

Injuries can be prevented

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As physicians, public health advocates, and parents, we strive to promote safe environments for our children. Everyone wants to decrease the risk of unintentional injury, the leading cause of death for children under the age of 15.¹ Unintentional injury is a significant burden on our children and youth and a critical issue for public health. In the United States, over 400 people die of injuries every day; at least 57 of these deaths occur among children, with almost two-thirds related to unintentional injuries.²

Unfortunately, the best injury prevention practices and policies are not always utilized, and oftentimes are not even available for children. Physicians who care for children are in a leadership position to recognize the need for safer environments for children. And historically, with safety as a priority, they have been strong advocates for creating such environments. In the realm of injury prevention, examples include advocating for child passenger safety seat laws, seat-belt laws, reduced blood alcohol lim-

its for drivers, industry standards to turn down water heaters, and installing propeller guards in motorboats.

These are important. Nonetheless, we are far from using the advances we have made in the scientific study of injury prevention and epidemiology to create safer environments for our children. The gap between known, scientifically-established best practices and policies and reality is vast.

This issue of the *Wisconsin Medical Journal* highlights injuries associated largely with recreational activities. Many of these activities involve children. The burden of these types of injuries falls on those least able to advocate for change. In an era where physicians and public health advocates are encouraging physical and recreational activities to counter the obesity epidemic, we should promote injury prevention practices that lessen the injury incidence and severity associated with these activities.

Injury tracking data has revealed head injuries to be a leading cause of severe injury and death in multiple types of outdoor sporting events including snowmobiling, skateboarding, bicycling, motorcycling, and skiing.³⁻⁷ The use of a helmet has been shown to be the single most effective measure available to decrease the risk of serious brain injury in a bicycle crash.⁸ Data strongly support the use of helmets not just for bicycling and motorcycling but for skiing, snowboarding, and skateboarding as well. These scientifically-established best practices for injury prevention need to become the norm for recreational activities.

The articles in this issue reinforce the understanding that head injuries, especially those related to recreational activities, have a major impact on Wisconsin children, adolescents, and young adults. Children, specifically younger ones, are at an increased risk of head injury due to their higher center of gravity, still-developing motor skills, and their oftentimes poor judgment and poor assessment of risk.

Tieves et al describe the epidemiology of traumatic brain injury (TBI) in Wisconsin, noting in particular that TBI is a major cause of death and hospitalizations, particularly for male teens, young adults, and the elderly. The article suggests that these groups should be targeted with counseling regarding their high risk-taking behaviors and the use of personal protective equipment to reduce the impact of future injury. Other authors discuss how helmets can prevent head injuries associated with horseback riding (Jagodzinski et al), motorcycle riding (Sauter et al), snowmobiling (Sy et al), and bicycling (Corden et al). Prevention is the best means of protecting children from the devastation of traumatic brain injury. The scientific study of injury prevention and epidemiology has again created a need for advocacy.

Physicians play an important role in advocating for injury prevention. The American Academy of Pediatrics strongly encourages physicians to provide injury prevention guidance to families at any opportunity. Physicians can educate and recommend that patients wear helmets; ride their bicycles only under safe conditions; wear personal protective equipment

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when skateboarding or rollerblading; wear personal flotation devices when on boats, in open bodies of water or participating in water sports; and not drink alcohol while operating motorized vehicles such as snowmobiles, ATVs, and motorcycles. It is critical that physicians are aware of the developmental level of their patients when encouraging outdoor activities.

Another role physicians can play is advocating for broader environmental changes. Physicians can advocate for changes like increased numbers of bicycle lanes and separate bike paths to prevent injuries, and increased access to hospitals designated as trauma centers to care for the injured. These measures would again allow the best practice of injury prevention to be implemented.

A third role physicians can play is advocating for injury prevention legislation. Some examples from the two injury issues of the *Wisconsin Medical Journal* include supporting primary enforcement of safety belts; requiring belt positioning booster seats in vehicles for children 4-8 years old; requiring motorcyclists to wear helmets; requiring people to wear helmets during certain recreational activities; as well as legislation mandating fencing around all public and private pools and use of US Coast Guard-approved personal flotation devices by children when on boats, in open bodies of water, or participating in water sports. Families look to the law to determine the minimum of safety. Legislation and other regulations have been shown to be a strong influence on people's adoption of injury prevention strategies, including equipment like helmets and choice of child passenger restraint.^{9,10}

As physicians, it is critical that we join together to create a culture of safety for Wisconsin's children and families. Prevention is the most effective means of limiting the expansive devastation of traumatic brain injury. Changes in public policy and our thinking about injury prevention are needed to support this vision.

In addition to supporting state legislation requiring helmets during high-risk recreational activities, school districts and community-sponsored events should mandate the use of well-fitting helmets during any activity that has an elevated risk of serious head injury such as school-related bicycle or ski trips. Retail stores should be urged to provide options for helmets that are affordable and child-friendly and include them in the purchase of every bicycle, set of skies, or snowmobile sold.

Finally, coalitions of parents, physicians, and community leaders need to advocate for legislative change to protect children from traumatic brain injury and to promote the safety advantages and social desirability of protective headgear and other injury prevention equipment. To keep our children safe, we need to close the gap between the scientifically-established best practice recommendations, community awareness, and current legislation.

Parents should confirm that when their children participate in outdoor activities that those activities are undertaken with safety as a priority. We all should advocate for a culture in which safety is the norm. We should create an environment for children in which it is socially desirable to be wearing appropriate protective gear. We should create a culture where a bike is never sold without a helmet and skies are never rented or sold without a helmet. The burden needs to be on those who choose not to partake in such safety precautions to opt out. We need to shift expectations. Right now, the perspective is that those who adequately protect their children are the exception to the rule; appropriately protecting children should become the rule.

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