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Hearing on Defending Against Bioterrorism: How Vulnerable Is America?
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Chairman McCaul and Ranking Member Thompson, thank you for inviting me to speak on the threat posed by bioterrorism, and more importantly, for the vital work that you and the other committee members are doing to strengthen the security of our country. I feel especially privileged to be sharing a table with former Governor Tom Ridge and former Senator Joe Lieberman, two of our nation's most distinguished public servants. I congratulate them on chairing the bipartisan Blue Ribbon Study Panel whose excellent new report, *A National Blueprint for Biodefense*, is of key interest at this hearing.

As you may know, in previous testimony before subcommittees of the House Homeland Security Committee I have referenced a 2012 paper titled *WMD Terrorism*. It was produced by the Aspen Institute's Homeland Security Working Group, on which I served. While reviewing the threat of terrorism posed by various weapons of mass destruction the Aspen paper emphasized that bioterrorism remains a continuing and serious threat. A virtue of the new Lieberman-Ridge *Blueprint* is that it digs more deeply into numerous biodefense activities, details their flaws, and lists recommendations for remediation. Many of the policy deficits derive from turf issues, bureaucratic inertia, and the absence of a coherent national strategy. A casual observer might feel overwhelmed by the multiplicity of issues cited in the *Blueprint*, which includes about 100 recommendations and subsets of action items. Yet failure to absorb the importance of the report's key messages would be a disservice to our national interest.

Let me make three essential observations that are drawn from the *Blueprint* and a few other reports that preceded it:

1. The biological threat is real and in a worst case scenario could be catastrophic.
2. Biodefense activities conducted by scores of government agencies are uncoordinated and many are redundant.
3. An individual with full presidential authority should be designated to oversee and coordinate the nation's biosecurity policies and activities.

I am aware that specifics about some of the recommendations have been questioned—for example, that the Vice President be the designated leader for oversight of biodefense. This designation, according to the *Blueprint*, would assure White House authority behind efforts to promote cooperation among agencies. But it also assumes that the Vice President is conversant with biodefense issues and that a Vice President's other obligations would allow for adequate attention to a new and large responsibility. Still, the need to resolve such details should not obscure the *Blueprint's* overall importance.

In some respects, strengthening biodefense capabilities can also enhance defense against disease outbreaks in general. A deliberate bioattack, as the report notes, at some point is likely. It is also true that future naturally occurring epidemics are certain. Emphasizing the overlapping benefit of preparedness for either eventuality should be a source of support for both.

A blurring of the line between deliberate and natural causes has been evident in the Ebola epidemic, which began in mid-2014 in West Africa. The World Health Organization estimates that the outbreak has thus far resulted in more than 28,000 cases including 11,000 deaths. The Ebola virus is deemed a potential bioterrorism agent, though this recent outbreak was of natural origin. Travelers from countries with high rates of the disease are screened upon arrival in the United States. After landing at Newark International Airport a suspected Ebola patient is taken to the University Hospital in Newark and remains there for days or weeks under observation. The patient is confined to an extended treatment area in a huge open space in one of the hospital buildings. The treatment area includes elaborate plumbing and electrical systems, negative pressure containment enclosures, and special waste management systems. An official from the WHO termed the hospital's response capability a "model for other hospitals." Yet for all the praise, the facility can accommodate no more than one or two patients at a time.

At this point of understanding, the medical needs would be the same whether the genesis of the disease was deliberate or not. Either way, a few simultaneous cases could overwhelm the hospital's ability to provide adequate care. Thus biodefense expenditures to expand surge capacity, say for a dozen victims, could benefit non-defense needs as well.

The *Blueprint* offers credible pathways to improve biodefense, though its top-down emphasis barely addresses the need for education within the general medical community. The field of terror medicine, which includes aspects of disaster and emergency medicine, focuses on distinctive features of a medical response to a terrorist attack. A healthcare provider is likely to be the first professional to identify a patient's illness as potentially related to biological terrorism. This was illustrated in 2001 when victims of the anthrax letter attacks began to show up in doctors' offices and hospital emergency rooms. Yet even years after those attacks, many physicians, nurses, and others in the medical community feel unprepared to deal with biological or other forms of terrorism. **

For the past two years the Rutgers New Jersey Medical School has offered a course on terror medicine to fourth year medical students. The curriculum includes lectures, videos, and hands-on simulation exercises involving biological and other terror threats. The dozens of students and faculty who have participated have been uniformly enthusiastic about the experience. Links to relevant articles about the course are listed at the end of my written testimony.

Familiarizing the medical community throughout the country with the essentials of terror medicine would provide a bottom-up approach toward a goal shared with the authors of

the *Blueprint*: enhancement of the country's biodefense. Enrollment in courses and other instructional formats on terror medicine should be encouraged.

The co-chairs of the Blue Ribbon Panel have indicated their intention to press vigorously for enactment of the *Blueprint's* recommendations. I wish them great success. But I also suggest that support from a broad base of informed and enthusiastic healthcare providers could augment their efforts.

Thank you again for your attention to this very important matter.

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*Unless otherwise indicated the views expressed here are my own and not representative of any institution.

**Smith and Hewison. "Are Nurses Prepared to Respond to a Bioterrorist Attack: A Narrative Synthesis," *Journal of Advanced Nursing* (2012) 68:12.
<http://www.ncbi.nlm.nih.gov/pubmed/22708982>

**Stankovic, et al. "Bioterrorism: Evaluating the Preparedness of Pediatricians in Michigan," *Pediatric Emergency Care* (2009) 25: 2. http://journals.lww.com/pec-online/Abstract/2009/02000/Bioterrorism_Evaluating_the_Preparedness_of.8.aspx

Sample Articles about the Rutgers Course on Terror Medicine

Cole, et al. "Terror Medicine As Part of the Medical School Curriculum," *Frontiers in Public Health: Disaster and Emergency Medicine*, September 12, 2014.
<http://dx.doi.org/10.3389/fpubh.2014.00138>

Barnes, "Terror May Become a Bigger Focus at Med School," *Global Security Newswire*, produced by *National Journal*, June 24, 2014. <http://www.nti.org/gsn/article/terror-may-become-bigger-focus-med-school/>

Kitchenman, "Medical School Students Gain Insight into Harsh Reality of 'Terror Medicine'," *NJ Spotlight*, April 4, 2014.
<http://www.njspotlight.com/stories/14/04/03/medical-school-students-gain-insight-into-harsh-reality-of-terror-medicine-issues/>

Sample Statements from Student Evaluations of the Course on Terror Medicine

"A fantastic introduction to terror medicine, an area we would otherwise never learn about."

"The course explored topics that have not been touched on in previous medical school classes but are very relevant to every medical student."

"It was great, informative, and relevant."

"Very interesting and valuable lessons in a short amount of time and I would recommend to every medical student."

"This course provides an in-depth introduction to terror medicine and is a valuable springboard to a field that future doctors should be aware of and comfortable with."