Barriers and opportunities in reducing motor vehicle injuries

A certain number of injuries are the inevitable consequence of enhanced mobility provided by high speed motor vehicle travel, but as a society we tolerate many more injuries than need occur. Vehicles and roadways can be made safer, and there are many effective, but underused ways to change driver behavior. This underuse of behavior change strategies is illustrated in the United States by recent Insurance Institute for Highway Safety ratings of state laws in the areas of alcohol-impaired driving, young driver licensing, seat belt and child restraint use, motorcycle helmet use, and red light camera use. Research has indicated that all of the laws rated are effective in reducing the problem, but many states either do not have the laws or have weak versions of them. The majority of the ratings are either poor or marginal.

**Barriers**

There is a certain amount of public apathy about highway safety. People generally consider motor vehicle crashes and injuries to be a societal problem, but one that does not particularly affect them. To some extent this is because most people think they are better than average drivers and that it is the other driver who is the problem. Public indifference translates into a lack of political will to more fully apply countermeasures known to be effective. In turn, motor vehicle injury prevention efforts are woefully funded compared with other major health problems, and the scarce resources limit research and the implementation of programs.

**Opportunities**

Occasionally, societal movements arise that greatly increase concern about the highway safety problem among the public and policymakers, and this can produce large societal gains. Three such movements in the United States are noteworthy. One occurred in the 1960s when federal hearings resulted in the National Traffic and Motor Vehicle Safety Act, which authorized the federal government to set safety standards for new cars, and the Highway Safety Act, which authorized development of a national highway safety program. The second movement was the surge in attention to alcohol impaired driving in the 1980s. The third is the current graduated licensing movement, which began in the mid-1990s and now involves more than 40 states.

Where do these movements come from? The federal hearings in the 1960s resulted largely from concern about the rapid rise in motor vehicle deaths in the early 1960s. Concurrent media coverage of the conflict between General Motors and Ralph Nader fanned public interest in the hearings. In the 1980s, Mothers Against Drunk Driving (MADD) and other citizen interest groups spurred public and political support by drawing attention to the “innocent victims”, especially children, killed by alcohol impaired drivers. This stirred public outrage and transformed drunk drivers from comic figures to criminals. During this period, new legislation was enacted, media coverage was extensive, enforcement and prosecution were emphasized, and fatalities resulting from alcohol-impaired driving dropped sharply. Unfortunately, public and political attention to the alcohol problem waned in the 1990s.

Origins of the graduated licensing movement are less clear, particularly because graduated licensing was debated and largely rejected in the 1970s and 1980s. Back then, the Institute published research favorable to graduated licensing and was accused of an “insidious attack” on teenagers and their lifestyles. Night driving restrictions, a central feature of graduated licensing, were routinely rejected as draconian and anti-teenager, whereas now such restrictions exist in 33 states and are considered sensible and humane (that is, pro-teenager).

Why has the social climate for graduated licensing changed so drastically? Those of us who get asked this question answer it uncertainly. Clearly those teenagers who have died on the roads because they were allowed to drive with full privileges at too early an age and with too little experience could be considered “innocent victims”. Parents of fatally injured teenagers have been powerful spokespersons for graduated licensing in many states, and crashes involving teenage deaths that occurred while laws were being debated influenced legislation. However, it was not a MADD-style movement that triggered graduated licensing.

Many safety organizations were promoting graduated licensing in the 1990s, although it is not certain to what extent these activities created or fueled the movement. Whatever the spark (and there probably were several), the graduated licensing movement has given researchers the opportunity to document the effects of these new systems and to point out the research basis for different features of graduated licensing. Advocates are using such information to urge state legislators to adopt strong systems. These are important roles, especially because the movement is proceeding rapidly and there are many choices to be made, some better than others, in constructing a graduated system. And because public attention can unpredictably shift away from social problems once considered important, it is necessary to maximize these efforts while the wave is still building.

**New opportunities**

Where is attention needed now? In terms of United States data, the largest category of motor vehicle deaths involves passenger vehicle occupants. Within this group, alcohol impaired drivers and non-users of seat belts stand out. We have reduced the alcohol impaired driving problem but it remains large. About 30% of fatally injured drivers in the United States have blood alcohol concentrations of 0.10% or greater. A revived 1980s-style attention to this problem would be welcome. Many of us in the field have concluded we basically know what works to reduce the problem and simply need more widespread application of proven, but underused, techniques including sobriety checkpoints, breath alcohol interlocks, passive alcohol sensors, strong administrative license revocation laws, and vehicle based strategies such as impoundment or license tag confiscation.

Non-use of seat belts is exasperating because the fix is so easy: the belt is in the vehicle and just needs to be attached, a two second operation. Yet despite laws requiring belt use in all jurisdictions except New Hampshire, the belt use rate...
in the United States is relatively low. About 70% of front seat occupants in observational surveys are belted. However, it is the population of those in crashes that is of primary interest, not the non-crash population, and particularly those in the types of crashes in which seat belts are needed to protect against injury. Among drivers in more serious crashes (velocity changes greater than 20 mph), only slightly more than half use belts; in severe crashes with velocity changes greater than 50 mph, belt use is about 40% (belt use calculated from the National Highway Traffic Safety Administration’s National Automotive Sampling System/Crashworthiness Data System, 1990–99). The potential improvement here is great, although it is hard to conceive of a social movement arising out of concern about adult lawbreakers whose injuries are aggravated by their failure to use seat belts. All the ingredients are in place to achieve major increases in belt use through stepped-up enforcement of the laws. The vast majority of people polled are in favor of belt use laws and think belts are effective in reducing injuries. Well publicized enforcement programs in the United States have produced 90% belt use in observed populations. These programs enjoy wide community support, there are guidebooks available for communities wishing to conduct such programs, and federal money is available to support them. However, they happen rarely.

Where do we go from here?
This returns us to the starting point, public indifference to the highway safety problem and our need to understand this phenomenon better. A brief introductory section of the classic 1964 book Accident Research is a good place to start. A number of barriers to public concern are discussed, ranging from the traditional (crashes happen to other people) to the speculative (crashes provide our society with “satisfaction related to those derived from human sacrifice, Roman circuses, public executions . . . and other socially condoned forms of public violence and bloodletting”).

We need to better understand the conditions under which certain highway safety problems come to the fore and demand attention and action. We also need a better understanding of the course of these social movements from their origin to maturity and beyond. A common approach in the highway safety field is to try to arouse public concern through emotional appeals, for example, having relatives of the deceased or maimed crash survivors tell their stories. There may be other approaches that can act as triggering mechanisms.

Key points
- Public apathy about highway safety hinders progress.
- Occasionally, societal movements arise that greatly increase concern and action. This occurred in the 1980s for alcohol impaired driving and presently for licensing systems for young drivers.
- We do not always understand why these movements happen but need to take advantage of them when they do.
- In the United States, further attention is needed to the alcohol impaired driving problem and to non-use of seat belts.

Whether or not we can understand these patterns of interest and disinterest sufficiently to influence them is unclear. But we should try, because otherwise our efforts are stymied. And when the rare opportunity comes to us, as in the case of alcohol impaired driving and graduated licensing, the public health community needs to take full advantage in advancing and guiding these movements.

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