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DOD and the Biological Weapons Domestic Response Plan: Does it Contribute?

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ABSTRACT

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The domestic response plan, or passive defense, regarding biological weapons involves deterrence by diminishing the prospects that an attack will attain the desired results and minimizing the consequences of an attack if it were to take place. The three layers of passive defense involve peacetime precautionary measures and preparation, crisis management, and consequence management. Currently, DOD plays a supporting role to other agencies with assets including, but not limited to, the US Army Medical Research Institute for Infectious Disease, US Army National Guard Weapons of Mass Destruction-Civil Support Teams, and the US Marine Corps Chemical Biological Incident Response Force. The planned role of DOD assets in this policy is resource intensive and in some cases has questionable added value in supporting a reaction to an attack. In establishing an effective and efficient response plan, while minimizing risk to the U.S., resources are better directed to enhancing the medical and public health capabilities in this arena prior to enhancing DOD assets. This paper evaluates the role the DOD plays in the Federal Response Plan in the event biological weapons are used against non-military targets within the United States. It defines the threat, outlines the current policy toward terrorism and biological agents, presents analysis of the passive defense component of homeland security strategy as it applies to biological warfare using a risk assessment framework, and makes policy recommendations regarding the role the DOD plays to posture for success in the near term extending to 2010.

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PREFACE

The issue of preparing the United States to respond domestically to a potential Weapons of Mass Destruction incident has received increased emphasis over the past few years. Efforts have received increased impetus since the attacks on U.S. soil on 11 September 2001 and subsequent deployment of Anthrax through the mail. Events pertaining to this topic are not static and new information, developments, and decisions occur almost daily. This paper deals with the basic framework of our national response and DOD's supporting role specifically in the realm of a biological agent attack. Necessarily, it deals with the system as a whole, explores some of the weaknesses in the system, and recommends a course of action to determine where DOD resources and energy should be placed to support success in the current environment.

DOD AND THE BIOLOGICAL WEAPONS DOMESTIC RESPONSE PLAN: DOES IT CONTRIBUTE?

In 1989, terrorism expert Jeffrey Simon profiled a terrorist group most likely to resort to biological weapon use as one unconcerned about political backlash, demonstrating a previous pattern of high-casualty inflicting incidents with a degree of sophistication and innovation in weaponry, and having shown a willingness to take risks.¹ This describes the threat environment existing today against the United States at the terrorist level, and arguably at the nation-state level, as it applies to the employment of biological weapons. The terrorist attacks on New York City and the Pentagon on 11 September 2001 generated an extremely heightened interest among the media and the public concerning the likelihood of biological warfare directed on the United States and the nation's ability to respond to a biological warfare attack. The interest and scrutiny were amplified in the wake of the targeted exposure of civilian members of the media and Congress, with the concomitant exposure of ordinary civilians and employees of the U.S. Postal Service, to anthrax via the postal system.

In response to a string of successful attacks on the United States abroad, amplified by the events of 11 September, President George W. Bush announced on 20 September 2001 the creation of the cabinet-level position of the Office of Homeland Security responsible to lead, oversee and coordinate a comprehensive national strategy to safeguard our country against terrorism and respond to any attacks that may come.² The nation's efforts to combat biological warfare directed at its citizens, regardless of the perpetrator, and minimize the likelihood and consequence of such an attack must be a major facet of the homeland security strategy.

A potential attack is a serious threat and generates numerous concerns regarding the application of resources to combat it. Fortunately, major efforts have been underway to establish policy, plans, and systems to respond to and to minimize the consequences of such an attack over the past few years. These efforts involve numerous agencies of the government including the Department of Defense (DOD). Major strides have been made on this front and a framework has been established, but efforts are still underway and debate continues regarding the appropriate allocation of monetary and manpower resources to finalize a coherent effective and efficient policy to minimize the psychological and physical consequences of such an attack.

This paper evaluates the role the DOD plays in the Federal Response Plan in the event biological weapons are used against non-military targets within the United States. It defines the threat, outlines the current policy toward terrorism and biological agents, presents analysis of the passive defense component of homeland security strategy as it applies to biological warfare

using a risk assessment framework, and makes policy recommendations regarding the role the DOD plays to posture for success in the near term extending to 2010.

CURRENT U.S. BIOLOGICAL WARFARE DEFENSE POLICY

The U.S. policy regarding biological warfare can be extrapolated from its policy on terrorism defined by President Bush and summarized in his statement:

We will direct every resource at our command every means of diplomacy, every tool of intelligence, every instrument of law enforcement, every financial influence, and every necessary weapon of war to the disruption and defeat of the global terror network.³

Biological weapons are some of the most feared components of the global terror threat due to their potential availability and widespread psychological and health affects if successfully employed. The DOD plays a critical role in executing this policy as articulated by former Secretary of Defense, William Cohen, when he stated the primary objectives of U.S. policy relating to biological warfare defense are to:

- prevent countries from acquiring biological weapons and their delivery systems utilizing diplomacy and the Biological Weapons Convention
- deter through conventional military and nuclear forces
- deter through equipping and training U.S. and coalition forces to deal with biological warfare
- employ early detection within the Department of Defense (DOD)
- employ prophylaxis through the DOD anthrax vaccination policy
- implement the Domestic Terrorism Preparedness Program.⁴

This strategy is echoed in A National Security Strategy for a Global Age, published in December 2000, and further expanded regarding military deterrence through a robust capability to accurately attribute the source of attacks and respond effectively and decisively through a wide tailored range of options.⁵ Included in this response spectrum is the ability to effectively deter through an effective passive defense posture. Thus, the overall U.S. policy consists of intelligence, deterrence, passive defense, active defense, and offensive options.⁶

In view of the fact that every resource is to be applied to this effort, but that resources are still limited, it is imperative that every resource is applied in a manner that has the greatest chance of ensuring the desired effect. DOD clearly has a significant role in the biological warfare and terrorism policy, and is engaged in all facets to include passive defense. Aaron Weiss categorizes the DOD as having received a disproportionate amount of domestic consequence management responsibilities.⁷ To assess the validity of this statement, it is

necessary to evaluate the overall national response plan, the level of readiness of the various contributors, and the role of the DOD.

THE DOMESTIC RESPONSE POLICY

Passive defense provides deterrence against biological weapons by diminishing the prospects that an attack will attain the desired results and minimizing the consequences of an attack if it were to take place.⁸ The three layers of passive defense involve peacetime precautionary measures and preparation, crisis management, and consequence management.⁹ Presidential Decision Directive (PDD) 39 assigns the Federal Emergency Management Agency (FEMA) the responsibility for coordinating the federal response in consequence management.¹⁰ Consequence management describes ways and means to alleviate the short and long term physical, socio-economic, and psychological effects of a biological attack and describes the coordination of local, regional, national, and international assets before, during, and after an attack.¹¹ PDD-62 and 63 assign Human and Health Services (HHS) as the lead agency for public health services including prevention, surveillance, laboratory services and personal health services.¹² These responsibilities are also detailed in the January 2001 U.S. Government Interagency Domestic Terrorism Concept of Operation Plan, which also assigns DOD a supporting role. This role includes the U.S. Army Medical Research Institute for Infectious Diseases and the U.S. Marine Corps Chemical Biological Incident Response Force.¹³ The Government Accounting Office (GAO) has identified more than 20 departments and agencies as having a role in preparing and responding to the public health and medical consequences of a bioterrorist attack.¹⁴

It should be noted that though many of the organizations referred to in this document include the terms Weapons of Mass Destruction or chemical- biological in their title, this discussion centers on the response to biological weapons. The nature of a chemical attack and the required response is not synonymous with a biological attack. After a chemical attack, there is a very short time period within which to make a difference. This is because, once exposed, those who are going to survive do and those who are not do not.¹⁵ Post exposure intervention consists of decontamination, transfer to a hospital, and supportive care.¹⁶ While the manifestations of a chemical attack are often rapid, the manifestations of a biological attack are insidious. The first clinical signs and symptoms of illness appear hours or days after an attack and potentially act as the first harbinger that an attack has occurred. In a biological attack three groups exist: those definitely exposed, those potentially exposed, and the uncontaminated. The exposed personnel and potentially exposed personnel must be isolated from each other and

further isolated from definitely uncontaminated personnel as rapidly as possible. After isolation, exposed and potentially exposed personnel undergo transfer to a hospital, treatment with antibiotics, supportive care, and vaccination as appropriate. All of this must be accomplished while maintaining isolation amongst the separate groups.¹⁷

DOD'S ROLE IN MANAGING THE CONSEQUENCES OF DOMESTIC WEAPONS OF MASS DESTRUCTION INCIDENTS

The 2000 annual DOD report to Congress clearly outlines the DOD role in managing the consequence of domestic chemical, biological, radiological, or nuclear agents incidents. In responding to CBRNE incidents, "When requested, the Department of Defense will provide its unique and extensive resources in accordance with several key principles."¹⁸ These principles are:

- The DOD will ensure an unequivocal chain of responsibility, authority, and accountability for its actions to assure the American people that the military will follow all relevant laws when an emergency occurs.
- DOD will always play a supporting role to the Lead Federal Agency (LFA) in accordance with the Federal Response Plan and will ensure complete compliance with the Constitution, the Posse Comitatus Act and other applicable laws.
- DOD's consequence management equipment and assets are largely resident in its warfighting capabilities to protect U.S. forces during hostilities overseas. However, many of these capabilities can be dual use. (Decontamination, medical support, logistics).
- DOD will employ Reserve Component as the forward- deployed units for consequence management in the domestic arena.
- DOD will balance LFA requests for support against any ongoing war fighting requirements. Before providing support, DOD will consider whether requested military assets are available domestically and whether the Department has sufficient legal and budgetary authorities to provide them.¹⁹

Multiple elements within the DOD have been established, or were previously in existence, and are available to support the DOD's mission in this arena. The Secretary of the Army is the DOD Executive Agent for providing DOD resources to civil authorities.²⁰ The Director of Military Support (DOMS) serves as the Action Agent for the Secretary of the Army and ensures the performance of all planning and execution responsibilities for military assistance to civil authorities.²¹ Included in the assets that could be employed are the Joint Task Force for Civil

Support, the Marine Corps Chemical Biological Incident Response Force, the Army Technical Escort Unit, the Army Special Medical Augmentation Response Teams, the Chemical-Biological Rapid Response Team, and Weapons of Mass Destruction Civil Support Teams [WMD-CS Teams; formerly Rapid Assessment and Initial Detection (RAID) Teams] of full-time National Guard personnel.²²

The Joint Task Force Civil Support, headquartered in Fort Monroe, Virginia, began operation on 1 October 1999 under the command of a two star general. It is assigned to the U.S. Joint Forces Command. It provides command and control over DOD forces in support of a lead federal agency in a time of crisis following a weapon of mass destruction incident.²³ The United States Pacific Command and United States Southern Command have broad responsibilities for coordinating and providing military assistance to civil authorities for states, territories, and possessions outside the continental United States to include response to a weapon of mass destruction incident.²⁴

The National Guard WMD-CS Teams each comprise 22 full time National Guard personnel with a mission of deploying rapidly, assisting local first responders in determining the precise nature of an incident, providing expert medical and technical advice, and helping pave the way for the identification and arrival of follow-on military support.²⁵ Currently 32 teams are authorized by congress.²⁶ These teams are viewed as the likely initial military response for consequence management.²⁷ The time requirement for arrival at the incident site is four hours.²⁸ These teams are organized under the peacetime control of a state's Adjutant General and will likely remain in state status, but may be transferred to Federal service if national security dictates. Interstate agreements provide a process for the WMD-CS Teams and other National Guard assets to be used by neighboring states.²⁹ The National Guard has reportedly faced some manning problems, trying to find personnel with the appropriate skills and rank to fill the highly specialized positions.³⁰

The Technical Escort Unit (TEU) is a component of the U.S. Army Soldier Biological and Chemical Command and was established in 1944.³¹ Its missions include worldwide response for escorting, rendering safe, disposing of, sampling verification, mitigating hazards and identifying weaponized and non-weaponized chemical, biological, and hazardous material. TEU would be potentially deployed as a part of the crisis management effort to render safe and dispose of any unemployed biologic agent delivery devices.³²

The U.S. Army has developed Special Augmentation Response Teams for Nuclear/Biological/Chemical (SMART-NBC) and Infectious Disease (SMART-AIT), based out of

the Regional Medical Commands with a mission to provide advice to medical treatment facilities on handling contaminated patients and to authorities on determining follow-on medical resources, supplies, and equipment to resolve the incident.³³ A total of six SMART-NBC teams and two SMART-AIT teams exist in CONUS and generally consist of five active duty Army medical professionals, typically not in the Professional Officer Filler System (PROFIS), with special training and equipment designed to support specific incidents. They can deploy anywhere in CONUS within 12 hours of notification.³⁴ In addition to the above functions, the SMART-NBC teams provide a direct communication link to DOD assets such as the U.S. Army Medical Research Institute of Chemical Defense (USAMRICD) and the Armed Forces Radiobiology Research Institute (AFRRI) to further solicit expertise regarding the specific situation.³⁵

The U.S. Marine Corps' Chemical-Biological Incident Response Force (CBIRF) was created after the 1995 Sarin gas attack in Tokyo's subway system.³⁶ General Charles C. Krulak established this unit without tasking from the Department of Defense upon his becoming the Commandant of the Marine Corps.³⁷ The concept for employment of this unit is as an initial, rapid response to chemical or biological incidents. When such an incident occurs, the CBIRF deploys to the site and provides a number of significant initial consequence management capabilities in consultation with civilian and government agencies. The team can assist in coordinating initial relief efforts; security and isolation at the affected site, detection, identification, and limited decontamination of personnel and equipment, as well as expert medical advice and assistance.³⁸ This unit consists of 375 personnel.

The CB-RRT forms the core of the federal military response and provides a graduated response ranging from prepositioning prior to high-profile events to responding to a WMD incident.³⁹ The commander is provided by the U.S. Army Soldier Biological and Chemical Command and membership is drawn from existing organizations to include the TEU, and ordinance group, USAMRIID, the U.S. Navy Medical Research Institute, the U.S. Naval Research Laboratory, the U.S. Navy Environmental and Preventive Medical Unit, the U.S. Army Medical Research Institute for Chemical Defense, and the U.S. Army Material Command Treaty Lab. The CB-RRT commander tailors the deployed teams to the needs of the situation and the requirements of the joint force commander.⁴⁰

While the above units are designed specifically for a biological threat, the Reserves could contribute through the employment of various medical assets for consequence management. Approximately 65 percent of the Army's medical forces are resident in the Guard and

Reserves.⁴¹ These units are integral to the health services support plan in case of any deployment or mobilization. Additional emergency support functions exist across various units within the DOD to include transportation, medical evacuation, communications, engineering, firefighting, decontamination, energy, and logistic supports.⁴²

With the exception of the National Guard WMD-CS Teams and JTF-CS, the above units do not have as their primary mission consequence management in support of civilian authorities. Their primary mission is to support the regional CINC's warfighting requirements. If they are available and authorized, they are able to support civil authorities. Their presence is not guaranteed in the case of biological weapon deployment or any other civil support emergency.

At the end of the day, the responsibility of the DOD is to be trained and ready to fight and win the nation's wars. Civilian agency support responding to a significant biological attack in the most efficient and cost effective way is secondary.

RISK MANAGEMENT

One methodology to evaluate the role DOD should play in providing support to biological attack preparedness in the United States utilizes a risk management approach. This would allow for a framework to balance all available resources to implement the most effective control measures to minimize the risk of an attack and its consequences. Risk management includes three primary elements: a threat assessment, a vulnerability assessment, and a criticality assessment.⁴³ Threat assessment identifies and evaluates threats based on various factors, including capability and intentions as well as the potential lethality of an attack.⁴⁴ Vulnerability assessment is a process that identifies weaknesses that may be exploited by an enemy and suggests options to eliminate or mitigate those weaknesses.⁴⁵ A criticality assessment is a process designed to systematically identify and evaluate an organization's assets based on the importance of its mission or function, the group of people at risk, or the significance of the structure.⁴⁶ The criticality assessment provides a basis for prioritizing which assets and structures require increased or special protection from an attack.⁴⁷ Risk assessment as it applies to biological weapons requires an evaluation of the threat of such an attack and its impact through identification of weaknesses in the response system. This identifies areas, which could be exploited, and the likely targets that would generate the most significant consequences.

THREAT ASSESSMENT: THE BIOLOGICAL THREAT

At the November 1998 Hoover Institute Conference on Biological and Chemical Weapons, former Secretary of State George P. Shultz stated that it is not a question of “if” biological weapons will be used but of “when.”⁴⁸ This is a recurring theme as most experts discuss or testify regarding biologic weapons. In fact, though the source has not been identified, biologic weapons in the form of anthrax have been delivered via an unanticipated form of delivery- the mail. So, in addition to the question of when will biological agents be employed next, the question includes where and how agents will be delivered. The nature of the biological threat in terms of potential delivery scenarios, types of agents, and possible effects must remain broad and inclusive of all feasible attacks to appropriately evaluate prophylactic and response measures.

The potential biological agents are numerous. The Anti-Terrorism Act of 1996 directed the Center for Disease Control (CDC) to establish a regulatory regime that would identify biological agents posing a threat to public health based on the effect on human health, contagiousness, method of transmission, and availability and effectiveness of immunizations and treatments for resulting illness.⁴⁹ The CDC subsequently identified twenty-four select agents and twelve toxins posing a significant threat to public health.⁵⁰ Most experts consider the agents of smallpox, anthrax, plague, and tularemia within this group to be the highest near-term threat agents based on their potential in terms of availability and magnitude of population affected.⁵¹ This is not a static list and will continue to evolve as technology and research advance in this area. Much thought and discussion has been done regarding the likely delivery systems and agents available to terrorist organizations - though total concurrence is not present. As significant technical hurdles exist to produce dry or microencapsulated agents, to achieve maximal impact, it was previously felt terrorists would probably utilize the dissemination of wet slurries of pathogens or toxins in an enclosed space such as a building or a subway station using simple equipment such as a garden pesticide fogger.⁵² This assumption should be questioned due to the sophisticated weaponization of the Anthrax strain delivered via the mail to the Congressional Office Buildings. On 19 November 2001, the United States identified Iraq as having a biological warfare program and North Korea, Libya, Syria, Iran, and Sudan as strongly suspected nations developing such programs.⁵³ When discussed in terms of a nation-state, it is possible more advanced delivery systems with a higher yield may be present. If these states felt their interests were threatened by the United States in its efforts to combat and eradicate the reach of global terrorism, a potential response may be to resort to the employment of biological weapons.

To be most effective, regardless of the sophistication of the delivery system or the agent, delivery of biological agents must be covert. That is to say, exposure of the target without the target suspecting or knowing that they have been exposed delays the reaction time. The consequence of this is a delay in reactive mediation such as instituting treatment or containing the exposure through isolation of the subjects. This increases the efficacy of any attack, whether the agent is contagious or not.

One of the aspects making biological weapons such a potent threat is the psychological impact. The psychological impact of potentially being damaged by an invisible, imperceptible agent is frightening and may inevitably elicit a variety of both acute and chronic non-productive psychological responses.⁵⁴ This multiplies the overall effectiveness of biologic agents from a terrorist perspective. The recent attention and reaction in the United States bears this concept out. One of the reactions to the recent attacks is that Congress is negotiating a package that could provide more than \$3 billion to improve the nation's response to bioterrorism.⁵⁵ In the wake of this event, the director of the CDC has urged the public to keep the bioterrorism threat in perspective, weighing it against the 20,000 deaths caused each year by the flu or the continuing danger imposed by smoking or driving.⁵⁶ Instituting a balanced response to the biological threat requires more than simple assurances or pleas to keep things in perspective. It requires the appropriate allocation of dollars to mitigate vulnerabilities.

VULNERABILITY ASSESSMENT: THE HEART OF THE MATTER

Given that employment of biological weapons is a potential threat, the concept of vulnerability is critical in determination of allocation of resources. Efforts should be directed to minimize the vulnerability to the given threat in the most efficient manner possible. It also must take into account one of the basic tenets of asymmetric warfare in that the enemy will attack vulnerability. This section analyses our vulnerability- where we have been going and where we are at in our ability to respond to a biological agent attack.

In discussing the nation's vulnerability to a covert biological attack, it is useful to define the necessary tenets required to minimize the efficacy of such employment. In presenting a model for the consequences of biological agent employment, Monica Giovachino from the Center for Naval Analysis outlines these tenets as follows:

- Recognize that an unusual medical event is occurring.
- Obtain laboratory confirmation that a patient has a disease potentially caused by a biological attack.
- Polling surrounding medical institutions to ascertain if similar cases are appearing.

- Determining the affected population by implementing a very rapid epidemiological investigation to determine place and time of exposure.
- Advising public officials regarding information required to be communicated to the public and creating a forum for updating information, how to prevent panic, the advisability of quarantine, who should receive prophylaxis, and what provisions should be made for symptomatic people.
- Rapidly provide prophylaxis to essential front line personnel, health care providers, and their families.
- Establishing mass prophylaxis sites (personnel, equipment, and instructions).
- Identifying and locating homebound individuals who need prophylaxis or treatment.
- Determining if site decontamination is necessary and executing decontamination.
- Determining special precautions for at risk populations such as the elderly and very young.⁵⁷

There is general consensus, given the threat, that the appropriate ways to establish a viable passive defense include research and development for early warning devices, rapid diagnostic assays, and improved vaccinations and antibiotics; national stockpiling of vaccinations and antibiotics; enhancing awareness, training, and coordination of the public health system from the local to the federal level; identifying and correcting health system shortfalls in terms of medical bedding and isolation capacity; and establishing a information sharing protocol with the public to minimize the psychological impact of an attack. However, there is much criticism of the efficiency, effectiveness, and funding of programs to effect these ways. In 1999, the Stimson Center reviewed the US Government's strategy of preparedness toward unconventional terrorism attack and noted that the efforts are uncoordinated and a result of unclear national strategy with at least a dozen congressional committees that have authorized virtually any program with the term terrorism in the title.⁵⁸ The Domestic Preparedness Program was a result of the Defense Against Weapons of Mass Destruction Act of 1996 (also known as the Nunn-Lugar-Domenici legislation) tasking of the DOD to teach first responders in the 120 largest U.S. cities how to deal with unconventional terrorism.⁵⁹ Overall training has subsequently been passed onto the Department of Justice. A pitfall of this program was that it was structured as a cost-sharing arrangement, such that the federal government provides training and equipment while cities covered local cost, with no requirement to sustain training or capabilities.⁶⁰ The result of this policy is a low emphasis on preparedness at the local level.⁶¹ The Stimson report concluded that major efforts need to be made toward a coherent, rehearsed, response plan addressing treatment with completion of national

consensus medical protocols, local training, and hospital and patient isolation capacity at local levels.⁶²

Donald Henderson, then Director of the Center for Civilian Biodefense Studies at Johns Hopkins University, testified before Congress on 5 September 2001, that better preparing our public health and medical care services to respond to outbreaks and epidemics and to mass casualty situations whatever their origin, at a cost of at least \$1 billion per year, would significantly mitigate the consequences of a bioweapons attack and make ourselves a less attractive target.⁶³ He states that we are ill prepared to deal with an epidemic of any sort as there is no comprehensive plan nor an agreed upon strategy for dealing with the problem of biological weapons.⁶⁴ He observes that there is little inter-agency coordination at the federal level and that nationally funded programs appear to be as often competitive as cooperative.⁶⁵ He summarizes:

If we do nothing more than strengthen the public health and medical care systems, we can significantly decrease the suffering and death that would follow a bioweapons attack. By being able to mitigate the consequences of such an attack, we make ourselves less attractive targets to would-be perpetrators. As important, we could improve the everyday functioning of the health care and public health system for the general good.⁶⁶

David Siegerst of the Potomac Institute for Policy Studies reinforces this conclusion, along with an appeal for resources directed toward aggressive research and development in multivalent vaccinations and antibiotics.⁶⁷ Currently effective vaccines or drug treatments are available for only one fifth of the most serious likely biologic threats.⁶⁸

Finally, Dr. Tara O'Toole, Senior Fellow, Center for Civilian Biodefense Studies at John Hopkins University, testifying before congress on 23 July 2001, argued that to date, the federal government and the media have focused primarily on organizational issues involved in bioterrorist response, with much attention directed towards questions of who is in charge and how multi-agency function should be coordinated and funded.

Insufficient attention has been directed towards analyzing and preparing the concrete elements of the response itself. Epidemics are fundamentally different from other natural disasters and will demand very different responses than other types of 'catastrophic terrorism'. The scant attention paid to vulnerabilities in critical infrastructures of medicine and public health reflects this lack of focus on the response itself.⁶⁹

She made the following recommendations for improving bioterrorism response:

- Engage the medical community and hospital leaders in planning

- Conduct independent analysis of current institutional capabilities and plans to care for the sick
- Establish a substantial Research and Development Program for the prevention and treatment of infectious disease
- Encourage, design, and assess the use of training programs, exercises, and drills for bioterrorism responders, including high-level decision makers⁷⁰

Funding specific components of the overall policy is a direct reflection of the commitment and priority given to each aspect. In FY 2000 the federal budget earmarked \$1.4 billion for the defense against WMD of the \$8.4 billion allocated for defense against terrorism. \$315 million (3.7% of total) went toward assistance to first responders in the form of training, equipment grants, and planning assistance.⁷¹ Relatively small changes were seen in the FY01 budget, where out of a total of \$9.7 billion allocated toward combating terrorism, \$1.7 billion was earmarked for defense against WMD terrorism, of which \$663.4M went toward terrorism preparedness and response and \$439.7M toward all aspects of research and development.⁷² The President's 2003 Budget Proposal includes \$5.9 billion to combat bioterrorism.⁷³

The consensus in the public health and infectious disease community is that an investment in the medical response capability, to include local preparedness and health care provider education, development of rapid diagnostic tests, and maintenance of national stockpiles of vaccinations and antibiotics serves the dual purpose of preparing for and deterring the employment of biological weapons but also immeasurably strengthens the public health infrastructure and the day to day management of routine infectious diseases.⁷⁴ Correction of public health deficiencies will also help mitigate the untoward psychological impact on the public through enhanced confidence that a biological agent can be detected and assets are readily available for treatment.

In congressional testimony on 23 July 2001, Dr. Hughes, Director of the Center for Disease Control (CDC), discussed the results of the *Dark Winter* exercise, which simulated an intentional outbreak of smallpox. The results validated many of the above concerns, and also identified the absence of a public information plan.⁷⁵

Given that there is strong sentiment that the public health system has been and is vulnerable, does the DOD's contribution to the biodefense plan fill a void or ameliorate the shortcomings in the basic infrastructure? Resources have been directed toward the DOD effort. In fiscal year 1999, the DOD allocated about \$52 million for WMD-CS Teams and requested \$37 million for FY 00.⁷⁶ Subsequently the DOD was funded \$70 million in Fiscal Year (FY)

2000 and \$93.3 million in FY 2001 for training and preparation of these units (WMD-CS Teams).⁷⁷ For the JTF-CS it was \$3.4 million in FY2000 and \$8.7 million in FY 2001.⁷⁸

Two reports in 1999 raised serious doubts about the efficacy of the DOD's contribution. The Stimson report called into question the role and effectiveness of the DOD in domestic preparedness and response arguing that it is not seen as credible at the local level.⁷⁹ As one local official stated regarding the National Guard WMD-CS Teams: "The good thing about those teams is that it takes them as long as it does to get here."⁸⁰ In addition, congressional hearings reflect uncertainty regarding the role of the National Guard in response to a biological incident.⁸¹

These concerns are echoed in a 1999 General Accounting Office (GAO) report wherein state and local officials involved in emergency management stated that they had a reliable consequence management capability independent of the federal government.⁸² Furthermore, many did not want to establish a system dependent upon federal assets, as their availability and responsiveness in all situations would be unreliable.⁸³ These sentiments are also highlighted in the Stimson Center report, "The message from the front line about these National Guard teams is unified and clear: They have a minuscule, if not negative, utility."⁸⁴ WMD-CS Teams may benefit the politician in that they are a visible, tangible entity that can be pointed to as demonstration of commitment to taking care of the populace. The Stimson report addresses this when it states:

The idea of the RAID (*WMD-CS*) teams may have been politically convenient, but it was untenable from the outset. Governors and elected officials in Washington would serve preparedness much better by immediately disbanding the RAID teams. Their equipment should be disbursed within the respective states to front-line rescue units, where any leftover training money from the program should be placed as well. Elected officials hesitant to cut a politically popular program should do back of the envelop cost benefit analysis of paying these teams indefinitely to wait for the improbable versus reassigning this equipment and training funds to full-time, professional rescuers, thereby improving response to all manner of emergencies.⁸⁵

The GAO report further stated in 1999 that the Federal Bureau of Investigation (FBI) and the Federal Emergency Management Agency (FEMA), the two agencies responsible for the federal response to terrorist incidents, do not see a role for the WMD-CS Teams in the federal response plan.⁸⁶ Instead, they see the National Guard role responding with personnel and equipment as it does for national disasters and other emergencies.⁸⁷ The GAO stated that these issues point to the requirement for focus on an approach that capitalizes on existing capabilities, minimizes unnecessary duplication of activities and programs, and focuses funding on the highest priority requirements.⁸⁸ In this vein, they recommended that the appropriate

federal agencies determine the need for the WMD-CS Teams before proceeding to expand the program in more states than the original ten.⁸⁹ Specifically, in the realm of biological agents, the identification of the agent will involve the medical community over a period of days rather than the HAZMAT community of the WMD-CS Teams over a matter of hours.⁹⁰ The function of providing medical advice to first responders is present in many federal entities currently and can be accessed either on the scene or by telephone to the incident commander.⁹¹

In response to these criticisms, Ms. Berkowsky, the Assistant to the Secretary of Defense for Civil Support, and Mr. Cragin, the Principal Deputy Assistant Secretary of Defense for Reserve Affairs, testified before the Senate Committee on Armed Services in March of 2000 defended these teams by stating that they will be able to respond to an incident as part of a state response, well before federal response assets would be called upon to provide assistance.⁹²

While the 1999 analysis of the WMD-CS Team concept was dismal in some quarters, local agencies that had observed the Marine CBIRF concluded that they were very competent.⁹³ Though this unit essentially trains and awaits disaster, there is significant doubt at the local level that they could show up in time to affect the outcome of rescue operations unless they were predeployed.⁹⁴

Events following the 11 September attacks have led to a revisiting of the status of preparedness. The GAO reports that federal departments have increased their own capacity to identify and deal with a bioterrorist incident. The CDC, USDA, and the Food and Drug Administration (FDA) have improved methods to survey and detect disease outbreaks in humans and animals.⁹⁵ Additionally, laboratory response networks to maintain current methods for biological identification and characterization of human clinical samples have been established.⁹⁶ Teams have been established to respond to WMD emergencies. HHS' Office of Emergency Preparedness (OEP) created Disaster Medical Assistance Teams- four of them known as National Medical Response Teams are specially trained and equipped to provide medical care to victims of WMD events, such as bioterrorist attacks.⁹⁷ Although all 50 states and approximately 255 local jurisdictions have received or are scheduled to receive some federal assistance in terms of training and equipment in preparation for a terrorist WMD incident, they are still not adequately prepared to respond to a bioterrorist attack.⁹⁸ Local officials have had difficulty in getting hospitals and medical personnel to participate in local training, planning, and exercise to improve their preparedness.⁹⁹ This difficulty can be understood in the context in which most hospitals operate. Health care is a business and

hospitals and health care providers operate to deliver health care at a profit. Expending monetarily uncompensated installation and individual time and resources toward enhancing preparedness essentially robs from the bottom line in terms of profit.

The warnings and pleas for an investment in the public health system seem to have been validated in the response to the anthrax infections in the fall of 2001. Difficulties in responding to the recent anthrax outbreak were a manifestation of the long neglected, money-starved public health system according to Dr. Jeffrey Koplan, the director of the Centers for Disease Control and Prevention.¹⁰⁰ Dr. Koplan further states that the country's readiness is weakened by old labs, crumbling buildings, and outdated technology that slows the detection of outbreaks. He attributes this to over 30 years of neglect and under investment of the public health system, which needs to be corrected if the nation is to be as effective as possible regarding a bioterrorist threat or an infectious disease.¹⁰¹

At this time, indications are that while we have made strides to improve our response posture, significant vulnerabilities still exist.

CRITICALITY ASSESSMENT

The criticality assessment provides a basis for prioritizing which assets and structures require higher or special protection from an attack. While the psychological impact of biological weapons can manifest with detected deployment at any level, the maximum affect occurs by attacking the health, resources, and psyche of the public likely centers around employment at large population bases or at key governmental institutions. In this vein, the Department of Justice (formerly Department of Defense) Domestic Preparedness Program focused on providing training to the 120 largest U.S. cities by mid 2001, while the Department of Justice through its Metropolitan Firefighters and Emergency Medical Services Program provides training to individuals in 255 cities and counties.¹⁰² The GAO also found that there are over 600 local and state hazardous material (HAZMAT) teams in the United States. These teams almost daily assess and take appropriate actions in incidents involving toxic materials. The Domestic Preparedness Program is providing teams from the largest 120 cities with the opportunity to expand their capabilities to counter WMD incidents.¹⁰³ While open to some criticism regarding the duplication of such efforts, the bulk of the effort to date is directed toward larger population areas. This prioritization leaves smaller cities and rural areas at greater risk. If successfully attacked, the physical consequences on a smaller area would be less, but the psychological damage nationwide would still be significant. It is appropriate to prioritize efforts to respond in larger population areas and key governmental institutions. These possible targets are the most

critical to protect initially, but this does not preclude establishing an infrastructure that simultaneously enhances preparedness against a biological attack at the local level nationwide.

DUAL PURPOSE- GOOD AND BAD

The above discussion indicates that the risk management approach identifies the greatest weakness as the vulnerability of the nation's ability to respond to a significant biological attack. In rectifying this problem, what, if any, role should DOD play?

In a congressionally mandated study reported in February 1999, the Science Applications International Corporation defined 47 potential roles that the National Guard could assume to help redress critical gaps in response to a WMD incident.¹⁰⁴ Some of these roles were already intrinsic in the reserve mission, while others required specific, focused training to support consequence management. Potential program implementation costs were outlined in this study over a five-year period from FY99 to FY04 and totaled more than \$3 billion, \$345 million just for supporting WMD-CS Teams.¹⁰⁵ One justification of the utilization of DOD assets as an on-call capability to support civilian agencies in responding to a biological weapon attack is that it leverages the DOD asset's intrinsic capabilities. These units have dual purpose—they can prepare for their wartime mission and apply this preparation and capabilities to a domestic response requirement. As long as the unit training, coordination, and equipment do not require a unique application of resources in terms of time and money for enhanced domestic response readiness, then it is truly a dual-purpose unit with transparent execution of the mission whether applied to support of the armed forces or civilian agencies. In reviewing the available DOD resources, the WMD-CS Teams do not appear to serve a dual purpose. Though these teams could be called to federal service, they exist solely to support domestic WMD-CS incidents. All others, to include the CBIRF and the SMART teams, have some role in supporting the mission of the Armed Forces. Is the investment of federal and DOD resources in WMD-CS Team's preparedness toward a domestic biological weapon response the wisest application or can they be better applied to the dual-purpose concept of bolstering the medical and public health's ability to respond to disease outbreak and mass casualty situations? As stated by many experts, an investment in the public health system and first responder training not only prepares these entities better to support a biological weapon attack, but also better prepares them to function and serve the populace on a daily basis. This also has a positive psychological impact on the local community. The health system and first responders know they are prepared to respond. Improvement in routine service, along with the knowledge that planning and training for an emergency are at the forefront, generates public confidence in the system as a whole.

Efforts to ameliorate the threat require focus on the likelihood of a biologic attack that overwhelms a framework established utilizing the civilian medical and public health agencies and cross the threshold requiring employment of DOD assistance, and focus on the risk of these assets not being available due to employment to meet other DOD warfighting missions. The concept of some of these assets being “on call” to augment an overwhelmed infrastructure, assumes for planning purposes that they will not otherwise be engaged or that the threat of biologic weapon employment is minimal. This assumption is dangerous as DOD assets may actually be engaged in an overseas conflict when a domestic biological agent attack is made as a form of asymmetric warfare. For example, given a plausible conflict involving two countries with known biological weapons capability, namely Iraq and North Korea, the threat of biological weapon employment on a larger scale within the United States may be increased. Forcing the United States to direct resources toward responding to a domestic biological attack would be advantageous to those countries or their allies and sympathizers. In this scenario, reliance on DOD assets for augmentation is a potentially risky policy.

One argument regarding the deterrent effect of preparedness is that if the adversary knows the employment of biological weapons has a low likelihood of achieving the desired effect, they are less likely to utilize them. Therefore, it is logical that having a system capable of responding to this threat generally independent of DOD is a more powerful deterrent than one that has DOD use as a likely required or necessary contingent. On a larger scale, as long as a policy exists where the basic infrastructure does not exist to support a biological response without a low threshold requiring DOD support, then a biological attack at the level exceeding that threshold becomes more appealing to adversaries looking to spread resources thin. Is there really no question that no matter the situation, the germane DOD assets are likely available to support the response plan? The 1995 RAND study “Assessing the State of Federal Missions of the National Guard” analyzed the planned force structure of the National Guard and its commitments in the warplans for two, nearly simultaneous major regional conflict. It found the commitment to these federal missions only partially employs the National Guard.¹⁰⁶ They conclude that the National Guard structure is adequate for both federal and state missions, including the unlikely, but possible situation of simultaneous peak federal and state demand missions in that up to fifty percent of the Army National Guard can be classified as a strategic reserve.¹⁰⁷ Since the time of that study, both the National Guard and Reserve have been reorganized and downsized. Warplans call for the use of the majority of the National Guard to support the National Military Strategy in the event of two nearly simultaneous Major Theatres of War. The same applies for the Reserve and USMC contributions.

CONCLUSION/ RECOMMENDATIONS

As we apply every resource toward combating terrorism, prioritization of the application of these resources is paramount to fashion a viable, effective state of preparation to minimize consequences and deter a biological attack on the United States. An extreme sense of urgency today should serve to focus efforts toward improvements in the capabilities to minimize the consequences rather than broaden the scope of programs and agencies of uncertain or unproven value at great expense, or worse, at the expense of strengthening a critical infrastructure piece. While certain elements or initiatives within the DOD may prove to be a added value in the future with the ability to get there fast and essentially identify and coordinate follow-on DOD resources, they do no good if the local medical care and public health infrastructure are not in place. This methodology in applying significant resources at the federal level for unique teams with specialized capabilities, often redundant in local, state, and other federal agencies at the expense of preparedness at the lowest level of response and the associated systems sets the stage for failure. Aaron Weiss effectively argues for weaning the active duty military from WMD consequence management.¹⁰⁸ He also states these responsibilities should be turned over to civilian agencies and the National Guard and Reserve forces.¹⁰⁹ Weaning of the active duty military from the consequence management role is needed to decrease the overall vulnerability of the nation. The degree and specific capabilities that civilian agencies, the National Guard, and Reserves respectively play in this role needs to be precisely defined. Specifically, there is vulnerability in relying on reservist medical capabilities as they can be in effect seen as an active component potentially deployed in support of on-going military operations, or as a needed asset for imminent deployment as a response to an event. Deployment of these units also decreases the local medical system's response capability by drawing on their trained medical personnel from first responder to trained physician. The National Guard, while it has some of the same concerns, will definitely play a role in consequence management. Although the nature of biological attack is different in many ways than other disasters, the nature of the National Guard support required may be very similar. There is some risk in planning for the utilization of the National Guard and Reserves, but it would be imprudent not to include the intrinsically available DOD resources in an overall plan. The added value of the National Guard WMD-CS Teams is questionable. There may be a role that can be fulfilled by a few geographically dispersed teams. As the events around a covert deployment of biological agents against citizens unfold, it is hard to see how these teams utilize their specialized capabilities to logically support the steps outlined in the federal or state response. Most of these functions will be handled by the public health system initially with

subsequent assistance by existing state and federal agencies. The ability to arrive after detection of an outbreak within four hours does not provide a critical contribution to the overall execution of biological agent consequence management. More robust, manpower intensive capabilities, which do not rob the local system of their expertise and are embedded in traditional National Guard roles, are far more likely to provide added value. If specialized communications or detection capabilities are needed, they should be imbedded in the state or federal Emergency Management Agencies and Public Health Systems. At the very least, expending resources to expand the number of WMD-CS Teams should not be a part of an overall biological agent employment response. To fully assess this, similar questions should be raised about their role and contributions in the overall realm of WMD consequence management.

To summarize, the U.S. domestic preparedness strategy regarding biological weapon attack should consist of:

- Federal funding, with clear initial preparedness and subsequent sustainment accountability measures, enhanced local and state first responder and hospital training and capacity
- Investment in upgrading the public health infrastructure, national vaccination and antibiotic stockpiles, and research and development in the areas of biological agent detection and enhanced treatment/ prophylaxis
- Focused efforts on coordinating the roles and responses of available non-DOD national and local assets to minimize reliance on the military
- Use of DOD assets only within the parameters of their warfighting missions in order to maintain focus on their primary mission and not dilute resources that could be better applied to other agencies with consequence management as a primary mission
- A moratorium on new WMD-CS Teams with a reassessment of their role, if any, after resources are allocated to correct the deficiencies of the public health and federal, local, and state medical systems

Only by enhancing existing systems responsible for the daily well being of the public to adequately respond to a biological agent attack as the first priority, will we be able to adequately define where the holes in an effective response are. This will have the added benefit of enhancing the day-to-day capabilities of the health services system without detracting from the primary focus of the DOD.

Word Count = 8058.

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