Trends in Impaired Driving in the United States: How to Resume Progress

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Background

After years of decline, alcohol-related crash rates have stalled and actually increased. From 1982 to 1999, rates of alcohol-related (BAC > .00) crashes declined, as did the total number of alcohol-related crashes in the United States. In 1982, there were 26,173 alcohol-related fatalities in the United States, 60 percent of the total number of people killed on U.S. roadways. By 1999, that percentage had fallen to 40 percent and alcohol-related fatalities fell to 16,572; decreases of 33.3\% and 36.7\% respectively. Figure 1 shows the number of alcohol-related and non alcohol-related fatalities from 1982 to 2002.

\begin{figure}[h]
\centering
\includegraphics[width=\textwidth]{Traffic_Fatalities.png}
\caption{Traffic Fatalities in the United States 1982 to 2002}
\end{figure}

As can be seen in the figure, the most dramatic declines occurred from 1982 to 1994.

The prevalence of drinking drivers on the roadways (BAC$\geq$ .05\%) on Friday and Saturday nights did not change much in the U.S. between 1986 (8.4\%) and 1996 (7.7\%) after falling sharply from 1973 (13.7\%) to 1986\textsuperscript{1}. In addition, the proportion of drivers involved in fatal crashes estimated to have been legally intoxicated (BAC$\geq$.08\%) has been fairly constant, varying between 20-22\% since 1995 after falling steadily from 1982 to 1994 (see Figure 2).\textsuperscript{2}
Objectives and Methodology
This paper reviews the observed trends in light of the legal and social developments in recent years and suggests ways in which further progress might be accomplished.

Results and Analysis
A number of factors probably contributed to the declines seen in the 1980s and 1990s. These included:

- deterrence, including enforcement practices, administrative license revocation, and lower BAC limits;
- raising of the drinking age to 21;
- increased public awareness and activism;\(^3\)
- a reduction in per capita alcohol consumption
- socioeconomic factors (e.g. unemployment rate)

The largest drop in crash fatalities occurred in the teenage group, mainly due to federally mandated zero tolerance and age 21 drinking laws. In the group with the highest rate of alcohol-related fatalities (per year of age), ages 21 and 24, fatalities dropped by almost 50 percent between 1982 and 1994.\(^4\) See Table 1.

Table 1. Alcohol-Related Fatalities by Age, 1982, 1994, 2002\(^4\)

<table>
<thead>
<tr>
<th>Year</th>
<th>Ages 15-20</th>
<th>Ages 21-24</th>
<th>All Ages</th>
</tr>
</thead>
<tbody>
<tr>
<td>1982</td>
<td>5,504</td>
<td>4,733</td>
<td>26,173</td>
</tr>
<tr>
<td>1994</td>
<td>2,448</td>
<td>2,425</td>
<td>17,308</td>
</tr>
<tr>
<td>2002</td>
<td>2,442</td>
<td>2,541</td>
<td>17,419</td>
</tr>
</tbody>
</table>

While the major legislative action was aimed at people under 21 (raising the minimum purchase age of alcohol, mandating a very low BAC level (<=.02) for drivers under 21), other research suggests that the preventive effects of the minimum purchase age laws extended beyond age 21.\(^5\) Obviously, the dramatic decreases in impaired driving due to this major policy change are unlikely to be duplicated.
Since 1999, the number of alcohol-related fatalities has begun to increase somewhat, reaching 17,419 by 2002. For 2000, 40 percent of all fatalities involved alcohol and that increased to 41 percent in 2001 and 2002. Stewart and Fell noted that the recent trend was very discouraging news, especially in light of the bold national goal that was established in 1995 to reduce alcohol-related traffic fatalities in America to no more than 11,000 by the year 2005. At that time, 125 recommendations were made to meet the ambitious goal. Despite all this activity, progress in achieving this national public health goal has been slow and for the last few years movement has been in the wrong direction.

Because the number of annual alcohol-related fatalities is generally affected by the number of miles driven, the US National Highway Traffic Safety Administration (NHTSA) recently changed its measure of the problem from the number of deaths per year to the number of alcohol-related fatalities per 100 million vehicle miles traveled (VMT). This mileage-based measure (AR/VMT) is more sensitive to impaired driving countermeasures and less influenced by other factors, such as the economy, that affect annual vehicle mileage. Comparing mileage rates over the past two decades also reveals a sharp drop in alcohol-related fatalities (BAC >.00) between 1982 (AR/VMT of 1.64) and 1994 (.73), and a continued, but much less pronounced decrease between 1994 and 2002 (.62). (See Table 2.) Looking to the future, NHTSA has set a target of reaching .53 alcohol-related fatalities by 2004 (from .62 in 2002).

### Table 2. Fatality Rates by Alcohol Involvement, 1982, 1994, 2002

<table>
<thead>
<tr>
<th>Year</th>
<th>Fatalities per 100m VMT BAC=0.00</th>
<th>Fatalities per 100m VMT BAC=0.01</th>
<th>Fatalities per 100m VMT BAC=0.08</th>
</tr>
</thead>
<tbody>
<tr>
<td>1982</td>
<td>1.11</td>
<td>1.64</td>
<td>1.46</td>
</tr>
<tr>
<td>1994</td>
<td>0.99</td>
<td>0.73</td>
<td>0.64</td>
</tr>
<tr>
<td>2002</td>
<td>0.90</td>
<td>0.62</td>
<td>0.53</td>
</tr>
</tbody>
</table>

### Discussion

Most analysts have concluded that the days of dramatic progress may have ended. An update of a model used to analyze the effectiveness of various impaired driving laws in the U.S. projects that alcohol-related fatalities will still be at about 16,600 in 2005 if present trends continue. This stagnation in progress is particularly discouraging because the tools to make significant progress are available. Many effective strategies are well known, but not implemented as widely or as vigorously as possible. Because of the significant progress that has been made in the past, complacency may have set in among policy makers. The level of public awareness and concern seems to have waned, with attention deflected to other issues.

In their 2002 paper, Stewart and Fell discussed some of the major strategies that can contribute to further reductions in impaired driving in the U.S. Many of these strategies have already helped reduce alcohol-related traffic fatalities in this country. The key strategies for reducing impaired driving include a good legislative framework, enforcement efforts, alcohol policy, and public awareness. Some of the most important laws include: Administrative License Revocation (ALR), lowering the illegal per se blood alcohol concentration (BAC) limit to .08 g/dl., graduated driver licensing (GDL), primary enforcement of occupant protection laws, and vehicle sanctions (such as immobilization or impoundment of the vehicle and alcohol ignition interlock devices) for offenders. Highly publicized and frequent enforcement has great potential for reducing impaired driving crashes in the U.S. Two key areas for enforcement are sobriety checkpoints, and
enforcement of minimum drinking age and zero tolerance laws. Changes in alcohol policy, such as higher taxes and laws that decrease the availability and accessibility of alcohol can also have an impact. Public information and awareness campaigns, especially when tied to enforcement efforts, can play a role.

In its 2003 report, *Initiatives to Address Impaired Driving*, NHTSA identified priority initiatives at the national and state level. Among the proposed initiatives are:

**Behavioral interventions:**
- A coordinated national media campaign modeled on the current “Click it or ticket” campaign for seatbelt enforcement – combining high visibility enforcement with focused media coverage
- Screening and brief intervention programs for offenders – acknowledging that many offenders are problem or addicted drinkers

**Motor vehicle and environmental interventions:**
- Further development of the Intelligent Vehicle Initiative that may help to counteract the behavioral deficits that occur when the driver is impaired by alcohol or other drugs
- Roadway improvements such as the increased use of “rumble strips” that can prevent single vehicle crashes – half of which are alcohol related

**Strategies designed to deal with offenders:**
- High visibility law enforcement
- DWI courts to monitor offenders more closely
- DWI prosecutors – providing better training and support to prosecutors
- Increased efficiency of offender processing so that law enforcement officers can arrest and process offenders more quickly and easily
- More vigorous enforcement of laws against sales or service of alcohol to drinkers who are underage or already intoxicated
- Promotion of effective alternative sanctions (such as house arrest or electronic monitoring) but limiting diversion programs that allow the offender’s driving record to be expunged

**Promote the adoption and effective implementation of key laws at the state level:**
- Zero tolerance laws that prohibit drivers under 21 from having any alcohol
- Administrative license revocation
- .08 BAC limits
- Primary seatbelt law enforcement
- Implied consent provisions mandating that arrested offenders submit to alcohol testing
- Law prohibiting having open containers of alcohol in a vehicle
- Laws providing more effective penalties for repeat offenders
- More effective and easily enforced minimum purchase age laws

These strategies are designed to deal with a variety of deficiencies in the existing systems for preventing and dealing with impaired driving. Some of them may have measurable effects on alcohol-related crashes. Most of the strategies are ones that are currently available and have existing research support.
Conclusion and Possible Next Steps
A wide range of strategies are available to make incremental progress in preventing deaths and injuries due to impaired driving. What is needed is dogged persistence and the mustering of political will to put these strategies into wider use. This effort also requires a rekindling of public concern about the daily tragedies that can seem mundane in a time of dramatic events. Research and determined efforts of policy makers and advocates have brought us this far and given us the tools to continue chipping away at this problem.

References