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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This report is based on information that was provided to us by the Michigan Office of Highway Safety Planning or that we became aware of during the course of the review and acquired on our own. There may be other information about EUDL program that we did not review. Our conclusions are based on the information that was available to us.

The opinions, findings, and conclusions expressed in this publication are those of the authors and not necessarily those of the Michigan Office of Highway Safety Planning or the U.S. Department of Justice, Office of Juvenile Justice and Delinquency Prevention (OJJDP). This report was prepared in cooperation with the Michigan Office of Highway Safety Planning.

We are grateful to all of the people associated with Michigan’s EUDL program and programs outside of Michigan who took the time to speak with us about their experiences with EUDL.

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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)

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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 straightforward 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 seen 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 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 straightforward 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 drinking 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 Intoxication 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.
REFERENCES


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

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<tr>
<th>Fiscal Year</th>
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*Summarized from state grant proposals provided to UMTRI by EUDL coordinator.
# APPENDIX B

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

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<th>PROGRAM</th>
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<tr>
<td>Party Patrol/LOOKOUT</td>
<td>St Ignace Police</td>
<td>Mackinac</td>
<td>9990</td>
<td>2002</td>
<td>2004</td>
<td>10</td>
<td>8</td>
<td>22</td>
</tr>
<tr>
<td>Party Patrol/LOOKOUT</td>
<td>Big Rapids DPS</td>
<td>Mecosta</td>
<td>17688</td>
<td>2002</td>
<td>2004</td>
<td>12</td>
<td>8</td>
<td>20</td>
</tr>
<tr>
<td>Project Type</td>
<td>Agency</td>
<td>City</td>
<td>Code</td>
<td>Start Year</td>
<td>End Year</td>
<td>ID</td>
<td>Staff</td>
<td>FTEs</td>
</tr>
<tr>
<td>----------------------------</td>
<td>----------------------</td>
<td>-----------</td>
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<td>------------</td>
<td>----------</td>
<td>----</td>
<td>-------</td>
<td>------</td>
</tr>
<tr>
<td>Party Patrol</td>
<td>Alpena Co Sheriff</td>
<td>Alpena</td>
<td>14000</td>
<td>2003</td>
<td>2004</td>
<td>3</td>
<td>8</td>
<td>17</td>
</tr>
<tr>
<td>Party Patrol/LOOKOUT</td>
<td>Allegan Co Police</td>
<td>Allegan</td>
<td>17905</td>
<td>2003</td>
<td>2004</td>
<td>4</td>
<td>8</td>
<td>16</td>
</tr>
<tr>
<td>Party Patrol/LOOKOUT</td>
<td>Bay Co Sheriff</td>
<td>Bay</td>
<td>9983 (7650)</td>
<td>2003</td>
<td>2004</td>
<td>4</td>
<td>8</td>
<td>16</td>
</tr>
<tr>
<td>Party Patrol/LOOKOUT</td>
<td>Iron Mt Police</td>
<td>Dickenson</td>
<td>17833</td>
<td>2003</td>
<td>2004</td>
<td>2</td>
<td>8</td>
<td>18</td>
</tr>
<tr>
<td>Party Patrol/SPOTLIGHT</td>
<td>Traverse City Police</td>
<td>Grand Traverse</td>
<td>14005</td>
<td>2003</td>
<td>2004</td>
<td>2</td>
<td>8</td>
<td>18</td>
</tr>
<tr>
<td>SPOTLIGHT/LOOKOUT</td>
<td>Kent CO Sheriff</td>
<td>Kent</td>
<td>17920</td>
<td>2003</td>
<td>2004</td>
<td>2</td>
<td>8</td>
<td>18</td>
</tr>
<tr>
<td>OJJDP Evaluation</td>
<td>UMTRI</td>
<td></td>
<td>27556</td>
<td>?</td>
<td>?</td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

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

<table>
<thead>
<tr>
<th>PROGRAM</th>
<th>ACTIVITY</th>
</tr>
</thead>
</table>
| 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

<table>
<thead>
<tr>
<th>PROGRAM</th>
<th>ACTIVITY</th>
</tr>
</thead>
</table>
| 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

<table>
<thead>
<tr>
<th>PROGRAM</th>
<th>ACTIVITY</th>
</tr>
</thead>
</table>
| 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 |
**Youth Alcohol Training Officer**  
- Finalized shell grant application  
- Worked with agencies  
- Monitored SPOTLIGHT, Party Patrol, & LOOKOUT grantees  
- Presented at MI Judicial Inst.  
- Enhanced Party Patrol training presentation  
- Developed strategic plan/sessions for new grantees  
- Trained on new e-grants system

**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

### PROGRESS REPORT PERIOD: 2002

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

### PROGRESS REPORT PERIOD: 7/02 - 12/02

<table>
<thead>
<tr>
<th>PROGRAM</th>
<th>ACTIVITY</th>
</tr>
</thead>
</table>
| 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  
- Assisted Lansing Community College for training grant |
| Youth Alcohol Training Officer | Revised/edited LEGAL presentation  
- Party Patrol training |
| SPOTLIGHT | Strategic planning meetings reviewed  
- Media plans developed & implemented  
- Community meetings held  
- LEGAL training conducted |
### PROGRESS REPORT PERIOD: 1/03 - 6/03

<table>
<thead>
<tr>
<th>PROGRAM</th>
<th>ACTIVITY</th>
</tr>
</thead>
</table>
| 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.*
### APPENDIX E

## Strategies for Reducing Underage Alcohol Use*

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

### Expressions of Community Norms against Underage Use

<table>
<thead>
<tr>
<th>Strategy</th>
<th>Priority</th>
<th>Level of Effectiveness</th>
</tr>
</thead>
<tbody>
<tr>
<td>• Prohibitions or controls on alcohol use at community events or in public areas, which can also be seen as a control on access</td>
<td>High</td>
<td>This strategy has not been specifically evaluated, but it can be a strong expression of community norms and can reduce alcohol access.</td>
</tr>
<tr>
<td>• Prohibition of alcohol sponsorship of public events.</td>
<td>High</td>
<td>This strategy has not been specifically evaluated, but it can be a strong expression of community norms.</td>
</tr>
<tr>
<td>• Media campaigns, media advocacy, and counteradvertising.</td>
<td>High</td>
<td>Media campaigns have been found to be very important components of enforcement efforts, greatly magnifying their effectiveness.</td>
</tr>
</tbody>
</table>
### Strategies Based in Schools and in Other Youth Organizations

<table>
<thead>
<tr>
<th>Strategy</th>
<th>Priority</th>
<th>Level of Effectiveness</th>
</tr>
</thead>
<tbody>
<tr>
<td>• School policies regarding alcohol use on school property or at school-sponsored events.</td>
<td>High</td>
<td>This strategy has been found to reduce substance use problems.</td>
</tr>
</tbody>
</table>

### Prevention of Impaired Driving

<table>
<thead>
<tr>
<th>Strategy</th>
<th>Priority</th>
<th>Level of Effectiveness</th>
</tr>
</thead>
<tbody>
<tr>
<td>• Establishment and enforcement of “zero tolerance” laws for drivers under 21.</td>
<td>Very High</td>
<td>All States now have these laws. They can be very effective in reducing alcohol-related traffic crashes, especially if well-publicized and enforced.</td>
</tr>
<tr>
<td>• Sobriety checkpoints for impaired drivers.</td>
<td>Very High</td>
<td>This strategy can be very effective in reducing impaired driving and crashes. Specific effects on youth have not been evaluated.</td>
</tr>
<tr>
<td>• Vigorous and well-publicized enforcement of impaired driving laws in general, as well as other traffic enforcement.</td>
<td>High</td>
<td>This strategy has a strong effect on impaired driving. Specific effects on youth have not been evaluated.</td>
</tr>
</tbody>
</table>

*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 *

<table>
<thead>
<tr>
<th>Compliance checks</th>
</tr>
</thead>
<tbody>
<tr>
<td>• Conduct regular enforcement actions involving the use of underage decoys who attempt to purchase alcohol.</td>
</tr>
</tbody>
</table>

**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 *

<table>
<thead>
<tr>
<th>DWI Enforcement</th>
</tr>
</thead>
<tbody>
<tr>
<td>• Driving under the influence emphasis patrols</td>
</tr>
</tbody>
</table>

**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 driver’s 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.
## APPENDIX G

### EUDL SUCCESS STORIES 2000-2005

<table>
<thead>
<tr>
<th>Year</th>
<th>State</th>
<th>Program Description</th>
<th>Contact Name</th>
<th>Strategy</th>
<th>Type of initiative</th>
</tr>
</thead>
<tbody>
<tr>
<td>2002</td>
<td>Alabama</td>
<td>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; &quot;designated lanes&quot; program in supermarkets with specific lanes for alcohol purchase</td>
<td>Martha Ellis</td>
<td>Limitation on access; Expressions of community norms; Prevention of impaired driving</td>
<td>Local</td>
</tr>
<tr>
<td>2003</td>
<td>Alabama</td>
<td>Graduated Driver's Licensing Law with severe sanctions for drunken driving</td>
<td>Milton Saffold</td>
<td>Prevention of impaired driving</td>
<td>State</td>
</tr>
<tr>
<td>2001</td>
<td>Alaska</td>
<td>Anchorage: involve community members in permit approval process for alcohol outlets</td>
<td>Joan Diamond</td>
<td>Limitation on access</td>
<td>Local</td>
</tr>
<tr>
<td>2002</td>
<td>Alaska</td>
<td>Increase excise tax on alcohol</td>
<td>Joan Diamond</td>
<td>Limitation on access</td>
<td>State</td>
</tr>
<tr>
<td>2003</td>
<td>Arizona</td>
<td>Party patrols accompanied by media advocacy and education</td>
<td>Lt. Brian Kozak</td>
<td>Limitation on access; Strategies based in schools</td>
<td>Local (citywide)</td>
</tr>
<tr>
<td>2004</td>
<td>Arkansas</td>
<td>Added enforcement resources = more compliance checks; local police joined with ABC; database for compliance checks on laptops in the field</td>
<td>Kenny Heroman</td>
<td>Limitation on access</td>
<td>State</td>
</tr>
<tr>
<td>2003</td>
<td>California</td>
<td>Compliance checks and Social host ordinance; penalize adults for providing alcohol to minors</td>
<td>Judy Wash-Jackson</td>
<td>Limitation on access</td>
<td>Local (citywide)</td>
</tr>
<tr>
<td>2005</td>
<td>California</td>
<td>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)/retailers who furnished alcohol; Youth conference</td>
<td>Judy Matty</td>
<td>Limitation on access; Prevention of impaired driving</td>
<td>State</td>
</tr>
<tr>
<td>2003</td>
<td>Colorado</td>
<td>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 &quot;partying&quot; from family campground, anti-underage drinking message on jumbotron</td>
<td>Ruth Michaels</td>
<td>Limitation on access; Expressions of community norms</td>
<td>Local</td>
</tr>
<tr>
<td>2000</td>
<td>Connecticut</td>
<td>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</td>
<td>Geralyn Laut</td>
<td>Limitation on Access</td>
<td>Local</td>
</tr>
<tr>
<td>2001</td>
<td>Connecticut</td>
<td>Bristol, CN closes loophole to facilitate party patrol enforcement</td>
<td>Patricia Checko</td>
<td>Limitation on access</td>
<td>Local</td>
</tr>
<tr>
<td>2004</td>
<td>Connecticut</td>
<td>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</td>
<td>Gary Najarian</td>
<td>Limitation on access</td>
<td>Local and State</td>
</tr>
<tr>
<td>2003</td>
<td>Delaware</td>
<td>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</td>
<td>Tracy Bachman</td>
<td>Limitation on access</td>
<td>Local</td>
</tr>
<tr>
<td>2004</td>
<td>District of Columbia</td>
<td>Ban on single container sales</td>
<td>Nadine Parker</td>
<td>Limitation on access</td>
<td>Local (ward 4)</td>
</tr>
<tr>
<td>2004</td>
<td>Florida</td>
<td>Ban on beer sales at county fair and youth show</td>
<td>Deborah Schlageter</td>
<td>Limitation on access</td>
<td>Local (countywide)</td>
</tr>
<tr>
<td>2003</td>
<td>Georgia</td>
<td>Local ordinance to include mandatory responsible alcohol sales and service workshop for licensees</td>
<td>Cathy Finck</td>
<td>Limitation on access; Prevention of impaired driving</td>
<td>Local (countywide)</td>
</tr>
<tr>
<td>2004</td>
<td>Georgia</td>
<td>Increased enforcement and compliance; public awareness efforts and recruit and train youth enforcement teams</td>
<td>Clarise Jackson-Hall/Ronald Johnson/Cathy Finck</td>
<td>Limitation on access; Expressions of community norms</td>
<td>State</td>
</tr>
<tr>
<td>2003</td>
<td>Hawaii</td>
<td>Social host law: criminal penalties and/or fines for adults who furnish alcohol to minors; media campaign to educate the public about new law</td>
<td>Donna Gutierrez</td>
<td>Limitation on access; Expressions of community norms</td>
<td>State</td>
</tr>
<tr>
<td>Year</td>
<td>State</td>
<td>Action</td>
<td>Person</td>
<td>Scope</td>
<td></td>
</tr>
<tr>
<td>------</td>
<td>------------</td>
<td>-------------------------------------------------------------------------------------------------</td>
<td>-------------------------------</td>
<td>------------------------------</td>
<td></td>
</tr>
<tr>
<td>2004</td>
<td>Illinois</td>
<td>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</td>
<td>Kris Povlsen</td>
<td>Local (citywide)</td>
<td></td>
</tr>
<tr>
<td>2003</td>
<td>Indiana</td>
<td>Keg tracking legislation/keg ID numbers: purchasers provide a driver's license, home address, and date of birth</td>
<td>Lucy Swalls</td>
<td>State</td>
<td></td>
</tr>
<tr>
<td>2005</td>
<td>Indiana</td>
<td>Mandatory server training bill</td>
<td>Lisa Hutcheson</td>
<td>State</td>
<td></td>
</tr>
<tr>
<td>2004</td>
<td>Iowa</td>
<td>Keg registration: provide name, address, DLN, and ID sticker for keg</td>
<td>Mary Krier</td>
<td>Local (countywide)</td>
<td></td>
</tr>
<tr>
<td>2002</td>
<td>Kansas</td>
<td>Keg registration ordinance which led to state law</td>
<td>Teresa Walters</td>
<td>State</td>
<td></td>
</tr>
<tr>
<td>2004</td>
<td>Kentucky</td>
<td>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</td>
<td>Jack Blair</td>
<td>Local and State</td>
<td></td>
</tr>
<tr>
<td>2004</td>
<td>Louisiana</td>
<td>Keg tracking legislation/keg ID numbers: purchasers provide a driver's license, and retailers keep information for no less than 6 months</td>
<td>Murphy Painter/Sharron Ayers/Cathy Childers</td>
<td>State</td>
<td></td>
</tr>
<tr>
<td>2005</td>
<td>Maine</td>
<td>Implementation of a written policy on underage drinking; targeted enforcement details; development of a &quot;callout&quot; team who investigate reports of underage drinking parties; increased communication w/parents with school-based parent group presentations/education</td>
<td>Becca Matusovich</td>
<td>State</td>
<td></td>
</tr>
<tr>
<td>2002</td>
<td>Maryland</td>
<td>Vigorous compliance checks with notice of suspension posted on outlets in violation</td>
<td>Jean Byrd</td>
<td>Local (countywide)</td>
<td></td>
</tr>
<tr>
<td>2002</td>
<td>Massachusetts</td>
<td>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</td>
<td>Amy Fradette</td>
<td>Local</td>
<td></td>
</tr>
<tr>
<td>2003</td>
<td>Massachusetts</td>
<td>Increase in investigators completing surveillance, fake ID checks, and compliance checks; provide tips to newly licensed establishments</td>
<td>Ted Mahoney</td>
<td>State</td>
<td></td>
</tr>
<tr>
<td>2003</td>
<td>Massachusetts</td>
<td>Three years of alcohol purchase surveys using legal but young-looking adults</td>
<td>Amy Fradette</td>
<td>State</td>
<td></td>
</tr>
<tr>
<td>2004</td>
<td>Massachusetts</td>
<td>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</td>
<td>Jamie Binienda</td>
<td>State</td>
<td></td>
</tr>
<tr>
<td>2002</td>
<td>Minnesota</td>
<td>Zero Adult Providers (ZAP): focus on those who provide the alcohol, party patrol officer, publicity campaigns</td>
<td>Jeff Nachbar</td>
<td>Local</td>
<td></td>
</tr>
<tr>
<td>2002</td>
<td>Minnesota</td>
<td>Ordinance for stiffer penalties for outlets who sell to minors</td>
<td>Pat Bluh</td>
<td>Local</td>
<td></td>
</tr>
<tr>
<td>2003</td>
<td>Minnesota</td>
<td>Keg registration</td>
<td>Leah Preiss</td>
<td>State</td>
<td></td>
</tr>
<tr>
<td>2001</td>
<td>Mississippi</td>
<td>Attorney General blankets state with compliance checks</td>
<td>Bill Perrett</td>
<td>State</td>
<td></td>
</tr>
<tr>
<td>2000</td>
<td>Missouri</td>
<td>Keg registration ordinance with locking, numbered plastic tag</td>
<td>Tempe Humphrey</td>
<td>Local</td>
<td></td>
</tr>
<tr>
<td>2003</td>
<td>Montana</td>
<td>Minor Alcohol Prevention Program; Identifying Underage Buyers training seminar; compliance checks; keg registration ordinance; reduce BAC to .08</td>
<td>Lisa Posada-Griffin</td>
<td>Local and State</td>
<td></td>
</tr>
<tr>
<td>2002</td>
<td>Nebraska</td>
<td>Bill to give Liquor Control Commission discretion to issue graduated sanctions for non-compliant outlets</td>
<td>Project Extra Mile</td>
<td>State</td>
<td></td>
</tr>
<tr>
<td>2003</td>
<td>Nebraska</td>
<td>Party patrol project ; new state digital driver's license and adoption of special conditions for high-risk establishments in Lincoln</td>
<td>Tom Workman</td>
<td>Local and State</td>
<td></td>
</tr>
<tr>
<td>Year</td>
<td>State</td>
<td>Description</td>
<td>Implementor</td>
<td>Limitation on Access</td>
<td>Strategy Area</td>
</tr>
<tr>
<td>------</td>
<td>--------------</td>
<td>-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------</td>
<td>--------------------------------------------------</td>
<td>-----------------------</td>
<td>-----------------------------</td>
</tr>
<tr>
<td>2004</td>
<td>Nebraska</td>
<td>Vigorous compliance checks and media campaigns initiated by Project Extra Mile along with community based coalitions</td>
<td>Diane Riibe</td>
<td>Limitation on access;</td>
<td>Local (citywide)</td>
</tr>
<tr>
<td>2005</td>
<td>Nebraska</td>
<td>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</td>
<td>Diane Riibe</td>
<td>Limitation on access;</td>
<td>Local (citywide)</td>
</tr>
<tr>
<td>2000</td>
<td>Nevada</td>
<td>Compliance checks prevent alcohol sales to minors; Local Policy Options training for various individuals</td>
<td>Kathy Bartosz</td>
<td>Limitation on access;</td>
<td>State (7 counties)</td>
</tr>
<tr>
<td>2002</td>
<td>Nevada</td>
<td>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</td>
<td>Eddie Bonine</td>
<td>Limitation on access,</td>
<td>Local (countywide pilot for statewide adoption)</td>
</tr>
<tr>
<td>2002</td>
<td>Nevada</td>
<td>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</td>
<td>Diane Pidsosny</td>
<td>Limitation on access</td>
<td>Local</td>
</tr>
<tr>
<td>2004</td>
<td>New Hampshire</td>
<td>Regular enforcement and tougher penalties for alcohol outlets</td>
<td>Chief Aidan Moore</td>
<td>Limitation on access</td>
<td>Local (citywide)</td>
</tr>
<tr>
<td>2004</td>
<td>New Mexico</td>
<td>Training and education for non-compliant retailers, merchant recognition program, public awareness efforts using media, media literacy course; students assisting with compliance checks</td>
<td>Annjenette Torres</td>
<td>Limitation on access;</td>
<td>Local (countywide)</td>
</tr>
<tr>
<td>2004</td>
<td>New York</td>
<td>Enhanced patrols using multi-jurisdictional operations and officers; compliance checks; enhanced enforcement; aggressive media campaign</td>
<td>Margaret Brennan</td>
<td>Limitation on access;</td>
<td>Local (countywide)</td>
</tr>
<tr>
<td>2001</td>
<td>North Carolina</td>
<td>Limit alcohol sales in urban redeveloped areas</td>
<td>Octavia Rainey</td>
<td>Limitation on access</td>
<td>State</td>
</tr>
<tr>
<td>2001</td>
<td>Ohio</td>
<td>Revises rule governing keg purchases</td>
<td>Jewel Neely</td>
<td>Limitation on access</td>
<td>State</td>
</tr>
<tr>
<td>2004</td>
<td>Ohio</td>
<td>Ohio State will prohibit alcohol ads on local radio broadcasts of its games in 2004</td>
<td>Holly Zweizig</td>
<td>Expressions of community norms</td>
<td>Local (University)</td>
</tr>
<tr>
<td>2003</td>
<td>Oklahoma</td>
<td>Tribe passed underage drinking policy</td>
<td>June Hamilton</td>
<td>Limitation on access</td>
<td>Local</td>
</tr>
<tr>
<td>2001</td>
<td>Oregon</td>
<td>Increase communication with college and community; implement a social norms-based campaign; alcohol-free alternatives</td>
<td>Susan Chambers</td>
<td>Limitation on Access;</td>
<td>Local</td>
</tr>
<tr>
<td>2002</td>
<td>Oregon</td>
<td>Parental responsibility: Ordinance stating parents will be fined for underage drinking or unlawful acts committed by child</td>
<td>Janet Jones</td>
<td>Limitation on access</td>
<td>Local</td>
</tr>
<tr>
<td>2005</td>
<td>Pennsylvania</td>
<td>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</td>
<td>Chief Leo Sokoloski</td>
<td>Limitation on access</td>
<td>Local (citywide)</td>
</tr>
<tr>
<td>2004</td>
<td>Puerto Rico</td>
<td>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</td>
<td>Jose Malave</td>
<td>Limitation on access</td>
<td>State</td>
</tr>
<tr>
<td>2002</td>
<td>Rhode Island</td>
<td>Fake ID seizure: bars call local police upon suspicion of a fake ID</td>
<td>Officer Kevin Parsonage</td>
<td>Limitation on access</td>
<td>Local</td>
</tr>
<tr>
<td>2003</td>
<td>Rhode Island</td>
<td>Keg registration law</td>
<td>Brenda Amodei</td>
<td>Limitation on access</td>
<td>State</td>
</tr>
<tr>
<td>2004</td>
<td>South Carolina</td>
<td>Multijurisdictional alcohol enforcement teams: compliance checks; party patrols; traffic safety checkpoints; traffic stops; shoulder taps</td>
<td>Shannon W. Anderson</td>
<td>Limitation on access;</td>
<td>State (multi counties and cities)</td>
</tr>
<tr>
<td>Year</td>
<td>State</td>
<td>Action</td>
<td>Person(s)</td>
<td>Jurisdiction</td>
<td></td>
</tr>
<tr>
<td>------</td>
<td>---------</td>
<td>-------------------------------------------------------------------------------------------------</td>
<td>----------------------------------</td>
<td>--------------------</td>
<td></td>
</tr>
<tr>
<td>2002</td>
<td>Texas</td>
<td>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</td>
<td>Elizabeth Limon Garza</td>
<td>Local</td>
<td></td>
</tr>
<tr>
<td>2004</td>
<td>Texas</td>
<td>Parental notification policy; training provided for college &quot;teams&quot;</td>
<td>Ellen Ward/Mary Hill</td>
<td>Local and State (colleges)</td>
<td></td>
</tr>
<tr>
<td>2005</td>
<td>Texas</td>
<td>College and enforcement teams curb alcohol promotions on campus</td>
<td>Mary Hill/Marveen Mahon/Lt. Christine Guerra</td>
<td>Local (college)</td>
<td></td>
</tr>
<tr>
<td>2003</td>
<td>Utah</td>
<td>Beer-handler's permit for persons working in bar, restaurant, store, or other alcohol outlet followed by compliance checks</td>
<td>Corporal Sheldon Barney</td>
<td>Local</td>
<td></td>
</tr>
<tr>
<td>2002</td>
<td>Vermont</td>
<td>Stop Teen Alcohol Risk Teams (START): enforcement (party patrols), prevention, education, and intervention/treatment with focus on environmental change</td>
<td>Dominic Cloud</td>
<td>State</td>
<td></td>
</tr>
<tr>
<td>2002</td>
<td>Virginia</td>
<td>Keg registration ordinance</td>
<td>Gerald Spates</td>
<td>Local</td>
<td></td>
</tr>
<tr>
<td>2004</td>
<td>Washington</td>
<td>Meaningful evaluation of programs identifying specific problems and offering effective and appropriate strategies</td>
<td>Aaron Starks</td>
<td>State</td>
<td></td>
</tr>
<tr>
<td>2002</td>
<td>West Virginia</td>
<td>Compliance checks; technology involving scanning devices that identify licensee's file; press releases on outlets that passed or failed compliance checks</td>
<td>David Plantz</td>
<td>State</td>
<td></td>
</tr>
<tr>
<td>2003</td>
<td>Wisconsin</td>
<td>Alcohol free county fair</td>
<td>Sarah Hibbard</td>
<td>Local</td>
<td></td>
</tr>
<tr>
<td>2005</td>
<td>Wyoming</td>
<td>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</td>
<td>Sharon Guerney</td>
<td>Local</td>
<td></td>
</tr>
</tbody>
</table>
### APPENDIX H

#### STATE EUDL REPRESENTATIVES INTERVIEWED

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

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

<table>
<thead>
<tr>
<th>AGENCY</th>
<th>HIGH FREQ (%)</th>
<th>MODERATE FREQ (%)</th>
<th>LOW FREQ (%)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Highway safety</td>
<td>12 (70.6%)</td>
<td>2 (11.8%)</td>
<td>3 (17.6%)</td>
</tr>
<tr>
<td>State police</td>
<td>11 (64.7%)</td>
<td>3 (17.6%)</td>
<td>3 (17.6%)</td>
</tr>
<tr>
<td>Substance abuse prevention and treatment</td>
<td>8 (47.1%)</td>
<td>7 (41.2%)</td>
<td>2 (11.8%)</td>
</tr>
<tr>
<td>Alcohol Beverage Commission (ABC)*</td>
<td>10 (62.5%)</td>
<td>5 (29.4%)</td>
<td>1 (5.9%)</td>
</tr>
<tr>
<td>Juvenile Justice</td>
<td>7 (41.2%)</td>
<td>6 (35.3%)</td>
<td>4 (23.5%)</td>
</tr>
<tr>
<td>Governor’s Office</td>
<td>8 (47.1%)</td>
<td>4 (23.5%)</td>
<td>5 (29.4%)</td>
</tr>
<tr>
<td>Attorney General</td>
<td>4 (23.5%)</td>
<td>4 (23.5%)</td>
<td>11 (64.7%)</td>
</tr>
<tr>
<td>Human Services</td>
<td>8 (47.1%)</td>
<td>3 (17.6%)</td>
<td>5 (29.4%)</td>
</tr>
<tr>
<td>Education</td>
<td>5 (29.4%)</td>
<td>6 (35.3%)</td>
<td>6 (35.3%)</td>
</tr>
</tbody>
</table>

*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 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 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.
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

<table>
<thead>
<tr>
<th>Period</th>
<th>Drinking Driver</th>
<th>Non-Drinking Driver</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Male</td>
<td>Female</td>
</tr>
<tr>
<td>Pre EUDL 1995-1997</td>
<td>1,520 (80.0%)</td>
<td>381 (20.0%)</td>
</tr>
<tr>
<td>Post EUDL 1 1998-2000</td>
<td>1,604 (81.6%)</td>
<td>362 (18.4%)</td>
</tr>
<tr>
<td>Post EUDL 2 2001-2003</td>
<td>1,434 (80.4%)</td>
<td>350 (19.6%)</td>
</tr>
<tr>
<td>% change Pre EUDL to Post EUDL2</td>
<td>-5.7%</td>
<td>-8.1%</td>
</tr>
</tbody>
</table>

### TABLE 4B: CRASH-INVOLVED DRIVERS 21 YEARS OF AGE AND OLDER BY DRINKING INFORMATION, SEX, AND EUDL PERIOD

<table>
<thead>
<tr>
<th>Period</th>
<th>Drinking Driver</th>
<th>Non-Drinking Driver</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Male</td>
<td>Female</td>
</tr>
<tr>
<td>Pre EUDL 1995-1997</td>
<td>14,828 (80.2%)</td>
<td>3,663 (19.8%)</td>
</tr>
<tr>
<td>Post EUDL 1 1998-2000</td>
<td>12,486 (79.6%)</td>
<td>3,208 (20.4%)</td>
</tr>
<tr>
<td>Post EUDL 2 2001-2003</td>
<td>10,331 (79.6%)</td>
<td>2,809 (21.4%)</td>
</tr>
<tr>
<td>% change Pre EUDL to Post EUDL2</td>
<td>-30.3%</td>
<td>-23.2%</td>
</tr>
</tbody>
</table>
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>
<thead>
<tr>
<th>TABLE 5A: CRASH-INVOLVED DRIVERS UNDER 21 YEARS OF AGE BY DRINKING INFORMATION, WEEKEND/WEEKDAY AND EUDL PERIOD</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Year</strong></td>
</tr>
<tr>
<td></td>
</tr>
<tr>
<td>Pre EUDL 1995-1997</td>
</tr>
<tr>
<td>Post EUDL 1 1998-2000</td>
</tr>
<tr>
<td>Post EUDL 2 2001-2003</td>
</tr>
<tr>
<td>% change Pre EUDL to Post EUDL2</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>TABLE 5B: CRASH-INVOLVED DRIVERS 21 YEARS OF AGE AND OLDER BY DRINKING INFORMATION, WEEKEND/WEEKDAY AND EUDL PERIOD</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Year</strong></td>
</tr>
<tr>
<td></td>
</tr>
<tr>
<td>Pre EUDL 1995-1997</td>
</tr>
<tr>
<td>Post EUDL 1 1998-2000</td>
</tr>
<tr>
<td>Post EUDL 2 2001-2003</td>
</tr>
<tr>
<td>% change Pre EUDL to Post EUDL2</td>
</tr>
</tbody>
</table>
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.

**Figure 1: Crashes Involving Underage Drinking Drivers by Month, 1995-2003.**
<table>
<thead>
<tr>
<th>Time Period</th>
<th>Jan</th>
<th>Feb</th>
<th>Mar</th>
<th>Apr</th>
<th>May</th>
<th>Jun</th>
<th>Jul</th>
<th>Aug</th>
<th>Sept</th>
<th>Oct</th>
<th>Nov</th>
<th>Dec</th>
</tr>
</thead>
<tbody>
<tr>
<td>1995-1997</td>
<td>817</td>
<td>206</td>
<td>56</td>
<td>42</td>
<td>53</td>
<td>123</td>
<td>221</td>
<td>304</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>1998-2000</td>
<td>710</td>
<td>254</td>
<td>71</td>
<td>40</td>
<td>53</td>
<td>103</td>
<td>221</td>
<td>304</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>2001-2003</td>
<td>628</td>
<td>249</td>
<td>72</td>
<td>28</td>
<td>32</td>
<td>88</td>
<td>175</td>
<td>263</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

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

Figure 3: Crashes Involving Underage Non-Drinking Drivers by Month, 1995-2003
Figure 4: Crashes Involving Underage Non-Drinking Drivers by Time of Day, 1995-2003

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

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

Figure 7: Crashes Involving Non-Drinking Drivers 21 Years of Age and Older by Month, 1995-2003
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).