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## Promoting Child Pedestrian Injury Research

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Schwebel's state-of-the-art article on pedestrian injuries in this issue of *AJLM* points to the important need to develop and implement more effective child pedestrian interventions. In 2009, the Centers for Disease Control and Prevention's National Center for Injury Prevention and Control developed a comprehensive research agenda that described research needs and priorities for 2009–2018.<sup>1</sup> Pedestrian injury prevention was among the priorities. Pedestrian injury prevention research was identified as a priority area because pedestrians are a vulnerable population, and the burden of pedestrian injuries is large (43 498 pedestrians killed in the United States from 2000 to 2008).<sup>2</sup>

Characteristics of the built environment can play an important role in pedestrian injury prevention.<sup>3</sup> But despite an increased recognition of the importance of the built environment for physical activity promotion, there has been a dearth of research exploring how increasing pedestrian exposure might influence pedestrian-related deaths and injuries to children.

With increased focus on walking as a means to prevent childhood obesity, the relationship between increased walking and injury prevention becomes a more important researchable area. Planning, funding, and implementing changes in the built environment that favor more walking can have important safety implications. Modifying the built environment to encourage more pedestrian mobility must be accompanied by efforts to reduce or prevent pedestrian injuries, and research can help inform these preventive strategies.<sup>4</sup>

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Among the Centers for Disease Control and Prevention research priorities in transportation safety, we encourage research on the effectiveness of behavioral and environmental strategies to prevent pedestrian injuries. Important areas include multidisciplinary approaches involving theory-based education and training programs, engineering solutions, and the effects of strong law enforcement. Research should include interventions that focus not only on pedestrians but also on drivers and the driving environment, such as strengthening enforcement strategies for speed limits, yield-to-pedestrian laws, and school zones.<sup>4</sup>

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The findings and conclusions are those of the author and do not necessarily represent the official views of the National Center for Injury Prevention and Control or CDC.

Changes in pedestrian and driver behaviors and modifications in roadway environments can be tested, including traffic-calming measures that slow traffic and improve road conditions for pedestrians and bicyclists. Researchers should develop and evaluate strategies that reduce the risk for collisions with pedestrians, such as increased pedestrian and vehicle visibility or the influence of roundabout intersections on pedestrian behaviors, and address the different risk factors for groups in urban and rural settings. The medical profession can be an important ally in supporting such efforts and encouraging policy makers to consider what might happen by increasing exposure of child pedestrians to traffic without protecting them through environmental modifications.

New research<sup>5</sup> suggests that hybrid electric vehicles, because of their super-quiet engines, may place pedestrian at elevated risk of a collision. The odds of a hybrid vehicle being in a collision with a pedestrian was 35% greater than the odds of an internal combustion engine vehicle being in a similar crash. These issues raise further concern about child pedestrian safety as more hybrid vehicles enter the vehicle fleet.

It is our hope that investments in livable environments and community safety can be coordinated with safety research to maximize applications that protect children.<sup>6,7</sup> Federal and state agencies, foundations, corporations, and civic entities can use funding opportunities as a way to increase our knowledge, ultimately leading to improved protection for child pedestrians, but only if investments are made strategically. Joint research efforts on topics such as those above, which might pique the interest of physicians, injury researchers, and town planners, may ultimately be the best way to proceed.

Safety cannot be an afterthought for child pedestrians. Just as consumers have come to expect safe cars from manufacturers, we should expect safe environments for children to walk, especially as lifestyle medicine and public health practitioners promote walking as a means to reduce obesity and improve overall health.

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