

Hot Spots Policing: What We Know and What We Need to Know

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Abstract

After reviewing the evidence regarding the general effectiveness of hot spots policing (what we know), we focus on areas where new knowledge must be developed (what we need to know). These include the importance of considering the impact of hot spots approaches on non-spatial displacement; assessing what strategies are most effective in addressing hot spots; examining how hot spots policing affects police legitimacy; evaluating whether hot spots policing will be effective in smaller cities and rural areas; investigating the long-term impacts of hot spots policing; and considering whether the adoption of hot spots policing will reduce overall crime in a jurisdiction.

Keywords

displacement, hot spots policing, place-based policing, police legitimacy

Over the past two decades, a series of rigorous evaluations have suggested that police can be effective in addressing crime and disorder when they focus in on small units of geography with high rates of crime (see Braga, Papachristos, & Hureau, 2012, National Research Council [NRC], 2004; Weisburd & Eck, 2004). These areas are typically referred to as hot spots, and policing strategies and tactics focused on these areas are usually referred to as hot spots policing or place-based policing. This place-based focus stands in contrast to traditional notions of policing and crime prevention more generally, which have often focused primarily on people (see Weisburd, 2008). Police, of course, have never ignored geography entirely. Police beats, precincts, and districts

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determine the allocation of police resources and dictate how police respond to calls and patrol the city. With place-based policing, however, the concern is with much smaller units of geography than the police have typically focused on. Places here refer to specific locations within the larger social environments of communities and neighborhoods, such as addresses, street blocks, or small clusters of addresses or street blocks. Crime prevention effectiveness is maximized when police focus their resources on these micro-units of geography.

In this article, we focus on what we know and what we need to know about hot spots policing. We do not survey basic research knowledge, which we also think important for the long-term development of hot spots policing programs (e.g., see Weisburd, Groff, & Yang, 2012; Weisburd, Lawton, & Ready, 2012). Rather, our interest here is in key areas of hot spots policing practice that should be the focus of research over the next decade. We begin below by giving a short definition of hot spots policing, and briefly reviewing the evidence regarding the general effectiveness of hot spots policing. We then turn in more detail to areas where new knowledge must be developed. We argue that we know that hot spots policing does not lead inevitably to immediate spatial displacement, though there is little evidence regarding other types of displacement; that we have emerging evidence on which hot spots policing strategies work best, but that there is still much to learn; that we do not know enough about the impacts of hot spots policing on police legitimacy; that we know little about whether hot spots policing will be effective in smaller cities and rural areas; that we need to know more about the long-term impacts of hot spots policing; and that we need evidence on whether the adoption of hot spots policing will reduce crime in a jurisdiction. In conclusion, we discuss the importance of filling these gaps in knowledge, and the need for policing research more generally to receive more realistic federal funding levels if it is to provide real guidance for practice.

What Is Hot Spots Policing?

Hot spots policing, also sometimes referred to as place-based policing (see Weisburd, 2008), covers a range of police responses that all share in common a focus of resources on the locations where crime is highly concentrated. Just as the definition of hot spots varies across studies and contexts (from addresses to street segments to clusters of street segments), so do the specific tactics police use to address high-crime places. There is not one way to implement hot spots policing. As Weisburd (2008) notes, approaches can range rather dramatically across interventions.

For example, the strategies of place-based policing can be as simple as drastically increasing officer time spent at hot spots, as was the case in the Minneapolis, Minnesota, Hot Spots Patrol Experiment (Sherman & Weisburd, 1995). But place-based policing can also take a much more complex approach to the amelioration of crime problems. In the Jersey City, New Jersey, Drug Market Analysis Program Experiment (Weisburd & Green, 1995), for example, a three-step program (including identifying and analyzing problems, developing tailored responses, and maintaining crime control gains) was used to reduce problems at drug hot spots. Also in Jersey City, a problem-oriented

policing (POP) approach was taken in developing a specific strategy for each of the small areas defined as violent crime hot spots (Braga et al., 1999).

We Know That Hot Spots Policing Is Effective

It is no longer something new that hot spots policing is an effective policing strategy. Indeed, one important police scholar recently communicated with one of the authors that it is no longer enough (for publication) to show that hot spots policing works.¹ That is an established fact based on strong experimental and quasi-experimental evidence. As the NRC (2004) review of police effectiveness noted: “studies that focused police resources on crime hot spots provided the strongest collective evidence of police effectiveness that is now available” (p. 250). A Campbell systematic review by Braga et al. (2012) comes to a similar conclusion; although not every hot spots study has shown statistically significant findings, the vast majority of such studies have (20 of 25 tests from 19 experimental or quasi-experimental evaluations reported noteworthy crime or disorder reductions), suggesting that when police focus in on crime hot spots, they can have a significant beneficial impact on crime in these areas. As Braga (2007) concluded, “extant evaluation research seems to provide fairly robust evidence that hot spots policing is an effective crime prevention strategy” (p. 18).

We Know That Hot Spots Policing Does Not Inevitably Lead to Immediate Spatial Displacement, Though There Is Little Evidence Regarding Other Types of Displacement

A key concern in the development of hot spots policing was that crime would just move around the corner in response to a police focus on high-crime places (Weisburd et al., 2006). Spatial crime displacement is the notion that efforts to eliminate specific crimes at a place will simply cause criminal activity to move elsewhere, thus negating any crime control gains. Braga et al. (2012) found significant evidence of spatial displacement in only one study (Ratcliffe, Taniguchi, Groff, & Wood, 2011), and even here, the amount of displacement was far less than the main crime prevention benefit of the intervention. Thus, in nearly every study, crime did not simply shift from hot spots to nearby areas (see also Weisburd et al., 2006). Indeed, a more likely outcome of such interventions was a diffusion of crime control benefits (Clarke & Weisburd, 1994) in which areas surrounding the target hot spots also showed a crime and disorder decrease.

Displacement is not inevitable, in part, because hot spots tend to have specific features that make them attractive targets for criminal activity, and these same features may not exist on neighboring blocks. For example, in a study of displacement and diffusion in Jersey City, Weisburd et al. (2006) found that the prostitution hot spot targeted by police had few homes and many vacant buildings, making it an attractive

site for prostitution activity. In contrast, one of the catchment areas near the target site had many more residences, making it more likely that the police would be called when prostitution occurred. In this context, prostitutes could not easily move their illegal activity to areas nearby.

While the research evidence is strong regarding immediate spatial displacement, we know much less about displacement to areas farther away. Weisburd and Green (1995) examined the emergence of new drug hot spots as a result of hot spots policing, and found that there was no evidence the intervention had displaced crime to other parts of the city. Still, a handful of new hot spots did emerge in post-intervention analyses, although it is not clear if these new markets actually reflected spatial displacement. Besides that study, little is known about displacement across longer distances. One methodological problem for such studies is that hot spots research so far has generally randomly allocated or identified control areas within jurisdictions, making it complex to examine displacement beyond a few blocks. There is simply too much confounding of areas to isolate displacement. We note later the potential for jurisdiction-wide hot spots studies to examine this question more carefully.

We also know little about non-areal displacement, such as displacement of crime types or methods. In the Jersey City Displacement and Diffusion Study (Weisburd et al., 2006), method displacement was observed in qualitative data as a result of the hot spots policing interventions. Prostitutes and drug dealers moved their activities indoors as a response to police crackdowns, or began to arrange “dates” with clients. That study suggested that contrary to prior assumptions, area displacement was less likely than method displacement. But we simply need to know more both about larger area spatial displacement and other forms of displacement that might result from hot spots policing strategies.

We Have Emerging Evidence on Which Hot Spots Policing Strategies Work Best, but There Is Still Much to Learn

While the evidence on the effectiveness of hot spots policing is persuasive, there still remains the question of what specifically police officers should be doing at hot spots to most effectively reduce crime. The literature thus far has not provided the same level of guidance. As Braga (2007) notes, “Unfortunately, the results of this review provide criminal justice policy makers and practitioners with little insight on what types of policing strategies are most preferable in controlling crime hot spots” (p. 19). Nonetheless, the existing literature does shed some light on what police should be doing to most effectively address crime hot spots.

The first hot spots study, the Minneapolis Hot Spots Patrol Experiment, suggested that increased police presence alone leads to reductions in crime and disorder (Sherman & Weisburd, 1995). Officers were not given specific instructions on what activities to engage in while in hot spots. They simply were told to increase patrol time in the treatment hot spots. While the study did not include a systematic examination of officer

activities, subsequent analyses by Koper (1995) provide some insight into how much time officers should be spending in hot spots. He found that each additional minute of time officers spent in a hot spot increased survival time by 23%. Survival time here refers to the amount of time after officers departed a hot spot before disorderly activity occurred. The ideal time spent in the hot spot was 14 to 15 minutes; after about 15 minutes, there were diminishing returns, and increased time did not lead to greater improvements in residual deterrence. This phenomenon is often referred to as the "Koper curve" as graphing the duration response curve shows the benefits of increased officer time spent in the hot spot until a plateau point is reached (see Koper, 1995).

As Koper (1995) notes "police can maximize crime and disorder reduction at hot spots by making proactive, medium-length stops at these locations on a random, intermittent basis in a manner similar to Sherman's (1990) crackdown-backoff rotation strategy" (p. 668). Both Koper (1995) and Sherman (1990) argue for an approach in which police travel between hot spots, spending short periods of time in each hot spot to maximize residual deterrence, and moving from hot spot to hot spot in an unpredictable order. The goal is for potential offenders to recognize an increased cost of offending in these areas because police enforcement could increase at any moment.

Only recently has Koper's (1995) recommendation been applied to the design of a hot spots policing experiment. The Sacramento, California, Police Department undertook a 3-month randomized experiment in which officers were explicitly instructed to randomly rotate between treatment group hot spots and to spend about 15 minutes in each hot spot. Results suggest the Koper (1995) approach to hot spots policing had a significant impact on crime. Treatment group hot spots had significantly fewer calls for service and Part I crime incidents than control group hot spots when comparing the 3 months of the experiment in 2011 to the same period in 2010 (Telep, Mitchell, & Weisburd, 2012).

The Braga and Bond (2008) hot spots experiment in Lowell, Massachusetts, included a mediation analysis to assess which hot spots strategies were most effective in reducing crime. Results suggested that situational prevention strategies (see Clarke, 1995) had the strongest impact on crime and disorder. Such strategies focus on efforts to disrupt situational dynamics that allow crime to occur by, for example, increasing risks or effort for offenders or reducing the attractiveness of potential targets. Such approaches are often a prominent part of hot spots interventions and include things like razing abandoned buildings and cleaning up graffiti. Increases in misdemeanor arrests made some contribution to the crime control gains in the treatment hot spots, but were not as influential as the situational efforts. Social service interventions did not have a significant impact. These findings suggest not only the importance of situational crime prevention as a strategy for addressing crime facilitators in hot spots, but also that aggressive order maintenance through increases in arrests may not be the most effective way of addressing high-disorder places. Braga and Weisburd (2010) conclude as well that

...based on the available empirical evidence, we believe that police departments should strive to develop situational prevention strategies to deal with crime hot spots. Careful

analyses of crime problems at crime hot spots seem likely to yield prevention strategies that will be well positioned to change the situations and dynamics that cause crime to cluster at specific locations (pp. 182-183).

An additional promising approach for dealing with crime hot spots is having officers incorporate principles from problem-oriented policing. Beginning with the Jersey City Drug Market Analysis Program experiment (Weisburd & Green, 1995), a series of experiments and quasi-experiments have pointed to the crime control effectiveness of hot spots policing programs that incorporate problem-oriented policing approaches (e.g., Braga & Bond, 2008; Braga, et al., 1999; Mazerolle, Price, & Roehl, 2000). In their Campbell review of hot spots policing experiments, Braga et al. (2012) find that overall, problem-oriented hot spots policing programs produced effect sizes that were more than double those produced by hot spots studies focused only on increasing police presence.

The first randomized experimental study to compare different hot spot treatments was conducted by Taylor, Koper, and Woods (2011) in Jacksonville, Florida. One treatment group received a more standard saturation patrol response and the second received a problem-oriented response that focused on officers analyzing problems in the hot spot and responding with a more tailored solution. Results showed a decrease in crime (though not a statistically significant decrease) in the saturation patrol hot spots, but this decrease lasted only during the 90-day intervention period. In the POP hot spots, there was no significant crime decline during the intervention period, but in the 90 days after the experiment, street violence declined by a statistically significant 33%. These results offer experimental evidence suggesting that problem-oriented approaches to dealing with crime hot spots may be more effective than simply increasing patrols in high-crime areas. They also suggest that problem-solving approaches may take more time to show beneficial results.

A recent study by Ratcliffe et al. (2011) in Philadelphia, Pennsylvania, points to the possible crime prevention effectiveness of foot patrol strategies at crime hot spots. Focusing high-dosage foot patrol at hot spots was found to reduce violent crime by 23%, as compared with normal police service in control areas. The hot spot areas in this study were somewhat larger than in other hot spots experiments, but the careful attention paid to the specific places where crime was focused suggests that foot patrol more generally can be an effective strategy for hot spots policing. Existing studies show that preventive patrol at hot spots is effective, and that police can impact crime by focusing on hot spots for only 15 min at a time. Situational prevention at crime hot spots is also promising, as are problem-oriented policing approaches. Ratcliffe et al. (2011), in turn, point to the potential to harness foot patrol in hot spots policing. But despite the strong research base for hot spots policing, there remain many questions regarding what the police should do to most effectively reduce crime and disorder.

First, there is a vast array of hot spots strategies that have not been rigorously tested. As Koper (2014) reports in this issue, a survey of agencies of various sizes indicated a wide variety of strategies they use to address high-crime places. While some of the most popular strategies used by respondents have been well evaluated

(e.g., problem solving and directed patrol), other common responses have not been the subject of extensive rigorous research. For example, many agencies identified targeting known offenders as an effective strategy for shooting and homicide hot spots. To date, only limited research has evaluated a focus on known offenders as a hot spots strategy, but the results for this approach are very promising (see Ratcliffe, Groff, Haberman, & Sorg, 2012). Buy and bust and reverse sting operations were identified by a number of respondents as effective approaches in drug violence hot spots, but these strategies have not been rigorously evaluated thus far. Other strategies frequently used by agencies that have not yet been researched extensively include community partnerships, checks on probationers and parolees, and using warrant service operations to target wanted offenders.

Second, we need to know more about the impact of new technologies on the effectiveness of hot spots policing. Lum, Hibdon et al. (2011) for example, found that license plate readers (LPRs) were not effective at reducing overall crime or automobile crime. In contrast, Koper, Taylor, and Woods (2013) found LPRs reduced at least certain crime types when used in a rotating, short-term crackdown fashion as recommended by Sherman (1990) and described above. While these two randomized experiments are an important first step in understanding how police technology affects hot spots policing, we still need to know more about whether often costly new technologies can enhance the ability of police to address high-crime places. Can gunshot detection devices, for example, be used to supplement hot spot patrols? Can police utilize CCTV or other camera technology as tools in efforts to address high-crime places?

Third, we need to know more about which strategies are most effective in what contexts. Clearly, the effectiveness of strategies will depend on the specific types of crimes and types of places that are the focus of police attention. But we still do not have enough studies to provide detailed answers to these types of questions. Such detail is needed for the real-world application of hot spots policing. Survey responses described by Koper (2014), for example, revealed that agencies are frequently using different types of strategies to address different types of violent crime, but research to date has not extensively examined if and how the effectiveness of hot spots strategies varies across crime type.

We Do Not Know Enough About the Effects of Hot Spots Policing on Police Legitimacy

The empirical research is highly supportive of the overall effectiveness of hot spots policing in reducing crime and disorder. The success of policing, however, is also dependent on public perceptions of the legitimacy of police actions (NRC, 2004; Tyler, 1990). The police need the support and cooperation of the public to effectively combat crime and maintain social order in public spaces. Legitimacy here refers to the public belief that there is a responsibility and obligation to voluntarily accept and defer to the decisions made by authorities (Tyler 1990). A number of scholars have recently argued that intensive police interventions such as hot spots policing may erode citizen perceptions of the police (e.g., see Kochel, 2011; Rosenbaum, 2006). Rosenbaum (2006), for

example, argues that enforcement-oriented hot spots policing runs the risk of weakening police-community relations. Aggressive tactics can drive a wedge between the police and communities, as the latter can begin to feel like targets rather than partners. This is particularly relevant in high-crime minority communities where perceptions of the police already tend to be more negative (see Gau & Brunson, 2010). This has implications for the crime control effectiveness of hot spots policing as Tyler (1990) has argued that legitimacy is an important predictor of long-term compliance with the law. If hot spots policing interventions weaken perceptions of legitimacy, then the short-term crime control gains from the intervention might be offset by long-term increases in criminal offending.

Despite arguments that intensive interventions such as hot spots policing will have negative impacts on police legitimacy, there is very little evidence to support this position. A study by Hinkle and Weisburd (2008) found that police crackdowns on crime and disorder hot spots led people living in the areas targeted to become more fearful of crime. However, that study was based on a correlational design, in which the affected hot spot areas had levels of crime overall higher than the comparison areas used in the study. And there is developing evidence from other studies that residents in crime hot spots that are subject to focused police attention welcome the concentration of police efforts in problem places (e.g., Chermak, McGarrell, & Weiss, 2001; Corsaro, Brunson, & McGarrell, 2010). For example, a study linked to the Kansas City Gun Experiment (Sherman & Rogan, 1995) found that the community strongly supported the intensive patrols and perceived an improvement in the quality of life in the treatment neighborhood (J. Shaw, 1995).

One recent study by Braga and Bond (2009) examined community reaction to the problem-oriented policing initiative in Lowell (see also Braga & Bond, 2008). Data from interviews showed that the community perceived improvements in social and physical disorder and an increased number of contacts with the police. However, no statistically significant differences were found in fear of crime or perceptions of police tactics or demeanor. Recent experimental research from three cities in San Bernardino County, California, also found that a broken windows style intervention at hot spots had no impact on resident perceptions of police legitimacy (Weisburd, Hinkle, Famega, & Ready, 2011).

Clearly, we need more evidence in different contexts and in regard to different types of strategies. Moreover, it would be useful to assess the views of residents of areas nearby hot spots and target sites to assess whether such interventions have spill-over effects (either positive or negative) on legitimacy perceptions. In addition, research to date has not attempted to measure how the individuals who were stopped and searched by the police perceive such programs. Ideally, a study would compare the perceptions of individuals stopped as part of a hot spots intervention to those stopped under standard routine preventive patrol.

The knowledge base on this important topic of how police fairness and effectiveness intersect in hot spots policing remains limited. But it is important to develop for two reasons. First, if hot spots policing does negatively impact perceptions of legitimacy, then crime control gains in the short run may be offset by reduced cooperation

and compliance of the public in the long term. In turn, the public's perceptions of the police are an important outcome for police in of themselves. So, if hot spots policing reduces legitimacy perceptions, this in itself is an issue of concern. Second, if the police can increase perceptions of legitimacy in hot spots policing by adopting specific tactics this could enhance crime control effectiveness. One mechanism for this is the increased cooperation of the law-abiding public. But there is also emerging research that increased perceptions of legitimacy of police actions may lead offenders and potential offenders to lower rates of recidivism and offending (Papachristos, Wallace, Meares, & Fagan, 2013; Paternoster, Brame, Bachman, & Sherman, 1997; Tyler, Sherman, Strang, Barnes, & Woods, 2007).

It is certainly time to place legitimacy evaluations as a key outcome measure of hot spots policing interventions. This would require more attention be paid to questions of procedural justice. Procedural justice refers to the ways in which the police interact with citizens, including the ways in which police strategies give citizens the sense that they are treated fairly and that their side of the story is heard (Tyler, 2004; Tyler & Huo, 2002). Braga and Weisburd (2010) and Weisburd and Braga (2013) have argued that hot spots policing programs can incorporate procedural justice components to both increase legitimacy perceptions and enhance crime control effectiveness. There need to be field experiments to test whether a procedurally just hot spots policing approach would have these outcomes.

We Know Little About Whether Hot Spots Policing Will Be Effective in Smaller Cities and Rural Areas

Nearly all the experimental and quasi-experimental studies of hot spots policing have been conducted in large cities like Minneapolis (Sherman & Weisburd, 1995), Jersey City (Braga et al., 1999), and Jacksonville (Taylor et al., 2011). This raises questions about how applicable existing hot spots tactics, and the evidence supporting them, are to smaller, less densely populated cities. Even less is known about whether the tactic is applicable in small towns or rural county jurisdictions. As Lum and Koper (2013) find, just 1 of nearly 120 rigorous policing crime control interventions included as part of the Evidence-Based Policing Matrix (Lum, Koper, & Telep, 2011) took place in a rural area. Hot spots researchers (like police researchers more generally) have largely ignored smaller cities and towns and rural areas. This is not a minor concern as the vast majority of police agencies in the United States are small- to mid-sized agencies serving smaller cities and towns. Data show that of the approximately 17,895 state and local police agencies in the country, 16,828 (93.6%) employ fewer than 100 officers (Reaves, 2011). As such, it is crucially important to evaluate hot spots policing (as well as all police innovations), not just in larger cities but also in the small- to mid-sized cities and rural counties that account for a majority of police agencies nationwide.

It is not readily apparent that hot spots policing will be relevant for such places. One of the key assumptions of hot spots policing is that crime is highly concentrated in specific micro-geographic places (Sherman, Gartin, & Buerger, 1989; Weisburd, Bushway,

Lum, & Yang, 2004; Weisburd, Groff, & Yang, 2012). But there is little research evidence that such clustering is found in smaller cities. Just as most hot spots policing studies have occurred in larger cities, so too has most of the basic research on the concentration of crime. And even if there is such clustering, there is evidence that crime hot spots in small cities will often be much less “hot” than those in larger cities. In an article on the barriers likely to be encountered in small city studies, Hinkle, Weisburd, Famega, and Ready (2014) argue that the number of crimes in hot spots is likely to be much smaller in smaller cities. For example, the mean number of hard and soft crime calls for the 110 address clusters (which were defined to be no larger than a linear street block) included in the Minneapolis Hot Spots Patrol Experiment was 182.9 in the year of data used to pick study sites (Sherman & Weisburd, 1995). The broken windows policing study in San Bernardino, California (Weisburd et al., 2011) used six-month pre-, during-, and post-intervention periods, and was conducted in smaller cities where the highest crime street segments had relatively smaller numbers of crimes as compared with larger city hot spots. Specifically, during the 6-month pre-intervention period the mean number of crime calls for service² across the 110 blocks was 9.6 (which would lead to a count of about 20 crimes over a year—much lower than in Minneapolis).

While such lower-activity places may still be “crime hot spots” in smaller jurisdictions, the ability of the police to influence crime at such places may be different. This is an empirical question for which we have very few answers. The broken windows experiment in San Bernardino County did not lead to significant crime prevention outcomes, and indeed is the only randomized hot spots experiment we are aware of not to show statistically significant crime prevention gains (Weisburd, Hinkle, Famega, & Ready, 2012). But the study was designed primarily to examine citizen perceptions of hot spots policing, not crime outcomes, and accordingly the researchers did not maximize the research design to measure crime. Hinkle et al. (2014) argue that assessing outcomes in the San Bernardino experiment was difficult because the number of events at each hot spot was too small to allow for statistically powerful outcomes. This is likely to be a serious barrier to evaluation in many smaller cities or in rural areas.

We need more basic research on crime concentrations in smaller cities and rural jurisdictions, and we need evaluation studies that are designed in ways that allow for statistically powerful assessments of the impacts of hot spots policing in such areas. In smaller cities, we need to consider how strategies can be developed that focus more directly on the smaller numbers of events likely to be encountered. This may involve more effective targeting, higher dosage, or perhaps more reliance on enhancing hot spots policing through informal social controls (that would operate when the police are not around). Clearly, studies must be designed in which there are sufficient numbers of places to allow for statistically powerful designs with low base rate places.

In turn, the case of rural hot spots studies may demand new and innovative thinking that goes much beyond present studies. For example, in discussions with police in Taiwan, one of the article authors (Weisburd) observed that crime hot spots in rural areas may relate to the concentrations of livestock or public resource areas (such as wells). And the crimes may involve repeat thefts of pigs, or vandalism of pipes that lead water to farms in nearby areas.

Clearly, much basic and applied research is needed before we apply existing hot spots policing concepts to rural areas, and even to smaller-sized cities. One lesson of policing studies over the last few decades is that a one-size-fits-all approach to police crime prevention is not effective (Weisburd & Eck, 2004). Similarly, the lessons of hot spots policing in larger jurisdictions cannot be applied uncritically to smaller cities and rural jurisdictions.

We Need to Know More About the Long-Term Impacts of Hot Spots Policing

Hot spots policing studies to date have looked only at the short-term benefits of these tactics. Not one of the studies reviewed by Braga et al. (2012) had more than a 1-year follow-up period. What this means is that we know little about whether hot spots policing strategies will affect crime in the long run. Can we have long-term impacts on crime at hot spots? What types of strategies are likely to have only short-term benefits? What types of strategies are likely to ameliorate crime in the long run?

Hot spots policing scholars have looked primarily to what can be termed “opportunity theories” (Cullen, 2010; Wilcox, Land, & Hunt, 2003) as a basis for constructing practical crime prevention approaches (e.g., see Eck & Weisburd, 1995; Sherman et al., 1989; Weisburd et al., 2004). These approaches often rely on increasing guardianship (e.g., through increasing police presence) as a means of blocking opportunities to offend. Hot spots interventions that rely primarily on guardianship would not be expected to have long-term impacts on crime. Indeed, the theoretical basis for such interventions comes from the routine activities perspective which refers to the specific characteristics that underlie a criminal event (Cohen & Felson, 1979; Felson & Boba, 2010). The presence or threat of presence of a capable guardian is expected to prevent the opportunity for crime that develops from the convergence in space and time of a motivated offender and a suitable victim. Without such guardianship, there is no crime prevention effect.

The hot spots studies have already shown that the benefits of guardianship go beyond the specific periods police are present (Koper, 1995; Sherman & Weisburd, 1995; Telep et al., 2012). But programs that focus only on increasing guardianship are not expected to have long-term impacts on crime, particularly after interventions have ended. Indeed, their benefit comes from utilizing existing police resources routinely to suppress crime in a specific time period. Recent analyses by Sorg, Haberman, Ratcliffe, and Groff (2013) suggest that the crime prevention effects of foot patrol in Philadelphia (see Ratcliffe et al., 2011), for example, disappeared after the treatment period ended. Examining more than a year of follow-up data for the first phase of the foot patrol intervention, Sorg et al. (2013) find no evidence of residual deterrence in the treatment hot spots. Once the foot patrol officers were removed, crime over time in the treatment areas became statistically indistinguishable from the control hot spots.

More problem-oriented hot spots approaches are designed to have longer-term impacts by changing the dynamics of places. POP was originally developed by Herman Goldstein (1979) to address the underlying problems that lead to crime. In this context,

we would expect problem-oriented policing at hot spots, when properly applied, to “solve” problems and therefore prevent crime in the long run (see Taylor et al., 2011). This is true as well for situational prevention approaches, which try to change the underlying opportunity structures behind crime (Clarke, 1995). However, we simply have no evidence for such outcomes. Evaluations so far have been short term, in part because of the difficulties of applying experimental studies in the field for long periods (Weisburd, 2000, 2005) and in part because federal funding has been limited to shorter term time frames. In turn, there may be difficulty in stopping crime for the long run in chronic crime hot spots, in part because the specific situational context of such places in urban geographies is often beyond the power of the police to change. But these are empirical questions that need to be answered.

Weisburd, Groff, and Yang (2012) focus not only on opportunity factors in high-crime places, but also argue that hot spots can be seen as micro communities and accordingly that longer-term social change at crime hot spots is also relevant to crime prevention at places. If longer-term social interventions are used that ameliorate social conditions, this approach has strong potential for long-term impacts of hot spots policing. Weisburd, Groff, and Yang (2012) collected geographic data on structural factors reflecting social disorganization at the street segment level in Seattle (Sampson & Groves, 1989; C. R. Shaw & McKay, 1942; Wilcox, Quisenberry, Cabrera, & Jones, 2004) and what some have termed intermediate variables of social control (Sampson & Groves, 1989; Sampson, Raudenbush, & Earls, 1997). Their findings indicate that there are micro-geographic hot spots of social disorganization and low social control.

For example, they collected data on public housing and Section 8 vouchers at street segments, finding that there are public housing assistance hot spots. Indeed, 50% of housing assistance is consistently found on about 0.4% of the street segments in Seattle. There is also strong street-by-street variability, emphasizing the importance of hot spot segments rather than larger area concentrations. Within 800 feet of the public assistance hot spots, 84.3% of street segments do not have any public housing assistance recipients. Collective efficacy has come to be seen as an important representation of the ability of residents of communities to exercise informal social controls (Sampson et al., 1997). One important indicator of collective efficacy is residents' willingness to participate in public affairs (Morenoff, Sampson, & Raudenbush, 2001; Sampson et al., 1997). Weisburd, Groff, and Yang (2012) represented collective efficacy using the percentage of active voters on each street segment (see also Coleman, 2002; Putnam, 2001). When Weisburd, Groff, and Yang (2012) examined the street segments within 800 feet of the “hot spots” of active voters (the top 10%), only 25% of neighboring street segments also evidenced such high levels of active voting. Most importantly, these social features of places are strongly related to whether a street segment was identified as a chronic crime hot spot over the 16-year period they examined in Seattle (Weisburd, Groff, & Yang, 2014). Property values, housing assistance, and collective efficacy as measured by voting behavior were all key variables in the models explaining membership in the chronic crime hot spot group. These social features of places not only evidenced strong street-to-street variability, but also were key

factors in explaining developmental crime trends over time. Whether a place was a crime hot spot or not was strongly related to its social characteristics.

The fact that causal mechanisms underlying developmental patterns of crime at a place can be found in factors such as economic deprivation or collective efficacy suggest that strategies that focus on long-term social change should be added to the tool box of crime prevention at places. Such strategies are just beginning to be examined. For example, Weisburd Gill and Davis³ have received Bureau of Justice Assistance funding for a study that uses patrol resources to encourage collective efficacy at crime hot spots. In this case, patrol officers will work with block leaders to enhance cooperation, and the willingness of people living on a block to become involved in crime prevention efforts. In Seattle, the Office of Community Oriented Policing Services has funded a community policing program for juvenile crime hot spots. These are newly emerging programs and studies that seek to marshal informal social controls with the idea of having long-term crime prevention gains. But more generally, we know little about whether and under what conditions such programs will enhance the long-term effectiveness of hot spots policing. This is a key area that hot spots policing researchers should examine over the next decade.

We Need Evidence on Whether the Adoption of Hot Spots Policing Will Reduce Crime in a Jurisdiction

Perhaps the most important question still unanswered in hot spots policing studies is whether the adoption of hot spots policing will reduce overall crime in a jurisdiction. The origins of hot spots policing can be found in the recognition by some scholars that large geographic units are the wrong units of focus both for policing programs and policing evaluations. The fact that crime is clustered at places means that spreading police resources widely reduces dosage at those places where the police are most needed. This is one of the basic foundations of the hot spots policing approach (Sherman & Weisburd, 1995). But another important catalyst for hot spots policing came from the recognition that the impacts of geographically focused policing programs will not be observed if the geographic level of evaluation is incorrect.⁴ If the intervention occurs at a few chronic hot spots, then measuring the outcome of the intervention at a macro-geographic unit could lead to any treatment effect being “washed out” by the larger area trends in crime.

But in focusing on the crime prevention effectiveness of the police at crime hot spots, researchers have neglected to ask the broader question of whether hot spots policing can help reduce crime overall in a jurisdiction. An important methodological barrier to answering this question comes from the design of most hot spots policing evaluations. They generally randomly allocate, or create quasi-experimental comparison areas, within a single jurisdiction. This makes it impossible of course, to answer the question of whether hot spots policing applied broadly across a jurisdiction will reduce crime.

Instead, scholars and practitioners have relied on a logic model for the general crime prevention effectiveness of hot spots policing. If hot spots policing can

significantly reduce crime at chronic crime hot spots, and there is little evidence of displacement, then there is inevitably an overall reduction in crime. While this logic makes sense, it does not take into account key issues. Are the benefits of hot spots policing programs marginal relative to overall crime trends in a city? Can police agencies marshal enough hot spots policing to gain a meaningful overall crime prevention benefit? There are only two studies that we found that speak to this issue. In a quasi-experimental evaluation of Operation Impact in New York, Smith and Purtell (2007) find an overall area effect (at the precinct level) when large numbers of officers were sent into the generally small Impact Zones in each target precinct. In turn, there is evidence that officers focused their enforcement activities on crime hot spots (Smith & Purtell, 2007; see also Weisburd, Telep, & Lawton, 2014). Weisburd, Groff, Jones, Amendola, and Cave (unpublished manuscript) found in a randomized field experiment in Dallas, Texas, that GPS knowledge of where police officers patrol helped police managers increase patrol time at hot spots and reduced crime. The overall crime prevention benefit did not extend to all of the 232 beat areas in the city, but Weisburd et al. (unpublished manuscript) note that in areas with large numbers of hot spots there were overall meaningful effects on crime.

Initial studies accordingly provide encouraging evidence for the effect of hot spots policing on jurisdictional crime levels. However, this question remains an open one that future studies must focus on. We cannot simply rely on the effects of police at hot spots to know whether hot spots policing reduces crime in jurisdictions. We need studies carefully designed to focus in on this question. This will require multi-jurisdictional experiments, or at least ones that divide up cities into areas that are assigned to hot spots policing and those that are not.⁵ It is also important for this type of research to be done soon. As hot spots policing begins to be applied across most large U.S. jurisdictions and indeed around the world (Koper, 2008; Reaves, 2010), it will be harder and harder to identify control conditions for such studies.

If hot spots policing does not lead to lower jurisdictional crime levels, it does not change the benefits that can be found at specific high-crime areas, nor decrease its utility as a specific strategy for specific problems. However, as hot spots policing becomes more widely adopted as a generalized strategy for police agencies, we need to know more about the effectiveness of that generalized strategy. Such jurisdiction-level studies would also allow us to learn more about displacement across large areas. As we noted earlier, this is also an area in which we have little empirical knowledge to date. Moreover, studies at the jurisdiction level would also be useful for assessing the cost-effectiveness of hot spots policing (see Braga et al., 2012).

Conclusion

A number of scholars have remarked that the last few decades have been a remarkable time for the development of policing research (Bayley, 2008; NRC, 2004; Weisburd & Braga, 2006). A large body of studies has been accumulated, and we know much more today than in past decades. However, in hot spots policing research, as in policing more generally, this has become a half full/half empty discussion. We have learned

much, but there is still a significant area of knowledge that is lacking. Hot spots policing research has been seen as the area of policing studies with the strongest evidence base (NRC, 2004; Telep & Weisburd, 2012), and it has generated the largest number of rigorous studies we are aware of in policing. But recognizing how far we have come also leads us to wonder about how to get to the next stage of hot spots policing research.

The areas we have identified that need more evidence can be identified in part because we have strong knowledge that hot spots policing is effective. To move forward with hot spots policing, it is important to begin to fill in the gaps of knowledge. What specific strategies should be used in which specific contexts? While displacement does not threaten the crime control benefits of hot spots policing, are there specific types of displacement that are more likely in specific circumstances? Can we harness legitimacy perceptions in hot spots policing to improve its crime prevention effectiveness, and to lessen negative consequences? Will hot spots policing have long-term as well as the established short-term impacts? Will hot spots policing be effective in smaller cities and rural counties? Will hot spots policing as a generalized policing strategy have overall crime prevention outcomes in a jurisdiction? These are all questions that can now be asked because we already know that hot spots policing is effective.

These are also questions that are critical for the adoption of hot spots policing in practice. These are questions that practitioners need to have answers to. But these are also questions that will require a major federal government investment in advancing hot spots policing. It is not the time to stop funding in this area, because we have established effectiveness; it is time to increase funding because we have evidence that such funding will have a strong yield for public safety. Having identified a policing approach that is effective, it seems to us as particularly timely to embark on a large-scale research program to identify the “cookbook” of effective hot spots policing strategies. Guidebooks and checklists are routinely available in medical science and practice (e.g., see Hales & Pronovost, 2006; McKenzie, 2007; Winters et al., 2009; Wolff, Taylor, & McCabe, 2004). It is time to make them available to the police. Evidence-based policing, like evidence-based medicine, will always rely on combining the best research evidence with professional expertise (Lum, Telep, Koper, & Grieco, 2012; Sackett, Rosenberg, Gray, Haynes, & Richardson, 1996). Thus, no guidebook will ever provide all the answers on dealing with crime hot spots. But a more extensive effort must be made to provide the police with as much practical knowledge as possible about how to tackle high-crime places in ways that maximize fairness and effectiveness across a range of different contexts.

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Notes

1. Personal communication with Richard Rosenfeld.
2. The crime measure included all calls for service for arson, assault, burglary, carjacking, grand theft, man with gun, motor vehicle theft, petty theft, rape, and robbery.
3. Read more about the Brooklyn Park (Minnesota) Smart Policing Project at <http://alturl.com/zwgtz>
4. This observation comes from Weisburd's work in the New York City community policing evaluation that he completed before work on the Minneapolis Hot Spots Patrol Experiment (see Weisburd, McElroy, & Hardman, 1988). In that study beats between 12 and 30 square blocks in size were originally the focus of evaluation. After walking the street with the community policing officers, it quickly became apparent to Weisburd that officers were focusing the bulk of their attention on a small number of chronic problem blocks in these larger beats and so evaluating the project at the beat level was likely to water down the crime prevention impacts of the activities of the officers.
5. Examinations of the jurisdiction-level effects of hot spots policing will also need to consider temporal patterns of crime hot spots (see Townsley, 2008). Police agencies will have to find a balance between targeting areas that have shown some stability in crime rates over time, while also allowing for flexibility in shifting resources when data suggest the movement of hot spots or the emergence of new hot spots (see Ratcliffe, Groff, Haberman, & Sorg, 2012). A citywide implementation of hot spots would require greater attention to the potential cooling off of some chronic crime locations over time and the emergence of new high-crime places requiring police attention.

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