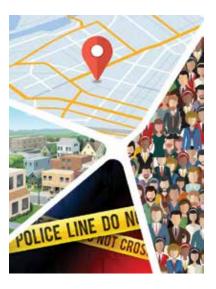# RESEARCH WILL SHAPE THE FUTURE OF PROACTIVE POLICING

BY **PAUL A. HASKINS**

Proactive policing — strategies and tools for stopping crime before it occurs — appears to be here to stay, but important challenges persist. Some relate to constructing more reliable measures of effectiveness — for instance, how to measure a strategy's impact on crime when residents are reluctant to report it. Others are inherent in the approach, such as how to harmonize preventive strategies with community interests and protection of residents' legal rights.

Research already in hand has persuaded leading criminologists that certain types of proactive policing, such as aspects of hot spots policing, can curb crime, especially in the near term and in targeted areas. Particularly in larger cities, law enforcement is leveraging powerful computer-based algorithms that analyze big data to isolate crime breeding grounds (place-based policing) and to pinpoint likely future offenders (person-based policing).

Where proactive policing theory and practice will lead law enforcement in coming years, researchers note, will depend in part on efforts to address research-related concerns such as:

- A need for wider use of more exacting research designs, such as randomized controlled trials (RCTs), to better evaluate the merits and replicability of promising policing methods.

- A need for more accurate measures of program success or failure, given recognition of the insufficiency of conventional measures. (For example, a low rate of calls for police service could reflect residents' reluctance to report crime, rather than low crime.)

- Continued progress in convincing law enforcement leaders to advance high-utility research by executing protocols with fidelity to the model and adopting scientifically sound best practices.

At the same time, proactive policing approaches face the challenge of maintaining or strengthening law enforcement's connections with the community — by continually building trust and working to institutionalize respect for residents' legal rights while targeting violent offenders. One concern related to community interests is the potential for data analysis algorithms to skew proactive policing activities in communities.

"The promise of proactive policing strategies makes it critical that we understand their effectiveness through rigorous and replicable research."

If past is prologue, NIJ will remain a principal driver of proactive policing research nationally by funding and managing empirical studies along the spectrum of proactive policing approaches. As NIJ Director David B. Muhlhausen observed in a January 2018 column, "The promise of proactive policing strategies makes it critical that we understand their effectiveness through rigorous and replicable research."[1]

Muhlhausen acknowledged the impact of a recent comprehensive study of proactive policing by the National Academies of Sciences, Engineering, and Medicine, funded in part by NIJ. The November 2017 National Academies final report, *Proactive Policing: Effects on Crime and Communities,* concluded after scouring the field of research that certain proactive policing methods are succeeding at reducing crime.[2] At the same time, the National Academies pointed to extensive gaps in proactive policing research as well as evidence that certain once-promising proactive policing approaches have not proved to be effective.

Calling recent decades a "golden age" of policing research, the National Academies report urged intensified research assessing the promise of proactive policing. "Much has been learned over the past two decades about proactive policing practices," the report states. "But, now that scientific support for these approaches has accumulated, it is time for greater investment in understanding what is cost effective, how such strategies can be maximized to improve the relationships between the police and the public, and how they can be applied in ways that do not lead to violations of the law by police."

Defining Proactive Policing

The term "proactive policing" encompasses a number of methods designed to reduce crime by using prevention strategies. By definition, it stands in contrast to conventional "reactive" policing, which for the most part responds to crime that has occurred. The National Academies report underscored that the intended meaning of proactive policing is broad and inclusive: "This report uses the term 'proactive policing' to refer to all policing strategies that have as one of their goals the prevention or reduction of crime and disorder and that are not reactive in terms of focusing primarily on uncovering ongoing crime or on investigating or responding to crimes once they have occurred. Specifically, the elements of proactivity include an emphasis on prevention, mobilizing resources based on police initiative, and targeting the broader underlying forces at work that may be driving crime and disorder."

The report identified four categories within proactive policing: place-based, person-focused, problem-oriented, and community-based. Exhibit 1 presents descriptions of these classifications and the primary policing strategies that fall under each.

In the field, however, the lines between categories of proactive policing are often blurred. For example, William Ford, an NIJ physical scientist and senior science advisor, pointed out that a hot spots policing program — focusing resources on small, concentrated crime zones — may employ aspects of one or more other proactive policing approaches such as focused deterrence, community policing, or problem-oriented policing. That complexity can complicate evaluations of any one policing method.

History and NIJ's Role

To discern NIJ's role in proactive policing research going forward, Ford said, "Attention must be paid to the past, because we paved that ground."

Early iterations of experimental proactive policing were innovative foot patrols focused on preventing crime and assessing the impact of patrolling squad cars. In the early 1970s, the Kansas City Preventive Patrol Experiment yielded the fresh insight that routine patrolling in police cars was of limited value in preventing crime and making residents feel safer.

In the 1980s, studies of the source of 911 calls in Minneapolis helped lay the cornerstone of place-based policing, including hot spots techniques. (See the related article "From Crime Mapping to Crime Forecasting: The Evolution of Place-Based Policing" on page 96.)

In the 1990s, community policing took root, said Joel Hunt, NIJ senior computer scientist. By the 2000s, computers were supplanting push pins and wall-mounted crime maps. Data-driven policing strategies — typically employing algorithm-controlled electronic maps — began to emerge in the same decade, with extensive NIJ support. Focused deterrence, a strategy designed to discourage crime by confronting high-risk individuals and convincing them that punishment will be certain, swift, and severe, is a product of the current decade.

Collectively, research to date has discerned a stronger overall crime-reduction effect from place-based strategies — such as certain hot spots policing approaches — than from person-based strategies such as focused deterrence, Hunt noted. However, a recent meta-analysis of focused deterrence strategies by Anthony A. Braga, David Weisburd, and Brandon Turchan found that interventions that targeted gangs/ groups and high-risk individuals were most effective in reducing crime.[3] The authors concluded that "the largest impacts are found for programs focused on the most violent offenders."[4]

One example of a person-focused program initially falling short of expectations is the Strategic Subjects List pilot program implemented by the Chicago Police Department in 2013. The list consisted of 426 individuals calculated to be at highest risk of gun

violence. The design called for interventions aimed at reducing violence by and toward those on the list, with a resultant reduction in the city homicide rate. An NIJ-sponsored study by RAND Corporation researchers found, however, that the Chicago pilot effort "does not appear to have been successful in reducing gun violence."[5]

New NIJ funding is aimed at clarifying the factors informing commercial algorithms that drive certain proactive approaches, Hunt said. Work also continues on police legitimacy — establishing trust in the community's eyes — and procedural justice, which falls under community policing.

Pushing for More Rigorous Research Methodologies

The National Academies and NIJ agree on the need for enhanced experimental program evaluations through rigorous RCTs. However, the conclusion by the National Academies that focused deterrence policy is effective is solely based on a number of quasi-experiments. RCTs randomly divide an experiment's subjects into groups that receive the experimental treatment and control groups that do not. There is broad agreement that RCTs are generally the best methodology for establishing causality. To improve the scientific rigor of policing research, NIJ's 2018 policing research solicitation made it clear that projects employing RCTs would be favored going forward.

As NIJ Director Muhlhausen explained during the 2017 Annual Meeting of the American Society of Criminology, "RCTs are a powerful tool in understanding what works and is scalable across contexts. When we know what works, we can fund what works."

RCTs are valued as more reliable scientific methods not only for evaluating whether new policing methods work and can be replicated, but also for testing previous findings of less precise methods. For example, with support from NIJ and the Bureau of

Category	Description	Types
Exhibit 1. The Four Categories of Proactive Policing		
Place-Based	Preventing crime by using data to isolate small geographic areas where crime is known to be concentrated.	*Hot Spots Policing/Crime Mapping* Policing focused on small areas where crime is clustered, using maps and geographic information systems to identify clusters of crime. Statistical software may be used to distinguish random clusters of crime from hot spots.[1] *Predictive Policing* Using advanced analytics and intervention models to predict where crime is likely to happen.[2]
Person-Focused	Preventing crime by using data to identify strong concentrations of crime within small populations.	*Focused Deterrence* A strategy that targets specific criminal behavior by a small number of offenders, who are confronted and informed that continued criminal behavior will not be tolerated.[3] *Stop, Question, and Frisk/Stop and Frisk* The practice of officers stopping and detaining individuals if they have reasonable suspicion that the person is committing or about to commit a crime.[4]
Problem-Oriented	Identifying underlying social causes of crime and tailoring solutions to those causes.	*Problem-Oriented Policing* An analytics method used by law enforcement to develop strategies that prevent and reduce crime by targeting underlying conditions that lead to recurring crime. The method calls for law enforcement to employ a range of approaches to problems and evaluate their impact.[5]
Community-Based	Using community resources to identify and control sources of crime.	*Community-Oriented Policing* A philosophy promoting strategies that support systematic use of community partnerships and problem-solving techniques to proactively address conditions giving rise to crime.[6] *Police Legitimacy* Building public trust and confidence in law enforcement so that the public accepts police authority and believes police actions are justified and appropriate.[7] *Procedural Justice Policing* An antecedent to police legitimacy; the idea of perceived fairness in law enforcement processes, involving a chance to be heard and the perception that police are neutral, trustworthy, and treat individuals with dignity and respect for their rights.[8] *Broken Windows Policing* Intense enforcement against minor offenses, such as broken windows, on the theory that neighborhoods marked by social and physical disorder suggest resident indifference to crime and invite more predatory crime.[9]

Notes

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4. National Institute of Justice, CrimeSolutions.gov, "Program Profile: Stop, Question, and Frisk in New York City," https://crimesolutions.gov/ProgramDetails.aspx?ID=603.

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8. Ibid., 9-10.

9. Robert J. Sampson and Stephen W. Raudenbush, *Disorder in Urban Neighborhoods—Does It Lead to Crime?,* Research in Brief (Washington, DC: U.S. Department of Justice, National Institute of Justice, February 2001), NCJ 186049, https://www.ncjrs.gov/pdffiles1/nij/186049.pdf; and George L. Kelling, *"Broken Windows" and Police Discretion,* Research Report (Washington, DC: U.S. Department of Justice, National Institute of Justice, October 1999), NCJ 178259, https://www.ncjrs.gov/pdffiles1/nij/178259.pdf.

Justice Assistance, researchers employed RCTs to assess the effectiveness of a focused deterrence program model previously used to break up a drug market in a small Southern city. The original research, employing a quasi-experimental technique limited to that single site, found the treatment to be effective. But the subsequent RCT, using seven different areas, did not validate that finding: The treatment was found to be ineffective in three of five sites where implemented, while two sites were unable to implement it, researchers reported in 2017.[6]

NIJ scientists caution that RCTs, for all their benefits, are not a magic bullet for all experimental settings. "There are limits on situations in which they can be administered effectively," said Hunt. For example, he said, "I can't randomize where incidents occur, only the treatment, and then only in some cases." Further, police chiefs can be reluctant to give a perceived treatment "benefit" to one group while denying it to control groups, Hunt added. RCTs can also be complex, partly because after the random assignment of subjects, researchers must examine key variables to ensure that treatments and control groups are properly split on those variables (e.g., age, race, and gender). RCTs can also be relatively costly to administer. However, RCTs are still the best research design available for establishing causality. NIJ strives to do RCTs wherever possible.

Representative Research in Process

NIJ's 2017 grant solicitation statement in the policing strategies and practices area called for research on place- or person-based projects that can reduce crime "with minimal negative collateral consequences," such as heightened community distrust of law enforcement. The 2017 solicitation thus embodied the NIJ five-year strategic plan's emphasis on evaluating community engagement strategies and building community trust and confidence in law enforcement.

Two projects funded by NIJ in 2017 focus on evaluating the community impact of hot spots policing and problem-oriented policing initiatives, including development of new measures of law enforcement effectiveness. They are:

1. A study of the impact of different strategies within hot spots on citizens' perceptions of police in a Midwestern university town. The purpose is to demonstrate that police-community relations and police legitimacy can be strengthened, even in a hot spots policing environment.

2. A 30-month RCT study of 100 hot spots in two medium-size Southeastern cities. The study is using community surveys designed to move "beyond unreported crime to also measure perceptions of safety, police legitimacy, and collective efficacy" (an overall community-police relations measurement). On the law enforcement side, the study team is also examining officer morale, officers' perceptions of their roles, police-community relations, and the program's impact on law enforcement policies and practice.

The 30-month study, with its call for new measures of the impact and effectiveness of policing methods, reflects a concern that simplistic measures of law enforcement success, such as number of arrests or citizen calls for service, are often misleading.

Demystifying Policing Algorithms

Algorithms inform law enforcement strategies by sorting and analyzing sometimes massive amounts of crime data to identify the highest risk places and individuals. NIJ currently supports research measuring the effectiveness and efficiency of commercial algorithms that are marketed to law enforcement agencies for crime mapping and related approaches. At the same time, NIJ scientists are comparing a naive algorithm model to contest entries from the Real-Time Crime Forecasting Challenge. (A naive model is one that assumes what happened before is what will happen next; e.g., the model forecasts that crime will occur this month in the place it occurred last month.)

Hunt, who is leading that in-house study, said commonplace scientific concerns with algorithm-dependent law enforcement strategies include the quality of data going in, how the data are introduced to the algorithm, and "what we do with the numbers at the back end." Hunt observed that a crime data sample — and thus data-dependent algorithm output — can be biased when, for instance, community members no longer report crime.

Indeed, fewer than half of all violent and property crimes are reported to the police, according to the latest National Crime Victimization Survey.[7] Similarly, homicide clearance rates have reached near-record lows in several major U.S. cities due to increasing gang violence, witness intimidation, and a lack of community cooperation with law enforcement.[8] "Mutual cooperation between the police and the community is essential to solving crimes," said NIJ Director Muhlhausen. "Unfortunately, some community members refuse to cooperate with criminal investigations, even though law enforcement is legitimately trying to serve and protect their community."

Hunt said NIJ is pushing for greater transparency on the scientific foundations of support for commercial policing algorithms — that is, less of a "black box" approach by vendors. Academic researchers YongJei Lee, SooHyun O, and John E. Eck, the three members of a team that was among the winners of NIJ's 2016 Real-Time Crime Forecasting Challenge, wrote that a lack of transparency and a "lack of theoretical support for existing forecasting software" are common problems with proprietary hot spots forecasting products.[9]

Procedural Justice

The National Academies report on proactive policing pointed to procedural justice as one of the methods lacking adequate research evidence to support — or to preclude — its effectiveness. NIJ is working to grow that evidence base through projects such as an ongoing police-university research partnership

in a medium-size Mid-Atlantic city, funded in 2016. The research was designed to use surveys and other techniques to gauge police and citizen perceptions of procedural justice issues and to forge a better understanding of the benefits of procedural justice training, body-worn cameras, and the mechanisms of public cooperation, trust, and satisfaction.

One recent NIJ-supported study casts new doubt on the effectiveness of procedural justice training in a specific police application. The Seattle Police Department conducted training to "slow down" the thought processes of police officers during citizen encounters to reduce negative outcomes. The selected officers were deemed to be at risk because (1) they had worked in hot spots or other high-crime city areas, and (2) they had been involved in incidents in which they were injured or used force, or where a complaint had been filed about the officer or the incident.

As reported in NIJ's CrimeSolutions.gov, a central web resource to help practitioners and policymakers learn what works in justice-related programs and practices, the Seattle Police procedural justice training initiative was rated as having "no effects," positive or negative, on procedural justice in the community.[10] The rating was based on a study[11] utilizing an RCT of the program. The RCT found no statistically significant differences between the treatment group and the control group in the percentage of incidents resulting in an arrest, the number of times force was used, the number of incidents resulting in citizen complaints, and other key measures.

One challenge for research on justice-focused policing methods such as procedural justice and police legitimacy — as important as they may be to the ultimate goal of respecting citizens' rights under law — has been distinguishing their impact from that of routine policing. Brett Chapman, an NIJ social science analyst, said of procedural justice generally that although the work is important, one "challenge is trying to demonstrate how it is dramatically different from what police have been doing for years."

Research Quality Depends on Execution

Even if an experimental design is flawless, outcome quality can depend on agency cooperation and performance. For example, an NIJ-sponsored 2012 research report on a randomized trial of broken windows policing in three Western cities concluded that the results were negatively affected by problematic execution by the responsible law enforcement agencies.[12]

NIJ operates a national initiative designed to build law enforcement agency research competence. The Law Enforcement Advancing Data and Science (LEADS) Scholars program develops the research capability of midcareer law enforcement professionals from agencies committed to infusing science into their policy and practice. LEADS scholars learn the latest research developments and carry that knowledge to the field.

Proactive Policing and the Fourth Amendment

On the street, the impact of proactive policing methods that involve law enforcement confronting suspects will be measured against the rule of law, including the Fourth Amendment's protections against unreasonable search and seizure. The boundaries concerning unlawful treatment of suspects by law enforcement are not always distinct. In 2000, the Supreme Court held in *Illinois v. Wardlow*[13] that police may conduct a street stop of a suspect with a lower threshold of reasonable suspicion if the stop occurs in a high-crime area. Thus, an individual's particular location may effectively reduce his or her rights in a law enforcement interaction. Implicit in that location-specific adjustment of suspects' rights is the Court's recognition that, in those crime-prone areas, innocent citizens are at heightened risk of becoming victims of crime.

Rachel Harmon, a University of Virginia law professor, and a colleague pointed out in "Proactive Policing and the Legacy of Terry,"[14] "So long as police focus

on high crime areas, they can effectively lower the behavior-based suspicious activity demanded for each stop." Yet as scholar Andrew Guthrie Ferguson and a colleague observed in 2008,[15] the Supreme Court has not defined a high-crime area for Fourth Amendment purposes.

Whether or to what extent a law enforcement strategy can exist in harmony with Fourth Amendment protections will depend on program particulars. In *Floyd v. City of New York*,[16] a federal district court held in 2013 that New York City's stop and frisk policy at the time represented unconstitutional profiling and barred the practice. But the *Floyd* proscription was limited to excessive aspects of stop and frisk in New York.

David L. Weisburd, an author of the National Academies study and the executive director of the Center for Evidence-Based Crime Policy, noted but took exception to a narrative he sees being advanced by some scholars and commentators that deterrence-based policing strategies make constitutional violations inevitable. In a 2016 paper in the *University of Chicago Legal Forum* specifically referencing hot spots policing, Weisburd posited "that hot spots policing properly implemented is likely to lead to less biased policing than traditional strategies. Moreover, there is little evidence that hot spots policing per se leads to abusive policing practices."[17]

Rachel Harmon and her colleague sounded a similar theme, relative to stop and frisk policies, in her 2017 article referenced above: "Although the proactive use of stops and frisks may make constitutional violations more likely, it seems feasible to design a proactive strategy that uses stops and frisks aggressively and still complies with constitutional law."[18]

The Harmon article further argued that proactive strategies such as hot spots and preventive policing can avoid constitutional peril "by narrowing proactive policing geographically rather than demographically." Thus, in Harmon's view, "the same focused strategies that are most likely to produce stops that satisfy the Fourth Amendment may also be the most likely to be carried out effectively and without discrimination."[19]

Weisburd, in his 2016 paper, identified a need for new proactive programming that aspires to broad justice impacts. He called for "a new generation of programs and practices that attempts to maximize crime control and legitimacy simultaneously."[20] The contemporary NIJ-supported, community-focused research noted above seeks new pathways for harmonizing proactive policing strategies with progress on community justice values.

About the Author

Paul A. Haskins is a social science writer and contractor with Leidos.

Notes

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