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U.S. Department of Justice
Office of Justice Programs
Bureau of Justice Statistics

Futures in Crime Analysis:

Exploring Applications of Incident-based Crime Data

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EXECUTIVE SUMMARY

The Criminal Justice Statistics Association (CJSA) established the Incident-Based Reporting (IBR) Project in an effort to promote the use and analysis of incident-based crime data for policy and decision making purposes. This report, the first in a series from the project, demonstrates how incident-based crime data can be analyzed to address specific law enforcement or criminal justice policy questions. It also promotes understanding of the new Federal Bureau of Investigation (FBI) National Incident-Based Reporting System (NIBRS), the new federal standard for incident-based crime reporting.

CJSA developed this project with input from representatives from the Bureau of Justice Statistics (BJS), the FBI, the Association of State UCR Programs (ASUCRP), and several state Statistical Analysis Centers (SACs). CJSA conducted a mail survey of 184 individuals involved in the production, collection, or analysis of incident-based crime data to assess current levels of implementation, and to solicit input for the development of demonstration analyses. In addition to reviewing the survey results, this report presents:

- suggestions for potential NIBRS "services" from the IBR survey respondents.
- Based on information obtained from the IBR Survey, a series of demonstration analyses using incident-based crime data were developed. Three analysis topics were selected for inclusion based on the stated research priorities of survey respondents: victim and offender relationships, offense location, and the involvement of weapons in criminal offenses. Tabular and graphical formats are used to present the demonstration analyses.
- ### HIGHLIGHTS
- #### Research Priorities for Incident-Based Crime Data
- IBR Survey Respondents were presented with 14 analysis topics and asked to rank the three most important applications of IBR data. Examination of victim and offender relationships was the most frequently cited analysis priority among survey respondents.
 - The second and third most frequently indicated priorities included examination of drug and alcohol involvement in criminal incidents, and the tracking of offenders through the criminal
 - a brief description of the NIBRS program and other incident-based crime data reporting systems;
 - a discussion of issues encountered during analysis of NIBRS data; and

justice system.

- Research priorities differed among respondents currently involved in IBR systems and respondents that were not currently involved with incident-based systems.

Incident-Based Crime Data "Service Enhancements"

- IBR Survey respondents were asked to indicate the utility of potential support resources. Among the three suggested resources, the production of special reports encouraging and demonstrating possible uses of incident-based crime data received the strongest endorsement (a mean score of 4.1 on a scale of 1 to 5).
- Creation of specialized training seminars demonstrating data collection methods and potential analysis techniques received a mean score of 3.9. Sixty-eight percent (68%) of respondents indicated that training seminars "would somewhat enhance" or

"would greatly enhance" their use of NIBRS data.

- Development of sample datasets containing incident-based crime data (with tutorials) received mixed responses among respondents--producing a mean score of 2.7. Approximately 30% of the respondents indicated that sample datasets "would greatly enhance" their use of IBR data, while almost 33% of the respondents indicated that such datasets "would not enhance" their efforts. Nearly 25% of the respondents stated that sample datasets would have a neutral effect on their analysis endeavors.

Incident-based crime data holds great promise for the criminal justice system. It has applications in criminal justice policy creation, law enforcement resource management, program evaluation, and strategic planning efforts. The demonstration analyses and research findings in this report provide a starting point from which more detailed analyses and discussions of potential application of incident-based crime data should emerge.

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INTRODUCTION

A new generation of improved police information systems that provide a rich source of data for law enforcement and criminal justice policy analysts is emerging across the country. The development of these systems, commonly called incident-based crime data reporting (IBR) systems, is being encouraged by federal action. Recently (1988) the Federal Bureau of Investigation (FBI) published a series of documents describing the National Incident-Based Reporting System (NIBRS). NIBRS creates data definition, collection, and reporting standards that improve on the traditional summary Uniform Crime Reporting (UCR) program and that lay the groundwork for a new national crime reporting system. State and local criminal justice analysts stand to benefit immensely from this new source of data, and it is to them that this report on using incident based crime data is directed.

NIBRS improves on the summary UCR program in two important ways. First, it collects detailed information on many more aspects of a crime incident than does UCR. UCR collects information from police reports regarding the most serious offense in multiple offense incidents. For example, if an incident involves both burglary and forcible rape offenses, only information on the latter offense would be reported to the FBI. NIBRS allows the officer to record multiple offenses for single crime

incidents. Using the example above, under NIBRS the officer would record information regarding each of the offenses involved in the criminal incident. Additionally, NIBRS links multiple offense incidents with any resultant arrests. Record identification numbers also link reported offenses to victims and arrested persons. These information links, combined with the reporting of multiple offenses, provide a depth of crime information never before available at a national level.

As implementation of incident-based crime data reporting systems (also called IBR systems) proceeds according to the standards created under NIBRS, law enforcement and criminal justice policy analysts will come to rely increasingly on this new source of information. The nature of crime analysis and crime policy analysis will change. More refined analysis will be possible, as will a broader range of analysis options.

This report presents demonstration analyses using incident-based crime data from three states with active IBR programs (Kansas, New York, and South Carolina) and also suggests several different options for specialized analysis efforts as well as the display of those analysis results. The emerging importance of the NIBRS and incident-based crime data reporting systems in criminal justice analysis prompted this report, the purpose of

which is to encourage analysis of incident-based crime data and promote understanding of NIBRS.

To develop this report CJSA consulted with criminal justice data analysis experts--particularly those who analyze UCR or IBR crime data; conducted a survey of IBR data providers, collectors, and analyzers; and reviewed existing literature on UCR and IBR data collection and analysis. Discussion focuses on several substantive areas:

- a brief description of the NIBRS program and other incident-based crime data reporting systems;
- a review of findings from the IBR/UCR survey (see Appendix B);
- a presentation of demonstration analyses using incident-based crime data;
- suggestions for potential NIBRS "service enhancements" based on the IBR survey responses; and
- a discussion of issues encountered during the analysis of NIBRS data (e.g., data accuracy and completeness, data limitations for policy and decision making, integration of IBR data with other data sources).

The anticipated audiences for this report are state and federal analysts who will use IBR/NIBRS data at aggregate levels, including state Statistical Analysis Center¹ Directors (SACs); state UCR Program Directors; police analysts; and state, federal, and private sector criminal justice planners and researchers. This report encourages the exploration and use of IBR data as it becomes available.

DEVELOPMENT OF THE NIBRS PROGRAM

The UCR program was established 60 years ago by the International Association of Chiefs of Police (IACP).² In an effort to collect comparable data across thousands of jurisdictions, the founding committee developed data definitions and reporting rules that were eventually placed under the auspices of the FBI. The UCR program was intended to provide

standard information on state and local law enforcement activities that could be examined on a national level, given the variability in state criminal codes, law enforcement practices, and data collection systems employed by each law enforcement agency.

Participation in the UCR program has remained voluntary since

the program's inception. In certain states, such as Alabama, reporting compliance is legislatively mandated.³ Since the 1970's, increased reliance on UCR data for policy making purposes as well as federal funding support have garnered increasing levels of participation among the nation's law enforcement agencies. The Comprehensive Data Systems program, sponsored by the Law Enforcement Assistance Administration program from 1972 to 1980, created the state UCR programs, which led to a dramatic increase in reporting coverage and improved reporting system management.⁴ As Rosen et al., (1990) state:

"...after more than fifty years, the UCR [program] has become a common language by which law enforcement chief executives, state and federal legislative and executive branch officials, and the media communicate crime information to the public."⁵

Limitations regarding the UCR system, which has retained the same format since its inception 60 years ago, include a lack of detail on offense and arrest data, especially for the less serious crimes; limited information regarding the victims of crime; and an inability to link offense, arrest, and victim records. Analysis topics and analytic methods are limited by the aggregate summary-based data reporting scheme employed by the UCR program. Analyses using summary

data are generally restricted to the eight index offenses and simply reflect the frequency of occurrence--because only the most prominent details in an offense are collected. As the informational needs of criminal justice policy makers and law enforcement resource managers have increased over time, the limitations of the UCR data have become more apparent.

During the early 1980's, the FBI and the Bureau of Justice Statistics (BJS) joined together to promote the development of a national incident-based crime data reporting system. A study conducted by Abt Associates, Inc. was commissioned by BJS to guide the development and implementation of data elements, data collection mechanisms, and data analysis procedures. Through an examination of the existing UCR program, interviews with UCR experts and criminal justice researchers, and a survey of more than 3,400 law enforcement personnel, the study demonstrated strong support for an improved UCR program--an incident-based system. The findings and recommendations published in *"Blueprint for the Future of the Uniform Crime Reporting Program: Final Report of the UCR Study"* established the preliminary implementation and reporting requirements for the NIBRS program.⁶ Many state and local law enforcement agencies adopted incident-based systems, and the United States Congress has directed all federal agencies to report on relevant NIBRS data elements.⁷

In response to the recommendations offered in the report, the FBI's UCR Section developed a three volume set of NIBRS informational documents.⁸ Volume I provides data collection guidelines for state and local UCR program personnel. Volume II presents data submission specifications for state and local systems personnel who prepare magnetic tapes for submission to the FBI. Volume III contains suggested approaches to developing an IBR system, including a

model incident report, standard data entry guide, data entry screens, and software design suggestions.

NIBRS was created to provide more detailed and analytically useful criminal offense data. To achieve this goal, the FBI accepted the recommendations offered in the "Blueprint" report to develop and implement an incident-based, rather than a summary-based, crime data reporting apparatus.

INCIDENT-BASED REPORTING SYSTEMS AND THE NIBRS STANDARDS

Incident-based reporting systems are computerized databases that can be used to examine a variety of specific crime- and offense-related questions. Unlike the summary UCR program, which collects an array of information in a summary (aggregate) format, incident-based reporting systems collect information regarding the characteristics and circumstances of each criminal offense or incident. Aggregation is possible, yet each offense or incident is maintained as a discrete unit. In addition to producing the standard aggregate statistics reflecting the total number of incidents, IBR data provide rich detail on a wide range of crime categories, socio-demographic characteristics, and other incident-related characteristics (e.g., use of weapons, drug or alcohol involvement, crime location). These variables can be analyzed in combinations to provide

information for policy making purposes.

With the exception of several states that developed incident-based crime data reporting systems prior to the advent of NIBRS, the majority of states currently implementing IBR programs adhere to the data format guidelines established by the FBI. Generally, states with pre-existing IBR systems included fewer data items than are required by the NIBRS program. In general, these IBR systems evolved from and were tailored to meet specific policy or decision making needs within the individual states.

To ensure compliance with the NIBRS reporting standards, many states and law enforcement agencies implementing IBR augmented their reporting systems. Several states gather more data than are required by the

NIBRS standards. These states mandate the reporting of NIBRS elements as well as a subset of state-specific elements, often classified as optional.

As of the first quarter of 1990, twenty-four states had applied for and received funds from the Bureau of Justice Statistics to support the development and implementation of NIBRS programs. The funds provide seed money to encourage the transition from UCR to the NIBRS reporting format. Specifically, they subsidize the development of reporting mechanisms, reporting software, and database management techniques.

As part of the implementation process, several states have begun pilot programs to test data collection and reporting mechanisms, and to explore analysis possibilities. States with large metropolitan areas that dominate crime statistics have enlisted larger law enforcement agencies in their processes for two reasons: large departments provide sufficiently large sample sizes for examining data collection and reporting mechanisms, and their participation encourages participation among smaller departments.

At this point, little crime data are available from the NIBRS project. In states where data collection has begun, preliminary analyses and data quality assurances are being conducted by the state UCR Programs or Statistical Analysis Centers. Currently, states with pre-existing IBR systems are not

submitting data to the FBI UCR Program in the NIBRS format. The analyses demonstrated in this report reveal the utility of incident-based crime data for resource management, policy decisions, and law enforcement applications.

Using NIBRS Data for Policy Analysis and Decision Making

In contrast to summary UCR data, which restrict analyses to aggregation on a limited number of data elements, the examination of incident-based crime data serves a multitude of analysis needs. The NIBRS program is designed to provide incident-based crime data for a variety of purposes at the local, state, and federal levels. Two important uses are state-level policy analysis, and local and multi-jurisdictional crime analysis.

NIBRS includes 52 data elements that provide detailed, incident-specific information on 22 primary crime categories comprised of 46 offenses (see Appendix A for a list of the NIBRS data elements and primary offense categories).⁹ This information allows state legislators and policy makers to ascertain crime prevalence, and allows analysts to conduct detailed analyses of victim and offender relationships and demographics. Using the information provided by the analyses, policy makers and legislators can assess the impact of previous legislative efforts (e.g., harsher narcotics enforcement statutes) and respond to the emergence of new law

enforcement priorities such as bias-related crimes, domestic violence, or victimization of the elderly.

In addition to its strategic policy analysis utility, NIBRS holds great promise for tactical crime analysis, examining the effectiveness of specific law enforcement techniques, determining

the allocation of scarce resources like manpower and patrol concentration, and identifying and comparing trends in criminal activities exhibited in different counties, jurisdictions, or departments. Incident-based crime data can also be used to estimate the need for support staff, victim services, or the adoption of specialized policies.

THE INCIDENT-BASED CRIME DATA SURVEY

CJSA conducted a mail survey of 184 people, including state UCR Directors, state SAC Directors, representatives from BJS and the FBI, and researchers who have analyzed incident-based crime data. The survey polled the producers, collectors, and users of incident-based crime data on the following issues:

- how IBR data are being analyzed;
- recommendations regarding priority topics for analysis; and
- types of enhancements to current NIBRS "support services" that would be most beneficial to users of the data.

Of the 184 surveys distributed, 83 responses were received--a 45% return rate. In many of the 83 returned surveys, several respondents combined their responses to avoid duplication and to provide representation of their

organizations' activities and policies. For example, when multiple surveys were received within an agency, the respondents combined their comments on one form. (In such cases, the respondents either contacted the authors or indicated multiple respondents on the survey.)

A total of 119 responses were contained in the 83 surveys returned, yielding an effective response rate of 65%. Prior to distributing the instrument, CJSA identified a "high priority" respondent group consisting of approximately 45 persons actively involved in the analysis of IBR crime data or the development of an incident-based system, whose responses were ensured through follow-up telephone calls. Among the "high priority" respondents the response rate exceeded 87%.

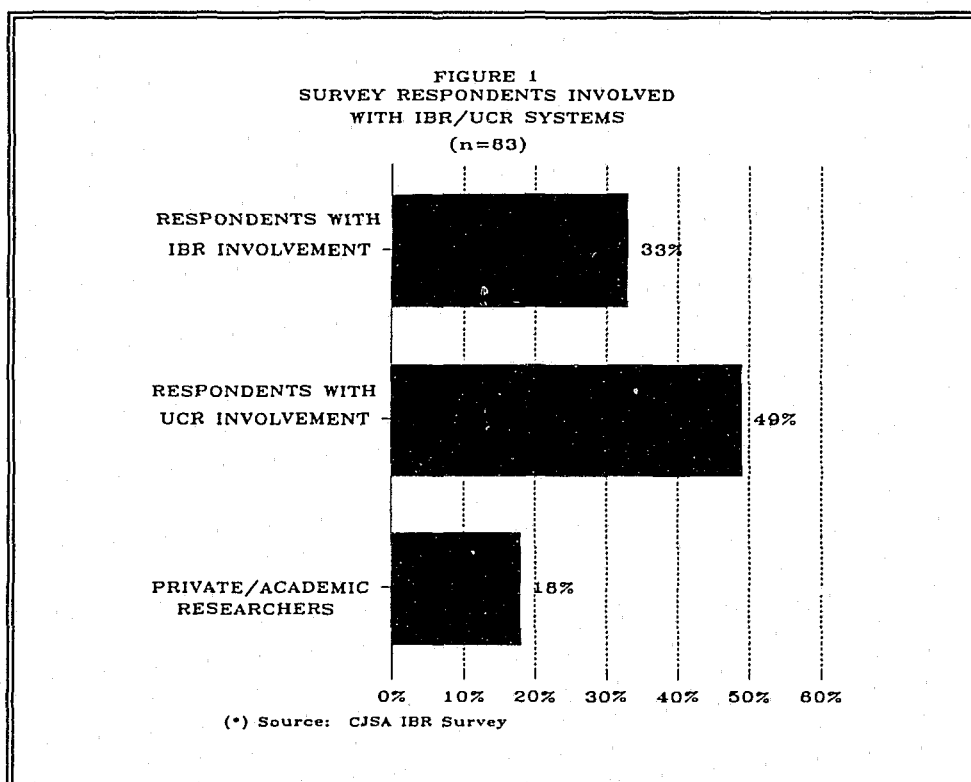
The state level focus of the IBR survey targets a key group of potential

incident-based crime data users. Legislators, law enforcement officials, program planners and evaluators, and other criminal justice professionals working at the state level will rely on IBR data for the establishment of policy, creation of legislation, and resource management.

In analyzing the survey responses, a primary distinction is made between individuals who are actively involved with incident-based crime data and individuals who are not (i.e., SAC Directors who have not yet worked with IBR data, and researchers with limited IBR analysis experience). The activities, concerns, and suggestions of individuals actively involved with incident-based

crime data may differ significantly from individuals who are not as intimately involved.

Among the survey respondents, 33% (n=27) were actively involved with incident-based crime data reporting systems, while a total of 67% (n=56) indicated involvement in either UCR-related activities (49%, n=41) or in criminal justice research in both private and academic settings (18%, n=15). Figure 1 illustrates the UCR or IBR involvement status for all survey respondents. The second group consists primarily of UCR Program Directors, state SAC Directors, state analysts, and law enforcement personnel.



Research Applications for Incident-Based Crime Data

To ascertain the types of data collection and analysis activities that respondents are engaged in (or previously performed), survey respondents were asked to examine a list of potential data applications and indicate ones in which they have been involved. Based on the input of the IBR Project Advisory Board, fourteen potential data applications were included in the survey:

- Victim and Offender Relationships
- Costs of Crime
- Drug/Alcohol Involvement in Crime
- Crime Rates by Population Characteristics
- Spatial Analysis of Offenses
- Residency of Victim and Offender
- Use/Involvement of Weapons
- Hate/Bias Related Crimes
- Secondary Crimes in Events
- Crime Rates by Offense Type
- Tracking of Arrested Offenders
- Development of New Indices
- Characteristics of Cleared Offenses
- Other

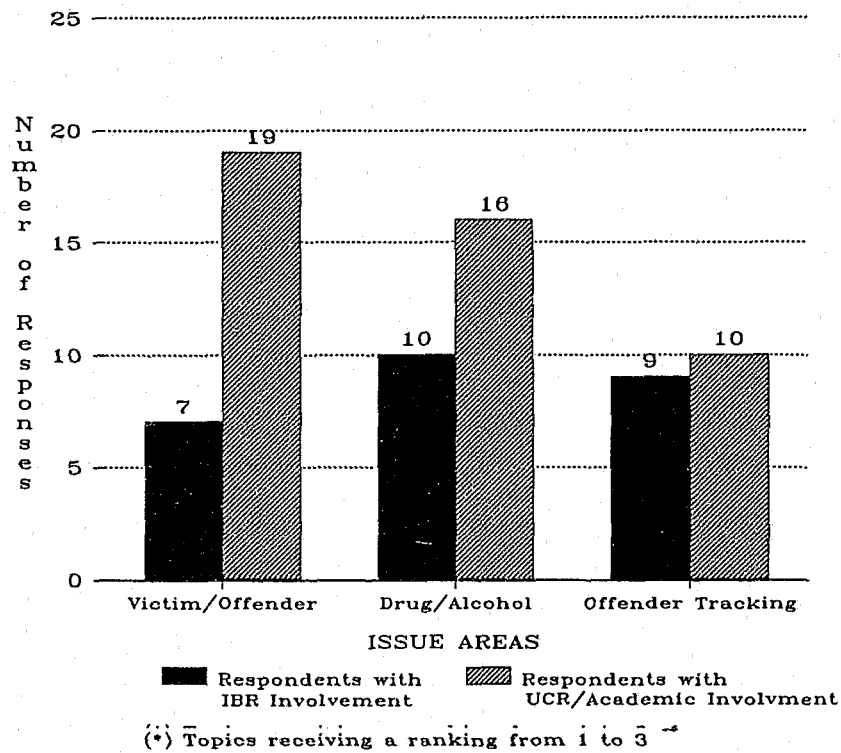
Research Priorities for Incident-Based Crime Data

Since NIBRS data are not generally available, survey respondents were presented with the same 14

analysis topics and asked to rank the three most important applications of IBR data. Again, respondents' answers were analyzed in two groups ("IBR" and "Non-IBR") to reveal divergences in priorities.

Figure 2 displays the three most frequently cited analysis priorities among "IBR" respondents and "Non-IBR" respondents. Examination of the relationship of the victim to the offender (e.g., family member, acquaintance, stranger, or unknown), drug or alcohol involvement in the offense (i.e., offenders who either were under the influence of these substances or committed the offense for drug- or alcohol-related reasons), and tracking of criminal offenders (following an offender through various stages of the criminal justice system and observing characteristics such as sentence type, sentence length, and processing time between events) were ranked as the most important analysis topics. Both "IBR" and "Non-IBR" respondents consistently ranked these areas as the first, second, or third priority topic. Other analysis topics receiving endorsement as a priority area included bias-related offenses, the involvement of weapons in an offense, and the involvement of secondary offenses in a crime incident. In addition to providing useful data on the needs and priorities of IBR crime data users, the analysis topic rankings were used to select topics for the demonstration analyses presented below.

FIGURE 2
RESPONDENTS' RANKING OF
IBR RESEARCH PRIORITIES (*)



DEMONSTRATION ANALYSES USING INCIDENT-BASED CRIME DATA

This section presents a series of demonstration analyses to illustrate the advantages of incident-based crime data for decision making purposes. The demonstrations pose specific research questions that reflect the stated priorities of the IBR survey respondents, and offer possible analysis strategies for answering the questions. As part of the analyses, examples of tabular and graphic data presentations are offered, and

advantages of incident-based analysis over summary-based analysis are discussed.

"The relationship of the victim to the offender" is the most frequently cited priority analysis topic among the IBR survey respondents. The following demonstration analyses examine this topic from several perspectives and provide examples of suggested data

presentation options. The sample data as well as the tabular and graphic presentations have been culled from documents provided by survey respondents in the Kansas Bureau of Investigation; the New York State Division of Criminal Justice Services; and the South Carolina Law Enforcement Division.

Analysis of the victim and offender relationship, a key component in the analyses of interpersonal and violent crime, will be greatly enhanced by the availability of incident-based crime data. Previously, researchers had two options available to them: collect limited amounts of specific data required to answer their inquiries, or rely on data provided by the National Crime Survey or other secondary sources. Because it

collects such a broad range of information from local police departments across the country, the NIBRS program will provide a comprehensive source for victim and offender data, much of which has not been previously available.

NIBRS data can also be used to examine details and discern patterns in criminal offenses such as the location of the offense and involvement of weapons, particularly in less serious offenses (Group B Offenses).¹⁰ For example, assaults and batteries will vary by the type of weapon involved in the offense, the level of violence used by the perpetrator, and type of injury suffered by the victim. These information items are not collected under the summary UCR program for lesser offenses.

WHAT ARE THE RELATIONSHIPS BETWEEN VICTIMS AND OFFENDERS?

Analyses of victim and offender relationships using summary National UCR data are limited by the format of the data. Analysts can determine the number of personal crime offenses that take place during a given period or within a given geographical region of the country (i.e., North, East, South, and West); but, except for homicide, they are unable to answer basic questions about the characteristics of the victim, offender, or circumstances of the incident. Unlike summary UCR data, NIBRS data can be used to answer questions like the following for all

reported offenses: What is the relationship between victims and perpetrators? What is the relationship between the perpetrators' ages and the victims' ages?

Table 1 shows a typical tabular representation of statewide UCR crime data.¹¹ When examining violent, interpersonal offenses, the analyst can provide only cumulative summaries or monthly/yearly trend analyses. They may be aggregated by jurisdictional reporting authority or a specific time period, but details regarding the

participants, the locations, and other circumstances of the offenses may not be

uniformly available.

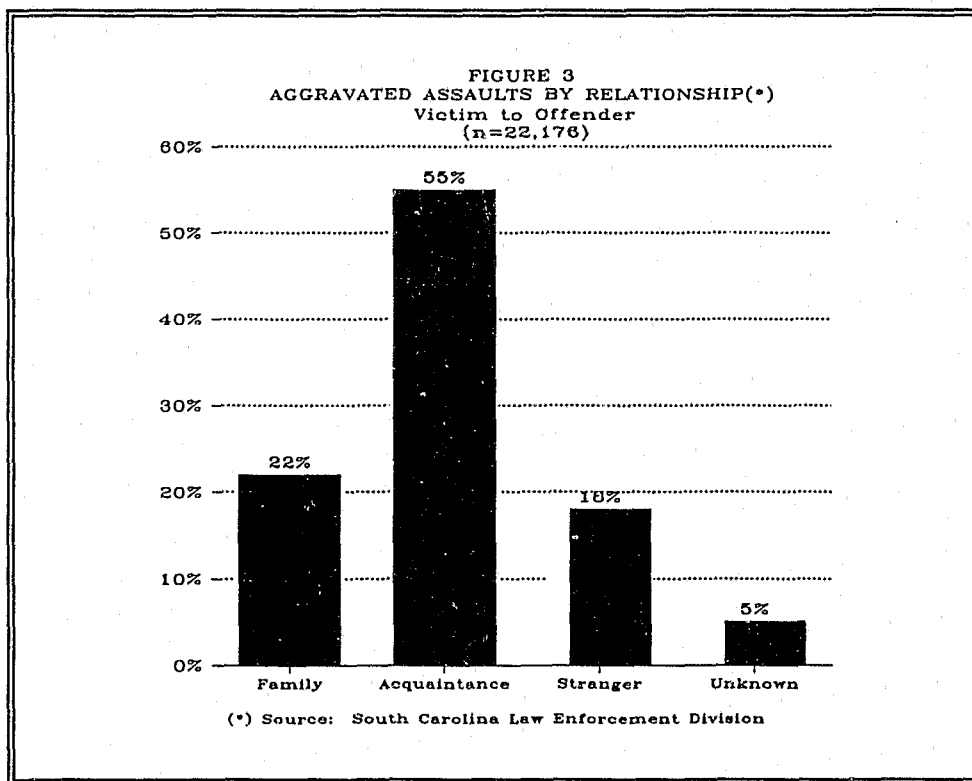
TABLE 1
ARRESTS FOR VIOLENT OFFENSES(*)
(UCR Index Offenses: Yearly Totals)

Murder/Non-Negligent Manslaughter	94
Rape	762
Robbery	2,115
Aggravated Assault	5,947
TOTAL	8,918

(*) Source: Kansas Bureau of Investigation

While information such as that provided in Table 1 is useful in charting fundamental crime trends over a period of time or within a geographical location, more refined analyses are impossible. Figure 3 furnishes information that summary UCR crime data cannot--a breakdown of the relationships between victims and offenders for reported aggravated assault offenses.¹² More than three quarters

(77%) of aggravated assault victims reported knowing the offenders prior to the offense. Twenty-two percent (22%) reported that the offenders were members of their family, while 55% reported being acquaintances of the offenders. Conversely, less than a quarter (18%) of those reporting aggravated assaults were not familiar with the offenders.



Until the advent of the NIBRS program, information such as that presented in Figure 3 had to be obtained through specialized surveys and data collection efforts. Information on the relationship between offenders and their victims is useful to treatment programs that deal with violent offenders, outreach or counselling

programs that serve abused children and battered spouses, prosecuting attorneys who are involved with victim-witness programs, and to policy makers and legislators who set enforcement policies for law enforcement agencies and create statutes for the punishment of offenders and treatment of victims.

IS THERE A RELATIONSHIP BETWEEN VICTIMS AND OFFENDERS BY AGE GROUP?

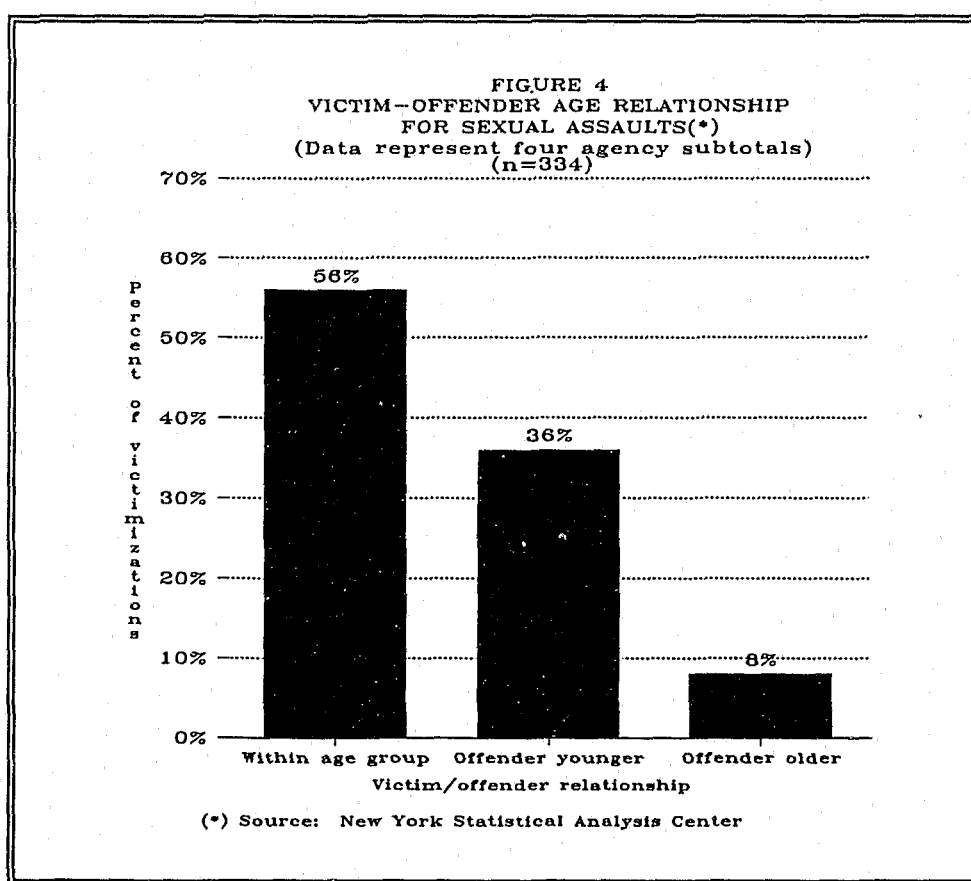
Victim and offender relationships can be further explored by examining the relationship of age to the incident. Using sample incident-based crime data from New York State, Table 2 presents age categorizations for victims and their offenders involved in sexual assaults.¹³ The majority of sexual assault victimizations were reported by victims in the 17 to 30 year old group (n=246). Victims between the ages of 1 and 16

reported the fewest number of sexual assaults (n=12), while those 31 years or older reported more than six times that number of sexual victimizations (n=76). Age relationship information is useful in establishing criminal investigation protocols and priorities, developing and implementing treatment programs, and drafting legislation that targets specific offender or victim age groups.

TABLE 2 SEXUAL ASSAULTS(*) Comparison of Victim and Offender Ages				
	VICTIMS AGE 1 - 16	VICTIMS AGE 17 - 30	VICTIMS AGE 31+	TOTALS
OFFENDERS AGE 1 - 16	12	70	20	102
OFFENDERS AGE 17 - 30	0	151	31	182
OFFENDERS AGE 31+	0	25	25	50
TOTALS	12	246	76	334
(*) Source: New York Statistical Analysis Center. Data represent subtotals for 4 agencies.				

Figure 4 demonstrates another analytic approach to the victim and offender age relationship. Approximately 56% of the reported sexual assault victims were preyed upon by offenders within the same age category (based on data in Table 2). Additionally, more than a third (36%) of the offenders were in a younger age group than their victims, while less than ten percent (8%) were in an older age group than their victims.

The data presented in Figure 4 reveal a pattern in the sexual assault offenses that analyses of summary UCR data would not have revealed: sexual assaults occur predominately between individuals of the same age group. Among the assaults that deviate from this norm, the offenders tend to be younger than their victims. Only in a minority of cases is the victim and offender age relationship reversed.



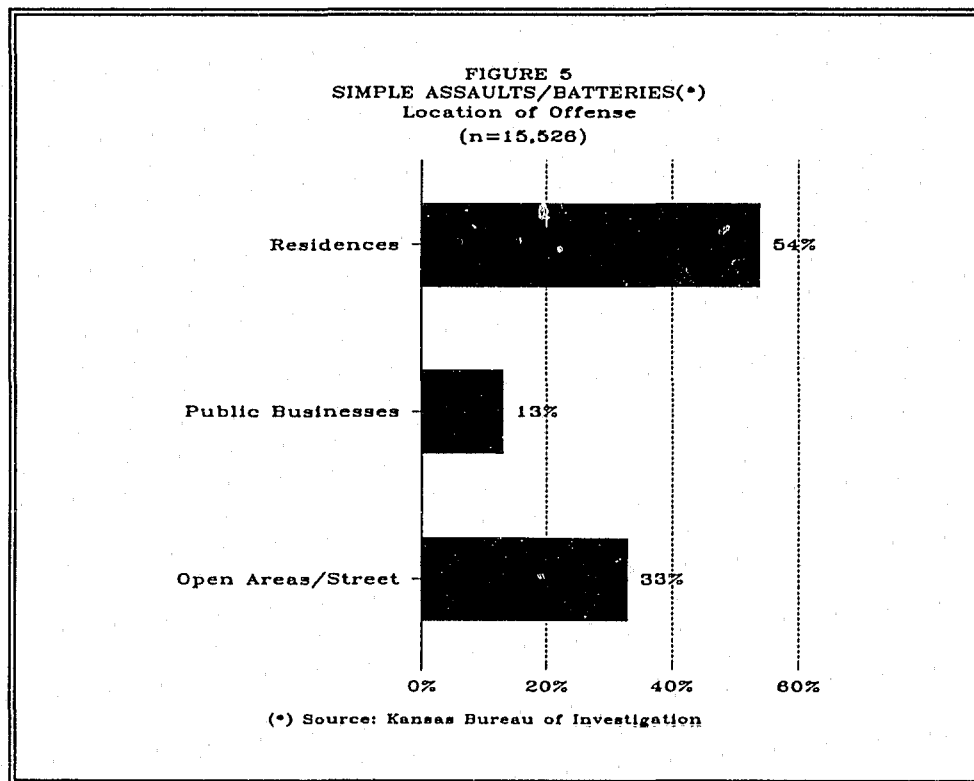
Another dynamic of violent, interpersonal offenses that warrants study is the location of the offense. The next set of demonstration analyses uses

incident-based crime data for simple assault and simple battery offenses to illustrate another IBR data analysis application.

WHERE DO SIMPLE ASSAULTS AND SIMPLE BATTERIES OCCUR?

Summary UCR crime data do not provide information on circumstances such as location for simple assaults and simple batteries. NIBRS data allow the analyst to examine the issue of offense location using various classification schemes (e.g., in the home/out of home; or home vs. public building vs. street). Figure 5 indicates that 54% (n=8,342) of reported simple assaults and batteries took place in a residence, 13% (n=2,070) of reported simple assaults and batteries took place in a public

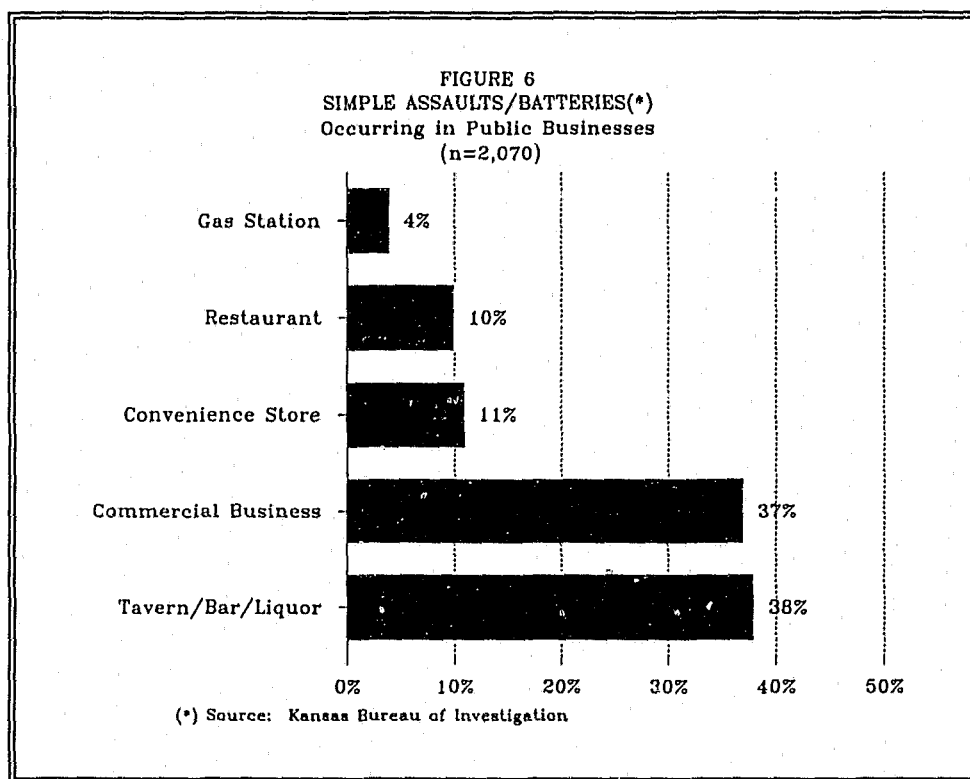
building or business, and 33% (n=5,114) of reported simple assaults and batteries occurred in an open area or the street.¹⁴ This information can be used for patrol allocation purposes or for the establishment of law enforcement training and procedures for handling assault and battery cases. Depending upon the needs of the requesting agency, however, a different spatial analysis may be called for, such as frequency of simple assaults and batteries in different types of public businesses.



IN WHAT TYPES OF PUBLIC BUSINESSES DO SIMPLE ASSAULTS AND SIMPLE BATTERIES OCCUR?

With NIBRS, offense location for simple assaults and simple batteries can be analyzed in detail. Figure 6 presents detailed offense location information for the second category in Figure 5--simple assaults and simple batteries that occur in public businesses. Simple assaults and simple batteries in commercial businesses occur almost as frequently as those in taverns, bars, or liquor stores--despite the exacerbating influence of

alcohol in the latter location categories. Additionally, more than three times as many simple assaults and batteries occur in commercial businesses and bars, taverns, and liquor stores compared to each of the other locations (i.e., gas stations, restaurants, and convenience stores). This type of information can be used to focus law enforcement training and response procedure development.



NIBRS data may be used to add other dimensions to an analysis such as this. For example, simple assaults and

batteries occurring in various locations may also be examined according to the extent of urbanization (e.g., for rural,

suburban, and urban areas), or according to the extent of drug or alcohol involvement in the offense.

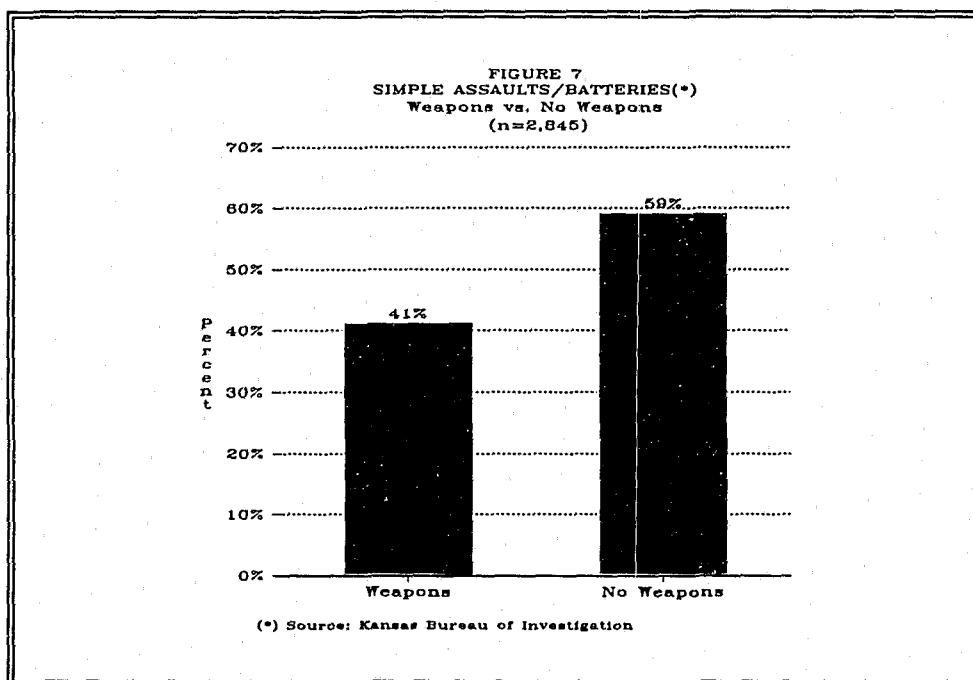
Another application for NIBRS crime data involves the presence of weapons in an offense. The summary UCR program only collects use of weapons information for homicide, robbery, and aggravated assaults. Given the frequency with which they occur, simple assaults (a Part II data element under the summary UCR program) are of great concern to both the law

enforcement community and the general public. Until the advent of the NIBRS program, detailed information on Part II offenses was restricted to summary totals and some basic information on circumstances for arrests only. As the following demonstration illustrates, the increased reporting detail required by the NIBRS program aids in the development of practical law enforcement policy, criminal statutes, and a variety of law enforcement resource management plans.

IN WHAT PERCENTAGE OF SIMPLE ASSAULTS AND SIMPLE BATTERIES ARE WEAPONS USED?

Figure 7 combines the number of simple assaults and simple batteries involving the use of weapons, and compares them with the number of similar arrests that do not involve weapons.¹⁵ Fifty-nine percent (59%, n=1,666) of the simple assault or battery arrests did not involve the use of a weapon, while 41% (n=1,179) did involve weapons. While this information is not completely unexpected--simple

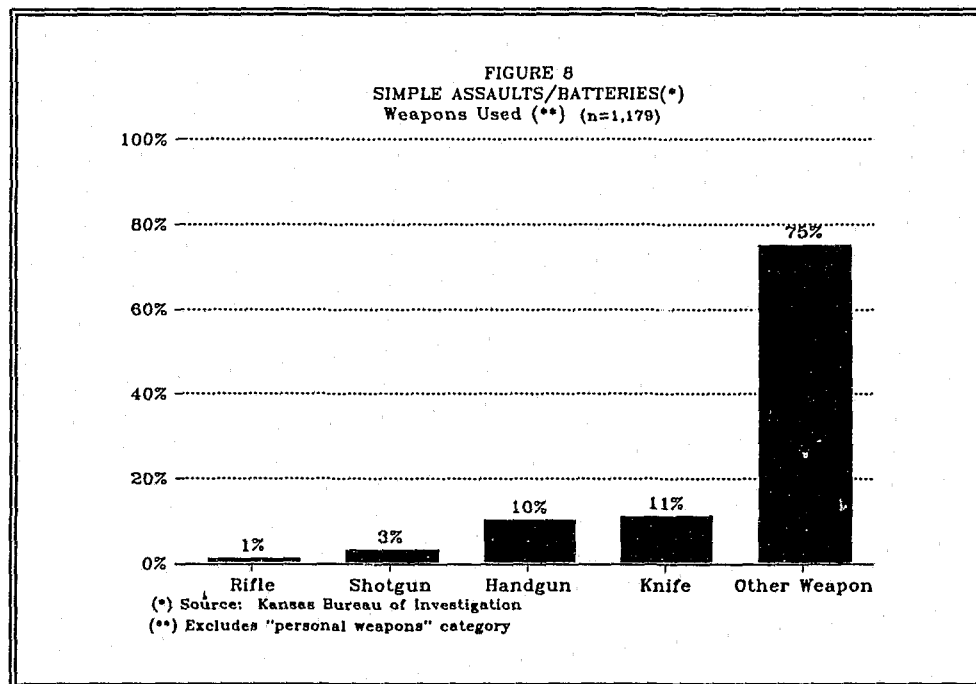
assaults or batteries tend to involve less physical violence, consequently, the chance of weapons involvement is lowered--it does not indicate the types of weapons that are involved in the offenses. Law enforcement officials establishing departmental enforcement policy, legislators drafting criminal statutes, and special interest groups can use this information to guide their activities.



WHAT TYPES OF WEAPONS ARE USED IN SIMPLE ASSAULTS AND SIMPLE BATTERIES?

To make full use of the incident-level data, Figure 8 provides weapons type information for the data depicted in Figure 7. The majority of the "weapons" category was comprised of "other weapons" (i.e., a rock, piece of wood, or any other object used as a weapon) which constituted three quarters of all weapons involved in simple assaults and batteries. Knives were the next most

frequently cited weapons (11%), followed by handguns (10%), shotguns (3%), and finally, rifles (1%). As the analysis focuses on what are normally considered deadly weapons, the category of "personal weapons," which involve the offender's use of his fist, foot, head, or other body part, was excluded from the analysis.



The expanded number of offenses and increased incident-level detail in NIBRS provide a rich database from which any number of analyses can be conducted. Rather than allowing the data to drive the research, NIBRS data improve the analyst's ability to assess the activities and issues confronting the

criminal justice system, develop focused research hypotheses, and adopt numerous analytic approaches. This is accomplished without sacrificing any of the traditional summary reporting capacities available under the UCR reporting format.

OTHER ANALYSIS APPLICATIONS FOR INCIDENT-BASED CRIME DATA

In addition to the analysis topics presented in the previous sections, incident-based crime data have numerous other research applications. Through its work with the state SACs, state UCR Programs, state legislators and policy makers, and other research entities, CJSA has identified several potential applications for incident-based crime data. They include:

- Expert Systems
- "At Risk" Rates and Crime Indices
- Weapons and Violence Prevalence
- Geographic Data Files
- Offender Based Transaction Statistics
- Socio-Economic Analyses

Expert Systems

In many law enforcement agencies, experienced personnel work with software developers to construct interactive computer programs that are used to aid in investigative, management, and resource allocation decisions. These programs are commonly referred to as expert systems. Expert systems draw upon the combined experiences of law enforcement officers to develop multiple scenarios and multiple solutions for those scenarios. Those using the expert system input relevant information about a specific type of activity or decision, which is then assessed given previous probabilities and outcomes.

Expert systems have been developed for training purposes (e.g., familiarizing new personnel with local crime trends or proper investigative approaches); for use as investigative aids in specific types of criminal offenses such as burglary, serial homicide and rape, electronic money laundering, and other offenses; and as a component of strategic crime analysis (i.e., identifying patterns of criminal activity within jurisdictions) to help guide manpower allocation decisions. Through their use of expert systems, law enforcement agencies have learned that they can benefit from the combined prior experiences of their personnel.

Incident-based crime data can be used to establish probabilities for specific types of activities, profiles of offenders and victims, and other crime elements that are used to create expert systems. (Within NIBRS, data elements such Resident Status of Arrestee, Resident Status of Victim, Location Type, Number of Premises Entered, Method of Entry, and other offense specific elements could be incorporated into expert systems.) By examining the combined characteristics of reported incidents, law enforcement personnel can use a large "knowledge base" of prior investigative experiences to aid their ongoing investigative activities.

"At Risk" Rates and Crime Indices

Incident-based crime data can be

used to calculate residential vs. non-residential "at risk" rates for combinations of offender and victim populations. The calculation of such rates can provide better estimates of the prevalence of reported crimes, help identify seasonal variations in offending rates and, thus, help guide resource allocation and policy decisions.

For example, calculation of "at risk" rates for forcible rape using current summary UCR data is somewhat misleading. These rates reflect all reported offenses for the general population. They do not distinguish between male and female victims, and they do not account for seasonal fluctuations often experienced with rape crimes. The "Resident Status of Victim" and "Resident Status of Arrestee" elements in NIBRS permit more accurate calculations of offense rates in this area, such as:

- the rate of reported rapes of jurisdiction female residents for the jurisdiction female population, expressed as

$$\frac{\text{\# Reported Rapes of Jurisdiction Female Residents}}{\text{Female Population in Jurisdiction}}$$

- or the rate of reported resident-to-resident rapes for the jurisdiction female population, expressed as

$$\frac{\text{\# Reported Rapes of Jurisdiction Female Residents by Jurisdiction Residents}}{\text{Female Population in Jurisdiction.}}$$

Other crime indices relating to rape may be constructed with IBR data that cannot be with summary UCR data. For example, with IBR data it is possible to compare the number of rape victims living in a certain jurisdiction to the number of arrested rape offenders in the same jurisdiction--a ratio of victims to offenders--and compare this statistic to data for victims and offenders from outside the jurisdiction.

The development of "at risk" rates and special indices is enhanced by NIBRS. NIBRS will allow the calculation of special rates and indices for larceny, theft, motor vehicle theft, and other offense types. Law enforcement officials can focus their investigative practices by examining the residency characteristics of offenders and reported incidents.

The availability of these data paves the way for expert systems, which can recommend investigative approaches based on data analysis. For example, the burglary expert system developed and used in Baltimore County, Maryland focuses on the offense jurisdiction, the type of dwelling and items stolen, and other information related to the offender's modus operandi. By examining the details of the current incident (or string of incidents), law enforcement officials can establish probable suspect profiles, which, in turn, guide investigative proceedings.

Weapons and Violence Prevalence

By analyzing incident-specific weapons and violence information provided by NIBRS, crime and policy analysts can determine the numbers and types of weapons used in reported crime incidents. Under NIBRS, the number of offense categories for which weapons information is recorded has increased. Additionally, given the detailed nature of information collected under an incident-based system, other more detailed indicators of violent behavior are available. For example, the level of violence and weapons involvement may be examined for particular victim/offender relationships, or for offenses that do or do not involve drugs or alcohol.

These data are important in examining issues such as drug-related violence, domestic violence, gang-related violence, and other offense specific violent behaviors. Law enforcement officials, policy makers, and other criminal justice practitioners can use this information to guide policy decisions, develop law enforcement response tactics, target social services, and create new legislation. By establishing the prevalence and types of violent behaviors in incidents and the presence of weapons, state law enforcement officials and policy makers will make more informed decisions.

Geographic Data Files

Another analysis issue warranting

consideration by IBR data users is the possibility of combining IBR data with other geo-coded databases for special analyses. By adding geo-code data elements to IBR data and matching crime data with geographic files, researchers can increase the utility of the data and broaden the scope of their analyses. For example, by combining IBR data with geo-based census files, researchers can examine crime trends within city neighborhoods or blocks. This is particularly important in identifying high crime areas that require either additional law enforcement resources or a specialized response. The use of geo-based census data may also aid in identifying the locations of specific types of criminal activities.

NIBRS standards do not contain a geographic code data element. To conduct geographic crime analysis states and local jurisdictions will have to build one into their IBR systems. This would require local law enforcement to make a geographical designation for the reported incident, and to create and maintain updated address files.

Offender Based Transaction Statistics

Offender Based Transaction Statistics (OBTS) systems exist in many states. These systems support the tracking of arrested offenders through the prosecution, conviction, and sentencing stages of the criminal justice system, thereby providing a valuable database for criminal justice policy analysis.¹⁶ Arrest information in many

OBTS systems suffers from some of the same limitations as summary UCR data. For example, only one offense may be coded per arrest incident; demographic data are often limited to age, sex, and race variables.

States that support OBTS systems might link those databases with IBR systems. This would provide a valuable integration between law enforcement events (and the valuable information contained in IBR databases) and the subsequent criminal justice processing of criminal offenders. With such a link, all of the detailed data and the linkages between offense, offender, and victim present in IBR systems could be brought to bear on policy analyses that focus on the aftermath of arrest--e.g., prosecution, conviction, and sentencing decisions. This would permit much more focused analyses and evaluations of law enforcement policies than is currently possible with OBTS systems. For example, a linkage between IBR and OBTS would make it possible to answer such questions as: "In what percentage of reported robberies is an offender apprehended, and how many are ultimately incarcerated?"

This linkage would permit modeling of the impact of changing patterns in reported crime, as well as examining criminal justice processing of offenders arrested for multiple-offense incidents (e.g., assault and robbery). If IBR data are linked to OBTS data, the new possibilities that IBR data bring to police-related research would be

extended to criminal justice policy analysis crossing many sectors of the criminal justice system.

In order to achieve this integration of data systems, state IBR programs would have to add "person and event identifiers" into their IBR databases that would allow matching of arrest incidents between IBR and OBTS. This is not a simple task. Adding such linking variables requires a coordinated approach to criminal justice information systems integration, and extensive planning. Ideally, IBR systems will be incorporated into such efforts in the future.

Socio-Economic Analyses

IBR data might also be combined with social and economic indicators to conduct socio-economic crime analyses. Analysts might link individualized offender data with social and economic background indicators obtained from correctional or other criminal justice databases. For example, analysts could combine IBR arrest data with a correctional database containing information on parental characteristics, evidence of physical abuse, evidence of narcotics abuse, and other information gathered for prison records. NIBRS could also be combined with data obtained from court records (e.g., pre-sentencing reports, probation files). Joint analyses such as these allow criminal justice researchers, policy makers, planners, and analysts to answer questions that they could not answer

relying solely on incident-based crime data. The "marriage" of such databases provides information that will aid criminal justice analysts in their study of criminal behavior and the causes of crime, which will affect law enforcement policies and priorities.

Development of linkages between state and federal IBR systems and other

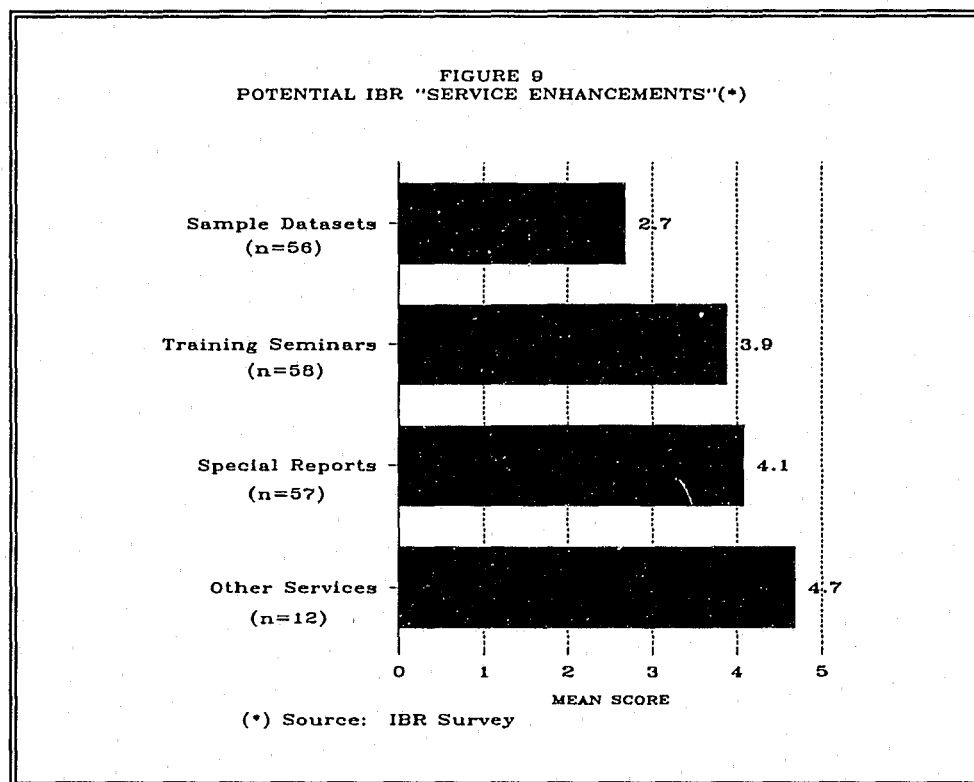
types of databases will require much thought, cooperation, and creativity among participating agencies at the state, local, and federal levels.

Cooperation among state and local level UCR program representatives, members of agencies such as the state SACs, and federal agencies such as the FBI and BJS will undoubtedly increase the likelihood that such linkages will occur.

INCIDENT-BASED CRIME DATA "SERVICE ENHANCEMENTS"

Respondents to the IBR mail survey were asked to comment on the usefulness of potential support resources. The potential resources and services included provision of sample datasets containing incident-based crime data (with tutorials); training seminars that focus on the collection, aggregation, or analysis of incident-based crime data; special topic reports or articles which illustrate possible analysis and display techniques for incident-based data; and

any other services the respondent cared to offer. The respondents were asked to indicate the degree of usefulness on a five point scale which ranged from "(1) Would Not Enhance" to "(5) Would Greatly Enhance" [their use of incident-based crime data]. Figure 9 presents the results of the response analysis. More than three quarters (78%, n=65) of the survey respondents completed the "service enhancement" section.¹⁷



Survey respondents exhibit mild support for the development of sample datasets --producing a mean score of 2.7 on a scale of 1 to 5. Approximately

30% of the respondents feel that sample datasets "would greatly enhance," while almost 25% of the respondents indicate that the sample datasets would have a

neutral effect on their analysis efforts. Almost a third of the remaining respondents declare that the availability of sample datasets either "would not enhance" or "would not enhance very much" their use of IBR crime data.

Support among respondents for the creation of specialized training seminars is strong. The mean score for this enhancement is 3.9, with 68% of the respondents indicating that training seminars "would somewhat enhance" or "would greatly enhance" their use of NIBRS data. Only 14% of the respondents state that training seminars "would not enhance" or "would not enhance very much" the use of IBR crime data. Slightly more than 18% of the respondents feel that training seminars would have a neutral effect on their analysis of incident-based crime data.

Support for the production of special topic reports or articles illustrating analysis and display techniques for incident-based data is strong, eliciting a mean score of 4.1. Seventy three percent (73%) of those responding to the question indicate that the production of specialized IBR reports "would somewhat enhance" or "would greatly enhance" their ability to

work with incident-based data. The majority of the remaining responses (approximately 22%) fall into the neutral category, with less than 5% of the respondents indicating that specialized reports "would not enhance" analysis efforts.

In addition to the specific "service enhancements" offered in the survey, several respondents suggested another service that would enhance their use of incident-based crime data. These respondents suggested the development of specialized training which illustrates potential uses (i.e., analysis) of NIBRS data at the local police department level as well as increased technical assistance in selecting and modifying data collection and analysis software. Written comments assert that additional emphasis should be placed on involving local police departments in the training and development components, as these organizations provide the data. The high mean score for these suggestions (mean = 4.7 of a possible 5, see Figure 9) does not necessarily suggest that this service enhancement is the most highly recommended. Twelve of the 65 (18%) survey respondents suggested this other enhancement, and it is likely that they rated their own suggestions highly.

CONCLUSIONS

Incident-based crime data reporting (IBR) systems place long-awaited policy analysis capabilities into the hands of tactical and strategic crime analysts. They provide new sources of crime information in formats that permit new approaches to crime analysis and new possibilities for crime solving and criminal justice information system integration. Realizing these benefits, however, will require coordinated information system development policies that insure data integrity and support crime analysis research efforts.

Incident-Based Crime Data Analysis Issues

Despite its obvious utility and improvement over summary UCR data, use of IBR data raises several issues for policy analysis. The combined previous experiences of the FBI, state UCR program personnel, state Statistical Analysis Centers, and an assortment of researchers who collect and analyze UCR data raise concerns regarding the implementation of NIBRS. The concerns focus on the difficulties inherent in converting to a new data collection system as well as greatly increasing the numbers and types of data elements that are being collected. Primary among these concerns is data quality, which affects the analysis process and any inferences that are drawn.

Whereas the UCR program

collects summary information on eight primary offenses (as well as limited circumstantial data), the NIBRS program requires law enforcement agencies to report on 46 primary offenses for 22 crime categories (a secondary group of 11 crime categories is also outlined in the NIBRS guidelines). As with all data collection systems, incident-based crime data reporting systems are only as good as the information which is put into them. Increasing the number of reported elements, as NIBRS has done, places an additional burden on the reporting officer; a burden that may affect data accuracy and completeness.

Researchers should also be aware of the general dangers inherent in the analysis of aggregated data. Aggregating IBR data on regional and national levels introduces a new level of complexity in data management and analysis at the state and federal levels. Now more than ever, efforts to ensure the integrity of the data should be used, and any conclusions drawn from the data should take the new complexities and the possibility of new errors into consideration.

To address this concern many states are working with their law enforcement agencies to develop standardized forms that are easy to use and capture the appropriate information. Numerous states are developing software that will facilitate data submissions by

streamlining collection processes within the department and at the state collection agency.

As part of the data collection and analysis chain, NIBRS data will be used to establish policy. Just as the collectors and analyzers of NIBRS crime data should be aware of data quality issues, so too should policy makers, legislators, and others who will use analysis results for decision making. Their isolation from the incidents and the collection and analysis processes renders them vulnerable to limitations of the data.

As more state NIBRS programs reach full implementation, the impact of data quality concerns will be softened. When implementing any data collection scheme, especially one as immense as the NIBRS program, a certain amount of error is unavoidable as participants grow accustomed to the forms, procedures, and responsibilities involved. The majority of the state NIBRS programs are either in the development or early implementation stages. As these programs evolve and mature, the completeness and quality of their data will improve.

Summary

Incident-based crime data hold great promise for the criminal justice system. They have applications in criminal justice policy creation, law enforcement resource management, program evaluation, and strategic planning efforts. As NIBRS achieves

full implementation and incident-based data become available, analysts and decision makers at the state, local, and federal levels will benefit from this new, rich source of crime incident data.

The demonstration analyses and research findings in this report provide a starting point from which more detailed analyses and discussions of incident-based crime data should emerge. CJSA's intent in conducting this research is to promote the understanding and use of incident-based crime data. The demonstration analyses provided in this report illustrate potential applications for IBR crime data and the advantages of NIBRS over the UCR crime data currently used by most criminal justice analysts. Policy makers and decision makers in the states and the federal government now have more data to set policy and make decisions. CJSA is encouraging the use and exploration of incident-based data for policy and decision making by highlighting its advantages and its vast potential for research and analyses applications.

The IBR survey, which was conducted as part of this project, answers three basic questions about incident-based crime data: Who are the people that are involved with the collection and analysis of IBR crime data? What are their analysis priorities for the data? and, What are their technical assistance and service needs? As the findings indicate, NIBRS programs are still in developmental and early implementation stages. Despite

the lack of available data, decision makers, analysts, and researchers can identify both immediate needs and specific issues to which IBR crime data can be applied. In addition to their stated analysis priorities, users of incident-based crime data have

confirmed the need for practical guidance in their analyses of IBR data through training seminars and special reports, as well as technical assistance in selecting and modifying data collection and analysis software.

APPENDIX A
NIBRS Data Elements and Crime Categories

NIBRS Data Elements Required by FBI

ORI Number	Sex of Victim
Incident Number	Race of Victim
Incident Date/Hour	Ethnicity of Victim
Cleared Exceptionally	Resident Status of Victim
Exceptional Clearance Date	Aggravated Assault/Homicide Circumstances
UCR Offense Code	Additional Justifiable Homicide Circumstances
Offense Attempted/Completed	Type Injury
Offender(s) Suspected of Using	Offender Number(s) to be Related
Location Type	Relationship(s) of Victim to Offender(s)
No. of Premises Entered	Offender (Sequence) Number
Method of Entry	Age of Offender
Type Criminal Activity	Sex of Offender
Type Weapon/Force Involved	Race of Offender
Type Property Loss/Etc.	Arrestee (Sequence) Number
Property Description	Arrest (Transaction) Number
Value of Property	Arrest Date
Date Recovered	Type of Arrest
No. of Stolen Motor Vehicles	Multiple Clearance Indicator
No. of Recovered Motor Vehicles	UCR Arrest Offense Code
Suspected Drug Type	Arrestee Was Armed With
Estimated Drug Quantity	Age of Arrestee
Type Drug Measurement	Sex of Arrestee
Victim (Sequence) Number	Race of Arrestee
Victim Connected to UCR Offense Code(s)	Ethnicity of Arrestee
Type of Victim	Resident Status of Arrestee
Age of Victim	Disposition of Arrestee Under 18

Primary NIBRS Crime Categories

Arson	Homicide Offenses
Assault Offenses	Kidnaping/Abduction
Bribery	Larceny/Theft Offenses
Burglary/Breaking and Entering	Motor Vehicle Theft
Counterfeiting/Forgery	Pornography/Obscene Material
Destruction/Damage/Vandalism of Property	Prostitution Offenses
Drug/Narcotic Offenses	Robbery
Embezzlement	Sex Offenses, Forcible
Extortion/Blackmail	Sex Offenses, Non-forcible
Fraud Offenses	Stolen Property Offenses
Gambling Offenses	Weapon Law Violations

APPENDIX B
IBR Project Survey

CRIMINAL JUSTICE STATISTICS ASSOCIATION

IBR SURVEY

The following survey contains questions regarding incident-based crime data. The purpose of this survey is to solicit answers that reflect your opinions, activities, and experiences with incident-based crime data. If you do not currently work with an incident-based crime data reporting system, we are still interested in your response. You were chosen to receive this survey either because you are involved in the collection or analysis of incident-based crime data, or because you are a member of a professional association concerned with incident-based crime reporting issues. The information obtained from this questionnaire will be used to determine the priority uses for incident-based crime data. The priority areas will then be used to guide the development of a report that presents demonstration analyses and highlights the utility of incident-based crime data for current and potential users. We hope you will take the time to fill out this questionnaire and return it to us (self-addressed envelope included). Your input will help others in your field learn about the value of collecting and analyzing incident-based crime data.

Please provide the following information.

NAME: _____

ORGANIZATION: _____

Organizational Status:

- ☐ Federal
- ☐ State
- ☐ County
- ☐ Municipal
- ☐ Other (please indicate) _____

POSITION/TITLE: _____

ADDRESS: _____

TELEPHONE: (____) _____ - _____

1. Please give a brief description of your occupational responsibilities and activities. (Include a brief discussion of criminal justice information systems experience.)

2. Are you currently involved in any of the following activities relating to incident-based crime data?

(Please place a check mark next to all appropriate responses.)

- ☐ collection and submission of incident-based crime data?
☐ compilation and dissemination of incident-based crime data?
☐ analysis and interpretation of incident-based crime data?
☐ other? (please explain) _____

3. Following is a list of common research applications for incident-based crime data. If you have performed analysis or interpretation within any of these areas, please provide the information requested under each category.

Victim/Offender Relationships

- a. What was the impetus for your activity in this area?

- ☐ Response to information request(s) from outside agency
☐ Routine analysis conducted by your agency on regular basis
☐ Special one-time analysis performed by your agency
☐ Don't Know/Not Applicable

- b. Who was your primary audience(s) for your work in this area?

- | | |
|--|--|
| <input type="checkbox"/> state planners/analysts | <input type="checkbox"/> general public |
| <input type="checkbox"/> local planners/analysts | <input type="checkbox"/> state legislature |
| <input type="checkbox"/> local law enforcement officers/managers | <input type="checkbox"/> special interest groups |
| <input type="checkbox"/> state law enforcement officers/managers | <input type="checkbox"/> other (specify) _____ |
| <input type="checkbox"/> press/media | |

Costs of Crime

- a. What was the impetus for your activity in this area?

- ☐ Response to information request(s) from outside agency
☐ Routine analysis conducted by your agency on regular basis
☐ Special one-time analysis performed by your agency
☐ Don't Know/Not Applicable

- b. Who was your primary audience(s) for your work in this area?

- | | |
|--|--|
| <input type="checkbox"/> state planners/analysts | <input type="checkbox"/> general public |
| <input type="checkbox"/> local planners/analysts | <input type="checkbox"/> state legislature |
| <input type="checkbox"/> local law enforcement officers/managers | <input type="checkbox"/> special interest groups |
| <input type="checkbox"/> state law enforcement officers/managers | <input type="checkbox"/> other (specify) _____ |
| <input type="checkbox"/> press/media | |

Drug and Alcohol Involvement in Crime

a. What was the impetus for your activity in this area?

- ☐ Response to information request(s) from outside agency
- ☐ Routine analysis conducted by your agency on regular basis
- ☐ Special one-time analysis performed by your agency
- ☐ Don't Know/Not Applicable

b. Who was your primary audience(s) for your work in this area?

- | | |
|--|--|
| <input type="checkbox"/> state planners/analysts | <input type="checkbox"/> general public |
| <input type="checkbox"/> local planners/analysts | <input type="checkbox"/> state legislature |
| <input type="checkbox"/> local law enforcement officers/managers | <input type="checkbox"/> special interest groups |
| <input type="checkbox"/> state law enforcement officers/managers | <input type="checkbox"/> other (specify) |
| <input type="checkbox"/> press/media | _____ |

Secondary Crimes in Events (examining multiple charge arrests)

a. What was the impetus for your activity in this area?

- ☐ Response to information request(s) from outside agency
- ☐ Routine analysis conducted by your agency on regular basis
- ☐ Special one-time analysis performed by your agency
- ☐ Don't Know/Not Applicable

b. Who was your primary audience(s) for your work in this area?

- | | |
|--|--|
| <input type="checkbox"/> state planners/analysts | <input type="checkbox"/> general public |
| <input type="checkbox"/> local planners/analysts | <input type="checkbox"/> state legislature |
| <input type="checkbox"/> local law enforcement officers/managers | <input type="checkbox"/> special interest groups |
| <input type="checkbox"/> state law enforcement officers/managers | <input type="checkbox"/> other (specify) |
| <input type="checkbox"/> press/media | _____ |

Weapons Involvement in Crime

a. What was the impetus for your activity in this area?

- ☐ Response to information request(s) from outside agency
- ☐ Routine analysis conducted by your agency on regular basis
- ☐ Special one-time analysis performed by your agency
- ☐ Don't Know/Not Applicable

b. Who was your primary audience(s) for your work in this area?

- | | |
|--|--|
| <input type="checkbox"/> state planners/analysts | <input type="checkbox"/> general public |
| <input type="checkbox"/> local planners/analysts | <input type="checkbox"/> state legislature |
| <input type="checkbox"/> local law enforcement officers/managers | <input type="checkbox"/> special interest groups |
| <input type="checkbox"/> state law enforcement officers/managers | <input type="checkbox"/> other (specify) |
| <input type="checkbox"/> press/media | _____ |

Spatial (geographic) Analyses of Offending

a. What was the impetus for your activity in this area?

- ☐ Response to information request(s) from outside agency
- ☐ Routine analysis conducted by your agency on regular basis
- ☐ Special one-time analysis performed by your agency
- ☐ Don't Know/Not Applicable

b. Who was your primary audience(s) for your work in this area?

- | | |
|--|--|
| <input type="checkbox"/> state planners/analysts | <input type="checkbox"/> general public |
| <input type="checkbox"/> local planners/analysts | <input type="checkbox"/> state legislature |
| <input type="checkbox"/> local law enforcement officers/managers | <input type="checkbox"/> special interest groups |
| <input type="checkbox"/> state law enforcement officers/managers | <input type="checkbox"/> other (specify) |
| <input type="checkbox"/> press/media | _____ |

Residency of Victim/Offender

a. What was the impetus for your activity in this area?

- ☐ Response to information request(s) from outside agency
- ☐ Routine analysis conducted by your agency on regular basis
- ☐ Special one-time analysis performed by your agency
- ☐ Don't Know/Not Applicable

b. Who was your primary audience(s) for your work in this area?

- | | |
|--|--|
| <input type="checkbox"/> state planners/analysts | <input type="checkbox"/> general public |
| <input type="checkbox"/> local planners/analysts | <input type="checkbox"/> state legislature |
| <input type="checkbox"/> local law enforcement officers/managers | <input type="checkbox"/> special interest groups |
| <input type="checkbox"/> state law enforcement officers/managers | <input type="checkbox"/> other (specify) |
| <input type="checkbox"/> press/media | _____ |

Crime Rates by Offense Type

a. What was the impetus for your activity in this area?

- ☐ Response to information request(s) from outside agency
- ☐ Routine analysis conducted by your agency on regular basis
- ☐ Special one-time analysis performed by your agency
- ☐ Don't Know/Not Applicable

b. Who was your primary audience(s) for your work in this area?

- | | |
|--|--|
| <input type="checkbox"/> state planners/analysts | <input type="checkbox"/> general public |
| <input type="checkbox"/> local planners/analysts | <input type="checkbox"/> state legislature |
| <input type="checkbox"/> local law enforcement officers/managers | <input type="checkbox"/> special interest groups |
| <input type="checkbox"/> state law enforcement officers/managers | <input type="checkbox"/> other (specify) |
| <input type="checkbox"/> press/media | _____ |

Crime Rates by Population Characteristics

a. What was the impetus for your activity in this area?

- ☐ Response to information request(s) from outside agency
- ☐ Routine analysis conducted by your agency on regular basis
- ☐ Special one-time analysis performed by your agency
- ☐ Don't Know/Not Applicable

b. Who was your primary audience(s) for your work in this area?

- | | |
|--|--|
| <input type="checkbox"/> state planners/analysts | <input type="checkbox"/> general public |
| <input type="checkbox"/> local planners/analysts | <input type="checkbox"/> state legislature |
| <input type="checkbox"/> local law enforcement officers/managers | <input type="checkbox"/> special interest groups |
| <input type="checkbox"/> state law enforcement officers/managers | <input type="checkbox"/> other (specify) |
| <input type="checkbox"/> press/media | _____ |

Tracking Arrested Offenders

a. What was the impetus for your activity in this area?

- ☐ Response to information request(s) from outside agency
- ☐ Routine analysis conducted by your agency on regular basis
- ☐ Special one-time analysis performed by your agency
- ☐ Don't Know/Not Applicable

b. Who was your primary audience(s) for your work in this area?

- | | |
|--|--|
| <input type="checkbox"/> state planners/analysts | <input type="checkbox"/> general public |
| <input type="checkbox"/> local planners/analysts | <input type="checkbox"/> state legislature |
| <input type="checkbox"/> local law enforcement officers/managers | <input type="checkbox"/> special interest groups |
| <input type="checkbox"/> state law enforcement officers/managers | <input type="checkbox"/> other (specify) |
| <input type="checkbox"/> press/media | _____ |

Hate/Bias Related Crimes

a. What was the impetus for your activity in this area?

- ☐ Response to information request(s) from outside agency
- ☐ Routine analysis conducted by your agency on regular basis
- ☐ Special one-time analysis performed by your agency
- ☐ Don't Know/Not Applicable

b. Who was your primary audience(s) for your work in this area?

- | | |
|--|--|
| <input type="checkbox"/> state planners/analysts | <input type="checkbox"/> general public |
| <input type="checkbox"/> local planners/analysts | <input type="checkbox"/> state legislature |
| <input type="checkbox"/> local law enforcement officers/managers | <input type="checkbox"/> special interest groups |
| <input type="checkbox"/> state law enforcement officers/managers | <input type="checkbox"/> other (specify) |
| <input type="checkbox"/> press/media | _____ |

Development of New Indices (e.g., crime seriousness scoring)

a. What was the impetus for your activity in this area?

- ☐ Response to information request(s) from outside agency
- ☐ Routine analysis conducted by your agency on regular basis
- ☐ Special one-time analysis performed by your agency
- ☐ Don't Know/Not Applicable

b. Who was your primary audience(s) for your work in this area?

- | | |
|--|--|
| <input type="checkbox"/> state planners/analysts | <input type="checkbox"/> general public |
| <input type="checkbox"/> local planners/analysts | <input type="checkbox"/> state legislature |
| <input type="checkbox"/> local law enforcement officers/managers | <input type="checkbox"/> special interest groups |
| <input type="checkbox"/> state law enforcement officers/managers | <input type="checkbox"/> other (specify) _____ |
| <input type="checkbox"/> press/media | |

Characteristics of Cleared Offenses

a. What was the impetus for your activity in this area?

- ☐ Response to information request(s) from outside agency
- ☐ Routine analysis conducted by your agency on regular basis
- ☐ Special one-time analysis performed by your agency
- ☐ Don't Know/Not Applicable

b. Who was your primary audience(s) for your work in this area?

- | | |
|--|--|
| <input type="checkbox"/> state planners/analysts | <input type="checkbox"/> general public |
| <input type="checkbox"/> local planners/analysts | <input type="checkbox"/> state legislature |
| <input type="checkbox"/> local law enforcement officers/managers | <input type="checkbox"/> special interest groups |
| <input type="checkbox"/> state law enforcement officers/managers | <input type="checkbox"/> other (specify) _____ |
| <input type="checkbox"/> press/media | |

Other (specify) _____

a. What was the impetus for your activity in this area?

- ☐ Response to information request(s) from outside agency
- ☐ Routine analysis conducted by your agency on regular basis
- ☐ Special one-time analysis performed by your agency
- ☐ Don't Know/Not Applicable

b. Who was your primary audience(s) for your work in this area?

- | | |
|--|--|
| <input type="checkbox"/> state planners/analysts | <input type="checkbox"/> general public |
| <input type="checkbox"/> local planners/analysts | <input type="checkbox"/> state legislature |
| <input type="checkbox"/> local law enforcement officers/managers | <input type="checkbox"/> special interest groups |
| <input type="checkbox"/> state law enforcement officers/managers | <input type="checkbox"/> other (specify) _____ |
| <input type="checkbox"/> press/media | |

4. Among the following incident-based crime data topics, please indicate in rank order the topics that you feel are the three most important applications of incident-based crime data.

<input type="checkbox"/> Victim/Offender Relationships	<input type="checkbox"/> Costs of Crime
<input type="checkbox"/> Drug and Alcohol Involvement in Crime	<input type="checkbox"/> Crime Rates by Population Characteristics
<input type="checkbox"/> Spatial (geo) Analysis of Offenses	<input type="checkbox"/> Residency of Victim/Offender
<input type="checkbox"/> Use of Weapons	<input type="checkbox"/> Hate/Bias Related Offenses
<input type="checkbox"/> Secondary Crimes in Events	<input type="checkbox"/> Crime Rates by Offense Type
<input type="checkbox"/> Tracking of Arrested Offenders	<input type="checkbox"/> Development of New Indices
<input type="checkbox"/> Characteristics of Cleared Offenses	<input type="checkbox"/> Other (specify) _____

Questions 6, 7, 8, and 9 pertain to the development and implementation of state level incident-based reporting systems. Please complete the questions if applicable.

6. What level of implementation has been achieved in your incident-based crime data reporting program (i.e., 25%, 50%, 75%, 100%)?

☐ not applicable

7. If your program has not yet achieved full implementation, what developmental steps still need to be completed? (Please explain.)

☐ not applicable

8. Would you be willing to provide copies of any reports, analyses, or graphic presentations that make use of your incident-based crime data? (If yes, please include the materials when you return this questionnaire.)

☐ included

☐ not included

9. Please provide a list of the data elements currently collected under your incident-based reporting system.

☐ included

☐ not included

10. Please indicate the degree to which the following resources would enhance your use of incident-based crime data? (Please circle the appropriate response.)

- Sample datasets containing incident-based crime data (with tutorials)

Would
Not
Enhance

Greatly
Enhance

1

2

3

4

5

- Training seminars focusing on the collection, aggregation, or analysis of incident-based data

Would
Not
Enhance

Greatly
Enhance

1

2

3

4

5

- Special topic reports/articles illustrating possible analysis and display techniques for incident-based data

Would
Not
Enhance

Greatly
Enhance

1

2

3

4

5

- Other (please explain) _____

Would
Not
Enhance

Greatly
Enhance

1

2

3

4

5

ENDNOTES

1. Statistical Analysis Centers are located within state agencies and respond to the information needs of criminal justice managers and policymakers at the federal, state, and local levels. They are involved in a wide range of statistical, research, and information system activities depending upon the priorities of each state's criminal justice system.
2. Federal Bureau of Investigation, 1988. *Crime in the United States: Uniform Crime Reports 1988*. U.S. Department of Justice, Federal Bureau of Investigation, Uniform Crime Reporting Section, p.1.
3. Wright, Lawrence et al., 1989. *I.B.R.: Management Tool*. Alabama Criminal Justice Information Center, p.1.
4. Gasson, Karen F. et al., 1990. *Statistical Analysis Centers: The Evolution of State Criminal Justice Information Resources*. Criminal Justice Statistics Association, p.2.
5. Rosen et al., 1990. *The New York State Uniform Crime Reporting Re-design Project: A Guide for Policy Decision Makers*. New York State, Division of Criminal Justice Services, Bureau of Statistical Services (Unpublished manuscript).
6. Poggio, Eugene C., et al., 1985. *Blueprint for the Future of the Uniform Crime Reporting Program: Final Report of the UCR Study*. U.S. Department of Justice, Bureau of Statistics, Federal Bureau of Investigation.
7. See the *Anti-Drug Abuse Act of 1988, Title VII, Subtitle I - Provisions relating to the Federal Bureau of Investigation, Section 7332 - Uniform Federal Crime Reporting Act of 1988*.
8. Federal Bureau of Investigation, 1988. *Uniform Crime Reporting: National Incident-Based Reporting System, Volumes I-III*. U.S. Department of Justice, Federal Bureau of Investigation, Uniform Crime Reporting Section.
9. Federal Bureau of Investigation, *ibid*.
10. See definition and discussion of Group B Offenses in: *Uniform Crime Reporting, National Incident-Based Reporting System: Volume 1 Data Collection Guidelines*. U.S. Department of Justice, Federal Bureau of Investigation, July 1988.

11. Kansas Bureau of Investigation, 1989. *Crime in Kansas: 1988*. Office of the Attorney General, Kansas Bureau of Investigation, Statistical Analysis Center, p. 63.
12. South Carolina Law Enforcement Division, 1990. *Crime in South Carolina: 1989 Supplement*. Governor's Office of Public Safety, South Carolina Law Enforcement Division (SLED), p. 4.
13. Rosen et al., *ibid*.
14. Kansas Bureau of Investigation, *ibid*.
15. The Kansas Bureau of Investigation collapses simple assaults and simple batteries into one category for reporting purposes. Simple assaults, as defined under Kansas criminal statutes, do not include the presence or use of weapons, though simple batteries may involve the use of weapons.
16. For more information on OBTS and analyses using OBTS data, see SEARCH Group, Inc., 1986, "*Offender Based Transaction Statistics National Reporting Standards*," U.S. Department of Justice, Bureau of Justice Statistics; Manson, Donald A., 1986, "*Tracking Offenders: White Collar Crime*," U.S. Department of Justice, Bureau of Justice Statistics; Bureau of Justice Statistics, 1989, "*Criminal Cases in Five States, 1983-86*," U.S. Department of Justice, Bureau of Justice Statistics.
17. A total of sixty-five survey respondents completed one or more of the potential enhancements questions. The n's for each of the four service enhancements reflect the actual number of respondents that answered the question.

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The Criminal Justice Statistics Association (CJSA) is a national organization of criminal justice professionals in government agencies, academia, and other settings who conduct research and provide information which informs policy and program decisions at all levels of government. CJSA also serves as a clearinghouse, convenes conferences and seminars, and provides consultation and training to criminal justice specialists.
