

## Chapter 5

# A Bottom-Up View of Top-Down Training and Equipment Programs

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At times, an event that resonates in one place is not seen elsewhere as having significant implications. In the nation's capital, for instance, Senator Sam Nunn (D–Georgia, ret.) investigated Aum Shinrikyo's activities shortly after the sect's 20 March 1995 attack, and, along with his colleague Senator Richard Lugar (R–Indiana), began to warn that terrorists might commit such attacks in the United States.<sup>1</sup> With Senator Pete Domenici (R–New Mexico), Nunn and Lugar introduced legislation instructing the government to assist the 120 largest US metropolitan areas to prepare for the possible terrorist use of unconventional weapons.<sup>2</sup> Elsewhere in the country, emergency responders were more attuned to the potential of conventional terrorist attacks, as reinforced by the World Trade Center and Oklahoma City bombings.<sup>3</sup> The poison gas dilemma was discussed in some cities, with the most pronounced reaction coming perhaps in New York City, where in June 1995 a major no-notice drill mocked the release of sarin in the subway, after which officiators declared many rescuers “dead” because they failed to take appropriate safety precautions.<sup>4</sup> As news of this drill rippled through the emergency response community nationwide, locals elsewhere tried searching for

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<sup>1</sup> “In an age when we have witnessed two major terrorist attacks on targets in the United States, anything other than constant vigilance in this area could have catastrophic consequences. Yet preventing groups such as the Aum from arising in the future and obtaining similar destructive capabilities is an extremely complex problem. It is not one that will be solved in one or two years. And it is not one that will yield to simple solutions. . . . The activities of the Aum should serve as a warning to us all. This is a lesson that we will ignore at our peril. Prepared Statement of Senator Sam Nunn, US Senate, Committee on Governmental Affairs, Permanent Subcommittee on Investigations, *Global Proliferation of Weapons of Mass Destruction*, Part I, 104<sup>th</sup> Cong., 1<sup>st</sup> sess., 31 October 1995 (Washington, DC: US Government Printing Office, 1996), 6-7.

<sup>2</sup> The Defense Against Weapons of Mass Destruction Act of 1996 was introduced on 23 June 1996, and, after being wrapped into the 1997 Defense Appropriations Act, received final congressional passage on 23 September 1996. See Public Law 104-201.

<sup>3</sup> Robert D. McFadden, “Blast Hits Trade Center,” *New York Times*, 27 February 1993; Malcolm Gladwell, “At Least 5 Die, 500 Hurt as Explosion Rips Garage Under World Trade Center,” *Washington Post*, 27 February 1993; John Kifner, “At Least 31 Are Dead, Scores Missing After Car Bomb Attack in Oklahoma City Wrecks 9-Story Federal Office Building,” *New York Times*, 20 April 1995; Sue Ann Pressley, “Bomb Kills Dozens in Oklahoma Federal Building; More Than 200 Missing,” *Washington Post*, 20 April 1995.

<sup>4</sup> Interviews with author: former EMS Supervisor/Paramedic (12 July 2000); Director, City Emergency Services Department (18 May 2000); MMRS Coordinator, Fire Department (9 May 2000); District Fire Chief, EMS Division (2 March 2000); Fire Captain/Assistant Emergency Management Coordinator, Office of Emergency Management (5 January 2000); Battalion Fire Chief, (17 November 1999); Project Manager, Emergency Management Planning (27 July 1999); Lieutenant/Hazmat Commander (10 March 1999); Battalion Fire Chief (8 February 1999); Special Projects Program Manager, Department of Public Health (5 February 1999); Paramedic/Emergency Planner, Public Health Department (4 February 1999). The author has also viewed the videotape of this exercise, staged in June 1995 at the subway station at East 14<sup>th</sup> Street and 1<sup>st</sup> Avenue. One of the key problems, in addition to firefighters not wearing their self-contained breathing apparatus, was that the command post was situated too close to the toxic threat zone.

data that would help arm their rescuers but came up short, conducted the occasional decision making exercise, and engaged in some cross-training between different responder groups. City officials who were concerned about unconventional terrorism usually lacked the political support to fund the requisite planning, training, and drills.<sup>5</sup>

By far, however, most local authorities thought of Aum's actions as an aberration in terrorist behavior and therefore saw no immediate need to review their home town's policies and preparedness for a chemical or biological attack. Not until the federal government arrived with its unconventional terrorism training and grants did most cities undertake preparations of any significance.<sup>6</sup> As one local responder put it, "The real wake-up call always comes when something happens at home."<sup>7</sup>

This chapter reviews what happened in US cities when federal officials knocked on their doors with preparedness training and equipment grants. The local reaction was not always so warm, and those who came from Washington did not necessarily understand the local environment. After a brief overview of the federal programs, discussion moves to the circumstances that hindered the smooth and even implementation of these programs. Then, the chapter concentrates on the front line's evaluation of the training and exercise programs and the equipment grants. The chapter ends with first responders' recommendations to improve and administer these programs more cost effectively.

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<sup>5</sup> When one fire department contacted the Army about the best decontamination solution to use with victims, the response was, "We use 'X' to decontaminate tanks, but we don't decontaminate people." Interview with author: Chief, County Fire Department (9 September 1999). Others noting the paucity of decontamination and medical treatment information were: Fire Captain/Assistant Emergency Management Coordinator (5 January 2000); Fire Captain, Hazmat Unit (9 February 1999). The week after the Tokyo subway attack, one city's emergency crews contacted the local National Guard for some joint training. Interview with author: Deputy Coordinator, Fire Emergency Preparedness and Disaster Services (3 February 2000). Others reporting cross-training between police and fire units were: Deputy Coordinator, Fire Emergency Preparedness and Disaster Services (3 February 2000); Battalion Fire Chief/Emergency Services Administrator (15 November 1999); Chief, County Fire Department (9 September 1999); Battalion Fire Chief (8 February 1999); Special Projects Program Manager, Department of Public Health (5 February 1999). Another city conducted a tabletop exercise, incorporated a chemical agent component into the annual emergency drill at the airport, and began exercising with local chemical companies. Interview with author: Assistant Director, Office of Emergency Management (23 March 1999). In yet another city, officials concluded that terrorists would only use unconventional weapons in subways, so they considered themselves ahead of the curve after creating a hazardous materials response team at the airport, where a subway ran between the concourses. Interview with author: Paramedic Operations Supervisor (9 March 1999).

<sup>6</sup> Interviews with author: Director, Emergency Management Division, County Department of Public Safety (19 September 2000); Director, City Emergency Services Department (18 May 2000); MMRS Coordinator, Fire Department (9 May 2000); District Fire Chief, EMS Division (2 March 2000); Fire Captain/Assistant Emergency Management Coordinator (5 January 2000); Battalion Fire Chief, (17 November 1999); Lieutenant/Hazmat Commander (10 March 1999); Battalion Fire Chief (8 February 1999); Special Projects Program Manager, Department of Public Health (5 February 1999); Paramedic/Emergency Planner, Public Health Department (4 February 1999).

<sup>7</sup> Interview with author: Police Lieutenant (23 March 1999).

## FEDERAL TRAINING AND RESPONSE PLANNING PROGRAMS

After Congress mandated domestic preparedness programs in 1996, the federal government fanned squads of presenters across the country and brought some local officials to Washington to brief them about the unconventional terrorist threat and the federal programs taking shape.<sup>8</sup> Explaining the concept of the training and exercise program that was to follow, Defense Department officials portrayed their instruction as centered on what the front line would need to know to respond to nuclear, biological, and chemical (NBC) terrorism events, dubbing it the “NBC delta.”<sup>9</sup> Congress stipulated that the Pentagon train twenty-seven cities in three months and maintain a brisk pace thereafter until all 120 cities were trained. “We didn’t have a plan,” observed a federal official involved in the early days of this effort, “but we knew we were moving out. We conceived these things on the fly.”<sup>10</sup>

The US Army hired contractors to administer the Domestic Preparedness Program (DPP), the first phase of which was billed as “train-the-trainer” training, geared to prepare the instructors from the local police and fire academies and their counterparts in the medical community to teach the necessary skills to the rank and file. The second phase of the program followed on the heels of a week of instruction, beginning with a tabletop exercise intended to help a city’s emergency managers gauge their ability to make the appropriate decisions to respond effectively to a hypothetical chemical agent release. Six months later, ostensibly after the training had spread to the firefighters, police, emergency medical services (EMS) crews, and hospital care providers, Pentagon contractors returned to help local officials plan and conduct a large functional or field exercise simulating a chemical agent release. The purpose of this exercise was to deploy and drill trained front-line units. Roughly one month after the chemical field exercise, the training program ended with a biological tabletop exercise.<sup>11</sup> The DPP slate of activities did not include a field exercise mocking a bioterrorism attack.

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<sup>8</sup> Interviews with author: Physician, Hospital Department of Emergency Medicine (24 March 1999); Emergency Preparedness Director, Office of Emergency Services (9 February 1999); Battalion Fire Chief (8 February 1999).

<sup>9</sup> Accordingly, one of the Domestic Preparedness Program (DPP) manuals states: “The training is focused on the NBC difference or “delta”: emergency response concerns that are specific to dealing with the consequences of an NBC terrorist attack. NBC delta builds on care providers’ existing skills and training in mass casualty incidents (MCIs), HAZMAT incidents, and other aspects of emergency response.” *Technician—Hospital Provider Course: Instructor Guide* (Domestic Preparedness Training Program, Booz Allen & Hamilton, Inc., and Science Applications International Corporation: 1998), 6.

<sup>10</sup> Interview with author: Federal official (12 May 1999). Also commenting on the jumbled outcome that resulted when Congress mandated a program, put a significant amount of money in it, and then left it up to the executive branch to determine what preparedness means and how the program should be implemented was a senior official with the Department of Health and Human Services (6 May 2000).

<sup>11</sup> US Army Soldier and Biological Chemical Command, “Training Overview Brief,” in *Defense Against Weapons of Mass Destruction: Regional Kickoff Meeting FY99 Cities* (Aberdeen, Md.: US Army Soldier and Biological Chemical Command, 1998).

As the Pentagon unveiled its DPP training, other parts of the federal government began to offer their own terrorism preparedness programs, as chapter 4 discusses. For example, the Federal Emergency Management Agency developed self-study and on-site courses with the National Fire Academy and Emergency Management Institute. The Justice Department offered preparedness training to responders in 255 cities and counties and in June 1998 opened a training center for civilian responders at the Army's old chemical school at Ft. McClellan, Alabama.<sup>12</sup> As 2000 began, cities could choose from roughly ninety preparedness courses offered by various federal agencies.<sup>13</sup> Not only were training courses abundant, they were redundant.<sup>14</sup> No one in Washington refereed the explosion of training courses or provided guidance about their quality, and befuddled local officials could hardly wade through all of the options.

Another part of the Defense Against Weapons of Mass Destruction Act of 1996 directed the Office of Emergency Preparedness in the Department of Health and Human Services (HHS) to begin awarding grants to cities to form Metropolitan Medical Strike Teams, later re-christened Metropolitan Medical Response Systems (MMRS). By 2000, some seventy-two cities were engaged in setting up multidisciplinary MMRS brigades of roughly forty police, fire, and medical rescuers. Although the formulation varied from city to city, a hazardous materials (hazmat) squad usually became the backbone of the MMRS. The balance of the team was drawn from EMS crews, bomb and special weapons and tactics (SWAT) teams, physicians, and, sometimes, toxicologists. Some MMRS teams formed later in the program have been linked into the local public health department and laboratories and private health care facilities.<sup>15</sup> HHS initially asked the cities to prepare an overall weapons of mass destruction response plan, but most chose to address the easiest

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<sup>12</sup> US Department of Justice, *Report to Congress: Assessment of Department of Justice Requirements for the Center for Domestic Preparedness Facility at Fort McClellan, Alabama*, (Washington, DC: US Department of Justice, March 2000), 1–3.

<sup>13</sup> *Compendium of Weapons of Mass Destruction Courses Sponsored by the Federal Government* (Aberdeen, Md.: US Army Soldier and Biological Chemical Command, January 2000).

<sup>14</sup> Among the problems, different federal agencies were providing similar training programs to the same jurisdictions. General Accounting Office, *Combating Terrorism: Need to Eliminate Duplicate Federal Weapons of Mass Destruction Training*, GAO/NSIAD-00-64 (Washington, DC: US General Accounting Office, March 2000).

<sup>15</sup> Interviews with author: Fire EMS Statistician (30 August 2000); Physician, University Hospital Department of Emergency Medicine (20 September 2000); Medical Toxicologist/Poison Control Center Director (13 June 2000); Battalion Fire Chief, Special Operations (25 May 2000); Emergency Management Specialist, Office of Emergency Management (9 May 2000); Captain/Assistant Emergency Management Coordinator (5 January 2000); Toxicologist, Poison Control Center (9 March 1999); Paramedic/Emergency Planner, Public Health Department (4 February 1999). One major city's MMRS fields emergency medical technicians (EMT), but no physicians. Therefore, to augment the medical expertise available for this type of disaster, this state's public health department is developing a four-person team of medical experts in each region that could respond to the incident scene within four hours. Interview with author: Registered Nurse/Chief, EMS Division, State Department of Public Health (3 February 2000).

of the unconventional terrorism scenarios first—the response to a chemical attack. HHS subsequently provided separate grants for bioterrorism response planning.<sup>16</sup>

Washington, DC, was the first city to stand up an MMRS, superimposing on top of front-line responders a layer of advanced help that would function as advisors, not replacements. Washington gave MMRS team members beepers and, if summoned, they would gather at a pre-identified location, retrieve their equipment, head for the incident scene, and join the response in progress. Early on, Washington's free-standing, on-call team was touted as the model.<sup>17</sup>

The “golden hour” is a rescue term that refers to the time window within which those with traumatic injuries must receive medical treatment or likely perish. The critical lifesaving timeframe could be much shorter after a chemical weapons attack, which was the primary reason why numerous cities resoundingly rejected Washington's MMRS model. Outside the beltway, the prevailing view was that the victims would be dead long before MMRS squads organized in this fashion could bring their specialized equipment and training to bear. Instead, most cities integrated MMRS members and their equipment into front-line hazmat, fire, EMS, and police units. This MMRS design requires approximately 150 rescuers to be trained so that three shifts can be manned, with backups to fill-in when team members are ill or on vacation. The integrated approach enables rescuers with the best equipment and training to be on the scene in minutes, even if the whole MMRS team does not gather that quickly.<sup>18</sup> In addition to a faster response time, the creation of three full teams would allow off-duty MMRS squads to be paged to augment and relieve the initial responders.

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<sup>16</sup> Under contract, HHS requested that cities plan to treat one thousand chemical casualties. The focus of the biological planning was for cities to demonstrate an awareness of how to handle three echelons of a possible bioterrorist attacks: 1) one hundred infected patients, 2) one hundred to ten thousand victims; and 3) greater than ten thousand patients. Interviews with author: Commander, US Public Health Service (3 July 2000); Federal official, Office of Emergency Preparedness, Department of Health and Human Services (28 June 2000); Commander, US Public Health Service (6 May 2000).

<sup>17</sup> Team members and their equipment can supposedly arrive in the center of the city within forty-five minutes. Interview with author: Chief, County Fire Department (9 September 1999). Also, Frances E. Winslow and Cmdr. John Walmsley, “Metropolitan Medical Strike Team Systems: Responding to the Medical Demands of WMD/NBC Events,” forthcoming paper.

<sup>18</sup> Interviews with author: Federal official, Office of Emergency Preparedness, Department of Health and Human Services (28 June 2000); Paramedic (12 May 2000); Emergency Management Specialist, Office of Emergency Management (9 May 2000); Battalion Fire Chief (15 November 1999); Physician/EMS Medical Director (13 November 1999); Project Manager, Office of Emergency Management (27 July 1999); EMS Superintendent-in-Chief (24 March 1999); Fire Lieutenant and Fire Captain (5 February 1999).

## **FEDERAL AND LOCAL POLITICS HANDICAPPED PREPAREDNESS EFFORTS**

Perhaps it was inevitable that the launch of resource-rich programs with high-profile missions would be accompanied by considerable friction between the federal agencies involved. Federal authorities preached the importance of local response agencies working hand-in-hand and claimed that they would do so themselves, but front-line rescuers got the distinct impression that the federal agencies were locked in an intense competition for terrorism preparedness missions and money.<sup>19</sup> Local suspicions of a federal turf battle could be confirmed when the federal partners spoke, as they did at a mid-April 1999 conference. A Pentagon official stated: “We have ramped up tremendously over the last eighteen months. We have new assets, like the [National Guard Rapid Assessment and Initial Detection] teams. Some of them make sense and some of them have just been generated through the process.” Afterwards, a representative of the Federal Emergency Management Agency added: “We have a fairly small amount of money at stake here. We’d certainly like to have more.” Next, an official from HHS chimed in with, “We don’t lack for authority. We lack for people and money.”<sup>20</sup> Small wonder then, that the locals found the federal “work together” sermon to be hypocritical.

The locals had trouble figuring out who was in charge among the many federal agencies and what the overall game plan was. The federal programs had varying time lines, slightly different goals, and conflicting views on priorities and how to accomplish certain response tasks. Local authorities in charge of preparedness efforts in their communities constantly got mixed signals from Washington. “The more federal agencies that got in the act, the more confusing it got because they each had their own approach,” said a state official who watched the whole circus repeatedly come to town. “They weren’t bad people or bad agencies, it was just their view of the world.”<sup>21</sup> The duplication of effort aside, these circumstances created practical

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<sup>19</sup> “If they aren’t working together, then how can they expect the city agencies to work together on this?” Interview with author: Physician, Hospital Department of Emergency Medicine (24 March 1999). “There seemed to be a real lack of coordination in what they were going to do and how they were going to offer it.” Interview with author: Director, Office of Emergency Preparedness (19 September 2000). Also, Battalion Fire Chief, Special Operations (25 May 2000); Police Sergeant (9 May 2000); Detective/Bomb Squad (19 January 2000); Assistant Director, Office of Emergency Management (23 March 1999); Emergency Preparedness Director, Office of Emergency Services (9 February 1999); Battalion Fire Chief (8 February 1999); Director, Office of Emergency Services (4 February 1999).

<sup>20</sup> Interviews with author: Federal Emergency Management Coordinator (13 April 1999); Senior government official (13 April 1999).

<sup>21</sup> Interview with author: Division Chief, State Disaster Medical Services Division (15 February 2000). Also supporting this view were: Director, Emergency Management Division, County Department of Public Safety (19 September 2000); Fire EMS Statistician (30 August 2000); EMS Licensing Agent, State Department of Public Safety (27 January 2000); Assistant Director, Office of Emergency Management (23 March 1999); Battalion Fire Chief (8 February 1999).

problems locally. For example, the federal agencies did not standardize the terminology and content of their courses, which left the locals puzzling over the discrepancies in what they were taught.<sup>22</sup>

Engrossed in their own competition, federal officials often appeared oblivious to what bearing local politics had on the traction that the DPP and MMRS programs gained in different municipalities. The fact that the money initially went to the cities as opposed to the states, and often ended up in the fire departments instead of other response agencies, created different undercurrents in each metropolitan area. Some cities got off the starting mark with gusto, some in fits and starts, and others just sputtered. The federal programs were administered in a one-size-fits-all manner, with few, if any, adjustments to account for local circumstances.

Placing the DPP and MMRS funds in the cities trained and equipped front-line rescuers, but it also bypassed state authorities. Circumventing the state emergency response officials was more than a ruffled-feathers matter. Disaster response is a multi-agency, multi-tiered endeavor. Cities stricken with a large-scale emergency call first upon county resources, where emergency response capabilities such as sheriffs, EMS agencies, hospitals, public health directors, and coroners often reside. As needed and according to the emergency management system that states began to institute in the 1980s, cities next activate mutual aid agreements with neighboring cities and counties, if such agreements are in place. Once regional response capabilities are outstripped, a city requests state assistance. Thus, state officials viewed Washington's initiatives as undercutting the all-hazards, all-levels-of-government approach to disaster response. State officials say that had the federal programs passed through them, the money would have been more evenly distributed through counties and cities and across the different disaster response disciplines.<sup>23</sup> Not bothering to mince words, some city and federal officials countered that if the federal aid had gone through the state,

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<sup>22</sup> For example, the Pentagon employs the acronym WMD to refer to weapons of mass destruction, and Justice Department uses BE NICE. Interviews with author: Physician/Associate Medical Director, Fire EMS Division (27 July 1999); EMS Superintendent-in-Chief (24 March 1999).

<sup>23</sup> "If you undertake terrorism preparedness in a vacuum and not as part of regular emergency management activity, you will fail." Interview with author: Area Emergency Manager, Department of Veterans Affairs (24 May 2000). Also, in other interviews, Pre-Hospital Care Coordinator/Emergency Planner, County EMS (2 May 2000); Division Chief, State Disaster Medical Services Division (15 February 2000).

only crumbs would have cascaded down to the cities and their front-line responders.<sup>24</sup> With the onset of programming in each state, discord flared between some local and state officials, hindering progress.

Another dimension that made it challenging for cities to move forward with the DPP and MMRS efforts was the hidden costs of the preparedness programs. Congress stipulated that no federal funds could be spent on local labor costs, so the cities had to absorb the appreciable manpower expenses to train and drill. As one local official put it, “Equipment is cheap in comparison to training funds.”<sup>25</sup> The equipment grants from the Defense, Justice, and HHS Departments also required the cities to maintain what is purchased, a cost that mounts over time. Said another local official, “It cost us a lot of our time and money to take their money.”<sup>26</sup> City managers and chiefs of response agencies that were scrapping to fund regular public safety services were hardly enthusiastic supporters of these programs. “The bean counters can’t see spending ‘X’ amount of money on something that may never happen,” remarked a senior disaster assistance official.<sup>27</sup> The same could be said of mayors and city council members, who saw this type of emergency as even more remote than floods or tornadoes. Even discussing the possibility of unconventional terrorism was enough to set some city governments on edge. One city council asked that the agenda topic be renamed so that it would not incite a media frenzy.<sup>28</sup> So, many cities faced major problems with a lack of support, or “buy-in,” from elected officials, city managers, and response agency chiefs for the DPP training and MMRS

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<sup>24</sup> If the money had gone through the state, said one city official, “they would have taken a huge cut and we would have gotten crumbs. No first responders would have been trained.” Interview with the author: Assistant Director, Office of Emergency Management (23 March 1999). Said another, state officials plan and theorize, but locals get the job done. “Putting it in the cities was a stroke of genius,” according to an EMS Chief, Emergency Services Department (21 September 2000). Also commenting on this point, Director, Office of Emergency Preparedness (19 September 2000); Director, Emergency Management Division, County Department of Public Safety (19 September 2000); Physician, Division of Disease Control, Public Health Department (8 August 2000); Deputy Director, Office of Emergency Management (26 May 2000); Emergency Preparedness Director, Office of Emergency Services (9 February 1999). In a 6 May 2000 interview, a Public Health Service Commander stated that HHS deliberately went straight to the cities at first to avoid having the state governments take a cut of 10 percent or more.

<sup>25</sup> Interview with author: Assistant Director, Office of Emergency Management (23 March 1999).

<sup>26</sup> Interview with author: Fire EMS Statistician (30 August 2000). Seconding this view, another responder noted that to maintain a piece of equipment, a city must spend roughly a quarter of the item’s original price. Interview with author: Hazmat Coordinator/Instructor (8 September 2000). For a city of 500,000, the General Accounting Office estimated that equipment maintenance costs for basic items over a ten-year period would be \$4.6 million and roughly \$43 million for all of the items needed for a high capability. General Accounting Office, *Combating Terrorism: Analysis of Potential Emergency Response Equipment and Sustainment Costs*, GAO/NSIAD-99-151 (Washington, DC: US General Accounting Office, June 1999), 2.

<sup>27</sup> Interview with author: Director of Hospital EMS and Disaster Medicine (19 April 1999). Similar thoughts about how expensive it was to accept the federal aid were expressed by Fire EMS Statistician (30 August 2000); Director, Office of Emergency Services (4 February 1999).

<sup>28</sup> Interview with author: Deputy Director, Office of Emergency Management (17 December 1999).

programs.<sup>29</sup> In box 5.1, local authorities relate some of the tactics they used to shake loose support. Every time local preparedness champions made some headway, however, personnel turnover and electoral cycles forced them to re-educate the newcomers and cope anew with the objections of influential locals who threw efforts off track within different response agencies and sometimes across an entire metropolitan area.<sup>30</sup> The more time that passed without a Tokyo-like incident in the United States, the harder it became to elicit and sustain the local support costs.

Finally, the DPP training was coordinated locally out of either the mayor's office of emergency management or the fire departments, and most of the equipment purchased went to hazmat, fire, and EMS personnel. The MMRS funds went to the mayor, who then delegated the task of pulling together the MMRS teams to whomever in whatever organization he or she saw fit.<sup>31</sup> Not surprisingly, local rifts erupted between the have- and have-not response agencies. The unwieldy situation was often capped by a need for MMRS teams to draw components from both city and county response entities. Local officials lamented that federal administrators often had no clue of how city and county governments work or of the jurisdictional and political schisms, some considerable, between the local emergency response agencies.<sup>32</sup>

In many cities, animosity had built up between the fire, police, and the third-service EMS agencies. Rescue personnel from these agencies frequently worked the same emergencies together, but away from the scene organizational loyalty, the competition for local resources, and personality differences translated into interagency relationships that were anything but collegial. In a fair number of cities, the fire departments proved to be reasonable arbiters of how the DPP training and equipment funds were spent, showing an appreciation that they alone could not pull off a response to an unconventional terrorist attack by inviting

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<sup>29</sup> Interviews with author: Battalion Fire Chief, (17 November 1999); Emergency Preparedness Director, Office of Emergency Services (9 February 1999); Fire Lieutenant (5 February 1999); Director, Office of Emergency Services (4 February 1999); Paramedic/Emergency Planner, Public Health Department (4 February 1999).

<sup>30</sup> One novice to MMRS planning circles recalled that he thought they were about to discuss the local NBC television affiliate and was surprised to find out NBC was shorthand for nuclear, biological, and chemical weaponry. Interview with author: Police Commander, Special Operations Division (23 March 1999). On the difficulties of generating and sustaining local political support: District Fire Chief, EMS Division (2 March 2000); Detective/Bomb Squad Member (19 January 2000); Hazmat Specialist (19 April 1999); Emergency Preparedness Director, Office of Emergency Services (9 February 1999); Director, Office of Emergency Services (4 February 1999); Paramedic/Emergency Planner, Public Health Department (4 February 1999).

<sup>31</sup> The MMRS contracts stipulate that the team should be composed of certain response elements, but do not set terms for how the money should be apportioned among agencies participating in the MMRS. Interviews with author: Commanders, US Public Health Service (3 July 2000; 6 May 2000).

<sup>32</sup> Interviews with author: General Manager, Emergency Department (22 September 2000); Fire EMS Statistician (30 August 2000); Fire Chief (15 May 2000); District Fire Chief, EMS Division (2 March 2000); Battalion Fire Chief (17 November 1999); Assistant Director, Office of Emergency Management (23 March 1999); Deputy Fire Chief (23 March 1999); Emergency Preparedness Director, Office of Emergency Services (9 February 1999); Director, Office of Emergency Services (4 February 1999); Paramedic/Emergency Planner, Public Health Department (4 February 1999).

**Box 5.1: Successful Tactics to Secure Local “Buy-In”**

Front-line and mid-level management proponents of the preparedness activities employed several tactics to grab the attention and secure the buy-in of elected officials and agency chiefs. For instance, on-scene commanders stunned the hierarchy in one city by telling them that if a chemical terrorist attack occurred, their staffs would have to be bystanders—undoubtedly in full view of news helicopters—because they had no equipment or training to operate in a contaminated zone. Recalled an EMS chief, “I’m not sending paramedics in to die. Police also said that they wouldn’t hold the perimeter under those circumstances. Now *that* shook up the mayor’s office.”<sup>1</sup> Politicians, hospital and agency chiefs, and mid-level managers in other cities had a similar “uh-oh” reaction when they witnessed the initial tabletop exercise, wherein the novel operational problems provoked fumbles on the part of rescue commanders and health care providers.<sup>2</sup> Staffers in other cities gained buy-in by giving the big-wigs a taste of life on the front lines, putting them in level A moonsuits, and seeing to it that the mayor got a glimpse of his own mortality in a tabletop exercise.<sup>3</sup> Each of these tactics convinced senior local officials to cut loose training funds and auxiliary expenses.

## NOTES

1. Emphasis in the original statement. Interview with author: Paramedic Operations Supervisor (9 March 1999). Another EMS chief also told his bosses he would refuse to send personnel, unequipped and untrained, into harm’s way. Interview with author: Battalion Fire Chief, Chief of EMS (8 February 1999).

2. Interviews with author: Police Lieutenant (23 March 1999); Fire Captain and Fire Lieutenant (5 February 1999).

3. On dressing out in protective gear, interview with author: Deputy Director, Office of Emergency Management (6 April 1999). If the mayor or other city officials are to be designated casualties in any drill, cautions the individual who related this story, the scenario has to be realistic or the “target(s)” will see right through the ploy. Interview with author: Project Manager, Emergency Management Planning (27 July 1999).

neighboring jurisdictions into the training.<sup>33</sup> Taking this principle a step further, several fire departments also shared the DPP equipment with the police and EMS and even other regional fire departments.<sup>34</sup> In other locations, the fire departments flatly declined to share equipment funds with other response agencies. An EMS chief noted that the head of his fire department vetoed any suggestions to share the DPP equipment

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<sup>33</sup> Those noting that mutual aid partners were invited into the training included: Director, Office of Emergency Preparedness (19 September 2000); Deputy Director, Office of Emergency Management (26 May 2000); Fire Chief (15 May 2000); Emergency Management Specialist, Office of Emergency Management (9 May 2000); Fire Captain/Assistant Emergency Management Coordinator (5 January 2000); Battalion Fire Chief (15 November 1999); Fire Commander (19 April 1999); Assistant Director, Office of Emergency Management (23 March 1999); Emergency Preparedness Director, Office of Emergency Services (9 February 1999); Registered Nurse/Hospital Disaster Coordinator (4 February 1999).

<sup>34</sup> Interviews with author: Police Lieutenant, Tactical Support Office (18 September 2000); MMRS Coordinator, Fire Department (9 May 2000); Fire Captain/Assistant Emergency Management Coordinator (5 January 2000); Fire Commander (19 April 1999); Lieutenant/Hazmat Commander (10 March 1999); Battalion Fire Chief (8 February 1999). In a few cities, fire departments did not open the doors to mutual aid partners and were unwilling to share equipment funds with other response agencies in their cities, much less with neighboring towns. Interviews with author: District Fire Chief, EMS Division (2 March 2000); Battalion Fire Chief (17 November 1999); Director of Hospital EMS and Disaster Medicine (19 April 1999); Hazmat Specialist (19 April 1999).

with other response agencies, particularly the police.<sup>35</sup> Invariably, hospitals, which were not field response entities, tended to be the last in line for any trickle-down equipment from the federal grants.<sup>36</sup>

## FRONT-LINE PERSONNEL EVALUATE THE DOMESTIC PREPAREDNESS TRAINING PROGRAM

Among the first things often mentioned by front-line responders about the DPP training was that it was “olive drab”—Army through and through—in attitude and content.<sup>37</sup> To illustrate the point, DPP instructors habitually dismissed one thousand fatalities in a chemical terrorist attack as an “acceptable loss.” Although such an outlook may be a battlefield necessity, it was way out of step in a civilian rescue setting, where the operational philosophy is to save every possible life.<sup>38</sup> Next, first responders observed that the caliber of the instructors was very uneven, so much so that one’s experience in the course was luck of the draw.<sup>39</sup> Locals rated some instructors as excellent, true experts in their field. Winning the highest praise were the first responders hired as trainers after going through advanced Pentagon chemical and biological

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<sup>35</sup> This fire chief also forbade cross-drilling with special police units, such as the SWAT and bomb squads. Interview with author; District Fire Chief, EMS Division (2 March 2000). Police had yet to receive any equipment in other cities. Interview with author: Registered Nurse/Emergency Planner, Public Health Department (7 April 2000).

<sup>36</sup> As one emergency department physician said of their place in equipment purchases line, “We suck hind teat.” Interview with author: Physician/Associate Director, Hospital Department of Emergency Medicine (9 March 1999). Others agreeing that hospitals got very little aid were: General Manager, Emergency Department (22 September 2000); Director, Emergency Management Division, County Department of Public Safety (19 September 2000); Police Lieutenant, Tactical Support Office (18 September 2000); Fire EMS Statistician (30 August 2000); Physician, Division of Disease Control, Public Health Department (8 August 2000); Physician, Hospital Division of Emergency Medicine (31 May 2000); MMRS Coordinator, Fire Department (9 May 2000); Registered Nurse/Chief, EMS Division, State Department of Public Health (3 February 2000); Associate Hospital Administrator/Registered Nurse (13 November 1999); Medical Toxicologist/Poison Control Center Director (13 June 2000); EMS Superintendent-in-Chief (24 March 1999); Registered Nurse/Hospital Disaster Coordinator (4 February 1999); Paramedic/Emergency Planner, Public Health Department (4 February 1999).

<sup>37</sup> This assessment prevailed despite the fact that DPP administrators brought in first responders to help them shape the content of the classes, which went through a couple of iterations before the program debuted. Interviews with author: Hazmat Coordinator/Instructor (8 September 2000); Deputy Director, Office of Emergency Management (26 May 2000); Captain, EMS (27 July 1999); Battalion Fire Chief, Special Operations Division (12 May 1999); Emergency Planner (8 March 1999).

<sup>38</sup> Several individuals also noted the legal implications for cities of adopting an acceptable-loss approach to terrorist events. If civilian rescuers do not go all-out to save victims, cities may be sued. Interviews with author: Director, County Emergency Management (21 September 2000); Hazmat Coordinator/Instructor (8 September 2000); Assistant Director, Office of Emergency Management (23 March 1999); Lieutenant/Hazmat Commander (10 March 1999); Toxicologist (9 March 1999); Emergency Preparedness Director, Office of Emergency Services (9 February 1999); Fire Captain, Hazmat Unit (9 February 1999).

<sup>39</sup> Interviews with author: Hazmat Coordinator/Instructor (8 September 2000); Medical Toxicologist/Poison Control Center Director (13 June 2000); FBI Special Agent (3 February 2000); Fire Commander (19 April 1999).

casualty training.<sup>40</sup> Both federal and local officials, however, remarked that some instructors were substandard and so lacking in depth that they were reading off of slides and unable to answer questions.<sup>41</sup>

## **POOR REVIEWS FOR ADVANCED DPP CLASSES**

The Defense Department's training is separated into segments that are supposed to be geared to the level of course attendees, as listed in table 5.1. The awareness-level course got generally positive reviews as a solid, reasonably comprehensive introduction to the threat and the life-and-death ramifications if locals did not react appropriately. For instance, if there are signs of a toxic hazard, the awareness training teaches responders to back off and call better trained and equipped rescuers.<sup>42</sup>

More specialized rescuers, such as paramedics and hazmat team members, frequently attended the awareness course before taking the operations and technician courses. Several individuals interviewed characterized the advanced courses as a platform from which to build, a good starting point.<sup>43</sup> However, the advanced courses received far more criticism than praise, partly because they were filled with beginner materials, an approach that was on its face rather weak. The DPP program was aimed at the nation's largest cities, virtually all of which have fully certified hazmat teams and personnel well versed in the Integrated Command System. Local responders expected only a minimum of background material before the courses began to focus on the specialized skills needed for unconventional terrorist incidents. Instead, the advanced

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<sup>40</sup> Often, these instructors had attended the US Army Medical Research Institute for Infectious Disease's chemical and biological casualty course and adapted the information therein for a civilian setting. Interviews with author: EMS Chief, Emergency Services Department (21 September 2000); Police Lieutenant, Tactical Support Office (18 September 2000); Area Emergency Manager, Department of Veterans Affairs (24 May 2000); MMRS Coordinator, Fire Department (9 May 2000); Pre-Hospital Care Coordinator/Emergency Planner, County EMS (2 May 2000); District Fire Chief, EMS Division (2 March 2000); Battalion Fire Chief (15 November 1999); EMS Superintendent-in-Chief (24 March 1999); Police Lieutenant (23 March 1999); Paramedic Operations Supervisor (9 March 1999); Physician/Associate Director, Hospital Department of Emergency Medicine (9 March 1999); Physician, Hospital Department of Emergency Medicine (9 March 1999); Registered Nurse/Hospital Disaster Coordinator (4 February 1999).

<sup>41</sup> Interviews with author: Federal official (12 May 1999); Fire Captain, Hazmat Unit (9 February 1999); Emergency Preparedness Director, Office of Emergency Services (9 February 1999). Another common sore point was the superior attitude exhibited by Defense Department personnel and their training contractors, despite their lack of experience in the unpredictable and dangerous world of street rescues. Interviews with author: Hazmat Coordinator/Instructor (8 September 2000); Detective/Bomb Squad Member (19 January 2000); Captain, EMS (27 July 1999); Battalion Fire Chief, Special Operations Division (12 May 1999); Emergency Planner (8 March 1999).

<sup>42</sup> Interviews with author: Pre-Hospital Care Coordinator/Emergency Planner, County EMS (2 May 2000); Director of Hospital EMS and Disaster Medicine (19 April 1999); Police Lieutenant (23 March 1999); Physician/Associate Director, Hospital Department of Emergency Medicine (9 March 1999); Police Captain/Firing Range Director (5 February 1999); Registered Nurse/Hospital Disaster Coordinator (4 February 1999).

<sup>43</sup> Interviews with author: Deputy Coordinator, Fire Emergency Preparedness and Disaster Services (3 February 2000); Fire Captain/Assistant Emergency Management Coordinator (5 January 2000); Battalion Fire Chief (15 November 1999); Physician/EMS Medical Director (13 November 1999). Also giving this assessment of the advanced courses, Physician, University Hospital Department of Emergency Medicine (20 September 2000).

**Table 5.1: Outline of Domestic Preparedness Program Courses**

Course	Target Audience	Primary Training Objectives	Course Length
Responder Awareness	Firefighters, law enforcement, emergency medical services personnel	<ul style="list-style-type: none"> <li>Recognize an NBC incident through signs, symptoms, and trends</li> <li>Identify available protective measures</li> <li>Learn about possible agent dissemination means</li> <li>Pinpoint appropriate responder reactions</li> </ul>	4 hours
Responder Operations	Incident response teams	<ul style="list-style-type: none"> <li>Builds on responder awareness course</li> <li>Learn basic chemical downwind hazard prediction</li> <li>Understand capabilities of personal protective gear</li> <li>Acquire basic knowledge of detection and agent identification equipment</li> <li>Explore decontamination requirements unique to unconventional weapons</li> </ul>	4 hours
Hazardous Materials Technician	Hazmat responders	<ul style="list-style-type: none"> <li>Learn specifics on chemical agents, symptoms of exposure, immediate first aid, decontamination, and personal protection</li> </ul>	12 hours
Emergency Medical Services Technician	Emergency medical services responders and paramedics	<ul style="list-style-type: none"> <li>Understand health effects of exposure to NBC agents</li> <li>Consider triage and field treatment issues specific to NBC agents</li> <li>Master proper antidote administration</li> </ul>	8 hours
Hospital Provider Technician	Emergency room personnel	<ul style="list-style-type: none"> <li>Understand health effects of exposure to NBC agents</li> <li>Consider triage and treatment issues specific to NBC agents</li> <li>Master proper antidote administration and emergency treatment of victims</li> <li>Learn decontamination means and requirements</li> </ul>	8 hours
Incident Command	Incident commanders	<ul style="list-style-type: none"> <li>Gain additional knowledge in managing mass casualty incidents</li> <li>Explore detection, agent identification, protection, and mass decontamination issues from incident commander perspective</li> <li>Develop and exercise NBC response plan</li> </ul>	6 hours

Source: US Army Soldier and Biological Chemical Command, Domestic Preparedness Program, “NBC Domestic Preparedness Training Program—Overview of Courses,” in *Defense Against Weapons of Mass Destruction Regional Kickoff Meeting: FY99 Cities* (Aberdeen, Md.: US Army Soldier and Biological Chemical Command, n.d.).

courses contained far too much material that they were already required to know and were short on the information that they eagerly sought on how to protect themselves and to aid victims. Consequently, first responders described them as “extremely generic and canned,” or, more bluntly, “garbage” and “a big [expletive] waste of their time.”<sup>44</sup>

Moreover, the first responders thought the advanced courses included a surfeit of extraneous material, such as unnecessary factoids and lengthy descriptions of military capabilities and equipment that civilians cannot obtain. “Waxing eloquent about how anthrax is a gram positive bacillus doesn’t make sense to most first responders,” observed a city emergency planner. “Why waste their time telling them things they don’t understand or need?”<sup>45</sup> A police captain echoed this sentiment: “I’ve read the stuff, but I’m not a doctor and I can’t remember all of this.”<sup>46</sup> Some indignant locals concluded that the team of DPP contractors—Science Applications International Corporation, EAI Corporation, Booz Allen & Hamilton, Inc., and Disaster Planning International, Inc.—bloating the courses with redundant and nonessential information to “financially support their staff” and “teach them with very little effort.”<sup>47</sup> Clearly, the front line expected more from a training program that billed itself as providing the NBC delta.

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<sup>44</sup> The first remark was made by a Battalion Fire Chief (8 February 1999); the second by Chief, County Fire Department (9 September 1999), and the third describes the assessment that members of a hazmat squad gave their captain after attending the hazmat technician course. Interview with author: Fire Captain, Hazmat Unit (9 February 1999). Others who, in interviews with the author, described the advanced courses as redundant of material they were already required to know: Director, County Emergency Management (21 September 2000); MMRS Coordinator, Fire Department (9 May 2000); Emergency Management Specialist, Office of Emergency Management (9 May 2000); Division Chief, State Disaster Medical Services Division (15 February 2000); FBI Special Agent (3 February 2000); Battalion Fire Chief (15 November 1999); Deputy Director, Office of Emergency Management (27 July 1999); Project Manager, Office of Emergency Management (27 July 1999); Hazmat Specialist (19 April 1999); Toxicologist (9 March 1999); Physician/Associate Director, Hospital Department of Emergency Medicine (9 March 1999); Physician, Hospital Department of Emergency Medicine (9 March 1999); Emergency Preparedness Director, Office of Emergency Services (9 February 1999); Battalion Fire Chief (8 February 1999); Paramedic/Emergency Planner, Public Health Department (4 February 1999); Registered Nurse/Hospital Disaster Coordinator (4 February 1999). The DPP course gave more detail about pertinent topics, noted a fire training supervisor, than the National Fire Academy’s course, which he described as taking two days to present eight hours of material. Interview with author: Fire Commander (19 April 1999). Initially, the training at Ft. McClellan included an entire day on how to put on Mission-Oriented Protective Posture (MOPP) gear, which was arguably a waste of time because this type of protective gear is not approved for civilian use. Interview with author: Fire Lieutenant/Hazmat Operations (27 July 1999). After revision, this course received much better reviews. Interviews with author: Police Lieutenant (8 July 2000); EMS Specialist/Paramedic (12 May 2000); Paramedic (12 May 2000); Fire Captain/Assistant Emergency Management Coordinator (5 January 2000).

<sup>45</sup> Interview with author: Project Manager, Office of Emergency Management (27 July 1999).

<sup>46</sup> Interview with author: Police Captain, Special Operations (8 February 1999). In agreement on this point were: Director of Hospital EMS and Disaster Medicine (19 April 1999); Fire Captain, Hazmat Unit (9 February 1999).

<sup>47</sup> The first comment was made by an Emergency Preparedness Director, Office of Emergency Services (9 February 1999). A hazmat lieutenant made the second remark, continuing that the courses, for the contractors, are “just profit. They walk in, spit out the same thing every time, and there is no preparation time.” Interview with author: Fire Lieutenant/Hazmat Operations (27 July 1999). Instructors were reportedly paid \$600 per day, plus expenses, regardless of whether they taught for just twenty minutes during a day or the entire week. Interview with author: Hazmat Coordinator/Instructor (8 September 2000).

Accordingly, first responders were quite vocal about several topics that the courses should have addressed but did not. For instance, locals assumed that information about the planning and logistics support necessary to orchestrate a response to an unconventional terrorist attack, not to mention the special demands for coordination between responding agencies, would be the foundation of the incident command course, but such material was not included.<sup>48</sup> Other important areas where the interviewees found the training wanting were:

- \* *Quick rescue techniques and possible exemptions to personal protective gear rules.* From firefighters to hospital care providers, civilians are required to observe Occupational Safety and Health Administration (OSHA) hazmat regulations. While safety is always paramount, civilian rescuers contested the OSHA and DPP mantras—level A all the way—that only those outfitted in the highest level of protective gear should enter the presumably contaminated or “hot” zone. The courses did not clarify when lesser grades of protective gear would be suitable or whether there were exigent circumstances, such as victims suffering within sight, that merit more aggressive rescue techniques. As veteran rescuers explained, if firefighters followed all OSHA rules, they would never enter burning buildings, which they obviously do.<sup>49</sup>
- \* *Joint response tactics unique to an unconventional terrorist event.* To rule out the possibility that an unexploded terrorist device might be present, bomb technicians would be asked to work alongside hazmat personnel in the hot zone. Simultaneous deployment of bomb squads and hazmat teams is novel in many cities. The courses omitted guidance and tactics for the joint deployment of these specialized squads.<sup>50</sup>
- \* *Specific information about decontamination.* The need to decontaminate victims was emphasized, and the courses went into depth about how to decontaminate rescuers. However, little guidance was provided for working with victims, when gross decontamination would be satisfactory and technical decontamination necessary. Also absent were basic details about how to handle children and the

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<sup>48</sup> Interviews with author: Police Lieutenant (23 March 1999); Lieutenant/Hazmat Operations, Fire Department (27 July 1999); FBI Special Agent (3 February 2000).

<sup>49</sup> Interviews with author: Director, County Emergency Management (21 September 2000); Deputy Director, Office of Emergency Management (26 May 2000); Hazmat Specialist (19 April 1999); Deputy Fire Chief (23 March 1999); Police Lieutenant (23 March 1999); Physician/Associate Director, Hospital Department of Emergency Medicine (9 March 1999); Fire Captain, Hazmat Unit (9 February 1999).

<sup>50</sup> Interviews with author: Detective/Bomb Squad Member (19 January 2000); Hazmat Specialist (19 April 1999); Police Lieutenant (23 March 1999).

elderly, the preferred decontamination additives and concentrations fire crews should employ, and evaluations of commercially available decontamination equipment.<sup>51</sup>

- \* *Medical treatment protocols for EMS crews.* The EMS technician course specified which treatments were suitable for which chemical and biological agents, but omitted guidelines on administering antidotes under realistic field circumstances, such as how much nerve agent antidote should be given to children or women.<sup>52</sup>
- \* *Medical diagnosis strategies and treatment protocols for hospitals.* The hospital technician course was described as shallow, “missing the ballpark altogether.” Even though consensus protocols for civilian chemical casualty treatment were not yet available, the course could have provided much more on casualty care, as well as instruction to arm physicians to recognize the syndromes associated with exposure to biological agents.<sup>53</sup>

In short, the DPP courses contained a glut of information about agent characteristics and symptoms, but so little was offered about other essential topics that the training “just scares the [expletive deleted] out of the first responder community and leaves them ill-prepared for dealing with this type of emergency.”<sup>54</sup>

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<sup>51</sup> Observed one responder, “If you were depending upon that course to teach you decontamination, you were lost.” Interview with author: MMRS Coordinator, Fire Department (9 May 2000). Others who expressed similar views were: Director, County Emergency Management (21 September 2000); Hazmat Coordinator/Instructor (8 September 2000); Physician, Hospital Division of Emergency Medicine (31 May 2000); Battalion Fire Chief (17 November 1999); Battalion Fire Chief (15 November 1999); Police Lieutenant (23 March 1999); Toxicologist (9 March 1999); Special Projects Program Manager, Department of Public Health (5 February 1999).

<sup>52</sup> Interviews with author: Registered Nurse/Chief, EMS Division, State Department of Public Health (3 February 2000); Physician/Associate Medical Director, Fire EMS Division (27 July 1999); Fire Lieutenant/Hazmat Operations (27 July 1999).

<sup>53</sup> Interviews with author: Physician, Hospital Division of Emergency Medicine (31 May 2000); Area Emergency Manager, Department of Veterans Affairs (24 May 2000); Registered Nurse/Emergency Planner, Public Health Department (7 April 2000); Medical Toxicologist/Poison Control Center Director (27 July 1999); Physician, Hospital Department of Emergency Medicine (24 March 1999); Physician/Associate Director, Hospital Department of Emergency Medicine (9 March 1999).

<sup>54</sup> This harsh criticism was by a first responder who served as a DPP instructor: Police Lieutenant (23 March 1999). Similar comments about being “scared to inaction” were made by: Hazmat Coordinator/Instructor (8 September 2000); Chief, County Fire Department (9 September 1999).

## **MIXED RESULTS IN GETTING DIFFERENT CATEGORIES OF RESPONDERS INTO THE CLASSROOM**

Another refrain about the DPP courses was that they were not, as advertised, formulated as train-the-trainer instruction because they lacked information on how trainers should teach the courses.<sup>55</sup> Further detracting from the train-the-trainer concept, federal and local authorities did not require academy and departmental instructors to attend the training. Instead, front-line personnel were trained in many cities, which was beneficial, but temporal and not in line with the stated purposes. To set the stage for the training to spread throughout the responding agencies and to be institutionalized, trainers and agency managers needed to be in class.<sup>56</sup>

Once federal instructors departed, local authorities were left with a mound of materials and hundreds to train. In each of the response disciplines—fire, police, EMS, and hospital care providers—officials took a buzz saw to the DPP courses before disseminating them within their agencies, cutting material that took one or more full days in its DPP format to four hours or less. For example, one city trimmed the awareness course from two days to four hours, and another clipped the three-day hazmat technician course to one day, inserting information on rescue strategy and tactics that the original course omitted.<sup>57</sup>

After cropping the courses, locals overseeing the training faced the challenge of getting front-line personnel into the classroom. In many cities, two categories of personnel attended class rarely, if at all. Such would appear to be the case with 911 dispatchers, who send the appropriate response units to emergencies and are supposed to forewarn them when extra caution should be used. From city to city, the 911 call centers are organized differently, and the high rate of turnover among these staffs makes it difficult to keep them

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<sup>55</sup> Interviews with author: Hazmat Coordinator/Instructor (8 September 2000); Battalion Fire Chief (17 November 1999); Physician/Associate Medical Director, Fire EMS Division (27 July 1999); Captain, EMS (27 July 1999); Director of Hospital EMS and Disaster Medicine (19 April 1999). One individual contested this viewpoint: Fire Captain/Assistant Emergency Management Coordinator (5 January 2000).

<sup>56</sup> Interviews with author: Deputy Coordinator, Fire Emergency Preparedness and Disaster Services (3 February 2000); Police Lieutenant (23 March 1999).

<sup>57</sup> The first course reduction was noted by Project Manager, Office of Emergency Management (27 July 1999), the second by Fire Captain, Hazmat Unit (9 February 1999). Others who stated that they drastically reduced and reformatted the courses using additional resources to cover topics that the courses lacked were: Medical Toxicologist/Poison Control Center Director (13 June 2000); Physician, Hospital Division of Emergency Medicine (31 May 2000); Deputy Director, Office of Emergency Management (26 May 2000); Emergency Management Specialist, Office of Emergency Management (9 May 2000); MMRS Coordinator, Fire Department (9 May 2000); Registered Nurse/Emergency Planner, Public Health Department (7 April 2000); Registered Nurse/Chief, EMS Division, State Department of Public Health (3 February 2000); Fire Captain/Assistant Emergency Management Coordinator (5 January 2000); Police Commander, Special Operations Division (23 March 1999); Police Captain, Special Operations Division (23 March 1999); Assistant Director, Office of Emergency Management (23 March 1999); Battalion Fire Chief (8 February 1999); Police Captain/Firing Range Director (5 February 1999).

fully trained.<sup>58</sup> Although some cities trained their emergency dispatchers and established appropriate call lists and instructions for them to use,<sup>59</sup> several locals said that their 911 operators had not been prepared to handle calls of this nature.<sup>60</sup> Given concerns that the initial wave of rescuers could become victims themselves, the need to train 911 dispatchers is self-explanatory.

Another category of just-behind-the-front-lines personnel who did not figure prominently in DPP training, but who are particularly critical to the ability to pick up signs of a covert biological attack are laboratory technicians. These staff members analyze cultures and thereby enable accurate diagnosis of illnesses. When asked whether laboratory technicians had received awareness or any other specialized training, numerous city officials shook their heads negatively.<sup>61</sup> In 1999, the Centers for Disease Control and Prevention (CDC) began a program to improve disease surveillance capabilities. This program, discussed in more detail in chapter 4, reached sixty-three laboratories in forty states by mid-2000.<sup>62</sup> Late in the summer

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<sup>58</sup> Uniformed fire, EMS, and police officers man the call centers in some locations, civilians in others. In some cities, 911 calls come into a central office and are then passed off to the appropriate emergency service agency, depending upon the type of aid needed. Citizens must telephone police, fire, or EMS agencies directly in small towns where no 911 service exists. One state official noted that over half of the towns in his state had yet to join the 911 system. Interviews with author: Director, City Emergency Services Department (18 May 2000); Fire Chief (15 May 2000); Emergency Management Specialist, Office of Emergency Management (9 May 2000); Pre-Hospital Care Coordinator/Emergency Planner, County EMS (2 May 2000); EMS Licensing Agent, State Department of Public Safety (27 January 2000). On the high turnover rate and training problems, Battalion Fire Chief (19 January 2000); Fire Captain/Assistant Emergency Management Coordinator (5 January 2000); Battalion Fire Chief (17 November 1999).

<sup>59</sup> Interviews with author: Physician, University Hospital Department of Emergency Medicine (20 September 2000); Director, Emergency Management Division, County Department of Public Safety (19 September 2000); Hazmat Coordinator/Instructor (8 September 2000); Fire EMS Statistician (30 August 2000); Deputy Director, Office of Emergency Management (26 May 2000); Battalion Fire Chief, Special Operations (25 May 2000); Sergeant, Fire Department (9 May 2000); District Fire Chief, EMS Division (2 March 2000); Deputy Coordinator, Fire Emergency Preparedness and Disaster Services (3 February 2000); Fire Battalion Chief (19 January 2000); Battalion Fire Chief (15 November 1999); Police Commander, Special Operations Division (23 March 1999); Paramedic Operations Supervisor (9 March 1999).

<sup>60</sup> Interviews with author: Director, County Emergency Management (21 September 2000); Physician, Hospital Division of Emergency Medicine (31 May 2000); Emergency Management Specialist, Office of Emergency Management (9 May 2000); Pre-Hospital Care Coordinator/Emergency Planner (2 May 2000); Registered Nurse/Emergency Planner, Public Health Department (7 April 2000); EMS Licensing Agent, State Department of Public Safety (27 January 2000); EMS System Analyst/Paramedic, State Department of Health and Social Services (25 January 2000); Fire Captain/Assistant Emergency Management Coordinator (5 January 2000); Battalion Fire Chief, (17 November 1999); Paramedic/Emergency Planner, Public Health Department (4 February 1999); Registered Nurse/Hospital Disaster Coordinator (4 February 1999).

<sup>61</sup> Interviews with author: Medical Toxicologist/Poison Control Center Director (13 June 2000); Registered Nurse/Emergency Planner, Public Health Department (7 April 2000); Registered Nurse/Chief, EMS Division, State Department of Public Health (3 February 2000); Fire Captain/Assistant Emergency Management Coordinator (5 January 2000); Physician, Hospital Department of Emergency Medicine (24 March 1999); Physician/Associate Director, Hospital Department of Emergency Medicine (9 March 1999); Registered Nurse/Hospital Disaster Coordinator (4 February 1999); Paramedic/Emergency Planner, Public Health Department (4 February 1999). Only one of over thirty cities surveyed created and taught a special course for hospital laboratory technicians. Interview with author: Physician, University Hospital Department of Emergency Medicine (20 September 2000).

<sup>62</sup> Dr. Scott Lillibrige, Director, Bioterrorism Preparedness and Response Program, CDC. Presentation at the International Conference on Emerging Infectious Diseases, 17 July 2000, Atlanta, Georgia.

of 2000, the American Society of Microbiologists and the CDC joined forces to draft guidelines for hospital, private clinic, and contract laboratory technicians to improve their awareness and capabilities for handling unusual cultures. These standards were slated for publication by the end of 2000.<sup>63</sup>

In contrast to most other response disciplines, the DPP training spread fairly quickly through the firefighting and EMS ranks. A factor that facilitated the dissemination of preparedness training in these disciplines was that firefighters and EMS crews regularly engage in training while on shift, in between calls. Thus, many cities reported making significant progress training their hazmat and EMS crews to the technician level. Regular firefighters were being trained at least to the awareness level, with entire front lines in a few cities being trained to the operations and even technician level. Cities were also establishing decontamination squads among their regular fire ranks to be able to cope with mass casualties.<sup>64</sup>

Not nearly as much success was encountered in the law enforcement community. With gangs, drugs, gun violence, and all other crimes that police contend with daily, they see unconventional terrorism as the least of the problems that police face. Patrol officers view hazardous materials incidents as the responsibility of the fire department, and they generally were not interested in this training. Police must certify their skills in so many areas that they resist any suggestion that another skills test be added.<sup>65</sup> Police availability for training also differs drastically from the fire and EMS crews because officers are on patrol throughout their shifts and must be pulled off-line to train or train off-duty.<sup>66</sup> Generating enthusiasm for unconventional terrorism training within the nation's police departments was therefore an uphill battle. In some cities the

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<sup>63</sup> The guidelines are an abbreviated version of the gold standard protocols employed in the CDC's strengthened surveillance laboratory network, emphasizing the need to recognize unusual samples and package them properly for more definitive analysis in one of the network laboratories. Interview with author: Senior CDC official (29 August 2000).

<sup>64</sup> Interviews with author: EMS Chief, Emergency Services Department (21 September 2000); Director, Emergency Management Division, County Department of Public Safety (19 September 2000); Hazmat Coordinator/Instructor (8 September 2000); Fire EMS Statistician (30 August 2000); Deputy Director, Office of Emergency Management (26 May 2000); Battalion Fire Chief, Special Operations (25 May 2000); Deputy Fire Chief (15 May 2000); Battalion Fire Chief (19 January 2000); Fire Captain/Assistant Emergency Management Coordinator (5 January 2000); Director of Hospital EMS and Disaster Medicine (19 April 1999); Physician, Hospital Department of Emergency Medicine (24 March 1999); EMS Superintendent-in-Chief (24 March 1999); Lieutenant/Hazmat Commander (10 March 1999); Physician/Associate Director, Hospital Department of Emergency Medicine (9 March 1999).

<sup>65</sup> For example, in addition to basic law enforcement skills (e.g., firearms certification), police must be certified in cardio-pulmonary resuscitation, first aid, workplace violence, domestic violence, mental health, and sexual harassment. Interviews with author: Director, Emergency Management Division, County Department of Public Safety (19 September 2000); Hazmat Coordinator/Instructor (8 September 2000); District Fire Chief, EMS Division (2 March 2000); Detective/Bomb Squad Member (19 January 2000); Battalion Fire Chief (19 January 2000); Chief, County Fire Department (9 September 1999); Police Commander and Police Captain, Special Operations Division (23 March 1999); Emergency Preparedness Director, Office of Emergency Services (9 February 1999); Police Lieutenant and Police Captain, Special Operations Division (8 February 1999).

<sup>66</sup> This work pattern explains why police usually do not refine their skills and strategies until a big event occurs, prompting them to study the lessons to prevent a recurrence. Interviews with author: Detective/Bomb Squad Member (19 January 2000); Battalion Fire Chief (19 January 2000).

bomb and SWAT units were fully trained, but the rank and file were not even awareness-level trained.<sup>67</sup> A few police departments trained all of their personnel to the awareness level, which is arguably the best that cities could hope to achieve.<sup>68</sup>

Securing the participation of local hospitals in the DPP training program turned out to be a disheartening chore in many cities, particularly with regard to private, managed care facilities. Somewhat cynically, local officials stated that unless an endeavor made these hospitals money, saved them money, or was regulated, they would not do it.<sup>69</sup> Since many of the nation's private hospitals are losing money on a daily basis,<sup>70</sup> hospital administrators view preparedness programming as a business decision, weighing the likelihood of a terrorist event against the increased cost of personnel training and equipment maintenance. Many a hospital opted to stay on the sidelines,<sup>71</sup> but in a few cities, advocates of preparedness programming managed to break through and secure hospital participation. The tactics that they employed to gain the cooperation of hospital administrators and medical personnel are described in box 5.2.

Although a small cadre of emergency department physicians and nurses and infection control personnel was trained, doctors from other hospital departments and private clinicians rarely attended the DPP

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<sup>67</sup> Interviews with author: Director, County Emergency Management (21 September 2000); Battalion Fire Chief, Special Operations (25 May 2000); Fire Commander (19 April 1999); Police Captain/Staff, Office of the Police Chief (9 March 1999); Police Captain, Special Operations (8 February 1999); Police Captain/Firing Range Director (5 February 1999).

<sup>68</sup> Interviews with author: Director, Emergency Services Department (18 May 2000); Fire Captain/Assistant Emergency Management Coordinator (5 January 2000); Police Lieutenant (23 March 1999). To expect cities to train all patrol officers to the technician level is unrealistic, stated one city emergency office staffer. The goal is to keep the first police on the scene from becoming victims themselves, because the actual rescue response will have to be mounted by more specialized emergency units. Interview with author: Project Manager, Office of Emergency Management (27 July 1999).

<sup>69</sup> Interviews with author: MMRS Coordinator, Fire Department (9 May 2000); EMS Licensing Agent, State Department of Public Safety (27 January 2000); Physician/Associate Director, Hospital Department of Emergency Medicine (9 March 1999); Battalion Fire Chief (8 February 1999); Fire Lieutenant (5 February 1999); Paramedic/Emergency Planner, Public Health Department (4 February 1999); Registered Nurse/Hospital Disaster Coordinator (4 February 1999).

<sup>70</sup> Over half of California's 450 hospitals are losing money, for example. Emergency facilities are often among the first cut from hospital services. Accordingly, Los Angeles County experienced a 20 percent decrease in emergency departments in the past two decades. One study predicts that there will be a "serious undersupply of emergency rooms" in the area by 2005. The rest of the country is fighting similar trends. While emergency department visits rose from 89 million to 100 million between 1992 and 1998, the number of emergency departments dropped from about 5,000 to 4,600. Andrew LaMar, "California's Emergency Rooms Could Get State Aid to Stay Open," *Contra Costa Times*, 15 July 2000; Miguel Bustillo, "California and the West: Treating an Emergency Care Crisis," *Los Angeles Times*, 15 February 2000. Also, Elisabeth Rosenthal, "Private Hospitals in New York Signal a Deepening Crisis," *New York Times*, 4 June 1996.

<sup>71</sup> For instance, hospital administrators noted that they would have to log and store decontamination equipment and train personnel to use it. Interviews with author: Commander, US Public Health Service (3 July 2000); Paramedic (12 May 2000); Division Chief, State Disaster Medical Services Division (15 February 2000); Physician/EMS Medical Director (13 November 1999); Emergency Preparedness Director, Office of Emergency Services (9 February 1999).

**Box 5.2: Strategies to Secure Hospital Participation**

All metropolitan areas encountered problems getting hospitals to participate in domestic preparedness activities, but a few managed impressive breakthroughs. One city's emergency planners surveyed key area hospitals and decided to approach local trauma centers and a few other hospitals based on their geographic distribution and their prominence in the community. City officials explained to these hospitals' senior administrators the steps that the city was taking to respond effectively to an unconventional terrorist event. They then made a common-sense appeal for the hospitals' cooperation: if terrorists used chemical or biological agents, these hospitals would be inundated with self-presenting patients, some genuinely ill and others worried, but well. By their own admission, the hospitals at the table were all very poorly prepared to receive contaminated patients. Therefore, the hospitals all agreed to shape up and be designated as primary receiving hospitals in such an incident. They formed a city-wide hospital planning group, coordinating their activities with the local MMRS. In one year, this group mapped and began to implement a course for region-wide improvement, enabling these hospitals to participate meaningfully in the city's chemical functional exercise. Not only were the nucleus hospitals motivated to improve, before long dozens of other area hospitals contacted the committee asking to be included.<sup>1</sup>

The unofficial route was the key to one city's success in getting large numbers of hospitals to participate. Instead of starting with the more formal hospital council, which they knew would result in lengthy delays, a couple of esteemed members of the local health care community placed personal calls to the disaster coordinators in private and public hospitals. When asked for their input and participation, those on the other end of the line volunteered ideas and joined the effort, expressing relief that someone had finally asked for their views. Once some momentum was created, it was easier to get local medical committees involved and for emergency department physicians to gain support within their own hospitals. For this city's biological tabletop exercise, hospital personnel packed the room.<sup>2</sup> Other cities achieved their breakthrough the grassroots way, rallying a corps of emergency department nurses and public health officials to power the effort forward with doctors, hospital administrators, and medical committees.<sup>3</sup> Some in the health care community assembled concentrated courses and took them to hospitals so that medical professionals could fit attendance into their schedules. Such grand rounds training is a staple in the medical community.<sup>4</sup> Finally, one private hospital company resolved at least some aspects of its training problem by making hazmat awareness and decontamination training a condition of the employment contracts of its emergency department physicians.<sup>5</sup>

**NOTES**

1. This hospital planning group created a template to help other hospitals augment their mass casualty plans for unconventional terrorism, addressing among other issues of the demands that such an event would place upon management, security, decontamination, and public relations. The planning group concluded that installing this template would enhance a hospital's performance in any mass casualty incident. During the field exercise, the hospitals saw patients transported from the incident scene and had anywhere from thirty-five to one hundred self-referring patients dumped at their doorsteps. This committee met every two weeks for an hour and a half. They identified and prioritized forty different issues in need of attention. For example, the planning group decided that all hospitals should employ the same decontamination equipment so that it would be interchangeable. Interview with author: Emergency Management Specialist, Office of Emergency Management (9 May 2000).
2. The architects of this strategy also believed that their campaign to recruit doctors and hospital administrators was aided by describing the problem as a "mass poisoning," not a hazmat incident, which their colleagues tend to think of as a fire department responsibility. Interviews with author: Physician/Hospital Department of Emergency Medicine (24 March 1999); EMS Superintendent-in-Chief (24 March 1999); Assistant Director, Office of Emergency Management (23 March 1999).
3. Interviews with author: MMRS Coordinator, Fire Department (9 May 2000); Physician/EMS Medical Director (13 November 1999).
4. Interviews with author: Toxicologist/Poison Control Center Director (13 June 2000); Physician, Hospital Division of Emergency Medicine (31 May 2000); Registered Nurse/Chief, EMS Division, State Department of Public Health (3 February 2000); Project Manager, Emergency Management Planning (27 July 1999); Toxicologist, Poison Control Center (9 March 1999).
5. Physicians must attend initial hazmat awareness training as well as yearly refresher training. They are required to take an annual respirator fit test. These activities are mandatory and figure into physicians' yearly raises. Interview with author: Emergency Planner, Hospital Health Maintenance Organization (15 August 2000).

courses.<sup>72</sup> Unless the pulmonologists, internists, the intensive care unit staff, and other medical specialties are also trained, patients admitted from the emergency department after an unconventional terrorist incident would be attended by staff who are unfamiliar with the peculiarities of chemical and biological agent casualty care.<sup>73</sup> The assumption in most cities was that the emergency department staffs would propagate the training throughout the hospital, but those in emergency medicine have struggled to fit this task into their own schedules and to get their colleagues' attention. As one physician observed, "The response on the part of the medical community has been spectacularly underwhelming."<sup>74</sup>

One reason given for the dearth of medical personnel in the classroom was that the local training coordinator gave them short notice.<sup>75</sup> Another was that many within the health care community do not view unconventional terrorism as a problem to begin with, much less a problem that ranks high among their other priorities.<sup>76</sup> The inability to make significant inroads into the health care community is of additional concern because nursing and medical schools do not include chemical and biological agent casualty care in their standard curricula, although those specializing in emergency medicine and infectious diseases get some training.<sup>77</sup>

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<sup>72</sup> An average of thirty doctors and nurses attended, a very small fraction of the medical community in large cities. On a really good day, attendance might rise to forty. Interviews with author: Lieutenant/Hazmat Operations, Fire Department (27 July 1999). Others commenting on low medical staff participation were: Medical Toxicologist/Poison Control Center Director (27 July 1999); Assistant Director, Office of Emergency Management (23 March 1999); Physician/Associate Director, Hospital Department of Emergency Medicine (9 March 1999); Emergency Preparedness Director, Office of Emergency Services (9 February 1999); Registered Nurse/Hospital Disaster Coordinator (4 February 1999).

<sup>73</sup> Interviews with author: Physician/Director, Department of Public Health (27 July 1999); Medical Toxicologist/Poison Control Center Director (27 July 1999); Physician/Associate Director, Hospital Department of Emergency Medicine (9 March 1999); Registered Nurse/Hospital Disaster Coordinator (4 February 1999).

<sup>74</sup> Interview with author: Physician/Associate Director, Hospital Department of Emergency Medicine (9 March 1999).

<sup>75</sup> Fire departments can order their personnel into training within a matter of days, but hospitals need time to organize attendance. Interview with author: Registered Nurse/Chief, EMS Division, State Department of Public Health (3 February 2000).

<sup>76</sup> Interviews with author: Commander, US Public Health Service (3 July 2000); Registered Nurse/Emergency Planner, Public Health Department (7 April 2000).

<sup>77</sup> Interviews with author: Medical Toxicologist/Poison Control Center Director (13 June 2000); Physician, Hospital Division of Emergency Medicine (31 May 2000); Physician (29 May 2000); Registered Nurse/Emergency Planner, Public Health Department (7 April 2000); Registered Nurse/Chief, EMS Division, State Department of Public Health (3 February 2000); Associate Hospital Administrator/Registered Nurse (13 November 1999); Physician, Department of Public Health (23 May 1999); Director of Hospital EMS and Disaster Medicine (19 April 1999).

## FRONT-LINE PERSONNEL GRADE THE FEDERAL EQUIPMENT PROGRAMS

In addition to training, the federal grant programs brought specialized chemical and biological emergency response equipment to numerous cities. Many view the federal grants as a handout that no city could refuse, but looking the proverbial gift horse in the mouth, some cities had serious qualms about accepting the equipment grants because of the local costs that came with them and the way that they were structured and administered.<sup>78</sup> Three departments—Defense, HHS, and Justice—issue equipment grants, each with its own set of hoops, guidelines, and restrictions on how the money could be spent. These circumstances made it an ordeal for local officials to apply for and meet the terms of the grants.<sup>79</sup>

As part of the DPP training program, the Pentagon offered cities a \$300,000 grant to purchase training equipment subsequently on “loan” for a five-year period. The equipment shopping list consisted in no small part of battlefield gear that local responders found ill-suited for or outright incompatible with civilian uses. Even though their hazmat and fire teams were already trained in civilian-approved respiratory equipment, DPP personnel urged cities to purchase military respirators that would have required extra training and annual certifications. The Pentagon list featured items that were impracticable to local responders, such as military detectors with a radiation source, which not all cities are licensed to maintain, and detectors that alarm only for a single agent or a small number of agents.<sup>80</sup> First responders also did not understand why the DPP list would include items known to be unreliable, yet exclude some commercially available equipment that was arguably superior to the military items offered.<sup>81</sup>

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<sup>78</sup> One city turned down the MMRS program because previous experiences with the Urban Search and Rescue program had been so bad. Federal authorities then pressed county officials to come aboard. Interview with author: Battalion Fire Chief, Special Operations Division (12 May 1999).

<sup>79</sup> “If we hadn’t have had to jump through all of the hoops, it would have been so much easier to get operational.” Interview with author: EMS Specialist/Paramedic (12 May 2000). Also, General Manager, Emergency Department (22 September 2000); Director, Emergency Management Division, County Department of Public Safety (19 September 2000); Police Lieutenant, Tactical Support Office (18 September 2000); Battalion Fire Chief, (17 November 1999); Emergency Preparedness Director, Office of Emergency Services (9 February 1999); Special Projects Program Manager, Department of Public Health (5 February 1999); Director, Office of Emergency Services (4 February 1999).

<sup>80</sup> Interviews with author: Fire Captain, Hazmat Unit (9 February 1999); Emergency Preparedness Director, Office of Emergency Services (9 February 1999); Paramedic/Emergency Planner, Public Health Department (4 February 1999). See also, US Army Soldier and Biological Chemical Command, Domestic Preparedness Program, “Generic Training Equipment Set,” in *Defense Against Weapons of Mass Destruction Regional Kickoff Meeting: FY99 Cities* (Aberdeen, Md.: US Army Soldier and Biological Chemical Command, n.d.).

<sup>81</sup> One case in point is the SMART tickets that detect biological agents, which have false-positive and false-negative rates of 50 percent. Made by New Horizons, Inc., the SMART tickets cost \$76 for a pack of two and have a limited shelf life of ten to twelve months. Of the SMART tickets, one emergency office staffer quipped, “You might as well go out in the field and flip a coin.” Interviews with author: Project Manager, Office of Emergency Management (27 July 1999). Also, Paramedic (12 May 2000); Deputy Coordinator, Fire Emergency Preparedness and Disaster Services (3 February 2000); Fire Commander (19 April 1999); Special Projects Program Manager, Department of Public Health (5 February 1999). SMART ticket information obtained in conversation with a New Horizons Diagnostics, Inc., representative (26 September 2000).

Although Pentagon officials verbally stated that they had no intention of reclaiming the loaner equipment after five years, they nonetheless had cities sign contracts with extensive maintenance terms. The contracts stipulated that DPP equipment was for training purposes only, which left some cities worried about the legality of rolling these items out in actual emergencies. The terms further specify that the “borrowers,” meaning the cities, must be able to produce for Pentagon authorities any piece of loaned equipment within twenty-four hours, replace any damaged or lost equipment, and ensure that city personnel remained trained and certified to use it. Yet, DPP program managers remained silent when city officials repeatedly pressed them to specify procedures for certifying that the equipment was in good condition throughout the loan. City officials chaffed at the unclear liability of this situation.<sup>82</sup>

In addition to the DPP equipment loans, cities in the MMRS program received grants to prepare response plans and to buy personal protective gear and a cache of pharmaceuticals. The grants averaged \$300,000, although the amount varied according to the size of the city. To begin with, the locals applauded HHS officials for sharing information among MMRS cities, allowing them to learn from each other’s successes and mistakes.<sup>83</sup> With the equipment grants, some cities divvied up the purchased items between the members of the MMRS teams, as well as their hospitals. Although local officials said the HHS grants had the least number of strings among the three primary federal grant programs, some complained that HHS would not approve their equipment requests unless they ordered a certain number of Mark 1 nerve agent antidote kits and the biological agent detector called the SMART ticket, which city officials described as very unreliable.<sup>84</sup> The unique travails of the pharmaceutical aspect of these grants will be discussed separately in the next segment of this chapter.

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<sup>82</sup> They were concerned about the attendant manpower costs and their unclear liability regarding the use and maintenance of the equipment. Interviews with author: Assistant Director, Office of Emergency Management (23 March 1999); Emergency Preparedness Director, Office of Emergency Services (9 February 1999); Special Projects Program Manager, Department of Public Health (5 February 1999); Director, Office of Emergency Services (4 February 1999).

<sup>83</sup> Interviews with author: Registered Nurse/Emergency Planner, Public Health Department (7 April 2000); Physician/EMS Medical Director (13 November 1999); Emergency Preparedness Director, Office of Emergency Services (9 February 1999); Registered Nurse/Hospital Disaster Coordinator (4 February 1999). For several years running, the Office of Emergency Preparedness in HHS has set aside several hours on the agenda of its annual National Disaster Medical System Conference for MMRS cities to share information. This office, led at the time by Rear Adm. Frank Young, hosted the first major conference devoted solely to the topic. See *Proceedings of the Seminar on Responding to the Consequences of Chemical and Biological Terrorism* (Washington, DC: US Public Health Service, 11–14 July 1995).

<sup>84</sup> Interviews with author: Physician, Hospital Division of Emergency Medicine (31 May 2000); EMS Specialist/Paramedic (12 May 2000); Emergency Preparedness Director, Office of Emergency Services (9 February 1999). According to an HHS staffer, unwritten rules did exist about the mandatory purchase of Mark 1 antidote kits and SMART tickets early in the program, but were gradually phased out. Interview with author: Commander, US Public Health Service (6 May 2000). Another official said there was never an unwritten quantity of a specific item that had to be purchased, but there was a requirement to be able to treat one thousand chemical casualties and that the items requested were carefully reviewed since some cities were asking for equipment that was not even mentioned in their response plans. Interview with author: Commander, US Public Health Service (28 June 2000). On problems with the SMART tickets, see footnote 81.

Finally, in fiscal year 1998, Congress directed the Justice Department to provide grants to purchase personal protective gear and decontamination, detection, and communications equipment for fire and EMS responders. The first year, eligibility for the grants was limited to a list of 120 cities and counties that differed somewhat from the 120 areas selected for Pentagon training. The effort expanded in 1998 to 157 locations to include some areas that had received little or no assistance under the DPP or MMRS programs. By 1999, Justice began switching the locus of the grants to states instead of cities. From 2000 and beyond, all Justice Department grants would go to state emergency agencies.<sup>85</sup> City officials were soon exasperated with how the Office of Justice Programs administered the grants. For instance, grant applications were sent to individuals who were deceased, had never been elected, or were long out of office, squandering time that the local authorities needed to prepare their applications. Often, the plan for how to spend grant funds required approval by department chiefs, the mayor's office, and the city council. Some cities received only five days notice that they could apply for a grant, which meant that herculean measures had to be taken to meet the deadline.<sup>86</sup>

As if sorting out the differences between the three grant programs was not perplexing enough, city officials culling through their equipment options were repeatedly approached by vendors touting detectors, decontamination equipment, and personal protective gear.<sup>87</sup> According to one survey, there were literally hundreds of alternatives from which to choose, as indicated in table 5.2. Much of what was being peddled appeared to fit civilian needs, but was still in development. Numerous detectors and decontamination options had yet to be proven against actual agents, and medical treatments were not yet licensed. Trade journals and other media sources were filled with still more references for new products coming on line.<sup>88</sup>

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<sup>85</sup> Interview with author: Justice Department official (19 September 2000). Justice Department programming is also discussed in chapter 4.

<sup>86</sup> When frazzled local officials asked why there was not more lead time, a Justice Department representative replied that the circumstances were out of his control. This exchange among several local officials and a Justice Department bureaucrat took place at a conference held in Washington, DC, on 13 April 1999. In interviews, similar comments were made by: Physician, Hospital Division of Emergency Medicine (31 May 2000); Emergency Preparedness Director, Office of Emergency Services (9 February 1999); Director, Office of Emergency Services (4 February 1999).

<sup>87</sup> Interviews with author: Division Chief, State Department of Emergency Management (13 April 1999); Fire Chief (6 April 1999); Emergency Planner (8 March 1999); Director, Office of Emergency Services (4 February 1999).

<sup>88</sup> Among the truckload of items receiving press coverage was the Ultrasonic Pulse Echo sensor. Using sound waves to screen the contents of closed containers, the tool can identify a chemical nerve agent and distinguish between Coke and Diet Coke. Sandia National Laboratories developed a biodegradable decontamination foam to render toxic chemicals and biological agents harmless, and Johns Hopkins University scientists have devised a fluorometric affinity biosensor, which is a battery-powered, handheld device designed to detect biological agents in less than two minutes. Steve Goldstein, "Antiterrorist Gizmos Go on Display in Washington," *Philadelphia Inquirer*, 18 May 1999; Malcolm W. Browne, "Chemists Create Foam to Fight Nerve Gases," *New York Times*, 16 March 1999; "Miniature Biosensor Detects Toxins," *Research and Development* 41, no. 9 (August 1999): S-53. For a description of technologies being pursued by the Defense Advanced Research Projects Agency, see Paul Jacobs, "Attack of the Killer Microbes," *Los Angeles Times*, 19 August 1999.

**Table 5.2: 1998 Survey of Available Equipment Options for Chemical and Biological Response**

Type of Equipment	Number of Items	Notes
Personal Protective Equipment: Breathing and Clothing	64	<ul style="list-style-type: none"> <li>* 54 items protect against chemical <i>and</i> biological agents</li> <li>* 8 items for chemical agent protection only</li> <li>* 27 items commercially available</li> <li>* 13 items in research and development</li> <li>* 11 items consist of both breathing and clothing protection</li> <li>* Equipment manufacturers located in 19 countries</li> </ul>
Chemical Agent Detection: Commercial, Field Testing, US Government, Laboratory Research, Military	98	<ul style="list-style-type: none"> <li>* 96 items designed for environmental detection, 4 for detection in human beings</li> <li>* 56 items funded by commercial companies; 28 by the Pentagon</li> <li>* 60 items commercially available</li> <li>* 13 items in field testing stage</li> <li>* 16 items in laboratory development</li> <li>* 42 items provide numerical estimates of concentration, 47 items indicate presence or absence of agent, 4 provide information on agent concentration level</li> <li>* 51 hand-held items, 10 single-person portable, 12 movable by truck, and 23 fixed in location</li> </ul>
Epidemiology Resources	15	* 14 items operational <sup>R</sup>
Symptom-Based Diagnosis Systems: Operational, Planned	6	* products differ in scope, some addressing just military chemical agents; others toxic chemicals more broadly and drugs/treatments; and one emergencies of unknown etiology
Biological Agent Detection: Commercial, Field Tests, Laboratory	73	<ul style="list-style-type: none"> <li>* 6 items commercially available, 38 under development in laboratories, 29 undergoing field testing</li> <li>* 56 items designed for environmental detection, 17 for human diagnosis, 7 with ability to do both</li> <li>* 28 items provide numeric indications of agent concentration, 24 provide no such estimates, and 21 give no quantification data</li> <li>* Items evenly divided into hand-held, single-man-movable, and fixed categories</li> </ul>
Decontamination Products: Commercial, Field Tests, Research	33	<ul style="list-style-type: none"> <li>* 10 items commercially available</li> <li>* 25 items for chemical decontamination only, 4 for biological decontamination, 3 for both chemical and biological agents</li> <li>* 22 items in research and development phase, 8 for human decontamination, 14 for decontamination of objects</li> </ul>
Chemical Agent Treatments: Cyanide, Nerve Agents, Phosgene, Vesicants	40	<ul style="list-style-type: none"> <li>* 12 treatments for cyanide, 17 for nerve agents, 5 for phosgene, 6 for vesicants</li> <li>* 21 treatments in preclinical stage, 14 commercially available</li> <li>* 8 with proven efficacy in humans, 27 with evidence of efficacy in animals</li> </ul>

Type of Equipment	Number of Items	Notes
Biological Agent Treatments	88	* 57 treatments in preclinical stage, 13 listed as investigational new drugs , and 16 commercially available * 3 treatments with proven efficacy in humans, 18 with evidence of efficacy in animals, 47 with no/only partial evidence of efficacy
Computer Models: Beta testing, Operational, Planned	20	* 13 in beta testing, 4 available for use, 3 in planning stage

Source: Institute of Medicine, *Chemical and Biological Terrorism* (Washington, DC: National Academy Press, 1999), Appendix B, 222-59.

<sup>R</sup> Since publication of this survey, two items listed as planned have entered into operation. More information about the US Department of Defense Global Emerging Infections System is available at: <http://www.geis.ha.osd.mil>. Canada's Global Public Health Information Network continuously monitors six hundred global sources, including newspapers, news wires, and medical journals for possible indications of a communicable disease outbreak. For more on this network, see Thomas W. Grein et al., "Rumors of Disease in the Global Village: Outbreak Verification," *Emerging Infectious Diseases* 6, no. 2 (March/April 2000): 97-102.

Needless to say, only certain laboratories can perform effectiveness testing of this equipment against warfare agents. Not all the cities had the resources, expertise, or time to evaluate all of the equipment options. When local responders contacted federal authorities for guidance, sometimes the individual on the other end of the line had considerable savvy about the capabilities of the different brands of equipment. Responders also called the vendors directly, finding some companies that were willing to loan them test pieces of equipment and others that made unverifiable claims. Those interviewed who were able to test equipment were confident that their purchases were well-informed. Local officials also applauded the fact that all DPP equipment purchases were made through a single contractor, EAI, which created economies of scale that drove some prices down and stretched grant monies further.<sup>89</sup>

Other cities found that federal officials, their contractors, and the equipment vendors provided conflicting information about equipment that left many important questions unanswered. Although they placed orders within the specified timeframe, some locals did so with lingering doubts about the wisdom of their purchases. "We came into this blind," said an emergency responder. "We wanted to get the right equipment to do the job, but there is so much out there. We were at the mercy of the vendors."<sup>90</sup> Some cities

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<sup>89</sup> Interviews with author: Paramedic (12 May 2000); Emergency Management Specialist, Office of Emergency Management (9 May 2000); Sergeant, Fire Department (9 May 2000); Special Projects Program Manager, Department of Public Health (5 February 1999).

<sup>90</sup> Interviews with author: Division Chief, State Department of Emergency Management (13 April 1999). Also, District Fire Chief, EMS Division (2 March 2000); Deputy Coordinator, Fire Emergency Preparedness and Disaster Services (3 February 2000); Chief, County Fire Department (9 September 1999); Battalion Fire Chief, Special Operations Division (12 May 1999); Assistant Director, Office of Emergency Management (23 March 1999).

purchased items that they neither wanted nor needed and therefore remained in the box, unused.<sup>91</sup> A Pentagon official adroitly summed up the state of affairs: “There are a lot of people that are buying toys that don’t know how to use or maintain them.”<sup>92</sup>

As they reviewed the array of options, local responders put a premium on equipment that could be used for multiple purposes—for instance, detectors that could sense substances other than the classic warfare agents. Multipurpose equipment is the key to maintaining true proficiency with specialized instruments—being able to use them routinely instead of just during unconventional terrorism training. Responders, locals argued, cannot be expected to operate a complicated machine effectively in an emergency if they only work with it a couple of times a year. When locals tried to order dual-use equipment, their requests often met with stiff resistance from federal authorities. To a certain extent, federal authorities were policing the orders to ensure that purchases had an application for response to an unconventional terrorist event and were not just generic items. City officials, however, observed that the grant administrators made some short-sighted decisions because the local responders ended up with equipment that was gathering dust in warehouses instead of being used regularly.<sup>93</sup>

## **COST-SAVING STRATEGIES TO SUSTAIN THE LOCAL PHARMACEUTICAL CACHES**

The pharmaceutical portion of the HHS grants had its own particular set of difficulties. Local pharmaceutical purchases were handicapped by interminable delays in the delivery of drugs and concerns about where the money would come from to repurchase drugs once their shelf lives expired. Several cities skewed purchases toward nerve agent antidotes because early in the program HHS recommended buying Convulsant Antidote for Nerve Agent kits, as well as one thousand Mark 1s, leaving scant grant monies for drugs to treat casualties from other types of chemical and biological agents. Moreover, city officials were told that the Mark 1 kit, which the Pentagon acquires with a five-year shelf life, was available to civilians only in overrun stocks with a much shorter shelf life. Local authorities had a hard time bringing themselves

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<sup>91</sup> Under the DPP grant program, one city signed for \$23,000 worth of military and training gear that it will never use, including a \$200 piece of plastic pipe sold for \$50 at the local hardware store. Under the HHS grant, this same city was pushed to buy \$25,000 in biological SMART tickets, which this city’s hazmat experts described as useless. See footnote 81. Interviews with author: Fire Captain, Hazmat Unit (9 February 1999); Emergency Preparedness Director, Office of Emergency Services (9 February 1999). Others also reporting DPP equipment purchasing problems included: Battalion Fire Chief, Special Operations Division (12 May 1999); Division Chief, State Department of Emergency Management (13 April 1999); Deputy Fire Chief (23 March 1999).

<sup>92</sup> Remark made at a conference on 13 April 1999, Washington, DC. An almost identical comment was made by a city emergency management staffer in an interview with the author: Deputy Director, Office of Emergency Management (27 July 1999).

<sup>93</sup> Interviews with author: Registered Nurse/Emergency Planner, Public Health Department (7 April 2000); Deputy Fire Chief (23 March 1999); Emergency Preparedness Director, Office of Emergency Services (9 February 1999); Fire Captain, Hazmat Unit (9 February 1999); Director, Office of Emergency Services (4 February 1999).

to spend so much money on a drug that would expire so quickly and would be useful only if nerve agent were released.<sup>94</sup> Moreover, local officials predict that city governments will not necessarily fund the replacement of these drugs after their expiration.<sup>95</sup>

The importance and expense of these drug purchases merits a more thoughtful approach on the part of the federal government. To begin with, the CDC, which is the custodian of the national stockpile of antidotes and pharmaceuticals to be used in the event of an unconventional terrorist attack, was not asked to make recommendations about what cities should purchase. Nor was the CDC aware of what had been bought locally.<sup>96</sup> Better coordination between the national and local levels could reduce the possibility of gluts and gaps in antidotes and antibiotics.

Next, a modest increase in Public Health Service staff would stretch drug purchase dollars further by enabling city drug stocks to be procured in bulk, bringing economies of scale into play.<sup>97</sup> The DPP equipment grant purchases benefitted from economies of scale. Serious cost-savings would also accrue if federal authorities and pharmaceutical companies were more forthcoming about the shelf lives of the drugs involved. The US Food and Drug Administration Shelf Life Extension program has conducted stability tests of over one hundred drugs at the behest of the Pentagon. These tests show that several of the antibiotics and antidotes being purchased for terrorism preparedness retain their efficacy long past their stated expiration dates. For example, Mark 1 autoinjectors scheduled to expire in November 1985 were tested after being purposefully stored for three months in environmentally challenging conditions. The Mark 1s maintained their potency and fifteen years later, they continue to be approved for use. The Food and Drug Administration judged the Pentagon's ciprofloxacin to be sound over nine and a half years after its original March 1989 expiration date. Other antibiotics, like tetracycline and penicillin, also had their shelf lives extended at least two years. During a six-year period, the Pentagon saved more than \$260 million by

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<sup>94</sup> The Mark 1 nerve agent auto-injector costs \$17 apiece, and cities were encouraged to purchase enough for one thousand victims. Apparently, the key to gaining HHS approval of early equipment requests was to order certain items, notably the Mark 1 atropine injectors and SMART tickets for biological agent detection. Local officials held the SMART tickets, as noted in footnote 81, in particularly low regard. Interviews with author: Fire EMS Statistician (30 August 2000); Deputy Director, Office of Emergency Management (26 May 2000); Emergency Management Specialist, Office of Emergency Management (9 May 2000); Project Manager, Office of Emergency Management (27 July 1999); Physician, Hospital Department of Emergency Medicine (24 March 1999); Emergency Preparedness Director, Office of Emergency Services (9 February 1999); Battalion Fire Chief (8 February 1999).

<sup>95</sup> Interviews with author: EMS Chief, Emergency Services Department (21 September 2000); Physician, Division of Disease Control, Public Health Department (8 August 2000); Pre-Hospital Care Coordinator/Emergency Planner (2 May 2000); Registered Nurse/Emergency Planner, Public Health Department (7 April 2000); Fire Captain/Assistant Emergency Management Coordinator (5 January 2000); Battalion Fire Chief/Emergency Services Administrator (15 November 1999); Emergency Preparedness Director, Office of Emergency Services (9 February 1999); Director, Office of Emergency Services (4 February 1999).

<sup>96</sup> Interview with author: Senior Public Health official (28 August 2000).

<sup>97</sup> Interviews with author: EMS Chief, Emergency Services Department (21 September 2000); EMS Specialist/Paramedic (12 May 2000); Battalion Fire Chief, Special Operations Division (12 May 1999).

avoiding unnecessary drug replacement costs. This cost-saving program has been practically invisible and is little known even within the Food and Drug Administration.<sup>98</sup> HHS officials could help the cities avoid frequent drug replacement costs by incorporating the Shelf Life Extension program into the terrorism preparedness framework for local drug caches. Doing so should be a matter of priority.

Next, the Joint Commission on Accreditation of Healthcare Organizations does not specify what quantity of chemical antidotes hospitals must maintain on a daily basis, and surveys have consistently demonstrated these drugs to be in short supply in US hospitals. Proposals to establish guidelines for normal circumstances should certainly be heeded. Moreover, specifications need to be drafted for larger local purchases of antidotes being made for terrorism preparedness.<sup>99</sup> For example, guidance should include whether the nerve agent antidote atropine should be bought in vials, in its powdered form, in Mark 1 kits, or in some combination of these options. The most economic approach would appear to be to purchase a modest amount of liquid atropine and more in the less expensive powdered form, which has a much longer shelf life. While hospitals are reconstituting the powdered atropine, the liquid antidote can be administered to those most in need. If large purchases of Mark 1s are stipulated, then US policy makers need to consider how to increase production capacity and address the justifiable gripes that local officials have about the shorter shelf lives of the kits available to civilians and the lengthy shipping delays.<sup>100</sup>

Finally, the cities themselves can take steps to extend indefinitely the life of their emergency cache of antibiotics. One city entered into a custodial memorandum of understanding with the county hospital. This hospital stores the antibiotics and consumes them in the normal course of treating other diseases (e.g., AIDS, tuberculosis), replenishing what is used. By creating this “bubble,” the city does not have to repurchase the

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<sup>98</sup> In 1985, the Air Force approached the Food and Drug Administration for efficacy testing to try to extend the shelf life of drugs in the Pentagon’s stockpile program. The costs for testing from 1993 to 1998 were \$3.9 million, and the savings during that time period totaled \$263.4 million. Drug manufacturers are allowed to select whatever expiration date they desire, and the industry’s tendency is to set such dates conservatively. Critics argue that the companies have profit motives to set short expiration dates, which requires more frequent repurchasing of drugs. Laurie P. Cohen, “Safe and Effective: Many Medicines Prove Potent for Years Past Their Expiration Dates,” *Wall Street Journal*, 28 March 2000.

<sup>99</sup> Recommendations for routine operational circumstances can be found in Richard C. Dart et al., “Combined Evidence-Based Literature Analysis and Consensus Guidelines for Stocking of Emergency Antidotes in the United States,” *Annals of Emergency Medicine* 36, no. 2 (August 2000): 126–32. On the difficulty of establishing local antidote stockpiles, see Richard J. Brennan, Joseph F. Waeckerle, Trueman W. Sharp, and Scott R. Lillibridge, “Chemical Warfare Agents: Emergency Medical and Emergency Public Health Issues,” *Annals of Emergency Medicine* 34, no. 2 (August 1999): 197.

<sup>100</sup> One company manufactures Mark 1 kits for both military and civilian needs. On 1 August 2000, the US government renewed its contract with Meridian Medical Technologies as sole provider of nerve agent antidotes, including the Mark 1 kits. The original developer of the autoinjector delivery system, Meridian also manufactures other autoinjectors (e.g., diazepam, morphine) and the associated training materials for these items. “Meridian Receives Contract Renewal From US Department of Defense,” *Business Wire*, 1 August 2000.

drugs when their shelf lives expire.<sup>101</sup> In another city, local authorities have contracted with their Veterans Administration (VA) hospital to store, rotate, and purchase their medical supplies. The terms of the arrangement required the VA to establish procedures to disburse the drugs at any hour, any day of the week. Apparently, the VA is charging \$45,000 annually to perform this service, but locals note that this high cost may be offset by the VA's ability to purchase drugs in bulk and therefore at huge discounts. In another city, local officials are considering establishing a pharmaceutical bubble within their prison system.<sup>102</sup> Another city has negotiated an agreement with the local navy hospital to store and rotate its pharmaceutical cache.<sup>103</sup> To the extent possible, HHS officials should encourage and assist cities in establishing a pharmaceutical bubble that will make the expiration dates on antibiotics immaterial and sustain these supplies over the long term.

## **FIRST RESPONDERS EVALUATE THE TABLETOP AND FIELD EXERCISES**

A well-conceived exercise helps participants pinpoint weaknesses in plans and capabilities and steps to improve response capabilities. The Pentagon hired Research Planning, Inc., (RPI) to help the DPP cities plan and execute a chemical tabletop exercise, a chemical functional exercise, and a biological tabletop. To a certain extent, the success of these exercises depends not just upon the contractor, but upon the dedication, ingenuity, and resources of the local authorities. One city got the most out of its exercises by turning them into cattle-call educational events, inviting over five hundred officials from their city and neighboring towns to attend as observers. During the chemical tabletop, local exercise facilitators turned the observing officials into participants, asking them to "provide" the assets at their disposal. This approach garnered larger participation in the subsequent chemical field and biological tabletop exercises, such that the entire municipal area could meaningfully flex its capabilities across all response disciplines through to the hospitals.<sup>104</sup> Although some cities were intent on getting maximum benefit out of the exercise program, some local

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<sup>101</sup> Interview with author: Emergency Preparedness Director, Office of Emergency Services (9 February 1999). Note that the antidotes for chemical casualties are of such narrow utility that this strategy is unlikely to work. Of the \$60,000 in MMRS funds that one city spent on its drug cache, local officials estimate that the \$14,000 in chemical antidotes will probably expire, but the remaining \$46,000 in antibiotics can be rotated in this fashion. Others reporting efforts to build bubbles, in one case with local drug warehouses, were: Director, Emergency Services Department (18 May 2000); Emergency Management Specialist (9 May 2000); Physician/EMS Medical Director (13 November 1999).

<sup>102</sup> The Veterans Administration can apparently purchase some drugs at a 700 percent savings from the prices that the city would be charged. Interviews with author: Deputy Coordinator, Fire Emergency Preparedness and Disaster Services (3 February 2000); Registered Nurse/Chief, EMS Division, State Department of Public Health (3 February 2000); Registered Nurse, Department of Public Health (8 July 1999). One city asked its local VA hospital for a similar arrangement, but was refused. Interview with author: Emergency Management Specialist, Office of Emergency Management (9 May 2000).

<sup>103</sup> Interviews with author: Battalion Fire Chief, Special Operations (25 May 2000); Paramedic (12 May 2000); EMS Specialist/Paramedic, County EMS (12 May 1999).

<sup>104</sup> Interview with author: Assistant Director, Office of Emergency Management (23 March 1999).

officials may have steered their drills in less demanding directions to show response capabilities in the best light.<sup>105</sup>

As with the training, local experiences with the exercise program depended largely on the quality of the contractor staff assigned to their city. Some locals gave RPI high praise, saying that the contractor provided interesting, challenging tabletop and field scenarios that were developed in consultation with local officials to make the exercises more realistic.<sup>106</sup> In contrast, other local officials were angered that RPI wasted their time with meetings to plan “custom” exercises, then incorporated so few of their suggested changes that the process smacked of a “cookie cutter” product. These locals also characterized the exercises as unrealistic, which meant that cities were unable to test their response capacity. RPI’s segregation of fire, police, EMS, and medical authorities during the tabletop exercises was another source of irritation because it contradicted the Integrated Command System.<sup>107</sup>

The further away from the incident scene, the weaker some of the tabletop and field exercises became, such that the hospital care providers did not really have their capabilities challenged.<sup>108</sup> One hospital disaster coordinator rated the hospital portion of the chemical tabletop as “silly” because all one hundred of the mock victims arrived at the emergency departments by ambulance, fully decontaminated. Not only was that scenario unrealistic, such a small number of patients meant that the hospitals were not required to juggle incoming patients against limited bed availability and spread patients among several hospitals. Nor was this rather orderly scenario one that would strain the hospital’s security and decontamination capabilities. In this

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<sup>105</sup> Interview with author: Police Lieutenant, Special Operations Division (8 February 1999).

<sup>106</sup> One city was so impressed with RPI’s performance that it hired the contractor to conduct other emergency drills. Interviews with author: MMRS Coordinator, Fire Department (9 May 2000); Registered Nurse/Emergency Planner, Public Health Department (7 April 2000); Deputy Director, Office of Emergency Management (27 July 1999); Physician/Associate Director, Hospital Department of Emergency Medicine (9 March 1999); Registered Nurse/Hospital Disaster Coordinator (4 February 1999); Battalion Fire Chief (8 February 1999); Director, Office of Emergency Services (4 February 1999). Noting that the contractor had to be pushed to change its proposed scenario, but carried it out well once the city insisted on changes: Director, Emergency Management Division, County Department of Public Safety (19 September 2000).

<sup>107</sup> For example, one city’s chemical tabletop scenario postulated a nerve agent release at an arena, with twenty thousand dead. Although indeed this could have been viewed as a realistic scenario, the scale of the disaster was such that local authorities concluded they could provide no help. They drilled opening the city’s emergency operations center, labeled the arena a giant morgue, and did not exercise any other capabilities. In the field exercise, RPI personnel reportedly removed the two “bombs” that had been planted, leaving this city’s bomb squad with nothing to find. Interviews with author: Director, Office of Emergency Preparedness (19 September 2000); Emergency Preparedness Director, Office of Emergency Services (9 February 1999); Battalion Fire Chief (8 February 1999); Police Captain, Special Operations (8 February 1999). Another city manager described their field exercise as purposefully designed to be unmanageable. Interview with author: Emergency Planner (8 March 1999). The view that RPI was taking a cookie cutter approach to the exercises was seconded by: Area Emergency Manager, VA Medical Center (24 May 2000); FBI Special Agent (3 February 2000).

<sup>108</sup> Note that this was not universally the case. Some health care professionals believed that the exercises provided a reasonable test of their capabilities. Interviews with author: Director, County Emergency Management (21 September 2000); MMRS Coordinator, Fire Department (9 May 2000); Registered Nurse/Emergency Planner, Public Health Department (7 April 2000); Fire Captain/Assistant Emergency Management Coordinator (5 January 2000).

same city's field drill, patients were not even sent to the participating hospitals, which therefore concluded that the only useful thing they could do was familiarize their staffs with their new decontamination equipment.<sup>109</sup> Despite near universal agreement that a bioterrorist event would place considerable stress on a city's health care system, the RPI staff suggested plans for biological tabletops that stopped decision making short of the hospitals. One city refused to schedule this exercise until the plan was modified to put a reasonable test before its hospitals.<sup>110</sup>

Following the tabletop and functional exercises, RPI prepared an after action report intended to help the local officials understand the shortcomings of their performance. The reports, which included the contractor's recommendations on how cities can improve their preparedness, were supposed to be delivered within about three months after the tabletops and five months after the field exercises. Local officials were to provide input into the reports, which may account for some of the delays. Key local rescuers from two cities had not seen these reports six months and even a year after exercises.<sup>111</sup> An emergency manager from another city noted that "by the time the thing arrived, it was not incredibly enlightening" because the locals had figured out on their own the areas in need of improvement.<sup>112</sup> Other local officials described these reports as redundant, general, poorly written, "just switching city names," and "choked full of boilerplate" language.<sup>113</sup> Similarly, one hospital disaster coordinator concluded that these reports were just a filling-in-the-blanks exercise for the contractor, with the contents lacking in real substance. According to this individual, hospital staffers also ignored the reports because, like many of the drills, they focused almost exclusively on the on-site part of the response.<sup>114</sup> Finally, locals said the reports showed that RPI did not

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<sup>109</sup> As noted in chapter 6, disaster victims and those who worry they might have been injured arrive at various hospital entrances by all manner of transportation. In incidents involving hazardous materials, most patients are not decontaminated thoroughly or at all before they arrive at hospitals. Interviews with author: Fire Lieutenant (5 February 1999); Registered Nurse/Hospital Disaster Coordinator (4 February 1999). Others that found the health care aspects of their city's chemical tabletop and functional exercises to be wanting were: Physician, Hospital Division of Emergency Medicine (31 May 2000); Director, City Emergency Services Department (18 May 2000); Associate Hospital Administrator/Registered Nurse (13 November 1999).

<sup>110</sup> City officials said when their biological tabletop was eventually held, they had to provide a physician to facilitate the medical aspects of the exercise. Interviews with author: Physician, Hospital Department of Emergency Medicine (24 March 1999); Assistant Director, Office of Emergency Management (23 March 1999). Apparently, RPI proposed biological tabletop scenarios shed light on hospital involvement because so many cities were having difficulties getting hospital personnel to participate in the preparedness training program.

<sup>111</sup> Interviews with author: Police Commander, Special Operations Division (23 March 1999); Police Captain/Firing Range Director (5 February 1999); Paramedic/Emergency Planner, Public Health Department (4 February 1999).

<sup>112</sup> Interview with author: Emergency Planner (8 March 1999).

<sup>113</sup> Interviews with author: Physician, Hospital Division of Emergency Medicine (31 May 2000); Paramedic/Emergency Planner, Public Health Department (4 February 1999).

<sup>114</sup> Interview with author: Registered Nurse/Hospital Disaster Coordinator (4 February 1999).

understand the Integrated Command System and the way that cities work internally or with their surrounding counties.<sup>115</sup> In sum, the locals had nothing positive to say about this aspect of the exercise program.

## **OVERHAULING THE DOMESTIC PREPAREDNESS TRAINING**

Even before the DPP training hit the road, the Pentagon previewed the material with local responders, who gave the product a scathing review and recommended major changes if the courses were to communicate effectively to the targeted audiences and meet their information needs. Although the courses were adjusted before the training debuted in Denver, not enough was altered at that time or in several interim reviews because harsh feedback dominated the interviews conducted for this report. Granted, some interviewees gave the training positive ratings, and some first responders were also bound to find a one-size-fits-all training program wanting. True as well was the fact that Congress mandated a stiff training schedule. However, it was incumbent upon Pentagon program managers to produce training that furnished the promised substance—the NBC delta—or inform Congress that more time was needed to do so.

The Pentagon's contractors also executed the training and exercise programs in a manpower intensive and consequently expensive fashion. Contractors routinely sent six or more people for the initial meeting with city officials, staying just a few hours. At most, this task should have occupied two people. Similar packs returned to brief each city's senior officials and to firm up plans for the training and exercise programs. In each of these overstuffed meetings, the contractors mostly repeated the same material from the first briefing. Locals observed that much of this busy work could have been accomplished with conference calls or by e-mail, and that the money that it consumed would have been much better used for equipment purchases.<sup>116</sup> Another point made by several cities is that countless hours of training time could have been saved had local trainers been allowed to preview the training material, assess which portions were new, and tailor the instruction to their city's training status and capabilities.<sup>117</sup>

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<sup>115</sup> For example, the reports showed that the contractors do not comprehend that in a disaster and in day-to-day matters, the mayor and city council do not manage the city. Instead, the mayor and city council rely on the experts—the emergency manager and the fire, police, and medical response teams. Interview with author: Emergency Preparedness Director, Office of Emergency Services (9 February 1999). Agreeing that the contractors do not understand how cities run, but saying that the report was useful: Director, Emergency Management Division, County Department of Public Safety (19 September 2000).

<sup>116</sup> Interviews with author: Director, Office of Emergency Preparedness (19 September 2000); Director, Emergency Management Division, County Department of Public Safety (19 September 2000); Hazmat Coordinator/Instructor (8 September 2000); Division Chief, State Department of Emergency Management (13 April 1999); Physician, Hospital Department of Emergency Medicine (24 March 1999); Emergency Planner, Office of Emergency Management (8 March 1999); Emergency Preparedness Director, Office of Emergency Services (9 February 1999); Director, Office of Emergency Services (4 February 1999).

<sup>117</sup> On second thought, the contractors spent enough time in each town beforehand that they should have been able to customize the training themselves. Interviews with author: Director, County Emergency Management (21 September 2000); Director, Office of Emergency Preparedness (19 September 2000); Hazmat Coordinator/Instructor (8 September 2000); Medical Toxicologist/Poison Control Center Director (13 June 2000); Physician, Hospital Division of Emergency Medicine (31 May 2000); Deputy Director, Office of Emergency Management (26 May 2000); Emergency Management Specialist, Office of Emergency Management (9 May 2000); MMRS Coordinator, Fire Department (9 May 2000); Registered Nurse/Chief, EMS

The DPP training program, in transition to Justice Department management, needs an overhaul. Since the DPP training began, the Pentagon has issued several reports addressing questions about the efficacy of firefighters' turnout gear for quick rescues, rapid decontamination strategies, and other pertinent topics. A few medical treatment protocols for biological agents were also published.<sup>118</sup> This information was added to the training materials for cities in late 1999, but by that time more than sixty cities had already been trained.<sup>119</sup> Follow-up with those cities has been spotty. A couple of local officials reported receiving updated materials on compact disc, but several found it to be a monumental chore to get basic items (e.g., chemical and biological casualty handbooks), much less updated materials or answers to remaining questions. When front-line officials asked for revised materials, some were told they would have to buy the entire set of exorbitantly priced training books anew. Locals reported that once the DPP personnel "blew through town," a city was checked off the "to do" list, and the Pentagon and its contractors were not heard from again.<sup>120</sup>

Thus, the first task for the Justice Department is to ensure that the training is what it was supposed to be from the beginning—instruction for professional trainers on the NBC delta. The instruction should not dwell on topics (e.g., incident command) that responders are already certified in or can obtain elsewhere; instead, it should focus on unconventional terrorism response. Before launching the revised program, the Justice Department should see that it passes muster with a cross-section of responders. Of course, updated and revised materials should be provided to cities that have already received the training.

The Justice Department would also do well to heed local advice about reordering the exercise program to get better results. Most cities sent their senior personnel to the first tabletop exercise, which usually brought out each city's lack of preparedness. If the chemical tabletop preceded the initial training,

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Division, State Department of Public Health (3 February 2000); Assistant Director, Office of Emergency Management (23 March 1999); Emergency Preparedness Director, Office of Emergency Services (9 February 1999); Battalion Fire Chief (8 February 1999); Police Captain/Firing Range Director (5 February 1999).

<sup>118</sup> *Interim Planning Guide: Improving Local and State Agency Response to Terrorist Incidents Involving Biological Weapons*, Biological Weapons Improved Response Program (Aberdeen, Md.: US Army Soldier and Biological Chemical Command, 1 August 2000); *Guidelines for Mass Casualty Decontamination During a Terrorist Chemical Agent Incident* (Aberdeen, Md.: US Army Soldier and Biological Chemical Command, January 2000); Thomas V. Inglesby et al., "Plague as a Biological Weapon: Medical and Public Health Management," *Journal of the American Medical Association* 283, no. 17 (3 May 2000): 2281–90. Thomas V. Inglesby et al., "Anthrax as a Biological Weapon: Medical and Public Health Management," *Journal of the American Medical Association* 281, no. 18 (12 May 1999): 1735–45.

<sup>119</sup> The key revisions took place in the eighth review of the course materials, which was completed in mid-October 1999 and first taught in November 1999.

<sup>120</sup> Interviews with author: Director, County Emergency Management (21 September 2000); Director, Emergency Management Division, County Department of Public Safety (19 September 2000); Hazmat Coordinator/Instructor (8 September 2000); Physician, Hospital Division of Emergency Medicine (31 May 2000); Emergency Management Specialist, Office of Emergency Management (9 May 2000); Chief, County Fire Department (9 September 1999); Physician/Associate Medical Director, Fire EMS Division (27 July 1999); Director of Hospital EMS and Disaster Medicine (19 April 1999); Deputy Fire Chief (23 March 1999); Emergency Preparedness Director, Office of Emergency Services (9 February 1999); Paramedic/Emergency Planner, Public Health Department (4 February 1999).

city managers, appreciating their weaknesses, might be more motivated to support the training and to ensure that the appropriate people (e.g., trainers, senior managers) attended, easing the subsequent propagation of the training to front-line responders.<sup>121</sup> Other locals thought that more time should elapse between the training and the functional exercises. The responders could drill more rigorously in the full field exercise if the rank and file were allowed more time to absorb the new skill sets. These large exercises would be more beneficial after the equipment had arrived and units had staged smaller, cross-disciplinary drills with it. Otherwise, the functional exercises would just be a walk-through for many responders.<sup>122</sup>

Another improvement that the Justice Department could make is to see that cities in training benefit from insight into how their predecessors handled planning, training, equipping, and drilling problems, as well as their response strategies at common problem areas (e.g., subways, airports, harbors). Pentagon officials and contractors balked at even giving generic examples of problems and solutions, which means that cities already trained had not learned from each other's mistakes and good ideas.<sup>123</sup> Training scenarios should be built around lessons learned during other cities' exercises, and other scenarios should include situations the responders are more likely to encounter (e.g., hoaxes).<sup>124</sup> Moreover, the exercise portion of the program should ensure that all drills realistically test the capabilities of health care providers, not just the skills of on-scene rescuers.

Administratively, the Justice Department should review instructor qualifications and trim costs by substituting as often as possible conference calls and other long-distance communications methods for contractor trips to the cities. Also, Justice officials should either see that the after action reports from the exercises become a prompt, meaningful tool for locals to identify and resolve response problems or substitute in-depth, after-exercise verbal critiques, called "hot washes." Finally, Justice Department officials should

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<sup>121</sup> Interviews with author: Police Lieutenant (23 March 1999); Emergency Preparedness Director, Office of Emergency Services (9 February 1999).

<sup>122</sup> "Going straight to a full-scale exercise is a recipe for failure." Interview with author: Police Lieutenant, Special Operations (8 February 1999). Since various snags in the equipment grant process delayed deliveries, some cities requested that their field exercises be postponed until their equipment kits arrived to make the endeavor more worthwhile and realistic. RPI insisted that exercises move forward as scheduled, which meant that the cities missed a major opportunity to test the equipment and their personnel in the full-scale drill. Interviews with author: Director, City Emergency Services Department (18 May 2000); District Fire Chief, EMS Division (2 March 2000); Emergency Preparedness Director, Office of Emergency Services (9 February 1999); Battalion Fire Chief (8 February 1999); Fire Lieutenant and Fire Captain (5 February 1999).

<sup>123</sup> Interviews with author: Deputy Police Commander, Special Operations Division (23 March 1999); Police Captain, Special Operations Division (23 March 1999); Hazmat Specialist (9 February 1999); Battalion Fire Chief (8 February 1999); Director, Office of Emergency Services (4 February 1999); Paramedic/Emergency Planner, Public Health Department (4 February 1999). Unlike the Defense Department personnel, the Office of Emergency Preparedness in HHS shared information among MMRS cities.

<sup>124</sup> Interviews with author: Medical Toxicologist/Poison Control Center Director (27 July 1999); Physician, Hospital Department of Emergency Medicine (24 March 1999); Police Lieutenant (23 March 1999); Physician/Associate Director, Hospital Department of Emergency Medicine (9 March 1999); Physician, Hospital Department of Emergency Medicine (9 March 1999); Emergency Preparedness Director, Office of Emergency Services (9 February 1999).

not miss the opportunity to devise benchmarks for how deep into the front ranks the training should reach. The Pentagon did not articulate such goals. Ultimately, the success of this training effort will depend on whether jurisdictions across the country institutionalize preparedness training and continue to practice plans, strategies, and skills in tabletop and field drills.