

Testimony of
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Committee on Homeland Security
Subcommittee on Emerging Threats, Cybersecurity, and Science and Technology
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Emerging Biological Threats and Public Health Preparedness: Getting Beyond Getting Ready



Introduction

Good morning Mr. Chairman. Thank you for the opportunity to testify before the Subcommittee on this important and timely issue. My colleagues and I have testified before your Subcommittee on several occasions on this topic, and I appreciate your continued interest in ensuring that an outbreak of a disease, intentional or natural in origin, does not threaten our homeland security, economic stability, and our Nation's critical infrastructures and key resources. I am thus pleased to have the opportunity to share our views with you and your constituents through this hearing in Providence, RI.

As you know, Mr. Chairman, this is one of the last events where I will appear as the Assistant Secretary for Health Affairs and Chief Medical Officer of the Department of Homeland Security (DHS), as I will be leaving Federal service at the beginning of August. I delayed the timing of my departure in order to testify once again to the urgency and importance of giving sufficient attention to biological threats to our Nation. At this, my last hearing, I would like to take this opportunity to thank you personally for all that you have done to ensure the success of the Office of Health Affairs and our mission to make the Nation safer and more secure.

Today I will discuss a number of important issues surrounding emerging biological threats and our Nation's preparedness, including: the current biological threat environment as illustrated by the effect a biological attack might have in a city like Providence, our approach to bio-surveillance and environmental detection, and the roles and responsibilities of Federal, State, local and the private sector in response to and recovery from a biological attack. Providing this information to the public creates a more resilient public. By reducing the elements of surprise, fear and panic, we can reduce the terror associated with such an event, making the public reaction a key part of the solution rather than the problem.

Current Biological Threat

The risk of a large-scale biological attack on the Nation is significant. We know that our terrorist enemies have sought to use biological agents as instruments of their warfare, and we believe that capability is within their reach.

I know many here today recall the anthrax attacks of 2001. As you know, Mr. Chairman, certain buildings occupied by Members of the Legislative Branch were temporarily closed while they were decontaminated. The magnitude of that terrorist attack is miniscule compared to the larger, anthrax release envisioned by our enemies. It is nonetheless exemplary of the potential health and economic damage to which we are vulnerable. Unfortunately, the threat has not diminished since then – in fact, it has been building since well before the attacks of 9/11.

We know that, in the late 1990s, al-Qaeda began developing a biological weapons program and constructed a low-tech facility in Qandahar, Afghanistan for anthrax production. Fortunately, U.S. military forces disrupted this activity and additional American and coalition operations in the region have damaged al-Qaeda leadership and operational capabilities – but not their intent to use biological weapons. You will recall that in 2002, al-Qaeda stated that they had the right to kill 4 million Americans – 2 million of them children – and cripple thousands. An advisor to bin Laden later issued a fatwa on the permissibility of using weapons of mass destruction and increased the 4 million casualty figure to 10 million.

We have determined that al-Qaeda seeks to develop and use a biological weapon to cause mass casualties in an attack on the homeland. Our analysis indicates that anthrax is a likely choice; and a successful single-city attack on an unprepared population could kill hundreds of thousands of citizens. A coordinated attack on multiple targets would come much closer in magnitude to our enemy's goal. Because of this, we see the threat of an aerosolized anthrax attack as our number one bioterrorism concern, and it is that threat which we vigorously plan, invest and intend to defeat. Our efforts are not optional or discretionary. The ramifications of such an attack include tremendous loss of life, economic costs, damage to critical infrastructure, and unprecedented environmental contamination.

A biological attack would impact every sector of our society – not just the medical and public health communities. A biological attack respects no geographic or geopolitical boundary and will have an impact well beyond our nation's emergency departments and public health infrastructure. Absenteeism across multiple sectors due to illness, fear of contagion, or public health measures could threaten the function of critical infrastructure, the movement of goods and

services, and the operation of our institutions. No Federal department or agency will be exempt from the consequences of such an attack. Further, critical life-saving activities will depend on actions taken in the first few moments of the event. State and local governments will be called on to take several critical actions – alerting the public of the crisis without inciting panic; maintaining public confidence while making critical decisions; and bolstering local communities to rebound quickly.

As we work together to counter this threat, we must keep in mind that acts of biological terrorism don't go "*bang*." It could be hours or even days before we realize the full extent of an incident. Because of the lack of an explosion or immediate visual damage, many do not perceive the threat of bioterrorism to be as significant as that of a nuclear or conventional strike, even though such an attack could kill as many people as a nuclear detonation and have its own long-term environmental effects. This has caused a lack of public urgency in devoting significant resources to countering this threat – a luxury we simply cannot afford.

Mr. Chairman, many people ask me "what keeps you up at night?" It is the possibility of a large-scale biological attack on our homeland.

Threat Awareness

Given the challenges we face in assessing current terrorist capabilities and identifying plots, it is unlikely that we will receive actionable or specific warning of an imminent biological attack. Furthermore, many of these deadly biological agents, including anthrax, are readily available in nature, relatively easy to procure, culture, and weaponize. There are numerous domestic and international biological research programs using these agents for legitimate purposes, making it more difficult to separate the ill-intentioned research initiatives. As a result, it is unlikely that we will have credible knowledge of an imminent biological threat before it occurs.

This is why it is imperative that we continue to enhance our Nation's efforts to disrupt biological plots, provide the earliest possible detection and warning of an attack, strengthen our preparedness and response efforts, and increase our capacity to quickly recover.

Secretary Chertoff and I have been promoting the inclusion of health and medical expertise in our State and local fusion centers as they develop and expand. OHA is working with the DHS Office of Intelligence and Analysis to provide information on biological threats to communities in harm's way and to encourage fusion centers to tap into local expertise in public health and health care to be a part of their information fusion. We have begun discussions with the HHS Assistant Secretary for Health regarding the incorporation of officers from the corps of the U.S. Public Health Service to help communities achieve this capability. DHS will be holding meetings in the late summer and early fall with States and local representatives with the goal of providing information on the biological threat and discussing the value of public health in fusion centers.

Providence, RI

While it is easy for us to assume that terrorists are only interested in striking major cities such as Washington, D.C. or New York City, we cannot ignore the attractiveness of softer targets to our enemies. On April 19, 1995 Oklahoma City experienced the horrors of terrorism when a truck bomb was detonated in front of the Alfred P. Murrah Federal Building, killing 168 people, including 19 children, and injuring hundreds more. Who would have thought that Oklahoma City would have been a target for terrorism? It is therefore imperative that all States and local jurisdictions are adequately prepared to handle events across the chemical, biological, radiological and nuclear spectrum, as well as more conventional attacks or naturally occurring outbreaks.

The city of Providence, like many mid-size cities, has a number of characteristics that make it potentially attractive as a target, such as its proximity to military assets, major metropolitan areas, and an important transportation routes. An aerosolized sprayer releasing air-borne anthrax particles into the air throughout a city like Providence would not necessarily be detected in the immediate aftermath of the release. Clinical symptoms of inhalational anthrax would not be discovered for at least two or three days after the attack occurred, yet the health effects and environmental consequences could be catastrophic.

Surveillance and Detection

It is critical to receive warning of a biological attack as soon as it occurs and to identify the causative agent immediately. Such a warning would enable the prevention of most cases of inhalational anthrax, through the combined response of the CDC and its State and local partners in distributing sufficient prophylactic antibiotics to the public before the onset of disease. A delay of just one day in detection of an anthrax release – and therefore treatment of affected populations – would result in thousands of unnecessary deaths.

Sufficient early warning through environmental detection is one of the Department's top priorities, one for which the Office of Health Affairs, working with the Science and Technology Directorate (S&T), is responsible. We are investing significant amounts of taxpayer resources to our BioWatch program, which provides detection and warning of a biological attack in our Nation's highest-risk urban areas through a series of pathogen detectors. With S&T, we are developing the next generation of detectors, known as Generation 3, which will be automated and significantly reduce detection time to allow our health providers to get countermeasures into the hands of affected populations within the critical window of time to save lives.

Complementing our BioWatch capabilities is our establishment of a robust biosurveillance integration center, where other departments and agencies come together to monitor their biological data and analyze potential biological threats. The National Biosurveillance Integration Center (NBIC), authorized in the 9/11 Act (P.L. 110-53), will bring together data from other Federal departments, the public domain and eventually the private sector and States and local government to understand and characterize biological events and incidents across the areas of human health, animal health, food, water and the environment. Through robust data analysis and integration across these sectors, we aim to provide the earliest possible warning of outbreaks and threats to human and veterinary health and the food and water supply. Over the past several months, we have made great progress in our governance structure. We now have all the relevant departments coming to an "ownership meeting," which recognizes that DHS is the host for NBIC, but the system belongs to every department across the Federal government that needs access to a bio-surveillance common operation picture (BCOP). We are working very closely with the CDC as they develop improved human health surveillance systems, which will be a vital

element of the Government's BCOP. It is in all of our interest to ensure the success of our partner agencies' improvements in their data systems.

Federal, State and Local Response and Recovery

If a large-scale biological attack occurred here in downtown Providence using aerosolized anthrax, it would likely go undetected for days, until large numbers of people begin showing up in emergency departments and doctors' offices two to five days after the attack. Unfortunately, most cases would progress quickly to a form of pneumonia that is very resistant to treatment once it has started. The sentinel cases would be those receiving the highest doses of anthrax spores, and would be the harbinger of tens of thousands more, nearly all requiring intensive medical care, including ventilatory support and the anthrax countermeasures we have in the Strategic National Stockpile (SNS). Federal, State and local law enforcement would seek to identify the perpetrators to prevent subsequent attacks. Since we do not know the extent of the exposure, Federal and local health officials would likely mobilize the SNS for antibiotics to be given to the population as environmental sensors and samples identify the affected areas. In such a scenario, State and local resources, including medical assets, would be taxed if not overwhelmed. Rather than a smoking building defining the extent of the victims, every man, woman, and child in the area – and every building and every farm in the plume – could be affected. This is not a pretty picture, so preparedness is required to minimize the impact.

In such a case, the Secretary of Homeland Security would stand up all of the power and assets of Federal government to manage the incident. The Federal Emergency Management Agency (FEMA) would stand up its National Resource Coordination Center to bring Federal assets to bear. The responsibility for the public health and medical response lies within the Department of Health and Human Services under the Public Health Services Act and as the lead for Emergency Response Function (ESF) – 8: *Public Health and Medical Response*, with the Assistant Secretary for Preparedness and Response (ASPR) as the HHS Secretary's principal advisor and as the official responsible for certain functions. In order to have the tools to execute its mission successfully, HHS has invested thousands of hours and billions of dollars to make sure we have the appropriate medical countermeasures to deal with the threats to human health. This includes

research and development of new medicines, vaccines and anti-toxins, as well as their stockpiling and distribution. DHS has been their advocate and partner every step of the way.

Additionally, law enforcement and security measures are directed by the Department of Justice as the lead for ESF – 13: *Public Safety and Security*; decontamination activities and environmental cleanup are directed by the Environmental Protection Agency as the lead for ESF – 10: *Oil and Hazardous Materials Response*; and the terrorism crime scene investigation, as well as attribution and characterization to prevent second attacks are led by the Federal Bureau of Investigation. Our success is dependent on their success, Mr. Chairman. I encourage you to lend them your support in this effort, and encourage the support of your Congressional colleagues. While homeland security may not be the primary mission of these agencies, their homeland security responsibilities are crucial to our mission.

The Department of Homeland Security is charged with leading the overall domestic incident management, including coordinating the Federal response and integrating it with the State and local response efforts. OHA leads the DHS biodefense activities, which includes oversight and management responsibility for implementation for Homeland Security Presidential Directive 10, *Biodefense for the 21st Century*, although many other components and offices have major related responsibilities. The DHS National Biodefense Analysis and Countermeasures Center, a component of S&T, is responsible for the bioforensics analysis, and working with I&A and law enforcement, to determine the likely source of the germ. Our National Operations Center (NOC) coordinates all of the Federal operations and monitors the responses and requirements of local entities. DHS would quickly stand up a Joint Information Center (JIC) with all the relevant Departments and agencies to ensure accuracy and timeliness of information to the public. Under a Stafford Act declaration, FEMA coordinates Federal assistance to requesting States. In accordance to the National Response Framework and because a biological incident would likely be an unusually complex incident requiring extraordinary coordination Secretary Chertoff has named a pre-designated a Principal Federal Official (PFO) to lead the response to a biological event. The PFO would assist States, local and tribal governments by overseeing a coordinated Federal response. A PFO is a senior Federal official with proven management experience and

strong leadership capabilities. Vice Admiral Vivien Crea of the U.S. Coast Guard is our pre-designated PFO for biological events and provides excellent leadership and knowledge.

Recommendations

Mr. Chairman, I have a number of recommendations for the Subcommittee to consider to enhance the state of preparedness in the event of a biological attack or natural outbreak.

1. Continue to support our development of next generation automated detection technologies to reduce the time-to-detect to allow the necessary time to deliver life-saving medical countermeasures to the population. Because a biological attack is so challenging to accurately predict, we must continue to refine our early detection and warning capabilities. If our partners at HHS are to deliver life-saving prophylactic antibiotics, we must be able to detect a biological release sooner. Our current detection equipment has a built-in delay of up to 36 hours, which is not consistent with the requirements of disease prophylaxis. Over time, we must seek to cover more of our Nation's population with earlier environmental warning. Such an expansion must be risk-based which takes into account population density and critical infrastructures.
2. Continue to support the development of the National Biosurveillance Integration Center (NBIC). It is the one place where agencies can come together to share data across the sectors of human health, animal health, food, water and the environment. The Center illustrates the very nature of DHS – to integrate the assets and resources of sister government agencies in a protected, open environment for the purposes of subject matter expertise and information sharing. The service we must provide is a common operating picture for decision makers before and during events to afford them the best possible information upon which to make good decisions. The oversight of NBIC belongs to the Committee on Homeland Security in full view and participation of other Congressional committees and sister agencies.
3. Support the full integration of health expertise into information fusion centers. While intended initially for law enforcement, with the threats including biological and chemical events, the expertise of the health community is needed in the information fusion process.

The assistance of HHS may be available to assist local agencies where needed. DHS will work with local health directors to ensure necessary security clearances and information analysis training to ensure the success of such participation.

4. Consolidate the Committee's jurisdiction over issues of homeland security. While DHS is by its authorization (P.L. 109-295) a collaborative agency, so must Congress work collaboratively to ensure a more secure homeland, empowering an effective yet supportive oversight environment. As Secretary Chertoff has mentioned on numerous occasions, the current threat environment does not lend itself to jurisdictional disputes in Congress over the Department's authorities and responsibilities. Homeland Security is a team sport and we all should have the common goal of a more secure Nation as our first priority.

Conclusion

The threat of bioterrorism against the U.S. remains a significant concern. We continue to face an enemy determined to acquire and develop biological agents into weapons of mass destruction against the Homeland. The Office of Health Affairs and the Department of Homeland Security takes this threat very seriously and are doing significant work to prevent, enhance early detection and surveillance and integrate Federal, State and local preparedness and response capabilities to reduce the catastrophic consequences of a biological attack on the Homeland.

Mr. Chairman, I sincerely appreciate your dedication and efforts to enhance the security of the Nation. Thank you again for the opportunity to testify. It has been a real pleasure working with you during my time at the Department of Homeland Security. I have created an office that is completely ready for the transition. I leave the Office in the experienced and capable hands of Dr. Jon R. Krohmer, the Principal Deputy Assistant Secretary and Deputy Chief Medical Officer. I ask for your support of Dr. Krohmer over the coming months, as he is eager to work with you to better secure the Homeland.

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