REVIEW OF MICHIGAN'S EUDL PROGRAM

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Michigan's Enforcing Underage Drinking Laws (EUDL) program for Fiscal Years 2000 -2004 is reviewed through a process evaluation of funded activities, an examination of EUDL strategies and programs in 17 other states, and an assessment of the extent to which Michigan EUDL program can be evaluated with respect to changes in underage drinking behavior. The process evaluation Michigan's EUDL program indicates that the focus of the program has been on SPOTLIGHT, Operation LOOKOUT, and Party Patrol, through grants which fund these overtime police enforcement activities in a large number of Michigan communities. Program activities, for the most part, were carried out as planned. The review of EUDL strategies and programs in other states shows a wide variety of approaches. However, most states stress the importance of fostering collaboration at both the state and local level, and having a support network in place at, with all of the various involved agencies working together toward a shared and clear vision of what is to be accomplished. The assessment of the extent of "evaluability" indicates that the current mix of EUDL activities in Michigan makes it difficult to identify behavioral changes in drinking because the grants are awarded to a large number of jurisdictions spread across the state for narrowly focused, short term activities. Furthermore, while the data collected on these activities are useful for process evaluations, information is lacking on the underage drinking population and other exposure measures. It is recommended that future EUDL efforts be planned and implemented in concert with appropriate evaluation designs so that impacts of the programs on the amount and frequency of underage drinking and perceptions about alcohol use can be measured in addition to changes in the levels of enforcement activity.

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EXECUTIVE SUMMARY

To help U.S. jurisdictions address the problem of underage drinking, the Office of Juvenile Justice and Delinquency Prevention (OJJDP) initiated the Enforcing the Underage Drinking Laws (EUDL; formally known as Combating Underage Drinking) program in 1998, a $50 million program of block grants, discretionary programs, and technical assistance. In its first year, the EUDL program awarded block grants of $360,000 to each state to develop a comprehensive and coordinated initiative to enforce state laws prohibiting the sale of alcoholic beverages to minors and to prevent the purchase or consumption of alcoholic beverages by minors (under age 21). The enabling legislation stipulated that block grant funds be used to support activities in three general areas: enforcement, public education, and innovative programs. Since 1998, the U.S. Congress has continued to appropriate funds annually for the program.

In 2001, the University of Michigan Transportation Research Institute (UMTRI) conducted an evaluation of activities funded under the 1998 and 1999 EUDL program and examined how well the funded programs and activities met the objectives stated in the grant applications. UMTRI found that most of the activities that were proposed in the applications for the EUDL grants for 1998 and 1999 were carried out. However, UMTRI noted that a process evaluation could not evaluate whether activities and programs funded by the grants were indeed reducing underage drinking, the overall objective, and if they were reducing alcohol-involved crashes among drivers under age 21. Recognizing the need to update and expand upon the earlier work, the Michigan Office of Highway Safety Planning (OHSP) has contracted with UMTRI to evaluate EUDL grants Michigan received from OJJDP from FY 2000 to FY 2004.

This study was divided into three parts.
1. *Overall Picture of Michigan's EUDL Program.* This included a description and process evaluation of the Michigan EUDL program from FY 2000 to FY 2004, based on grant applications and progress reports provided by OHSP.
2. *EUDL Strategies and Programs in Other States*. This included a review of recommended research-based strategies for reducing underage alcohol use, telephone interviews with EUDL coordinators from a sample of states across the U.S., and an identification of promising EUDL program elements.

3. *Evaluation Issues*. This included an examination of evaluation issues of Michigan's EUDL program including assessment of the program "evaluability" in light of the goals of both the EUDL program and OHSP.

1. Overall Picture of Michigan's EUDL Program

The focus of Michigan's EUDL efforts for the past several years has been primarily on three youth alcohol enforcement programs intended to reduce underage alcohol use: SPOTLIGHT, Operation LOOKOUT, and Party Patrol. SPOTLIGHT is a cooperative program between retailers and law enforcement to deter minors from attempting to purchase alcohol and/or use false identification, stop adults from purchasing alcohol for minors, and promote community awareness of the laws associated with alcohol. The program uses undercover police officers inside alcohol retail establishments posing as store employees to stop minors from attempting to purchase alcohol, and officers outside to stop adults from purchasing alcohol for minors. Operation LOOKOUT is a program involving the use of banners, public service announcements, and posters at special events such as concerts, festivals, and sporting events where a need exists for enforcement of underage drinking laws. The program is intended to deter minors from purchasing or consuming alcohol at these types of events and to prevent adults from supplying alcohol to minors. The Party Patrol program is an overtime law enforcement program targeting minors consuming alcohol. The program creates "response teams" trained in controlled dispersement that are able to respond quickly to parties where minors are consuming alcohol.

In each of FYs 2000 through 2003 (the years for which state grant information was provided to UMTRI), the bulk of EUDL funds were allocated for enforcement to SPOTLIGHT, Operation LOOKOUT, and Party Patrol programs collectively ($290,000, $310,000, $210,000, and $190,000, respectively for each year;). A review of the actual local community grants for FYs 2001-2003 (the years for which local grant information was mainly provided) indicates that in FY 2001, 26 SPOTLIGHT grants were awarded in amounts ranging from $4,848 to $10,008, as well as four Operation LOOKOUT grants in amounts ranging from $2,985 to $3,281. In FY 2002, the focus shifted to Party Patrols, with 13 local programs funded in amounts ranging from $2,987 to $17,994 (with three programs also including Operation LOOKOUT). In FY 2003, the majority of funded programs were again Party Patrols, in combination with Operation LOOKOUT (with local grant information provided for only six projects).

Grants were also awarded each year to support a youth alcohol police liaison officer and two youth alcohol training officers, responsible for conducting and coordinating youth alcohol education and training meetings with law enforcement agencies receiving grant funding. The youth alcohol liaison officer is also responsible for maintaining and compiling all activity reports from grantees. The liaison and training officers attend appropriate conferences and assist in the development of OHSP-sponsored new youth alcohol prevention programs. In FYs 2000 – 2003, $70,000, $30,000, $50,000, and $50,660 were spent, respectively, on supporting a law enforcement liaison and two trainers.

Beginning in FY 2001, monies were spent each year to support specific training activities in local communities. These included: $15,000 in FY 2001 for training coalitions on the collection and use of data and achieving sustainability, and $5,000 for LEGAL training; $20,000 in FY 2002 for training law enforcement, local coalitions, and judicial staff, and $20,000 for youth team leadership training; and $15,000 in FY 2003 for youth team leadership training. A few additional grants focused on increasing public awareness of the consequences of underage drinking issues, particularly among students in high schools and colleges (e.g., Courageous Persuaders).

During the 3-year period from FY2001-2003, 36 separate police agencies across 32 counties received direct funding. In a few additional jurisdictions, grant funding was provided to an umbrella organization that coordinated activities among several local law enforcement agencies. Although there are some gaps in progress reported and confusion about reporting dates, the state, for the most part, has carried out the activities it proposed in its yearly grant applications.

2. EUDL strategies and programs in other states

EUDL strategies

In their work for the OJJDP, The Pacific Institute for Research and Evaluation (PIRE) has identified four types of strategies for reducing underage alcohol use including: limitations on access (including enforcement of minimum purchase age laws aimed at retailers and youth, strategies aimed at reducing social availability of alcohol, improvement of laws related to minimum purchase age, and controls on availability in general); expressions of community norms (such as prohibitions or controls on alcohol use at community events or in public places, alcohol advertising, or alcohol sponsorship of public events, as well as community sponsorship of alcohol-free activities, and parent coalitions); school-based strategies (such as school policies on

alcohol use on school property or at school-sponsored events, media literacy programs, and prevention curricula); and prevention of impaired driving (such as zero tolerance laws, sobriety checkpoints, vigorous enforcement, and responsible beverage service techniques).

PIRE reviewed the research evidence for strategies in each of these areas, assigned priority levels, and provided information about the level of effectiveness for each strategy. Priority ratings (low, medium, high, and very high) are based on a combination of the strength of the research evidence, the degree of promise based on prevention principles or similar strategies, and the potential power of the effects. Four strategies received a "very high" priority rating: compliance checks; increases in price through excise taxes; establishment and enforcement of zero tolerance laws; and sobriety checkpoints. The first two fall under the limitations on access strategy and the second two fall under the prevention of impaired driving strategy.

Best practices identified by the Wake Forest University School of Medicine, as part of their national evaluation of EUDL programs are complementary to PIRE's result. Among them are: compliance checks; DWI enforcement (including enhanced enforcement of drinking and driving laws and sobriety checkpoints); local policies to restrict zoning for outlet locations; and state policies to increase excise taxes, restrict zoning, and enact .08 BAC laws.

EUDL programs and experience in other states
Representatives of 17 EUDL programs in states outside of Michigan were interviewed by telephone to learn about their experiences. States were selected based on recommendations from Michigan's program coordinator as well as the desire to have a geographically representative group of states. Programs varied considerably in terms of the state agency responsible for administering EUDL grant funds, the overall focus of EUDL efforts, the basis for distributing funds, and specific programs funded. Few programs had been formally evaluated in terms of outcomes, and thus, little could be concluded from the interviews about actual program effectiveness. However, based on our impressions about program direction and clarity of purpose, several themes emerged with implications for planning and implementing EUDL programs. Findings are summarized below, with common themes highlighted.

Formalized vision/goals for overall state program

Many states do not have a formal vision or set of goals for their overall program. Instead, they rely on the goals outlined at the federal level or focus on development of goals and objectives at the community grant recipient level. For states that do set overall goals for their program, the process varies. Some develop them on their own, while others rely on a state-level task force or develop them in conjunction with other partners. Several states noted that their goals have not changed much over time, only the strategies used to achieve them. Thinking carefully about what its overall program is trying to accomplish and formulating its own vision and goals within the framework of the national EUDL perspective seems to have helped some states tailor the federal government's broad program mandate to their state's unique characteristics and needs, provide program participants with a stronger sense of ownership in the program, and define program goals and objectives that are focused enough so that program effectiveness can be discerned.

Involvement of other state agencies in EUDL program efforts
The level of involvement of different areas of state government in the EUDL program varies from state to state, although some patterns are apparent. As one would expect, involvement was generally reported to be high among the agencies responsible for administering the block grant funds. Across all states contacted, the highest levels of involvement were reported for highway safety, state police, and the alcohol beverage commission (with high involvement being reported by about 71 percent, 65 percent, and 63 percent, respectively). The lowest involvement was reported for the attorney general and education.

Evolving nature of programs
Every state program has evolved over time, learning lessons often through trial and error and changing course, sometimes subtly and sometimes more dramatically. Many states reported learning things from their discretionary grants that allowed them to refine their programs. An important focus of this learning has been on data collection needs. Several states realized that they were collecting data that were not useful or did not answer the questions they were interested in. Grappling with issues of which data to collect and how to simplify the data demands placed on local communities caused some states to think more carefully about what questions they were trying to answer and what they were trying to accomplish.

Setting priorities for funding

There is considerable variation in how states set priorities for distributing EUDL funds. Some states heavily weight what has been done in the past, while others use simple or complicated sets of data-driven criteria that may include crash, violation, and/or drinking rates to rank grant applicants in terms of underage drinking problems. Some states fund community-wide efforts, some target specific agencies within a community, and some focus more on statewide organizations such as MADD. Many states report having some type of state-level advisory group, coalition, or task force in place to help them set priorities. These groups seem to be useful in providing direction and clarity of purpose to the priority-setting process, helping to manage the grant application process, and facilitating cooperation among multiple state agencies with a stake in underage drinking prevention. While at least one state uses a mini-grant system for a portion of their monies, many seem to favor awarding fewer grants with a more comprehensive scope.

Strategies/programs funded

The majority of grant monies is used to support enforcement efforts, with the focus being largely on limiting access to alcohol, particularly through compliance checks. Every state interviewed reported conducting compliance checks, with many considering compliance checks to be a mainstay of their program. Other reported enforcement activities included party patrols, shoulder tap operations, and Cops in Shops. Alcohol-impaired driving prevention generally comprises a small percentage of overall EUDL funding, if funded through EUDL at all. A few states conduct sobriety checkpoints (sometimes referred to as safety checkpoints), especially during special events like proms and graduations, if enabling legislation exists.

A number of non-enforcement strategies are also funded, often as a way to support and enhance enforcement. These strategies generally involve building local coalitions to increase community awareness of alcohol-related issues and changing community norms relative to alcohol use as well as conducting public information and education campaigns. Many of these efforts involve high school or college-age students, although they are not necessarily considered school-based strategies per se. While many states noted the challenge of promoting policy initiatives given constraints on lobbying by state agencies, some have found creative ways to support community efforts and to encourage communities to take the lead in pursuing policy initiatives without compromising their adherence to federal requirements.

Many states considered their most successful programs to be compliance checks. Others pointed to community coalitions or more comprehensive efforts at the community level. Coalitions, in particular, are seen as a way to energize members of the community and engage them in the issue of underage drinking. Efforts characterized by a multi-faceted approach, strong collaboration between law enforcement and other partners, and a firm basis in research evidence are perceived as especially successful. Most states recognized the value of measuring program effectiveness, but they reported challenges in actually doing so. Compliance checks seem to be the most amenable to evaluation: data collection is fairly straight forward and changes in compliance rates can be easily determined and enforcement needs identified. Most states have standardized forms for collecting compliance check data that are provided to local law enforcement agencies.

Several state coordinators reported using data collected through bi-annual, state-administered school surveys to assess community-level changes in alcohol-related attitudes and reported behaviors among high school students. Surveys of the general public have also been useful in assessing knowledge and awareness of community programs and policies. Other reported measures of program success at the community level include tracking drinking-related violations among youth, violations among adults for furnishing alcohol, media activity, and training efforts.

Few states have undertaken a formal evaluation of their overall program, although many recognized the need for more comprehensive evaluation efforts, and at least one state has developed its own model. Some states have developed relationships with external consultants who help them analyze their enforcement data on an ongoing basis. Several state coordinators noted the challenge of moving the evaluation process from the community level to the state level, especially in terms of whether meaningful results can be obtained.

Discretionary grant funding
In addition to the block grant funding for EUDL, federal funds are available for discretionary grants (generally as part of an open competitive bidding process). Almost every state interviewed has received at least one such grant over the life of their program. The discretionary grant funds have allowed states to expand successful block grant strategies, as well as test out new approaches that could improve their existing block grant activities. Factors that seem to have helped states obtain discretionary grant funding include being proactive in identifying opportunities for funding, relying on a comprehensive program approach, having an organized

system that facilitates the expedient submission of applications, being creative in finding a fit between the discretionary grant request for proposals and the individual state's characteristics and activities, and recognizing the central role of evaluation in program planning and implementation.

Use of national/other research-based information

There is widespread use of and support for PIRE and the resources it provides. About three-quarters of the states interviewed reported taking advantage of PIRE's on-site training, technical assistance, publications, and/or website. A similar proportion attends the annual leadership conference sponsored by PIRE, with several noting that it provides a good opportunity to interact with other coordinators and to participate in quality sessions. Most states characterized PIRE as being a great resource and responsive to their needs.

Rewards and challenges of administering the EUDL program

The key reward reported by states is seeing their program have an impact on local communities. Some think about this impact in terms of a reduction in underage drinking or in the associated deaths and injuries. For many, however, the impact has more to do with changing the awareness of the general public about the seriousness of underage drinking, as well as police officers, judges, and other professionals responsible for enforcing and adjudicating underage drinking laws. Another important reward mentioned by state coordinators is the collaboration and cooperation that can develop at the community level, with diverse segments of the community working together through coalitions and other networks to address underage drinking issues.

Key challenges reported are the limited funds available and the short-term nature of the funding cycle, making it difficult to bring about statewide and/or long-term change. Some states noted that they are unable to fund some of the communities/projects they would like to fund or that they cannot be as involved in each project as they would like because of a lack of time, staff, and/or money. An important challenge for many states is the persistence of community norms that minimize the dangers of underage drinking and consider underage drinking to be a rite of passage, leading to inaction or lack of support by the alcohol beverage industry and law enforcement community in addressing the problem. This is especially problematic when state and local policies for reducing underage drinking are lacking.

Many states reported being helped in their efforts to promote EUDL by having in place local coalitions and other networks that can share resources and collaborate effectively. Others pointed to the flexibility and support of their supervisors, as well as the competence of their grantees, as being important to their ability to manage the EUDL program. The guidance and support of PIRE was also considered a resource that makes their management task easier and more effective.

Advice to other states

States were asked what advice they would give others for strengthening their EUDL programs. Suggestions included: planning early to determine the long-term direction of the program and identify groups to be brought to the table; early identification of questions need to be answered to assess program success; fostering collaboration and coordination through the development of support networks at the state level with a shared vision of what is to be accomplished, and community coalitions at the local level to help organize efforts and serve as a bridge for broader statewide collaboration; having a unified statewide focus for the program rather than just funding a collection of individual projects and locations in isolation from one another; fully utilizing PIRE as a resource; and paying attention to ensuring that funded projects are actually doing what they said they would do.

Promising Program Elements

Several promising program elements were identified through the interviews with representatives of EUDL programs including:

1. Having a vision and set of goals for the overall state EUDL program, apart from the mandates imposed by the federal government and the objectives of individual grantees, to provide a broad, relatively stable framework around which year-to-year objectives can be updated in response to changes in federal, state, and local priorities.

2. Having in place a process for setting funding priorities that is tied to program goals and objectives, and involves input from an organized body of informed advisors that constitutes a support network for the program.

3. Having a mix of funded strategies/programs that are research based and reflect the full spectrum of approaches to reducing underage drinking. There appears to be considerable

information available from PIRE and other sources on research-based strategy effectiveness. Many state programs have found ways to facilitate local championship of these strategies without violating federal restrictions on state agency lobbying.

4. Focusing on leveraging existing resources and capabilities in the state and local communities. To a great extent, this means supporting and building on the efforts of existing community coalitions and fostering cooperation and collaboration among existing entities and organizations. State programs with clarity of purpose and direction are often those that take advantage of the relationships and networks already in place in the community.

5. Taking advantage of the work PIRE has done to identify effective EUDL strategies and the resources that PIRE provides to states. OJJDP has invested considerable funds in PIRE, and most states interviewed report benefiting from PIRE's knowledge base and training. It allows them to plan and implement programs on a more scientific and efficient basis.

6. Making sure that in reporting program progress, completed activities are directly linked to the program objectives that gave rise to the activities. In this way, actual progress can be tracked and conclusions can be reached about whether the program is being implemented as planned, what is working especially well, and what challenges or problems need to be overcome.

3. Evaluation Issues

There are a number of levels at which Michigan's EUDL program can be evaluated. At the most basic level, it is important to determine whether the program is being implemented as planned. The process evaluation carried out by UMTRI focused on comparing proposed state activities with those actually completed (for FYs 2001 – 2003, the 3-year period for which information was mainly provided to us), based on a review of the state's grant proposals and their corresponding progress reports. The activities proposed over the 3-year review period were largely carried out.

At the next level of evaluation, it is important to determine if program activities are actually having an impact on the people they are intended to target. EUDL programs are intended to reduce the incidence of underage drinking. Thus, changes in underage drinking behavior and drinking and driving behavior are desired outcomes of the program. Ultimately of course, the desired impact of EUDL is a reduction in deaths and injuries among young people, particularly

from traffic crashes, due to underage alcohol use. Dimensions of underage drinking behavior that can be used to measure outcomes of EUDL programs include: amount and frequency of underage drinking; perceptions about alcohol use; alcohol-related violations among youth; alcohol-related injuries and deaths among youth.

The current mix of enforcement activities funded through Michigan's EUDL program makes it difficult to examine behavioral changes in drinking. Most of Michigan's grant funds are awarded to a relatively large number of jurisdictions spread across the state for narrowly focused, short-term enforcement activities. Because the impacts of these program activities are likely to be fairly localized, it may not be fruitful to look for changes in behavior at the community level, let alone the county or state level (where data on youth drinking and driving behavioral change are typically collected and analyzed). While one could look for changes among the specific individuals targeted by the enforcement activities, reliable data about these targeted individuals and their pre-program levels of the behaviors of interest are generally lacking (i.e., exposure data such as the numbers of youth attending underage parties or numbers of underage parties in a jurisdiction). The information on enforcement activity that has generally been collected as part of program efforts is useful for process evaluations, but is not sufficient to determine whether changes in behavior have occurred and if so, whether they can be attributed to the EUDL program

While evaluating the impact of the current mix of funded EUDL activities on underage drinking behavior, based on the data currently available, is not feasible, this is not to say that EUDL program efforts do not have an effect on underage drinking behavior. Future EUDL efforts should be planned and implemented in concert with appropriate evaluation designs so that the impacts on underage drinking can be measured in addition to changes in the levels of enforcement activity. To a great extent, the nature of each intervention will drive the evaluation design. Effective evaluation planning requires detailed information about: program goals and objectives; program design (e.g., one shot versus multiple interventions); program timing, placement, and process; and the purpose of the evaluation. Depending on the type of questions the evaluation is intended to answer, appropriate evaluation designs might include: a one-shot test that measures variables of interest at a single point in time; a pre-post design in which data are collected prior to the program and after the program is completed and then compared; a reversal design in which data are collected prior to the program (baseline), during the program,

and after the program has ended, with the follow-up period used as a control period to assess return to baseline behavior; and a control group design in which one group is selected to receive the program, while a second group does not (the control group), and differences between the groups are assessed.

There are a number of existing data sources, particularly at the state level that could be used to assess alcohol-related behavior change among young people. These include: the Master Driving Record maintained by the Michigan Department of State (a complete driver-history data base containing among other things, arrest, conviction, court, and crash information for every driver in the state); the Behavior Risk Factor Surveillance System developed by the Michigan Department of Community Health (to gather statewide data on alcohol use of individuals age 18 and older); the Youth Risk Behavior Survey conducted by the Michigan Department (to gather statewide data on drinking and substance abuse behavior of high school students under age 18); and the Michigan crash files maintained by the Michigan State Police (containing detailed information on all crashes reported by law enforcement agencies in the state).

By building on these existing data sources, realistic and obtainable benchmarks can be identified to assess the county impacts of Michigan's EUDL program. Among the more useful benchmarks for dimensions of underage drinking behavior are: amount and frequency of underage drinking (e.g., number of youth who report underage dinking in some time frame, number of youth who report drinking five or more drinks in a row within the last two weeks, attempts to buy alcohol, typical quantity of consumption when drinking); perceptions about alcohol use (e.g., knowledge about health and legal consequences of drinking, perception of peer drinking norms, perception of harm associated with alcohol consumption, perception of acceptability of underage drinking in the community; alcohol-related violations (e.g., minor in possession, DUI, DWI, open intoxicants); and alcohol-related injuries and deaths (e.g., alcohol-related injuries and deaths in general, alcohol-related motor vehicle injuries and deaths).

INTRODUCTION

To help U.S. jurisdictions address the problem of underage drinking, the Office of Juvenile Justice and Delinquency Prevention (OJJDP) initiated the Enforcing the Underage Drinking Laws (EUDL; formally known as Combating Underage Drinking) program in 1998, a $50 million program of block grants, discretionary programs, and technical assistance (McKinney, 1999). In its first year, the EUDL program awarded block grants of $360,000 to each state and the District of Columbia to develop a comprehensive and coordinated initiative to enforce state laws prohibiting the sale of alcoholic beverages to minors and to prevent the purchase or consumption of alcoholic beverages by minors (under age 21). The enabling legislation stipulated that block grant funds be used to support activities in three general areas: enforcement, public education, and innovative programs. Since 1998, the U.S. Congress has continued to appropriate funds annually for the program.

Funding for the training and technical assistance component of the EUDL program has largely been directed at the Pacific Institute for Research and Evaluation (PIRE), to help grant recipients focus their efforts on prevention, intervention, and enforcement issues related to retail and social availability of alcohol to minors, possession of alcohol by minors, and drinking and driving by minors (McKinney, 1999). The Center for Enforcing Underage Drinking Laws, created by PIRE to provide states and communities with practical, research-based tools for enforcing underage drinking, offers a wide range of services including training, technical assistance, products and materials, and an annual leadership conference.

In 2001, the University of Michigan Transportation Research Institute (UMTRI) conducted an evaluation of activities funded under the 1998 and 1999 Michigan EUDL program (Kostyniuk and Streff, 2001). The evaluation examined how well the funded programs and activities met the objectives stated in the grant applications. UMTRI found that most of the activities that were proposed in the applications for the EUDL grants for 1998 and 1999 were carried out. However, UMTRI noted that a process evaluation could not evaluate whether activities and programs funded by the grants were indeed reducing underage drinking, the overall objective, and if they were reducing alcohol-involved crashes among drivers under age 21. Recognizing the need to update and expand upon the earlier work, the Michigan Office of Highway Safety Planning (OHSP) has contracted with UMTRI to evaluate EUDL grants Michigan received from OJJDP

from FY 2000 to FY 2004. This evaluation includes a process evaluation of Michigan's EUDL program, review of EUDL programs in other states, and a discussion about how to evaluate the effectiveness of Michigan's program.

STUDY OBJECTIVES

The objectives of the study were to:

1. Conduct an updated process evaluation of programs and activities funded by the EUDL grants from OJJDP from FY 2000 to FY 2004.
2. Provide OHSP with an understanding of what other states are doing with respect to their EUDL programs.
3. Assess the extent to which the Michigan programs funded through these grants can be evaluated in light of the overall EUDL and OHSP goals.
4. Conceptually design evaluation studies for those programs that can be evaluated, and estimate the effort required to carry out these evaluations.
5. Carry out an evaluation for those programs that can be evaluated within the resources of this grant.
6. Set benchmarks and objectives for future programs funded by EUDL grants.

STUDY METHODS

This study was divided into three parts.   The process evaluation of the Michigan EUDL program from FY 2000 to FY 2004 was conducted in the first part. This included examining proposals and progress reports from OHSP for the OJJDP EUDL grants and determining if the proposed activities were carried out.   In the second portion of the study, the experience with EUDL programs across the U.S. was examined by reviewing recommended research-based strategies for reducing underage alcohol use, by conducting telephone interviews with EUDL coordinators from a sample of states across the U.S., and by gleaning promising elements for EUDL programs from the review and interviews.   The evaluation issues of Michigan's EUDL program were addressed in the third part. This section includes the assessment of the "evaluability" of the present program in light of the goals of both the EUDL program and OHSP, an evaluation based on alcohol-related crashes, and suggestions for future evaluations.

The following sections of this report summarize the findings of each of the three study parts. Details from the various reviews have been placed in the appendices.

SUMMARY OF FINDINGS

1. Overall picture of Michigan's EUDL program

The focus of Michigan's EUDL efforts for the past several years has been primarily on three youth alcohol enforcement programs intended to reduce underage alcohol use: SPOTLIGHT, Operation LOOKOUT, and Party Patrol. As described in the state's proposals to OJJDP, SPOTLIGHT is a cooperative program between retailers and law enforcement to reduce underage alcohol purchases. The program's objectives are to deter minors from attempting to purchase alcohol and/or use false identification, to stop adults from purchasing alcohol for minors, and to promote community awareness of the laws associated with alcohol. The program uses undercover police officers inside alcohol retail establishments (e.g., bars, take-out stores, restaurants) posing as store employees to stop minors from attempting to purchase alcohol. Other law enforcement officers are positioned outside the retail establishments to stop adults from purchasing alcohol for minors. As part of the program, establishments display signs and posters as a deterrent when officers are not present. According to grant materials, agencies receiving SPOTLIGHT funding are required to attend training developed in FY 1999 by Lansing Community College, called Guide for Alcohol Licensees (LEGAL). The training provides guidelines for conducting sting/decoy operations and other enforcement activities, processing liquor violations, holding education classes for retailers, and adhering to rules of the Michigan Liquor Control Commission.

Operation LOOKOUT is described in state grant materials as a program involving the use of banners, public service announcements, and posters at special events such as concerts, festivals, and sporting events where a need exists for enforcement of underage drinking laws. The program is intended to deter minors from purchasing or consuming alcohol at these types of events and to prevent adults from supplying alcohol to minors. An Operation LOOKOUT kit comes as part of the program and contains sample press releases and letters to judges, businesses, schools, and community coalitions to inform them of the program.

The Party Patrol program is an overtime law enforcement program targeting minors consuming alcohol. The program creates "response teams" trained in controlled dispersement that are able to respond quickly to parties where minors are consuming alcohol.

In each of FYs 2000 through 2003 (the years for which state grant information was provided to UMTRI), the bulk of EUDL funds were allocated for enforcement to SPOTLIGHT, Operation LOOKOUT, and Party Patrol programs collectively ($290,000, $310,000, $210,000, and $190,000, respectively for each year; see Appendix A for summary of state funded activities as described in state grants). A review of the actual local community grants for FYs 2001-2003 (the years for which local grant information was mainly provided) indicates that in FY 2001, 26 SPOTLIGHT grants were awarded in amounts ranging from $4,848 to $10,008, as well as four Operation LOOKOUT grants in amounts ranging from $2,985 to $3,281 (see Appendix B for list of local grants awarded). In FY 2002, the focus shifted to Party Patrols, with 13 local programs funded in amounts ranging from $2,987 to $17,994. Three of these programs also included Operation LOOKOUT. In FY 2003, the majority of the programs funded were again Party Patrols, in combination with Operation LOOKOUT (with local grant information provided for only six projects in 2003, four of them being Party Patrol/LOOKOUT). As can be seem from Appendix B, many funded projects spanned multiple FYs, so some FY 2002 grants actually carried over into FY 2003 and beyond, as was the case in earlier years. This is because monies are used on a "first in, first out" basis (personal communication with program coordinator). There was considerable variation within FYs in terms of when projects started and ended, the number of months over which they were funded, and the amount funded.

In addition to the monies spent on the three enforcement programs, grants were awarded each year to support a youth alcohol police liaison officer and two youth alcohol training officers. As described in the state grant materials, these officers are responsible for conducting and coordinating youth alcohol education and training meetings with law enforcement agencies receiving grant funding. The youth alcohol liaison officer is also responsible for maintaining and compiling all activity reports from grantees. The liaison and training officers attend appropriate conferences and assist in the development of OHSP-sponsored new youth alcohol prevention programs. In FYs 2000 – 2003, $70,000, $30,000, $50,000, and $50,660 were spent, respectively, on supporting a law enforcement liaison and two trainers.

Beginning in FY 2001, monies were spent each year to support specific training activities in local communities. These included: $15,000 in FY 2001 for training coalitions on the collection and use of data and achieving sustainability, and $5,000 for LEGAL training; $20,000 in FY 2002 for training law enforcement, local coalitions, and judicial staff, and $20,000 for youth team leadership training; and $15,000 in FY 2003 for youth team leadership training. A few additional grants focused on increasing public awareness of the consequences of underage drinking issues, particularly among students in high schools and colleges (e.g., Courageous Persuaders).

The locations of EUDL grantees across the state for FYs 2001 – 2003 are shown in Appendix C. During that 3-year period, 36 separate police agencies across 32 counties received direct funding. In a few additional jurisdictions, grant funding was provided to an umbrella organization that coordinated activities among several local law enforcement agencies (e.g., Traffic Improvement Association of Oakland County).

The annual process for setting priorities for allocating EUDL funds is complex and involves several steps (as outlined in personal communication with the program coordinator). The majority of funds are set aside for enforcement efforts. To determine which counties qualify for enforcement funding, counties are ranked based on population (overall, age 15-19, and college enrolled), alcohol characteristics (e.g., alcohol permits and sales and juvenile arrests), and crash rates (alcohol-involved fatal and overall crashes among 0-20 year-olds and among all ages). These three criteria are weighted differently with population accounting for 60 percent, alcohol characteristics 20 percent, and crash rates 20 percent of the ranking decision. The lead enforcement agency in each of the top 20 or so counties is contacted and invited to submit a proposal for EUDL funding. Most, but not all of these counties usually respond by using a grant proposal template provided by the state. Most of the enforcement monies awarded go directly toward paying overtime for law enforcement officers to carry out one or more of the youth enforcement programs described earlier. Therefore, local coalitions play a limited role in the state's EUDL efforts, and any community networking at the community level is fairly informal. According to the program coordinator, compliance checks have not been used in Michigan in the past, but will be supported through EUDL funds beginning next fiscal year.

Appendix D summarizes the state program activities carried out between FY 2001 and 2003, as reported in progress reports from Michigan's program to the OJJDP. Although there are some

gaps in progress reported and confusion about reporting dates, the state, for the most part, has carried out the activities it proposed in its yearly grant applications.

2. EUDL strategies and programs in other states

2.1 EUDL Strategies

Recommended strategies for reducing underage alcohol use have been compiled by PIRE and made available to states and communities through published materials and training services (e.g., see PIRE, 1999). Effective strategies have also been identified as part of the national evaluation of the EUDL program being conducted by Wake Forest (e.g., see Wake Forest University School of Medicine, 2002). PIRE distinguishes between four types of strategies for reducing underage alcohol use:

- Limitations on access (including enforcement of minimum purchase age laws aimed at retailers and youth, strategies aimed at reducing social availability of alcohol, improvement of laws related to minimum purchase age, and controls on availability in general);

- Expressions of community norms (such as prohibitions or controls on alcohol use at community events or in public places, alcohol advertising, or alcohol sponsorship of public events, as well as community sponsorship of alcohol-free activities, and parent coalitions);

- School-based strategies (such as school policies on alcohol use on school property or at school-sponsored events, media literacy programs, and prevention curricula);

- Prevention of impaired driving (such as zero tolerance laws, sobriety checkpoints, vigorous enforcement, and responsible beverage service techniques).

PIRE has identified limitations on access as the area with the greatest potential for reducing underage drinking and associated problems. Although PIRE considers the strategies in the other areas to be less well supported by research evidence, they note that there are several promising approaches in these areas, especially when conducted in conjunction with other initiatives.

To assist states and communities in their EUDL efforts, PIRE has reviewed the research evidence for strategies in each area, assigned priority levels, and provided information about the level of effectiveness for each strategy. Priority ratings (low, medium, high, and very high) are based on a combination of the strength of the research evidence, the degree of promise based on prevention

principles or similar strategies, and the potential power of the effects. Across all the strategy areas, four strategies received a "very high" priority rating: compliance checks; increases in price through excise taxes; establishment and enforcement of zero tolerance laws; and sobriety checkpoints. The first two fall under the limitations on access strategy and the second two fall under the prevention of impaired driving strategy. Appendix E contains a listing of strategies with very high and high priority ratings.

The Wake Forest results are complementary. They classify as best practices those that 50 percent or more of experts perceived to be highly effective and to have a high quantity of empirical evidence. They classify as promising practices as those that 50 percent or more of experts perceived to be highly effective but not to have a high quantity of empirical evidence. Ineffective and questionable practices are considered to be those that 50 percent or more of experts perceived to not be highly effective (with or without a high quantity of empirical evidence). Key among the best practices are:

- Compliance checks;
- DWI enforcement (including enhanced enforcement of drinking and driving laws and sobriety checkpoints);
- Local policies to restrict zoning for outlet locations; and
- State policies to increase excise taxes, restrict zoning, and enact .08 BAC laws.

The promising practices focus on enforcement and policy development at the state, local, and school level. Appendix F contains a listing of best and promising practices.

As part of its efforts to recognize and share information about effective strategies for reducing underage alcohol use, PIRE is also responsible for compiling success stories from state EUDL programs. To qualify as a success story, a strategy must meet the following criterion set by PIRE: 1) a policy change has been implemented that directly relates to underage drinking (state law, local ordinance, school policy, or institutional policy change) such as keg registration; OR 2) efforts that show a measurable decrease in underage drinking or access to alcohol such as compliance checks conducted by enforcement showing a downward trend in non-compliance rates, thus limiting the access of alcohol to underage youth from retail outlets or other innovative approaches. A summary of the PIRE-designated successful stories can be found in Appendix G.

2.2. EUDL programs and experience in other states

Representatives of 17 EUDL programs in states outside of Michigan were interviewed by telephone to learn about their experiences. States were selected based on recommendations from Michigan's program coordinator as well as the desire to have a geographically representative group of states. A listing of states, the representatives interviewed, and their organizational affiliations, is contained in Appendix H. Programs varied considerably in terms of the state agency responsible for administering EUDL grant funds, the overall focus of EUDL efforts, the basis for distributing funds, and specific programs funded. Few programs had been formally evaluated in terms of outcomes, and thus, little could be concluded from the interviews about actual program effectiveness. However, based on our impressions about program direction and clarity of purpose, several themes emerged with implications for planning and implementing EUDL programs. Findings from the these qualitative interviews are summarized below, with particular attention paid to the themes that emerged.

Formalized vision/goals for overall state program

Many states do not have a formal vision or set of goals for their overall program. Instead, they rely on the goals outlined at the federal level or focus on development of goals and objectives at the community grant recipient level. For states that do set overall goals for their program, the process varies. Some develop them on their own, while others rely on a state-level task force or develop them in conjunction with other partners. Several states noted that their goals have not changed much over time, only the strategies used to achieve them. There do seem to be benefits that come from a state thinking carefully about what its overall program is trying to accomplish and formulating its own vision and goals within the framework of the national EUDL perspective. The federal mandate is quite broad, and tailoring this mandate to a state's unique characteristics and needs has helped some states focus their efforts more effectively. It has also provided program participants with a stronger sense of ownership in the program. Given the increasing attention on measurable outcomes of EUDL programs that several states perceived to be coming from the federal government, it makes sense to ensure that from the onset, program goals and objectives are focused enough so that program effectiveness can be discerned.

Involvement of other state agencies in EUDL program efforts

The level of involvement of different areas of state government in the EUDL program varies from state to state, although some patterns are apparent (see Appendix I). As one would expect, involvement was generally reported to be high among the agencies responsible for administering the block grant funds. Across all states contacted, the highest levels of involvement were reported for highway safety, state police, and the alcohol beverage commission (with high involvement being reported by about 71 percent, 65 percent, and 63 percent, respectively). The lowest involvement was reported for the attorney general and education.

Evolving nature of programs

Every state program has evolved over time, learning lessons often through trial and error and changing course, sometimes subtly and sometimes more dramatically. Many states reported learning things from their discretionary grants that allowed them to refine their programs. An important focus of this learning has been on data collection needs. Several states realized that they were collecting data that were not useful or did not answer the questions they were interested in. Grappling with issues of which data to collect and how to simplify the data demands placed on local communities caused some states to think more carefully about what questions they were trying to answer and what they were trying to accomplish.

Setting priorities for funding

There is considerable variation in how states set priorities for distributing EUDL funds. Some states heavily weight what has been done in the past, while others use simple or complicated sets of data-driven criteria that may include crash, violation, and/or drinking rates to rank grant applicants in terms of underage drinking problems. Some states fund community-wide efforts, some target specific agencies within a community, and some focus more on statewide organizations such as MADD. Many states report having some type of state-level advisory group, coalition, or task force in place to help them set priorities. These groups seem to strengthen the priority-setting process by providing direction and clarity of purpose, as well as in some cases, helping to manage the grant application process. These groups can also be useful in facilitating cooperation among multiple state agencies with a stake in underage drinking prevention. While at least one state uses a mini-grant system for a portion of their monies, many states seem to favor awarding fewer grants that are more comprehensive in scope.

Strategies/programs funded

As one would expect, the majority of grant monies is used to support enforcement efforts. Within this broad category, there is some variation, although most states focus enforcement on limiting access to alcohol, particularly through compliance checks. In fact, every state interviewed reported conducting compliance checks, with many considering compliance checks to be a mainstay of their program. Other reported enforcement activities included party patrols, shoulder tap operations, and Cops in Shops. Alcohol-impaired driving prevention, considered one component of overall enforcement, generally comprises a small percentage of overall EUDL funding, if funded through EUDL at all. A few states conduct sobriety checkpoints (sometimes referred to as safety checkpoints), especially during special events like proms and graduations, if enabling legislation exists.

A number of non-enforcement strategies are also funded, often as a way to support and enhance enforcement. These strategies generally involve building local coalitions to increase community awareness of alcohol-related issues and changing community norms relative to alcohol use, as well as conducting public information and education campaigns. Many of these efforts involve high school or college-age students, although they are not necessarily considered school-based strategies per se. Some of the more formal school-based strategies employed include holding alcohol-free events for youth (e.g., Friday Night Live), implementing evidence-based programs (e.g., Protecting You and Protecting Me), working closely with MADD and SADD, and establishing alcohol-related policies (e.g., a policy for athletes was just made mandatory in every school district in Nevada). While many states noted the challenge of promoting policy initiatives given constraints on lobbying by state agencies, some have found creative ways to support community efforts and to encourage communities to take the lead in pursuing policy initiatives without compromising their adherence to federal requirements. For example, many state representatives focus on providing community leaders with the information and resources they need (e.g., materials and training from PIRE) so that legislative and policy initiatives can be pursued more effectively at the local level.

Consistent with how they are spending their resources, many states considered their most successful programs to be those involving compliance checks. Others pointed to community coalitions or more comprehensive efforts at the community level. Coalitions, in particular, are

seen as a way to energize members of the community and engage them in the issue of underage drinking. Efforts characterized by a multi-faceted approach, strong collaboration between law enforcement and other partners, and a firm basis in research evidence are perceived as especially successful. While most states recognized the value of measuring program effectiveness, they reported challenges in actually doing so. Compliance checks seem to be the most amenable to evaluation: data collection is fairly straight forward and changes in compliance rates can be easily determined and enforcement needs identified. Most states have developed standardized forms for collecting compliance check data that are provided to local law enforcement agencies.

Several state coordinators reported using data collected through the bi-annual, state-administered school surveys to assess community-level changes in alcohol-related attitudes and reported behaviors among high school students. Surveys of the general public have also been helpful to some states in assessing knowledge and awareness of community programs and policies (e.g., parental hosting of underage parties). Other reported measures of program success at the community level include tracking drinking-related violations among young people, violations among adults for furnishing alcohol, media activity, and training efforts.

Few states have undertaken a formal evaluation of their overall program, although many recognized the need for more comprehensive evaluation efforts, and at least one state has developed its own model. Some states have developed relationships with external consultants who help them analyze their enforcement data on an ongoing basis. Several state coordinators noted the challenge of moving the evaluation process from the community level to the state level, especially in terms of whether meaningful results can be obtained.

Discretionary grant funding

In addition to the block grant funding for EUDL, federal funds have been available for discretionary grants to states. While some states seem to have done particularly well in obtaining multiple years of discretionary grant funding, almost every state interviewed has received at least one such grant over the life of their program. According to those interviewed, all discretionary grants have been offered as part of an open competitive bidding process except for the 2005 grants, which were limited to the top applicants in 2004 who did not get funded in that cycle. The discretionary grant funds have allowed states to expand successful block grant strategies, as well as to test out new approaches that could later be used to improve their existing block grant

activities. Factors that seem to have helped states obtain discretionary grant funding include being proactive in identifying opportunities for funding, relying on a comprehensive approach to combating underage drinking, having an organized system that facilitates the expedient submission of applications, being creative in finding a fit between the discretionary grant request for proposals and the individual state's characteristics and activities, and recognizing the central role of evaluation in program planning and implementation.

Use of national/other research-based information

There is widespread use of and support for PIRE and the resources it provides. About three-quarters of the states interviewed reported taking advantage of PIRE's on-site training, technical assistance, publications, and/or website. A similar proportion attends the annual leadership conference sponsored by PIRE, with several noting that it provides a good opportunity to interact with other coordinators and to participate in quality sessions. Most states characterized PIRE as being a great resource and responsive to their needs.

Rewards and challenges of administering the EUDL program

Key among the rewards reported by states is seeing their program have an impact on local communities. Some think about this impact in terms of a reduction in underage drinking or a reduction in the associated deaths and injuries. For many, however, the impact has more to do with changing the awareness of not only the general public about the seriousness of underage drinking, but also of the police officers, judges, and other professionals responsible for enforcing and adjudicating underage drinking laws. Another important reward mentioned by state coordinators is the collaboration and cooperation that can develop at the community level, with diverse segments of the community working together through coalitions and other networks to address underage drinking issues.

Among the challenges reported by states are the limited funds available and the short-term nature of the funding cycle, making it difficult to bring about statewide and/or long-term change. Some states noted that they are unable to fund some of the communities/projects they would like to fund or that they cannot be as involved in each project as they would like because of a lack of time, staff, and/or money. An important challenge for many states is the persistence of community attitudes that minimize the dangers of underage drinking. These attitudes are perceived to result in community norms that consider underage drinking a rite of passage and

lead to inaction or lack of support by the alcohol beverage industry and law enforcement community in addressing the problem. This is especially problematic when state and local policies for reducing underage drinking are lacking.

Many states reported being helped in their efforts to promote EUDL by having in place local coalitions and other networks that can share resources and collaborate effectively. Others pointed to the flexibility and support of their supervisors, as well as the competence of their grantees, as being important to their ability to manage the EUDL program. The guidance and support of PIRE was also considered a resource that makes their management task easier and more effective.

Advice to other states

States were asked what advice they would give others for strengthening their EUDL programs. Several states noted the importance of early planning to decide what the long-term direction of the program should be, what groups need to be brought to the table at the start to build a foundation for program efforts, and as the program proceeds, what questions need to be answered to assess program success. Almost every state stressed the importance of fostering collaboration and coordination at both the state and local level. At the state level, this means having a support network in place, with all of the various agencies working together towards a shared (and clear) vision of what is to be accomplished. The specific configuration of this network (e.g., task force, advisory group) is less important than the need to ensure that members can move beyond turf issues and show a united front. Once the foundation is in place at the state level, relationships with local communities can be built and nurtured. Community coalitions are seen as an important tool for organizing efforts at the local level, as well as serving as a bridge for broader statewide collaboration. Several states mentioned the importance of having a unified statewide focus for the program rather than just funding a collection of individual projects and locations in isolation from one another. PIRE was also promoted as a valuable resource for improving EUDL program effectiveness. Finally, at least one state advised that states must pay attention to ensuring that funded projects are actually doing what they said they would do.

2.3 Promising Program Elements

As the interviews with representatives of EUDL programs in states outside of Michigan were completed, a number of promising program elements emerged. These include the following:

1. Having in place a vision and set of goals for the overall state EUDL program, apart from the mandates imposed by the federal government and the objectives of individual grantees. Having state goals can promote continuity by providing a broad, relatively stable framework around which year-to-year objectives can be updated in response to changes in federal, state, and local priorities.

2. Having in place a process for setting funding priorities that is tied to program goals and objectives, and involves input from an organized body of informed advisors that constitutes a support network for the program.

3. Having a mix of funded strategies/programs that are research based and reflect the full spectrum of approaches to reducing underage drinking (limiting access to alcohol, building community norms, school-based strategies, and prevention of alcohol impaired driving). There appears to be considerable information available from PIRE and other sources about which strategies are supported by research evidence and are of high priority. Many state programs have found ways to facilitate local championship of these strategies without violating federal restrictions on state agency lobbying.

4. Focusing on leveraging existing resources and capabilities in the state and local communities. To a great extent, this means supporting and building on the efforts of existing community coalitions and fostering cooperation and collaboration among existing entities and organizations. Despite the myriad of differences in how state programs are organized and implemented, a clear theme that emerged is that state programs with clarity of purpose and direction are often those that take advantage of the relationships and networks already in place in the community.

5. Taking advantage of the work PIRE has done to identify effective EUDL strategies and the resources that PIRE provides to states. OJJDP has invested considerable funds in PIRE, and most states interviewed report benefiting from the knowledge base PIRE has developed and the training it provides. It allows them to move forward with their program planning and implementation on a more scientific basis and to better focus their limited program funds.

6. Making sure that in reporting program progress, completed activities are directly linked to the program objectives that gave rise to the activities. In this way, actual progress can be tracked and

conclusions can be reached about whether the program is being implemented as planned, what is working especially well, and what challenges or problems need to be overcome.

In addition to the promising program elements that emerged from the interviews themselves, useful information came from reviewing published program-related materials provided by several of the EUDL coordinators from other states. In particular, an evaluation of the 1999-2002 discretionary grant activity in Washington State identified several lessons learned that can be applied to other states' programs funded through block grants (see Fabiano, 2002 for full report). These lessons are summarized here:

- Community coalitions developed by the grantees were as effective as the strategies they promoted and supported.
- The most successful coalitions shared a set of characteristics that included: a leader, whose primary job was to coordinate the coalition, who provided a consistent infrastructure; a sense of purpose that came from a regular meeting schedule and attention to intra-group communication; youth participation; diverse coalition membership; strategic planning as a guiding force for coalition activities; self-reflection by the coalition; consideration of hospitality industry members as prevention partners; and celebration and recognition of successes.
- Traditional informational, knowledge-based education strategies (the most frequently used educational strategies) had little evidence-based support in the research literature and may be ineffective in actually reducing underage drinking.
- Evidence-based enforcement strategies (especially multi-jurisdictional enforcement coalitions, compliance checks, party patrols, publicity about enforcement) are more frequently used than evidence-based prevention strategies.
- There was a direct relationship between increased flow of resources into community-based projects and increased EUDL enforcement.
- Grantees tried unsuccessfully to accomplish environmentally-focused ends (e.g., changing community norms) by using individually-focused means.
- Most grantees were capable of and interested in doing community-based program evaluation.
- There was a need for technical assistance in identifying and collecting credible baseline data on scope of underage drinking and extent of enforcement activities.

- A central data management system and on-site visits are critical components of an effective monitoring and evaluation system.
- Grantees' considerable enforcement and prevention experience represents an underutilized source of technical expertise for reducing underage drinking.
- Two-year grant periods are appropriate and realistic for conducting community-based prevention and assessing impact; 1-year grants may impede progress.

3. Evaluation Issues

There are a number of levels at which Michigan's EUDL program can be evaluated. At the most basic level, it is important to determine whether the program is being implemented as planned. The process evaluation carried out by UMTRI focused on comparing proposed state activities with those actually completed (for FYs 2001 – 2003, the 3-year period for which information was mainly provided to us), based on a review of the state's grant proposals and their corresponding progress reports. The activities proposed over the 3-year review period were largely carried out. The state EUDL program can and should be looking at each of their funded projects in the same way to determine whether project objectives and activities are being implemented as planned. This requires a reporting format from grantees that specifically ties proposed objectives/activities to those completed during the project, with adequate information about completed activities to reach meaningful conclusions.

At the next level of evaluation, it is important to determine if program activities are actually having an impact on the people they are intended to target. EUDL programs are intended to reduce the incidence of underage drinking. Thus, changes in underage drinking behavior and drinking and driving behavior are desired outcomes of the program. Ultimately of course, the desired impact of EUDL is a reduction in deaths and injuries among young people, particularly from traffic crashes, due to underage alcohol use. Dimensions of underage drinking behavior that can be used to measure outcomes of EUDL programs include:

- Amount and frequency of underage drinking
- Perceptions about alcohol use
- Alcohol-related violations among youth

- Alcohol-related injuries and deaths among youth

The current mix of enforcement activities funded through Michigan's EUDL program makes it difficult to examine behavioral changes in drinking. Most of Michigan's grant funds are awarded to a relatively large number of jurisdictions spread across the state for narrowly focused, short-term enforcement activities. Because the impacts of these program activities are likely to be fairly localized, it may not be fruitful to look for changes in behavior at the community level, let alone the county or state level (where data on youth drinking and driving behavioral change are typically collected and analyzed). While one could look for changes among the specific individuals targeted by the enforcement activities, reliable data about these targeted individuals and their pre-program levels of the behaviors of interest are generally lacking (i.e., exposure data such as the numbers of youth attending underage parties or numbers of underage parties in a jurisdiction). The information on enforcement activity that has generally been collected as part of program efforts is useful for process evaluations, but is not sufficient to determine whether changes in behavior have occurred and if so, whether they can be attributed to the EUDL program. These issues are explored more fully in regard to the specific enforcement programs funded through Michigan's EUDL grants.

The SPOTLIGHT program is aimed at limiting access to alcohol by stopping minors from purchasing alcohol and from having adults buy alcohol for them. The data typically reported from individual grantees for SPOTLIGHT activities include numbers of enforcement acts, citations, arrests, and warnings for: minor in possession (MIP); adults furnishing alcohol; false ID to police; liquor law violations; false ID purchase; OUIL; no driver license; warrant arrests; controlled substance arrests; MIP tobacco; child restraint law violations; no seatbelt used; and assault and battery. These data can be used to assess changes in the levels of enforcement activity before and after SPOTLIGHT interventions occur. However, for the most part, it is difficult to interpret what these changes mean and what conclusions can be reached about the effects of these enforcement activities on actual underage drinking. For example, if the numbers of warnings, citations, and arrests have increased, does that mean that underage drinking has increased or that police are simply doing a better job of enforcement, as one would expect from targeted enforcement efforts? It is important to examine these data to determine whether the program is being implemented as planned, but the data, by themselves, do not allow us to make inferences about the population targeted by the enforcement – young people trying to purchase

alcohol. If more were known about the numbers of young people actually trying to purchase alcohol (i.e., the specific population being targeted), not just those being apprehended, there would be a more meaningful context in which to interpret changes in citation and arrest numbers.

Operation LOOKOUT targets special events such as concerts and sporting competitions that occur over the space of a few hours. Data reported from LOOKOUT events include the number of enforcement contacts and the size of the event. Because the activities are often so narrowly focused, one would not expect effects to extend much beyond the local community or segment of the community targeted. In addition, because these funded activities are often one-time events, there is no basis for comparison in terms of measuring change. Thus, the LOOKOUT program, by itself cannot generally be evaluated in light of drinking behavior in the broader community.

Party Patrol is an overtime law enforcement program in which special response teams respond quickly to parties where minors are consuming alcohol.   Data reported by individual grantees for this program include: hours of party patrol enforcement; enforcement contacts; parties dispersed; MIP citations; adults furnishing alcohol; traffic stops leaving party; open intoxicants; verbal warnings; felony arrests; misdemeanor arrests; and number of persons processed. Similar to the SPOTLIGHT program, these data are helpful in determining whether the program is being implemented as planned and in identifying changes in the levels of enforcement activity. However, from the data collected, it is difficult to assess what impact this program is having on underage drinking in the jurisdictions targeted. At the very least, more information on the population of young people being targeted, not just apprehended, would be necessary to make meaningful inferences about what changes in levels of enforcement activity might mean.

According to Michigan's program coordinator, the state is planning to shift its funding focus to compliance checks during the next fiscal year. This presents an opportunity for more meaningful evaluation. As discussed earlier, the effectiveness of compliance checks can be examined by comparing rates of retailer compliance before and after the funded enforcement activity to determine whether sales to minors have been reduced. In addition, to the extent that compliance checks can be carried out more broadly than previously funded enforcement activities, one would expect more widely dispersed effects. The population of retail establishments available to sell to underage buyers is known, thus providing the needed measure of exposure. Thus, the assessment of behavior changes, especially among young people, and especially when compliance checks are

supported by broader community public education and information efforts, might prove to be a more useful endeavor.

While evaluating the impact of the current mix of funded EUDL activities on underage drinking behavior, based on the data currently available, is not feasible, this is not to say that EUDL program efforts do not have an effect on underage drinking behavior. Future EUDL efforts should be planned and implemented in concert with appropriate evaluation designs so that the impacts on underage drinking can be measured in addition to changes in the levels of enforcement activity. To a great extent, the nature of each intervention will drive the evaluation design. However, some general guidelines are useful (see Molnar, Streff, and Shope, 1997 for a detailed discussion on evaluating impaired-driving prevention programs for youth). Effective evaluation planning requires detailed information about: program goals and objectives; program design (e.g., one shot versus multiple interventions); program timing, placement, and process; and the purpose of the evaluation. Depending on the type of questions the evaluation is intended to answer, appropriate evaluation designs might include: a one-shot test that measures variables of interest at a single point in time; a pre-post design in which data are collected prior to the program and after the program is completed and then compared; a reversal design in which data are collected prior to the program (baseline), during the program, and after the program has ended, with the follow-up period used as a control period to assess return to baseline behavior; and a control group design in which one group is selected to receive the program, while a second group does not (the control group), and differences between the groups are assessed.

The control-group design is often combined with the pre-post design to increase the ability of the evaluator to determine if observed differences are the result of the program or due to other causes. For example, a community selected for EUDL activities could be matched with a similar community in which no EUDL intervention activities would be undertaken during the study period. A period of two years has been recommended (Fabiano, 2002). Credible data on the scope of underage drinking and the extent of enforcement activities would be collected before the implementation of enforcement activities (baseline) and after the study period. Data on alcohol-related violations, injuries and deaths and alcohol and driving-related violations, injuries and deaths among underage youth would also be collected before and after the enforcement periods in both communities.

The scope of underage drinking would be assessed through a survey of underage youth. An appropriate sampling strategy would be followed so that the results would be representative of the community. The questions on the survey would be concerned with: frequency and amount of drinking, binge drinking, drinking and driving, riding with drinking drivers, use of false ID, attempts to purchase alcohol, asking adults to purchase alcohol, attitudes toward drinking, and knowledge of the effects of alcohol.

Data on enforcement activities would be similar to what are collected now. Data on alcohol-related injuries and deaths would be obtained from community health organizations. Analysis of the program effect on changes in drinking behavior would come from comparisons of the before and after measures in each community, and between the EUDL and comparison communities.

It is important to note that when planning a community-wide EUDL program and evaluation, that the size of the community is important. It may be very difficult to discern any effects of the program if the community is small. As such, the population of a county would be sufficiently large. An advantage of going to the county is that data already are collected from a number of sources that could be used to assess alcohol-related behavior change among young people. These include:

- The Master Driving Record, maintained by the Michigan Department of State, a complete driver-history data base containing among other things, arrest, conviction, court, and crash information for every driver in the state.
- The Behavior Risk Factor Surveillance System, developed by the Michigan Department of Community Health to gather statewide data on alcohol use (e.g., having tried alcohol, binge drinking, drinking and driving) for individuals age 18 and older.
- The Youth Risk Behavior Survey, conducted by the Michigan Department of Education among high school students under age 18 to gather statewide data on drinking and substance abuse behavior.
- The Michigan crash files, maintained by the Michigan State Police, and containing detailed information on all crashes reported by law enforcement agencies in the state (e.g., crash type, alcohol involvement, age, zero tolerance information, and injury severity).

By building on these existing data sources, realistic and obtainable benchmarks can be identified to assess the county impacts of Michigan's EUDL program. Among the more useful benchmarks for dimensions of underage drinking behavior are:

Amount and frequency of underage drinking

Number of youth who report underage dinking in some time frame (e.g., 30 days).

Number of youth who report drinking five or more drinks in a row within the last two weeks

Attempts to buy alcohol

Typical quantity of consumption when drinking

Perceptions about alcohol use

Knowledge about health and legal consequences of drinking

Perception of peer drinking norms

Perception of harm associated with alcohol consumption

Perception of acceptability of underage drinking in the community

Alcohol-related violations

Alcohol-related violations – minor in possession violations

Alcohol-related driving violations – DUI, DWI, Open intoxicant citations

Rate and proportions of selected alcohol violations (MIP, DUI, DWI, etc.)

Alcohol-related crashes

Rates and proportions of alcohol-related crashes

Alcohol-related injuries and deaths

Alcohol-related motor vehicle injuries

Alcohol-related motor vehicle deaths

Alcohol-related injuries

Alcohol-related deaths

The benchmarks listed above can be used in evaluations of communities at the county level. However, these benchmarks could also be obtained for the entire state and allow monitoring of changes in underage drinking behavior at the state level. Michigan has an opportunity to use findings from the Youth Risk Behavioral Survey and the Behavior Risk Factor Surveillance

System Survey to assess changes in youth alcohol behavior that might be attributable to the state's EUDL efforts. These data provide a wealth of information on drinking behavior and attitudes. These self-reported survey data could serve to complement examination of driving violation and crash data. It should be noted that any changes could not be attributed wholly to the overall effect of EUDL programs across the state, but rather to the cumulative effects of all efforts at changing alcohol-related behavior among underage youth. Still a statewide study would provide a useful base from which to measure community-level evaluations.

Underage involvement in alcohol-related crashes: Pre and Post EUDL

One of the objectives of this study was to conduct an evaluation of Michigan's EUDL program if our assessment showed that the program was "evaluatable" in light of the objectives of the EUDL program, and if it was possible to do so within the resources of the project. However, as indicated above, the current mix of EUDL activities do not lend themselves to the evaluation of their impact on drinking behavior. On the other hand, it was possible for us to examine the overall the involvement of underage drivers in alcohol-related vehicle crashes in Michigan for several years before and after the initialization of the EUDL program, and we were therefore asked by the sponsor to do so. By examining the numbers and patterns of underage drinking crashes over the time period, we can provide a trend line with respect to drinking and driving crashes which can be of use for future evaluations.

In our assessment of the underage drinking crash trends, we examined Michigan data from 1995 through 2003, which included a 3-year period before EUDL grants were initiated in Michigan (pre EUDL period, 1995 through 1997) and two 3-year periods after the start of EUDL programs (post EUDL 1, 1998-2000 and post EUDL 2, 2001-2003). We compared alcohol-related and non-alcohol-related crash patterns in the three time periods between drivers under age 21 years, and 21 and older. The details of the analysis are in Appendix J.

The results of the analysis showed that the overall total number of crash-involved drivers declined by 7% over the three time periods. The decrease in crash involvements for drivers under age 21 was 12%. In all three time periods, 17% of crash-involved drivers were under age 21. During that time period there was an overall decrease in alcohol-related crashes. However, the decrease in crash involvements among underage drivers was less than that of drivers 21 and older (15% compared to 29%). The proportion of drivers under age 21 among all crash-involved

drivers who had been drinking remained at 2% for all three time periods. At the same time the proportion of "had been drinking" drivers among all crash-involved drivers under age 21 increased from 10% to 12%.

Of under-age crash-involved drivers who had been drinking, 80% were male in all three time periods. This is the same as the proportion of males among had-been-drinking crash-involved drivers age 21 years and older. In contrast, the proportion of males among non-drinking drivers was 56-58% over the three time periods for both age groups.

The pattern of when crashes involving drinking drivers under age 21 occurred did not change over the three time periods. The peak time for these crashes was between midnight and 3AM, and in summer (June, July, and August). While the peak hours of drinking-driving crashes involving drivers 21 years and older were also between midnight and 3AM, the monthly pattern was quite different, with the peak occurring from November through January. In contrast, crashes involving non drinking drivers under age 21 peaked between 3 and 6PM and in November, December and January. This is the same pattern of crash involvements as for non-drinking drivers age 21 and older. However, while the peak hours the peak periods of alcohol-related crash involvements for drivers 21 years and older was quite different that that of the younger drivers.

From this analysis we can conclude that there has been a reduction in underage drinking and driving crashes, which was greater than the overall reduction in crashes from 1995 to 2003. However, the reduction in alcohol-related crashes was not as large among underage drivers as for drivers of legal drinking age. There have been no changes in the patterns of underage drinking vehicle crashes. Although the reduction in alcohol-related crashes coincided with the initialization of EUDL programs in the state, we cannot conclude that the reduction in alcohol-related crashes is due to EUDL particularly given that alcohol-related crashes among older drivers not subject to the EUDL programs also declined and at a greater rate. There may be many causes, including changing societal norms toward the acceptance of drinking and driving which may have contributed to the introduction of the EUDL program in the first place. However, quantifying the trend in statewide underage drinking crashes provides a basis for measures of the changes in underage alcohol-related crashes relative to changes in other types of crashes which can be used to build future evaluations.

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Michigan EUDL Program: Grant Objectives and Funded Activities, FYs 2000-2003*

FISCAL YEAR	GRANT OBJECTIVE(S)	ACTIVITIES	AMOUNT
2000	To support law enforcement liaison and two trainers	Youth alcohol education and enforcement police liaison	$70,000
2000	To reduce underage drinking through the LOOKOUT, SPOTLIGHT, and Party Patrol enforcement programs	SPOTLIGHT Program	$290,000
2001	Unite communities concerned with underage drinking and coordinate regional networks with youth participation through the MI Coalition to Reduce Underage Drinking (MCRUD)	Training coalitions on the collection and use of data and maintaining self-sustainability	$15,000
2001	To reduce underage drinking through the LOOKOUT, SPOTLIGHT, and Party Patrol enforcement programs	Comprehensive attack on underage drinking pilot project	$200,000
2001	To support law enforcement liaison and two trainers	Youth alcohol education and enforcement police liaison	$30,000
2001	To reduce underage drinking through the LOOKOUT, SPOTLIGHT, and Party Patrol enforcement programs	SPOTLIGHT Program	$110,000
2001	To reduce underage drinking through the LOOKOUT, SPOTLIGHT, and Party Patrol enforcement programs	LEGAL Training to educate law enforcement about MI liquor law	$5,000
2002	To support law enforcement liaison and two trainers	Youth alcohol liaison officer & youth alcohol training officer	$50,000
2002	To reduce underage drinking through the LOOKOUT, SPOTLIGHT, and Party Patrol enforcement programs	Youth alcohol enforcement programs	$210,000
2002	To raise awareness of the importance of having a designated driver	Training for law enforcement, local coalitions, and judicial staff	$20,000
2002	To develop a youth alcohol offense card for law enforcement officers to use during youth alcohol enforcement operations	Youth offender violations card	$10,000
2002	To raise awareness of the importance of having a designated driver	MADD Thunderbirds public service announcements	$5,000
2002	Unite communities concerned with underage drinking and coordinate regional networks with youth participation through the MI Coalition to Reduce Underage Drinking (MCRUD)	Youth team leadership training	$20,000
2002	Create a TV commercial developed by high school students targeted at middle school students regarding the dangers of alcohol use	Courageous Persuaders	$45,000
2003	To support law enforcement liaison and two trainers	Youth alcohol liaison officer & youth alcohol training officer	$50,660
2003	To reduce underage drinking through the LOOKOUT, SPOTLIGHT, and Party Patrol enforcement programs	Youth alcohol enforcement programs	$175,000
2003	To reduce underage drinking through the LOOKOUT, SPOTLIGHT, and Party Patrol enforcement programs	Public information materials to support enforcement efforts	$15,000
2003	Conduct multi-media programs in high schools throughout MI to educate teens on the dangers of alcohol use	MADD national multi-media program	$25,000
2003	Unite communities concerned with underage drinking and coordinate regional networks with youth participation through the MI Coalition to Reduce Underage Drinking (MCRUD)	Youth team leadership training	$15,000
2003	Create a TV commercial developed by high school students targeted at middle school students regarding the dangers of alcohol use	Courageous Persuaders	$50,000
2003	Unite communities concerned with underage drinking and coordinate regional networks with youth participation through the MI Coalition to Reduce Underage Drinking (MCRUD)/To reduce underage drinking through the LOOKOUT, SPOTLIGHT, and Party Patrol enforcement programs	College Campus Programs	$27,000

*Summarized from state grant proposals provided to UMTRI by EUDL coordinator.

Michigan EUDL Program: Summary of Local Community Grants, FYs 1999-2003*

PROGRAM	GRANTEE	COUNTY	FUNDING	FY START	FY END	MONTH START	MONTH END	MONTHS
SPOTLIGHT/Legal Training	Lansing Community Col	Ingham	186639	1999	2001	10	5	19
Courageous Decisions	Troy Community Coal	Oakland	23500	2000	2000	3	9	6
LOOKOUT	Traverse City Police	Grand Traverse	2985	2001	2002	12	8	8
LOOKOUT	Iron Co Sheriff	Iron	3281	2001	2002	12	8	8
LOOKOUT	St Ignace Police	Mackinac	2994	2001	2002	12	8	8
LOOKOUT	TIA	Oakland	3000	2001	2002	12	8	8
SPOTLIGHT	Munising City Police	Alger	4959	2001	2002	5	5	12
SPOTLIGHT	Saugtuck Douglas Police	Allegan	6506	2001	2002	3	5	14
SPOTLIGHT	Bay City Pol	Bay	6449	2001	2002	2	5	16
SPOTLIGHT	Charlevoix City Police	Charlevoix	4986	2001	2002	10	8	10
SPOTLIGHT	Escanaba PSD	Delta	6990	2001	2002	5	5	12
SPOTLIGHT	Traverse City Police	Grand Traverse	6987	2001	2002	10	8	10
SPOTLIGHT	Hillsdale Co Sheriff	Hillsdale	6967	2001	2002	3	5	14
SPOTLIGHT	E Lansing Police	Ingham	9979	2001	2002	3	5	14
SPOTLIGHT	Ionia Co Sheriff	Ionia	10000	2001	2002	2	5	15
SPOTLIGHT	Kalamazoo Co Sheriff	Kalamazoo	9982	2001	2002	4	5	13
SPOTLIGHT	Kent CO Sheriff	Kent	7000	2001	2001	10	12	10
SPOTLIGHT	Kent CO Sheriff	Kent	7000	2001	2002	3	5	14
SPOTLIGHT	Livingston Co Sheriff	Livingston	5966	2001	2002	10	8	10
SPOTLIGHT	St Ignace Police	Mackinac	4963	2001	2002	5	5	12
SPOTLIGHT	Manistee Police	Manistee	7010	2001	2002	3	5	14
SPOTLIGHT	Marquette Co Sheriff	Marquette	4848	2001	2002	11	5	7
SPOTLIGHT	Big Rapids DPS	Mecosta	9977	2001	2002	10	8	10
SPOTLIGHT	Norton Shores Police	Muskegon	6719	2001	2002	10	8	10
SPOTLIGHT	Freemont Police	Newaygo	9553	2001	2002	2	5	15
SPOTLIGHT	TIA	Oakland	10000	2001	2002	10	8	10
SPOTLIGHT	Oceana Co Sheriff	Oceana	10008	2001	2002	2	5	15
SPOTLIGHT	Ottawa Co Sheriff	Ottawa	10002	2001	2002	5	5	24
SPOTLIGHT	Marlette Police	Sanilac	9987	2001	2002	10	8	10
SPOTLIGHT	Manistique PSD	Schoolcraft	6989	2001	2002	5	5	12
SPOTLIGHT	Tuscola Co Sheriff	Tuscola	9485	2001	2002	4	5	13
SPOTLIGHT	Van Buren Co Sheriff	Van Buren	9993	2001	2002	3	5	14
ID Checking Guide	MI Licensed Bev Assoc	Ingham	9000	2002	2002	4	9	5
Party Patrol	Iron Mt Police	Dickenson	6976	2002	2002	1	9	8
Party Patrol	Petoskey DPS	Emmet	17994	2002	2004	12	8	20
Party Patrol	Petoskey DPS	Emmet	4979	2002	2002	1	9	8
Party Patrol	Flushing Twnp Police	Genesee	4980	2002	2002	1	9	8
Party Patrol	Mt Pleasant DPS	Isabella	17350	2002	2004	12	8	20
Party Patrol	Big Rapids DPS	Mecosta	2987	2002	2002	1	9	8
Party Patrol	TIA	Oakland	9988	2002	2004	11	8	21
Party Patrol	Holland Police	Ottawa	17918	2002	2004	10	8	22
Party Patrol	Gross Ile Police	Wayne	17973	2002	2004	10	8	22
Party Patrol	Gross Ile Twnp Police	Wayne	6997	2002	2002	1	9	8
Party Patrol/LOOKOUT	Chocolay Twnp Police	?	17983	2002	2004	10	8	22
Party Patrol/LOOKOUT	St Ignace Police	Mackinac	9990	2002	2004	10	8	22
Party Patrol/LOOKOUT	Big Rapids DPS	Mecosta	17688	2002	2004	12	8	20

Party Patrol	Alpena Co Sheriff	Alpena	14000	2003	2004	3	8	17
Party Patrol/LOOKOUT	Allegan Co Police	Allegan	17905	2003	2004	4	8	16
Party Patrol/LOOKOUT	Bay Co Sheriff	Bay	9983 (7650)	2003	2004	4	8	16
Party Patrol/LOOKOUT	Iron Mt Police	Dickenson	17833	2003	2004	2	8	18
Party Patrol/SPOTLIGHT	Traverse City Police	Grand Traverse	14005	2003	2004	2	8	18
SPOTLIGHT/LOOKOUT	Kent CO Sheriff	Kent	17920	2003	2004	2	8	18
OJJDPP Evaluation	UMTRI		27556	?	?			
Party Patrol	St Clair Sheriff	St Clair	18000	?	?	?	?	?

*Summarized from local community grant proposals provided to UMTRI by the EUDL coordinator.

Michigan EUDL Program: Locations of Funded Projects*
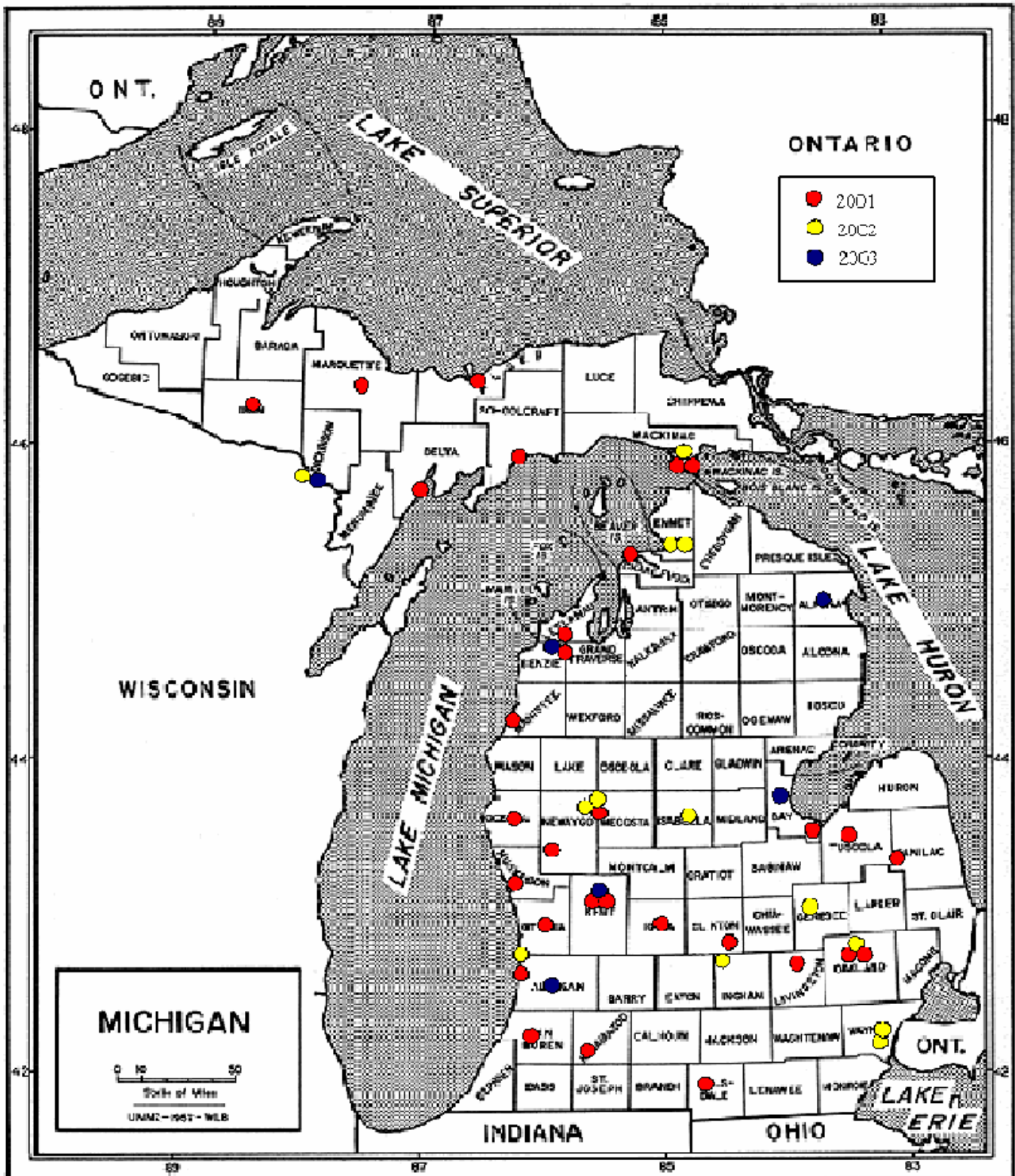
*Based on information contained in Appendix B. Countywide grants are shown as being located in the center of the county

APPENDIX D

Michigan EUDL Program: Reported State Program Activity*

PROGRESS REPORT PERIOD: 7/01 - 12/01	
PROGRAM	**ACTIVITY**
Youth Alcohol Liaison Officer	Contacted and helped all grantees Assisted new agencies interested in grants Edited Party Patrol binders Finalized shell grant application Revised SPOTLIGHT and LEGAL manuals Helped identify police agencies to participate in Party Patrol & LOOKOUT Explained programs to police & helped with grant app Attended three OHSP Grant Orientation meetings Assisted Youth Programs coordinators with progress reports Scheduling/planning two-day Party Patrol training Attended strategic planning meetings
Youth Alcohol Training Officer	Taught 5 LEGAL classes Identified benefits of LEGAL training for retailers Attended Party Patrol training
SPOTLIGHT	25 grants awarded to date, none from FY01 Grant
LOOKOUT - Liaison Officer	Increased # of arrests and prosecutions Heightened awareness through media Attended strategic planning meetings Conduct LOOKOUT enforcement
Party Patrol	Six agencies received grants Training held (Liaison provided training on MI laws) Liaison and training officers certified Party Patrol trainers Strategic planning meeting with Liaison Grant to be completed
Training	Party Patrol dispersement training Survey to determine what type of training's needed
PROGRESS REPORT PERIOD: 10/01 - 11/01	
PROGRAM	**ACTIVITY**
Innovative Underage Court Programs	Promotional package Courageous Crusaders video developed/duplicated Contact info database created Promotional package and registration info mailed Assisted target high schools Website updated to include rules
PROGRESS REPORT PERIOD: 2001	
PROGRAM	**ACTIVITY**
Youth Alcohol Liaison Officer	Finalized shell grant application FY03-04 Worked with agencies Monitored SPOTLIGHT, Party Patrol, & LOOKOUT grantees Presented at MI Judicial Institute Enhanced Party Patrol training presentation

	Developed strategic plan/sessions for new grantees Trained on new e-grants system
Youth Alcohol Training Officer	Hired two new trainers New trainers shadowed liaison
SPOTLIGHT	Strategic planning meetings reviewed Media plans developed & implemented Community meetings held LEGAL training conducted SPOTLIGHT enforcement implemented
LOOKOUT	Five LOOKOUT grants awarded
Party Patrol	Six agencies received grants
Training	PIRE training for MCRUD coalitions
Innovative Underage Court Programs (Courageous Crusaders)	>200 video entries with awards ceremony

<table>
<tr><td colspan="2" align="center">PROGRESS REPORT PERIOD: 2002</td></tr>
<tr><td>PROGRAM</td><td>ACTIVITY</td></tr>
<tr><td>Youth Liaison Officer</td><td>Finalized shell grant application
Worked with agencies
Monitored SPOTLIGHT, Party Patrol, & LOOKOUT grantees
Presented at MI Judicial Instit.
Enhanced Party Patrol training presentation</td></tr>
<tr><td></td><td>Developed strategic plan/sessions for new grantees</td></tr>
<tr><td>Youth Alcohol Training Officer</td><td>Hired two new trainers
New trainers shadowed liaison</td></tr>
<tr><td>Youth Alcohol Enforcement Programs</td><td>No activities listed - summary of SPOTLIGHT, Party Patrol, & LOOKOUT</td></tr>
<tr><td>Training</td><td>Training for MCRUD Teen Leadership Team</td></tr>
<tr><td>Innovative Underage Court Programs(Courageous Crusaders)</td><td>>200 video entries with awards ceremony</td></tr>
<tr><td>Youth Offenders Violation Card</td><td>Gathering info</td></tr>
<tr><td>MADD Thunderbirds PSA</td><td>PSAs modified and sent to TV stations</td></tr>
</table>

<table>
<tr><td colspan="2" align="center">PROGRESS REPORT PERIOD: 7/02 - 12/02</td></tr>
<tr><td>PROGRAM</td><td>ACTIVITY</td></tr>
<tr><td>Youth Liaison Officer</td><td>Finalized shell grant application
Worked with agencies
Monitored SPOTLIGHT, Party Patrol, & LOOKOUT grantees
Presented at MI Judicial Institute
Enhanced Party Patrol training presentation
Developed strategic plan/sessions for new grantees
Assisted Lansing Community College for training grant</td></tr>
<tr><td>Youth Alcohol Training Officer</td><td>Revised/edited LEGAL presentation
Party Patrol training</td></tr>
<tr><td>SPOTLIGHT</td><td>Strategic planning meetings reviewed
Media plans developed & implemented
Community meetings held
LEGAL training conducted</td></tr>
</table>

	SPOTLIGHT enforcement implemented
LOOKOUT	Five LOOKOUT grants awarded
Party Patrol	Six agencies received grants
Training	Data collection training for MCRUD
Innovative Underage Court Programs(Courageous Crusaders)	Participation expanded to all counties New promotional package Support provided to participants Presented at six high schools
Youth Offenders Violation Card	Gathering information
MADD Thunderbirds PSA	Currently in development
PROGRESS REPORT PERIOD: 1/03 - 6/03	
PROGRAM	**ACTIVITY**
Youth Liaison Officer	Finalized shell grant application Worked with agencies Monitored SPOTLIGHT, Party Patrol, & LOOKOUT grantees Presented at MI Judicial Institute Enhanced Party Patrol training presentation Developed strategic plan/sessions for new grantees
Youth Alcohol Training Officer	Hired two new trainers New trainers shadowed liaison
SPOTLIGHT	Strategic planning meetings reviewed Media plans developed & implemented Community meetings held LEGAL training conducted SPOTLIGHT enforcement implemented
Equipment purchases (enforcement and prevention)	Enforcement: breath testers, alcohol sensors, laptops, LCD projectors MCRUD: server training videos, service announcements, slide sets & CD-roms, video camera, LCD projector, slide projector, TV & VCR

*Based on progress reports provided to UMTRI by EUDL coordinator.

STRATEGIES FOR REDUCING UNDERAGE ALCOHOL USE*

LIMITATIONS ON ACCESS

STRATEGY	PRIORITY	LEVEL OF EFFECTIVENESS
Enforcement of minimum purchase age laws aimed at retailers:		
• Vigorous use of compliance checks	Very High	This strategy has been repeatedly demonstrated to reduce sales of alcohol to minors.
• Application of appropriate sanctions to violating merchants	High	This strategy has not been specifically evaluated. It is an important adjunct to compliance checks.
• Education of merchants regarding techniques and responsibilities	High	This strategy has not bee specifically evaluated, but it can be an important strategy for supporting and sustaining the use of compliance checks.
• Development of community support for enforcement	High	This strategy has not been specifically evaluated, but it can be an important strategy for supporting and sustaining the use of compliance checks.
Improvement of laws related to minimum purchase age:		
• Improve laws regarding minors in possession of alcohol	High	States with more stringent laws have been found to have lower rates of sales to minors.
Controls on availability in general:		
• Increase in price through excise taxes.	Very High	Increased taxes have consistently been found to reduce alcohol consumption and problems, especially among youth.
• Conditional use permits for alcohol outlets	High	This strategy has not been specifically evaluated, but it may be a way of reducing access.
• Controls on outlet location and density	High	Higher density contributes to increased alcohol-related problems. Lower density reduces alcohol-related problems.
• Controls on hours of sale	High	Effects on youth have not been specifically evaluated, but, in general, controls on availability reduce alcohol-related problems.

EXPRESSIONS OF COMMUNITY NORMS AGAINST UNDERAGE USE

STRATEGY	PRIORITY	LEVEL OF EFFECTIVENESS
• Prohibitions or controls on alcohol use at community events or in public areas, which can also be seen as a control on access	High	This strategy has not been specifically evaluated, but it can be a strong expression of community norms and can reduce alcohol access.
• Prohibition of alcohol sponsorship of public events.	High	This strategy has not been specifically evaluated, but it can be a strong expression of community norms.
• Media campaigns, media advocacy, and counteradvertising.	High	Media campaigns have been found to be very important components of enforcement efforts, greatly magnifying their effectiveness.

STRATEGIES BASED IN SCHOOLS AND IN OTHER YOUTH ORGANIZATIONS		
STRATEGY	**PRIORITY**	**LEVEL OF EFFECTIVENESS**
• School policies regarding alcohol use on school property or at school-sponsored events.	High	This strategy has been found to reduce substance use problems.
PREVENTION OF IMPAIRED DRIVING		
STRATEGY	**PRIORITY**	**LEVEL OF EFFECTIVENESS**
• Establishment and enforcement of "zero tolerance" laws for drivers under 21.	Very High	All States now have these laws. They can be very effective in reducing alcohol-related traffic crashes, especially if well-publicized and enforced.
• Sobriety checkpoints for impaired drivers.	Very High	This strategy can be very effective in reducing impaired driving and crashes. Specific effects on youth have not been evaluated.
• Vigorous and well-publicized enforcement of impaired driving laws in general, as well as other traffic enforcement.	High	This strategy has a strong effect on impaired driving. Specific effects on youth have not been evaluated.

*Adapted from Strategies To Reduce Underage Alcohol Use: Typology and Brief Overview, Office of Juvenile Justice and Delinquency Prevention, 1999.

APPENDIX F

Best and Promising Approaches in Enforcing Underage Drinking Laws

BEST PRACTICES IN ENFORCING UNDERAGE DRINKING LAWS *†
Compliance checks   • Conduct regular enforcement actions involving the use of underage decoys who attempt to purchase alcohol.   **DWI Enforcement**   • Enhance enforcement of drinking and driving laws   • Conduct sobriety checkpoints   **Local Policy**   • Restrict zoning (outlet locations and density)   **State Policy**   • Increase excise tax   • Restrict zoning (outlet locations and density)   • Enact .08 blood alcohol content laws for the general population

*≥50% of experts perceived practice to be highly effective and to have high quantity of empirical evidence
†Adapted from National Evaluation Enforcing Underage Drinking Laws Program, Wake Forest University School of Medicine, 2002.

PROMISING PRACTICES IN ENFORCING UNDERAGE DRINKING LAWS *†
DWI Enforcement   • Driving under the influence emphasis patrols   **Other Enforcement Approaches (including training)**   • Training of law enforcement officers to promote better enforcement efforts   • Enforcement and education efforts focused on parents and landlords who allow underage drinking parties to take place on their property   **State Policy**   • Directly increase prices in "control" states in which prices are set by the state   • Enact, or strengthen existing, dram shop liability laws   • Restrict hours of sale   • Require or encourage the use of drivers' license scanners   • Enhance driver's license to facilitate recognition of underage purchase attempts and make license more difficult to falsify   • Enact and promote the use of civil penalties   • Ban concurrent sales of alcohol and gasoline   • Restrict alcohol marketing   **School Policy**   • Enact alcohol policies on college grounds and at college-sponsored events   **Local Policy**   • Prohibit entry of persons under 21 into bars/nightclubs and other "adult" locations   • Require or encourage the use of driver's license scanners   • Restrict the availability of alcohol at community festivals and other community   events   • Restrict alcohol industry sponsorship of public events   • Require conditional use permits   • Ban concurrent sales of alcohol and gasoline   • Restrict alcohol marketing

*≥50% of experts perceived practice to be highly effective but did not perceive high quantity of empirical evidence
†Adapted from National Evaluation Enforcing Underage Drinking Laws Program, Wake Forest University School of Medicine, 2002.

		EUDL SUCCESS STORIES 2000-2005			
Year	State	Program Description	Contact Name	Strategy	Type of initiative
2002	Alabama	P.A.S.S. on drinking: seminars for local merchants re: fake ID identification and youth-access laws; work with law enforcement to conduct and track compliance checks; "designated lanes" program in supermarkets with specific lanes for alcohol purchase	Martha Ellis	Limitation on access; Expressions of community norms; Prevention of impaired driving	Local
2003	Alabama	Graduated Driver's Licensing Law with severe sanctions for drunken driving	Milton Saffold	Prevention of impaired driving	State
2001	Alaska	Anchorage: involve community members in permit approval process for alcohol outlets	Joan Diamond	Limitation on access	Local
2002	Alaska	Increase excise tax on alcohol	Joan Diamond	Limitation on access	State
2003	Arizona	Party patrols accompanied by media advocacy and education	Lt. Brian Kozak	Limitation on access; Strategies based in schools	Local (citywide)
2004	Arkansas	Added enforcement resources = more compliance checks; local police joined with ABC; database for compliance checks on laptops in the field	Kenny Heroman	Limitation on access	State
2003	California	Compliance checks and Social host ordinance: penalize adults for providing alcohol to minors	Judy Wash-Jackson	Limitation on access	Local (citywide)
2005	California	Liquor law enforcement program to immediately investigate collisions, assaults, and other incidents where underage alcohol use is suspected; determine how and where alcohol was obtained; legal consequences for person(s)/retailer who furnished alcohol; Youth conference	Judy Matty	Limitation on access; Prevention of impaired driving	State
2003	Colorado	Country Jam USA festival: instituted specially marked arm bands for minors, no keg beer, only one drink per person at the bar, posting of anti-underage drinking banner, separate "partying" from family campground, anti-underage drinking message on jumbotron	Ruth Michaels	Limitation on access; Expressions of community norms	Local
2000	Connecticut	Glastonbury Alcohol and Drug Council (GLAD) strengthen ordinances and enforcement strategies so that minors drinking on private property can be cited and fined and adult hosts fined	Geralyn Laut	Limitation on Access	Local
2001	Connecticut	Bristol, CN closes loophole to facilitate party patrol enforcement	Patricia Checko	Limitation on access	Local
2004	Connecticut	State does not prohibit minors drinking on private property, but a law to close this loophole is pending. Towns are passing ordinances to prohibit underage drinking on private property unless they are with parent/guardian and to allow officers to issue citations and fines with probable cause	Gary Najarian	Limitation on access	Local and State
2003	Delaware	Environmental model: Mayor's Alcohol Commission formed and helped to enact laws that can be enforced by police, helped to create an alcohol enforcement unit, and helped to bring about an increase in the license fees of outlets to cover additional enforcement; local ordinance to restrict happy hours and discounted drink specials; no alcohol establishments can operate within 300 feet of a dormitory	Tracy Bachman	Limitation on access	Local
2004	District of Columbia	Ban on single container sales	Nadine Parker	Limitation on access	Local (ward 4)
2004	Florida	Ban on beer sales at county fair and youth show	Deborah Schlageter	Limitation on access	Local (countywide)
2003	Georgia	Local ordinance to include mandatory responsible alcohol sales and service workshop for licensees	Cathy Finck	Limitation on access; Prevention of impaired driving	Local (countywide)
2004	Georgia	Increased enforcement and compliance; public awareness efforts and recruit and train youth enforcement teams	Clarise Jackson-Hall/Ronald Johnson/Cathy Finck	Limitation on access; Expressions of community norms	State
2003	Hawaii	Social host law: criminal penalties and/or fines for adults who furnish alcohol to minors; media campaign to educate the public about new law	Donna Gutierrez	Limitation on access; Expressions of community norms	State

2004	Illinois	Merchant/vendor training session geared toward youth; enforcement training for police; increase community awareness; reduction of hours of alcohol sale by one hour each day; compliance checks using underage college students; party patrols; advertising campaign focused on laws related to furnishing alcohol to minors	Kris Povlsen	Limitation on access: Expressions of community norms; Strategies based in schools; Prevention of impaired driving	Local (citywide)
2003	Indiana	Keg tracking legislation/keg ID numbers: purchasers provide a driver's license, home address, and date of birth	Lucy Swalls	Limitation on access	State
2005	Indiana	Mandatory server training bill	Lisa Hutcheson	Prevention of impaired driving	State
2004	Iowa	Keg registration: provide name, address, DLN, and ID sticker for keg	Mary Krier	Limitation on access	Local (countywide)
2002	Kansas	Keg registration ordinance which led to state law	Teresa Walters	Limitation on access	State
2004	Kentucky	Increased enforcement and education for alcohol-licensed establishments; Operation Zero Tolerance conducting retail compliance checks; educating licensees; Cops in Shops; Server Training in Alcohol Regulations program - several communities have passed local ordinances requiring server training and insurance companies are requiring the same prior to issuing liability insurance	Jack Blair	Limitation on access; Prevention of impaired driving	Local and State
2004	Louisiana	Keg tracking legislation/keg ID numbers: purchasers provide a driver's license, and retailers keep information for no less than 6 months	Murphy Painter/Sharron Ayers/Cathy Childers	Limitation on access	State
2005	Maine	Implementation of a written policy on underage drinking; targeted enforcement details; development of a "callout" team who investigate reports of underage drinking parties; increased communication w/parents with school-based parent group presentations/education	Becca Matusovich	Limitation on access; Expressions of community norms; Prevention of impaired driving	
2002	Maryland	Vigorous compliance checks with notice of suspension posted on outlets in violation	Jean Byrd	Limitation on access	Local (countywide)
2002	Massachusetts	Alcohol purchase surveys using adult decoys influenced law enforcement to conduct compliance checks; publicized results of survey; follow up surveys to assess change in selling patterns	Amy Fradette	Limitation on access	Local
2003	Massachusetts	Increase in investigators completing surveillance, fake ID checks, and compliance checks; provide tips to newly licensed establishments	Ted Mahoney	Limitation on access; Prevention of impaired driving	State
2003	Massachusetts	Three years of alcohol purchase surveys using legal but young-looking adults	Amy Fradette	Limitation on access	State
2004	Massachusetts	Rehired investigative and enforcement officers who heightened public awareness, instituted Cops in Shops, Last Call (targeting bars that have served the last drink to a drunk driver or that serves to convicted drunk drivers), and Safe Spring (targeting prom and graduation times). Also launched TIPS on TAPS showing how citizens can report establishments distributing to minors or intoxicated persons	Jamie Binienda	Limitation on access; Expressions of community norms	State
2002	Minnesota	Zero Adult Providers (ZAP): focus on those who provide the alcohol, party patrol officer, publicity campaigns	Jeff Nachbar	Limitation on access; Strategies based in Schools; Expressions of community norms	Local
2002	Minnesota	Ordinance for stiffer penalties for outlets who sell to minors	Pat Bluth	Limitation on access	Local
2003	Minnesota	Keg registration	Leah Preiss	Limitation on access	State
2001	Mississippi	Attorney General blankets state with compliance checks	Bill Perrett	Limitation on access	State
2000	Missouri	Keg registration ordinance with locking, numbered plastic tag	Tempe Humphrey	Limitation on Access	Local
2003	Montana	Minor Alcohol Prevention Program; Identifying Underage Buyers training seminar; compliance checks; keg registration ordinance; reduce BAC to .08	Lisa Posada-Griffin	Limitation on access; Prevention of impaired driving	Local and State
2002	Nebraska	Bill to give Liquor Control Commission discretion to issue graduated sanctions for non-compliant outlets	Project Extra Mile	Limitation on access	State
2003	Nebraska	Party patrol project ; new state digital driver's license and adoption of special conditions for high-risk establishments in Lincoln	Tom Workman	Limitation on access	Local and State

2004	Nebraska	Vigorous compliance checks and media campaigns initiated by Project Extra Mile along with community based coalitions	Diane Riibe	Limitation on access; Expressions of community norms	Local (citywide)
2005	Nebraska	End to BYOB on city property (rentals of city facilities, host receptions, other celebrations); special liquor license for events held on city property; service of alcohol through license caterer, nonprofit org., or onsite retailer; security hired by event holders and approved through police; refundable deposit paid by event holders	Diane Riibe	Limitation on access; Expressions of community norms; Prevention of impaired driving	Local (citywide)
2000	Nevada	Compliance checks prevent alcohol sales to minors; Local Policy Options training for various individuals	Kathy Bartosz	Limitation on access; Prevention of impaired driving	State (7 counties)
2002	Nevada	Athletes and alcohol: would-be athletes and parents attend info meeting and students bound to policy with varying levels of sanctions for 1, 2, and 3rd offense	Eddie Bonine	Limitation on access, Strategies based in schools	Local (countywide pilot for statewide adoption)
2002	Nevada	Compliance checks: close loophole in law stating that seller has no obligation to ask for ID by enacting local ordinance with seller liability and prohibit sales to minors	Diane Pidsosny	Limitation on access	Local
2004	New Hampshire	Regular enforcement and tougher penalties for alcohol outlets	Chief Aidan Moore	Limitation on access	Local (citywide)
2004	New Mexico	Training and education for non-compliant retailers, merchant recognition program, public awareness efforts using media, media literacy course; students assisting with compliance checks	Annjenette Torres	Limitation on access; Expressions of community norms; Strategies based in schools; Prevention of impaired driving	Local (countywide)
2004	New York	Enhanced patrols using multi-jurisdictional operations and officers; compliance checks; enhanced enforcement; aggressive media campaign	Margaret Brennan	Limitation on access; Expressions of community norms	Local (countywide)
2001	North Carolina	Limit alcohol sales in urban redeveloped areas	Octavia Rainey	Limitation on access	State
2001	Ohio	Revises rule governing keg purchases	Jewel Neely	Limitation on access	State
2004	Ohio	Ohio State will prohibit alcohol ads on local radio broadcasts of its games in 2004	Holly Zweizig	Expressions of community norms	Local (University)
2003	Oklahoma	Tribe passed underage drinking policy	June Hamilton	Limitation on access	Local
2001	Oregon	Increase communication with college and community; implement a social norms-based campaign; alcohol-free alternatives	Susan Chambers	Limitation on Access; Expressions of Comm Norms	Local
2002	Oregon	Parental responsibility: Ordinance stating parents will be fined for underage drinking or unlawful acts committed by child	Janet Jones	Limitation on access	Local
2005	Pennsylvania	Ordinances: open container expanded to include private property; excessive targets large late-night parties; town can recover costs assoc. with calls for service; limit on attendance to gatherings and requires party hosts to get a permit; requires hearing before town council to transfer a liquor license; hardwired and interconnected smoke detectors in off-campus student housing; off-campus student housing regularly inspected	Chief Leo Sokoloski	Limitation on access	Local (citywide)
2004	Puerto Rico	Code of Order: prohibits alcohol sales to minors, outdoor alcohol sales, consumption of alcohol in public spaces, sale of alcohol in glass containers, sale of alcohol from motor vehicles or portable refrigerators, drinking within a motor vehicle, and loud noise	Jose Malave	Limitation on access	State
2002	Rhode Island	Fake ID seizure: bars call local police upon suspicion of a fake ID	Officer Kevin Parsonage	Limitation on access	Local
2003	Rhode Island	Keg registration law	Brenda Amodei	Limitation on access	State
2004	South Carolina	Multijurisdictional alcohol enforcement teams: compliance checks; party patrols; traffic safety checkpoints; traffic stops; shoulder taps	Shannon W. Anderson	Limitation on access; Prevention of impaired driving	State (multi counties and cities)

2002	Texas	Education and enforcement: police, U.S. Customs, and Alcoholic Beverage Commission representatives inform youth crossing into Mexico of legal conseq. of underage drinking and take youth returning to the U.S. and under the influence, into custody	Elizabeth Limon Garza	Limitation on access	Local
2004	Texas	Parental notification policy; training provided for college "teams"	Ellen Ward/Mary Hill	Limitation on access; Expressions of community norms; Strategies based in schools	Local and State (colleges)
2005	Texas	College and enforcement teams curb alcohol promotions on campus	Mary Hill/Marveen Mahon/Lt. Christine Guerra	Expressions of community norms	Local (college)
2003	Utah	Beer-handler's permit for persons working in bar, restaurant, store, or other alcohol outlet followed by compliance checks	Corporal Sheldon Barney	Limitation on access; Prevention of impaired driving	Local
2002	Vermont	Stop Teen Alcohol Risk Teams (START): enforcement (party patrols), prevention, education, and intervention/treatment with focus on environmental change	Dominic Cloud	Limitation on access	State
2002	Virginia	Keg registration ordinance	Gerald Spates	Limitation on access	Local
2004	Washington	Meaningful evaluation of programs identifying specific problems and offering effective and appropriate strategies	Aaron Starks		State
2002	West Virginia	Compliance checks; technology involving scanning devices that identify licensee's file; press releases on outlets that passed or failed compliance checks	David Plantz	Limitation on access; Expressions of community norms	State
2003	Wisconsin	Alcohol free county fair	Sarah Hibbard	Expressions of community norms	Local
2005	Wyoming	Marketing and education campaign; letter thanking bars and stores for not selling to under 21 airmen or their establishment is off limits to all air force base personnel; alcohol screening and education and treatment for abusers; off duty alternatives for minors	Sharon Guerney	Limitation on access; Expressions of community norms; Prevention of impaired driving	Local

APPENDIX H

	STATE EUDL REPRESENTATIVES INTERVIEWED			
STATE	NAME	TITLE	AGENCY	LENGTH OF INVOLVEMENT
OH	Holly Zweizig	Assistant Director and Project Director	Ohio Parents for Drug Free Youth	6 years
MA	Rebecca Donatelli	Program Coord.	Governor's Highway Safety Bureau	5 years
CT	Valerie Lamotte	Planning Specialist	Office of Policy Management	7 years
NM	AnnJenette Torres	EUDL Coordinator	NM Children, Youth, and Families Department, Prevention and Intervention	3 years
NE	Fred Zwonchek	Administrator and EUDL Coordinator	NE Office of Highway Safety, Department of Motor Vehicles	8 years
CO	Kenneth Peterson	Chief Investigator	CO Department of Revenue, Liquor Enforcement Division	6 months
CA	Dennis Hall	Associate Governmental Program Analyst	CA Office of Traffic Safety: Bus	3 years: was coord. previously
OR	Jeff Ruscoe	Statewide Prevention Coordinator	Department of Human Services	1.5 years
WA	Aaron Starks	Statewide Reducing Underage Drinking Coordinator	Department of Social and Health Services, Division of Alcohol and Substance Abuse Prevention	2.5 years
WI	Blinda Beason	Youth Alcohol Program Manager	Department of Transportation, Division of State Patrol, Bureau of Transportation Safety	6 years
TX	Joel Moreno	Deputy Assistant, Chief of Enforcement	Alcoholic Beverage Commission, Enforcement Regulatory Agency	1 year
NV	Kathy Bartosz	Statewide EUDL Coordinator	NV Juvenile Justice Programs Office	7 years
PA	Mary Beth Wolfe	EUDL Coordinator	Liquor Control Board, Bureau of Alcohol Education	3.5 years
AL	Rhonda Pines	Traffic Safety Section Chief	AL Department of Economic and Community Affairs, Law Enforcement Traffic Safety	3 years
SC	Michelle Nienhius	Prevention Consultant	Department of Alcohol and Other Drug Abuse Services	8 months
MN	Sharon Johnson	Youth/Alcohol Programs Coordinator	Minnesota Department of Public Safety	7 years
IL	Mary Ellen Matte	EUDL Acting Coordinator	Department of Human Services	6 years

APPENDIX I

Level of Involvement of State Agencies in EUDL Program: Qualitative Interviews with EUDL Representatives

LEVEL OF INVOLVEMENT OF STATE AGENCIES IN EUDL PROGRAM			
AGENCY	HIGH FREQ (%)	MODERATE FREQ (%)	LOW FREQ (%)
Highway safety	12 (70.6%)	2 (11.8%)	3 (17.6%)
State police	11 (64.7%)	3 (17.6%)	3 (17.6%)
Substance abuse prevention and treatment	8 (47.1%)	7 (41.2%)	2 (11.8%)
Alcohol Beverage Commission (ABC)*	10 (62.5%)	5 (29.4%)	1 (5.9%)
Juvenile Justice	7 (41.2%)	6 (35.3%)	4 (23.5%)
Governor's Office	8 (47.1%)	4 (23.5%)	5 (29.4%)
Attorney General	4 (23.5%)	4 (23.5%)	11 (64.7%)
Human Services	8 (47.1%)	3 (17.6%)	5 (29.4%)
Education	5 (29.4%)	6 (35.3%)	6 (35.3%)

*The state of Nevada does not have an ABC.

APPENDIX J

Pre/Post EUDL Statewide Drinking Crash Analysis

To determine if there have been changes in underage drinking and driving vehicle crashes in Michigan after the initiation of the EUDL program, Michigan vehicle crash data from 1999-2003 was divided into 3 three-year periods, the pre-EUDL period (1995 through 1997), the Post-EUDL 1 period (1998 through 2000), and the post-EUDL 2 period (2001-2003). Crash involvement of drinking drivers under age 21 was examined for each of these time periods and compared to the crash involvement of drivers under age 21 who had not been drinking. The crash patterns of drinking and non-drinking drivers under age 21 were also compared to those of crash-involved drivers age 21 and older. The reason for the comparisons was to determine if there were different changes between crash involvement of underage drinking drivers and older drinking drivers and also between the crash involvement of underage drinking drivers and underage non-drinking drivers. Crashes in each period were examined by two age groups (under 21 and 21 years of age and older), by whether the driver was recorded as "had been drinking" in the crash record, by sex, weekday/weekend, month, and time of day. The annual average number of crashes and their proportion for each time period is reported in each analysis. It should be noted that any changes in crash patterns identified here cannot be attributed to the EUDL program or to any other specific program. While the EUDL or other programs may have contributed to changes, this analysis does not attribute causation, but simply identifies trends over time periods of interest.

Table 1 shows the average annual number of vehicle crashes for drivers by age group. Although the total number of crashes decreased by 12% for the younger age group and by 6.8% for the older age group, the relative proportions of crash involvement by age group remained the same (i.e., younger drivers were involved in 17% of the vehicle crashes in all three periods).

TABLE 1. CRASH-INVOLVED DRIVERS BY LEGAL DRINKING AGE AND EUDL PERIOD			
Year	Under 21 Years Average Number (%)	21 Years and Older Average Number (%)	Total
Pre EUDL 1995-1997	107,628 (16.9%)	527,567 (83.1%)	635,195
Post EUDL 1 1998-2000	104,579 (16.8%)	517,385 (83.2%)	621,965
Post EUDL 2 2001-2003	99,019 (16.8%)	491,563 (83.2%)	590,582
% change Pre EUDL to Post EUDL2	-12%	-6.8%	-7.0%

Table 2 shows the number of crashes involving drivers who had been drinking and the number of crashes involving drivers who had not been drinking by age group for each time period. Overall, the number of crashes involving drinking drivers decreased from the pre-EUDL to the post-EUDL 2 period by 27.5%, and the number of crashes involving non-drinking drivers decreased by 5.4%. The decrease in the number of crashes involving drinking drivers under age 21 decreased by 15%. However, the number of crashes involving drinking drivers age 21 and older decreased by almost 30%. Among non-drinking drivers crash-involvement decreased by 5% for those under 21 and by 5% for those 21 years of age and older.

Although the numbers of crashes in each category decreased, the proportion of drinking crash-involved drivers who were under 21 years increased from 10% in the pre-EUDL period to 12% in the post-EUDL 2 period. At the same

time, the proportion of non-drinking crash-involved drivers under age 21 was almost constant (17.6% in the pre-EUDL period and 17.3% in the post EUDL 2 period).

TABLE 2: CRASH-INVOLVED DRIVERS BY DRINKING INFORMATION, LEGAL DRINKING AGE, AND EUDL PERIOD				
Year	Drinking Driver		Non-Drinking Driver	
	Under 21 Years Number (%)	21 Years and Older Number (%)	Under 21 Years Number (%)	21 Years and Older Number (%)
Pre EUDL 1995-1997	2,137 (10.2%)	18,838 (89.8%)	95,672 (17.6%)	447,069 (82.4%)
Post EUDL 1 1998-2000	1,985 (11.1%)	15,881 (88.9%)	93,690 (17.5%)	440,807 (82.5%)
Post EUDL 2 2001-2003	1,816 (11.9%)	13,385 (88.1%)	89,018 (17.3%)	424,442 (82.7%)
% change Pre EUDL to Post EUDL2	-15%	-28.9%	-7.0%	-5.1%

Table 3 shows the proportions of drinking and non-drinking crash-involved drivers in each of the two age groups over the three time periods. The proportion of drinking drivers among crash-involved drivers under age 21 remained at about 2%. At the same time, the proportion among crash-involved drinking drivers age 21 and older decreased slightly from 4% to 3%. Whether the 1% difference is a start of a trend or just a chance variation remains to be seen.

TABLE 3: CRASH- INVOLVED DRIVERS BY DRINKING INFORMATION, LEGAL DRINKING AGE AND EUDL PERIOD				
Period	Drinking Driver and under 21 years Number (%)	Non-Drinking Driver and under 21 years Number (%)	Drinking Driver and 21 years and Older Number (%)	Non-Drinking Driver and 21 years and Older Number (%)
Pre EUDL 1995-1997	2,137 (2.2%)	95,672 (97.8%)	18,837.7 (4.0%)	4470,68.7 (96.0%)
Post EUDL 1 1998-2000	1,985 (2.1%)	93,690.3 (97.9%)	15,881 (3.5%)	440,807 (96.5%)
Post EUDL 2 2001-2003	1,816 (2.0%)	89,018 (98.0%)	13,385 (3.1%)	42,4442 (96.9%)

Tables 4a and 4b show that the distribution of crashes involving drinking and non-drinking drivers in each age group by sex is quite stable and has not changed over the three time periods. Men constitute 80% of drinking crash-involved drivers in both age groups and 56-58% of non-drinking crash-involved drivers in both age groups.

TABLE 4A: CRASH-INVOLVED DRIVERS UNDER 21 YEARS OF AGE BY DRINKING INFORMATION, SEX, AND EUDL PERIOD				
Period	Drinking Driver		Non-Drinking Driver	
	Male	Female	Male	Female
Pre EUDL 1995-1997	1,520 (80.0%)	381 (20.0%)	54,828 (58.2%)	39,350 (41.8%)
Post EUDL 1 1998-2000	1,604 (81.6%)	362 (18.4%)	53,091 (57.4%)	39,409 (42.6%)
Post EUDL 2 2001-2003	1,434 (80.4%)	350 (19.6%)	48,881 (55.9%)	38,612 (44.1%)
% change Pre EUDL to Post EUDL2	-5.7%	-8.1%	-10.8%	-1.3%

TABLE 4B: CRASH-INVOLVED DRIVERS 21 YEARS OF AGE AND OLDER BY DRINKING INFORMATION, SEX, AND EUDL PERIOD				
Period	Drinking Driver		Non-Drinking Driver	
	Male	Female	Male	Female
Pre EUDL 1995-1997	14,828 (80.2%)	3,663 (19.8%)	254,770 (57.9%)	185,287 (42.1%)
Post EUDL 1 1998-2000	12,486 (79.6%)	3,208 (20.4%)	250,974 (57.6%)	185,059 (42.4%)
Post EUDL 2 2001-2003	10,331 (79.6%)	2,809 (21.4%)	236,665 (56.8%)	180,299 (43.2%)
% change Pre EUDL to Post EUDL2	-30.3%	-23.2%	-7.1%	-2.7%

Tables 5a and 5b show that overall number of crashes on weekends decreased more than the number of crashes on weekdays between the pre-EUDL and post-EUDL 2 periods. The largest percent decrease was for drinking drivers on weekends (16%). However, the proportions of weekend and weekday crashes for drinking and non-drinking drivers in each age group did not change much in the three time periods. The tables also show that almost two-thirds of crashes for underage drinking drivers occur on weekends. The proportion of drink driving crashes among drivers age 21 and older that occur on weekends is a little lower at 59-60%. For non-drinking drivers, the proportion of crashes on weekends is a little higher for the younger drivers at 41-42% as compared to 38-39% for the older age group.

TABLE 5A: CRASH-INVOLVED DRIVERS UNDER 21 YEARS OF AGE BY DRINKING INFORMATION, WEEKEND/WEEKDAY AND EUDL PERIOD				
Year	Drinking Driver		Non-Drinking Driver	
	Weekend	Weekday	Weekend	Weekday
Pre EUDL 1995-1997	1,418 (66.4%)	719 (33.6%)	40,371 (42.2%)	55,301 (57.8%)
Post EUDL 1 1998-2000	1,306 (65.8%)	680 (34.2%)	38644 (41.2%)	55046 (58.7%)
Post EUDL 2 2001-2003	1185 (65.3%)	631 (34.7%)	36,625 (41.1%)	52,393 (58.9%)
% change Pre EUDL to Post EUDL2	-16.4%	-12.2%	-9.3%	-5.3%

TABLE 5B: CRASH-INVOLVED DRIVERS 21 YEARS OF AGE AND OLDER BY DRINKING INFORMATION, WEEKEND/WEEKDAY AND EUDL PERIOD				
Year	Drinking Driver		Non-Drinking Driver	
	Weekend	Weekday	Weekend	Weekday
Pre EUDL 1995-1997	11,295 (60.0%)	7,543 (40.0%)	174,472 (39.0%)	272,597 (61.0%)
Post EUDL 1 1998-2000	9,377 (59.0%)	6,504 (41.0%)	167,573 (38.0%)	273,234 (62.0%)
Post EUDL 2 2001-2003	7,871 (58.8%)	5,514 (41.2%)	160,735 (37.9%)	263,707 (62.1%)
%change Pre EUDL to Post EUDL 2	-30.3%	-26.9%	-7.9%	-3.3%

Figures 1-8 show the distribution of crashes by month and time period for drinking and non-drinking drivers under age 21, and for drinking and non-drinking drivers age 21 years and older. The data tables for each figure are also shown.

	Jan	Feb	Mar	Apr	May	June	July	Aug	Sept	Oct	Nov	Dec
1995-1997	156	139	152	166	173	208	215	198	196	184	183	169
1998-2000	168	122	131	146	191	187	212	197	165	180	144	143
2001-2003	129	104	130	122	151	179	188	189	156	167	158	145

Figure 1: Crashes Involving Underage Drinking Drivers by Month, 1995-2003.

	12a.m-3a.m.	3a.m.-6a.m.	6a.m.-9a.m.	9a.m.-12p.m.	12p.m.-3p.m.	3p.m.-6p.m.	6p.m.-9p.m.	9p.m.-12a.m.
1995-1997	817	206	56	42	53	123	273	355
1998-2000	710	254	71	40	53	103	221	304
2001-2003	628	249	72	28	32	88	175	263

Figure 2: Crashes Involving Underage Drinking Drivers by Time of Day, 1995-2003

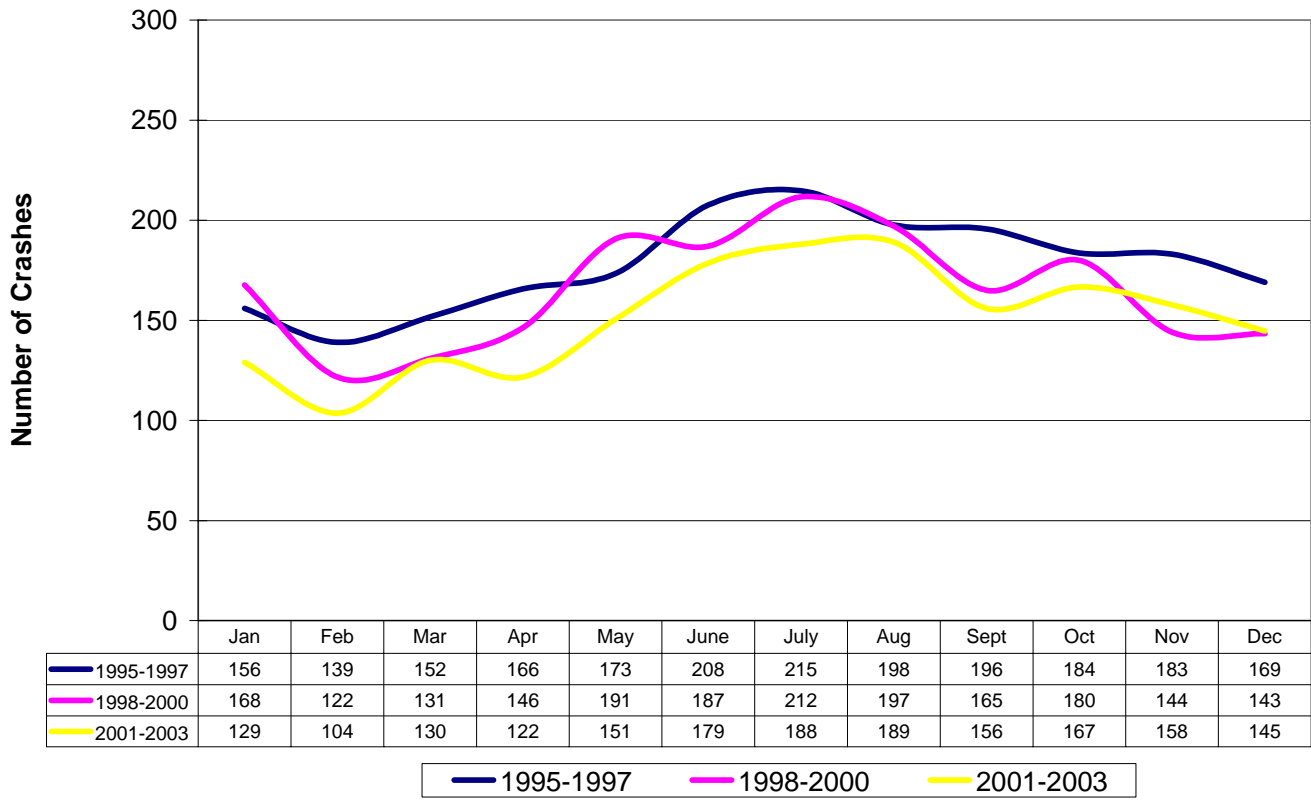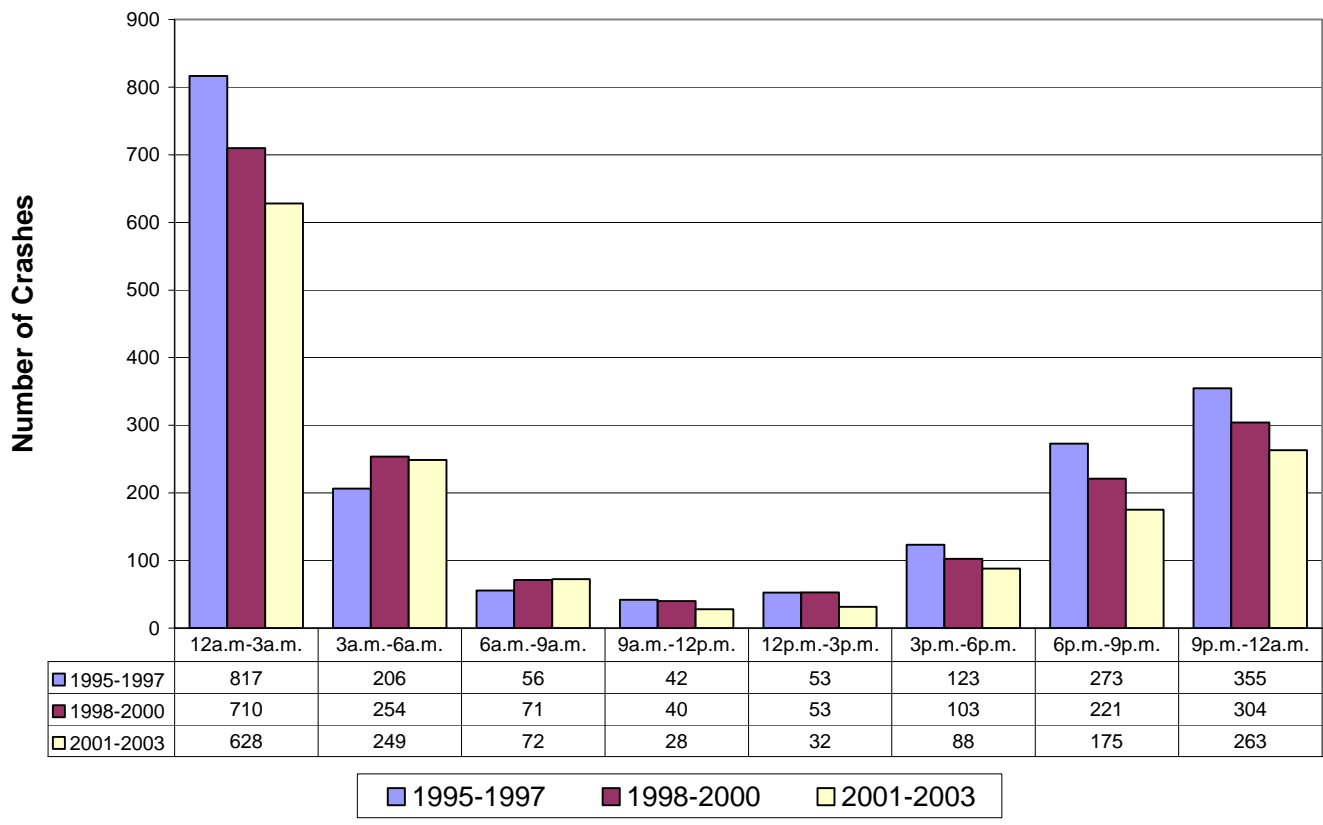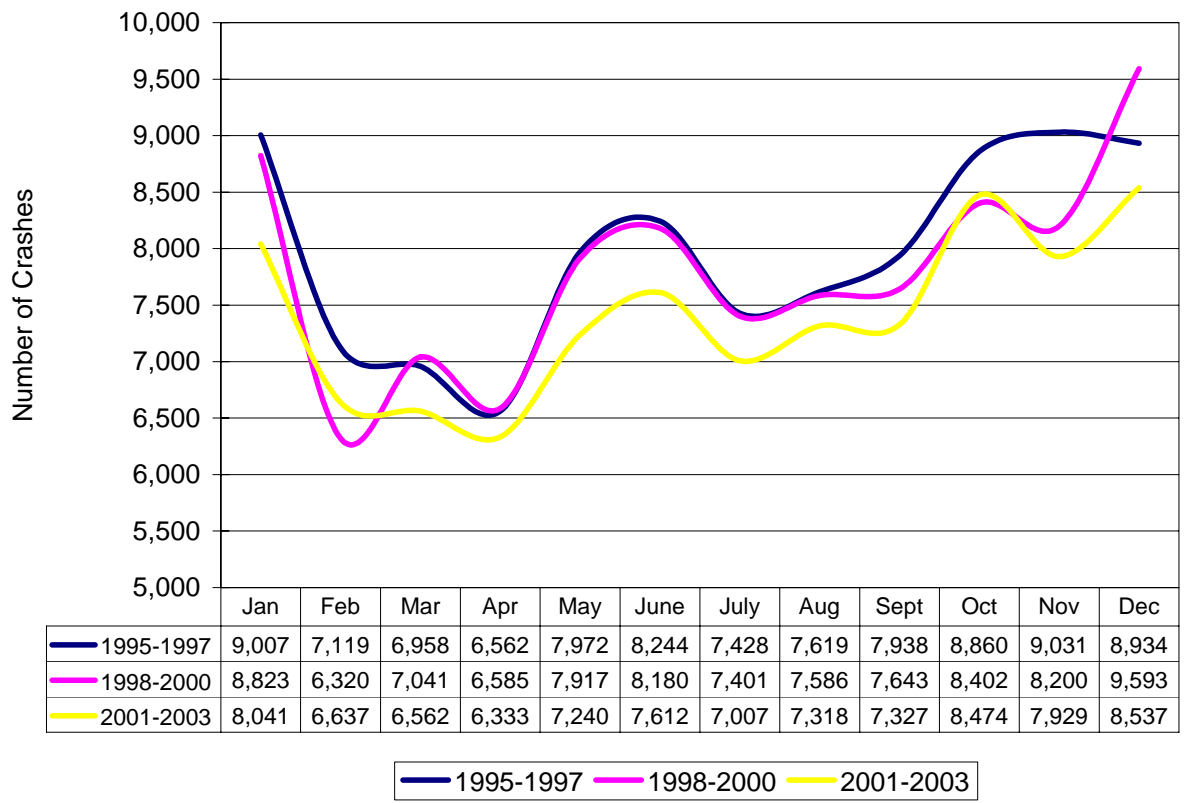|	Jan	Feb	Mar	Apr	May	June	July	Aug	Sept	Oct	Nov	Dec
1995-1997	9,007	7,119	6,958	6,562	7,972	8,244	7,428	7,619	7,938	8,860	9,031	8,934
1998-2000	8,823	6,320	7,041	6,585	7,917	8,180	7,401	7,586	7,643	8,402	8,200	9,593
2001-2003	8,041	6,637	6,562	6,333	7,240	7,612	7,007	7,318	7,327	8,474	7,929	8,537

Figure 3: Crashes Involving Underage Non-Drinking Drivers by Month, 1995-2003

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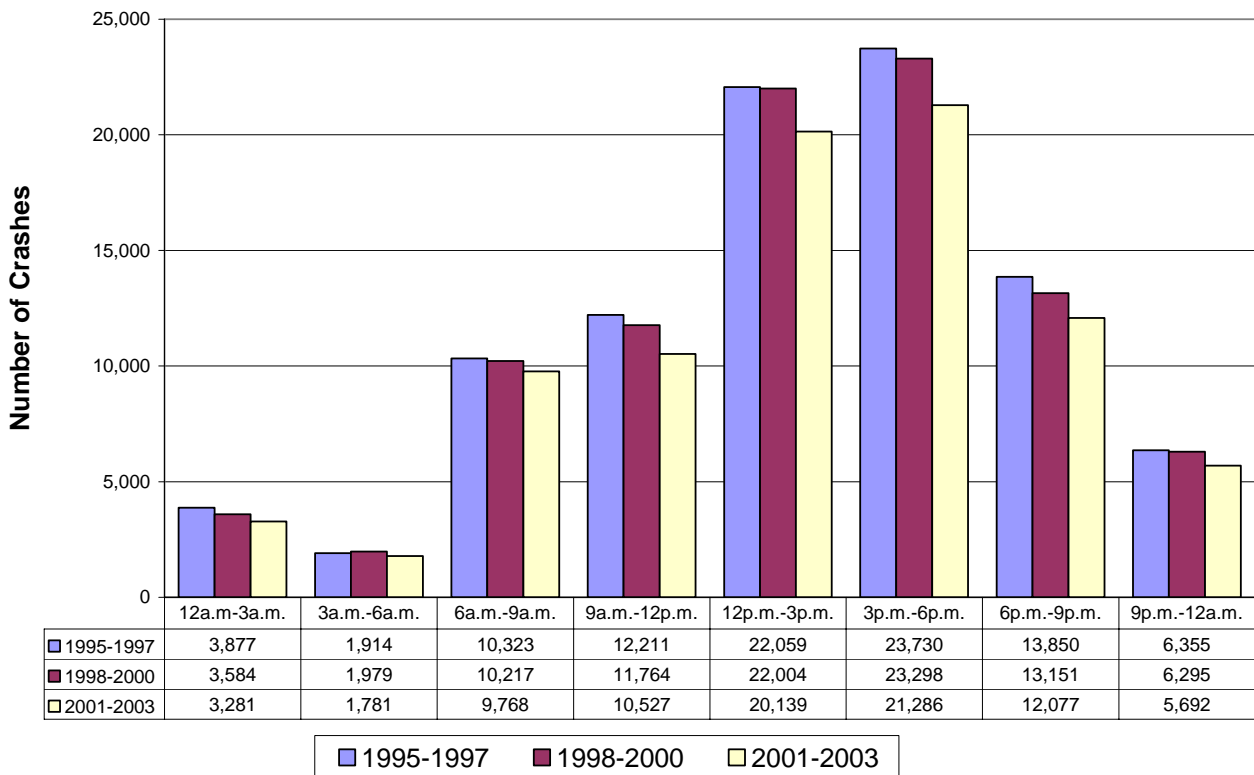
Figure 4: Crashes Involving Underage Non-Drinking Drivers by Time of Day, 1995-2003

	12a.m-3a.m.	3a.m.-6a.m.	6a.m.-9a.m.	9a.m.-12p.m.	12p.m.-3p.m.	3p.m.-6p.m.	6p.m.-9p.m.	9p.m.-12a.m.
1995-1997	3,877	1,914	10,323	12,211	22,059	23,730	13,850	6,355
1998-2000	3,584	1,979	10,217	11,764	22,004	23,298	13,151	6,295
2001-2003	3,281	1,781	9,768	10,527	20,139	21,286	12,077	5,692

Figure 5: Crashes Involving Drinking Drivers 21 Years of Age and Older by Month, 1995-2003

	Jan	Feb	Mar	Apr	May	June	July	Aug	Sept	Oct	Nov	Dec
1995-1997	1,654	1,437	1,511	1,416	1,540	1,502	1,503	1,573	1,524	1,584	1,757	1,837
1998-2000	1,459	1,172	1,256	1,200	1,339	1,283	1,366	1,349	1,280	1,363	1,291	1,522
2001-2003	1,126	993	1,096	1,019	1,053	1,098	1,108	1,189	1,152	1,163	1,149	1,239

**Crashes Involving Drinking Drivers 21 Years of Age and Older by Time of Day,
1995-2003**

	12a.m-3a.m.	3a.m.-6a.m.	6a.m.-9a.m.	9a.m.-12p.m.	12p.m.-3p.m.	3p.m.-6p.m.	6p.m.-9p.m.	9p.m.-12a.m.
1995-1997	5,142	923	345	573	1,114	2,682	3,840	3,076
1998-2000	4,285	863	338	474	956	2,215	3,223	2,501
2001-2003	3,658	738	295	352	694	1,710	2,462	2,058

□ 1995-1997   ■ 1998-2000   □ 2001-2003

Figure 6: Crashes Involving Drinking Drivers 21 Years of Age and Older by Time of Day, 1995-2003

	Jan	Feb	Mar	Apr	May	June	July	Aug	Sept	Oct	Nov	Dec
1995-1997	44,310	34,932	32,877	30,425	35,255	35,031	32,185	32,439	35,398	42,689	46,442	45,086
1998-2000	42,955	30,283	33,578	31,606	36,134	35,897	32,626	33,189	35,243	40,886	41,830	46,580
2001-2003	39,460	31,535	31,416	30,212	33,912	34,677	31,987	33,202	34,057	40,880	41,291	41,813

—— 1995-1997   —— 1998-2000   —— 2001-2003
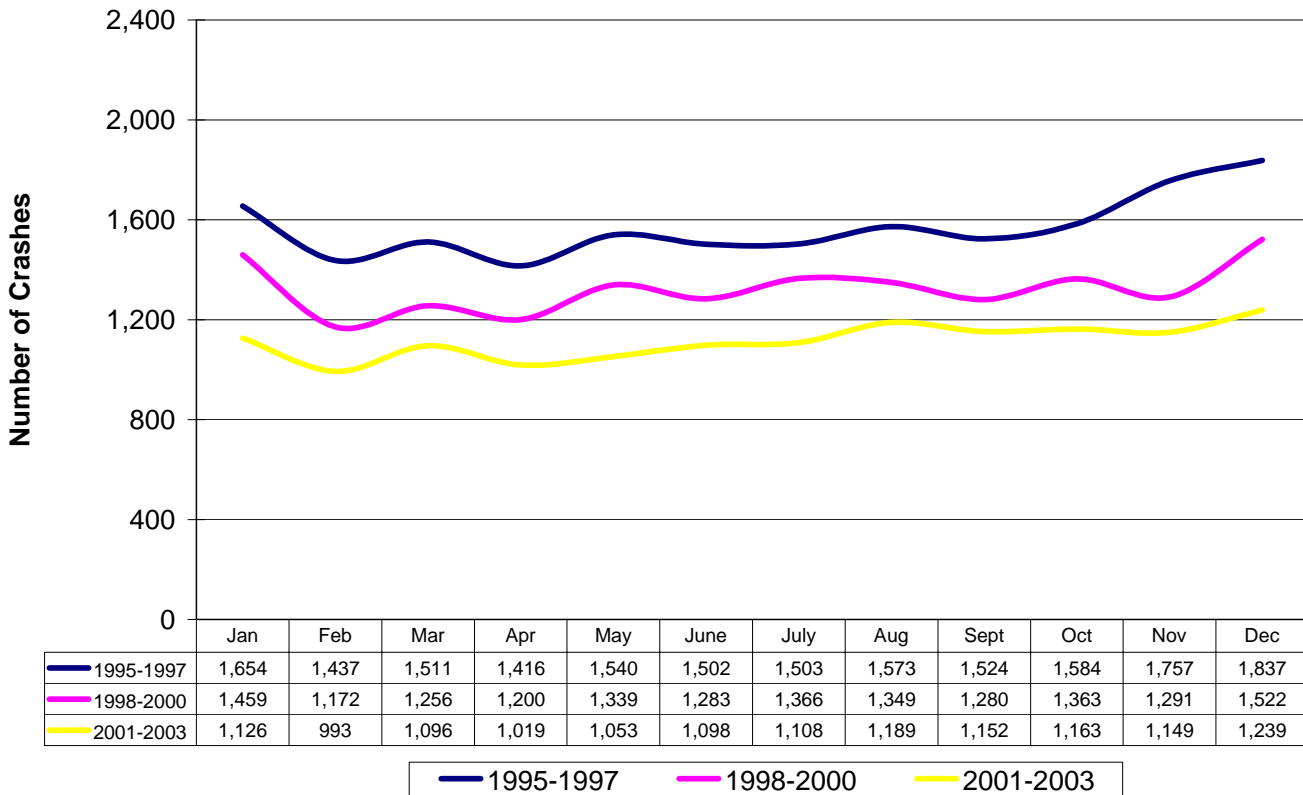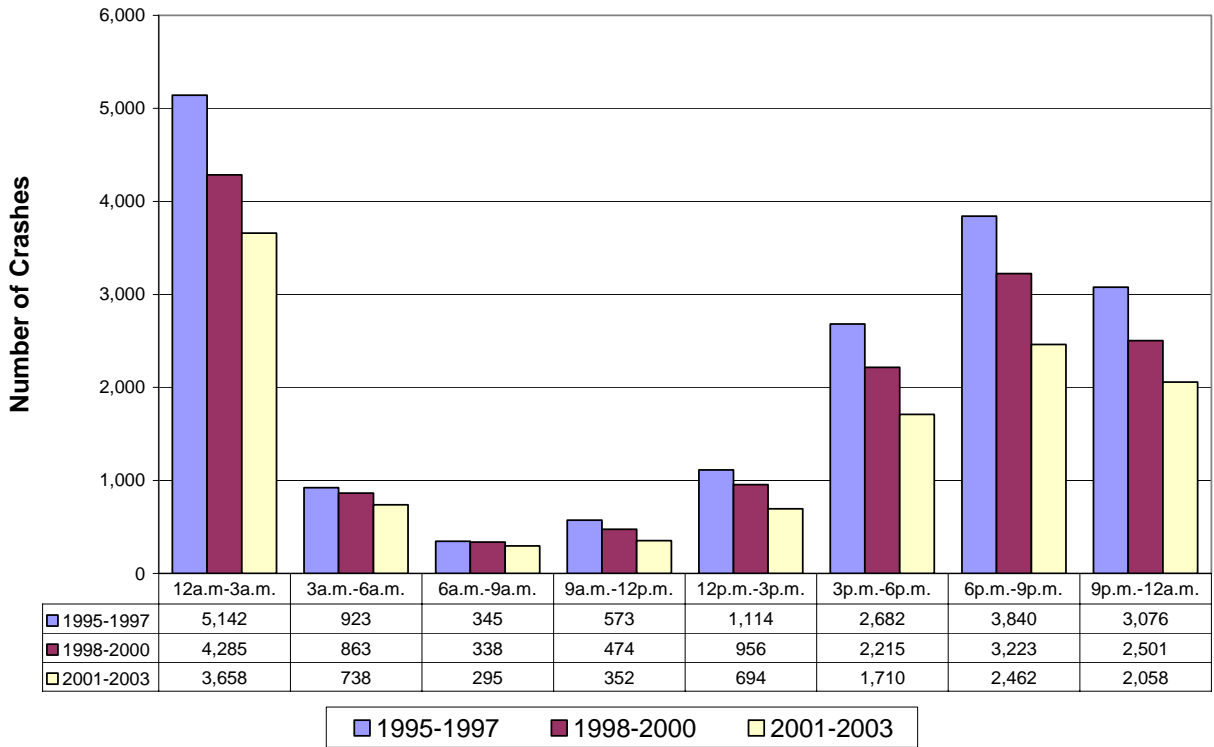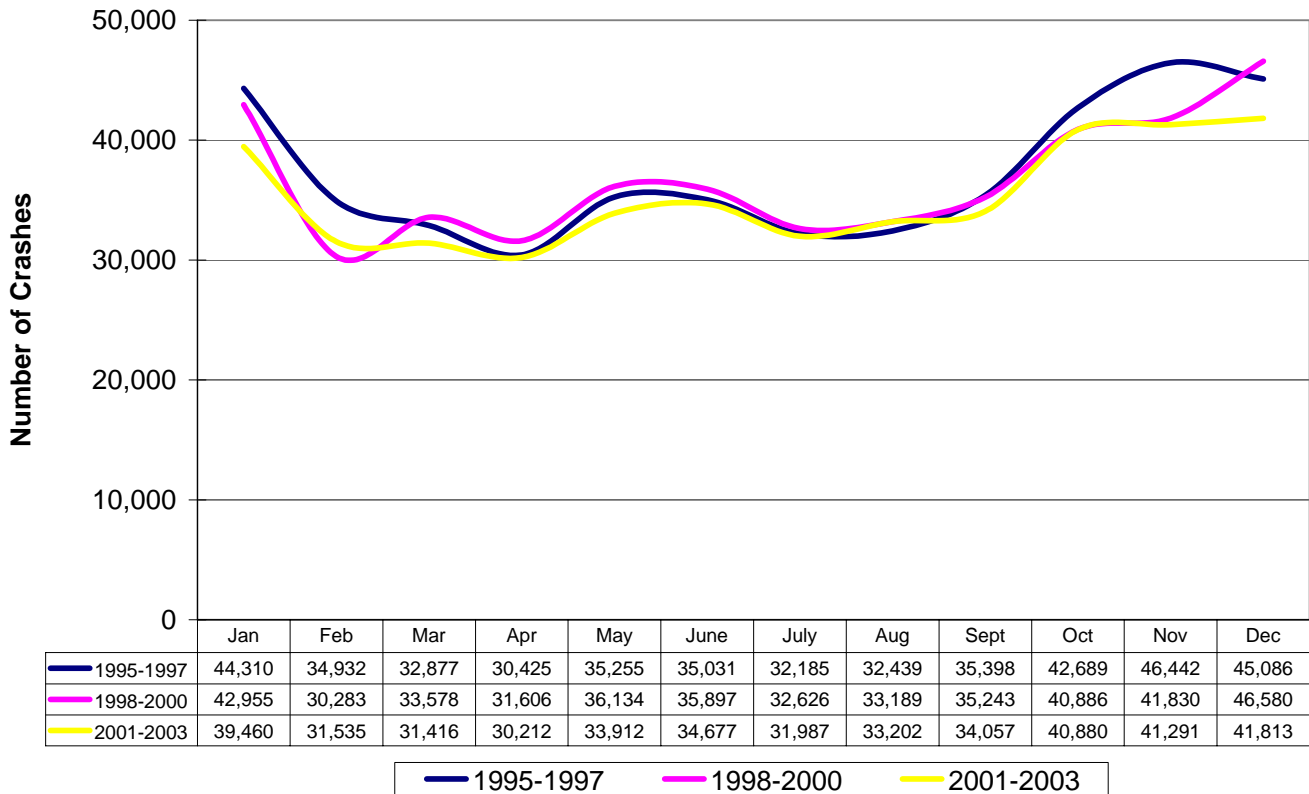
Figure 7: Crashes Involving Non-Drinking Drivers 21 Years of Age and Older by Month, 1995-2003

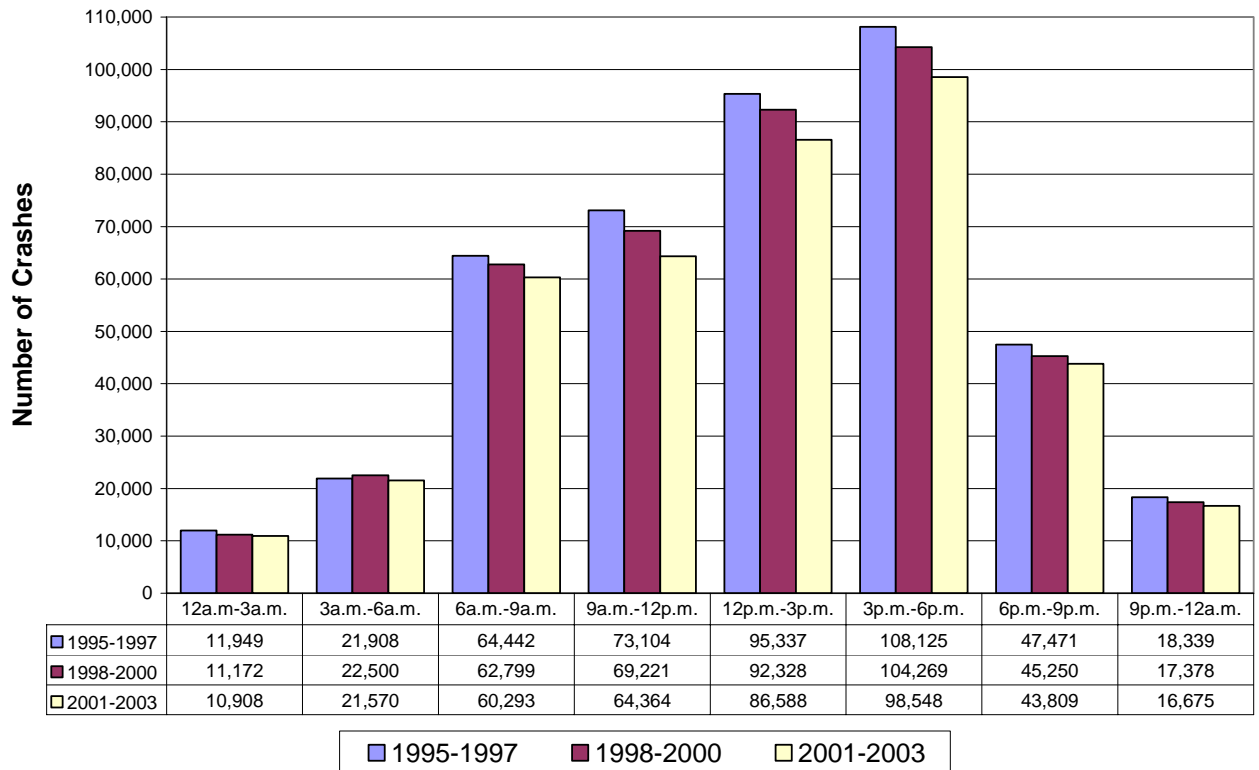**Figure 8: Crashes Involving Non-Drinking Drivers 21 Years of Age and Older by Time of Day, 1995-2003**

	12a.m-3a.m.	3a.m.-6a.m.	6a.m.-9a.m.	9a.m.-12p.m.	12p.m.-3p.m.	3p.m.-6p.m.	6p.m.-9p.m.	9p.m.-12a.m.
1995-1997	11,949	21,908	64,442	73,104	95,337	108,125	47,471	18,339
1998-2000	11,172	22,500	62,799	69,221	92,328	104,269	45,250	17,378
2001-2003	10,908	21,570	60,293	64,364	86,588	98,548	43,809	16,675

Examining the distribution of crashes by month shows a clear downward trend in the number of crashes over the three time periods for drinking and non-drinking drivers in both age groups. Although the changes for crashes involving non-drinking drivers age 21 and over (Figure 7) are small, they do show a decreasing trend.

The pattern of drink driving crashes among underage drinking drivers is different than that of the older drinking drivers and also different than that of non-drinking underage drivers. The peak months of drink driving crashes among underage drivers are June, July, and August (Figure 1). Although the numbers of crashes decreased with each time period, the monthly pattern remained the same. The pattern of drinking-driving crashes for drivers age 21 and older does not exhibit a summer time peak (Figure 5). It is relatively flat with a slight increase in November, December, and January. The monthly pattern of crashes for non-drinking drivers under age 21 (Figure 3) is similar to that of non-drinking drivers age 21 and older (Figure 7). The peaks in crashes for both age groups occur in November, December, and January. The patterns of peak months have remained relatively stable for all groups over the 3 time periods.

The distributions of crashes by time of day show similar patterns for drinking drivers of both age groups and also for non-drinking drivers of both age groups. The peak period of crashes for drinking drivers is from 12 midnight to 3:00 AM (Figures 2 and 6). The peak periods of crashes for non-drinking drivers are from 3:00- 6:00 pm and from 12:00 -3:00 pm (Figures 4 and 8).