

Multidisciplinary approach to highway safety shown to work best

THOUGH MOST MOTOR vehicle crashes involve driver error of some kind, highway safety campaigns that target only driver safety awareness are generally ineffective at reducing the losses associated with highway crashes. These campaigns have the potential to greatly increase their effectiveness by adding other elements such as law enforcement, roadway engineering, and community-based initiatives to the campaign.

The Insurance Institute for Highway Safety (IIHS) and the Iowa Safety Management System (Iowa SMS) have each independently conducted a comprehensive review of existing research on the effectiveness of various types of highway safety education campaigns. These studies agree that driver education and public awareness programs *by themselves* are only marginally effective in improving highway safety. However, education efforts can be used with great success when carefully designed as part of a more comprehensive, integrated approach.

What doesn't work

Driver education campaigns—especially those focused on repetitive actions like obeying speed limits and stop signs and using safety belts—may increase drivers' knowledge but generally don't change the drivers' behavior, according to the studies.

Jon S. Vernick of the Johns Hopkins Center for Injury Research and Policy has even gone so far as to say, "There's no evidence that high school driver education reduces motor vehicle crash involvement rates for young drivers."

As for public awareness campaigns, "A billboard message by itself won't improve drivers or yield other safety benefits. Such messages waste resources and drain energy from effective highway safety approaches" (IIHS). The same could be said for bumper stickers, key chains, and radio and television advertisements directed at driver safety awareness.

One small part of the problem, according to the IIHS report, is that even if education efforts have a positive impact on the behavior of some drivers, "high-risk drivers—the ones who most need to change their behavior—are the most difficult group to influence."

Another popular explanation for why education efforts by themselves don't guarantee change is that a gain in knowledge does not directly or automatically correspond to a change in attitude or behavior.

What does work

The studies agree that the most effective approach to reducing highway crashes, crash injuries, and crash fatalities is a multidisciplinary one that combines vehicle and highway engineering, law enforcement, emergency response, *and* driver education efforts. For example, "while education to change driver behavior almost never is effective by itself, it's beneficial when it enhances the effectiveness

of traffic safety laws" (IIHS). Motorists are more likely to change their behavior in response to traffic laws than because of an education campaign, presumably because motorists "believe their driving skills will enable them to avoid collisions ... [but] their skills won't enable them to avoid a ticket."

The study sponsored by Iowa SMS generated a list of successful education approaches, as synthesized from numerous highway safety campaigns and evaluative studies. Here are a few:

- Campaigns are generally more effective when they combine mass media with community, small group, and individual activities.
- Campaigns are generally more effective when they address the existing beliefs and knowledge base of the target audience.
- Campaigns are generally more effective when they also direct their messages to parents, peers, and others who have direct interpersonal influence on the targeted individuals.
- Campaigns are generally more effective when they present educational messages in entertainment contexts.
- Campaigns are generally more effective when they emphasize immediate, high-probability incentives. Arousing fear by emphasizing the negative consequences of current poor driving behaviors has also been found to be highly to moderately successful as a campaign strategy.

A common theme in these successful approaches is that "mass" media messages are not as effective as campaigns that target a specific audience and integrate safety messages into many parts of the target individuals' lives—home, community, and entertainment, as well as school.

Iowa is already on track

Recommendations from these reports confirm the value of Iowa's multidisciplinary approach to improving traffic safety. Iowa SMS is founded on the four E's of highway safety—engineering, enforcement, education, and emergency response.

For more information

The IIHS *Status Report: What Works and Doesn't Work to Improve Highway Safety* (Vol. 36, No. 5, May 19, 2001) can be found at www.highwaysafety.org/srpdfs/sr3605.pdf.

The Iowa SMS *Communicating Highway Safety: What Works Report* (by Associate Professor Lulu Rodriguez, Greenlee School of Journalism and Communication, Iowa State University, February 2002) can be found at www.ctre.iastate.edu/reports/chs.pdf.

For additional information, contact Mary Stahlhut, Iowa SMS, 515-239-1169, mary.stahlhut@dot.state.ia.us. •