Examining the effectiveness of bicycle patrols versus automobile patrols in Charlotte, North Carolina, and Hartford, Connecticut

Chris Menton
Roger Williams University, pmenton@rwu.edu

Follow this and additional works at: http://docs.rwu.edu/sjs_fp

Recommended Citation
http://docs.rwu.edu/sjs_fp/10

This Article is brought to you for free and open access by the School of Justice Studies at DOCS@RWU. It has been accepted for inclusion in School of Justice Studies Faculty Papers by an authorized administrator of DOCS@RWU. For more information, please contact mwu@rwu.edu.
Examining the Effectiveness of Bicycle Patrols Versus Automobile Patrols in Charlotte, North Carolina, and Hartford, Connecticut

Chris Menton, Associate Professor, School of Justice Studies, Roger Williams University, Bristol, Rhode Island

Introduction

In the past 20 years, the use of bicycles by police departments has grown significantly. This is actually a resurgence of the use of bicycles in police patrols. In the late 1800s and early 1900s, bicycle patrols were used by many major city police departments (Fox, 1998). It is apropos that bicycles for police patrol have experienced this revival along with the focus on community policing. The use of bikes harkens back to a time when the police were a closer part of the community. They were connected. It makes sense that bicycles should be used in an atmosphere where the concept of police/community relationships is being renewed as a valued and important facet in the strategy of controlling crime. Early in 1987, the Seattle Police Department started deploying bicycle patrols in their downtown area to augment foot patrols. This is believed to be the first integrated use of bicycles in patrols since the early 20th century.

The use of police bicycle patrols has become widespread. The International Police Mountain Bike Association (IPMBA) reports that approximately 5,600 (43%) of all police departments use these bike patrols on a routine basis, including 90% of all departments serving at least 100,000 residents. Approximately 309 (13%) of all sheriff’s departments, including about 50% of those serving 500,000 residents or more, also employ officers on bikes. These departments employ over 83% of all officers and 45% of all deputies (International Police Mountain Bike Association Facts, n.d.).

The scant research that exists on bicycle patrols is inconsistent with the level of deployment of bicycle patrols across the country. Research on the effectiveness of this method of patrol conveyance needs to catch up. Currently, newspaper stories are the primary source of information on bicycle patrols. Research on police patrol effectiveness has focused on automobile or foot patrols. The landmark Kansas City motor patrol study revealed important information on the effectiveness of motor patrols (Kelling, Pate, Dieckman, & Brown, 1974). With increased focus on community policing, an increase in accompanying support for foot patrols has grown. Numerous articles have been published in IPMBA’s newsletters by member officers detailing the effectiveness of bicycle patrols in their community. These assertions are based on internal statistics and can provide little basis for comparison. The bicycle patrols themselves have been deployed in coordination with other efforts such as redevelopment and community revitalization efforts.

In June 1995, I rode with two Boston police officers who were on bicycle patrols. My concern was where they went, who they talked to, and how many people they talked to. I was quite amazed to find out that these officers were talking to a dozen different citizens groups of citizens every hour. These contacts ranged from simple salutations and recognitions to arrests, one of which was an actual physical take-down. This seemed to be a high level of contact with the public. What would be a practical contact count for a patrol car? That initial foray a decade ago did not have a point of comparison (Menton, 1995).

**What Is Effectiveness?**

The mission of police is multidimensional and sometimes contradictory, yet the functioning of police as imposers or maintainers of social order is clear. The difficulty is often in the details. Most current statistics generated by police departments offer arrest statistics or statistics on other official activities as measures of effectiveness. This can be problematic; if the measure of success is based on arrests, then are police not encouraged to arrest? Observations in this study revealed quite the contrary. Usually the mission of police is to de-escalate situations. Often, an arrest is required because of the nature of an activity in which an individual is participating. Other times, an arrest can be prevented and arrest avoidance can be the preferred response, as arrests are time-consuming activities and if a better alternative is available, it is generally utilized.

Both departments use civil citations for issues such as public drinking and other "quality-of-life" offenses. Even the tracking of civil citations will not provide an adequate picture of what the police activity is and its effectiveness.

The method of data gathering used in this study was the participant-observer model. The criterion constituting a data entry was the police having contact with a member of the public. A tally of all these contacts and a brief description, as well as the time and number of people involved was recorded during a total of 10 tours of duty between Charlotte, North Carolina, and Hartford, Connecticut. Half of the patrols observed were in a car, and the other half were on a bicycle. The bicycle patrols were the same or similar in area, hours, and day of the week to the car patrols that were observed. The police officers were asked not to do anything special, simply to conduct their tour of duty as they would normally have an observer not been present. Judging from the use of discretionary behaviors, the observation seemed generally unobtrusive.

Access to these departments was secured through contact with the Law Enforcement Bicycle Association (LEBA) for Charlotte and the International Police Mountain Bike Association (IPMBA) for Hartford. These observations took place during July and August of 2005. Data was gathered by note taking on-site, often as the contacts were transpiring. Subsequently, the notes were transcribed into a narrative and the numbers entered into a database. All contacts were recorded as accurately as possible from saving hello to a passerby or store clerk to an arrest. Contacts fell on a continuum of seriousness ranked as follows: 1 for not serious at all; 2 for having some impact on the person's knowledge or movements; and 3 for having a serious effect. How a person's situation or attitude was affected by the contact determined whether the contact was classified as positive, neutral, or negative contact. Calculating the number of contacts and the total number of people contacted was divided by the mode of patrol conveyance, whether it was a car or a bike.

<table>
<thead>
<tr>
<th>Table 1</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Contacts/Hour Comparison</strong></td>
</tr>
<tr>
<td><strong>Sessions</strong></td>
</tr>
<tr>
<td>Car</td>
</tr>
<tr>
<td>1</td>
</tr>
<tr>
<td>2</td>
</tr>
<tr>
<td>3</td>
</tr>
<tr>
<td>6</td>
</tr>
<tr>
<td>9</td>
</tr>
<tr>
<td>Totals</td>
</tr>
</tbody>
</table>

As illustrated in Table 1, bicycle patrols had a far greater amount of contact when compared to the car patrols. This calculates into, for cars 2.38 contacts per hour compared to 3.95 contacts per hour for bicycles. When it is broken down on a per person level, the car patrol has contact with 6.97 people per hour, and the bike patrol has contact with 16.67 people per hour. From the point of view of having contact with the public, the bicycle is obviously superior in this category.

In classifying whether the contact with a member of the public was positive, negative or neutral, a judgment was reached by the observer on the attitude of the principal individual involved in the contact based on body language, language, and the nature of the contact. Considering the amount of contact by the bicycle patrols, which almost doubled that of the car patrols, these figures for positive, negative, or neutral contact seem similar. When the tenor of the contact could not be judged, a rating of neutral was assigned.
Seriousness of the contact was determined by how much of an effect the contact had on the member of the public. Nonserious contacts were contacts that involved salutations or chatting. Any contact that affected the person's knowledge or behavior or had a consequence on that person was classified as a somewhat serious contact. This would include asking for and receiving directions, receiving a civil citation, discussing the presence of individuals in the neighborhood who are in possession of firearms. A serious contact would be an event that alters that person's behavior. This would include an arrest, a moving violation, impoundment of a motor vehicle, resolving a domestic violence issue, or an order to leave a motel room.

As can be seen in Table 3, serious contacts were similar between the bicycle and the automobile patrols. Somewhat serious contacts were a bit higher in the bicycle patrol. Not serious contacts were significantly higher in the bicycle patrols, nearly three times higher, than for the automobile patrols. One might ask why we would want the police to bother with nonserious contacts given that it may detract from their ability to do the serious duties. Yet, this information does not reveal detraction from serious contacts, simply an enhancement of nonserious contacts. These contacts, in many ways, may have a positive effect on the public perception of police, particularly in the areas that are patrolled. These areas were downtown areas or areas of modest socioeconomic means and often, predominantly racial minority communities. Contacts in which little or nothing is at stake might serve to promote the concept of the police as approachable in more serious future happenings.

The measures given here, frequency of contact, character of contact, and seriousness of the contact, are not negatively affected, and in some cases, are positively affected, by the use of bicycle patrols. This should give cause for reflection. The other advantages of bicycle patrols will be discussed later, but at this point, the sheer contact with people clearly is superior on bicycle patrols, with the exception of one area.

Table 4

| Number of Radio Calls Answered |
|-------------------------------|----------------|
| Car                           | Bike          |
| 30                            | 13            |

In this category, all contacts were classified in terms of whether they were initiated by a radio call, a citizen flagging down a police officer, or the police officer. This study, when a citizen flagged down a police officer, that contact was not listed as a call; although, in some of these cases, these incidents would rank as somewhat serious.

Patrol cars in this study answered 30 calls. Bicycle patrols answered 13 calls. On the face, these numbers would seem to indicate that police on bicycles cannot answer as many calls. Certainly this is the logic that often seems to be employed when we think about calls for which officers must traverse great distances. In densely populated areas and in downtown areas, this is generally not the case, and either by habit or by deployment policy, police on bikes are not given as many calls as police in motor vehicles are given. It is not that the police on the bicycles received and refused calls or received and were unable to respond to those calls. They simply were not called as often as motor patrols.

In some cases, the calls to which the police officers responded were some distance away—a mile or more. The police officers traversed that distance on bicycles in a very short period of time. Officers on bikes sprinting to the scene of an important call can arrive there in a relatively short amount of time. Often, the calls to which the cars responded were longstanding calls regarding a crime that had taken place, perhaps the night before. The issue of whether bicycle patrols should be responding to calls has been indirectly addressed by Pate, Bowers, Ferrara, and Lorence (1976). Theirs and subsequent work questions the urgency of many calls and has led to classifying of calls. Further examination might yield information that demonstrates that bicycle patrols may be as effective if utilized with certain types of calls.
Training

In both Charlotte and Hartford, officers assigned to bicycle patrols must first attend a training program certified by a national police cycling organization. Charlotte uses a curriculum developed by the Law Enforcement Bicycle Association, which includes riding technique training; interaction with vehicles and criminal suspects, as well as attention to physical health maintenance. Hartford uses the IPMBA curriculum, and all of its bicycle patrol officers are IPMBA-certified.

The use of a bicycle as a vehicle for patrol changes the character of policing and requires officers to be properly skilled and physically fit. Training is a start in addressing these issues.

Equipping officers to do patrols on bicycles involves the cost and maintenance of bicycles, accessories, and clothing. Storage, maintenance, and staging areas are also needed for bicycle patrol units. The equipment and accommodations vary from unit to unit. Generally, a maintenance/storage space was available. Major maintenance was contracted out while small repairs and adjustments were done by the officers themselves, often while on patrol, taking a moment to fix a flat tire or make a slight adjustment.

Standard equipment included a quality mountain bike with a chain-stay kick stand, a rear rack with a bag, lighting systems, water bottle, and flat tire repair capabilities. Outfitting an officer to patrol on bike is quite different than outfitting an officer in a patrol car. For example, there are seasonal change considerations. Jackets, coats, and long sleeve shirts are the usual clothing differences for a motor patrol officer based on the seasons. Seasonal changes for a bicycle officer include gloves, trousers versus short pants, wind jackets, and footwear. Footwear needs to provide stiff lateral support for pedaling as well as flexibility for standing, walking, and running. Generally, outfitting bicycle patrol officers requires equipment that is protective, lightweight, and flexible. Protective gear must be designed for both crashes and violence. All officers observed wore protective vests, bike helmets, and gloves. Helmets and gloves were standard bicycling equipment and provided some collateral protection from noncrash violence.

Equipment belts must secure the same items that automobile patrol officers use. This equipment consists of those items that are required and permitted by a specific department. The belt and securing devices are required to be leather in Class B patrol uniforms. Mesh belts and securing devices are less inhibiting to body movement and are overwhelmingly used by the bicycle patrol officers.

Riding Skills

A common impression exists that riding a bicycle is an unskilled activity. That practically anyone can ride a bike may be true; however, riding a bicycle safely and effectively on patrol entails a number of techniques and skills. Training and experience can hone these skills.

These skills include preliminary safety checks before going out; the ability to shift, brake, and steer appropriately; route selection; obstacle management (e.g., stairs and curbs); mounting and dismounting; and placement of the dismounted bike.
city blocks, contains a number of restaurants, clubs, and bars. The main drag has become a cruising event on weekend evenings, with heavy, slow traffic moving in both directions. The sidewalk on the main drag in places is extra wide, with park benches perpendicular and abutting the streets. Other sitting areas are available in front of set back, high rise buildings. The bicycle patrols initially assigned to the area patrolled in two pairs, from 3:00 PM to 7:00 PM, when redeployed officers from other districts on bicycles, motorcycles, cars, and foot, were briefed and assigned to the area. Two officers on foot were assigned to each intersection on the main drag. Motorcycle officers were directed to traffic enforcement within the grid. Two patrol cars were assigned to remain on the perimeter to deploy for prisoner transport when arrests were made. About 25 officers in all were redeployed to this operation.

Because this operation depended heavily on officers not usually assigned to the central district, the four officers on the bicycles who were regularly assigned to the downtown area circulated continuously and advised, prodded, and modeled what the officers unfamiliar with the area should do. Large numbers of people congregated away from the intersections, on the benches provided. There was almost constant social control present with the additional bike units from other districts. The ongoing order maintenance was under the supervision of a captain and a sergeant. A plan methodically developed by the downtown bicycle officers was carried out in large measure by these bicycle officers.

The plan was executed as follows: The cruising of cars was disrupted prior to the bars closing by closing off the main drag and rerouting traffic to the secondary roads. This disruption effectively deterred people from continuing to cruise the downtown area. When the bars closed and the patrons emerged from the drinking establishments, it was to a quieter environment with a large police presence. A reasonable time after last call, the bicycle patrol officers started to patrol the parking lots, eventually denying vehicle egress and mostly gently urging folks to go home. The message from the bike units was lower key yet as serious as any approach by a police officer in a motor unit with flashing lights and loud sirens.

Limitations of This Study

One hundred hours of observation is a limit to this study; however, the data gathered was more detailed. More than arrests, calls, and citations were counted. By comparing the number of contacts with the public by officers on bicycles to those by motor patrol officers, we see that officers on bikes can address situations more easily and seem more approachable to the public. In order to develop a practical comparison, the same or similar shifts, days of the week, and patrol areas were observed. In all cases, shifts and days of the week were exact matches. The small amount of data collected was influenced by the allotted length of time. Additional observations are taking place as this work is being submitted.

The deployment of bicycle patrols has substantial differences from that of motor patrols. These differences constitute a double-edged sword. For emergency calls more than two miles away from a bicycle patrol officer’s location, it may be impractical to expect him or her to constantly be the first responder. On the other hand, bicycle patrols can insert themselves more deeply and quietly into a situation.

Other Limits to Bicycle Patrols

Bicycle patrols cannot transport arrestees, witnesses, or other citizens. They cannot generate the imposing presence of a motor patrol with flashing lights and sirens, although oftentimes that is not necessary. They can, however, transport small amounts of evidence and trace through congested traffic areas more quickly than a car or on foot.

Who Rides Bicycle Patrols?

Police officers who ride bicycle patrols are predominantly male, as are the police departments that were observed. The nature of the activities of this duty assignment requires and attracts officers who are in good to excellent physical condition. The riding I observed took place in 90 to 100+ degree temperatures, yet officers were able to sprint to the scene, and in one case, chase down a car. Officers doing this will naturally have a high level of exposure to the public and therefore, at some level, must have an affinity towards high visibility and accessibility.

All of the officers riding bicycles were volunteers who were certified by a national organization. Many of the officers were assigned part-time to the bicycle patrol and in some cases, even had the option of using motor patrol instead of bicycle patrols. Generally speaking, bicycle patrol assignments were sought after positions, and being reassigned to motor patrols or other duties was generally a cause for disappointment.

Conclusion

Bicycle patrol units perform effectively in most dimensions of patrol duties. They also perform more effectively in some dimensions of patrol duties. Under community policing philosophies, closer relationships with the public is an objective. Bicycle patrol units provide those closer exposures and relationships with the public. This study provides evidence that is consistent with assumptions based on departmental crime statistics, anecdotal observations, and intuitive conclusions. Bicycle patrol officers are more approachable for pedestrians and for those members of the public in motor vehicles. Bike patrol officers are more likely to roll up on illicit activities or situations in which people are in need because they can see and hear better from their perch which is over 6 feet high and unimpeded by air conditioning fans and the cage construction of a motor vehicle. Their views are unfettered as is their hearing.

In one situation in which suspects in a stabbing were located in a slight blind in a downtown area, a motor patrol officer was overhead saying, "I didn't even know this place existed." There were four homeless men who had been camping out in that blind and either witnessed or were participants in a beating and stabbing incident, which sent another man to the hospital.

How bicycles are used and the strategies of their deployment should be integrated considerations in patrol strategies. Although not all officers on motor patrol and other assignments felt that bicycle patrols were safe, and in some cases, they believed they were not as effective in providing a show of force, the overwhelming relationship between motor patrol and bicycle patrol was that of mutual assistance and respect. One motor officer asserted that there should be no foot patrols; they
should all be converted into bike patrols. Another lamented that the call he was going to for a second time that evening for reports of shots fired was going to continue to be ineffective because the people who were involved would simply slip through the backyards and end up on the next street over which was not easily accessible from the call site. He said that bicycle patrols could easily address this issue. In a prior example cited, a motor patrol officer asked for the bicycle patrol to assist in shutting down an apartment seemingly dedicated to illicit activities.

In an interview with the president of the Law Enforcement Bicycle Association and another with the executive director of the IPMBA, both individuals talked about the increased use of bicycle patrols in a number of other fashions for crowd control and tactical purposes. In Boston, bicycles are used for gang suppression and crime suppression. The bicycle unit is deployed in response to incidents in specific neighborhoods. Their patrol was tantamount to a saturation patrol strategy. Perhaps bicycle patrols responding to more calls and taking more calls may increase their profile in patrol command strategies and strengthen their position as an integrated component of policing in metropolitan areas.

Acknowledgments for Cooperation, Assistance, and Guidance

- Roger Williams University School of Justice Studies, Justice System Training and Research Institute
- Charlotte Macon Police Department
- Hartford Police Department
- Law Enforcement Bicycle Association
- International Police Mountain Bike Association

Bibliography


Richardson, T. J. (2002, Fall). Remembering the Alamo: The foot and bike patrol is rolled out and a city is reborn. *IPMBA News*. Available online at www.ipmba.org/newsletter-0303-alamo.htm


Chris Menton is an associate professor of criminal justice at Roger Williams University. He is a retired lieutenant from the Massachusetts Department of Correction and a former criminal justice trainer. He holds a master’s degree in criminal justice/human service personnel training and a doctorate in societal studies. He is a proficient bicyclist.