

A Snapshot Report of National and International DWI Programs and Sanctions

**Prepared for the
New Mexico Criminal and Juvenile Justice Coordinating Council**

Prepared for the
New Mexico Criminal and Juvenile Justice Coordinating Council

This report provides research information for the New Mexico Criminal and Juvenile Justice Coordinating Council in accordance with §31-8-15(G) NMSA Repl. 1978.

It is not a statement of the Council's views or opinions.

Table of Contents

Introduction	4
National DWI Programs and Initiatives	4
Dedicated Detention Facilities	5
Ignition Interlock Programs	6
Vehicle/License Plate Sanctions	7
Probation Sanctions	8
Treatment Programs	9
Combined Programs	10
International DWI Initiatives	11
References	15
 ADDENDUM: Review of the Literature: Best Practices and the State of New Mexico	 17

Introduction

The use of alcohol as a contributing factor in motor vehicle crashes continues to plague traffic safety in the United States and in New Mexico specifically. While there has been a general decline in alcohol-related motor vehicle crashes and deaths, NHTSA data shows that in 2000 40 percent of the 43,000 motor vehicle deaths in the U.S. were alcohol related. And while New Mexico's rate of alcohol-involved fatalities per 100,000 residents fell from 20.8 to 11.3 from 1990 to 2000, it is still almost double the national rate which fell from 8.9 to 5.9 over the same time period (Guerin and Davis 2002). The level of intoxication on New Mexico's roads is also very high – a report on BAC test results from 2001 showed that the average BAC level was 0.16, double the legal limit for drivers over the age of 21 (Driving While Impaired 2001). Alcohol-related crashes are also a very high risk for New Mexico's Native American and Hispanic populations. As a percentage, more Native Americans die in New Mexico as a result of motor vehicle crashes than any other ethnic group, and Mexican-Americans have the second highest alcohol-related fatality rate (after Native Americans) in the U.S. (Guerin and Davis 2002, NHTSA 2002).

While New Mexico continues to rank high in alcohol-related motor vehicle fatalities, progress has been made on reducing DWI crashes since 1990 and this momentum can be continued with new and innovative initiatives. This brief report, which was compiled by the New Mexico Criminal and Juvenile Justice Coordinating Council (CJJCC) for its members and for the Legislative and Executive branches, provides a high-level view of programs that have been successful in other states, as well as lists information on the DWI initiatives and sanctions in other countries around the world. Also included as an addendum is a literature review of national and state DWI programs that was completed in 2002 for the State of New Mexico Department of Finance and Administration Local Government Division.

National DWI Programs and Initiatives

Across the U.S., various states have tightened DWI sanctions and initiated more severe maximum jail sentences for DWI convictions, usually for drivers with multiple convictions over a specific period of time. However, recent studies have shown that repeat DWI offenders are not deterred from drinking and driving by the threat of longer prison sentences. Felony sentencing laws also place a strain on prison systems. A review of Minnesota's DWI offense data in 1989 showed that 94,000 of the state's drivers could potentially be arrested for a third DWI offense, and almost 7,000 of those drivers were actually arrested that year. It was estimated that if those 7,000 drivers had been given three to four year felony prison sentences, 26 lives would have been saved and after four years, over 26,000 drivers would be in prison. This is in contrast to the fact that in 1989, Minnesota's total prison population was 3,103 inmates (NCADD Abstract). This has left states seeking alternative ways to deal with DWI offenders that are more effective in reducing recidivism rates and more efficient in the use of limited resources.

Dedicated Detention Facilities

Several states have turned to dedicated detention facilities for multiple DWI offenders as an alternative to already overcrowded traditional jail or prison facilities. These facilities provide alcohol education, treatment and counseling in addition to confinement, and are often connected with community service, job and aftercare programs. Detention may last from several weeks to several months, and often costs less on a per day basis than traditional jail facilities. Table 1 highlights several dedicated detention facilities and their level of success in reducing DWI recidivism (NHDDP Treatment Abstract).

Table 1: Dedicated Detention Facilities

State	Program	Program Details	Results
Arizona	Maricopa County Day Reporting Center	Highly structured non-residential facility with supervision, reporting, employment, counseling, education and community service. Cost is \$19/day compared to \$36/day in county jail.	Research showed a DWI recidivism rate of 8%.
Maryland	Baltimore County DWI Correctional Treatment Facility	28-day residential treatment program followed by one-year aftercare program.	One year after 213 people completed the 28-day program only 9 (4%) had been arrested again for DWI.
Massachusetts	Longwood Treatment Facility	Minimum-security prison for multiple offenders with three or more DWI convictions.	Reported 6% recidivism after 12 months, 10% recidivism after 18 months, and 14% recidivism after two years.
New Hampshire	Multiple DWI Offender Intervention Detention Center	Multiple DWI offenders mandated to facility as a condition of license reinstatement. Seven-day in-patient residential, counseling and treatment program. Cost is \$950 paid by offender.	Not available.
New York	Suffolk County DWI Alternative Facility	Minimum-security prison for hardcore DWI offenders with 3 to 5 months of incarceration and 3 to 5 years of probation treatment. Cost is \$28/day compared to \$110/day at county jail.	Over a 10-year period recidivism is reported at 18% for all criminal offenses.

Source: NHDDP Treatment Abstract, Jones and Lacey 1999.

Ignition Interlock Programs

Ignition interlock programs have become popular in many jurisdictions as a component of broader DWI offender programs, usually in conjunction with licensing sanctions (Table 2). Ignition interlock devices measure a person's BAC level and will not allow the car to be started if a BAC above a predetermined level is recorded. These devices can significantly reduce DWI recidivism while they are installed, though the long-term effect on hardcore offenders after the devices have been removed has yet to be determined (NHDDP Sanctions Abstract).

Table 2: Ignition Interlock Programs

State	Program	Program Details	Results
Pennsylvania	Ignition Interlock Program	DWI offenders convicted of a second or subsequent DWI offense must have all vehicles they own equipped with an ignition interlock device for one year following a one-year hard suspension of driving privileges.	Over a one-year period tracking 68% of the program participants, participants drove a total of 4,049,686 sober miles on PA roadways. Ignition locks occurred 7,137 times with BAC levels from .025-.099, 526 times with BAC levels from .10-.19, and 21 times with BAC levels of .20 or greater.
Maryland	Maryland Ignition Interlock Program	Repeat DWI offenders were randomly assigned to have an ignition interlock device installed on their vehicles.	2.4% of the offenders who received interlock devices were arrested on alcohol-related traffic charges compared to 6.7% of offenders who did not receive interlock devices. However, there was no difference in recidivism between the groups after the interlock was removed.
West Virginia	West Virginia Ignition Interlock Program	Ignition interlock program administered by state Dept. of Motor Vehicles on a voluntary/incentive-based system for offenders who have completed a safety and treatment program.	Recidivism rate for DWI offenders who participated in the program was 1.6% compared to 6.4% for offenders who did not.

Source: NHDDP Sanctions Abstract, PADUI Ignition Interlock Report 2002.

Vehicle/License Plate Sanctions

Removing a repeat DWI offender's access to their vehicle is also an approach that has been used in several states as a sanction for impaired driving offenses or for driving with a suspended license. These programs can include vehicle impoundment, with short-term or long-term impoundment of the vehicle of a person who has been arrested for DWI; suspension of vehicle registration by physically impounding the license plates on the vehicles of convicted DWI offenders; the permanent confiscation of vehicles owned by repeat DWI offenders; and vehicle immobilization, by attaching a locking wheel (wheel boot) to a DWI offender's vehicle to prevent the offender from using his or her car (NHTSA 2001). Several programs that implement vehicle-based sanctions have shown significant reductions in recidivism, though in many cases these programs are plagued by poor administrative execution and enforcement (Table 3).

Table 3: Vehicle/License Plate Sanctions

State	Program	Program Details	Results
Minnesota	Vehicle License Plate Impoundment	Administrative-based license plate seizure for hardcore drunk drivers. Police can seize plates of drivers who have had three or more DWIs in a five-year period.	Minnesota's administrative-based license plate impoundment program showed a 50% decrease in recidivism over a two-year period compared with DWI violators who did not experience impoundment.
Ohio	Franklin County Vehicle Impoundment and Immobilization Program	The vehicles of hardcore DWI and suspended license offenders were impounded and/or immobilized for a period of one to six months.	Over a two-year period the vehicles of almost 1,000 offenders were impounded or immobilized, and results showed a 40% reduction in recidivism over offenders who did not have vehicles impounded.

Source: NHDDP Sanctions Abstract.

Probation Sanctions

Probation has long been used as a primary sanction for DWI offenders as an alternative to jail sentences. Probation is attractive because it alleviates pressure on already overcrowded correctional facilities and is much less expensive to administer. Many states are strengthening their probation programs with electronic monitoring, surveillance, increased drug and alcohol testing, and risk assessment and treatment or counseling (Table 4). An Intensive Supervision Probation (ISP) program in Wisconsin that includes weekly meetings with counselors and referral for treatment as part of its probation conditions saw a 50% reduction in recidivism for DWI offenders who participated in the ISP program (NHDDP Sanctions Abstract).

Table 4: Probation Sanctions

State	Program	Program Details	Results
Wisconsin	Milwaukee County Intensive Supervision Probation	An ISP program that is used to reduce jail time and includes weekly meetings with court monitors or counselors with a combination of individual assessment and referral to appropriate treatment services. Program charges participants on a sliding scale based on ability to pay to cover costs.	1996 study found the probability of recidivism was reduced by 50% for participants in the ISP program.
New York	Suffolk County Project Intercept	Surveillance and enforcement program to reduce DWI recidivism among high-risk DWI probation population.	Project was found by county to be "highly successful."
California	Los Angeles County Electronic Monitoring/Home Detention Program	DWI offenders confined to their homes during court-specified hours and monitored with electronic monitoring equipment.	Study of program found that one year after entering the program the recidivism rate for offenders was cut by 33%. Program also saved nearly \$1 million by not sending these offenders to jail.
Kansas	Intensive Supervision Probation	Two to five year probation program including drug/alcohol testing, electronic monitoring, community service, treatment, and risk assessment. Program costs \$7.65/day per offender.	Kansas found the program to be effective with certain high-risk populations.

Source: NHDDP Sanctions Abstract.

Treatment Programs

Many jurisdictions have struggled with the level and type of treatment that should be made available to or required for DWI offenders. The success of treatment programs varies from reducing recidivism by just a couple of percentage points to up to 20% or more. Treatment programs are thought to be most successful when combined with supervision and when completing the treatment program is a required condition for license reinstatement (NHDDP Treatment Abstract). Many treatment programs are combined with education and community service, and a program in California outlined in Table 5 tailors treatment programs in length and content specifically for offenders with one, two, or more DWI offenses.

Table 5: Treatment Programs

State	Program	Program Details	Results
California	California DWI Treatment Programs for First Offenders, Second Offenders, and Third and Higher Offenders	First offender programs were three months long with 15 hours each of education and counseling. Second offender programs were 18 months long with 12 hours of education and 52 hours of counseling. Third and higher offender programs were 30 months long with 18 hours of education, 117 hours of counseling and 120-300 hours of community service.	Study found that combining treatment with drivers license action reduced recidivism for first offenders as well as repeat offenders. Repeat offenders with one prior DWI who received only license suspension were 1.5 times as likely to recidivate as those who participated in the 18 month program. Repeat offenders with two or more prior DWIs who received only license suspension were 1.7 times as likely to recidivate as those who participated in the 30 month program.
Tennessee	Shelby County Correction Center	Offenders with three or more DWI convictions participated in a treatment program that included educational programming, AA meetings, moral reconation therapy and a voluntary aftercare program.	After two years, the recidivism rate for program participants was 10% compared to 15% for non-participants. For participants who completed the voluntary aftercare program the recidivism rate was 4%.

Source: NHDDP Treatment Abstract, NHTSA 2001.

Combined Programs

Finally, combined programs (Table 6) take advantage of several different types of sanctions and combine incarceration, probation, vehicle immobilization or ignition interlock, education, treatment, and community service. Often a mix of these sanctions is tailored to meet the specific severity and circumstances of the DWI offense that has been committed. In Rockdale County, Georgia, the Judge Todd program includes a personal pre-sentence investigation by the judge who then creates a program specific to each DWI offender that has resulted in over a 50% reduction in recidivism for DWI offenders who participated in the judge's program (Jones and Lacey 1998).

Table 6: Combined Programs

State	Program	Program Details	Results
Georgia	Judge Todd Program in Rockdale County, Georgia	Individualized approach to sentencing DWI offenders by Judge William F. Todd based on the judge's own pre-sentence investigation, with a wide range of sentencing options including combinations of fines, jail time, house arrest, electronic monitoring, intensive supervision probation, work release, and AA programs. Pictures of convicted DWI offenders published in local newspapers and all offenders must attend a victim's impact panel.	In a study with a comparison group, after one year 6% of the Todd group had committed another DWI offense compared to 11% of comparison group; after four years the recidivism rates were 13.8% and 24.7% respectively. At any given time after conviction the recidivism rate of the Todd group was 54% that of the comparison group.
Minnesota	Anoka County Repeat DWI Offender Program	For offenders with three or more DWI convictions. Progressive sanctions from 60-90 day jail sentence in minimum-security work release facility, then house arrest, then probation.	Reported 7.5% recidivism rate (for offenders who completed the program) compared to 41% recidivism rate for the state as a whole.
New Jersey	New Jersey Alcohol Countermeasures Program	All offenders are fined and have license suspended and occasionally a jail sentence is imposed, combined with various levels of treatment depending on an assessment of the severity of the individual's drinking problem. Treatment ranges from education classes to 52 weeks of AA programs.	Reported that over an eight-year period, offenders who completed the program assignment had "significantly fewer DWI arrests."

Source: Jones and Lacey 1998, NCADD Research Abstract.

International DWI Initiatives

A recent report by the NHTSA reviewed DWI laws and sanctions in other countries around the world to determine what lessons might be learned from how other countries structure their DWI laws. In the past, the United States has drawn on international alcohol policy and enforcement information for its own programs, including the British Road Safety Act of 1967 and Australian programs on random breath-alcohol level testing (NHTSA 2000).

The primary feature of DWI laws in other countries is the establishment of blood alcohol levels that are considered per se or preemptive evidence of impaired driving. Table 7 shows that many countries, especially in Western Europe, have an illegal BAC level lower than the United States, with a downward trend in recent years (including Sweden with the lowest illegal BAC level of .02). In some specific cases, the lowered BAC level has resulted in fewer alcohol-related crashes and deaths. In 1995, both Belgium and France lowered their illegal BAC level from .08 to .05. A year later Belgium reported a 14 percent reduction in fatalities, while France reported a 4 percent reduction in fatal crashes (NHTSA 2000).

Sanctioning of DWI law violators is different among countries, but a common trend is making the arrest BAC the primary factor in determining the penalties, as opposed to most states in the United States where penalties are determined based on whether an offender has already had one or more previous DWI violations. In addition to differing illegal BAC levels and driving sanctioning approaches, the United States differs from many countries on the minimum age for motor vehicle licensing and alcohol purchase as well as differing cultural attitudes towards alcohol consumption that may play a role in effects of DWI laws and sanctions (NHTSA 2000).

Table 7: DWI Initiatives in Other Countries.

Country	BAC Limit	Sanctions	Rehabilitation Programs	Min. License Age	Min. Drinking Age	Per Capita Consumption of Alcohol
Australia	.05 (.02 for younger drivers in some Australian states)	Fines and license suspension graduated by BAC level.	Varies by state, some rehabilitation programs required for multiple offenses	18	18	7.6L
Austria	.05 (.01 for novice drivers during a 2 year probationary period)	Fines and license suspension graduated by BAC level (\$240 for BAC of .05, \$6,400 for BAC of .16+). For multiple offenses fines and suspensions are increased.	Psychological improvement course required for BAC level of .12 to .16 with loss of license for failing to attend.	17	16	9.8L

Country	BAC Limit	Sanctions	Rehabilitation Programs	Min. License Age	Min. Drinking Age	Per Capita Consumption of Alcohol
Belgium	.05	Fines and license suspension graduated by BAC level (\$136 for BAC up to .08, \$10,922 for BAC over .08, fines doubled for multiple offenses). Immediate suspension of license and imprisonment is possible.	Rehabilitation programs required at judge's discretion.	18	15	9.1L
Brazil	.08	<i>No Data Available</i>	<i>No Data Available</i>	18	18	3.6L
Canada	.08 (with lower BAC limits for new drivers)	Fines and suspensions vary by province, with up to one year license suspension for first offense.	Varies by province, DWI courses most common.	16-18*	18-19	6.2L
Czech Republic	.05	<i>No Data Available</i>	<i>No Data Available</i>			10.1L
Denmark	.05	Fines and license suspension graduated by BAC level (\$592 up to BAC of .08). Higher fines and license suspension for higher BAC levels and multiple offenses.	Rehabilitation offered but not required	18	18	10.0L
Finland	.05	Fines graduated by BAC level and income level. Suspension of license tied to BAC level.	<i>No Data Available</i>	18	18	6.6L
France	.05	Fines and license suspension graduated by BAC level. Multiple offenses incur automatic license suspension for 1 to 3 years.	Medical assessment decided by judge for re-granting of license for BAC levels over .08.	18	16	11.5L
Germany	.05	Fines and license suspension graduated by BAC level.	Required rehabilitation depending on severity of offense.	18	16	9.9L

Country	BAC Limit	Sanctions	Rehabilitation Programs	Min. License Age	Min. Drinking Age	Per Capita Consumption of Alcohol
Ireland	.08	<i>No Data Available</i>	<i>No Data Available</i>	18	18	9.2L
Italy	.08	Fines and license suspension graduated by BAC level.	<i>No Data Available</i>	18	16	8.8L
Luxembourg	.08	<i>No Data Available</i>	<i>No Data Available</i>	18	17-18	11.6L
Netherlands	.05	Fines and license suspension graduated by BAC level (\$200 to \$1,100).	Voluntary driving education training for BAC levels up to .12, required for over .12.	18	None	8.0L
New Zealand	.08 (.03 for drivers under age 20)	Fines of \$4,500 for BAC over .08 (\$6,000 for multiple offenses) and mandatory license suspension for 6 months (1 year for multiple offenses).	Drug/alcohol assessment required for multiple offenses before license is reinstated.	15	20	7.0L
Norway	.05	License suspension for all BAC levels above .05.	Voluntary driver training.	18	18-20	4.1L
Portugal	.05	Fines and license suspension graduated by BAC level.	<i>No Data Available</i>	18	None	11.0L
Russia	.05	<i>No Data Available</i>	<i>No Data Available</i>	18	21	5.8L
Spain	.05	Fines and license suspension graduated by BAC level. License suspension for 3 months at first offense, 1-4 years for multiple offenses.	<i>No Data Available</i>	18	16	10.2L

Country	BAC Limit	Sanctions	Rehabilitation Programs	Min. License Age	Min. Drinking Age	Per Capita Consumption of Alcohol
Sweden	.02	Fines and license suspension graduated by BAC level and tied to income. License revoked for 2 to 12 months on first offense for BAC level up to .10 on first offense, 12 to 36 months above .10.	Attendance in rehabilitation program required to get a medical certificate necessary for re-granting license.	18	18	5.3L
Switzerland	.08	<i>No Data Available</i>	<i>No Data Available</i>	18	14-18	9.4L
United Kingdom	.08	Fines up to \$8,000 (avg. fine is \$480). 3 year minimum license suspension for second offense within 10 years.	Rehabilitation courses mandatory.	17	18	7.3L
United States	.08 in 17 states, .10 in 33 states (at time of report)	Varies by state.	Varies by state.	14-17**	21	6.4L

Recreated from NHTSA 2000.

* All but two Canadian provinces have graduated licensing programs

** 24 U.S. states have graduated licensing programs

References

Driving While Impaired. (2001). New Mexico State Highway and Transportation Department, Transportation Programs Division, Traffic Safety Bureau. Santa Fe, New Mexico.

Guerin, Paul and James W. Davis. (2002). Motor Vehicle Related Deaths in New Mexico: Alcohol and Ethnicity. Prepared for: State of New Mexico Local Government Division of the Department of Finance Administration. Institute for Social Research and the Division of Government Research, Albuquerque, New Mexico.

Jones, Ralph K. and John H. Lacey. (1998). Final Report: Evaluation of An Individualized Sanctioning Program for DWI Offenders. Prepared for U.S. Department of Transportation National Highway Traffic Safety Administration. Contract Number DTNH22-94-C-05124. Mid-America Research Institute, Inc. of New England. Winchester, Massachusetts.

Jones, Ralph K. and John H. Lacey. (1999). Final Report: Evaluation of A Day Reporting Center for Repeat DWI Offenders. Prepared for U.S. Department of Transportation National Highway Traffic Safety Administration. Contract Number DTNH22-95-C-05050. Mid-America Research Institute, Inc. of New England. Winchester, Massachusetts.

NCADD Research Abstract: Incapacitation Alternatives for Repeat DWI Offenders. National Commission Against Drunk Driving. Web site viewed on February 3, 2003 at <http://www.ncadd.com/tsra/abstracts/038.html>.

NHDDP Treatment Abstract. Dedicated Detention Facilities. National Hardcore Drunk Driver Project. Web site viewed on February 3, 2003 at <http://dwidata.org/treatment/dedicated.cfm>.

NHDDP Sanctions Abstract. Sanctions Vehicle Based. National Hardcore Drunk Driver Project. Web site viewed on February 3, 2003 at http://dwidata.org/sanctions/vehicle_based.cfm.

NHDDP Sanctions Abstract. Sanctions Vehicle Impoundment. National Hardcore Drunk Driver Project. Web site viewed on February 3, 2003 at <http://dwidata.org/sanctions/impound.cfm>.

NHDDP Sanctions Abstract. Intensive Supervision Probation (ISP). National Hardcore Drunk Driver Project. Web site viewed on February 6, 2003 at http://dwidata.org/sanctions/intense_super_prob.cfm.

NHTSA. (2000). On DWI Laws in Other Countries. National Highway Traffic Safety Administration, U.S. Department of Transportation. DOT HS 809 037. Web site viewed on February 3, 2003 at <http://www.nhtsa.dot.gov/people/injury/research/pub/DWIothercountries/dwiothercountries.html>. Washington, DC.

NHTSA. (2001). Alcohol and Highway Safety 2001: A Review of State Knowledge. National Highway Traffic Safety Administration, U.S. Department of Transportation. DOT HS 809 383. Washington, DC.

NHTSA. (2002). Facts About: Drinking and Driving and Hispanics. National Highway Traffic Safety Administration, U.S. Department of Transportation. Fall 2002. Washington, DC.

PADUI. (2002). Pennsylvania Driving Under the Influence Association Ignition Interlock Report October 2001 – September 2002. Pennsylvania Department of Transportation Contract # OR-19.

ADDENDUM

**REVIEW OF THE LITERATURE:
Best Practices and the State of New Mexico**

**Prepared for:
The State of New Mexico
Department of Finance and Administration
Local Government Division**

**Prepared by:
The University of New Mexico
Institute for Social Research
Center for Applied Research and Analysis**

July 2002

Introduction

Despite progress towards reducing drunk driving in the United States, DWI remains a serious social problem. At some point in their lives, 3 out of 10 Americans will be involved in an alcohol-related crash at an estimated economic cost of \$45 billion per year (Polacsek, Rogers, and Woodall 2001). For the State of New Mexico, the problem is especially severe with the state ranking at the top in rate of alcohol-related crash deaths. The current rate of 9.7 places New Mexico fourth worst in the nation behind Wyoming (11.6), Mississippi (10.8) and Montana (9.9) for alcohol-related crash deaths (DWI Resource Center 2000). For comparison, the lowest rates of alcohol-related crash deaths are in the states of Massachusetts (2.3) and New York (1.4) (DWI Resource Center 2000). According to the DWI Resource Center, New Mexico's neighboring states of Texas and Arizona have alcohol-related crash death rates of 6.9 and 6.7 respectively. To the credit of concerned citizens and state legislators, effective in 1994, stricter DWI laws combined with a community-based, county-administered, state-funded project to create the Local DWI Grant Program aimed at reducing the rate of DWI recidivism in the State of New Mexico.

The Local DWI Grant Program provides funding from state liquor excise taxes in order to support counties and/or municipalities in their combined efforts to combat the problem of DWI in the state of New Mexico. Funding is available for eight components: prevention, enforcement, screening and assessment, teen court, outpatient treatment, intensive supervision, alternative sentencing, and coordination, planning, and evaluation. Each county and/or municipality determines which areas to target within its jurisdiction. Therefore, there is an interest in determining which interventions work best to reduce drunk driving in a continuing effort to evaluate and improve the current Local DWI Grant Program.

Many research studies have shown clearly that increases in alcohol taxes and/or increases in the retail price of alcoholic beverages are associated with decreases in alcohol consumption (University of

Minnesota, School of Public Health 2000). Further, alcohol-related traffic crashes along with other social and health problems significantly decline with increased taxes (Toomey and Wagenaar 1999), yet average state-level beer taxes have eroded dramatically over the past 30 years (UM School of Public Health 2000). Due to inflation, the real tax on beer is now much lower than in the past with the average state beer tax in 2000 only about one-third the rate of beer tax in 1968. New Mexico is among one of only six states that have managed to keep up with inflation and not experienced erosion in its beer taxation rate (University of Minnesota School of Public Health 2000).

Comprehensive Community Interventions

Community intervention programs similar to the one enacted by the State of New Mexico have also been initiated in varying forms in other states including Massachusetts, New York, California, and South Carolina. The Massachusetts state government gave funding to six local communities to undertake a comprehensive multi-strategy program to reduce alcohol-impaired driving as well as other related problems such as failure to wear seat belts. Each community was responsible for developing its own initiatives for combating the problem of drinking and driving. Over a 5-year period, fatal crashes in the funded communities had decreased by 25 percent compared to the rest of Massachusetts, and alcohol-related crashes in the funded communities dropped by 42 percent. Although further research is needed to verify findings, the study suggests that the overall organization of the community is important as a deterrent and, regardless of intervention focus, may be more effective than any one specific intervention. Noteworthy is that both Massachusetts and New York have a community intervention program and both lead in fewest alcohol-related traffic deaths.

In three experimental communities (two in California and one in South Carolina), a program was developed to incorporate community mobilization, media advocacy, training of alcoholic beverage servers, development of written alcohol serving policies, local zoning to reduce alcohol-outlet density, local enforcement of underage alcohol sales, clerk training in asking for age identification, police officer

training, additional officer enforcement hours, use of passive alcohol sensors, and monthly sobriety checkpoints. When compared to matched comparison communities, the experimental communities saw a 10 percent decrease in the number of single-vehicle nighttime crashes per 100,000 population (Holder, Saltz, Grube, Voas, Gruenewald, and Treno 1997).

Comprehensive community intervention programs can be viewed in part as a population-wide prevention approach. That is, approaches that address only treatment for chronic heavy drinkers or educating those at high risk to reduce alcohol consumption reach only one segment of the drinking population. A population-wide prevention approach, on the other hand, addresses the entire population rather than among heavy drinkers alone since the majority of injuries and deaths related to alcohol are a result of moderate drinkers engaging in occasional risky drinking (UM School of Public Health 2000). Population-wide prevention strategies as demonstrated in the New Mexico Local DWI Grant Program focus on changing conditions that contribute to risky drinking practices in their communities as well as targeting convicted DWI offenders.

The aspect of the Local DWI Grant Program that focuses on convicted DWI offenders serves in part as a mechanism to administer and/or monitor intermediate sanctions from the court. An intermediate sanction is any legally binding order of the court that is more rigorous (unpleasant, intrusive, or controlling) than traditional probation, but less restrictive than total incarceration (U.S. Department of Health and Human Services, TIP 12, 2001). Community intervention programs, such as the New Mexico Local DWI Grant Program, are organized activities and interventions designed to achieve a specific purpose, and they should not be looked at as a sanction in themselves. The overloaded criminal justice system may look to a community based program such as the Local DWI Grant Program as an alternative to incarceration and probation; thus, making the program part of a team effort but not the sole solution. The New Mexico Local DWI Grant Program can punish and treat DWI offenders at the same time, but

few DWI programs in the State of New Mexico have any real authority to deal with non-compliance. For example, in one southern county, DWI offenders who are non-compliant for program activities are referred back to the court and dropped from the program's tracking without the program ever knowing the ultimate outcome of the offender's sentence.

Intermediate sanctioning programs, combined with alcohol and/or other drug abuse treatment, have been shown to be a more cost-effective approach to the growing problem of crime and substance abuse in the U.S. than long-term incarceration (U.S. Department of Health and Human Services, TIP 12, 2001). More criminal justice officials are expressing a belief that effective treatment will reduce offenders' propensity to commit future crimes. This belief is supported by growing public opinion that traditional forms of sanctions do not work and that intermediate sanctions may present a viable alternative. Greater expectations on intermediate sanctioning programs to reduce costs, increase efficiency, and provide for public safety may be too high and unrealistic. However, it is clear that greater demands will be put on these types of programs in their local communities in the future. Therefore, there is an increasing importance to the continuation of monitoring and evaluating the impact and effectiveness of programs.

According to the National Highway Traffic Safety Administration (NHTSA), the percentage of U.S. highway fatalities that are alcohol related has decreased nationally from 57 to 38 percent over a 20-year period; yet, this decline, while associated with a significant increase in number and severity of drunk-driving laws, can not be attributed to any one program effort. Although traditional punitive sanctions, such as fines and jail time, are commonly used, they have not eliminated drinking and driving and are not seen as the most effective deterrents to DWI (Voas and Fisher 2001). Many DWI programs around the country have developed additional procedures to deter drinking and driving such as rehabilitation programs, ignition interlock, electronic monitoring, education programs, and victim impact panels, making it difficult to single out the most effective sanction. This section of the report will discuss results

from several studies around the U.S. in an attempt to identify those sanctions and programs that appear to have a greater impact in preventing DWI.

Effects of Legislative Changes to Reduce DWI

It is difficult to determine the effects of each individual law in the reduction of alcohol-impaired driving. Several laws are often passed at one time and states often experience the effects of one another's state laws in attempts at public awareness through media exposure. Both general deterrence laws, that attempt to prevent the general public from ever driving after drinking, and specific deterrence laws, that target convicted drunk drivers from repeating their offense, have shown to be effective in the reduction of alcohol-impaired driving (Hingson 1996). Evidence from numerous criminal justice studies in several fields suggests that swift and certain punishment for breaking any specific law, more than the severity of punishment, increases the effectiveness of that law.

General deterrence laws include: raising the minimum legal drinking age to 21 years, criminal per se laws that make it a criminal offense to drive with a BAC above the state's legal limit, administrative license suspension, and lowering the legal BAC from 0.10 to 0.08. According to the NHTSA, states having a 21-year legal age minimum to drink saw a 10 to 15 percent drop in alcohol-related deaths among drivers in the targeted ages compared to states that did not adopt such laws. This measure is credited with preventing the deaths of 700 to 1,000 persons annually for the past decade (Hingson 1996). Criminal per se laws have made convictions easier to obtain and the lowering of the legal BAC has had a significant impact on decreasing the proportion of fatal crashes involving fatally injured drivers at 0.08 percent BAC and higher (Hingson, McGovern, Howland, Heeren, Winter, and Zakocs 1996). In early 1968, only one state (Utah) had a BAC at 0.08. By 2000, 19 states set BAC limits at 0.08 and, with U.S. Transportation Appropriations Bill S.2720 signed into law imposing reductions in highway funds as a penalty on states

that fail to adopt 0.08 BAC by 2004, most states will likely move to the lower limit within the next year (UM School of Public Health 2000).

In addition, administrative license revocation laws have been associated with a 5 percent decline in fatal crashes and a 9 percent decline in alcohol-related crashes (Klein 1989). Oftentimes, the adoption of administrative license revocation laws occur consecutively with the lowering of the legal BAC, making it difficult to determine the independent factors associated with each measure. The State of New Mexico has taken the above measures in its attempt to combat the social problem of drinking and driving, and has moved into areas of specific deterrence to further reduce alcohol-impaired driving rates.

Specific deterrence measures are aimed at convicted DWI offenders in order to prevent recidivism. Specific deterrence laws include mandated treatment programs, incarceration, license actions, probation, and actions against vehicles. Some of these programs are present in the State of New Mexico and will be addressed below.

License Suspensions

Mandatory license suspensions are more effective than discretionary suspension in reducing total crashes and violations (Hingson 1996). The effectiveness is attributed to a perceived certainty of punishment. In *A Guide to Sentencing DUI Offenders* published by NHTSA and NIAAA in 1996, the following findings were reported:

1. Suspension periods between 12 and 18 months were optimal for reducing DUI recidivism;
2. Suspension periods of less than 3 months seem to be ineffective; and,
3. Although more than 50 percent of persons with suspended licenses continue to drive, they seem to drive less frequently and more cautiously in order to avoid arrest (Hingson 1996).

Although not connected to any specific DWI research, an older study found that license suspension is the most effective sanction in mitigating overall traffic risk (Peck 1991). Therefore, it would seem logical to combine mandatory license suspensions with DWI specific intervention to achieve the most effective recidivism prevention.

Jail Sentence

In an examination of more than 80 studies involving the use of jail time to reduce the rate of DWI recidivism, only one study provided evidence of a reduction for first-time repeat offenders who received a mandatory 2-day jail sentence (Nichols and Ross 1996). Surprisingly, according to one study, long periods of jail time actually increased the rate of recidivism (Mann, Vingilis, Gavin, Atlas, and Anglin 1991), and in another study, for first-time arrestees, incarceration increased the probability of rearrest (Dejong 1997). Any short-term benefits of incapacitation and general deterrent effects come with a cost to an already overloaded criminal justice system by the increased demand for jury trials, increased plea bargaining, and the over-crowding of jails and holding facilities (NHTSA 1996). An examination of intervention data compiled by the ISR on both the county program and Magistrate Court level from July 1, 1997 to June 30, 1999 for the original 15 study counties revealed that the majority of DWI offenders in the State of New Mexico have their jail time suspended or deferred.

For 1997-98 data, 471 convicted DWI offenders were assigned jail time while 210 convicted DWI offenders were not ordered to jail time. Of those receiving jail time, only 12 percent served all the court-ordered time. This jail time was primarily a 3-day sentence. For those remaining who were sentenced to jail time, 31 percent got all of their jail time suspended while an additional 49 percent got at least 90 percent of the original sentence suspended. Data for 1998-99 shows a similar pattern. That is, of the 407 convicted DWI offenders who were ordered to jail time, only 11 percent served all the assigned time; these sentences were primarily for 3 to 7 days. Moreover, there were 210 convicted DWI offenders who did not receive any jail time. Of the remaining convicted DWI offenders who were assigned jail time, 25 percent had the entire sentence suspended while 53 percent saw at least 90 percent of the sentence suspended. Because incarceration alone holds no guarantee of rehabilitation, programs have been designed to combine jail time with treatment in the hopes of greater effectiveness at preventing recidivism.

Dedicated Detention

This type of detention facility combines the benefits of incapacitation and treatment services. One program of this type, located in Maryland, has been found to reduce recidivism among both first-time and repeat offenders (Harding, Aspler, and Walsh 1989). A dedicated detention of this type also exists in San Juan County, New Mexico. The findings from a recent study examining the rates of recidivism among a primarily New Mexican population in connection to this facility were not available for public release at the time of this report. The San Juan County DWI Detention Center is specifically designed for first-time offenders and serves only a fraction of the DWI offenders within its county jurisdiction. Other counties that fund treatment for DWI offenders while they are incarcerated are Chavez, Bernalillo, and Eddy. It is generally accepted that mandated treatment does have a positive (although small) effect on offenders; however, small gains in behavior modification are jeopardized by the lack of available treatment services once the offender has been released from the providing detention facility.

Probation

While probation alone does not measurably reduce recidivism among high risk DWI offenders, it may slightly reduce recidivism among drivers at low risk for being repeat offenders (Hingson 1996). With some county jails experiencing overcrowding and other counties suffering from the high cost of incarceration, probation for DWI offenders is increasingly becoming the only viable solution. In addition, probation may better serve the client and his/her family by allowing the offender to continue with employment, but restrict DWI risk activities. However, compounding the difficulties in the State of New Mexico is that traditional probation services for DWI offenders are no longer being provided by the Department of Corrections to the Courts. Therefore, Local DWI Grant Programs will be required to take on additional duties and expense if DWI offenders are to be properly monitored. Some counties in the State of New Mexico directly fund a trained probation officer through the component of Intensive Supervision or Alternative Sentencing. Other counties fund a compliance monitor or tracker who serves a

probation-like role. However, each of these components is defined differently across counties and not all counties provide the level of DWI offender monitoring that constitutes traditional probation.

For offenders over age 55 who have at least 12 years of education, contact probation (face-to-face reporting) reduced recidivism by at least 30 percent; however, for older offenders with less education, and for offenders between 30 and 55 years old, probation did not reduce recidivism (Wells-Parker, Bangert, and Topping 1990). Contact probation also reduced recidivism for a young minority population who had at least 12 years of education; and, for those even younger minority offenders, a combination of short-term intervention (education) and probation worked best (Wells-Parker 1994). The only subgroup among the younger offenders who did not benefit from contact probation was Caucasian.

According to the ISR process survey results, 24 counties had some type of compliance monitor, tracker, or probation officer during fiscal year 1999-00. For various reasons, counties are turning to electronic monitoring as an alternative to traditional probation.

Electronic Monitoring

Electronic monitoring is a specific form of home confinement that includes a tamper-proof ankle or wrist bracelet. Two formats exist, passive and active. In the passive programmed format a central computer dialing the home periodically throughout the day monitors the client. The client states his/her name and the time into the phone. In an active continuous format, there is a signal in the phone that is connected to the bracelet. If the client moves more than 100 to 150 feet away from the phone a signal will notify probation officers that a violation has occurred.

There has been growth in the use of electronic monitoring since the early 1980s, driven in part by the idea that jail is not the best alternative for certain populations of offenders. Jail suicide prevention profiles indicate that DWI offenders are among the highest risk suicide candidates because they tend to suffer from depression and anxiety combined with alcohol and/or drug use. The increasing costs of incarceration, jail overcrowding, and study results showing jail to be ineffective as a deterrent provide

support for greater use of some form of electronic monitoring with DWI offenders. Issues to consider when initiating an electric monitoring system are the relatively high cost of setup, availability of compliance personnel, high rates of technical violations, and no rehabilitative component to this type of program.

One solution to the lack of a rehabilitative aspect to electronic monitoring is to combine both treatment and electronic monitoring programs. An evaluation of a cognitive-behavioral treatment program delivered within the context of intensive supervision via electronic monitoring revealed an 87 percent completion rate for those clients receiving treatment while being electronically monitored. In comparison, those clients receiving traditional probation and also sentenced to the same treatment program had a completion rate of 52.9 percent. Recidivism rates between the two groups were similar, 35.3 percent for those on traditional probation and 31.5 percent for those clients on electronic monitoring. The study supports claims that moderate to low risk offenders can be treated within the community with few public safety risks. From the process surveys, Torrance, Bernalillo, and Los Alamos counties reported using an electronic monitor for the study period.

Ignition Interlock

Research indicates that the majority of those individuals with suspended licenses continue to drive illegally, thus increasing their chances of recidivating and posing a real threat to public safety. Interlock systems provide a viable alternative (or an additional sanction) to license revocation and suspension. An ignition interlock device is a system that connects a breath analyzer to an automobile's ignition that prevents starting the vehicle if the driver records an unacceptable BAC. Although the system can be successfully bypassed, the failure rate of the system is small.

In a study of 1,387 convicted DWI offenders in Maryland, only 2.4 percent of the individuals with the interlock device had a new violation compared to 3.5 percent of those without the device. Overall, during the 2-year study period, 5.9 percent of the interlock group recidivated compared to 9.1 percent of those

who did not have the interlock device. In a similar study in Ohio, the interlock device lowered the likelihood of rearrest by 65 percent during a 30-month study period. The implications are clear: fewer DWI offenders are driving while under suspension for a current offense although the effectiveness drops sharply once the device is removed from the vehicle.

New Mexico stands in a unique position to add to the growing base of knowledge in regards to effective DWI sanctions. The initiation of New Mexico Statue #66-8-102i requiring an ignition interlock for all first time offenders provides the opportunity to study first-hand the effects of ignition interlock systems on recidivism rates. Carefully designed research methodologies should be constructed prior to the implementation of the new law in order not to miss the opportunity at primary data collection. The ignition interlock system is one way to combat the problem of offenders who continue to drive after the suspension or revocation of their license although other creative measures such as plate seizures have also been put into place to aid law enforcement officers in their efforts to reduce DWI. For funding year 1999-00, only Grant County reported use of the ignition interlock system.

Random DWI Checkpoints

From April 1994 to March 1995, the state of Tennessee conducted one of the most extensive sobriety checkpoints program in the United States. Law enforcement officials stopped over 150,000 drivers at 900 checkpoints that resulted in a 17 percent reduction in alcohol-related fatal crashes when compared to five contiguous states during the same period (Lacey, Jones, and Fell 1996). Although checkpoints have considerable deterrence potential, they are limited in that many drunk drivers pass through roadblocks undetected as demonstrated in a study that found one-half of the drivers who passed through a checkpoint were over the BAC limit (Ferguson, Wells, and Lund 1995). The use of passive alcohol sensors increased the detection of alcohol-impaired drivers by 16 percent and when passive sensors are used, sober drivers are less likely to be erroneously suspected of alcohol use. In addition, preliminary breath tests at

roadsides have been found to reduce nighttime fatal crashes even after controlling for unemployment, income, alcohol taxes, and miles driven (Hingson 1996).

Enforcement is most likely to be 1) effective in deterring alcohol-impaired driving if it is publicized and it is most likely to be 2) actively pursued by the police if they feel there is a strong demand for such action (Hingson 1996). Both of these considerations can be increased by the presence of a community intervention program as discussed above. It has been observed across the U.S. that arrests for drunk driving have declined without clear indications as to why. Further studies should be conducted concerning the link between law enforcement and community intervention programs as to the impact each has on the other. The impact of reduced arrest rates on driver's perceptions of the likelihood that alcohol-impaired drivers will be arrested certainly has an influence on the effectiveness of the Local DWI Grant Program in the State of New Mexico. The odds of getting arrested for drunk driving are already quite low as reported by several studies (Fitzpatrick 1992, Reinerman 1988, Ross 1984, Voas 1982). Therefore, attempts should be made to build conceptual bridges between the key players in the prevention, punishment, and/or treatment of DWI.

Victim Impact Panels

Recent research on Victim Impact Panels (VIP) comes directly from the State of New Mexico (Polacsek *et al* 2001). In a study to compare mandated DWI school to court-ordered attendance at a VIP plus DWI school, researchers found no significant difference in recidivism rates between the two groups. The immediate beneficial effects of VIP did not seem to last over time (Polacsek *et al* 2001). However, as noted by the researchers, DWI school was 24 hours of training while the VIP was only 1 hour. In addition, there were interaction affects of prior convictions with the researchers observing that nearly 21 percent of respondents were not true, first-time offenders. Methodological differences between DWI school and VIP were not as clear as the researchers had assumed suggesting that the research was perhaps testing the same affect rather than two different responses.

A Mothers Against Drunk Driving (MADD) sponsored study in Oregon showed a recidivism rate for VIP participants to be 8.8 percent as compared to a general rearrest rate of 40 percent, making final conclusion as to the effectiveness of VIP premature.

Treatment or Rehabilitative Programs

Treatment outcome studies are designed to answer commonsense questions regarding whether a treatment approach accomplishes anything. Perhaps untreated patients do just as well, implying that the treatment does not influence outcome at all or may even do harm (Gordis 1992). In addition, research can provide information that may reduce cost and inconvenience to clients; i.e., if the treatment is helpful, perhaps less treatment is just as effective. The difficulty in assessing treatment programs is that there are many different “schools of treatment” and one approach may be effective for a particular type of client and not another. There is no single superior approach to treatment for all individuals and different types of individuals respond best to different treatment approaches (Miller and Hester **xxxx**).

Perhaps the most widely cited research concerning DWI treatment is that of Elizabeth Wells-Parker *et al* (1995):

In the meta-analysis of studies of DUI offenders, treatment effectiveness was examined across all types of offenders and across all types of treatment that have been evaluated. Treatment had a consistently small but positive effect, as compared with no treatment, punishment (e.g. fines or jail), or licensing sanctions (e.g. suspension), in reducing the rate of repeated DUI offenses and involvement in alcohol-related crashes. Treated offenders repeated their offenses, on average, 8 to 9 percent less often than did untreated offenders (Wells-Parker, Bangert-Drowns, Allegrezza, McMillen and No Williams 1995).

Treatment works, and is more effective if conducted as a combination of treatment modes.

Evaluation studies showed that treatment in which several forms of rehabilitation were combined, or multi-modal treatments—especially those that included education; psychotherapy or counseling; and follow-up, such as contact probation (face-to-face meetings with a counselor as opposed to being tracked through records) or aftercare given by providers of alcoholism treatment—were more effective by at least 10 percent in reducing DUI offender recidivism than was any one of these methods alone. Although some multi-modal treatment involved more time and total treatment hours, intensity could not be shown to account for the differences in effectiveness between multi-modal and single mode treatment (Wells-Parker *et al* 1995).

In addition, the rate of compliance for completion of treatment programs will be increased by a combination of treatment with other sanctions. While the literature showed consistently that rehabilitation was more effective than any other sole sanction, the most effective option may be rehabilitation combined with some loss of driving privileges (McKnight and Voas 1991).

If penalties for driving without a license are weak, and there is little chance of being detected without a license, then contingent reinstatement of the driver's license upon completion of a treatment program may be ineffective inducement for the offender to enter or complete the program. Thus, DUI offenders' entry and completion rates with respect to mandated treatment might be related to how the offenders perceive the courts' willingness to impose sanctions for failure to comply with the treatment mandates (Wells-Parker *et al* 1995).

In many research studies, a combination of license actions, community service, and fines with therapy, education, and monitoring have proven to be the most effective.

In a California research study, 88,552 first DUI offenders were classified into one of five first-offender sanction groups: treatment program and license restriction; treatment program, jail, and license restriction; treatment program and jail; jail and license suspension; and jail (DeYoung 1997). Results showed the offenders receiving alcohol treatment with license restriction had the lowest average number of subsequent DUI convictions with the two highest recidivism rates belonging to jail and jail with license suspension (DeYoung 1997). An additional finding of the research was that longer treatment programs were no more effective than the shorter programs (DeYoung 1997); this is consistent with the Wells-Parker meta-analysis. Newer research reports that length of treatment is an important predictor of successful outcomes, making data on length of treatment an important variable to consider in evaluation research (National Institute of Drug Abuse (NIDA) 2002). It is apparent in the literature that some sort of sanction that restricts driving combined with either alcohol education and/or treatment would be the most logical approach to reducing DWI recidivism. This situation would require a cooperative effort between treatment providers, the criminal justice system, and the community intervention program. According to

the ISR DWI program process survey 21 counties self-reported that in 1999-2000 they funded out-patient treatment.

Bibliography

I. Books and Articles

- Alcocer, A. (1982). Alcohol Use and Abuse Among the Hispanic American Population. Alcohol Health Monograph No. 4: Special Population Issues 361-82.
- Allen, J.P.; Litten, R.Z. (1993). Psychometric and Laboratory Measures to Assist in the Treatment of Alcoholism. *Clinical Psychology Review*. 13; 223-39.
- Applegate, B.K.; Cullen, F.T. (1995). Public Support for Drunk-Driving Countermeasures: Social Policy for Saving Lives. *Crime and Delinquency*. 41:2; 171-91.
- Ball, R.; Lilly, J.R. (1986). The Potential Use of Home Incarceration for Drunken Drivers. *Crime & Delinquency* 32:2; 224-47.
- Beck, K.; Rauch, W. (1999). Effects of Ignition Interlock License Restrictions on Drivers with Multiple Alcohol Offenses: A Randomized Trial in Maryland. *American Journal of Public Health* 89:11; 1696-1701.
- Bonta, J.; Wallace-Capretta, S.; Rooney, J. (2000). A Quasi-Experimental Evaluation of An Intensive Rehabilitation Supervision Program. *Criminal Justice & Behavior*. 27:3; 312-30.
- Chang, I., Lapham, S.C. and Wanberg, K.W. Alcohol Use Inventory: Screening and Assessment of First-Time DWI Offenders, I, Reliability and Profiles, Submitted for Publishment.
- Chang, I. And Lapham, S.C. (1996). "Validity of Self-Reported Criminal Offenses and Traffic Violations in Screening of Driving-While-Intoxicated Offenders." Alcohol and Alcoholism, 31, 583-590.
- Chang, I.; Lapham, S.C.; and Barton, K.J. (1995). "Drinking Environment and Sociodemographic Factors among DWI Offenders." Journal of Studies on Alcohol, 57, 659-669.
- Cheung, Y. (1991). Ethnicity and Alcohol/Drug Use Revisited: A Framework for Future Research. *The International Journal of the Addictions* 25: 5A and 6A; 581-605.
- Crandell, J. (1987). Effective Outpatient Treatment for Alcohol Abusers and Drinking Drivers (pp. 1-8). Lexington: Lexington Books.
- C'De Baca, J. (1999). Risk Factors for Recidivism Among DWI Offenders Entering Screening: A 4-Year Follow-up. The University of New Mexico-Albuquerque unpublished dissertation.

- Curley, R. (1967). Drinking Patterns of the Mescalero Apache. *Quarterly Journal of Studies on Alcohol* 28: 116-31.
- Davis, L.J.; Morse, R.M. (1991). Self-Administered Alcoholism Screening Test: A Comparison of Conventional Versus Computer-Administered Formats. *Alcoholism: Clinical and Experimental Research*. April 15:2; 155-57.
- Davis, L.J.; Hurt, R.D.; Morse, R.M.; O'Brien, P.C. (1987). Discriminant Analysis of the Self-Administered Alcoholism Screening Test. *Alcoholism: Clinical and Experimental Research*. June 11:3; 269-73.
- DeJong, C. (1997). Survival Analysis and Specific Deterrence: Integrating Theoretical and Empirical Models of Recidivism. *Criminology* 35:4 561-75.
- DeYoung, D.J. (1997). An Evaluation of the Effectiveness of Alcohol Treatment, Driver License Actions and Jail Terms in Reducing Drunk Driving Recidivism in California. *Addiction* 92:8; 989-97.
- DiCenso, C.; Paull, M. (1999). Treating the Alcohol Dependent Persons: Predictors of Treatment Completion from a Court Order Perspective. *Alcoholism Treatment Quarterly* 17:3; 79-85.
- Dozier, E. (1966). Problem Drinking Among American Indians: The Role of Sociocultural Deprivation. *Quarterly Journal of Studies on Alcohol* 27: 72-87.
- Duncan, D. (1997). Chronic Drinking, Binge Drinking and Drunk Driving. *Psychological Reports* 80: 681-2.
- Evans, D. (1996). Problem Undercover: Westchester County's DWI. *Corrections Today* 58:5; 172-4.
- Ferguson, S.A.; Wells, J.K.; and Lund, A.K. (1995). The role of passive alcohol sensors in detecting alcohol-impaired drivers at sobriety checkpoints. *Alcohol, Drugs and Driving* 11:23-29.
- Fields, L. (1994). Pretrial Diversion: A Solution to California's Drunk Driving Problem. *Federal Probation* 58:4; 20-31.
- Fitzpatrick, J.L. (1992). Problems in the Evaluation of Treatment Programs for Drunk Drivers: Goals and Outcomes. *Journal of Drug Issues*. 22:1; 155-67.
- Foon, A. (1988). The Effectiveness of Drinking-Driving Treatment Programs: A Critical Review. *The International Journal of the Addictions* 23:2; 151-74.
- Fors, S.; Rojek, D. (1999). The Effect of Victim Impact Panels on DUI/DWI Rearrest Rates: A Twelve-Month Follow-Up. *Journal of Studies on Alcohol* July: 514-20.

- Freivalds, A. (1991). A New Implementation of Sheedy's Visual Grating Task. *Perceptual and Motor Skills* 73: 425-426.
- Gagnon, A. (1990). Reducing Driving Under the Influence: Recidivism in Massachusetts. *Alcoholism Treatment Quarterly* 7:4; 101-111.
- Gilbert, M.J. (1991). Acculturation and Changes in Drinking Patterns Among Mexican-American Women. *Alcohol Health & Research World* 15:3; 234-38.
- Girasek, D.C.; Gielen A.C.; Smith, G.S. (2002) "Alcohol's Contribution to Fatal Injuries: A Report on Public Perceptions." *Annals of Emergency Medicine* 39 (6): 622-630.
- Goodman, L.A. (1972). "A Modified Multiple Regression Approach To The Analysis of Dichotomous Variables." *American Sociological Review*, 37, 28-46.
- Gordis, E. (1992). "Treatment Outcome Research—A Commentary by NIAAA Director Enoch Gordis, M.D." *Alcohol Alert*
- Gruenewald, P.; Millar, A.; Roeper, P. (2000). Access to Alcohol: Geography and Prevention for Local Communities. *Alcohol Health & Research World* 20:4; 244-51.
- Gurnack, A.M. (1989). "Rehabilitation Outcomes for Alcohol Impaired Drivers Referred for Assessment in Two Wisconsin Counties." *Journal of Alcohol and Drug Education* 35:1, 45-59.
- Hackenberg, R.; Gallagher, M. (1972). The Costs of Cultural Change: Accidental Injury And Modernization among the Papago Indians. *Human Organization* 31:2; 211-26.
- Harding, W.M.; Apsler, R.; and Walsh, W.A. (1989). Assessment of Multiple DWI Offender Restriction. *National Highway Traffic Safety Administration Report No. DOT HS-807-615*. Springfield, VA: National Technical Information Service.
- Heath, D. (1991). Uses and Misuses of the Concept of Ethnicity in Alcohol Studies: An Essay in Deconstruction. *The International Journal of the Addictions* 25:5A and 6A; 607-28.
- Hepburn, J.A.; Albonetti, C.A. (1994). Recidivism Among Drug Offenders: A Survival Analysis of the Effects of Offender Characteristics, Type of Offense, and Two Types of Intervention. *Journal of Quantitative Criminology*. 10:2; 159-79.
- Hingson, R. (1996). Prevention of Drinking and Driving. *Alcohol Health & Research World* 20:4; 219-26.
- Hingson, R.; McGovern, T.; Howland, J.; Heeren, T.; Winter, M.; Zakocs, R. (1996). Reducing Alcohol-Impaired Driving in Massachusetts: The Saving Lives Program. *American Journal of Public Health* 86:6; 791-97.

- Hingson, R.; Heeren, T.; Winter, M. (1998). Effects of Maine's 0.05% Blood Alcohol Level for Drivers with DWI Convictions. *Public Health Reports* 113: 440-446.
- Hingson, R.; Heeren, T. (1999). Preventing Impaired Driving. *Alcohol Health & Research World* 23:1; 31-40.
- Hoffman, N.; Ninonuevo, F.; Mozey, J.; Luxenberg, M. (1987). Comparison of Court-Referred DWI Arrestees with Other Outpatients in Substance Abuse Treatment. *Journal of Studies on Alcohol* 48:6; 591-94.
- Holder, H.D.; Saltz, R.F.; Grube, J.W.; Voas, R.B.; Gruenewald, P.J.; and Treno, A.J. (1997). A community prevention trial to reduce alcohol-involved accidental injury and death: overview. *Addiction* 92:2, S155-S171.
- Honeymar, M. (1997). Alcoholics Anonymous as a Condition of Drunk Driving Probation: When Does It Amount to Establishment of Religion? *Columbia Law Review* 97: 437-72.
- Jamieson, J.D.; Stone, W. (1991). Predicting DWI Education Success. *Federal Probation* 55:1; 43-8.
- Joksch, H. (1985). Review of the Major Risk Factors. *Journal of Studies on Alcohol Supplement* 10: 47-53.
- Jonah, B. (1986). Accident Risk and Risk-Taking Behavior Among Young Drivers. *Accid. Anal. & Prev.* 18:4; 255-71.
- Jonsson, P. (1991). State May Give Drunk Drivers Death Penalty. *Christian Science Monitor* 92:91; 2.
- Juhnke, G.; Sullivan, T. (1995). Attitude Changes in DWI Offenders: A Study of a Short-Term Treatment Program. *Journal of Addictions & Offender Counseling* 15:2; 51-59.
- Kenkel, D. (1993). Drinking, Driving, and Deterrence: The Effectiveness and Social Costs of Alternative Policies. *Journal of Law & Economics* 36: Oct; 877-913.
- Kingsnorth, R.; Jungsten, M. (1988). Driving Under the Influence: The Impact of Legislative Reform on Court Sentencing Practices. *Crime & Delinquency* 34:1; 3-28.
- Klein, T. (1989). Changes in Alcohol Involving Fatal Crashes Associated with Tougher State Alcohol Legislation. *Contract No. DTNH-22-88-C-07045. Washington, DC: National Highway Traffic Safety Administration.*

- Lacey, J.; Jones, R.; and Fell, J. (1996). The effectiveness of the Checkpoint Tennessee Program. 40th Annual Proceedings, Association for the Advancement of Automobile Medicine. October 7-9.
- Langworthy, R.; Latessa, E. (1993). Treatment of Chronic Drunk Drivers: The Turning Point Project. *Journal of Criminal Justice* 21: 265-76.
- Lapham, S.; Skipper, B.; Owen, J.; Kleyboecker, K.; Teaf, D.; Thompson, B.; Simpson, G. (1995). Alcohol Abuse Screening Instruments: Normative Test Data Collected from a First DWI Offender Screening Program. *Journal of Studies on Alcohol* Jan: 51-9.
- Lapham, S.; Skipper, B.; Simpson, G. (1997). A Prospective Study of the Utility of Standardized Instruments in Predicting Recidivism among First DWI Offenders. *Journal of Studies on Alcohol* Sept: 524-30.
- Lapham, S.C.; Smith, E.; Chang, I.; Skipper, B.J.; C'de Baca, J.; Baum, G. and Hunt W.C. (1999). Prevalence rate of alcohol and drug use disorders among convicted first DWI offenders at 5-year follow up.
- Lapham, S.C.; Wanberg, K.W.; Timken, D.S. and Barton, K. (1996). A User's Guide to the Lovelace Comprehensive Screening Instrument. (Report No. The Lovelace Institutes, Albuquerque.
- Levy, D.; Shea, D.; Asch, P. (1989). Traffic Safety Effects of Sobriety Checkpoints and Other Local DWI Programs in New Jersey. *American Journal of Public Health* 79:3; 291-293.
- Lewis, R. (1982). Alcoholism and the Native American- A Review of the Literature. Alcohol and Health Monograph No. 4: Special Population Issues 315-28.
- Lilly, R.; Ball, R. (1992). The Pride, Inc., Program: An Evaluation of 5 Years of Electronic Monitoring. *Federal Probation* 56:4; 42-8.
- Lilly, R.; Ball, R. (1993). Electronic Monitoring of the Drunk Driver: A Seven-Year Study of the Home Confinement Alternative. *Crime & Delinquency* 39:4; 462-85.
- Long, C.; Williams, M. (1998). Treating Alcohol Problems: A Study of Programme Effectiveness and Cost Effectiveness According To Length and Delivery of Treatment. *Addiction* 93:4; 561-72.
- Lurie, N.O. (1971). The World's Oldest On-Going Protest Demonstration: North American Indian Drinking Patterns. *Pacific Historical Review* 40: 311-32.
- Mackenzie, D.; Brame, R.; McDowell, D.; Souryal, C. (1995). Boot Camp Prisons and Recidivism in Eight States. *Criminology* 33:3; 327-57.

- Mann, R.E.; Vingilis, E.R.; Gavin, D.; Adlaf, E. and Anglin, L. (1991). Sentence severity and the drinking driver: relationships with traffic safety outcome. *Accident Analysis and Prevention* 23: 483-491.
- Mann, R.; Smart, R.; Stoduto, G.; Adlaf, E.; Vingilis, E.; Beirness, D.; Lamble, R. (2000). Changing Drinking-and Driving Behavior: The Effects of Ontario's Administrative Driver's License Suspension Law. *Canadian Medical Association Journal* 162:8; 1141-3.
- May, P. (1977). Explanations of Native American Drinking: A Literature Review. *Plains Anthropologist* 22:70; 223-32.
- May, P. (1994). The Epidemiology of Alcohol Abuse among American Indians: The Mythical and Real Properties. *American Indian Culture and Research Journal* 18:2; 121-43.
- McKnight, A.J.; and Voas, R.B. (1991). The Effect of License Suspension upon DWI Recidivism. *Alcohol, Drugs and Driving*. 7:43-54.
- McMillen, David L.; Adams, Michael S.; Wells-Parker, Elisabeth; Pang, Mark G.; Anderson, Bradley J. (1992) "Personality Traits and Behaviors of Alcohol Impaired Drivers: A Comparison of First and Multiple Offenders." *Addictive Behaviors*, 17, 407-414.
- Miller, W.R.; and Hester, R.K. (1986). The effectiveness of alcoholism treatment methods: What research reveals. In: Miller, W.R., and Heather, N., eds. *Treating Addictive Disorders: Processes of Change*. New York: Plenum Press, pp. 121-174.
- Miller, W.R.; and Hester, R.K. (1989). *Treating Alcohol Problems: Toward An Informed Eclecticism*. *Handbook of Alcoholism Treatment Approaches: Effective Alternatives*, pp. 3-13.
- Morgan, Kathryn D. (1993). Factors Influencing Probation Outcome: A Review of the Literature. *Federal Probation*. June; 23-29.
- Morse, B.; Elliot, D.S. (1992). Effects of Ignition Interlock Devices on DUI Recidivism: Findings from a Longitudinal Study in Hamilton County, Ohio. *Crime & Delinquency* 38:2; 131-158.
- Nochajski, T.; Miller, B. (1993). The Effects of a Drinker-Driver Treatment Program. *Criminal Justice & Behavior* 20:2; 174-90.
- O'Callaghan, J. (1990). Alcohol, Driving and Public Policy: The Effectiveness of Mandated A.A. Attendance for DWI Offenders. *Alcoholism Treatment Quarterly* 7:4; 87-99.
- Pearson, F.; Glasel, A. (1990). Contingent Intermediate Sentences: New Jersey's Intensive Supervision Program. *Crime & Delinquency* 36:1; 75-87.

- Peck, R.C. (1991). The general and specific deterrent effects of DUI sanctions: a review of California's experience. *Alcohol, Drugs and Driving* 7: 13-42.
- Peck, R. (1994). "Evaluating DUI Program Impact in Quasi Experiments." *Alcohol, Drugs and Driving*, 10, 207-215.
- Peck, R.; Arstein-Kerslake, G.; Helander, C. (1994). Psychometric and Biographical Correlates of Drunk-Driving Recidivism and Treatment Program Compliance. *Journal of Studies on Alcohol* Nov: 667-78.
- Petersilla, J.; Turner, S. (1992). An Evaluation of Intensive Probation in California. *The Journal of Criminal Law & Criminology* 82:3; 610-58.
- Polacsek, M.; Rogers, E.M.; Woodall, G.W. (2001). MADD Victim Impact Panels and Stages-of Change in Drunk-Driving Prevention. *Journal of Studies on Alcohol*. 62:3; 344-50.
- Pratt, A. (1975). A Mandatory Treatment Program for Skid Row Alcoholics; its Implication for the Uniform Alcoholism and Intoxication Treatment Act. *Journal of Studies on Alcohol* 36:1; 166-70.
- Pristach, C.A.; Smith, C.M.; Perkins, C. (1993). Reliability of the Self-Administered Alcoholism Screening Test (SAAST) in Psychiatric Inpatients. *Journal of Addictive Diseases*. 12:4; 77-89.
- Rackmill, S.J. (1994). An Analysis of Home Confinement as a Sanction. *Federal Probation*. March: 45-52.
- Reinarman, C. (1988). The social construction of an alcohol problem: The case of Mothers Against Drunk Drivers and Social Control in the 1980s. *Theory Society*. 17:91-120.
- Richman, A. (1985). Human Risk Factors in Alcohol-Related Crashes. *Journal of Studies on Alcohol* Supplement 10; 21-31.
- Ross, H.L. (1982). Deterring the Drinking Driver (pp. xiii-xxvii). Lexington: Lexington Books.
- Schaefer, J. (1982). Ethnic and Racial Variations in Alcohol Use and Abuse. Alcohol And Health Monograph Np.4; Special Population Issue 291-311.
- Shoham, V.; Rohrbaugh, M.; Stickle, T.; Jacob, T. (1998). Demand-Withdraw Couple Interaction Moderates Retention in Cognitive-Behavioral Versus Family-Systems Treatments for Alcoholism. *Journal of Family Psychology* 12:4; 557-77.
- Simpson, H. (1985). Human-Related Risk Factors in Traffic Crashes: Research Needs And Opportunities. *Journal of Studies on Alcohol* Supplement 10:32.39.
- Snow, R.; Anderson, B.; Landrum, J. (1993). The Life Activities Inventory as a DUI

Countermeasure: An Attempted Replication. Social Research Report Series 93-4.

- Taxman, F.; Piquero, A. (1998). On Preventing Drunk Driving Recidivism: An Examination of Rehabilitation and Punishment Approaches. *Journal of Criminal Justice* 26:2; 129-43.
- Toomey, T.L.; and Wagenaar, A.C. (1999). Policy options for prevention: the case of alcohol. *Journal of Public Health Policy* 20(2):192-213.
- Vigdal, G.; Stadler, D. (1994). Alternative to Revocation Program Offers Offenders a Second Chance. *Corrections Today* 56:1; 44-7.
- Voas, R.B.; Lacey, J.H. (1990). Drunk driving enforcement, adjudication and sanctions in the United States. In: Wilson, R.J. and Mann, R.E. (Eds). *Drinking and Driving: advances in research and prevention*, pp. 116-158.
- Voas, R.B. (1982). *Drinking and Driving: Scandinavian Laws, Tough Penalties and United States Alternatives*. National Highway Traffic Safety Administration Report No. DOT-HS-806-240. Springfield, Virginia: National Technical Information Center.
- Voas, R.B.; Holder, H.D.; and Gruenewald, P.J. (1997). The Effect of Drinking and Driving Interventions on Alcohol-Involved Traffic Crashes Within A Comprehensive Community Trial. *Addiction* 92:6; 221-37.
- Voas, R.B.; Fisher, D.A. (2001). Court Procedures for Handling Intoxicated Drivers. *Alcohol Research and Health*. 25:1; 32-42.
- Voas, R.B.; Marques, P.R.; Tippetts, A.S.; and Beirness, D.J. (1999). The Alberta Interlock Program: The Evaluation of a Province-Wide Program on DUI Recidivism. *Addiction*.94:12; 1849-1860.
- Waller, P. (1985). Licensing and Other Control of the Drinking Driver. *Journal of Studies on Alcohol* Supplement 10: 150-60.
- Weinrath, M. (1997). The Ignition Interlock Program for Drunk Drivers: A Multivariate Test. *Crime and Delinquency*. 43:1; 42-64.
- Wells-Parker, E.; Bangert, J.L.; and Topping, J. (1990). Other preventive approaches: Matching the DUI offender to an effective intervention strategy. In: Wilson, J. and Mann, R., eds. *Drinking and Driving: Advances in Research and Prevention*. New York: Guilford Press, pp. 267-289.
- Wells-Parker, E. (1994). Mandated Treatment. *Alcohol Health & Research World* 18:4; 302-7.

- Wells-Parker, E.; Bangert-Drowns, R.; Allegrezza, J.; McMillen, R.; No Williams, M. (1995). Final Results from a Meta-Analysis of Remedial Interventions with Drink/Drive Offenders. *Addiction* 90:7; 907-26.
- Wheeler, G.; Hissong, R. (1988). Effects of Criminal Sanctions on Drunk Drivers: Beyond Incarceration. *Crime & Delinquency* 34:1; 29-42.
- Wieczorek, W.; Hanson, C. (1997). New Modeling Methods: Geographic Information Systems and Spatial Analysis. *Alcohol Health & Research World* 21:4; 331-39.
- Wieczorek, W.; Miller, B.; Nochajski, T. (1992). "The Limited Utility of BAC For Identifying Alcohol-Related Problems among DWI Offenders." *Journal of Studies on Alcohol*, 53, 419-419.
- Wilson, R.J.; Mann, R. (1990). Drinking and Driving: Advances in Research and Prevention (pp. 1-9). New York: Guildford Press.
- Wilson, R.J. (1993). Drinking and Driving; In Search of Solutions to an International Problem. *Alcohol Health & Research World* 17:3; 212-21.
- Windle, M.; Miller, B. (1990). Problem Drinking and Depression Among DWI Offenders: A Three-Wave Longitudinal Study. *Journal of Consulting and Clinical Psychology* 58:2; 166-74.
- Winfrey, L.; Giever, D. (2000). On classifying driving-while-intoxicated offenders: The experiences of a citywide DWI drug court. *Journal of Criminal Justice* 28: 13-21.
- Yu, J. (1994). Punishment Celerity and Severity: Testing a Specific Deterrence Model On Drunk Driving Recidivism. *Journal of Criminal Justice* 22:4; 355-66.
- Yu, J.; Williford, W. (1995). Drunk-Driving Recidivism: Predicting Factors from Arrest Context and Case Disposition. *Journal of Studies on Alcohol* Jan: 60-6.

II. Government Publications

- DWI Resource Center. September (2000). Fatality Analysis Reporting System. *National Highway Traffic Safety Administration*.
- General Accounting Office. (1999). Highway Safety: Effectiveness of State .08 Blood Alcohol Laws. *General Accounting Office*.
- National Council on Alcoholism. (1987). A Report on the DWI Offender Screening Program: Overview and Program Evaluation. *National Council on Alcoholism, Albuquerque, Area Inc.*
- National Institute of Justice. (1985). Jailing Drunk Drivers: Impact on the Criminal Justice System. *National Institute of Justice*.

- National Safety Council. (2001). Injury Facts. pp. 90-91.
- New Mexico Department of Health. October (1998). Local Government Division, DWI Grant Program. Evaluation of Treatment Outcome for DWI Offenders. Draft Project Summary Report 1997.
- New Mexico Department of Health. March (2002). Final Report: An Analysis of the Statewide Alcohol Screening and Tracking Program for DWI Offenders 07/01/99-06/30/2000.
- Subcommittee on Alcoholism and Drug Abuse of the Committee on Labor and Human Resources United States Senate. (1982). Alcohol, Drugs And Driving. *Committee on Labor and Human Resources.*
- U.S. Department of Health and Human Services. (1994). Combining Substance Abuse Treatment With Intermediate Sanctions for Adults in the Criminal Justice System: Treatment Improvement Protocol (TIP) Series 12. DHHS Publication No. (SMA) 94-3004. *U.S. Department of Health and Human Services.*
- U.S. Department of Transportation. (1978). Phase 1: Developing Generalized Driving While Intoxicated (DWI) School Curricula. *U.S. Department of Transportation.*
- U.S. Department of Transportation. (1983). Minnesota's Double-Barreled Implied Consent Law. *U.S. Department of Transportation.*
- U.S. Department of Transportation. (1984). State Laws on Early License Revocation for Driving While Under the Influence. *U.S. Department of Transportation.*
- U.S. Department of Transportation. (1984). The Impact of Two-Day Jail Sentences for Drunk Drivers in Hennepin County, Minnesota. *U.S. Department of Transportation.*
- U.S. Department of Transportation. (1985). DWI Sanctions: The Law and the Practice. *U.S. Department of Transportation.*
- U.S. Department of Transportation. (1986). Dealing with Drinking Drivers. *U.S. Department of Transportation.*
- U.S. Department of Transportation. (1986). DWI Charge Reduction Study. *U.S. Department of Transportation.*
- U.S. Department of Transportation. (1988). The Drunk Driver and Jail: The Drunk Driver and the Jail Problem. *U.S. Department of Transportation.*
- U.S. Department of Transportation. (1988). The Drunk Driver and Jail: Alternatives to

Jail. *U.S. Department of Transportation.*

III. University Publications

Alcohol Epidemiology Program. Alcohol policies in the United States:

Highlights from the 50 states. Minneapolis: University of Minnesota, 2000.

Belenko, Stephen, Ph.D., (June, 1998) Research on Drug Courts: A Critical Review
The National Center on Addiction And Substance Abuse At Columbia University.

IV. Websites

Accountable Government. (1999). New Mexico Crashes, 1999 Rank and Trends.

<http://www.accountablegovernment.org/nmrankingsfactsheet.htm>

Butler Center for Research and Learning. June (1998). Outcomes of Alcohol/Other Drug
Dependency Treatment. November 27, 2000.

http://www.hazelden.org/research/publication_detail.cfm?id=41

Butler Center for Research and Learning. August (1998). Addiction: A Disease Defined. November 27,
2000.

http://www.hazelden.org/research/publication_detail.cfm?id=44

Butler Center for Research and Learning. September (1998). The Treatment Investment: Stemming the
Cost of Addiction. November 27, 2000.

http://www.hazelden.org/research/publication_detail.cfm?id=43

Mothers Against Drunk Driving (MADD). (1999). State-By-State Traffic Fatalities – 1999.

<http://www.madd.org/stats/0,1056,1303,00.html>

National Institute on Alcohol Abuse and Alcoholism. July (1992). Alcohol Alert. No. 17 PH 322.

<http://www.niaaa.nih.gov/publications/aa17.htm>

National Highway Traffic Safety Administration: <http://www.nhtsa.dot.gov>

National Library of Medicine. Screening for Problem Drinking. Guide to Clinical Prevention. 2nd
Edition.

<http://text.nlm.nih.gov/cps/www/cps.58.html>

V. Magazines

Little, Dr. Greg; Robinxon, Dr. Kenneth; Burnette, Katherine; Swan, Stephen. “Ten-
Year Outcome Data on MRT-Treated DWI Offenders.” Cognitive-Behavioral Treatment Review
Second Quarter 1999.