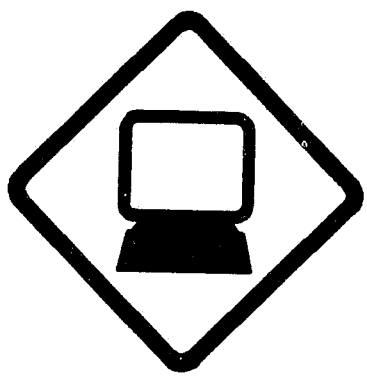
STRATEGIES FOR IMPLEMENTING NIBRS IN LAW ENFORCEMENT AGENCIES



William M. Holmes, Ph.D.
Director
Statistical Analysis Center
Massachusetts Committee on Criminal Justice
100 Cambridge Street, Suite 2100
Boston, MA 02202

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ABSTRACT

STRATEGIES FOR IMPLEMENTING NIBRS

IN LAW ENFORCEMENT AGENCIES

A project to implement the National Incident Based Reporting System in Massachusetts law enforcement agencies was carried out by the state Statistical Analysis Center (SAC). A variety of strategies were used to facilitate implementation; including, technical assistance, user group meetings, subgrants, and education. The effects of these strategies are described. Barriers and facilitators to implementation are discussed. Recommendations are provided regarding effective strategies and technical issues that need to be addressed.

STRATEGIES FOR IMPLEMENTING NIBRS

IN LAW ENFORCEMENT AGENCIES

The U.S. Department of Justice is in the process of replacing the summary based Uniform Crime Reporting system (UCR) with the National Incident Based Reporting System (FBI, 1988). This system will provide much more detailed information about crime and will be a major new source of data for crime analysis, law enforcement management, and criminal justice research (CJSA, 1991; Poggio, Kennedy, and Carlson, 1985).

The criminal justice Statistical Analysis Center (SAC) for the Commonwealth of Massachusetts conducted a project to encourage the implementation of the National Incident Based Reporting System (NIBRS) in Massachusetts. This project was part of the national program of the U.S. Bureau of Justice Statistics to assist states in developing NIBRS.

A variety of strategies were used by the project; including technical assistance, subgrants to law enforcement agencies, a needs assessment of police management information systems, informative meedings, and provision of documentary information (Bibel, 1987; Holmes, 1992).

TECHNICAL ASSISTANCE

The SAC provided technical assistance in face-to-face meet-

ings, by phone, with letters and memoranda, and articles in the quarterly publication of the SAC, The Networker. Assistance provided mainly concerned technical requirements of the hardware and software and clarification of the NIBRS codes and format of the data files. Numerous discussions were held with police and software vendors to clarify the codes, their positions in data fields, and error checking routines needed.

Documents were prepared based on these requests for assistance to more fully answer some of these recurring questions. Technical guides for NIBRS developed by the FBI (1988) were also provided to all vendors of police management information software that were used in Massachusetts law enforcement agencies.

SUBGRANTS

The SAC provided subgrants to state and local law enforcement agencies. These funds went primarily to local police departments and the Criminal History Systems Board (CHSB). Funds were mainly used for software and technical assistance. Most of the money went to local agencies, rather than the CHSB.

Two rounds of subgrants were awarded. The first round was to departments having more than 1,000 FBI Part I offenses per year. The second round was to departments having less than 1,000 FBI Part I offenses per year. The purpose in stratifying the grants in this fashion was to assure that issues appropriate to both large and small departments were addressed.

Grant recipients were monitored on a quarterly basis. Programmatic and fiscal reports both had to be sent to the SAC every quarter. When departments delayed sending in the reports, they were contacted and asked to provide the reports or explanations for the delay. If the reasons for the delay were technical, the SAC provided verbal and written information to deal with the issues. In some instances letters were sent to town offices and software vendors to speed up project activity. Occasionally, circumstances prevented a department from completing an activity in exactly the manner stated in the contract. Changes in the contracts required written approval of the SAC Director.

Thirty departments in the Commonwealth developed a capacity to provide NIBRS data as a direct result of the subgrants. Because many of the software vendors modified their programs to meed the needs of these thirty departments, a number of additional departments will be able to acquire NIBRS capacity when they upgrade their current software.

NEEDS ASSESSMENT

The SAC had a needs assessment done of police management information systems in the Commonwealth (McDevitt, Spaar, and Bibel, 1988). This assessment provided a baseline for monitoring implementation and identified software and hardware with which NIBRS would have to deal. The identification of software vendors was especially important because police software in Massachusetts

is very diverse and a number of vendors serve the market. Identifying them at an early stage of implementation allowed coordinated efforts to deal with common software issues. It also allowed the state UCR agency (the Crime Reporting Unit of the Criminal History Systems Board) to plan how it would acquire data from and communicate with the different software in use.

INFORMATIVE MEETINGS

Group meetings were held with Chiefs and data processing staff of departments and with software vendors. The meetings were intended to educate the audience regarding the purposes of NIBRS, its importance, and its role in managing a departments information. They also provided information regarding technical requirements of the data fields, coding, file format, and data transmission. In addition, these sessions were an opportunity for the police and vendors to provide feedback on obstacles, concerns, and future information needs.

These meetings were found very useful for orienting police to the NIBRS program, describing its purposes, and addressing concerns expressed. They were less useful for providing technical information because the diversity of hardware and software available meant that many technical issues were idiosyncratic to a specific department or a small number of departments.

Meetings were also held with "user groups," departments using the same hardware, software, or vendor. These meetings

identified problems shared between the departments and allowed group efforts to reach solutions. They also allowed departments to collectively address vendors, which increased their influence in having the vendors provide needed modifications.

These meetings have been instrumental in creating a climate of acceptance for NIBRS in the law enforcement community. The NIBRS standards, finally adopted in late 1988 by the FBI, have been unanimously accepted by the Massachusetts Chiefs of Police Association as the new standard for crime reporting. The concept of incident-specific crime reporting has been accepted by policy-makers on the state level as an effective way of rapidly collecting information on specific criminal and social problems (domestic violence, child abuse, drug-related crimes, etc.). What work remains to be done involves improving the state-level data collection, analysis and presentation function, and increasing local support and cooperation.

DOCUMENTARY INFORMATION

Documentary information was provided by articles in The Networker, papers disseminated by the SAC, and documents provided. Documents were prepared based on requests for information from departments implementing NIBRS. These requests primarily dealt with technical specifications of hardware and software, codes used with NIBRS data, and datafile format. Very concrete examples of what the data will look like were found very useful.

Papers using NIBRS data and describing implementation were also written (Hamby, Cloherty, Pierce, and Bibel, 1988; Bibel, 1987). Their presentation and professional meetings has resulted in strategy revisions to enhance the utility of findings produced by analysis of NIBRS data.

RESULTS

The NIBRS project had a positive impact on the criminal justice information system in ways other that just developing NIBRS software and data. It resulted in provision of UCR data from departments not participating before the project began. Involvement in NIBRS development expanded the capacity of some law enforcement agencies to analyzed crime data. A needs assessment for police information systems was conducted to provide a baseline of information for planning. The capacity of the Crime Reporting Unit and the SAC for analysis and display of incident based crime data was initiated and expanded. Other goals have also been achieved.

IMPACT ON UCR

The Massachusetts State Police have become consistent providers of UCR data. The State Police Barracks have been linked with a computer network using a law enforcement management information system that collects NIBRS compatible data. Procedures

for the transmission of these data to the Crime Reporting Unit are under development.

The number of college and university public safety departments providing UCR data has been increasing throughout the project period. A number of campuses have applications pending for ORI code numbers (F.B.I. agency identifiers). These departments have been very receptive to starting their reporting with NIBRS. The University of Massachusetts at Amherst currently provides NIBRS data. With the passage of a state law mandating reporting by college, university, and private school public safety departments, others are expected to participate within the next year.

IMPACT OF SUBGRANTS

Even though the total number of subgrants was not large, their impact was considerable. Once software vendors modified their programs to provide NIBRS data, they were able to offer it to other departments as those agencies purchased new software or replaced old equipment and upgraded software. In addition, the recipient departments became exemplars for other departments. The NIBRS departments demonstrated how the process of implementation could occur, what its advantages were, and provided information on how to deal with problems of implementation. A number of towns adjacent to the subgrantees either initiated planning efforts to acquire NIBRS capacity or became involved in joint ventures with NIBRS departments to take advantage of its capacities.

INFRASTRUCTURE IMPROVEMENT

The NIBRS project significantly improved the criminal justice information infrastructure in the Commonwealth. Beyond the local effects of grants to individual departments, it changed how Massachusetts looked at information in the state and how it handled its databases. Issues of integration, database design, standardization, communication, and interoperability receive much more attention. The needs assessment of police departments and planning documents produced continue to be used in developing the criminal justice information system in the state.

REMAINING BARRIERS

Problems of software modification and costs to towns remain the principle obstacles to further NIBRS implementation in the Commonwealth. Most of the police departments now appear to favor NIBRS. The ongoing emphasis of incident based reports as a necessary component to police management information systems has been widely accepted. NIBRS is seen by many departments as an issue that gives them leverage with town officials in acquisition of a police management information system. It is also often recognized as providing information needed for meeting police accreditation standards.

Software modification has been a problem primarily with

packages written in low level languages (e.g., Assembler) or in languages that are not highly portable between different brand computers (e.g., COBOL). The greatest success in software modification has been in those packages written in higher level (sometimes a "Fourth Generation Language" (also referred to as 4GL) with modular construction and to be device independent. The advantage of higher level languages lies in the greater availability of software tools and libraries of verified subroutines and program modules. Most 4GLs have developmental and application software tools to facilitate design, modification, and testing of programs.

Newer software and languages tend to be device independent. This represents an advantage for implementing NIBRS. The reason lies with the fact that NIBRS is often introduced as part of an upgrade to their existing system, which usually involves upgrading and changing their hardware. This is commonly due to the larger transaction volume and file storage requirements of an incident based system compared to existing systems and the introduction of PMIS. Since NIBRS is often included as part of a PMIS upgrade, the requirements for running an integrated system may exceed the capacity of existing systems that primarily use several stand alone programs. Software that is not written to be device independent almost always take longer to modify, add new modules, or adapt to changes in hardware.

COMPLETION OF NIBRS

Since Massachusetts is a voluntary UCR reporting state, completion of NIBRS will depend on the voluntary efforts of the Commonwealth's communities, as well as the leadership and support of the state. The basis for completion has been laid by this project. All of the basic infrastructure necessary for NIBRS has been created. The state has achieved a capacity to receive, check, clean, format, and transmit NIBRS data to the FBI. Approximately thirty departments currently have the capacity to provide NIBRS. Future implementation can use the procedures and software developed by these departments and by the state for continued expansion of the NIBRS system in Massachusetts.

RECOMMENDATIONS

A variety of strategies are needed to implement NIBRS. Several approaches, however, seemed especially beneficial. These are:

- Periodic meetings with law enforcement representatives to discuss NIBRS implementation issues and to develop and revise strategies for implementation and use of NIBRS.

These meetings identify barriers to implementation and strategies for dealing with them. They also allow law enforcement officials

to identify sources of frustration and successes that have been achieved. This is important to maintaining commitment to NIBRS.

- Working with software vendors to encourage program code emphasizing device independent design, modular construction, and integrated data.

Some of the software is developed by ad hoc additions to existing programs, usually in consultation with local departments. This may result in too much focus on quick and dirty solutions that are difficult and expensive to modify or expand to meet future needs. Encouraging software design that incorporates these principles will increase its reliability and potential for enhancement.

- Seed money for demonstration projects, especially for NIBRS software used in a number of sites.

A number of the departments making progress towards NIBRS did so with relatively small grants. Often agencies were able to use this money to leverage additional funds from local towns or state agencies. Investment in modifying software used in more than one department meant that vendors were able to reduce costs to individual agencies and offer the NIBRS upgrade to other agencies not receiving seed money.

- Development of user groups based on common software.

User groups serve a number of functions. They share solutions to common problems. They provide collective pressure on a software vendor to make desired changes in the program. They reduce costs by reducing duplication and wasted effort. They become a focal point for disseminating information to a number of departments. They also provide each department with mutual encouragement and motivation to complete NIBRS implementation.

- Development of data analysis products that provide information for common police management and criminal justice policy concerns.

One of the common complaints of departments beginning implementation is difficulty in seeing direct benefits to the local department. It takes a while for police administrators to become familiar with the use of NIBRS information and how they can use it in addressing local concerns. Providing examples to local departments based on local data will make the utility of NIBRS more immediate and concrete.

- Coordination of modifications to state criminal justice systems with NIBRS information.

Coordination of NIBRS with other modifications to state criminal justice systems has a number of benefits. For one, it can enhance tracking disposition of cases after arrest. The use of NIBRS incident identifiers improves matching court outcomes with individual incidents, something that is difficult and problematic to do with automated data in most states when offenders have multiple prosecutions pending for several offenses. Identification of repeat offenders across jurisdictions will be improved. Linkage of arrest information with Computerized Criminal History and court records can also allow development of or increased reliability in OBTS systems. These improvements resulting from implementation of NIBRS will also aid the states in meeting federal requirements for providing information identifying felons, drug offenders, and criminal aliens. Support for NIBRS implementation should be part of each state's plan for improvement of their criminal justice information systems.

The above are not the only strategies that help implement NIBRS. A variety of activities were mentioned in the report itself. Given that law enforcement information systems, computers, and software are continuously changing, any strategy will need periodic review and assessment. An attitude of experimentation and flexibility is needed to discover new ways in which NIBRS may be used and to increase its utility for the law enforcement community.

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