Long-Term Effects of Law Enforcement's Post-9/11 Focus on Counterterrorism and Homeland Security

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Preface

This report represents the final publication supported by Award No. 2007-IJ-CX-0012 awarded by the National Institute of Justice (NIJ), Office of Justice Programs, U.S. Department of Justice. The opinions, findings, and conclusions or recommendations expressed in this publication are those of the authors and do not necessarily represent the official position or policies of the U.S. Department of Justice. This award is the result of NIJ's interest in helping to inform the field of terrorism research as it relates to the long-term impact of 9/11 on police forces and the challenges nine years out that police departments face in this area.

This study addresses the following research questions:

- How have law enforcement's strategies evolved to meet departments' long-term counterterrorism (CT) and homeland security (HS) requirements? To what degree has this focus created new operational demands? What effect has the focus on CT and HS had on training and officer skills-sets needed?
- How has law enforcement resourced its CT and HS activities?
- What advantages and challenges are associated with this new focus on CT and HS?
- What has been the evolution of fusion centers? What key trends are associated with law enforcement agencies' current approach to CT, including information-sharing, leveraging technology, and coordination activities?

- What are the current benefits associated with this long-term focus on CT and HS? What analytic framework can be used to assess the potential costs?

To address these questions, we used a case study approach of five major law enforcement agencies in major metropolitan areas to understand their experiences in these areas post-9/11. To determine how federal allocation for HS grant programs has changed over time, we conducted an analysis of the major grant programs in this area. Lastly, to quantify the costs associated with shifting enforcement personnel away from direct crime-fighting activities (e.g., patrol, investigations) into CT and HS functions, we conducted a cost of crime analysis.

This report will be of interest to law enforcement and those involved with CT and HS at the federal, state, and local levels. Specifically, this report will be of interest to law enforcement agencies in urban areas, the U.S. Departments of Justice and Homeland Security, and to the network of fusion centers within the United States.

This report builds on extensive RAND research on law enforcement and homeland security, including

- Lois M. Davis, Kevin Jack Riley, Gregory Kirk Ridgeway, Jennifer E. Pace, Sarah K. Cotton, Paul Steinberg, Kelly Damphousse, and Brent L. Smith, *When Terrorism Hits Home: How Prepared Are State and Local Law Enforcement?* MG-104-MIPT, 2004.
- Lois M. Davis, Louis T. Mariano, Jennifer E. Pace, Sarah K. Cotton, and Paul Steinberg, *Combating Terrorism: How Prepared Are State and Local Response Organizations?* MG-309-OSD, 2006.
- Paul Heaton, *Hidden in Plain Sight: What Cost-of-Crime Research Can Tell Us About Investing in Police*, Santa Monica, Calif.: RAND Corporation, OP-279-ISEC, 2010.
- K. Jack Riley, Gregory F. Treverton, Jeremy M. Wilson, and Lois M. Davis, *State and Local Intelligence in the War on Terrorism*, MG-394-RC, 2005.
- Jeremy M. Wilson, Bernard Rostker, and Cha-Chi Fan, *Recruiting and Retaining America's Finest: Evidence-Based Lessons for Police Workforce Planning*, MG-960-NIJ, 2010.

- Benjamin Zycher, *A Preliminary Benefit/Cost Framework for Counterterrorism Public Expenditures*, MR-1693-RC, 2003.

All of these reports are accessible through the RAND website at http://www.rand.org.

This research was conducted within the Safety and Justice Program of RAND Infrastructure, Safety, and Environment (ISE), a unit of the RAND Corporation. The mission of the ISE is to improve the development, operation, use, and protection of society's essential built and natural assets; and to enhance the related social aspects of safety and security of individuals in transit and in their workplaces and communities. The Safety and Justice Program research addresses occupational safety, courts and corrections, and public safety—including violence, policing, substance abuse, and public integrity. Information about the Safety and Justice Program and its research publications can be found at http://www.rand.org/ise/safety. Inquiries may be directed to:

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Contents

Figure

Tables

Summary

Since the 9/11 terrorist attacks, the need for increased counterterrorism (CT) and homeland security (HS) efforts at the federal, state, and local levels has taken the spotlight in public safety efforts. A report by the U.S. Department of State on assessing and managing the terrorist threat explained that

> The continued threat of terrorism has thrust domestic preparedness obligations to the very top of the law enforcement agenda. . . .[T]this capacity must be considered as much a staple of law enforcement operations as crime analysis, criminal intelligence, and crime prevention." (U.S. Department of State, 2005)

In the immediate aftermath of 9/11, many law enforcement agencies (LEAs) who considered the terrorist threat to be high for their jurisdiction (especially LEAs in metropolitan areas or in jurisdictions with critical infrastructure) internally shifted resources or increased departmental spending to improve security for their department, to develop CT capabilities, and to improve their overall level of preparedness for incidents involving chemical, biological, radiological, nuclear, or explosive (CBRNE) incidents (Davis et al., 2004).

Today, CT and HS are an important part of LEAs' agendas, especially for LEAs located in urban areas and/or in jurisdictions where the terrorism threat is considered to be high. In the years since 9/11, LEAs have continued to develop their CT and HS capabilities. At the same time, federal, state, and local governments have placed new demands on LEAs to participate in statewide or regional threat assessments, improve coordination on intelligence-sharing and other CT activi-

ties, participate in such major initiatives as the development of fusion centers and the implementation of the National Incident Management System (NIMS), and to demonstrate overall that their department and community are better prepared. LEAs are still developing comprehensive CT strategies and assessing what direction these plans should take. Incorporating CT activities into a department, though, represents a significant organizational change, one that requires departments to balance investments in traditional law enforcement priorities and those for CT and HS preparedness. Also, traditional funding for law enforcement has undergone some significant changes, particularly with the ending of such U.S. Department of Justice (DOJ) programs as the Community-Oriented Policing Services (COPS), which provided LEAs with funding to hire and reassign officers to community-policing activities,[1] and the consolidation of preparedness funding within the U.S. Department of Homeland Security (DHS). The resulting increased reliance on HS grants, which call for a regional, multi-jurisdictional approach to preparedness and the adoption of an all-crimes, all-hazards approach to information-sharing and intelligence analysis, has resulted in both advantages and challenges for LEAs. In addition, LEAs must consider how to integrate CT approaches with other key trends in policing practices, such as community policing, problem-oriented policing, or intelligence-led policing.

The purpose of this study is to provide an in-depth understanding of the long-term adjustments that large urban LEAs have made to accommodate the renewed focus on CT and HS, as well as the advantages and challenges associated with it. Specifically, this study addresses the following research questions:

- How have law enforcement's strategies evolved to meet departments' long-term CT and HS requirements? What long-term organizational adjustments were made? To what degree has this focus created new operational demands? What effect has the focus on CT and HS had on training and officer skills-sets needed?

[1] The COPS Universal Hiring Program began in 1994 and ended in 2004.

- How has law enforcement resourced its CT and HS activities? How has federal funding for these activities evolved, and what are some of the implications for LEAs?
- What advantages and challenges are associated with this new focus on CT and HS?
- What has been the evolution of fusion centers? What key trends are associated with LEAs' current approach to CT, including information-sharing, leveraging technology, and coordination activities?
- What are the current benefits associated with this long-term focus on CT and HS? What analytic framework can be used to assess the potential costs?

Approach

To address these questions, we developed a three-pronged approach that included a case study analysis, analysis of federal funding trends, and a framework for analyzing the costs associated with internally shifting departmental resources to focus on CT and HS.

The study relied primarily on in-depth case studies of five large urban LEAs—the Boston Police Department, the Houston Police Department, the Las Vegas Metropolitan Police Department, the Los Angeles County Sheriff's Department, and the Miami-Dade Police Department—purposefully selected to achieve representation of major urban departments in jurisdictions where the terrorist threat is considered to be high, as well as to achieve geographic variation and variation in the degree of the departments' experience with CT and HS. For each LEA, we conducted site visits and in-depth interviews with a range of personnel involved in developing or implementing CT or HS functions within their department, including departmental leadership, sworn and civilian personnel involved with fusion centers, CT units, HS bureaus or divisions, specialized response units, training bureaus, grants management, and administration. We conducted a qualitative analysis to identify similarities and differences among LEAs with respect to each of the research questions.

We also conducted an analysis of the major federal HS grant programs to examine how federal allocations have evolved over time, and we reviewed grant program requirements to put into context the key themes related to funding issues identified from the case study interviews. In addition, we developed a framework for assessing the potential costs associated with shifting law enforcement personnel from traditional policing functions to focus on CT and HS functions. To do so, we used a common analytic approach for estimating the potential financial costs stemming from reduced attention to routine crimes and then considered what this suggests in terms of shifting 1 percent of a department's sworn force from routine patrol functions to CT or HS functions.

Study Limitations

The study has the following limitations. We purposely selected a sample of five large LEAs in high-threat urban areas, which means that these results are generalizable only to other such urban areas. We primarily used a case study approach, which provides an in-depth understanding of the long-term adjustments LEAs have made to accommodate this new focus, as well as the advantages and challenges associated with it. It can also serve to identify hypotheses and issues for future research.

The views presented here are those of the LEAs in our case studies; they do not include the perspective of DHS or state departments of law enforcement or offices of homeland security. Therefore, the issues identified in this report represent only the perspective of local law enforcement.

Finally, as noted above, a key limitation of our study was that we were unable to obtain detailed data on the number and types of sworn personnel shifted to create new units or enhance existing organizational structures, and how these changes evolved over time to quantify costs at the departmental level.

Overall Findings

Law Enforcement's Counterterrorism Function Has Evolved

Pre-9/11, law enforcement's criminal intelligence focus was on specific types of crime, such as organized crime, white-collar crime, or gangs. In the aftermath of 9/11, law enforcement's focus has evolved to also include terrorist threats. Nine years after the 9/11 terrorist attacks, we see that LEA's information-sharing networks have evolved to include not only CT, but also the adoption of an all-crimes approach, with the goal of striking a balance between criminal intelligence and intelligence related to terrorist threats.

In terms of organizational units, whereas pre-9/11 a number of departments had specific crime-related units, such as organized crime units or narcotics units, following 9/11 many large urban LEAs stood up CT-specific units to gather and analyze terrorist-related information and intelligence. In addition, many state governments and some local governments established fusion centers, largely on their own initiative, to address gaps in information-sharing, terrorism, and law enforcement information-sharing by the federal government. A recent evolution was the replacement of Terrorism Early Warning Groups (TEWGs) with the fusion center model. Fusion centers importantly expanded the focus from CT-specific to an all-crimes, all-hazards approach to intelligence collection, information-sharing, and analysis. Most fusion centers are managed by the state police or by a state's HS bureau; only 20 percent are managed by large urban areas. Three of the five case study LEAs managed their region's fusion center. The LEAs' fusion centers were co-located with the city's or county's emergency operations center, thus allowing these jurisdictions to achieve economies of scale both in the physical investment and in co-locating staff tasked with both CT and for emergency planning and response.

In terms of network composition, whereas before 9/11 intelligence networks were specific to different types of crime (e.g., High-Intensity Drug Trafficking Areas [HIDTA]), following 9/11 the networks' foci expanded to include all crimes and hazards under the fusion center model. We identified several trends that underlie the shift

toward an all-crime, all-hazards approach to intelligence analysis and information-sharing.

First, as LEAs' CT efforts continue to move toward a fusion center model, large urban areas are starting to use information technology to organize virtually and to share information. An advantage of organizing virtually is that it allows more LEAs to participate in the information-sharing network and helps to reduce the resource commitments required to participate in a fusion center. A challenge is that a key goal of the "fusion" process is sharing and analyzing intelligence information to identify larger patterns and themes in crime trends—this is a dynamic process, but in a virtual organization there may be fewer face-to-face interactions and less informal information exchange. In addition, incentivizing participation is more difficult when LEA personnel are not co-located.

Second, the renewed focus on CT and HS has served as a catalyst to promote technology adoption (e.g., IT systems, software, camera systems) by fusion centers. An advantage is that this allows for better access to information, better linkage of network participants, and leveraging of technology to facilitate identifying the nexus between different types of criminal activity and potential terrorist-related activity. A challenge associated with the expanded use of technology is the need to also incorporate sustainability plans to address maintenance and replacement costs not covered by grant funding, as well as to address incompatible data record management systems among LEA network participants.

Third, LEAs have tapped into existing infrastructure and networks to help build their local intelligence functions. For example, the High Intensity Drug Trafficking Areas (HIDTA) network served as a model for one LEA to develop its CT information-sharing network. LEAs also have designated officers within a department to serve as liaisons between officers in the field and the CT unit or fusion center, and LEAs have expanded their community networks. An advantage of using or expanding existing networks is that the start-up costs associated with building on existing relationships tend to be lower. A challenge is that expanding or developing new networks takes time, energy, and resources. These transaction costs are often overlooked when gen-

erating new networks. Also, where existing networks are used, it is possible that the purposes of the network(s) may become diluted over time.

Fourth, fusion centers have helped centralize and formalize information exchange among LEAs and other network participants within a region. These centers also have enabled these networks to become more formally connected to the federal intelligence community. An advantage is that formalizing information exchange helps to make this process less dependent on personal relationships and contacts, which is especially important since officers often rotate out of CT positions into new roles. A challenge of formalizing information exchange is that fusion center participants may have different information needs and goals that must be recognized and negotiated.

Fifth, HS and the Urban Areas Security Initiative (UASI) funding focuses on enhancing regional preparedness, with a key goal being to encourage a regional, multi-jurisdictional approach and improve coordination among multiple stakeholders and different sizes of stakeholders within a region. As a result, the size of information-sharing networks has substantially increased, with one case study department's network expanding from agencies within two counties to include agencies from six counties. An advantage overall is that a focus on regional preparedness is helping to ensure regional cooperation across many specialties, increasing coordination of assets and resources across geographic boundaries, integrating policies and practices concerning preparedness, and, in terms of fusion centers, improving regional information-sharing and analytic capabilities. In addition, smaller LEAs participating in fusion center networks are realizing spillover benefits of greater access to information being housed by larger departments and opportunities to strengthen their relationships with larger LEAs in their region. A challenge associated with this trend is that larger LEAs tend to disproportionately contribute to these information-sharing networks—playing a coordination, analytic, and administrative role—whereas smaller LEAs tend to be more in an information-receiving mode. This has increased the coordination burden for large LEAs managing fusion centers. This trend also runs the risk of fusion centers becoming more focused on pushing out information versus there being

a two-way exchange; there is also the risk of less attention being paid to the actual "fusion" or analysis of intelligence information.

Organizational Adjustments, Personnel and Training Issues

To create CT and HS units, bureaus, or divisions and to staff fusion centers, the case study LEAs made a number of organizational adjustments.

All the departments stood up new HS bureaus or units and/or CT units. In the aftermath of 9/11, case study departments refocused their tactical intelligence units on CT. Eventually, these evolved into formal HS bureaus or divisions and CT units. For example, one department initially started a HS unit and, then later expanded this unit into a HS Bureau made up of 60–70 employees with an infrastructure protection, operations intelligence, and CT intelligence section. All of the departments also developed or enhanced existing specialized response teams to focus on CBRNE incidents.

Three of the five case study departments used UASI funding to develop or enhance a fusion center. The fusion centers grew out of preexisting units or structures within some of the departments. For example, one department's fusion center grew out of its original criminal intelligence unit; another department's fusion center evolved from its pre-9/11 tactical intelligence unit center; and the third department's fusion center had as its predecessor a terrorism early warning group.

To create CT and HS units and to staff the fusion centers, all five of the case study LEAs shifted sworn personnel internally from other activities to staff these new positions. This involved combining or refocusing existing units (e.g., criminal intelligence, organized crime units), shifting personnel to create or expand CT and HS units, and, in a number of cases, shifting personnel at the mid-to-upper levels within a department to these positions. Further, because HS funding does not cover the cost of hiring new personnel, the LEAs for the most part did not have the flexibility to hire new sworn personnel for these activities; grant funding only covered the hiring of civilian contract personnel or intelligence analysts.

It takes time for law enforcement personnel to develop the specialized expertise needed for CT and HS. For example, in addition

to learning about response to CBRNE incidents and becoming proficient in using NIMS, personnel must learn techniques for collecting and analyzing raw intelligence, evaluating source credibility, and other requirements specified in the fusion center and other related guidelines. In addition, they must develop their local contacts and networks and have a good understanding of the local situation in terms of threats, key partners, and local priorities. Developing such expertise requires a substantial upfront investment by departments to enable these officers to undertake the specialized training and time necessary to become knowledgeable experts in CT and HS. As one commander noted, it can take a mid-career officer at least two years to become effective in CT.

However, the typical career progression for sworn officers does not mesh well with this upfront investment. To advance in one's career, sworn officers typically promote to new jobs and into different types of positions every couple of years. As a result, the substantial investment in training, relationship-building, and knowledge-building can be lost right as these individuals become most effective in CT and HS positions. The mismatch between the typical career progression in law enforcement can also affect the ability of a department to internally recruit for these positions, with some sworn officers expressing concern that these positions could stall their advancement. Four of the departments commented that there was a critical need for a specialized career track in CT and HS.

HS grants, as discussed below, do providing funding for hiring civilian staff or contractors as intelligence analysts. There are pros and cons in having civilian analysts staff these positions. On the plus side, interviewees commented that civilian analysts tend to have statistical backgrounds, and, in some cases, intelligence backgrounds. Civilians also are more like to stay in these positions longer than a sworn officer, who typically rotates out of positions every couple of years to keep progressing in his or her career. On the downside, civilian analysts may not understand the law enforcement environment or their information needs. And when HS grants end, departments must find a way to continue to fund these positions.

A few interviewees took the view that sworn police officers were uniquely positioned to understand the intelligence needs of law enforcement. Yet, one CT commander observed that police officers do not necessarily make the best intelligence analysts. In his view, departments take the best investigators (e.g., from narcotics units) and try to turn them into analysts. However, to be a CT intelligence analyst requires a different set of expertise and mindset than what law enforcement officers typically are trained for. It requires specialized training of sworn personnel to become intelligence analysts, yet there is no specific career track for this specialized area. Another CT expert concluded that fusion centers or CT units optimally should be staffed with a combination of experienced officers, civilian intelligence analysts, and operators.

The focus of training has shifted from response to large-scale emergencies involving man-made or natural disasters to also include those involving terrorist threats, which for responders require training in weapons of mass destruction (WMD) awareness and response; the use of specialized personal protective equipment (PPE) and other technology, such as radiological detectors; the role of law enforcement in a CBRNE scenario; and incident management and response. In addition, the number of CT and HS training courses being offered has proliferated, making it challenging (and increasing search times) to identify the right training opportunities for a department and assess the quality of the training offered. The case study LEAs expressed concerns about the type and level of training offered by DHS. Some felt the training offered was too basic and wanted the flexibility to use grant funding for other training opportunities they felt better met their needs. Yet, training developed by a LEA or non-DHS approved training programs may not be covered by DHS grant funding if it does not meet specific requirements. As one departmental trainer stated,

> There should be allowances for larger departments to create their own training and bring in specialized expertise. Good cops will meet the experts that offer training. . . . When we have identified particular training opportunities, we just can't get it approved

> through DHS and ODP. It is very frustrating to send up training requests and have them denied.

Three of the five LEAs commented on the challenges of fitting HS training within the routine training that a department must undertake. The perception was that there were more training requirements now and that this meant, at times, having to cut optional training to make room for the new courses related to CT and HS. Training on NIMS was the most frequently cited example of HS training requirements. NIMS

> provides a systematic, proactive approach to guide departments and agencies at all levels of government, nongovernmental organizations, and the private sector to work seamlessly to prevent, protect against, respond to, recover from, and mitigate the effects of incidents, regardless of cause, size, location, or complexity, in order to reduce the loss of life and property and harm to the environment. (FEMA, n.d.-a)

NIMS training was cited by most interviewees as being valuable in terms of creating a common language by which agencies involved in a multi-agency response to major events could more effectively communicate and manage large-scale incidents. Developing proficiency in using NIMS was cited as an important benefit of the focus on HS preparedness and funding. However, NIMS also represented a substantial training requirement for departments where all sworn personnel must go through basic NIMS training and command staff must receive more advanced training. Depending on the size of a department, it could take 2–3 years for such departments to run all their personnel through NIMS training due to the need to fit NIMS training with other mandated training. Although HS grant funding provides support for NIMS training, several departments commented that overtime costs still were substantial to accommodate this requirement.

Funding Issues

A particularly important trend has been for HS grants to adopt a regional approach to HS preparedness and response. This is best illus-

trated by the Urban Area Security Initiative (UASI), which was a direct result of the Homeland Security Act of 2002 (P.L. 107-296) and is an important source of funding for fusion centers and LEAs' CT and HS preparedness activities. The UASI program is intended to assist participating jurisdictions in developing integrated regional systems for prevention, protection, response, and recovery. States are required to ensure that at least 25 percent of UASI-appropriated funds are dedicated toward law enforcement terrorism prevention-oriented planning, organization, training, exercise, and equipment activities, including those activities that support the development and operation of fusion centers. Importantly, although the amount of HS grant funding available has substantially increased since 9/11, the evolution of a regional focus on preparedness has meant that grant funding no longer goes directly to individual departments but instead to states and regions. Three of the case study departments commented that this trend has meant that law enforcement's needs and priorities must increasingly compete with those of multiple stakeholders within a region.

The award, distribution, and reimbursement process for HS grants (e.g., UASI and the State Homeland Security Program [SHSP]) are set up to go to individual states and then to the local or regional level. This system was cited by all of the case study LEAs as resulting in the management and disbursement of grants becoming much more complex following 9/11. Interviewee concerns included high administrative costs related to multiple layers of review and decisionmaking, multiple levels of review related to procurement processes, and more extensive grant administration and reporting requirements. As a result, some LEAs hired full-time grants managers and, in one case, developed an electronic grants management database to handle these requirements. HS grants management and report requirements, as well as match requirements, have had the unintended effect of some departments forgoing grant opportunities.

The U.S. Government Accountability Office (2005) found that, despite federal efforts to expedite the award of grant funds and the transfer of those funds to localities, some states and local jurisdictions could not expend the funds to purchase equipment or services until other, nonfederal requirements were met. Some state and local offi-

cials reported that their ability to spend grant funds was also complicated by various state and local legal and procurement requirements and approval processes, which could take months in some instances. Although DHS and states have made numerous efforts to address these problems, case study LEAs reported that, nine years after 9/11, state and city or county procurement processes were still at times slow, requiring multiple layers of review, and were not set up to support the purchase of specialized equipment needed by law enforcement.

UASI and SHSP grant funding can be used to hire new staff and/or contractor positions to serve as intelligence analysts (DHS, 2009c). Grant funding can also be used to hire personnel or to pay for overtime and backfill expenses *only* for individuals performing allowable planning, training, exercise, and equipment activities. HS grant funding *cannot* be used to support the hiring of personnel to fulfill traditional public safety duties. For departments, this has meant that these grant programs do not support the hiring of sworn personnel for CT or HS purposes. As noted above, in response, LEAs primarily have internally shifted sworn personnel from other positions to staff new CT or HS units or bureaus, and departments have relied on overtime to meet HS requirements (e.g., training or personnel staffing requirements). Four of the case study departments emphasized the need for funding to support hiring of sworn personnel for these positions.

A common theme heard from four case study LEAs was that, although HS grants were beneficial in enabling the purchase of specialized equipment, once a grant was over, the maintenance or replacement costs were no longer supported. This issue is not unique to HS grant programs, and in fact the grant guidelines direct applicants to develop sustainability plans. However, it raises the larger issue of federal versus state and local responsibility for HS preparedness. And the views of the case study LEAs were consistent with other studies of first responders. LaTourrette et al. (2003) examined this issue with a group of first responders. In that study, interviewees reported that the maintenance, repair, and replacement costs of PPE and other HS technology had to compete for funding with other departmental priorities; many interviewees wondered whether sufficient funding would be available for restocking these items after homeland security concerns lessen.

Lastly, UASI region definitions may be inconsistent with a state's existing mutual aid network and emergency management system—the mutual aid network law enforcement must use in the case of an emergency. The problems this can create, for example, include the fact that UASI recipients are required to conduct planning, training, and exercise programs with the partners that make up their Urban Area Working Group (UAWG). At the same time, these partners may differ from a LEA's operational area partners, which the state's emergency management system also requires LEAs to work with in planning, training, and conducting exercises. There is a need to reconcile UASI regional structures with individual states' emergency management systems.

Framework for Estimating the Potential Costs Associated with Counterterrorism and Homeland Security Efforts

Prior examinations of the costs (and benefits) of CT and HS expenditures typically have focused at the national or state level, on estimating the costs of averting terrorist incidents. To our knowledge, there have been no studies to evaluate the cost implications of CT and HS efforts at the local LEA level, where law enforcement plays a central role in HS preparedness and countering terrorist threats.

We developed an analytic framework for estimating some of the financial cost implications of CT and HS efforts at the local level. Specifically, we employed a common analytic approach for estimating some of the potential financial costs. As a consequence of LEAs internally restructuring to staff CT and HS units and fusion centers, a potential collateral cost is that routine police patrol presence may be reduced (depending on the number and types of sworn personnel that were reallocated), for instance, and that the reduced patrol presence may lead to increased crime—a possibility that has not been previously considered in the literature. For this analysis, we focused on crimes that the literature has shown to be more responsive to the size of the police force: aggravated assault, robbery, burglary, and motor vehicle theft. Because we were unable to obtain detailed data for each department on the number and types of personnel shifted over time, we instead estimated the number of additional new crimes that might result from a hypothetical 1 percent reduction in a LEA's police patrol

force as a result of reallocating staff to CT and HS functions, and then calculated the direct costs to the criminal justice system and the indirect costs to victims. We estimated this at the national level and then for the jurisdictions covered by the five case study LEAs.

We estimate that a 1 percent shift in police personnel away from police patrol functions to focus on CT and HS activities, nationally, would lead to additional annual crime costs of approximately $363 million. At the local level, the annual crime costs ranged from $1.54 million to $6.2 million across the jurisdictions where the case study LEAs are located. To put these findings into context, we compared the annual cost of crime in each locality served by our case study LEAs with an economic measure of Gross Municipal Product (GMP)—the value of goods and services produced in a jurisdiction in a given year. This enabled us to compare the relative impact of a shift in police personnel from traditional public safety duties to CT and HS functions as a proportion of the total economic output from each locality. As a proportion of GMP, the range was very narrow, between 0.002 percent and 0.004 percent.

However, the costs associated with officers being assigned to routine patrol duties versus CT or HS duties is more complex than simply considering the effects of shifting personnel from routine patrol functions to CT and HS duties. A range of other factors need to be taken into account. For example, increased police presence for HS or CT purposes (e.g., specialized units at the ports or airports) also has had spillover effects in helping to reduce crime in general in these locations. Indeed, one department noted an 80 percent decrease in theft at their jurisdiction's international airport following an increase in the number of police personnel assigned to the airport for HS reasons. In addition, the all-crimes focus of fusion centers has been important, not only for CT, but also for improving information-sharing on crime in general. The case study LEAs reported that increased sharing of crime data improved their ability to identify cross-jurisdictional crime, which has led to the solving of more cases. In addition, there are other benefits that must be considered, such as improvements in coordination, incident management, and overall preparedness for responding to large-scale incidents in general.

Benefits Associated with the Long-Term Focus on Counterterrorism and Homeland Security

The case study LEAs identified a number of benefits associated with the long-term focus on CT and HS. Table S.1 provides a qualitative summary of some of the key benefits identified by interviewees.

Importantly, this new focus on CT and HS represented a cultural or paradigm shift for LEAs toward greater collaboration with other law enforcement agencies at the local, state, and federal levels, a shift that has resulted in improved information-sharing and regional coordination. NIMS was seen as an important advance in improving incident management for multi-agency response to major emergencies or disasters. Investments in training and equipment helped improved LEAs' capabilities to respond to CBRNE-related incidents. HS training is now part of LEAs' core curriculum.

The development and enhancement of fusion centers helped improve regional coordination on CT among multiple stakeholders and the development of closer working relationships among LEAs within a region. Improved information-sharing of criminal and terrorist threat information has not only benefited CT, but also routine crime-fighting efforts. Fusion centers have also helped to formalize the information-sharing process.

Changes and consolidation of HS grant funding at the federal level have led to LEAs establishing dedicated grants management positions to manage HS grants, which has resulted in capacity-building for grants administration in general within these departments. As a result, one might expect that the marginal costs of managing non-HS grants may also have been reduced. It also led to investments in grants management systems to enable departments to better track grant funds and meet reporting requirements.

The focus on CT and HS also has helped to prevent terrorist-related attacks. All of the case study LEAs cited examples of how their activities resulted in preventing attacks from being carried out, although it was difficult to quantify the number of attacks. For example, one LEA postulated that at least five significant terrorist-related incidents had been prevented; however, due to security concerns interviewees were reluctant to provide any detailed information about specific incidents.

Table S.1
Summary of Benefits Identified

Domain	Description
Overall cultural or paradigm shift	Long-term focus on CT and HS represents a cultural or paradigm shift toward greater collaboration among law enforcement at the local, state, and federal levels. Has resulted in more openness in the sharing of intelligence information.
NIMS training	Improved the incident management of large-scale events involving a multi-agency response.
Other CT and HS training and specialized training	HS training department-wide has improved the cop-on-the-street's awareness of the threat of terrorism and what information to look for and how to report it. Improved departments' capabilities to respond to CBRNE-related incidents, including developing departmental proficiency in using NIMS. HS training is now part of departments' core curriculum.
Relationship building with the local community	Improved community outreach and relationship building with community groups. Assignment of special community liaison officers to do outreach with the community and private sector related to HS, and to serve as a point of contact for HS-related information.
Specialized tactical response units	Specialized tactical response units developed or enhanced response capabilities following 9/11 to address CBRNE and other terrorist-related incidents. In addition to developing local and regional capability, has also helped develop law enforcement response capabilities in general. Specialized response units particularly have benefited from HS grant funding in terms of additional investments in equipment and training.
Grants management	Having dedicated grants management personnel to manage HS grants has resulted in capacity-building within LEAs to manage and administer grants. Also has led to investments in grants management systems.
Fusion centers	Improved regional coordination and information-sharing about terrorist-related threats among local law enforcement agencies and other regional stakeholders. Adoption of an all-crimes, all-hazards approach to information-sharing and analysis has also had spillover benefits related to crime in general. Improved LEAs' abilities to address cross-jurisdictional crime and to develop analytic capabilities in general. Fusion centers have helped to routinize/formalize the diffusion process. In addition, by expanding the fusion centers' networks to include other LEAs in a region has led to improvements in strengthening relationships among agencies.

Table S.1—Continued

Domain	Description
Equipment and technology	HS funding allowed LEAs to purchase a range of equipment such as sensors, specialized bomb robots, etc. HS grant requirements helped standardize the equipment used by all first responders and enabled LEAs to purchase PPE to prepare for CBRNE attacks.
	LEAs are using HS funding to leverage technology (e.g., to improve communications and IT systems, to implement a camera network system in high crime areas, to improve virtual information-sharing within a fusion center's network).

It was also difficult for departments to estimate the magnitude of the events prevented. As noted above, CT activities also improved routine crime-fighting abilities and helped LEAs to connect the dots between crime and terrorist-related activity.

Future Challenges

In the wake of the 9/11 terrorist attacks, an important change has been the move toward regionalism: a consistent trend in both grant funding (e.g., UASI) and state and federal guidance to encourage the adoption of a regional approach to HS and preparedness. Enhancing regional preparedness has a number of advantages associated with it: increased coordination of assets and resources across geographic boundaries, developing regional cooperation across many specialties, integrating policies and practices concerning preparedness, and improving information-sharing and access to intelligence about terrorist threats and crime in general. Regionalization also has some associated challenges: the expansion in size of fusion center networks, how to ensure the equal participation of all participants, and how to ensure flexibility in HS grant programs to account for variation in local needs and capabilities. The case study LEAs reported that the funding mechanisms tended to be inflexible, requiring multiple levels of review and reporting, and that the goal of standardizing equipment and training among first responders had hampered their ability to purchase state-of-the art equipment and to obtain the specialized training they felt to be most

important. Given this, DHS may want to consider ways to further streamline HS grant reporting and review mechanisms and how to best achieve more flexibility in grant mechanisms. Clearly, there remains a desire at the local level to have more of a law enforcement perspective in HS grant funding decisions.

As law enforcement is becoming more and more specialized, CT/HS is now seen as another specialty position opportunity. However, the traditional career progression of law enforcement personnel requires changing jobs every several years in order to keep advancing. Because of this, the investments that individuals make to develop the expertise, relationships, and networks important for CT and HS are often lost. There are two possible options for creating a specific career track for CT/HS:

1. Have intelligence analysts be career civilians with rotating sworn officer oversight. This could help provide a balance between civilian/sworn expertise in CT/HS positions.
2. Renegotiate CT and HS assignments so that they have indefinite or longer terms, thereby allowing sworn officers to remain in these types of specialized units for extended periods of time.

However, both options raise other potential issues. The creation of specific career track for CT or HS is a provocative option that is worth exploring further, but doing so must entail addressing the complex set of issues outlined in this report. The appropriate role of civilian analysts in CT and how to sustain these positions also warrants further examination.

Fusion centers and the adoption of an all-crimes, all-hazards approach to information-sharing clearly have improved regional information-sharing capacity and LEAs analytic capabilities. Yet, there are several remaining challenges. One is how to effectively engage all the participants in a regional fusion center and balance information-sharing with true analysis of threat/intelligence information. We found that the larger LEAs disproportionately contributed to these networks—playing a coordination, analytic, and administrative role—whereas smaller agencies tended to be more recipients of information.

Given this central role, DHS may want to consider what additional support needs—primarily personnel—the larger LEAs may require to continue to effectively operate these centers.

A second, important challenge is the question of how to sustain fusion centers. In the current economic downturn, states, counties, and cities are looking for ways to reduce costs and maintain basic policing services, and they are questioning what the investment in CT and HS has achieved for them. This has resulted in fusion centers looking increasingly to the federal government to provide increased, targeted support. This is an important and complex problem that must be addressed.

A third challenge involving fusion centers is measuring whether information-sharing and intelligence networking have improved. Such measurement should be a priority for future work in this area.

We were able to qualitatively assess the benefits associated with investing in CT and HS, with the case study LEAs' interviewees identifying a number of benefits. We were successful in developing an analytic framework to consider how to measure some of the associated costs of internally shifting sworn personnel to focus on CT and HS functions. However, a key limitation of our study was that we were unable to obtain detailed data on the number and types of sworn personnel shifted to create new units or enhance existing organizational structures, and how these changes evolved over time to quantify costs at the departmental level. Future research is needed to work with individual LEAs to help set up systems to capture the data necessary for these departments to be able to quantify the costs and benefits associated with these investments.

Finally, nine years after the 9/11 terrorist attacks and in this era of economic budget cuts, LEAs are finding it harder and harder to make the case for investing in CT and HS and the long-term benefit of such investments. As is true for prevention in general, it is difficult to quantify, for example, the magnitude and cost of terrorist-related incidents prevented or the value of the relationships and networks developed. This poses a conundrum for LEAs in demonstrating and gaining support for these activities, both within their department and from city and county officials who must make funding decisions about how to

spend limited policing resources. It also underscores the importance of buy-in from senior leadership to convey to the rest of the department why an investment in this area is critical to its overall mission. There is a fundamental question of how law enforcement agencies and state and local officials can know that their investments in CT and HS and in fusion centers are making a difference. The development of metrics at the department level could help to quantify the long-term costs and benefits of CT and HS.

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Abbreviations

AEL	Authorized Equipment List
BZPP	Buffer Zone Protection Program
CBRNE	chemical, biological, radiological, nuclear, or explosive
COPS	Community-Oriented Policing Services
CRS	Congressional Research Service
CT	counterterrorism
DHS	Department of Homeland Security
DoD	U.S. Department of Defense
DOJ	U.S. Department of Justice
EMPG	Emergency Management Performance Grant Program
FBI	Federal Bureau of Investigation
FEMA	Federal Emergency Management Agency
FTE	full-time equivalent
FY	fiscal year
GAO	U.S. Government Accountability Office
GED	General Education Development credential/General Education Diploma
GMP	gross municipal product
HIDTA	High Intensity Drug Trafficking Areas
HS	homeland security

HSGP	Homeland Security Grant Program
I&A	intelligence and analysis
ICS	Incident Command System
IED	improvised explosive device
JTTF	Joint Terrorism Task Force
LEA	law enforcement agency
LETPP	Law Enforcement Terrorism Prevention Program
MHz	megahertz
MMRS	Metropolitan Medical Response System
MOU	memorandum of understanding
MSA	Metropolitan Statistical Area
NCISP	National Criminal Intelligence Sharing Plan
NCVS	National Crime Victimization Survey
NDPC	National Domestic Preparedness Consortium
NIJ	National Institute of Justice
NIMS	National Incident Management System
NLD-DPP	Nunn-Lugar-Domenici Domestic Preparedness Program
ODP	Office for Domestic Preparedness
OHS	Office of Homeland Security
PD	police department
POST	Police Officer Standards and Training
PPE	personal protective equipment
PSGP	Port Security Grant Program
PSIC	Public Safety Interoperable Communications
SDPP	State Domestic Preparedness Program

SHSGP	State Homeland Security Grant Program
SHSP	State Homeland Security Program
SLGC	State and Local Government Coordination
SWAT	Special Weapons and Tactics
TEWG	Terrorism Early Warning Group
TSGP	Transit Security Grant Program
UASI	Urban Areas Security Initiative
UAWG	Urban Area Working Group
WMD	weapons of mass destruction

CHAPTER ONE

Introduction

Background

Since the 9/11 terrorist attacks, the need for increased counterterrorism (CT) efforts at the federal and state levels has taken the spotlight in public safety efforts. But equally important is the effort at the local law enforcement agency (LEA) level. A report by the U.S. Department of State explained that

> The continued threat of terrorism has thrust domestic preparedness obligations to the very top of the law enforcement agenda. . . . [T]his capacity must be considered as much a staple of law enforcement operations as crime analysis, criminal intelligence, and crime prevention." (U.S. Department of State, 2005)

Terrorism has become a local community concern, and LEAs have increased the level of resources devoted to CT efforts. The International Association of Chiefs of Police describes a dire need for law enforcement's attention to CT efforts, stating "local police leadership is urgently needed . . . [to] allay emotions and concerns [of] citizen perception of danger" of terrorist threat (International Association of Chiefs of Police, 2003, p. 5).

Today, CT is an important part of many local LEAs' agendas, especially those in urban areas and/or in high-risk jurisdictions. But LEAs are still developing comprehensive CT strategies and assessing what direction these plans should take. Incorporating CT activities into a department is a significant organizational change process. Based

on the report *Protecting Your Community from Terrorism*, which outlines how a local police department can prepare and execute homeland security (HS) plans, "even those [agencies] that feel certain of their charges must make significant changes to their structure, policies, procedures, personnel expertise, training, and budgets—all with only their own guidelines or standards to ensure success" (Police Executive Research Forum, 2003).

Some critics have argued that, although the United States is making significant strides in CT work, "the make-up of Washington's post-9/11 domestic intelligence architecture continues to reflect a federal-centric orientation" (Chalk and Rosenau, 2004, p. 19). A common criticism is that federal agencies, such as the FBI, are reluctant to share intelligence with local municipalities. Initially, federal intelligence agencies were somewhat skeptical of terrorism-related information supplied by state and local LEAs (Chalk and Rosenau, 2004; Jenkins, 2008; Progressive Policy Institute, 2003). Despite the perception by critics that the intelligence community may disregard information from state and local LEAs, the FBI has recognized that success against terrorism is best achieved through cooperation among various federal, state, and local law enforcement safety agencies (Caruso, 2002). Others argue that LEAs serve as the foundation for effectively assessing threatening activities within their communities, in ways better than the FBI can (Bodrero, 1999). The impact of such focusing events as 9/11 may be better assessed after a significant time has elapsed (McGarrell, Freilich, and Chermak, 2007).

The purpose of this study is to examine the current state of CT and HS in LEAs nine years following the 9/11 terrorist attacks and the long-term adjustments that large urban police departments have made to accommodate this new role. In the rest of this background section, we summarize some of the key issues surrounding CT efforts at the LEA level.

Relevant Trends in Policing That Intersect with Counterterrorism and Homeland Security

Over the past 30 years, several major trends in policing intersect with LEAs' new role in CT and HS. These trends include community polic-

ing, problem-oriented policing, intelligence-led policing, and predictive policing.

The *community policing* concept seeks to reform the professional model of policing from one that relies heavily on technology and motorized patrol to one that reestablishes connections between the police and community (McGarrell, Freilich, and Chermak, 2007). Community policing is intended to promote organizational strategies that support systematically using partnerships and problem-solving techniques to proactively address immediate problems that may impact public safety (DOJ, n.d.). In the context of HS, a community policing strategy can help build relationships with the community and provide the public with information about potentially suspicious activities and about potential terrorist and other threats (McGarrell, Freilich, and Chermak, 2007).

Problem-oriented policing is a concept first introduced by Herman Goldstein in 1979. Goldstein called for a paradigm shift, arguing that policing should expand its traditional mandate to also include a focus on preventing and controlling crime. Problem-oriented policing involves having police analyze recurring problems to identify underlying causes and having them proactively manage and develop interventions to address identified problems (Weisburd et al., 2008). The problem-solving model, as developed by John Eck and William Spellman, has come to represent four steps (Weisburd et al., 2008)—scanning, analysis, response, and assessment (SARA)—and is similar to the intelligence process advocated by the National Criminal Intelligence Sharing Plan (NCISP) (McGarrell, Freilich, and Chermak, 2007).[1] Some have argued that terrorism should be considered a special class of problems to which problem-oriented policing principles can be applied (Riebling, 2006).

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[1] Associated with problem-solving policing is a continuous improvement business model as exemplified by the CompStat program developed by the New York Police Department. The CompStat program analyzes crime trends to inform the development of responses and targeting of police resources to effectively manage crime problems; in addition, commanders are held accountable for the level and type of crime in their precincts (McGarrell, Freilich, and Chermak, 2007).

Intelligence-led policing has its origins in the United Kingdom and is based on the recognition that police spend much of their time responding to crime and not enough of their time targeting recurring offenders (Ratcliffe, 2008). It was originally articulated as a law enforcement operational strategy to reduce crime by using crime analysis and criminal intelligence to develop crime-reduction tactics that concentrated on active and recidivist offenders. According to Ratcliffe,

> Intelligence-led policing is a business model and managerial philosophy where data analysis and crime intelligence are pivotal to an objective, decision-making framework that facilities crime and problem reduction, disruption and prevention through both strategic management and effective enforcement strategies that target prolific and serious offenders.

Like problem-oriented policing, intelligence-led policing emphasizes the role of analysis in informing decisionmaking (Ratcliffe, n.d.). Following the 9/11 terrorist attacks, an Intelligence Sharing Summit held in 2002 brought together intelligence experts from the United States and Europe (Peterson, 2005), with one of their key recommendations being the promotion of intelligence-led policing. The summit led to the creation of a Global Intelligence Working Group and the development of the NCISP in 2003.

Another important development in law enforcement of relevance to CT is *predictive policing*—a policing model that builds on the intelligence-led policing model. Predictive policing generally involves taking data from disparate sources, analyzing the data, and using the results to anticipate, prevent, and respond more effectively to future crime (Pearsall, 2010). A 2009 NIJ symposium on predictive policing brought together law enforcement officers, crime analysts, researchers, and scientists to explore the concept of predictive policing, its application, and its impact on the future of policing. Symposium participants identified several ways in which predictive policing could be used to support CT, including conducting threat and vulnerability assessments, predicting acts of terror, and assessing the risk of inmate radicalization (NIJ, 2009).

Local Law Enforcement Agencies and Counterterrorism

Many police executives have recognized that the threat of terrorism is real and that it must be given an important place in the myriad priorities that require their attention. Although terrorism has been a part of the landscape since the 1993 World Trade Center bombing, the 1995 Oklahoma City bombing, and other incidents, this priority "has competed with more pressing demands such as street crime or the shift from traditional policing approaches to building problem-solving relationships with members of the community" (Stephens and Hartmann, 2002, p. 15). Besides terrorism, routine crime and new emerging problems, such as identity theft and cyber crime, all must vie for scarce police resources. And while

> Americans look to the federal government for leadership in developing and implementing a broad national strategy to protect the nation from the threat of terrorism, state and local law enforcement agencies will play a pivotal role on the ground in preventing and responding to any future incidents within the borders of the United States. (Holden, 2003, p. 1).

A 1995 RAND report conducted in the aftermath of the first attack on the World Trade Center in 1993 was one of the first to assess domestic preparedness for terrorism, specifically focusing on the role of law enforcement (Riley and Hoffman, 1995). A nationwide survey administered by Riley and Hoffman found that even pre-9/11, "a sizable majority of state and municipal law enforcement organizations consider terrorism, or the threat thereof, to be a problem," with smaller communities seeing terrorism as less of a threat than larger communities. However, the study also found that state and local LEAs were unprepared to respond to the threat of terrorism. In particular, it found that there was poor liaison and communication with federal and state officials, little or no training related to terrorism preparedness, little or no intelligence and strategic threat-assessment capability, and minimal expert review of plans and training exercises. A follow-up 2002 RAND survey of local LEAs found that those departments that perceived the risk of future terrorist attacks in their jurisdictions to be higher were more likely to undertake steps to improve their pre-

paredness for terrorism (Davis et al., 2004). Specifically, in response to 9/11, local LEAs (particularly those within large counties) undertook such steps as increasing the number of personnel engaged in emergency response planning; updating response plans for chemical, biological, or radiological attacks and, to a lesser extent, mutual aid agreements; and reallocating internal resources or increasing departmental spending to focus on terrorism preparedness. However, both studies noted that overall organizational investments in terrorism preparedness importantly had to compete with other state and local priorities (Riley and Hoffman, 1995; Davis et al., 2004).

Today, the question for LEAs has shifted from *whether* they should have CT programs to *how they can be implemented*. Various government organizations and university institutions have noted activities already undertaken by local LEAs. For example, Davis et al. (2006) found that LEAs with a higher threat perception were more likely to create or assign an organizational structure (e.g., create a new unit, assign personnel) to address prevention, preparedness, response, or recovery for terrorism-related incidents. Harvard's Kennedy School issued a report in 2002 that noted that the importance of state and local domestic preparedness planning had been neglected as a result of attention devoted to creating the new U.S. Department of Homeland Security (DHS) (Kayyem and Howitt, 2002). They called for more attention to local efforts and for urgency in preparing local LEAs for terrorist attacks. Also, national strategy doctrine from DHS has begun to address more specifically the needs of local LEAs.

A 2005 RAND report, *State and Local Intelligence in the War on Terrorism* (Riley et al., 2005), suggests that state and local LEAs may be uniquely positioned to augment federal intelligence capabilities given their presence in nearly every American community, knowledge of local individuals and groups, and use of intelligence to combat crime. A 2002 national survey of law enforcement agencies found that 38 percent of LEAs had developed new organizational structures to address the threat of terrorism following 9/11, with that number growing (Davis et al., 2006).

CT efforts can intersect with traditional policing efforts along many dimensions. These include personnel allocation, recruitment,

retention, training, internal communication, external communication/information-sharing, technology, community outreach, resources, and other crime areas. For example, community policing is not only affected by CT efforts (resource allotment and prioritization of efforts) but also serves to enhance CT efforts (using local knowledge to understand the actual threat in a community among its members) (Holden, 2003).

Funding Counterterrorism Efforts

Shortly after 9/11, the U.S. Department of Justice's (DOJ's) Office of Domestic Preparedness (ODP) made about $800 million in federal preparedness funding available to the first-responder community; however, only a portion was distributed to local LEAs (Davis et al., 2004). Many state and local city and county governments also increased spending on terrorism preparedness, with some of that funding going to law enforcement. The process for distributing HS funding to reach state and local governments in the initial years following 9/11 took some time. For example, the DHS Secretary Inspector General's Office found that the receipt and spending of ODP first-responder grant funds had been slow for a variety reasons, with the majority of funds that were initially available (i.e., $882 million in the FY 2002 State Domestic Preparedness Program [SDPP] and FY 2003 State Homeland Security Grant Program [SHSGP] first-responder grant funds awarded by ODP) not being drawn down (DHS, 2004).

Overall, there is a general confusion about how local CT efforts are to be funded and who is currently receiving funding for such efforts and from whom. Reports inconsistently note the amount of federal and state funding going toward local CT activities. Walker (2006) states in his testimony to the House of Representatives,

> The United States government has no clear record of the budgetary resources available for counterterrorism financing assistance . . . because funding for counterterrorism financing training and assistance is mingled with funding given to the agencies for anti-money laundering training and assistance and other programs; it is difficult for US government "decision-makers" to determine the actual amount allocated to these efforts.

CT efforts have begun to exacerbate fiscal conditions in local jurisdictions attempting to fund these efforts, and it is unclear that funding for future work is stable and sustainable. For example, a 2006 Congressional Research Service (CRS) report found that federal CT training programs were quite varied and were provided by a number of different federal agencies and departments (Reese, 2006). Relevant to law enforcement in particular is CT training provided by DOJ and DHS, with most federal agencies providing training in conjunction with private and public educational institutions, federal laboratories, and development centers. Among the issues identified by CRS were possible duplication of CT training programs, the potential for redundancy, and how DHS training funding was allocated (Reese, 2006).

The "Cost" of Counterterrorism for Local Law Enforcement Agencies

A report on alternative ways to fund CT efforts noted that, "[p]rior to September 11th, most local agencies had very small terrorism prevention and response budgets" (Skipper and Webb, 2006). Today, some argue that federal funds for local LEAs may be diverted to meet HS needs. Understanding the costs to a local LEA involves considering whether other public safety activities may be sacrificed, if at all, for example, by focusing attention away from traditional crime to CT (e.g., converting a gang or white-collar crime unit to a CT unit) to meet increased HS demands. Research has found that about one-quarter of local LEAs increased departmental spending or internally reallocated resources immediately after 9/11 to focus on terrorism preparedness (Davis et al., 2004). Yet only one in five LEAs reported receiving external funding (or resources) from any source following 9/11 to support these activities. In large degree, the funding for such efforts originates from already stretched-thin city budgets (Riley et al., 2005). But little is known about the opportunity costs of shifting resources away from traditional policing functions to focus on CT and HS. Further, an assessment of the changes to intra-organizational processes is needed to help us understand the burden on the organizational capacity of the departments bearing the additional resource strain of CT efforts (Riley et al., 2005).

In his testimony before the U.S. House of Representatives, Raymond Kelly, Police Commissioner of the City of New York, spoke of the impact CT efforts have placed on his department:

> [O]ur preparations come at a steep price: about $180 million per year to maintain our daily counterterrorism and intelligence activities. . . . [W]hile the federal government provides vital assistance for training, equipment, and overtime, we still have huge expenses to cover. (Kelly, 2005)

Some argue the only way to maintain a successful local LEA CT unit is to seek critical resources from key officials. However, Galloway (2004) found that "many state leaders are not fully aware of the most critical gaps in their state's LEAs' homeland security efforts."

Potential Benefits of Counterterrorism for Local Law Enforcement Agencies

While a focus on CT has costs for local LEAs, Zycher (2003) suggests that several benefits exist from incorporating CT programs into a LEA. Generally, CT activities are considered collective goods—they benefit society generally, but not specific individuals in particular. In the long term, Zycher suggests the overall public-sector CT costs should be considered a "good deal" because the overall benefits of avoiding terrorist activities outweigh the costs. In the short term, Zycher sees CT as analogous to ordinary domestic anti-crime efforts by local LEAs, which were deployed in anticipation of perceived problems and then used to prevent/respond to crimes. Therefore, according to Zycher, the cost is close to zero, because police resources are fixed assets. This idea that CT is a public good leads to the assertion that it may be appropriate for the federal government to finance certain state and local efforts because some activities may accrue to neighboring jurisdictions.

An additional benefit can result from improvements in coordination for CT and HS planning and in regionalization of these activities, both of which may lead to better preparation for managing and responding to large-scale emergencies (Willis et al., 2009; Jordan, 2010). For example, as part of an ongoing RAND study on public/private coordination, an assistant police chief from a large metropoli-

tan city noted that an important benefit of the National Incident Management System (NIMS) developed after 9/11 was that it helped formalize and clarify incident command relationships between the fire department and law enforcement that had been contentious before.

Another dimension of potential benefits includes the possibility that training, skills, and methods developed in a department as part of CT activities will, in turn, sharpen the ability of those officers to perform traditional crime prevention and fighting tactics. Perhaps the particular types of skills needed to tackle CT activities are the same skills that will improve overall success and lower crime statistics (Riley et al., 2005). Improvements in information-sharing for CT also can lead to better information-sharing on criminal activity in general. Holden (2003) found that LEAs have

> broken new ground in addressing obstacles to interagency coordination, cooperation, and communication; enhancing intelligence and information collection and exchange; augmenting the capacity of first responders; and adapting existing crime prevention and control strategies, such as community policing, to the demands of a post 9/11 environment. (Holden, 2003, p. 1).

These kinds of improvements can strengthen the overall capacity of a police department. As noted above, community policing activities are a common element of law enforcement agencies today. Incorporating CT activities into community policing can potentially benefit both programs. The partnerships formed within community policing efforts provide a ground's-eye view for local law enforcement officers to identify threats and implement preparedness plans. The framework of community policing programs can lay the foundation for intelligence gathering and community knowledge from citizens of that community (Holden, 2003).

Finally, to the extent that terrorists engage in traditional criminal activity to fund their operations, investments in CT could uncover and prevent other crimes (Riley et al., 2005). The nexus between specific types of crimes (e.g., narcotics trafficking, money laundering) and terrorist activities has been clearly recognized (Stana, 2004; U.S. Department of State, 2005). Terrorists may engage in nonterrorist criminal

conduct prior to committing any terrorist act; this includes crimes related to creating false identities, thefts to procure funding for the group, thefts of weapons or explosive materials, and, frequently, crimes related to the maintenance of internal security (Smith et al., 2008). Sanderson (2004) asserts that

> [B]oth organized crime and terrorist groups run in the same circles—they already operate outside of the law and they often need the same resources, including: false identification, shipping documents, operators, transportation networks, and counter-surveillance techniques.

Similarly, in a recent analysis of film piracy, Treverton et al. (2009) concludes that the links between terrorist groups and organized crime may be stronger than previously thought.

Study Objectives

The issues raised above provide the context in which this report is grounded, the purpose of which is to provide some empirical context for understanding how the terrorist threat has impacted local policing organizations, particularly those in large urban areas, while also considering the changes in terms of their costs and benefits to public safety provision.

In particular, with funding from the National Institute of Justice (NIJ), this study addresses the following research questions:

- How has law enforcement's strategies evolved to meet departments' long-term CT and HS requirements? What long-term organizational adjustments were made? To what degree has this focus created new operational demands? What effect has the focus on CT and HS had on training and officer skills-sets needed?
- How has law enforcement resourced its CT and HS activities? How has federal funding for these activities evolved and what are the implications for LEAs?

- What advantages and challenges are associated with this new focus on CT and HS?
- What has been the evolution of fusion centers? What key trends are associated with LEAs' current approach to CT, including information-sharing, leveraging technology, and coordination activities?
- What are the current benefits associated with this long-term focus on CT and HS? What analytic framework can be used to assess the potential costs?

Approach and Study Limitations

To address these questions, we developed a three-pronged approach that included a case study analysis, analysis of federal funding trends, and a framework for analyzing costs. In this section, we describe our case study approach focusing on five large urban LEAs. We also discuss our analysis of trends in federal HS funding and our approach for developing an analytic framework for analyzing the costs associated with shifting internal departmental resources to support CT and HS functions.

Case Study Approach

Selection of Case Study Law Enforcement Agencies. The RAND team, in consultation with NIJ project staff, identified the following selection criteria: (1) LEAs located in major urban areas and jurisdictions with a high risk of terrorist attacks, (2) LEAs from different regions of the country, and (3) LEAs that varied in their experience with CT and HS. The five large urban LEAs were selected because of their leadership in this area and the relatively high level of terrorism risk that their jurisdictions face. Two of the departments are located in Tier I urban areas (considered to be at the highest risk for terrorism), and the other three departments are located in Tier II urban areas (next highest risk for terrorism). Table 1.1. summarizes the organizational characteristics of the five selected LEAs.

Table 1.1
Characteristics of Case Sudy Law Enforcement Agencies

LEA	Geographic Locale	Tier Level of Urban Area	Size (No. of Full-Time Sworn Personnel)[a]	Manages Region's Fusion Center
Boston PD	Northeast	Tier II	1,961	Yes
Houston PD	Southwest	Tier I	5,092	Yes
Las Vegas Metropolitan PD	West	Tier II	2,674	No
Los Angeles County Sheriff's Department	West	Tier I	8,239	Yes
Miami-Dade PD	Southeast	Tier II	3,094	No

[a] The number of full-time sworn personnel is as of September 2004 and comes from Reaves (2007).

The Boston, Houston, Las Vegas Metropolitan, and Miami-Dade LEAs are among the 50 largest police departments in the United States; the Los Angeles County Sheriff's Department is the largest sheriff's department in the United States (Reaves, 2007). We selected the Las Vegas Metropolitan PD because of the potential terrorist threat the city faces given its iconic status. Houston, Miami-Dade, and the Boston PDs are located in major port cities. The Houston PD's recent experience with two major hurricanes in 2005 also helped to test a number of the department's response capabilities and its overall preparedness. The Miami-Dade PD's jurisdiction represents an important entry point into the United States for the Caribbean and surrounding areas. The Boston PD was selected because of the direct impact that 9/11 had on this metropolitan area, thrusting this department in the forefront of law enforcement's new role in CT and HS. All of the departments have major international airports. Finally, the Los Angeles County Sheriff's Department was selected because it represents the largest sheriff's office in the United States and is responsible, along with the Orange County Sheriff's Department, for Region One Homeland Security in California. Also, it was selected because, in California, sheriff's departments are responsible for law enforcement mutual aid at the local and regional levels. This department also has a long history of addressing terror-

ist threats and developing information-sharing structures even prior to the 9/11 terrorist attacks.

Data Collection and Analysis. For each LEA, we conducted site visits and in-depth interviews with a range of personnel involved in developing or implementing CT or HS functions within their department. Interviewees included a wide range of personnel, including departmental leadership, sworn and civilian personnel involved with fusion centers, CT units, HS bureaus or divisions, specialized response units, training bureaus, grants management, and administration. We also interviewed, where appropriate, representatives from the office of emergency management and other participants in county or regional interagency task forces to gain their perspective about coordination issues.

We developed a standardized protocol to guide our interviews. The protocol addressed the following issues:

- organizational structures specific to CTand HS and how they have evolved over time, including internal adjustments such as shifting personnel, consolidating units, expanding existing structures
- overview of a department's CT and HS operations and regional role
- perceptions about internal and external challenges associated with a focus on CT and HS and developing relevant functions
- information-sharing and fusion center issues
- training and equipment issues related to CT and HS needs, including NIMS compliance
- resourcing of CT and HS efforts, including advantages and challenges associated with HS grant funding
- impacts of federal, state, or local grant requirements on departments and ways in which requirements either facilitate or hinder internal initiatives
- suggestions about modifications to existing grant mechanisms to facilitate the use of funding, staff, or other resources for CT or HS.

In addition, we collected relevant documentation from each department we visited, including organizational charts, descriptions of implemented programs, information on grants received, and reports describing CT- and HS-related organizational structures and initiatives. We used written documentation from the departments to augment the information from the interviews and help identify any discrepancies in what the interview team learned.

To ensure the confidentiality of individual interviewees, we assigned a code to each department and present the findings referring only to Departments A, B, C, D, or E. We provide a descriptive analysis of these qualitative data with the aim of identifying similarities and differences between sites with respect to the following domains:

- strategies for meeting CT and HS requirements
- adjustments made in terms of organizational structures, personnel, training, equipment, and administration
- resourcing of CT and HS activities
- issues specific to fusion centers, including information-sharing
- advantages and challenges associated with meeting CT and HS requirements, such as compliance with NIMS
- resourcing of CT and HS activities
- suggestions regarding options for addressing identified challenges.

Analysis of Federal Funding Trends and of Potential Costs Associated with Shifting Law Enforcement Resources to Focus on Counterterrorism and Homeland Security

To examine how federal allocation for HS grant programs have changed over time and put into context the key themes related to funding issues identified from the case study interviews, we conducted an analysis of the major federal HS grant programs and reviewed grant program requirements. We selected the programs based on a review of the DHS and Federal Emergency Management Agency (FEMA) federal websites and then added to our list those programs that our case study LEAs indicated were important sources of grant funding for CT and HS purposes. We then took this list of grant programs and reviewed the individual grant program guidelines for fiscal years (FYs)

2000–2009.[2] We also searched for summaries of funding allocations, changes in grant programs, and federal allocations per grant program for the states and urban areas where our case study LEAs are located. We also reviewed related reports from such organizations as the U.S. Government Accountability Office (GAO) and CRS. Combined, this information allowed us to construct tables of how funding at the federal level has evolved and to develop graphs to describe how HS funding has evolved over time.

To develop a framework for assessing the potential costs associated with shifting law enforcement personnel from traditional policing functions to focus on CT and HS, we first undertook a review of the literature on estimating the costs and benefits of CT and HS expenditure and a review of literature on estimating the cost of crime. This review informed the development of our analytic approach. Our goal was to provide a framework that others might use in estimating some of the financial cost implications of CT and HS efforts at the local level, using the case study LEAs in the study for that analysis. Specifically, we used a common analytic approach for estimating the potential financial costs stemming from reduced attention to routine crimes and then considered what this suggests in terms of shifting 1 percent of a department's sworn force from routine patrol functions to CT or HS functions.

To examine the direct and indirect costs of several specific crimes that have been shown to be responsive to the size of the police force, we first estimated the number of new crimes that would result from a hypothetical reduction of 1 percent in the police patrol force. To do so, we used the elasticities presented by Heaton (2010), in conjunction with the number of reported crimes of each type for each LEA jurisdiction obtained from the relevant LEA's annual reports for 2008. Second, we calculated the direct costs to the criminal justice system and the indirect costs to victims resulting from those crimes. The specification

[2] In some instances, we had to estimate the funding level for a given program and year. For example, if the federal allocation amount could not be located for a given year (e.g., FY 2007), we assumed roughly the same percentage as in the previous two fiscal years to derive an estimate for FY 2007. Our method of estimation is detailed in Appendix B.

of a 1 percent reduction in the police force because of new CT and HS tasks was not linked to the actual change in routine patrol forces observed for a specific LEA, but instead provides a useful metric for subsequent cost calculations that can be applied to LEAs more broadly. Similar to Heaton (2010), we also calculated the annual cost of crime relative to the gross municipal product (GMP) for the localities served by our case study LEAs; this enabled us to examine the relative impact of policing changes as a proportion of the total economic output of that locality and subsequent cross-LEA comparisons.

Study Limitations

The study has the following limitations. We primarily used a case study approach to help answer these questions. An analysis such as what is presented here, which draws from only five case studies, cannot by any means be called a *representative sample*. We adopted this approach because case studies lend themselves to both generating and testing hypotheses and provide us with an in-depth understanding of the long-term adjustments LEAs have made to accommodate this new focus, as well as the advantages and challenges associated with it.

We purposely selected a sample of large police agencies in high-threat urban areas, which means that these results may not be generalizable to other urban areas or localities. In addition, the views are those of the LEAs in our case studies; we were unable to ask DHS or state or local departments of law enforcement or offices of homeland security about their perceptions about the role of law enforcement in CT and HS, nor about their perspective on the issues identified. Only in a few cases did we actually interview a partner LEA or a representative from the mayor's office. Thus, one should read the challenges identified in this report as representing only the perspective of law enforcement.

One of our goals was to examine quantitatively the costs associated with LEAs investing in and internally shifting sworn personnel to CT and HS functions. An important limitation of this study is our inability to collect detailed data on the number and type of sworn officers that were shifted to CT and HS activities following 9/11 and what their assignments were prior to the shift. The case study departments were able to tell us about the development of new units or bureaus

or expansion or consolidation of existing organizational structures, but less able to provide detailed data on personnel shifts. They also were able to tell us how many personnel currently were in the different types of units, but unable to provide detailed data documenting the history of these adjustments in terms of number and types of personnel shifted. This partly was because of the frequency with which sworn officers rotate through positions; changes in budgeted versus allocated personnel slots, with retirements impacting several of the departments (i.e., had budgeted positions unfilled because of personnel cutbacks and loss of personnel through retirements); the lack of data systems to allow this type of tracking to be done; and the fact that many adjustments had been made since 9/11. Nine years out, it was difficult for departments to make those distinctions. In addition, the data available from the case study departments varied. For example, one department had automated its grants management system and so was able to provide detailed information on HS grants received, whereas other departments varied in their ability to provide such detailed grant information.

Organization of This Report

The remainder of this report is organized around the structure of the questions above. Chapter Two presents an overview of how law enforcement resourced its CT and HS activities, while Chapter Three examines the evolution of fusion centers and the coordination activities and information-sharing activities associated with them. Chapter Four looks at how law enforcement's strategies have evolved to meet departments' long-term CT and HS requirements in terms of the new operational demands created, the long-term organizational adjustments made, and the effect this focus on CT and HS has had on training and officer skill sets needed. Chapter Five provides a framework for estimating the potential costs associated with shifting law enforcement personnel from traditional policing functions to focus on CT and HS. Finally, Chapter Six offers some conclusions about future challenges.

CHAPTER TWO

The Evolution of Funding

Introduction

Since its creation in 2003, DHS has administered a series of grant programs to assist law enforcement and other first responders in improving state and local homeland security (HS) grant programs.[1] Grant funding received by state and local LEAs for improvements in CT and HS operations includes funding earmarked for training, the procurement of new equipment and technology, and the hiring of intelligence analysts.

In the wake of the 9/11 terrorist attacks, an important change has been the move toward regionalism: a consistent trend in both grant funding and in federal and state guidance to encourage the adoption of a regional approach to HS and preparedness. The underlying idea was that regionalization of risk reduction and HS response and preparedness would enable federal, state, and local governments to overcome a fragmented federal grant mechanism and jurisdictional barriers to address needs, fill in gaps, and improve coordination (Caruson et al., 2005). In 2004–2005, Caruson et al. noted that a number of state governors began to support regional structures for HS and having states play a key coordinating role between the federal government and local governments. The idea was that having HS resources flow through the states would enable governors to improve their state's overall preparedness and coordinate the distribution of funds to local areas. This meant

[1] The term *first responder* refers to those who work as law enforcement personnel, firefighters, emergency medical service providers, and/or emergency managers.

that federal grant money that previously would have gone directly to law enforcement for training, equipping, and personnel would now go through the state to regional organizations or councils and then to local governments. This provided the states with tighter control over coordination and how the funds would be spent to improve preparedness.

As part of this trend toward regionalism, federal grant programs have undergone a number of transitions in the past decade meant to streamline the grant administration process and expedite the disbursement of grant awards to eligible states and urban areas. However, despite these intended goals, there has been little to no evaluation of funding trends or grants management procedures in recent years. The 9/11 Commission (2004) noted that administrative/procedural complications are a stumbling block to the expedient use of grant money on the part of states and localities. In addition, state HS officials have expressed the need for additional improvements to the system. In a 2008 survey of state HS directors, the top challenges identified were (1) insufficient funding available, (2) ongoing changes to the grant application process, and (3) inflexible guidelines regulating how funds are to be spent (National Governors Association, 2010, p. 9). Currently, HS grants are not provided directly to LEAs, but instead distributed to a state or a region within a state before being transferred to local LEAs and other agencies.

In this chapter, we summarize the evolution of HS grant funding and some of the current issues identified by law enforcement.

Overview of Homeland Security Grant Programs

Here we provide an overview of how funding for HS has evolved over time. The Nunn-Lugar-Domenici Domestic Preparedness Program (NLD-DPP) was established in 1996, with the lead agency being the U.S. Defense Department (DoD) (Davis, 1998). The new program was to provide training and equipment to help U.S. cities respond to possible terrorist attacks that involve weapons of mass destruction (WMD). DoD identified 120 of the most populous cities for participation in the program (including the cities where the five case study LEAs are

located). As part of the program, the U.S. Army's Chemical and Biological Defense Command designed a "train-the-trainer" program for first responders (including law enforcement) on responding to WMD incidents. In 2000, the NLD-DPP was transferred to the DOJ's Office of Domestic Preparedness (ODP).

At the time of the 9/11 terrorist attacks, funding for emergency preparedness primarily was through ODP. ODP was charged with coordinating preparedness efforts and with working with state and local first responders, including law enforcement, to improve terrorism preparedness, including training, exercises, and equipment support. In addition, ODP was responsible for directing terrorism preparedness grant programs at the federal level for all emergency response providers and for measuring programmatic performance and improvements in domestic preparedness. In 2002, for example, ODP offered training to law enforcement (through various mechanisms) in such areas as WMD awareness, response to hazardous materials events or incidents involving WMD, and incident management.

In FYs 2002 and 2003, ODP managed about $3.5 billion under separate grant programs (Jenkins, 2004). Eighty-five percent of those funds were for statewide grants (the State Domestic Preparedness Program [SDPP], which was a predecessor to the State Homeland Security Grant Program [SHSGP]) and grants targeted for selected urban areas (the Urban Areas Security Initiative [UASI I and II]) (GAO, 2005). In general, state and local grant recipients could use the funds for training, equipping, planning, and administration. Under SHSGP and UASI, states could retain 20 percent of the grant funding but had to distribute the remaining 80 percent to local governments (Jenkins, 2004).

In 2003, the ODP was transferred to the new DHS Directorate of Border and Transportation Security. In March 2004, ODP was consolidated with the Office of State and Local Government Coordination and Preparedness (SLGCP), along with other grant preparedness programs from other agencies (GAO, 2005). The Post-Katrina Emergency Management Reform Act of 2006 (P.L. 109-295) further consolidated grant administration authority under FEMA (Jenkins, 2008). This meant that one organization—FEMA—had operational responsibilities to respond to natural and man-made disasters.

At the federal level, the Homeland Security Grant Program (HSGP) is currently made up of five subprograms: (1) the State Homeland Security Program (SHSP), (2) the UASI, (3) Operation Stonegarden, (4) the Metropolitan Medical Response System (MMRS), and (5) the Citizen Corps Program (FEMA, 2010b). Of these five subprograms, SHSP and UASI were mentioned by most of the case study LEAs as being important to their department and jurisdiction. State and local governments receive HS preparedness funding through these programs as well as funding for CT training and other activities. In addition, other grant programs the case study LEAs cited as being (or having been) sources of HS funding were the Law Enforcement Terrorism Prevention Grants (LETPP), the Buffer Zone Protection Program (BZPP), the Port Security Grant Program (PSGP), and the Transit Security Grant Program (TSGP). Table 2.1 summarizes the main features of these different programs.

Funding Trends

Tracking funding trends across fiscal years is challenging, partly because of the fragmented nature of the grant administration process and partly because of inconsistent data on expenditures and reimbursements. Measuring progress has also proved a challenge, as a comprehensive evaluation of various grant programs does not currently exist. A recent GAO report (Jenkins, 2008) noted that "FEMA's current efforts do not provide information on the effectiveness of [homeland security] funds in improving the nation's capabilities or reducing risk" and that that an analysis of expenditure trends by fiscal year has been complicated by "inconsistencies in DHS's reporting of grant expenditures over time."

In 2005, DHS and some state governments initiated several procedures to streamline the disbursement of grant funds. For example, some states developed centralized purchasing systems that allowed local governments to bypass local procurement requirements by having state governments purchase services and equipment on their behalf. DHS also arranged for states and localities to be able to purchase products

Table 2.1
Overview of Key Homeland Security Grant Programs Cited by Case Study Law Enforcement Agencies as Important Sources of Funding

Grant Program	Purpose	Funding Information
State Homeland Security Program (SHSP)[a]	Supports the implementation of the State Homeland Security Strategy to address the identified planning, equipment, training, and exercise needs for acts of terrorism. SHSP also supports the implementation of NIMS.	Funds are allocated based a minimum guarantee of 0.75% to each state of total appropriations (all eligible states). The remaining funds are allocated based on an individual state's population.
Law Enforcement Terrorism Prevention Program (LETPP)	Supports the following activities: intelligence gathering and information-sharing through enhancing/ establishing fusion centers; hardening high-value targets; planning strategically, continuing to build inoperable communications; and collaborating with non-law enforcement partners, other government agencies and the private sector. The LETPP program was started in 2005 and in 2007 was consolidated within the UASI and SHSGP programs.	Funds are allocated based a minimum guarantee of 0.75% to each state of total appropriations (all eligible states). The remaining funds are allocated based on an individual state's population.
Urban Areas Security Initiative (UASI)	Supports the unique planning, equipment, training, and exercise needs of high threat, high density urban areas, and assist them in building an enhanced and sustainable capacity to prevent, protect against, respond to, and recover from acts of terrorism. UASI grant program was started in 2003. UASI funds are also used to establish and operate fusion centers.	Funding is allocated to 50 major urban areas and 25 mass transit systems nationwide that DHS determined in 2004 were at a high risk of terrorist attack. DHS uses risk and vulnerability assessments, as well as data on population density and placement of critical infrastructure to determine the level of funding for each state.
Emergency Management Performance Grants (EMPG)	Supports state and local jurisdictions in developing regional planning processes that enhance emergency management and catastrophic capabilities through strengthened national and regional relationships.	Funds are allocated based a minimum guarantee of 0.75% to each state of total appropriations (all eligible states). The remaining funds are allocated based on an individual state's population. Additionally, EMPG requires that recipient states match 50% of the award total.

Table 2.1—Continued

Grant Program	Purpose	Funding Information
Metropolitan Medical Response System Program (MMRS)	Supports jurisdictions in preparing for a range of mass casualty incidents, including CBRNE, and agriculture to epidemic outbreaks, natural disasters and large-scale hazardous materials incidents.	124 cities are eligible to receive MMRS funding.
Buffer Zone Protection Program (BZPP)	Supports the protection of critical infrastructure and key resource (CIKR) assets, including chemical facilities, financial institutions, nuclear and electric power plants, dams, stadiums, and other high-risk/high-consequence facilities, through allowable planning and equipment acquisition.	The State Administrative Agency (SAA) is responsible for obligating the funds to the appropriate local units of government or other designated recipients.
Port Security Grant Program (PSGP)	Supports the creation of a sustainable, risk-based effort to protect critical port infrastructure from terrorism, particularly attacks using explosives and non-conventional threats that could cause major disruption to commerce.	Seven port areas have been selected as Group I (highest risk) and 48 port areas have been selected as Group II. Ports not identified in Group I or II are eligible to apply as a Group III or "All Other Port Areas" applicant.
Transit Security Grant Program (TSGP)	Supports security enhancements for intercity passenger rail transportation and other security measures. The program addresses three transit modalities: rail transit, intercity bus transit, and ferry systems.	TSGP basic eligibility is derived from the UASI.
Operation Stonegarden	Provides funding to enhance cooperation and coordination among local, state, and federal law enforcement agencies to secure the nation's land borders.	Funds are allocated competitively to designated localities within U.S. border states based on risk analysis and the anticipated feasibility and effectiveness of proposed investments by the applicants.

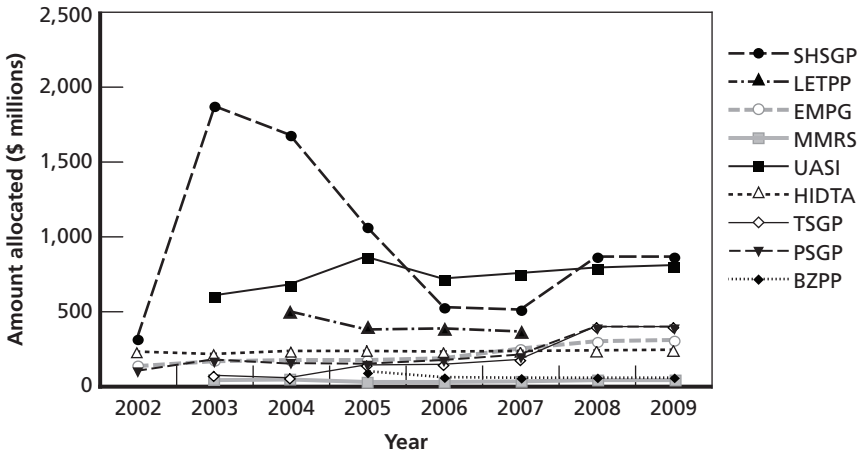
[a] The SHSP used to be known as the State Homeland Security Grant Program (SHSGP).

NOTE: The Citizen Corps Program is not listed since its focus is on community involvement in preparedness and is not a major source of funding for law enforcement.

directly from DoD vendors, thus expediting the procurement process. Finally, DHS allowed states and localities the opportunity to obtain grant funds prior to making an expenditure rather than having to wait for reimbursement after submitting proof of obligation, i.e., a purchase order (Jenkins, 2008).

Figure 2.1 provides an overview of how the federal allocation of HS grant funding has changed from FY2002 to FY2009. Note that we are only showing those grant programs cited by our case study departments as ones that they have participated in. (See Appendix B for a summary of changes in HS grant funding for these programs within the five states that the case study LEAs are located in.) The trends illustrate the degree to which federal funding for HS has fluctuated. Immediately following 9/11, there was a substantial increase in the federal allocation of funding for the SHSGP, whereas the HIDTA grant funding has remained relatively stable over time. The Law Enforcement Terrorism Prevention Program (LETPP) began in FY 2004, but in FY2008, Congress consolidated the LETPP with SHSGP and UASI (Reese, 2008). Instead, states and UASI regions were required to use

Figure 2.1
Federal Allocation of Homeland Security Grants, 2002–2009



NOTE: See Appendix B for a list of data sources used.

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at least 25 percent of grant funds from these programs for law enforcement terrorism prevention activities. Specifically, in FY2008, DHS mandated that a minimum of 25 percent of the $950 million allocated for SHSGP and a minimum of 25 percent of the $820 million allocated for UASI must be used for LEA terrorism prevention programs (Lake and Nuñez-Neto, 2009, p. 68).

To provide a sense of how the total amount of HS grant funding for these nine programs combined has changed over time, Figure 2.1 shows that in FY 2002, one year following the 9/11 terrorist attacks, the total amount of funding for these programs was approximately $765.61 million. In FY 2003, the amount rose substantially, to $3,110.55 million, with $596.4 million designated for the new UASI grant program. In FY 2004, the LETPP came into being and was allocated $497.05 million out of the total $3,487.11 million allocated in FY 2004. Between FY 2005 and FY 2008, the total amount of funding for these programs went from $3,100.04 million to $3,039.94 million. By FY 2009, the total HS grant funding for these specific programs remained at approximately the same level, at $3,065.52 million. In FY 2010 (not shown), Congress appropriated approximately $4.2 billion for FEMA for state and local homeland security overall and established limits on the amount that grantees could use funding for management and administration costs (Lake and Haddal, 2009).

A particularly important trend has been HS grants focusing on a regional approach to HS preparedness and response. This is best illustrated by UASI. DHS began sponsoring UASI as a result of the Homeland Security Act of 2002 (P.L. 107-296). UASI focuses on enhancing regional preparedness within major metropolitan areas. The program provides opportunities for large urban areas to apply for UASI grants (HS-related grants that support preparedness and response activities) with adjacent counties and municipalities. The goal is to encourage regionalization and improved coordination among agencies in large urban areas. The UASI program is intended to assist participating jurisdictions in developing integrated regional systems for prevention, protection, response, and recovery. States are also required to ensure that at least 25 percent of UASI-appropriated funds are dedicated to law enforcement terrorism prevention-oriented planning, organization,

training, exercise, and equipment activities, including those activities that support the development and operation of fusion centers (FEMA, 2010b). As discussed in Chapter Three, this move toward regionalization has had important implications for fusion centers. Importantly, HS grant funding, particularly the move toward regionalization, has presented some key challenges for LEAs, as discussed below in our interviews with the five case study LEAs.

Grant/Funding Results from Case Study Interviews

Grants Do Not Cover the Costs of Police Personnel for Counterterrorism or Homeland Security Activities

Many HS grants, particularly UASI grants, do not allow LEAs to cover the cost of hiring new police personnel to undertake CT and HS activities. The HSGP guidance for FY2010, for example, clearly states that the UASI and SHSP grant funding cannot be used to support the hiring of personnel to fulfill traditional public safety duties. Instead, UASI and SHSP grant funding can be used to hire new staff and/or contractor positions to serve as intelligence analysts (DHS, 2009c). Grant funding can also be used to hire personnel or to pay for overtime and backfill expenses only for individuals performing allowable planning, training, exercise, and equipment activities (DHS, 2009c).[2] In FY2007, HSGP had a pilot program to cover the costs of full-time CT personnel; however, this program lasted only a year.

The dilemma this created for LEAs was expressed by one head of a CT unit: "I love HS grants and our department has done well in terms of being able to purchase specialized equipment. But I would give all of these 'toys' back to have people. . . .[W]e need people to operate." In Chapter Three, we discuss in detail the challenge and trade-offs this poses for LEAs.

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[2] The HSGP FY2010 program guidance indicates that only 50 percent of the total UASI or SHSP grant funds can be used for personnel and personnel-related activities, such as operational overtime, backfill to participate in approved training or exercises, salaries and personnel costs for intelligence analysts, and overtime to participate in intelligence-sharing activities (DHS, 2009c).

Grants Do Not Cover Equipment Maintenance or Replacement Costs and Lack Flexibility in Tailoring Equipment to Meet Departmental Needs

To address variation in equipment, ensure uniformity in standards, and improve regional capabilities, DHS created the Authorized Equipment List (AEL).[3] There are 21 allowable prevention, protection, response, and recovery equipment categories and equipment standards on the AEL (see the Responder Knowledge Base [FEMA, 2010c]). Equipment purchased using UASI or SHSP funds, for example, has to meet the regulatory and/or DHS-adopted standards as detailed in the AEL (DHS, 2009c). HS grant funds can be used for maintenance contracts, user fees, warranties, repair or replacement costs, and upgrades as part of ongoing grants. However, routine maintenance costs are the responsibility of the departments, and funds may not be used to cover costs for equipment purchased by state or local funds or to prepay, for example, maintenance contracts that may extend beyond the grant period. This requirement is intended to avoid supplantation, whereby federal funds are used to replace state or local funds and to encourage states and localities to develop sustainability plans.

A common theme we heard from four of the case study departments was the issue of HS grants not covering equipment maintenance or replacement costs. Given the above grant requirements, we assumed they were referring primarily to equipment that had been previously purchased or where the HS grant had ended. For example, one department discussed the problem of service contracts for equipment purchased using HS grant funding. The contracts could not be extended beyond the HS grant period. As one interviewee remarked, "If you have ongoing services like LexisNexis—you can only use this service for the period of the grant. If there are remaining grant funds, a department is unable to prepay in advance to continue the service." These comments may reflect a lack of understanding by LEAs of HS grant requirements, including the need to address sustainability costs and limitations in

[3] The AEL was created through a rigorous process involving federal agencies, CBRNE response experts, as well as input from state and local responders. The AEL is based on the Standardized Equipment List (SEL) which was developed by the Interagency Board for Equipment Standardization and Interoperability.

reimbursement for maintenance and replacement costs of equipment or technology. Further, issues related to maintenance and replacement of equipment are not necessarily unique to HS, but rather a problem that LEAs face routinely with any technology or equipment purchased.

Yet, as early as the 1990s, the Nunn-Lugar Domenici Domestic Preparedness Program specifically focused on providing equipment and training to select cities to prepare for terrorist attacks involving WMD. Subsequent HS grants also encouraged the widespread adoption of personal protective equipment (PPE) by first responders (including law enforcement) to protect against the use of chemical or biological weapons. On the one hand, DHS and the federal government may view the ongoing maintenance and replacement costs as the responsibility of local governments. On the other hand, law enforcement and localities may view the maintenance and replacement of such specialized equipment to be more of a federal responsibility. LaTourrette et al. (2003) examined these issues in interviews with law enforcement, fire service, and emergency medical services personnel. Interviewees commented that the maintenance, repair, and replacement costs of PPE and other HS technology must compete for funding with other departmental priorities, and many wondered whether sufficient funding would be available for restocking these items after homeland security concerns lessen.

Another common theme heard from three of the case study departments was that DHS's goal of standardizing equipment served to hamper these departments' abilities to obtain state-of-the-art equipment. This is important because these departments have jurisdictional responsibility for high-risk areas and tend to be the leaders in CT and HS, with other LEAs looking to them for guidance on equipment and technology. The AEL, in their view, was geared more toward firefighters and was not necessarily up-to-date in terms of advances in law enforcement technology: "We are required to purchase equipment on the AEL whether or not our department needs it, it is redundant with equipment we already have, or it is not state-of-the-art." Several interviewees felt that at the federal and state levels, the law enforcement perspective and equipment (and training) needs were not well understood and that the firefighter perspective dominated the AEL:

> With the COPS grants, we knew what we wanted and needed—it was easier. Whereas, DHS doesn't know what our department needs or wants. Instead, we are given grant funding to buy things without an understanding of our departmental needs.

A GAO (2005) report on first responder grant programs summarized findings regarding how procurement processes have contributed to delays in the expenditure of HS grant funds. Some state and local officials reported that complying with their own procurement regulations could take months and that the requirement for competitive bidding often was a lengthy process. Although DHS and states have made numerous efforts to address these problems, several of the case study LEAs also commented on this issue. The slowness of going through multiple layers of review for sole source requests was cited as causing significant delays in procuring specialized equipment. Further, state and county procurement processes are not necessarily designed to support law enforcement in buying specialized equipment; instead, they are geared more toward buying routine equipment. Interviewees from our case study departments also discussed the problem of dealing with generic city or state procurement processes not geared toward the specialized equipment needs of law enforcement, necessitating sole source requests. For example, in one instance, a department's bomb squad had purchased a bomb robot that required a specialized trailer. However, city procurement personnel denied the sole source request, arguing that any trailer should suffice; the department ended up paying on its own for the specialized trailer.

Finally, under UASI, states can veto urban area purchases or project priorities and so undermine local decisionmaking, which has led to some states and urban areas operating disjointedly (Jordan, 2010). Two of our case-study departments had sought other sources of funding, such as from private police foundations, to help fund specialized training and/or the purchase of equipment that HS grant mechanisms would not support.

Grant Reporting and Disbursement Processes Have Multiple Layers of Review

Figure 2.1 illustrated how the size of HS grant funding has grown over time in terms of amount of funding and the number of grants. In addition, since 9/11 grant funding has changed from grants being awarded to individual departments to grants focusing on states and regional bodies. This has resulted in more layers of review than there were pre-9/11.

The award, distribution, and reimbursement process for UASI and SHSP grants is set up to go through the state and then to the local level. GAO (2005) outlined the process for first responder equipment grants, which illustrates the multiple layers involved. Specifically, the state submits the grant application, and, if awarded, the grant funding then goes to the state, which in turn subgrants the funds to local jurisdictions or urban areas.[4] Once the subgrants are awarded, certain legal and procurement requirements have to be met, such as a city council's approval of acceptance of the grant awards (GAO, 2005). Once all requirements have been met, then the state, local jurisdictions, or urban areas can obligate the funds. When a local jurisdiction or urban area incurs an expenditure for first responder equipment, they must submit procurement documents, such as invoices, to the state for reimbursement. The state then draws down the grant funds from the federal government to reimburse the jurisdiction or urban area. In its 2005 assessment, GAO noted that, despite federal efforts to expedite the award of grant funds and the transfer of those funds to localities, some states and local jurisdictions could not expend the funds to purchase equipment or services until other, nonfederal requirements were met. For example, some state and local officials reported that their ability to spend grant funds was complicated by various state and local legal and procurement requirements and approval processes, which could take months in some instances.

In the next chapter, we discuss the advantages of regionalization. Here, we focus specifically on the change from grants going to individ-

[4] Although UASI grants are awarded to urban areas, the states retain responsibility for administering the grant program.

ual departments or cities, in the older process, to the current process, in which HS grant programs that involve state and regional actors and require interagency collaboration—and the challenges that this change has created for LEAs.

The multiple layers of review and processes were cited by the case study LEAs as making the management and disbursement grant process much more complex than it was pre-9/11. The range of problems this raised, as cited by the case study departments, included the following:

- High administrative costs because of multiple layers of review and decisionmaking.
- Multiple layers of review can introduce inefficiencies. As one interview put it, "We have to do so many checks and balances for locals, state, and federals that we spend a lot of time duplicating these processes."
- Multiple layers of approval, review, and reporting can cause delays in the grant disbursement process. As commented on by one department, it used to be that grants were department-specific; now, because HS grants are at the state level or at the regional level, numerous offices and individuals have to review and approve grant applications.

  An example from Department E illustrates the problems in disbursement of grants that this process can result in. The interviewees noted that the department had received $7 million in HS grant funding that was held up for two years by the state and city review processes. The department finally received the grant in February, but it was due to expire in April of the same year. It was up to the city to apply for an extension of the grant, which could take several months. The department ended up having to give the $7 million back to DHS because it was unable to meet the grant deadlines.

Three of the case study departments commented that this has served to make it more difficult to keep the focus on law enforcement's needs. This has had implications for grant administration and report-

ing requirements, with four of the case study LEAs commenting that the application process and reporting requirements were much more extensive now, with multiple layers of report. To address the complexity of applying for and managing HS grants, three of the case study departments have hired or assigned full-time civilian staff to manage grants, whereas before, sworn officers would manage grants as part of their regular duties.

- For example, Department E's HS Division now has two full-time equivalent (FTE) civilians working on grants including HS grants. Because this division handles all the department's HS grants and given the detailed requirements of each grant, interviewees felt that instead of two individuals that six grants managers were needed.
- Department C for the first-time hired a civilian grants manager and invested in developing a grants management database to keep track of all HS and other grants throughout the department.
- Department B's grant application and management responsibilities are being handled by the fusion center program manager. He is borrowing once a week an individual from another department to assist with grants management, but he still found it challenging to keep up with all the HS grants administrative and reporting requirements.

Departments are also forgoing some grant opportunities because of some grants' match requirements. Three departments noted that it was becoming more and more challenging to meet match requirements as local resources are being strained due to the economic downturn:

- Department D: "Our department was unable to come up with the 25 percent match requirement for the port security grant."
- Department E: "We opted to forego certain HS grants because of the match requirement. We felt the amount was too small given the high administrative burden of applying [for] and managing these grants."

- Department B: "HS preparedness money has a 25 percent match requirement; our city can come up with match, but we are reluctant to ask the mayor for matching dollars when needs may be higher elsewhere within the department."

The match requirement is intended to achieve a balance between federal and state and local responsibility for preparedness and to avoid unnecessary uses of funding. In 2008, DHS made some adjustments to HS grant programs including easing the 25 percent match requirement for rail, transit, and port security aid to be responsive to state and local concerns (Hsu, 2008). However, these comments suggest that one unintended effect of HS grant policies may be that some major departments are deciding to forego some grant opportunities due to the match requirement, partly due to HS being a lower priority than other local needs and/or an inability to meet the match requirement.

Two of the case study departments discussed the issue of grant programs changing their focus from year to year, making it more difficult for LEAs to manage long-term investments in training and strategic plans. There is also the opposite problem: LEAs and regional partners must apply in advance for HS grant funding, meanwhile local priorities may change. Table 2.2 provides an overview of how HSGP priorities have evolved overtime beginning with FY2004. It illustrates changing priorities from year to year—for example, from CBRNE to a focus on strengthening capabilities to deal with improvised explosive devices (IED) and radiological/nuclear threats, as well as an increasing emphasis on regional preparedness and on the development of fusion centers.

Grant Mechanisms' Evolution Toward Regionalization Poses Other Key Challenges

In FY2008, the definition of UASI regions changed from including a 10-mile radius around an urban area's center city boundary to the Metropolitan Statistical Areas (MSAs) defined by the U.S. Census Bureau (GAO, 2009). Each UASI region was required to create its own regional working group (called an urban area working group [UAWG]). The membership of the group must include representation from jurisdic-

Table 2.2
Overview of HSGP Priorities Over Time

Fiscal Year	Funding Priorities
2004	HSGP expanded the scope of its program from funding planning, equipment, and training for preparedness, especially for CBRNE attacks and including having states use HS funding to fill in gaps and capabilities identified in states' HS strategies. This is the first year that ODP administered the new LETPP, with funding available to law enforcement to support information-sharing, target hardening, threat recognition, intervention activities to interdict terrorists, interoperable communications, and management and administration. Guidance makes reference to support for Terrorism Early Warning Groups (TEWGs).
2005	Preparedness funding was guided by the state and urban HS strategies. Application for and administration of the six major grant programs (SHSP, UASI, LETPP, EMPG, MMRS, and the Citizen Corps Program) were consolidated under the HSGP. A priority of the HSGP was to support the implementation and adoption of NIMS. To receive future FY2006 preparedness funds, applicants must certify that they have met the minimum FY2005 NIMS compliance requirements. UASI recipients must develop a multi-jurisdictional response plan based on an IED scenario. Guidance makes reference to support for TEWGs and for contractors/consultants for intelligence fusion centers.
2006	In FY2006, DHS adopted a risk- and need-based approach to allocating funding for certain grant programs within the HSGP. This was the first year that the Interim National Preparedness Goal was in place, which outlines national priorities, such as an all-hazards approach to preparedness and focused expenditures on building capabilities identified in the Target Capabilities List (TCL). Other priorities included expanding regional collaboration, continuing to strengthen CBRNE, interoperable communications, threat information-sharing, and medical surge and mass prophylaxis capabilities. Applicants were required to be fully compliant with NIMS by September 2006 as a condition for receiving FY2007 funding. Guidance continues to include support for TEWGs and for fusion centers.
2007	The overarching funding priorities continued to be risk-based funding and regional security cooperation. Other priorities included measuring process toward achieving the National Preparedness Goal, integrating and synchronizing preparedness programs and activities, building a statewide critical infrastructure/key resource (CI/KR) protection program, adopting statewide communications interoperability plans, strengthening radiological/nuclear detection capabilities, and enhancing catastrophic planning. Importantly, an additional priority was the establishment and enhancement of fusion centers. Establishing a baseline capability within all fusion centers was the primary emphasis of the FY2007 LETPP. Also, a pilot program to fund full-time CT staff for Tier 1 UASI jurisdictions was implemented. This was the first year that support for TEWGs was not addressed.

Table 2.2—Continued

Fiscal Year	Funding Priorities
2008	The HSGP priorities were to measure progress in achieving the National Preparedness Guidelines, strengthening IED attack deterrence/prevention/protection capabilities, especially for law enforcement, and strengthening preparedness planning. In addition, this was the first year that the LETPP was no longer funded and consolidated under the SHSP and UASI programs. Instead, states were required to devote at least 25 percent of SHSP and UASI funds to law enforcement terrorism prevention-related planning, training, exercise, and equipment activities. The full-time CT staffing pilot program was also discontinued.
2009	The HSGP overall priorities were to further narrow the focus through the risk-based funding and capability planning process that DHS had started four years earlier. Priorities included measuring progress toward achieving the National Preparedness Guidelines and strengthening citizen preparedness. Specific priorities related to the law enforcement terrorism-prevention activities were to strengthen IED deterrence/prevention/protection capabilities, strengthen radiological/nuclear detection capabilities, and maximize information-sharing via the national network of fusion centers.
2010	One of DHS's important initiatives this fiscal year was to support the maturation of the Information Sharing Environment (ISE) and, specifically, continued enhancement of state and major urban area fusion centers to include support for implementation of the Nationwide Suspicious Activity Reporting (SAR) Initiative (NSI). Additionally, fusion centers were asked to assess their progress toward achieving baseline capabilities and to use HSGP grant funds to address identified gaps.

NOTE: The above summary is based on a review of DHS's HSGP guidance and application kits for each fiscal year. See FEMA, 2010b.

tions and response disciplines that make up a UASI region as defined by the UAWG. Beginning in FY2008, grant guidance recommended that urban areas' UAWG also include members of counties within which the cities in the UASI region reside, contiguous jurisdictions, and jurisdictions within the region's MSA. UAWGs are encouraged to take a regional approach to membership, but the UAWG's composition does not have to conform to a MSA composition.[5] A number of UASI regions expanded their membership as a result. Some of the advantages of regionalization are improvements in inter-jurisdictional coordina-

[5] FY2010 UASI guidance also requires that UAWGs must include local MMRS leadership and Citizen Corps Council representatives.

tion and planning, mutual agreement on roles and responsibilities, and regional consolidation of administrative functions and procurement activities (GAO, 2009). GAO also identified some key challenges to regional collaboration, including conflicting missions, concerns regarding jurisdiction and control over resources, and incompatible processes or systems that made reaching a consensus on priorities difficult.

Another important challenge of regionalization was identified by one of the case study departments: The UASI regions may be inconsistent with the existing mutual aid and emergency management structures at the state and local levels. For one of our case study departments, the state's emergency response plan explicitly divides the state into domestic security task force regions that align with the operational boundaries for the state department of law enforcement (Caruson et al., 2005); but for another, UASI region definitions were inconsistent with its state's existing emergency management system—the mutual aid network that law enforcement would use in the case of an emergency.[6] In the latter case, the LEA interviewee felt that UASI's separation of urban areas had caused the division of formerly cohesive management structures. For example, UASI grants require participants to conduct planning, training, and exercise programs with the partners that make up the UAWG and UASI urban area. These partners may differ from those defined by the state's emergency management system, which also requires LEAs to participate in planning, training, and exercises with their operational area partners. Interviewees noted that the administrative costs involved in trying to reconcile these two systems were significant. As a solution, the county had proposed to DHS that the UASI urban area be redefined to create one region that would encompass the county's entire operational area. Interviewees further commented that UASI had the potential to create competition among mutual aid law enforcement partners for grant dollars and to drive a wedge between

[6] This system has five organizational levels: (1) state—statewide resource coordination integrated with federal agencies; (2) regional—manages and coordinates information and resources across operational areas; (3) operational area—manages and/or coordinates information, resources, and priorities among all local governments within a county; (4) local—county, city, or special districts; and (5) field—the on-scene responders to an event.

a department that had received UASI grant funds versus mutual aid partners that had not.

A related issue identified by one of the case study departments was that the UASI and SHSP grant programs may have inconsistent definitions of operational areas. To address this issue, one county had proposed that a single administrative entity be established for the grants management and administration of the two grants within its state. The interviewee reported, though, that DHS had taken the position that it was the responsibility of the state to establish new UAWGs to address this issue, whereas the state considered it the responsibility of DHS to determine the boundaries of urban areas and to modify the UASI program to take into account these differences. Efforts by the county to reach agreement on restructuring the boundaries of the UAWGs for its state have been unsuccessful to date.

This example illustrates one of the challenges of trying to develop regional structures and collaborative networks that align with existing emergency management systems, which vary from state to state. UASI was designed to strengthen the ability of "high-threat, high-density" urban areas to prepare for and respond to acts of terrorism (Jordan, 2010). However, the definition of a UASI region does not explicitly take into account the emergency management and governance structure of a state. On the one hand, the proposal described above, to have UASI and SHSP grants consolidated, ignores the fact that UASI was created to ensure preparedness of high-risk urban areas and to provide targeted resources to those areas, whereas SHSP is focused on ensuring a state's overall level of preparedness—so combining these two grant programs could dilute the pool of funding available to high-risk urban areas. On the other hand, consolidating the funding at the state level may provide more flexibility in ensuring that the definition of UASI regions within a state is in alignment with the state's emergency management structure.

CHAPTER THREE

The Evolution of Fusion Centers and Information-Sharing

Introduction

The need for improved sharing of intelligence information between local, state, and federal law enforcement agencies was recognized as early as the 1964 Warren Commission report (Carter, 2004). In 1971, the National Advisory Commission on Criminal Justice Standards and Goals (NAC) included recommendations in its report that were directed at establishing and operating intelligence functions for state and local law enforcement agencies (Carter, 2004). By the 1980s, criminal enterprises had grown dramatically from drug trafficking to counterfeiting; however, law enforcement intelligence units had neither the expertise or personnel to address these problems effectively (Carter, 2004). Key limitations were the lack of a systematic method for analyzing collected intelligence information and the degree to which law enforcement executives recognized the value of such a capability.

The 9/11 terrorist attacks highlighted the important intelligence role that state and local law enforcement have to play, both in terms of information-sharing and the analysis of threat information. Following the 9/11 terrorist attacks, there was a call for greater collaboration and information-sharing about terrorist threats among local, state, and federal agencies (9/11 Commission, 2004, p. 328). In response to 9/11, a number of LEAs created and activated, or "stood up," specialized HS units and integrated CT functions in their departments. For example, a national survey of LEAs conducted in 2002 found that 26 percent of LEAs in metropolitan areas reported having specialized terrorism units

(Davis et al., 2004). Among the case study departments in this study, all reported having established HS bureaus or units and/or CT units.

In this chapter, we discuss how LEAs have evolved their approach to gathering, analyzing, and sharing counterterrorism intelligence since 9/11. We first provide a brief overview of the definition of CT intelligence, federal and local intelligence functions, and the evolution of LEA CT intelligence based on a brief review of the literature. Then, we present findings from the case study analysis to examine how these intelligence functions have continued to evolve and how law enforcement agencies at all levels (primarily state and local, but federal intelligence as well) are sharing information. That analysis centers around the identification of six key trends; we consider the advantages and challenges of these emerging trends based on the case study interviews.

Overview and Background

Defining Intelligence

Law enforcement has increasingly recognized the need to expand the collection, analysis, and synthesis of intelligence and information to include terrorist-related threats. Intelligence can be defined as information that has been collected through clandestine methods and is not acted on immediately (Riley et al., 2005). A recent CRS report defines intelligence as "information to which value has been added through analysis and is collected in response to the needs of policymakers" (Masse and Rollins, 2007, p. 1). While definitions of intelligence vary at different levels of government and among different agencies, LEAs generally use a relatively broad definition and focus on evidence- and information-gathering (Riley et al., 2005).

In the aftermath of 9/11, information-sharing weaknesses were considered a major contributing factor to the nation's failure to prevent these terrorist attacks. Since then, many state governments and some local governments have established fusion centers, largely on their own initiative, to address gaps in information-sharing, terrorism, and law enforcement information-sharing by the federal government (GAO, 2007). Fusion centers vary in their composition—with a

range of federal, state, and local entities coming together to collect and analyze information related to homeland security, terrorism, and law enforcement—as well as in their stage of development (GAO, 2007).

Also, a number of information-sharing initiatives were mandated by the Homeland Security Act of 2002 and the Intelligence Reform and Terrorism Prevention Act of 2004 (P.L. 108-458; known as the Intelligence Reform Act) (GAO, 2007). The Homeland Security Act required that the President implement procedures under which federal agencies can share relevant homeland security information with other federal agencies and with state and local personnel, including law enforcement. The Intelligence Reform Act (amended in 2007) mandated the establishment of an Information Sharing Environment (ISE) that combines policies, procedures, and technologies that link people, systems, and information across federal, state, local, tribal, and private-sector entities. State and local fusion centers were seen as important partners in this endeavor (GAO, 2007).

In addition to local law enforcement, the FBI shifted its mission to include a focus on CT following the 9/11 attacks. The FBI is designated as the lead federal agency for investigating acts of domestic and international terrorism. The FBI primarily conducts its CT investigations through its Joint Terrorism Task Forces (JTTFs). The JTTFs (along with FBI field offices) are responsible for national infrastructure protection and for investigations involving domestic and international acts of terrorism and the use of WMD. The JTTFs are composed of teams of state and local LEA representatives, FBI agents, and representatives of other federal agencies.[1] In addition, the FBI has directed that its field offices become involved with the fusion centers, given their growing role in the sharing of homeland security, terrorism, and law enforcement information (GAO, 2007).[2]

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[1] The first JTTF was established in New York City in 1980. The JTTFs vary in size and structure in relation to the terrorist threat dealt with by each FBI field office. On average, 40 to 50 people are assigned full-time to the JTTFs; however, some task forces, such in New York City, are substantially larger (U.S. Department of Justice, Office of the Inspector General, 2003).

[2] The FBI's role in and support of fusion centers varies across the various field offices but often includes assigning FBI special agents and intelligence analysts to these centers to facilitate the flow of information between state and local entities and the FBI.

The Evolution of Law Enforcement Agencies' Information-Sharing Networks

Table 3.1 provides an overview of how LEA's information-sharing networks and intelligence functions have evolved over time. We focus on three major changes: focus of law enforcement's intelligence function, organizational unit, and network composition. Pre-9/11, law enforcement's **criminal intelligence** activities focused on specific types of crime, such as organized crime, white-collar crime, or gangs. In the aftermath of 9/11, law enforcement's focus evolved to also include ter-

Table 3.1
Evolution of Law Enforcement's Information-Sharing Networks and Intelligence Function, Pre-9/11 to Current

Category	Before 9/11	1–3 Years After 9/11	7–9 Years After 9/11
Focus of intelligence	Criminal intelligence (e.g., gangs, organized crime, narcotics, white collar)	Intelligence evolved to also include a focus on terrorist threats	Further development of intelligence functions; adopting all-crimes, all-hazards approach to intelligence and regionalization trend
Organizational unit	Criminal intelligence or other specialized units	CT units DHS encourages adoption of TEWG model	All-crimes, all-hazards approach adopted DHS encourages adoption of fusion center model
Network composition	Networks specific to certain types of crime (e.g., HIDTA)	Beginning to examine role of LEA intelligence in national CT and HS strategies Some LEAs build on existing info-sharing networks to include CT and HS, but not common DHS encourages connection of some of local networks	Networks become more formalized and expand in size Fusion centers centralize sharing/ formalize relationships Fusion centers more formally connected to federal intelligence community (FBI, DHS liaisons) LEAs have adopted more aggressive collaboration with federal agencies

rorist threats. Nine years after the 9/11 terrorist attacks, we see that these information-sharing networks have evolved to include not only CT, but also the adoption of an all-crimes approach to information-sharing, with the goal of striking a balance between criminal intelligence and terrorist-related intelligence. GAO (2007) interviewed staff from a number of fusion centers and found that a common explanation for adopting this broader focus to include criminal activity in general was the recognition of the nexus of many crimes (e.g., drug crime) with terrorist-related activities.

In terms of **organizational units** (Table 3.1), whereas pre-9/11 a number of departments had specific crime-related units such as organized crime units or narcotics units, following 9/11 many large urban LEAs stood up CT-specific units to gather and analyze terrorist-related information and intelligence (Davis et al., 2006). Similarly, at the federal level, there was a recognition of the potential benefit of encouraging local LEAs to serve as the "eyes and ears" on the ground.

At the same time that states and localities were embracing the fusion center concept, major urban areas also began to adopt a Terrorism Early Warning Group (TEWG) model to bring agencies together to analyze terrorist threats for their jurisdiction and to disseminate intelligence information. TEWGs are designed "to identify emerging threats and provide early warning by integrating inputs and analysis from a multidisciplinary, interagency team" (Sullivan 2005, p. 2). The purpose of a TEWG is to encourage coordination of information-sharing at the local level, including interagency coordination among local LEAs and state agencies as well as federal representation. In addition, the TEWG can help integrate FBI and local law enforcement information-sharing efforts. In the mid-2000s, then Secretary of DHS Tom Ridge encouraged law enforcement agencies to adopt a TEWG model for analysis and information-sharing, and ODP, through the UASI program, provided training and technical assistance to establish interagency working groups modeled after Los Angeles County's TEWG (the Los Angeles Sheriff's Department was an early adopter of the TEWG model) (Davis et al., 2004). However, shortly after Ridge's endorsement of the TEWG model, which was more CT-focused, HSGP funding began emphasizing the development and enhancement

of fusion centers, which take an all-crimes/all-hazards approach versus a strict focus on CT.

Although many of the post-9/11 fusion centers began with a CT mission, the majority expanded their mission to include all-crimes or all-hazards (Rollins, 2008). Fusion centers build on existing organizational structures by encouraging organizations to integrate their traditional crime statistics and information into a common database shared by both local and federal LEAs. Additionally, other entities (e.g., public health, schools, local government) are encouraged to participate in information-sharing within the fusion center framework. Fusion center models have resulted in more formal information-sharing networks, centralization of information, greater integration between different levels of government, and more leverage by local LEAs to gain access to information from the federal government. Masse and Rollins (2007) suggests that fusion center adoption was largely the result of the events of 9/11:

> Although the elements of the information and intelligence fusion function were conducted prior to 9/11, often at state police criminal intelligence bureaus, the events of 9/11 provided the primary catalyst of the formal establishment of more than 40 state, local, and regional fusion centers across the country. (p. ii)

While there is no one "model" structure for fusion centers, such centers generally focus on similar processes (Masse and Rollins, 2007). Fusion is the process of pooling and analyzing information from many different sources to help identify larger crime trends and emergency management opportunities. Fusion refers to

> a collaborative effort of two or more agencies that provide resources, expertise, and information to the center with the goal of maximizing their ability to detect, prevent, investigate and respond to criminal and terrorist activity. Fusion also turns information and intelligence into actionable knowledge. The primary components of a fusion center are situational awareness and warnings that are supported by law enforcement intelligence, derived from the application of the intelligence process, where require-

> ments for actionable information are generated and information is collected, integrated, evaluated, analyzed, and disseminated. (U.S. Department of Justice, Office of Justice Programs, Global Justice Information Sharing Initiative, 2006)

As of July 2009, there were 72 fusion centers around the country, most of which were operated at the state level (DHS, 2009d). Roughly 20 percent of fusion centers are sponsored by large urban areas (usually as part of UASI grants), which are the focus of this study. Overall, most fusion centers are state-owned or operated, with 40 percent taking an all-crimes approach to information-sharing, 40 percent adopting an all-crimes, all-hazards approach (which includes an emergency preparedness component), and only 15 percent having a CT-only specific focus (Masse and Rollins, 2007).

As of July 2009, DHS had 36 field representatives deployed at 27 fusion center locations (DHS, 2009d). The role of the DHS liaisons is to help the flow of classified and unclassified information, provide expertise and augment the analytic capabilities of fusion centers, coordinate with local law enforcement and other agencies, and provide local awareness and access. DHS also has an initiative to install Homeland Security Data Network terminals (a classified collateral network) in 70 fusion centers to facilitate the sharing of federal information with the fusion centers. In addition, DHS offers intelligence and analysis (I&A) training programs for state and local partners, and both DHS and DOJ support a Fusion Process Technical Assistance Program to facilitate the development and operation of fusion centers.

DHS has provided more than $254 million from FYs 2004–2007 to state and local governments to support fusion centers (DHS, 2009d). Currently, UASI is a key source of funding for fusion centers. Because DHS is a primary funding source for fusion centers and because federal grants cover only specific periods of time, an issue moving forward will be the sustainability of the fusion centers without federal assistance.

Finally, in terms of **network composition** (Table 3.1), we see that whereas before 9/11 intelligence networks were specific to different types of crime (e.g., HIDTA), following 9/11 local and state law enforcement and the federal government began examining the role of

law enforcement in CT and HS strategies. Some LEAs built on or refocused existing information-sharing networks specifically around CT. A key result of the focus on fusion centers at the federal, state, and local levels and the development of fusion center guidance and baseline capabilities is that these networks have become more formalized over time. Fusion centers have been important for centralizing information-sharing and for formalizing these information-sharing networks among LEAs within a region. In addition, fusion centers have allowed these networks to be more formally connected to the federal intelligence community.

Case Study Results: Current Trends Underlying This Evolution

In this section, we discuss some of the most current trends that underlie the shift toward all-crime, all-hazards approaches to intelligence, as well as some additional observations about the evolution of the fusion concept. Both advantages and challenges to these trends will be discussed, followed by some preliminary conclusions. We start with an overview of the fusion centers relevant to the case study departments. We then describe six trends that summarize common themes that we identified across the case study departments.

Description of Fusion Centers Operated by Case Study Departments

As noted, most fusion centers are managed by the state police or by a state's homeland security bureau, with only 20 percent managed by large urban areas. Three of the five case study LEAs managed their region's fusion center: Departments B, D and E. The other two of our case study departments—Departments A and C—were not directly responsible for running the fusion center in their region. In the case of Department A, it played a role in establishing the regional fusion center but is not directly responsible for managing it. In the case of Department C, the state's department of law enforcement runs the regional fusion center, with Department C having an active intelligence unit within its HS Bureau.

Three of the case study departments' fusion centers were co-located with the city or county's emergency operations center or bureau, thus allowing departments to achieve economies both in physical investments and organizational investments and to co-locate staff tasked with threat assessment, intelligence gathering, and analysis with those responsible for emergency planning, response, and incident management. Doing so is also consistent with an all-crimes/all-hazards approach.

In general, the case study departments' current fusion center networks are substantially larger than preexisting intelligence information-sharing networks. For example, one department's fusion center network encompasses 44 jurisdictions; another department's network encompasses 6 counties and 67 participating LEAs; and a third department's network covers the area's metropolitan area, with over 100 agencies participating in its fusion center.

Trend 1: Using Technology to Organize Virtually

With the adoption of the fusion center model, LEAs in large urban areas are starting to use technology to organize virtually and share information. Fusion centers were originally designed to serve as physical space where representatives from different agencies convened to share intelligence. However, while more urban areas are adopting the fusion center model, it appears that participating law enforcement agencies may be less willing to commit full-time personnel to operate the fusion center. As the distance from 9/11 continues to grow, there seems to be a demand to operate fusion centers virtually so as to allow agencies (particularly LEAs surrounding large cities with limited personnel) to participate without dedicating full-time personnel. These factors are encouraging more virtual participation in intelligence-sharing.

For example, in one instance, LEAs in Department C's UASI region developed SharePoint websites to share intelligence with participating communities, such as CT-, gang-, and drug-crime-related websites. Department D's fusion center holds two daily conference calls in which participants are able to call in to share and access intelligence about criminal activity in general, without requiring personnel from each participating agency to be present.

This approach has several advantages. First, it allows more local LEAs to participate in the information-sharing process. In traditional fusion center models, only agencies that have the means to supply a liaison to the center derive the full benefits of information exchange. Since many of the smaller LEAs surrounding large cities cannot afford these personnel costs, virtual organizations allows smaller agencies that may not have been able to participate in-person to join in the information exchange process. Second, virtual organizations reduce the resource commitment required by most agencies. Thus, in addition to allowing more participants, virtual fusion centers also reduce the potential costs to participating agencies.

There are also several challenges associated with virtual organization and information exchange that we identified from our interviews. First, incentivizing participation is more difficult when LEA personnel are not co-located. Three of the case study departments commented about this issue. Personnel co-located with fusion centers suggest that the accountability created by working face-to-face with other agencies may be diminished in a virtual environment.

Second, informal information-sharing can be lost over the Internet and through conference calls. A key goal of the "fusion" process includes sharing intelligence to identify larger patterns and themes in crime trends. This is a very dynamic process that requires updated, current exchange and the synthesis of information, which may be lost in virtual environments. Since the fusion process relies heavily on human synthesis of information, which requires considerable information exchange, some of this synergy may be lost in the relatively static (noncontinuous flows of information) environment of virtual space. If personnel from each participating agency are not fully involved in the fusion process, which may be more likely in virtual environments because of less face-to-face accountability, then some of the dynamic synthesis (the trademark of fusion) may be lost.

Trend 2: Utilizing Technology—9/11 Served as a Catalyst for Adopting Technology

Interviews with the case study departments revealed a distinct trend toward technological advancements being used to facilitate CT intelli-

gence-sharing. Arguably, these advancements may have occurred without a focusing event such as 9/11. However, interviewees from three of the case study departments suggest that large-scale events, such as 9/11, as well as such events as political conventions, have been important catalysts for change. Here, we examine how 9/11 served as a catalyst to promote technology adoption in fusion centers and with surrounding LEAs.

For Department D's urban area working group (UAWG), nine surrounding communities applied for an UASI grant, which supported the purchasing of a new camera system to facilitate emergency evacuations in the case of large-scale disaster. Department D had conducted an internal analysis to identify the high-crime areas along evacuation routes where placement of cameras may help mitigate crime in those areas. While these technologies existed prior to 9/11, it was the UASI funding that allowed this UAWG to purchase these cameras.

Similarly, as information exchange increases between LEAs, the need to facilitate database queries grows. Currently, LEAs are using tip-generating software, such as COPLINK,[3] to rapidly search records for tips and leads. The software works by cross referencing and querying several databases at once, essentially data mining to generate potential crime trends. For instance, Department B's analysts described a circumstance in which a phone number was recovered at a crime scene. Through COPLINK, officers were able to search all the participating databases to identify anyone that may have a link to the phone number. So rather than simply identifying the owner of the number, COPLINK helped supply analysts with potential associates of the owner of the telephone number. As intelligence moves from a local focus to a regional focus, it becomes important to search more databases quicker. Department B reported that using COPLINK had greatly benefited their agency in generating leads more readily. In addition, Department B felt that the organization of its fusion center increased the department's

[3] COPLINK is a problem-solving technology that uses a distributed database design. It is an Internet-based system software application that allows law enforcement agencies to establish links among their own files and those of other agencies to conduct sophisticated analyses and data searches of multiple databases.

CT capacity and criminal intelligence capacity in general, by allowing law enforcement agencies to more effectively draw the linkage between different types of criminal activity and terrorism (e.g., one may be gathering intelligence information on terrorist-related activity and, in doing so, also uncover evidence about drug trafficking).

We observed numerous advantages observed relating to law enforcement technologies. First, these technologies allow for better access to information, as well as more effective use of information through more inputs (i.e., cameras) and filters (i.e., query capabilities). Second, these technologies offer infrastructure that may be used to expand information-sharing. In the case of the camera system for Department D's UAWG, a private foundation offered funding to upgrade the camera network to allow for data and information exchange between participating LEAs. In addition to facilitating information exchange, the camera system also helped to create redundancy in data warehousing. (Each of the UAWG's participating cities now has a physical backup copy of the other cities' databases, thus creating eight additional copies of each city's database.) Third, in some cases, such as the placement of cameras in high-crime areas, the technology has a crime deterrence value.

Challenges associated with expanding the use of technology identified by interviewees related to the issue of maintenance and replacement costs, as well as incompatible data record management systems among LEAs. Having discussed the issue of maintenance and replacement costs in the previous chapter, here we focus on the issue of incompatible data record management systems. LEAs in surrounding urban areas may have different record management systems. Department D reported that, to participate in fusion centers, some LEAs belonging to a fusion center network may end up double-reporting (once for their jurisdiction and once for the fusion center), thus providing a disincentive for participation. In one metropolitan area, UASI funding was used to provide the surrounding communities with laptops to enable them to access Department D's databases. However, an unintended outcome was that this led to a one-way information exchange, skewed to disproportionately benefit the smaller LEAs (although it is unclear though how frequently the smaller LEAs participating in the fusion

center accessed Department D's databases). Also, once the UASI grant had ended, the smaller LEAs were unable to cover the costs of maintaining these laptops.

Trend 3: Utilizing Technology—Tapping into Existing Infrastructure and Building New Networks

Many of the local intelligence functions were either built around existing LEA networks or have been integrated into existing organizational networks. To develop and further hone their local and regional CT functions after 9/11, some LEAs chose to use existing information-sharing networks. For example, Department B used the HIDTA as a model to build its intelligence-sharing function. HIDTA includes law enforcement networks used to share information related to drug trade in high-volume trafficking areas. While these relationships were relatively informal, they improved the flow of information to help generate better drug-trafficking intelligence.

Several of the case study LEAs built their own networks within their department. For example, Department E co-located terrorism liaison officers at each precinct office. These officers served as a liaison between the officer in the field and the CT unit and were responsible for tracking and reporting information that may relate to CT. Three of the case study departments also discussed expanding their community networks. For example, one case study department developed a concept called "public trust policing," which was a way for the department to reach out to the community and build relationships with specific groups. Although this is a variation of community policing, the goal was to build trust between the department and the community to improve information exchange in the future.

An advantage of using or expanding existing networks is that the start-up costs associated with building on existing relationships tend to be lower. Since contacts, relationships, and a sense of purpose are already developed, LEAs can quickly begin exchanging information through these predetermined channels.

Each of these approaches also has its own set of challenges. In the case of building a new network, these relationships take time, energy, and resources to build. First, the larger urban areas essentially need to

sell this idea to the surrounding communities. Next, these agencies need to identify points of contact and develop memoranda of understanding (MOUs) to clarify protocol and expectations. Finally, monitoring and enforcement need to occur to ensure proper participation in the group. These transaction costs are often overlooked when generating a new network. On the other hand, if an existing network is used, it is possible that either the original purpose of the network or its CT function may become diluted over time. As a network adopts multiple goals, it is forced to prioritize. And as CT competes for attention with other priorities in the network, information-sharing specific to terrorist threats may become less robust within the multipurpose network.

Trend 4: Moving Toward Regionalization

As noted in Chapter Two, UASI focuses on enhancing regional preparedness within major metropolitan areas. A key goal is to encourage regionalization and improved coordination among multiple stakeholders (including law enforcement) within large urban areas. Because UASI preparedness and response networks are complex, they can develop regional cooperation across many specialties, increase coordination of assets and resources across geographic boundaries, integrate policies and practices concerning preparedness, and, in terms of fusion centers, improve information-sharing and analytic capabilities (Jordan, 2010). Advantages associated with this shift toward regionalization include better access to information and an ability to recognize crime trends across larger urban areas. Because UASI grants encourage large urban departments to work with smaller surrounding communities in HS-related activities, including fusion centers, smaller LEAs are realizing spillover benefits of greater access to information being housed by larger departments. Fusion centers also allow smaller LEAs to develop relationships with the larger LEAs in their region, which can serve to facilitate coordination. However, as noted above, some of these relationships may also tend to be lopsided and may need to become more balanced in order to incentivize sustained participation by larger LEAs. For example, under UASI, Department E's fusion center network expanded from two to six counties, with Department E largely

responsible for providing personnel for and managing the fusion center's operations.

Another advantage is that, as criminal intelligence capabilities move outward from large urban areas to include surrounding communities, analysts are able to recognize crime trends that cut across jurisdictional boundaries. Because criminals do not generally adhere to these boundaries, criminal data from surrounding communities in an urban area may create a more comprehensive understanding of crime trends.

One challenge associated with regionalization identified in the case study department interviews is ensuring the participation of and contributions by smaller LEAs to information-sharing networks. Since the contribution of smaller LEAs to a fusion center's information-sharing network may require a larger proportional allocation of resources than the larger LEAs and because the benefits of these efforts are often much less to the smaller LEAs than they are for larger LEAs, there may be inadequate incentives for smaller LEAs to invest resources in actively participating in fusion centers.

Another challenge identified is the potential for competition among LEAs for grant resources. The UASI program requires urban areas to apply for these grants with surrounding counties and municipalities. For example, in one UASI region, grant funds were to be distributed among fusion center participants to help bring smaller LEAs' technology, communication systems, and equipment needs up to speed. This had the potential to create competition among the smaller LEAs for grant resources. At the same time, the larger LEAs arguably contribute disproportionately to CT and HS efforts in urban areas. So, while much of the UASI money may be consumed in this instance by the surrounding small LEAs, the larger LEA continued to carry the burden of the fusion center responsibilities and have the larger HS role for its region. Jordan (2010) also identified broader evidence of competition, noting that although UASI funding served as a catalyst for regional collaboration, urban area participants disagreed over which organizations, specialty areas, and jurisdictions should receive what percentage of funds and which regional preparedness and response activities should be prioritized.

Similarly, as intelligence networks and responsibilities grow, there is the potential for CT and HS resources to be spread too thin. For example, Department E's fusion center expanded its information-sharing network from two to six counties, which now requires coordinating 67 local LEAs. A CT interviewee noted that, as a result, the fusion center runs the risk of becoming more focused on pushing out information versus being a two-way exchange of information, and less attention may be being paid to the actual analysis of intelligence information.

Trend 5: Formalizing Information Exchange

Fusion centers help create formal relationships between agencies and encourage participation by affiliated parties. Indeed, this was an explicit goal of the fusion center model. Prior to adoption of the fusion center model, information exchange among law enforcement agencies often tended to depend more on informal relationships and personal contacts. For example, a small LEA participating in Department D's fusion center network characterized how information exchange among local LEAs had evolved from his perspective. Before the fusion center was stood up, this officer would physically drive around to neighboring police departments every couple of weeks to informally share information. Now, however, this collaboration is being institutionalized between local LEAs through more formal channels of information exchange through the fusion center. For this smaller department, instead of having this informal exchange of information, this officer now participates in twice-daily conference calls through the fusion center.

An additional advantage is that information exchange is now less reliant on individual contacts. Since law enforcement officers are frequently rotated into new positions, they take with them relationships and personal contacts. This is particularly difficult for CT and HS functions because of the high degree of trust required for robust information exchange. The fusion center model, however, has helped formalized some of these relationships, thus smoothing out transitions when personnel leave.

Challenges to formalization relate largely to the "fusion" process. As mentioned, fusion requires human interaction, analysis, and synthesis of information and is largely a dynamic process. While fusion centers provide physical space to encourage this behavior, they are also creating formal rules and relationships, which go against the general theory of fusion. Generally, synthesis is a dynamic, ad hoc process that encourages informal sharing and relationships. Yet, the goal of formalizing relationships and organizational structures also may have an unintended effect of less happenstance sharing among participants, which can discourage informal sharing and ad hoc interactions.

Another challenge to the formalization of information exchange is related to the potential conflicting objectives and goals of LEAs and federal agencies that are participating in the fusion centers. A phrase that came up several times in our case study interviews was "deconfliction," which is a process of ensuring that the LEAs and the FBI are not simultaneously pursuing the same criminals. In this context, interviewees commented about the differences between law enforcement and the FBI in their perspective and goals. In their view, law enforcement tends to have the shorter-term goal of taking criminals off the streets as soon as possible, whereas the FBI has the perspective of developing cases and leads over long periods of time.

Trend 6: Centralizing Information and Managing Relationships

Finally, fusion centers tend to encourage the centralization of information warehousing and dissemination. Fusion centers are moving to collect intelligence in one location, with the intention of supplying relevant information to surrounding communities. While the primary function of fusion centers is to process and synthesize information, another relevant duty is to supply the necessary information to actors who require the information to act. Additionally, fusion centers help to manage relationships by serving as formal points of contact. So, for example, if an agency participating in the fusion center needs to contact the FBI or another department, the fusion center can serve a "brokerage" role in helping to connect an officer with the right point of contact.

Advantages associated with centralization include improved information exchange among agencies and between different levels of law enforcement. Since centralization can improve efficiency in network structures, thus eliminating redundancy in sharing, more information can be processed through fusion centers. Similarly, information may also be processed more effectively, because all relevant agencies are being included in information-sharing. Additionally, fusion centers may be able to help law enforcement gain access to other information-sharing networks.

There were also some challenges associated with centralizing information and relationships. First, as mentioned previously, it is difficult for the smaller LEAs to provide personnel to participate regularly in the fusion center. Second, differences in security clearances between LEAs may make it difficult for information to flow freely. Several of the interviewees felt that CT intelligence information often seemed to be over-classified, resulting in underutilization of information because fusion center participants (mainly those from smaller LEAs) did not have the proper security clearance. Additionally, since there is regular turnover in personnel, it is difficult for LEAs to receive and maintain the necessary clearances in a timely manner. Finally, it is difficult for the fusion centers to maintain commitments from all the participating agencies. When activities are centralized, all beneficiaries are expected to contribute to maintain these services. However, personnel, data management, analysis, and administrative costs are high and can be a barrier to sustained participation in an information-sharing network.

Summary

Given the evolution of the intelligence function for law enforcement and the adoption of the fusion center model, there appears to be several fundamental effects. Specifically, the model has

- encouraged the adoption of a regional approach to CT and HS preparedness and response

- greatly expanded the size of the networks for CT and criminal intelligence and information-sharing
- helped formalize LEAs CT intelligence and analysis functions
- broadened the mission from terrorism-focused only to an all-crimes/all-hazards approach.

Doing so also comes with some challenges, such as how to ensure participation of all law enforcement agencies within a region, how to effectively manage the size of the regional networks that have developed, and how to maintain an ability to leverage technology. A concern expressed by some interviewees was how to keep the focus on true "fusion"—that is, gathering and analysis of threat information—versus having these networks become simply a point for sharing of information and pushing out information to localities.

Finally, a fundamental remaining challenge has to do with how to continue to fund and support the fusion centers and this exchange of information. The initial investment by DHS was intended to be seed grant funding, with the expectation that localities and states would be able to continue to fund these fusion centers and sustain the information-sharing networks that have developed. In this period of economic downturn, many local budgets are being cut, and law enforcement agencies have had to rely increasingly on federal grant funds for CT and HS purposes.

CHAPTER FOUR

The Effects of the Focus on Counterterrorism and Homeland Security on Personnel and Training

Introduction

One of the key questions we sought to answer was how law enforcement's strategies have evolved to meet departments' long-term CT and HS requirements. This involves understanding what long-term organizational adjustments were made and how much the CT and HS focus has created new operational demands. It also involves understanding how much of an effect this focus on CT and HS has had on training and officer skills sets needed.

In this chapter, we begin with a discussion of the organizational adjustments made to accommodate the focus on CT and HS: A common theme across all of the case study LEAs was establishment of a HS unit or office and a CT unit, and having specialized response units with a HS focus in training and mission. We then discuss what effect the focus on CT and HS has had on officers' skill sets and other personnel-related issues. We also summarize the findings from our case studies on the effect on training of law enforcement personnel. Finally, we provide a summary of the benefits identified with respect to LEAs' long-term focus on CT and HS.

Organizational Adjustments

To create counterterrorism and homeland security units, case study departments made a number of organizational adjustments:

Immediately After 9/11, a Shift in Intelligence Focus to Include Counterterrorism

Following 9/11, there was a new emphasis on CT and HS and on regional communication, information-sharing, and cooperation among law enforcement. In response to 9/11, all the case study departments refocused their intelligence efforts. Whereas before the 9/11 terrorist attacks LEA intelligence activities were focused on gangs, organized crime, drug trafficking, and other related areas, after 9/11 LEAs began to focus on terrorism-related intelligence in addition to criminal intelligence. A Department B interviewee summarized how the department's focus had changed: "On September 10th, 2001 our focus was on gangs, traditional organized crime and prevention; on September 11th, 2001, we shifted our focus to immediate terrorist threats."

Two of the departments had a focus on CT prior to 9/11. A national political convention in the mid-1990s first prompted Department D to create an intelligence unit and develop CT intelligence capabilities. Department E prior to 9/11 already had a focus on CT through an interagency group, which was focused on threat analysis and intelligence information dissemination. This group had as its primary focus CT and eventually was replaced with the region's fusion center.

Striking a Balance Between Counterterrorism Intelligence and Criminal Intelligence

Immediately following 9/11, terrorism intelligence became an important focus. As described in Chapter Three, the fusion center model was adopted nationwide, and states and localities were encouraged to take an all-crimes/all-hazards approach to information-sharing and analysis and preparedness. Nine years after the 9/11 terrorist attacks, we found in our discussions with interviewees that in compliance with the guidance from the HSGP a balance is being achieved in terms of focusing on terrorism and criminal intelligence and in adopting an all-crimes, all-hazards approach. For example, Department B illustrated how its HS lieutenant's responsibilities had shifted over time as follows: "Before 9/11, our focus was 100 percent on organized crime; immediately following 9/11, it shifted to about 80 percent terrorism and 20 percent

organized crime; currently, the focus of our intelligence efforts are 60 percent terrorism and 40 percent organized crime."

All the departments commented on the linkage between criminal activities and terrorist-related activities. For example, Departments B and C discussed how, when looking at terrorist-related activity, police may also turn up information related to drug trafficking or document fraud and, vice versa, how focusing on drug interdiction or organized crime or white-collar crime also may have a terrorist nexus, such that illegal activities are being used to fund terrorist groups or activities. On the one hand, one could argue that the all-crimes approach taken by fusion centers' intelligence gathering and analysis of information enables LEAs to make these broader connections between different types of criminal activities and to define "terrorist-related crime" fairly broadly. On the other hand, because terrorist-related incidents are rare events, an all-crimes approach also enables fusion centers and departments to justify their investments in intelligence information-sharing and analysis.

Creation of Counterterrorism- or Homeland Security–Focused Units

All of our case study departments stood up new HS bureaus or units and/or CT units. In the aftermath of 9/11, the departments refocused their tactical intelligence units on CT. Eventually, these evolved into formal HS bureaus or divisions and CT units. For example, in the aftermath of 9/11, Department C initially started a HS unit and then more recently expanded this unit into a HS Bureau made up of 60–70 employees, with three sections, focused on infrastructure protection, operations intelligence, and CT intelligence. Department E created a new HS Division, which consolidated various functions, including the emergency operations bureau (which contains both its fusion center and CT unit). Department B formed a criminal intelligence and HS division in response to 9/11. Department D merged its research and evaluation office with its intelligence unit, which was then reorganized in 2005 to form its fusion center. Department A developed a regional response unit to do threat assessments, surveillance, and training to respond to incidents.

Use of Federal Funding for Fusion Centers

UASI funding was used by three of the case study departments to develop or enhance fusion centers. UASI funding, starting in 2005, enabled urban areas to establish fusion centers or regional intelligence centers. In the three case study departments that did so, the fusion centers grew out of preexisting units or structures:

- Department B's fusion center, established in 2006, grew out of its criminal intelligence unit, which later became a criminal intelligence division. Department B's fusion center was modeled after the structure and organization of another information-sharing multi-jurisdictional network: HIDTA. The fusion center is co-located with the department's emergency operations center.
- Department D's fusion center evolved from a tactical intelligence center that pre-dated UASI funding. This center was formed in 2004 and represented a merger of research and evaluation activities with the department's criminal intelligence unit. UASI grant funds were used to establish the fusion center staffed by both civilians and sworn personnel with a twofold mission: (1) fight organized crime and (2) focus specifically on HS and terrorism.
- Department E's fusion center replaced a TEWG that the department had in place pre-9/11. Department E's fusion center is organizationally located within its emergency operations bureau and is staffed by a lieutenant, two sergeants, five deputies, a crime analyst, and an information technology support analyst.

Internal Personnel Shifts

To create the fusion centers, CT and HS units, and other organizational structures, the five case study departments shifted law enforcement personnel internally. To staff the fusion centers and CT and HS units with sworn personnel, all the case study LEAs did so by reallocating personnel internally. Most of these positions involved shifting sworn officers at the middle to upper levels into these new units or structures; any hiring of new police personnel occurred at the bottom, as part of departments' regular recruiting process, and was not spe-

cifically related to CT or HS functions.[1] This result is consistent with findings from a national survey of law enforcement agencies that found that nearly 40 percent of LEAs in metropolitan areas reported internally reallocating agency resources after the 9/11 terrorist attacks to focus on CT and HS (Davis et al., 2004).

Specifically, Department C shifted sworn personnel internally to staff its HS bureau. This bureau has grown modestly in size from one sergeant and five detectives to two sergeants and ten detectives at the time of our interviews. Department A shifted ten detectives from patrol and investigations to staff its new response unit. Department E shifted both units and personnel from other parts of the department to help staff the HS division and also had personnel on loan from other departments.

We sought to obtained detailed information on the numbers and types of sworn personnel shifted to create these new units and how this evolved over time. The case study departments were able to tell us how many personnel currently were in the different types of units, but unable to tell us with any degree of accuracy the history of these adjustments in terms of number and types of personnel shifted. Thus, a key limitation of our study, which we will discuss further in Chapter Five, is that we were unable to obtained the detailed data necessary to describe changes in personnel over time as the case study departments' CT and HS structures evolved. This partly was due to the frequency with which sworn officers rotate through positions; changes in budgeted versus allocated personnel slots, with retirements affecting several of the departments (i.e., budgeted positions went unfilled due to personnel cutbacks and loss of personnel through retirements); the lack of data systems to allow this type of tracking to be done; and the fact that many adjustments have been made since 9/11. Nine years out, it was difficult for departments to make those distinctions. This is not an uncommon problem in studying law enforcement. Wilson, Rostker, and Fan (2010), in their study of recruitment and retention practices by law enforcement agencies, also encountered data problems, noting

[1] The exception is civilian analysts and other support personnel, whom the LEAs were able to leverage HS grant funding to hire (discussed further below).

that agencies tended to have a difficult time collecting and maintaining detailed personnel data due to scarce resources, other demands on staff's time, lack of electronic databases or databases that could not be easily aggregated, and narrow data collection scope by departments.

Specialized Response Units

The departments also created or expanded specialized response units related to HS. For example, Department B's bomb squad has doubled in size since 9/11. This department also created a crowd disbursement team following 9/11, and the department's special response group, which existed before 9/11, now has a capability to address CBRNE incidents. Finally, although not specifically focused on in the interviews, the various case study LEAs also were involved with regional tasks forces (including the UAWGs) specific to terrorist-related response, either as participants or helping to lead a regional task force.

Personnel Issues

In this section, we summarize the key findings from the case studies as they relate to personnel issues.

It Takes Time for Law Enforcement Personnel to Develop Specialized Expertise in Counterterrorism and Homeland Security

All of the case study departments commented on the type of personnel who select into the CT or HS units or divisions. Typically, they tend to be mid-career officers who are highly motivated to get into this area, and they often self-select into these positions. As noted by one chief, in the post 9/11 era, law enforcement is becoming more and more specialized, and departments need personnel with different types of expertise.

Personnel must learn about WMD preparedness and response to CBRNE, as well as major HS initiatives that may impact their jurisdiction. Personnel also need to learn about the intelligence process, including techniques for collecting raw intelligence, conducting open source research, evaluating source credibility, and understand the fusion center's detailed guidelines. In addition, personnel must develop

their local contacts and a good understanding of the local situation in terms of threats, key partners, and local priorities. These personnel also must identify training and courses that will help them prepare for a new position in CT or HS.

Developing such expertise requires a substantial upfront investment by departments to enable these officers to undertake the specialized training and time necessary to develop their knowledge and expertise in this area and to develop the contacts and information-sharing networks needed for these types of positions. As one commander noted, it can take a mid-career officer at least two years to become effective in CT.

The Typical Career Progression for Law Enforcement Officers Does Not Mesh Well with Counterterrorism and Homeland Security Needs

Polk and Armstrong (2001) provide a summary of the typical progression of a law enforcement officer's career. Following an initial assignment to patrol, traffic, or detention services, an officer's career path typically progresses to the next stage by assignment to a specialist position or through promotion in rank. Promotion in rank is necessary to increase one's level of supervisorial or managerial responsibility and to expand one's career path options. A specialist position, such as canine, Special Weapons and Tactics (SWAT), or as a detective, entails full-time performance of duties with specialized skills. A specialist may transfer laterally to other positions within a department; however, it is only through promotion in rank that an officer assumes more advanced positions within a department. This means that officers typically change jobs every couple of years and move into different types of positions. Thus, to keep advancing in his or her career, an officer who has been assigned to a CT or HS position, after investing significant time to develop his or her expertise and knowledge in these areas, must seek opportunities to promote to the next position after a few years.

As a result, the significant investments in training of these individuals can be lost just as they become most effective in CT and HS positions. As one interviewee noted,

> When people promote out of the fusion center, they take with them hundreds of hours of training, as well as their experience, expertise, contacts, and knowledge of the local HS/intelligence landscape. There is a need for more of a career track in HS/CT—it should not just be a stop in your career advancement.

Another commander estimated that his department had invested $500,000 in training of one officer who subsequently promoted out of a CT position. Another commander commented that it took him two years to develop the expertise and relationships to be effective in his HS position, yet he was about to be rotated out to a position unrelated to HS. Further, some officers may be reluctant to go into CT and HS because they fear that, once they obtain the security clearances[2] and specialized training, that they will become locked into these positions, making it more difficult for them to advance in their careers. Thus, the mismatch between the typical career progression in law enforcement and the demands of CT can affect the ability of a department to recruit into these positions and to retain officers in them. Four of the departments commented that there was a need for a specialized career track in CT/HS.

There Is a Trade-Off in Using Law Enforcement Personnel Versus Civilians as Intelligence Analysts

Intelligence analysts whose position is funded by UASI or SHSP grants must meet specific criteria laid out by DHS. These personnel either must have completed training to ensure baseline proficiency in intelligence analysis and production within six months of being hired or have served as an intelligence analyst for at least two years in a federal agency, the military, or state and/or local law enforcement intelligence unit (DHS, 2010c). In this regard, DHS ensures that these personnel meet the standards laid out in the Global Justice Sharing Initiative's *Minimum Criminal Intelligence Training Standards for Law Enforcement and Other Criminal Justice Agencies in the United States*

[2] According to one interviewee, it can take up to 18 months to obtain a security clearance.

(U.S. Department of Justice, Office of Justice Programs, Global Justice Information Sharing Initiative, 2007).

Three of the case study LEAs discussed the pros and cons of having law enforcement officers, as opposed to civilian personnel, trained as intelligence analysts. Two departments were using sworn officers as intelligence analysts. These interviewees felt that sworn police officers were uniquely positioned to understand the intelligence needs of law enforcement. Yet, a CT commander within one of these departments commented that police officers do not necessarily make the best analysts. In his view, the department takes the best investigators (e.g., from narcotics units) and tries to turn them into analysts. However, to be a CT intelligence analyst requires a different set of expertise and mindset than what law enforcement officers typically are trained for. He noted that it requires specialized training of sworn personnel to become intelligence analysts, yet there is no specific career track for this specialized area.

Interviewees commented on the pros and cons of using civilian analysts. On the plus side, interviewees noted that civilian analysts tend to have statistical backgrounds and, in some cases, intelligence backgrounds. Civilians also are more like to stay in these positions longer than a sworn officer, who typically rotates out of positions every couple of years to keep progressing in his or her career. On the downside, civilian analysts may not understand the law enforcement environment or the department's information needs. Further, one department interviewee felt that civilian contractors tended to be more expensive. One CT expert concluded that fusion centers or CT units optimally needed a combination of experienced officers, civilian intelligence analysts, and operators.

Grants Do Not Cover the Costs of Police Personnel for Some Counterterrorism or Homeland Security Activities

Four of the case study departments raised the issue that HSGP grants do not cover the costs of hiring police personnel for CT or HS activities. As summarized in Chapter Two, HSGP funding[3] can be used to

[3] Hereafter, we refer to "HSGP grant funding" and "HS grant funding" interchangeably.

hire new staff and/or contractors to serve as intelligence analysts or to pay for overtime and backfill expenses associated with HS-related planning, training, exercise, and equipment activities. However, these funds cannot be used to hire personnel to fulfill traditional public safety duties. The case study departments reported that, as a result, they have internally shifting sworn personnel to staff or expand CT and HS units or divisions.

In addition to the pros and cons of having civilian versus sworn personnel in intelligence analyst positions, there are additional considerations. HS funding guidance explicitly states that applicants should develop sustainability plans for continuing efforts once the funding period has ended. For those departments that have not identified internal or external sources of funding to maintain intelligence analyst positions, once their grant ends these positions may have to be cut. In general, LEAs are more likely to eliminate civilian staff positions than sworn personnel when local budget reductions occur. For example, an interviewee at Department B noted that over the past several years his agency had lost 200 civilian personnel in order to retain sworn personnel for patrol functions. Another department wondered about the effect of CT capabilities in general being dependent on grant funding. One commander expected that once his department's UASI funding ended, it would have to reduce or eliminate civilian analytic staff and make do with law enforcement officers filling these positions. He postulated that as a result, the department may have to take a less regional focus on CT. These comments illustrate that departments are concerned about how to sustain intelligence analytic capabilities once HS grant funding ends. They also reflect the fact that interviewees either weren't aware of or disagree with the requirement that grant recipients must develop sustainability plans to continue activities (e.g., training, equipment, or analytic capabilities) once the funding has ended. This issue of long-term sustainment of preparedness capabilities developed under a grant program is not unique to law enforcement, but it gets at the tension between the division of local and state versus federal responsibilities when it comes to homeland security.

Compounding this issue is the fact that all but one of the departments indicated that over the past several years they have had budget

hiring freezes or were being affected by retirements, which meant that CT and HS personnel and units had to be obtained by internally shifting departmental resources. For example, Department B mentioned difficulties in recruiting and the impact of retirement on the size of their force, which, between 2004 and 2008, decreased by 700 officers. Department E had 10,400 budgeted positions, but only 9,400 slots were actually filled. Department C has only grown by 62 positions since 2004. Only Department A was in the process of expanding its force, with the expansion being driven by the growing population in the surrounding metropolitan area, not by HS or other requirements. Combined, the hiring freezes plus retirements have made the case study departments even more strained in terms of retaining and having sufficient numbers of CT and HS sworn personnel.

It Is Difficult to Make the Case Locally for New or Dedicated Police Personnel for Counterterrorism and Homeland Security Activities

In terms of investments in CT and HS, as more and more time has passed since the 9/11 terrorist attacks, LEAs have found it more and more challenging to make the case, both internally and to local government, that investing in CT and HS is more important than having sworn officers dedicated to routine crime-fighting or other local priorities. CT and HS in general must compete with other priorities within a department, such as addressing gang crime or violent crime in a region.

For example, Department E started a terrorism liaison officer program. This required taking from each station an existing patrol officer position to create the new program. However, as noted by the interviewee, from the station captain's perspective: "What does the [terrorism liaison officer] do for me? It means I've lost an officer in a radio car to this position." Another interviewee in charge of a CT unit similarly noted, "I've heard senior leadership say they don't know what CT does, what it accomplishes, how it helps them." In their view, it does not help leadership make the case to local officials about what the department is doing to combat gang crime, for example, or other high-priority types of crime for their county. The same interviewee commented that city mayors tend to view fighting crime as being more important than CT

and HS: "Our chief would [be more likely to] get fired for too high crime rates than he would for HS issues."

In the case of Department E, which provides contract policing services for a number of cities within the county (half of this department's sworn force provides contract services), there is even less flexibility to shift sworn personnel. The contract cities are interested in basic policing functions and do not feel that specialized units, including those focused on CT or HS activities, should be their responsibility.

Training Issues

In a 2004 national survey of law enforcement agencies on terrorism preparedness conducted by the RAND Corporation, LEAs were asked to rank the incident types (chemical, biological, radiological, nuclear, or conventional explosives) they considered most important to prepare for (Davis et al., 2006). LEAs ranked as their first priority conventional explosives, followed by chemical as their second priority, and biological incidents as their third priority. For their first priority incident (conventional explosives), 54 percent of LEAs indicated it was a somewhat or a high priority to spend departmental resources to prepare for this type of incident.

The Bureau of Justice Statistics' (BJS's) 2002 and 2006 surveys of state and local law enforcement training academies provide information on the extent of terrorism-related training law enforcement personnel receive and how it has changed over time (Reaves, 2009).[4] Table 4.1 summarizes the findings from the two surveys. Between 2002 and 2006, there were sizable increases in the percentage of law enforcement academies providing training on terrorist-related topics. In terms of emergency response training, the percentage of academies providing training on response to incidents involving WMD increased from 57 percent to 70 percent; for training on post-incident stabiliza-

[4] In addition to basic recruit training, 87 percent of training academies in 2006 also provided in-service training for active-duty officers and officers in specialized units, such as SWAT.

Table 4.1
Terrorism-Related Training Provided by State and Local Law Enforcement Training Academies

	Percentage of Academies Providing Training	
Terrorism-Related Topics	**2002**	**2006**
Response to WMD	57	70
Understanding the nature of terrorism	48	62
Relevant federal, state, and local agencies	44	57
Interagency information-sharing	33	44
Intelligence gathering	28	44
Role of anti-terrorism task forces	15	35
Related technology/equipment	21	33
Post-incident stabilization of community	13	31
Intelligence analysis	11	26

SOURCE: Reaves (2009).

tion, the increase was from 13 percent to 31 percent. Although not asked about in the 2002 survey (and not shown in Table 4.1), training on the NIMS/Incident Command System (ICS) was provided by 70 percent of the academies in 2006 (Reaves, 2009). In terms of CT-related training, Table 4.1 shows that 44 percent of LEA training academies provided training on intelligence gathering and interagency information-sharing in 2006; 35 percent on the role of anti-terrorism task forces; and 26 percent on intelligence analysis.

The type of specialized CT and HS training and courses offered at the federal level are primarily by DHS through its National Domestic Preparedness Consortium (NDPC).[5] DHS established NDPC as its principal mechanism for delivering training to state and local responders. Seven organizations make up the consortium. Of particular relevance to law enforcement are the following:[6]

[5] See National Domestic Preparedness Consortium, n.d.

[6] The other consortium members include the National Center for Emergency Response in Surface Transportation (NCERST), Pueblo, Colorado; Counter Terrorism Operations

- Louisiana State University's National Center for Biological Research and Training's Academy of Counter-Terrorist Education, which provides training to law enforcement on awareness training, performance-level training, incident management, and planning
- New Mexico Institute of Mining and Technology Energetic Materials Research and Testing Center (EMRTC), which provides law enforcement training on incident response to terrorist bombings, prevention and response to suicide bombings
- Texas A&M University's National Emergency Response and Rescue Training Center, which provides law enforcement training on terrorism awareness, incident management, threat and risk assessment, and response to bombing, WMD, and terrorist incidents
- Center for Domestic Preparedness, which provides training on the management and remediation of WMD events.

In addition, there has been a proliferation of contractors offering training courses to law enforcement. LEA training academies provide training through a combination of bringing in contractors with expertise, having LEA instructors attend DHS training and then teach the course at the LEA academy, or offering their own courses. Also, specialized units such as bomb, SWAT, aviation, or canine units receive specialized training.

Lastly, law enforcement could use HS funds to develop their own training courses. However, as noted in the FY2006 HSGP guidance, these training courses had to adhere to the Office of Grants and Training *Emergency Responder Guidelines* and the office's *Homeland Security Guidelines on Prevention and Deterrence* (DHS, 2005, p. 91). Further, training should address specific capabilities and related tasks articulated in the Target Capabilities List and the Uniform Tasks List and comply with all applicable federal, state, and local regulations, certifications, guidelines and policies.

Support (CTOS)/The Nevada Test Site, Las Vegas, Nevada; and the University of Hawaii's National Disaster Preparedness Training Center.

In this subsection, we summarize the key training issues we uncovered in our interviews with the five LEAs.

The Focus of Training Has Shifted, and the Number of Training Courses Has Proliferated

The focus of training has shifted from response to large-scale emergencies involving man-made or natural disasters to terrorist threat, WMD awareness and response, use of specialized PPE and other technology such as radiological detectors, the role of law enforcement in a CBRNE scenario, and incident management and response. As one department noted: "Before 9/11, we always had field force training and critical incident management; since 9/11, we have had more specific courses on WMD awareness and response."

In addition, the number of training courses being offered has proliferated, making it challenging to identify the right training opportunities and assess the quality of the training offered for CT and HS. For example, FEMA's Responder Knowledge Base lists 154 FEMA preparedness grants for law enforcement and 60 courses on NIMS/IMS (FEMA, 2010c). This does not include training being offered by private firms not part of the NDPC. This suggests that the search costs of finding training opportunities for these departments have significantly increased since 9/11. Interviewees from three of the case study departments commented that because there are a large number of training packages and vendors available, the search time for the trainers to identify opportunities was quite high. Further, smaller departments tend to turn to the case study LEAs for guidance on what training is available and needed for law enforcement.

The case study LEAs also expressed concerns about the type of training offered by DHS and the lack of flexibility in grant programs to tailor the training to meet their needs. For example, interviewees from three departments felt that the training offered was too basic in some cases and wanted the flexibility to identify other specialized training to meet their needs. Some spent search time and training time to seek out specialized training expertise, because they felt that the DHS training offered was too basic. Yet, training developed by a LEA or non-DHS

approved training programs may not be covered by DHS grant funding if it does not meet specific requirements. One interviewee commented,

> There should be allowances for larger departments to create their own training and bring in specialized expertise. Good cops will meet the experts that offer training. . . . When we have identified particular training opportunities, we just can't get it approved through DHS and ODP. It is very frustrating to send up training requests and have them denied.

An example of specialized training that departments wanted is for bomb squads. One unit was particularly interested in learning from military munitions experts in Iraq about their experiences, expecting that law enforcement may encounter similar threats here. However, the unit felt that the FBI and DHS were limiting its ability to get this type of experience, either by classifying this information or by not allowing more tailored training to be funded through their grant programs. A Department B interviewee felt that DHS was trying to control too much in terms of what training law enforcement needed. One department noted that, for its jurisdiction, the primary threat is toxic chemicals, yet it is not getting enough training in this area, at the expense of a focus on bioterrorism.

In addition, there are the costs to the trainers of trying to incorporate new HS optional or mandated training into the regular law enforcement training schedules. For example, to build into the core curriculum basic WMD/terrorism awareness and response training and more advanced CT and HS training requires departmental trainers to make room for these courses and to search out, and in some instances develop their own, CT and HS courses (as well as become certified as trainers in a particular area).

Interviewees from two of the case study departments felt that the grant programs were inflexible in terms of what training would be supported. For example, an interviewee from a response unit within Department B commented that a specialized unit may have already received certain types of training and instead be in need of equipment. Department D's grants manager commented,

> Local police departments should be treated more as partners in the process and be able to provide input to DHS grant programs as to what training they need. The Feds should look at us as mature partners in the process and let us dictate to some degree how we spend the training funds.

This individual felt that block grants would be a better option rather than detailed guidelines on what training and programs a department can receive. Another interviewee from this department felt that the training exercises put on by federal officials often were unrealistic and focused on "catastrophic" events, which would overwhelm local capabilities. In that LEA's view, smaller exercises would be more beneficial to see how well the incident management and response system worked and for fine-tuning it.

In response, as noted earlier, some departments were turning to private police foundations to fund specialized training (and purchase equipment) that they felt was not easily attainable through HS grant programs.

Homeland Security Training, Especially for NIMS Compliance, Can Be Burdensome

Three of the five LEAs commented on the challenges of fitting in HS training with the routine training a department must undertake. The perception was that there were more training requirements now and that meant sometimes having to cut optional training to make room for the new training related to CT and HS. For example, two departments said to make room for this new training they ended up cutting their active shooter training.

The most frequently cited example of this had to do with the NIMS requirement that states and urban areas be compliant with requirements to implement this new system. Homeland Security Presidential Directive 5 (HSPD-5) has as its main purpose enhancing the ability of the United States to manage domestic incidents by establishing a single, comprehensive national incident management system (DHS, 2009b). HSPD-5 directed that the Secretary of Homeland Security develop and administer a National Response Plan (NRP) and NIMS.

NIMS was intended "to provide a consistent nationwide approach for Federal, State, and local governments to work effectively and efficiently together to prepare for, respond to, and recover from domestic incidents, regardless of cause, size, or complexity" (DHS, 2009b).

NIMS

> provides a systematic, proactive approach to guide departments and agencies at all levels of government, nongovernmental organizations, and the private sector to work seamlessly to prevent, protect against, respond to, recover from, and mitigate the effects of incidents, regardless of cause, size, location, or complexity, in order to reduce the loss of life and property and harm to the environment. (FEMA, n.d.-a)

NIMS is an initiative by DHS intended to establish a comprehensive, nationwide systematic approach to incident management that includes

> A core set of doctrine, concepts, principles, terminology, and organizational processes for all hazards. It is not a detailed operational or resource plan. Scalable, so it may be used for all incidents (from day-to-day to large-scale). Essential principles for a common operating picture and communications interoperability. Standardized resource management procedures. (DHS, 2009b)

Under HSPD-5, the adoption of NIMS is a requirement to receive federal preparedness assistance, through grants, contracts, and other activities (DHS, 2009b). Table 4.2 summarizes the NIMS training requirements for a department to become certified (specifically, Table 4.2 shows how the Virginia Department of Criminal Justice Services has interpreted the requirements).

NIMS training was seen as valuable by the interviewees in terms of creating a common language by which agencies involved in a multiagency response to major events could more effectively communicate and manage large-scale incidents. The NIMS training requirement also represented, however, a substantial undertaking for a department. As noted above, HSPG grant programs required that states and localities be NIMS-compliant in order to receive grant funding for the sub-

Table 4.2
National Incident Management System Training Requirements

Training Requirement	Who Must Complete (General)	Who Must Complete (Law Enforcement Personnel)
IS 700: NIMS	All personnel with a direct role in emergency preparedness, incident management, or response including volunteers	All sworn personnel
IS 100 or IS 100.LE: Introduction to ICS (prerequisite for ICS 200)	All personnel at the entry, first line supervisor, middle management, command and general staff levels of emergency management operations including volunteers	All sworn personnel
IS 200: Basic ICS (prerequisite for ICS 300)	All personnel at the first line supervisor, middle management, command and general staff levels of emergency management operations	Immediate supervisors who manage daily operations often from field locations
ICS 300: Intermediate ICS (prerequisite for ICS 400)	Middle management personnel, command staff, section chiefs, strike team leaders, task force leaders, unit leaders, division/group supervisors, branch directors, multi-agency coordination system/emergency operations center staff	Commanding Officers and their Deputies/Assistants; Captains and Lieutenants; Special Team Leaders
ICS 400: Advanced ICS	Command and general staff, incident and area commanders, emergency managers, and multi-agency coordination system/ emergency operations center managers	Chiefs of Police, Sheriffs, their Chief Deputies, Shift Commanders, and others who will serve as an Incident Commander or ICS Section Chief
IS 800.B: National Response Framework: An Introduction	All state officials with emergency management responsibilities as well as those who interact with the Emergency Support Functions All local governments officials with overall emergency management or emergency planning responsibilities	Only those who also have emergency management responsibilities; does not pertain to law enforcement planning. Useful for officers designated to work in an emergency operations center.

SOURCE: Virginia Department of Criminal Justice Services, 2010.

sequent year. Three of the case study departments commented that the requirement to have all of their sworn personnel go through basic NIMS training and then have command staff receive additional training was a substantial undertaking and could take 2–3 years, depending on the size of the department. NIMS training had to be squeezed in-between a department's routine law enforcement training requirements. As one interviewee noted, "By the time we certified everyone in our department, we were already behind for the next round of training." Although HS grant funding does provide support for NIMS training, several departments commented that overtime costs were substantial. One interviewee mistakenly asserted that NIMS was an unfunded mandate.

Major Events Have Been a Catalyst for Counterterrorism and Homeland Security Training

In addition to 9/11, other major events also have served as an impetus for innovations in equipment and technology and in training and coordination. For example, interviewees cited the 1994 Democratic National Convention, the Super Bowl, and other major events as having spurred their departments to acquire new technology and equipment (as well as address the need for better incident management and coordination and improvements in interoperability). Some of these events occurred prior to 9/11, whereas other events occurred shortly afterward and served to highlight key gaps in capabilities that have led departments and jurisdictions to address them. In addition, to keep HS capabilities current, departments utilize these events to practice using equipment and CBRNE-related technology and practice incident management and response.

Summary of Benefits

Here, we provide a qualitative summary of the benefits associated with case study LEAs' long-term focus on CT and HS (see Table 4.3).

In considering the advantages associated with the fusion center model and improvements in coordination and information-sharing,

Table 4.3
Summary of the Benefits of a Focus on Counterterrorism and Homeland Security

Domain	Description
Overall cultural or paradigm shift	Long-term focus on CT and HS represents a cultural or paradigm shift toward greater collaboration, including less-territorial attitudes and more openness in sharing of information. Fewer turf issues among local, state, and federal law enforcement agencies.
NIMS training	Improved incident management of large-scale events in general (e.g., major sporting events, political events, or major holidays). Improvements in incident management involving multi-agency response, as well as these events allow law enforcement and partner agencies to practice CT and HS response plans.
Other CT and HS training and specialized training	HS training department-wide has improved the cops on the street awareness of WMD and what information to look out for and how to report it to their chain of command. Improved departments' capabilities to respond to CBRNE-related incidents or other types of terrorist threats. HS training is now part of departments' core curriculum with department-wide personnel being trained on WMD awareness and other components of departments receiving more specialized training.
Relationship building with the local community	Increased rapport and relationship building with community leaders. Assignment of special community liaison officers to do outreach to the community, private sector, and to serve as a point of contact for HS-related information.
Specialized tactical response units	Specialized tactical response units that were developed in response to 9/11 to address CBRNE and terrorist-related attacks in general has had a spillover effect in that these units have helped law enforcement response capabilities in general for different types of incidents and emergencies. Specialized response units particularly have benefited from HS grant funding in terms of additional investments in equipment and training.
Information-sharing	Improved information-sharing around routine crime and terrorist-related incidents
Incident management	NIMS in particular, as well as other specialized training, has improved incident management of large-scale events.

Table 4.3—Continued

Domain	Description
Grants management	The need to have dedicated grants management personnel to manage HS grants and application process has also resulted in capacity-building within the departments to manage grants in general, and so the marginal costs of managing other grants may have been reduced.
	It also led to investments in the development of grants management systems (e.g., some departments for the first time set up formal grant databases) to enable departments to better track grant funds and manage grants.
Fusion centers and regional coordination	Improved regional coordination and better coordination among local law enforcement agencies and other stakeholders agencies involved in CT and HS.
	Increased coordination and cooperation among law enforcement agencies and other stakeholder agencies concerned with CT and HS.
	Improved information-sharing of crime data benefits not only CT and HS, but also routine crime-fighting. Has improved departments' abilities to address cross-jurisdictional crime and analysis of crime patterns.
	Improved analytic capabilities, although it varies across departments and degree to which information-sharing takes precedent over analysis of information.
	All-hazards approach and NIMS training means that departments are better able to coordinate and manage large-scale events involving a multi-agency response.
	Fusion centers have helped to routinize/formalize the diffusion process. In addition, by expanding the fusion centers' networks to include other law enforcement agencies in a region this has led to improvements in informal information-sharing among agencies. Because fusion centers are connecting a number of law enforcement agencies in a region, it has also led to the development of informal relationships across departments (captain in department y now knows who to call in department x with questions, requests for information, etc.).
Equipment and technology	HS funding allowed LEAs to purchase equipment and standardize the equipment that all departments were using—however, this came at a significant cost, as discussed above.
	Specialized tactical response units in particular benefited from the grant funding that enabled purchasing of equipment such as PPE and radiological detectors.
	LEAs also used HS funding to leverage technology including upgrades to their communications systems to improve interoperability; camera network system for Department D; communications vehicles; bomb robots; laptops to improve virtual coordination within fusion centers.

Table 4.3—Continued

Domain	Description
Equipment and technology (continued)	Technology also benefited non-case study LEAs who participated in the fusion centers and benefited from how the case study departments utilized UASI funding to improve coordination and connectivity with surrounding jurisdictions.
	LEAs also utilized software (e.g., COPLINK) to help generate leads more easily.
	Purchasing of equipment also had an impact on morale of employees in that they now felt they had the equipment needed to do their CT and HS and tactical response jobs.
Prevention of terrorist-related incidents	This category is the most difficult to quantify. The departments all cited how their activities impacted routine crime-fighting, helped to connect the dots, etc. Difficult to quantify prevention. For example, one department postulated that at least 5 significant terrorist-related incidents had been prevented. However, due to security concerns, departments were reluctant to give more detailed information. Even so, it was difficult for departments to estimate the magnitude of events prevented.

Department E commented that the fusion center has helped them develop closer working relations with the FBI and helped to create an increased awareness of the need to share information. Interviewees from three of the case study departments noted fewer turf battles and a realization that they each needed each other's information. In addition, the focus on CT and HS has brought law enforcement and other key local and regional stakeholders together to develop the relationships that did not necessarily exist prior to 9/11 to address specific threats. Whereas prior to 9/11/ intelligence was focused on criminal activities, within law enforcement there is now a recognition of the longer-term view that CT intelligence requires. In addition, as terrorist networks grow, law enforcement has created strong networks with other LEAs domestically and internationally to share information and common goals.

Better coordination and information-sharing on routine crime and cross-jurisdictional crime was also cited. As discussed in Chapter Three, this includes examples of cases that were solved because surrounding departments through the fusion center network were able to share information that allowed them to identify cross-jurisdictional crimes. Information-sharing among law enforcement agencies of crime

data in general has enabled agencies in a region to look beyond their jurisdiction to better understand cross-jurisdictional crime and sharing of information to better connect the dots to solve cases.

Simply having increased police presence at the airports or ports focusing on HS issues also had a spillover effect in terms of reducing the number of thefts at the airport and improving drug interdiction capabilities at the port. For example, Department B noted that the organization of its fusion center had increased their capacity to identify and connect the dots on crime, in general. That is, while looking at crime related to terrorist activity, an officer may find another type of crime such as drug trafficking information. The all-crimes, all-hazards approach adopted by fusion centers meant that the case study LEAs recognized better the nexus between criminal and terrorist-related activities.

Case study LEAs also realized some key benefits as a result of receiving HS grant funding to purchase equipment and technology. For example, several case study departments cited that UASI funding had come at a crucial time to enable them to purchase new radios, to upgrade their emergency operations center from laptops to a sophisticated "war room," to purchase PPE for CBRNE, and to improve communications interoperability. As one interviewee commented, "The most outstanding thing since 9/11 is the equipment with many technological advancements occurring that departments now have the ability to purchase bomb suits and state-of-the-art equipment for their tactical response units." But as discussed in Chapter Two, using HS funds for these purposes also came with some costs, such as lack of flexibility in purchasing cutting-edge, specialized equipment these departments needed, lack of funding to cover maintenance and repair costs, onerous procurement processes, etc.

Interviewees also commented the focus on CT and HS and having dedicated personnel involved in community outreach activities has led to improved community relationships and the building of trust. For example, interviewees from Department C said that, as a result of establishing a rapport with local community leaders following 9/11, the department was better able to communicate with community leaders and plan the support for a major political demonstration without any

incidents. We did not interview any community members in these different localities and so were unable to verify or compare and contrast their perspective with that of the case study LEAs (especially those segments of the community that police were focusing their relationship-building efforts to develop trust and information-sharing networks).

In the research literature, this issue has received some attention. Jonathan (2010) examined how public opinion of police CT and HS-related activities may vary. He examined several competing hypotheses: (1) extensive HS responsibilities may change the strategies and character of policing, resulting, for example, in less transparency and accountability and thereby potentially weakening public perceptions of the police; or (2) extensive police involvement in CT may enhance public perceptions of the police and police legitimacy if the public's fear of terrorism is high and the threat is perceived as severe and more acute than other threats. Jonathan used survey data to examine changes in the attitudes of the majority Jewish population in Israel toward the Israeli Police over the period of the Second Palestinian Intifada. He found that positive attitudes toward the police rose and peaked during the time period of the highest terrorism threat, but that it followed a "rally" effect, with a decline once the crisis had passed and the public's priorities and expectations of their police force began to change. One might postulate a similar effect for LEAs in this country.

Finally, at the start of this project, we hypothesized that the LEAs' focus on CT and HS may have a positive effect on recruitment and retention. Similar to how community policing attracted applicants who were interested in community service versus traditional policing careers, we hypothesized that CT and HS may also attract individuals to law enforcement. None of the case study LEAs felt that CT or HS has had a direct positive or negative impact on recruitment and retention, citing instead, a number of other factors that traditionally influence these areas. As several interviewees noted, the reasons for individuals joining the police force remain the same as in the past. In terms of retention, retirements (e.g., the bubble now hitting from the hiring of police personnel during the COPS era) along with the economic downturn appear to have the greatest impact.

CHAPTER FIVE

Framework for Estimating the Potential Costs Associated with Shifting Law Enforcement Personnel to Focus on Counterterrorism and Homeland Security

Introduction

In the previous chapter, we examined some of the qualitative costs and benefits of LEAs pursuing a CT and HS strategy, but it is also possible to quantitatively examine the potential costs of pursuing such a strategy. CT and HS can be financially costly activities for targeted societies. By striking at a variety of targets with a range of methods (such as bombings, kidnappings, or assassinations), terrorists attempt to generate an atmosphere of pervasive fear, and by making such attacks seem random, law enforcement must spend significant resources to protect a wide range of potential targets (Hirshleifer, 1991). For example, CT efforts for the city of New York alone were estimated at about $180 million per year in 2005 (Kelly, 2005), and the implementation of CT and HS programs adds further expenses; a single week at orange (high) alert cost the New York City Police Department and the city of San Francisco an estimated $5 million and $2.6 million, respectively (Holden, 2003).

Prior studies examining the costs and benefits of CT and HS expenditures typically attempt to contrast these macro-level expenses with estimates of the expenses saved by averted terrorist incidents. Estimating the value of prevention (i.e., benefits) is more difficult than estimating the cost, although broad attempts have been made. For exam-

ple, Zycher (2003) devised a scale for the extent of terrorist attacks that includes moderate, severe, and nuclear, with economic impact costs resulting from deaths, injuries, property damage, and reduced economic output ranging from $12.8 billion (moderate), to $212.8 billion (severe), to $540.8 billion (nuclear).[1] In addition to estimating the direct economic costs of damage and lost life, Zycher considers other costs associated with such attacks, including those that affect tourism, foreign direct investment, savings and consumption, investment, stock markets, foreign trade, and the urban economy—all of which are also negatively affected by terrorist acts. (See Frey, Luechinger, and Stutzer [2004] for a review.)

However, to our knowledge, there have been no attempts to evaluate the cost implications of CT and HS efforts at the more micro-level, such as at the local LEA level, where CT and HS efforts are increasingly involved. Specifically, since 9/11 LEAs have increased the resources are devoted to CT and HS efforts (Davis et al., 2006), but that devotion of resources is often done within overall budget constraints, which leads to restructuring of the existing police force.

In this chapter, we attempt to estimate some of the financial cost implications of CT and HS efforts at the local level, using the case study LEAs in the study for that analysis. Specifically, we present an analysis that employs a common analytic approach for estimating the potential financial costs stemming from reduced attention to routine crimes. We first discuss how we did the cost estimation, then we discuss our results. We do not specifically attempt to estimate the potential financial benefits of CT and HS efforts, but we do discuss our cost estimates in relation to the work by Zycher (2003). A key limitation to this analysis is that the case study departments were unable to provide data to allow us to quantify the number of personnel shifted over time. Therefore, our goal here is simply to provide a framework for others interested in estimating the potential costs of shifting law enforcement personnel away from traditional public safety roles to CT and HS activities.

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[1] Unless otherwise stated, all dollar values are adjusted to reflect 2009 dollars.

Method for Cost Estimation at the Local Level for the Case Study Departments

Of our case study departments, two had a terrorism-related intelligence unit prior to 9/11. Following 9/11, all the case study departments refocused their intelligence efforts from criminal intelligence to include in addition terrorism-related intelligence and created new HS bureaus or divisions, CT units, and focused specialized response teams capable of responding to terrorist-related incidents, including those involving WMD. Also, as discussed in Chapter Three, using UASI funds, they stood up regional fusion centers.

To create these new CT and HS units and bureaus and staff the fusion centers, the case study LEAs reported shifting personnel internally from other activities to staff these new positions. This involved combining or refocusing existing units, shifting personnel to create or expand units, and, in a number of cases, shifting personnel at the mid-to-upper levels within a department to these positions. Further, because HS funding does not cover the cost of hiring new personnel, the departments for the most part did not have the flexibility to hire new sworn personnel for these activities; grant funding covered only the hiring of civilian contract personnel or analysts. Thus, in considering the collateral cost that LEAs incurred by focusing on CT and HS, it is important to recognize that for many departments (including our case study LEAs) the investments in CTand HS since 9/11 have come largely from internally shifting personnel and resources out of routine crime prevention (including patrol and investigative activities) to address CT and HS.

When it comes to thinking about how to estimate costs at the local level, we start with the recognition that a collateral cost of restructuring LEAs to meet CT and HS needs is that routine police patrol presence may be reduced and that the reduced patrol presence may lead to increased crime—a possibility that does not appear to have been previously considered in the CT and HS literature. Given this, we estimate the cost associated with the new crimes committed following a reduction in the patrol force nationally and in our five case study LEAs. We considered different methods of how to calculate the costs

associated with the reallocation of police to work on terror-related tasks that take them away from routine crime control.

Specifically, we examine the direct and indirect costs of several specific crimes that have been shown to be responsive to the size of the police force. First, we estimate the number of additional crimes that result from a hypothetical fixed reduction in the routine police force patrol (1 percent), and then we calculate the direct costs to the criminal justice system and the indirect costs to victims resulting from those crimes. The specification of a 1 percent reduction in the police force due to new CT and HS tasks is not linked to the actual change in routine patrol forces observed for a specific LEA, but it provides a useful metric for subsequent cost calculations that can be applied to LEAs more broadly.

A literature examining the effects of police on crime has developed (e.g., Corman and Mocan, 2000; Evans and Owens 2007; Levitt 2002) that identifies significant reductions in certain types of crimes in response to increased police presence. The literature reports measures, called "elasticities," which are measures of the percentage change in the crimes that are associated with a given percentage change in the size of the police force. In work done recently at RAND, Heaton (2010) reports the combined elasticity estimates of multiple published studies.[2] The FBI has identified several offenses that it deems "index crimes," which serve as a basic measure of the occurrence of serious crimes: violent crimes (including homicide, rape, robbery, aggravated assault) and property crimes (including burglary, larceny, and motor vehicle theft). In our analysis, we focus on the four index crimes that have previously been shown to respond significantly to the size of the police force: aggravated assault, robbery, burglary, and motor vehicle theft.[3]

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[2] To do so, Heaton used a meta-analysis with inverse-variance weighting to account for the different levels of precision among studies.

[3] Larceny and rape have consistently been shown to be unresponsive to police force size, and only Levitt (2002) identifies a significant elasticity between homicide and police force; Evans and Owens (2007) and Corman and Mocan (2000) do not. We do not consider homicide for reasons we discuss in the conclusion.

In conjunction with the estimation of changes in crimes associated with changes in size of the police force, we refer to the cost of crime literature that has followed from Miller, Cohen, and Wiersema's (1996) highly influential and frequently cited cost-of-crime study. The study attempted to identify all the individual costs associated with specific crimes to derive an "average cost" for an individual crime of a specific type. Miller, Cohen, and Wiersema's (1996) study used a variety of sources to identify each cost component: The National Crime Victimization Survey (NCVS) and insurance claim processing costs were used to estimate property loss costs; medical costs were obtained from victim reports, hospital administrative records, and worker's compensation data; mental health treatment and first-responder investigative costs were obtained from surveys and published administrative cost data; productivity losses were estimated from NCVS and wage data; and data on wage premiums for occupational risk and jury awards for pain and suffering were used to estimate the intangible costs of each crime to victims. The original cost estimates have since been updated to reflect more recent data and to include costs to the criminal justice system as well as to victims, which were not originally estimated (Cohen and Piquero, 2009; McCollister, French, and Fang, 2010). These updated cost estimates include data from the National Incident Based Reporting System on individual crime incidents and property loss, as well as Bureau of Justice Statistics information on police costs and corrections costs.

Thus, we first estimate the number of additional crimes associated with changes in the size of police presence, then we multiple these crimes by their average costs. For our analysis, we break down crime costs into direct costs and indirect costs. The direct costs of crime are the local, state, and federal government funds spent on police protection, legal and adjudication services, and corrections programs, including incarceration. Indirect costs of crime are considered to be the tangible direct economic losses suffered by crime victims, including medical care costs, lost earnings, and property loss/damage, as well as intangible nonmonetary losses such as fear, pain, suffering, and lost quality of life.

We base our estimates of tangible costs on estimates by McCollister, French, and Fang (2010), while we base our estimates of total cost to victims (tangible and intangible) on the mean estimates of McCollister, French, and Fang (2010) and Cohen and Piquero (2009).[4] While the types of indirect (victim) costs considered here are not explicitly borne by government, let alone specific LEAs, it is important to consider both direct and indirect costs within a policy context. If costs were based strictly on the costs to LEAs or the criminal justice system more broadly, we would underestimate the cost/benefit ratio by ignoring the broader social costs of crime—especially since intangible victim costs represent the largest cost component for violent crimes. At the same time, it is important to note that our cost-of-crime estimates exclude many of the factors that Zycher (2003) considered in his cost-of-terrorism estimates, such as real estate values and economic activity; we have specifically limited our analysis to the types of costs most often identified in the cost-of-crime literature. Our approach to estimating these specific types of costs associated with CT and HS efforts is an extension of the literature on police presence effects on crime—it is not exclusive to the CT and HS mission, and it can easily be applied to any situation where a law enforcement department has to shift or reallocate resources to take on a new or expanded role in some other area of police work.

Findings from the Cost Estimation

Table 5.1 presents the specified costs associated with crimes resulting from a hypothetical 1 percent decrease in the size of the sworn police force (officers who are allowed to carry weapons and make arrests) at the national level and for each of the case study LEAs. As noted, the specific crimes we consider are aggravated assault, robbery, burglary, and motor vehicle theft. Aggravated assault refers to an attack or attempted attack with a weapon, regardless of whether an injury occurred, or an

[4] Cohen and Piquero (2009) did not report tangible victim costs as distinct from total cost to victims.

Table 5.1
Costs Associated with Crimes (in 2009 dollars[a]), Assuming a 1 Percent Decrease in Force Size

		Direct	Indirect		
Type of Crime	No. of New Crimes	Criminal Justice	Tangible Cost to Victims	Total Cost to Victims (tangible costs and quality of life)	Total Crime Cost
Assault					
National	2,438	27,449,000	21,082,000	172,210,000	**199,659,000**
Dept. A	22	248,000	190,000	1,556,000	**1,804,000**
Dept. B	38	432,000	332,000	2,709,000	**3,141,000**
Dept. C	15	174,000	134,000	1,093,000	**1,267,000**
Dept. D	12	130,000	100,000	814,000	**944,000**
Dept. E	32	359,000	276,000	2,254,000	**2,613,000**
Robbery					
National	2,616	27,963,000	8,577,000	49,833,000	**77,796,000**
Dept. A	29	312,000	96,000	556,000	**868,000**
Dept. B	63	671,000	206,000	1,196,000	**1,867,000**
Dept. C	16	167,000	51,000	298,000	**465,000**
Dept. D	14	151,000	46,000	269,000	**420,000**
Dept. E	36	387,000	119,000	690,000	**1,077,000**
Burglary					
National	8,978	29,070,000	12,156,000	16,770,000	**45,840,000**
Dept. A	60	195,000	82,000	112,000	**307,000**
Dept. B	109	353,000	147,000	203,000	**556,000**
Dept. C	37	121,000	50,000	70,000	**191,000**
Dept. D	14	46,000	19,000	26,000	**72,000**
Dept. E	65	210,000	88,000	121,000	**331,000**

Table 5.1—Continued

Type of Crime	No. of New Crimes (under a 1% decrease in force size)	Direct	Indirect		
		Criminal Justice	Tangible Cost to Victims	Total Cost to Victims (including Tangible Cost (and Quality of Life)	Total Crime Cost
Motor Vehicle Theft					
National	4,210	14,390,000	25,585,000	25,286,000	**39,676,000**
Dept. A	50	171,000	305,000	301,000	**472,000**
Dept. B	67	229,000	467,000	402,000	**631,000**
Dept. C	27	91,000	163,000	161,000	**252,000**
Dept. D	11	36,000	64,000	63,000	**99,000**
Dept. E	67	231,000	410,000	405,000	**636,000**

[a] Rounded to nearest thousand.

NOTES: We focus only on crimes with established statistically significant relationships to police personnel levels. While the number of estimated new crimes may appear relatively small in some of the smaller LEAs, they represent outcomes significantly greater than zero. At the same time, we stress that our estimates should be considered point estimates within some confidence interval. Based on Heaton's (2010) meta-analysis, the 95% confidence intervals for new crimes at the national level are as follows: Assault (0–5,109); Robbery (999–4,237); Burglary (5,200–12,844); Motor Vehicle Theft (2,746–5,818).

attack without a weapon from which serious injury results. Robbery refers to completed or attempted theft, directly from an individual, of property or cash by force or threat of force, with or without a weapon, and with or without injury. Burglary refers to unlawful/forcible entry or attempted entry into a residence, usually involving theft. Motor vehicle theft refers to stealing or unauthorized seizure of a motor vehicle, including attempted thefts.

The first column in Table 5.1 presents the number of new crimes we might expect, using the elasticities provided in Heaton (2010) in conjunction with the number of reported crimes of each type for each LEA jurisdiction obtained from the relevant LEA's annual reports for 2008. We use reported crimes rather than arrests, because arrests may be a function of the size of the police force. We obtained the number

of crimes at the national level from the FBI Uniform Crime Report for 2008. We estimate the number of new crimes by multiplying the elasticity value of that crime with the percent change in the size of the force (1 percent) and the number of crimes during the baseline year (2008). For example, if the police force decreased by 1 percent in Department D's jurisdiction, we would anticipate 12 additional assaults, 14 additional robberies, 14 additional burglaries, and 11 more motor vehicle thefts than if the police force had remained at its original size.

The second column in Table 5.1 reflects the direct costs to the criminal justice system of each of these various additional crimes and is simply the product of the number of new crimes and the synthesized cost estimates from McCollister, French, and Fang (2010) and Cohen and Piquero (2009).[5] For example, the 12 additional assaults we estimated for Department D's jurisdiction are expected to directly cost the criminal justice system $130,000. The third column presents the tangible costs to victims of the new crimes,[6] and the fourth column presents the total cost to victims of the new crimes (combining both the tangible cost from the previous column and the further intangible costs).[7] For instance, the 12 additional assaults in Department D's jurisdiction are estimated to equal a tangible cost of $100,000 to individuals with a total cost of $814,000 to individuals. The final column in Table 5.1 presents the total cost of each crime in each location—the sum of the direct (criminal justices) cost and the total cost to victims. Thus, the 12 additional assaults that we estimated would result from a 1 percent change in force size are estimated to total nearly $1 million ($944,000).

Table 5.2 provides information that places the costs from Table 5.1 into perspective for each location. To provide some context for interpreting these numbers, we compare the annual cost of crime in each

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5 Rounded to the nearest $1,000.

6 Estimates in this column are based on McCollister, French, and Fang (2010) only, because Cohen and Piquero (2009) did not distinguish between tangible and intangible costs.

7 Estimates in this column are based on the mean total cost to victims reported by McCollister, French, and Fang (2010) and Cohen and Piquero (2009).

Table 5.2
Selected Crime Costs as a Percentage of Gross Municipal Product, Assuming a 1 Percent Decrease in Force Size

Law Enforcement Agency	Reduction in Force Size (no. of officers)	Crime Costs, 2008 ($ millions)	Gross Municipal Product, 2008 ($ billions)	Crime Costs as % of Total Output
National	6,657	362.97	14,165.6	0.003
Dept. A	28	3.45	78.0	0.004
Dept. B	52	6.20	142.4	0.004
Dept. C	31	2.18	116.4	0.002
Dept. D	21	1.54	40.1	0.004
Dept. E	99	4.66	215.9	0.002

locality to an economic measure of gross municipal product (GMP).[8] Similar to Heaton (2010), we calculated the annual cost of crime relative to the GMP for the localities served by our case study LEAs; this enables us to discuss the relative impact of policing changes as a proportion of the total economic output of that locality and to make subsequent cross-LEA comparisons.

The first column in Table 5.2 reports the actual number of officers that constitute 1 percent of the police force in 2008 for each LEA. The size of each force was obtained from the respective LEA's 2008 annual reports; the numbers of sworn police officers at the national level are based on the 2008 Occupational Employment Statistics Survey conducted by BLS. The actual number of officers engaged in CT and HS tasks at each LEA varies, but this column provides a sense of the size of personnel shifts required to reflect a 1 percent change. For example, a 1 percent decrease in the size of the police force of Department D would represent 21 fewer sworn officers in the department.

The second column summarizes the total cost to each LEA of the four crimes, assuming a 1 percent decrease in the police force involved in routine patrol and direct crime-fighting activities. For example, the total cost of all the additional assaults, robberies, burglaries, and motor

[8] GMP is the value of goods and services produced in a jurisdiction in a given year.

vehicle thefts in Department D taken from Table 5.1 is $944,000 for assaults, $420,000 for robberies, $72,000 for burglaries, and $99,000 for motor vehicle thefts, for a total cost of $1.54 million.

Column three reports the GMP, or total economic output, associated with the specific LEA's service area. We follow Heaton (2010) in the calculation of GMP; we estimate the gross product for individual jurisdictions by multiplying the gross product of the encompassing Metropolitan Statistical Area (MSA) by the share of the MSA population represented by the service population of the department.[9]

Having calculated GMP, we are able to derive the final column in Table 5.2, which is the total cost of the additional crimes in each location as a percentage of the total economic output of that location (assuming a 1 percent decrease in the police force engaged in patrol and other direct crime-fighting activities). Thus, for Department D, that amounts to 0.0038 (rounded to 0.004) percent, the result of dividing the $1.54 million in crime costs by the $40.1 billion in GMP.

As shown in Table 5.2, a 1 percent shift in personnel to CT and HS activities at the national level is expected to lead to additional annual crime costs of approximately $363 million. At the local level, the dollar costs range from $1.54 million in Department D to $6.2 million in Department B; as a proportion of GMP, the range is between 0.002 percent and 0.004 percent, respectively. However, the actual percentage of sworn officers at each LEA that were shifted varies by location; to derive the true costs associated with personnel shifts in each LEA, we must make further adjustments to the numbers in Table 5.2. For instance, according to Department E's 2007 annual report, 7 percent of its sworn officers were located in the department's Office of Homeland Security.[10] This suggests that for the areas served by Department E, the actual total crime costs resulting from CT and HS staffing are

[9] The gross product for each MSA in 2008 was obtained from the Bureau of Economic Analysis.

[10] The report lists these positions as "budgeted," which may differ from the actual number of filled positions.

$32.62 million, or 0.028 percent of the total GMP (= $4.66 million shown in Table 5.2 x 7[11]).

Ideally, we would list the percent change at each LEA and include this directly in Table 5.2, but it is difficult to identify the number of sworn personnel engaged in CT and HS tasks at each LEA (as we discuss in more detail below), partly because of the complex nature of the organizational structures and partly because elapsed time since 9/11 has made it difficult for departments to provide detailed data regarding personnel shifts. For example, Department E's Homeland Security Division is made up of multiple bureaus, including an emergency operations bureau, field operations support, air operations bureau, SWAT and other specialized teams, and transit services. The emergency operations bureau is where the fusion center is located, along with various specialized units, such as counterterrorism, tactical planning, arson, and hazmat. Some of these personnel are directly involved in CT and HS activities (e.g., fusion center and CT unit personnel), whereas other personnel are part of specialized response teams that will also have HS responsibilities, and still other personnel, such as those in the transit bureau, provide direct policing services but also have to be trained in HS awareness and response because of the potential terrorist target the transit system represents. Thus, a simple counting of personnel would not provide a true picture of what is encompassed within Department E's Homeland Security Division.

Having said that, this report represents an attempt to estimate one specific quantifiable aspect of the costs associated with developing CT and HS programs for local law enforcement. Assuming that the new positions to conduct CT and HS tasks must be staffed by officers who otherwise would be placed in routine crime prevention/patrol duties, the resulting reduction in police force will increase certain types of crimes in those locations. It is essential to note issues that affect how we consider the estimates derived here. There are issues that would argue for making these the upper bound of costs associ-

[11] We must multiply the cost amount listed in Table 5.2 by 7 (the actual percentage of Department E's force located in the Office of Homeland Security) to arrive at the correct total cost.

ated with increased crimes resulting from CT and HS staffing, but there are also some countervailing issues. Starting first with the issues that would argue for making these estimates upper bounds, we have assumed that when an officer is placed into CT and HS activities, that officer no longer contributes to local law enforcement routine crime-fighting activities—in other words, that there are no spillover effects of their work on CT and HS tasks on local crime. This is a tenuous assumption for several reasons. First, while some CT and HS activities, such as fusion center coordination, HS planning, or CT intelligence-gathering activities, may not involve an officer doing anything related to routine patrol, each department generally has a combination of both CT and HS and routine crime-fighting activities.

Second, in some cases, officers were moved to new locations, such as airports or ports, as part of the CT and HS tasks, which would simply shift the location of police patrol presence and not remove those officers from crime prevention duty. For example, officers who are part of the specialized response units or teams increased their presence at one region's international airport. In such cases, we would expect a decrease in crime because of increased police presence. Indeed, Department C reported a spillover effect—by simply having an increased police presence at the international airport focused on terrorist detection and prevention, they also have impacted routine crime at the airport, realizing an 80 percent reduction in theft over time. In addition, Department C reported that having a greater police presence at a major port (from 2 officers prior to 9/11 to 44 officers at the time of our interview) has also led to increased coordination with other agencies to do drug interdiction. This type of consequence has previously been considered; Klick and Tabarrok (2005) noted that increased police activity in response to increases in the terror alert level in Washington, D.C., decreased crime by 6 percent on high alert dates, especially among auto and other thefts. However, in this case, it is unclear how much of this decrease was the result of reduced general public traffic in response to the elevated threat level versus crime reduction because of police presence.

This further suggests that where these specialized units are present there may be additional benefits—decreases in crime in the specific location, increases in relationship building, the formation of intelli-

gence networks, and coordination with other agencies. More broadly, spillover effects of CT and HS efforts may include things such as better preparedness for and assistance in public emergencies and national disasters.

Third, another spillover effect from the fusion centers' expanded networks and adopting an all-hazards/all-crimes approach is improvements in information-sharing on routine crime in general. The case study LEA jurisdictions and surrounding jurisdictions participating in the fusion centers reported that increased sharing of crime data and information increased their ability to identify cross-jurisdictional crime, which has led to the solving of more cases. In part, this is the result of allowing smaller surrounding LEAs to access the criminal databases that the larger LEAs have. For example, Department D cited specific examples of how the intelligence analysis provided by their fusion center was used for a number of large-scale enforcement operations in local neighborhoods related to areas with chronic violence or quality-of-life violations. Although the interviewees cited several examples of cases that were solved as a result of improvements in information-sharing, it is difficult to quantify this overall effect on crime.

Finally, one must keep in mind that, as shown in Table 5.3, the departments vary in terms of the percentage of sworn personnel that are involved in routine patrol or investigations—i.e., those activities

Table 5.3
Functions of Sworn Personnel for Case Study LEAs

Law Enforcement Agency	Percentage of Sworn Personnel, by Function			
	Patrol	Investigations	Jail	Court Security
Department A	46	10	22	0
Department B	67	20	2	0
Department C	35	35	0	2
Department D	69	18	0	0
Department E	27	8	27	18

SOURCE: Numbers are based on 2000 data from the Law Enforcement Management and Administrative Statistics (LEMAS) website (Bureau of Justice Statistics, 2009).

one might associate with routine crime-fighting. The impact of shifting a hypothetical blanket 1 percent of the force from routine crime to CT and HS will thus vary. Whether a shift in police personnel affects crime depends on the relative number of staff and types of staff (and from which positions) that are shifted. The estimates here assume that the reductions come strictly from routine patrol and crime-prevention positions, but CT and HS staffing was not necessarily accomplished by direct transfer of these personnel. For example, as Table 5.3 shows, compared with Department E, the other LEAs place a greater percentage of their full-time sworn personnel in patrol functions (ranging from 35 percent in Department C to 69 percent in Department D), while Department E has only 27 percent involved in patrol functions. An important limitation of this study is our inability to collect detailed data on the number and type of sworn officers that were shifted to CT and HS activities following 9/11 and what their assignments were prior to the shift. Partly, this is because the organizational changes occurred, in some instances, five or more years ago, with additional changes evolving over time. The case study LEAs were able to tell us about the development of new units or bureaus, but less able to provide detailed data on personnel shifts.

As noted earlier, however, there are some countervailing issues that affect the estimates the other way. For example, we excluded homicides from our estimates. Given the literature, there is a case to be made that homicides are less sensitive to the size of the police force than other types of crime. If we had included homicides in our estimates, it would have wildly inflated the cost estimates because of the lost productivity of a lost life; for example, a 1 percent reduction in sworn officers in Department E would result in approximately 2 homicides. Thus, using the synthesized elasticity and cost estimates from Heaton (2010), by including homicides we would have added an extra $15.3 million, increasing the percentage of GMP from .004 percent to .009 percent (i.e., more than doubling it). Therefore, while we consider our cost estimates to reflect an upper bound because we assume there are no spillover crime prevention effects, had we relied on Levitt's (2002) paper, which identifies a significant association between police personnel level and homicides, and disregarded the others that do not, our cost estimates could double.

Second, to put our cost estimates into context, we selected a locality's GMP as an economic measure. Presenting the cost of crime as a percentage of GMP is useful for two reasons. First, it suggests that the costs of additional crimes resulting from even a relatively large reorganization of LEA personnel into CT/HS roles represent a small portion of the jurisdiction's total economic output. Second, it enables a direct comparison of costs at local levels across different LEAs by standardizing the costs to a common metric. However, there may be other economic measures that would better help both law enforcement officials and county/city officials to put into context their investment in CT and HS for their particular locality.

Finally, when attempting to construct cost/benefit ratios related to terrorist acts, the cost-of-crime estimates are further placed into perspective. According to Enders and Sandler (2002), a terrorist incident in recent years is about 17 percentage points more likely to result in casualties than in the 1970s. Zycher (2003) estimated that a single bombing results in 4 deaths and 37 injuries, for a total cost of $25.5 million. As noted with reference to homicides, loss of life rapidly inflates the total associated costs. While it is difficult to predict the reduction in terrorist activity resulting from the case study LEAs' contribution to CT and HS, even relatively small-scale terrorist acts ultimately present a much larger total cost (largely through loss of life) than potential additional local crimes. It is important to consider that whether a shift in personnel affects crime depends on the relative number of staff and types of staff that were shifted from traditional policing functions to focus on CT and HS. The case study LEAs had a difficult time quantifying the number and magnitude of potential terrorist incidents that their activities have prevented over the years, in part because of the classified nature of their activities and in part because of the complexity of assigning estimates to a range of activities. More explicit identification of the extent to which LEA CT and HS activities reduce the availability of sworn officers (in number and in time spent) to contribute to routine policing activities, and the ability to achieve better estimates of the number and scale of averted incidents, such as the types that Zycher reports, will both be important for better assessing the costs and benefits of law enforcement's long-term investment in CT and HS activities.

CHAPTER SIX

Future Challenges

In this chapter, we examine some challenges that need to be addressed, based on what we have seen from our analysis of five large urban LEAs at the forefront of addressing the new requirements for CT and HS.

The Challenge of Regionalization

Enhancing regional preparedness has had a number of advantages associated with it, including increased coordination of assets and resources across geographic boundaries, developing regional cooperation across many specialties, integrating policies and practices concerning preparedness, and improving information-sharing and access to intelligence about terrorist threats, as well as about crime in general (Jordan, 2010). As found in our study, the UASI grants have encouraged participation of smaller LEAs in fusion centers' networks, enabled LEAs to leverage technology, and improved information-sharing about terrorist threats and about crime in general. Regionalization also has important benefits for all-hazards emergency management. The implementation of NIMS was cited by the case study departments as an important advancement in managing incidents involving a multi-agency response.

Regionalization also has some associated challenges, such as addressing conflicting missions, concerns over jurisdiction and control over resources, and incompatible processes or systems (GAO, 2009). Our study identified some additional challenges at the departmental level. HS grant programs are designed to support and build regional capabilities; improve coordination in planning, equipping, and train-

ing to help regions prioritize strategies for addressing gaps in preparedness; and to measure progress toward achieving national preparedness goals. Yet, there is a need to balance the rigidity and flexibility in HS grant funding to account for variation in local needs and capabilities. For instance, the case study LEAs who are at the forefront in addressing CT and HS preparedness for major urban areas reported that the funding mechanisms tended to be inflexible, requiring multiple levels of review and reporting. The goal of standardizing equipment and training among first responders within a region, in their view, had hampered their ability to purchase state-of-the art equipment and to obtain the specialized training they felt to be most important. For instance, although DHS does cover non-DHS training if the programs meet specific requirements, interviewees felt that it was difficult to get training requests approved.

In addition, because HS funding does not support the hiring of sworn personnel who may fulfill both traditional public safety as well as CT and HS roles, the case study LEAs felt that this limited their ability to ensure the personnel capacity to fulfill these regional leadership roles. Also, departments must weigh local crime-fighting priorities with investments in CT and HS.

The call has been heard before for allowances for LEAs, especially large departments, to have more flexibility in tailoring their own training and bringing in specialized expertise. There also remains a desire at the local level to have more of a law enforcement perspective in HS grant funding decisions. As one interviewee put it,

> Local police departments should be treated more as partners in the process and be able to provide input to DHS grant programs as to what training they need. The Feds should look at us as mature partners in the process and let us dictate to some degree how we spend the training funds.

Also, we identified some unintended effects of current grant funding processes, including

- higher administrative costs in terms of applying for, identifying, and managing HS grants

- multiple layers of review that complicate the approval and procurement processes
- higher administrative costs and/or match requirements leading some LEAs to forego grant opportunities
- increased competition among LEAs at the local level for grant funding.

Given this, DHS may want to consider ways to further streamline HS grant reporting and review mechanisms.

Lastly, the need for LEAs to maintain and replace equipment purchased is not a new issue, with HS grant funding explicitly directing grant applicants to develop sustainability plans. Similar to the concerns expressed by other first responders (LaTourrette et al., 2003), our study highlights that, at the local level, specialized equipment for CT and HS purposes must compete with a department's other equipment and technology priorities. Nine years after 9/11 and as HS concerns lessen, the issue of how to ensure sufficient funding to replace and maintain this equipment and technology remains a federal and local concern.

The Challenge of Creating Specialized Counterterrorism or Homeland Security Career Tracks for Local Law Enforcement Agencies

Arguably, law enforcement is becoming more and more specialized. All of the case study LEAs commented on the specialized expertise and training that CT and HS requires. In this sense, a focus on CT and HS is now seen as another specialty position opportunity. However, the traditional career progression of law enforcement personnel requires changing jobs every several years in order to keep advancing. The result is that the investment that individuals make to develop the expertise, relationships, and networks important for CT and HS is often lost when these officers transition to new positions.

A career-track for sworn officers in CT or HS potentially could be developed. Two examples of specialized career tracks are forensics and crime analysis, each of which requires specialized training and has

its own professional societies and degree programs. Individuals who do this type of work are often hired specifically for these areas. However, in the case of CT and HS, these specialized positions are typically filled by mid-to-senior-level sworn officers who may actively seek these positions. Departments must then make a considerable investment in enabling these officers to develop the needed expertise and knowledge to perform well in a CT or HS position. Unlike the specialized career tracks for forensics or crime analysts, in law enforcement almost all sworn staff start out on patrol, with promotion being the primary mechanism for career advancement. Additionally, the length and duties of assignments of sworn personnel are often dictated by position descriptions that are tied to collective bargaining agreements. For instance, in one Midwest police department, most assignments (other than patrol) are considered special assignments, and an officer can generally hold a special assignment for only three years; then he or she must go back to patrol for a few years before getting another special assignment.

Given this, there are two possible options. First, intelligence analysts could be career civilians with rotating sworn officer oversight. This could help provide a balance between civilian versus sworn officer expertise in CT and HS positions. Second, the assignments associated with CT and HS could be renegotiated so that they have indefinite or longer terms, thereby allowing sworn officers to remain in these types of specialized units for extended periods of time. However, this option raises other potential issues. First, the advancement options likely will be smaller if an officer chooses to stay in a CT or HS unit (because the unit is smaller relative to the larger organization, there will be fewer leadership positions). Second, other officers may resist having assignments associated with CT or HS as indefinite or longer terms, because this may result in fewer opportunities for them to rotate into these specialized positions. On the other hand, we learned in our interviews that some officers were reluctant to be rotated into these positions out of concerns that once they develop the needed expertise, they will be "kept" in a CT or HS position, limiting their promotion opportunities. In summary, the creation of a specific career track for CT or HS is a provocative option that is worth exploring further, but doing so must entail addressing the complex set of issues outlined here.

The Challenge of Investing in and Sustaining Fusion Centers

In September 2008, DHS established the *Baseline Capabilities for State and Major Urban Area Fusion Centers* (DHS, 2008a), as an addendum to the *Fusion Center Guidelines*. The goal was to ensure a consistent level of baseline capabilities to operate an integrated national network of fusion centers. The guidelines could be used by fusion center managers, staff, and stakeholders, as well as state and local officials with oversight and budgetary responsibilities, to assist them in identifying, prioritizing, and allocating resources for fusion centers and in identifying capability gaps, developing plans to mitigate gaps, and to inform funding requests (DHS, 2008a, p. 11).

In his April 1, 2009, testimony before the Committee on Homeland Security, Subcommittee on Intelligence, Information Sharing, and Terrorism Risk Assessment, Robert Riegle, Director of DHS's State and Local Program Office, Office of Intelligence and Analysis, noted that fusions centers still had a way to go:

> Since resources and priority mission areas vary from center to center, it is expected to take a period of up to five years for all fusion centers to years to achieve all of the capabilities. Some centers may not need to "house" all of these capabilities, but may choose instead to leverage another fusion center or other operational entity's capability. (Reigle, 2009)

Since 9/11, LEAs' intelligence function has evolved to include an increased focus on terrorist threats, the creation of CT units and fusion centers, the adoption of an all-crimes, all-hazards approach to information-sharing, and an expansion of the information-sharing networks to include more regional participants. The development of fusion centers under UASI, the case study LEAs reported, has clearly improved regional information-sharing capacity and their analytic capabilities. Using technology to organize fusion centers virtually has enabled more local LEAs to participate in the information-sharing process. Yet, a remaining challenge is how to effectively engage all participants in a fusion center network and provide the right incentives for

smaller LEAs to actively participate in these networks. We found that the larger LEAs disproportionately contributed to these networks—playing coordination, analytic, and administrative roles—whereas smaller agencies tended to be more recipients of information. DHS may want to consider what additional support needs—primarily personnel—that the larger LEAs may require to continue to effectively operate these centers. Also, as intelligence information-sharing networks and responsibilities grow, once a fusion center becomes a certain size, it becomes increasingly difficult for it to do true analysis. The risk is of losing a two-way exchange of information and of less attention being paid to analysis of intelligence information. Finding ways to ensure that the fusion centers have the capabilities to perform these activities will be important. Another future challenge will be ensuring the participation and contributions of smaller LEAs to information-sharing networks.

There is also a fundamental question of how LEAs and state and local officials can know that their investments in CT and HS and in fusion centers are making a difference. This dilemma is not unique to law enforcement and is true of any long-term investment in prevention-related activities.

As noted by Riegel (2009), a related challenge is sustainment. In the current economic downturn, states and counties and cities are looking for ways to reduce costs and maintain basic policing services. This has resulted in fusion centers looking increasingly to the federal government to provide increased, targeted support. As noted in our report, LEAs face in general pressure both within departments and from local officials to make the case of why investments in CT and HS are cost-effective and worthwhile over investments in other public safety priority areas (e.g., reducing gang or violent crime). Thus, it will be important in the future for LEAs to be able to directly quantify the benefits of investments in CT and HS. Measuring whether information-sharing and intelligence networking has improved should also be a priority for future work in this area (Willis et al., 2010).

The Challenge of Quantifying the Costs and Benefits of Counterterrorism and Homeland Security

Holden (2003) found that since 9/11 LEAs have

> broken new ground in addressing obstacles to interagency coordination, cooperation, and communication; enhancing intelligence and information collection and exchange; augmenting the capacity of first responders; and adapting existing crime prevention and control strategies, such as community policing, to the demands of a post 9/11 environment. (Holden, 2003, p.1)

In this study, we set out to qualitatively assess the benefits associated with LEAs' investments in CT and HS. The case study LEAs' interviewees identified a number of benefits, including improved collaboration among law enforcement at the local, state, and federal levels; improved regional coordination among preparedness stakeholders; improvements in incident management; and improved LEA capabilities to respond to CBRNE-related incidents, with HS training now being part of LEAs' core curriculum. The development and enhancement of fusion centers has helped improve regional coordination on CT among multiple stakeholders and the development of closer working relationships among LEAs within a region. Improved information-sharing of criminal and terrorist threat information has not only benefited CT, but also routine crime-fighting efforts. In addition, we found evidence of capacity-building for grant administration.

We also set out to quantify some of the costs associated with this investment in CT and HS. Prior examinations of the costs (and benefits) of CT and HS expenditures typically have focused on estimating the costs of averting terrorist incidents for the nation as a whole or at the state level. To our knowledge, there have been no studies to evaluate the cost implications of CT and HS efforts at the local LEA level where law enforcement plays a central role in HS preparedness and countering terrorist threats. As a consequence of LEAs internally restructuring to staff CT and HS units and fusion centers, we postulated that a potential collateral cost is that routine police patrol presence may be reduced (depending on the number and types of sworn

personnel that were reallocated) and that the reduced patrol presence may lead to increased crime—a possibility that has not been previously considered in the literature.

We developed an analytic framework for estimating some of the financial cost implications of CT and HS efforts at the local level. Specifically, we employed a common analytic approach for estimating some of the potential financial costs. For this analysis, we focused on crimes that the literature has shown to be more responsive to the size of the police force: aggravated assault, robbery, burglary, and motor vehicle theft. Because we were unable to obtain detailed data for each department on the number and types of personnel shifted over time, we instead estimated the number of additional new crimes that might result from a hypothetical 1 percent reduction in a LEA's police patrol force as a result of reallocating staff to CT and HS functions, and then calculated the direct costs to the criminal justice system and the indirect costs to victims.

We estimate that a 1 percent shift in police personnel away from police patrol functions to focus on CT and HS activities would result in additional annual crime costs of approximately $363 million. At the local level, the annual crime costs ranged from $1.54 million to $6.2 million across the jurisdictions in which the case study LEAs are located. To put these findings into context, we compared the annual cost of crime in each locality served by our case study LEAs to an economic measure of gross municipal product (GMP)—the value of goods and services produced in a jurisdiction in a given year. As a proportion of GMP, the range was very narrow, between 0.002 percent and 0.004 percent.

However, the costs associated with officers being assigned to routine patrol duties versus CT or HS duties are more complex than this comparison alone. There appear to be a number of indirect benefits associated with a focus on CT and HS. For example, increased police presence for CT or HS purposes (e.g., specialized units at the ports or airports) had spillover effects in helping to reduce crime in these locations. The all-crimes focus of fusion centers has not only been important for CT, it has also increased sharing of crime data and improved LEAs' ability to address cross-jurisdictional crime. In addition, other

benefits noted above also must be considered in a true cost benefit analysis.

Our analysis was a first step toward quantitatively measuring the *costs* associated with LEAs' focus on CT and HS. We were successful in developing an analytic framework to consider how to measure associated costs. A key limitation of our study was that we were unable to obtain the detailed data on the number and types of sworn personnel shifted to create new units or enhance existing organizational structures, and how these changes evolved over time. Future research is needed to work with individual LEAs to set up systems to capture the data needed to help these departments quantify the costs and benefits of these investments.

There are also clearly numerous *benefits* associated with this focus that also should be quantified. Although measuring the benefits of CT and HS efforts may be difficult, future research should focus this area, since, in this era of budget cuts, LEAs are increasingly being pressured to justify their investments in CT and HS.

We asked interviewees what performance metrics are helpful to their department in this area. They generally cited as a metric that fact that no successful terrorist incidents had occurred in their jurisdiction or region since 9/11. When asked how they measured success, some of our interviewees said that they would use the metrics being developed for the fusion centers and DHS's baseline capabilities. Some said they ask themselves each day whether they were able to heighten awareness of the terrorist threat or improve coordination. They also cited process-oriented measures, such as whether there is a process in place to maintain privacy or to share information with key stakeholders. In terms of fusion centers, metrics reported by interviewees included looking at crime trends, using police officers in coordination with intelligence officers, the number of personnel trained to do CT intelligence gathering or analysis, and the number of other agencies participating in the fusion center network. In terms of HS, they cited the number of personnel trained in using NIMS, number of exercises undertaken, and the number of sworn officers equipped with PPE.

LEAs acknowledge, though, that it is difficult to quantify the magnitude and cost of terrorist-related incidents prevented or the value

of the CT/HS relationships and networks developed. This is in sharp contrast to crime, for which one can measure changes in the crime rate in specific areas and identify the types of incidents that are more sensitive to the size of the police force engaged in crime prevention and detection activities in those areas. This poses a conundrum for LEAs in demonstrating and gaining support for these activities, both within their department and from city and county officials who must make funding decisions about how to spend limited law enforcement resources. At the senior leadership level, commanders must be responsive to queries from city councils or county boards of supervisors about what an investment in CT and HS has meant for their jurisdiction. And at the local level, there is pressure to focus policing resources on immediate crime problems, such as reducing violent crime. Nine years after 9/11 and as HS concerns lessen, being able to convey why an investment in CT and HS is critical to its overall public safety mission will be a future challenge for law enforcement.

APPENDIX A

Summary of Case Study Law Enforcement Agencies' Counterterrorism and Homeland Security Organizational Structures

The Miami-Dade Police Department formed a Homeland Security Bureau that is composed of approximately 60–70 employees and includes the department's CT unit. In addition, the sheriff co-chairs the Southeast Regional Domestic Security Task Force (SERDSTF) and has both local and regional responsibility for HS preparedness. Other specialized units or divisions relevant to HS include the Airport District Station, Police Operations Bureau, and Special Patrol Bureau.

The Houston Police Department's Patrol Operations and their Criminal Investigations and Homeland Security Division oversee CT and HS for the department. Other relevant structures are the specialized response units that also must address HS preparedness and responses, including SWAT, the bomb squad, and a special response group (SRG). Airport Operations also has an important role in HS. This department also operates the region's fusion center, which is co-located with Houston's emergency operations center.

The Las Vegas Metropolitan Police Department following 9/11 created a Homeland Security Division and the All-hazards Regional Multi-Agency Operations and Response (ARMOR) unit, which is a regional response unit. The ARMOR unit is a partnership between the Las Vegas Metropolitan D, Las Vegas Fire and Rescue, and the Clark County Fire Department (Weiss and Davis, 2007). The ARMOR unit is responsible for conducting threat assessments, surveillance using remote cameras and monitoring, and training. This unit relies on

SWAT and other specialized tactical units to respond to an incident. In 2003, the department formed a CT section composed of four detectives, a sergeant, and a detective who came from the Las Vegas Metropolitan PD's criminal intelligence unit.

In 2004, the Boston Police Department merged its research and evaluation office with its intelligence unit, which was called the Tactical Intelligence Center prior to UASI funding. Using UASI funding, the department formed a fusion center in 2005. The fusion center was a way to integrate the intelligence capabilities of Boston, local, state, and federal law enforcement partners and represented a strategic overhaul of the department's traditional intelligence operations (Boston Police Department, 2005); in addition, civilian crime analysts were embedded with intelligence investigators to jointly identify, analyze, and disseminate patterns and other relevant data. This expanded the department's ability to respond to emerging crime trends focusing on the intersection of high-impact criminal activities, locations, and people. Other relevant units with HS responsibilities include the Police Operations Division, the Bureau of Field Service, and specialized response units (special operations, hazmat, commercial vehicle enforcement, harbor patrol, bomb squad).

The Los Angeles County Sheriff's Department currently has a Homeland Security Division, which is composed of the Emergency Operations Bureau (within which resides the department's fusion center and CT unit), Aero Bureau, Field Operations Support Services, Special Enforcement Bureau (houses specialized response units, such as SWAT, canine, etc.), and Transit Services North and South Bureaus. Its Homeland Security Division is also responsible for all HS grants. The HS Division's responsibilities include (a) mutual aid for Los Angeles and Orange Counties; (b) coordinating the response to large-scale incidents; (c) intelligence gathering and analysis and information-sharing; (d) identifying resources and logistics needs; and (e) managing resources as part of the overall coordination role and bringing together the different units and their roles within the department as it relates to CT and HS. This department's fusion center was developed from their TEWG, an interagency group established prior to 9/11 to focus on terrorist-related threats and response.

APPENDIX B

Funding Trends

In this appendix, we provide tables that show how federal allocations of homeland security grant funding has changed over time, both at a the national level and to each of the five states in which our case study departments are located.

At the federal level, the Homeland Security Grant Program (HSGP) is currently made up of five subprograms: (1) the State Homeland Security Program (SHSP), (2) the UASI, (3) Operation Stonegarden, (4) the Metropolitan Medical Response System (MMRS), and (5) the Citizen Corps Program (FEMA, 2010b). Other programs shown include those mentioned in the case study interviews as being important to law enforcement—SHSGP and LETPP.

The Law Enforcement Terrorism Prevention Program (LETPP) was focused on prevention of terrorist attacks and provided law enforcement and public safety agencies with funds to support intelligence gathering and information sharing (FEMA, 2008). The LETPP program funded a range of activities, including information sharing and analysis; target hardening; threat recognition; terrorist interdiction; and enhancing, establishing, and staffing fusion centers; as well as planning, organization, training, and equipment.

The LETPP, which is important to law enforcement, began in 2003/2004 but was later consolidated in 2007/2008 into the UASI and SHSGP programs. In FY2008, DHS mandated that a minimum of 25 percent of the $950 million allocated for SHSGP and a minimum of 25 percent of the $820 million allocated for UASI be used for LEA terrorism prevention programs.

Data Sources

The data for federal and state homeland security grant programs' allocations by fiscal years in the tables below are derived from the following sources:

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Funding Tables

Table B.1
Federal Allocation of Homeland Security Grants ($ millions)

Fiscal Year	SHSGP[a]	LETPP	EMPG	MMRS	UASI	HIDTA	TSGP	PSGP	BZPP
2000	2.9		–	–		191.3			
2001	142.4		–	–		206			
2002	315.7		134.69	–		221.35		93.87	
2003	1866.3		165.2	42.3	596.4	206.35	65	169	
2004	1675.06	497.05	173.7	46.28	670	225.02	50	150*	
2005	1062.3	386.30	173.9	28.22	854.7	226.5	135.26	140.86	92
2006	528	384.12	185	28.81	710.6	224.7	135.9	168.1	50.9
2007	509	363.75	250	32.01	746.9	225.3	172	201.2	50.5
2008	861.28[b]		300	39.83	781.63	230	388.6	388.6	50
2009	861.265		306.02	39.83	798.63	234	388.6	388.6	48.575

* indicates an estimated value; – indicates we were unable to find this information.

[a] In FY 2008, $950 million was enacted for SHSGP. An additional $60 million was provided for SHSGP as an emergency enactment (not shown in the table).

[b] The name of the SHSGP program has evolved over time. Currently, it is known as the SHSP program. The predecessor to SHSGP was the State Domestic Preparedness Program (SDPP).

NOTES: The LETPP program started in FY 2004 and ended in FY 2007.
The BZPP program began in 2005.
The UASI program started in 2003 as a direct result of the Homeland Security Act of 2002.
The MMRS program was developed in 1999 by the U.S. Department of Health and Human Services.
The TSGP program began in 2003.
The PSGP program began in 2002.
The Emergency Management Performance Grant (EMPG) program was created in the 1950s to help provide for the country's security through a local/state/federal partnership to plan, train, exercise and educate for potential nuclear attacks. The program has evolved over the years to address all hazards.
The HIDTA began in 1995.

Table B.2
Allocation of Homeland Security Grants: California ($ millions)

Fiscal Year	SHSGP	LETPP	EMPG	MMRS	UASI	HIDTA	TSGP	PSGP	BZPP
2000	–		–	–		28.3			
2001	–		–	–		–			
2002	24.831		–	–		–		15.7	
2003	164.28		13.1	6.04	102.3	–	7.97	35	
2004	133.2	39.5	13.8	6.85	141.6	–	6.77	36	
2005	84.6	30.8	13.8	4.1	148.3	9.27	19.48	33.3	12.95
2006	47.58	42.37	14.24	41.18	136.29	–	19.13	13.2	5.84
2007	55.85	39.9	15.39	4.65	140.71	–	20.1	29.6	4.67
2008	110.09		23.1	5.78	143.79	–	41.6	64.82	7.38
2009	104.59		24.22	5.78	148.14	–	41.6	65.44	5.2

* indicates an estimated value; – indicates we were unable to find this information.

NOTES: In FYs 2008 and 2009, TSGP shows amount for Tier I recipients only. Tier II recipients did not have the funding amount broken out by state; instead in FYs 2008 and 2009 $36.6 million was allocated each year for Tier II recipients.

Table B.3
Allocation of Homeland Security Grants: Texas ($ millions)

Fiscal Year	SHSGP	LETPP	EMPG	MMRS	UASI	HIDTA	TSGP	PSGP	BZPP
2000	–		–	–		27.7			
2001	–		–	–		–			
2002	–		–	–		–		7.8	
2003	97.3		8.6	4.36	56.0	–	–	27.9	
2004	87.4	25.9	9.0	4.84	39.0	–	0.8	36.1	
2005	55.7	20.3	9.0	3.0	49.8	8.16	2.13	51.2	6.55
2006	26.14	24.74	9.34	3.02	34.96	–	0.8	31.98	6.55
2007	34.4	24.6	10.1	3.36	58.54	–	3.78	23.8	2.81
2008	65.44		15.83	4.18	38.11	–	–	47.3	4.18
2009	62.17		16.63	4.18	73.39	–	–	47.26	4.2

* indicates an estimated value; – indicates we were unable to find this information.

NOTES: In FYs 2008 and 2009, TSGP shows amount for Tier I recipients only. Tier II recipients did not have the funding amount broken out by state; instead in FYs 2008 and 2009 $36.6 million was allocated each year for Tier II recipients.

Table B.4
Allocation of Homeland Security Grants: Florida ($ millions)

Fiscal Year	SHSGP	LETPP	EMPG	MMRS	UASI	HIDTA	TGSP	PSGP	BZPP
2000	–		–	–		16.6			
2001	–		–	–		–			
2002	12.967		–	–		–		8.8	
2003	86.31		6.9	2.36	30.9	–	0.9	20.2	
2004	69.967	20.8	7.2	2.52	38.5	–	1.6	8.1	
2005	44.7	16.3	7.2	1.6	30.9	11.83	2.1	7.3	4.85
2006	25.59	18.61	7.48	1.63	53.5	–	1.78	7.5	1.7
2007	25.46	18.18	8.1	1.8	38.68	–	4.7	14.1	2.31
2008	37. 09		12.61	2.25	20.5*	–	–	21.28	1.79
2009	35.24		13.24	2.25	35.62	–	–	21.27	0.8

* indicates an estimated value; – indicates we were unable to find this information.

NOTES: In FYs 2008 and 2009, TSGP shows amount for Tier I recipients only. Tier II recipients did not have the funding amount broken out by state; instead in FYs 2008 and 2009 $36.6 million was allocated each year for Tier II recipients.

Table B.5
Allocation of Homeland Security Grants: Nevada ($ millions)

Fiscal Year	SHSGP	LETPP	EMPG	MMRS	UASI	HIDTA	TGSP	PSGP	BZPP
2000	–		–	–		0			
2001	–		–	–		0			
2002	3.693		–	–		–		0	
2003	24.706		2.0	0.28	–	–	0	0	
2004	20.028	5.9	2.1	0.4	10.5	–	0	0	
2005	12.808	4.7	2.1	0.23	8.5	1.24	0	0	0.95
2006	8.11	4.18	2.14	0.23	7.75	–	0.1	0	1.19
2007	5.61	4.0	2.31	0.26	9.31	–	0	0	0.39
2008	9.39		3.65	0.32	9.03	–	–	0	0.4
2009	8.92		3.83	0.32	8.58	–	–	0	0.4

* indicates an estimated value; – indicates we were unable to find this information.

NOTES: In FYs 2008 and 2009, TSGP shows amount for Tier I recipients only. Tier II recipients did not have the funding amount broken out by state; instead in FYs 2008 and 2009 $36.6 million was allocated each year for Tier II recipients.

Table B.6
Allocation of Homeland Security Grants: Massachusetts ($ millions)

Fiscal Year	SHSGP	LETPP	EMPG	MMRS	UASI	HIDTA	TGSP	PSGP	BZPP
2000	–		–	–		1.9			
2001	–		–	–		–			
2002	6.59		–	–		–		3.85	
2003	42.731		3.4	1.24	20.5	–	3.78	2.98	
2004	34.64	10.3	3.6	1.15	22.7	–	3.7	1.34	
2005	21.9	7.95	3.6	0.7	28.1	0.38	9.55	1	1.05
2006	11.71	10.24	3.7	0.7	18.21	–	11.0	0.15	2.13
2007	11.8	8.43	4	0.77	14.21	–	15.1	2.04	0.58
2008	17.21		5.87	0.96	13.78	–	29.3	4.52	0.4
2009	16.35		6.16	0.96	14.56	–	29.3	4.52	0.8

* indicates an estimated value; – indicates we were unable to find this information.

NOTES: In FYs 2008 and 2009, TSGP shows amount for Tier I recipients only. Tier II recipients did not have the funding amount broken out by state; instead in FYs 2008 and 2009 $36.6 million was allocated each year for Tier II recipients.

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