

Unit IV

Responding to the Threat

As the previous sections of this volume illustrate, the threat of WMD terrorism is a complex and multifaceted challenge, requiring a sophisticated, context-specific response. For Unit Four we have chosen to highlight critical themes of strategy, intelligence, and resilience, as well as the unique problems posed by the threat of bioterrorism. A group of case studies are also provided which include practical, research-based recommendations for responding to the WMD terrorist threat effectively.

First, in a section on the strategic dimensions of our response to this threat, we begin with a review of proliferation control regimes authored by Mary Beth Nikitin, Paul Kerr, and Steven Hildreth of the U.S. Congressional Research Service. They describe the history of multinational efforts to restrict trade in nuclear, chemical, and biological weapons and missile technologies, and then assess how well these restrictions are being enforced worldwide. This is followed by Albert Mauroni's assessment of the current U.S. strategic framework for countering the threat of WMD proliferation, a framework that appears to be built around an assumption that nonproliferation efforts have been ineffective. After reviewing the development and revisions of this strategy over the last two decades, he offers suggestions on how to improve the framework. For example, he argues that the U.S. government needs to stop treating the threat of weapons of mass destruction as if it were a special case to be handled distinct from other national security issues, and needs to incorporate perspectives beyond nuclear weapons and arms-control experts.

Next, Lois Davis and Jeanne Ringel of the RAND Corporation provide an overview of the nation's public health response system, and recent efforts to improve preparedness for a WMD attack. After assessing federal efforts to define WMD threats and priorities, and the national response framework through which state and local coordination is critical, they offer some research-based recommendations for how the public health sector can better prepare for an attack involving CBRN weapons. And in

412 *Unit IV Responding to the Threat*

the final essay of this section, Brigadier General (retired) Russell Howard describes how traditional applications of American power—economic, political, diplomatic, and military used to leverage and influence states in the past—are not effective against transnational, non-state actors with access to weapons of mass destruction and an intent to use them. Thus, he argues, there is sometimes no other choice than to engage in military action to prevent or preempt a WMD attack against the U.S. homeland.

Intelligence

Clearly, intelligence plays a critical role in combating terrorism, WMD proliferation, and many other kinds of threats to national and homeland security. Thus, the next two selections reflect important developments and challenges in this arena. First, Matthew Waxman of the Columbia Law School examines the opaque nature of intelligence on any state's potential WMD program, which has become increasingly complicated by the global spread of dual use technologies and scientific knowledge. Thus, as demonstrated most recently by cases in Iraq, North Korea, and Iran, policymakers aiming to disarm an opponent believed to be holding or building WMD will continue to face uncertainty about the true extent and nature of an adversary's alleged WMD programs.

Then Brian Finlay of the Stimson Center analyzes the vital role that the private sector plays in monitoring the international transportation of WMD-related materials and equipment. He argues that states and terrorist organizations can easily exploit legitimate businesses up and down the supply chain to obtain dual-use knowledge and technologies. In today's security environment, a diverse set of forces is gathering, presenting a growing challenge to the practicality of the existing nonproliferation regime and to governments' ability to prevent proliferation without the determined efforts of the private sector. Thus, improving the relationship between the public and private sector, particularly with regard to communication and information sharing, is paramount to preventing WMD proliferation in the 21st century.

Response and Resilience

In the third section of Unit Four, authors address the social and psychological aspects of national and homeland security, focusing on the need to develop resilience in the face of the WMD terrorism threat. First, Ashton Carter, Michael May, and William Perry examine the actions needed to prepare the U.S. for recovering from a nuclear detonation. Among the challenges that must be addressed are emergency response, evacuation and sheltering, immediate radiation effects, follow-on threats after the first nuclear weapon, attribution and retaliation, and the long

process of cleanup, especially the uniquely difficult problem of fallout and residual radioactivity. Further, they note that although it is most important for first responders and members of the media who report on homeland security to have an understanding of the government's plans after an attack, a measure of public knowledge will be essential to the plan's acceptance and effectiveness. Some grasp of the considerations of sheltering versus evacuation, decontamination and resettlement, and what a nuclear detonation does and does not do will be needed in order for the public to follow the government's recommendations willingly. Above all, it will be vital to avoid panic and overreaction, which can do wider damage to national governance and international order, thus fulfilling the nuclear terrorists' objectives.

The next selection, by Ronald Perry (of Arizona State University) and Michael Lindell (of Texas A&M University) also addresses this theme by reviewing what is known about how citizens respond to natural and technological disasters. For example, this research suggests that authorities can expect citizens to feel frightened by a disaster, but to be rational (within their limits), and most will co-operate with official guidance and recommendations. The authors extrapolate from this research to describe what might be reasonably expected following a major WMD terrorist attack, noting that there will be considerable variation based on the nature of consequences of the specific weapons involved (e.g., chemical, biological, nuclear, radiological, incendiary devices, or others). A central argument from this analysis is that citizen response to terrorist incidents is not unpredictable. Thus, research on human and organizational behavior plays a critical role in ensuring that emergency planning is realistic and will yield the most positive results in the event of a WMD terror attack.

The Unique Challenges of Responding to Bioterrorism Threats and Attacks

In the next section of Unit Four, we focus our attention on the unique and troubling aspects of the bioterrorism threat. First, Lea Ann Fracasso, an associate attorney at Cassidy Schade LLP in Chicago, describes the legal challenges of implementing a policy of mandatory vaccinations in preparation for—and in the aftermath of—a terrorist attack using a weaponized strain of smallpox. She notes that several currently recognized exemptions to mandatory vaccinations, including those based on religious grounds, would be challenged in the wake of a bioterror attack. From her analysis, she concludes that governments need to prepare now for the inevitable need to deal with non-complying individuals who, regardless of the consequences, insist on remaining unvaccinated. Certainly, she notes, any preparations made in advance of a biological attack will save

414 *Unit IV Responding to the Threat*

the government time and money that would be far more significant if not considered until after the attack has taken place and the catastrophic consequences are already underway.

This is followed by an analysis of the need for environmental decontamination following a large-scale terrorist attack using biological weapons. Crystal Franco and Nidhi Bouri (of the Center for Biosecurity of the University of Pittsburgh Medical Center, Baltimore, Maryland) examine the cost and logistics of the decontamination response following the 2001 anthrax attacks, and then draw implications from that to project the magnitude of the response capabilities that will be needed in the event of a much larger scale biological attack. They also identify gaps in decontamination policy and technical practice at the federal level and provide practical recommendations that will better enable the U.S. to undertake a biological decontamination response.

Gregory Koblentz (of George Mason University) and Jonathan Tucker (formerly of the Monterey Institute of International Studies) follow with an assessment of how new kinds of forensic science can be used to trace the origins of a biological attack. In particular, the emerging field of microbial forensics can help determine the genetic, chemical and physical properties of a pathogen or toxin used as a weapon. This provides information that can assist in identifying the country, group or individual responsible for an attack. However, because the object of these analytical methods is not man-made, but rather living microorganisms that are self-replicating, evolving and can be obtained from multiple sources, the attribution of a biological attack is extremely challenging. Thus, they call for increased public and private investment in new research and technologies that can improve the capabilities of microbial forensics.

And finally, Sam Berger (of the Office of Management and Budget) and Jonathan Moreno (of the University of Pennsylvania) describe two competing models for how public health systems should respond to a biological attack. The coercive model relies on aggressive measures such as quarantines, confinements, mandatory vaccinations, and other forceful methods to contain the spread of disease. This model is typified by the Model State Emergency Health Powers Act (MSEHPA), which grants public health officials broad police powers in the wake of a biological attack. In contrast, some public health scholars have proposed a cooperative model that nurtures public trust of health officials in order to encourage compliance with reasonable emergency measures. Proponents of this model believe that public health officials should provide clear and accurate information to the public in the event of an attack and should structure health responses to be as respectful of individual civil rights as possible. These two models are not wholly incompatible, and public health responses may require some mix of coercive and cooperative

measures depending in part on the characteristics of the biological agent in question, including its virulence, transmissibility, incubation period, and so forth. However, in some situations, policymakers must make a choice to emphasize one approach over the other.

Case Studies

Four case studies complete Unit Four by providing readers with several kinds of “how to respond” guidance and policy advice. In the first of these, David Albright, Paul Brannan, and Andrea Scheel Stricker of the Institute for Science and International Security argue that current efforts to deter, catch, and prosecute traffickers in dangerous nuclear goods are insufficient and inadequate. From their analysis, implementing universal laws and norms against illicit nuclear trade, establishing more secure nuclear assets, and achieving earlier detection of nuclear trade are critical to stopping the spread of nuclear weapons to other states and terrorists. The second case study—authored by Elin Gursky of the ANSER Institute for Homeland Security, and Thomas Inglesby and Tara O’Toole of the Center for Biosecurity of the University of Pittsburgh Medical Center—explores issues of disease surveillance, diagnostics and detection, drawing from observations of the medical and public health response to the 2001 anthrax attacks. Despite the commitment and hard work of individuals in these professional communities, they argue, the anthrax attacks revealed an unacceptable level of fragility in systems now properly recognized as vital to national defense. In striving to help improve these response systems, the authors identify the strategic and organizational successes and shortcomings of the nation’s response to the anthrax attacks so that medical and public health communities as well as elected officials can learn from this crisis.

The next case study examines the consequence management response to the 1995 sarin gas attacks on the Tokyo subway system. Here, Robyn Pangj of the Executive Session on Domestic Preparedness reveals a series of missed opportunities for Japanese authorities to preempt the attack or mitigate its effects. Many of the lessons learned in Japan also offer insights for the United States. For example, relationships between various agencies need to be established and nurtured, and telecommunications infrastructure must be strengthened at the local and international levels. In addition, medical surge capacity should be enhanced, laws are needed to enable appropriate surveillance and prosecution methods, and psychological care capabilities need improvement. Pangj concludes that the United States has already confronted several of these challenges, some with greater vigor and success than others, and calls for greater efforts in all areas.

416 *Unit IV Responding to the Threat*

And finally, Colonel Xavier Stewart draws on his extensive military experience, including seven years as Commander of the 3rd Weapons of Mass Destruction-Civil Support Team, to identify a broad range of potentially catastrophic threats to the U.S. homeland. He then describes several organizations that have been established as cornerstones of local and regional response capabilities, and the various kinds of training provided to these organizations. He concludes his article by proposing the establishment of All-Hazard Training Centers in the 10 Federal Emergency Management Agency regions to train WMD Civil Support Teams and emergency responders for chemical, biological, radiological, nuclear, high yield explosive, cyberspace, and natural catastrophes.

This collection reflects a broad spectrum of issues that must be addressed in responding to the complex WMD and terrorism threats identified in the earlier parts of the volume. Readers will also note that, as many of these chapters suggest, there is a considerable need for creative thinking. It is thus hoped that the perspectives provided here will inspire research that contributes new ideas and strategies to improve our response to these threats.

Second Edition

WEAPONS *of* MASS DESTRUCTION

and TERRORISM

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