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7. Author(s) Surla, L.T. Jr., and Koons, S.M.	8. Performing Organization Report No.

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16. Abstract

The purpose of the evaluation was to determine the effects of eliminating plea bargaining for DWI offenses on general deterrence, recidivism, and court operations. Specific indicators of impact on these three areas were identified and methods were developed for measuring the effects of no-plea bargaining on these indicators. A national review was conducted of jurisdictions in which no-plea bargaining laws or policies had been implemented. After conducting site visits and collecting preliminary data, Fort Smith, Arkansas and Lexington and Louisville, Kentucky were selected for case study sites. From the study findings MetaMetrics concludes that policy or legislation for the elimination of plea bargaining contributes significantly to the reduction of repeat drunk driving behavior among those convicted of DWI. No negative effects on court operations were detected in the case study sites. Elimination of plea bargaining also appears to contribute, in concert with other anti-DWI measures, to the reduction of drunk driving behavior among the general driving population.

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EXECUTIVE SUMMARY

AN EVALUATION OF THE ELIMINATION OF PLEA BARGAINING FOR DWI OFFENDERS

Widespread use of plea bargaining is made to reduce cases involving driving while intoxicated or driving under the influence of alcohol (DWI or DUI) to lesser offenses, often to non-alcohol related charges such as reckless driving. The National Highway Traffic Safety Administration has recognized the importance of plea bargaining issues to policy makers, legislators, officials of agencies involved in traffic safety and administration of justice, and the general public. NHTSA contracted with MetaMetrics Inc. to conduct an evaluation of the Elimination of Plea Bargaining for DWI Offenders. The study was designed to assist policy makers in making decisions on developing and implementing no plea bargaining policies and legislation.

The purpose of the evaluation was to determine the effects of eliminating plea bargaining for DWI offenses in three areas: on the driving public as a whole, on the repeat DWI behavior of convicted offenders, and on court operations. Specific indicators of impact on these three areas were identified, and methods were developed for measuring the effects of no plea bargaining on these indicators. A national review was conducted of jurisdictions in which no plea bargaining laws or policies had been implemented. A number of these jurisdictions were identified as potential case study sites. After conducting site visits and collecting preliminary data, two states were selected for case study sites. These were Fort Smith, Arkansas and Lexington and Louisville, Kentucky.

SUMMARY OF CASE STUDY FINDINGS

The Fort Smith, Arkansas study component was completed in September 1987. The Lexington and Louisville, Kentucky study component was completed in June 1988. A summary of findings is presented below. A detailed discussion of study approach, study setting, data collection, data analysis, and findings is given in the final report.

FORT SMITH, ARKANSAS

The Fort Smith site provided the most clearly defined study opportunity for assessing the impact of the elimination of plea bargaining for DWI offenders. The Arkansas Omnibus DWI Law that became effective in January of 1983 prohibited the reduction of drunk driving charges. Other changes included increased sanctions, suspension and seizure of driving licenses, and standards for determining intoxication.

Program Description

Under the direction and support of the Western Arkansas Counseling and Guidance Center, a six county non-profit health facility, Fort Smith developed a system approach to the detection, prosecution, sentencing, and treatment of the DWI offender. Officials representing criminal justice and community organizations participated in the effort as the DWI Task Force. A federal grant was awarded through the Arkansas Office of Highway Safety. Over the four year period 1982-85, the grant and Task Force effort included portable testing devices, a citizen/public information an education campaign, and computerization of Municipal Court DWI records.

Program Impact

Major changes occurred at the enforcement, prosecution, and court levels. The elimination of plea bargaining for DWI offenders

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affected processing of DWI offenders and the incidence of DWI citations and accidents. Findings are summarized below:

o   From 1980 to 1982, DWI arrests were relatively constant and averaged 1,780 citations per year. By 1987, citations declined to 1,115, a reduction of 37%.

o   Level of DWI law enforcement remained constant from 1980 through 1987.

o   Prior to the law (January 1983), 43% of DWI charges were reduced to reckless driving. After the law, only 7% were reduced to reckless driving.

o   Alcohol-related accidents and accidents with injuries declined in the four year period 1984-87 following enactment of the Omnibus DWI Law. Population in the City of Fort Smith increased over the same four year period and the accident rates per 1,000 population declined.

o   Fines for DWI offenders increased. The average pre-law fine was $187; the average post-law fine was $482. Jail sentences remained essentially unchanged. A larger percentage of DWI offenders had their licenses suspended after the law (87% of post-law offenders compared to 27% of pre-law offenders).

o   The data indicated no adverse impact on the court in terms of backlogs or high number of appeals. Since citations declined, there was a smaller caseload for court processing. Even with an increase in the DWI conviction rate on the original charge, there was a net decline of DWI convictions from 1,300 in 1983 to 1,000 in 1986.

o   There was a decline in the level of recidivism, the percent of first time DWI offenders arrested for a second time. For those arrested for DWI in the pre-law period, the recidivism rate was 33% compared to 21% for those arrested during the post-law period.

MetaMetrics concludes that the behavior of drivers in Fort Smith changed after the passage of the Omnibus DWI Law and after active implementation of provisions on plea bargaining and sanctions. Additionally, first-time DWI offenders were arrested for second offenses at a substantially lower rate than that of pre-law first time offenders.

The active involvement of criminal justice and community agencies in implementing the law and public information programs may have been essential ingredients in the success of Fort Smith in reducing DWI offenses. Other Arkansas communities may not have benefited as much from changes in the law.

LEXINGTON AND LOUISVILLE, KENTUCKY

The Kentucky sites provided an opportunity to conduct a multi-level evaluation. Measures of impact before and after the passage of no plea bargaining legislation were examined for Lexington and Louisville, and the sites were also compared with one another.

Program Description

Kentucky has had a long-established no plea bargaining policy in Fayette County (Lexington) and the practice of allowing plea bargaining in Jefferson County (Louisville). On July 13, 1984 Statewide legislation was introduced that required the prosecution to oppose the amendment of DUI charges at blood alcohol levels of .15 and above. Stricter sanctions were also established, as well as additional provisions for detection and arrest of offenders.

Program Impact

Different changes occurred in Lexington and Louisville in the enforcement, prosecution, and adjudication of DUI cases. Major findings are summarized below:

o   The level of DUI arrests dropped 50% in Lexington from the before legislation to the after legislation periods, and raised by 31% over these periods in Louisville.

o   The level of reductions from original charge remained around 2% during the before and after periods in Lexington. The level of reductions changed markedly in

Louisville, however, dropping from 79% to 36%.

o The passage of the legislation apparently had a positive effect on the time to adjudication in Louisville; the average time from arrest to conviction dropped from 105 days to 55 days. The length of time from arrest to conviction was nearly the same in Lexington, at an average of 40 days before and 37 days after the legislation.

o There was a decline in recidivism rate for both sites. In Louisville the rate of recidivism for first time offenders 36 months after arrest decreased from 23% in the before group to 19% in the after group. In Lexington the decrease was even larger, from 19% for the before group to 8% in the after group.

MetaMetrics concludes that the legislative institution of no plea bargaining in Kentucky had an impact on several indicators examined in this study: reduction to lesser charge, recidivism, and time to adjudication Additional factors, such as public awareness, political will, and commitment on the part of individuals within the responsible agencies, also appeared to be at work within both sites. The identification of these environmental or contextual factors may be key to a practical understanding of the role that can be played by specific traffic safety interventions such as no plea bargaining.

CONCLUSIONS

From the study findings MetaMetrics concludes that policy or legislation for the elimination of plea bargaining contributes significantly to the reduction of repeat drunk driving behavior among those individuals convicted of DWI. It also appears to contribute, in concert with other anti-DWI measures, to the reduction of drunk driving behavior among the general driving population.

The case studies revealed that several related factors influence the reduction of drunk driving. One is the entire complex of anti-DWI measures implemented at a site. Another is the environment itself, within which the various measures are being applied.

The degree of impact that a given measure (such as no plea bargaining) will have is a function of 1) the degree to which it is actually implemented, 2) the existence of other measures that can support it and multiply its impact, and 3) conditions within the environment, some of which further and some of which diffuse the impact of the measure. Thus, for example, the passage of no plea bargaining legislation in Kentucky resulted in positive, but vastly different, effects in two sites. While only one site in Arkansas was included in the present study, it is possible that the no plea bargaining legislation passed there may also have had different effects in different communities in the state.

States, regions, and cities are dynamic social and economic entities. When performing a study on multiple sites one must be clear about the intention of any comparison made among them. One intent of the case study approach used in this evaluation was to discover similarities and differences between environments that were implementing a common measure (no plea bargaining) toward a common end (reducing drunk driving). The purpose of this was to derive a more sophisticated understanding of the impact of that measure and, having discovered it to be useful, to know better how to implement it in other settings. In summary, MetaMetrics concludes that no plea bargaining legislation or policy does have an important impact on drunk driving behavior; and that, to maximize the effectiveness of no plea bargaining, other existing measures and environmental factors should be understood and worked into the total anti-DWI strategy.

Plea bargaining is a legal process used widely in the criminal justice system to negotiate charges, pleas, and sentences. It is generally conducted informally through discussions between prosecutors, defense attorneys, and judges, wherein agreements are made concerning the charge to which a defendant is willing to plead guilty. Plea bargaining is used to arrange reduced sentences, achieve guilty convictions, and adjudicate cases without going to trial. Widespread use of plea bargaining is made to reduce cases involving driving while intoxicated or driving under the influence of alcohol (DWI or DUI) to lesser offenses, often to non-alcohol related charges such as reckless driving.

Critics have asserted that reducing charges and sentences can undermine the punitive and deterrent effects of the law. There has been concern that plea bargaining for drunk driving allows offenders to receive inappropriately light punishments, removes the more serious alcohol-related charge from offenders' criminal records, and makes it less likely that offenders will be deterred from repeating their crimes. As a result of these concerns there has been a recent demand for policy and legislation that curtail the powers of criminal justice officials to negotiate pleas for drunk driving offenses.

On the other hand, criminal justice officials have also expressed opposition to policies or legislation that would curtail or eliminate plea bargaining, citing the possible negative effects of instituting such controls. Anticipated negative effects on the court system include greater resistance by defendants to the criminal justice process with attendant increases in jury trials, continuances, and delays. There is concern that the sanctions for a DWI conviction are too severe or that they should not be applied to all offenders in all circumstances. There is also concern that deterrent effects on DWI offenders and the general public will not be great enough to justify the costs of stricter prosecution.

The National Highway Traffic Safety Administration has recognized the importance of these issues to policy makers, criminal justice officials, and the general public. In response NHTSA contracted with MetaMetrics Inc. to conduct an evaluation of the Elimination of Plea Bargaining for DWI Offenders. The purpose of this evaluation was to determine effects that eliminating plea bargaining has on the incidence of alcohol-impaired driving by the general public, on the recidivism rate for convicted offenders, and on court operations. The findings of this study will be used to assist policy makers in making decisions on developing and implementing no plea bargaining policies and legislation.

Two states with no plea bargaining legislation were selected as evaluation case study sites. This report presents the results of the Lexington and Louisville, Kentucky and the Fort Smith, Arkansas case studies.

1.1   OBJECTIVES AND ISSUES

The purpose of the evaluation was to determine the effects of eliminating plea bargaining in three areas. Specifically, the evaluation addressed the following questions:

> o What is the impact of no plea bargaining upon the drunken driving behavior of the public as a whole, most of whom are not arrested or convicted?

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o What is the effect of no plea bargaining on the subsequent DWI behavior of convicted offenders?

o What impact does no plea bargaining have upon court operations?

These three areas were examined to the maximum extent possible in each of the study sites. The diversity of the sites has provided illumination on these questions from different perspectives.

There were also two major considerations that were addressed in the design and conduct of the evaluation. These are:

o What valid, measurable indicators of impact can be identified?

o What factors, in addition to no plea bargaining, affect the indicators of impact?

In some cases impact can be measured fairly directly. For instance, impact on court operations can be determined by looking at changes in numbers of postponements, numbers of jury trials, and court backlogs. In other cases change cannot be measured directly, but must be estimated. One indicator of impact on the drunk driving behavior of the general public, for instance, is a change in night-time accidents. Underlying the use of this as an indicator is the assumption that night-time accidents are a valid measure of drunken driving. The measures used in this study and the assumptions behind them are discussed in Section 2, Study Approach.

Even when reasonable measures of impact have been identified, it must be recognized that there may be factors other than the presence or absence of plea bargaining that affect these indicators. For example, policy or legislation prohibiting plea bargaining is generally introduced along with other anti-DWI measures. In order to explore the impact of no plea bargaining itself, it is necessary to first examine the characteristics of no plea bargaining as a process. The impact of this process may be seen more clearly in some indicators than on others. For instance, one reason plea bargaining is used is to facilitate speedy adjudication. One would therefore expect that a no plea bargaining law would cause an increase in the time it takes to adjudicate a DWI case. Other changes in DWI law, like an increase in the level of penalties for a DWI conviction, would not necessarily affect this indicator. However, if no plea bargaining and increased penalties are both introduced at the same time, then it would be harder to attribute a change in the drunken driving behavior of the general public to no plea bargaining alone.

A number of confounding variables have been identified and, as far as possible, taken into account in the analysis of impact. A discussion of these factors is presented in Section 2, Study Approach.

1.2 SITE SELECTION

In the early phase of the evaluation MetaMetrics gathered information on DWI plea bargaining practices nationwide and identified 21 jurisdictions as potential case study sites. The initial major criterion of suitability was the presence of a no plea bargaining law or policy.

After conducting interviews and reviewing materials to determine the suitability of these jurisdictions as potential case study sites, five sites were identified as candidates for in-depth data collection. Site visits and initial field data collection were conducted at four sites. Of the five candidates, three were chosen as potential study sites. These sites were

Fort Smith, Arkansas, Lexington and Louisville, Kentucky, and Ventura County, California. The Arkansas and Kentucky sites were ultimately used as the case study sites. The Letter Report on Site Recommendations and Evaluation Plan detailing the process of selecting sites is presented in Appendix A.

1.3   DESIGN

Of the 21 sites reviewed there were no jurisdictions that, from a clear plea bargaining position, adopted a complete no plea bargaining policy or law in the absence of any other anti-DWI measures or factors. In some cases no plea bargaining policies or laws in these jurisdictions have led to related traffic safety measures; in others they were adopted at the same time as other anti-DWI policies or laws; in other cases the no plea bargaining position was not implemented in a single event, but was developed in stages.

No single jurisdiction provided a clear cut opportunity to examine the impact of no plea bargaining in isolation from other important variables. Given the apparent relationship between the implementation of no plea bargaining measures and the presence of other factors, the case study approach has been taken in this evaluation. The evaluation designs for the selected study sites have been tailored to assess the effect of no plea bargaining within the complex of DWI practices and other factors present at the time of no plea bargaining implementation. The designs for each case study site are presented in Section 3, Fort Smith Setting and Study Design, and Section 5, Kentucky Setting and Study Design.

1.4   FINDINGS

The Fort Smith, Arkansas study component was completed in September 1987. The Lexington and Louisville, Kentucky study component was completed in June 1988. A summary of findings is presented below. A detailed discussion of data collection, analysis, and findings is given in Section 3 for Fort Smith and in Section 5 for Kentucky.

1.4.1   Fort Smith, Arkansas

The Fort Smith site provided the most clearly defined study opportunity for assessing the impact of the elimination of plea bargaining for DWI offenders. The Arkansas Omnibus DWI Law that became effective in January of 1983 prohibited the reduction of drunk driving charges. Other changes included increased sanctions, suspension and seizure of driving licenses, and standards for determining intoxication.

Site Description

Fort Smith is the county seat of Sebastian County, which is the third largest county in the state (1980 Census of Population, Washington). It is located approximately 160 miles from Little Rock, on the western boarder of Arkansas. Seventy-five percent of the population of Sebastian County resides in Fort Smith.

Program Description

Prior to the passage of the Omnibus DWI Law, concerted efforts were made by community, private, and criminal justice agencies to address the problem of drunk driving in Sebastian County. A federal grant for anti-DWI activities was awarded in 1982 through the Arkansas Office of Highway Safety. Over a four year period the effort included portable testing devices, a citizen/public information and education campaign, computerization of Municipal Court DWI records, and provision of funds for the

prosecution of appealed DWI cases. These efforts continued after the passage of the Omnibus DWI Law.

The police department apparently operated no special DWI enforcement programs either before or after the passage of the Omnibus Law. The size of the patrol force remained constant.

<u>Program Impact</u>

Major changes occurred at the enforcement, prosecution, and court levels. The elimination of plea bargaining for DWI offenders affected processing of DWI offenders and the incidence of DWI citations ad accidents. Findings are summarized below:

o   From 1980 to 1982, DWI arrests were relatively constant and averaged 1,780 citations per year. By 1987, citations declined to 1,115, a reduction of 37%.

o   Level of DWI law enforcement remained constant from 1980 through 1987.

o   Prior to the law (January 1983), 43% of DWI charges were reduced to reckless driving. After the law, only 7% were reduced to reckless driving.

o   Alcohol-related accidents and accidents with injuries declined in the four year period 1984-87 following enactment of the Omnibus DWI Law. Population in the City of Fort Smith increased over the same four year period and the accident rates per 1,000 population declined.

o   Fines for DWI offenders increased. The average pre-law fine was $187; the average post-law fine was $482. Jail sentences remained essentially unchanged. A larger percentage of DWI offenders had their licenses suspended after the law (27% of pre-law offenders compared to 87% of post-law offenders).

o   The data indicated no adverse impact on the court in terms of backlogs or high number of appeals. Since citations declined, there was a smaller caseload for court processing. Even with an increase in the DWI conviction rate on the original charge, there was a net decline of DWI convictions from 1,300 in 1983 to 1,000 in 1986.

o   There was a decline in the level of recidivism, the per cent of first time DWI offenders arrested for a second time. For those arrested for DWI in the pre-law period the recidivism rate was 33% compared to 21% for those arrested during the post-law period.

MetaMetrics concludes that the behavior of drivers in Fort Smith changed after the passage of the Omnibus DWI Law and after active implementation of provisions on plea bargaining and sanctions. Additionally, first-time DWI offenders were arrested for second offenses at a substantially lower rate than that of pre-law first time offenders.

The active involvement of criminal justice and community agencies in implementation of the law and public information programs may have been essential ingredients in the success of Fort Smith in reducing DWI offenses. Other Arkansas communities may not have benefited as much from the Arkansas Omnibus DWI Law.

1.4.2 Lexington and Louisville, Kentucky

The Kentucky sites provided an opportunity to conduct a multi-level evaluation. Measures of impact before and after the passage of no plea bargaining legislation were examined for Lexington and Louisville, and the sites were also compared with one another.

Site Description

Louisville and Lexington, located about 80 miles from one another, are the two largest cities in Kentucky. Louisville is the seat of Jefferson County, and Lexington is the seat of Fayette County. The city of Louisville itself is approximately one-third larger than Lexington, and is located in a more urban setting that includes many smaller townships.

Program Description

Kentucky has had a long-established no plea bargaining policy in Fayette County (Lexington) and the practice of allowing plea bargaining in Jefferson County (Louisville). In July 1984, statewide legislation was introduced that required the prosecution to oppose the amendment of DUI charges at blood alcohol levels of .15 and above. Stricter sanctions were also established, as well as additional provisions for detection and arrest of offenders.

In 1982 Lexington instituted an increased police enforcement traffic alcohol program (TAP). This program was funded through September 1984. A similar program was initiated in Louisville in October 1985 and was in operation through the end of the study period.

Program Impact

The two Kentucky sites differ in terms degree of urbanization and socio-economic level of residents. There is evidence at both sites of an increasing level of public and law enforcement awareness of DUI issues and support for anti-DUI measures (as it is throughout the country); however, the two cities may differ in terms of the degree of this awareness and support and the rate at which it is increasing. The 1984 DUI legislation instituted changes that applied to both sites. This legislation, working in different settings, resulted in different kinds of changes in Lexington and Louisville in the enforcement, prosecution, and adjudication of DUI cases.

Major findings are summarized below:

o   In Lexington the level of DUI arrests dropped 50% from the before legislation to the after legislation periods. In Louisville it raised by 31% over these periods.

o   In Lexington the level of reductions from DUI to a lesser charge did not change after the law, but remained constant at 2%. In Louisville, on the other hand, prior to the law 79% of the DUI charges were reduced. After the law, only 36% were reduced.

o   The passage of the legislation apparently had a positive effect on the time to adjudication in Louisville; the average time from arrest to conviction dropped from 105 days to 55 days. The length of time from arrest to conviction was nearly the same in Lexington, at an average of 40 days before and 37 days after the legislation.

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o There was a decline in recidivism rate for both sites. In Louisville the rate of recidivism for first time offenders 36 months after arrest decreased from 23% in the before group to 19% in the after group. In Lexington recidivism declined even more sharply, from 19% for the before group to 8% in the after group.

MetaMetrics concludes that the legislative institution of no plea bargaining in Kentucky had an impact on the indicators examined in this study. Additional factors, such as public awareness, political will, and commitment on the part of individuals within the responsible agencies, also appear to be at work within both sites. The identification of these environmental or contextual factors may be very important to a practical understanding of the role that can be played by specific interventions such as no plea bargaining.

SECTION 2
STUDY APPROACH

In developing the study designs for the Arkansas and Kentucky studies MetaMetrics took into consideration the different programs, environments, and data sources at each of the sites. Accordingly, two separate designs were developed. The design for the Arkansas study is described in Section 3. The design for the Kentucky study is presented in Section 5.

Each study design focused on the measurement of impact. Indicators of impact were determined in consultation with the NHTSA Project Officer and other NHTSA officials. Impact data were collected during site visits. Information on contributing factors was collected as well through interviews and review of materials.

2.1   DESIGN CONCEPT

The purpose of this evaluation was to determine the impact of no plea bargaining on general deterrence, specific deterrence, and court operations. The first study task was to identify sites with a no plea bargaining policy or law. The measure used to determine the presence or absence of no plea bargaining was the number of reductions and convictions for cases originally charged as DWI offenses. A high number of convictions on original charge was used as the indicator of the extent of no plea bargaining.

The second task was to select case study sites from the list of candidate sites. Selection was made on the basis of considerations such as data availability, presence of confounding factors, and the length of time having passed since the institution of no plea bargaining. The site selection methodology is described in MetaMetrics' Letter Report on Site Recommendations and Evaluation Plan dated January 5, 1987. This Letter Report is presented in Appendix A.

For each area of impact (general deterrence, specific deterrence, and court operations) measures of impact were identified. For instance, a measure of specific deterrence is the number of DWI offenders who are arrested a second time for DWI – the number who recidivate.

Other factors, termed co-variables, were also identified. Co-variables are factors that relate directly to the measures of impact. One possible co-variable of the recidivism rate is the number of arrests that were made during a given period.

Finally, confounding variables were identified. Confounding variables are factors that can affect the indicators of impact. Since the evaluation was designed to determine the impact of no plea bargaining on recidivism, for example, factors other than no plea bargaining that also affect recidivism are confounding variables. One confounding variable would be a change in the severity of sentences for DWI convictions. A change in recidivism could then be attributed to no plea bargaining or to a change in the severity of sanctions.

The principal measure of no plea bargaining itself is the proportion of arrests that are convicted of the original offense and the proportion that are reduced. One co-variable is the number of arrests that are made. Another is the blood alcohol content of the arrestee; lower BAC levels are less likely to be convicted, particularly since minimum BAC levels

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are generally set as legal standards of intoxication. A confounding variable would be a change in public opinion on alcoholism and drunk driving.

A summary of the measures, co-variables, and confounding variables for each of the three areas of impact are shown in Figure 2-1. The three areas of impact are discussed below.

Figure 2-1

Confounding Variables and Measures of Impact

CONFOUNDING VARIABLES	CO-VARIABLES	MEASUREMENTS
Public Opinion on Alcoholism	No. of Arrests BAC Level	Reductions Convictions

No-Plea Bargaining

Court Operations → Recidivism → General Deterrence

CONFOUNDING VARIABLES	CONFOUNDING VARIABLES	CONFOUNDING VARIABLES
Non-DWI-related Changes in: Judicial Procedure Prosecutorial Procedure Defense Procedure	Changes in Sanction Time: Arrest to Disposition Alcohol Treatment Programs	Other anti-DWI Measures Non-DWI Accidents

CO-VARIABLES	CO-VARIABLES	CO-VARIABLES
No. of Arrests DWI-related Changes in: Judicial Procedure Prosecutorial Procedure Defense Procedure	No. of Arrests Incidence of DWI	Public Awareness Accident Reporting

MEASUREMENTS	MEASUREMENTS	MEASUREMENTS
Time: Arrest to Disposition No. of Jury Trials No. of Appeals	No. of Rearrests Opportunity to Recidivate	Alcohol-Related Accidents First vs Multiple Arrests

2.1.1 General Deterrence

One purpose of no plea bargaining is to create a climate that will deter the general driving population from drinking and driving. The assumption is that no plea bargaining will impact individuals who are never arrested for DWI. One question that could be addressed, therefore, is the extent of public awareness of the elimination of plea bargaining, and on the relationship between such awareness and driving behavior. Given that an indication of general and specific deterrence due to the elimination of plea bargaining is found, an effort to collect data on the impact of public information programs could subsequently be undertaken, where community resources are available to assist in the effort.

If no plea bargaining does in fact deter the general population from driving drunk, one outcome should be a reduction in alcohol-related accidents. Thus an important measure of general deterrence would be the change in the level of alcohol-related accidents before and after the implementation of no plea bargaining legislation or policy.

During the design phase of the project MetaMetrics recommended that data collection focus on determining the extent and impact of no plea bargaining. Data about public information or accidents would be moot if little or no impact were identified. A design for assessing DWI public information processes could be developed after determining the nature and extent of impact.

The evaluation of general deterrence focused on the following questions:

1) What impact has the elimination of plea bargaining had on the number of alcohol-related accidents?

2) What other measures of general deterrence can be identified?

3) To what extent is the general driving public aware of the elimination of plea bargaining, and to what extent does this knowledge affect the general public's driving behavior?

4) Are there other factors that relate to general deterrence at this site?

5) What are the confounding variables at this site that affect the identified measures of general deterrence?

Questions 1 and 2 are concerned with direct measures of impact. Measures of a change in alcohol-related accidents include data from accident reports on the presence of alcohol as a factor in the accidents, and data on the number of night-time accidents and single-vehicle accidents.

Question 3 identifies a co-variable, a factor that relates to the measure of impact, given that impact has been identified. If impact on the general public has been determined, then an investigation could be conducted to see how public information processes contribute to this result.

Another co-variable of general deterrence is the accuracy of police accident reports, specifically the reporting of alcohol as a factor in accidents. The greater the accuracy of these reports, the more reliable will be the number of alcohol-related accidents as a measure

of general deterrence. As with public awareness, however, if there has been no impact on general deterrence then determining the accuracy of police reports is a moot point.

Confounding variables, factors other than the implementation of no plea bargaining practices, would include the implementation of other anti-DWI measures. Another confounding variable would be the number of night-time and single-vehicle accidents that were not DWI-related.

Another possible indicator of general deterrence could be a shift in the characteristics, specifically a shift in the drunk driving history, of the population of individuals that does get arrested for DWI. If there is a greater concentration of multiple offenders, that is, if there is a shift in the arrested population toward a smaller proportion of first-time offenders, then one might conclude that the general population is being deterred and that those who do get arrested for DWI are the problem drinkers.

2.1.2 Specific Deterrence – Recidivism

Recidivism is the tendency to return to a previous mode of behavior. The rate at which first-time DWI offenders are arrested again for driving drunk, and also the time between first and second offenses, are indicators of recidivism. MetaMetrics focused on this measure of specific deterrence.

Records of individuals arrested for DWI offenses were reviewed to determine the impact of the elimination of plea bargaining on specific deterrence. It was expected that after the implementation of a no plea bargaining policy or law there would be fewer reduced charges and that consequently a higher proportion of those arrested would be convicted for DWI offenses. Sanctions should be more severe for these offenders as a group. If MetaMetrics' experience with offenders convicted on charges other than DWI is relevant, the impact of conviction and/or more severe sanctions on recidivism will not be 100% effective. That is, both before and after no plea bargaining, some proportion of first time offenders can be expected to be rearrested for DWI offenses. However, it would be expected that recidivism would decline as a result of the elimination of plea bargaining.

Depending on the sanction, such as loss of license, type of sentence, incarceration in jail or prison, length of incarceration; and offender characteristics, including crime, sex, age, and number of prior convictions; recidivism rates for various populations could range up to 25% or greater. A factor to be taken into consideration when calculating recidivism rate is the opportunity to recidivate – for example, the length of time an offender has between first offense and the time that data is collected. This factor was accounted for in the calculation of recidivism rates.

Recidivism is a measure of arrests for drunk driving, and is therefore an indirect measure of the incidence of DWI. A co-variable of recidivism, therefore, is the actual incidence of drunk driving. Another co-variable of recidivism would be the level of enforcement, the number of arrests for DWI.

One confounding variable is the implementation of anti-DWI measures other than no plea bargaining, such as changes in sanctions and the institution of alcohol treatment programs. Another is changes in the amount of time from arrest to disposition, since this factor is considered to have an impact on recidivism.

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2.1.3 Operational Effects

The evaluation investigated the impact of no plea bargaining on court operations. Negative impact would be an increase in the amount of time it takes to adjudicate DWI cases, with attendant increases in the costs of adjudication. Measures of such impact could include an increase in the amount of time from arrest to disposition, increases in the number of jury trials, and an increase in the number of appeals.

A factor that could affect court operations would be a change in the number of arrests. Arrest data was used in the analysis. Other co-variables include other DWI-related changes in judicial procedures, prosecutorial procedures, and defense procedures. Confounding variables include non-DWI-related changes in procedures. Interviews were conducted with enforcement and adjudication personnel to obtain additional information on system changes.

2.2 EXTERNAL FACTORS/CONTEXT OF CHANGE

As stated in Section 1, no single jurisdiction provided a clear cut opportunity to examine the impact of no plea bargaining in isolation from other important variables. Given the apparent relationship between the implementation of no plea bargaining measures and the presence of other factors, an evaluation approach has been taken in this study that includes an investigation of the environment within which the key events occur.

This approach assumes that the underlying conditions and forces or context allows events and changes to occur and affects their impact and significance. This approach contrasts with the more traditional perspective on social change, which assumes that events can be completely isolated from their context, thus allowing the effects of these events to be determined.

Determining the impact of no plea bargaining itself remains important. It has therefore been useful to broaden the focus of the evaluation to include questions about the milieu and about the role of no plea bargaining and associated changes within the context of the environment.

The evaluation designs for the selected study sites included the collection of data on the effect of no plea bargaining within the complex of DWI practices and other factors present at the time of no plea bargaining implementation. Data were collected through interviews, analysis of court data, and review of other materials. Given a determination of impact, these data indicate that an analysis of conditions and changes within, and interactions between specific institutions or milieus, such as the courts, police departments, and public agencies, could be very useful in understanding the processes by which DWI behavior is impacted.

Analysis would include posing direct questions about changes in the environment over time and corrolating these with the incidence of other changes and phenomena. An analysis of this kind could be helpful in making evaluation findings useful to other jurisdictions. Figure 2-2 below indicates one way that data can be grouped for analysis. Discussions of the milieu as the context of change are included in Section 4, Fort Smith Findings and Impact and Section 6, Kentucky Findings and Impact.

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Figure 2-2

Divisions and Incidence
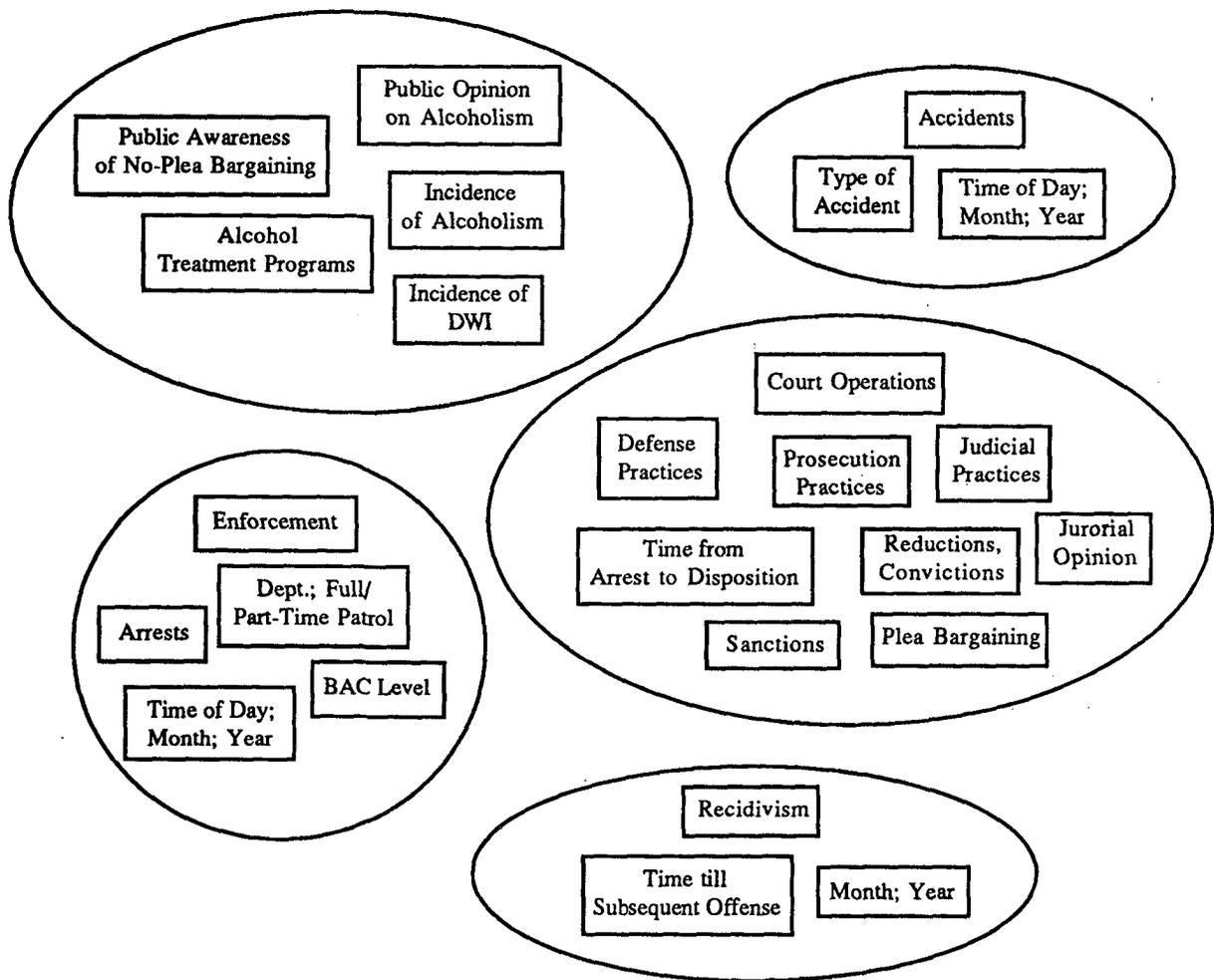
SECTION 3
FORT SMITH SETTING
AND STUDY DESIGN

Fort Smith, Arkansas was selected from the 12 candidate sites as the jurisdiction with the most clearly defined change in plea bargaining practices. Prior to the passage of the Arkansas Omnibus DWI Law (Act 549) plea bargaining was a regular practice in Fort Smith and other jurisdictions in Arkansas. The Omnibus DWI Law became effective on January 1, 1983. A major component of the law was the prohibition of reduction of drunk driving charges.

Other changes did occur with this law, however. These changes included administrative seizure of drivers licenses; BAC of .10 percent as a *per se* standard of intoxication; mandatory license suspension, fines, and jail sentences (7 days for second offense); mandatory alcohol assessment as part of presentence investigation; and mandatory jail term for a conviction of driving under an alcohol-related license suspension.

3.1 STUDY SETTING

Fort Smith is the county seat of Sebastian County, which is the third largest county in the state (1980 Census of Population, Washington). It is located approximately 160 miles from Little Rock, on the western border of Arkansas. Seventy-five percent of the population of Sebastian County resides in Fort Smith.

3.1.1 Program Description

During the 1980s, private, community, and criminal justice agencies in Sebastian County have been making efforts to curtail drunk driving. Law enforcement, court, prosecution, and treatment officials met in 1982 to formulate a coordinated project known as the Sebastian County DWI Systems Approach.

The DWI Task Force was formed to implement the DWI Systems Approach. The Task Force included representatives from law enforcement, judicial, prosecution, educational, and treatment agencies. The Governor's DWI Advisory Council met with the DWI Task Force on a regular basis to review the activities and progress of the Systems Approach program. Information exchanged during these meetings has been used by the Governor's DWI Advisory Council in meetings with groups in other areas of the state that wish to initiate or review their own DWI programs.

In addition to increased communications between agencies, the effort resulted in the award of a federal grant for anti-DWI activities through the Arkansas Office of Highway Safety. Activities over a four-year period included the purchase of portable testing devices, a citizen/public information and education campaign, computerization of Municipal Court DWI records, and provision of funds for the prosecution of appealed DWI cases. Education projects have included posters publicizing the DWI law, radio and television PSAs, and use of the Arkansas-produced film "None For The Road." Over 60,000 DWI "stuffers" have been mailed out locally in customers' bank statements. These efforts continued after the passage of the Omnibus DWI Law.

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3.1.2 System Changes

Several months before the DWI Omnibus Law was implemented a number of changes occurred in preparation for maintaining court operations at a level which would allow compliance to the law. In addition, a new judge was elected and assumed responsibilities of the Municipal Court on January 1, 1983.

One of the first acts of the newly elected judge was the establishment of an independent filing system for first and multiple DWI offenders. This allowed the Court to appropriately review the offenders record and to more readily identify the multiple DWI offender. Another change required that defendants sign a form stating counsel was retained or waived, a procedural change which prevented cases from being overturned on appeal for lack of such a record.

Table 3-1 provides a summary of contrasts between pre-law and post-law system components.

Table 3-1

Pre-Law and Post-Law System Changes

Municipal Court

Pre-Law   Alcohol assessment not required by law. Judge may impose treatment condition.

Post-Law   Pre-sentence investigation. State Highway Department has authority to set conditions for treatment in order for defendant to get license back.

Pre-Law   Poor record keeping enabled multiple offenders to obtain dismissal through appeal on technical grounds.

Post-Law   Administrative changes corrected for legal technical deficiencies which existed prior to new law. First and multiple offender cases "flagged". Records maintained of defendant retaining and waiving right to counsel.

Pre-Law   Cash bond release. 10 days in jail suspended if enter treatment for 30 days. Judge may use discretion in sentencing first or multiple DWI offender.

Post-Law   Order Pre-Sentence investigation and have next court appearance in 30 days. If defendant does not show, Office of Driver's Services, State Highway Department will not return license. However, no incentive for multiple DWI offender to enter treatment since mandatory penalties. No sentencing discretion allowed in consideration of offender treatment.

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Pre-Law	Charge reduced to reckless driving. Limited prosecution of multiple offenders, and/or offenders charged with DWI/accident.
Post-Law	No plea bargaining. All offenders charged with DWI in compliance with law. Some cases dismissed or reduced to reckless driving if BAC .10 or less.

Police

Pre-Law	No concentrated effort for arresting DWIs. Standard patrol activities. 62 patrol officers.
Post-Law	No concentrated effort for arresting DWIs. Coordination of police officer schedules with court dates. 62 patrol officers.

Community

Pre-Law	Negligible activities.
Post-Law	TV and Radio PSAs. Bank statement enclosures (Do Not Drive While Drunk posters, etc.). Server training, taxi services (COMP CARE). Beer distributors set alcohol education fund (1983–84).

Prosecutor

Pre-Law	Paid flat rate. Municipal Court Circuit Court trials and appeals were not compensated. DWI cases prosecuted were accident-related, high BAC level, and multiple offender cases.
Post-Law	Paid to prosecute cases at trial and appeal level (hourly fee plus costs). No plea bargaining, including first offenders. Some "sentence bargaining" (fines) – However, defendant still receives DWI conviction.

Appeal Court

Pre-Law	$36.00 appeal bond. License retained until final case disposition. Plea and sentence bargaining.
Post-Law	$1,000 appeal bond. Multiple offenders' license not returned until case settled. Convicted first offender may apply for a restricted driving permit. Some sentence bargaining. ($150 reduction in fine and costs if enter guilty plea prior to retrial). However, guilty plea results in alcohol-related conviction.

Municipal Prosecutor's Office

According to interviews conducted in Fort Smith, before the present Municipal Prosecutor took office in 1980 the charge of DWI was more frequently dismissed or reduced to reckless driving. This may have been due to the Court's heavy workload, as well as the reluctance of the municipal prosecutor to argue cases appealed to Circuit Court without compensation. A selective prosecution policy aimed at DWI offenders with a high BAC and/or accident related DWI charge was the common practice.

Under the System approach, and in response to the new legislation, Fort Smith allocated funds for the prosecution of drunk drivers requesting appeals. This funding ensured that the prosecutor would receive an hourly rate plus costs for prosecuting cases appealed to Circuit Court, and thus provided the incentive for the prosecutor to retain a valid DWI case at all levels of judicial review.

Circuit Court

DWI offenders who decide to appeal their conviction must now post a $1,000 appeal bond. Raising the legal cost to the defendant for appeal to Circuit Court is a system change which may have discouraged defendants from seeking a retrial.

The incentive to appeal was also reduced by the 1985 legislation (Act 918), which allows a convicted first offender to apply for a restricted driving permit. DWI offenders who appeal their case are not offered this privilege, and must wait until litigation is completed to apply for the restricted permit. Defendants may also enter guilty pleas before the retrial occurs, and in some cases may even receive a $150 reduction in fines and costs for doing so. Defendants who enter into this "Sentence Bargaining" agreement still receive an alcohol-related conviction. Word-by-mouth publicity about heavy fines and sentences and the certainty of conviction may play a role in the present low level of DWI appeal trial activity which occurs in Circuit Court.

3.2 ARKANSAS DWI LEGISLATION

A number of DWI bills were submitted to the Arkansas State legislature and enacted into law between 1982-83 and 1985. The Omnibus DWI Law became technically effective January 1, 1983. However, due to the appointment of a new judge to the Municipal Court at that same time, full compliance to the law was not implemented by the Court until May 1, 1983.

The Omnibus DWI Law had the most profound impact of all the DWI bills on the manner in which DWI cases in Fort Smith were prosecuted. The major provisions of the legislation included:

o   Prohibiting prosecuting attorneys from reducing drunk driving charges.

o   Authorizing on-the-spot seizure of arrested suspects' driver's licenses by the police (the seizure is neither an administrative revocation procedure nor a pre-conviction license suspension);

o   Establishing a blood alcohol content of .10 percent as a per se, rather than presumptive, standard of intoxication;

o Imposing a mandatory 90-day license suspension, with no provision for a restricted license, for first offenders (second offenders receive one-year suspensions and third offenders two years);

o Requiring multiple offenders to serve mandatory minimum jail sentences (seven days for a second offense, 90 days for a third offense, and one year in the state penitentiary for a fourth offense);

o Imposing mandatory minimum fines ($150 for a first offense, $400 for a second offense, and $900 for a third offense), as well as a mandatory $250 court costs assessment;

o Requiring persons convicted of drunk driving to undergo an alcohol assessment as part of a pre-sentence investigation; and

o Imposing a mandatory 10-day jail term for those convicted of driving while under an alcohol-related suspension.

During 1984 and 1985 the Arkansas Supreme Court upheld the constitutionality of the Omnibus DWI Law after hearing a number of appealed cases that were originally tried in Sebastian County. The Omnibus DWI law was amended in 1985 to permit DWI first offenders to obtain a restricted driving permit by applying to the Office of Driver Services, Arkansas Highway Safety Department. Such permits under the amendment were restricted to "hardship" cases. A second amendment allowed the court to hold persons in contempt if they failed to complete a court-ordered treatment program, as well as invoke a fine of $200.

Cumulatively, Acts 549 and 918 of 1983 and Act 113, which was passed February 14, 1985, resulted in a set of fines and penalties for first and multiple DWI Offenders. Table 3-2 presents the schedule of fines and penalties.

Table 3-2

Schedule of Fines and Penalties

Offense	Jail	Mandatory Fine	License Suspension/Revocation
1st	24 hrs – 1 yr[1]	$150 – $1,000	90 – 120 days
2nd	7 days – 1 yr[2]	$400 – $3,000	1 yr – 16 mos
3rd	90 days – 1 yr[2]	$900 – $5,000	2 yrs – 30 mos
4th	1 yr – 6 yrs[2]	$900 – $5,000	3 yrs

[1] Discretionary minimum with alternative of public service.
[2] Mandatory

3.3 ADJUDICATION

When an offender is formally arrested by the Municipal Police Department for DWI, an evidentiary BAC test is administered at the Fort Smith Police Department. The driver's license is held by the Police Department. A copy of the arrest citation and breath test report are forwarded to Municipal Court. The defendant's license is also forwarded to the Arkansas Highway Safety Program and is retained until the defendant has satisfactorily completed alcohol education and treatment or is otherwise entitled by law to regain possession.

The Fort Smith Municipal Court, a trial court of limited jurisdiction, is responsible for DWI cases referred by the Municipal Police Department. The DWI defendant's arrest data are entered into the Court's automated system and the case is then forwarded to the Municipal Attorney's Office for prosecution.

Arrest information is verified by Court personnel and the Municipal judge and prosecutor are alerted to all information pertinent to appropriate review of the case. For example, pending charges, prior arrests, outstanding warrants, or prior failures to appear for criminal proceedings are included in the report. The Municipal Attorney's Office reviews the case for its legal merits and prepares to prosecute the defendant.

After the arrest citation and other documents are received by the Municipal Court an appearance date is set for the defendant to enter a plea. Guilty pleas may be submitted to the Court's business office prior to the appearance date. Defendants who plead guilty under the DWI Omnibus law must participate in a pre-sentence screening. A sentencing date is scheduled 30 days from the time the plea is entered to allow sufficient time for the pre-sentence report to be completed.

The judge reviews the DWI pre-sentence report at the sentencing hearing and a judgment is rendered, which the defendant is required to read and sign. The judgment states the charge for which the defendant has admitted guilt and the penalties for the conviction which the offender will incur. Notification is also provided to the convicted DWI offender on the procedure to obtain a restricted driving permit and/or re-possession of the license at the termination of the license suspension period.

A trial date is scheduled for Municipal Court when a defendant pleads "Not Guilty." Although there is no right to a jury trial in Municipal Court, defendants retain the right to argue a not guilty plea before the Municipal Court judge. A judicial finding of "Guilty" may then be appealed to the Circuit Court, which schedules a "Trial de Nova" to hear the appeal.

After passage of the Omnibus Law, a number of DWI cases with a borderline per se Blood Alcohol Content (BAC) level have resulted in dismissal of the case or reduction of the charge to reckless driving. The borderline per se BAC level is defined as .10 per cent. Other factors that are known to contribute to case dismissal or a finding of reckless driving include lack of sufficient evidence to demonstrate probable cause for the arrest or failure of the prosecution to present a witness (officer failing to show for Court proceeding).

Defendants found guilty at the Municipal Court Trial hearing may appeal their conviction to the Circuit Court. The defendant is then scheduled for a re-trial, customarily called a "Trial de Nova." Some convicted offenders request the Trial de Nova on the basis of valid legal arguments. Others may attempt to use the appeal process as a way to delay conviction and avoid sentencing under the mandatory multiple offender sanctions of the law. (A second offense is one in which conviction occurred within 3 years of the first DWI

conviction.) A delay may also work against the system and in favor of the defendant if witnesses move, become deceased, or if the arresting officer retires from the force. Despite these possible motives of a request for appeal, the frequency of appeals throughout the study period has remained minimal.

3.4   DATA SOURCES

DWI information in Fort Smith, Arkansas was collected and analyzed to determine the impact of no plea bargaining and associated sanctions on DWI offender recidivism, general deterrence, and court operations. Data from before implementation of the Omnibus DWI Act and after implementation were reviewed.

A review of the Fort Smith DWI Systems Approach identified six system components from which data appropriate to the study could be drawn. These six components of the system are the Fort Smith Police Department, Municipal Court, Circuit Court, Municipal Prosecutor's Office, Western Arkansas Counseling and Guidance Center, and the Arkansas Highway Safety Department. Availability of data from the six components is described below.

Police Department

Daily Police Department work records show arrest information, including type and number of citations issued, specific DWI charge (1st offense, 2nd offense, etc.), BAC level, date of arrest, and accident information. The Municipal Police Department also maintains the arrest and conviction record of each defendant on index cards and microfiche.

Municipal Court

Until June 1984 data on all defendants processed through the Municipal Court were chronologically and alphabetically filed in the Court Docket books. Information recorded included the criminal case number, original charge, final charge, final disposition, and sentence and/or fine. The dates of continuances, Municipal Court trials, Circuit Court appeals, and the disposition of these court proceedings were also recorded.

After June 1984 this information was kept in the Court's automated data system. Defendant information for the preceeding three years was stored on magnetic tape. Access to this archival data is limited as it is not currently on-line.

The Chief Judge maintains a manual file on DWI offenders. This file contains a copy of the original citation, pre-sentence report, signed record of defendant retaining a lawyer or the signed waiver of defendants' right to retain a lawyer, and other pertinent information relative to case processing. This system was instituted in January 1983.

Circuit Court

The records of Municipal Court cases appealed to the Circuit Court are maintained by the Circuit Court. The Court also retains a record of cases of multiple offenders (4th offense) for which the Circuit Court had original jurisdiction. Final dispositions of the Circuit Court are forwarded to the Municipal Court for recording in the Municipal Court Docket.

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Prosecutor's Office

The prosecutor retains a monthly record of number of DWI trials in Municipal Court and the number of monthly appeals made to Circuit Court.

Western Arkansas Counseling Center

The Guidance Center provides a statistical summary in its Annual Report of the number of DWI offenders referred for DWI education and treatment and number of pre-sentence screening reports conducted for the Municipal Court. The Center also conducts analyses of demographic and other information provided by the offender, such as age, sex, race, and BAC level at time of arrest.

Highway Safety Department

The Highway Safety Department maintains data and performs analyses of DWI arrests from data entered onto the Adult Initial Contact Form (AICF) for persons arrested for DWI within the state. Information is maintained separately for each county. The automated system can be used to combine county data and obtain state totals for BAC level, accident data (including fatalities), court dispositions, and other demographic and criminal justice information.

3.5   DATA COLLECTION

Key data were obtained from the Municipal Police Department index cards, Municipal Court docket records, and the Guidance Center automated DWI system.

3.5.1   Specific Deterrence Data

The Fort Smith Municipal Police Department maintains a index card system on individuals that lists name, sex, birth date, dates of arrest, offenses, and court dispositions. This manual system provided the information for recidivism analysis.

A sample was drawn of individuals with last names beginning with A through M. Data were collected on offenders with a first DWI arrest from January 1, 1980 through April 30, 1986. The information was collected during the last week of April 1987 and includes all arrests through April 30, 1987. Excluded from the study were females, juveniles aged 18 years or less, and persons who did not have a Fort Smith address.

3.5.2   General Deterrence Data

Accident and fatality data were requested to analyze trends and possible impact on general deterrence. DWI citation information from 1980 through 1986 was obtained from the Guidance Center.

3.5.3   Court Operations

A sample of the offenders identified from police records was drawn (every sixth individual) and information was obtained from the Court Docket. The accuracy of disposition data obtained from the police record was checked.

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3.6   DATA ANALYSIS

Data collected from police and court systems were entered into a computerized data base and analyzed at MetaMetrics' home office. To complete this task a data base with the appropriate fields was then established using dBase III+. The data were then coded and entered. Finally, programs were written and run in dBase III+ that produced reports with the needed statistics.

Findings and impact are presented in Section 4. A description of the procedures used for the preparation and analysis of data is given in Appendix B.

The Arkansas State legislature passed the Omnibus DWI Law in 1983 to reduce the risks to highway safety resulting from drivers under the influence of alcohol. The intent of the no plea bargaining legislation was to increase the certainty of conviction and so ensure that sanctions were applied. In addition, Act 549 increased sanctions for DWI.

This increase in sanctions is a confounding variable, since this change can also affect the measures of impact used in this study. However, the impact of a change to no plea bargaining cannot in any case be separated from the impact of sanctions applied after conviction. If sanctions are increased but plea bargaining is still practiced, then an individual will not be convicted and sanctions will not be applied. In this case it is unlikely that the sanctions, whatever they are, will have an impact on that individual's later behavior. On the other hand, if no plea bargaining is implemented, then guilty individuals will receive sentences and those sentences, whether lenient or strict, can have an impact on later behavior.

Data analysis indicates that the implementation of the Omnibus DWI Law reduced the recidivism rate of DWI offenders and acted as a general deterrence to DWI behavior. Court operations were not adversely affected by the law. Other factors that could potentially have had a confounding influence, such as level of law enforcement, were not found to have affected the indicators of impact.

4.1   SYSTEM CHANGES

The issue of the impact resulting from no plea bargaining legislation would be moot if in practice the legislation was ignored or there was no actual change in the extent of plea bargaining. Thus the first question to answer is whether no plea bargaining was actually implemented. There is also the possibility of negative impact. For instance, implementation of the law could adversely affect court operations in terms of delays until trial and court backlogs.

Finally, other system changes could have contributed to observed changes in DWI citations, convictions, recidivism, and court processing. The number of DWI citations, for example, could be affected by the level of police activity to monitor, detect, and arrest DWI offenders. These three areas will be addressed in the following subsections.

4.1.1   Plea Bargaining

For the pre-law implementation period, January 1, 1980 through April 30, 1983, a total of 953 first time DWI offenders were identified from municipal police records for names beginning with A through M. A total of 754 first time DWI offenders were identified for the post-law period of May 1, 1983 through April 30, 1986. Table 4-1 displays selected court disposition information on both groups.

Table 4-1
DWI Court Dispositions

	Pre-Law		Post-Law	
	#	%	#	%
Sample Size[1]	862		683	
Dispositions:				
Guilty				
Guilty of Original Charge	618	71.7	603	88.3
Reduced to Reckless	235	27.3	55	8.1
Not Guilty[2]	9	1.0	24	3.5

More than one out of four cases was reduced before the law. About one in twelve was reduced after. According to the above data, the new legislation resulted in a substantial decrease in the proportion of cases reduced to reckless driving.

The police data regarding court dispositions may have been incomplete, since recording these data required following up on court processing. In the police data sample, about 10% of both the pre- and post-law cases had no disposition information. In addition, there may have been a proportion of inaccurately recorded dispositions.

A sample of 148 pre-law cases and 178 post-law cases were reviewed through the court docket records in order to check the completeness and accuracy of police disposition records. The plea bargaining information for this sample is shown in Table 4-2 below.

The number of cases reduced to reckless driving was underrecorded in police records for the pre-law period. The actual proportion of cases reduced to reckless may have been closer to 40% rather than the 27.3% shown for the 862 police records. The court data does substantiate the decrease in cases reduced to reckless after implementation of the Omnibus DWI Law.

Table 4-2
DWI Cases Reduced to Reckless Driving

	Pre-Law		Post-Law	
	#	%	#	%
Sample Size	148		178	
Cases Reduced:				
Police Data	37	25.0	12	6.7
Court Data	62	41.9	13	7.3

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[1] Excludes those with no disposition data.

[2] Not guilty, nolle prosse, and dismissed.

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4.1.2 Court Operations

The data indicated no adverse impact on the court in terms of backlogs or increased number of appeals. Since citations declined there was a smaller caseload for court processing. In 1982, the peak period, there were 1,784 DWI citations. In 1987 there were 1,115 DWI citations. These data are discussed more fully in subsection 4.1.4.

Even with an increase in the DWI conviction rate on the original charge, there was a net decline in total DWI convictions from 1,300 in 1983 to 1,000 in 1986, and no substantial change in appeals. Table 4-3 shows the court appeal data for the pre- and post-law periods.

Table 4-3
Court Appeals

Police Data	Pre-Law	Post-Law
Sample Size	953	683
Guilty	618	603
Appeals	4	2
Appeals as % of Guilty	0.7%	0.3%

4.1.3 Sanctions

The dollar amount of fines increased for those found guilty. The average pre-law fine was $187; the average post-law fine was $482. Jail sentences remained essentially unchanged. A larger percentage of DWI offenders had their licenses suspended after the law (27% of pre-law offenders compared to 87% of post-law offenders). Table 4-4 shows the sanctions for those found guilty of DWI or reckless driving.

Table 4-4
Sanctions

	Pre-Law		Post-Law	
	#	%	#	%
Guilty – Total	853		658	
DWI	618	72.5	603	91.6
Reduced	235	27.5	55	8.4
Fine – Total	842	98.7	658	100.0
Average Amount	$187		$482	
Median Amount	$175		$500	
Jail – Total	32	3.8	35	5.3
Average Days	46		50	
Median Days	10		7	
Suspended License – Total	235	27.5	575	87.4
Average Days	119		110	
Median Days	90		90	

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4.1.4 Law Enforcement

The Municipal Police Department is an essential element of the Fort Smith DWI systems approach and is actively engaged in the enforcement of drunk driving laws. Table 4-5 demonstrates that its patrol force (62 patrol officers out of a total of 107 law enforcement personnel) has remained fairly constant since 1980.

Table 4-5
Municipal Police Department, 1980-1987

	1980	1981	1982	1983	1984	1985	1986	1987
Total Personnel	104	104	104	104	104	104	106	107
Uniformed Personnel:								
Patrol Division	61	61	61	61	61	61	62	62
Automobiles	10	10	10	10	10	10	10	10
Motor Bikes	5	5	5	5	5	5	6	6

During this period of time law enforcement policies have also remained constant. Activities for the detection of drunk driving have not changed and are incorporated into routine patrol activities. According to the Police Department, roadblocks and selective enforcement techniques are not used, although assessment of individual police officer performance is based in part on the number of DWI citations issued. Although the level of DWI law enforcement remained constant from 1980 through 1987, DWI citations declined by 38%, as shown in Table 4-6.

Table 4-6
DWI Arrest Citations, 1980-1987

Year	Citations
1980	1,797
1981	1,759
1982	1,784
1983	1,609
1984	1,626
1985	1,582
1986	1,139
1987	1,115

Figure 4-1 presents the data in graph form.

Figure 4-1
DWI Arrest Citations, 1980-1987
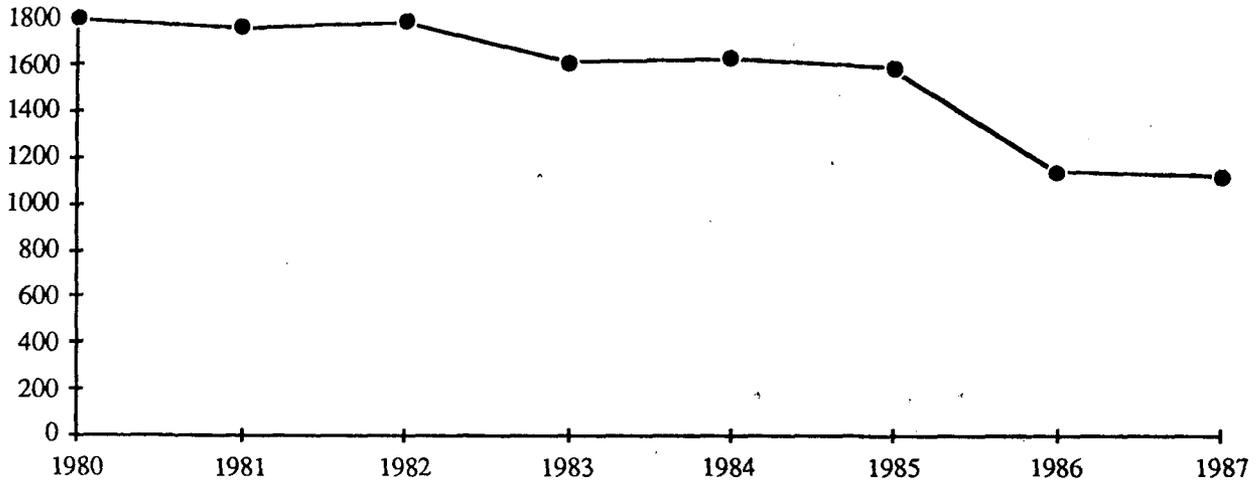
4.1.5 Defendant Characteristics

The study population was defined as male residents of Fort Smith who were first time DWI arrestees. Table 4-7 shows other characteristics of the pre-law and post-law groups.

Table 4-7
Characteristics

		Pre-Law	Post-Law
Sample Size		953	754
Race/White	Number	861	638
	Percent	90.4%	84.6%
Age	Average	30.5 Years	29.6 Years
	Median	26.9 Years	27.0 Years

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Statistical analysis of difference shown that there was a slight change in the racial composition and the age of the two groups. There were proportionally fewer whites arrested after the passage of the DWI legislation. The average age decreased by approximately one year, but the median age remained essentially unchanged.

Table 4-8 shows the previous criminal history of the populations. Since the study populations were samples of first-time DWI arrestees, these previous arrests were not for DWI, although in many cases there were alcohol-related offenses such as disorderly conduct and assault.

Table 4-8
Previous Criminal History

	Pre-Law		Post-Law	
	#	%	#	%
Sample Size	953		754	
Previously Arrested	282	29.6	246	32.6
Number of Previous Arrests:				
1	168	17.6	131	17.4
2	62	6.5	62	8.2
3 or More	52	5.5	53	7.0

In general, first time DWI arrestees contain a substantial number of individuals who had been previously arrested. In the Fort Smith pre- and post-law groups, approximately one third of the offenders had been previously arrested on other charges. There was a slightly larger proportion of previous offenders in the post-law group.

4.2   GENERAL DETERRENCE

Table 4-9 shows the level of DWI citations and alcohol related accidents for the period 1980 through 1986. Despite the gradual increase in the Fort Smith population since 1980, DWI citations and alcohol-related accidents (determined by BAC level) declined dramatically in the four year period 1984-87 following enactment and implementation of the Omnibus DWI Law. The change is even more dramatic in terms of the rate per 1,000 population. As discussed in Section 4.1.4, the level of DWI citations per 1,000 population decreased by 41% from 1980 to 1987.

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Table 4-9
Fort Smith Population, DWI Citations
and Alcohol-Related Accidents, 1980-1986[1]

	Population[2]	DWI Citation	Alcohol Related Accidents	w/Injuries	Per 1,000 Population Citations	Accidents	w/Injuries
1980	71,384	1,797			25.2		
1981	71,330	1,759			24.7		
1982	71,275	1,784			25.0		
1983	71,941	1,609			22.4		
1984	72,607	1,626	279	95	22.4	3.8	1.3
1985	73,290	1,582	249	83	21.6	3.4	1.1
1986	73,980	1,139	222	82	15.4	3.0	1.1
1987	74,660	1,115	190	56	14.9	2.5	.8

4.3 RECIDIVISM

Information from police records on subsequent DWI arrests was analyzed. Prior to collecting data, a minimum sample size was determined that would be large enough to detect a 10% change in recidivism. A methodology to calculate recidivism rates based on the incremental recidivism rate of each group through time was applied. This methodology is presented in Appendix C.

The post-law sample includes offenders who were arrested up to April 1986. Data collection was conducted in April of 1987. This provided a minimum of one year of post-arrest data on all members of the population. The maximum time after arrest was four years (48 months) for the post-law group and seven and one-third years (84 months) for the pre-law group.

For the pre-law group, after one year the recidivism rate was 18.0%. For the post-law group, the one year recidivism rate was 13.3%. This is a reduction in recidivism rate of approximately 25%, and is a statistically significant change.

Through time the change becomes larger. After four years the pre-law rate was 33% and the post-law rate was 21%, a 36% reduction in recidivism.

The rates level off after the third year for the pre-law group. Approximately half of the recidivism takes place by the 18th month and 80% is realized by the third year. If this pattern holds true for the post-law group, the projected recidivism rate by the 84th month would be 25%. This would be an overall 34% decrease in recidivism rate after a period of seven years four months.

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[1] Sources: Arkansas Industrial Development Association; Fort Smith Police Department; Western Arkansas Counseling and Guidance Center.

[2] Estimated from available population figures for January of each year.

Table 4-10 shows the recidivism data for six month intervals. The rates are diagrammed in Figure 4-2.

Table 4-10
Recidivism Through Time, Percent

Month	Pre-Law	Post-Law
6	10.6	9.5
12	18.0	13.3
18	22.4	16.3
24	25.9	18.0
30	29.1	20.1
36	30.4	20.1
42	31.8	21.0
48	33.0	21.0
54	34.1	
60	35.1	
61	35.9	
72	37.0	
78	37.3	
84	37.9	

Figure 4-2
Recidivism Through Time, Percent

29
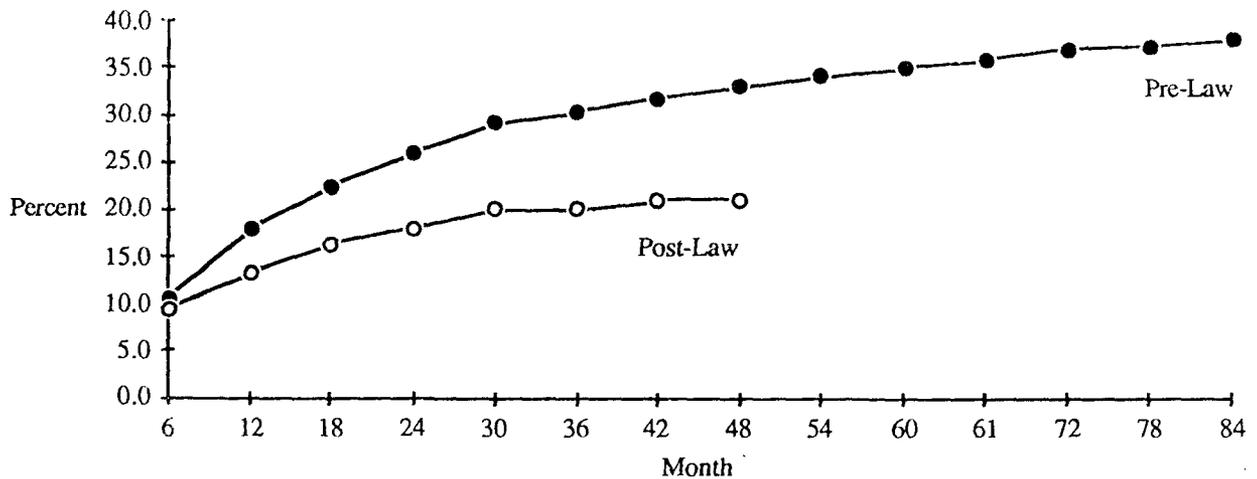
4.4   CONCLUSIONS

MetaMetrics concludes that the behavior of drivers in Fort Smith changed after the passage of the Omnibus DWI Law and after active implementation of provisions on plea bargaining and sanctions. Additionally, first-time DWI offenders were arrested for second offenses at a substantially lower rate than that of pre-law first time offenders.

The active involvement of criminal justice and community agencies in implementation of the law and public information programs may have been essential ingredients in the success of Fort Smith in reducing DWI offenses. Other Arkansas communities may not have benefited as much from the Arkansas Omnibus DWI Law.

SECTION 5
KENTUCKY SETTING
AND STUDY DESIGN

Kentucky has had a long-established no plea bargaining policy in Fayette County (Lexington) and the practice of allowing plea bargaining in adjacent Jefferson County (Louisville). On July 13, 1984 Statewide legislation was introduced that required the prosecution to oppose the amendment of DUI charges at blood alcohol levels of .15 and above. Stricter sanctions were also established, as well as additional provisions for detection and arrest of offenders.

This set of circumstances presented the opportunity to conduct a multi-level evaluation. Measures of impact before and after the legislation were examined for Lexington and Louisville, and the sites were also compared with one another.

The evaluation looked at the arrest and adjudication of residents of the cities of Lexington and Lousiville only. An explanation of data collection and analysis procedures is given in Section 5.4. Descriptions of the sites are provided below.

5.1   LEXINGTON STUDY SETTING

The prosecuting attorney in Fayette County (Lexington) has followed the policy of not allowing plea bargaining for DWI offenses for the past 15 years. The conviction rate in Fayette for DWI arrests was reportedly 90% in 1976, and was documented at 95% in 1983.[1]

On May 1, 1982 Fayette County instituted an increased police enforcement traffic alcohol program (TAP). The program included officer training. It operated Monday through Saturday evenings on an overtime staffing basis. The size of the patrol ranged from 15 to 25 officers per night. The TAP program resulted in a large increase the number of arrests for DUI. The program was funded through September 30, 1984, after which time the number of arrests decreased.

An evaluation of the TAP program was conducted by the University of Kentucky from 1983-1986. This evaluation found a significant reduction in reported alcohol-related accidents during the TAP period. During the enforcement period the DUI arrests increased dramatically and then tapered off. The researchers speculated that this reduction in arrests (taken with the reduction in alcohol-related accidents) reflects a decrease in the number of alcohol-impaired drivers as a result of TAP. However, a more conservative assumption would be that the decrease in arrests reflects a decrease in the level of enforcement.

The Lieutenant in charge of the Fayette TAP maintained records of publicity on the TAP program. Apparently there was a general awareness of the high probability of apprehension in Fayette for DUI. It is not known at the present if there is a general awareness of the likelihood of being prosecuted on the original charge. The Lieutenant had also requested and was receiving monthly reports from the Administrative Office of the Courts. These reports provided him with a number of statistics, including the volume of arrests and number convictions on original charge per month. Interview were conducted

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[1]   Pigman, Jerry G. and Kenneth R. Agent, Alcohol Impact Evaluation (Interim Report) (University of Kentucky: Lexington, Kentucky), 1983, p. 11.

with representatives from the Lexington Police Department, the State Highway Safety Office, the Governor's Office, the State Attorney's Office, and the District Court. Among those interviewed there was a clear awareness of and attention to the high rate of conviction on original DUI charge in Fayette County.

Since Lexington has had a policy of no plea bargaining for a long period of time, a change in the rate of conviction on original change due to the passage of no plea bargaining legislation could only be slight. However, the effect of passing a law that significantly increased penalties in a location that already had a no plea bargaining policy could be investigated. Effects on court processing in particular could be examined. Impact on recidivism could also be examined.

As a potential complication, there was an increase in number of arrests during the TAP program and a decrease in arrests after the end of the program, which corresponded closely with the passage of the DUI legislation. The relationship between the level of enforcement and the measurement of rates of recidivism is addressed in Section 4.

It was decided that the study would look at both Lexington and Louisville, both as separate sites and in comparison with one another. Discussions with the Chief Research Engineer at the University of Kentucky Transportation Research Program indicated that while these sites are not identical, they would be appropriate for comparison. Louisville and Lexington are the two largest cities in Kentucky. Louisville has its own police department, as does Lexington. The availability and comparability of computerized data for the two sites made Louisville the best choice as a second site.

5.2   LOUISVILLE STUDY SETTING

Plea bargaining was allowed in Jefferson County (Louisville) prior to the 1984 legislation. In Jefferson DUI convictions and attendant sanctions have been avoided by allowing first offenders to plea to offenses such as Reckless Driving and Public Intoxication. Meetings with Jefferson County court and police personnel provided information on the history of thinking about drunk driving, DUI enforcement, and DUI adjudication in the county.

From the 1970's to the early 1980's arrests were made or citations were given for DUI only if drivers were overtly breaking a law. There were no programs to focus police efforts on making an impact on the incidence of DUI or on alcohol-related accidents. There was also no focused effort to prosecute on original DUI charge or to administer severe sanctions.

In the early 1980's there began to be a shift in police approach from a purely enforcement role to an impact-oriented role. During this period there were a combination of changes in the social and judicial environment. There were long-term, concerted efforts on the part of public agencies, private organizations, and individuals to bring concerns about drunk driving to the forefront. For example, beginning in 1985 DUI arrest and BAC statistics were maintained by the Evidential Breath Testing Unit in Lexington to track the severity of the problem and the need for a program of action. Federal funds became available to implement programs to address these concerns.

In October 1985 the Louisville city TAP program was initiated. The program was assisted by Federal funding for training and equipment. Officers volunteer for the unit and receive in-service DUI and breath testing training. Criteria for acceptance into the unit include record of court attendance and arrests. In July of 1987 the TAP unit was comprised of 10 officers and one sergeant. The officers are assigned full-time to the unit,

in contrast to Lexington, which assigned TAP officers on an over-time basis. The program resulted in an increase in the number of arrests for DUI. In May 1988 the program was still in operation.

Since plea bargaining did take place before the 1984 legislation, it would be expected that the implementation of the legislation would have an impact on the rate of conviction on original charge. Change in rate of conviction, the measure of the implementation of the no plea bargaining legislation, is one analysis to be performed.

There is the perception within the Louisville and Jefferson County police departments that the 1984 legislation has also caused an increased level of effort on the part of offenders to avoid the effects of conviction. According to interviewed TAP officers, one tactic of defense attorneys has been to move for continuances, in the expectation that the arresting officer will eventually miss a court date which would result in a dismissal. The granting of continuances also delays the loss of the offender's license. Another tactic has been to request jury trials, in the expectation that the judge will dismiss a case rather than grant them. The officers reported that the TAP unit emphasizes the importance of officer follow-through for the entire course of a trial to prevent such tactics from being effective.

Data were not available on numbers of continuances or jury trials. However, the time from arrest to first court date and final adjudication was available. Analysis of adjudication time and of recidivism are presented in Section 4.

5.3 KENTUCKY DUI LEGISLATION

In July 1984 Senate Bill No. 20 was enacted by the General Assembly of the Commonwealth of Kentucky, that changed existing DUI laws in several respects. The law now requires that a charge of DWI at a blood alcohol content of .15 and above cannot be amended by and shall be opposed by the prosecuting attorney; in effect it prohibits plea bargaining for BAC levels of .15 and over. The legislation leaves the amendment of a DUI charge to the discretion of the prosecutor at BAC levels below .15%; however, at BAC levels above .10% the reasons for requesting and granting an amendment must be recorded.

Penalties for conviction were also increased. Prior to 1984, conviction for DUI did not result in a driving suspension for first offenders. The 1984 legislation increased the minimum fine from $100, no jail time, and optional license suspension to $200 and/or 48 hours and a 30 day mandatory loss of license for a first offense. Increased mandatory penalties for second and third offenses were also passed.

The law also includes changes in treatment requirements and detection and arrest procedures. Table 5-1 compares old and new laws. More detailed information is provided in Appendix D.

Table 5-1

Changes in DUI Statutes

Amendment of Charge

Pre-Law   No provision restricting dismissal or amendment of charge.

Post-Law   When blood alcohol reading is .15% or above, prosecutor must oppose the
              amendment of DUI charge. When blood alcohol reading is .10% or above,
              if prosecution moves to amend charge it must give reasons for such motion
              and court must record its reasons for granting such amendment.

Sentencing Sanctions

Pre-Law   First Offense: $100-500 probateable fine. No jail time required. No
              community service required. Six months loss of license, which may be
              waived if offender attends an alcohol education program.

Post-Law   First Offense: $200-500 fine, 2-30 days in jail, or both. Offender may
              apply to do 2-30 days of community service in lieu of fine or jail. Minimum
              of 30 days loss of license if offender attends an alcohol education program;
              otherwise 6 months loss of license. Minimum of 48 hours jail time if a
              person other than the driver suffered injury.

5.4   DATA SOURCE

Arrest and adjudication data for Jefferson and Fayette counties are on the
computerized Administrative Office of the Courts (AOC) system. This system has been in
place from 1980 to the present time.

All of the arrest and adjudication data for Lexington and Louisville for the time
period 1/1/80 – 7/13/87 were collected. The database used for the analysis is comprised of
the entire population of individuals resident in Lexington and Louisville who were
adjudicated for DUI during this time period.

5.5   DATA ACQUISITION AND PREPARATION

Data were downloaded from the AOC mainframe onto floppy disks in a
microcomputer format. These data were then transfered onto an Apple Macintosh computer
and were prepared and analyzed using 4th Dimension, a database management and
programming environment.

The data are kept in the AOC system on a case, rather than a defendent, basis.
Since the study is concerned with identifying impact on defendents, and since a single
defendent may have multiple cases, one of the first steps in preparing the data for analysis
was to link cases to form defendent records. After cleaning the data files of cases in which

the defendents were not residents of Lexington or Louisville, or were otherwise out of range, the database held over 40,000 records.

The data, as acquired from the AOC system, can be considered to have started out in an un-linked form. One would want, ideally, to link all the cases perfectly, to associate all the cases that belong to a single defendant. However, due a change that took place in driver's license numbering in Kentucky, there were no unique identifiers with which to perfectly link all cases.

It was decided to err on the side of underlinking. This decision was based on the importance of not biasing the data toward showing more recidivism than actually took place. This decision was made even though any bias that is introduced into the data via the linking process should, in fact, be introduced equally in the before-law and after-law data.

The data contain only the last court disposition record for each case. Certain data, including data on appeals, continuances, and sanctions, are therefore not available for every case. For example, information on appeals will be in the court disposition record for a case only if an appeal took place as part of the last court transaction. Therefore, while this textual data was retained, no analysis of sanctions or other such data has been conducted at this time.

Data were collected for Lexington for the periods 1/1/80 through 7/13/87 and for Louisville for the periods 1/1/80 through 2/18/88. To limit the analysis to cases that took place during the same periods of time, those cases that were arrested before 1/1/80 and convicted after 7/13/87 were eliminated.

A detailed description of the data acquisition process, decision-making, and procedures used for the preparation and analysis of data, is presented in Appendix B.

5.6 DATA ANALYSIS

Programs to generate statistics were written and executed in 4th Dimension. Defendant and arrest statistics were calculated for Lexington and Louisville. These analyses are described in Section 6.

SECTION 6
KENTUCKY FINDINGS
AND IMPACT

Two sites in Kentucky were studied to determine the impact of no plea bargaining. In Lexington a no plea bargaining policy had been in effect for several years prior to the passage of the DUI legislation that prohibited plea bargaining at a BAC level of .15 and above. In Louisville plea bargaining was practiced up until the passage of the no plea bargaining legislation.

In Louisville, after the passage of the legislation, reductions to a lesser charge decreased from 79% to 36%. The amount of time from arrest to conviction decreased by more than half, from an average of 105 days to 55 days. Finally, the rate of recidivism after 36 months from arrest decreased from 23% for the before group to 19% for the after group, a decrease of 16%.

In Lexington, since a no plea bargaining policy was already being practiced, the passage of the legislation had little effect on either level of plea bargaining or on time to adjudicate. The level of reductions of charges was 3% before the legislation and 2% after. The length of time from arrest to conviction was an average of 40 days before and 37 days after the legislation. However, Lexington also showed a marked decrease in the rate of recidivism in the after legislation period. The rate of recidivism after 36 months from arrest was 19% for the before group and 8% for the after group, a decrease of 60%.

While the legislative institution of no plea bargaining in Louisville clearly had an impact on the indicators examined in this study, there is also a factor in addition to no plea bargaining that was acting within Lexington, if not within both sites, to reduce the level of recidivism. This factor may be a combination of public awareness, political will, and commitment on the part of individuals within the responsible agencies. Commitment on the part of individuals was strikingly demonstrated during interviews at the Lexington and Louisville enforcement and adjudication agencies. It could be seen, for instance, in the development of special record-keeping systems at both sites, designed to keep those in leadership roles appraised of information such as the level of DUI arrests and the level of plea bargaining.

The level or intensity of factors such as public awareness and support are not identical within the Louisville and Lexington environments. This could be measured in the incidence of features such as the long-term implentation of a no plea bargaining policy and the institution at an earlier date of a Traffic Alcohol Program (TAP) in Lexington. The presence of these factors can be seen in Louisville as well, however. For instance, a federally funded program is currently operating in Jefferson county (Louisville) that includes training a police unit in accident reporting; this has resulted in better statistics and improved ability to indicate alcohol-involvement in accidents.

The continued decrease in the recidivism rate in Lexington may indicate that the public and political environment at that site has until now been more conducive to the institution of changes that impact DUI behavior. The identification of these environmental or contextual features may be very important to a practical understanding of the role that can be played by specific interventions like no plea bargaining.

6.1   DEFENDENT CHARACTERISTICS

Lexington defendant characteristics changed only slightly from before to after the legislation. Around 80% of the defendants were male and 90% were white both before and after the legislation. The Louisville defendant characteristics also changed only slightly, with around 90% male and 85% white both before and after.

The age at first arrest of those arrested for DUI was also nearly the same before and after the legislation, from around 31 to 33 years for both Lexington and Louisville defendants.   These statistics are presented in Tables 6-1 and 6-2 below.

Table 6-1
Lexington Defendant Characteristics

	BEFORE		AFTER		TOTAL
	n	%	n	%	
Total	5,921	69.2	2,640	30.8	8,561
Sex					
Male	4,973	84.0	2,175	82.7	
Female	945	16.0	454	17.3	
Total	5,918	100.0	2,629	100.0	
Race					
White	5,368	91.4	2,285	87.3	
Nonwhite	506	8.6	331	12.7	
Total	5,874	100.0	2,616	100.0	
	mean	sd	mean	sd	
Age	31.3	211.571	31.6	213.508	

Table 6-2
Louisville Defendant Characteristics

	BEFORE		AFTER		TOTAL
	n	%	n	%	
Total	12,360	47.8	13,484	52.2	25,844
Sex					
Male	11,060	89.8	11,484	85.5	
Female	1,251	10.2	1,953	14.5	
Total	12,311	100.0	13,437	100.0	
Race					
White	10,519	85.5	11,078	82.5	
Nonwhite	1,782	14.5	2,342	17.5	
Total	12,301	100.0	13,420	100.0	
	mean	sd	mean	sd	
Age	32.7	228.520	32.8	220.999	

6.2 SYSTEM CHANGES

The criminal justice systems in both Louisville and Lexington changed during the study period, July 1981 to July 1987, with respect to handling DUI offenders. Changes in law enforcement, prosecution, and cout processing are summarized below.

6.2.1 Plea Bargaining

Tables 6-3 and 6-4 show the proportion convicted on original charge before and after the legislation. Figure 6-1 is a graph of relative proportions convicted on original charge.

Table 6-3
Lexington Defendant Dispositions

	BEFORE		AFTER	
	n	%	n	%
Disposition				
Guilty	5,633	97.5	2,465	98.2
Reduced	144	2.5	44	1.8
Total	5,777	100.0	2,509	100.0

Table 6-4
Louisville Defendant Dispositions

	BEFORE		AFTER	
	n	%	n	%
Disposition				
Guilty	2,267	20.8	7,961	63.7
Reduced	8,640	79.2	4,543	36.3
Total	10,907	100.0	12,504	100.0

Figure 6-1

Louisville and Lexington
Percentage Guilty and Reduced
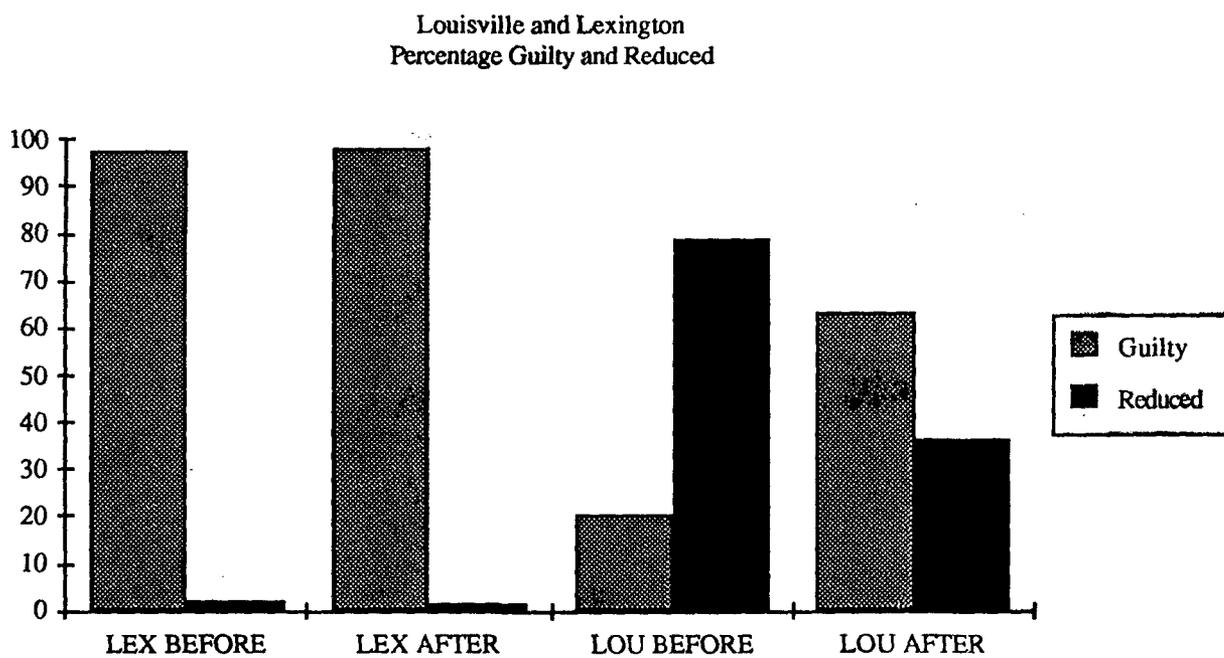
In Lexington there was a high level of no-plea bargaining both before and after the legislation. Of those who were convicted, 97.5% before and 98.2% after were convicted of the original charge. This finding confirms the statements made by Lexington police and other officials.

In Louisville, however, there was a relatively high level of plea bargaining before the legislation, and a large decrease in the level of plea bargaining after the legislation. This finding confirms the earlier statements made by officials in Louisville. Of those convicted, 20.8% were found guilty of the original charge before the legislation and 63.7% were guilty of the original charge after the legislation.

The Louisville TAP program began operating after the passage of the legislation. Questions were raised by Louisville enforcement personnel regarding the possibility of a difference in prosecution of TAP arrest cases. It was thought that TAP cases may be prosecuted more rigorously than non-TAP cases.

About 12% of the Louisville cases were indicated as TAP arrests. The remainder either did not show the arresting officer or had a non-TAP arresting officer. In those cases that were indicated as non-TAP, 59.4% were found guilty of the original charge. This is slightly less than the conviction rate for non-TAP and unspecified arrests. Thus, while the arresting officer information was not available for all cases, there is no indication that TAP and non-TAP cases are prosecuted differently. (The Lexington TAP officers were assigned on an over-time basis, and thus it was not feasible to try to determine if a case was a TAP or a non-TAP arrest in Lexington.)

6.2.2 Court Operations

An important concern about the institution of no-plea bargaining is the possible effects such a policy or law could have on court operations. Case backlogs are one detrimental effect that could be expected from no-plea bargaining.

The court data were analyzed to determine the length of time a case took from arrest to first court appearance, and from first court date to conviction date, both before and after the legislation. Several questions were addressed by these analyses. One was whether the passage of the legislation had an effect on court processing in terms of time to final disposition. Another was whether cases being prosecuted on the original charge take more time to be adjudicated than do reduced cases. Such an increase in the time for adjudication might be expected, since defendants being adjudicated on the original charge may resist the court process with appeals and other delays.

It was found, however, that time between arrest and final adjudication did not increase for either site. In Lexington the number of days from arrest to court date remained almost constant, an average of 4 days both before and after the legislation. It did take longer to adjudicate cases on the original charge than on a reduced charge both before and after the legislation; reduced cases took an average of 28 days before and 29 days after. However, the days from court to conviction date were also nearly the same, an average of 36 days before and 33 days after. Overall, there was almost no difference in the time to adjudication before and after the legislation. These findings bear out earlier indications that a no-plea bargaining policy has been in effect in Lexington for some time.

In Louisville, the time from arrest to first court date also remained nearly constant, an average of 7 days both before and after the legislation. However, the overall number of days from arrest to conviction decreased by half from before to after the legislation. The average days to conviction was nearly three times greater in Louisville than Lexington

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before the legislation; 98 days compared to 36 days. These figures were closer in the after period; 48 days compared to 33 days.

Before the legislation, in Louisville cases adjudicated on original charge took longer than those adjudicated on a reduced charge; an average of 118 days compared to 89 days. After the legislation, original charge cases took a shorter length of time than reduced cases; 46 days comapred to 69 days.

Statistics on court processing are given in Tables 6-5 and 6-6. These statistics are also shown in graph form in Figures 6-2 and 6-3.

Table 6-5
Court Processing
Arrest to Court and Court to Conviction

Sets	Days from Arrest-Court		Days from Court-Conv.: All		
	Mean	sd	N	Mean	sd
LEX Before	4.4	83.844	5,777	36.0	91.955
LEX After	4.1	26.908	2,509	33.3	47.428
LEX TOTAL			8,286		
LOU Before	6.7	51.023	7,244	97.9	139.660
LOU After	7.2	54.077	8,628	48.1	70.361
LOU TOTAL			15,872		

Table 6-6
Court Processing
Court to Conviction: Guilty and Reduced

Sets	Days from Court-Conv.: Guilty			Days from Court-Conv.: Reduced		
	N	Mean	sd	N	Mean	sd
LEX Before	5,633	36.2	92.912	144	28.3	38.431
LEX After	2,465	33.4	47.556	44	28.5	39.330
LEX TOTAL	8,098			188		
LOU Before	2,267	117.6	192.425	4,977	88.9	106.137
LOU After	7,961	46.3	70.106	667	68.7	70.122
LOU TOTAL	10,228			5,644		

Figure 6-2

Lexington Court Processing:
Before and After

Figure 6-3

Louisville Court Processing:
Before and After
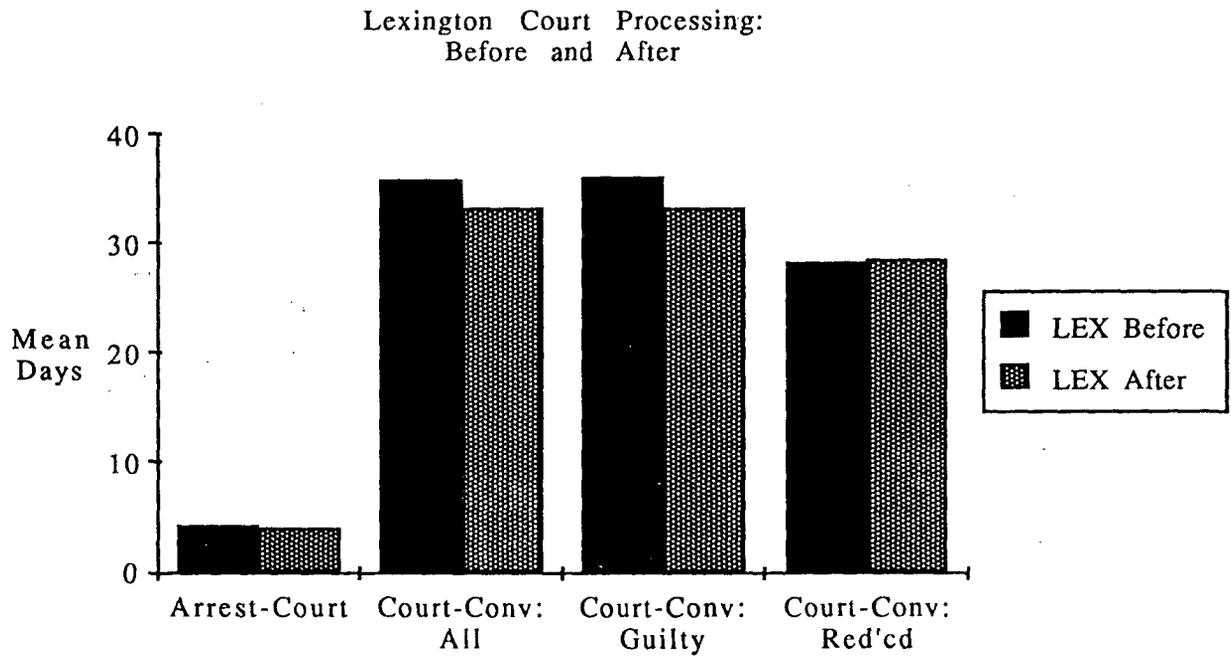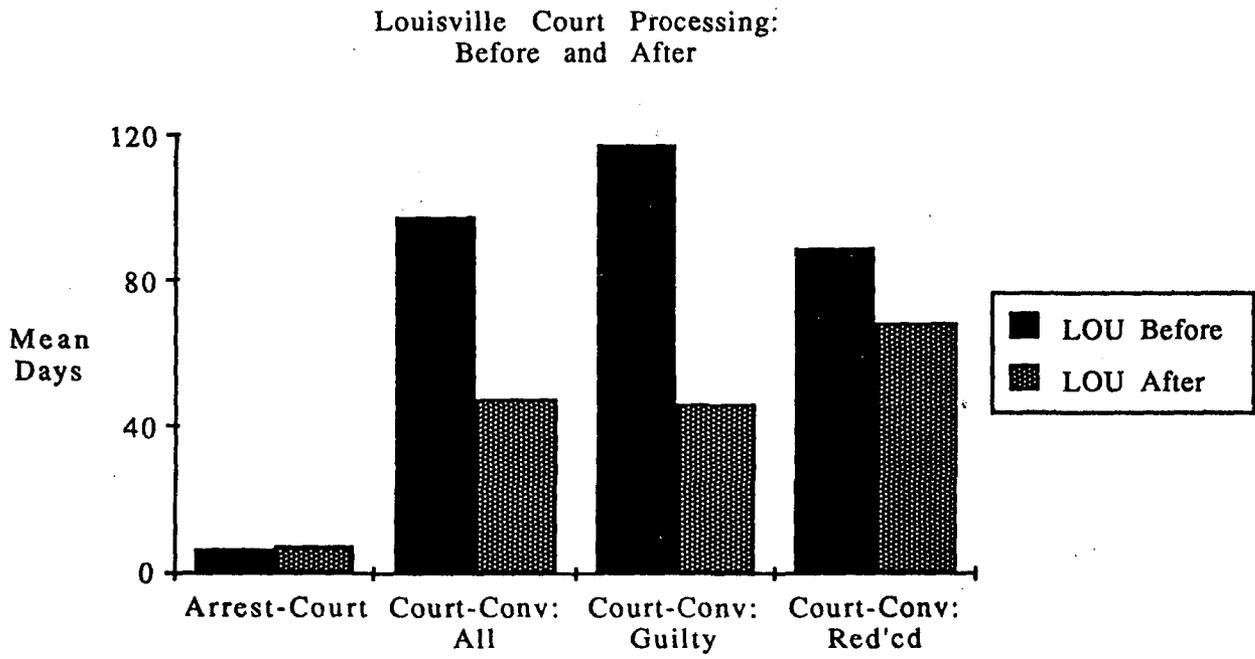
6.2.3 Law Enforcement

Louisville instituted a TAP program after the passage of the no-plea bargaining legislation. Lexington had a TAP program prior to the legislation, and activity in this program was slowing down around the time that the legislation was passed. Thus the level of arrests varied across time for each site and between the two sites.

Before the legislation, Lexington had an average of 177 arrests per month. After the legislation, there was an average of 88 arrests per month at this site. This is a decrease in the level of enforcement of 50%.

In Louisville, the average number of arrests was 387 per month before and 506 per month after the legislation. This is an increase in the level of enforcement of 31%.

Population data were gathered for the two sites in order to compare changes in enforcement levels with changes in population. There are several issues to consider in using these data.

For Census purposes, the city of Lexington is synonomous with the whole of Fayette County. All residents of the county, including those outside the city proper, are counted in the U.S. and Kentucky censuses as being residents of Lexington/Fayette County. However, arrest data were collected only for people living within the city of Lexington itself, not for those living in the county but outside the city. No accurate figures or estimates were available for the number of Fayette Country residents living outside the city. According to a Kentucky Department of Commerce official, however, this number should not be more than several thousand. Therefore, the Kentucky Department of Commerce population figures for Lexington/Fayette County are used without being adjusted.

Louisville is part of a large metropolitan area that includes many other towns. However, separate U.S. Census data are available for the city of Louisville. Arrest data were collected only for those living in Louisville. Thus no adjustments were necessary to these population data.

DUI arrests declined in Lexington from 12 per 1,000 population in 1982 to 4 per 1,000 in 1986. Arrests for DUI have been increasing during this period for Louisville. They rose from 16 per 1,000 in 1982 to 27 per 1,000 in 1986. These figures are shown in Table 6-7.

Determining the relationship, if any, between level of enforcement and level of recidivism is very important to analyses of recidivism. If arrests are a contributing factor to level of recidivism, then a determination of the contribution of level of arrest, an analysis of covariance, would need to be taken into account in the calculation of a recidivism measure.

This question was investigated through an analysis of the level of arrests and proportion of multiple offenders per month, and through the calculation and comparison of proportion recidivating and proportional standardized arrest scores. These analyses are discussed in Appendix E.

If analysis results from both sites are considered, it could be concluded that the level of arrests does not affect the level of recidivism. In the case of Lexington, an apparent or spurious corrolation may exist, since both arrest level and recidivism rate were dropping during the same period of time.

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Table 6-7

Kentucky Population and Arrests

	1980	1981	1982	1983	1984	1985	1986	1987	1988	1990
LEX/FAYETTE (KY COMMERCE)										
Population	**204,165**	206,571	208,977	211,382	213,788	**216,194**	217,839	219,485	221,130	**222,775**
Arrests			2,424	2,861	2,074	1,406	926			
Arrests/1,000 population			11.6	13.5	9.7	6.5	4.3			
LOUISVILLE (US CENSUS)										
Population	**298,694**	296,128	**293,561**	291,702	**289,843**	288,157	**286,470**	284,784	283,097	281,411
Arrests			4,570	4,749	5,825	5,822	7,587			
Arrests/1,000 population			15.6	16.3	20.1	20.2	26.5			

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Figures in bold are Kentucky Department of Commerce
and U.S. Bureau of the Census estimates.

This conclusion, if it is valid, would tend to corroborate the tentative hypothesis indicated in the analysis of first and multiple arrests. That is, given a pool of potential recidivists, the rate of recidivism is not dependent on the level of arrests. If this is the case, then the validity of a cumulative recidivism score should not be undermined by variable arrest levels through time.

6.3 RECIDIVISM

MetaMetrics has developed a cumulative recidivism function to measure the recidivism of a group comprised of members who were in the population for varying lengths of time; that is, members who did not enter and leave the population on the same calendar date but were arrested over a period of time. (The methodology is described in Appendix C.) The estimated cumulative recidivism function is an aggregated function derived from the length of time between first and subsequent arrest. Because it is aggregated, however, and is not calculated on the basis of calendar time, it is not directly comparable to arrest rates over time. It was therefore necessary to establish the covariance of periodic arrest rates and period recidivism rates, as described above and in Appendix E, in order to determine the contribution of level of arrest to recidivism. If a degree of covariance had been found, then it would have been necessary to adjust the cumulative recidivism function to account for this factor or to omit this function entirely from the analysis. Since the data do not appear to indicate a reliable degree of covariance between level of arrests and recidivism rates, the recidivism rate has been calculated as though unaffected by the level of arrests.

The calculation of any sort of periodic (monthly, quarterly, etc.) recidivism rate is complicated by the fact that recidivism itself is determined by a situation that changes over time – the number of individuals in the pool of first time arrested and convicted offenders. At the beginning of each time frame, the before legislation and after legislation periods, this pool contains no members. A monthly or other periodic recidivism rate would therefore have to look at the number of recidivists arrested in that period as a proportion of the size of the pool of potential recidivists during that period.

The size of the pool itself is a function of at least four factors. It is directly a function of the number of arrests – a known factor. It is a function of the number of individuals that leave the pool of potentials, through recidivating (another known factor) or through other attrition such as moving and death (unknown factors in the current case). It is also a function of another unknown, that being the number of potential offenders available to be arrested. If it is assumed that the number of potential offenders remains constant, then the arrests can be viewed as samples of a constant population. As discussed, it appears that this assumption can be made. This would be consistent with the study's null hypothesis. The hypothesis being tested by the study is that an intervention – a no plea bargaining policy or law – has an impact on the drinking and driving behavior of the population of those individuals arrested and adjudicated for DUI. The null hypothesis is that this intervention has no effect.

The estimated cumulative recidivism function was calculated for Lexington and Louisville before- and after-legislation groups. Figures for Lexington before and after groups are shown in Tables 6-8 and 6-9. Figures for Louisville are given in Tables 6-10 and 6-11.

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Table 6-8
Estimated Cumulative Recidivism Score
Lexington Before

Month	No Incidents	Incidents	Est. No Incidents	Est. Incidents	Cumu. Recidivism
0	5843	78	5843	78	0.013
1	5779	64	5857.189	142.189	0.024
2	5707	72	5848.99	213.99	0.037
3	5661	46	5875.978	260.978	0.044
4	5615	46	5875.978	306.978	0.052
5	5566	49	5872.812	355.812	0.061
6	5520	46	5876.006	402.006	0.068
7	5484	36	5886.74	438.74	0.075
8	5444	40	5882.418	478.418	0.081
9	5403	41	5881.33	519.33	0.088
10	5360	43	5879.136	562.136	0.096
11	5327	33	5890.193	596.193	0.101
12	5289	38	5884.63	633.63	0.108
13	5253	36	5886.871	669.871	0.114
14	5225	28	5895.899	698.899	0.119
15	5203	22	5902.705	721.705	0.122
16	5175	28	5895.87	748.87	0.127
17	5144	31	5892.433	779.433	0.132
18	5127	17	5908.567	798.567	0.135
19	5104	23	5901.63	820.63	0.139
20	5093	11	5915.568	833.568	0.141
21	5078	15	5910.912	847.912	0.143
22	5061	17	5908.577	864.577	0.146
23	5033	28	5895.691	890.691	0.151
24	5008	25	5899.225	916.225	0.155
25	4978	30	5893.306	945.306	0.16
26	4965	13	5913.554	961.554	0.163
27	4947	18	5907.583	978.583	0.166
28	4924	23	5901.59	1000.59	0.17
29	4912	12	5914.836	1014.836	0.172
30	4894	18	5907.593	1031.593	0.175
31	4880	14	5912.439	1046.439	0.177
32	4869	11	5916.085	1058.085	0.179
33	4854	15	5911.213	1072.213	0.181
34	4840	14	5912.435	1086.435	0.184
35	4829	11	5916.11	1098.11	0.186
36	4821	8	5919.794	1106.794	0.187
37	4763	13	5858.296	1108.296	0.189
38	4619	8	5696.731	1085.731	0.191
39	4511	5	5573.184	1067.184	0.191
40	4352	4	5382.711	1034.711	0.192
41	4201	9	5200.729	1008.729	0.194
42	4047	5	5020.837	978.837	0.195
43	3934	3	4886.683	955.683	0.196
44	3790	5	4711.404	926.404	0.197
45	3634	4	4523.446	893.446	0.198
46	3473	2	4327.804	856.804	0.198
47	3258	5	4062.226	809.226	0.199
48	3072	3	3836.199	767.199	0.2
49	2925	0	3656.202	731.202	0.2
50	2781	2	3476.204	697.204	0.201
51	2601	3	3253.547	655.547	0.201
52	2407	3	3014.352	610.352	0.202
53	2237	1	2804.953	568.953	0.203
54	2060	1	2584.169	525.169	0.203
55	1921	4	2410.971	493.971	0.205
56	1771	1	2227.35	457.35	0.205
57	1601	0	2014.682	413.682	0.205
58	1380	0	1736.578	356.578	0.205
59	1178	0	1482.383	304.383	0.205
60	1015	0	1277.266	262.266	0.205
61	839	0	1055.789	216.789	0.205
62	675	0	849.413	174.413	0.205
63	466	0	586.41	120.41	0.205
64	355	0	446.728	91.728	0.205
65	293	0	368.708	75.708	0.205
66	236	0	296.98	60.98	0.205
67	187	0	235.319	48.319	0.205
68	150	0	188.758	38.758	0.205
69	121	0	152.265	31.265	0.205
70	83	0	104.446	21.446	0.205
71	58	0	72.987	14.987	0.205
72	22	0	27.685	5.685	0.205
73	1	0	1.258	0.258	0.205

Table 6-9
Estimated Cumulative Recidivism Score
Lexington After

Month	No Incidents	Incidents	Est. No Incidents	Est. Incidents	Cumu. Recidivism
0	2616	24	2616	24	0.009
1	2600	15	2624.074	39.074	0.015
2	2578	6	2616.968	44.968	0.017
3	2538	14	2582.374	58.374	0.023
4	2496	9	2553.726	66.726	0.026
5	2434	8	2499.304	73.304	0.029
6	2376	4	2447.793	75.793	0.031
7	2322	5	2396.196	79.196	0.033
8	2261	8	2338.282	85.282	0.036
9	2198	4	2281.2	87.2	0.038
10	2139	4	2224.014	89.014	0.04
11	2079	11	2165.679	97.679	0.045
12	2008	4	2102.845	98.845	0.047
13	1948	6	2044.083	102.083	0.05
14	1898	7	1997.77	106.77	0.053
15	1820	4	1922.761	106.761	0.056
16	1749	3	1851.822	105.822	0.057
17	1678	1	1779.701	102.701	0.058
18	1617	5	1716.026	104.026	0.061
19	1555	3	1655.348	103.348	0.062
20	1475	2	1573.221	100.221	0.064
21	1388	0	1482.437	94.437	0.064
22	1310	2	1399.13	91.13	0.065
23	1235	1	1321.044	87.044	0.066
24	1153	1	1234.331	82.331	0.067
25	1074	0	1150.756	76.756	0.067
26	986	1	1056.467	71.467	0.068
27	894	2	958.865	66.865	0.07
28	802	2	862.118	62.118	0.072
29	687	0	740.344	53.344	0.072
30	628	0	676.763	48.763	0.072
31	555	0	598.094	43.094	0.072
32	478	0	515.116	37.116	0.072
33	375	1	404.118	30.118	0.075
34	264	0	285.26	21.26	0.075
35	142	0	153.435	11.435	0.075
36	49	0	52.946	3.946	0.075

By these calculations, the rate of recidivism for those Lexington residents arrested in Lexington after 36 four-week periods was 19% before the passage of legislation and 8% after the legislation. This is a decrease in the recidivism rate of 60%. In Louisville the recidivism rate of the pre-legislation group at 36 months was 23% and for the post-legislation group it was 19%, a decrease of 16%.

These findings are shown as graphs in Figures 6-4 and 6-5. In each case, since the before groups had a longer time in which to recidivate, the curve for the before group extends for a 73 four-week period while that for the after group extend for 36 weeks. While Lexington showed a greater decrease in the level of recidivism than did Louisville, a projection of the after group curve would show an increasing difference in the rate of recidivism between before and after groups.

6.4   CONCLUSIONS

MetaMetrics concludes that the legislative institution of no plea bargaining in Kentucky had a positive impact on recidivism and court processing time. Additional factors, such as public awareness, political will, and commitment on the part of individuals within the responsible agencies, also appear to be at work within both sites. The identification of these environmental or contextual factors may be very important to a practical understanding of the role that can be played by specific interventions such as no plea bargaining.

Table 6-10
Estimated Cumulative Recidivism Score
Louisville Before

Month	No Incidents	Incidents	Est. No Incidents	Est. Incidents	Cumu. Recidivism
0	11975	385	11975	385	0.032
1	11844	131	12237.437	524.437	0.043
2	11713	131	12237.437	655.437	0.054
3	11588	125	12243.777	780.777	0.064
4	11511	77	12295.046	861.046	0.07
5	11428	83	12288.595	943.595	0.077
6	11345	83	12288.595	1026.595	0.084
7	11248	97	12273.318	1122.318	0.091
8	11170	78	12294.231	1202.231	0.098
9	11094	76	12296.447	1278.447	0.104
10	11033	61	12313.188	1341.188	0.109
11	10961	72	12300.843	1411.843	0.115
12	10883	78	12294.065	1489.065	0.121
13	10800	83	12288.376	1571.376	0.128
14	10734	66	12307.869	1639.869	0.133
15	10672	62	12312.484	1702.484	0.138
16	10615	57	12318.286	1760.286	0.143
17	10542	73	12299.619	1830.619	0.149
18	10480	62	12312.542	1894.542	0.154
19	10424	56	12319.633	1951.633	0.158
20	10368	56	12319.633	2007.633	0.163
21	10325	43	12335.164	2053.164	0.166
22	10267	58	12317.169	2108.169	0.171
23	10211	56	12319.582	2164.582	0.176
24	10152	59	12315.942	2222.942	0.18
25	10098	54	12322.044	2278.044	0.185
26	10044	54	12322.044	2332.044	0.189
27	9983	61	12313.409	2391.409	0.194
28	9926	57	12313.374	2449.374	0.199
29	9871	55	12320.87	2504.87	0.203
30	9812	59	12315.849	2562.849	0.208
31	9769	43	12336.054	2610.054	0.212
32	9724	45	12333.517	2654.517	0.215
33	9664	60	12314.403	2710.403	0.22
34	9612	52	12324.661	2764.661	0.224
35	9561	51	12325.95	2815.95	0.228
36	9523	38	12342.799	2857.799	0.232
37	9368	41	12190.548	2863.548	0.235
38	9132	46	11935.679	2849.679	0.239
39	8841	37	11613.839	2809.839	0.242
40	8459	32	11211.497	2744.497	0.245
41	8163	32	10808.958	2677.958	0.248
42	7850	47	10435.41	2632.41	0.252
43	7500	39	10030.191	2569.191	0.256
44	7223	39	9710.235	2526.235	0.26
45	7007	38	9470.994	2501.994	0.264
46	6896	25	9371.786	2500.786	0.267
47	6571	34	8962.597	2425.597	0.271
48	6274	24	8602.009	2352.009	0.273
49	6043	27	8317.11	2301.11	0.277
50	5800	30	8018.491	2248.491	0.28
51	5549	13	7711.37	2175.37	0.282
52	5231	27	7286.52	2082.52	0.286
53	4968	21	6956.079	2009.079	0.289
54	4646	18	6532.836	1904.836	0.292
55	4359	16	6153.119	1810.119	0.294
56	4120	16	5837.175	1733.175	0.297
57	3849	15	5474.485	1640.485	0.3
58	3547	12	5064.684	1529.684	0.302
59	3262	7	4673.55	1418.55	0.304
60	3028	13	4347.622	1332.622	0.307
61	2822	6	4069.316	1253.316	0.308
62	2625	9	3793.308	1177.308	0.31
63	2401	3	3490.249	1086.249	0.311
64	2192	4	3182.457	994.457	0.312
65	1940	3	2821.74	884.74	0.314
66	1685	4	2454.637	773.637	0.315
67	1487	3	2171.353	687.353	0.317
68	1222	3	1788.001	569.001	0.318
69	997	2	1462.377	467.377	0.32
70	758	0	1114.052	356.052	0.32
71	493	0	724.575	231.575	0.32
72	248	0	364.492	116.492	0.32
73	10	0	14.697	4.697	0.32

Table 6-11
Estimated Cumulative Recidivism Score
Louisville After

Month	No Incidents	Incidents	Est. No Incidents	Est. Incidents	Cumu. Recidivism
0	12980	504	12980	504	0.039
1	12873	97	13393.038	617.038	0.046
2	12543	82	13148.785	687.785	0.052
3	12170	97	12841.723	768.723	0.06
4	11721	80	12467.31	826.31	0.066
5	11266	81	12065.692	880.692	0.073
6	10841	69	11694.605	922.605	0.079
7	10383	77	11272.288	966.288	0.086
8	9938	51	10869.785	982.785	0.09
9	9432	67	10369.557	1004.557	0.097
10	8964	49	9925.543	1010.543	0.102
11	8472	52	9432.327	1012.327	0.107
12	7940	55	8894.617	1009.617	0.114
13	7447	56	8400.535	1009.535	0.12
14	6995	37	7950.445	992.445	0.125
15	6555	33	7489.964	967.964	0.129
16	6087	36	6990.403	939.403	0.134
17	5671	26	6551.409	906.409	0.138
18	5310	32	6162.619	884.619	0.144
19	4957	30	5787.817	860.817	0.149
20	4650	19	5462.422	831.422	0.152
21	4339	14	5117.998	792.998	0.155
22	3989	23	4720.391	754.391	0.16
23	3655	25	4350.235	720.235	0.166
24	3387	16	4059.021	688.021	0.17
25	3144	12	3785.69	653.69	0.173
26	2871	15	3470.216	614.216	0.177
27	2552	13	3100.837	561.837	0.181
28	2292	8	2799.18	515.18	0.184
29	1999	9	2449.895	459.895	0.188
30	1743	1	2145.813	403.813	0.188
31	1559	3	1920.392	364.392	0.19
32	1304	5	1609.377	310.377	0.193
33	996	0	1233.98	237.98	0.193
34	708	1	877.166	170.166	0.194
35	399	0	495.034	96.034	0.194
36	141	0	174.937	33.937	0.194

Figure 6-4

Lexington
Recidivism Through Time

Recidivism
Rate

Four-week Periods

Before
After

Figure 6-5

Louisville
Recidivism Through Time
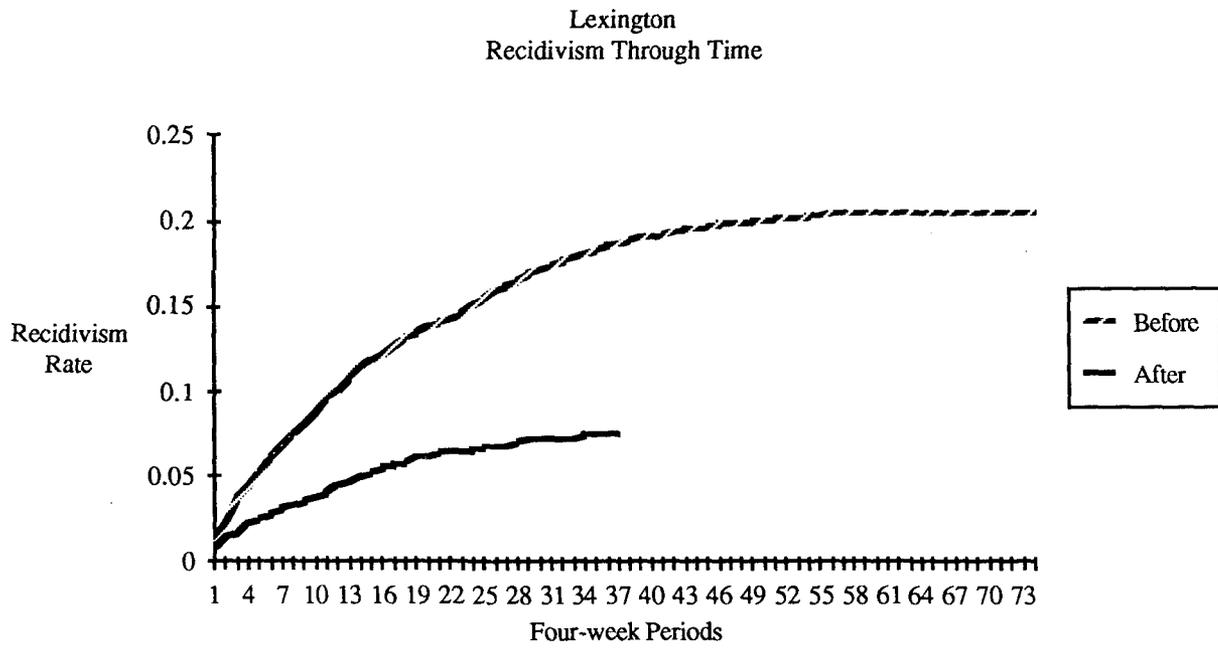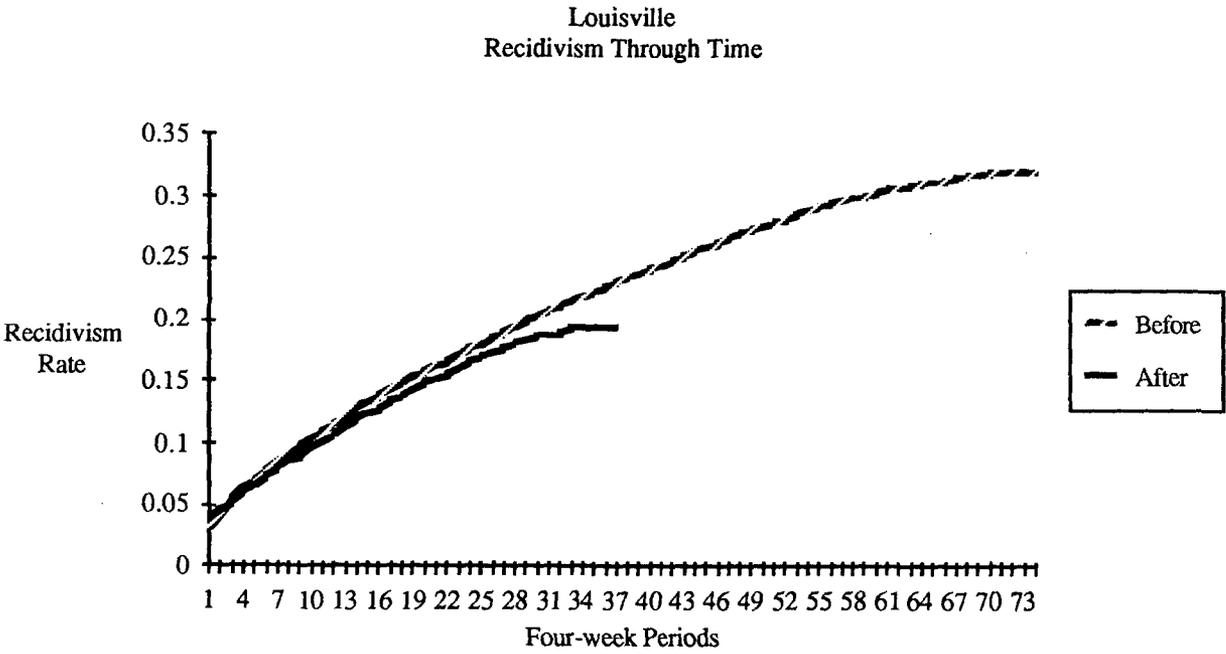
APPENDIX A
LETTER REPORT ON SITE RECOMMENDATIONS AND EVALUATION PLAN

MetaMetrics Inc.

January 5, 1987

Dr. Richard Compton
DOT/National Highway Traffic
    Safety Administration
Room 6240
400 7th Street, S.W.
Washington, D.C. 20590

Subject: Report on Site Recommendations and Evaluation Plan

Dear Dr. Compton:

This report presents the information gathered during Task 2, Site Selection. The purpose of the site selection task was to identify sites where the existance of no plea bargaining laws or policy can be evaluated. At sites where this is the case, the evaluation will look at the impact of no plea bargaining on:

- o Recidivism
- o General Deterrence
- o Court Operations

This report presents information gathered on jurisdictions which were identified as study candidates. Three to five of these jurisdictions are recommended for further study. Information is also presented on those sites which were initially identified as potential sites but were later excluded from the study. Evaluation procedures consistent with proposed evaluation designs for the initial site visits are also presented.

The following list of 21 potential sites was developed from meetings with NHTSA headquarter personnel, review of prior study results, and telephone conversations with NHTSA Regional Alcohol Coordinators.

Region	Candidate Jurisdictions
I	None
II	New York, Statewide New Jersey, Statewide
III	Virginia, Statewide
IV	Georgia, DeKalb County Kentucky, Fayette County Mississippi, Statewide Alabama, Huntsville
V	Indiana, Marion County
VI	Arkansas, Fort Smith New Mexico, Albuquerque Texas, El Paso, Austin Louisiana, Baton Rouge
VII	Iowa, Statewide Kansas, Wichita, Topeka Missouri, Green County
VIII	Wyoming, Statewide Colorado, Statewide
IX	Arizona, Flagstaff California, Ventura County
X	Washington, Seattle Oregon, Washington County

Regional Alcohol Coordinators and other individuals at these potential sites were interviewed by telephone, and key information was obtained. As a result of these interviews, 12 sites were identified which have a no-plea bargaining policy or law and which have other characteristics relevant to the study. These 12 sites are presented below.

	Identified
Region	Jurisdictions
I	None
II	None
III	None
IV	Georgia, DeKalb County
	Alabama, Huntsville
	Kentucky, Fayette County
	Mississippi, Jackson
V	Indiana, Marion County
VI	Arkansas, Fort Smith
VII	Missouri, Springfield
	Kansas, Topeka
VIII	Colorado, Denver
	Wyoming, Cheyenne
IX	Arizona, Flagstaff
	California, Ventura County
X	None

The key information on each of these 12 sites was arranged in a matrix, and rankings were assigned to the sites (see Charts 1 and 2). The scoring system used to rank the 12 sites is described below:

1. No Plea Bargaining Law/Policy: Policy = 1 point

A no plea bargaining law or policy was a qualifying criterion for the inclusion of a site in the study. Therefore no points were given for no plea bargaining law or policy.

Most sites which had passed a no plea bargaining law had also passed related DWI legislation which would act as confounding variables for the study. Sites which had a policy rather than a law were given one point.

2.   Date of Law/Policy: 1982-1983 = 1 point

    The longer a no plea bargaining law or policy has been in
effect, the longer a period of time will have elapsed in which an
impact could be exhibited. For the study a site at which a
policy or law which has been in effect for a relatively long
period of time is preferable to a site which has recently
instituted a law or policy. At the same time, for before/after
studies it is necessary that comparable data be collected for the
period of time before and after the implementation of a law or
policy. Sites at which a before/after study is suggested were
given one point for a date of implementation of 1982-1983. (The
site at which a comparative study is suggested was given one
point by default.)

3.   Evidence of Successful Implementation: Yes = 1 point

    Those sites for which the telephone interview respondents
indicated that the law or policy was being successfully
implemented were given one point.

4.   Availability of Key Data Elements: Yes = 1 point

    Sites at which key data elements, including arrests,
arraignment, disposition, and penalties, were readily available
were given one point.

5.   Recordkeeping System: Computerized = 1 point

    Sites which have had computerized systems prior to the
implementation of the law or policy were given one point.

6.   Design -- Before/After or Comparison: Yes = 2 points

    Sites at which it appeared that a suitable before/after or
comparison study could be made were given two points.

7.   Population: 100,000+ = 1/2 point; 200,000+ = 1 point

    The impact of no plea bargaining on court operations,
general deterrence, and recidivism will be reflected by
indicators such as arrest and conviction rates, time between
arrest and conviction, and recidivism rates. While such changes
can take place in jurisdictions with low as well as high

populations, the statistical significance of any such changes will be greater at sites with larger populations. An arrest rate of 2% on DWI would provide a DWI population of 2,000 per year at sites with populations of 100,000. One-half point was given to sites with populations of 100,000 or greater, and one point was given to those with 200,000 or more.

8. Confounding Variables: No points given

All sites had confounding variables. Therefore no points were given or subtracted in this category. The specific confounding variables will be taken into consideration in the study design for each study site. For instance, the presence of traffic alcohol patrols may have a bearing on overall arrest rates, but would not confound conviction rates as a function of arrests.

9. Publicity: Yes = 1 point

Sites which have had publicity focusing on the no plea bargaining law or policy were given one point.

10. Cooperation of Courts/Prosecutor's Office: No points given.

All agencies contacted expressed interest and willingness to cooperate in a study. Therefore no points were given in this category.

11. Presence of Cooperating Agencies: Yes = 1/2 point

Public and private agencies working to reduce drunken driving may be able provide assistance such as data collection on public attitudes toward no plea bargaining measures. At those sites for which the telephone interview respondents indicated that such agencies were known to be present in the jurisdiction, one-half point was given.

The following charts present the key information on each site and the scores assigned to each site.

Chart 1

Region/Site	IV GA	IV AL	IV KY	IV MS	V ID	VI AK	VII MO	VII KS	VIII CO	VIII WY	IX AZ	IX CA
1 NPB Policy/Law P,L	P	L	P/L	L	P	L	P	L	L	L	L	P/L
2 NPB Date	83	83	82/84	83	82	82	83	82	82	84	82	79/82
3 Successful Y,N	Y	Y	Y	—	—	Y	Y	Y	Y	—	Y	Y
4 Key Data Available Y,N	Y	Y	Y	—	N	Y	Y	Y	Y	N	Y	Y
5 Data Manual/ Computerized Prior to NPB	Manual	Manual	Computer	Manual	Manual	Manual	Computer	Computer	Manual	Manual	Manual	Computer
6 Study Design Comparison/ Before–After, N	B/A	B/A	B/A	N	N	B/A	N	B/A	N	N	B/A	Comparison
7 Population (000)	520	187	193	190	800	90	140	120	470	50	56	500
8 Confounding Variables Y,N	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y
9 NPB Publicity Y,N	Y	N	Y	N	Y	Y	N	N	N	N	N	N
10 Cooperation from Office Y,N	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y
11 Cooperating Agencies Y,N	Y	Y	Y	—	—	—	—	—	—	—	—	—

Chart 2

Region/Site	IV GA	IV AL	IV KY	IV MS	V ID	VI AK	VII MO	VII KS	VIII CO	VIII WY	IX AZ	IX CA
1 NPB Policy/Law	1		1		1		1					1
2 NPB Date	1	1	1	1	1	1	1	1	1		1	1
3 Successful	1	1	1			1	1	1	1		1	1
4 Key Data	1	1	1			1	1	1	1		1	1
5 Data System			1				1	1				1
6 Study Design	2	2	2			2		2			2	2
7 Population	1	.5	.5	.5	1		.5	.5	1			1
8 Confounding Variables												
9 NPB Publicity	1		1		1	1						
10 Cooperation from Office												
11 Cooperating Agencies	.5	.5	.5									
TOTAL POINTS	8.5	6.0	9.0	1.5	4.0	6.0	5.5	6.5	4.0	0	5.0	8.0

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The following section presents more detailed information on each of the 21 sites. Those sites which were excluded from the list of potential candidates, and the reasons for their exclusion, are presented first.

EXCLUDED SITES

Region I

According to Jim Ryan, Regional Alcohol Coordinator, there is no anti-plea bargaining legislation or policy in Region I (New England).

Mr. Ryan feels that plea bargaining is a necessary evil. Given their caseloads, it would not be good public policy to have anti-plea bargaining policy or legislation. Without evidence that anti-plea bargaining works, implementing such legislation or policy would be an act of faith.

Region II

New York and New Jersey were recommended as potential sites by Tom Louizou, Regional Alcohol Coordinator.

Conversations held by Gary Reiner with Richard Smith and Jerry Friedman at the New York State Office of Alcohol Safety revealed that while plea bargaining out of an alcohol-related charge has not been allowed for the past three years by State legislation, plea bargaining from DWI to DWAI (Driving While Alcohol Impaired) is allowed. While Albany County (District Attorney Greenberg) has been identified as having a tough policy, Mr. Smith and Mr Friedman have suggested that obtaining data from the State Highway Department would be very difficult; in addition, the Special Traffic Options Program, implemented in 1981, may be a confounding variable.

William Hughes at the New Jersey Office of Highway Safety stated that no plea bargaining legislation was passed in 1975.

Region III

Robert Voas called Stuart Napier, Virginia Department of Motor Vehicles (Driver Record Systems Department), as the State has detailed VASAP (Alcohol Safety Action Program) driver record system which includes arrest information. However, no VASAP locality with a clear no plea bargaining policy could be identified.

Don Haney at the NHTSA Regional Office was contacted. Mr. Haney agreed to raise the issue in the Region III staff meeting. Frank Attabelli, Regional Administrator, called back and he and Robert Voas discussed each state in the region. They jointly agreed that none would be good prospects for the study.

Region VI

According to Howard Graf, Deputy Assistant Governor's Representative in Albuquerque, New Mexico, the state allows plea bargaining.

Although there is a no plea bargaining law in the state of Texas, Vern With, Regional Coordinator, stated that there is weak compliance with the legislation. There is a disproportionate number of citations issued compared to convictions entered into the state drivers record.

According to Vern With, Baton Rouge, Louisiana has had a no plea bargaining policy since 1983. However, he described the baseline data prior to 1983 as poor.

Region VII

Although Jim Stevens, the Regional Alcohol Coordinator, suggested Iowa as a potential site, conversations between Gary Reiner and Carl Wells, Area Administrator of Western Iowa, revealed that the state allows plea bargaining.

Region X

According to Michael Baldwin, Regional Alcohol Coordinator, no plea bargaining legislation was passed in Oregon in 1975. This early date precludes conducting a before/after study in this state. In addition, 90-95% of first time offenders enter a diversion program, and the charge is expunged from the state drivers record. These two factors combine to eliminate Oregon as a potential study site.

Washington State does not have a no plea bargaining law. According to Michael Baldwin tough prosecution is offset by a high percentage of deferred prosecution cases, for which the DWI arrest is not entered into the state drivers record.

POTENTIAL SITES

Site: Region IV, DeKalb County, Georgia
Ralph Bowden, Solicitor   Gentry Shelnutt Asst. Solicitor

Type of No Plea Bargaining

Policy: January 1, 1983, when the Solicitor came into office.

Policy at the solicitor's office is that they don't dismiss or
reduce a good DUI case.   They do negotiate on sentencing,
however.   Georgia passed legislation in 1984 on minimum
sentencing, which takes some authority away from the prosecutor.

Being Implemented/Successful

They are implementing the policy. The only way a case can be
nolle prossed or dismissed is with the approval of Bowden or
Shelnutt.   Shelnutt judges there is no serious affect on caseload
or backlog.   Backlog is by volume, not related to the policy.

Data Availability

They have a manual record keeping system.   Bowden says that the
manual system in their office works well.   Driving History
records for the State are kept at the Department of Public
Safety, and Criminal History records are kept at the Georgia
Crime Information Center (GCIC).   Key data elements are
available.   Data goes back indefinately.   There are about 500 DUI
arrests per month.

Factors which Facilitate Comparison

Legislation does not introduce confounding factors.

Under the solicitor's predecessor, good DWI cases were frequently
reduced to public drunk cases (which has no licencing penalties
or mandatory DWI school attendance).   These will show as nollo
pleas in the records.

Confounding Variables

Publicity/Cooperating Agencies

The solicitor thinks the public is aware of the tough stance of
the prosecuting office.   There has been some publicity in the
past.   They keep a clipping file.

Area organizations include the Committee to Combat Drunken and
Drug Drivers, which is influential in Georgia.   The head of the
organization is active in monitoring DUI cases and working on
legislation.   Families in Action was formed to deal primarily
with drugs, but they have become interested in DUI.

The Solicitor's office would be cooperative with the study.

Site: Region IV, Huntsville, Alabama
Larry Nelson, Highway Safety Coordinator

Type of No Plea Bargaining

State Legislation: July 1983

Included in a package of legislation revamping the State DWI law,
including increased maximum penalties.

The Huntsville municipal court was recommended by CV Rice,
Regional Alcohol Coordinator.

Being Implemented/Successful

The Huntsville municipal court is successfully implementing the
no plea bargaining legislation. It handles more DWI legislation
than any other court in the state. Rapid, with few continuences,
86% conviction on DWI in July 1986.

They know that the legislation is being implemented through
checking charges against penalties.

Data Availability

They have a computerized data system. There was a computerized
system prior to legislation, though it has been revised since.
Mr. Nelson can't say how effective it was before 1983, when he
came in.

Factors which Facilitate Comparison

A before/after study would be recommended. The population is
roughly 187,000. Computerized before/after data is available.

Confounding Variables

An increased maximum penalty and other legislation was passed at
the time the no plea bargaining legislation was passed.

Publicity/Cooperating Agencies

Anne Forgey, State and local president of MADD could provide
information as well. She was on the local task force on drunk
driving, which made a big push for the legislation. (Mr. Quinn
was also involved in this.)

The Highway Safety Office would be cooperative with the study.

Site: Region IV, Fayette County, Lexington, Kentucky
Lt. Larry Ball, County Police Department

Type of No Plea Bargaining

Policy: Since 1982, for BAC over .10, in Fayette County.
From .00-.05 the individual is not under the influence; from .06
- .09 is a grey area, in which the charge can be amended down.

In July 1984 Statewide legislation was passed, revamping the old
DUI law and including other measures.

Being Implemented/Successful

Lt. Ball has recently reviewed the data. Before 1982 the State
had a DUI conviction rate of around 40%. After 1982 the State
had a rate of around 70%, and Lexington had a rate of 90%. There
have been 12,000 convictions and around 600 not convicted since
1982 in Fayette County. From 35 arrests for DUI per month they
went to 500.

There is not much problem with backlogging. Most of those
charged plead guilty; they tend to get a better deal than what
the juries are giving.

Data Availability

They've had a computerized system since (at least) 1982. Good
information is available.

Factors which Facilitate Comparison

Policy rather than legislation before 1984.

Confounding Variables

They have a traffic alcohol program called TAP -- Traffic Alcohol
Patrol, which could introduce confounding variables.

Publicity/Cooperating Agencies

Lt. Ball says that the police department is very proud of its
conviction rate and that the judges and the police department
would be very cooperative.

An evaluation done by the University of Kentucky found that the
public is aware of conviction rate. Lt. Ball has kept a
scrapbook of publicity himself.

Site: Region IV, Mississippi Highway Safety Office
Billy Turell, Assistant Director, Highway Safety
Barbara Spencer, Alcohol Counter-Measures Coordinator

Type of No Plea Bargaining

Legislation: 1983. Also included license suspension, higher
fines, mandatory jail or community service, and one DUI law (had
separate DUI and DWI charges before that). Now have .10 BAC per
se law and no-plea bargaining.

Being Implemented/Successful

They are in the process of sampling court systems to monitor the
process of implementing the law. Ms. Spencer used this
information to tell me which towns are doing better than others.
They have found that conviction rates did increase.

Data Availability

They have had a computerized system since prior to the new law.
It has been standardized only since 1985, so getting comparable
before/after data would probably be difficult.

Factors which Facilitate Comparison

Some areas have been identified which are more successful in
implementing the law than others.

Confounding Variables

There would be difficulties in identifying suitable controls for
those successful areas. Mississippi is mostly made up of small
towns and the regions in Mississippi are very different from one
another.

There are a multitude of measures and programs being implemented.

Publicity/Cooperating Agencies

They are undertaking a project at this time with Mississippi
State University to determine public awareness of the package of
legislation.

There are a number of public education programs that have been
going on for some time.

The Office of Highway Safety would be cooperative with the study.

Site: Region V, Marion County, Indiana
Jon Bailey, Deputy Prosecutor

Type of No Plea Bargaining

Policy: 1982. The prosecutor was the Chairman of the Governor's
Task Force to Reduce Drunk Driving. Findings of the committee
led him to institute a no plea bargaining policy.

Being Implemented/Successful

It is being implemented. It would be difficult to determine how
successful it is being, however. The record keeping system is
very poor.

Data Availability

They have computerized record keeping, but the system is poor.
It is currently being overhauled. The manual records are kept on
a case basis, not summarized. Better record keeping was
instituted 5 years ago, but data goes back indefinitely.

They have about 7,000 arrests for DWI/year.

Factors which Facilitate Comparison

Confounding Variables

The 1983 revision of the state statute included sobriety
checkpoints and other measures.

Publicity/Cooperating Agencies

The prosecutor has a name recognition of 88%, and his stance on
drunk driving would probably be the #1 issue prompting this name
recognition.

The prosecutor's office would be cooperative with the study.

Site: Region VI, Arkansas, Ft. Smith
Jim Horton, Alcohol Coordinator
Georgia Swearington, CASE monitor

Type of No Plea Bargaining

Policy: 1982

Being Implemented/Successful

High arrest rate for DWI prior to the 1982 policy has been
maintained. There was a 20-30% conviction rate prior to the
policy. There was a 95-99% conviction level, with 2,000
prosecuted in 1986.

Data Availability

The system was manual and poor prior to 1982. Post-1982
automated data system is supposed to be excellent.

Factors which Facilitate Comparison

Confounding Variables

The population of the site is 90,000. There was a high rate of
arrest prior to 1982.

Publicity/Cooperating Agencies

There is publicity about no plea bargaining. Records on
publicity are maintained.

Site: Region VII, Missouri, Springfield, Green County
Vicki Williams, State Alcohol Safety Coordinator
Sam Phillips, Assistant Prosecuting Attorney

Type of No Plea Bargaining

Policy: 1983. Implemented in Green County.

Being Implemented/Successful

There is a 94% conviction rate on the original charge.

Data Availability

Records were automated in 1983. Manual 1982 data is available,
although pre-1983 data would not necessarily appear on the
driver's record.

Factors which Facilitate Comparison

Although the population of Green County is small, it has some
jurisdiction over municipal court cases which adds 140,000 to the
population base.

Confounding Variables

The population of Green County is 40,000.

Publicity/Cooperating Agencies

There is publicity connected with the CASE program.

The Prosecuting Attorney's Office is very interested in being
part of the study.

Site: Region VII, Kansas, Topeka
B.E. Robinson, State Alcohol Safety Coordinator

Type of No Plea Bargaining

Legislation: 1982

Policy: Wichita has never allowed plea bargaining.

Being Implemented/Successful

20-30% of the cases in Topeka enter a diversion program after entering a guilty plea.

Data Availability

Computerized system has been in use for about 6-8 years.

Factors which Facilitate Comparison

The population is 120,00. 1116 DWI offenders were arrested in 1986 (?), with a conviction rate of approximately 90%.

Confounding Variables

Kansas allows diversion for first time DWI/DUI offenders. It has mandatory sentencing for offenders not accepted into the diversion program. It has a CASE program (since 1983).

Publicity/Cooperating Agencies

Convictions are publicized through the CASE program.

The Office of State Alcohol Safety would cooperate with a study.

Site: Region VIII, Colorado
Ray Slaughter, District attorney's office

Type of No Plea Bargaining

Legislation: 1982.

Being Implemented/Successful

They have Statewide anti-plea bargaining legislation, with 100%
compliance. None works better than the others.

It would be difficult to determine which, if any, areas are being
more successful than others, since there is no computerized pre-
legislation data. Also, all jurisdictions should be equal, there
is no leeway to not apply it.

Data Availability

They have had a comprehensive automated data system since 1983.
There is good data on DUI. There is probably manual data for
prior to 1983, but it would probably be difficult to access.

Factors which Facilitate Comparison

Confounding Variables

A package of legislation was passed along with no plea
bargaining, including revocation of license, with instant
revocation at BAC of .15. Mr. Slaughter feels that the "teeth"
of the legislation are in the license revocation.

Publicity/Cooperating Agencies

Site: Region VIII, Wyoming
Robert Duncan, County Court Coordinator

Type of No Plea Bargaining

Legislation: 1984. Provides for presumption at BAC level .10.
No charge is reduced unless there is not a good case. No other
relevant legislation was passed at the time.

Being Implemented/Successful

Success would be hard to measure; data is not very good.

Data Availability

They have a manual system, though they are now in the process of
computerizing (a pilot project is currently being implemented).
They don't keep records of cases that were not adjudicated.
Citation and disposition records would be at separate locations.

Factors which Facilitate Comparison

No confounding legislation was passed at the time of the no plea
bargaining legislation.

Confounding Variables

The population of Wyoming is small; Cheyenne has 50,000.

The legislation has only been in effect since 1984.

Publicity/Cooperating Agencies

Mr. Duncan was not aware of any publicity or public awareness of
the no plea bargaining legislation.

Site: Region IX, Flagstaff, Arizona

Type of No Plea Bargaining

Legislation: 1982.

Being Implemented/Successful

Other jurisdictions may or may not be following the law, but
Judge Bob Kuebler in Flagstaff is implementing it. Plea
bargaining rates there went from 95% who did to 100% who don't.

Data Availability

The data system has been automated for about 3 years. They have
arrest data.

Factors which Facilitate Comparison

Some jurisdictions are apparently not following the requirements
of the law. Flagstaff had 95% plea bargaining before the
legislation, and 0% after.

Confounding Variables

Publicity/Cooperating Agencies

The Governor's Office of Highway Safety, the Judge's Office, and
the Court Clerk will be cooperative in the study.

Site: Region IX, Ventura, California
Ray Peck, Director of Research
Michael Bradbury, Prosecuting Attorney
Marilyn Sabin, California Office of Highway Safety

Type of No Plea Bargaining

Policy: 1979. Statewide legislation was passed in 1982
providing for a plea to reckless from a DWI to be recorded as a
"wet reckless" charge. Since this legislation statewide plea
bargaining has been low.

Being Implemented/Successful

Conviction data show that conviction rate is 90% in Ventura
compared to 66% in the state for DWI.

Data Availability

The court has a computerized calendaring system. State data file
on convictions and sanctions are available. The Bureau of
Criminal Statistics has arrest data.

Factors which Facilitate Comparison

The population is high; there are 75,000 in the city of Ventura,
and 300,000 in the county as a whole.

Confounding Variables

There was an increase in arrests at the time the no plea
bargaining policy began. Mandatory sentencing in 1982 gave
public the impression that jail was mandatory for frst offense
DUI. The 1982 "wet reckless" law is a confounding variable.

Publicity/Cooperating Agencies

The Prosecuting Attorney's Office and the California Office of
Highway Safety would be cooperative with the study.

INITIAL FIELD DATA COLLECTION

MetaMetrics recommends that initial field data collection
take place for three to five of the above assessed jurisdictions.
This data collection can be undertaken in two stages. One test
site will be visited in the first stage. On the basis of the
collected data, preliminary analysis, and initial findings, at
least two sites will be visted in the second stage.

Two basic designs, case control and before/after, are
proposed for the study and each has advantages and drawbacks.
MetaMetrics recommends using both designs.

At this time, only Ventura County appears to be appropriate
for a case control approach. If no other candidate sites for a
case control approach emerges, a single intensive site visit
should suffice for collecting data from Ventura County. It is
recommended that the single site visit take place during Task IV.

The Ventura County site data collection is expected to
require visits to Sacramento, Ventura County, and selected
control sites. California Department of Motor Vehicles data will
be requested by telephone. This information does not include
arrest data and conviction rates based on arrests must be
calculated. This data should be available from the appropriate
police agencies for the selected jurisdictions. Other related
data may be required from the local court systems.

The MetaMetrics proposal was based on three to five sites
for initial site visits for selection of two to three final case
study sites. Ventura County is the only site identified at this
time as a candidate for the case control approach. The final one
or two sites for the before/after approach are to be selected
during initial field data collection. A minimum of 3 initial
field site visits are to be conducted which may be sufficient for
selecting one or two final case study sites for the before/after
approach.

From Task 2 activities, the five ranked sites are Lexington,
Kentucky; De Kalb County, Georgia; Topeka, Kansas; Huntsville,
Alabama; and Ft. Smith, Arkansas. MetaMetrics reocmmends that
the top ranked jurisdiction (after the project review session
with the COTR) be designated an intensive initial case study
site. The subsequent initial sites can be selected following

completion of preliminary analysis of data collected at the intensive case study site.

INTENSIVE CASE STUDY DATA PROCEDURES

The before/after design approach as presented in the MetaMetrics proposal can be tested at the intensive case study site and design refinements will be identified. The preliminary analysis performed on the initial data will aid in determining the feasibility of the approach at this site as well as data collection and analysis issues that may be useful for determining adjustments of procedures for initial field data colleciton at other candidate sites.

The MetaMetrics field team will meet with personnel from the key cooperating agencies and will outline the objective and procedures for the site visit. Issues to be discussed at this level include:

o Selection of appropriate indicators of change in deterrence and recidivism,

o Data sources and data availability,

o Extent of real change as a function of the elimination of plea bargaining practices,

o Internal or systemic factors which affect plea bargaining practices,

o Factors outside the plea bargaining practices which may affect indicators of deterrence and recidivism,

o Publicity and public information campaigns,

o Potential for third party data collection.

Other sources of information may be identified and interviews will be conducted accordingly. The major focus of the site visit will be to collect the following data from appropriate information systems.

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LAW ENFORCEMENT AND COURT DATA

Date of arrest
Jurisdiction
BAC
Charge including:
- o Driving while impaired
- o Driving while under the influence
- o Driving while intoxicated
- o Reckless driving
- o Homicide w/auto
- o Hit and run
Accident

COURT RECORD, PROSECUTOR'S OFFICE, STATE MOTOR VEHICLE
DEPARTMENT

Previous arrests
Previous convictions
- o Driving priviledges revoked
Formal Charge
Trial
- o Jury
- o Nonjury
Court Date
Lawyer
- o Assigned lawyer
- o Choose lawyer
- o No lawyer
Plea
Disposition of Charge
- o Nolle Pros
- o Probation before Judgement
- o Diversion
Date of Disposition
Presentence Investigation
- o Alcohol assessment
Penalties
Probation
- o Conditions of probation
Suspended Sentence

COURT ADMINISTRATOR, PROBATION (COMMUNITY RELEASE),
CORRECTIONS

Fines paid
Penalties served

DERIVED MEASURES

Time between arrest and disposition
Proportion convicted on original charge
Proportion of arrested who go to jail
Change in severity of penalties

APPENDIX B
DATA PREPARATION AND DOCUMENTATION

Fort Smith Data Preparation and Documentation

Data collected from police and court systems were entered into a computerized data base and analyzed at MetaMetrics' home office. To complete this task a data base with the appropriate fields was then established using dBase III+. The data were then coded and entered. Finally, programs were written and run in dBase III+ that produced reports with the needed statistics.

The following is the structure for the database: C:\Seth\POLICE.DBF

Number of data records: 1,766
Date of last update: 5/21/87

Field	Field Name	Description	Type	Width
1	LAST	First 4 Letters Last Name	Character	4
2	RACE	Race - White/Nonwhite	Logical	1
3	DOB	Date of Birth	Date	8
4	SSN	Social Security Number	Character	11
5	PREVARREST	Number of Previous Arrests	Numeric	2
6	SUBARREST	Number of Subsequent Arrests	Numeric	2
7	SUBDWI	Number of Subsequent DWIs	Numeric	2
8	ARREST1	Date of First Arrest	Date	8
9	ACCIDENT1	Accident Involved/First DWI	Logical	1
10	OCHARGE1	Other Charges with First DWI	Logical	1
11	APPEAL1	Charge(s) Appealed	Logical	1
12	DISPO1	Disposition - Reduced, Guilty, Other	Numeric	1
13	FINE1	Amount of Fine/First DWI	Numeric	4
14	FSUSP1	Fine Suspended/First DWI	Logical	1
15	JAIL1	Days of Jail Time/First DWI	Numeric	4
16	JSUSP1	Jail Suspended/First DWI	Logical	1
17	LICENSE1	Days License Suspended/First DWI	Numeric	3
18	REVOKED1	License Revoked/First DWI	Logical	1
19	OTHER1	Additional Sanction Applied	Logical	1
20	ARREST2	Date of Second Arrest	Date	8
21	ACCIDENT2	Accident Involved in Second Arrest	Logical	1
22	OCHARGE2	Other Charges with Second Arrest	Logical	1
23	APPEAL2	Charge(s) Appealed	Logical	1
24	DISPO2	Disposition - Reduced, Guilty, Other	Numeric	1
25	FINE2	Amount of Fine/Second DWI	Numeric	4
26	FSUSP2	Fine Suspended/Second DWI	Logical	1
27	JAIL2	Days of Jail Time/Second DWI	Numeric	4
28	JSUSP2	Jail Suspended/Second DWI	Logical	1
29	LICENSE2	Days License Suspended/Second DWI	Numeric	3
30	REVOKED2	License Revoked/Second DWI	Logical	1
31	OTHER2	Additional Sanction Applied	Logical	1

TOTAL   85

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Kentucky Data Preparation and Documentation

1.   Download data from mainframe computer to microcomputer

        Data were downloaded from the mainframe format, EEPSDC, to a microcomputer
format, ASCII. The data were downloaded as text files under the MSDOS operating
system. MSDOS is an operating system used by IBM microcomputers. These text files
were stored on floppy disks.

2.   Transfer data to the Macintosh

        The MSDOS text files were transfered to Finder text files. The Finder is an
operating system used by Apple microcomputers. A copy of these data were stored on
floppy disks.

3.   Load data into 4th Dimension, eliminating unnecessary cases/fields

        Programs were written to load selected fields and records into 4th Dimension data
files. Records for non-DWI cases, non-final cases, and for defendants who were not
residents of the cities of Lexington or Louisville were eliminated. Unnecessary fields were
not loaded.

        The programs executed the following procedures:

        a)   Load the following records:
                i)   Offense status = 'F' (final)
                ii)   City = Lexington or Louisville
                iii)   Offense code charged = 9001490 (DWI)
        b)   Load or create the following fields:

	Variable	Field Length	Field Type
i)	First 4 Letters of Last Name	04	Alpha
ii)	ID	01	I
iii)	Sex	01	Alpha
iv)	Race	01	Alpha
v)	Date of Birth	06	Date
vi)	Date of Arrest	06	Date
vii)	Date of Court Appearance	06	Date
viii)	Date of Conviction	06	Date
ix)	Disposition	07	I
x)	Officer Code	06	I
xi)	Judges Orders	40	Alpha

The variable "ID" was created to mark cases to be kept and cases to be eliminated in the load, pre-clean, and post-clean steps.

4.   Pre-clean the data files: eliminate and clean up out of range cases

The first pre-clean step was to eliminate cases that did not have enough information to be appropriately linked to other cases for the same defendant. In order to be linked a case needed a minimum of a defendant name and date of birth. Those cases that did not have these minimum fields were unlinkable. If these cases had been kept in the data file they would have remained under the tacit assumption that they represented first arrests and non-recidivists. We therefore eliminated those cases that did not have these minimum linking fields.

Data were collected for Lexington for the periods 1/1/80 through 7/13/87 and for Louisville for the periods 1/1/80 through 2/18/88. To limit our analysis to cases that took place during the same periods of time, we eliminated those cases that were arrested before 1/1/80 and convicted after 7/13/87. Also eliminated were those cases for which the defendant was less than 10 years old at the time of arrest.

Fields with variables that fell out of range were cleaned up. For Sex, those that were not 'M', 'F', or blank were replaced with blanks. For Race, those that were not 'W', 'B', 'N', 'I', 'C', 'J', 'O', or blank were replaced with blanks. The variables 'N' and 'B' both refer to Black defendants; in cases with Race ='N' the value was changed to 'B'.

After these steps the case file contained records with the following variables and range of values:

Case File

	Variable	Range
i)	First 4 Letters of Last Name	Text (non-blank)
ii)	ID	0 (zero)
iii)	Sex	'M', 'F', blank
iv)	Race	'W', 'B', 'I', 'C', 'J', 'O', blank
v)	Date of Birth	> 3650 days after Arrest
vi)	Date of Arrest	> 1/1/1980 and < 7/13/1987
vii)	Date of Court Appearance	>= DOArrest and < 8/10/87
viii)	Date of Conviction	>= DOCourt and < 8/10/87
ix)	Disposition	Integers or blank
x)	Officer Code	Integers or blank
xi)	Judges Orders	Text or blank

5.   Link cases

Cases were linked using the following variables:

a)   First 4 Letters of Last Name
b)   Date of Birth
c)   Sex
d)   Race

The minimum variables required to match two cases were Last Name and Date of Birth. With these two variables the probability of overlinking (of mis-matching cases that did not belong to the same defendant) was very small. Taking very conservative parameters, we calculated the probability of mis-matching a case if all defendants had the same last name, sex, and race. Under these conditions, if all defendants were between the ages of ten and sixty years old the probability of any two separate individuals having the same date of birth is less than one in .00005, or one half of one thousanth of a percent.

For any given probability (q) of mis-matching two individuals, the probability (p) of a mis-match occuring in a population of the size n is calculated as follows:

$$p = ((n/2) * n-1) * q$$

If we have a group of 100 white males with the last name SMIT the probability that any two of them will have the same date of birth is 4,950 * .00005, or .23.

Cases were linked that matched as follows:

Name & DOB & (Race if it exists & Sex if it exists)

6.   Post-clean the data files: Eliminate linked records that fall out of range

Since we have no information before 1/1/80 we do not know if cases that appear to be first arrests are in fact first or subsequent arrests. Therefore, after linking we discarded sets of records for those defendants whose first arrest occured before 7/13/81. We thus reduce the probability of incorrectly labeling a subsequent arrest as a first arrest. We also eliminated all sets of cases for defendants who had any case with a blank arrest date, since without complete arrest information we cannot correctly identify a defendant as belonging to the pre-law period or post-law period.

7.   Consolidate data

The cleaned and linked case records were consolidated into defendant-based records. The relevant data from each set of cases for a single defendant were read into a single record. Alpha codes were converted to integer codes; for Sex "M" and "F" were converted to "1" and "2", with blank was converted to "0"; for Race "W" was converted to "1", all nonwhite codes were coded as "2" and blank was conveted to "0".

All cases with a disposition of DWI conviction or a conviction date and a blank disposition code were coded as Guilty. Those with a disposition other than DWI were coded as Reduced. All others, those with a blank conviction date and a blank disposition code, were coded as Other.

For Louisville, which has a TAP patrol, TAP and non-TAP arrests were determined by checking officer code and date of arrest. TAP arrests were coded as "1" and non-TAP arrests were coded as "2". TAP and non-TAP arrests were determined as follows:

o   Date of Arrest >= 06/20/87 and Officer Code = 1991
o   DOArrest >= 06/3/86 and OC = 2108
o   DOArrest >= 10/1/85 and OC = 1441
o   DOArrest >= 10/1/85 and OC = 1541
o   DOArrest >= 10/1/85 and OC = 1711
o   DOArrest >= 10/1/85 and OC = 1815
o   DOArrest >= 10/1/85 and OC = 1994
o   DOArrest >= 10/1/85 and OC = 1997
o   DOArrest >= 10/1/85 and OC = 2094

The consolidation programs created the following fields in the defendant file:

Defendant File

	Variable	Field Type
a)	Sex	I
b)	Race	I
c)	DOB	Date
d)	Total Number of Arrests	I
e)	First Date of Arrest	Date
f)	First Date Court Date	Date
g)	First Conviction Date	Date
h)	First Disposition	I
i)	TAP or non-TAP arrests	I
j)	Judge's Orders	Alpha
k)	Second Date of Arrest	Date
l)	Second Date Court Date	Date
m)	Second Conviction Date	Date
n)	Second Disposition	I
o)	TAP or non-TAP arrests	I

8.   Create arrest files

An arrest file was created using the cleaned, linked case file. This file contained the arrest dates and the arrest index (first arrest, second arrest, and so forth) for all arrests for which the arrest index was known. In other words, excluding those arrests for which arrest index could not be determined, this file contained all arrests that took place between 7/13/81 and 8/10/87.

The arrest loading program created the following fields in the arrest file:

Arrest File
Variable   Field Type

a)   Arrest Date   Date
b)   Arrest Number (1st arrest, 2nd, etc.)   I

9.   Data Analysis

For Lexington and Louisville defendant files the following sets were created to facilitate processing of the data:

o   Before legislation (up to 7/13/81)
o   After legislation (including and after 7/13/81)
o   Male
o   Female
o   White
o   Nonwhite
o   Guilty
o   Reduced
o   Other
o   TAP
o   Non-TAP

Statistics were calculated as follows:

a)   Calculate statistics using the defendant files for Before and After groups:

      i)   Number of offenses (average and standard deviation)
      ii)   Age (years) at First Arrest (average and standard deviation)
      iii)   Sex — number and percent of males
      iv)   Race — number and percent of whites
      v)   Convictions and reductions (number and percent)
      vi)   TAP/Non-TAP convictions and reductions (number and percent)
      vii)   Time (days) from DOArrest to DOCourt (average and standard dev.)
      viii) Time (days) from DOCourt to DOConv (average and standard dev.)
      ix)   Periodic recidivism and periodic arrest score
      x)   Estimated cumulative rate of recidivism

b)   Calculate statistics using arrest files:

        i)   Total arrests
        ii)   Number and percent of first arrests
        iii)   Number and percent of second plus arrests

[LexCases]

Name	Alpha 4	Indexed; Enterable; Modifiable
ID	Long Integer	Indexed; Enterable; Modifiable
Sex	Alpha 2	Enterable; Modifiable
Race	Alpha 2	Enterable; Modifiable
DOB	Date	Enterable; Modifiable
DOArrest	Date	Enterable; Modifiable
DOCourt	Date	Enterable; Modifiable
DOConv	Date	Enterable; Modifiable
Disp	Long Integer	Enterable; Modifiable
Officer	Long Integer	Enterable; Modifiable
JOrders	Alpha 40	Enterable; Modifiable

[LexArrests]

DOArrest	Date	Indexed; Enterable; Modifiable
AIndex	Integer	Enterable; Modifiable

[LexDefs]

Sex	Integer	Enterable; Modifiable
Race	Integer	Enterable; Modifiable
DOB	Date	Enterable; Modifiable
TArrests	Integer	Enterable; Modifiable
DOArrest 1	Date	Enterable; Modifiable
DOCourt 1	Date	Enterable; Modifiable
DOConv 1	Date	Enterable; Modifiable
Disp 1	Integer	Enterable; Modifiable
TAP 1	Integer	Enterable; Modifiable
JOrders	Alpha 40	Enterable; Modifiable
DOArrest 2	Date	Enterable; Modifiable
DOCourt 2	Date	Enterable; Modifiable
DOConv 2	Date	Enterable; Modifiable
Disp 2	Integer	Enterable; Modifiable
TAP 2	Integer	Enterable; Modifiable

Name	Alpha 4	Indexed; Enterable; Modifiable
ID	Long Integer	Indexed; Enterable; Modifiable
Sex	Alpha 2	Enterable; Modifiable
Race	Alpha 2	Enterable; Modifiable
DOB	Date	Enterable; Modifiable
DOArrest	Date	Enterable; Modifiable
DOCourt	Date	Enterable; Modifiable
DOConv	Date	Enterable; Modifiable
Disp	Long Integer	Enterable; Modifiable
Officer	Long Integer	Enterable; Modifiable
JOrders	Alpha 40	Enterable; Modifiable

| DOArrest | Date | Indexed; Enterable; Modifiable |
| AIndex | Integer | Enterable; Modifiable |

Sex	Integer	Enterable; Modifiable
Race	Integer	Enterable; Modifiable
DOB	Date	Enterable; Modifiable
TArrests	Integer	Enterable; Modifiable
DOArrest 1	Date	Enterable; Modifiable
DOCourt 1	Date	Enterable; Modifiable
DOConv 1	Date	Enterable; Modifiable
Disp 1	Integer	Enterable; Modifiable
TAP 1	Integer	Enterable; Modifiable
JOrders	Alpha 40	Enterable; Modifiable
DOArrest 2	Date	Enterable; Modifiable
DOCourt 2	Date	Enterable; Modifiable
DOConv 2	Date	Enterable; Modifiable
Disp 2	Integer	Enterable; Modifiable
TAP 2	Integer	Enterable; Modifiable

```
$setname1:=Request("Ready for 1st set name:")
If (ok=1)
   $setname2:=Request("Ready for 2nd set name:")
   If (ok=1)
      INTERSECTION($setname1;$setname2;"Intersection")
      USE SET("Intersection")
   End If
End If
```

```
CREATE RECORD([LexArrests])
If ([LexCases]ID=pid)
   paindex:=paindex+1
Else
   paindex:=1
End If
[LexArrests]DOArrest:=[LexCases]DOArrest
[LexArrests]AIndex:=paindex
pid:=[LexCases]ID
SAVE RECORD([LexArrests])
```

```
SET CHANNEL(10;"LEX Arrest Stats")
SEND PACKET("LEX Arrest Stats"+Char(13))
DEFAULT FILE([LexArrests])
ALL RECORDS
SORT BY INDEX([LexArrests]DOArrest)
FIRST RECORD
$StartDate:=!Mon, Jul 13, 1981!
$EndDate:=$StartDate+29
$Arrests:=0
$Firsts:=0
While (Not(End selection))
   If ([LexArrests]DOArrest>=$EndDate)
      SEND PACKET(String($StartDate)+" - "+String($EndDate-1)+"    # Arrests = "+String($Arrests)+"    # First Arrests = "+Strli
      $StartDate:=$EndDate
      $EndDate:=$StartDate+29
      $Arrests:=0
      $Firsts:=0
   End If
   $Arrests:=$Arrests+1
   If ([LexArrests]AIndex=1)
      $Firsts:=$Firsts+1
   End If
   NEXT RECORD
End while
SEND PACKET(String($StartDate)+" - "+String($EndDate-1)+"    # Arrests = "+String($Arrests)+"    # First Arrests = "+String($F
SET CHANNEL(11)
```

```
DEFAULT FILE([LexCases])
SEARCH BY INDEX([LexCases]ID=0)
APPLY TO SELECTION([LexCases];LEX Arr Unlink )
SEARCH BY INDEX([LexCases]ID±1;100000)
SORT SELECTION([LexCases]ID;>;[LexCases]DOArrest;>)
If (ok=1)
    pid:=[LexCases]ID
    paindex:=0
    APPLY TO SELECTION([LexCases];LEX Arr Link )
End If
```

```
CREATE RECORD([LexArrests])
[LexArrests]DOArrest:=[LexCases]DOArrest
[LexArrests]AIndex:=1
SAVE RECORD([LexArrests])
```

```
DEFAULT FILE([LexCases])
APPLY TO SELECTION([LexCases]; •Lexconv Unlink• )
```

```
DEFAULT FILE([LexCases])
ALL RECORDS([LexCases])
$left:=Records in selection-1
SEARCH BY INDEX([LexCases]ID=0)
OPEN WINDOW(150;150;350;250;0;"LEX Consol")
While (Not(End selection))
   ERASE WINDOW
   MESSAGE(Char(13)+" Working on -> "+[LexCases]Name+Char(13)+" "+String($left)+" left")
   $left:=$left-1
   CREATE RECORD([LexDefs])
   Case of
      : ([LexCases]Sex="M")
         [LexDefs]Sex:=1  `male
      : ([LexCases]Sex="F")
         [LexDefs]Sex:=2  `female
      Else
         [LexDefs]Sex:=0  `unknown
   End case
   Case of
      : ([LexCases]Race="")
         [LexDefs]Race:=0  `unknown
      : ([LexCases]Race="W")
         [LexDefs]Race:=1  `white
      Else
         [LexDefs]Race:=2  `non-white
   End case
   [LexDefs]DOB:=[LexCases]DOB
   [LexDefs]TArrests:=1
   [LexDefs]DOArrest 1:=[LexCases]DOArrest
   [LexDefs]DOCourt 1:=[LexCases]DOCourt
   [LexDefs]DOConv 1:=[LexCases]DOConv
   Case of
      : (([LexCases]DOConv#!00/00/00!)&(([LexCases]Disp=0)|([LexCases]Disp=9001490)))
         [LexDefs]Disp 1:=1  `guilty
      : (([LexCases]Disp#0)&([LexCases]Disp#9001490))
         [LexDefs]Disp 1:=2  `reduced
      Else
         [LexDefs]Disp 1:=3  `other
   End case
   $o:=[LexCases]Officer
   Case of
      : (([LexCases]DOArrest>=!Tue, Oct 1, 1985!)&(($o=1441)|($o=1541)|($o=1711)|($o=1815)|($o=1994)|($o=1997)|($o=2094)))
         [LexDefs]TAP 1:=1  `tap
      : (([LexCases]DOArrest>=!Tue, Jun 3, 1986!)&($o=2108))
         [LexDefs]TAP 1:=1  `tap
      : (([LexCases]DOArrest>=!Sat, Jun 20, 1987!)&($o=1991))
         [LexDefs]TAP 1:=1  `tap
      Else
         [LexDefs]TAP 1:=2  `non-tap
   End case
   [LexDefs]JOrders:=[LexCases]JOrders
   [LexDefs]DOArrest 2:=!00/00/00!
   [LexDefs]DOCourt 2:=!00/00/00!
   [LexDefs]DOConv 2:=!00/00/00!
   [LexDefs]Disp 2:=0
   [LexDefs]TAP 2:=0
   SAVE RECORD([LexDefs])
   NEXT RECORD([LexCases])
End while
SEARCH BY INDEX([LexCases]ID±1;100000)
SORT SELECTION([LexCases]ID;>;[LexCases]DOArrest;>)
```

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```
If (ok=1)
  While (Not(End selection))
    ERASE WINDOW
    MESSAGE(Char(13)+" Working on -> "+[LexCases]Name+Char(13)+" "+String($left)+" left")
    CREATE RECORD([LexDefs])
    $pid:=[LexCases]ID
    Case of
      : ([LexCases]Sex="M")
        [LexDefs]Sex:=1  `male
      : ([LexCases]Sex="F")
        [LexDefs]Sex:=2  `female
      Else
        [LexDefs]Sex:=0  `unknown
    End case
    Case of
      : ([LexCases]Race="")
        [LexDefs]Race:=0  `unknown
      : ([LexCases]Race="W")
        [LexDefs]Race:=1  `white
      Else
        [LexDefs]Race:=2  `non-white
    End case
    [LexDefs]DOB:=[LexCases]DOB
    [LexDefs]DOArrest 1:=[LexCases]DOArrest
    [LexDefs]DOCourt 1:=[LexCases]DOCourt
    [LexDefs]DOConv 1:=[LexCases]DOConv
    Case of
      : (([LexCases]DOConv#!00/00/00!)&(([LexCases]Disp=0)|([LexCases]Disp=9001490)))
        [LexDefs]Disp 1:=1  `guilty
      : (([LexCases]Disp#0)&([LexCases]Disp#9001490))
        [LexDefs]Disp 1:=2  `reduced
      Else
        [LexDefs]Disp 1:=3  `other
    End case
    $o:=[LexCases]Officer
    Case of
      : (([LexCases]DOArrest>=!Tue, Oct 1, 1985!)&(($o=1441)|($o=1541)|($o=1711)|($o=1815)|($o=1994)|($o=1997)|($o=2094)))
        [LexDefs]TAP 1:=1  `tap
      : (([LexCases]DOArrest>=!Tue, Jun 3, 1986!)&($o=2108))
        [LexDefs]TAP 1:=1  `tap
      : (([LexCases]DOArrest>=!Sat, Jun 20, 1987!)&($o=1991))
        [LexDefs]TAP 1:=1  `tap
      Else
        [LexDefs]TAP 1:=2  `non-tap
    End case
    [LexDefs]JOrders:=[LexCases]JOrders
    NEXT RECORD([LexCases])
    If ([LexCases]ID=$pid)
      [LexDefs]DOArrest 2:=[LexCases]DOArrest
      [LexDefs]DOCourt 2:=[LexCases]DOCourt
      [LexDefs]DOConv 2:=[LexCases]DOConv
      Case of
        : (([LexCases]DOConv#!00/00/00!)&(([LexCases]Disp=0)|([LexCases]Disp=9001490)))
          [LexDefs]Disp 2:=1  `guilty
        : (([LexCases]Disp#0)&([LexCases]Disp#9001490))
          [LexDefs]Disp 2:=2  `reduced
        Else
          [LexDefs]Disp 2:=3  `other
      End case
      $o:=[LexCases]Officer
      Case of
```

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```
      : (([LexCases]DOArrest>=!Tue, Oct 1, 1985!)&(($o=1441)|($o=1541)|($o=1711)|($o=1815)|($o=1994)|($o=1997)|($o=2094))
        [LexDefs]TAP 2:=1  `tap
      : (([LexCases]DOArrest>=!Tue, Jun 3, 1986!)&($o=2108))
        [LexDefs]TAP 2:=1  `tap
      : (([LexCases]DOArrest>=!Sat, Jun 20, 1987!)&($o=1991))
        [LexDefs]TAP 2:=1  `tap
      Else
        [LexDefs]TAP 2:=2  `non-tap
    End case
    $tarrests:=2
    NEXT RECORD([LexCases])
    While (([LexCases]ID=$pid)&(Not(End selection)))
        $tarrests:=$tarrests+1
        NEXT RECORD([LexCases])
    End while
    [LexDefs]TArrests:=$tarrests
    $left:=$left-$tarrests
  Else   `error
    [LexDefs]TArrests:=-1
  End If   `second record has same id
    SAVE RECORD([LexDefs])
End while    `loop thru all cases
End If   `sort 'ok'
CLOSE WINDOW
```

```
`link related cases
DEFAULT FILE([LexCases])
ALL RECORDS
SORT SELECTION([LexCases]Name;>;[LexCases]DOB;>;[LexCases]Sex;>;[LexCases]Race;>)
If (ok=1)
   OPEN WINDOW(150;150;350;250;0;"LEX Linker")
   $left:=Records in selection-1
   id:=10000
   FIRST RECORD
   $pid:=[LexCases]ID
   $pn:=[LexCases]Name
   $pd:=[LexCases]DOB
   $ps:=[LexCases]Sex
   $pr:=[LexCases]Race
   NEXT RECORD
   While (Not(End selection))
      ERASE WINDOW
      MESSAGE(Char(13)+" Working on -> "+[LexCases]Name+Char(13)+" "+String($left)+" left")
      $left:=$left-1
      If (($pn=[LexCases]Name)&($pd=[LexCases]DOB))  `names and DOB both match
         If (($ps=[LexCases]Sex)|($ps="")|([LexCases]Sex=""))  `sexes match or don't exist
            If (($pr=[LexCases]Race)|($pr="")|([LexCases]Race=""))  `races match of don't exist
               If ($pid=0)  `id doesn't exist
                  PREVIOUS RECORD
                  [LexCases]ID:=id
                  SAVE RECORD
                  NEXT RECORD
                  [LexCases]ID:=id
                  id:=id+1
               Else   `id already exists
                  [LexCases]ID:=$pid
               End if   `id
               SAVE RECORD
            End if   `race match
         End if   `sex match
      End if   `name and DOB match
      $pid:=[LexCases]ID
      $pn:=[LexCases]Name
      $pd:=[LexCases]DOB
      $ps:=[LexCases]Sex
      $pr:=[LexCases]Race
      NEXT RECORD
   End while
   CLOSE WINDOW
End If   `sort ok
```

```
DEFAULT FILE([LexDefs])
SEARCH([LexDefs]DOArrest 1<!Fri, Jul 13, 1984!)
CREATE SET("LEX Before")
SAVE SET("LEX Before";"LEX Before")
SEARCH([LexDefs]DOArrest 1>=!Fri, Jul 13, 1984!)
CREATE SET("LEX After")
SAVE SET("LEX After";"LEX After")
SEARCH([LexDefs]Sex=1)
CREATE SET("LEX Male")
SAVE SET("LEX Male";"LEX Male")
SEARCH([LexDefs]Sex=2)
CREATE SET("LEX Female")
SAVE SET("LEX Female";"LEX Female")
SEARCH([LexDefs]Race=1)
CREATE SET("LEX White")
SAVE SET("LEX White";"LEX White")
SEARCH([LexDefs]Race=2)
CREATE SET("LEX Nonwhite")
SAVE SET("LEX Nonwhite";"LEX Nonwhite")
SEARCH([LexDefs]Disp 1=1)
CREATE SET("LEX Guilty")
SAVE SET("LEX Guilty";"LEX Guilty")
SEARCH([LexDefs]Disp 1=2)
CREATE SET("LEX Reduced")
SAVE SET("LEX Reduced";"LEX Reduced")
SEARCH([LexDefs]Disp 1=3)
CREATE SET("LEX Other")
SAVE SET("LEX Other";"LEX Other")
SEARCH([LexDefs]TAP 1=1)
CREATE SET("LEX Tap")
SAVE SET("LEX Tap";"LEX Tap")
SEARCH([LexDefs]TAP 1=2)
CREATE SET("LEX Nontap")
SAVE SET("LEX Nontap";"LEX Nontap")
```

```
DEFAULT FILE([LexDefs])
TheSet:=Request("What set(s) did you select?")
   `Initialize variables and arrays
   `Calculate for four-week periods
$ArrayMax:=80  `must be less than 999
$StartDate:=!Mon, Jul 13, 1981!
$Counter:=1
While ($Counter<=$ArrayMax)
   FArrests{$Counter}:=0
   RArrests{$Counter}:=0
   Prop{$Counter}:=0
   EndDate{$Counter}:=$StartDate+(($Counter+25)*28)
   $Counter:=$Counter+1
End while
   `Calculate FirstArrests and RArrests by period
FIRST RECORD
While (Not(End selection))
   Period:=Int((([LexDefs]DOArrest 1-$StartDate)/28)+1
   FArrests{Period}:=FArrests{Period}+1
      `Does 2nd arrest happen within 26 periods
   If ([LexDefs]TArrests>=2)&([LexDefs]DOArrest 2<=EndDate{Period})
      RArrests{Period}:=RArrests{Period}+1
   End If
   NEXT RECORD
End while
   `Write FirstArrests and RArrests to file
SET CHANNEL(10;"Lex Proportion")
SEND PACKET("Lex Proportion"+Char(13)+TheSet+Char(13)+Char(13))
SEND PACKET("Period"+Char(9)+"EndDate"+Char(9)+"First Arrests"+Char(9)+"RArrests"+Char(9)+"Proportion"+Char(9)+Char(1
Period:=1
While (Period<=$ArrayMax)
   If (FArrests{Period}#0)
      Prop{Period}:=Round((((RArrests{Period}/FArrests{Period})*100);4)
      SEND PACKET(String(Period)+Char(9)+String(EndDate{Period})+Char(9)+String(FArrests{Period})+Char(9)+String(RA
   End If
   Period:=Period+1
End while
SET CHANNEL(11)
```

```
DEFAULT FILE([LexCases])
SEARCH BY INDEX([LexCases]ID=0)
APPLY TO SELECTION([LexCases];LEX Pst Unlink )
SEARCH BY INDEX([LexCases]ID±1;100000)
SORT SELECTION([LexCases]ID;>;[LexCases]DOArrest;>)
If (ok=1)
   pid:=[LexCases]ID
   pname:=[LexCases]Name
   APPLY TO SELECTION([LexCases];LEX Pst Link )
End if
SEARCH BY INDEX([LexCases]Name="*****")
DELETE SELECTION([LexCases])
```

DEFAULT FILE([LexDefs])
ALL RECORDS
SEARCH([LexDefs]TArrests>1)
SEARCH SELECTION([LexDefs]DOArrest 2<[LexDefs]DOArrest 1)

```
┌─If (((([LexCases]ID=pid)&(pname="*****"))|([LexCases]DOArrest<!Mon, Jul 13, 1981!))
│    [LexCases]Name:="*****"
└─End If
pid:=[LexCases]ID
pname:=[LexCases]Name
```

```
┌─If ([LexCases]DOArrest<!Mon, Jul 13, 1981!)
│    [LexCases]Name:="*****"
└─End If
```

```
DEFAULT FILE([LexCases])
ALL RECORDS
$left:=Records in selection-1
FIRST RECORD
OPEN WINDOW(150;150;350;250;0;"LEX precleaner")
While (Not(End selection))
   $changed:=False
   ERASE WINDOW
   MESSAGE(Char(13)+" Working on -> "+[LexCases]Name+Char(13)+" "+String($left)+" left")
   $left:=$left-1
   If ([LexCases]ID=0)
      If ((([LexCases]DOB=!00/00/00!)|([LexCases]DOArrest>!Mon, Jul 13, 1987!)|([LexCases]DOArrest<!Tue, Jan 1, 1980!)|([LexCas
         [LexCases]ID:=1
         $changed:=True
      Else   `clean up
         `sex must be 'M', 'F', or blank
         If ((([LexCases]Sex#"M")&([LexCases]Sex#"F")&([LexCases]Sex#"")))
            [LexCases]Sex:=""
            $changed:=True
         End if
         `race must be 'W', 'B', 'N', 'I', 'C', 'J', 'O', or blank
         $r:=[LexCases]Race
         If (($r#"W")&($r#"B")&($r#"N")&($r#"I")&($r#"C")&($r#"J")&($r#"O")&($r#""))
            [LexCases]Race:=""
            $changed:=True
         Else
            If ($r="N")
               [LexCases]Race:="B"
               $changed:=True
            End if
         End if
      End if
   End if
   If ($changed)
      SAVE RECORD
   End if
   End If
   NEXT RECORD
End while
ERASE WINDOW
MESSAGE(Char(13)+" Deleting tagged records . . .")
SEARCH BY INDEX([LexCases]ID=1)
DELETE SELECTION
ALL RECORDS
CLOSE WINDOW
```

```
DEFAULT FILE([LexDefs])
TheSets:=Request("What set(s) did you select?")
 `Initialize variables and arrays
EndDate:=!Mon, Jul 13, 1987!
ArrayMax:=80
Month:=0
Counter:=0
While (Counter<=ArrayMax)
   Clean{Counter}:=0
   Dirty{Counter}:=0
   Counter:=Counter+1
End while
 `Load arrays with values
FIRST RECORD
While (Not(End selection))
   If ([LexDefs]TArrests=1)
      Month:=Int(Abs((EndDate-[LexDefs]DOArrest 1)/30))
   Else
      Month:=(Int(Abs(([LexDefs]DOArrest 2-[LexDefs]DOArrest 1)/30)))-1
      Dirty{Month+1}:=Dirty{Month+1}+1
   End if
   Clean{Month}:=Clean{Month}+1
   NEXT RECORD
End while
Counter:=ArrayMax-1
While (Counter>=0)
   Clean{Counter}:=Clean{Counter}+Clean{Counter+1}
   Counter:=Counter-1
End while
 `Write the filled array into a document
SET CHANNEL(10;"LEX Array")
SEND PACKET("LEX Array"+Char(13)+TheSets+Char(13)+Char(13))
SEND PACKET("Month"+Char(9)+"Clean"+Char(9)+"Dirty"+Char(13))
Counter:=1
While (Counter<=ArrayMax)
   SEND PACKET(String(Counter)+Char(9)+String(Clean{Counter})+Char(9)+String(Dirty{Counter})+Char(13))
   Counter:=Counter+1
End while
SET CHANNEL(11)
 `Calculate EstClean, EstDirty, and CPI; write the data into a document
SET CHANNEL(10;"LEX Recidivism")
SEND PACKET("LEX Recidivism"+Char(13)+TheSets+Char(13)+Char(13))
SEND PACKET("Month"+Char(9)+"Clean"+Char(9)+"Dirty"+Char(9)+"Est. Clean"+Char(9)+"Est. Dirty"+Char(9)+"CPI"+Char(13))
Counter:=0
PrevCPI:=0
While (Clean{Counter}#0)
   PV:=(1/Abs(1-PrevCPI))*PrevCPI*Clean{Counter}
   EstClean:=Clean{Counter}+PV
   EstDirty:=Dirty{Counter}+PV
   CPI:=(EstDirty/EstClean)
   RoundEC:=Round(EstClean;3)
   RoundED:=Round(EstDirty;3)
   RoundCPI:=Round(CPI;3)
   SEND PACKET(String(Counter)+Char(9)+String(Clean{Counter})+Char(9)+String(Dirty{Counter})+Char(9)+String(RoundE(
   PrevCPI:=CPI
   Counter:=Counter+1
End while
SET CHANNEL(11)
BEEP
BEEP
```

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```
DEFAULT FILE([LexCases])
  `Initialize variables and arrays
  `Calculate for four-week periods
$ArrayMax:=80  `Can be 3 digits maximum
TheSets:=Request("What set(s) did you select?")
$StartDate:=Date(Request("Start Date (Bef=7/13/81, Aft=7/14/84) "))
$Counter:=0
$N:=0
While ($Counter<=$ArrayMax)
    Arrests{$Counter}:=0
    Means{$Counter}:=0
    Standard{$Counter}:=0
    $Counter:=$Counter+1
End while
  `Count Arrests by period
FIRST RECORD
While (Not(End selection))
    $Period:=Int((([LexCases]DOArrest-$StartDate)/28)+1
    Arrests{$Period}:=Arrests{$Period}+1
    $SumArrests:=$SumArrests+1
      `Determine the maximum period
    If ($Period>$N)
        $N:=$Period
    End if
    NEXT RECORD
End while
  `Calculate MeanArrests
MeanArrests:=$SumArrests/$N
  `Calculate Sum of Arrests Squared and Periodic Means
$Period:=1
$SumXSquare:=0
While ($Period<=$N)
    $SumXSquare:=$SumXSquare+(Arrests{$Period}*Arrests{$Period})
    $Counter:=0
    $PeriodSum:=0
    While ($Counter<=25)&($Period+25<=$N)
        $PeriodSum:=$PeriodSum+Arrests{$Period+$Counter}
        $Counter:=$Counter+1
    End while
    Means{$Period}:=$PeriodSum/26
    $Period:=$Period+1
End while
  `Calculate Standard Deviation
$SDeviation2:=($SumXSquare/$N)-(MeanArrests*MeanArrests)
BEEP
SDeviation:=Request("Calculate and enter the square root of ";String($SDeviation2))
SDeviation:=Num(SDeviation)
  `Calculate the Standard Scores for each period and write to file
ShortMean:=Round(MeanArrests;2)
ShortSD:=Round(SDeviation;2)
SET CHANNEL(10;"Lex Standard")
SEND PACKET("Lex Standard"+Char(13)+TheSets+Char(13)+Char(13))
SEND PACKET("Mean Arrests: "+String(ShortMean)+Char(13)+"Standard Deviation: "+String(ShortSD)+Char(13)+Char(13))
SEND PACKET("Period"+Char(9)+"Mean by Period"+Char(9)+"Standard Score by Period"+Char(13))
Period:=1
While (Period<=$N)
    Standard{Period}:=((Means{Period}-MeanArrests)/SDeviation)+50)*100
    StandShort:=Round(Standard{Period};4)
    MeanShort:=Round(Means{Period};4)
    SEND PACKET(String(Period)+Char(9)+String(MeanShort)+Char(9)+String(StandShort)+Char(13))
    Period:=Period+1
```

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└ **End while**
 SET CHANNEL(11)

```
SET CHANNEL(10;"LEX Stats")
SEND PACKET("LEX"+Char(13)+Char(13))
DEFAULT FILE([LexDefs])
N:=Records in selection
M:=Records in selection
FIRST RECORD
x1:=0
x2:=0
x3:=0
x4:=0
s1:=0
s2:=0
s3:=0
s4:=0
While (Not(End selection))
   x1:=x1+[LexDefs]TArrests  `# of arrests
   s1:=s1+([LexDefs]TArrests*[LexDefs]TArrests)
   x2:=x2+([LexDefs]DOArrest 1-[LexDefs]DOB)  `age at 1st arrest
   s2:=s2+(([LexDefs]DOArrest 1-[LexDefs]DOB)*([LexDefs]DOArrest 1-[LexDefs]DOB))
   x3:=x3+([LexDefs]DOCourt 1-[LexDefs]DOArrest 1)  `days from arrest to court
   s3:=s3+(([LexDefs]DOCourt 1-[LexDefs]DOArrest 1)*([LexDefs]DOCourt 1-[LexDefs]DOArrest 1))
   If ([LexDefs]DOConv 1#!00/00/00!)
      x4:=x4+([LexDefs]DOConv 1-[LexDefs]DOCourt 1)  `days from court to conv
      s4:=s4+(([LexDefs]DOConv 1-[LexDefs]DOCourt 1)*([LexDefs]DOConv 1-[LexDefs]DOCourt 1))
   Else
      M:=M-1
   End if
   NEXT RECORD
End while
mean:=(x1/N)
sd2:=((s1/N)-((mean)*(mean)))
SEND PACKET("# of offenses . . ."+Char(13))
SEND PACKET("N = "+String(N)+Char(13))
SEND PACKET("mean = "+String(mean)+Char(13))
SEND PACKET("sd2 = "+String(sd2)+Char(13))
SEND PACKET(Char(13))
mean:=(x2/N)
sd2:=((s2/N)-((mean)*(mean)))
SEND PACKET("age at first arrest (days) . . ."+Char(13))
SEND PACKET("N = "+String(N)+Char(13))
SEND PACKET("mean = "+String(mean)+Char(13))
SEND PACKET("sd2 = "+String(sd2)+Char(13))
SEND PACKET(Char(13))
mean:=(x3/N)
sd2:=((s3/N)-((mean)*(mean)))
SEND PACKET("days from arrest to court . . ."+Char(13))
SEND PACKET("N = "+String(N)+Char(13))
SEND PACKET("mean = "+String(mean)+Char(13))
SEND PACKET("sd2 = "+String(sd2)+Char(13))
SEND PACKET(Char(13))
mean:=(x4/M)
sd2:=((s4/M)-((mean)*(mean)))
SEND PACKET("days from court to conv . . ."+Char(13))
SEND PACKET("N = "+String(M)+Char(13))
SEND PACKET("mean = "+String(mean)+Char(13))
SEND PACKET("sd2 = "+String(sd2)+Char(13))
SEND PACKET(Char(13))
CREATE SET("base")
INTERSECTION("base";"Lex Guilty";"new")
USE SET("new")
N:=Records in selection
```

```
FIRST RECORD
x4:=0
s4:=0
While (Not(End selection))
    If ([LexDefs]DOConv 1#!00/00/00!)
        x4:=x4+([LexDefs]DOConv 1-[LexDefs]DOCourt 1)  `days from court to conv
        s4:=s4+(([LexDefs]DOConv 1-[LexDefs]DOCourt 1)*([LexDefs]DOConv 1-[LexDefs]DOCourt 1))
    Else
        N:=N-1
    End If
    NEXT RECORD
End while
mean:=(x4/N)
sd2:=((s4/N)-((mean)*(mean)))
SEND PACKET("days from court to conv (guilty) . . ."+Char(13))
SEND PACKET("N = "+String(N)+Char(13))
SEND PACKET("mean = "+String(mean)+Char(13))
SEND PACKET("sd2 = "+String(sd2)+Char(13))
SEND PACKET(Char(13))
INTERSECTION("base";"Lex Reduced";"new")
USE SET("new")
N:=Records In selection
FIRST RECORD
x4:=0
s4:=0
While (Not(End selection))
    If ([LexDefs]DOConv 1#!00/00/00!)
        x4:=x4+([LexDefs]DOConv 1-[LexDefs]DOCourt 1)  `days from court to conv
        s4:=s4+(([LexDefs]DOConv 1-[LexDefs]DOCourt 1)*([LexDefs]DOConv 1-[LexDefs]DOCourt 1))
    Else
        N:=N-1
    End If
    NEXT RECORD
End while
mean:=(x4/N)
sd2:=((s4/N)-((mean)*(mean)))
SEND PACKET("days from court to conv (reduced) . . ."+Char(13))
SEND PACKET("N = "+String(N)+Char(13))
SEND PACKET("mean = "+String(mean)+Char(13))
SEND PACKET("sd2 = "+String(sd2)+Char(13))
SEND PACKET(Char(13))
SET CHANNEL(11)
```

APPENDIX C
RECIDIVISM METHODOLOGY

THE ESTIMATED CUMULATIVE RATE OF RECIDIVISM FUNCTION

Recidivism is defined as a relapse into a previous mode of behavior. The term is generally used in the criminal justice context to mean the rearrest or return of a previously convicted person to jail or prison for a new conviction.

The recidivism rate of a population is a figure that is calculated by dividing a measure of recidivism by a measure of time. If a population is made up of people who have all been in it for the same length of time, then an analysis of their recidivism performance is relatively simple. One could divide the number of rearrested individuals by the number of years during which the rearrests took place. This would give a yearly recidivism rate for that population.

However, there is often a need to look at a population made up of people who have been members of that group for varying lengths of time. This could occur when people enter into the population over a period of time or when they leave it at different points in time – as would be the case, for instance, with a group of people who were arrested during the course of a year. The individuals in this population would then have different lengths of time during which they might be rearrested. Because this situation arises often in program evaluation, MetaMetrics has developed a methodology for measuring the recidivism of a population in which the individuals who comprise it have been in it for different lengths of time.

In the case of the present Evaluation of the Elimination of Plea Bargaining for DWI Offenders, the pre-law and post-law populations are comprised of individuals who entered the populations at different points in time. These individuals drop out at different points in time as well, either at the end of the period for which data are available, or when the individuals are rearrested.

The following example is given in order to illustrate the methodology. Let us take a population of 100 individuals who each had their first DWI arrest during the course of one year – between the first day of Year 1 and the last day of Year 1. Let us assume that two years' worth of data are available – between the first day of Year 1 and the last day of Year 2. An individual in this population can have been in it for as much as one year and as little as two years. Each individual will also have at least one year, and at the most two years, in which to recidivate.

The first steps in calculating the recidivism of a group are to determine how long each individual was in the population, and if and when that person had a subsquent incident (was rearrested). A chart can then be prepared showing how many individuals were in the population

without incidents for one month, two months and so forth; how many had incidents after one month (two months, etc.) of being in the population; and finally, a third column of numbers called the "base". For each month the base will equal the total number of individuals who were present in the population through that month, plus those who dropped out because they had been rearrested. The base is the number of individuals during any given period whose behavior can be accounted for.

In our example the base will be 100 for at least the first twelve months, since each individual will have had at least one year in which to recidivate. The base will decline over the last twelve months, since it will include individuals who had been in the population for only thirteen months, fourteen months, and so forth, until month twenty-four, when those individuals who had been arrested in Month 1 of Year 1 will be counted. These figures shown in Table 1.

Table 1

Number with No Incidents
and Incidents by Month

Months	No Incidents (NI)	Incidents (I)	Base
0	100	0	100
1	98	2	100
2	95	3	100
3	93	2	100
4	93	0	100
5	92	1	100
6	90	2	100
7	88	2	100
8	86	2	100
9	86	0	100
10	84	2	100
11	83	1	100
12	82	1	100
13	82	0	100
14	73	0	91
15	63	1	82
16	56	1	76
17	48	0	68
18	39	0	59
19	31	0	51
20	26	0	46
21	23	0	43
22	15	0	35
23	11	0	31
24	5	0	25

From Month 1 to 13 the base equals the number with no incidents plus the total number to date with incidents. In Month 14 the base drops from 100 to 91. The nine missing individuals are those who were in the population, without any incidents, for only 13 months. At Month 24 the base is 25; this number is comprised of the twenty individuals who ever recidivated during the two year period, plus the five individuals who entered the population in January of Year 1 and never had a second incident throughout the 24 month period.

Using these figures, MetaMetrics calculates the estimated cumulative proportion with incidents (the recidivism rate) in the following manner. For any period n the cumulative proportion with incidents (CPI_n) is equal to the number people who had incidents during that period (I_n) plus a value we call the proportion value (PV_n), divided by the number of people with no incidents that period (NI_n) plus those with incidents (I_n) plus the PV_n. This equation is shown below.

$$CPI_n = \frac{I_n + PV_n}{NI_n + PV_n} = \frac{\text{Estimated Cumulative Incidents}}{\text{Estimated Base}}$$

where:

CPI_n	=	Cumulative proportion with incidents at period n
I_n	=	Number with incidents at period n
NI_n	=	Number with no incidents at period n
PV_n	=	Proportion value at period n

The PV_n is calculated as follows:

$$PV_n = \frac{(NI_n)(CPI_{n-1})}{|(1-CPI_{n-1})|}$$

where: CPI_{n-1} =   Cumulative proportion with incidents at period $n-1$

The entire equation is presented below:

$$CPI_n = \frac{I_n + \dfrac{(NI_n)(CPI_{n-1})}{|(1-CPI_{n-1})|}}{NI_n + \dfrac{(NI_n)(CPI_{n-1})}{|(1-CPI_{n-1})|}} = \frac{\text{Estimated Cumulative Incidents}}{\text{Estimated Base}}$$

This is a recursive equation. For each new month, the recidivism rate is calculated using the recidivism rate from the previous month (CPI_{n-1}). Applying this formula to the figures in Table 1 gives the recidivism rate of the population through time. These figures are shown in Table 2 below.

Table 2

Estimated Cumulative Recidivism

Months	Estimated Cumulative Incidents	Estimated Cumulative Base	Cumulative Recidivism
0	2.0	100.0	0.020
1	5.0	100.0	0.050
2	7.0	100.0	0.070
3	7.0	100.0	0.070
4	8.0	100.0	0.080
5	10.0	100.0	0.100
6	12.0	100.0	0.120
7	14.0	100.0	0.140
8	14.0	100.0	0.140
9	16.0	100.0	0.160
10	17.0	100.0	0.170
11	18.0	100.0	0.180
12	18.0	100.0	0.180
13	18.0	100.0	0.180
14	17.0	89.0	0.191
15	15.9	77.9	0.204
16	14.4	70.4	0.204
17	12.3	60.3	0.204
18	10.0	49.0	0.204
19	7.9	38.9	0.204
20	6.7	32.7	0.204
21	5.9	28.9	0.204
22	3.8	18.8	0.204
23	2.8	13.8	0.204
24	1.3	6.3	0.204

The estimated rate of recidivism for this population, after 24 months, is thus 20.4%.

APPENDIX D
LEGISLATIVE CHANGES – KENTUCKY

Changes in DUI Statutes
1984 GENERAL ASSEMBLY
(SENATE BILL 20)

I.   SENTENCING SANCTIONS

                    A. First Offense   Existing Law

Fine & Jail Time: $200-$500 or 48 hrs - 30 days (or both) $100-$500 (probatable)
                                                                        No Jail Time Required

Community Service: 2 - 30 days (defendant may apply to the   None
                     judge following sentencing to jail or a fine
                     to do community labor in lieu of fine or jail,
                     provided his offense did not involve personal
                     injury to another)

Loss of License: 30 days with education/treatment (or)   6 months, may be waived
                     6 months without education/treatment   if attend ADE

Services Cost: $150 service fee   Pay $25 if go to ADE

Other Comments: At least one penalty cannot be suspended or probated;

                     At least 48 hours mandatory jail time if person other
                     than driver suffered physical injury as result of the
                     offense.

B. Second Offense

Fine:	$350 - $500	$100-$500 (probatable)
Jail Time:	7 days - 6 months (7 days not suspendable)	3 days-6 months (probatable)
Community Service:	10 days - 6 months (may be assessed in addition to fine and jail)	May be given as part of probation
Loss of License:	12 months	1 year
Services Cost:	$150 service fee	None
Other Comments:	Court can establish terms of probation	Court can establish terms of probation

C.   Third Offense

Fine:	$500 - $1,000	$100-$500 (probatable)
Jail Time:	30 days - 1 year (30 days not suspendable)	30 days - 1 year (probatable)
Community Service:	10 days - 1 year (May be assessed in addition to fine and jail)	May be given as condition of probation
Loss of License:	2 years	At least 2 years
Services Cost:	$150 service fee	None

D. <u>Other Sentencing Recommendations</u>

First and second offenders may serve terms of imprisonment   No reference as to when
on non-working days in 24 hour periods.   sentence may be served.

Juveniles convicted have licenses revoked until age 18, or   Juveniles treated same
as otherwise provided, whichever period is longer.   as adults.

Juveniles detained for traffic offenses must be detained in   Juveniles can be held in
a ward separate from adult prisoners.   jail for traffic offenses.

II.   TREATMENT

A. <u>First Offense</u>   <u>Existing Law</u>

Length: Optional 90 day education program to reduce   Optional education program
                     license suspension period from 6 months to
                     30 days.

Cost: Offender pays cost   Offender pays cost

Penalty for
  Non-Completion: License suspension is 6 months rather   Court may revoke license
                     than 30 days.   for 6 months

B. Second Offense   <u>Existing Law</u>

Length: 1 year (early release possible)   None

Cost: Offender pays cost   None

Penalty for   Failure to complete constitutes contempt   None
Non-Completion: of court and court may impose any suspended
                       penalty

C. Third Offense   <u>Existing Law</u>

Length: 1 year (in-patient treatment required --   None
                       person may be released early from in-patient
                       treatment, but not from program)

Cost: Offender pays cost   None

Penalty for   Failure to complete constitutes contempt   None
Non-Completion: of court and court may impose any suspended
                       penalty

III. PENALTIES FOR DRIVING ON REVOKED LICENSE

	A. **First Offense**	**Existing Law**
Class B Misdemeanor:	$250 fine, 90 days jail, or both License revocation time doubled	$12 - $500 fine (probatable) and/or 6 months in jail (probatable)
	B. **Second Offense**	
Class A Misdemeanor:	$500 fine, 1 year jail, or both License revocation time doubled	Same as penalty for first offense
	C. **Third Offense or More**	
Class D Felony:	$10,000 fine, 1-5 years prison, or both License revocation time doubled	Same as penalty for first offense

IV. DEFINITION

Refers to alcohol or any other substance which may impair one's driving ability.

Refers to alcohol and any drug

V. DETECTION AND ARREST

Permits use of PBT in addition to other testing procedures

Permits use of multiple testing for detection

Allows probable cause arrest

Allows video taping of sobriety tests under certain conditions

VI. AMENDMENT OF CHARGE

When blood alcohol reading is .10% or above, if prosecution moves to amend the charge, it must give reasons for such motion and court must record its reasons for granting amendment of the charge.

When blood alcohol reading is .15% or above, prosecutor must oppose the amendment of DUI charge, unless all prosecution witnesses will be unavailable for trial.

Use of PBT counts as the one test given

Only one chemical test can be given

No probable cause arrest

No similar provision

No provision restricting dismissal or amendment of charge

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VII. PRE-TRIAL LICENSE REVOCATION

Authorized on court order upon motion of prosecution in certain cases

No pre-trial license revocation

OTHER CHANGES:

Allows DUI victims to be eligible for victim compensation funds

DUI victims not eligible for victim compensation funds

Includes DUI deaths in murder and second degree manslaughter statutes

DUI included in involuntary manslaughter by inference

Permits new applicants for a learner's permit to attend Transportation Cabinet's driver improvement program

No information on drug. and/or alcohol use and driving included in booklet or in the examination

Provides that a person arrested for DUI who shows a blood alcohol reading of .15% or more be detained in custody for at least 4 hours following his arrest

No such provision

APPENDIX E
ARREST ANALYSIS – KENTUCKY

E-1   Arrests and Proportion of Multiple Offenders

Since the database used in the Kentucky analyses is comprised of the entire population of cases for Lexington and Louisville residents, it was possible to analyze the total number of arrests each month and the number of first arrests each month for these sites. This analysis focuses on the relationship between level of enforcement and the level of recidivism. It is an examination of the constitution of the arrested population over time with respect to one characteristic, the concentration of multiple offenders in the arrested population.

Lexington and Louisville monthly arrest statistics are shown in Tables E-1 and E-2. These tables present the number of arrests for each four-week period, including the percent of those arrested who were multiple offenders. Figures E-1 and E-2 graph the total arrests and the proportion of multiple offenders per month.

The proportion of multiple offenders is zero at the beginning of the data, since the arrestees are defined as being multiple offenders by virtue of having been arrested before. If there is no relationship between the number of arrests in a month and the proportion of multiple offenders who are caught that month, then the slope of this proportion of multiple offenders curve should level off over time. If, on the other hand, there is some relationship between level of enforcement and proportion of multiple offenders, then the curve could continue to rise or begin to fall off. If an enforcement program begins to catch mostly serious offenders (those who are very drunk for example), then the proportion of multiple offenders arrested in a month would be higher than before. Conversely, if a program begins to target the general population (through setting up road-blocks for instance), then the proportion of multiple offenders could decrease.

Figure E-1 shows that, while the number of arrests per month in Lexington declines from the before period to the after period, the percent of arrests of multiple offenders increases and then appears to level off. In Louisville, as shown in Figure E-2, the number of arrests increases from the before to the after period. At this site, as well, the proportion of multiple offenders increases and then levels off.

These data indicate that the proportion of multiple offenders in the population does not vary with respect to the size of the arrest "net" for a given period. These findings tend to substantiate an assumption that the level of recidivism is not dependant on the level of enforcement.

MONTH Start date	End Date	# Arrests	# First Arrests	% Multiple Offenders
7/13/08	18/10/81	28	28	0.0
8/11/81	9/8/81	41	41	0.0
9/9/81	10/7/81	41	40	2.4
10/8/81	11/5/81	43	42	2.3
11/6/81	12/4/81	47	47	0.0
12/5/81	1/2/82	39	39	0.0
1/3/82	1/31/82	51	51	0.0
2/1/82	3/1/82	90	87	3.3
3/2/82	3/30/82	87	82	5.7
3/31/82	4/28/82	93	89	4.3
4/29/82	5/27/82	247	239	3.2
5/28/82	6/25/82	269	252	6.3
6/26/82	7/24/82	240	233	2.9
7/25/82	8/22/82	213	200	6.1
8/23/82	9/20/82	242	220	9.1
9/21/82	10/19/82	301	276	8.3
10/20/82	11/17/82	270	245	9.3
11/18/82	12/16/82	216	198	8.3
12/17/82	1/14/83	204	182	10.8
1/15/83	2/12/83	196	173	11.7
2/13/83	3/13/83	246	211	14.2
3/14/83	4/11/83	234	201	14.1
4/12/83	5/10/83	261	234	10.3
5/11/83	6/8/83	225	189	16.0
6/9/83	7/7/83	188	161	14.4
7/8/83	8/5/83	224	188	16.1
8/6/83	9/3/83	257	221	14.0
9/4/83	10/2/83	281	234	16.7
10/3/83	10/31/83	223	191	14.3
11/1/83	11/29/83	213	181	15.0
11/30/83	12/28/83	200	166	17.0
12/29/83	1/26/84	154	119	22.7
1/27/84	2/24/84	203	162	20.2
2/25/84	3/24/84	193	161	16.6
3/25/84	4/22/84	225	172	23.6
4/23/84	5/21/84	187	148	20.9
5/22/84	6/19/84	164	129	21.3
6/20/84	7/18/84	150	111	26.0
7/19/84	8/16/84	128	101	21.1
8/17/84	9/14/84	159	120	24.5
9/15/84	10/13/84	163	125	23.3
10/14/84	11/11/84	142	112	21.1
11/12/84	12/10/84	142	99	30.3
12/11/84	1/8/85	105	79	24.8
1/9/85	2/6/85	71	51	28.2
2/7/85	3/7/85	134	103	23.1
3/8/85	4/5/85	149	113	24.2
4/6/85	5/4/85	121	93	23.1
5/5/85	6/2/85	122	95	22.1
6/3/85	7/1/85	115	85	26.1
7/2/85	7/30/85	111	79	28.8
7/31/85	8/28/85	106	80	24.5
8/29/85	9/26/85	103	79	23.3
9/27/85	10/25/85	111	81	27.0
10/26/85	11/23/85	123	99	19.5
11/24/85	12/22/85	87	68	21.8
12/23/85	1/20/86	79	62	21.5
1/21/86	2/18/86	68	54	20.6
2/19/86	3/19/86	89	72	19.1
3/20/86	4/17/86	68	56	17.6
4/18/86	5/16/86	102	79	22.5
5/17/86	6/14/86	64	47	26.6
6/15/86	7/13/86	78	56	28.2
7/14/86	8/11/86	83	66	20.5
8/12/86	9/9/86	67	49	26.9
9/10/86	10/8/86	70	50	28.6
10/9/86	11/6/86	69	59	14.5
11/7/86	12/5/86	66	54	18.2
12/6/86	1/3/87	51	42	17.6
1/4/87	2/1/87	83	63	24.1
2/2/87	3/2/87	65	56	13.8
3/3/87	3/31/87	38	36	5.3
4/1/87	4/29/87	29	24	17.2
4/30/87	5/28/87	29	27	6.9
5/29/87	6/26/87	3	3	0.0
6/27/87	7/25/87	1	1	0.0
TOTAL		10180	8561	

Figure E-1
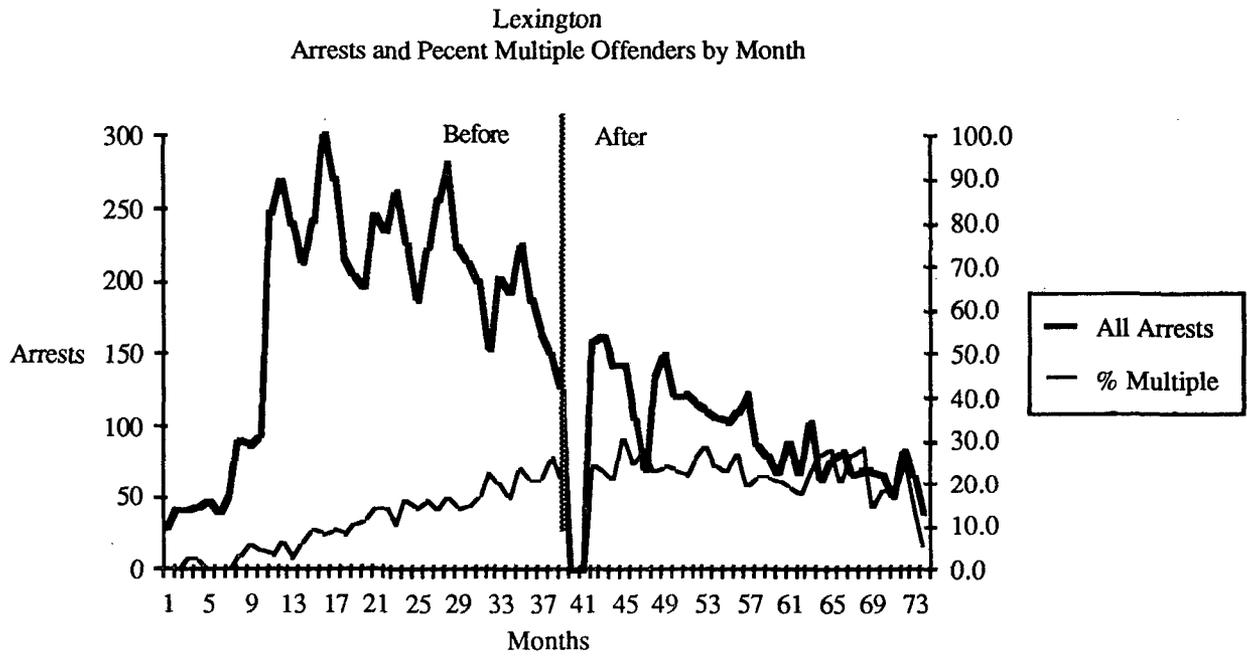
Lexington
Arrests and Pecent Multiple Offenders by Month

MONTH Start date	End Date	# Arrests	# First Arrests	% Multiple Offenders
7/13/81	8/10/81	363	354	2.5
8/11/81	9/8/81	337	327	3.0
9/9/81	10/7/81	421	404	4.0
10/8/81	11/5/81	387	351	9.3
11/6/81	12/4/81	349	327	6.3
12/5/81	1/2/82	395	371	6.1
1/3/82	1/31/82	303	279	7.9
2/1/82	3/1/82	405	343	15.3
3/2/82	3/30/82	386	349	9.6
3/31/82	4/28/82	383	352	8.1
4/29/82	5/27/82	310	276	11.0
5/28/82	6/25/82	317	284	10.4
6/26/82	7/24/82	328	269	18.0
7/25/82	8/22/82	331	282	14.8
8/23/82	9/20/82	378	333	11.9
9/21/82	10/19/82	444	385	13.3
10/20/82	11/17/82	410	365	11.0
11/18/82	12/16/82	359	311	13.4
12/17/82	1/14/83	375	317	15.5
1/15/83	2/12/83	482	412	14.5
2/13/83	3/13/83	476	407	14.5
3/14/83	4/11/83	373	300	19.6
4/12/83	5/10/83	444	368	17.1
5/11/83	6/8/83	363	294	19.0
6/9/83	7/7/83	335	274	18.2
7/8/83	8/5/83	375	298	20.5
8/6/83	9/3/83	431	337	21.8
9/4/83	10/2/83	435	355	18.4
10/3/83	10/31/83	178	119	33.1
11/1/83	11/29/83	279	227	18.6
11/30/83	12/28/83	357	307	14.0
12/29/83	1/26/84	467	376	19.5
1/27/84	2/24/84	493	384	22.1
2/25/84	3/24/84	523	407	22.2
3/25/84	4/22/84	527	399	24.3
4/23/84	5/21/84	426	326	23.5
5/22/84	6/19/84	361	260	28.0
6/20/84	7/18/84	378	293	22.5
7/19/84	8/16/84	415	325	21.7
8/17/84	9/14/84	482	351	27.2
9/15/84	10/13/84	563	423	24.9
10/14/84	11/11/84	485	357	26.4
11/12/84	12/10/84	425	307	27.8
12/11/84	1/8/85	439	310	29.4
1/9/85	2/6/85	340	238	30.0
2/7/85	3/7/85	465	342	26.5
3/8/85	4/5/85	515	356	30.9
4/6/85	5/4/85	475	347	26.9
5/5/85	6/2/85	462	335	27.5
6/3/85	7/1/85	386	282	26.9
7/2/85	7/30/85	417	292	30.0
7/31/85	8/28/85	419	290	30.8
8/29/85	9/26/85	486	342	29.6
9/27/85	10/25/85	585	406	30.6
10/26/85	11/23/85	525	375	28.6
11/24/85	12/22/85	480	330	31.3
12/23/85	1/20/86	496	355	28.4
1/21/86	2/18/86	528	371	29.7
2/19/86	3/19/86	584	424	27.4
3/20/86	4/17/86	636	461	27.5
4/18/86	5/16/86	637	455	28.6
5/17/86	6/14/86	639	476	25.5
6/15/86	7/13/86	619	448	27.6
7/14/86	8/11/86	677	480	29.1
8/12/86	9/9/86	653	455	30.3
9/10/86	10/8/86	602	446	25.9
10/9/86	11/6/86	580	419	27.8
11/7/86	12/5/86	592	437	26.2
12/6/86	1/3/87	544	385	29.2
1/4/87	2/1/87	506	371	26.7
2/2/87	3/2/87	513	365	28.8
3/3/87	3/31/87	470	336	28.5
4/1/87	4/29/87	456	329	27.9
4/30/87	5/28/87	355	265	25.4
5/29/87	6/26/87	163	135	17.2
TOTAL		33298	25843	

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Figure E-2

Louisville
Arrests and Pecent Multiple Offenders by Month
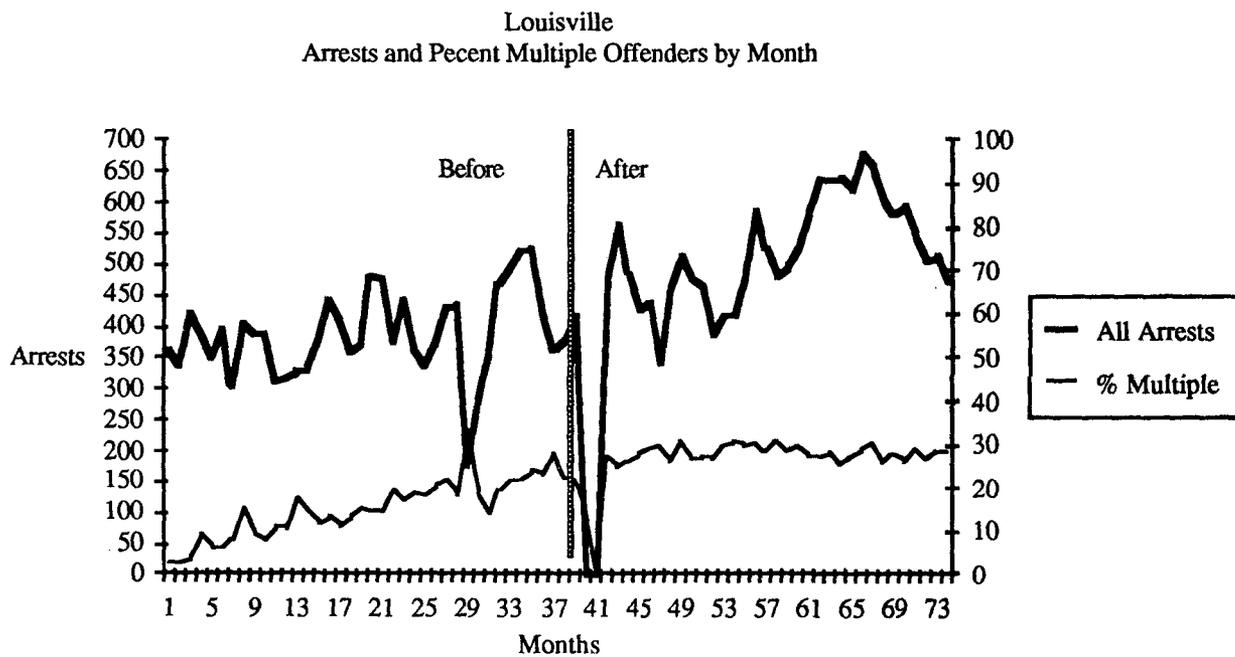
E-2   Proportion Recidivating and Standardized Arrest Scores

In order to further examine the relationship between level of arrests and recidivism, two proportions were calculated and then tested for covariance. Four-week periods were used, which gives thirteen periods per year. The first variable calculated was the number of rearrests during a period divided by the population of arrestees during that period. This was calculated as follows:

$$\frac{Rearrests\ (periodn)}{Total\ Arrests(periodn)} * 100 = Recidivism\ Proportion\ (periodn)$$

This calculation provided the recidivism proportion.

The second variable calculated was a standard arrest score. This was determined as follows:

$$\frac{((Number\ of\ Arrests(periodn) - Mean\ Arrests(periodn)\ )+50)}{Standard\ Deviation(periodn)} * 100 = Standard\ Arrest\ Score(periodn)$$

This provided the arrest proportion.

The proportions were calculated for recidivism periods of two years. The figures used in calculating the proportions for Lexington are shown in Table E-3. The proportion recidivating and standard arrest score through time are presented in graph form in Figure E-3. A scatter chart, graphing proportion recidivating and standard arrest score pairs of variables, is given in Figure E-4. The figures for Louisville are presented in Table E-4 and Figures E-5 and E-6.

The correlation coefficient for the entire period for Lexington was .782, which indicates a high level of corrolation. That is, it appears that as the level of arrests decreases, the level of recidivism also decreases. The apparent correlation between these two variables can be seen in the scatter plot. However, the correlation coefficient for these variables for Louisville was .423. This is a low level of correlation. In this case, the level of recidivism does not vary with the overall increase in the level of arrests. The scatter plot for Louisville indicates this distribution.

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Standard all	Proportion	Mean Stand.(x)	Mean Prop.(y)	little x	little y	xy	xsquared	ysquared
50.4	8.0	50.282	12.767	0.122	-4.767	-0.579	0.015	22.721
50.5	17.1	50.282	12.767	0.220	4.306	0.949	0.049	18.546
50.6	7.5	50.282	12.767	0.330	-5.267	-1.740	0.109	27.738
50.7	20.0	50.282	12.767	0.447	7.233	3.231	0.199	52.321
50.8	18.6	50.282	12.767	0.540	5.838	3.151	0.291	34.082
50.9	14.6	50.282	12.767	0.625	1.867	1.167	0.391	3.487
51.0	9.1	50.282	12.767	0.706	-3.676	-2.595	0.498	13.512
51.0	17.3	50.282	12.767	0.760	4.567	3.470	0.577	20.854
51.1	22.0	50.282	12.767	0.817	9.184	7.503	0.667	84.355
51.2	17.8	50.282	12.767	0.868	5.011	4.349	0.753	25.111
51.2	16.1	50.282	12.767	0.928	3.305	3.067	0.861	10.921
51.2	19.1	50.282	12.767	0.934	6.374	5.952	0.872	40.627
51.2	20.6	50.282	12.767	0.883	7.794	6.881	0.779	60.746
51.1	20.6	50.282	12.767	0.845	7.875	6.653	0.714	62.023
51.1	15.3	50.282	12.767	0.794	2.539	2.016	0.630	6.449
51.0	17.2	50.282	12.767	0.750	4.388	3.292	0.563	19.255
51.0	16.0	50.282	12.767	0.702	3.264	2.290	0.492	10.652
50.9	18.4	50.282	12.767	0.636	5.629	3.583	0.405	31.691
50.9	15.9	50.282	12.767	0.582	3.106	1.809	0.339	9.649
50.8	15.3	50.282	12.767	0.532	2.574	1.370	0.283	6.626
50.8	12.2	50.282	12.767	0.482	-0.557	-0.268	0.232	0.311
50.7	16.8	50.282	12.767	0.419	3.985	1.671	0.176	15.877
50.7	11.5	50.282	12.767	0.380	-1.262	-0.480	0.145	1.593
50.6	13.6	50.282	12.767	0.307	0.825	0.253	0.094	0.681
50.5	9.4	50.282	12.767	0.246	-3.355	-0.824	0.060	11.255
50.5	14.1	50.282	12.767	0.209	1.336	0.279	0.044	1.785
50.4	15.5	50.282	12.767	0.168	2.703	0.454	0.028	7.306
50.4	14.4	50.282	12.767	0.113	1.648	0.187	0.013	2.715
50.3	14.4	50.282	12.767	0.031	1.648	0.051	0.001	2.715
50.2	13.6	50.282	12.767	-0.052	0.846	-0.044	0.003	0.716
50.2	15.8	50.282	12.767	-0.110	3.052	-0.336	0.012	9.318
50.1	14.7	50.282	12.767	-0.157	1.957	-0.308	0.025	3.831
50.1	13.4	50.282	12.767	-0.218	0.679	-0.148	0.048	0.461
50.0	8.9	50.282	12.767	-0.256	-3.863	0.989	0.066	14.920
50.0	10.8	50.282	12.767	-0.318	-2.007	0.638	0.101	4.029
49.9	9.9	50.282	12.767	-0.367	-2.883	1.057	0.134	8.312
49.8	12.6	50.282	12.767	-0.443	-0.174	0.077	0.196	0.030
49.8	11.2	50.282	12.767	-0.490	-1.573	0.770	0.240	2.473
49.7	9.7	50.282	12.767	-0.542	-3.032	1.644	0.294	9.194
49.7	13.4	50.282	12.767	-0.584	0.635	-0.371	0.341	0.404
49.7	11.7	50.282	12.767	-0.607	-1.116	0.678	0.369	1.246
49.6	5.5	50.282	12.767	-0.640	-7.255	4.645	0.410	52.634
49.6	7.2	50.282	12.767	-0.691	-5.567	3.847	0.478	30.988
49.5	9.2	50.282	12.767	-0.738	-3.571	2.637	0.545	12.754
49.5	10.5	50.282	12.767	-0.766	-2.302	1.764	0.587	5.297
49.5	9.6	50.282	12.767	-0.800	-3.178	2.541	0.640	10.098
49.5	7.7	50.282	12.767	-0.815	-5.074	4.134	0.664	25.750
49.5	4.1	50.282	12.767	-0.821	-8.668	7.115	0.674	75.140
49.4	7.8	50.282	12.767	-0.872	-4.989	4.349	0.760	24.889
49.4	10.6	50.282	12.767	-0.915	-2.179	1.994	0.838	4.746
49.3	9.0	50.282	12.767	-0.960	-3.767	3.617	0.922	14.188
49.3	9.2	50.282	12.767	-1.016	-3.556	3.612	1.032	12.647
49.2	5.0	50.282	12.767	-1.070	-7.767	8.308	1.144	60.322
49.2	0.0	50.282	12.767	-1.126	-12.767	14.380	1.269	162.989
2715.2	689.4							
						124.732	22.072	1152.978
50.3	12.8 Means							

$r=$ 0.782

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Figure E-3

**Lexington
All - 2 year
Recidivism and Standard Arrest Score**
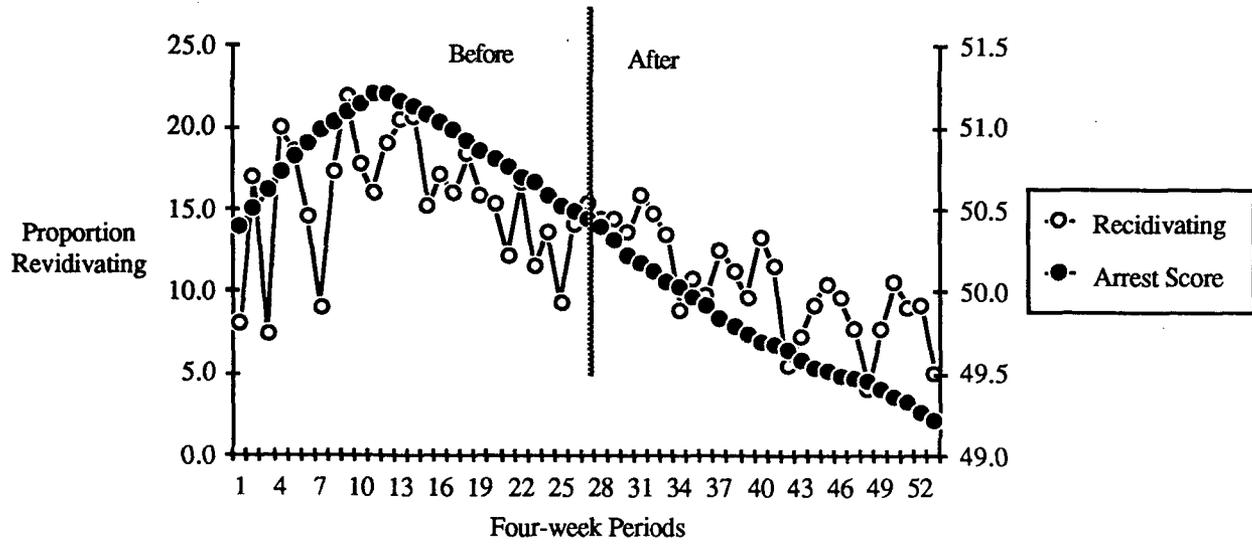
Figure E-4

Lexington
All - 2 year
Proportion Recidivating vs. Arrest Score
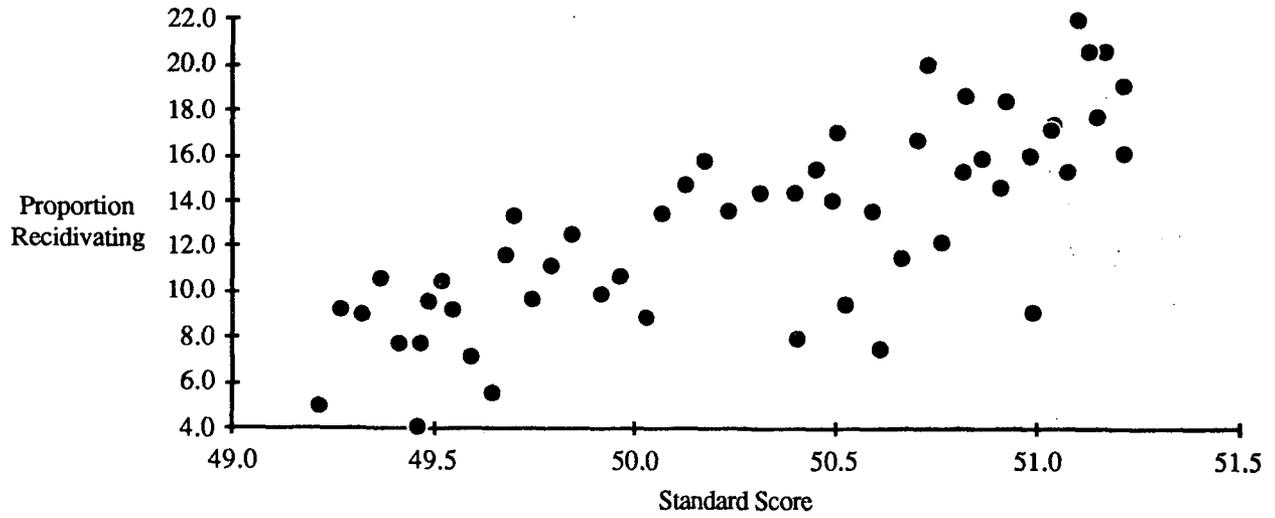
Table E-4
Louisville Arrest and Recidivism Scores
All

Standard all	Proportion	Mean Stand.(x)	Mean Prop.(y)	little x	little y	xy	xsquared	ysquared
49.417	20.4	50.034	17.884	-0.617	2.518	-1.555	0.381	6.342
49.418	21.6	50.034	17.884	-0.616	3.746	-2.308	0.379	14.034
49.443	16.1	50.034	17.884	-0.591	-1.813	1.071	0.349	3.285
49.448	19.1	50.034	17.884	-0.586	1.204	-0.706	0.344	1.451
49.370	17.5	50.034	17.884	-0.664	-0.351	0.233	0.441	0.123
49.350	15.1	50.034	17.884	-0.684	-2.827	1.934	0.468	7.993
49.341	16.4	50.034	17.884	-0.693	-1.466	1.016	0.480	2.149
49.390	17.0	50.034	17.884	-0.644	-0.920	0.593	0.415	0.846
49.426	15.4	50.034	17.884	-0.609	-2.477	1.508	0.370	6.135
49.462	15.7	50.034	17.884	-0.572	-2.210	1.264	0.327	4.884
49.523	18.6	50.034	17.884	-0.511	0.713	-0.364	0.261	0.508
49.566	14.2	50.034	17.884	-0.468	-3.695	1.729	0.219	13.651
49.583	15.5	50.034	17.884	-0.451	-2.367	1.067	0.203	5.601
49.609	19.9	50.034	17.884	-0.425	2.045	-0.869	0.181	4.182
49.636	16.7	50.034	17.884	-0.398	-1.159	0.462	0.159	1.344
49.673	15.6	50.034	17.884	-0.361	-2.251	0.813	0.130	5.065
49.708	15.5	50.034	17.884	-0.327	-2.414	0.789	0.107	5.829
49.729	16.6	50.034	17.884	-0.306	-1.267	0.387	0.093	1.605
49.761	15.7	50.034	17.884	-0.273	-2.150	0.587	0.075	4.621
49.802	20.8	50.034	17.884	-0.232	2.888	-0.670	0.054	8.338
49.778	21.2	50.034	17.884	-0.256	3.284	-0.840	0.066	10.785
49.737	13.1	50.034	17.884	-0.298	-4.764	1.418	0.089	22.700
49.775	14.9	50.034	17.884	-0.259	-2.977	0.772	0.067	8.863
49.790	12.7	50.034	17.884	-0.244	-5.195	1.268	0.060	26.989
49.821	14.5	50.034	17.884	-0.214	-3.401	0.726	0.046	11.568
49.845	18.6	50.034	17.884	-0.190	0.703	-0.133	0.036	0.495
49.855	18.8	50.034	17.884	-0.179	0.887	-0.159	0.032	0.787
49.868	14.2	50.034	17.884	-0.166	-3.690	0.614	0.028	13.619
49.881	16.5	50.034	17.884	-0.154	-1.362	0.209	0.024	1.856
49.907	15.7	50.034	17.884	-0.127	-2.232	0.284	0.016	4.981
50.047	20.3	50.034	17.884	0.013	2.386	0.031	0.000	5.695
50.128	15.5	50.034	17.884	0.093	-2.372	-0.222	0.009	5.628
50.169	17.5	50.034	17.884	0.134	-0.391	-0.053	0.018	0.153
50.190	19.9	50.034	17.884	0.156	2.064	0.322	0.024	4.258
50.202	22.2	50.034	17.884	0.168	4.280	0.720	0.028	18.316
50.232	20.4	50.034	17.884	0.197	2.519	0.497	0.039	6.346
50.272	13.5	50.034	17.884	0.238	-4.404	-1.048	0.057	19.398
50.336	18.8	50.034	17.884	0.302	0.935	0.282	0.091	0.875
50.419	20.6	50.034	17.884	0.384	2.694	1.035	0.148	7.256
50.500	18.6	50.034	17.884	0.465	0.728	0.339	0.217	0.530
50.589	21.4	50.034	17.884	0.555	3.545	1.968	0.308	12.565
50.676	17.6	50.034	17.884	0.642	-0.299	-0.192	0.412	0.089
50.725	22.9	50.034	17.884	0.691	5.039	3.480	0.477	25.388
50.745	17.4	50.034	17.884	0.711	-0.442	-0.314	0.505	0.195
50.779	20.6	50.034	17.884	0.745	2.677	1.995	0.555	7.165
50.811	21.7	50.034	17.884	0.777	3.797	2.952	0.604	14.421
50.882	21.0	50.034	17.884	0.848	3.072	2.606	0.720	9.437
50.914	21.5	50.034	17.884	0.880	3.604	3.170	0.774	12.987
50.905	18.1	50.034	17.884	0.871	0.239	0.208	0.758	0.057
50.925	19.9	50.034	17.884	0.891	2.001	1.783	0.794	4.003
50.887	23.4	50.034	17.884	0.853	5.471	4.665	0.727	29.936
50.840	13.8	50.034	17.884	0.806	-4.078	-3.287	0.650	16.629
50.729	17.8	50.034	17.884	0.694	-0.066	-0.046	0.482	0.004
2651.809	947.8					32.032	14.295	401.958
50.034	17.9 Means				r=		0.423	

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Figure E-5

Louisville
All - 2 year
Recidivism and Standard Arrest Score
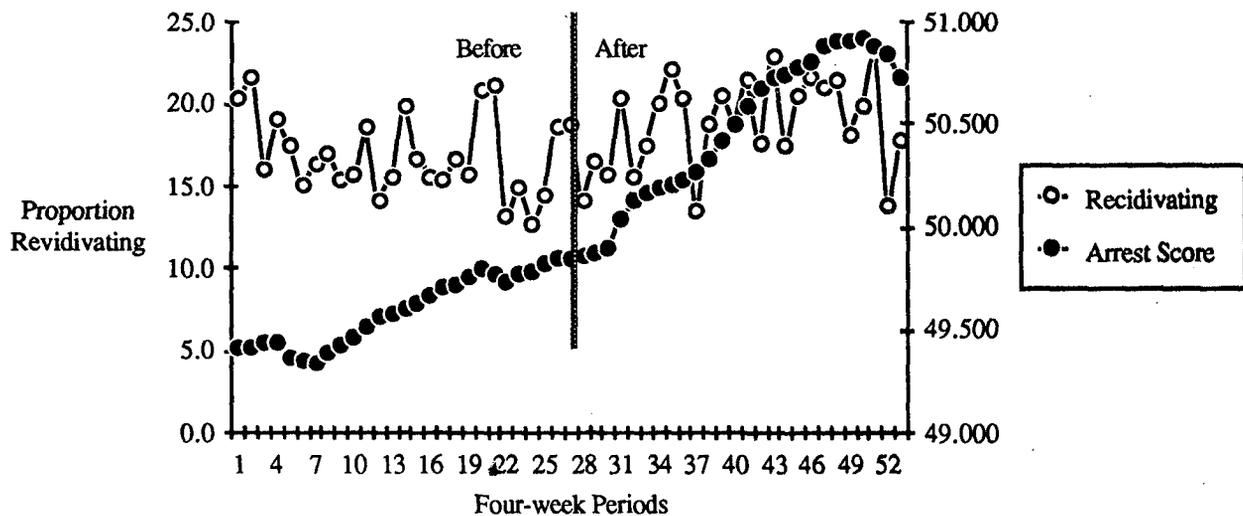
Figure E-6

Louisville
All - 2 year
Proportion Recidivating vs. Arrest Score
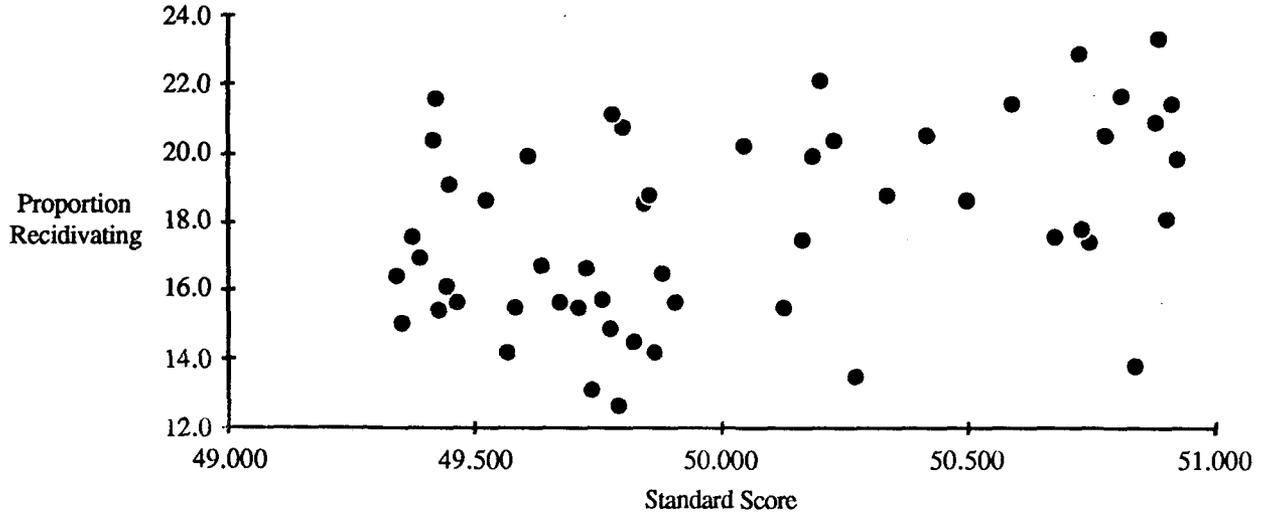
If the results from both sites are considered, it could be concluded that the level of arrests does *not* affect *the* level *of* recidivism. In *the* case of Lexington, an apparent or spurious corrolation may exist, since both arrest level and recidivism rate were dropping during the same period of time.

This conclusion, if it is valid, would tend to corroborate the tentative hypothesis indicated in the analysis of first and multiple arrests. That is, given a pool of potential recidivists, the rate of recidivism is not dependent on the level of arrests. If this is the case, then the validity of a cumulative recidivism score should not be undermined by variable arrest levels through time.