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Factors To Consider For Patrol Allocation In Community Oriented Policing

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by

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ABSTRACT

Police managers must analyze many factors to determine the most effective and efficient means of allocating personnel to patrol operations in implementing community oriented policing. Law enforcement is looking with renewed focus on strategies that help prevent crime, reduce fear of crime, and improve the quality of life in neighborhoods. Making effective use of the talents and resources available within communities will help extend severely strained resources. As police interaction becomes more positive, productive partnerships will be formed, leading to greater satisfaction with police services and increased job satisfaction among officers. Reduced levels of crime will allow more police resources to be allocated to services having the greatest impact on the quality of community life.

This research discusses the various factors affecting patrol allocation that should be considered necessary to implement the community oriented policing philosophy. Several police agencies similar in size to the Tyler Police Department were contacted and the factors considered by these agencies are compared.

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Introduction

Police administrators traditionally allocate personnel to patrol operations by only considering the total number of citizen generated calls for service. As more and more police departments follow the national trend toward community oriented policing, police administrators will be forced to consider many other factors to better determine and justify the number of officers necessary to provide effective community policing.

The purpose of this research is to identify policy level issues relating to the allocation of personnel for patrol operations. The primary intent of the research is to provide police administrators with accurate and relevant information regarding these factors. This research will serve as a guide to help departments in developing the appropriate resources necessary for patrol operations.

The research was conducted for the primary benefit of the Tyler Police Department. The results will be presented to Chief of Police and his executive staff. However, the applicability of the results will be useful to any other agency that is engaged in community policing.

Information used in this report was gathered primarily from publications that deal with patrol allocation methods. This information consists of books, journals, and police magazines. Secondary information was gathered through telephone interviews and information received from other police agencies similar in size to Tyler. This secondary information was used as a comparison of the various factors used by these agencies in determining patrol allocation numbers.

The research indicated that the best method being utilized is similar to the methods being used by the agencies that were surveyed. Each of these agencies used a method similar to the IACP model, which considers the maximum number of factors that affect allocation of police officers. An accurate picture of the requirements that are placed upon today's officer is depicted and the police manager is then able to allocate the officers in the most effective and efficient manner.

Historical, Legal or Theoretical Context

In the early 1800's, Sir Robert Peel set forth the fundamental concept of community oriented policing. Peel stated "the police are the public and the public are the police, the police being the only members of the public who are paid to give full time attention to duties which are incumbent on every citizen, in the interest of community welfare and existence" (Swanson, et. al. 16). Galvin and Smith (3) define community policing as an organization wide philosophy and management approach that promotes community, government, and police partnerships; pro-active problem solving; and community engagement to address the causes of crime, fear of crime, and other community issues. Allocation is defined as the determination of the overall numbers of personnel for the agency and for each organizational component within the agency (Standards for Law Enforcement Agencies 16-1). Patrol is one of the most important aspects in community oriented policing and requires the most personnel.

The uniformed officer is usually the first contact with the public (IACP 2). Patrol operations must be adequately staffed, deployed, supervised, and trained if resources are to be utilized in the most effective and efficient manner (Clark 48). Traditionally, police administrators have applied several basic methods in determining the number of officers to allocate to patrol. These methods include guesswork, the comparison of police strength with that of other comparable jurisdictions, or the addition of officers to compensate for an increase in crime (Wilson and McLaren 357).

These traditional methods of patrol allocation have proven not to be the most effective way to obtain the optimal deployment of personnel. Guesswork leaves too much to chance. Mistakes are more likely and workload is not evenly distributed. Officer health and moral suffer (Lawrence 2). The 'comparable size' method is not effective because rarely are the community problems identical in the compared jurisdictions. Stenzel and Buren (121) state "no two agencies are alike; nor their needs; nor their goals". Budgetary differences exist between agencies due to the differing economic base. Increasing police officers to offset increases in crime is also not effective. It has been proven that increasing the number of police does not lower the crime rate or increase the proportion of solved crimes (Swanson, et.al.17). Also the budgetary and political restraints placed on today's police agencies make this method impractical.

Realizing that these methods were inadequate, other methods were developed through independent research, beginning in the early 1900's with the work of Vollmer, where the geographical beat was introduced (Swanson, et.al. 546). In 1920, Fosdick expanded on Vollmer's research by incorporating a deployment mode based on changes in crime and in 1929, Smith considered workload demand and further expanded the ways personnel were allocated to patrol (Swanson, et.al. 546). By 1941, Wilson developed another method based on hazard where the type of crime was weighted (Swanson, et.al. 546). In 1959, the International Association of Chiefs of Police developed a formula to calculate patrol allocation which was based on time and location of the offense (Tsai 1). In the early 1960's, Phoenix, Arizona modified Wilson's hazard method to deal with response times and the types of calls for service (Swanson, et.al. 546). In 1964, Crowther suggested the use of computer programs to allocate patrol personnel based on the assumption that 15 percent of calls for service need not be responded to immediately (Swanson, et.al. 546). Larson, in 1969, designed an allocation model based on geographical characteristics of the community and used more than three priority levels for the type of call for service (Larson 1-12). The Patrol Car Allocation Method, developed by Larson in 1975, relied on optimizing dispatch delays and response time and equalizing workloads (Chaiken 1-25). In 1977, Larson developed a third model, known as the hypercube queing modeling, which is based on the assumption that officers directly affect the crime rate within each geographical area that they are assigned (Tsai 2).

As the community oriented policing philosophy continues to evolve, police administrators are being forced to further modify these methods to meet their respective agency's needs in determining optimal patrol allocation. Police administrators have now begun to allocate patrol personnel based on combinations of the many factors that affect an officer's daily workload demands.

Review of Literature or Practice

Swanson, et. al., in summarizing the review of research on traditional policing, found that increasing police numbers does not lower the crime rate, randomized motor patrol neither lowers crime nor increases the chances of catching suspects. Two-person cars are not more effective than one-person cars. Saturation patrol does not reduce crime; instead, it displaces crime. The kind of crime that terrorizes Americans most is rarely encountered by police on patrol. Improving response times has no effect on the likelihood of arresting criminals or even satisfying involved citizens. Crimes are seldom solved through criminal investigations conducted by police, they are solved because suspects are immediately apprehended or someone identifies them (17).

With the national trend toward community oriented policing beginning in the mid to late 1970's, numerous methods of allocating personnel to patrol operations were developed to coincide with this movement. These methods were researched and experimented with by police agencies across the nation. A wide array of factors that directly affect the officer's workload and available time were utilized.

Prior to the advent of the IACP model in 1966, each of the previous methods considered only one or two factors that directly affected the officer's workload to determine patrol allocation. Early computer models that were developed soon were outdated. The IACP determined that more factors should be considered and a model was developed based on these considerations (IACP 6). The model considered many different factors in resolving the problems associated with allocating patrol personnel. This model relied on crime analysis information such as response time, temporal and geographical considerations, beat characteristics, and the type of call for service. The model also relied on other policy related factors that included equalizing workload, call priorities, and weighting factors assigned to different kinds of calls. Numerous police agencies implemented this model as the fundamental way to allocate personnel.

The research determined that allocation of personnel to patrol operations is not an exact science. Management must establish realistic goals and objectives, then make calculated assumptions utilizing the maximum number of factors that affect an officer's workload. The amount of available time to devote to community oriented policing can then be determined.

Several cities that are similar in police force size and jurisdictional size to the Tyler Police Department were surveyed. The survey dealt with the practices and policies used by these cities to determine the best method for determining patrol allocation. The police departments of Hurst, Plano, and Longview, Texas and Little Rock, Arkansas were surveyed.

Each of these agencies utilized modifications to the IACP model established in 1966. Each agency developed a time availability factor. The availability factor is based on the amount of time an officer is available to respond to calls for service, enforce traffic laws, and perform other patrol related duties. Considerations are made to calculate an officer's off-duty time, thus determining the available time. This off-duty time includes vacation/compensation time, holidays, training, sick leave, injury or administrative leave, regular days off, and other forms of leave such as military, emergency, or disciplinary leave. Crime analysis information is provided to form an average time required to work each call for service, the total number of citizen generated calls for service, and the number of officers required to work each of the calls.

Each agency then makes a calculated assumption based on these factors as to what percentage of the officer's daily time is to be spent working these calls for service. Longview (Hamilton 15) and Little Rock (Cook 3) each follow the IACP model with an ideal percentage of 35%. Hurst (Singleton 29) and Plano (Certain 11) set their percentage at 40%. Once the time percentage factor and the available time for each officer is determined, the available time to work the citizen generated calls for service is established. Dividing this available time into the total calls for service yields the number of officers required to implement the philosophy.

The Tyler Police Department currently utilizes a system that is similar to these agencies for allocating personnel to patrol operations (Thompson 17).

Discussion of Relevant Issues

Once the decision has been made to implement community oriented policing, administration must consider many factors before determining the number of officers necessary for patrol operations. These include factors relating to geographical and temporal distribution of crime, officer workload, and the amount of time required in responding to calls for service. The average police administrator has most of the basic data to make a careful analysis of the past events occurring in his jurisdiction which may be extremely valuable on predicting the future police needs (Kreutzer 40).

Crime data should be analyzed to determine the geographical and temporal distribution of crime. The calls per shift percentages are determined and are essential in equalizing the per officer workload. Once the percentage of the total workload in a geographical subdivision is known, the administrator can begin to consider what share of the total resources should be assigned to that area. The number of personnel that are required for each shift can then be allocated, based on when and where the needs exist. The analysis will further determine how many patrol units are required in a given geographical area as well as when the units are required.

An officer workload analysis should be conducted to determine how much time an officer has available to respond to calls for service. A workload demand analysis is critical because it serves as the foundation for decisions about patrol allocation on a proportionate need basis (Cawley, et.al. 51). Patrol units should have approximately equal workloads, for it has been shown that equal workloads lead to higher levels of officer productivity and better morale (Levine and McEwen 39).

The workload analysis will also determine how much time the officer can spend working on community problems and how much time is spent performing required administrative functions such as time spent testifying in court. The identification of the amount of patrol time that is classified as noncommitted or available is essential in determining how much time can be spent working in the community, solving problems. This available time has traditionally been utilized in performing random preventative patrol duties. When the total patrol time and how it is being expended is known, the police manager can deploy resources efficiently, consider more productive managerial alternatives, and develop programs that are responsive to the needs of the agency and the community.

An analysis regarding the times involved in handling calls for service should also be conducted. This analysis will provide the manager with a true picture of how many units are required for each type of call for service. This analysis will determine which calls merit an immediate mobile response, which calls can be delayed, and which calls could be handled by civilian personnel. How officers spend their time when not responding to calls for service is also determined.

Completing the analysis of the data requires time and effort. If the agency does not have computerized information, many man hours will be expended compiling the required information. However, this information is essential in maximizing the available resources to the existing budget structure. Once these analyses are completed, management can then determine and justify the allocation of patrol operations personnel.

Personnel costs comprise 95% of operating expenses for police agencies (IACP 5). Wilson and McLaren (656) indicate police salaries represent the greatest block of expense to taxpayers. The best method in determining patrol personnel allocation is needed. Today's Police Manager cannot increase personnel without adequate justification whenever the crime rate increase. The manager must operate within the budgetary and political constraints established by city administration. The amount of money available for patrol operations should be directed toward upgrading service rather than "beefing up" when crime rates increase (Giertz 2). Police executives must demonstrate that they are providing the optimum service possible for the tax dollars they receive, and they must defend with facts any proposals for additional manpower or support resources (Levine and McEwen 3).

Every possible option must be explored to place as many of the agency's officers into the patrol operations function. Civilianization where possible is necessary to put the maximum available sworn personnel into the operations function. Utilizing civilians to perform those services that do not necessarily require an officer, an agency can free up additional officers for patrol and reduce overall costs (Levine and McEwen 41).

Conclusion/Recommendations

In implementing the community oriented policing philosophy, Police Managers must consider as many factors as is possible to determine the best way to allocate personnel to patrol operations. Allocation, and the justification therein, based solely on citizen generated calls for service is not adequate. The Police Manager of today must establish realistic goals and objectives and set forth some basic guidelines to implement community oriented policing. These guidelines can be established only after consideration of these factors.

Long term shifts and beat assignments must be instituted if officers are to form lasting partnerships with the community. While there is no exact formula that can be used to determine allocation of patrol officers, consideration of such factors as geographical areas of assignment, workload analyses across work shifts and each the geographical areas, frequency and nature of calls for service, frequency and nature of criminal activity, expectations of response time, and the estimated time needed for community partnership and problem solving activities is necessary to obtain optimum patrol allocation in the community oriented policing concept.

The best method revealed by this research is the one currently being used by the agencies that were surveyed. Each of these agencies utilize modifications to the IACP model. This method considers the maximum number of factors affecting allocation and gives a truer picture of what is required of today's patrol officer. Determination of how much time can be devoted to community oriented policing can be established and the most effective use of an officer's time is possible. Budget and political considerations can be addressed effectively. This method can be easily adapted for use in any agency, from the largest to the smallest.

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