THE LOCATION OF CHILD CYCLIST VERSUS MOTOR VEHICLE COLLISIONS IN AN URBAN ENVIRONMENT

L Rothman*, A Howard  
Correspondence: Hospital for Sick Children, 555 University Avenue, Toronto, Ontario, M5G 1X8, Canada

Background Cycling is a popular activity for children. Cyclists are disproportionately represented in motor collisions, and these collisions are frequently severe. This analysis was conducted to determine the age-specific variation in location of cyclist versus motor vehicle collision in children ages 1–17 years, in Toronto, Canada in order to identify appropriate prevention strategies.

Methods All police-reported cyclist-motor vehicle collisions involving children ages 1–17 between 1 January 2000 and 31 December 2005 were included. Age-specific ORs were calculated to compare differences in collision locations. Geographic Information System software was used to identify major versus neighbourhood roads.

Results There were 1325 police-reported collisions involving child cyclists with the majority (57%) involving 13–17 year olds. Collision rates were consistently higher in teenagers compared to younger children. Children ages 9–12 had almost twice and children ages 13–17 almost four times greater odds of collision on major roads as compared with 5–8-year-old children. Children ages 9–12 had a three times and children ages 13–17 had a four times greater odds of collisions at intersections (vs midblock) compared with 5–8-year-old children.

Conclusions Younger children (ages 5–8) require more options for safe off-road cycling in their neighbourhoods as they generally are involved in collisions on smaller neighbourhood roads and in midblock locations. Older children (ages 9–17) require training in order to learn to safely negotiate intersections and vehicular traffic on larger roadways. It is essential to consider the age of children in order to plan successful strategies to encourage safe cycling.