

The accidental patient

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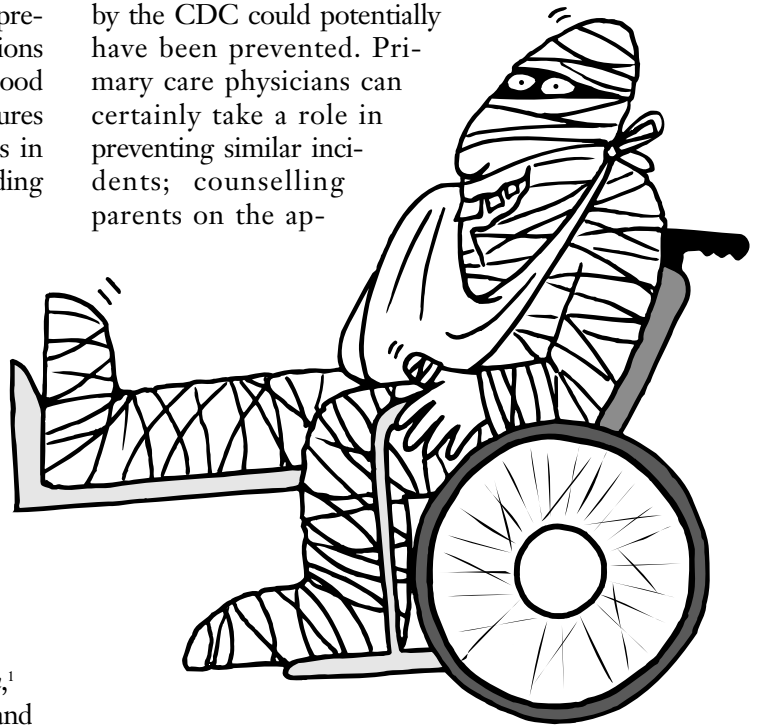
njury is the most common cause of death and disability among children and young adults in Canada and continues to be an important cause of death and disability in older age groups. Health care professionals have increasingly recognized the importance of examining patterns of injury to find ways to better protect the public. The last 2 decades have also brought an increased awareness by the public, government and private industry that injuries are for the most part predictable and preventable. Many success stories have resulted: innovations in packaging have led to a tremendous drop in childhood poisonings; seat belts, air bags and other safety features have reduced the frequency and severity of injuries in motor vehicle crashes; and ongoing studies are leading to an improved understanding of risks for injury-producing falls in elderly people.

Those who are committed to injury prevention and control are working toward changing the paradigm from one in which injuries are perceived as random accidents to one in which they are researched and treated like any other preventable health problem. During this last year 2 reports have highlighted the value of researching patterns of injury occurrence and of using the fruits of that research to design better prevention programs. These reports also point to the responsibilities of physicians in preventing injuries.

The first of these reports, highlighted in the January 1 issue of the *Journal of the American Medical Association*,¹ was an update by the US Centers for Disease Control and Prevention (CDC) on an unexpected series of deaths in children associated with automobile air bag deployment. Air bags are clearly a valuable supplement to seat belts in preventing fatal and nonfatal injuries associated with motor vehicle crashes. Despite this, the CDC report suggested that air bags may have caused some deaths that would not otherwise have occurred. Of the 32 children under 12 who died subsequent to the deployment of a passenger-side air bag, two-thirds were unrestrained or improperly restrained; thus, these deaths should not be attributed to air bag activation alone. However, 9 of the children who died were in rear-facing carriers placed in the front passenger seat and

thus might not have died if the car had not been equipped with air bags.

Air bags *do* save lives, especially when used in conjunction with proper seat restraints. Previous studies have made it clear that children are better protected when sitting in a properly fitted restraint and in the back seat. Infants in rear-facing carriers should never be placed in the front seat of a vehicle equipped with a passenger-side air bag.² All 32 deaths reported by the CDC could potentially have been prevented. Primary care physicians can certainly take a role in preventing similar incidents; counselling parents on the ap-



propriate placement and use of child car seats has been shown to improve rates of proper use of these devices. Such advice should become part of standard preventive care by physicians who provide care for families with young children.

Air bags have also been associated with other new patterns of injury. Short drivers who need to sit close to the steering wheel are exposed to greater forces from air bags. Ocular injuries previously uncommon in motor vehicle crashes, such as hyphema, retinal detachment and lens dislocation, are also being reported. Further design

improvements are on the horizon in the form of "smart" air bags that can be programmed to deploy at varying speeds to compensate for the stature and position of the occupant.

When we cannot persuade people to alter unsafe behaviour by educating them about their risk of injury, another tactic is to influence their perception of risk for some more noxious or more probable outcome. This principle can be applied to the enforcement of legislation against drunk driving: whereas motorists may ignore public health messages about the hazards of impaired driving, their behaviour may be influenced by a heightened awareness of their risk of getting caught. Thus the Insurance Company of British Columbia (ICBC) spent \$4.6 million on their 1996 "Enhanced CounterAttack" campaign. This program provided funding to markedly increase the number of impaired-driving roadchecks conducted by police. A report on the program, released in August of this year,³ showed that over the 6-month study period about 20% of residents were stopped each month at a roadcheck. Using its own actuarial data, ICBC estimated that during this period their \$4.6 million investment prevented 10 deaths, 910 injuries and damage to 3328 vehicles, and saved the ICBC an estimated \$19 million, representing a 4 to 1 return on their investment. Moreover, an earlier phase of the project demonstrated a 65% drop in the number of drivers stopped who had a blood alcohol level over the legal limit!

Although recent years have seen increased public condemnation of impaired driving, little change in behaviour has resulted, save for a decrease in drunk driving among young people. We continue to find that 40% of fatally injured drivers have been drinking and that 15% of people admitted to major hospitals with multiple trauma related to motor vehicle crashes have blood alcohol levels above the legal limit (Ontario Trauma Registry: unpublished data). About 15% of drivers on the road in the evening have been drinking and 2%–3% of drivers are legally impaired. Physicians should add their voices to programs that enhance enforcement of legislation against impaired driving. There is good evidence that physician interactions can have a positive impact on the behaviours of moderate drinkers. One such intervention is the Alcohol Risk Assessment and Intervention program developed by the College of Family Physicians of Canada. A decrease in rates of impaired driving could be expected if this program were widely used.

A third important report is due for publication soon. *For the Safety of Canadian Children and Youth*, commissioned by Health Canada and written and edited by injury control professionals from across Canada, will be a wonderful resource for anyone with an interest in understanding the importance of injuries in children, how they

occur and what steps can be taken to prevent more of them.⁴ It highlights common patterns of injury causing death and disability among young people, providing information on incidence rates, risk factors and preventive strategies.

Developing a better understanding of how injuries occur and how to prevent them offers physicians the opportunity to realize an important objective of their profession: to prevent the very health problems they are responsible for treating.

References

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