

Fall-related injuries in young children 0-6 years

Understanding the Issue

Falls are often considered part of the childhood experience, but they can result in serious injuries. This Ontario Injury Compass presents emergency visit data between 2012-2016 for fall-related injuries in young children aged 0-6 years. It also details risk factors and leading evidence-based strategies to prevent these falls from occurring.

Between 2012-16, 262,826 young children aged 0-6, visited an Emergency Department (ED) in Ontario for fall-related injuries. Falls resulting from slips, trips, and stumbles were the leading causes of injury for children aged 1-6 in 2016, while falling from a bed was the leading cause of injury for infants younger than age one.

5-Year Trend

Over a 5-year period (2012-16), the ED visit rate per 100,000 due to fall-related injuries in young children rose marginally by 4.2%. During the same period, ED visit counts rose from 51,339 in 2012 to 54,458 in 2016 respectively (Figure 1). The absence of a reduction in these injury statistics may indicate the need for more education and preventative measures as detailed in the upcoming section of this report.

Risk Factors

Gender

Fall-related ED-visits were slightly higher for female, than male, children aged 0-6. Between 2012-16, 148,569 female children aged 0-6 visited an Ontario ED for fall-related injuries, while the count was slightly lower, at 115,241, for male children of the same age group (Figure 2).

FIGURE 1. Fall-related ED visits, Counts and Crude rates, NACRS, Ontario, 2012 - 2016

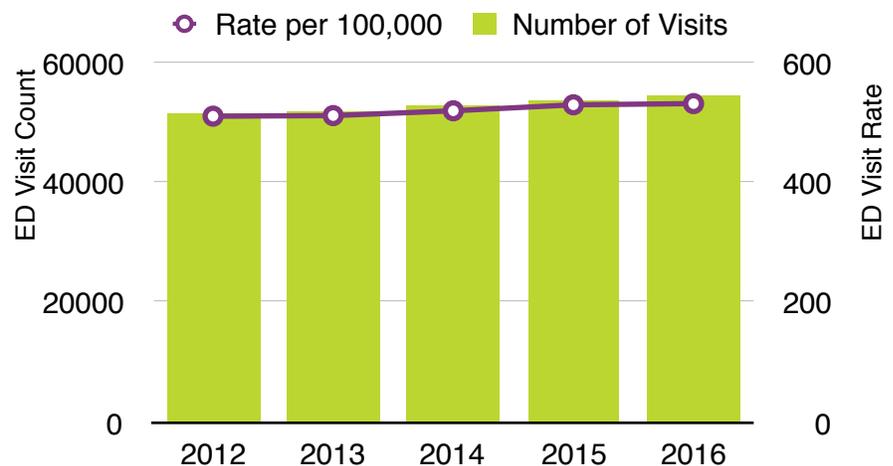
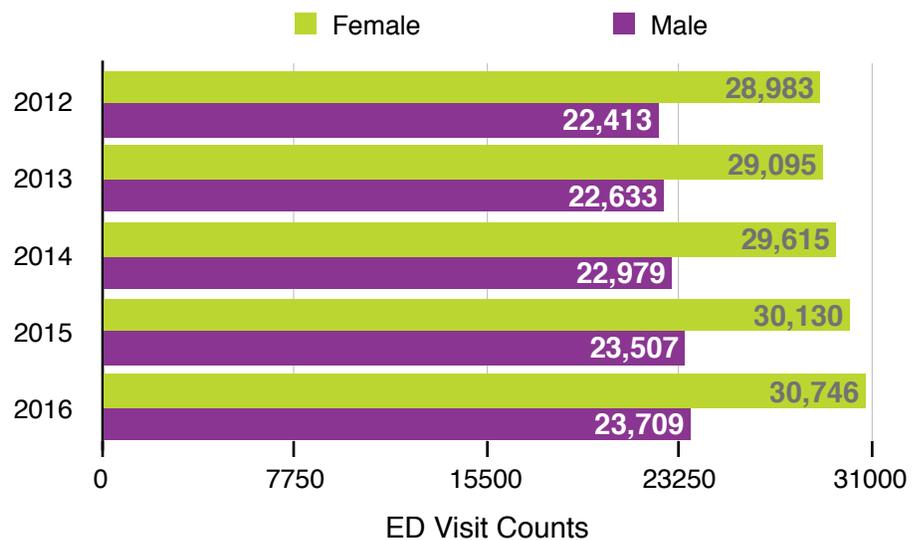


FIGURE 2. Fall-related ED visits by Gender, NACRS, Ontario 2012-16



Age & Cause of Injury

In 2016, for children aged 0-3, falls resulting from slips, trips, and

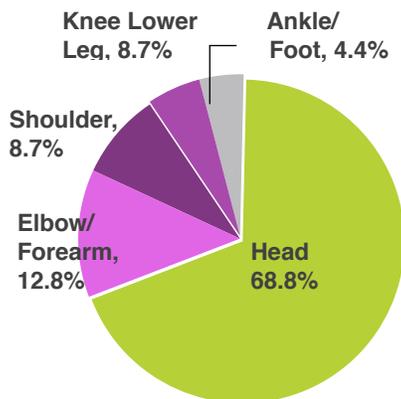
stumbles on the same level, falls involving a bed and other furniture, and falls on and from stairs/steps were the leading causes of injury.

For older children aged 4-6, falls resulting from slips, trips, and stumbles on the same level, falls involving monkey bars and falls on and from stairs and steps were the top three leading causes of injury in 2016. For children younger than age one, falls while being carried or supported by other people contributed to over half (54%) of the ED-visits. Falls from monkey bars contributed to most ED-visits in children aged 4-5 years, indicating that it may be beneficial to encourage adult supervision during this type of risky play.

Injuries to the Body

Injuries to the head were most common in fall-related injuries (68.8%) (Figure 3). Injuries to the

FIGURE 3. Fall-related ED visits by injured body part NACRS, Ontario, 2015



elbow/shoulder (12.8%) were also significant, followed by smaller instances of knee and lower leg injuries (8.7%) and injuries to the ankle/foot (4.4%).

Prevention Strategies

Environmental Changes

- Lower the crib mattress before your baby (5-6 months) can push up on their hands and knees to prevent them from falling out of the crib.¹
- Consider changing infants while resting on the floor.

- Secure handrails and wall-mounted gates at the top of the stairs and pressure-mounted gates at the bottom to prevent falls on stairs for small children (up to approximately 2 years).²
- Secure furniture (e.g., dressers and bookshelves) and remove loose rugs and/or electrical cords to prevent a busy toddler from tipping things onto themselves or tripping.³
- Windows and balcony doors on levels above the first floor are best locked and secured from prying arms.⁴
- Whether at home or outdoors, keep your environment well-lit to ensure that the child is able to make their way around safely.

Behaviour Changes

There are additional things parents and caregivers can do to prevent risk for falls:

- Supervise and handle infants carefully to help prevent a fall.³
- Teach children how to explore their indoor environment safely (e.g., using stairway handrails).⁴⁻⁵
- Teach children how to use playground equipment (e.g., monkey bars) safely, navigate the road cautiously, avoid icy surfaces and paths in the winter and wear protective gear (e.g., helmets) when on a bicycle.

Methodology

ED visit data were obtained from the National Ambulatory Care Reporting System (NACRS) at CIHI. Data are from calendar year January 1, 2012 -

December 31, 2016. These data, as well as population estimates for calculating rates, were accessed using IntelliHEALTH ONTARIO through the Ministry of Health and Long-Term Care. ICD-10-CA coding was used to isolate falls in children aged 0-6 (W00-W19; S00-S99).

References

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