Proactive Policing: a Summary of the Report of the National Academies of Sciences, Engineering, and Medicine



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Abstract

This paper provides a summary of our report for the National Academy of Sciences, Engineering, and Medicine on proactive policing. We find that there is sufficient scientific evidence to support the adoption of many proactive policing practices if the primary goal is to reduce crime, though the evidence base generally does not provide long-term or jurisdictional estimates. In turn, we conclude that crime prevention outcomes can often be obtained without producing negative community reactions. However, the most effective proactive policing strategies do not appear to have strong positive impacts on citizen perceptions of the police. At the same time, some community-based strategies have begun to show evidence of improving the relations between the police and public. We conclude that there are likely to be large racial disparities in the volume and nature of police–citizen encounters when police target high-risk people or high-risk places, as is common in many proactive policing programs. We could not conclude whether such disparities are due to statistical prediction, racial animus, implicit bias, or other causes.

Keywords Crime prevention · Evidence-based · Proactive-policing · Community impacts

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This article draws heavily from the 2018 report of the National Academies of Sciences, Engineering, and Medicine ("National Academies"), Proactive Policing: Effects on Crime and Communities; permission to reprint was granted courtesy of the National Academies Press. David Weisburd chaired the study committee authoring that report, and Malay Majmundar served as study director. This article is authored by the full study committee (Committee on Proactive Policing: Effects on Crime, Communities, and Civil Liberties), the members of which are listed in alphabetical order after the committee chair and the study director. While this article closely follows the report findings, we want to note that it is not a product of the National Academies and does not necessarily represent the positions of the National Academies.

Introduction

In 2015, the National Institute of Justice and the Laura and John Arnold Foundation asked the National Academies of Sciences, Engineering, and Medicine ("National Academies") to review the evidence and discuss the data and methodological gaps on: (1) the effects of different forms of proactive policing on crime, (2) whether they are applied in a discriminatory manner, (3) whether they are being used in a legal fashion, and (4) community reaction. The National Academies convened the Committee on Proactive Policing: Effects on Crime, Communities, and Civil Liberties ("Committee on Proactive Policing"), which had the specific expertise and experience needed to address the study's statement of task. The perspectives on the committee were balanced, and the members were screened for conflicts of interest as well as bias. The report authored by the committee, *Proactive Policing: Effects on Crime and Communities* (National Academies of Sciences, Engineering, and Medicine 2017) represents the consensus of the committee regarding the scientific evidence. The members of the Committee on Proactive Policing are the authors of this article, which summarizes the conclusions of the full report.

Proactive policing, as a strategic approach used by police agencies to prevent crime, is a relatively new phenomenon in the USA. It developed from a crisis in confidence in policing that began to emerge in the 1960s because of social unrest, rising crime rates, and growing skepticism regarding the effectiveness of standard approaches to policing (Bundy 1970; Kelling and Coles 1996; Weisburd and Braga 2006). In response, beginning in the 1980s and 1990s, innovative police practices and policies that took a more proactive approach began to develop. We use 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. This contrasts with the standard model of policing, which involves an emphasis on reacting to particular crime events after they have occurred, mobilizing resources based on requests coming from outside the police organization, and focusing on the particulars of a given criminal incident. Proactive policing is distinguished from the everyday decisions of police officers to be proactive in specific situations and instead refers to a strategic decision by police agencies to use proactive police responses in a programmatic way to reduce crime. In our review, we prioritized proactive policing strategies that are commonly applied in U.S. police agencies; cutting-edge strategies that, though not yet widely adopted, represent important new methods for preventing crime; and strategies that raise concerns about biased or abusive outcomes.

We begin our description of the findings of the National Academies' Committee on Proactive Policing by describing the main approaches to proactive policing we identified and identifying the extent to which these are spread across the landscape of American policing. We then turn to the specific conclusions of the committee in each of the four areas on which the report focused: law and legality, crime control, community impacts, and racial disparities and racially biased behavior. For each area, we list the main conclusions reached and then provide a final, summary discussion of the findings. We then turn to the broader policy implications of the report as a whole.

The Main Approaches to Proactive Policing

We identified four broad approaches to crime prevention that summarize the directions that proactive policing has taken over the past few decades: place-based approaches, problemsolving approaches, person-focused approaches, and community-based approaches (see Table 1). While the police practices described in this report may include elements of multiple models of prevention, it is generally the case that they develop primarily as a response to the insights of one logic model in particular. For example, hot spots policing and predictive policing developed primarily in response to the insights underlying the logic model of place-based prevention (described below), whereas community-oriented policing and procedural justice policing rely primarily on a logic model emphasizing the key role played by communities in crime prevention. This does not mean that specific programs do not also draw from other logic models of prevention. Rather, it is possible to think about the broad directions of proactive policing in reference to these categories and, more generally, to draw broader conclusions about why programs or practices have the impacts observed.

The place-based approach seeks to focus policing resources more efficiently and effectively by capitalizing on the concentration of crime incidents at certain locations, or microgeographic places, within a department's entire jurisdiction (Braga and Weisburd 2006; Sherman and Weisburd 1995; Weisburd 2008). Policing strategies that take a place-based approach include hot spots policing, predictive policing, and use of closed-circuit television (CCTV). A second approach, referred to here as the problem-solving approach, seeks to take a scientific approach

	Place-based approach	Problem-solving approach	Person-focused approach	Community-based approach
Logic model for crime preven- tion	Capitalize on the evidence for the concentration of crime at microgeographic places	Use a problem-oriented approach, which seeks to identify problems as patterns across crime events and then identi- fy the causes of those problems. Draw upon solutions tailored to the problem causes, with attention to assessment	Capitalize on the strong concentration of crime among a small proportion of the criminal population	Capitalize on the resources of communities to identify and control crime
Policing strategies	Hot spots policing; predictive policing; CCTV	Problem-oriented policing; third party policing	Focused deterrence; repeat offender programs; stop, question, and frisk	Community-oriented policing; procedural justice policing; broken windows policing
Primary objective	Prevent crime in microgeographic places	Solve recurring problems to prevent future crime	Prevent and deter specific crimes by targeting known offenders	Enhance collective efficacy and community collaboration with police
Key ways to accom- plish objective	Identification of crime hot spots and application of focused strategies	Scan and analyze crime problems, identify solutions, and assess them (SARA model)	Identification of known high-rate offenders and application of strategies to these specific offenders	Develop approaches that engage the community, or that change the way police interact with citizens

Table 1 Four approaches to proactive policing

to diagnosing the problems that underlie a pattern of crime incidents (Braga 2008; Goldstein 1979). After identifying the causes of these problems, it attempts to tailor solutions to the problems by addressing their causes, thereby preventing (or reducing) future crime. Strategies that take this approach include problem-oriented policing and third party policing. The third approach focuses on deterring crime by capitalizing on the insight that a small proportion of the crime-committing population commits a disproportionate share of the crimes (Pate et al. 1976; Wolfgang et al. 1972). Strategies that employ this person-focused approach include focused deterrence; repeat offender programs; and stop, question, and frisk (SQF). The fourth approach, which we call the community-based approach, focuses on involving the community in defining the key problems of policing and on fostering the community's role (as understood by a strategies that take a community-based approach include community-oriented policing, procedural justice policing, and broken windows policing.

The Diffusion of Proactive Policing Across American Cities

To what extent have these four proactive policing approaches spread across the landscape of American policing? To answer that question, we drew primarily on the data collected from the National Police Research Platform (NPRP) and the Police Executive Research Forum. Overall, many departments claim to be using multiple proactive policing innovations. The NPRP survey (Mastrofski and Fridell n.d.), the most comprehensive and representative survey gathering this information, uses a diverse national sample of approximately 100 municipal police and sheriff's agencies, of which the majority are agencies that have between 100 and 3000 sworn officers. Between October and December 2013, the NPRP conducted a survey of its participating agencies, asking knowledgeable persons within the organization to indicate whether specific innovations had been adopted, whether department policy regarding an adopted innovation had been established, and if so, in what year. Seventy-six of the 100 police agencies completed the questionnaire. Interestingly, the survey results suggest that there is very wide use of proactive policing in medium-to-large police agencies in America (Mastrofski and Fridell n.d., p. 3). The median number of sworn officers per department for the entire NPRP was 274; the median was 255.

The most commonly employed proactive policing innovation according to this survey was community-oriented policing, which more than 97% of agencies claim to be employing (see Table 2). Moreover, 9 of 10 local law enforcement agencies with over 100 sworn officers reported in 2013 that they had adopted community-oriented policing with supporting formal policies. Perhaps surprising, given the relatively later emergence of procedural justice policing on the American police reform agenda, almost 90% of departments claim to have implemented practices for this strategy in their department. While we cannot gauge from the surveys the depth of involvement and commitment to these strategies, the data suggest that police agencies across the USA are concerned about police legitimacy (as defined in the procedural justice logic model) and view community-based policing interventions as key to their work. Ninety-one percent of the departments surveyed claimed to use hot spots policing, again pointing to very high penetration of this strategy in American policing. Problem-oriented policing was also widely noted, with about 82% of responding NPRP departments claiming to use this strategy. The use of broken windows policing was claimed by 79% of NPRP respondents.

	Departments adopting with formal policy	Departments adopting without formal policy	Total departments adopting (either with or without formal policy)
Broken windows policing	59.2% (<i>N</i> = 45)	19.7% (N = 15)	78.9% (<i>N</i> = 60)
Problem-oriented policing	68.4% (<i>N</i> = 52)	13.2% (N = 10)	81.6% (N = 62)
Procedural justice	81.6% (N = 62)	7.9% (N = 6)	89.5% (N = 68)
Hot spots policing	75.0% (N = 57)	15.8% (N = 12)	90.8% (N = 69)
Community-oriented policing	90.8% (N = 69)	6.6% (N = 5)	97.4% (<i>N</i> = 74)

Table 2 Innovations adopted by departments, with and without formal policy, from the 2013 NPRP survey (N = 76)

Note: The NPRP survey asks departments if they are engaged in "community policing." The survey's use of "community policing" is equivalent to the committee's articulation of "community-oriented policing." Source: Adapted from Mastrofski and Fridell (n.d., p. 2)

PERF conducted the Future of Policing survey in 2012 (Police Executive Research Forum 2014). The survey instrument was distributed to 500 police departments across the country, and nearly 200 police departments responded. While the PERF survey was directed at its membership, which generally consists of larger and more progressive police agencies, the results provide a picture of the use of proactive policing strategies similar to the NPRP results (see Table 3). In this case, community-oriented policing, problem-oriented policing, and directed patrols/focused deterrence were the strategies most commonly used. Targeting known offenders and hot spots policing were also common, with almost 80% of departments claiming to use these strategies. Not surprisingly, predictive policing, which is a newer innovation, was less commonly employed. Although the agencies affiliated with PERF do not constitute a representative sample of all U.S. police agencies or of any subset thereof (e.g., large agencies), they may serve as a good indicator of likely trends in the use of strategies among larger police agencies (see Koper 2014, p. 126).

The prevalence of SQF is not examined by the above surveys, possibly because few departments created formal policies or structures to implement it, or possibly because of the controversy surrounding the use of this strategy. However, one relevant survey data source, the 2011 BJS Police-Public Contact Survey, found that of the 62.9 million people aged 16 or older with one or more police contacts in 2011, 7.3% (4.59 million) reported the contact was an involuntary street stop or arrest or other involuntary contact (not an involuntary traffic stop). Among those individuals reporting an involuntary contact, 19.1% (72,083 individuals) reported being searched or frisked (Langton and Durose 2013, pp. 2, 11–12). Between 2003 and 2010, reported SQF stops in New York increased almost fourfold from 160,851 to about 600,000 (Weisburd et al. 2014). At its peak in 2011, the NYPD reported 685,000 SQFs (for a population of 8.5 million).¹ Philadelphia and Los Angeles also saw substantial increases in pedestrian stops made by the police in the first decade of the twenty-first century. In Philadelphia, police reported 250,000 stops (in a city of 1.5 million) in 2009, double the number in 2007. Los Angeles reported 244,038 stops (in a city of 3.85 million) in 2008, double the number of stops in 2002 (Jones-Brown et al. 2013).

¹ That figure declined to 191,851 SQF incidents in 2013, and further declined to 22,565 SQF stops in 2015, as a result of court challenges and a changing political environment. See http://www.nyclu.org/content/stop-and-frisk-data [May 2017].

Strategy	Current use (%)
Community-oriented policing	93.7
Problem-oriented policing	88.9
Hot spots policing	79.9
Directed police patrols/focused deterrence	92.1
Targeting known offenders	79.3
Predictive policing	38.2

Table 3 Prevalence of use of proactive policing strategies by percentage of agencies responding to the 2012 future of policing survey (N = 200)

Source: Police Executive Research Forum (2014, p. 50)

These data tell us that many of the proactive policing approaches are not isolated programs used by a select group of agencies but rather a set of strategies that have been diffused across the landscape of American policing.

Law and Legality

Conclusion $3-l^2$: Factual findings from court proceedings, federal investigations into police departments, and ethnographic and theoretical arguments support the hypothesis that proactive strategies that use aggressive stops, searches, and arrests to deter criminal activity may decrease liberty and increase violations of the Fourth Amendment and Equal Protection Clause; proactive policing strategies may also affect the Fourth Amendment status of policing conduct. However, there is not enough direct empirical evidence on the relationship between particular policing strategies and constitutional violations to draw any conclusions about the likelihood that particular proactive strategies increase or decrease constitutional violations.

Conclusion 3-2: Even when proactive strategies do not violate or encourage constitutional violations, they may undermine legal values such as privacy, equality, and accountability. Empirical studies to date have not assessed these implications.

However effective a policing practice may be in preventing crime, it is impermissible if it violates the law. The most important legal constraints on proactive policing are the Fourth Amendment to the U.S. Constitution, the Equal Protection Clause (of the Fourteenth Amendment), and related statutory provisions. Although proactive policing strategies do not inherently violate the Fourth Amendment, any proactive strategy could lead to Fourth Amendment violations to the degree that it is implemented by having officers engage in stops, searches, and arrests that violate constitutional standards. This risk is especially relevant for SQF; broken windows policing; and hot spots policing interventions if they use an aggressive practice of searches and seizures to deter criminal activity.

In addition, in conjunction with existing Fourth Amendment doctrine, proactive policing strategies may also limit the effective strength or scope of constitutional protection or reduce the availability of constitutional remedies. For example, when departments identify "high-crime areas" pursuant to place-based proactive policing strategies, courts may allow stops by officers of

² The conclusions are numbered according to the chapters of the committee's report in which they were developed (see National Academies of Sciences, Engineering, and Medicine 2018).

individuals within those areas that are based on less individualized behavior than they would require without the "high-crime" designation. In this way, geographically oriented proactive policing may lead otherwise identical citizen–police encounters to be treated differently under the law.

The Equal Protection Clause guarantees equal and impartial treatment of citizens by government actors. It governs all policies, decisions, and acts taken by police officers and departments, including those in furtherance of proactive policing strategies. As a result, Equal Protection claims may arise with respect to any proactive policing strategy to the degree that it discriminates against individuals based on their race, religion, or national origin, among other characteristics. Since most policing policies today do not expressly target racial or ethnic groups, most equal protection challenges require proving discriminatory purpose in addition to discriminatory effect in order to establish a constitutional violation.

Specific proactive policing strategies such as SQF and "zero tolerance" versions of broken windows policing have been linked to violations of both the Fourth Amendment and the Equal Protection Clause by courts in private litigation and by the U.S. Department of Justice in its investigations of police departments (Floyd 2013; U.S. Department of Justice 2011, 2016). Ethnographic studies and theoretical arguments further support the idea that proactive strategies that use aggressive stops, searches, and arrests to deter criminal activity may decrease liberty and increase Fourth Amendment and Equal Protection violations (Brunson and Miller 2006; Fagan and Geller 2015; Sampson and Raudenbush 2004; Weisburd et al. 2014). However, empirical evidence is insufficient—using the accepted standards of causality in social science—to support any conclusion about whether proactive policing strategies systematically promote or reduce constitutional violations. In order to establish a causal link, studies would ideally determine the incidence of problematic behavior by police under a proactive policy and compare that to the incidence of the same behavior in otherwise similar circumstances in which a proactive policy is not in place.

However, even when proactive strategies do not lead to constitutional violations, they may raise concerns about deeper legal values such as privacy, equality, autonomy, accountability, and transparency. Even procedural justice policing and community-oriented policing, neither of which are likely to violate legal constraints on policing (and, to the extent that procedural justice operates as intended, may make violations of law less likely), may, respectively, undermine the transparency about the status of police–citizen interactions and alter the structure of decision-making and accountability in police organizations.

Crime and Disorder

The available scientific evidence suggests that certain proactive policing strategies are successful in reducing crime and disorder. This important conclusion provides support for a growing interest among American police in innovating to develop effective crime prevention strategies. At the same time, there is substantial heterogeneity in the effectiveness of different proactive policing interventions in reducing crime and disorder. For some types of proactive policing, the evidence consistently points to effectiveness, but for others, the evidence is inconclusive. Evidence in many cases is restricted to localized crime prevention impacts, such as specific places, or to specific individuals. There is relatively little evidence-based knowledge about whether and to what extent the approaches examined in this report will have crime prevention benefits at the larger jurisdictional level (e.g., a city as a whole, or even large administrative areas such as precincts within a city) or across all offenders. One key problem that needs to be examined in this regard, but which has not been studied so far, is the degree to which specific policing programs create "opportunity costs" in terms of the allocation of police or policing resources in other domains. Furthermore, the crime prevention outcomes that are observed are mostly observed in the short term, and the evidence seldom addresses long-term crime prevention outcomes.

It is important to note here that, in practice, police departments typically implement crime reduction programs that include elements typical of several prevention strategies. Given this hybridization of tactics in practice, review of the evidence was often hindered by the overlapping character of the real-world proactive policing interventions evaluated in many of the published research studies. Because of the large number of conclusions regarding crime prevention outcomes, we present the conclusions according to the four broad types of approaches identified. We also developed a table summarizing the evidence and its strength for each intervention approach (see Table 4).

Place-Based Strategies³

Conclusion 4-1: The available research evidence strongly suggests that hot spots policing strategies produce short-term crime reduction effects without simply displacing crime into areas immediately surrounding targeted locations. Hot spots policing studies that do measure possible displacement effects tend to find that these programs generate a diffusion of crime control benefits into immediately adjacent areas. There is an absence of evidence on the long-term impacts of hots spots policing strategies on crime and on possible jurisdictional outcomes.

Conclusion 4-2: At present, there are insufficient rigorous empirical studies on predictive policing to support a firm conclusion for or against either the efficacy of crime prediction software or the effectiveness of any associated police operational tactics. It also remains difficult to distinguish a predictive policing approach from hot spots policing at small geographic areas.

Conclusion 4-3: The results from studies examining the introduction of CCTV camera schemes are mixed, but they tend to show modest outcomes in terms of property crime reduction at high-crime places for passive monitoring approaches.

Conclusion 4-4: There are insufficient studies to draw conclusions regarding the impact of the proactive use of CCTV on crime and disorder reduction.

Policing has always had a geographic or place-based component, especially in how patrol resources are allocated for emergency response systems. However, over the past three decades, scholars and the police have begun to recognize that crime is highly concentrated at specific places (e.g., see Sherman et al. 1989; Weisburd 2015). Following this recognition, a series of place-based strategies have been developed in policing. In contrast to the focus of the standard

³ Studies reviewed for drawing conclusions include Braga et al. (2014b), Clarke and Weisburd (1994), Ferguson (2012, 2015), Gerell (2016), Gill and Spriggs (2005), Goldstein (1990), Gorr and Lee (2015), Hunt et al. (2014), Johnson et al. (2009), Kennedy et al. (2011), Koper (1995), La Vigne et al. (2011), McLean et al. (2013), Mohler et al. (2015), National Research Council (2004), Perry et al. (2013), Piza et al. (2014, 2015), Ratcliffe et al. (2009, 2011), Rosenbaum (2006), Santos (2014), Sherman and Eck (2002), Sherman and Weisburd (1995), Sorg et al. (2013), Weisburd and Eck (2004), Weisburd and Green (1995), Weisburd (2016), Weisburd et al. (2017), and Welsh and Farrington (2008).

Policing strategy	Principal mechanism ^a	Strength of evidence (study design, replication) ^b	Do strong studies find significant positive effects?	Concerns
Place-based strategies Hot spots policing Example: concentrated patrol of microgeographic high-crime places	Deterrence	Strong	Yes	
Predictive policing Example: data-intensive algorithm for predicting near-term crime in hot spots	Deterrence	Weak	Mixed	Not yet well defined
CCTV (type I) Example: passive monitoring of cameras in high-crime area	Deterrence (general)	Medium	Mixed	
CCTV (type II) Example: proactive camera surveillance linked to dedicated operational police response	Deterrence (specific)	Weak	Yes (but only 1 study)	Only 1 intervention studied
Problem-solving strategies Problem-oriented policing Example: close taverns that have frequent violence	Opportunity Deterrence	Medium	Yes	Only a small number of potential implementations have been studied
Third party policing Example: police coordinate with private security in a business improvement district (BID)	Opportunity Deterrence	Medium	Yes	
Person-focused strategies Focused deterrence policing Example: police department "calls in" a gang and delivers a personalized "carrot and	Deterrence	Medium	Yes	No RCTs, but evidence base includes stronger quasi-experiments
stick" message Stop-question-frisk (type I) Example: high-volume <i>Terry</i> stops throughout jurisdiction	Deterrence	Medium	Mixed	No RCTs
Stop-question-frisk (type II) Example: high-volume <i>Terry</i> stops in violent crime hot spots	Deterrence	Strong	Yes	Studies are confounded with hot spots policing practices. One RCT

Table 4 Strength of evidence on crime prevention effectiveness: Summary of proactive policing strategies

Policing strategy	Principal	Strength of	Do strong	Concerns
	mechanism ^a		studies find significant positive effects?	
Community-based strategies				
Community-oriented policing Example: neighborhood watch, newsletters, and community meetings	Collective efficacy	Weak	No	Broad category, not well defined
Procedural justice policing Example: train police to improve interactions with public	Legitimacy	Weak	Mixed	Evaluated interventions typically include tactics from other strategies, so effect of procedural justice component is not determinable
Broken windows policing (type I) Example: high-volume arrests for certain misde- meanors	Deterrence	Medium	Mixed	No RCTs
Broken windows policing II (type II) Example: clean up vacant lots	Opportunity	Strong	Yes	Evaluations to date do not allow identification of whether impact is due to collective efficacy or deterrence

Table 4 (continued)

RCT = randomized controlled trial

^a Principal mechanisms—deterrence: increase perceived and/or actual likelihood of arrest if an offense is committed; opportunity: curtail availability of attractive opportunities to commit crime; legitimacy: improve community perception of the legitimacy of police actions or of the police force generally; collective efficacy: increase the willingness of citizens to intervene and accordingly strengthen informal social controls

^b Strength of causal evidence—weak: available evaluations have a weak design and/or are sparse; medium: a few well-done studies done in different contexts with research designs that provide a strong basis for drawing causal conclusions; strong: a number of well-done studies conducted in varying contexts with research designs that provide a strong basis for drawing causal conclusions

model of policing, proactive place-based policing calls for a refocusing of policing on very small, "microgeographic" units of analysis, often termed "crime hot spots." A number of rigorous evaluations of hot spots policing programs, including a series of randomized controlled trials, have been conducted.

The available research evidence suggests that hot spots policing interventions generate statistically significant short-term crime reduction impacts without simply displacing crime into areas immediately surrounding the targeted locations. Instead, hot spots policing studies that do measure possible displacement effects tend to find that these programs generate a diffusion-of-crime-control benefits into immediately adjacent areas. While the evidence base is strong for the benefits of hot spots policing in ameliorating local crime problems, there are no rigorous field studies of whether and to what extent this strategy will have jurisdiction wide impacts.

Predictive policing also takes a place-based approach, but it focuses greater concern on predicting the future occurrence of crimes in time and place. It relies upon sophisticated computer algorithms to predict changing patterns of future crime, often promising to be able to identify the exact locations where crimes of specific types are likely to occur next. While this approach has potential to enhance place-based crime prevention approaches, there are at present insufficient rigorous empirical studies to draw any firm conclusions about either the efficacy of crime prediction software or the effectiveness of any associated police operational tactics. Moreover, it remains difficult to distinguish the police actions used in a predictive policing approach from hot spots policing at small geographic areas.

Another technology relevant to improving police capacity for proactive intervention at specific places is CCTV, which can be used either passively or proactively. The results from studies examining the introduction of CCTV camera schemes are mixed, but they tend to show modest outcomes in terms of property crime reduction at high-crime places for passive monitoring approaches. Again, we did not find evidence that would allow us to estimate whether CCTV implemented as a jurisdiction-wide strategy would have meaningful impacts on crime in that jurisdiction. As far as the proactive use of CCTV is concerned, there are insufficient studies to draw conclusions regarding the impact of this strategy on crime and disorder.

Problem-Solving Strategies⁴

Conclusion 4-5: There is a small group of rigorous studies of problem-oriented policing. Overall, these consistently show that problem-oriented policing programs lead to shortterm reductions in crime. These studies do not address possible jurisdictional impacts of problem-oriented policing and generally do not assess the long-term impacts of these strategies on crime and disorder.

Conclusion 4-6: A small but rigorous body of evidence suggests that third party policing generates short-term reductions in crime and disorder; there is more limited evidence of long-term impacts. However, little is known about possible jurisdictional outcomes.

Problem-solving strategies such as problem-oriented policing and third party policing use an approach that seeks to identify causes of problems that engender crime incidents and draws upon innovative solutions to those problems with attention to assess whether the solutions are effective (Goldstein 1979, 1990). Problem-oriented policing uses a basic iterative process of problem identification, analysis, response, assessment, and adjustment of the response, often called the SARA [scanning, analysis, response, and assessment] model (Eck and Spelman 1987). This approach provides a framework for uncovering the complex mechanisms at play in crime problems and for developing tailored interventions to address the underlying conditions that cause crime problems in specific situations. Despite its popularity as a crime prevention strategy, there are surprisingly few rigorous program evaluations of problem-oriented policing.

Much of the available evaluation evidence consists of nonexperimental analyses that find strong associations between problem-oriented interventions and crime reduction. Program evaluations also suggest that it is difficult for police officers to fully implement problemoriented policing. Many problem-oriented policing projects are characterized by weak problem analysis and a lack of nonenforcement responses to targeted problems. Nevertheless, even these limited applications of problem-oriented policing have been shown by rigorous evaluations to generate statistically significant short-term crime prevention impacts.

⁴ Studies reviewed for drawing conclusions include Braga and Bond (2008), Braga et al. (1999), Cook and MacDonald (2011), Desmond and Valdez (2013), Eck and Spelman (1987), Eck and Wartell (1998), National Research Council (2004), Mazerolle et al. (2000), Taylor et al. (2011), and Weisburd et al. (2010).

Third party policing draws upon the insights of problem solving, but also leverages "third parties" who are believed to offer significant new resources for preventing crime and disorder. Using civil ordinances and civil courts or the resources of private agencies, police departments engaged in third party policing recognize that much social control is exercised by institutions other than the police (e.g., public housing agencies, property owners, parents, health and building inspectors, and business owners) and that crime can be managed through coordination with agencies and in ways other than enforcement responses under the criminal law. Though there are only a small number of program evaluations, the impact of third party policing generates statistically significant crime and disorder reduction effects. Related programs that employ business improvement districts also show crime prevention outcomes with long-term impacts, though research designs have been less rigorous in establishing causality.

Person-Focused Strategies⁵

Conclusion 4-7: Evaluations of focused deterrence programs show consistent crime control impacts in reducing gang violence, street crime driven by disorderly drug markets, and repeat individual offending. The available evaluation literature suggests both short-term and long-term area wide impacts of focused deterrence programs on crime.

Conclusion 4-8: Evidence regarding the crime reduction impact of SQF when implemented as a general, citywide crime control strategy is mixed.

Conclusion 4-9: Evaluations of focused uses of SQF (combined with other self-initiated enforcement activities by officers), targeting places with violence or serious gun crimes and focusing on high-risk repeat offenders, consistently report short-term crime reduction effects; jurisdictional impacts, when estimated, are modest. There is an absence of evidence on the long-term impacts of focused uses of SQF on crime.

In the standard model of policing, the primary goal of police was to identify and arrest offenders after crimes had been committed. But beginning in the early 1970s, research evidence began to suggest that the police could be more effective if they focused on a relatively small number of chronic offenders (e.g., see Wolfgang et al. 1972). These studies led to innovations in policing based on the logic that crime prevention outcomes could be enhanced by focusing policing efforts on the small number of offenders who account for a large proportion of crime.

Offender-focused deterrence strategies, also known as "pulling levers," attempt to deter crime among a particular offending population and are often implemented in combination with problem-solving tactics. Offender-focused deterrence allows police to increase the certainty, swiftness, and severity of punishment in innovative ways. These strategies seek to change offender behavior by understanding the underlying crime-producing dynamics and conditions

⁵ Studies reviewed for drawing conclusions include Berk (2005), Braga et al. (2001, 2013, 2014a, 2018), Braga and Weisburd (2014), Corsaro et al. (2012), Fagan (2002), Groff et al. (2015), Koper and Mayo-Wilson (2006, 2012), Ludwig (2005), McGarrell et al. (2001), National Research Council (2004, 2005), Papachristos et al. (2007), Piehl et al. (2003), Ratcliffe et al. (2011), Rosenfeld et al. (2005, 2014), Rosenfeld and Fornango (2014), Saunders et al. (2015), Sherman et al. (1995), Smith and Purtell (2008), Wallace et al. (2016), Weisburd et al. (2014, 2016), and Wooditch and Weisburd (2016).

that sustain recurring crime problems and by implementing a blended strategy of law enforcement, community mobilization, and social service actions.

A growing number of quasi-experimental evaluations suggest that focused deterrence programs generate statistically significant crime reduction impacts. Robust crime control impacts have been reported by controlled evaluations testing the effectiveness of focused deterrence programs in reducing gang violence and street crime driven by disorderly drug markets and by nonexperimental studies that examine repeat individual offending. It is noteworthy that the size of the effects observed are large, though many of the largest impacts are in studies with evaluation designs that are less rigorous. We did not identify any randomized experiments in this program area. Nonetheless, many of the quasi-experiments have study designs that create highly credible equivalence between their treatment and comparison conditions, which supports interpreting their results as evidence of causation.

While SQF has long been a law enforcement tool of policing, the landmark 1968 Supreme Court decision Terry v. Ohio provided a set of standard criteria that facilitated its use as a strategy for crime control. According to that decision, police may stop a person based upon a "reasonable suspicion" that that person may commit or is in the process of committing a crime; if a separate "reasonable suspicion" that the person is armed exists, the police may conduct a frisk of the stopped individual. While this standard means that Terry stops could not be legally applied without reference to the behavior of the individual being stopped, interpretation of that behavior gave significant leeway to the police. As a proactive policing strategy, departments often employ SQF more expansively and to promote forward-looking, preventive ends.

Nonexperimental analyses of SQF broadly applied across a jurisdiction show mixed findings. However, a separate body of controlled evaluation research (including randomized experiments) that examines the effectiveness of SQF and other self-initiated enforcement activities by officers in targeting places with serious gun crime problems and focusing on high-risk repeat offenders consistently reports statistically significant short-term crime reductions.

Community-Based Strategies⁶

Conclusion 4-10: Existing studies do not identify a consistent crime prevention benefit for community-oriented policing programs. However, many of these studies are characterized by weak evaluation designs.

Conclusion 4-11: At present, there are an insufficient number of rigorous empirical studies on procedural justice policing to draw a firm conclusion about its effectiveness

⁶ Studies reviewed for drawing conclusions include Augustyn (2015), Bennett (1990), Bottoms and Tankebe (2012), Braga et al. (2015), Cahill et al. (2008), Cavanagh and Cauffinan (2015), Chicago Community Policing Evaluation Consortium (1995), Connell et al. (2008), Cook (2015), Corman and Mocan (2005), Fagan and Davies (2003), Fagan and Piquero (2007), Giacomazzi (1995), Gill et al. (2014), Harcourt and Ludwig (2005), Hinds (2007), Jackson et al. (2012), Kelling and Sousa (2001), Koper et al. (2010, 2016), Lindsay and McGillis (1986), MacQueen and Bradford (2015), Mazerolle et al. (2012, 2013a), Nagin and Telep (2017), National Research Council (2004), Owens et al. (2016), Pate et al. (1985a, 1987), Pate and Skogan (1985), Paternoster et al. (1997), Reisig et al. (2007), Robertson et al. (2014), Rosenbaum and Lawrence (2013), Rosenfeld et al. (2007), Sahin et al. (2016), Sherman (1997), Sherman and Eck (2002), Skogan et al. (2015), Tuffin et al. (2006), Tyler et al. (2010), Wallace et al. (2016), Weisburd et al. (2015b), Wheller et al. (2013), Wilson and Kelling (1982), Wolfe et al. (2016), Worden and McLean (2014), and Wycoff et al. (1985).

in reducing crime and disorder.

Conclusion 4-12: Broken windows policing interventions that use aggressive tactics for increasing misdemeanor arrests to control disorder generate small to null impacts on crime.

Conclusion 4-13: Evaluations of broken windows interventions that use place- based, problem-solving practices to reduce social and physical disorder have reported consistent short-term crime reduction impacts. There is an absence of evidence on the long-term impacts of these kinds of broken windows strategies on crime or on possible jurisdictional outcomes.

We also reviewed the crime prevention impacts of interventions using a community-based crime prevention approach. Such strategies include community-oriented policing, broken windows policing, and procedural justice policing. The logic models informing these community-based strategies seek to enlist and mobilize people who are not police in the processes of policing. In this case, however, the focus is generally not on specific actors such as business or property owners (as in the case of third party policing) but on the community more generally. In some cases, community-based strategies rely on enhancing "collective efficacy," which is a community's ability to engage in collective action to do something about crime (e.g., community-oriented policing) with the goal of the legitimacy of police actions (e.g., procedural justice policing) with the goal of increasing cooperation between the police and the public or encouraging law-abiding behavior. These goals are often intertwined in a real-world policing program.

As a proactive crime prevention strategy, community-oriented policing tries to address and mitigate community problems (crime or otherwise) and, in turn, to build social resilience, collective efficacy, and empowerment to strengthen the infrastructure for the coproduction of safety and crime prevention. Community-oriented policing involves three core processes and structures: (1) citizen involvement in identifying and addressing public safety concerns, (2) the decentralization of decision-making to develop responses to locally defined problems, and (3) problem solving. Problem solving and decentralization acquire a community-oriented policing character when these process elements are embedded in the community engagement (often called "partnership") element.

Although we identified a large number of studies of community-oriented policing programs, many of these programs were implemented in tandem with tactics typical of other approaches, such as problem solving. This was not surprising, given that basic definitions of community policing used by police departments often included problem solving as a key programmatic element. The studies also varied in their outcomes, reflecting the broad range of tactics and practices that are included in community-oriented policing programs, and many of the studies were characterized by weak evaluation designs. With these caveats, we did not identify a consistent crime prevention benefit for community-oriented policing programs.

Procedural justice policing seeks to impress upon citizens and the wider community that the police exercise their authority in legitimate ways. When citizens accord legitimacy to police activity, according to this logic model, they are more inclined to defer to police authority in instances of citizen–police interaction and to collaborate with police in the future, even to the extent of being more inclined not to violate the law. There is currently only a very small evidence base from which to support conclusions about the impact of procedural justice policing on crime prevention. Existing research does not support a conclusion that procedural

justice policing impacts crime or disorder outcomes. At the same time, because the evidence base is small, we also did not conclude that such strategies are ineffective.

Broken windows policing shares with community-oriented policing a concern for community welfare and envisions a role for police in finding ways to strengthen community structures and processes that provide a degree of immunity from disorder and crime in neighborhoods. Unlike the community-oriented policing strategy, it does not emphasize the co-productive collaborations of police and community as a mode of intervention; rather, it focuses on what police should do to establish conditions that allow "natural" community entities to flourish and promote neighborhood order and social/economic vitality. Implementations of broken windows interventions vary from informal enforcement tactics (warnings, rousting disorderly people) to formal or more intrusive ones (arrests, citations, stop and frisk), all of which are intended either to disrupt the forces of disorder before they overwhelm a neighborhood's capacity for order maintenance or to restore afflicted neighborhoods to a level where intrinsic community sources of order can manage it.

The impacts of broken windows policing are mixed across evaluations, again complicating the ability to draw strong inferences. However, the available program evaluations suggest that aggressive, misdemeanor arrest-based approaches to control disorder generate small to null impacts on crime. In contrast, controlled evaluations of place-based approaches that use problem-solving interventions to reduce social and physical disorder provide evidence of consistent crime reduction impacts.

Community Impacts

There is broad recognition that a positive community relationship with the police has value in its own right, irrespective of any influence it may have on crime or disorder. Democratic theories assert that the police, as an arm of government, are to serve the community and should be accountable to it in ways that elicit public approval and consent. Given this premise and the recent conflicts between the police and the public, we thought it very important to assess the impacts of proactive policing on issues such as fear of crime, collective efficacy, and community evaluation of police legitimacy.

Place-Based, Problem-Solving, and Person-Focused Interventions⁷

Conclusion 5-1: Existing research suggests that place-based policing strategies rarely have negative short-term impacts on community outcomes. At the same time, such

⁷ Studies reviewed for drawing conclusions include Armitage and Monchuk (2011), Baker and Wolfer (2003), Bond and Gow (1995), Braga (2010), Braga and Bond (2009), Braga et al. (2014a), Braga and Weisburd (2006), Brandl et al. (1994), Breen (1997), Brunson (2007), Chicago Community Policing Evaluation Consortium (1995), Clancy et al. (2001), Colgate-Love et al. (2013), Collins et al. (1999), Desmond et al. (2016), Desmond and Valdez (2013), Epp et al. (2014), Fratello et al. (2013), Gau and Brunson (2010), Giacomazzi et al. (1998), Gill et al. (2014), Graziano et al. (2014), Hinkle and Weisburd (2008), Jesilow et al. (1998), Kochel and Weisburd (2017), Langton and Durose (2013b), Miller et al. (2000), Miller and D'Souza (2016), National Research Council (2004), Pate et al. (1986), Ratcliffe et al. (2015), Rosenbaum et al. (2005), Segrave and Collins (2004), Shaw (1995), Skogan (1994, 2009), Skogan and Hartnett (1997), Skogan and Steiner (2004), Tuffin et al. (2006), Tyler et al. (2014), Weisburd et al. 2008, 2010, 2011, 2015a), Weitzer and Tuch (2002), Worden and McLean (2017), and Wycoff and Skogan (1993).

strategies rarely improve community perceptions of the police or other community outcome measures. There is a virtual absence of evidence on the long-term and jurisdiction-level impacts of place-based policing on community outcomes.

Conclusion 5-2: Studies show consistent small-to-moderate, positive impacts of problem-solving interventions on short-term community satisfaction with the police. There is little evidence available on the long-term and jurisdiction-level impacts of problem-solving strategies on community outcomes.

Conclusion 5-3: There is little consistency found in the impacts of problem-solving policing on perceived disorder, quality of life, fear of crime, and police legitimacy, except for the near-absence of backfire effects. The lack of backfire effects suggests that the risk is low of harmful community effects from tactics typical of problem-solving strategies.

Conclusion 5-4: Studies evaluating the impact of person-focused strategies on community outcomes have a number of design limitations that prevent causal inferences to be drawn about program effects. However, the studies of citizens' personal experiences with person-focused strategies do show marked negative associations between exposure to SQF and proactive traffic enforcement approaches and community outcomes. The long-term and jurisdiction-wide community consequences of person-focused proactive strategies remain untested.

Place-based, person-focused, and problem-solving interventions are distinct from communitybased proactive strategies in that they do not directly seek to engage the public to enhance legitimacy evaluations and cooperation. In this context, the concerns regarding community outcomes for these approaches have often focused not on whether they improve community attitudes toward the police but rather on whether the focus on crime control leads inevitably to declines in positive community attitudes. Community-based strategies, in contrast, specifically seek to reduce fear, increase trust and willingness to intervene in community problems, and increase trust and confidence in the police.

A body of research evaluating the impact of place-based strategies on community attitudes is only now emerging; this research includes both quasi-experimental and experimental studies. However, the consistency of the findings suggests that place-based proactive policing strategies rarely have negative short-term impacts on community attitudes. At the same time, the evidence suggests that such strategies rarely improve community perceptions of the police or other community outcome measures. Moreover, existing studies have generally examined the broader community at places and not specific individuals who are the focus of place-based interventions at crime hot spots. As noted below, more aggressive policing tactics focused on individuals may have negative outcomes on those who have contact with the police. Existing studies also generally measure short-term changes, which may not be sensitive to communities that become the focus of long-term implementation of place-based policing. Finally, there has not been measurement of the impacts of place-based approaches on the larger community, extending beyond the specific focus of interventions.

The research literature on community impacts of problem-solving interventions is larger. Although much of the literature relies on quasi-experimental designs, a few well-implemented randomized experiments also provide information on community outcomes. Studies show consistent positive short-term impacts of problem-solving strategies on community satisfaction with the police. At the same time, however, the research base lacks estimates of larger jurisdictional impacts of these strategies. Because problem-solving strategies are so often implemented in tandem with tactics typical of community-based policing (i.e., community engagement), it is difficult to determine what role the problem-solving aspect plays in community outcomes, compared to the impact of the community engagement element. Although this fact makes it difficult to draw strong conclusions about "what" is impacting community attitudes, as we note below, it may be that implementing multiple approaches in tandem can have more positive outcomes for police agencies.

While there is evidence that problem-solving approaches increase community satisfaction with the police, we found little consistency in problem-solving policing's impacts on perceived disorder/quality of life, fear of crime, and police legitimacy. However, the near absence of backfire (i.e., undesired negative) effects in the evaluations of problem-solving strategies suggests that the risk of harmful community effects from problem-solving strategies is low. As with place-based approaches, community outcomes generally do not examine people who have direct contact with the police, and measurement of impacts is local as opposed to jurisdictional.

The body of research evaluating the impact of person-focused strategies on community outcomes is relatively small, even in comparison with the evidence base on problem-solving and place-based strategies; the long-term community consequences of person-focused proactive strategies also remain untested. These studies involve qualitative or correlational designs that make it difficult to draw causal inferences about typical impacts of these strategies. Correlational studies do find strong negative associations between exposure to the strategy and the attitudes and orientations of individuals who are the subjects of aggressive law enforcement interventions (SQF and proactive traffic enforcement). Moreover, a number of ethnographic and survey-based studies have found negative outcomes, especially for Black and other non-White youth who are continually exposed to SQFs. The studies that measure the impact on the larger community show a more complicated and unclear pattern of outcomes.

Community-Based Interventions⁸

Conclusion 6-1: Community-oriented policing leads to modest improvements in the public's view of policing and the police in the short term. (Very few studies of

⁸ Studies reviewed for drawing conclusions include Abuwala and Farole (2008), Baker (2016), Bradford et al. (2014), Brunson and Weitzer (2007), Chang (2015), Cohen-Charash and Spector (2001), Colquitt et al. (2013), Cordner (2014), De Angelis and Kupchik (2007, 2009)), Dillon and Emery (1996), Donner et al. (2015), Dunford and Devine (1998), Earley and Lind (1987), Farmer et al. (2003), Farole (2007), Gill et al. (2014), Greenberg (1990, 1994), Hinkle and Weisburd (2008), Houlden et al. (1978), Jonathan-Zamir et al. (2015), Kelling (1999), Kim and Mauborgne (1993), Kitzmann and Emery (1994), Kochel (2012), LaTour (1978), Lind et al. (1973, 1978, 1993, 2000), Lowrey et al. (2016), Ma et al. (2014), MacCoun (2005), MacQueen and Bradford (2015), Mastrofski (2015), Mazerolle et al. (2013b), McGarrell et al. (1999), Miller (2001), Nagin and Telep (2017), Pate et al. (1985a, 1985b, 1985c), Owens et al. (2016), President's Task Force on 21st Century Policing (2015), Renauer (2007), Sabath and Carter (2000), Renauer (2007), Rogers (2002), Sahin (2014), Sahin et al. (2016), Sargeant et al. (2013), Scott (2002), Schnebly (2008), Shute et al. (2005), Skogan (2006), Skogan and Hartnett (1997), Slocum et al. (2010), Sunshine and Tyler (2003), Taxman and Gordon (2009), Thibaut et al. (1972, 1974), Thibaut and Walker (1975), Trinkner et al. (2016), Tuffin et al. (2006), Tyler (1988, 2001, 2006), Tyler et al. (2007, 2014), Tyler and Fagan (2008), Tyler and Huo (2002), Tyler and Jackson (2014), Velez (2001), Voigt et al. (2017), Walker et al. (1974), Weisburd et al. 2016, 2011, 2015a), Wemmers (2013), Wemmers et al. (1995), Wheller et al. (2013), Wolfe and Piquero (2011), Worden and McLean (2014, 2016).

community-oriented policing have traced its long-term effects on community outcomes or its jurisdiction-wide consequences.) These improvements occur with greatest consistency for measures of community satisfaction and less so for measures of perceived disorder, fear of crime, and police legitimacy. Evaluations of community-oriented policing rarely find "backfire" effects on community attitudes. Hence, the deployment of community-oriented policing as a proactive strategy seems to offer prospects for modest gains at little risk of negative consequences.

Conclusion 6-2: Due to the small number of studies, mixed findings, and methodological limitations, no conclusion can be drawn about the impact of community-oriented policing on collective efficacy and citizen cooperative behavior.

Conclusion 6-3: The committee is not able to draw a conclusion regarding the impacts of broken windows policing on fear of crime or collective efficacy. This is due in part to the surprisingly small number of studies that examine the community outcomes of broken windows policing and in part to the mixed effects observed.

Conclusion 6-4: In general, studies show that perceptions of procedurally just treatment are strongly and positively associated with subjective evaluations of police legitimacy and cooperation with the police. However, the research base is currently insufficient to draw conclusions about whether procedurally just policing causally influences either perceived legitimacy or cooperation.

Conclusion 6-5: Although the application of procedural justice concepts to policing is relatively new, there are more extensive literatures on procedural justice in social psychology, in management, and with other legal authorities such as the courts. Those studies are often designed in ways that make causal inferences more compelling, and results in those areas suggest that the application of procedural justice concepts to policing has promise and that further studies are needed to examine the degree to which the success of such strategies in those other domains can be replicated in the domain of policing.

The available empirical research on community-oriented policing's community effects focuses on citizen perceptions of police performance (in terms of what they do and the consequences for community disorder), satisfaction with police, and perceived police legitimacy. The evidence suggests that community-oriented policing leads to modest improvements in the community's view of policing and the police in the short term. This occurs with greatest consistency for measures of community satisfaction and less so for measures of perceived disorder, fear of crime, and perceived legitimacy. Evaluations of community-oriented policing rarely find "backfire" effects from the intervention on community attitudes. Hence, the deployment of community-oriented policing as a proactive strategy seems to offer prospects of modest gains at little risk of negative consequences.

Broken windows policing is often evaluated directly in terms of its short-term crime control impacts. We emphasized in our report that the logic model for broken windows policing seeks to alter the community's levels of fear and collective efficacy as a method of enhancing community social controls and reducing crime in the long run. While this is a key element of the broken windows policing model, these outcomes have seldom been examined. The evidence was insufficient to draw any conclusions regarding the impact of broken windows policing on community social controls. Studies of the impacts of broken windows policing on fear of crime do not support the model's claim that such programs will reduce levels of fear in the community, at least in the short run.

While there is a rapidly growing body of research on the community impacts of procedural justice policing, it is difficult to draw causal inferences from these studies. In general, the studies show that perceptions of procedurally just treatment are strongly correlated with subjective evaluations of police legitimacy. The extant research base on the impacts of procedural justice proactive policing strategies on perceived legitimacy and cooperation was insufficient to draw conclusions about whether procedurally just policing will improve community evaluations of police legitimacy or increase cooperation with the police.

Although this finding may appear at odds with a growing movement to encourage procedurally just behavior among the police, it is important to stress that a finding that there is insufficient evidence to support the expected outcomes of procedural justice policing is not the same as a finding that such outcomes do not exist. Moreover, although the application of procedural justice to policing is relatively new, there is a more extensive evidence base on procedural justice in social psychology and organizational management, as well as on procedural justice with other legal authorities such as the courts. Those studies are often designed in ways that make causal inferences more compelling, and results in those areas suggest meaningful impacts of procedural justice on legitimacy of the institutions and authorities involved. Thus, the application of procedural justice ideas to policing has promise, although further studies are needed to examine the degree to which the success of such implementations in other social contexts can be replicated in the arena of policing.

Racial Bias and Disparities

Conclusion 7-1: There are likely to be large racial disparities in the volume and nature of police-citizen encounters when police target high-risk people or high-risk places, as is common in many proactive policing programs.

Conclusion 7-2: Existing evidence does not establish conclusively whether, and to what extent, the racial disparities associated with concentrated person-focused and placebased enforcement are indicators of statistical prediction, racial animus, implicit bias, or other causes. However, the history of racial justice in the USA, in particular in the area of criminal justice and policing, as well as ethnographic research that has identified disparate impacts of policing on non-White communities, makes the investigation of the causes of racial disparities a key research and policy concern.

Concerns about racial bias loom especially large in discussions of policing. The interest of this report was to assess whether and to what extent proactive policing affects racial disparities in police–citizen encounters and racial bias in police behavior. Recent high-profile incidents of police shootings and abusive police–citizen interaction caught on camera have raised questions regarding basic fairness, racial discrimination, and the excessive use of force of all forms against non-Whites, and especially Blacks, in the USA. In considering these incidents, it is important to note that the origins of policing in the USA are intimately interwoven with the nation's history of racial prejudice. Although in recent decades police have often made a strong effort to address racially biased behaviors, wide disparities remain in the extent to which non-White people and White people are stopped or arrested by police. Moreover, as the committee report's discussion of constitutional violations notes, the U.S. Department of Justice has identified continued racial disparities and biased behavior in policing in a number of major American police agencies.

As social norms have evolved to make overt expressions of bigotry less acceptable, psychologists have developed tools to measure more subtle factors underlying biased behavior. A series of studies suggest that negative racial attitudes may influence police behavior—although there is no direct research on proactive policing (Dovidio et al. 2002; Eberhardt et al. 2004; Fazio et al. 1995; McConnell and Leibold 2001; Payne 2001). There is a further growing body of research identifying how these psychological mechanisms may affect behavior and what types of situations, policies, or practices may exacerbate or ameliorate racially biased behaviors. In a number of studies, social psychologists have found that race may affect decision-making, especially under situations where time is short and such decisions need to be made quickly. More broadly, social psychologists have identified dispositional (individual characteristics) and situational and environmental factors that are associated with higher levels of racially biased behavior.

Proactive strategies often facilitate increased officer contact with residents (particularly in high-crime areas), involve contacts that are often enforcement-oriented and uninvited, and may allow greater officer discretion compared to standard policing models. These elements align with broad categories of possible risk factors for biased behavior by police officers. For example, when contacts involve stops or arrests, police may be put in situations where they have to "think fast" and react quickly. Social psychologists have argued that such situations may be particularly prone to the emergence of what they define as implicit biases.

Relative to the research on the impact of proactive policing policies on crime, there is proportionally very little field research exploring the potential role that racially biased behavior plays in proactive policing.⁹ There is even less research on the ways that race may shape police policy or color the consequences of police encounters with residents. These research gaps leave police departments and communities concerned with bias in police behavior without an evidence base from which to make informed decisions. Because of these gaps, it was not possible to draw any concrete conclusions about the role of biased behavior in proactive policing. Consequently, research on these topics is urgently needed both so that the field may better understand potential negative consequences of proactive policing and so that communities and police departments may be better equipped to align police behaviors with values of equity and justice.

Inferring the role of racial animus, statistical prediction, or other dispositional and situational risk factors in contributing to observed racial disparities is a challenging question for research. Although focused policing approaches may reduce overall levels of police intrusion, the committee report also detailed the very large disparities in the stops and arrests of non-White, and especially Black Americans, and we noted that concentrating enforcement efforts in high-crime areas and on highly active individual offenders may lead to racial disparities in police–citizen interactions. Although these disparities are often much reduced when taking into account population benchmarks such as official criminality, studies that seek to benchmark citizen–police interactions against simple population counts or broad, publicly available measures of criminal activity do not yield conclusive information regarding the potential for racially biased behavior in proactive policing efforts. Identifying an appropriate benchmark would require detailed information on the geography and nature of the proactive strategy, as well as localized knowledge of the relative importance of the problem. Such benchmarks are

⁹ Studies reviewed by the committee include Najdowski (2011), Najdowski et al. (2015), O'Flaherty (2015), Sampson and Lauritsen (1997), Terrill and Reisig (2003), and Tonry (1995).

not currently available. The absence of such benchmarks makes it difficult to distinguish between accurate statistical prediction and racial profiling.

Some of the most illuminating evidence on the potential impact of proactive policing and increased citizen–police contacts on racial outcomes relates to the use of SQF in New York City (Goel et al. 2016). This research seeks to model the probabilities that police suspicion of criminal possession of a weapon turns out to be justified, given the information available to officers when deciding whether to stop someone. This work finds substantial racial and ethnic disparities in the distribution of these probabilities, suggesting that police in New York City apply lower thresholds of suspicion to Blacks and Hispanics. We do not know whether this pattern exists in other settings.

Per the charge to the committee, the report reviewed a relatively narrow area of intersection between race and policing. This focus, though, is nested in a broader societal framework of possible disparities and biased behaviors across a whole array of social contexts. These can affect proactive policing in, for example, the distribution of crime in society and the extent of exposure of specific groups to police surveillance and enforcement. However, it was beyond the scope of this study to review them systematically.

Policy Implications

We want to point to three specific limitations when it comes to the usefulness of this review in informing policy choice. First, the literature that we reviewed typically lacks much information on the magnitudes of the effects of the strategies evaluated. A clear demonstration that the "treatment effect" is greater than would be expected by chance—that is, that the estimated effect is statistically significantly different from zero—helps establish that the program "worked" but not that it was "worthwhile" from a policy perspective. A more complete evaluation would require a comparison of the estimated magnitude of the effect with an estimate of the costs of the program.

Second, and closely related, is that the evaluation evidence, because it typically does not take account of cost, may actually provide a misleading impression of whether a program "worked," whether in reducing crime or increasing community attitudes, for the entire jurisdiction, as opposed to having an effect only for the segment of the city represented by the treatment group. Most evaluations provide a local estimate of program impacts. They do not report how the program affected the jurisdiction overall. With the absence of such reports, or at least of evidence-grounded estimates of jurisdiction-level impact, it is very difficult to provide guidance to police executives about how redeployment of resources will impact overall trends across a city. In turn, since most of the evaluations we reviewed assess local impacts only, we often do not know what the impacts of a program will be on the broader community when a program is broadly applied, as opposed to when it is implemented on a small scale.

Third, a police chief who is considering adopting a particular innovation may be able to make a prediction on whether it will reduce crime or improve community attitudes, based on evaluations of one or more similar programs, but that prediction must always be hedged by the constraint that making inferences about "here and now" from "there and then" is a tricky business. To the extent that programmatic effects are moderated by the characteristics of the target population and the implementing agency, then importing a program that appears promising in another setting can lead to disappointment.

However, while acknowledging these caveats, we think that we can provide broad policy guidance regarding what the science of policing is today and how that might affect the choices that police executives make. Waiting until the evidence base is fully developed to draw from science in policy making is not only unrealistic, but it also means that practitioners will not benefit from what is known already. The report of the Committee on Proactive Policing provides important knowledge for policing, knowledge that can help inform the debate about what the police should be doing.

A number of identifiable policing strategies provide evidence of consistent short-term crime prevention benefits at the local level. These include hot spots policing, problem-oriented policing, third party policing, SQF targeted to violent and gun crime hot spots, focused deterrence, and problem-solving efforts incorporated in broken windows policing. What these approaches have in common is their effort to more tightly specify and focus police activities. Police executives who implement such strategies are drawing upon evidence-based approaches. We also find that these strategies, with the important exception of SQF, do not lead to negative community outcomes. With the caveats noted above, it appears that crime prevention outcomes can be obtained without this type of unintended negative consequence. Albeit preliminary, this finding reinforces the policy relevance of these evidence-based approaches.

At the same time, the results of our review suggest that police executives should not view certain proactive policing approaches as evidence-based, at least at this time. For instance, SQF indiscriminately focused across a jurisdiction or broken windows policing programs relying on a generalized approach to misdemeanor arrests ("zero tolerance") have not shown evidence of effectiveness. This caveat, combined with research evidence that documents negative individual outcomes for people who are the subject of aggressive police enforcement efforts, even in the absence of clear causal interpretation, should lead police executives to exercise caution in adopting generalized, aggressive enforcement tactics. Moreover, our review of the constitutional basis for focusing police resources on people or places suggests that issues of legality are particularly relevant in the case of such strategies. Even in the case of focused programs for which there is evidence of crime control success, when aggressive approaches such as SQF are employed, police executives must consider and actively try to prevent potential negative outcomes on the community and on legality, and they should cooperate with researchers attempting to quantify and evaluate these issues. This means not only that police executives should proceed with caution in adopting such strategies but also that agencies that are already applying them broadly and without careful focus should consider scaling down present efforts.

Our findings regarding community-based strategies raise important questions about whether such approaches will yield crime prevention benefits. Many scholars and policy makers have sought to argue that community-oriented policing and procedural justice policing will yield not only better relations with the public but also greater crime control. We do not find consistent evidence for this proposition, and police executives should be accordingly wary of implementing community-based strategies primarily as a crime control approach.

We also concluded that community-oriented policing programs were likely to improve evaluations of the police, albeit modestly. Accordingly, if the policy goal of an agency is to improve its relationship with the communities it serves, community-oriented policing is a promising strategy choice, although we are unable to offer a judgment on whether the benefits are sufficient to justify the expected costs. Our review of policing programs with a communitybased approach also suggests that police executives may want to consider applying multiple strategies as a more general agency approach. We think that better outcomes may be obtained when programs are hybridized across the approaches defined in this report. If, for example, an agency seeks to improve both crime prevention and community satisfaction with the police, it seems reasonable to combine practices typical of community-oriented policing with evidencebased crime prevention practices typical of strategies such as hot spots policing or problemoriented policing. This has already been done in problem-solving approaches that emphasize community engagement, where these dual benefits have been observed.

Existing studies do not provide evidence of crime prevention effectiveness in the case of proactive procedural justice policing. Accordingly, we believe that caution should be used in advocating for such approaches on the ground that they will reduce crime. At the same time, studies we reviewed did not find that procedural justice policing has the expected positive community outcomes. Does this mean that police should not encourage procedural justice policing programs? We think that this would be a serious mistake for two reasons. The first is simply that procedural justice reflects the behavior of police that is appropriate in a democratic society. Procedural justice may not change citizen attitudes, but it encourages democratic policing. The second reason relates to the state of research in this area. While it is a mistake to draw strong conclusions that procedural justice policing will improve community members' evaluations of police legitimacy or cooperation with the police, it is equally wrong to draw the conclusion that it will not do so. Again, the evidence base here is too sparse to support either position.

The Future of Proactive Policing

Proactive policing has become a key part of police efforts to do something about crime in the USA. The committee report supports the general conclusion that there is sufficient scientific evidence to encourage the adoption of some proactive policing practices. Proactive policing efforts that focus on high concentrations of crimes at places or among the high-rate subset of offenders, as well as practices that seek to solve specific crime fostering problems, show consistent evidence of effectiveness without evidence of negative community outcomes. Community-based strategies have also begun to show evidence of improving the relations between the police and public. At the same time, there are significant gaps in the knowledge base that do not allow one to identify with reasonable confidence the long-term effects of proactive policing. For example, existing research provides little guidance as to whether police programs to enhance procedural justice will improve community perceptions of police legitimacy or community cooperation with the police.

Much has been learned over the past two decades about proactive policing programs. 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 the police. This knowledge in turn needs to be tested not only in the USA, the UK, and Australia, where the majority of studies we review have been conducted, but also across other parts of the world. This summary was prepared for the *Asian Journal of Criminology*. One major caveat of our findings is that research is needed in Asia and other settings to replicate whether the outcomes observed in primarily Western countries are found consistent in those contexts.

Compliance with Ethical Standards

Conflict of Interest The authors declare that they have no conflict of interest.

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