



Driver Education

The Missing Link in Traffic Safety

By Donald M. English

IN BRIEF

- Nearly 34,000 people die each year in traffic-related crashes, many of which involve impairment, speed and/or no seatbelt use.
- Several states have strategic highway safety programs that focus on driver and occupant behaviors, roadways and traffic information systems.
- One factor missing from most of these initiatives is a requirement for continuing driver education.

Data from Washington State DOT show that from 2001 to 2005, an average of 126,000 collisions occurred each year on the state's roadways. In those collisions, an average of 3,050 people suffered disabling injuries, and an average of 628 people died. For the same period, on average, 38% of traffic deaths occurred in speed-related crashes and 47% occurred in impairment-related crashes. In this case, an impaired driver has a blood alcohol content of 0.08 or greater and/or a positive result on a drug test.

In Washington, the Washington State Pa-

trol, Washington Traffic Safety Commission and the state's DOT have partnered to initiate Target Zero. This strategic highway safety plan targets five basic issues: driver and occupant behaviors, other special users, roadways, emergency medical services and traffic information systems.

Most states have similar initiatives. For example, California's Office of Traffic Safety lists eight priority areas including alcohol and other

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Table 1

Driver Survey Results

Years driving	No. of drivers	At-fault accidents	Moving violations	Voluntary retraining	Involuntary retraining
4 to 10	1	1	1	---	---
11 to 20	5	2	1	---	---
21 to 30	7	5	5	2	3
31 to 40	17	10	5	4	3
41 to 50	17	7	3	6	1
51 to 55	3	1		2	1
Total	50	26	15	14	8
Percentages	---	52%	30%	28%	16%

drugs, occupant protection, pedestrian and bicycle safety, traffic records, emergency medical services, roadway safety, police traffic services and motorcycle safety. New York's Highway Safety Strategic Plan lists these priorities: impaired driving, police traffic services, motorcycle safety, pedestrian, bicycle and wheel-sport safety, occupant protection, traffic records and community traffic safety programs.

Illinois's plan targets 10 issues: alcohol and other impaired driving, driver behavior and awareness, highway-railroad grade crossings, information systems for decision making, intersections, large trucks, roadway departure, safety belts/occupant protection, vulnerable users (pedestrians, bicyclists, and motorcyclists), and work zones. Florida's plan has four broad areas of emphasis: aggressive driving, intersection crashes, vulnerable road users and lane departure crashes.

Note that none of these initiatives includes continuing driver education. Most people do not seek defensive driver training on their own. Some undergo refresher training if their job requires driving and some take defensive driver training (e.g., 55-Alive for older drivers) to reduce insurance premiums. Continuing education of all drivers should be included in the various states' safety plans. The result will be safer roadways, lower insurance premiums, reduced loss of life and reduced accident-related disabling injuries.

The Paradox

BLS statistics indicate that motor-vehicle accidents are a leading cause of work-related deaths. Yet, OSHA has no safety standards that mandate or even recommend a fleet safety program or driver training for noncommercial drivers. This presents a paradox because OSHA has many other safety standards that require not only initial safety training but also ongoing refresher or remedial training.

Consider OSHA's standard for powered industrial trucks. It requires initial formal training that includes a practical aspect followed by an evaluation of the training's effectiveness, conducted by observing the operator using the forklift. Refresher training must be given if the operator has been involved in an incident, near miss or unsafe operation. Many other safety standards, including those from EPA and other agencies, require initial and ongoing refresher training. Why should driving be an exception when it is the most hazardous activity people engage in on a daily basis?

It should be noted that safety training is only one of several important components of a comprehensive program. ANSI/ASSE Z15.1-2006, Standard Safe Practices for Motor Vehicle Operations, is a voluntary standard that sets forth safety requirements for the operation of motor vehicle fleets (note that it is not specific to commercial fleets).

The components of Z15.1 include management, leadership and administration; operational

environment; driver considerations; vehicle considerations; and incident reporting and analysis. The written program should include safety policy; responsibilities and accountabilities; driver recruitment, selection and assessment; organizational safety rules; orientation and training; and reporting rates and major incidents to executives.

With respect to training, the standard states, "Training programs should address requirements for new drivers, continuing education of existing drivers and instances where remedial training shall be required."

The various state highway safety plans have contributed greatly to the decline in traffic deaths by recommending successful traffic safety programs, tougher legislation, improved roadways, faster emergency responses and stronger enforcement. This could be enhanced with required education of all drivers.

Just the Facts

Robson, Stephenson, Schulte, et al. (2010), researched safety training effectiveness. Questions asked include:

- 1) Does SH&E training have a beneficial effect on workers and firms?
- 2) Does higher engagement SH&E training have a greater beneficial effect on workers and firms than lower engagement SH&E training?

The researchers report strong evidence supporting the effectiveness of SH&E training on targeted SH&E behaviors.

This author conducted primary research with 50 drivers. Nine questions were asked:

- 1) How many years driving?
- 2) Since being a licensed driver have you had any at-fault accidents?
 - 3) If yes, how many?
 - 4) If yes, were there bodily injuries to any party?
 - 5) How many moving violations have you had in the past 5 years?
 - 6) Since being a licensed driver have you undergone any driver education classes?
 - 7) If yes, in what form (e.g., in-class only, behind the wheel, both in-class and behind the wheel, on-line, other)?
 - 8) If yes, was the training voluntary or involuntary?
 - 9) If involuntary, who required it? Traffic court, employer or other?

The survey cover letter indicated that it was strictly voluntary and that information would remain confidential. Participants were given the option to

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Key Elements of ANSI/ASSE Z15.1

Standard Safe Practices for Motor Vehicle Operations

- ANSI/ASSE Z15.1 effective April 28, 2006.
- Voluntary standard that sets forth safety requirements for the operation of motor vehicle fleets.
- Purpose is to establish safety requirements that mitigate injury and property losses.

Components of Z15.1

- Management, leadership and administration.
- Operational environment.
- Driver considerations.
- Vehicle considerations.
- Incident reporting and analysis.

Written Program Elements

- Safety policy.
- Responsibilities and accountabilities.
- Driver recruitment, selection and assessment.
- Organization and training.
- Reporting rates and major incidents to executives.

Driver Training Program

- Training program should address requirements for new drivers, continuing education of existing drivers and instances where remedial training shall be required.
- The training program should include both classroom and behind-the-wheel training.

With respect to training, ANSI/ASSE Z15.1 states, "Training programs should address requirements for new drivers, continuing education of existing drivers and instances where remedial training shall be required."

include their names. They were advised that no individual survey would be singled out and that they would be used in aggregate only. The participants represent a cross section of U.S. citizens chosen from this author's e-mail list of family, friends and associates living in at least 12 different states. About 100 surveys were distributed and 50 were returned. The author acknowledges that this survey may not meet the criteria of a scientific survey.

In this sample, years of driving experience ranged from 4 to 52 years. The median amount of driving experience of all respondents was 36 years. Among this group, 26 drivers (52%) reported having one or more at-fault accidents, while 15 drivers (30%) admitted to having received one or more moving violations within the past 5 years.

Of the total respondents, 28% have had some form of voluntary driver training since becoming initially licensed and 16% had some form of involuntary driver training as required by traffic court, an employer or other. Of the 26 drivers who reported at-fault accidents, 15 (58%) have taken driver education since the incident.

Liberty Mutual Research Institute for Safety's (2009) Center for Behavioral Sciences conducted studies on the effects of training and concluded that workers must understand what a warning means; be able to recall that information quickly; and be thinking about the relevant safety information at the time of risk. The researchers pointed to training as one way to maximize warning effectiveness. This suggests that relatively simple training conditions can dramatically improve warning comprehension in terms of accuracy and speed of response.

Why Training?

Up to 30 states now require people under age 18

to complete some form of driver education before they receive a license (Carroll, 2000). Most other states offer some type of nonmandatory driver instruction. Most education programs consist of at least 30 hours of classroom instruction and 6 hours behind the wheel.

A few states, including Connecticut, Illinois, Indiana, Massachusetts, New Hampshire, New York, Ohio and Rhode Island, have mandatory driver retraining programs. Individuals must attend these programs if they 1) accumulate a specified number of points on their license; 2) accumulate a specified number of surchargeable events; or 3) are ordered by a court. States such as California, Florida and Texas make driver retraining optional; a driver may elect to complete retraining in order to have a ticket dismissed or to reduce the number of points documented on his/her record.

Some states have conducted studies to evaluate the effectiveness of these retraining programs. For example, a study in Lake County, IL (Kennedy, 2000), was conducted in three separate evaluations (1993-94, 1996 and 1999) in order to evaluate program effectiveness over the long term. The researchers concluded:

In terms of the odds of being involved in an accident or moving violation, drivers who did not participate in driver safety training were, over a 10-year period of time, 1) eight times more likely to be involved in an accident than drivers who participated in driver safety training; and 2) 10 times more likely to be arrested for a moving violation than drivers who participated in driver safety training.

Massachusetts also has a mandatory driver retraining program that has been evaluated (NSC, 2005). This study was submitted in July 2005 to the Commonwealth of Massachusetts Registry of Motor Vehicles (RMV). Since its introduction in the state, more than 250,000 drivers have completed NSC's defensive driving course (DDC). According to NSC:

Of all participants, 3,285 (77%) had at least one minor violation in the 6 months prior to DDC training. Of this number, 2,392 (73%) did not record a minor violation in the following 6 months. Some 892 (21%) of all participants had at least one major violation in the 6 months prior to DDC training. Of this number, 810 (91%) did not record a major violation in the following 6 months. Of the 3,382 participants who did not have a major violation before DDC, only 289 (9%) had a major violation recorded following the course—91% maintained their clean record. Some 3,484 (82%) of all participants had at least one surchargeable violation in the 6 months prior to DDC training. Of this number, 2,555 (73%) did not record a surchargeable accident in the following 6 months.

In summary, based on the information made available by the Commonwealth of Massachusetts RMV, study participants showed statistically significant reductions in surchargeable incidents in the 6 months after exposure to the DDC course compared with the 6 months before.

Nebraska has a safety training option plan (STOP), an optional driver retraining program. The state will dismiss minor traffic violation for drivers who complete the course. The state studied the effectiveness of this course on recidivism. It examined the driving records of nearly 1,000 drivers eligible to take STOP in Douglas County in 2003 and 2004. The 3-year recidivism rate was 41% less among STOP participants, 55.8% to 32.9%. Individuals who do not take a STOP class are 1.7 times more likely to get a subsequent violation in a 3-year period (NSC Greater Omaha Chapter, 2007).

Even veteran trainers can be surprised by what many experienced drivers do not know. For example, many experienced drivers are not aware that a DUI conviction is a criminal offense in most states. Many are not sure when to stop for a school bus in the opposite direction with red lights flashing (e.g., on a four-lane highway, three-lane highway, two-lane divided road). Furthermore, most states enact new traffic laws every year, such as laws pertaining to cell phone or seatbelt use. Refresher training brings drivers up to speed on these regulations.

In 1998, OSHA issued voluntary training guidelines that serve as a model for trainers to use in developing, organizing, evaluating and editing safety training programs. The guidelines follow this model:

- 1) Determine whether training is needed.
- 2) Identify training needs.
- 3) Identify goals and objectives.
- 4) Develop learning activities.
- 5) Conduct training.
- 6) Evaluate program effectiveness.
- 7) Improve the program.
- 8) Ensure that training aligns with job tasks.

ANSI/ASSE Z490.1-2009, Criteria for Accepted Practices in Safety, Health and Environmental Training, also establishes criteria for SH&E training; it covers program development, delivery, evaluation and management.

Driver training, or retraining as the case may be, could be required by an OSHA standard. Training is an effective solution to problems such as employee (driver) lack of understanding, unfamiliarity with equipment, incorrect execution of a task, lack of attention or lack of motivation. These same training guidelines could be used by any state as part of its overall programs to reduce traffic accidents.

Conclusion

Motor-vehicle crashes continue to be a leading cause of fatalities in the U.S. While OSHA mandates initial and ongoing safety training in many regulations, the agency does not mandate a fleet safety program or driver training for noncommercial

drivers and fleets. The fact that only a few states require continuing driver education as a part of their comprehensive efforts to reduce traffic fatalities and disabling injuries is a major discrepancy when one considers the fatality rate in the U.S. each year.

Furthermore, according to the National Council on Compensation Insurance (2006), the most costly lost-time workers' compensation claims are for those resulting from motor-vehicle crashes. In 2003 and 2004, these injuries averaged \$35,873 per claim.

To address this need, key stakeholders should consider the following recommendations:

1) States should implement a policy that requires continuing driver education. This policy should be based on a driver's motor vehicle record that is reviewed before a license is renewed. The state should establish criteria that trigger the need for refresher driver education.

2) States should set training agency qualifications.

3) States should follow OSHA's model training guidelines or ANSI/ASSE Z490.1 in developing refresher training courses.

4) OSHA should develop a standard that requires business owners with noncommercial fleets and drivers to develop and implement a fleet safety program based on ANSI/ASSE Z15.1. **PS**

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