

Snowmobile injuries

Background and epidemiology: Again this winter, people are killing and injuring themselves while riding snowmobiles. The Canadian Institute for Health Information noted that, in the winter of 2000/2001, there were 137 admissions to hospital because of severe injuries from snowmobiling and 9 related deaths in trauma centres.¹ These reports probably underestimate actual events because they are based only on hospital data. Several US states have laws requiring snowmobile operators to report all incidents involving snowmobiles that result in injury requiring medical attention or property damage. In Maine, from 1991 to 1996, there were 1355 snowmobile-related incidents that resulted in 903 injuries among 2105 operators and passengers.² On average, there were 5.4 deaths per winter season during this period.

There is no information on risk factors because case-control studies have yet to be done. However, in the Maine report,² snowmobile-related incidents resulting in injury, death or property damage were more frequent during darker hours (4 pm to 6 am) than at other times. Not surprisingly, most of the operators and injured people were men (95% of those who died). Of the 1255 incidents in which the role of alcohol was evaluated, alcohol was a contributing factor in 13% of the incidents and 41% of the deaths. The primary causes were known for 1311 of the incidents and included excessive speed (52% of cases), inattention or careless operation (27%), operating on a public way (2%), operating on a steep hill or snow bank (2%) and crossing unsafe ice (1%). Of the 39 deaths, 82% resulted from trauma and 18% from drowning.

In some provinces in Canada young children are legally permitted to operate snowmobiles, and legal restrictions on the use of snowmobiles on private property often do not apply. In an analysis of 291 snowmobile-related injuries and deaths involving children in the United States between 1990 and



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1998, most (26%) involved ejection from the snowmobile;³ a large proportion of the events (43%) occurred on private property.

Clinical management: In the cases reported from Maine, the most common injuries were fractures (32%), lacerations and contusions (17%), and concussions (4%). Clinicians should be alert to the possibility of concomitant alcohol consumption and hypothermia among snowmobile trauma victims.

Prevention: Provincial laws governing snowmobile use include regulations for the minimum age of operators, registration of snowmobiles, wearing of helmets, speed limits and use of public roadways. However, because most snowmobile-related injuries and deaths occur off public roadways and because police have insufficient resources to patrol snowmobile trails, snowmobile clubs have attempted to fill the gaps through education programs, such as the Alberta Snowmobile Association's Sled Smart program offered in rural schools (www.altasnowmobile.ab.ca/safety/safety.html). In Ontario the provincial police, in collaboration with the Ontario Federation of Snowmobile Clubs and municipal police services, have delegated

some enforcement power to qualified club members through its STOP (Snowmobile Trail Officer Patrol) program (www.stopofficer.com). Such law enforcement may be effective in reducing snowmobile-related injuries and deaths.⁴ There appear to be no published studies of efforts to reduce injuries by means used with other motor vehicles, such as design changes, limiting engine horsepower and velocity potential, education programs, improving trails or placing warning signs on dangerous sections of trails, or raising the age requirement for operation of a vehicle.

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References

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