The National Transportation Safety Board’s Proposals for Reducing Youth Highway Crashes - Two Years of Progress

Barry M. Sweedler and Kevin E. Quinlan

National Transportation Safety Board, Washington, DC 20594, USA

ABSTRACT

In 1991, 9,156 persons died in traffic crashes in the U.S. involving 8,207 15-20 year-old drivers. Among fatally injured 15-20 year-old drivers, an estimated 40 percent had a positive BAC. Young drivers are over-represented in traffic crashes and deaths. Thus, they continue to be a major traffic safety concern. In 1990, according to the NHTSA, drivers aged 15-20 years comprised only 7.1 percent of licensed drivers, but accounted for 14.9 percent of all driver fatalities. Further, while young drivers do only 20 percent of their driving at night, over half of the crash fatalities of adolescent drivers occur during nighttime hours. First-year drivers (primarily ages 16 and 17) have twice the average number of crashes and, on a miles-driven basis, four times the number of crashes involving more experienced drivers.

Based on the magnitude of the problem, the NTSB, in 1993, recommended that all States pass laws: establishing lower BAC levels for youth and administrative licence revocation for low BAC alcohol-related youth traffic violations; establishing a provisional license system in conjunction with nighttime driving restrictions for more vigorous enforcement of, minimum purchase age laws, and decreasing alcohol availability to youth; and conducting carefully targeted multi-media community information and education campaigns and programs directed at youth. Since the recommendations were made, many states have taken the recommended action. This paper will discuss the proposals and the research that led to them and the improvements that have resulted.

YOUTH CRASH EXPERIENCE

In 1991, 9,156 persons died in traffic crashes involving 8,207 15- to 20-year-old drivers. Of the 8,207 drivers, both surviving and fatally injured, an estimated 2,419 had a positive BAC. Among fatally injured 15- to 20-year-old drivers, an estimated 40 percent (1,421 of 3,568) had a positive BAC. Although this is less than the positive test rate for drivers of all ages (44 percent in 1991), alcohol is illegal for persons under age 21 and any BAC should be prohibited. As high as these numbers seem, there has been a significant reduction in both youth alcohol-related fatal crashes and alcohol-related fatalities.

According to the Insurance Institute for Highway Safety (IIHS), 53 percent of the teenage drivers who died in highway crashes in 1980 had a BAC of 0.10 percent or higher. By 1987, the 53-percent figure had dropped to 28 percent, a reduction of nearly half. However, by 1989, the percentage of fatally injured teenage drivers with a BAC of 0.10 or higher had increased to 33 percent and remained at 33 percent in both 1990 and 1991.

244
By the early 1980’s, overwhelming evidence emerged that laws enacted in the early 1970’s to lower the drinking age had resulted in a sharp increase in alcohol-related traffic fatalities among youth. In those States that subsequently reinstated the 21 drinking age in the late 1970’s, reductions in these fatalities were realized (Wagenaar, 1981). The National Highway Traffic Safety Administration (NHTSA) has estimated that the age 21 laws have saved more than 13,000 lives since States started raising the minimum drinking age. While the minimum drinking age law changes did not stop teenage drinking and driving, they made it more difficult for those under 21, and especially those under 18, to obtain alcohol.

Young drivers are overrepresented in traffic crashes and deaths. Thus, they continue to be a major traffic safety concern. In 1990, according to the NHTSA, drivers aged 15-20 years comprised only 7.1 percent of licensed drivers (11.9 million of 168.99 million), but accounted for 14.9 percent of all driver fatalities (3,568 of 23,904 driver fatalities). Further, while young drivers do only 20 percent of their driving at night, over half the crash fatalities of adolescent drivers occur during nighttime hours (OTA, 1990). A large proportion of teen fatalities (ages 15 to 17) occur on Friday, Saturday, and Sunday (46 percent in 1988). First-year drivers (primarily ages 16 and 17) have twice the average number of crashes and, on a miles-driven basis, four times the number of crashes involving more experienced drivers.

REDUCING ALCOHOL AVAILABILITY (Age 21 Law Deficiencies)

In 1988, 25.2 percent of youth aged 12 to 17 and 57.9 percent of youth aged 18 to 20 reported using alcohol in the last month. In 1989, 33 percent of high school seniors and 41.7 percent of college students reported recent occasions of heavy “binge” drinking (five or more drinks on one occasion within the last 2 weeks) (PHS, 1991). Former Surgeon General Antonia C. Novello, in releasing a 50-State survey of State alcohol beverage control and enforcement, stated that the minimum drinking age of 21 is largely a myth because State laws are riddled with “loopholes, laxity and lip service.”

At the time of the survey, five States and the District of Columbia did not prohibit the purchase of alcohol by minors. One State and the District of Columbia did not prohibit the public possession of alcohol by minors. Twenty-three States did not prohibit minors from attempting to purchase alcohol, and six States had no laws with which to prosecute minors who purchase alcohol. Twenty-one States did not have laws that specifically prohibit alcohol consumption by minors, and two States had no laws against minors possessing alcohol. Sixteen States had no laws prohibiting minors from misrepresenting their age to purchase alcohol, and 19 States had no laws against minors presenting false identification.

Most State laws appear to place responsibility for underage drinking on the seller of alcohol, but not on the underage purchasers who also should be responsible for their actions. Both the National Minimum Drinking Age Act and State laws misplace responsibility, send a mixed message to youth, and impede enforcement. With such deficiencies, it is no surprise that alcohol is readily available to minors and that, as a consequence, alcohol-related crashes involving drivers under age 21 continue to occur. To maximize the lives saved from the establishment of a minimum drinking age, it is essential to reduce alcohol availability and traffic fatalities, improve State minimum drinking age laws and enforce these laws.
The Safety Board believes that tighter enforcement of the alcohol purchasing laws is required. Research on alcohol purchase attempts by a 19-year-old minor in 7 of 19 cities studied in 1992 indicated the following successful purchase rates: New York City (91 percent), Milwaukee (66 percent), Philadelphia (61 percent), Charlotte (57 percent), Atlanta (55 percent), Metro Miami (44 percent), and Indianapolis (44 percent) (Radecki, 1992).

Successive sting operations have had a positive effect. In June 1992, Denver police cadets under age 21 were able to purchase alcohol in 59 percent of attempts. Widespread media coverage, warning letters to beer vendors, followup stings and prosecutions, as well as thank you letters to vendors refusing to sell to minors reduced the successful purchase rate to 32 percent between June and October 1992; a third sting operation in October 1992 showed a further reduction in the successful purchase rate to 26 percent. Other research found cities in which the successful purchase rate was less than 20 percent.

LOWER BAC LIMITS FOR YOUNG DRIVERS

Even though States bar the sale of alcohol to persons under age 21, most States still permit a driver under age 21 to drive legally with alcohol in their system, as long as their BAC does not exceed the State’s adult legal limit (usually 0.10 percent). Young persons are overrepresented in both fatal crashes and motor vehicle fatalities. Research has shown that young drivers are particularly susceptible to impairment by small amounts of alcohol. For example, male drivers aged 16 to 20 have six times the driver fatality risk in single vehicle crashes at BACs from 0.01 to 0.04 percent compared to male drivers age 25 and older at these low levels. One study indicates that the risk of a crash, especially a fatal crash, increases with increasing BAC levels, but that “drivers age 16-19 have a higher risk of fatal crash than older drivers at all BACs.” Further, the study noted that drivers age 16 and 17 at low BACs (0.01 to 0.049 percent) have a crash risk three times that of drivers age 18 to 24 at the same BAC levels (Hingson, Herren, Morelock, 1992) (Hingson, Howland, 1986) (Zador, 1991) (Simpson, 1985).

To combat the underage drinking-driving problem, 15 States have laws to prohibit vehicle operation by underage drivers with a BAC level lower than the BAC level specified for drivers over 21. A law lowering the BAC for underage drivers has been found to be effective in reducing nighttime fatal crashes among teenagers in Maine. A study of the Maryland 0.02 percent BAC law found statistically significant reductions (a minimum 11 percent reduction) in alcohol-related crashes in the affected age group. When combined with a public information and education campaign, the Maryland law resulted in a nearly 50 percent reduction in underage alcohol-related crashes over a 2-year period, 1989-1990 (Hingson, Heeren, Morelock, 1989) (Blomberg, 1992).

Laws reducing the legal BAC for youth can be strengthened by imposing administrative license revocation when they are arrested with any measurable BAC (Preusser, Ulmer, Preusser, 1992). The driver’s license is an important possession for a young person, and it is reasonable to expect a significant benefit from revoking the license of underage drivers caught driving with any measurable BAC.
GRADUATED YOUTH LICENSING AND DRIVING RESTRICTIONS

A strategy to reduce crashes involving young novice drivers has been the use of a graduated license system in which the license can be revoked if certain conditions are violated. A graduated license combines restrictions so that driving takes place in less dangerous circumstances (daytime and with adult supervision) until the driver has had an opportunity to gain experience. Graduated licensure has been implemented in New Zealand. Evaluation of the New Zealand program shows dramatic decreases in crashes among 15- to 17-year-olds (the main target of the program). While injury crashes have dropped about 12 percent overall in New Zealand, crashes among these young drivers have dropped by 40 percent—from an average of about 120 per month to about 70 per month. The key point is that because driving patterns are formed early, driver improvement actions for youthful drivers need to be identified and acted on more rapidly than for adult drivers. An improved system has the following characteristics: a graduated license system including restricted nighttime driving before full licensure; a learner’s permit with a specific period of validity; parent/adult supervised practice driving especially during high-risk hours; a zero BAC limit; prompt, youth-oriented driver improvement actions; mandatory safety belt usage; and, demonstrated safe driving performance for specific periods in order to progress to full licensure (NHTSA, 1989).

NIGHTTIME DRIVING RESTRICTIONS

A 1985 NHTSA report on graduated licensing recommended nighttime driving restrictions for young drivers. At least eight States have placed nighttime driving restrictions on young novice drivers, prohibiting them from driving during high-risk nighttime hours. One study analyzed up to 5 years of crash data in four States and determined that nighttime driving restriction laws resulted in substantial crash reductions among young drivers during nighttime driving restriction hours in the following States: Pennsylvania (69 percent), New York (62 percent), Maryland (40 percent), and Louisiana (25 percent). States where the nighttime driving restrictions start earlier have achieved greater success than in States where the nighttime driving restrictions start later. Further, fewer crashes involving young novice drivers occurred during other times of the day in States with nighttime driving restrictions (Preusser, Williams, Zador, Blomberg, 1984).

CONCLUSIONS

The Safety Board concluded that despite improvements in the 1980’s, highway crashes among young drivers, including alcohol-related crashes, continue to be a serious and persistent problem. Research indicates that several legislative and policy actions can be effective in reducing the crashes including: laws establishing lower BAC levels for youth and administrative license revocation for low BAC alcohol-related youth traffic violations; eliminating deficiencies in, and providing for more vigorous enforcement of, minimum purchase age laws, and decreasing alcohol availability to youth; carefully targeted multi-media community information and education campaigns and programs directed at youth; and, laws establishing a provisional license system in conjunction with nighttime driving restrictions for young novice drivers. Our experience indicates that the most effective
combination is tough, fair laws, vigorous enforcement, and intensive and targeted educational campaigns.

**PROGRESS IN 1993 AND 1994**

We think it important to keep in mind that it usually takes about 3 years or three legislative sessions in States where legislatures don’t meet every year for a new concept to take the form of law. For example, for more than a decade, the Safety Board and the U.S. Department of Transportation have been promoting administrative license revocation laws for drivers who fail or who refuse to take a chemical test for alcohol. Arkansas recently joined 37 other States and the District of Columbia in enacting ALR. The State legislative response to the Board’s youth recommendations varied markedly depending upon the issue. Action has been greatest in response to our recommendation for zero tolerance (low BAC) laws for youth. Some action has been taken to shore up age 21 laws in the States, but little or no action has been taken on graduated licensing and nighttime driving restrictions.

When the Safety Board issued its letter to the States, 15 States had some form of lower BAC for youth. Since that time, 15 additional States and the District of Columbia have enacted such legislation. Four of the original 15 low BAC States, (California, Georgia, New Mexico, and Ohio) have improved their low BAC legislation by either lowering the BAC or raising the age of applicability. Thus, as of March, 1995, 30 States and the District of Columbia have enacted this life-saving legislation. Legislative action is pending in other States and we believe several more will act in 1995.

States have also taken action to close loopholes in the age 21 laws. For example, 49 States and the District of Columbia bar the sale of alcohol to persons under age 21. Forty-seven States and D.C. bar underage alcohol purchase and all States prohibit underage alcohol possession. Thirty-three States and D.C. prohibit underage alcohol consumption. States have also taken action to facilitate enforcement by banning the attempt to purchase alcohol (31 States & D.C.); misrepresenting one’s age to purchase alcohol (36 States & D.C.); and using fraudulent identification to purchase alcohol (39 States & D.C.). Twelve States and D.C. now have the comprehensive laws recommended by the Safety Board. In all, there have been 29 law changes in 15 States and the District of Columbia. Such prompt legislative action is especially gratifying and holds much promise for action in 1995 by many more States.

The Safety Board has closed its recommendation on graduated licensing to five States. Seven States have nighttime driving restrictions for young novice drivers. While graduated licensing legislation has been introduced in several States in the last 2 years, none has been enacted. Graduated licensing and nighttime driving restriction legislation seems to be difficult for State legislatures to enact in the absence of incentives. To that end, the High Risk Driver Act has been introduced in Congress again this year and that may provide the stimulus needed on graduated licensing. We also look forward to evaluation of such programs in New Zealand, Australia, and the provinces of Ontario and Nova Scotia in Canada.
REFERENCES


