

## **Research Needs and Priorities for the Hard-Core Drinking Driver**

**DOUGLAS J. BEIRNESS**

**HERBERT M. SIMPSON**

**DANIEL R. MAYHEW**

*Traffic Injury Research Foundation*

### **INTRODUCTION**

It has been well documented that during the decade of the 1980s, significant reductions occurred in the magnitude of the alcohol-crash problem, not only in the United States but throughout the Western world (Strategic Highway Research Program, 1993). As the magnitude of the problem changed, so too changed our understanding of the complexion of the problem. Attention began to focus on those individuals who persisted in driving after consuming too much alcohol. A series of papers and reports outlined the existence of a relatively small group of offenders who were responsible for a disproportionately large number of serious alcohol-involved roadway crashes (Beirness et al., 1997; Blakey and Associates, 1997; Simpson and Mayhew, 1991; Simpson et al., 1996; Sweedler, 1995; Wilson, 1993). The behavior of this group did not appear to be affected by the plethora of public information and education campaigns. Nor were they deterred by the threat of ever-increasing sanctions. They persisted in driving after consuming large quantities of alcohol—far too many crashed as a result.

Interest in this high-risk group of driving while intoxicated (DWI) offenders has escalated dramatically in the past few years. In many jurisdictions, new programs and policies have been introduced and implemented in an attempt to deal effectively with hard-core drinking drivers. Several others are actively pursuing new measures. Some jurisdictions have gone so far as to explicitly identify the target of their legislation in the name of the bill itself—for example, the Extreme Driving Under the Influence (DUI) Bill in Arizona, and the Persistent Drinking Driver Act in Colorado.

The very nature of the problem leaves little doubt that it is a difficult one to deal with effectively. Solutions need to be based on sound research. And while considerable research in this area has been done, numerous questions remain. This paper outlines some of the most urgent issues that need to be addressed.

### **RESEARCH NEEDS AND PRIORITIES**

#### **Epidemiology**

1. Create a clear, precise, objective and quantifiable definition of the “hard-core drinking driver.”
2. Using the new definition, determine the relative contribution of hard-core drinking drivers to the overall alcohol-crash problem.

## Research

1. Identify and validate clinically relevant subgroups of hard-core offenders.
2. Determine the developmental trajectory of hard-core offenders.
3. Identify signs and symptoms evident at the time of first DWI arrest that are predictive of repeat DWI behavior.

## Evaluation

1. Determine the extent to which countermeasure programs and policies have a general deterrent effect on hard-core drinking drivers.
2. Determine the extent to which programs and policies have a specific deterrent effect on hard-core drinking drivers.

## EPIDEMIOLOGY

### Create an Objective, Quantifiable Definition of the Hard-Core Drinking Driver

Over the past several years, a variety of labels have come into common usage—e.g., “hard-core drinking drivers,” “persistent drinking drivers,” “hardened drunk drivers,” “repeat DWI offenders,” “chronic drunk drivers.” Regardless of the label, at one level most people have some idea of the characteristics of the group to whom the label applies. It is that incorrigible, recalcitrant group of DWI offenders who persist in driving after consuming large quantities of alcohol. They are high-risk offenders who seem relatively resistant to efforts to change their behavior.

Labels are applied for obvious reasons, one of which is to facilitate communication through the economy of language they offer. At the same time, because of their imprecision, labels possess a high degree of connotative meaning and are, therefore, evocative of many different interpretations. This can unintentionally, or otherwise, shape the debate and discussion inappropriately.

The number and variety of labels used to refer to this group to some extent is testimony to the inconsistency and lack of precision regarding who constitute this high-risk group of drinking drivers. The implications for research as well as program and policy developments are twofold. First, in the absence of an objective, quantifiable definition, it is difficult to determine the overall magnitude of the problem caused by this group. Second, the vagueness of the definitions renders it impossible to determine reliably which individual drinking drivers are members of this group.

Since our own research on this problem (Beirness et al., 1997; Simpson and Mayhew 1991; Simpson et al., 1996) was largely responsible for popularizing the term “hard-core” and for stimulating interest in the problem, we have been very sensitive to the issue of a definition. Indeed, this was discussed thoroughly in a paper a few years ago (Simpson 1995). We have adopted the following working definition of hard-core drinking drivers: they repeatedly drive after drinking, often with high blood alcohol content (BACs), and they seem relatively resistant to changing this behavior (Simpson and Mayhew, 1991;

Simpson et al., 1996). More recently, we have further specified that this group tends to drink frequently and often to excess and may have been previously convicted of a DWI offense (Beirness et al., 1997).

Although this working definition has proved useful in identifying the problem and has been adopted by many others, it continues to suffer from a vagueness that hampers efforts to take the research to the next level.

An objective and quantifiable definition of the hard-core drinking driver would facilitate the direct comparison of research studies and would be particularly beneficial in the development of programs and policies to deal with this high-risk group of offenders. In addition, at a very practical level, establishing criteria would assist in determining which individuals are part of this group and, hence, eligible for the corresponding sanctions and programs.

### **Using the New Definition, Determine the Prevalence of Hard-Core Drinking Drivers and the Relative Contribution of This Group to the Overall Alcohol-Crash Problem**

Vagueness and imprecision in the definition of hard-core drinking drivers has resulted in a wide range of estimates of the size of the hard-core population. For example, most working definitions include a statement about repeated or persistent driving after drinking. Data from a national survey on drinking and driving conducted by the Traffic Injury Research Foundation revealed that 55 percent of respondents who reported driving after consuming "too much" alcohol did so on more than one occasion in the past 12 months and 9.6 percent did so at least monthly (Simpson et al., 1999). Using the reported frequency of the behavior, it was determined that 2.6 percent of the drivers accounted for 85 percent of all impaired driving trips. Although these data provide evidence of the persistence of the behavior, without other evidence—such as the BAC at the time of driving—it is difficult to determine whether or not they should be considered as part of the hard-core.

A repeat conviction for a DWI offense is also evidence of persistent drinking and driving behavior. This is especially true if one considers that for every conviction, the individual has engaged in the behavior on numerous other occasions. And, given that the average BAC among offenders is in the 0.16 to 0.18 range, convictions can be indicative of repeated driving with a high BAC. Again, estimates of the percentage of arrested and/or convicted DWI offenders who have a prior conviction on their record vary widely according to jurisdiction. Data from a survey conducted by NHTSA (Hedlund, 1995), combined with data from an independent survey of states conducted by ourselves (Simpson et al., 1999), indicate that between 10 and 75 percent of DWI offenders are recidivists. The size of the group can be either large or small, depending on where one looks and what criteria are used to define the group.

Diversity in the definition of hard-core drinking drivers has also resulted in variability in estimates of the magnitude of the problem. For example, using BAC as a criterion, roadside surveys indicate that only about 1 percent of all drivers on the road during late night hours have a BAC over 0.15 percent, but among driver fatalities 25 percent have a

BAC of this magnitude. This overrepresentation of high BAC drivers within the fatalities population serves to define them as a high-risk group.

Estimates of the magnitude of the alcohol-crash problem attributable to the hard-core also show considerable variability. Using Fatal Accident Reporting System data it has been determined that about 11 percent of drivers with a positive BAC involved in fatal crashes had been previously convicted of a DWI offense (Hedlund, 1995). In contrast, a study in British Columbia reported that 34 percent of drinking drivers responsible for fatal crashes had a prior DWI conviction on their record (Donelson et al., 1989). In Minnesota, Simon (1992) indicated that 35 percent of alcohol-related fatal crashes involved a driver who had a prior DWI offense.

Estimates of the magnitude of the hard-core drinking driver problem vary on the basis of the definition used to identify the group as well as the type and quality of the information in data systems used to establish the estimates. Both high BACs and evidence of repeat offenses are evidence suggestive of a hard-core offender but neither one alone is sufficient to determine group membership with any degree of certainty. Establishing an objective definition of the hard-core would facilitate the development of more precise estimates of the magnitude of the problem.

At one level, it is probably sufficient to know that the problem is large. In this sense, just about any defensible estimate is sufficient to support the call to action. Nevertheless, more precise estimates of the size of the hard-core population and their overall contribution to drinking and driving problems are critical in the setting of priorities, the development of policy, and the funding of both programs and research. Precise estimates of the magnitude of the problem are also crucial for evaluation purposes—i.e., monitoring changes in the problem so that we can determine when we are being successful.

## RESEARCH

### Identify and Validate Clinically Relevant Subgroups of Hard-Core Offenders

Terms such as “hard-core drinking driver” have the disadvantage of implying a similarity among members of the target group that belies the true heterogeneity of the population. Not all persons who meet the criteria of hard-core drinking driver are necessarily alike. While certain characteristics stand out and can be used to distinguish DWI offenders from other drivers, it would be incorrect and unproductive to ascribe these distinguishing characteristics to all hard-core drinking drivers.

Research has demonstrated that within the population of DWI offenders, various characteristics may be more or less prominent, creating definable subgroups or typologies (Arstein-Kerslake and Peck, 1986; Donovan and Marlatt, 1982; Steer et al., 1979; Sutker et al., 1980; Wells-Parker et al., 1986; Wilson, 1991). Drivers become drinking drivers for a variety of reasons; the reasons for their persistence in drinking and driving are likely to be equally varied. To understand the problem of the hard-core offender, it is imperative that we recognize their similarities and differences.

In the several studies that have identified subtypes of DWI offenders, a variety of populations and methods have been employed. Different approaches to the development of typologies give rise to different subgroups of offenders. Several of these typologies

would appear to describe different subgroups of hard-core drinking drivers. Although there appears to be some degree of overlap among the identified subgroups, there is no consensus that these are the most important, or even the only subgroups within this population.

Further research along these lines is needed to determine the prominent subgroups and the set of characteristics or variables that provide the best differentiation among the subtypes of offenders. Such studies would enhance our understanding of hard-core drinking drivers. In addition, they would facilitate the development of a valid and reliable assessment instrument that could be readily and easily applied to all offenders to help identify hard-core offenders. The greatest value in identifying subgroups of hard-core offenders lies in the implications for rehabilitation. Greater understanding of the characteristics, motivations, and problems of various groups of hard-core offenders would facilitate the development of tailored sanctions and rehabilitation programs.

### **Determine the Developmental Trajectory of Hard-Core Offenders**

Although there have been a number of studies addressing issues concerning hard-core drinking drivers, a good deal of this work has been of a descriptive or comparative nature. In addition, there has been considerable effort directed towards the development of policies and programs for dealing with this high-risk population. Basic research to understand the reasons some people become hard-core drinking drivers and the developmental path they take to get there has yet to be conducted. In addition, we know little or nothing about what happens to hard-core drinking drivers over time. Such research is essential to further our insight into, and understanding of, this problem.

A number of studies have compared repeat DWI offenders with those convicted for the first time (e.g., Bailey and Winkel, 1981; McMillen et al., 1992; Nochajski et al., 1994; Perrine, 1990). These cross-sectional studies typically show that repeat offenders are older, have more nontraffic arrests, are more likely to use drugs other than alcohol, and have more severe alcohol problems. But while the observed differences between groups are informative and interesting, the design of the studies does not permit a direct inference about the contributory role of such factors to repeat DWI behavior. Such differences may have been evident at the time of the first DWI offense or may have developed subsequently. Hence, these factors cannot necessarily be used as good predictors of subsequent DWI behavior.

There is a virtual lack of information about why some offenders continue to drive after drinking even after having been convicted of, and punished for, a DWI offense. Conversely, we don't have a good understanding of why some offenders discontinue their driving after drinking behavior. In attempting to deal effectively with the problem, it would seem that the answers to such questions are critical.

In depth, prospective studies of first-time DWI offenders would provide a wealth of information about the developmental path that facilitates or instigates repeat drinking and driving behavior and ultimately hard-core drinking driver status. Similarly, such studies would provide information about the factors and events that are protective of further drinking and driving behavior.

An extension of this line of research would examine the developmental trajectory of hard-core offenders to determine what happens to them and the critical events and factors that instigate or inhibit further drinking and driving behavior.

While it may appear that such research is largely academic, the results can have direct implications for the development of policies and programs for dealing effectively with hard-core drinking drivers. Understanding the factors that give rise to and perpetuate the behavior can be critical in this regard.

### **Identify Signs and Symptoms Evident at the Time of First DWI Arrest That Are Predictive of Repeat DWI Behavior**

For the most part, all first-time DWI offenders are dealt with by the courts in a similar fashion. They are dealt with as a single entity, without regard to their differences. With few exceptions, the sanctions imposed and rehabilitation programs required (if any) are very similar for all offenders. Little attention is paid to the possibility of a repeat offense.

As pervasive as this model may be, attempts to change it date back at least 30 years. The Alcohol Safety Action Projects of the 1970s were an attempt to distinguish among groups of DWI offenders based on the drinking pattern of the offender. Variations of this model are being used in some jurisdictions. Such systems require offenders to be screened or assessed for alcohol problems following conviction. This approach may be successful in identifying and referring for treatment those offenders who are currently experiencing alcohol problems. However, those who have not yet reached the problem drinking stage but are nonetheless at high risk of recidivism are unlikely to be identified and targeted for appropriate rehabilitation programs.

As an alternative, some jurisdictions (e.g., Victoria, Washington) have implemented tiered BAC systems. A higher BAC at the time of arrest leads to more severe sanctions and a requirement for assessment and rehabilitation. Again, using only BAC as the criterion, the possibility of errors in assignment to treatment could be substantial.

What is needed is a screening tool that helps to identify first-time DWI offenders who are at high risk of committing a repeat offense that can be used by the courts to help determine the most appropriate sanctions and ideas for rehabilitation.

The development of such a screening tool requires prospective research on first-time DWI offenders to identify valid and reliable factors that are predictive of repeat DWI offenses.

## **EVALUATION**

### **Determine the Extent to Which Countermeasure Programs and Policies Have a General Deterrent Effect on Hard-Core Drinking Drivers**

Implicit in the working definition of hard-core drinking drivers is the notion that they are unresponsive to widespread public education and awareness messages aimed at deterring driving after drinking behavior. If this is true, it may reflect the fact that they do not see or hear them, they ignore them as irrelevant, or the messages simply don't strike a responsive chord. Whatever the reason, it has led to the perception that hard-core drinking driv-



ers are not affected by public education and awareness programs. The validity of this perception has never been determined.

There is some research, however, that suggests hard-core drinking drivers may be reached with appropriately targeted messages (Isaac, 1995). Taking a market segmentation approach, Isaac indicates that hard-core drinking drivers are frequent consumers of particular types of media—e.g., sports television, rock and country radio, and action/adventure movies. The receptivity of this group to safety oriented messages is, however, unclear. She recommends expanding media messages/strategies based on motivating significant others to intervene with hard-core drinking drivers and using media as an adjunct to enforcement. Other research suggests hard-hitting media messages that focus on specific personal concerns of this high-risk group—their wife/girlfriend, their kids, their pets, their cars (Millward Brown, 1994). The extent to which these types of messages have an effect on the attitudes or behavior of hard-core offenders is not known.

In addition, the fact that hard-core offenders repeatedly engage in driving after drinking behavior suggests that they are undeterred by the threat of arrest or severe sanctions. Nevertheless, an almost universal approach for dealing with the drinking and driving problem has been—and continues to be—the enactment of more stringent laws with more severe sanctions. In recent years, many jurisdictions have taken this approach one step further by introducing new legislation aimed directly at hard-core offenders. These laws may include special charges and more severe penalties for persons with BACs above a specified threshold—e.g., Arizona's Extreme DUI Bill. It is not known whether such laws have any general (or specific) deterrent effect on hard-core drinking drivers.

Research is needed to help understand the nature and extent of general deterrence effects among hard-core drinking drivers. The results of such investigations would provide guidance in the continuation or development of new media messages targeted at this group. In addition, as an increasing number of jurisdictions move to implement legislation aimed at hard-core offenders, it will be important to examine the general deterrent effects of these new legislative efforts.

### **Determine the Extent to Which Programs and Policies Have a Specific Deterrent Effect on Hard Core Drinking Drivers**

A wide variety of approaches have been suggested for dealing effectively with hard-core drinking drivers—e.g., assessment and treatment, vehicle impoundment/immobilization, alcohol ignition interlocks, intensive supervision probation, special DWI facilities. Many examples of these types of programs can be found in jurisdictions throughout North America. Some have even been evaluated. Recently, the National Institute on Alcohol Abuse and Alcoholism issued a special call for applications to study programs for hard-core offenders. Nevertheless, considerably more research is needed to determine the effectiveness of programs in preventing recidivism, to help understand the way in which they impact hard-core offenders, and to provide guidance on how they can be made more effective.

As an illustration, it is generally accepted that alcohol ignition interlocks significantly reduce DWI behavior at least so long as the device is installed in the offender's vehicle. While this finding is encouraging, it provides only a partial answer. Numerous

questions remain. For example, which type(s) of offenders are most likely to benefit from interlocks? Are there offenders for whom interlocks should not be recommended? What is the ideal length of time for the interlock to be installed? Should there be conditions placed on the licenses of drivers to bridge the gap between the interlock and full license reinstatement? Are there ways to make interlocks even more effective? What other programs/sanctions would complement the interlock? Obviously, evaluation research in this area is far from complete.

In addition, as more and more jurisdictions implement a variety of programs and policies for dealing with hard-core offenders, it will be important to examine the interactions between these various programs. Determining the most efficient and effective combination of sanctions and programs for specific groups of offenders is a large undertaking.

It is also important to examine the system effects of various programs and policies—i.e., conduct a process evaluation. For example, in a jurisdiction with a variety of programs for hard-core offenders, an individual may be subjected to screening and/or assessment more than once—and possibly with different results—as they proceed through the system. Not only is this inefficient, it can also lead offenders to believe they are pawns in a complicated bureaucracy. Even the most well meaning programs can prove ineffective when they are not integrated into the existing system and managed efficiently.

Therefore, further evaluation research is needed to determine the effectiveness of the various programs and policies that have been (or will be) introduced to reduce the incidence of recidivism among hard-core drinking drivers—i.e., the specific deterrent effects. Such research should also examine the process involved in the implementation and operation of these programs. The results of such research will provide valuable and essential information on which types of programs and which combinations of programs are most effective in deterring repeat DWI behavior for specific groups of offenders.

## PRIORITIES

1. Define “hard-core” drinking drivers (1)
2. Determine specific deterrent effect of programs (7)
3. Identify predictors of recidivism (5)
4. Determine magnitude of hard-core problem (2)
5. Identify clinically relevant subgroups (3)
6. Determine developmental trajectory (4)
7. Determine general deterrent impact of programs (6)

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