

# Child pedestrians more likely to be struck by motor vehicles in the spring months

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New research presented today at the 2015 Annual Meeting of the American Academy of Orthopaedic Surgeons (AAOS) found that most child pedestrian injuries involving a motor vehicle occurred while children were unsupervised, near schools and bus stops, and in the spring months during the afternoon and evening hours.

Pedestrian injuries are among the leading causes of pediatric deaths in the U.S. In 2012, 557 child and young adult pedestrians under age 20 were killed by motor vehicles in the U.S. and 22,000 were injured, according to the National Highway Traffic Safety Administration. Nearly three-fourths (73 percent) of pedestrian fatalities occur in urban settings.

In this study, researchers reviewed [electronic medical records](#) of 100 child pedestrian emergency department visits at St. Christopher's Hospital for Children in Philadelphia, Pa. from January 1 to December 21, 2012, including ambulance dispatch data, patient demographics, procedure(s), diagnoses, and length of stay. First responder narratives provided accident scene descriptions, including the individuals who were present at the time of the accident, and the type of intersection or property where the injuries occurred. Google Maps were used to identify the accident site, injury clusters and specific street locations.

The patients included 79 males and 21 females with an average age of 8. Sixty-one percent of patients were evaluated in the emergency department only, or were admitted for less than 24 hours, while 39

patients were admitted for 24 hours or more with a mean length of stay of 1.98 days. Eleven patients were admitted to the Intensive Care Unit (ICU) for at least one day. Among the other findings:

- At the time of the trauma, 40 percent of the children were accompanied to the emergency department by a parent or guardian, 34 percent by friends or peers, 13 percent by older siblings, and 13 percent were alone.
- Most injuries occurred around the time of school dismissal and during evening hours: 29 percent of injuries occurred between 2 and 5 p.m., and 42 percent between 5 and 9 p.m.
- The greatest number of injuries occurred during the month of June (13 percent) followed by the other spring months.
- Of the 44 cases with enough accident scene information to perform a detailed analysis, 70 percent (31) of the [children](#) were injured mid-block, and 18 percent (eight) at a crosswalk. Nine percent (five) were struck on private property, a sidewalk or in a parking lot.
- Injury clusters were identified near schools and public [bus stops](#) used by students for transportation to and from school.

"Accidents most frequently occurred when no parental supervision was present from the time of school dismissal until the early evening hours, and were most often located mid-block," said orthopaedic surgery resident and lead study author Alexa J. Karkenny, MD. "Injuries peaked during the warm months and clustered both near schools and bus stops located near schools.

"Keeping these spatial, temporal and behavioral predictors of pediatric orthopaedic trauma in mind, we can help guide prevention strategies in urban settings," said Dr. Karkenny. In the [emergency department](#), "knowledge of the high-risk injuries in this subset of patients can help the trauma team to prioritize patient evaluations, which is especially

important in complicated cases involving multiple injuries."

Provided by American Academy of Orthopaedic Surgeons

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