

Hats off (or not?) to helmet legislation

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β See related article page 592

A preventive measure is most likely to succeed when 3 conditions are met: 1) it is population based, rather than requiring individual initiatives; 2) it is passive, rather than requiring active participation; and 3) it is accomplished with a single action, rather than requiring repeated reinforcement. Thus, we install water treatment systems in every community, rather than ask people to boil their own drinking water (condition 1). We require that cars have passive air bags installed in addition to seat belts (condition 2). We prefer vaccines that provide lifetime immunity to those that require booster shots (condition 3).

A law that requires cyclists to wear helmets does not incorporate any of these conditions — individual riders must actively purchase a helmet and remember to wear it every time they cycle — and should have a low chance of success. It is therefore reassuring to see that, despite these theoretical drawbacks, the helmet law in Nova Scotia appears to be working (see page 592).¹ Not only has the proportion of riders wearing helmets increased since the legislation was passed, but the incidence of head injuries among cyclists has decreased in the same period, and these changes are persistent.

Nova Scotia is among only 5 provinces in Canada to have such laws in place, and John LeBlanc and colleagues¹ urge physicians in other provinces to lobby actively for comparable legislation. Before doing so, however, one might ask why legislation appears to work so well.

Legislation can have any of the following effects: cyclists comply by buying helmets for themselves and their children and wearing them consistently; cyclists comply by not cycling or forbidding their children to cycle; or cyclists fail to comply (i.e., they do not wear a helmet) and cycle less than before.

On the basis of the data presented by LeBlanc and colleagues, all 3 effects may have occurred in Halifax. Certainly some cyclists will have responded by wearing helmets that they would not have bothered with before the legislation was passed. But there is troubling evidence that less positive responses have also occurred. The number of cyclists observed per day dropped from nearly 90 in 1995/96 to 34 in 1997 and 52 in 1998/99. Also, the proportion of the child cyclists observed decreased, from 8.1% before the legislation to 6.1% in the year it was introduced to 3.7% 2 years afterward. These results may be due in part to changes in observation sites or to bad weather in some years that discouraged all but the most dedicated cyclists. They are, however, exactly what one would expect if people were complying with the legislation by cycling less themselves and discouraging their children from cycling. Moreover, these figures reflect a pattern observed in New South Wales and Victoria, Australia, before and after legislation was introduced.² Although the

numbers of helmeted cyclists went up, the total numbers of cyclists dropped by larger amounts in the 2 years after the law took effect. These observations were made in good weather and in a country that had had a lengthy campaign to promote bike safety before the legislation was introduced.

If legislation has discouraged people, particularly children, from cycling, this is a negative effect that requires both acknowledgement and response. With an increasing prevalence of obesity³ and continued low levels of physical activity among children and youth,⁴ the benefits of cycling cannot easily be dismissed. Legislation is not the only means to encourage safer cycling, and we may be foolish to rely on it so heavily. Legislation cannot provide the positive feedback often necessary to change behaviour. I am reminded of a colleague who wears her seat belt when driving because it makes her feel comfortable; she says, “It’s like getting a hug from your car.” It is hard to imagine similar positive reinforcement for wearing a bicycle helmet. But there are other changes that will promote safety, such as dedicated bicycle paths, better education of motorists about sharing the road with cyclists, improved visibility and other safety gear. Physicians and others need to promote these changes, because legislation cannot do enough. Together, such measures can meet the 3 conditions for successful preventive measures: population based (e.g., helmet legislation that applies to all ages), passive (e.g., the development of safer environments for cyclists, such as bike paths) and not requiring repeated reinforcement (e.g., a bike of the right size for the rider).

Much of what is said to justify helmet legislation suggests that promotion alone does not work. The data from Australia² and now Nova Scotia¹ suggest that legislation increases helmet use but also reduces the numbers of cyclists. We need to develop and evaluate a combined approach to achieve the true benefits of safe cycling.

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Competing interests: None declared.

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