

Finding Common Ground: Improving Highway Safety With More Effective Interventions for Alcohol Problems

Introduction

Society has made tremendous progress in preventing impaired driving. The percentage of traffic fatalities that were alcohol-related declined from a peak of 60 percent in 1982 to 40 percent in 1999.¹ Safety experts have speculated that this decline has occurred due to a combination of factors including greater public recognition of the problem, advocacy by grassroots groups, stricter law enforcement and harsher penalties.

Nevertheless, traffic crashes remain the leading cause of death for Americans ages 2 through 33.² In 2001 and 2002, the number of alcohol-related traffic fatalities slowly began to climb again with an average of 20 more Americans dying each year in alcohol-related traffic crashes.³ In 2003, this increase leveled off, but almost 17,500 Americans died because of impaired driving.⁴

Americans need new strategies to reverse this trend and to reduce the deaths, the 500,000 injuries⁵ and the \$16 billion in property damage⁶ caused by alcohol-related traffic crashes every year. One such strategy: doing more to prevent recidivism among drivers who have been arrested for impaired driving.

Studies indicate that many impaired drivers treated in emergency rooms are at high risk for alcohol problems. The federal government estimates that 7 percent of American adults have an alcohol

problem.⁷ This prevalence rises to 15 percent among impaired drivers who are treated in emergency rooms for minor injuries and released.⁸ Among impaired drivers who are admitted to a hospital for more serious injuries, the prevalence increases even more, ranging from 25 to 30 percent.⁹

An arrest for driving under the influence (DUI) of alcohol usually results in an intervention mandated by a state court. These interventions vary in kind and intensity but recent advances in alcohol treatment have the potential to improve their effectiveness. These advances include an emphasis on strengthening patient motivation, the use of brief interventions to help some drinkers avoid more serious alcohol problems and the development of new medications. Research also shows that the court can use its power to assist DUI offenders in their efforts to recover from alcohol problems through better monitoring of their treatment progress.

Preventing impaired driving remains a top priority of the criminal justice system. But since many more people access alcohol treatment through court referrals than through the health care system¹⁰ – and with the prosecution of impaired driving cases comprising a large share of the criminal court docket – improving the quality of DUI interventions can ensure that greater numbers of Americans receive effective alcohol treatment.

A DUI arrest can be indicative of an alcohol problem.

The likelihood of being arrested for DUI is very low: estimates suggest Americans who drink some quantity of alcohol and drive (although they may not be legally impaired) do so up to 2,000 times before they get caught.¹¹ Nevertheless, approximately 1.5 million people are arrested for impaired driving each year.¹²

Impaired driving significantly increases the risk of traffic crashes that cause injury, death and property destruction.¹³ Forty-seven states have enacted laws that prohibit adults from driving with a blood alcohol content (BAC) above .08.¹⁴ A law passed in 2000 now permits the federal government to withhold a portion of highway funds from any state that has failed to adopt the .08 standard.

According to the National Highway Traffic Safety Administration (NHTSA), the risk of being involved in a crash increases substantially by the .08 level. A man of average weight could consume four cans of beer (or the equivalent) in an hour on an empty stomach before reaching this level of impairment; a woman of average weight, three beers.¹⁵

Improving the quality of DUI interventions can ensure that greater numbers of Americans receive effective alcohol treatment.

While not everyone arrested for DUI meets the clinical diagnosis for alcohol abuse or alcohol dependence, a DUI arrest can be indicative of an alcohol problem. According to studies of DUI arrest records:

- **As many as one-third of impaired drivers have a previous DUI conviction.**¹⁶ Multiple arrests for impaired driving – particularly when they occur within a single year – increase the likelihood of an alcohol problem. The National Institute on Alcohol Abuse and Alcoholism (NIAAA) includes “recurring alcohol-related legal problems, such as being arrested for driving under the influence of alcohol” among its **criteria for alcohol abuse**.¹⁷
- **At the time of their arrest, the majority of impaired drivers have a BAC of .15 or higher**¹⁸ (a person weighing 175 pounds would have to drink more than nine beers over a three-hour period before driving to reach a BAC level of .15; a person weighing 120 pounds would have to drink more than 5 glasses of wine¹⁹). High BACs occurring without signs of intoxication – including the ability to remain functional enough to drive a car – indicate physical tolerance to alcohol’s effects. Tolerance is one of NIAAA’s criteria for **alcohol dependence**.²⁰

License suspension is the most effective sanction for reducing traffic crashes among all impaired drivers.

A DUI arrest, then, presents society with a responsibility and a dilemma. The responsibility is to deter the individual from causing a traffic crash in the future through sanctions, or countermeasures; the dilemma is how best to do so.

Research has proven that license suspension, by reducing the opportunity for individuals to drive legally, is the most effective sanction for reducing traffic crashes among all people who have been arrested for impaired driving.²¹ Because they drive less, they have fewer opportunities to become involved in a traffic crash of any kind whether or not it is alcohol-related. This has led to the passage of administrative license revocation (ALR) laws in 42 states²² that permit law enforcement officers to seize the licenses of drivers who fail (or refuse to take) a chemical test to determine their BAC level. This seizure takes place at the time of arrest instead of after conviction. Such automatic suspensions, encouraged by NHTSA,²³ avoid the long delays that occur while offenders await trial.

Nevertheless, an estimated 75 percent of people whose licenses have been suspended continue to drive.²⁴ Forty-two states²⁵ now permit the installation of ignition interlock devices, a sanction which prevents individuals with alcohol on their breath from starting their cars. Research indicates that these systems reduce recidivism substantially for as long as they remain in use.²⁶ In most states the decision to have them installed is left to the driver. Unfortunately, when given a choice, 90 percent of offenders would rather risk being penalized for driving with suspended licenses than install ignition interlock systems on their cars.²⁷

Because so many DUI offenders continue to drive with suspended licenses, the public has demanded additional sanctions. Some states now permit license plate seizure, or vehicle incapacitation or impoundment, for those who drive without a valid license. These sanctions can be controversial because the family members of impaired drivers may rely on the vehicle for transportation.

Alcohol treatment increases the effectiveness of license suspension in reducing recidivism among impaired drivers with alcohol problems.

Alcohol treatment increases the effectiveness of license suspension by reducing recidivism, which differs from traffic safety risk. Traffic safety risk is measured by traffic crashes. Recidivism measures whether or not an individual who has been convicted of impaired driving is rearrested for drinking and driving. With the odds for an impaired driving arrest as low as they are, recidivism is a good indication of continued, frequent driving under the influence of alcohol or other drugs.

A large 1997 study in California compared the effects of license suspension, incarceration and alcohol treatment on DUI recidivism among individuals who had received one, two and three convictions for impaired driving. It showed that alcohol treatment, in combination with license suspension, did the best job of reducing DUI recidivism among all DUI offenders, no matter how many times they had been convicted.²⁸ For example, two-time DUI offenders who received 18 months of alcohol treatment including education, counseling and face-to-face interviews with program staff every other week were rearrested 30 percent less often than those who received license suspension alone.²⁹

The most effective DUI interventions combine education, counseling and monitoring.

These results were consistent with the findings of an earlier, landmark meta-analysis of 200 studies evaluating the effect of DUI interventions on recidivism. It concluded that these interventions reduced recidivism among DUI offenders by an average of 7-9 percent overall.³⁰ These results are similar to those achieved for other traffic safety initiatives that try to influence driver behavior such as laws that require seat belt use and graduated licensing for beginning drivers.³¹

The earlier meta-analysis also identified that the kind of intervention used in California – which combines education, counseling and monitoring – was the most effective approach for reducing recidivism among impaired drivers. This finding held true for both first-time and repeat offenders.

Most individuals who are arrested for impaired driving receive a court-mandated intervention of some kind to reduce the risk of repeat DUI.

Federal traffic safety officials have long recognized that people who have been arrested for DUI are at high risk for alcohol problems. During the 1970s it provided states with seed money for programs to intervene with impaired drivers. Today these programs exist in nearly every state. They are almost entirely self-supporting with DUI offenders paying most of the costs. Some states provide limited funding to help indigent drivers. This means that the courts usually can refer DUI offenders to treatment at little or no cost to the public.

DUI offenders are typically offered two levels of intervention: basic alcohol education – now often in conjunction with behavioral strategies to help them avoid driving after drinking – or traditional alcohol treatment programs that combine counseling with support group participation. In areas where alcohol treatment facilities may not be readily available, the courts sometimes require offenders to attend local support group meetings, such as Alcoholics Anonymous. Though these meetings help people in their efforts to recover from alcoholism, no evidence suggests that court-mandated support group participation by itself is sufficient to reduce recidivism among impaired drivers.³²

Traditional DUI education programs which rely on lectures, films and literature that have been developed to treat alcoholism have not been successful in reducing recidivism.

Some states base their referral decisions on the number of times an individual has been arrested for DUI, with first offenders automatically receiving basic education and multiple offenders receiving more intensive treatment. Other states assess all offenders to determine the seriousness of their alcohol problems before making a referral. The latter system recognizes that from a clinical perspective there may not be much difference between first-time and repeat offenders with respect to their alcohol use disorder diagnoses.

Most DUI offenders accept these interventions to avoid jail or because doing so offers attractive incentives, such as shorter periods of license suspension or permission to drive to and from work. Few readily admit they may have an alcohol problem. If they don't believe they need an intervention they are likely to resent having to pay for it out of their own pockets. This may affect their willingness to engage in treatment.

A new generation of DUI education programs recognizes the need to find better ways to motivate behavior change by offenders.

Mandated or “coerced” treatment for DUI offenders remains an issue of much debate among alcohol treatment professionals. Some see a DUI arrest as an opportunity for an intervention that targets the severity of individual’s alcohol problem; others insist that treatment effectiveness relies to a large extent on the motivation of the patient. The latter perspective reflects the judgment, common among alcohol treatment providers, that people with alcohol problems must “hit bottom” before they are willing to engage fully in the treatment that will enable them to make the behavioral changes that are necessary for recovery.

Many DUI offenders have not experienced the kind of serious alcohol problems associated with “hitting bottom.” This may explain why traditional DUI education programs, which rely on lectures,

films and literature that have been developed for use in treating advanced cases of alcoholism, have not been successful in reducing recidivism. In fact, alcohol treatment researchers have concluded that programs of this type are the least effective intervention for treating alcohol problems among nearly 50 that were studied.³³

The field now is moving towards less didactic treatment programs such as those developed by the Change Companies and the Prevention Research Institute that try to increase motivation by actively engaging DUI offenders in strategies to change their behavior. These programs help DUI offenders create plans to avoid driving after drinking and ask them to evaluate how successful they have been throughout the course of the program. This creates an ongoing opportunity for dialog and allows individuals who have difficulty in achieving this goal to reach their own conclusions about the impact of alcohol on their lives. Pre- and post-testing of participants in these programs, which have been adopted by many states, appear to change attitudes about alcohol and drug use. However, their impact on impaired driving recidivism has not yet been independently evaluated.

Screening and assessment for alcohol problems are the first steps in ensuring that DUI offenders receive effective interventions.

The first challenge to successfully intervening with DUI offenders is to try to predict their risk for recidivism. This includes **screening for alcohol** and other drug-related problems. Breathalyzer or blood tests administered by law enforcement officials can determine if a driver has a BAC level above the legal limit but this technology does not indicate whether or not the individual also has an alcohol problem.

Trained clinicians, credentialed substance abuse counselors and people in recovery from alcoholism are among those hired by the court to screen DUI offenders for alcohol problems. They use a number of standardized instruments to screen DUI offenders on the basis of self-reported drinking levels and previous alcohol-related problems. Some also conduct structured diagnostic interviews to obtain personal information such as family history, which may be

DUI offenders must be carefully assessed for problems with other drugs and co-occurring psychiatric disorders which can be factors in impaired driving.

relevant because scientists now know that the risk for alcoholism is 50 to 60 percent genetic.³⁴ The offender's BAC level at the time of arrest, as well as driving and criminal records, when available, provide additional indications about the need for treatment. Researchers, however, see an urgent need to establish the cost effectiveness of these various tools and processes both in predicting the likelihood of recidivism and in assessing the treatment needs of the individual.³⁵

DUI offenders also must be carefully assessed for problems with other drugs and co-occurring psychiatric problems, including conduct disorders and depression, which can be factors in impaired

driving. A recent study in New Mexico, the first of its kind, indicates that drivers with DUI convictions may be more likely to have problems with other drugs. When compared with prevalence rates among the general population in a leading national survey, both male and female DUI offenders were approximately twice as likely to have other drug problems.³⁶

Research has established that the presence of severe psychiatric or drug disorders among individuals with alcohol problems demands a more comprehensive level of services to be effective.³⁷ Thoroughly assessing and treating DUI offenders for these problems in addition to their alcohol use disorders is even more critical because public safety is at stake. Yet the majority of DUI offenders are young men with low levels of educational attainment who work in low-income jobs.³⁸ Many may not be able to afford the often prohibitive costs of such assessment and treatment, or have adequate health insurance coverage.

Brief interventions and the development of new medications to treat alcoholism may improve court-mandated interventions among DUI offenders who screen positive for alcohol problems.

Brief interventions have been used successfully in medical settings to reduce problem drinking among individuals who are not dependent on alcohol. There is evidence that these interventions, which consist of a series of brief, individual counseling sessions conducted by a trained health care professional to motivate behavior change, also may improve highway safety. One study found that individuals who received brief interventions had fewer motor vehicle fatalities and injuries over a four-year period than a control group of problem drinkers who didn't.³⁹ While this finding has enormous significance for preventing impaired driving among individuals who never have been arrested, it also has begun to stimulate researchers to look at brief interventions among DUI offenders. The early results have been encouraging.

A recent study of brief interventions among DUI offenders in Mississippi indicated that the addition of two 20-minute counseling sessions to a standard group intervention for first-time offenders proved significantly more effective in reducing recidivism among individuals with co-occurring feelings of depression than the standard intervention alone. In these sessions, basic education was supplemented by self-assessment and motivational enhancement components. This finding is particularly meaningful because among the drivers with the highest levels of alcohol problems, nearly half also suffered from depression.⁴⁰

The researchers who conducted the study concluded that "mild depression and feelings of sadness enhance the window of opportunity [for intervention] that a DUI arrest and conviction could open. Feedback and one-on-one contact with a counselor to discuss the feedback, in the context of a program that provides critical information and opportunities for planning behavioral change, may provide an effective means to take advantage of heightened motivation to change impaired driving behavior among depressed drinking drivers who would otherwise be at elevated risk for impaired driving."⁴¹

In terms of practical application, the Mississippi study has additional relevance: the brief interventions were conducted by individuals with a variety of backgrounds, working from manuals to ensure consistent delivery, who had received training in motivational interviewing, a non-confrontational therapeutic approach that allows DUI offenders to reach their own conclusions about the effect alcohol is having on their lives. The positive results suggest that comparable programs can be developed for other jurisdictions, which, like Mississippi, have limited financial and professional staffing resources.

New **medications** such as naltrexone offer another area of research. In clinical trials, naltrexone has helped patients in treatment for alcoholism remain abstinent by blocking alcohol's pleasurable effects and the intense craving to drink that can be stimulated by various environmental cues. It works only when taken as part of a treatment program that also includes therapy or counseling to change behavior.

Patient adherence to treatment programs that prescribe naltrexone as an adjunct to therapy has been simplified now that the medication can be administered in doses that last for as long as a month.⁴² Although some programs for DUI offenders who screen positive for alcohol problems have begun to use naltrexone, their effectiveness in reducing recidivism among this population has yet to be thoroughly evaluated. Again, the offender's ability to pay for the cost of this medication is an issue.

Probation and technology can ensure greater adherence to court-mandated interventions among DUI offenders.

The threat of incarceration provides courts with a powerful means of persuading DUI offenders to seek treatment; a probationary sentence also gives them the means to ensure treatment adherence. Regular supportive contact with probation officers or court-designated monitors with some training in addiction can reduce recidivism. In one study, first-time offenders who reported to an alcohol program monitor on a weekly basis had substantially fewer DUI rearrests than those who were not required to do so.⁴³

Less clear, however, is the relationship between the intensity of the monitoring and its effect on recidivism. The meta-analysis reached no conclusions in this regard although it did indicate that probation in combination with treatment reduced recidivism more effectively than probation alone.⁴⁴ More recent outcome studies with drug court participants who, like DUI offenders, can avoid jail by seeking treatment for their addictions, suggests that more intensive monitoring benefits high-risk individuals (i.e. those with a prior history of treatment) but may be ineffective with low-risk offenders.⁴⁵ More research is necessary to identify the most cost effective strategy for follow-up monitoring among DUI offenders who have received a combination of education and therapy or counseling.

Frequent and random testing for alcohol and other drug use during probation can help determine if offenders have relapsed. The consequences for violating the conditions of their probation by failing

these tests also provides offenders with a socially acceptable excuse for refusing to drink or use other drugs. This can be invaluable in their recovery efforts.

Technological advances in monitoring and alcohol/drug testing of offenders already in wide use also may have application in follow-up monitoring. Ignition interlocks, for example, also can produce a written record of the dates and times when alcohol use prevented an offender from starting his or her vehicle. Newer devices permit continuous monitoring of offenders from remote locations with smart modems that track BAC levels with ankle bracelets. Although additional research is needed, probation officers, treatment professionals and judges can use this technology to determine how successful multiple offenders who are being treated for alcoholism have been in their efforts to abstain from alcohol use.

Increased accountability can improve the quality of alcohol treatment delivered to DUI offenders who are assessed with alcoholism.

Most efforts to reduce recidivism among DUI offenders proceed along two separate tracks. On one track, the criminal justice system punishes offenders with sanctions; on a separate track, the offender seeks an intervention that has been mandated by the court, often in return for reduced penalties. As a result, the majority of DUI offenders receive some kind of intervention but evidence that the intervention has been completed, not that it has been effective, is sufficient for the offender to receive the rewards or avoid spending time in jail.

The death, injury and property destruction caused by alcohol-related car crashes, as well as the high cost of arresting and prosecuting impaired drivers, gives the nation a good reason to improve the interventions that DUI offenders receive. In this regard, the move towards **performance measurement** in addiction treatment holds considerable promise. It illustrates the growing conviction among health care experts that addiction treatment providers should be rewarded for the quality of care they deliver instead of treating patients as usual.⁴⁶ For example, publicly reported performance measures soon will make it possible for private employers and government purchasers of health care to hold health plans more accountable for the process of care they deliver to patients with alcohol problems. They can use this information to switch to better performing health plans or to demand quality improvements in addiction treatment when renegotiating their contracts.

Similarly, instead of relying on unscientifically evaluated claims of addiction treatment program success, courts and state agencies with DUI offender oversight eventually may be able to consider treatment accountability mechanisms – such as whether or not a program uses evidence-based clinical practice guidelines – when referring DUI offenders to alcohol treatment (at present, most courts require only that alcohol treatment providers be licensed by the state agency responsible for substance abuse). It is important, however, that any such accountability mechanisms be well-validated and that they be applied objectively and systematically across programs that treat DUI offenders.

The alcohol treatment field and the criminal justice system can do more to reduce recidivism among DUI offenders.

Research has established that court-mandated interventions, combined with license suspension, reduce recidivism more effectively than incarceration,⁴⁷ a far more costly alternative. Now that ALR laws have made automatic license suspension a reality for more and more DUI offenders, the combination of treatment with sanctions has become more widespread and the current system may show signs of improvement.

Finding ways to reduce the long delays between a DUI arrest and the initiation of treatment can help establish a stronger connection between the reason for arrest and the need for intervention in the minds of offenders.

Some 60 U.S. communities also have instituted special courts for dealing with DUI offenders that offer intensive treatment monitoring. For more information on this innovative approach, see **Ensuring Solutions Spotlight #3: Team Approach to Drug Treatment Shows Promise in Improving Traffic Safety.**

Much more, however, can be done to build on these strategies. Finding ways to reduce the long delays between a DUI arrest and the initiation of treatment – 90 days is not unusual even when offenders plead guilty⁴⁸ – can help establish a stronger connection between the reason for arrest and the need for intervention in the minds of offenders who have alcohol problems. In fact, alcohol treatment researchers think that rapid initiation of treatment after diagnosis is so critical that some addiction treatment performance measures hold health plans responsible for doing this within two weeks.⁴⁹

Other opportunities for additional gains include:

- developing and rigorously evaluating a range of interventions, including those currently in use, that address the complex problems among DUI offenders
- improving coordination and accountability among law enforcement agencies, the courts, treatment providers, probation officers and concerned citizens
- facilitating communication among states about successes and failures in systems used to deal with DUI offenders
- making interstate DUI arrest and conviction records transparent
- narrowing the gap between research and practice in alcohol treatment that is currently being delivered to DUI offenders

- encouraging greater accountability in addiction treatment by rewarding providers for the quality of treatment they are delivering
- recognizing that court-mandated monitoring can improve the effectiveness of court-mandated interventions for alcohol problems

The nation's health care system has a bigger role to play in reducing impaired driving.

Two-thirds of individuals who cause alcohol-related traffic crashes have never before been arrested for impaired driving.⁵⁰ This means that even if society were able to greatly reduce recidivism among DUI offenders, impaired driving would continue to kill and injure large numbers of Americans.

The nation's health care system, however, can play a much bigger role in solving what more often has been perceived as a law enforcement issue. If more Americans who are at high risk for alcohol problems were routinely **screened in primary care medical settings** and referred to appropriate levels of intervention, many of the impaired drivers who avoid arrest could be treated before they cause a car crash. In addition, other alcohol-related problems could be reduced.

Hospital **emergency rooms** offer a likely starting point for a concurrent public health strategy to reduce impaired driving. In 2000, nearly 8.4 million visits to the emergency room were alcohol-related.⁵¹ Roughly speaking, this means that there are approximately 7 million more opportunities in the nation's hospital emergency rooms than on the highways to intervene more effectively with people who have alcohol problems. Such interventions would have the advantage of immediacy and likely meet with less resistance from patients who would perceive them as expressions of concern from health care professionals rather than punishment by the criminal justice system.

Society needs far more research to provide better information about what works. The kind of systemic change that these broad-based solutions demand won't be easily achieved. Nor is it likely that when researchers have identified a number of effective interventions to meet the diverse needs of the DUI offender population that the full range will be readily available. This makes it necessary to consider the "real world" application of any intervention by examining its cost-effectiveness to determine if it will be feasible in communities with limited professional or financial resources. But traffic safety experts and advocates, judges and health care practitioners already agree on the basics. They know that more effective alcohol treatment and better monitoring of that treatment by the nation's criminal justice system can result in fewer alcohol-related crashes and lessen the death, disability and family heartache caused by such crashes and the alcohol problems that underlie them.

The nation's emergency rooms offer millions more opportunities than the nation's highways for intervening in alcohol problems.

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Ensuring Solutions to Alcohol Problems (Ensuring Solutions) at The George Washington University Medical Center in Washington, DC, seeks to increase access to treatment for individuals with alcohol problems. Working with policymakers, employers and concerned citizens, Ensuring Solutions provides research-based information and tools to help curb the avoidable health care and other costs associated with alcohol use and improve access to treatment for Americans who need it. The project is supported by a grant from The Pew Charitable Trusts.

LINKS

The Change Companies/Impaired Driving Program

<http://www.changecompanies.net/>

Mothers Against Drunk Driving

<http://madd.org/home/>

National Highway Traffic Safety Administration

<http://nhtsa.gov/>

National Institute on Alcohol Abuse and Alcoholism

<http://www.niaaa.nih.gov/index.htm>

Prevention Research Institute/Prime For Life Program

http://askpri.org/dui_content.html

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