A PERFORMANCE-BASED APPROACH
TO POLICE STAFFING AND ALLOCATION

Jeremy M. Wilson and Alexander Weiss

COPS
COMMUNITY ORIENTED POLICING SERVICES
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Jeremy M. Wilson
Alexander Weiss

The COPS Office presents this *Essentials for Leaders*, which provides summaries of existing and new COPS Office publications and resources, tailored for executives. *Essentials for Leaders: A Performance-Based Approach to Staffing and Allocation* summarizes the research conducted by the Michigan State University team on the current staffing allocation landscape for law enforcement agencies and provides a practical step-by-step approach for any agency to assess its own patrol staffing needs based upon its workload and performance objectives. Additionally, it identifies some ways beyond the use of sworn staff that workload demand can be managed, and discusses how an agency's approach to community policing implementation can affect staffing allocation and deployment.

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Preface

Much attention has been given to police recruitment, retention, and how to maintain police budgets and existing staffing positions. Less has centered on adequately assessing the demand for police service and alternative ways of managing that demand. To provide some practical guidance in these areas, the Office of Community Oriented Policing Services (COPS Office) provided support to the Michigan State University (MSU) School of Criminal Justice to review current law enforcement staffing allocation experiences and existing approaches to estimating the number of sworn staff a given agency requires.

This document provides an executive summary of the research conducted by the MSU team. It highlights the current staffing allocation landscape and a practical approach for any law enforcement agency to assess its staffing needs based upon its workload and performance objectives. It also highlights some ways beyond the use of sworn staff that workload demand can be managed, and discusses how an agency's approach to community policing implementation can affect staffing allocation and deployment. This work illustrates the issues police practitioners and planners must consider in conducting an assessment of their agency's staffing need. It should also be of particular interest to police executives and policymakers who are concerned about both police-staffing allocation and efficiently providing quality police services in their communities.

This research is more fully documented in *A Performance-Based Approach to Police Staffing and Allocation*. In addition to the above audiences, that work should be of interest to researchers interested in police staffing experiences and assessment methods.

The Current Context for Police Staffing

Staffing police departments is a continuous challenge that has become more complex in recent years. For some time, agencies have struggled to balance their efforts in recruiting and retaining their officers. These challenges were exacerbated by the recession of late 2008 and early 2009, which caused police agencies to implement hiring freezes, furloughs, lay-offs, salary and benefit cut-backs, and retirement incentives.
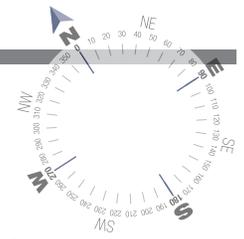
Such challenges have made it more imperative to answer the fundamental question of staffing analysis: How many police officers does an agency need? Answering this question is essential to any discussion about managing workforce levels, regardless of whether there is a shortage of qualified officers or an inability to support previous staffing levels.

Ultimately, police decision-makers have few resources to guide them in determining the number of officers they need. To be sure, there are multiple approaches to answering this question, but these generally have not been described and synthesized in a way that most practitioners could immediately understand and implement. This work outlines one approach to determining workforce need.

Several sources of information and expertise guide this approach. First is literature on police staffing analyses, including staffing tools and manuals, case studies, consultant assessments, and academic studies. Second are results from interviews with representatives from 20 different agencies of varying size, region, and jurisdiction. Third are results from a focus group with 21 police executives and planners, researchers, consultants, and members of the U.S. Department of Justice, Office of Community Oriented Policing Services (COPS Office). Fourth is the practical and academic experience the research team for this project has in working with police agencies across the United States in assessing staffing needs, identifying areas for improved efficiency, and developing evidence-based personnel planning lessons. Fifth is the continual solicitation of feedback from police and staffing experts.

The research comprised four parts: the current staffing landscape, approaches to determining staffing need and developing and applying a workload-based approach, how alternative ways of providing service could affect workforce planning, and the relationship between police staffing and community policing.

The Staffing Landscape

Police agencies face a three-fold challenge in meeting their staffing needs. First, there is a decreasing number of qualified applicants. This is attributable to changing generational work preferences, differences in workforce attributes, and decreasing resources available for hiring officers. Second, attrition is expanding through retirements, military call-ups, and other sources. Third, the scope of police work is expanding to encompass new areas such as homeland security and community policing,

obligating fewer officers to do more work. Interviews with representatives of police agencies suggest that the recession of late 2008 and early 2009 exacerbated these trends, with resources becoming so scarce that agencies often cannot apply innovative solutions learned elsewhere because they are struggling to maintain even basic levels and forms of service.

Interviewees reported a wide range of internal and external determinants of staffing need, including efficiency and productivity, crime rates, job tasks and calls, officer-to-population ratios, and established minimum staffing levels. Most agencies perform staffing analyses, but their level of sophistication varies. Agencies cite many different reasons for conducting analyses, including organizational and leadership change and for budgeting and negotiation purposes. Many staffing benchmarks reflect determinants of staffing need.

Budgeting for staffing is precarious. Not all agencies keep their actual staff levels close to their budgeted levels. Some deliberately keep fewer staff than authorized so that budget cuts do not debilitate the agency. Most see a gap between budgeted and actual staffing levels as inevitable due to fluctuations in staff resulting from military call-ups, layoffs, or furloughs.

To be sure, agencies feel they are understaffed, but few are able to conclusively demonstrate through workload analysis that they are. For many agencies, understaffing is a feeling that traditional workplace efforts appear disrupted. Agencies may feel understaffed because of a decline in officer proactivity, an increase in administrative tasks, a lack of staffing flexibility, or an inability to reduce overtime, among other reasons. A common claim is that agencies could accomplish more with additional officers. Like understaffing, the notion of a "full staff" appears to be subjective. Nevertheless, as one focus-group participant said, "If the answer to our problems is more staffing, we'll always be understaffed."

When asked to provide department-specific contexts for their staffing experiences, respondents listed circumstances that were remarkably similar across agencies. Almost all said budget constraints were important. Most also said their relationships with state and local governments were strained because of recent budget negotiations. Such strains have led them to share knowledge and strategy. Nevertheless, many agencies feel their environment is unique, leading them to believe comparisons with other departments would yield few practical solutions.

Perceived understaffing may compromise community-policing and problem-solving efforts. Increased duties arising from fiscal constraints reduce officer-initiated time normally spent in the community. While many of the duties officers no longer have time to perform could be transferred, one respondent suggested such transfer of duties might lead to public perceptions that the agency is isolated and does not care about residents. Such changes might, a respondent claimed, also lead to slippage in clearance rates, which eventually may lead to negative public perceptions of the agency.

Altogether, agencies believe they have had to adjust to a "new normal" in which opportunities to expand staff are restricted by many of the same economic conditions that magnify the need for innovative policing. Agencies seek efficient ways to do business, but staffing analysis remain a mystery to many, or are thought to be useful but out of reach for most agencies due to budget constraints. As a result, staffing is seen as an intuitive process in many agencies.

## Approaches to Determining Staffing Needs

Traditionally, there have been four basic approaches to determining workforce levels. These have evolved to reflect models of policing. The earliest models reflected approaches to addressing rising crime and the number of personnel necessary to do so. Later models aimed to improve efficiency, but did not give much attention to discretionary time required for community policing. More recent models address community-policing needs, but can require difficult decisions, such as those on defining response intervals. Altogether, these models differ in their assumptions, ease of calculation, usefulness, validity, and efficiency.

Many police agencies have used a per capita approach to estimate the number of officers an agency needs (Adams 1994; Orrick 2008). This requires determining an optimum number of officers per person, then calculating the number of officers needed for the population of a jurisdiction. To determine such an optimum rate, an agency may compare its rate to that of other jurisdictions in its region or of its size. Advantages of this method include its simplicity and ease of interpretation. Disadvantages include its failure to address how officers spend their time, the quality of their efforts, and community conditions, needs, and expectations. Given these disadvantages and others, experts strongly advise against using population rates for determining police-staffing needs.

The minimum staffing approach requires police supervisors and command staff to estimate a sufficient number of patrol officers that must be deployed at any one time to maintain officer safety and provide an adequate level of protection to the public (Demers, Palmer, and Griffiths 2007; Orrick 2008). This is a fairly common approach and generally reinforced through organizational policy and practice as well as collective-bargaining agreements (Kotsur 2006; National Sheriffs' Association 2007). Policymakers who believe that a minimum number of officers are needed to ensure public safety may choose this approach. Police officers themselves may insist for reasons of safety that a minimum number of officers are on duty at all times. There are, however, no objective standards for setting the minimum staffing level. Many agencies may determine the minimum staff level by perceived need without any factual basis in workload, presence of officers, response time, immediate availability, distance to travel, shift schedule, or other performance criteria (New Jersey Division of Local Government Services 2009; Shane 2007; Demers et al. 2007; Orrick 2008). This may result in deploying too few officers when workload is high and too many when it is low.

The authorized-level approach uses budget allocations to specify a number of officers that may be allocated (Wilson, Dalton, Scheer, and Grammich 2011). The authorized level does not typically reflect any identifiable criteria such as demand for service, community expectation, or efficiency analyses, but may instead reflect an incremental budgeting or other political decision-making process. The authorized level can become an artificial benchmark for need, creating the misperception that the agency is understaffed and overworked if the actual number of officers does not meet the authorized level (Baker and Harmon 2006). Focus-group participants also noted that unless an agency staffs above its authorized level fluctuations in recruitment, selection, training, and attrition may lead to actual staffing levels below authorized levels. Because the authorized level is often derived independently of workload consideration, an agency may be able to meet workforce demand with fewer officers than authorized. Still, the perception of being understaffed can diminish morale and productivity (Shane 2010) and make it appear that the community is not adequately funding public safety.

A more comprehensive attempt to determining appropriate workforce levels considers actual police workload. Workload-based approaches derive staffing indicators from demand for service (Lumb 1996). This approach is the only one to systematically analyze and determine staffing needs based upon actual workload demand while accounting for service-style preferences and other agency features and characteristics. It estimates
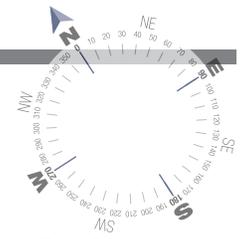
future staffing needs by modeling current levels of activity (Orrick 2008; Wilson and McLaren 1972; Keycare Strategy Operations Technology 2010). Unfortunately, there is no universally accepted method for conducting a workload-based assessment. Defining and measuring "work" varies by agency. Knowing that staff decisions are based upon calls for service and the time required to respond to them, officers may not have an incentive to be efficient in their response to calls or even to help reduce calls (Orrick 2008; Shane 2007). Learning how to conduct a workload-based assessment can be challenging. Still, staffing models based on actual workload and performance objectives are preferable to other methods that might not account for environmental and agency-specific variables.

A step-by-step approach for conducting a workload-based assessment should include the following:

1. **Examining the distribution of calls for service by hour of day, day of week, and month.** Calls for service can differ by hour of the day, day of the week, and month of the year. Peak call times can also differ by agency. Knowing when peak call times occur can help agencies determine when they must have their highest levels of staff on duty.

2. **Examining the nature of calls for service.** Reviewing the nature of calls can help in better understanding the work that an agency's officers are doing. Types of police work required can vary by area within a single jurisdiction, and require agencies to staff differing areas accordingly.

3. **Estimating time consumed on calls for service.** Determining how long a call takes, from initial response to final paper work, is key to determining the minimum number of officers needed for a shift. This is most straightforward when a single officer handles the call and completes resulting administrative demands (e.g., reports, arrests) prior to clearing it.

4. **Calculation of agency shift-relief factor.** The shift-relief factor shows the relationship between the maximum number of days that an officer can work and actually works. Knowing the relief factor is necessary to estimating the number of officers that should be assigned to a shift in order to ensure that the appropriate number is working each day. The shift-relief factor is calculated through division of the total number of hours needed to be staffed in a shift by the number of off-hours to which an officer is entitled. For example, in an agency which works 8-hour shifts, and in which each officer is entitled to a combined 151 days off— regular (104), vacation (15), holiday (12), sick (10), training (8), and personal (2)—the shift-factor would be (365/(365-151)), or approximately 1.7.

5. **Establishing performance objectives.** This encompasses determining what fraction of an officer's shift should be devoted to calls for service and what portion to other activities. For example, an agency might build a staffing model in which officers spend 50 percent of their shift on citizen-generated calls and 50 percent on discretionary activities.

6. **Providing staffing estimates.** Staffing needs will, as noted earlier, vary by time of day, day of week, and month of year, among other variables. Agencies should distribute their officers accordingly. For example, a shift with only half the number of calls than another shift will require half the number of officers. These numbers may also vary by the type of calls, and the time and officers they require, in each shift. For example, one large urban agency assigns two officers to each unit in its evening shift, affecting the number of officers needed for units to respond to calls. Another responds to the same type of calls in different ways in different shifts (e.g., sending a unit in some shifts, but requesting citizens file a report in person at a station during others).

The workload-based approach does have some limitations. It relies heavily on averages in producing estimates. It does not differentiate job junctions of police units. Acceptable response times to calls for service will vary by community, and can be lengthier than desired in large jurisdictions. Finally, the model works best for communities with at least 15,000 citizen-generated calls per year. One approach to coverage in communities with lesser numbers of calls for service is to make a subjective judgment about the appropriate level of policing required for deterrence, rapid response, and officer safety, and adjust numbers of officers accordingly.

Alternative Delivery Systems

Agencies may also consider alternative delivery systems for police services to better manage the demand for police services. These can include alternative methods for managing non-emergency calls for service, different ways citizens can report crimes and traffic accidents, and use of non-sworn personnel to handle calls.

Emergency calls for service are typically placed over a 911 system. This system has provided an easy and effective method for citizens to contact police. Police agencies have marketed 911 systems heavily; it is quite common, for example, to see "call 911" emblazoned on a police vehicle. In some communities, it can be difficult to find a non-emergency number to call the police. This poses a dilemma for police agencies: while 911 was designed for obtaining emergency services and rapid response, most calls for police service are not emergencies and do not require a rapid response. Citizen use of 911 to request all types of police service aggravates additional difficulties in managing such systems, including high turnover rates for public-safety communication personnel. Such difficulties have led many communities to adopt a 311 system for nonemergency calls. One urban agency implementing a 311 experienced a 25-percent reduction in 911 calls, including a 99.7 percent reduction in calls in the lowest-priority category (National Institute of Justice 2005). Other agencies have supplemented a 311 system with a website where many answers sought by phone can be viewed online (City of Evanston 2011). Jurisdictions may also carefully define some group of calls to which police will not typically respond, instructing citizens to visit a police station or use other means for submitting a report.

Providing different ways for citizens to report crime and accidents can alleviate demand on sworn staff. When citizens call police they often do so to file a report about an offense or traffic accident. In most communities, police officers are dispatched to the scene of the incident to gather information for the report. For many incidents, there is little likelihood that the case will be solved. Nonetheless, citizens often need some evidence that a report was filed (typically for insurance purposes), and police to want to know about all offenses so as to better understand patterns and hot spots. Many police departments have found ways to satisfy these needs while avoiding the dispatching of sworn staff for filing reports. A National Institute of Justice project in three cities showed overwhelming citizen support for alternative ways of reports such as walk-in, mail-in, officer response by appointment, and telephone reporting units (McEwen, Connors, and Cohen 1986). Evidence indicates that such approaches could reduce patrol workload by as much as one-fifth, in part because police could take nearly half the report over the phone (Kennedy 1993). One telephone reporting unit handles calls such as those for identity theft, missing persons, additional information on previously reported crimes, vandalism, and other calls totaling about 11 percent of the call load (City of Portland 2011). Another department allows citizens to use its website to submit reports of accidents, financial crimes, vandalism, and suspicious activity (City of Sacramento 2011).

Agencies can further alleviate the demands on sworn personnel by assigning more duties to non-sworn staff. Until recently, law enforcement agencies were organized so that nearly all functions were performed by sworn officers. Many departments now employ a significant number of non-sworn staff to support police operations. In 2007, the number of full-time, non-sworn employees in local police departments was about 138,000 (Reaves 2010). The use of non-sworn staff can free sworn officers to do community policing and other tasks. Non-sworn staff may in some circumstances have skills more appropriate for a given agency task. Non-sworn staff also typically cost less than sworn personnel. One of the most common uses for non-sworn staff is as community service officers. In one jurisdiction, these personnel assist patrol officers in non-enforcement activities, respond to citizen requests for service, identify and report criminal activities, assist citizens in identifying crime-prevention techniques, and assist in traffic control of special events, among other activities (City of Minneapolis 2011).

Staffing for Community Policing

The evolution of community policing duties has tremendous implications for police staffing. As of 2007, 14 percent of all agencies, including 60 percent of agencies serving populations between 50,000 and one million, had a specialized community-policing unit (Reaves 2010). Nearly half of all agencies and more than two-thirds of agencies serving populations of at least 25,000 had dedicated community-policing officers. Agencies adopt specialized approaches to community policing for many reasons, including a perception that there is not enough time to conduct community policing while responding to calls for service; a belief that funders prefer specialized approaches; and to visibly demonstrate a commitment to it (Maguire and Gantley 2009). Other agencies adopt community policing in a way that mixes generalized and specialized approaches.
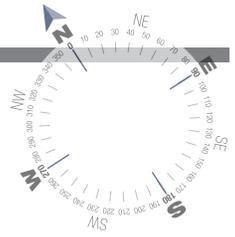
For example, an agency might have a dedicated problem-solving unit, but still fully train all officers and expect them to engage the community and attempt to address underlying crime problems as part of their normal work routine.

There is no standard benchmark to assess appropriate levels for community policing. Rather, levels tend to be determined locally based on qualitative assessments, performance objectives, and practical considerations (e.g., resource availability, demand for staff throughout the organization). Agencies that implement community policing throughout the organization will typically see patrol officers, who are most closely tied to community interaction, bear most of the effort. This will require agencies to increase the discretionary amount of time for these officers and the number of officers assigned to a shift. Agencies developing a specialized unit have less need to increase the discretionary time for patrol officers to devote to community policing. In one case, an urban jurisdiction passed a referendum to hire and deploy 57 problem-solving officers to cover the whole city, with one assigned to each community-policing beat (Wilson, Cox, Smith, Bos, and Fain 2007; Wilson and Cox 2008).

Future research might consider developing workload-based models to assess staffing needs for community policing. Unlike patrol, which can be fairly well predicted based on easily measurable time to respond to calls for service, an approach to determining staffing needs for community policing would need to account for fluctuations in the definition and operationalization of community policing; the opportunity and need to engage the community and solve problems over time; and the difficulty of measuring the time to complete the typical community-policing activity. Until such resources exist, it is likely that agencies will continue to staff for community policing based on general expectations of time commitment required or that can be afforded.

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