

The Kansas City Preventive Patrol Experiment

This landmark experiment found that traditional routine patrol in marked police cars does not appear to affect the level of crime, nor the public's feeling of security. The experiment demonstrated that urban police departments can successfully test patrol deployment strategies, and that they can manipulate patrol resources without jeopardizing public safety.

Patrol is considered the backbone of police work. The assumption underlying such deployment has been that the presence or potential presence of officers patrolling the streets in marked police cars deters people from committing crime. But the validity of this assumption had never been scientifically tested. And so, in 1972, with funding and technical assistance from the Police Foundation, the Kansas City Police launched a comprehensive, scientifically rigorous experiment to test the effects of police patrol on crime.

The Experiment

The experiment began in October 1972 and continued through 1973; it was administered by the Kansas City Police Department and evaluated by the Police Foundation. Patrols were varied within 15 police beats. Routine preventive patrol was eliminated in five beats, labeled "reactive" beats (meaning officers entered these areas only in response to calls from residents). Normal, routine patrol was maintained in five "control" beats. In five "proactive" beats, patrol was intensified by two to three times the norm. The experiment asked the following questions:

- Would citizens notice changes in the level of police patrol?
- Would different levels of visible police patrol affect recorded crime or the outcome of victim surveys?
- Would citizen fear of crime and attendant behavior change as a result of differing patrol levels?
- Would their degree of satisfaction with police change?

Information was gathered from victimization surveys, reported crime rates, arrest data, a survey of local businesses, attitudinal surveys, and trained observers who monitored police-citizen interaction.

Findings

Citizens did not notice the difference when the level of patrol was changed. And increasing or decreasing the level of police patrol had no significant effect on resident and commercial burglaries, auto thefts, larcenies involving auto accessories, robberies, or vandalism—crimes traditionally considered to be prevented by random, highly visible police patrol. The rate at which crimes were reported to the police did not differ in any important or consistent way across the experimental beats. Citizen fear of crime was not affected by different levels of patrol, nor was citizen satisfaction.

Ride-alongs by observers during the experiment also revealed that 60 percent of the time spent by a Kansas City patrol officer typically was non-committed. In other words, officers spent a considerable amount of time waiting to respond to calls for service. And they spent about as much time on non-police related activities as they did on police-related mobile patrol.

Implications

The findings do not prove *per se* that a highly visible police presence has no impact on crime in selected circumstances. What they do suggest, however, is that routine preventive patrol in marked police cars has little value in preventing crime or making citizens feel safe.

The overall implication is that resources ordinarily allocated to preventive patrol could safely be devoted to other, perhaps more productive, crime control strategies. More specifically, the results indicate that police deployment strategies could be based on targeted crime prevention and service goals rather than on routine preventive patrol.

It is important to note that this experiment was conceived and executed by a local police department with technical help from outside researchers. The experiment demonstrates that, with the right kind of leadership and help, urban police departments can test new approaches to patrol. And they can use their patrol resources to conduct such experiments without jeopardizing public safety.

Adapted from: <https://www.policefoundation.org/projects/the-kansas-city-preventive-patrol-experiment/>

The Newark Foot Patrol Experiment

The results of this experiment suggested that while foot patrol may not reduce crime (but see the Philadelphia Foot Patrol Experiment), it reduces citizen fear of crime. While fiscal constraints force departments to cut back their service, crime rates and citizen demands for service continue to increase. One service frequently demanded by citizens is foot patrol. They often associate foot patrol with the "good old days" when crime rates were low and they felt safe in their neighborhoods. Most citizens like frequent, close contact with the police; they may feel more secure when officers are visible and on the street.

But for years, police departments rejected foot patrol as antiquated, expensive, and irrelevant to contemporary policing. It carried low status among officers, was often regarded as a public relations activity, and was frequently used to punish poor performance. In 1973, the New Jersey state legislature passed the Safe and Clean Neighborhoods Act. Foot patrol was specifically mandated as part of an effort to expand the presence and visibility of police protection. At the invitation of the Governor of New Jersey, the Police Foundation evaluated foot patrol in 28 New Jersey cities. Newark was selected as the primary evaluation site. The evaluation began in February 1978 and ended in January 1979.

The Experiment

The Police Foundation evaluation posed the following questions:

- Does foot patrol improve police-citizen relationships?
- Do citizens feel safer when officers patrol on foot?
- Does foot patrol reduce crime?
- Will citizens report more crime when they have closer contact with the police?
- Will more arrests be made in foot-patrolled areas?
- Will foot patrol officers be more satisfied with their jobs and have more positive attitudes about citizens?
- Will citizens' fear of victimization be lessened?

Eight foot patrol beats in Newark were matched demographically. Foot patrol was continued in four randomly selected beats, and discontinued in four others. Foot patrol was also initiated in four beats where it had not previously been used. Researchers then began comparing reported crime, arrest and victimization rates, citizen fear and satisfaction with police services, as well as the attitude of foot patrol officers and officers on motorized patrol.

Findings

The study found that introducing foot patrol in a mix of police strategies significantly enhances the citizen's perception of safety in the neighborhood. This is something no other police strategy had been able to do. Although introducing foot patrol seemed to have little effect on crime rates, it did have the following positive effects:

- Residents knew when officers were patrolling their neighborhoods on foot.
- Residents in areas patrolled by officers on foot thought that crime was less of a problem than did residents in areas with only motorized patrol.
- Residents in areas with foot patrol felt safer and less likely to be victimized.
- Residents living in areas with foot patrol took fewer steps to protect themselves against crime.
- Residents in areas with foot patrol were more satisfied with police services.

In sum, residents in areas in which foot patrol was introduced clearly changed their attitudes about crime and how they felt about the safety and livability of their neighborhoods. They also were more satisfied with police services. While foot patrol had no effect on recorded crime rates, it should be remembered that citizens feel threatened by noncriminal (disorderly) behavior as well, and that this threat of victimization may dramatically alter their lives.

Close contact between police and the citizenry helped the former develop first-hand information about crime and possible criminal behavior. Such information systems may have a positive long-term impact.

Adapted from <http://pftest1.drupalgardens.com/content/newark-foot-patrol-experiment>

The Philadelphia Foot Patrol Experiment

The Philadelphia Foot Patrol Experiment was a major research collaboration between the Philadelphia Police Department (PPD) and researchers in Temple University's Center for Security and Crime Science involving about 240 police officers on foot beats around some of the city's most violent corners.

Since the Newark Foot Patrol Experiment, it had long been the opinion of many police and criminology researchers that police foot patrols improve community perception of the police and reduce fear of crime, but they don't prevent actual crime. Results from the Philadelphia Foot Patrol Experiment suggest a more positive view of intelligence-led targeting of foot patrol officers to violent crime hot spots.

The Experiment

During early 2009, violent crime reports were drawn from the incident database of the PPD for 2006, 2007 and 2008. Violent crime was defined as homicide, aggravated assault, and robberies not occurring indoors, and incidents were weighted by year. In this way, more recent events had greater relevance in the creation of the target locations for 2009, but summary values retained a portion of the long-term hotspot component. Two PPD Regional Operations Commanders identified 129 potential foot beats, and from these, 120 were selected for the experiment. Each area contained about 15 street intersections and 1.3 miles of roads. The foot beats were ranked by the weighted volume of violent crime and paired with a foot beat of a similar crime rate. One from each pair was randomly selected to be a target beat, while the other became a control (or comparison) area. There were 60 treatment areas and 60 control areas.

Officers patrolled in pairs with two teams assigned to each foot patrol. 240 officers worked 60 foot beat areas for three months. They worked from Tuesday morning to Saturday night in two shifts (10am to 6pm, 6pm to 2am). Some officers engaged in community-oriented work, speaking to community members and visiting child care centers and juvenile hangouts, while others were more crime oriented, stopping vehicles and conducting field interviews of pedestrians.

Findings

After a three month experimental phase, researchers found the violent crime hotspots had a reduction in violence of 90 offenses (with a net effect of 53 offenses once displacement was considered) - outperforming equivalent control areas by 23 percent. Note that the benefits were only achieved in areas with a threshold level of pre-intervention violence. When that threshold was achieved (in this study an average of 6 violent crimes in the three months pre-intervention), target areas had significantly less violent crime during the operational period, even after accounting for natural regression to the mean. In summary, after three months and relative to the comparison areas, violent crime in the target areas decreased 23%.

Official records of police activities during the intervention period reveal the following in the target areas:

- Drug-related incident detections increased 15%
- Pedestrian stops increased 64%
- Vehicle stops increased 7%
- Arrests increased 13%

Pedestrian and vehicle stops increased most in the top 20 percent of areas with the highest pre-intervention violence levels. With the increased police activity, it was estimated that in general, across all target areas, one violent crime was reduced for every additional four arrests, 89 pedestrian stops and 8 traffic stops.

The lack of significant reduction in the less-violent crime hotspots suggests that foot patrols are not a silver bullet to the problem of violence. They may only be measurably effective in higher crime areas. The relative lack of violent crime in other areas may warrant a more cost-effective approach to crime reduction, such as problem-oriented policing.

Adapted from various sources, including <http://www.cla.temple.edu/cj/center-for-security-and-crime-science/the-philadelphia-foot-patrol-experiment/>

The Minneapolis Domestic Violence Experiment

Under a grant from the National Institute of Justice, the Minneapolis Police Department and the Police Foundation conducted an experiment from early 1981 to mid-1982 testing police responses to domestic violence. The purpose of the experiment was to address a debate about how police should respond to misdemeanor cases of domestic violence.

Police have been typically reluctant to make arrests for domestic violence, as well as for a wide range of other kinds of offenses, unless a victim demands an arrest, a suspect insults an officer, or other factors are present. Observations of another department found four categories of police action in these situations: negotiating or otherwise 'talking out' the dispute; threatening the disputants and then leaving; asking one of the parties to leave the premises, or, very rarely, making an arrest. Similar patterns are found in many other cities.

The Experiment

In order to find which police approach was most effective in deterring future domestic violence, the Police Foundation and the Minneapolis Police Department agreed to conduct a randomized experiment. The design of the experiment called for a lottery selection, which ensured that there would be no difference among the three groups of suspects receiving the different police responses. The lottery determined which of three responses police officers would use on each suspect in a domestic assault case. According to the lottery, (1) a suspect would be arrested, or (2) sent from the scene of the assault for eight hours, or (3) given some form of advice, which could include mediation at an officer's discretion.

The design called for a six-month follow-up period to measure the frequency and seriousness of any future domestic violence in all cases in which the police intervened. The design applied only to simple (misdemeanor) domestic assaults, where both the suspect and the victim were present when the police arrived. Thus, the experiment included only those cases in which police were empowered, but not required, to make arrests under Minnesota state law.

The experiment was originally located in two of Minneapolis' four precincts, those with the highest density of domestic violence crime reports and arrests. The 34 officers assigned to those areas were invited to a three-day planning meeting and asked to participate in the study for one year. The experiment began on March 17, 1981 and ran until August 1, 1982, producing 314 case reports. Many of the officers did not turn in sufficient cases, and more officers had to be recruited. Researchers acknowledge there was little doubt that many of the officers occasionally failed to follow fully the experimental design.

Interviews were conducted during a 6-month follow-up period, with both victims and offenders, as well as official records consulted to determine whether or not re-offending had occurred. The study lasted approximately 17 months.

Findings

Two kinds of measures of repeat violence were used in the experiment. One was a police record of an offender repeating domestic violence during the six-month follow-up period. A second kind of measure came from the interviews in which victims were asked if there had been a repeat incident with the same suspect, broadly defined to include an actual assault, threatened assault, or property damage.

Arrest was found to be the most effective police response. The study found that the offenders assigned to be arrested had lower rates of re-offending than offenders assigned to counseling or temporarily sent away. Researchers cautioned against assuming that arrest worked best in all situations until replication could explore additional issues, including the potential for a "backfire effect" of arrest to increase future violence among the unemployed.

Employment status

In subsequent follow-up replication studies funded by the National Institute of Justice, the suspect's employment status had a significant and important impact. Suspects who were employed were more likely to be deterred by arrest, but unemployed suspects were more likely to engage in escalating violence.

Adapted from various sources, including <https://www.policefoundation.org/wp-content/uploads/2015/07/Sherman-et-al.-1984-The-Minneapolis-Domestic-Violence-Experiment.pdf>

The Minneapolis Hot Spots Policing Experiment

Recognizing that many criminologists questioned the effectiveness of uniformed police patrols in producing measurable crime differences following the Kansas City Preventive Patrol Experiment, researchers and police conducted a one-year randomized trial in Minneapolis to assess the effect of increases in police patrols at crime hot spots. In order to deter criminal activity, the Minneapolis Police Department utilized strategies to identify "hot spots" of crime and increase police presence in these areas. The strategies implemented by the program were intended to provide a general deterrent effect in high-crime areas.

The Experiment

Crime hot spots were defined as small clusters of addresses with frequent crime calls for police service. Selection of hot spots for the experiment began with an examination of dispatched calls for police service citywide to identify address clusters with 20 or more "hard calls" (i.e. serious offenses) and substantial "soft calls" (i.e. disorder offenses). The final sample consisted of 110 hot spots where crime calls were concentrated between 7pm and 3 am. The 110 hot spots were randomly assigned to either the experimental or control group. For the 55 hot spots assigned to the experimental group, officers increased patrol presence to a target duration of 3 hours per day. The program focused on increasing police presence in "hot spots" of crime, rather than the specific activities conducted by officers during patrols. The implementation of the strategy depended on the cooperation of the entire police force; this was facilitated using briefings, pizza parties, and the distribution of t-shirts with the program's logo.

Findings

Patrol logs and independent observation of the targeted hot spots were used to validate the duration of patrol presence per day in each hot spot. The impact of the increased patrol presence was measured by citizen calls concerning crime and independent observations of crime and disorder at the selected hot spots.

Findings revealed reductions in total crime calls that ranged from 6 to 13 percent with a more significant reduction in disorder at high crime hot spots. Observed disorder was only half as prevalent in experimental compared to control hot spots. An analysis of 13 specific types of disorder for the entire year shows that the greatest effects were on the categories of person down (on the ground), drug activity, vandalism, solicitation for prostitution, and assault. The findings support a place-specific "micro-deterrence" occurred in the hot spots which received additional patrols.

The authors suggest that substantial increases in police patrol can modestly reduce crime and generate more impressive reductions in disorder at high-crime micro locations.

The Koper Curve

A re-analysis of the experimental data by researcher Chris Koper identified an interesting pattern.

In evaluating the results of the experiment, Koper found that police maximized their deterrent effect by increasing patrols in the crime hot spot for 10-16 minute intervals, conducted randomly every two hours. Continuing the increased patrols for more than 16 minutes at a time produced an increasingly less effective deterrent effect. According to Koper (1995), the likelihood of crime or disorder within 30 minutes after a patrol visit was 15%; for stops of 10-16 minutes, the likelihood was reduced to 4%, causing deterrence to "peak". This is generally referred to as the 15 minute Koper curve.

See also the *Sacramento Hot Spots Policing Experiment*.

Adapted from various sources including <http://cebcp.org/evidence-based-policing/the-matrix/micro-places/micro-places-sherman-and-weisburd-1995/>

The Philadelphia Policing Tactics Experiment

A significant body of evidence exists that police are most effective at reducing crime when deployed to small, high crime areas known as hot spots. In 2010, the Philadelphia Police Department and researchers from Temple University's Center for Security and Crime Science (with support from the Bureau of Justice Assistance) set out to test the effectiveness of three policing strategies; foot patrol, problem-solving, and an offender-focused strategy.

The Experiment

Violent crime incidents for 2009 were analyzed using an innovative two-stage statistical process to identify hotspot clusters of violent crime across the city. Clusters were required to have a minimum number of five violent felonies (homicide, aggravated assault and robbery) and 15 violent crimes (violent felonies and misdemeanor assault).

These violence hotspot areas were mapped and presented to police command staff. Regional Operations Commanders worked with District Captains to identify 27 areas suitable for foot patrol, 27 for problem-solving, and 27 where police would focus enforcement on violent repeat offenders. A random selection process was applied so that 20 areas of each type were selected for additional police activity, and seven of each area type would receive the normal police response (in this randomized experiment, the control condition).

The Interventions

There was considerable variation in foot patrol activity as the operational tactics were left to District Captains. Foot patrol officers usually worked in pairs and were volunteers. Shift times varied by area, though there was a common aim of reducing violent crime and targeting the times of foot patrol to coincide with the periods of greatest violence. The general pattern was two officers, for 8 hours a day, five days a week. Problem-oriented policing was conducted by district officers in collaboration with members of the community and the support of personnel from police headquarters from the PPD2020 team. In offender focus sites, repeat violent offenders were identified by criminal intelligence officers and district personnel and details were passed on to command staff at the district level. The role of focusing enforcement activities on the identified individuals generally fell to officers assigned to a unit out of the normal shift pattern in each district (called 5-squad) who are tasked at the discretion of the District Captain.

The Findings

Offender focus areas were successful in reducing all violent crimes by 42% compared to the equivalent control areas. These violent incidents included homicide, robbery, and assaults - both aggravated and misdemeanor. The offender focus sites were even more effective on violent felonies, reducing them by 50% compared to the equivalent control areas. The foot patrol areas were not successful in reducing violence during the experimental period, nor were the problem-solving areas.

The offender focus area results show that by focusing on a number of key offenders in the violent crime hotspots, officers were able to reduce crime significantly. The assignment of criminal intelligence liaison officers to districts was an important component of this strategy as was the use of officers who were not responsible for answering calls for service and could concentrate on targeting key repeat offenders.

The study was unable to replicate the successful foot patrol findings from the Philadelphia Foot Patrol Experiment of 2009. The average size of the foot patrol areas used here was two to almost four times larger, each foot patrol area in 2009 used twice as many officers, and the officers in the current experiment were not as proactive as the rookies from 2009. With regard to problem-solving, fieldwork and surveys showed that at least eight of the problem-solving areas switched to a focus on nonviolent crime or quality of life issues during the experiment. This may explain the lack of overall significant reduction in violent crime in the problem-solving areas.

Adapted from various sources including <http://www.cla.temple.edu/cj/center-for-security-and-crime-science/the-philadelphia-policing-tactics-experiment/>

The Sacramento Hot Spots Policing Experiment

Many questions regarding research on police methods have traditionally been raised, tested, and evaluated by academics. In this study, the research team did not comprise academics but rather police practitioners (pracademics). The 90-day Sacramento Police Department (SPD) hot-spot study was completely designed, implemented, and analyzed by personnel within the SPD with the guidance of researchers from George Mason University, and conducted without external funding.

Hot-spot policing has become an accepted practice in policing, focusing police resources in small areas such as addresses, street blocks, or clusters of addresses or street blocks. The first hot-spot study conducted in Minneapolis, Minnesota, during 1995 revealed that 3 percent of the addresses in Minneapolis accounted for 50 percent of the crime calls to the police. In Sacramento, 4.7 percent of the street segments accounted for 50 percent of the crime calls for service, leading the SPD to believe it was imperative to focus its police resources on these so-called hot areas. Further analysis of the Minneapolis study established the optimal amount of time to visit a hot spot was 12 to 16 minutes, or approximately 15 minutes based on the Koper curve theory. As such, the SPD implemented a randomized control trial designed to answer the question, “Will visiting hot spots in a random, intermittent order for 12- to 16-minute increments reduce crime and calls for service in Sacramento?”

The Experiment

The SPD studied data from two districts (out of six) for hot-spots data collection. The SPD examined all of the computer-aided dispatch data for Districts 3 and 6 from January 1, 2009, to December 31, 2010. Analysts retrieved only calls generated by citizens, removed all supplemental calls to a primary call for service, and excluded calls that were geocoded to an intersection, so as to create a 100-block hot spot rather than an intersection. Addresses that did not meet hot-spot criteria were removed—that is, addresses where crime occurred in public and could reasonably be deterred by police presence. Forty-two hot spots were identified; 21 were randomly designated as treatment areas, and they received random intermittent patrol services for 15-minute periods each day. Every day, the officers were given a computer-generated random order to treat the hot spots. The other 21 were designated as non-treatment areas and received normal patrol services. Randomized intermittent treatment creates uncertainty in the mind of the offender, thus increasing the perception of risk and potentially reducing criminal activity.

Findings

A comparison of the calls for service in 2011 to the same three-month period in 2010 indicates a strong treatment effect. On average, each treatment hot spot had a decline of 3.57 calls for service (comparing 2011 to 2010), while each control hot spot had an average increase of 4.43 calls. Thus overall, calls for service declined by about 7.68 percent in the treatment group and increased by about 10.90 percent in the control hot spots. Part I crime incidents showed a somewhat similar pattern to calls for service. During the experimental period, treatment hot spots experienced fewer total Part I incidents (105) than the control hot spots (121). In the same period in 2010, the treatment hot spots had 140 Part I incidents, compared to 95 in the control hot spots. Thus, during the experimental period, the treatment group experienced a 25 percent decrease in Part I incidents, while the control group experienced a 27.37 percent increase in Part I incidents.

The SPD also analyzed officer activity during the study. Overall patrol response times to calls for service did not increase. Crime displacement was not an issue, and, most impressively, officers were 163.6 percent more proactive in District 3 and 72.9 percent more proactive in District 6. These statistics suggest that incorporating an intermittent, random Koper curve approach to a patrol strategy is an effective and efficient way to reduce crime and calls for service.

Adapted from

http://www.policechiefmagazine.org/magazine/index.cfm?fuseaction=display_arch&article_id=2861&issue_id=22013

The Queensland Procedural Justice Experiment

Exploring the relationship between procedural justice and citizen perceptions of police is a well-trodden pathway. Studies show that when citizens perceive the police acting in a procedurally just manner—citizen participation (or voice), fairness and neutrality, dignity and respect, and trustworthy motives—they view the police as legitimate and are more likely to comply with directives and cooperate with police. Police–citizen encounters that involve the use of procedural justice enhance the quality of police–citizen interactions, leading citizens to be more satisfied with the interaction and outcome.

This study - the world's first randomized field trial of legitimacy policing - examined both the direct and the indirect outcomes of procedural justice policing, tested under randomized field trial conditions. The question examined was whether police can enhance perceptions of legitimacy during a short, police-initiated and procedurally just traffic encounter and how this single encounter shapes general views of police.

The Experiment

In the Australian state of Queensland, researchers and police operationalized the four key components of procedural justice (citizen participation, dignity and respect, neutrality, and trustworthy motives) into a script delivered as the experimental condition by police to drivers during police-initiated random breath testing (RBT) traffic roadblocks. The control condition was a business-as-usual mode of RBT traffic operations.

The field trial involved random allocation of 60 planned roadblocks, called RBT operations, to either the standard RBT operation (control condition) or the experimental condition, where the traffic police used a script that operationalized key elements of procedural justice. The 60 RBT roadblock operations in the trial involved police pulling over between 300 and 400 cars per operation. The police provided each driver in the field trial with a sealed envelope and let drivers know that the envelope contained a survey developed by researchers at the University of Queensland, that the survey was voluntary, and that it could be completed at a later time.

Police–citizen contact during standard RBTs averages 20 seconds in length for drivers whose initial reading is negative and involves minimal verbal exchange between the police and the driver. Working with senior police, researchers carefully operationalized the four elements of procedural justice: citizen participation, dignity and respect, neutrality, and trustworthy motives, into a script. All motorists in the experimental condition were also provided with a community bulletin (highlighting the police priority problems, upcoming community events, and important contact information). On average, ten officers per RBT operation delivered either the standard (N = 30 RBT operations) or experimental intervention (N = 30 RBT operations). The experimental encounters took about four times as long (97 seconds) as the normal encounters (25 seconds).

Findings

Results showed significant differences between the control and experimental conditions: Procedurally just traffic encounters with police (experimental condition) shape citizen views about the actual encounter directly and general orientations toward the police relative to business-as-usual traffic stops in the control group.

Adapted from Mazerolle, L., Antrobus, E., Bennett, S., & Tyler, T. R. (2013). Shaping citizen perceptions of police legitimacy: A randomized field trial of procedural justice. *Criminology*, 51(1), 33-63.