Impaired Driving

Alcohol-related motor vehicle crashes kill someone every 31 minutes and non-fatally injure someone every two minutes (NHTSA 2006).

Occurrence and Consequences

- During 2005, 16,885 people in the U.S. died in alcohol-related motor vehicle crashes, representing 39% of all traffic-related deaths (NHTSA 2006).
- In 2005, nearly 1.4 million drivers were arrested for driving under the influence of alcohol or narcotics (Department of Justice 2005). That's less than one percent of the 159 million self-reported episodes of alcohol–impaired driving among U.S. adults each year (Quinlan et al. 2005).
- Drugs other than alcohol (e.g., marijuana and cocaine) are involved in about 18% of motor vehicle driver deaths. These other drugs are generally used in combination with alcohol (Jones et al. 2003).
- More than half of the 414 child passengers ages 14 and younger who died in alcohol-related crashes during 2005 were riding with the drinking driver (NHTSA 2006).
- In 2005, 48 children age 14 years and younger who were killed as pedestrians or pedal cyclists were struck by impaired drivers (NHTSA 2006).

Cost

Each year, alcohol-related crashes in the United States cost about $51 billion (Blincoe et al. 2002).

Groups at Risk

- Male drivers involved in fatal motor vehicle crashes are almost twice as likely as female drivers to be intoxicated with a blood alcohol concentration (BAC) of 0.08% or greater (NHTSA 2006). It is illegal to drive with a BAC of 0.08% or

higher in all 50 states, the District of Columbia and Puerto Rico.

- At all levels of blood alcohol concentration, the risk of being involved in a crash is greater for young people than for older people (Zador et al. 2000). In 2005, 16% of drivers ages 16 to 20 who died in motor vehicle crashes had been drinking alcohol (NHTSA 2006).

- Young men ages 18 to 20 (under the legal drinking age) reported driving while impaired more frequently than any other age group (Shults et al. 2002, Quinlan et al. 2005).

- Among motorcycle drivers killed in fatal crashes, 30% have BACs of 0.08% or greater (Paulozzi et al. 2004). Nearly half of the alcohol-impaired motorcyclists killed each year are age 40 or older, and motorcyclists ages 40 to 44 years have the highest percentage of fatalities with BACs of 0.08% or greater (Paulozzi et al. 2004).

- Of the 1,946 traffic fatalities among children ages 0 to 14 years in 2005, 21% involved alcohol (NHTSA 2006b).

- Among drivers involved in fatal crashes, those with BAC levels of 0.08% or higher were nine times more likely to have a prior conviction for driving while impaired (DWI) than were drivers who had not consumed alcohol (NHTSA 2006).

Prevention Strategies

Effective measures to prevent injuries and deaths from impaired driving include:

- Aggressively enforcing existing 0.08% BAC laws, minimum legal drinking age laws, and zero tolerance laws for drivers younger than 21 years old in all states (Shults et al. 2002, Quinlan et al. 2005).

- Promptly suspending the driver's licenses of people who drive while intoxicated (DeJong et al. 1998).

- Sobriety checkpoints (Elder et al. 2002).

- Health promotion efforts that use an ecological framework to influence economic, organizational, policy, and school/community action (Howat et al. 2004; Hingson et al. 2006).

- Multi-faceted community-based approaches to alcohol control and DUI prevention (Holder et al. 2000, DeJong et al. 1998).

- Mandatory substance abuse assessment and treatment for driving-under-the-influence offenders (Wells-Parker et al. 1995).

Other suggested measures include:

- Reducing the legal limit for blood alcohol concentration (BAC) to 0.05% (Howat et al. 1991; National Committee on Injury Prevention and Control 1989).

- Raising state and federal alcohol excise taxes (National Committee on Injury Prevention and Control 1989).

- Implementing compulsory blood alcohol testing when traffic crashes result in injury(National Committee on Injury Prevention and Control 1989). CDC Research and Evaluation

Actions to decrease alcohol-related fatal crashes involving young drivers have been effective

Over the past 20 years, alcohol-related fatal crash rates have decreased by 60 percent for drivers ages 16 to 17 years and 55 percent for drivers ages 18 to 20 years, according to a study from the Centers for Disease Control and Prevention (CDC). However, this progress has stalled in the past few years. To further decrease alcohol-related fatal crashes among young drivers, communities need to implement and enforce strategies that are known to be effective, such as minimum legal drinking age laws and "zero tolerance" laws for drivers under 21 years of age.

Related article: Elder RW, Shults RA. Trends in alcohol involvement in fatal motor vehicle crashes among young drivers – 1982-2001. MMWR 2002;51:1089–91.

Sobriety checkpoints reduce alcohol-related crashes

Fewer alcohol-related crashes occur when sobriety checkpoints are implemented, according to a CDC report published in the December 2002 issue of Traffic Injury Prevention. Sobriety checkpoints are traffic stops where law enforcement officers systematically select drivers to assess their level of alcohol impairment. The goal of these interventions is to deter alcohol-impaired driving by increasing drivers' perceived

risk of arrest. The conclusion that they are effective in reducing alcohol-related crashes is based on a systematic review of research about sobriety checkpoints. The review was conducted by a team of experts led by CDC scientists, under the oversight of the Task Force on Community Preventive Services—a 15-member, non-federal group of leaders in various health-related fields. (Visit www.thecommunityguide.org for more information.) The review combined the results of 23 scientifically-sound studies from around the world. Results indicated that sobriety checkpoints consistently reduced alcohol-related crashes, typically by about 20 percent. The results were similar regardless of how the checkpoints were conducted, for short-term "blitzes," or when checkpoints were used continuously for several years. This suggests that the effectiveness of checkpoints does not diminish over time.

Related article: Elder RW, Shults RA, Sleet DA, Nichols JL, Zaza S, Thompson RS. Effectiveness of sobriety checkpoints for reducing alcohol-involved crashes. Traffic Injury Prevention 2002;3:266-74.

Stronger state DUI prevention activities may reduce alcohol-impaired driving

Strong state activities designed to prevent driving under the influence (DUI), including legislation, enforcement, and education, may reduce the incidence of drinking and driving, according to a study from the Centers for Disease Control and Prevention (CDC). For the study, which was published in the June 2002 issue of Injury Prevention, CDC analyzed data from the 1997 Behavioral Risk Factor Surveillance System (BRFSS) national telephone survey, and the Mothers Against Drunk Driving (MADD) Rating the States 2000 survey, that graded states on their DUI countermeasures from 1996-1999. Results showed that residents of states with a MADD grade of "D" were 60 percent more likely to report alcohol-impaired driving than were residents from states with a MADD grade of "A." MADD based the grades on 11 categories of prevention measures, including DUI legislation; political leadership; statistics and records availability; resources devoted to enforcing DUI laws; administrative penalties and criminal sanctions; regulatory control and alcohol availability; youth DUI legislation; prevention and education; and victim compensation and support.

The study also found that 4 percent of the residents who consume alcohol reported they had driven after having too much to drink at least once during the previous month. Men were nearly three times as likely as women to report alcohol-impaired driving, and single people were about 50 percent more likely to report alcohol-impaired driving than married people or those living with a partner.

Related article: Shults RA, Sleet DA, Elder RW, Ryan GW, Sehgal M. Association between state-level drinking and driving countermeasures and self-reported alcohol-impaired driving. Injury Prevention 2002;8:106–10.

Research identifies effective interventions against alcohol-impaired driving

CDC and the Task Force on Community Preventive Services—an independent, nonfederal panel of community health experts—published systematic reviews of the literature for eight community-based interventions to reduce alcohol-impaired driving. The reviews revealed strong evidence of effectiveness for 0.08% blood alcohol concentration (BAC) laws, minimum legal drinking age laws, sobriety checkpoints, and mass media campaigns (under certain conditions). They also found sufficient evidence of effectiveness for lower BAC laws specific to young or inexperienced drivers (zero tolerance laws), school-based education programs to reduce riding with a drinking driver, and intervention training programs for alcohol servers. They found insufficient evidence of effectiveness to recommend the use of designated driver programs.
The systematic review of the effectiveness of 0.08% BAC laws for drivers was helpful in establishing a 0.08% standard nationwide. The review revealed that state laws that lowered the illegal BAC for drivers from 0.10% to 0.08% reduced alcohol-related fatalities by a median of 7 percent, translating to 500 lives saved annually. With this evidence, the Task Force on Community Preventive Services strongly recommended that all states pass 0.08% BAC laws. In October 2000, the President signed the Fiscal Year 2001 transportation appropriations bill, requiring states to pass the 0.08% BAC law by October 2003 or risk losing federal highway construction funds. As of October 1, 2003, 45 states and the District of Columbia had enacted 0.08% BAC legislation.

In June 2001, Tommy G. Thompson, Secretary of the Department of Health and Human Services, awarded the Secretary's Award for Distinguished Service to the CDC researchers who conducted systematic reviews for their contribution to the field. In September 2006, Mothers Against Drunk Driving (MADD) presented the Ralph W. Hingson Research in Practice National President's Award to the CDC research team to recognize their important contributions to reducing alcohol impaired driving.

Related articles:

Elder RW, Nichols JL, Shults RA, et al. Effectiveness of school-based health promotion programs for reducing drinking and driving and alcohol-involved crashes: a systematic review. American Journal of Preventive Medicine 2005;28(5S):288-304.

Ditter S, Elder RW, Shults RA, et al. Effectiveness of designated driver programs for reducing drinking and driving and alcohol-involved crashes: a systematic review. American Journal of Preventive Medicine 2005;28(5S):280-7.

Elder RW, Shults RA, Sleet DA, et al. Effectiveness of mass media campaigns for reducing drinking and driving and alcohol-involved crashes. American Journal of Preventive Medicine 2004;27:57-65.

Elder RW, Shults RA, Sleet DA, et al. Effectiveness of sobriety checkpoints for reducing alcohol-involved crashes. Traffic Injury Prevention 2002;3:266-74.

Shults RA, Elder RW, Sleet DA, Nichols JL, Alao MA, Carande-Kulis VG, et al. Reviews of evidence regarding interventions to reduce alcohol-impaired driving [published erratum appears in American Journal of Preventive Medicine 2002;23:72]. American Journal of Preventive Medicine 2001;21(4S):66–88.

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