeled Device-related Injury by Age and Gender



Aboriginal and Torres Strait Islander children account for 2.3 percent (n=62) of small-wheeled device-related injuries. Most children who presented to PCH ED with a small-wheeled device-related injury resided within the Perth Metropolitan Area (95.1%, n=2,603). Children residing in regional Western Australia accounted for only 3.3 percent (n=91) of presentations.

Injury

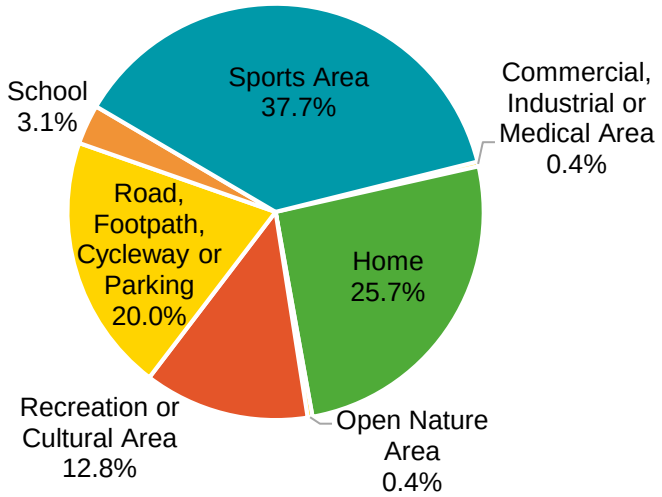
Every child that attends PCH ED is allocated a triage category between one and five based on the urgency of the medical attention required, with one being the most urgent and five being least urgent. The most commonly allocated triage category for small-wheeled device-related injuries was category 4-Semi-urgent (82.6%, n=2,261) followed by category 3-Urgent (15.3%, n=418). All of the small-wheeled device-related injuries presented in children were unintentional (100%, n=2,736).

All small-wheeled device-related injuries are categorised as occurring during participation in a sporting activity (100%, n=2,736). Scootering is the most common sporting activity leading to small-wheeled device-related injuries (53.1%, n=1,452) followed by skateboarding (35.2%, n=963), roller skating (7.8%, n=213) and rollerblading (3.9%, n=108).

For the majority of presentations, the use of safety equipment was unknown or there was an inadequate description provided (89.0%, n=2,434). Where safety equipment was known (n=302), only 50.3 percent (n=152) of children injured while using a small-wheeled device were reported as wearing a helmet. The remaining children were reported as wearing no safety equipment. The low usage levels of safety equipment is alarming. Although helmet use is not legally required when using small-wheeled devices, it is highly recommended[4].

The location of most small-wheeled device-related injuries was unknown (70.4%, n=1,926). Of the known locations (n=810), sports areas such as skate parks were the most common location for small-wheeled device related injury to occur accounting for 37.7 percent (n=305), followed by the home (25.7%, n=208) and road, footpath, cycleway or parking (20.0%, n=162) (Figure 3). Within the home, the outdoors is the most common location for small-wheeled device-related injury to occur.

Figure 3: Small-Wheeled Device-Related Injury by Location



A large number of small-wheeled device related injuries occurred on the weekend on either a Saturday or Sunday (42.3%, n=1,157). Between 12pm and 6pm was the most common time of day for injury to occur (28.8%, n=789).

Most children attended the emergency department based on the concerns of themselves or a relative (88.7%, n=2,428), were referred by a general practitioner (5.7%, n=156) or another hospital (4.6%, n=126). Of all small-wheeled device-related injury presentations to PCH ED, 86.3 percent (n=2,361) were discharged from hospital with treatment complete. A further 13.0 percent (n=355) of children were admitted to hospital for additional treatment. The remaining children either departed at their own risk, did not wait for treatment or were referred to another department.

Prevention

Small-wheeled devices can travel at high speeds and have minimal breaking mechanisms which limits the child's control of the device once in use. This can lead to collisions and falls resulting in a range of acute to chronic injuries. The risk of injury is heightened for young children, as well as inexperienced and experienced users performing tricks at high speeds[4]. The following preventative measures can assist in reducing the risk of small-wheeled device-related injuries in children:

- **Wear a helmet.** Select a helmet that complies with the current Australian Standards and fits the child's head properly.
- **Purchase and use protective equipment** such as elbow, wrist and knee guards.
- **Avoid poorly made products**. Check the quality, durability and functionality of products prior to purchase.
- Adjust the height of the scooter to ensure it is at the correct height for the rider.
- Roller skates and blades should be fitted correctly. The skates and blades should be firm and comfortable on the child's feet.
- **Conduct regular maintenance checks**. The devices brakes, locking mechanisms and handlebar grips should be checked. Sharp edges and protrusions on the device should be eliminated prior to use.
- **Teach children** how to use the device and practice in a safe place away from roads, slopes and driveways.
- **Ensure the child is supervised**. Learners and children under the age of 10 should always be supervised by an adult.
- **Identify safe places.** Check with local council for locations of skate parks and ramps in the area away from roads and traffic.
- **Use footpaths and shared paths.** A footpath or shared path is optimal for children. Riders must keep to the left and give-way to pedestrians.
- **Avoid use of the device on roads.** The inadequate brake mechanisms and presence of other vehicles increases the risk of injury.
- Avoid using small-wheeled devices in poor light, wet conditions or near traffic.
- **Wear bright coloured clothing**. Users should wear clothing that is highly visible to road users. This can include the use of reflective tape, reflectors, flashing lights and visibility flags.
- Contact your local skate centre or roller drome to find out if they offer lessons. Learning to fall safely is essential in reducing the risk of injury.

References:

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2. Mitchell, R., Curtis, K., & Foster, K. (2017). *A 10-year review of the characteristics and health outcomes of injury-related hospitalisations of children in Australia*. Day of Difference Foundation. University of Sydney: http://www.paediatricinjuryoutcomes.org.au/wp-content/uploads/2017/06/Australian-child-injury-report_FINAL-070617.pdf
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4. Kids Health. (2019). *Skateboards, scooters, rollerblades and roller skates Fact Sheet*. https://kidshealth.schn.health.nsw.gov.au/skateboards-scooters-rollerblades-and-rollerskates

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