Playground upgrades lead to fewer major head injuries

Toronto's drive to make play areas safer has led to large drop in related hospital stays

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Safer playground equipment and softer surfaces have helped drastically reduce the amount of serious head injuries to children, a new report from the Canadian Institute for Health Information shows.

Every day in Ontario, 23 children visit an emergency room mostly due to falls from playground equipment.

Arm, wrist or elbow fractures are the main reason for the 8,734 emergency visits in Ontario in 2004-2005.

At least one child a day requires a hospital admission of one night or more.

Hospital admissions for head injuries have declined dramatically. In 2002-2003, head injuries accounted for one in five admissions to hospital. That number is now 1 in 15, the CIHI report shows. The chief reason for the decline seems to be improved playgrounds, said Margaret Keresteci, manager of clinical registries at CIHI.

"Because most of these injuries happen during falls, falling onto a concrete surface and height of the equipment is an issue," she said. "It seems quite likely that the investment we put into really thinking about our playgrounds and designing them appropriately is paying off."

Not surprisingly, injury rates peak in the summer. June, July and August see 44 per cent of all playground-related hospital visits.

Toronto's drive to replace old playground equipment has helped reduce the amount of injuries city kids sustain while swinging, running and playing. In 2004-2005, there were 48 hospital admissions in the Toronto region due to playground injuries. In 2000-2001 there were 86.

Across the province, the number of visits to emergency departments varies. The Kingston and Brockville areas had the highest rate of playground injuries in Ontario in 2004-2005, with 438 visits per 100,000 people, the study shows, followed by London and Windsor with 430 per 100,000. In Toronto, the rate per 100,000 is 208.5, and the Mississauga-Halton area is the lowest at 129.9.

Only a portion of those visits lead to hospital admission. In Toronto, 18.6 children per 100,000 are admitted for one night or more.

Modern equipment that upholds safety standards means fewer serious head injuries, agreed Dr. Andrew Howard, an orthopedic surgeon and medical director of the trauma program at the Hospital for Sick Children. But other playground injuries can still be severe.

"If you send school-aged children to play on a grassy field, you'll get an occasional broken arm," he said. "On the playground with equipment present, there is a four times higher risk of having a severe kind of fracture compared with a low-energy normal fracture of childhood."

On a busy night at Sick Kids, Howard said he sees about "half a dozen" of these types of injuries in children that'll send them to the operating room. "We have seen injury rates drop from better equipment, but we have seen equipment related injuries are the severe injuries," he said.

Sick Kids staff treats about 400 playground injuries each year, including 200 fractures annually. He said the CIHI data may not have captured all the injury numbers as each Ontario hospital may not have properly recorded the reason for the visit.

But Howard said there really is such a thing as a better-built playground children can play on without taking away the physical play. Appropriate equipment heights, softer surfaces and barriers can all help stop serious falls. "The more I look at it, the more I'm convinced there is a safer way at making a good playground."

Kids aged 5 to 9 visited the hospital more than any other age group, with 54 per cent (or 4,744) of all visits, the CIHI numbers show. This age group is more than twice as likely to visit an emergency department as those aged 10 to 14, who visited the hospital 2,018 times.

There are various reasons for this, said Rebecca Nesdale-Tucker, manager of public policy and advocacy for Safe Kids Canada, a group that promotes ways to reduce unintentional injuries. Children aged 5 to 9 are increasingly confident with their movements on play structures and parents may be more relaxed with supervision.

"They could be using the playground more and in different ways," said Nesdale-Tucker. "They are stepping out on their own and trying new things. Even up to age 8, kids might not have that fear of falling. That is why the soft surfacing is so important."

CIHI's Keresteci knows this statistic intimately. When she was 7, she broke both her wrists trying to imitate Superman. She dove off a piece of high playground equipment and hit the concrete.

"The message here is ... children at this age should know their own limitations, what the equipment is designed for and not designed for," she said.

Children should play on age-appropriate equipment, points out Nesdale-Tucker.

"Keep the little ones on the smaller equipment designed for them. Be ready to catch them when they fall. Teach them the rules of safe play."