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A Model Program

Because unrealistically severe penalties often force drinking drivers to operate outside the system, increasing consideration should be given to methods to keep them in the system while reducing their potential risk. Because driving is integral to social and economic survival in this country, all but the most serious offenders should be permitted to drive after a reasonable period of hard license suspension (period determined by severity of the offense). A model program should realistically deal with the fact that the automobile is frequently the only source of transportation available to most people and the fact that most people drive even when their license is revoked. For first time offenders begin with a hard license sanction of 90 days, while their license is revoked their car should receive a special plate to facilitate detection. Tie the granting of limited driving privileges to participation in some type of remediation and the use of vehicle markings to increase fear of detection. If the individual is picked up driving while impaired, punish with another license suspension and tie issuance of a limited license to the installation of an interlock device. When the individual with an interlock tampers with it or drives another car, forfeit the vehicle. Make the issuance of the driver's conditional license also contingent upon the payment of a set of fees which is tied into to the individual's income (using the past years income tax return).

If all else fails, imprison.

APPENDIX D5B
DETERRENCE AND REHABILITATION: SECTION 2 — REHABILITATION AND SCREENING

Elizabeth Wells-Parker

INTRODUCTION

Convicted DUI offenders constitute a highly visible group of drinking drivers and exhibit a range of problems that potentially contribute to traffic safety risk. The identification of effective methods for dealing with convicted offenders continues to be a high priority among key actors (judges, etc.) within the system. Furthermore, some groups of drinking drivers, such as high BAC (>.15) drivers, are at elevated risk of having had a DUI offense prior to becoming involved in a fatal accident (Simpson and Mayhew 1991; Lewis, personal communication) and are unlikely to be affected by DUI prevention strategies targeting the general driving public. The population of detected offenders is an appropriate target for prevention of fatal accidents among such groups. Interventions that effectively target detected DUIs could become models for more broadly based prevention programs for undetected high risk drinking drivers who are relatively unlikely to be affected by traditional educational and media-based prevention strategies.

The major purpose of this paper is to provoke ideas about how to improve intervention methods with convicted DUI offenders. It is suggested that research on remedial intervention with DUI offenders must move beyond existing strategies and creatively consider new and untried approaches for improvements to occur. Also, the broader term "remedial intervention" is favored over rehabilitation and treatment to encourage the expansion of options that might be investigated.

For succinctness, reviews of such issues as efficacy of traditional rehabilitation, treatment, and probation approaches, treatment matching, and many technical screening issues have been omitted; however, these subjects have been qualitatively reviewed elsewhere (Mann, Leigh, Vingilis, and DeGenova 1983; Stewart and Ellingstad 1988; Wells-Parker, Landrum and Topping 1990; Wells-Parker and Bangert-Drowns 1991).

State of Knowledge; Current Issues and Problems

The efficacy of traditional rehabilitation and treatment of convicted DUI offenders to reduce subsequent drinking/driving and crash involvement at best remains controversial after nearly two decades of research. (See Wells-Parker and Bangert-Drowns, 1991 for a discussion of existing reviews.) A comprehensive meta-analysis of this body of research, which contains between 200 and 300 primary studies of varying methodological rigor, is being conducted. Although still in progress, observations from preliminary stages of this analysis suggest that (a) in spite of the large number of studies conducted, the range of intervention options that have been evaluated is very narrow relative to options reported in the general alcohol literature, and some of the options that have been shown to be effective in the alcohol treatment literature, such as community reinforcement programs, have never been evaluated for DUI offenders; (b) the range of identifiable options is even more restricted among methodologically rigorous studies; (c) most rehabilitation/treatment programs for DUI offenders neither assess nor target polydrug use; and (d) virtually no systematic data on the effect of variation in the general social/cultural climate or the judicial systems interface with rehabilitation/treatment are retrievable from existing studies.

Recent reviews of studies that compared the specific deterrent effects of license actions to rehabilitation/treatment suggested that rehabilitation should not be substituted for licensing actions but that combining the two may prove the most effective option for reducing all relevant target behaviors (Nichols and Ross 1990; Peck 1991; Simpson and Mayhew 1991). Policies that combine, rather than substitute, rehabilitation with other deterrence strategies have been suggested (Nichols and Ross 1990). Initial results of alternative sentencing programs that combine long-term probation, treatment, and other sanctions, such as use of special custodial facilities, appear promising (Simon 1992; Voas and Tippetts 1989), but additional evaluation is needed. With the exception of license suspension, probation, and some information on jail based and custodial facility programs, virtually nothing is known about the efficacy of combining treatment/ rehabilitation programs with other deterrence options. Less traditional options, such as ignition interlocks, home monitoring, tag identification, and vehicle impoundment, potentially provide more control and monitoring of the target behaviors of drinking/ driving and could offer opportunities to specifically tailor remedial programs as companion countermeasures. Given the need to develop comprehensive programs targeting the "hard core" offender (e.g., Simpson and Mayhew 1991), such intensive combined strategies merit investigation. Also, multi-tiered systems, which are more common in Europe and which involve continued monitoring, including medical monitoring, of chronic offenders as a basis for license reinstatement, should be investigated for possible adaptation to North American systems. (See Simpson and Mayhew 1991, for an extended discussion of such systems.)

Screening, Assessment, and Treatment Matching

Screening and assessment of convicted DUI offenders has become a standard practice within many DUI control systems. Previous research, as well as ongoing research, has focused on the development of improved screening and assessment methods. For purposes of discussion at least two distinct, although interrelated, reasons for assessing convicted offenders can be identified as typical within the U.S.[1]

1. In the traffic safety arena there is interest in risk screening—identifying instruments that yield improved prediction of subsequent traffic safety or alcohol problem outcomes and that provide superior validity with regard to defining risk categories (e.g., high versus low risk) for DUI offenders (Wieczorek, Miller, and Nochajski 1991). Such an instrument should be easy to administer and not too costly, and often is justified as a first stage screening device to identify offenders who are at higher risk of the target behavior and, therefore, justify a more intensive, expensive, and/or invasive alternative. In this regard, it is assumed that the "low risk" group requires minimal treatment—but that it will be cost effective to give expensive treatment to the high risk offenders. The utility of such screening devices hinges on their ability to predict a criterion (e.g., recidivism, accidents, severe alcohol problems, etc.) and the identification of appropriate cut points to define risk groups for decision making.

2. A second reason for assessment is closely linked to the client/treatment matching hypothesis, which is an interaction hypothesis, and which continues to gain much attention in the general alcohol treatment field (Institute of Medicine 1990). Recent interest in matching offenders to treatment has led to the development of multidimensional schemes and multivariate typologies in which the areas of problem assessment are expanded to include dimensions such as attitudes, expectancies, and personality traits, other drug use, situational indices, family history, and neurophysiological deficits. (See Wells-Parker, Anderson, Pang and Timken, in press, for review.) These schemes have been based on the

hypothesis that heterogeneity on such traits among convicted offenders is clinically relevant (i.e., that offenders falling into different categories require different types of intervention). Such typologies are not necessarily predicated on a single risk dimension, either for behavior repetition or for "alcohol problems." Indeed it would be possible for different "types" to have similar risk potential (e.g., for recidivism) but to require different treatment strategies.

Within the matching agenda, the value of a screening device would be predicated more on the relative magnitude of the interaction effects (type x treatment interaction) rather than the ability of the device to predict subsequent risk independent of the intervention's effect (i.e., a main effect).

Some would suggest a multi-stage process (e.g., risk screening for triage followed by diagnosis/assessment for matching). Others would develop a single device that achieves both purposes. Although the two reasons for screening are interrelated, they are clearly distinct: demonstration of validity with respect to one of these reasons (e.g., risk prediction) does not substitute for demonstration of validity with respect to the other (e.g., treatment matching).[2]

Also significant problems remain with each approach. Improved risk screening is predicated on (a) prediction of a substantially larger amount of criterion variance than predicted by existing schemes, (b) development of superior cut points for classification, or (c) simplification or cost reduction over existing schemes without loss of prediction. Problems exist with some of these goals. For example, considerable debate has occurred with respect to the nature of the arrested DUI population, and the proportion of true social or non-problem drinkers (Arstein-Kerslake and Peck 1986; Perrine 1990; Wilson, 1991) within the population. Although population parameters could vary with both locations and time period because of social/cultural or enforcement differences, etc. (Wells-Parker, Anderson, Pang, and Timken 1989), one view is that the entire convicted population is at elevated risk for subsequent rearrest/crash incidents (Wilson 1991); therefore, prediction within the population suffers from restricted range. As a technical point, the criterion measurement problem has been noted frequently within the DUI literature, (Mann, Leigh, Vingilis, and DeGenova 1983; Wells-Parker et al. 1990; Howard, Taylor, Ross, and Ganikos 1988) and the unavailability of inexpensive, valid, and reliable outcome criteria obviously limits the estimate of a validity coefficient for risk screening devices. In general, previous efforts at prediction have at best accounted for approximately 16-17 percent of the variance in a subsequent criterion, (e.g., recidivism, accidents etc.) even when multiple sources of records variables, personality/attitude measures, life circumstances indices, and demographics were included in multivariate prediction equations. Such equations seldom have been cross-validated.

Also, the ability to predict risk levels may be substantially lower for some sub-groups of DUI offenders than for others. Screening devices developed for adults may be inappropriate for teen and young adult offenders (Popkin, Lannenberg, Lacey, and Waller 1988). For example the level of prediction of DUI recidivism has been found to differ significantly for both racial and age groups. In a large-scale study in Mississippi, prediction was significantly better in the over 30 age group than in the under 30 age group. [Dunbar (1990) has noted a similar reduction in predictive validity of blood screens (e.g., GGT) for younger as compared to older groups.] Also, in the Mississippi study, variables that predicted rearrest for all other groups failed to predict rearrest for young (under age 30) black offenders. Such differential predictive validity has both practical and ethical policy implications when predicted risk is the basis for decision making; however, the differential validity of assessment devices is rarely evaluated.

The second problem for assessment—treatment matching—depends on confirmation of what are essentially interaction hypothesis, which are, with few exceptions, untested in the DUI literature. Difficulties with testing such interaction hypotheses are discussed elsewhere (Wells-Parker et al. 1990) as are difficulties in developing the complex, multidimensional schemes upon which to base such interactive hypothesis (Wells-Parker et al. in press). In spite of such difficulties, it is clear that the validity and utility of an assessment mechanism cannot be separated from the actual confirmation of the matching hypothesis itself if matching is the primary reason for assessment. That is, until variables that specify the effects of an intervention have been verified by testing the matching hypotheses, appropriate assessment tools for matching cannot be developed.

From a policy perspective, the substitution of new but unvalidated instruments for existing instruments, even if existing instruments have well documented deficiencies, should be viewed with caution especially if the newer instruments are more costly or time consuming to administer, score, or interpret. From a pragmatic perspective, even if it were possible to assess convicted offenders and to identify the best treatment options for those who would benefit from rehabilitation, this ability will be useless in many communities where options don't exist or are too expensive to be within the

range of many offenders. Russillo (1992) has noted the futility of improving screening and treatment through research if these improvements are never made available to offenders. In many U.S. communities, practical options are non-existent. Options are limited by payment policies of health insurers and by legislative restrictions. Policy research focusing on expanding the range of feasible intervention options that are available to offenders in most communities is a needed companion to treatment matching research agendas. Exploration of methods to expand the types of intervention options that are covered by health insurers also could be appropriate, especially if options that are more cost effective than currently covered methods are identified. Also, barriers to expansion of options beyond the traditional treatment and intervention modes need to be identified, and methods of overcoming such barriers need exploration. Barriers might include resistance by the local alcohol treatment community to new and different options, and to adequate evaluation of existing options.

Emerging and Future Research Agendas

The underlying premises of this section reflect two themes: (1) Strategies for "rehabilitating" DUI offenders have been limited to education, traditional treatment, and traditional criminal sanctions such as probation. It is time to expand and rethink the range of options for remedial intervention that are available for convicted offenders. (2) Sociocultural diversity within the U.S. population is reflected in the convicted DUI population, and this diversity is highly relevant to expansion of remedial intervention strategies.

In reviewing virtually all of the hundreds of studies that attempt to evaluate the effectiveness of rehabilitation with DUI offenders, the limited range of options that have been adequately investigated for DUI offenders is obvious. These options have been primarily short term education or group discussion programs, group therapy, some short-term behaviorally based therapies, probation, (both intensive and non-intensive) and traditional alcohol treatment. As mentioned earlier, the range of options that have been evaluated specifically for DUI offenders appears much narrower than the range of options tested within the general alcohol treatment literature.

Also, there has been considerable discussion of problems associated with trying to change an individual offender's behavior without changing the social, economic and physical environment that tends to maintain that behavior (Stewart and Ellingstad, 1988). Vingilis, (1990) has cited the need to consider the general social control context in developing viable deterrence options. However few specific deterrence strategies (with the possible exception of technological systems such as the interlock), attempt to alter negative environmental influences or to develop new support systems for alternative behaviors.

Would it be possible to develop intervention strategies for convicted DUI offenders that focus on changing the environment or the life circumstances of the offender in ways that would reduce the environmental causes and maintainers of drinking driving? In the alcohol treatment field, the community reinforcement approach is unique in that components of the treatment (such as alcohol free recreational clubs) potentially become part of the community support system for alternative behaviors to heavy social drinking. Could a similar strategy be adapted for DUI offenders? [An example of such a strategy for one subgroup—young minorities—will be discussed shortly.] This would represent an attempt to place intervention with convicted offenders in the context of the community and could be a cost effective method to intervene for traffic safety purposes with offenders who are unlikely to afford more expensive treatment options. Community intervention programs for drinking driving among the general public seldom assess the extent to which they reach and are relevant to detected offenders. While it is true that many drinking drivers are undetected, it would seem that at least some components of community programs should be relevant to the detected offender as well. It cannot be assumed that community programs relevant to the general population of drinking drivers, many of whom drive only at low BAC's and/or infrequently after drinking, will be relevant to frequent, or high BAC drivers or drinking drivers at high risk of detection. This is not to say that community support structures and programs could not be relevant to these groups. Indeed, if community interventions were developed to serve convicted offenders, such programs might be appropriate for a broader sub-population of undetected drinking drivers who also are at high risk of accident involvement and frequent drinking/driving.

An interrelated point is that remedial intervention programs for DUI offenders should take into account demographic and social changes as well as sociocultural diversity. In the United States the population is aging, women are found in increasing numbers in public drinking settings and in the DUI population, and ethnic groups in some areas are at particularly high risk of recidivism and accident involvement (Wells-Parker et al. 1990; Popkin and Council, in press). These trends should have relevance for planning intervention strategies. In the existing literature several studies have reported that intervention outcomes (e.g., recidivism reduction) could

differ according to demographic characteristics. Race (Wells-Parker, Anderson, McMillen and Landrum 1989; Reis 1982 a and b); age (Wells-Parker et al. 1989); education (Neff and Landrum 1983; Wells-Parker et al. 1989; Reis 1982 a and b); and gender (Wells-Parker et al. 1989), have been found to specify treatment outcome. Yet relatively little energy has been devoted to studying drinking driving issues for women, minority, and other demographic groups. Such strategies are likely to entail approaches beyond traditional education or alcohol treatment.

For example, young (under age 30) black DUI offenders are at especially high recidivism risk; yet virtually no studies have focused on understanding the act of drinking and driving within this group. (See Wells-Parker et al. 1991 and Howard et al. 1988 for additional commentary on research relevant to this group.) For this group nontraditional programs that avoid labeling these offenders as "criminal"; that provide role models; and that provide assistance in finding/maintaining jobs, etc., might be more appropriate recidivism prevention strategies than more traditional educational or treatment programs. If such programs developed as part of the DUI remediation structure, they might evolve toward more broadly based community programs targeting underserved young adult minorities (e.g., unemployed black males) and potentially reach undetected high risk drinking/drivers within these underserved groups. This is merely an example of potential recidivism reduction options that have not been considered for investigation of efficacy.

Recommendations

A. Expand remedial options available for DUI offenders; develop countermeasures targeted toward specific sub-groups of DUI offenders; continue intervention matching research.

1. Test the relative efficacy of programs combining rehabilitation strategies with technological/driving restraint options such as vehicle interlocks; home monitoring; vehicle impoundment/plate confiscation, especially for habitual offenders.
2. Examine possible adaptations of European medical monitoring/relicensing programs for habitual offenders. This could include assessment of the utility of biochemical markers within the U.S. offender population.
3. Adapt and test promising approaches from the general alcohol treatment field for DUI offenders. Include options, such as community reinforcement and family intervention, which have been previously untested for DUIs.
4. Continue intervention matching research for DUI offenders. Identification of appropriate assessment materials should be an integral part of this research. Consider matching, not only on alcohol problem indices, but on other variables such as driving behavior, social/family/life/ circumstances, sociodemographics (e.g. age, gender, etc.), and polydrug use.
5. Develop and test non-traditional options for underserved sub-groups. Consider options that could become community based and that create new support systems for alternative behaviors to drinking and driving for underserved high risk groups. Investigate the dissemination of such programs to similar but broader populations that potentially include undetected drinking drivers at high risk of accident involvement. Development of such options will require additional investigation into drinking–driving behaviors among minority, ethnic, and cultural groups. Also well-designed longitudinal studies that include adequate samples of females, minorities, and various age groups would inform development of intervention options.
6. Identify mechanisms for expanding affordable and appropriately diverse options for remediation within various types of communities, and for the dissemination of promising new options to diverse communities. Take into account demographics, and social trends in the development of ranges of intervention options.

B. Exploit on-going treatment research by explicitly examining DUI offenders as a sub-group of existing samples; improve the methodological and reporting standards for ongoing and future research.

1. DUI offenders frequently constitute a substantial portion of alcohol treatment participants (Institute of Medicine, 1990)[3]. When ongoing clinical trials of alcohol intervention involve substantial numbers or proportions of DUI offenders, outcome data sufficient for calculation of treatment effect sizes (e.g., means and standard deviations for treatment groups; significance tests; and numbers of subjects in treatment groups, etc.) should be reported separately for the DUI sub-sample. In some circumstances it may be appropriate to report such information for several sub-groups within the DUI sub-sample (e.g., men and women; different age groups, levels of alcohol problems, etc.). Thus, the knowledge base about the effect on alcohol specific interventions on various outcomes for DUI

offenders can be expanded at relatively low cost.

2. Research reports, whether published or unpublished, should provide sufficient information for calculation of effect sizes for all comparisons tested, regardless of statistical significance. A simple table of standard deviations with means (both corrected and uncorrected for statistical adjustments, if applicable) generally will suffice. This reporting practice would facilitate their inclusion in quantitative summaries of similar studies.

3. Funding agencies should require minimal methodological standards for intervention effect studies, including quasi-experimental studies and studies using existing groups for comparison. Also, standards should incorporate issues such as criterion measurement, the integrity of implementation, and process evaluation, as well as basic research design. Funding agencies should encourage the use of adequate follow-up intervals to permit the assessment of both short term and long term efficacy.

C. Set standards for assessment/screening research

1. In the search for risk screening devices, the marginal utility of proposed schemes should be compared to simpler or existing schemes. Take into account the criterion problem. [This could involve new approaches to the problem of criterion measurement as well as the improvement of existing records systems.] Examine differential validity, the need for group-specific norms, and/or the need for special screening instruments for sub-groups such as minorities, women, or different age groups (e.g., teen offenders).

2. When the purpose of assessment is matching, assessment research should be integrated with research to confirm the underlying matching hypotheses.

D. Explore the possibility of systematically examining data on the interface between intervention and the legal/judicial system (e.g., the impact of length of time between arrest and intervention referral by the courts) in terms of its effect on intervention efficacy. Evaluate programs designed to improve the interface (e.g., reduce arrest/referral delays).

E. Increase interagency cooperation and coordination of research on intervention and screening for DUI offenders. Examine the possibility that DUI offenders, or some portion of DUI offenders, constitute a high risk group that is frequently involved with a variety of systems, such as the criminal justice system, and the health care system, as well as more focused traffic and alcohol systems. Facilitate inter-agency research to design and evaluate innovative and comprehensive approaches to intervention with this group.

Notes

1. In other systems, such as some European DUI control systems, assessment of alcohol problems using biochemical markers as well as other data, is used to monitor offenders under license action and to make decisions about relicensing. The experience of other countries with other types and uses of assessment could be useful to U.S. researchers in revising assessment strategies.

2. Also, the common practice of assignment to intervention based on risk assessment assumes the validity of a matching strategy based on risk, and renders it impossible to directly test the matching hypothesis. [See Mann et al. 1983; Wells-Parker et al. 1990 for additional discussion on this point.]

3. Although DUI offenders, as a group, may overlap other populations seen in treatment they appear sufficiently distinct on a variety of indices (e.g., gender, age, problem severity, etc.) to require specific identification for understanding treatment response.

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APPENDIX D6
PREVENTION OF ALCOHOL–INVOLVED TRAFFIC CRASHES

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INTRODUCTION

The purpose of this paper is to review research concerning alcohol access, price and mass communication, and discuss the potential to prevent alcohol-involved traffic crashes. Alcohol access is defined here in a broad manner including forms of alcohol availability, site of purchase and use, type of alcohol, and limitations on availability.

Alcohol policy research has a 20-year history in public health concerned with the effects of alcohol consumption and chronic alcohol problems such as liver