Consequence Management: Domestic Response to Weapons of Mass Destruction

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From Parameters, Autumn 1997, pp. 119-34.

It is no longer a matter of if--but rather when--a weapon of mass destruction will be used against the people and institutions of the United States. The sarin gas attack that killed 12 people in a Tokyo subway in 1995 established the precedent, a dubious distinction that almost fell to the United States two years earlier. Only the unanticipated power of the explosion that rocked the World Trade Center in 1993, vaporizing the cyanide that had been packed with the explosive, prevented the gas from spreading throughout the area. The FBI presently is tracking several groups within the United States that have acquired, or show an inclination to use, some type of weapon of mass destruction. The seemingly inevitable attempt by foreign or domestic terrorists to use such weapons inside the United States requires a candid discussion about how we as a nation are preparing to manage the consequences of such an incident.

It is clear that we are not prepared. We are, however, moving ahead: strategic planning is underway, funds are being made available, and people are beginning to study the threat and its consequences. But the United States is not ready to address systematically the consequences of a domestic incident involving a weapon of mass destruction. Detection capabilities are limited, integrated analytical and planning efforts are proclaimed but not fully understood, and laws about domestic use of military forces need to be reexamined. Most important, there is no understanding of how all the moving parts of a response to such an attack on the United States would function in relation to the requirement and to one another. The whole is not only greater, it is also different than the sum of its parts.

Responsible agencies have been identified and charged with developing policies and programs for responding to a terrorist attack using a chemical or biological weapon, but there is a great deal we still don't know about how we should respond in such a crisis. We are not without precedents, however, and this article examines two of them. The Chemical-Biological Incident Response Force (CBIRF) is the first organization, and the first operational military unit, specifically designed to deal with the aftermath of a terrorist assault employing a weapon of mass destruction. Additionally, the nation's first practical experience in preparing for a terrorist attack using such weapons occurred during the 1996 summer Olympic Games in Atlanta. Analysis of the organization and the experience can begin to identify things to change, to emulate, and to create as we begin to overcome the ignorance, fear, and distaste of the subject. It is time to deal responsibly with an incipient crisis.

Definitions and Terms of Reference

A topic as broad as the use of weapons of mass destruction must be limited if we are to learn from an examination of its constituent parts. Consequently, while the threat is no less serious, the low probability of an incident based on terrorist-delivered nuclear devices excludes that weapon from this discussion. (A response structure, based on the national Nuclear Emergency Support Team, is already performing its mission with respect to nuclear-based means of attack.) Nor will this article delve into the most likely ways for launching the attack. Others have analyzed the organizations and motivations of those who would inflict grievous harm on the people and institutions of our country by conventional or unconventional means.[1] Instead, this article examines ways and means of dealing with the effects of an attack on the United States by individuals, groups, or states that use chemical or biological weapons to attain their strategic ends.

Following the sarin gas attack in Japan and the Oklahoma City bombing, President Clinton signed Presidential Decision Directive 39 (PDD-39), which addresses how the United States should deal with the prospect of terrorist use.
of weapons of mass destruction (WMD).\[2\] The PDD divides the threat--at home and abroad--into two discrete categories: crisis response and consequence management. Crisis response refers to instances where the perpetrators of an assault have been discovered before an actual release; in this context, there could be one or more "devices" to be rendered safe as a result of uncovering the plan or neutralizing the terrorists. Domestic crisis response is the responsibility of the FBI; the Department of State, through its Office of Counterterrorism, is accountable for overseas incidents.

Consequence management, by contrast, describes ways and means to alleviate the short- and long-term physical, socio-economic, and psychological effects of a chemical or biological attack. It describes the coordination of international, national, regional, and local assets to deal with the effects of such an attack. The term includes preparatory work in response to a WMD threat--against the Super Bowl, for example--that would include site surveys; assessment of the ability of local hospitals to treat or decontaminate victims, and the size, condition, and locations of local stocks of various antidotes. Preparation could include determining the locations, size, and availability of other national antidote stocks as well as international stocks available to support planning for surge capacity.

Thereafter, should police agencies be unable to prevent the incident, consequence management would include treatment of victims within a contaminated zone, their decontamination and evacuation, and local cleanup. It would also involve psychological treatment and other efforts to restore confidence in the social and economic well-being of the affected area and of the country itself. The Oklahoma City experience suggests that the latter could require long-term commitment of considerable resources.[3] Responsibility for consequence management of WMD attacks rests with the Federal Emergency Management Agency (FEMA) for domestic incidents and with the Department of State, through its Office of Foreign Disaster Assistance, for overseas incidents.

From the foregoing it should be clear that any division between response before the fact and dealing with consequences after the fact of an attack is both arbitrary and potentially misleading. It should also be apparent that actions taken in response to the consequences of a WMD attack will invariably have two kinds of outcomes. Not only will such actions have their own consequences, whether intended or unintended--and which may or may not play into the hands of the terrorists who launched the WMD assault--but consequence management clearly cannot be conducted on an ad hoc basis. Consider, for example, the contrast between chemical and biological scenarios. After a chemical attack, there is a "golden hour" within which to make a difference. After that hour, those who are going to survive do and those who are not, do not. Once decontaminated and removed from the incident site, or "hot zone," victims can be dispersed to hospitals.

The biological conceptual approach is the opposite: theoretically, the victims must be immediately isolated in order to prevent the agent from spreading. Potential victims need to be isolated from the definitely uncontaminated public; they also should be isolated from others afflicted with the illness until each individual's degree of contamination can be established. But this type of quarantine is currently impossible. Given today's detection capabilities and the incubation period of biological agents, we'll never know that we've been contaminated. Hence the diabolical genius of a biological agent attack: we become "the [unknowing] vector of our own death." [4]

So, although PDD-39 has been a catalyst for strategy to develop ways and means to deal with the WMD threat, the dichotomy it creates between prevention and dealing with the consequences of an attack could lead to a dangerous ambiguity. Given the varied dimensions and manifestations of chemical and biological terrorism, the battle of consequence management has been lost if there has not been consultation and planning well before any threat of an incident emerges. We must therefore think of crisis response and consequence management as parallel and overlapping continuums that both federal lead agencies and the first responder must keep constantly in view. Arbitrary distinctions between activities before and after an attack by WMD cannot be extended into planning and operational activities. Should we allow those two continuous and overlapping processes to be compartmentalized--and thus expressed in a simple linear logic because they are considered mutually exclusive--we will fail in our response and thus invite future attacks.

We should keep in mind that consequence management, like war, is very much about strategy and the interaction of two wills: our own and that of the terrorist planning an attack. On the one hand, PDD-39 has produced long-overdue and sustained attention to the very real threat from weapons of mass destruction. This attention has resulted in some
practical and continuing efforts to confront the problem. On the other hand, the distinction in PDD-39 between crisis response and consequence management could encourage linear thinking and the conclusion that once the "crisis" is over, consequence management begins. Nothing could be further from the truth. In a WMD situation, domestic or international, consequence management is the crisis.

It is also an almost indescribably complex task.

The Chemical-Biological Incident Response Force and the 1996 Summer Olympics

On 23 September 1996, Congress passed Public Law 104-201, The Defense Against Weapons of Mass Destruction Act. With uncharacteristically blunt language, the law describes the nation's ability to conduct consequence management:

(19) the . . . US lacks adequate planning and countermeasures to address the threat of nuclear, radiological, biological, and chemical terrorism . . .

(21) State and local emergency response personnel are not adequately prepared or trained for incidents involving nuclear, radiological, biological, and chemical materials;

(22) Exercises of the Federal, State, and local response to nuclear, radiological, biological, and chemical terrorism have revealed serious deficiencies in preparedness and severe problems of coordination.[5]

This post-Olympics language describes exactly the pre-Olympics situation.[6] It is also important to remember the political context of that summer. Not only was the whole world coming to Atlanta, it was the summer before a presidential election: every stone would be overturned to ensure that nothing went wrong. Under those conditions, the potential for terrorism--to include chemical-biological terrorism--was taken very seriously. Understandably, however, the focus was on the terrorist-initiated event itself. While thought was given to the consequences of a chemical-biological incident--and a consequence management response structure was in fact developed--there was no conceptual understanding of the problem nor were the particulars of a tactical response thought through.

This status began to change as the Office of Emergency Preparedness in the Department of Health and Human Services started asking questions. Tasked with taking care of mass casualties in any situation, Health and Human Services was acutely aware that they did not have the capacity to treat or decontaminate victims within a "hot zone" created by chemical or biological agents. Indeed, the ability to turn victims into patients did not exist within the entire US government, except (coincidentally) within the Marine Corps' just-established Chemical-Biological Incident Response Force (CBIRF).

CBIRF was the vision of the Marine Corps Commandant, General Charles C. Krulak. Following the March 1995 Tokyo sarin gas attack, General Krulak--then Marine Forces Pacific commander--went to his commander and asked what assets Pacific Command could muster to assist the Japanese. The answer was: "We've got nothing."[7] Upon becoming Commandant in July 1995, General Krulak--with no tasking from the Department of Defense--established the CBIRF. By April 1996, the CBIRF vision had become an operational force, created out of existing Marine Corps personnel, infrastructure, and budget.

In and of themselves, the elements that made up CBIRF were routinely military. Together, however, they were truly a revolutionary organization that the Office of Emergency Preparedness could use to begin developing concepts for consequence management. CBIRF included reconnaissance, detection, decontamination, medical, security, and service support elements. With these capabilities "under one tent," CBIRF had the ability to provide command and control support to the civilian incident site commander; conduct detection in a contaminated environment; insert Navy doctors into that hot zone for immediate triage of the more serious cases; decontaminate the victims; and turn the victims over to the local health authorities outside the hot zone. The unit also had a memorandum of understanding with the Naval Medical Research Institute[8] and was supported by an "electronic reachback" group of scientific and medical consultants headed by Nobel Laureate Joshua Lederberg. Nowhere else were such assets contained in one deployable unit, and no other organization had developed a comparable extended support structure ready to help in a crisis. With its elements cross-trained in their respective specialties, CBIRF easily adapted to the foundational need of consequence
However, CBIRF, like everyone else, did not have an overarching consequence management concept within which to operate. As a result, a month before the games started the key agencies involved held several meetings to design such a concept and the accompanying operational coordination mechanism. These two basic needs were reflected in the sine qua non issues of managing mass casualties and collecting evidence from a potentially contaminated area.

The challenge of managing mass casualties posed tough questions about assets, such as decontamination capabilities available at the local Atlanta hospitals; locations of national antidote reserves and how they would be flown in; surge capacity of all available federal assets and the ability of those responsible for those assets to adjust to the situation; evacuation plans; and training of response personnel. As with any other form of disaster planning, these were essentially issues of matching resources to the response. Unlike disaster planning, however, these questions would remain largely unanswered even as they helped to frame the enormity of just what consequence management entailed. They remain largely unanswered today.

Equally important were the needs of the FBI for evidence collection. The FBI's Hazardous Materials Response Unit (HMRU) needed to know what the response would look like during its first five minutes. This unit's philosophy was simple: there might be a lot of dead people about, but if you couldn't prove who did it, the likelihood of more dead people in future incidents just increased. Despite the extreme emotion of the moment, evidence had to be collected. It was from the perspective of this tactical immediacy that a response structure began to emerge by late June.

The effectiveness of the consequence management response depended on the chemical or biological samples that would be taken from the disseminating device itself or from contaminated material within the hot zone. Most important, once correctly identified, the samples would determine what kind of health response was necessary. Samples would also begin to build the case against the perpetrators. Thus the potentially conflicting needs to prepare for mass casualties and to facilitate evidence collection were bound together in establishing a concept of consequence management. The components of the solution were to be found throughout Atlanta; locations reflected circumstances at the time of planning rather than deliberate selection to enhance response to a threat or an incident.

The Chem/Bio Response Team, established at Dobbins Air Force Base in the northwest part of greater Atlanta, was in charge of sample collection. If there was an incident, this five-man team was to respond by helicopter to the incident site to obtain samples. The team was composed of two FBI personnel (team lead and evidence collection); two Army Technical Escort Unit personnel (sampling, sample escort, decontamination, and emergency ordinance disposal); and one Navy doctor from CBIRF to provide medical support to the team. Once the sample had been taken, plans were to fly it to the Centers for Disease Control and Prevention campus at Chamblee (just north of downtown Atlanta), where the identification and verification laboratories were located.

The CBIRF established itself at a winery in downtown Atlanta, just six blocks from Centennial Park, to be within range for immediate tactical response. Within blocks to a mile of most Olympic venues, CBIRF was ready for a quick response. If the Chem/Bio Response Team from Dobbins Air Force Base could not make it, CBIRF was well positioned not only to take samples, but to become the basis for--under the lead of the Atlanta Fire Department--an incident response structure.

No matter how the samples were collected, they had to reach the Chamblee campus. It was here that the personnel and equipment necessary to identify a sample had been assembled. The selection of this site was significant for several reasons. First, it was close to most of the Olympic venue sites in downtown Atlanta, the most likely place for an incident. Second, it already had laboratories of its own to help in the sample identification. Next, it had extra laboratory space to accommodate the labs that had been flown in for the games. Fourth, there was an airstrip located right next to it. And, finally, the campus was located just three miles from the FBI's regional headquarters, where the Special-Agent-in-Charge of the entire security effort had his command post.

The conglomeration of consequence management agencies at the Chamblee campus was known as the Science and Technology Center (or SciTech Center). Once samples had arrived and been identified, the center's executive steering committee (with a member from each agency) would meet to make a recommendation to its chair, the FBI Laboratory Coordinator. Advice of the Science and Technology Center's chairperson, as science advisor to the Special Agent in
The consequence management structure and team were ready when, on 27 July 1996, the pipe-bomb exploded in the early morning hours at Centennial Park. Because there were no apparent or suspected chemical agents released by the blast, the consequence management response structure was never officially activated. There is no indication, however, that the threat of biological contamination was ever considered by security authorities. CBIRF received an unofficial call from Atlanta's assistant fire chief within five minutes of the blast and had representatives at the scene within 15 minutes of the call. Within 20 minutes, CBIRF had assembled a force of 120 personnel, fully protected and ready to respond. Meanwhile, back at the lab, the SciTech Center's members were asking themselves what higher authorities seemingly did not: what if the blast had been laced with a biological agent? Within two hours of the incident, shrapnel, soil, and textile samples had been brought back to the SciTech Center for confirmation that they were not contaminated.

Observations

The consequence management effort in Atlanta was extraordinary. To move in such a short time from *tabula rasa* to an operational concept that was ready to react in an emergency is perhaps unprecedented, especially given the technical issues involved with becoming operational. Yet despite these great strides, the consequence management program remained a stepchild of the general security effort. Key issues from critiques of the consequence management process are summarized below.

*Connectivity and culture.* While there was superficial connectivity from the SciTech Center to FBI regional headquarters, there was never any feeling of legitimate inclusion among the assembled consequence management personnel at the SciTech Center. And why should there have been? Not only were the consequence management people johnny-come-latelies (some of the Olympics security personnel had been preparing for over a year), they brought with them an operational paradigm that had been made up in the previous month and had not been tested or evaluated. The result was a relationship that looked good in an organizational diagram, but did not convey any real connectivity.

Part of this problem probably resulted from the fact that scientists were necessarily at the center of the Atlanta consequence management effort. They were from a different culture than the door-kicking, hostage-rescuing, terrorist-killers around whom much of the counterterrorist organization had been built. The scientists were separated from operational matters by a cultural gap far greater than the three miles between their laboratories and the operational headquarters. Continuous communications were never maintained between the Chamblee campus and the FBI regional headquarters because there never was an incident that forced them to communicate. Nevertheless, the scientists were instrumental to the success of the entire consequence management effort: without sample identification, there could be no effective response effort.

*Information flow.* The above condition was exacerbated by the role, and flow, of information. Classified or sensitive information--such as a daily threat brief--was never released to anyone in the consequence management structure at Chamblee, which left the SciTech Center in its own unclassified reality. The inevitable result was that crisis response and consequence management became compartmentalized. No thought was given to how a transition might be made from crisis response to consequence management or, more important, how the lack of classified and sensitive information would hinder the ability of those involved to contribute to crisis response or consequence management.

*Operational isolation.* In the absence of a strategic vision for consequence management--the separation of crisis response from consequence management in PDD-39 essentially does nothing more than make it easy to assign lead agencies--and with exclusion by default from operational crisis response planning, consequence management operators were forced to figure things out for themselves. Issues such as evacuation plans, surge capacities, and exercising consequence management, while addressed by the SciTech Center, were evaluated in isolation.[14]

*Unity of effort.* The most significant consequence management observation from Atlanta is the absolute necessity for unity of effort from the strategic to the tactical level of operations. No single organization could hope to control or command such an effort. Thus the importance of the Science and Technology Center. It was here that people got to
know each other as people, rather than as stereotyped institutional representatives. It was here that each agency provided capabilities briefs to all the other agencies around the table. It was here that agencies invited one another to come see how they had set up for business. But beyond the show-and-tell aspects of the meetings, the various agencies had not had time to devise a decisionmaking process that all could accept and that might be effective in a crisis.

Since Atlanta

Much has been done since the passage of Public Law 104-201, The Defense Against Weapons of Mass Destruction Act, which designates the Department of Defense as the lead agency for domestic preparedness against weapons of mass destruction. Within DOD, the office of Special Operations/Low Intensity Conflict has supervisory oversight; the Director of Military Support on the Army staff is designated as the action agent. The Army's Chemical-Biological Defense Command at Aberdeen, Maryland, is directly responsible for program implementation.

The office of Special Operations/Low Intensity Conflict--according to the provisions of the Defense Authorization Act for FY 1997 (Titles XIV, XV, and II)--has established the management structure for addressing domestic preparedness. Further, working in conjunction with the other DOD agencies, it has developed a plan to spend more than $48 million dollars in FY 1998: $24 million on emergency response preparedness; $17 million on preparedness training; and more than $7 million on chemical and biological response. These funds will be used to prepare 26 cities for WMD terrorism (Denver was the site of the pilot program in April 1997). Over the next three years, a total of 120 metropolitan cities will receive the same training, which includes classroom instruction, video, CD-ROM, and the Internet as educational tools. Training and materials also will be made available to anyone in the United States who requests them.[15]

Beyond these initiatives, efforts are now under way to establish a standardized operational response. The US Army's Chemical-Biological Defense Command has spearheaded the effort to establish two national response task forces, one each in First Army and Fifth Army. These task forces are capable of providing consequence management support to domestic authorities. A Chem-Bio Quick Response Force is also being made ready for rapid deployment, and a WMD incident hotline network is close to being completed.

Continuing Issues

While it is amazing just how much has been done since the Atlanta experience, we must keep in mind a number of issues and questions, some of which cannot be answered at this time. They are cited as reference points to a process that cannot yet provide hindsight. Our pace can be judged only by those who follow us.

Political leadership. Consequence management is a political problem. True, it is a humanitarian problem writ large, and it is a disaster of the technical type. People die every day from accidents and other causes, but people do not die regularly from WMD attacks initiated by terrorists within the United States. As unlikely as this threat may seem, its potential should produce sustained political attention. But will the short attention span of the political process produce, as it often does, a decision to "just do something"? What is needed here is serious, sustained, informed, and thoughtful leadership that keeps things moving while allowing for the trial-and-error nature of such an embryonic concept as consequence management. Regrettably, in keeping with the American experience, it may take an incident to focus assets and responsibility for effective planning and preparation.

DOD leadership. Much will depend on how DOD adapts to the guidance it receives. DOD leaders and consequence management instructors need to be allowed and encouraged to deal with the problem as a whole--crisis response and consequence management--while taking time to acknowledge that chemical and biological incidents require different responses.

Combat preparedness. Most DOD chem-bio forces were originally created to protect American troops on the battlefield. With the prospect that these troops will be required to train civilians, we need to evaluate the effects of diverting trainers from their primary purpose. Combat troops prepared for survival on a contaminated battlefield are an imperative in an age in which potential adversaries who lack the means to confront us in a conventional conflict may reach for weapons of mass destruction to offset our technological and operational advantages.
Combat operations mentality. Is a combat operations mentality--inherent in existing methodologies[16]--appropriate for civilian training? Such an approach reminds us that managing the consequences of a WMD event is not equivalent to responding to a natural disaster or a humanitarian crisis. We are dealing with an enemy; how the consequences are managed may play into his hands. Conversely, a typically military approach will never be the answer in working with civilians. That said, and recognizing that by default DOD is the only organization that possesses the necessary expertise to effect the transition to an age of consequence management, there is no reason why our forces are not good enough to develop and use the appropriate conceptual approach to WMD in a domestic setting.

Transition from DOD leadership. The Department of Defense is tasked, by law, with domestic preparedness until at least 1999. DOD has the required expertise in the field and is the best organized of any federal agency to quickly implement a program. But who will take over from DOD in 1999? If no replacement organization or civilian institution is ready to assume responsibility as the lead agency, as required by Public Law 104-201, then we have another potentially significant precedent.[17] What other new or existing additional domestic problems might be given to DOD for solution?

Legal ramifications. The Reconstruction-era law referred to as Posse Comitatus, which limits the involvement of US armed forces in domestic law enforcement, probably needs to be examined specifically with the threat of terrorist WMD attacks in mind. Consider the FBI-led Chem-Bio Response Team developed for immediate sample collection during the Olympics. While the tasks were clearly delineated and in keeping with the law--and illustrative of new partners for new problems--this type of tactical expediency can serve to establish, simply through close tactical association, impairing precedents to Posse Comitatus. Rather than continue to amend a century-old law as we have in the past several decades, we might examine the Canadian Emergencies Act, created a decade ago, for insights into our own problems.[18]

Continuum of response. Much work remains to plan for and integrate the activities of assets between the federal level and the affected community. We need to:

- Establish the coordination mechanisms needed to oversee the entire immediate response before federal assets arrive.
- Use federal assets properly and expeditiously to augment the existing response structure.
- Examine the role of the military's reserves in a tiered response between the first responders and the arrival of federal help.[19]
- Plan for surge capacities that will be needed for different types of response.
- Develop plans for tactical coordination at the incident site.
- Develop model and specific evacuation plans.
- Decide who will handle the information campaign.
- Define the role of medical facilities, including preparation for mass psychological casualties.[20]
- Ensure that fire and police departments are prepared to work together.

Money. As in so many instances, money is the determinant of success and chem-bio defense is a growth industry. The Administration and Congress will have to decide who will pay for the infrastructure and capabilities necessary to meet the threat. There are two dangers here. First, beware of the difference between capabilities and crackerjacks. In an age of no experts and little collective experience, there will be no shortage of pretenders. From organizations to individuals, it is inevitable that some will claim false capabilities as they pursue the newly available funds for WMD defense. Second, beware of the possible outcome that merely validates DOD's nuclear, biological, chemical (NBC) force structure and budget. The NBC capabilities within DOD were designed during the Cold War to protect combat troops on a battlefield. Certainly, some of these concepts and methodologies will be transferable to the problem of domestic consequence management. But a lock, stock, and barrel transfer will constitute a setback, not progress.

Recommendations

Because it comes down to money, because there will be impostor capabilities, because there are no experts, and because there is the danger of old paradigms used as a reference point by default, the following suggestions seek to avoid these four potential obstacles.
**Invest in WMD detection.** From enhancing old systems to developing completely new ones, full-spectrum detection is the desired end state. Detection is the first line of defense; it is where tactical consequence management begins.

**Mandate consequence management awareness and training.** New awareness, education, and training concepts will be the keys to success.[21] Not only will these new concepts ensure a lowest common denominator of knowledge at the local, regional, and national level--about the problem itself and the capabilities of other organizations--they will become the foundation on which to:

- Develop a certification process for all levels of response. Such a process will enable the nation to begin standardizing its response to the consequences of WMD. Without a certification process, disparate approaches will inevitably inhibit communication and coordination.
- Encourage seminars and conferences, the more the better. We are still at a point where talking about the problem is a significant first step. If only to define the scope of the problem and to establish an awareness of just how many types of organizations and people are involved, conferences offer a significant national return for a relatively small investment.

**Identify, train, and mentor individuals within organizations.** Like many new problems that demand new partners, a new culture must be created to deal with the consequences of terrorist use of WMD. Without "growing" such a culture, organizations will not be able to respond effectively and efficiently to either crisis response or consequence management tasks.

**Develop a tiered continuum of response.** All national assets--such as the Chemical-Biological Incident Response Force--unless already deployed to potential terrorist targets such as the Super Bowl or an Inauguration, are generally not going to be able to respond to an incident within 6 to 12 hours. In that case, local responders will have to carry the burden of the immediate response. And while there is a good plan for federal agencies to educate and train metropolitan police, fire, health, and other emergency providers, the operational role of the "feds" interacting with the home state remains largely ill-defined. Some starting points include:

- The Atlanta model, while conceptually helpful, was an operational anomaly. Never again (unless there's a significant event in Atlanta) will there be a lash-up like the one for the Olympics. To have the Centers for Disease Control in the same town as the event and located just three miles from the FBI command post was pure coincidence. To have so many national assets available was political; the money was made available by a National Security Council that had to do everything in its power to prevent an incident with election-year ramifications.
- Exercise, don't notionalize. It is a military habit to account for a previously unencountered entity (e.g., the United Nations or non-governmental organizations) by making it monolithic and therefore deserving of its own "box" in a coordination wiring diagram. Accounting for them in a wiring diagram, or having somebody in the military notionalize (role-play) them is not good enough. Practicing coordination for this type of effort must involve all of the disparate partners in the solution. Invite everyone.

**Establish an operational concept for a deployable module of the Science and Technology Center.** The Science and Technology Center, or its functional equivalent, needs to be recognized as the center of the consequence management system. The cascade of events in response to an incident cannot begin until a sample has been positively identified. This new entity should include awareness that:

- If a SciTech Center is the focus of a response effort, then there necessarily must be a cultural shift as well. The door-kickers of crisis response must appreciate the critical importance of, and defer to, the scientists of consequence management.
- A federal SciTech Center has to be deployable. The SciTech Center must be modularized and capable of being deployed selectively anywhere in the United States, prepared to operate on its own or to augment existing laboratories, if any, near the incident site.

A SciTech Center, or its equivalent, and the traditional security command post must have mutual awareness and accessibility. There must be a place for those responsible for implementing policy--crisis responders and consequence
managers—-to meet, exchange ideas, and get to know one another.[22]

A SciTech Center must be recognized for its true contribution: it brings the different agencies together and forces people to talk to one another as professionals and not as institutional interfaces.

Select participants in any aspect of consequence management with great care. With so many organizations and agencies involved in consequence management, unity of command is probably impossible. The only alternative is unity of effort based on however many people are needed at the table for collaboration and coordination. Once at that table, a transparent flow of information through all essential channels will make or break the cohesion of effort in a response to a WMD attack. More than anything else, this type of cohesion is the result of hand-picked personnel with excellent interpersonal skills.

Mandate the following studies:

- Review Posse Comitatus. The longer military and domestic law enforcement officials serve together, the greater the chance of a blurring of the law. While it may be time to adjust the interpretation of this law, it should not occur as an unintended consequence of operating together. Any changes should recognize the evolving needs of the military and civilian law enforcement organizations.
- Study the effects to be expected if Department of Defense WMD personnel spend time away from preparing combat troops. We remain responsible for ensuring that our troops are adequately prepared for the contaminated battlefield.
- Define the transition from DOD to civilian leadership for domestic preparedness for the consequences of an attack using WMD. A permanent organizational role for DOD in domestic affairs should be challenged.[23]
- Examine the role of the state and its reserve forces within a consequence management response.

Encourage conferences and neutral forums. With organizational agendas always an issue and consequence management still an embryonic concept, these forums are needed for candid discussions of responsibilities. The Center of Excellence in Disaster Management and Humanitarian Assistance is a good example of such a forum. First developed as a civil-military-academic institution in support of the US Commander-in-Chief, Pacific, the center emphasizes the interagency process for integrating education, training, and research in operations other than war. More recently, it has hosted two conferences on consequence management. Because the center has an academic and neutral focus, it is an acceptable professional venue for international, governmental, and non-governmental organizations to train and to maintain a dialogue with the military on consequence management. The United States needs flat, smart, and inter-organizational institutions such as the Center of Excellence to examine problems with international implications such as consequence management.

Conclusion

An incident will happen: WMD will be used against Americans in their own country. The time to manage the consequences is now. We will be capable of this daunting task only if we remain candid and open to discussion. The above recommendations--based on a look at the recent past through the prism of the Chemical-Biological Incident Response Force and the response structure of the Atlanta Olympics--suggest some of the tasks needed to get started.

We understand that the emergence of consequence management means we live in an era of fundamentally new and transnational problems that demand new partners and new solutions. It is an age of borders violated and ethical and moral norms ignored. How we develop strategic initiatives and cooperate operationally will determine just how successful we are. We must meet these threats with minds "untrammelled by set forms and fixed ideas . . . . [A]bove all else, let us kill the stereotype, or it will kill us.][24]

NOTES

1. For ground-breaking work on this subject, see the Naval Postgraduate School thesis of James K. Campbell, "Weapons of Mass Destruction and Terrorism: Proliferation by Non-State Actors," soon to be published as "WMD Terrorism: Asymmetric Warfare in the 21st Century," by Inter-Pact Press.
2. The acronym WMD as used in this article refers only to weapons based on chemical or biological technologies.


4. Dr. Joseph Waeckerle, M.D., telephone interview, 6 June 1997.

5. PL 104-201, Title XIV, "Defense Against Weapons of Mass Destruction."

6. For an additional description of the consequence management effort in Atlanta, see Lois Embers, "TERRORISM: Combating Chemical and Biological Threats," in Chemical & Engineering News, 4 November 1996, pp. 10-16.


8. The Naval Medical Research Institute unit was another example of a vision made reality. Under the direction of Commander Jim Burans, USN, NMRI developed a deployable scientific kit that could identify biological agents within 15 minutes. Just prior to the Olympics, Dr. Burans' outfit identified anthrax in Iraqi soil, nearly two years after the fact, for the United Nations.

9. As an example of its task-organized adaptability, CBIRF personnel were unarmed during the Olympics. The security element, primarily for overseas situations, was thus freed to augment the victim retrieval teams, improving a difficult personnel management situation. Moving about in full protective gear, not to mention carrying the victims from where they fell to the decontamination line, would have been a considerable effort in the summer heat of Atlanta.

10. The federal agencies that were prepared to support local fire, police, and health organizations included: Office of Emergency Preparedness/Public Health Support; the FBI; US Forces Command (FORCECOM was tasked by DOD with consequence management support to local authorities); the Centers for Disease Control and Prevention (CDC); the Atlanta Fire Department; the Army's Technical Escort Unit (TEU), Material Command Treaty Lab, and Medical Research Institute for Infectious Disease; the Environmental Protection Agency (EPA); the US Coast Guard Strike Team; the Defense Special Weapons Agency; CBIRF; and FEMA.

11. The FBI HMRU was yet another example of a vision made reality in a very short time. The brainchild of Dr. Randall S. Murch, Chief of the Scientific Analysis Division of the FBI's Laboratory Division, and Dr. Drew Richardson, the HMRU director, its formation had been approved by the FBI only in early June 1996.

12. An exceptional moment in the Corps' history; the Marines had finally occupied ground truly worth defending.

13. Public Health Support subsequently established their command center at Chamblee as well, with another operational node at Dobbins AFB.

14. CBIRF and the Atlanta Fire Department did manage to exercise the day after the Olympics were over, 5 August 1996.

15. For example, National Guard units will have the Distance Learning Center at their locations. This education mechanism will be available to local emergency response officials.

16. For example, there is the danger that the military will focus only on those chem-bio agents that it can detect. The capability to detect non-military threat agents, such as industrial agents, is not part of standard military operating equipment.

17. FEMA has become more involved since the Olympics, where its consequence management presence was minimal. On 18 April 1997, along with DOD, it sponsored the first meeting related to the domestic preparedness implementation plan.

Operations: The Canadian Approach," both in this issue of Parameters, 27 (Autumn 1997), 82-97 and 135-52, respectively.

19. Another consideration for the operational solution is the role of the humanitarian non-governmental organization (NGO). The NGOs would call consequence management a technical disaster, not caring about its origins, only knowing that people were suffering. At the least, NGOs are going to have to become familiar with WMD and their potential effects on a refugee population fleeing an incident site, either at home or abroad. But should the NGOs be capable of operating in a hot zone? Should they be included in consequence management planning? Or, will new "WMD NGOs" arise to fill these unique voids in a global capacity to respond? Only time will tell, but there will always be a role for NGOs in this or in any other humanitarian disaster.

20. During the Tokyo subway gas attack, 4500 of the 5000 "injured" were thought to be psychosomatic. The psychological consequences of WMD use is something for which there is no precedent.

21. For example, consider the mindset change that must take place within the medical community. Dr. Adam Shapiro makes the child abuse awareness analogy. Before extensive awareness and education, doctors were not encouraged to ask about healing bruises on a child's body. "I fell off my bike," was good enough. With training, however, doctors began to think of alternative causes and examine other physical and psychological indicators. So it is with biological terrorism. The symptoms of biological agents can resemble flu symptoms. If a doctor were to get a number of flu victims in a short amount of time, he or she must at least consider the possibility that a biological agent is at work while beginning to look for positive or negative indicators.

22. In an effort to facilitate such awareness, before being thrown into a situation, the Chemical-Biological Arms Control Institute and the Center for Excellence for Disaster Management and Humanitarian Assistance will soon be sponsoring a conference that brings together first responders (e.g. police, fire) from cities that have begun to grapple with the issue of consequence management.

23. There continue to be concerns about the proper role of the military in support of civil authorities in these matters. See Knut Royce, "Army, FBI Mix Questioned," Long Island Newsday, 1 April 1997, p. 4.


Reviewed 22 August 1997. Please send comments or corrections to carl_Parameters@conus.army.mil