

Making Communities Safer

Taking Steps to
Prevent Crime

Finding New Ways of
Working Together

Exploring Issues of
Special Concern



Making Communities Safer

Monitoring Arrestees' Drug Use Reveals Community Trends

Research has firmly established the link between drug use and subsequent criminal behavior. NIJ has been tracking drug use among booked arrestees since 1987. Today, through the Arrestee Drug Abuse Monitoring (ADAM) program, community leaders and their research partners are following trends in the prevalence and types of drug use among arrestees in 35 locations around the Nation.¹¹

ADAM data, which are collected quarterly through voluntary and anonymous urine testing and interviews, allow State and local policymakers and analysts to view trends as they develop and make it possible to intervene earlier and in a more targeted way.

ADAM offers communities a means to assess the breadth and characteristics of their particular drug abuse problems; evaluate, at low cost, programs and interventions that serve or target the criminally active population; and plan specific policy interventions appropriate for local substance abuse problems.

Enhancements in 1998

NIJ has developed the capacity to test for a broader range of drugs than in the past, thus increasing a community's ability to detect important local variations in drug trends. Recent additions to the list of drugs that can be detected include LSD, inhalants, MDMA (ecstasy), and flunitrazepam (rohypnol). In addition, three sexually transmitted diseases—HIV, chlamydia, and gonorrhea—can be detected in urine.

¹¹ ADAM is a geographically expanded and scientifically more rigorous version of NIJ's Drug Use Forecasting (DUF) program, which operated at 23 sites from 1987 to 1997. The program expanded to 35 sites in 1998.

ADAM also has initiated several projects to improve drug testing procedures and make results more precise:

- Analyzing the impact that specimen storage and handling procedures have on drug test results.
- Confirming opiate test results to differentiate heroin use from medications containing opiate compounds.
- Testing for metabolites and markers that indicate crack cocaine use, as opposed to powder cocaine use.

ADAM's interview instrument was redesigned to concentrate on issues of interest to policymakers and practitioners. The new instrument increases the ability to calculate the prevalence of drug dependency, determine the prevalence of need for treatment, and illuminate drug market dynamics.

Interest From Abroad

ADAM has sparked international interest, and last year the program held its first gathering of representatives from other countries interested in following ADAM protocols. International ADAM is intended to create a research partnership among criminal justice organizations across the world. Drug surveillance or measurement systems in most countries are not compatible, making comparisons among countries difficult. I-ADAM addresses this limitation by introducing a standardized

Selected Highlights

ADAM Tracks Drug Use Trends in 35 Sites

Although most of the 35 ADAM sites in the United States are referred to by the name of the largest city in the area, the boundaries (or catchment areas) of most sites are substantially larger than the city. In most cases, the catchment area is the county. (The New York City site, for example, includes all of the city's five boroughs.) The 35 sites are:

Albuquerque	New Orleans
Anchorage	New York
Atlanta	Oklahoma City
Birmingham	Omaha
Chicago	Philadelphia
Cleveland	Phoenix
Dallas	Portland (Oregon)
Denver	Sacramento
Des Moines	St. Louis
Detroit	Salt Lake City
Ft. Lauderdale	San Antonio
Houston	San Diego
Indianapolis	San Jose
Laredo	Seattle
Las Vegas	Spokane
Los Angeles	Tucson
Miami	Washington, D.C.
Minneapolis	

In addition to the ADAM sites listed above, ADAM staff provide scientific assistance to domestic and international affiliated sites, including Albany and Buffalo, New York; Australia; Chile; England; Scotland; and South Africa.

international surveillance system that will allow researchers to compare the prevalence of drug use among arrestees in different nations and assess the consequences of drug abuse both within and across national boundaries.

Like the United States, many countries want to track drug use trends among their arrested population. I-ADAM can do this as well as collect information to gain a better understanding about the relationship between drugs and crime, sources of illegal income for arrestees, drug dependency, use of substance abuse treatment, age of onset of drug use, drug market dynamics, and certain public health topics.

I-ADAM also can contribute to a better understanding of crime issues that cross national borders, such as organized crime. I-ADAM data are tools to help countries coordinate their drug control policies and resources. Identification of similar drug problems in different nations can give governments grounds for such coordination. In addition, spotting a growing substance abuse problem in a country's arrestee population can help predict a potential target for international drug trafficking.

The Data Collection Process

Sites collect data for a 2-week period, four times a year. Each site collects data on adult males, and all but two are currently collecting data on adult females. Juvenile collection occurs in 12 sites, but is expected to expand with the FY 2001 appropriations. A random selection of arrestees are asked to take part in the study. The interviews are anonymous and confidential, which contributes to the high proportion of individuals who consent to participate at most sites.

Staff in individual sites may ask additional questions geared specifically to their community. Examples of such questions include:

- Patterns of acquiring and using crack, powder cocaine, and heroin.
- Patterns of acquiring and using methamphetamine.
- Acquisition of and attitudes toward firearms.
- Definitions of gang membership and participation in gang activities.
- Attitudes toward and patterns of sexually risky behaviors.

In January 2000, all ADAM sites will field a new interview instrument that will focus on three policy areas: drug use, dependency and need for treatment, and drug markets. These questions will serve to elicit information on the frequency and severity of drug use within each site, estimate the number of individuals dependent on drugs and in need of treatment, inventory treatment experiences to help assess how individuals attempt to access treatment, and show how drug market activity in a community responds to specific interventions.

Local Outreach and Involvement

ADAM represents an important partnership with and among local, State, and national policymakers. Officials at all levels can tailor aspects of the program to meet specific needs. For example, officials interested in gang activity can, together with their local data collection team, append gang-related questions to the main interview instrument. Such special studies can be done on a local, regional, or national basis, depending on who is interested in the topic. Such research needs are identified by local coordinating councils, which also play a big part in disseminating the data to local planners and policymakers.

For More Information

Visit the NIJ Web site at <http://www.adam-nij.net>.

The ADAM annual reports for 1998:

1998 Annual Report on Drug Use Among Adult and Juvenile Arrestees (NCJ 175656).

1998 Annual Report on Cocaine Use Among Arrestees (NCJ 175657).

1998 Annual Report on Marijuana Use Among Arrestees (NCJ 175658).

1998 Annual Report on Methamphetamine Use Among Arrestees (NCJ 175660).

1998 Annual Report on Opiate Use Among Arrestees (NCJ 175659).

Strategic Approaches to Community Safety

Although many law enforcement entities join forces with agencies in their communities to respond to crime, relatively few do so in a systematic, integrated way to analyze information and develop strategic plans to reduce a specific, targeted problem. Cities that have experienced the greatest reductions in crime, such as Boston and New York, have made remarkable efforts to collectively and comprehensively gather and analyze information from multiple agencies. Together, these groups analyze patterns and trends that define the precise nature of a problem, suggest strategic opportunities for interventions, and develop efficient ways to employ limited resources.

The Strategic Approaches to Community Safety Initiative, or SACSI, is a 2-year Department of Justice project intended to establish integrated and systematic approaches in five pilot cities:

- Indianapolis, Indiana.
- Memphis, Tennessee.
- New Haven, Connecticut.
- Portland, Oregon.
- Winston-Salem, North Carolina.

SACSI bolsters the use of a collaborative, knowledge-driven, problem-solving process through which groups can better identify and analyze their local problems and devise and implement strategies likely to reduce them. It builds on the knowledge gained from other comprehensive efforts, which have encouraged collaborations among Federal, State, and local agencies.¹²

The Process

The SACSI approach is unique in that the U.S. attorney takes on a new role—as community problem solver and proactive leader in reducing local crime. The U.S. attorney acts as a catalyst to the strategic approaches project, undertaking functions and activities not traditionally assumed by U.S. attorneys or their offices.

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¹² Comprehensive efforts that contribute to the SACSI model include the Boston Gun Project, the Comprehensive Communities Program, and Weed and Seed.

The U.S. attorney convenes a team of local, State, and Federal criminal justice practitioners; representatives from relevant community agencies; and a research partner. This team meets frequently to develop, implement, and evaluate a crime prevention and reduction strategy focusing on a major crime problem facing the city. Team members then work to better utilize both Federal law enforcement and community resources, making every effort to coordinate around the identified problem and desired outcome. They build on existing coalitions that might include a broad spectrum of individuals and organizations, consider varying perspectives on the problem, and lay the foundation for specific strategies adopted later in the process.

The research partner assists the group in analyzing information and devising a theory-based strategy to reduce the target crime problem. The research partner also takes responsibility for evaluating the effectiveness of the intervention, suggesting adjustments, and reevaluating the strategy. Academic partners unfamiliar with this type of “research in action” receive guidance and support from NIJ.

Features of the Justice Department’s Support

Numerous components of the Justice Department are partners in the program: the Office of the Associate Attorney General, Criminal Division, Executive Office of U.S. Attorneys, Intergovernmental Affairs, and the Office of Justice Programs, which includes the Bureau of Justice Assistance, Bureau of Justice Statistics, Executive Office of Weed and Seed, National Institute of Justice, Office for Victims of Crime, Office of the Assistant Attorney General, Office of Community Oriented Policing Services, and Office of Juvenile Justice and Delinquency Prevention.

NIJ’s ongoing support includes grants to local research partners, funding for project coordinators in the sites, technical assistance to help sites move toward their goals, and development and installation of a Community Safety Information System that will enhance the sites’ ability to combine and analyze data across agencies.

SACSI Takes Shape

Initial formative meetings for SACSI took place during the spring of 1998. Working groups, researchers, and project coordinators were then identified in the summer of 1998. Subsequently, sites began building broad coalitions and have been gathering information to identify and better understand their targeted crime problem. Sites have begun identifying possible interventions, and in some cases, they have started implementing their strategies.

State, local, and community partners have experienced an unparalleled amount of cooperation from a diverse group of stakeholders. Partners have commented on the unprecedented involvement of U.S. attorney’s offices in developing effective local crime reduction strategies.

Specific crime problems being addressed in pilot cities include:

- Indianapolis: homicide and gun violence.
- Memphis: sexual assault.
- New Haven: gun violence and community fear.
- Portland: youth gun violence.
- Winston-Salem: youth violence.

Through careful observation of efforts in the pilot jurisdictions and feedback from the research partners, the process will be refined and information will be shared with communities across the country about how to plan their individualized crime control strategies. This rigorous, dynamic method of addressing crime recognizes that crime is local. Although specific problems and solutions will vary by community, SACSI is showing that when certain steps are included in a strategic planning and implementation process, the likelihood of success in fighting local crime rises substantially.

For More Information

National Institute of Justice and Executive Office for Weed and Seed, *What Can the Federal Government Do To Decrease Crime and Revitalize Communities?* October 1998 (NCJ 172210).

Coleman, Veronica, Walter C. Holton, Jr., Kristine Olson, Stephen C. Robinson, and Judith Stewart, “Using Knowledge and Teamwork To Reduce Crime,” *NIJ Journal*, October 1998 (JR 000241): 16–23.

Kennedy, David, “Pulling Levers: Getting Deterrence Right,” *NIJ Journal* July 1998 (JR 000236): 2–8.

Policing in the Community

Policing in the United States continues to undergo dramatic transformation. Heightened focus on the characteristics and the role of the community has changed the manner in which many police agencies conduct business and has reshaped much of the thinking about the nature of law enforcement organizations and the policing strategies used to combat crime and disorder.

As one author noted, "In well-informed and well-organized communities, police departments are increasingly expected to understand the community as a partner, prepare department personnel for their part in the partnership process, and support officers in the process."¹³ The view that police departments and communities are coproducers of safety and public order is based on research showing that a coproduction strategy is more effective than a policing style that distances officers from the public by, in effect, relegating the community to the sidelines.¹⁴

An advantage of encouraging closer police-community relations is highlighted in a discussion paper prepared for one of a series of policing meetings on "measuring what matters," sponsored by NIJ and the Office of Community Oriented Policing Services (COPS). Written by a police chief, the paper notes that police have begun to think about crime and violence within the context of neighborhood conditions, education, the economy, and other demographic factors. Some police departments, he wrote, "are beginning to look at these factors to determine the effect of initiatives aimed at neighborhood problems."¹⁵

For example, a research study sponsored by NIJ and the Carnegie Corporation of New York observed that in

one of the community-oriented police agencies studied, officers interacted positively on a daily basis with persons of all ages, including children. By interacting with children, "officers learn about family situations that can be ameliorated through referrals to specialized community agencies, and occasionally they may learn about activities, such as child abuse and drug offense activities, that require law enforcement action."¹⁶

Defining "Community"

As law enforcement agencies move closer to the populace and to their communities, many are defining "community" broadly to include the cultural, religious, and ethnic contexts as well as the residents, businesses, and nonprofit groups in the community.¹⁷

When the concept of community is seen in this larger context, the mission of law enforcement expands from making the life and possessions of the individual safe and secure to also ensuring the safety and security of community life. Achieving the former is not necessarily the same as attaining the latter.

Consider a 10-year-old child returning from school through a designated safety corridor patrolled by police backed up by an occasional safe house. Arriving home, with its fortified extra locks, grilles, and perhaps an alarm system, the child is safe. But community life is likely to be seriously compromised in such an environment.

Safety corridors and other such reactive tactics are not enough to maximize community safety. The body of research about policing has demonstrated that proactive strategies are needed as well. The most effective proactive strategies result from various types of

¹³ Friedman, W., and M. Clark, "Community Policing: What Is the Community and What Can It Do?" in *Measuring What Matters: Proceedings From the Policing Research Institute Meetings*, Research Report, ed. R.H. Langworthy, Washington, D.C.: U.S. Department of Justice, National Institute of Justice and Office of Community Oriented Policing Services, July 1999 (NCJ 170610): 124.

¹⁴ Mastrofski, S.D., R.B. Parks, A.J. Reiss, Jr., and R.E. Worden, *Policing Neighborhoods: A Report From Indianapolis*, Research Preview, Washington, D.C.: U.S. Department of Justice, National Institute of Justice, July 1998 (FS 000223): 2.

¹⁵ Stephens, D.W., "Measuring What Matters," in *Measuring What Matters: Proceedings From the Policing Research Institute Meetings*, Research Report, ed. R.H. Langworthy, Washington, D.C.: U.S. Department of Justice, National Institute of Justice and Office of Community Oriented Policing Services, July 1999 (NCJ 170610): 62.

¹⁶ Chaiken, M.R., *Kids, COPS, and Communities*, Issues and Practices, Washington, D.C.: U.S. Department of Justice, National Institute of Justice, June 1998 (NCJ 169599): 42.

¹⁷ Friedman, W., and M. Clark, "Community Policing: What Is the Community and What Can It Do?" in *Measuring What Matters: Proceedings From the Policing Research Institute Meetings*, 124.

collaborative police-community interactions. These interactions flow, in part, from law enforcement's building trust among the public, forging police-community problem-solving projects and other partnerships, and gaining important insights into the community and its constituent groups through research.

Building Trust

To promote and maintain police-community coproduction of safety and public order, the community must trust the police. To build the public's trust, the police must engage the community in a manner seen as fair.

Research shows that when individuals report that a police officer treated them fairly, their sense of fairness comes more from the quality of the officer's interaction with them than from the outcome of the interaction. For example, in one study, residents said that their beliefs and attitudes about the police had more to do with how the officer treated them than with the fact that the officer did or did not issue them a ticket.¹⁸

Officer rudeness, aloofness, excessive force, lack of interaction and integrity, and the like foster distrust within the community and a sense of being treated unfairly, often entailing major adverse consequences.¹⁹

Officer integrity, another trust-enhancing quality, also is a research area receiving NIJ funding. The Institute is sponsoring a variety of integrity-related studies, among them an examination of the citizen complaint review process, a review of early warning systems, a demonstration of organizational and leadership contributions to integrity, an exploration of the characteristics of model sergeants, and development of indicators of the status of corruption within a police agency.

¹⁸ Tyler, Tom, "Why Do Citizens Defer to Legal Authorities? A Comparison of European Americans, African Americans, and Hispanics," summarized in *NIJ Journal*, April 1999 (JR 000239): 34.

¹⁹ Allegations of excessive force, for instance, have led to riots. Reflecting its ongoing concern about excessive force, NIJ continues to sponsor many use-of-force research studies, including (1) an examination of the types of force used by a county police department, the frequency of incidents, the factors affecting use of force and the extent of injuries, and the characteristics associated with the frequency and type of force used; (2) a national assessment of early warning systems law enforcement agencies have developed to identify officers who receive high rates of citizen complaints and to provide remedial intervention to correct problem behavior; (3) a comparison of police officers who, because of force- or integrity-related matters, have been dismissed or compelled to resign to a random sample of colleagues to determine

Understanding Community Characteristics

Research also can help law enforcement agencies get closer to their communities by gathering data about a community's characteristics, attitudes, and opinions. One method by which to conduct such studies is systematic social observation (SSO), which systematizes field methods for teams of researchers who observe events as they see and hear them, in contrast to relying on others to describe or interpret the events.²⁰

Supported by NIJ and COPS, an SSO-based study (Project on Policing Neighborhoods) focused on how police and citizens interacted with one another in different neighborhood environments and the consequences the interactions had on the quality of neighborhood life.²¹ These are among the findings in one of the two jurisdictions studied:

- Officers serving particular beats tended to rate a range of neighborhood problems as more severe than did residents.
- About half the residents reported that the police were "excellent" or "good" at working with the public to solve problems.
- Older residents reported feeling less safe than did younger ones, and members of neighborhood organizations felt safer than nonmembers.

Another study, based on interviews in Chicago, concluded that neighborhood context (such as socioeconomic status of residents and degree of neighborhood stability) appeared to be the crucial factor influencing attitudes and beliefs about crime and law. The researchers suggested that "to design more effective crime control strategies, policymakers and agents of the criminal justice system would do well to consider the role of community social norms."²²

whether they differ on a variety of individual, organizational, and community characteristics; and (4) development and evaluation of less-than-lethal devices.

²⁰ Mastrofski, S.D., R.B. Parks, A.J. Reiss, Jr., R.E. Worden, C. DeJong, J.B. Snipes, and W. Terrill, *Systematic Observation of Public Police: Applying Field Research Methods to Policy Issues*, Research Report, Washington, D.C.: U.S. Department of Justice, National Institute of Justice, December 1998 (NCJ 172859): vii.

²¹ Mastrofski, S.D., R.B. Parks, A.J. Reiss, Jr., and R.E. Worden, *Policing Neighborhoods: A Report From Indianapolis*, Research Preview, Washington, D.C.: U.S. Department of Justice, National Institute of Justice, July 1998 (FS 000223): 2.

²² Sampson, R.J., and D.J. Bartusch, *Attitudes Toward Crime, Police, and the Law: Individual and Neighborhood Differences*, Research Preview, Washington, D.C.: U.S. Department of Justice, National Institute of Justice, June 1999 (FS 000240): 2.

This same study also found that “collective efficacy”—the presence of mutual trust among neighbors combined with a willingness to intervene on behalf of the common good, specifically to supervise children and maintain public order—not race or poverty, was the largest single predictor of the overall violent crime rate. Understanding collective efficacy, according to the researchers, better equips planners, policymakers, and community service organizations to work with residents in addressing community problems.²³ (See “Understanding Crime in Its Context: The Project on Human Development in Chicago Neighborhoods,” page 44).

Police-Community Problem Solving

An example of a police department working out ways to engage the community in problem solving is the Chicago Police Department’s Alternative Policing Strategy (CAPS), which is being evaluated with support from NIJ and others. Under CAPS, police and residents collaborate in identifying and prioritizing problems, devising ways to address them, and helping to marshal community resources to find solutions.²⁴

Under the police-community approach to coproducing safety—whether in Chicago or elsewhere²⁵—police agencies, various components of the community, and a research partner participate in identifying problems and putting them in priority order. To define a problem, the problem solvers collect data, analyze incidents that may be related to the targeted problem, look beyond the individual incidents, and begin asking whether the incidents were triggered by a common underlying cause or condition that, if resolved, would prevent many of them from recurring.

²³ Sampson, R.J., S.W. Raudenbush, and F. Earls, *Neighborhood Collective Efficacy—Does It Help Reduce Violence?* Research Preview, Washington, D.C.: U.S. Department of Justice, National Institute of Justice, April 1998 (FS 000203): 1.

²⁴ See Hartnett, S.M., and W.G. Skogan, “Community Policing: Chicago’s Experience,” *NIJ Journal*, April 1999 (JR 000239): 2–11.

²⁵ In fiscal year 1998, NIJ added 10 research projects to its substantial portfolio of awards related to community-oriented policing. See Appendix A, page 59.

²⁶ McEwen, Tom, “NIJ’s Locally Initiated Research Partnerships in Policing—Factors That Add Up to Success,” *NIJ Journal*, January 1999 (JR 000238): 3.

²⁷ Couper, D.C., “Seven Seeds for the Field of Policing,” speech delivered in acceptance of the Police Executive Research Forum’s leadership award, Washington, D.C., May 4, 1993.

To foster greater collaboration with researchers, NIJ, with support from the COPS Office, has funded many projects (called locally initiated research partnerships) through which police and researchers share responsibility for jointly selecting a target problem, collaborating on a research design, interpreting findings, and implementing strategies for effecting change. In one jurisdiction, for example, the police department worked in concert with researchers from a nearby university to evaluate the department’s community policing initiative and unearth factors that facilitated or hindered implementation.²⁶ (For further discussion of NIJ’s support for a major effort in five communities to institutionalize the data-driven, problem-solving partnership approach, see “Strategic Approaches to Community Safety,” page 25.)

Closer Is Better

“Policing in the community” increasingly means a policing style fine-tuned to the community. That is the message of the quip “Law enforcement is not a game of cops and robbers in which the public plays the trees.” And it is the message of this remark by a police chief: “We must get closer to the people we serve. Closer is better. Distance is danger.”²⁷

For More Information

Chaiken, M.R., *Kids, COPS, and Communities*, Washington, D.C.: U.S. Department of Justice, National Institute of Justice, June 1998 (NCJ 169599).

Hartnett, S.M., and W.G. Skogan, “Community Policing: Chicago’s Experience,” *NIJ Journal*, April 1999, 2–11 (JR 000239).

Langworthy, R.H. *Measuring What Matters: Proceedings From the Policing Research Institute Meetings*, Washington, D.C.: Department of Justice, National Institute of Justice and Office of Community Policing Services, July 1999 (NCJ 170610).

Mastrofski, S.D., R.B. Parks, A.J. Reiss, Jr., and R.E. Worden, *Policing Neighborhoods: A Report From Indianapolis*, Washington, D.C.: U.S. Department of Justice, National Institute of Justice, July 1998 (FS 000223).

Mastrofski, S.D., R.B. Parks, A.J. Reiss, Jr., R.E. Worden, C. DeJong, J.B. Snipes, and W. Terrill, *Systematic Observation of Public Police: Applying Field Research Methods to Policy Issues*, Washington, D.C.: U.S. Department of Justice, National Institute of Justice, December 1998, vii (NCJ 172859).

Sampson, R.J., and D.J. Bartusch, *Attitudes Toward Crime, Police, and the Law: Individual and Neighborhood Differences*, Washington, D.C.: U.S. Department of Justice, National Institute of Justice, June 1999 (FS 000240).

Minimizing Risk Through Less-Than-Lethal Technology

Police, corrections officers, and concerned citizens have long expressed a need for public safety officers to have alternatives to using their hands, firearms, or batons when confronted by violent, uncooperative, or fleeing suspects. The development of less-than-lethal (LTL) technologies, including alternatives to high-speed pursuits, has consistently been among the top 10 priorities of NIJ's Law Enforcement and Corrections Technology Advisory Committee.

NIJ's LTL program identifies, develops, and evaluates new or improved devices and technologies that minimize the risk of death and injury to law enforcement officers, suspects, prisoners, and citizens. The program also contributes to reducing civil and criminal liability suits against law enforcement and corrections agencies.

Because no single LTL technology accommodates all scenarios and fulfills all requirements safely and effectively, NIJ's program is designed to provide options that best fit various needs while meeting such criteria as community acceptance and safety. NIJ does so in the following ways:

- Funding the development and improvement of existing LTL technologies.
- Testing and evaluating the safety and effectiveness of LTL technologies.
- Addressing the legal liabilities and social acceptability issues raised by LTL technologies.
- Coordinating with other Federal and international agencies to leverage LTL research, testing, and technology development.
- Providing information to law enforcement and corrections agencies about LTL technologies.

The LTL Program Portfolio

In 1998, NIJ's LTL portfolio consisted of six major project areas. NIJ has funded the development of some of these technologies as well as provided new and better information about several existing LTL weapons, such as pepper spray and shot bags.

Blunt impact projectiles. NIJ is funding research on three types of projects: (1) modification of a ring airfoil projectile (RAP), originally developed (but not fielded) by the U.S. Department of Defense; (2) development of test devices and models that predict the probability of injury from blunt-impact projectiles; and (3) development of a database on the effectiveness of projectiles currently in use.

RAP is a rubber ring weighing about 1 ounce and resembling a large napkin ring. Fired from an M-16A1 rifle equipped with an adaptor that makes the weapon non-lethal at the muzzle, RAP flies straight ahead at a constant velocity of 185 to 210 feet per second. A launching device suitable for use by law enforcement and corrections officers is under development, and modifications are being made to deliver pepper powder. Officers equipped with RAP will have a weapon that can be used at standoff range (30 feet—a sufficiently safe distance) when confronting violent suspects armed with weapons other than firearms.

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Chemicals. Pepper spray (oleoresin capsicum, or OC) is the primary chemical LTL weapon used by law enforcement and corrections agencies for one-on-one confrontations. NIJ is sponsoring a number of evaluations of its health effects and operational effectiveness.

Electrical devices. An electric stun projectile, developed through NIJ's Joint Program Steering Group (a partnership between NIJ and the Defense Advanced Research Projects Agency to jointly identify and fund projects), overcomes many of the limitations of currently available electric shock LTL devices, such as the stun gun and laser. The projectile is more effective because it allows the officer standoff distance from a suspect or prisoner and ensures electrical contact. Unlike earlier devices, there are no wires extending between officer and subject, and both electrical contacts are contained in a single device. The health effects of the stun projectile are being evaluated, with technical information from the developer forming the basis of the assessment.

NIJ compared the effectiveness of stun guns and pepper spray against hands-on tactics. The study, conducted in a jail environment, revealed fewer injuries with pepper spray than with hands-on tactics, but more injuries occurred with stun guns than with hands-on tactics.

Nets. Many practitioners and civilians view nets as particularly safe, noninvasive LTL weapons, preferable to chemical or electrical devices. One of the nets whose development was funded by NIJ was recently made available commercially. Another net design, unique in that it can be launched by a baton, is under development.

Light. NIJ is supporting the development of a laser dazzler to disorient suspects or prisoners and is funding the safety certification of the device.

Car stopping. With funding from the Department of Justice's Office of Community Oriented Policing Services, NIJ has invested in two projects related to

vehicle-stopping technologies: a Pursuit Management Task Force and a laboratory performance evaluation, which also received support from the U.S. Army Research Laboratory.

The Task Force, consisting of senior law enforcement officers and other experts, identifies police practices and the role of technology in high-speed pursuits of fleeing vehicles. The full range of police pursuit issues has been explored by the Task Force. Its recommendations are being used to plan the development and demonstration of advanced vehicle-stopping devices and to provide a resource for law enforcement agencies that develop and implement policies and procedures related to situations involving fleeing vehicles.

NIJ and the Army Research Laboratory evaluated a number of vehicle-stopping concepts and related hardware, assessing their performance, operational characteristics, and safety. These laboratory performance tests indicated that all devices met or could be modified to meet established standards for human safety. The evaluations also indicated that some devices could disrupt the engine performance of most vehicles tested. For some devices, more comprehensive testing is needed to determine effectiveness in operational scenarios; other devices need further development.

For More Information

Visit the JUSTNET Web site, at <http://www.nleetc.org>, where specific projects are described in more detail.

Edwards, Steven M., John Granfield, and Jamie Onnen, *Evaluation of Pepper Spray, Research in Brief*, Washington, D.C.: U.S. Department of Justice, National Institute of Justice, February 1997 (NCJ 162358).

Kaminski, Robert, Steven M. Edwards, and James W. Johnson, "Assessing the Incapacitative Effects of Pepper Spray During Resistive Encounters With the Police," *Policing* 22 (1) (1999):7-29.

National Law Enforcement and Corrections Technology Center, *Pursuit Management Task Force Report*, Rockville, Maryland: National Law Enforcement and Corrections Technology Center, September 1998 (NCJ 172200).

Taking Steps to Prevent Crime

Mapping Out Crime

The use of computer-generated maps showing precise details about a neighborhood is a well-established practice in the private sector when a developer, for example, makes a decision about the location of a new business or mixed-use development. But only in the last few years has mapping become more widely used by public safety agencies.²⁸

Those who use geographic information systems (GIS) technology are finding that they can use GIS not only to pinpoint the locations of crime by type, but also to add multiple layers of information—such as the location of schools, public transportation routes, residence of convicted sex offenders, and other neighborhood characteristics—so they can place crime in its context within the neighborhood and uncover the more subtle dynamics of crime and victimization patterns. The Charlotte-Mecklenburg (North Carolina) Police Department, for example, is integrating multiple

sources of information using data collected by the office of public works, the tax assessor, and other city and county agencies.

Mapping, with its rich data content and possibilities for viewing multiple scenarios, gives police greater capability to analyze criminal events more precisely, identify emerging high-crime areas (hot spots), develop solutions, and deploy resources.

NIJ Participates in a Vice Presidential Task Force

In 1998, NIJ participated in Vice President Gore's Task Force on Crime Mapping and Data-Driven Management, which aims to expand the use of crime mapping and data-driven management to improve law enforcement. Through the Task Force subcommittees, NIJ is working with State and local agencies to help them upgrade their technology and equipment and learn more about the various uses of crime mapping, especially with regard to integrating mapping with real-time data that supports community policing and crime prevention.

In establishing the Task Force, Vice President Gore cited the power of technology to reduce crime by employing up-to-the-minute mapping, tracking, and strategic analysis of crime data combined with local accountability for results.

Training and Assistance for Crime Mapping

To realize the technology's full potential, law enforcement agencies say they need training and technical assistance on the use of crime mapping and GIS. This is one finding from a 1998 national survey on the extent to which law enforcement agencies use analytic mapping. Published in *The Use of Computerized Crime Mapping*

Those who use geographic information systems technology are finding that they can use it not only to pinpoint the locations of crime by type, but also to add multiple layers of information—such as the location of schools, public transportation routes, residence of convicted sex offenders, and other neighborhood characteristics—so they can place crime in its context within the neighborhood and uncover the more subtle dynamics of crime and victimization patterns.

²⁸ An NIJ survey found that 36 percent of law enforcement agencies with 100 or more sworn officers are using some form of crime mapping. The figure for smaller agencies is 3 percent. Mamalian, Cynthia A., and Nancy G. LaVigne, *The Use of Computerized Crime Mapping by Law Enforcement: Survey Results*, Research Preview, Washington, D.C.: U.S. Department of Justice, National Institute of Justice, January 1999 (FS 000237).

Crime Mapping Research Awards

NIJ's Crime Mapping Research Center awarded nine major grants for crime mapping research in 1998:

- Assistance in Crime Mapping and Analytic Technologies for Enhancing Law Enforcement and Prosecution Coordination, Hunter College of the City University of New York.
- Combining Police and Probation Research To Reduce Burglary: Testing a Crime-Analysis Problem-Solving Approach, Arizona State University.
- Crime Hot-Spot Forecasting: Modeling and Comparative Evaluation, Carnegie Mellon University.
- Detection and Prediction of Geographical Changes in Crime Rates, State University of New York at Buffalo.
- A Geographic Information System Analysis of the Relationship Between Public Order and More Serious Crimes, University of Texas at Austin.
- Identification, Development, and Implementation of Innovative Crime Mapping Techniques, Hunter College of the City University of New York.
- Predictive Models for Law Enforcement, University of Virginia.
- The Social and Economic Impact of Sentencing Practices and Incarceration on Families and Neighborhoods, Yale University.
- Variation in Community Policing Activities Across Neighborhoods, University of Cincinnati.

by *Law Enforcement: Survey Results*, the researchers' findings will help NIJ to develop a strategic plan that will respond best to law enforcement needs related to GIS hardware, software, training, technical assistance, other resources, and dissemination techniques.

NIJ's Crime Mapping Research Center (CMRC), established in 1997, serves as a central source of information about mapping research. NIJ also makes training and practical application assistance available through NIJ's National Law Enforcement and Corrections Technology Center—Rocky Mountain Region in Denver. (See page 40 for more information about the National Law Enforcement and Corrections Technology Center.)

In collaboration with police officers, crime analysts, and researchers, NIJ has developed a number of courses to train law enforcement personnel in using crime mapping. The courses range from an introductory overview to specific uses and intermediate-level analysis.

During 1998, NIJ published jointly with the Police Executive Research Forum a volume to answer the question: "How do police agencies use crime mapping?" *Crime Mapping Case Studies: Successes in the Field* highlights successful efforts across the country that used mapping to identify suspects and prevent or reduce crime, from auto theft in Newark, New Jersey, to

burglary in Shreveport, Louisiana, and murder in Lowell, Massachusetts.

In the coming years, NIJ plans to continue reaching out to community safety agencies and providing assistance and technical expertise with mapping as a tool that can promote collaborative problem solving.

For More Information

Visit NIJ's Crime Mapping Research Center at <http://www.ojp.usdoj.gov/cmrc>, or call the Center at 202-514-3431.

To subscribe to the listserv (Crimemap), send an Internet message to listproc@aspensys.com. Leave the subject line blank and in the body of the message type: `subscribe crimemap,<Your Name>`.

For assistance from NLECTC—Rocky Mountain Region, visit the JUSTNET Web site at <http://www.nlectc.org>. Click on the "Rocky Mountain" center. Or contact the director of Rocky Mountain's Crime Mapping and Analysis Program, Noah Fritz, at 1-800-416-8086, or NIJ Program Manager James Williams at 202-305-9078.

LaVigne, Nancy G., and Julie Wartell, *Crime Mapping Case Studies: Success in the Field*, Washington, D.C.: Police Executive Research Forum, 1998 (PERF product #834).

Mamalian, Cynthia A., and Nancy G. LaVigne, *The Use of Computerized Crime Mapping by Law Enforcement: Survey Results*, Research Preview, Washington, D.C.: U.S. Department of Justice, National Institute of Justice, January 1999 (FS 000237).

Partnerships Promote the Safety of Women and Families

The Violence Against Women and Family Violence (VAW/FV) Research and Evaluation program was launched in 1996 in direct response to the Violent Crime Control and Law Enforcement Act of 1994 (Crime Act).

Over the past year, NIJ continued its ambitious research agenda in collaboration with many other Federal agencies, committing nearly \$10 million during 1998 to determine the nature and scope of violence against women and to address gaps in family violence programs, policies, and practices.

NIJ's VAW/FV program seeks to enhance the effectiveness of the criminal justice system's response to this type of violence and to improve the safety of women and their families. It achieves its goals through a multidisciplinary, collaborative research portfolio that is examining the causes and consequences of violence against women and family violence, evaluating prevention and intervention initiatives, and supporting field research that can be used to improve practice and formulate policy.

The initiative addresses the following program objectives:

- Describe the extent of violence against women and family violence.
- Identify the reasons why violent behavior against women and within the family occurs and the factors required to end this type of violence.
- Assess the effectiveness of prevention and intervention programs.
- Provide research results to justice system practitioners, victim service providers, and policymakers.
- Develop multidisciplinary partnerships to broaden research efforts.

Collaboration Enhances Ambitious Research Program

The foundation of NIJ's research on violence against women and family violence is built on a variety of intra- and interagency partnerships. Each partner enhances the depth and breadth of the program. NIJ's VAW/FV infrastructure is comprised of four components:

- The NIJ Violence Against Women Research and Evaluation Agenda.
- The NIJ/Violence Against Women Office Joint Program.
- The NIJ/Centers for Disease Control and Prevention Collaboration.
- The Interagency Consortium on Violence Against Women.

NIJ's Violence Against Women Research and Evaluation Agenda. NIJ has funded projects on such issues as domestic violence/intimate partner violence, sexual assault, and stalking. These studies fall under four major program areas: practitioner-researcher collaborations; evaluation of policies and programs, including experimental research designs; longitudinal studies of women's experience with violence; and basic research.

The Violence Against Women and Family Violence Research and Evaluation program achieves its goals through a multidisciplinary, collaborative research portfolio that is examining the causes and consequences of violence against women and family violence, evaluating prevention and intervention initiatives, and supporting field research that can be used to improve practice and formulate policy.

Members of the Interagency Consortium on Violence Against Women

- Centers for Disease Control and Prevention.
- National Institute on Aging.
- National Institute on Alcohol Abuse and Alcoholism.
- National Institute on Drug Abuse.
- National Institute of Justice.
- National Institute of Mental Health.
- Office of Behavioral and Social Science Research (at the National Institutes of Health).
- Office of Child Abuse and Neglect.
- Office of Research on Women's Health (at the National Institutes of Health).

NIJ and VAWO Joint Program. Together, NIJ and the Office of Justice Program's Violence Against Women Office (VAWO) are evaluating the effectiveness of four programs, plus the largest VAWO program, STOP (Services Training Officers Prosecutors) Violence Against Women grants program. A majority of STOP grants provide direct services to victims, with emphasis on providing assistance to underserved victims and building community capacity to combat violence against women. Nearly a quarter of the projects provide training for law enforcement and prosecution. Many grantees are developing policies and protocols or supporting specialized units within law enforcement or prosecution agencies.

NIJ and CDC Collaboration. NIJ and the Centers for Disease Control and Prevention (CDC) are collaborating on a 5-year effort to examine violence against women—why it occurs, how to prevent it, and how to increase the effectiveness of legal and health care interventions. The partners support joint publications, projects, conferences, meetings, and panels at professional gatherings. A major component of the NIJ/CDC collaboration is the National Violence Against Women Survey, which is described on pages 7–8.

NIJ and CDC expanded their joint research efforts in 1998 with almost \$1 million in funding for two new projects: a longitudinal examination of the effects of welfare system changes on domestic abuse among low-income minority women, and a study of partner violence among young, at-risk Mexican-American females to help develop culturally responsive, effective prevention programs.

Interagency Consortium. In 1996, nine Federal agencies formed a consortium to examine violence

against women using a multidisciplinary approach. The consortium brings together researchers from the mental health, public health and prevention, alcohol and drug abuse, and child development fields. Twelve research projects have been funded on a range of topics, including abuse of children and the elderly, partner violence, sexual violence, and perpetrators and victims of multiple episodes of family violence. Findings from the 12 projects are expected in 1999 and 2000.

For More Information

Visit NIJ's Violence Against Women and Family Violence Program Web site at <http://www.ojp.usdoj.gov/nij/vawprog/welcome.html>.

Visit CDC's National Center for Injury Prevention and Control Web site at <http://www.cdc.gov/ncipc/dvp/fivpt>.

Burt, M.R., L.C. Newmark, L.K. Jacobs, and A.V. Harrell, *Evaluation of the STOP Formula Grants to Combat Violence Against Women*, Washington, D.C.: Urban Institute, July 1998. To access this report on the Urban Institute's Web page, go to www.urban.org, then click on "Researchers by Name," and then on "Burt."

Chalk, R., and P. King, eds., *Violence in Families: Assessing Prevention and Treatment Programs*, Washington, D.C.: National Academy Press, 1998.

Crowell, N.A., and A.W. Burgess, eds., *Understanding Violence Against Women*, Washington, D.C.: National Academy Press, 1996.

Healey, K., C. Smith, and C. O'Sullivan, *Batterer Intervention: Program Approaches and Criminal Justice Strategies*, Issues and Practices, Washington, D.C.: U.S. Department of Justice, National Institute of Justice, February 1998 (NCJ 168638).

Legal Interventions in Family Violence: Research Findings and Policy Implications, Research Report, Washington, D.C.: American Bar Association and U.S. Department of Justice, National Institute of Justice, July 1998 (NCJ 171666).

Tjaden, P., and N. Thoennes, *Prevalence, Incidence, and Consequences of Violence Against Women: Findings From the National Violence Against Women Survey*, Research in Brief, Washington, D.C.: U.S. Department of Justice, National Institute of Justice, November 1998 (NCJ 172837).

Enhancing Public Safety by Improving and Detecting Weapons

Firearms were the cause of 34,000 deaths in 1996.²⁹ In addition, firearms killed 688 law enforcement officers (92 percent of those killed in the line of duty) from 1988 through 1997. Ten percent (or 62) of these officers were slain with their own firearm.³⁰

NIJ is supporting research and development activities that will lead to safer guns and better ways to detect concealed weapons.

Developing Smart Guns

NIJ's smart gun project supports the development and refinement of a firearm that will only fire for a recognized user.

In 1994, NIJ sponsored research to determine the viability of a smart gun that would be effective enough for law enforcement officers to use. In 1995, Colt Manufacturing developed the first working smart gun prototype using radio frequency identification technology. When activated, Colt Manufacturing's smart gun emits a radio signal, which is received by a small transponder worn by the authorized user. The transponder returns a coded radio signal to the firearm. When the weapon hears the signal, the trigger is unlocked and the weapon can be fired.

At a meeting convened in early 1998, NIJ demonstrated the product and solicited ideas for improvements from law enforcement and corrections officials. NIJ is supporting Colt Manufacturing's efforts to build Prototype II, which will contain more advanced features, including a smaller receiver that can fit on the back of a watch, in a bracelet, or be made a permanent part of a uniform. The rest of the components will be inserted in the grip of the gun.

²⁹ Centers for Disease Control and Prevention, *National Vital Statistics Report*, 47(9) (November 10, 1998): 67.

³⁰ Uniform Crime Reports, "Law Enforcement Officers Killed, 1997," Washington, D.C.: U.S. Department of Justice, Federal Bureau of Investigation, pp. 4, 15.

Other research, conducted by Sandia National Laboratories, suggests several existing technologies that also may be suitable for smart gun application, including touch memory, biometric technologies, and voice recognition.

In addition to making a police weapon safer, the smart gun concept, once fully developed and tested, has the potential to greatly improve safety for private owners by reducing the potential for accidental shooting and the opportunity for a suspect to turn a homeowner's firearm against the occupant.

Detecting Concealed Weapons

Concealed weapons in the hands of criminals are serious threats to the safety of the public and to law enforcement officials. Recognizing the severity of the problem, President Clinton directed the Department of Justice to address it. In response, NIJ initiated a technology program to provide better tools to detect weapons.

The Department of Justice/Department of Defense Joint Program Steering Group manages the concealed weapons detection program for NIJ, in collaboration with the U.S. Air Force Research Laboratory in Rome, New York, and the National Law Enforcement and Corrections Technology Center-Northeast Region.

NIJ and the partner agencies are developing technologies to unobtrusively detect metallic and nonmetallic concealed weapons using imagery-capable and multiple technology-based systems. NIJ also monitors other promising technology developments, including low-power x-rays that penetrate clothing but do not penetrate the body. Instead, the device reflects x-rays back from the skin, subjecting individuals to the equivalent of about 5 minutes of exposure to the sun at sea level. Computer software creates a composite image of the person from the reflected x-rays. The color and shape of objects in the image enable everyday items, like keys, to be distinguished from suspicious items.

The major advantage of this device over current walk-through portals, like those found at airports and courthouses, is that it can detect weapons with no metal content. The device was successfully demonstrated in a Federal courthouse in Los Angeles and at a State correctional facility in North Carolina in 1997 and at the U.S. Capitol in April 1998.

The second product is a walk-through portal developed by the Idaho National Engineering and Environmental Laboratory of Idaho Falls, Idaho. This device uses flux-gate magnetometers to detect changes in the earth's magnetic field caused by the magnetic material in weapons carried by individuals walking through it. It can detect weapons with even a small ferrous content. Another advantage it holds over current portals, besides improved sensitivity, is that it is not as likely to issue an alert for innocuous objects like keys, which usually do not contain ferrous material. This technology is almost ready for commercialization. A prototype is in operation in the Bannock County, Idaho, courthouse.

In addition to portal devices, NIJ has a number of hand-held weapons detectors in development. These devices are intended to allow law enforcement officials to scan individuals for illicit weapons at a safe distance. NIJ is pursuing multiple technical approaches to increase the chance of producing one or more devices that are highly effective. Two of these approaches use different types of radar and a third uses ultrasound. Each approach has different advantages and limitations. The ultrasound device is the least expensive and the most readily developed. On the other hand, ultrasound does not penetrate clothing as well as radar. The ultrasound device was demonstrated in 1998 for the California Border Alliance Group, where it was well

received. Three prototypes of this device were delivered to the U.S. Air Force Research Laboratory's Rome research site for evaluation. If the prototypes perform as expected, NIJ plans to demonstrate them with law enforcement agencies.

Also in development are two portable devices used for scanning groups of individuals for illicit weapons. One uses radar; the other is a hybrid system using both radar and infrared (heat-detecting) sensors. Both appear promising.

NIJ is developing a weapons detector that will mount to the front of patrol cars. It is intended to allow law enforcement officials to screen individuals standing 10 to 15 feet away for concealed weapons made of metal, like handguns and knives, from inside a patrol car.

Finally, NIJ is funding an effort to develop a device for noninvasive body cavity screening using magnetic resonance imaging, or MRI, a technology perhaps best known for its use in medicine.

Although NIJ's weapons technology and detection capability programs have only existed for 4 years, they have been remarkably successful in their endeavors to develop promising technologies.

In addition to making a police weapon safer, the smart gun concept, once fully developed and tested, has the potential to greatly improve safety for private owners by reducing the potential for accidental shooting and the opportunity for a suspect to turn a homeowner's firearm against the occupant.

For More Information

Visit the Web site of the National Law Enforcement and Corrections Technology Centers at <http://www.nlectc.org>.

"Making Guns Smart: The Next Step," *TechBeat*, Winter 1999: 3.

Finding New Ways of Working Together

Partnerships—Multiplying Perspectives and Resources

Recognizing that no single organization or field of study has the answer to reducing and preventing crime, NIJ joins with other government agencies, as well as with professional groups and other organizations, to work on issues collaboratively. The Institute also encourages the partnership approach at the local level. Partnerships bring together multiple perspectives, skills, experiences, and types of knowledge, increasing the chances of devising effective solutions and avoiding duplication of effort. They also help to ensure the involvement of all stakeholders.

The Rationale

Partnerships make sense for criminal justice because many issues that touch the field of criminal justice also affect other disciplines. Substance abuse, perceived as both a public health and criminal justice problem, is perhaps the best example. Health concerns also intersect with criminal justice concerns in corrections. This conjuncture prompted NIJ's partnership with the Centers for Disease Control and Prevention (CDC), which is conducting surveys on the prevalence of HIV/AIDS and other infectious diseases in prisons. Violence against women, also a concern of both health and criminal justice professionals, prompted a partnership between NIJ and CDC aimed at understanding the extent of the problem and finding effective responses.

Partnerships bring together multiple perspectives, skills, experiences, and types of knowledge, increasing the chances of devising effective solutions and avoiding duplication of effort.

In recent years, Congress has made it possible for partnerships among government agencies to flourish. Following passage of the 1994 Crime Act, for example, NIJ formed partnerships with the offices created to administer the Act to evaluate the innovative programs established at the State and local levels. Partnerships have greatly expanded NIJ's research capacity. Funds transferred to NIJ from other government agencies have more than doubled since 1995.³¹

Partnerships make strategic sense when criminal justice agencies at different levels of government come together in a single community to focus their collective skills on a common problem. At several sites nationwide, the Strategic Approaches to Community Safety Initiative (SACSI) is targeting problems like gang violence through a team approach that combines the efforts of U.S. attorneys, researchers, and local agencies and organizations to build the necessary infrastructure of research and technology for precise definition of problems and promising countermeasures. (See "Strategic Approaches to Community Safety," page 25.)

Researchers and Practitioners—Equal Partners

SACSI is only the most recent way in which NIJ has encouraged collaboration. Since 1995, the Institute has been promoting a new way for researchers to work together with criminal justice practitioners in law enforcement and other fields. In the locally initiated research partnerships program, the partners work as equals on pressing local problems. The collaborative approach is viewed by NIJ as such a valuable tool that it was selected as the theme of the 1998 criminal justice research and evaluation conference.

Police departments have long worked with researchers, but the traditional approach has been for the researcher to identify the topic of study and for the agency to provide access to data and staff. NIJ's locally

³¹ In 1995, transfers of funds from other agencies amounted to \$11.1 million; by 1998 that figure had risen to \$26.3 million.

initiated research partnerships are a departure from that model in that the law enforcement agency and the researchers together identify the problem to be studied and work side by side to develop strategies to deal with the problem. The two collaborate on the research design and its implementation and on the interpretation of study findings. In the long term, NIJ anticipates that the partnerships will extend beyond the life of the initial project to become ongoing collaborations that build practitioners' research capacity.

The 41 researcher-practitioner partnerships in policing are the subject of a national evaluation of both process and impact, with the final report expected early in the year 2000. From their beginnings in policing, the partnerships have been extended to other areas, including research on inmate substance abuse, crime in public housing, and violence against women (see "Partnerships Promote the Safety of Women and Families," page 34.)

Drug Treatment for Prisoners—Partnerships Extended

Because large proportions of arrestees are substance abusers, treatment offered in the correctional setting holds the potential for reducing drug use as well as recidivism. The Residential Substance Abuse Treatment (RSAT) program, authorized under the 1994 Crime Act, offers funds to the States to develop such programs in prisons and jails. States are encouraged to adopt comprehensive approaches that include relapse prevention and aftercare. With support from the Corrections Program Office, NIJ is evaluating selected RSAT programs.

The evaluations are patterned on the researcher-practitioner model. Researchers based in local universities or other research institutions are encouraged to collaborate with the State agency whose program is being assessed. Again, the immediate aim is to measure program effectiveness, while the long-term goal is to build the research capacity of the agency. A national-level evaluation, covering programs in all States that have RSAT programs, is also under way. In 1998, NIJ awarded many additional evaluation grants.

Joining Forces for Safer Public Housing

Some public housing communities across America experience disproportionately high levels of crime. NIJ has established a partnership with the U.S. Department of Housing and Urban Development (HUD) to help local public housing authorities (PHAs) reduce crime.

In one partnership effort, NIJ is developing measurable indicators of the impact of HUD's Public Housing Drug Elimination Program (PHDEP) so that public housing officials and residents will have empirically based evidence for deciding whether a program supported by PHDEP should be continued, modified, or discontinued and whether it can or should be replicated.

Another NIJ-HUD partnership effort brings together researchers, local PHAs, residents, and law enforcement officials. As with all research partnerships, NIJ sees this effort as helping to develop and sustain local research capacity. Researchers work with the PHAs and residents to design technically sound strategies for evaluating the impact of a program, with a built-in feedback loop that allows for midcourse correction. Alternatively, the partnership can first identify problems related to drug abuse and trafficking and other crime, then design and implement solutions and evaluate their impact. For the researchers, the projects afford the opportunity to apply their knowledge in a real-world setting where it can make a difference.

Eight researcher-practitioner partnerships are now under way in Calexico, California; Jonesboro, Arkansas; Omaha, Nebraska; Nashville, Tennessee; New Haven, Connecticut; Philadelphia, Pennsylvania; Raleigh, North Carolina; and Salt Lake City, Utah.

For More Information

McEwen, Tom, "NIJ's Locally Initiated Research Partnerships in Policing: Factors That Add Up to Success," *NIJ Journal* (January 1999): 2–10 (JR 000238).

Viewing Crime and Justice From a Collaborative Perspective: Plenary Papers of the 1998 Conference on Criminal Justice Research and Evaluation, Research Forum, Washington, D.C.: U.S. Department of Justice, National Institute of Justice, July 1999 (NCJ 176979).

Consulting the Experts in Science and Technology

A paramount concern in developing new equipment and technology is uncovering and understanding the needs of those who will use it. Equally important is making sure a product is the best tool for the job and has received the imprimatur of the experts. Lives are on the line every day—law enforcement officers, corrections personnel, and citizens. That reality is the driving force behind NIJ's creation of an array of measures to make sure these issues are fully addressed.

Identifying the Needs of the Field

Input from the people who work on the front lines comes to NIJ via a group of practitioners organized as the Law Enforcement and Corrections Technology Advisory Council (LECTAC). In essence, LECTAC members are the voice of State and local practitioners who will be the end users of NIJ-developed products, services, standards, guidelines, and publications. They work through the National Law Enforcement and Corrections Technology Centers (NLECTC), NIJ's one-stop technology education, assessment, and referral source for law enforcement and corrections agencies. LECTAC pinpoints needs and NIJ passes the information on to researchers, scientists, and engineers. Major imperatives are affordability, safety, effectiveness, and limited liability.

A Smart Gun (a gun that can be fired only by recognized users); through-the-wall surveillance systems (which can detect movement behind concrete walls); and advanced body armor inserts (lighter than the vests now used, they also protect against assault rifles) are among the products being developed on the basis of LECTAC recommendations.

Deciding on Priorities

Promising technologies and related policy issues are reviewed for NIJ by experts from the private sector and various Federal agencies. These knowledgeable representatives constitute the Technology and Policy Assessment Panel, whose primary function is presenting different perspectives on the best approaches to getting new technologies into practitioners' hands in both the short and long term. Legal, social, and other problems that might arise in developing a specific product are examined in depth. One of the Panel's subcommittees is dedicated to investigating liability, a recurring issue for criminal justice agencies.

It was the Panel that recognized the potential to adapt for law enforcement use some of the products developed for the military; the result has been a vigorous Justice-Defense Department collaboration on a number of products, including the ring airfoil projectile, a nonlethal deterrent device initially developed for use by the National Guard; a laser dazzler, which uses laser light to temporarily immobilize suspects; and an explosives diagnostic system that detects bombs and similar devices.

A paramount concern in developing new equipment and technology is uncovering and understanding the needs of those who will use it.

Refining and Standardizing Procedures

The work of law enforcement and corrections agencies encompasses a vast array of issues. These agencies operate best when they have access to the most advanced techniques and proven practices. Through a process involving technical working groups (TWG's), each dedicated to a specific discipline or practice, NIJ helps to identify the best techniques and practices, develop standardized procedures, and draw on

community opinion in the shaping of its long-range policies. The goal of each TWG is to produce objective, comprehensive, verifiable guidelines and procedures.

TWG's are established in response to community-articulated issues and in response to requests from the criminal justice community. A key component is a resource pool of organizations and experts in the field for which a TWG has been established. The guidelines for death investigations, recently published by NIJ, were developed through the work of a TWG.³²

In recent months, NIJ has set up TWG's to develop procedures for investigating bomb and explosive evidence, crime scenes, and arson; using eyewitness evidence; and responding to electronic crime. The guidelines for each procedure will be developed by surveying representatives of all relevant disciplines and arriving at a consensus that reflects their diverse perspectives.

Coordinating the Work of Federal Agencies

The Justice Department is only one of several Federal agencies that work on research and technology development that could be useful in law enforcement and corrections. For example, advances in communications and transportation could be adopted or adapted for police use. To avoid costly duplication, the many Federal agencies that conduct these types of activities now share information through the Technology Policy Council (TPC).³³

One way TPC maximizes the value of investments in research and development is by tracking Federal initiatives under way in all participating agencies.

As the executive agent for TPC, NIJ maintains

³² *National Guidelines for Death Investigation*, Research Report, Washington, D.C.: U.S. Department of Justice, National Institute of Justice, December 1997 (NCJ 167568).

³³ Initially, the Attorney General requested that the law enforcement and corrections components of the Justice Department that conduct research and development meet regularly to share information about their programs. Subsequently, other Federal agencies joined TPC, creating an interagency council with representatives from several departments.

a list of initiatives, which currently contains more than 150 projects at some stage of development.

Community Acceptance— An Essential Component

The technology tools developed under NIJ sponsorship must not only meet the tests of scientific soundness, cost-effectiveness, and responsiveness to practitioner needs, they also must be socially acceptable. That is, they must reflect community perceptions of appropriate and valid use.

Social acceptability is particularly important when unfamiliar technologies, such as new methods of non-lethal incapacitation, are proposed. Ensuring that the community has the opportunity to become familiar with proposed tools and technologies is the work of the Community Acceptance Panel, through which NIJ asks representatives with highly differing points of view to express their views and concerns. A typical panel, for example, might be composed of representatives from the American Civil Liberties Union, Hand-Gun Control, the National Rifle Association, the National Association for the Advancement of Colored People, neighborhood public housing associations, and crime watch groups. New and proposed technologies are presented to the panel by experts and criminal justice practitioners. NIJ uses the Panel's reactions to improve the way the technology programs are presented to the public and, if necessary, to modify the programs or specific products. The Community Acceptance Panel is not the only way NIJ receives public input about a new technology, but it is the most structured way, and every effort is made to achieve a balanced public perspective.

For More Information

Visit the Web site of the National Law Enforcement and Corrections Technology Center at <http://www.nlectc.org>.

Visit the Web site of the National Institute of Justice, Office of Science and Technology at <http://www.ojp.usdoj.gov/nij/sciencetech>.

Guiding the User of State-of-the-Art Technology

Criminal justice agencies face the same imperative for ongoing technological advancement as do other organizations. For that reason, NIJ has spearheaded technology-related research and development to produce life-saving equipment and devices that promise to prevent crime and improve criminal justice. NIJ also develops performance standards for equipment, tests equipment against them, and issues guidelines for using the equipment. In 1998, standards and guidelines were developed in several areas, and a number of training and technical assistance initiatives were undertaken to familiarize prospective users with the new technologies.

Measuring Performance, Issuing Standards

In law enforcement and corrections, where lives are on the line every day, equipment needs to meet rigorous and exacting standards for safety, dependability, and effectiveness. For more than 25 years, NIJ has developed standards for commercial equipment and tested it to help officials make informed decisions when purchasing such items as protective clothing, vehicles, weapons, and communications systems. In 1998, NIJ released standards for several types of equipment, among them:

- **Antennas used by law enforcement in radio communication.** The revised standard covers newer antennas, at base stations or other fixed sites, that use new frequency bands.
- **Pistols used by law enforcement officers.** Performance requirements were set for new weapon designs and calibers, and testing procedures were revised.

Guidance for Technology Users

Guidelines, as distinct from standards, present information in nontechnical terms and reach a wide audience. For example, NIJ developed guidelines for death investigations in conjunction with the Bureau of Justice Assistance and the Centers for Disease Control and Prevention; the booklet has been one

of NIJ's most frequently requested publications. Other guidelines issued in 1998 include:

- **Batteries used by law enforcement.** Vehicles, flashlights, mobile radios, laptop computers, and cell phones all require batteries. The guidelines cover performance advantages and disadvantages, cost-effectiveness, and handling and maintenance.
- **Designing and building forensics laboratories.** Developed with the American Society of Crime Laboratory Directors, the guidelines are a resource for building or refurbishing a laboratory. Safety, security, and adaptability to changing technologies were the main considerations in developing the guidelines.

Demonstrating Safe, Effective Riot Control in Prisons

A mock prison riot held at the West Virginia penitentiary showcased emerging technologies useful for rapid, safe response. Some 300 observers watched several scenarios set up to depict real-life riot situations. They included a stabbing and hostage-taking during a basketball game, an uprising in the prison chapel, cellblock takeovers, and high-speed escapes by boat and automobile.

The basketball game scenario featured a range of equipment used for restraint and communication. An electronic fence foiled an attempted escape, and other inmates were prevented from fleeing when their vehicle was disabled by a road spike. During the simulated hostage negotiations, a voice translator was used to talk with inmates who could not speak English. Participants used a biometric device to verify the identities of staff and inmates and an ion tracker to detect explosives in the facility.

Other scenarios demonstrated the capabilities of night-vision devices, security systems, officer protection products, drug detection systems, and location/tracking systems. Telemedicine technology was used to respond to staged injuries.

Saving Resources Through Technology-Based Training

Using advanced technologies as training tools can be a relatively low-cost alternative or supplement to conventional classroom learning. NIJ is developing several training tools in a number of areas of interest to law enforcement and corrections and has created an Internet-based database, the Law Enforcement Instructional Technology Information System, to catalog training curricula that use advanced technologies.

Handling bomb threats. Bomb threats are among the most frightening and dangerous situations public safety officers face. Under NIJ sponsorship, the University of Houston is developing an interactive multimedia package that trains first responders to conduct bomb threat assessments that cover evaluating the situation, searching, and evacuating.

Because the Bomb Threat Training Simulator (BTTS) is in CD-ROM format, it requires only a multimedia-equipped computer and enables trainees to learn at their own pace, saving travel time, class time, and money. An evaluation of the initial version of BTTS showed it to be more effective than conventional bomb threat response training. On the basis of reviews by experts, NIJ provided additional funds to develop BTTS for actual field use, with rollout scheduled for mid-2000.

Analyzing bombs. Dealing with explosive devices requires an understanding of how they are made and what they are made of. With the Department of Defense and the FBI, NIJ is piloting and evaluating a better way for law enforcement to diagnose these devices. One tool, the RTR-3, is a computer-based, portable x-ray system that permits real-time diagnosis or enables the x-ray images of the devices to be transmitted electronically for examination. The RTR-3 is being piloted in 28 State and local agencies nationwide.

Training bomb disposal experts. To aid in the highly dangerous and delicate process of dismantling bombs, NIJ, along with the FBI, is developing a computer-based, interactive tool for training bomb disposal technicians. Packaged as a CD-ROM, it is intended as a refresher course, supplementing basic training.

Preparing weapons team responses. Rescuing hostages, using force, clearing rooms and buildings, and dealing with threats to school security are simulated by an interactive technology, the Weapons Team Engagement Trainer (WTET). Trainees equipped with a range of simulated weapons respond to various scenarios that are projected on large screens and can be replayed for evaluation purposes. Originally developed for the Navy, WTET was commercialized for law enforcement use and has been installed in the Los Angeles County Sheriff's Department.

Briefing the Field: NIJ's Technology Institutes

Transferring technology to law enforcement and corrections is the aim of the Technology Institutes NIJ has held to bring State and local agency officials up to speed on recent developments applicable to their fields. In two sessions held in 1998, one for law enforcement and another for corrections, the range of affordable, effective technologies currently available or in the pipeline was showcased.

At each weeklong Institute, some 24 officials selected from a pool of applicants were briefed on technologies being developed by NIJ and other Federal agencies. The Institutes also served as forums where participants discussed the specific challenges they face and explored possible solutions. NIJ staff were on hand to direct them to further information.

For More Information

Visit the Law Enforcement Instructional Technology Information System Web site at <http://www.leitis.com>, for information about training curricula.

Visit the Web site of the National Law Enforcement and Corrections Technology Center (NLECTC) at <http://www.nlectc.org>, for information about new products and technologies for law enforcement and corrections. Or contact NLECTC by phone (800-248-2742) or e-mail (nlectc@aspensys.com).

Forensic Laboratories: Handbook for Facility Planning, Design, Construction, and Moving, Research Report, Washington, D.C.: U.S. Department of Justice, National Institute of Justice, April 1998 (NCJ 168106).

New Technology Batteries Guide, NIJ Guide 200-98, Washington, D.C.: U.S. Department of Justice, National Institute of Justice, October 1998.

NIJ Standard 0112.03, Autoloading Pistols for Police Officers, Washington, D.C.: U.S. Department of Justice, National Institute of Justice, November 1998.

NIJ Standard 0204.02, Fixed and Base Station Antennas, Washington, D.C.: U.S. Department of Justice, National Institute of Justice, June 1998.

Exploring Issues of Special Concern

Understanding Crime in Its Context: The Project on Human Development in Chicago Neighborhoods

What makes some communities relatively safe and lawful while others experience high rates of crime, violence, and substance abuse? How do individual personalities, family relationships, school environments, and type of community interact to contribute to delinquency and criminal behavior? What characteristics—of communities, families, and individuals—enable citizens to lead crime-free lives even in high-risk neighborhoods? Using Chicago as a laboratory, researchers are attempting to answer such questions about the complex relationships among community, crime, delinquency, family, and individual development.

The Project on Human Development in Chicago Neighborhoods brings together experts from many disciplines to examine crime in the context of community. It combines two studies into a single integrated research effort. The first is an intensive examination of the social, economic, organizational, political, and

cultural structure of Chicago's neighborhoods and the changes that take place in them over time. The second is a series of longitudinal studies assessing the personal characteristics and changing circumstances of a sample of children and adolescents. Researchers have conducted surveys among nearly 9,000 residents of 343 Chicago neighborhood clusters, more than 2,800 key community leaders, and a sample of 6,000 children and adolescents (from birth through age 18). The Chicago Project goes beyond previous studies by examining individuals *and* their communities—as well as individuals *in* their communities.

NIJ is conducting the Chicago study in partnership with the Harvard School of Public Health. The Project is cofunded by the John D. and Catherine T. MacArthur Foundation; the National Institute of Mental Health and the Administration for Children, Youth and Families of the U.S. Department of Health and Human Services; and the U.S. Department of Education.

Understanding Community Influences Offers Practical Benefits

The study's focus on the effects of community and neighborhood contexts on individual behavior offers a deeper understanding of human development and the role of changing social environments. Already, researchers have amassed a wealth of information that reveals significant ways in which the social environment of neighborhoods shapes and determines behavior and that identifies the developmental pathways that attract people to or deter them from a variety of antisocial behaviors. Preliminary analyses have provided new insight into the origins of some of the Nation's most serious problems: delinquency, substance abuse, and other forms of criminal behavior. This knowledge will help practitioners and policymakers develop effective strategies for prevention, intervention, treatment, rehabilitation, and sanctions.

As the Project's researchers explore how communities influence individual development, they are addressing specific questions such as, "What role is played by the

Preliminary analyses have provided new insight into the origins of some of the Nation's most serious problems: delinquency, substance abuse, and other forms of criminal behavior. This knowledge will help practitioners and policymakers develop effective strategies for prevention, intervention, treatment, rehabilitation, and sanctions.

economic opportunities available in a community?" and "How are residents affected by a range of social factors operating in the community?" Another concept being explored is the "spheres of influence" or "nested contexts" within the larger community, which play important roles in human development. These influences range from social contexts, such as school and peer groups, to family relationships, to an individual's own health and temperament.

The research produced by the Chicago Project has other useful applications. For example, the study is generating a substantial database of information about a major urban area—its people, institutions, resources, and their relationships within communities—along with a detailed description of life in the city's neighborhoods. This information should prove valuable to community agencies and leaders in Chicago and other large cities.

Community Cohesion and Residential Stability Help Reduce Crime

The Project's researchers have found that a community's cohesiveness offers insights into the social mechanisms that link neighborhood poverty and instability with high crime rates. This cohesiveness, or collective efficacy, is defined as mutual trust and a willingness on the part of neighborhood residents to help maintain public order where they live. Examples of collective efficacy include monitoring children's play groups; helping one another; and intervening to prevent juvenile truancy, street-corner loitering, and similar antisocial behavior. The researchers also found that collective efficacy is itself influenced by the extent of a neighborhood's residential stability.

The study is devoting particular attention to early childhood and family economic conditions and the ways in which they are related to the services available in neighborhoods. The local environment plays a crucial role in a neighborhood's educational, recreational, and child care services; the question of why similar environments affect children differently, depending on their age, gender, and ethnicity, is being examined.

Underlying factors, such as a child's temperament and social isolation, may produce problems for both

parents and children. The researchers are looking at how these developments occur, hoping to generate findings useful in developing community initiatives to strengthen neighborhood-based service programs.

For More Information

Visit NIJ's Web site at <http://www.ojp.usdoj.gov/nij>. Click on "Program" and "Publications."

Visit the Project on Human Development in Chicago Neighborhoods' Web site at <http://phdcn.harvard.edu> for current Project information, including Project brochures, descriptions of funded grants, a list of recent scientific publications, newsletters, progress reports, press releases, and staff contact information. Requests to receive the Project's quarterly newsletter, "The Chicago Project News," can be made via the Web site.

Project on Human Development in Chicago Neighborhoods (PHDCN) Annual Report, November 1998. Available from PHDCN, Harvard School of Public Health, 677 Huntington Avenue, Boston, MA 02115; phone: 617-432-1227.

Sampson, Robert J., and Dawn Jeglum Bartusch, *Attitudes Toward Crime, Police, and the Law: Individual and Neighborhood Differences*, Research Preview, Washington, D.C.: U.S. Department of Justice, National Institute of Justice, June 1999 (FS 000240); and Obeidallah, Dawn A., and Felton J. Earls, *Adolescent Girls: The Role of Depression in the Development of Delinquency*, Research Preview, Washington, D.C.: U.S. Department of Justice, National Institute of Justice, July 1999 (FS 000244).

Sampson, R., S. Raudenbusch, and F. Earls. "Neighborhoods and Violent Crime: A Multilevel Study of Collective Efficacy," *Science* 277:918-924; see also by the same authors, *Neighborhood Collective Efficacy: Does It Help Reduce Violence?* Research Preview, Washington, D.C.: U.S. Department of Justice, National Institute of Justice, April 1998 (FS 000203).

Selner-O'Hagan, M.B., et al., "Assessing Exposure to Violence in Urban Youth," *Journal of Child Psychology and Psychiatry and Allied Disciplines* 39(2) (1998); see also by the same authors, *Assessing the Exposure of Urban Youth to Violence*, Research Preview, Washington, D.C.: U.S. Department of Justice, National Institute of Justice, November 1996.

Examining Youth and Crime Issues

Overall arrests of juveniles have been declining since 1994, but persons under the age of 18 still accounted for an estimated 19 percent of all persons arrested and 17 percent of all violent crime arrests in 1997.³⁴ During 1998, with support from NIJ, the University of Chicago published a special volume in the *Crime and Justice* series devoted exclusively to youth crime issues.³⁵ The volume's 10 essays by highly respected scholars focus especially on youth violence. Other NIJ-funded research is examining the developmental sequences that lead some children to engage in antisocial behavior, safety in schools, gang-related violence, and transfers of youth to adult courts.

Developmental Antecedents to Youth Violence

A great deal of research has been done on the importance of early childhood in shaping later criminal behavior. A study of New York prison inmates found that 68 percent of the sample reported some form of child victimization and 23 percent reported experiencing multiple forms of abuse and neglect, including physical and sexual abuse.³⁶ Such findings have important policy implications for developing prevention programs for youth and providing treatment services for offenders.

NIJ-funded research also has found that one of the most important influences in keeping violent crime low in urban neighborhoods is collective efficacy—that is, mutual trust among neighbors combined with a willingness to intervene on behalf of the common good, including supervision of neighborhood children.³⁷

³⁴ Snyder, Howard N., *Juvenile Arrests 1997*, Washington, D.C.: U.S. Department of Justice, Office of Juvenile Justice and Delinquency Prevention, 1998 (NCJ 173938).

³⁵ Tonry, Michael, and Mark H. Moore, eds., *Youth Violence*, vol. 24 in *Crime and Justice: A Review of Research*, Chicago: University of Chicago Press, 1998.

³⁶ Weeks, R., and C.S. Widom, *Early Childhood Victimization Among Incarcerated Adult Male Felons*, Research Preview, Washington, D.C.: U.S. Department of Justice, National Institute of Justice, April 1998 (FS 000204).

³⁷ Sampson, R.J., S.W. Raudenbush, and F. Earls, *Neighborhood Collective Efficacy—Does It Help Reduce*

(See “Understanding Crime in Its Context: The Project on Human Development in Chicago Neighborhoods,” page 44, for more details about these findings.)

Safety in Schools

As community institutions, schools can serve as the physical places and social networks where communities mobilize against violence. Although children are generally safer in school than they are elsewhere, the recent series of violent incidents has raised school crime and safety to the highest level of priority.

According to the 1998 joint U.S. Department of Education/U.S. Department of Justice *Annual Report on School Safety*, key indicators show that few of the murders and suicides of youth occur at school and that most schools did not report any serious violent crimes to police in 1996.³⁸ Other major findings include the following:

- The percentage of 12th graders injured in violence at school has not changed over the 20-year period, 1976–96, although the percentage threatened with injury showed a very slight overall upward trend.
- In 1996–97, 10 percent of all public schools reported at least one serious violent crime to police. Another 47 percent reported at least one less serious violent or nonviolent crime. The remaining 43 percent did not report any crimes to police.
- Elementary schools were much less likely than either middle or high schools to report any type of crime to the police in 1996–97.

Violence? Research Preview, Washington, D.C.: U.S. Department of Justice, National Institute of Justice, April 1998 (FS 000203); and Earls, Felton, *Linking Community Factors and Individual Development*, Research Preview, Washington, D.C.: U.S. Department of Justice, National Institute of Justice, September 1998 (FS 000230).

³⁸ U.S. Department of Education and U.S. Department of Justice, *Annual Report on School Safety: 1998*. See also Kaufman, P., X. Chen, S.P. Choy, K.A. Chandler, C.D. Chapman, M.R. Rand, and C. Ringel, *Indicators of School Crime and Safety 1998: Executive Summary*, Washington, D.C.: U.S. Departments of Education and Justice, October 1998 (NCES 98–251/NCJ 172215).

The NIJ-funded *High School Youths, Weapons, and Violence: A National Survey* examined the extent to which a national sample of male high school sophomores and juniors was involved in or otherwise affected by firearm-related activity and exposure to weapons in 1996.³⁹ Highlights of the survey findings include the following:

- Fifty percent of the juveniles surveyed felt that they could obtain firearms relatively easily.
- Family and friends were the primary sources of guns.
- The majority of respondents who said they carry or possess firearms said they did so primarily for protection.
- Most schools had implemented some violence-limiting measures.

An assessment of one student-level problem-solving curriculum for 11th grade students found that the program was responsible for a significant drop in fear levels as well as a decline in actual incidents of crime and violence.⁴⁰ Classroom conditions improved as well; by the end of the year, the number of teachers reporting that they spent a majority of their time dealing with disruptive students had been reduced by half.

The curriculum brings together students, teachers, administrators, and the police to identify problems and develop responses. The program's major components include regular meetings among faculty, administrators, and the police; problem-solving classes for students; and regular reviews by police and teachers to identify problem students.

Replication of the program is needed in different school settings and regions of the country to determine the project's potential for positive outcomes.

³⁹ Sheley, J.F., and J.D. Wright, *High School Youths, Weapons, and Violence: A National Survey*, Research in Brief, Washington, D.C.: U.S. Department of Justice, National Institute of Justice, October 1998 (NCJ 172857).

⁴⁰ Kenney, D., *Crime in the Schools: A Problem-Solving Approach*, Research Preview, Washington, D.C.: U.S. Department of Justice, National Institute of Justice, April 1998 (FS 000224).

⁴¹ Huff, C.R., *Comparing the Criminal Behavior of Youth Gangs and At-Risk Youth*, Research in Brief, Washington, D.C.: U.S.

Gang-Related Violence

In the area of gang violence, an NIJ-funded study corroborates previous findings that gang members are more likely to engage in serious and violent crimes. More significantly, however, the research identified windows of opportunity for intervention and revealed that, contrary to popular belief, reprisals suffered by those youths who resisted overtures to join a gang were often milder than the serious assaults endured by youths during gang initiation.⁴¹

These findings underscore the need for effective gang-resistance education programs directed at preteens, especially those prone to delinquent and violent behavior.

In another NIJ study, interviews with 16- to 24-year-old males with violent histories revealed that young men saw violence as a way to achieve and maintain social power and dominance. It also was seen as a means to acquire flashy cars, control or humiliate others, defy authority, settle drug-related disputes, attain retribution, satisfy the need for thrills, and respond to challenges of one's manhood. The presence of guns, alcohol, or drugs also tended to influence social interactions leading to violence. The study identified several factors, such as the reaction of bystanders, that affect outcomes. Findings indicate that teaching negotiation and conflict avoidance skills under conditions that mimic the street can be effective.⁴²

Europeans are seeing a significant increase in juvenile crime, and the trends in juvenile violence in Europe appear to parallel the American experience. Although socioeconomic conditions such as rising unemployment and poverty were linked with increased juvenile crime rates, one study of European gangs revealed that an individual's family history of violence was a key indicator.⁴³

Department of Justice, National Institute of Justice, October 1998 (NCJ 172852).

⁴² Fagan, J., *Adolescent Violence: A View From the Street*, Research Preview, Washington, D.C.: U.S. Department of Justice, National Institute of Justice, January 1998 (FS 000189).

⁴³ Pfeiffer, C., *Trends in Juvenile Violence in European Countries*, Research Preview, Washington, D.C.: U.S. Department of Justice, National Institute of Justice, May 1998 (FS 000202).

Juvenile Transfers to Adult Courts

Several ongoing studies are examining the implications of the trend to adjudicate serious juvenile offenders in adult courts rather than through the juvenile justice

system. According to the National Survey on Sentencing Structures, 35 States have made it easier to transfer juveniles to adult courts, and a larger number of youths are being sentenced as adults and incarcerated in adult prisons.

For More Information

Fagan, J., *Adolescent Violence: A View From the Street*, Research Preview, Washington, D.C.: U.S. Department of Justice, National Institute of Justice, January 1998 (FS 000189).

Greenwood, P.W., *Costs and Benefits of Early Childhood Intervention*, OJJDP Fact Sheet, Washington, D.C.: U.S. Department of Justice, Office of Juvenile Justice and Delinquency Prevention, February 1999 (FS 9994).

Huff, C.R., *Comparing the Criminal Behavior of Youth Gangs and At-Risk Youth*, Research in Brief, Washington, D.C.: U.S. Department of Justice, National Institute of Justice, October 1998 (NCJ 172852).

Joint Justice Department and Education Department Report Shows Most Crime Against Students Occurs Away From Schools, BJS Fact Sheet, Washington, D.C.: U.S. Department of Justice, Bureau of Justice Statistics, October 1998 (NCES 98–251).

Kaufman, P., X. Chen, S.P. Choy, K.A. Chandler, C.D. Chapman, M.R. Rand, and C. Ringel, *Indicators of School Crime and Safety 1998*, Washington, D.C.: U.S. Departments of Education and Justice, 1998 (NCES 98–251/NCJ 172215).

Kenney, D., *Crime in the Schools: A Problem-Solving Approach*, Research Preview, Washington, D.C.: U.S. Department of Justice, National Institute of Justice, August 1998 (FS 000224).

Pfeiffer, C., *Trends in Juvenile Violence in European Countries*, Research Preview, Washington, D.C.: U.S. Department of Justice, National Institute of Justice, May 1998 (NCJ 167029).

Sheley, J.F., and J.D. Wright, *High School Youths, Weapons, and Violence: A National Survey*, Research in Brief, Washington, D.C.: U.S. Department of Justice, National Institute of Justice, October 1998 (NCJ 172857).

Tonry, Michael, and Mark H. Moore, eds., Youth Violence, vol. 24 in *Crime and Justice: A Review of Research*, Chicago: University of Chicago Press, 1998.

Weeks, R., and C.S. Widom, *Early Childhood Victimization Among Incarcerated Adult Male Felons*, Research Preview, Washington, D.C.: U.S. Department of Justice, National Institute of Justice, April 1998 (FS 000204).

Placing juveniles in adult facilities raises several issues:

- **Housing:** Integrating youth with adult inmates exposes them to potential rape or assault; yet segregated housing may not be available, and isolation for protection may increase the risk of suicide.
- **Programming:** Juveniles may be subject to mandatory education laws in addition to having different needs in terms of diet and physical exercise. Discipline methods for incarcerated adults may not be appropriate for juveniles.
- **Recidivism:** The most common change in State juvenile laws in recent years has been in transferring juveniles to the adult court system.⁴⁴ However, the findings about how transferring juveniles to the adult criminal justice system affects recidivism rates are quite limited.

Many States also have changed their laws with regard to confidentiality of a juvenile's criminal record and now are opening court proceedings to the public. Several States have created laws that make the juvenile's parents accountable for the child's crimes. For example, some States require parents to pay court or supervision fees. Legislation passed in 1995 in Idaho, Indiana, and New Hampshire requires parents to pay fees toward their child's custody in a State institution.

⁴⁴ 1996 National Survey of State Sentencing Structures, Washington, D.C.: U.S. Department of Justice, Bureau of Justice Assistance, September 1998 (NCJ 169270).

Issues in Sentencing and Corrections

The number of people incarcerated in the United States has more than tripled since 1980, and now tops 1 million.⁴⁵ And although the rate of increase seems to be leveling out, prison populations continue to rise.

A significant portion of this growth is attributable to sentencing reforms, such as mandatory-minimum and three-strikes laws, and to changing policies on parole release. The challenge of managing the influx of offenders has given rise to new approaches based in the courts and elsewhere. It also has generated new ways of thinking about how to manage the increasing number of offenders who are released into the community after serving their sentence and how to deal with the public safety issues that accompany their release.

Effects of Sentencing Reform

The amount of time offenders serve in prison is almost always less than the time they are sentenced to serve.⁴⁶ According to some critics of sentencing practices, large differences between time sentenced and served—particularly for violent offenders—drive a conceptual wedge between public expectations of punishment and systems practice, eroding public confidence.

To ensure that violent offenders serve larger portions of their sentences, Congress established the Violent Offender Incarceration and Truth-in-Sentencing (VOI/TIS) program through the 1994 Crime Act. Through grants to States, VOI/TIS helps States to ensure that violent offenders are incarcerated with more certainty and with longer, more determinate sentences.

NIJ has been working with the Justice Department's Corrections Program Office (CPO) to support research

aimed at understanding the impacts of VOI/TIS. Collaborating with CPO and consulting with corrections practitioners, sentencing policymakers, and researchers, NIJ is evaluating programs funded under VOI/TIS and conducting related research that will improve the ability of State and local jurisdictions to achieve the goals of their violent offender and truth-in-sentencing programs.

Rethinking Justice

To explore sentencing issues in depth, NIJ and CPO launched a series of executive sessions on sentencing and its implications for corrections. Begun in 1998, the sessions bring together practitioners and scholars foremost in their fields to find out if there are better ways to think about the purposes, functions, and interdependence of sentencing and corrections.

To better manage the flow of offenders, many jurisdictions are experimenting with specialized courts that streamline case processing and make services available to keep defendants from returning to court. Drug courts, for example, feature a treatment component, backed by the authority of the judge. NIJ-sponsored evaluations of drug courts in several jurisdictions are now under way, with preliminary findings showing reduction in reoffending by those sentenced. The issue of cost-effectiveness is of particular interest in these evaluations.

Restorative justice, another fairly recent innovation, attempts to repair the harm caused by crime and rebuild relationships in the community. The victim's perspective is central to deciding how to repair the harm caused by crime. The sanctions imposed also depart from tradition, requiring offenders to accept responsibility and act to repair the harm they caused. NIJ has been active in promoting the understanding of restorative justice in a number of ways. Regional symposia, for example, have produced an online "notebook," which is available at NIJ's Web page (www.ojp.usdoj.gov/nij/rest-just/index.htm).

⁴⁵ Bureau of Justice Statistics, *Correctional Populations in the United States, 1996*, Washington, D.C.: U.S. Department of Justice, Bureau of Justice Statistics, April 1999 (NCJ 171103):iii.

⁴⁶ Ditton, Paula M., and Doris James Wilson, *Truth in Sentencing in State Prisons*, Special Report, Washington, D.C.: U.S. Department of Justice, Bureau of Justice Statistics, January 1999 (NCJ 170032).

Like restorative justice, community justice aims to “restore” victim and offender, but is distinctive in its focus on the community. Local residents work on an equal footing with government agencies to identify needs and responses, with partnerships formed among the various stakeholders. Along with other Office of Justice Programs bureaus, NIJ cosponsored a major conference on community justice in 1998.

Correctional Health Care

Changing trends in the health of prison and jail populations have brought health care issues to the top of the corrections management agenda. NIJ continues its work with the Centers for Disease Control and Prevention (CDC) to measure the extent of HIV/AIDS, sexually transmitted diseases, and tuberculosis in prisons and jails. Surveys have identified high rates of infection. The most recent survey (1994–95) confirmed that AIDS is far more prevalent among inmates than in the overall U.S. population.⁴⁷ The results of the 1996–97 survey are expected in mid-1999.

Federal courts have confirmed prisoners’ constitutional right to adequate health care. Providing access to specialist physicians can be difficult because correctional facilities are often in rural areas where specialists are in short supply, and taking prisoners to specialists outside the prison poses security risks.

Telemedicine, the remote delivery of health care via telecommunications, holds great promise as an alternative. This new mode of care has been successfully demonstrated and implemented in a correctional setting, under NIJ sponsorship.⁴⁸ It has the potential to contain costs while improving access to medical specialists not otherwise available.

⁴⁷ The incidence of AIDS among State and Federal inmates in 1994–95 was 518 per 100,000, and among city and county inmates 706. By contrast, the incidence in the U.S. population (1993 data) was 41 per 100,000. Hammett, Theodore M., et al., *1994 Update: HIV/AIDS and STD's in Correctional Facilities, Issues and Practices*, Washington, D.C.: National Institute of Justice and Centers for Disease Control and Prevention, December 1995 (NCJ 156832).

⁴⁸ McDonald, Douglas C., et al., *Telemedicine Can Reduce Correctional Health Care Costs: An Evaluation of a Prison Telemedicine Network*, Washington, D.C.: U.S. Department of Justice, National Institute of Justice, March 1999 (NCJ 175040).

Women Offenders

Managing and meeting the needs of female prisoners are issues that have come to the forefront because of the surge in their numbers in the past decade. Although women still account for a small proportion of the prison population, their numbers are increasing much faster than that of male inmates. Women’s needs are distinct in part because of their disproportionate victimization from sexual or physical abuse and their responsibility for children.

A Department of Justice update on women in criminal justice focused considerable attention on women offenders and female juvenile offenders. The report, which NIJ was instrumental in preparing, noted that the increased number of women offenders has not been matched by enhanced attention to specialized programs. In a separate study, correctional officials and administrators identified a number of needs related to women offenders: a greater number of alternatives to incarceration; classification and screening for needs related to childhood sexual abuse, spousal abuse, and offenders’ children; management styles that differ from those used with men; and more drug treatment and mental health services.

The corrections officials identified effective or innovative programs, citing those that offer strong female role models, the chance to form supportive peer networks, and attention to women’s particular experiences as victims of abuse and as parents.⁴⁹ To further spotlight promising programs for women offenders, NIJ examined the New York City-based Women’s Prison Association, which offers an array of services, including transitional assistance to women who are HIV-positive or at risk of contracting HIV.⁵⁰

⁴⁹ Office of Justice Programs, *Women in Criminal Justice: A 20-Year Update*, Special Report, Washington, D.C.: U.S. Department of Justice, 1998 (NCJ 173416); and Morash, Merry, Timothy S. Bynum, and Barbara A. Koons, *Women Offenders: Programming Needs and Promising Approaches*, Research in Brief, Washington, D.C.: U.S. Department of Justice, National Institute of Justice, August 1998 (NCJ 171668).

⁵⁰ Conly, Catherine, *The Women’s Prison Association: Supporting Women Offenders and Their Families*, Program Focus, Washington, D.C.: U.S. Department of Justice, National Institute of Justice, December 1998 (NCJ 172858).

Residential Substance Abuse Treatment

Criminologists recognize that the high proportion of offenders who are substance abusers makes in-custody treatment appropriate for this population.⁵¹ The 1994 Crime Act provided expanded funds for residential substance abuse treatment, encouraging the States to adopt comprehensive programs, including relapse prevention and aftercare. The Corrections Program Office of the Department of Justice, which administers the program, transferred funds to NIJ to evaluate these programs in several States. These process evaluations are now nearing completion.

Reentry

Communities face public safety and health concerns when large numbers of offenders are released and returned to their homes. In addition, ex-offenders need to secure jobs to reduce their risk of recidivism and increase the likelihood that their reentry will go smoothly.

Health care after release. The health risk posed by inmates returning to the community suggests the need for collaboration between public health and corrections. In a study conducted with the CDC, NIJ found that virtually all correctional systems undertake some collaboration with public health agencies, but needs persist, especially in discharge planning and transitional services.⁵² Working with the National Commission on Correctional Health Care, NIJ is identifying the health care needs of soon-to-be-released inmates, with the goal of generating evidence useful for informing public policy to better protect offender and community health.

Academic and life skills programming. Finding a job can be a problem for released offenders because they often lack skills, have little or no job-seeking experience, and may encounter employers who refuse

For More Information

Visit the Sentencing and Adjudication section of the NIJ Web page at <http://www.ojp.usdoj.gov/nij/saap/welcome.html>.

Bureau of Justice Statistics, *Correctional Populations in the United States, 1996*, Washington, D.C.: U.S. Department of Justice, Bureau of Justice Statistics, April 1999 (NCJ 171103).

Ditton, Paula M., and Doris James Wilson, *Truth in Sentencing in State Prisons*, Special Report, Washington, D.C.: U.S. Department of Justice, Bureau of Justice Statistics, January 1999 (NCJ 170032).

Hammett, Theodore M., *Public Health/Corrections Collaborations: Prevention and Treatment of HIV/AIDS, STD's, and TB*, Research in Brief, Washington, D.C.: U.S. Department of Justice, National Institute of Justice, July 1998 (NCJ 169590).

Lipton, Douglas S., *The Effectiveness of Treatment for Drug Abusers Under Criminal Justice Supervision*, Research Report, Washington, D.C.: U.S. Department of Justice, National Institute of Justice, November 1995 (NCJ 157642).

McDonald, Douglas C., et al., *Telemedicine Can Reduce Correctional Health Care Costs: An Evaluation of a Prison Telemedicine Network*, Washington, D.C.: U.S. Department of Justice, National Institute of Justice, March 1999 (NCJ 175040); and McDonald, Douglas C., Andrea Hassol, and Kenneth Carlson, "Can Telemedicine Reduce Spending and Improve Prisoner Health Care?" in *NIJ Journal*, April 1999 (JR 000239).

Morash, Merry, Timothy S. Bynum, and Barbara A. Koons, *Women Offenders: Programming Needs and Promising Approaches*, Research in Brief, Washington, D.C.: U.S. Department of Justice, National Institute of Justice, August 1998 (NCJ 171668).

Office of Justice Programs, *Women in Criminal Justice: A 20-Year Update*, Special Report, Washington, D.C.: U.S. Department of Justice, 1998 (NCJ 173416).

to hire people with criminal records. Prisons have long offered academic and life skills programs to help meet offenders' needs. NIJ, the National Institute of Corrections, and the U.S. Department of Education's Office of Correctional Education have cooperated on a number of projects addressing these job and educational needs. The Delaware Life Skills Program, for example, offers academic, violence reduction, and life

⁵¹ See, for example, Lipton, Douglas S., *The Effectiveness of Treatment for Drug Abusers Under Criminal Justice Supervision*, Research Report, Washington, D.C.: U.S. Department of Justice, National Institute of Justice, November 1995 (NCJ 157642):2-3.

⁵² Hammett, Theodore M., *Public Health/Corrections Collaborations: Prevention and Treatment of HIV/AIDS, STD's, and TB*, Research in Brief, Washington, D.C.: U.S. Department of Justice, National Institute of Justice, July 1998 (NCJ 169590).

skills training.⁵³ Although programs have not been rigorously evaluated, it is clear that certain components have been successful among some inmates.

Case management. To aid in the reentry process, some jurisdictions have borrowed the case management approach of mental health and social service workers. Most often used by probation and parole officers, case management aims to deliver services geared to reducing recidivism and to address health care issues, including drug treatment, joblessness, and homelessness. NJ examined several case management

models and the major issues they raise. The greatest contribution of the approach to date has been to reduce recidivism and supervision costs for mentally disordered or developmentally disabled offenders.⁵⁴

⁵³ Finn, Peter, *The Delaware Department of Correction Life Skills Program*, Program Focus, Washington, D.C.: National Institute of Justice and National Institute of Corrections, August 1998 (NCJ 169589).

⁵⁴ Healey, Kerry Murphy, *Case Management in the Criminal Justice System*, Research in Action, Washington, D.C.: U.S. Department of Justice, National Institute of Justice, February 1999 (NCJ 173409).