

# BIOTERRORISM WATCH

Preparing for and responding to biological, chemical and nuclear disasters



## New government plan lauded as clear, concise path to all-hazards protection

*If implemented, represents "major step forward"*

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While the federal government has been much criticized for bioterrorism and disaster planning — or lack thereof — experts and scholars are lauding the concise yet ambitious plan recently released as Homeland Security Presidential Directive 21 (HSPD-21).

"This is actually a major change in federal government policy with regards to preparedness for mass casualty disasters," says Eric Toner, MD, senior associate with the Center for Biosecurity of the University of Pittsburgh Medical Center (UPMC). "It is a major step forward. This is a very clear statement of federal policy that if fully implemented really would improve the nation's preparedness."

In recent Congressional testimony that generally focused on the nation's lack of preparedness, Tara O'Toole, MD, chief of the UPMC biosecurity center also praised the directive. (See related story, p. 3.)

"This document, which reflects a wealth of input from medical and public health practitioners and experts in disaster response, begins to display the extent and complexity of what it will take to construct a robust biodefense," she said. "Creating a homeland defense that secures the country against devastating bioattacks will be the work of a generation. If we do it correctly, we will create the capacity to eliminate bioweapons as agents of mass lethality and take a major national security threat off the table."

### EDs need help

Though it promises no funding, the directive acknowledges the federal government must help hospital emergency departments and create "a firm foundation for community medical preparedness. We will . . . explore options to relieve current pressures on our emergency departments and emergency medical systems so that they retain the flexibility to prepare for and respond to events."

"For the first time, it recognizes that the federal government has to engage hospitals," Toner says. "Previously, there were federal plans

for disaster and hospital plans, and they weren't real effective. The government gave a relatively small amount of money to hospitals but the guidance wasn't very good about what you should do with the money. Hospitals did not synchronize with any clear national plan. This at least says that that needs to be done now."

Ultimately, the nation must collectively support and facilitate the establishment of a discipline of "disaster health," the directive states. "The specialty of emergency medicine evolved as a result of the recognition of the special considerations in emergency patient care, and similarly the recognition of the unique principles in disaster-related public health and medicine merit the establishment of their own formal discipline," the plan states. Such a discipline will provide a foundation for doctrine, education, training, and research and will integrate preparedness into the public health and medical communities, HSPD-21 states.

"There needs to be a national strategy for mass casualty care that incorporates not only what the

federal government does, but what the states and what local communities and individual health care institutions do," Toner says. "What that means for hospitals — at least hopefully — [is that] there will be much more clear guidelines for them. It doesn't guarantee there will be any more money. It is not an authorization bill, but it does call for the development of a strategy, and whether or not more money comes, at least it will be clear to hospitals what they are being asked to do."

The directive acknowledges the current threat from the onset, noting that a catastrophic health event, such as a terrorist attack with a weapon of mass destruction (WMD), a naturally occurring pandemic, or a calamitous meteorological or geological event, could cause tens or hundreds of thousands of casualties. "The United States has made significant progress in public health and medical preparedness since 2001, but we remain vulnerable to events that threaten the health of large populations," the directive states. "The attacks of Sept. 11 and Hurricane Katrina were the most significant recent disasters faced by the United States, yet casualty numbers were small in comparison to the 1995 Kobe earthquake; the 2003 Bam, Iran, earthquake; the 2004 Sumatra tsunami; and what we would expect from a 1918-like influenza pandemic or large-scale WMD attack. Such events could immediately overwhelm our public health and medical systems."

In essence, the government is conceding that it has been thinking too small in preparedness planning. "This really does talk about the fact that the scale of disasters that we have been preparing for in the past were much too small compared to the kinds of things that the government actually thinks could happen," Toner says. "[For example] a terrorist attack with an improvised nuclear weapon, a major bioterrorism attack or an earthquake. All of those things would cause many more casualties than our health care system could handle at this time. So HSPD-21 is the first document that really addresses that fact and [acknowledges] that we can't accommodate this with the system that we currently have. We have to have national disaster medical system that is much more robust."

Surprisingly concise for a government document, HSPD-21 assigns clear responsibilities and deadlines for implementation. (See table, p. 4-11.) "It spells out a number of very specific high-level actions that need to be taken and timelines for when those should be accomplished," Toner says. "This is a good thing."

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### Editorial Questions

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## Critical Components

The strategic plan outlines four critical components of public health and medical preparedness: biosurveillance, countermeasure distribution, mass casualty care, and community resilience. These sections are summarized as follows:

- **Biosurveillance:** The United States must develop a nationwide, robust, and integrated biosurveillance capability, with connections to international disease surveillance systems, in order to provide early warning and ongoing characterization of disease outbreaks in near real-time. A central element of biosurveillance must be an epidemiologic surveillance system to monitor human disease activity across populations. That system must be sufficiently enabled to identify specific disease incidence and prevalence in heterogeneous populations and environments and must possess sufficient flexibility to tailor analyses to new syndromes and emerging diseases. State and local government health officials, public and private sector health care institutions, and practicing clinicians must be involved in system design, and the overall system must be constructed with the principal objective of establishing or enhancing the capabilities of state and local government entities.

- **Countermeasure Stockpiling and Distribution:** In the context of a catastrophic health event, rapid distribution of medical countermeasures (vaccines, drugs, and therapeutics) to a large population requires significant resources within individual communities. Few, if any, cities are presently able to meet the objective of dispensing countermeasures to their entire population within 48 hours after the decision to do so. Recognizing that state and local government authorities have the primary responsibility to protect their citizens, the federal government will create the appropriate framework and policies for sharing information on best practices and mechanisms to address the logistical challenges associated with this requirement. The federal government must work with nonfederal stakeholders to create effective templates for countermeasure distribution and dispensing that state and local government authorities can use to build their own capabilities.

- **Mass Casualty Care:** The structure and operating principles of our day-to-day public health and medical systems cannot meet the needs created by a catastrophic health event. Collectively, our nation must develop a disaster medical capability that can immediately re-orient and coordinate existing

resources within all sectors to satisfy the needs of the population during a catastrophic health event. Mass casualty care response must be 1) rapid; 2) flexible; 3) scalable; 4) sustainable; 5) exhaustive (drawing upon all national resources); 6) comprehensive (addressing needs from acute to chronic care and including mental health and special needs populations); 7) integrated and coordinated; and 8) appropriate (delivering the correct treatment in the most ethical manner with available capabilities). We must enhance our capability to protect the physical and mental health of survivors; protect responders and health care providers; properly and respectfully dispose of the deceased; ensure continuity of society, economy, and government; and facilitate long-term recovery.

- **Community Resilience:** The above components address the supply side of the preparedness function, ultimately providing enhanced services to our citizens. The demand side is of equal importance. Where local civic leaders, citizens, and families are educated regarding threats and are empowered to mitigate their own risk, where they are practiced in responding to events, where they have social networks to fall back upon, and where they have familiarity with local public health and medical systems, there will be community resilience that will significantly attenuate the requirement for additional assistance. The federal government must formulate a comprehensive plan for promoting community public health and medical preparedness to assist state and local authorities in building resilient communities in the face of potential catastrophic health events. ■

## Bioterror expert: Invest in med records, rapid tests

*Nation remains unprepared, but making progress*

Seven years after the anthrax attacks jolted the nation and set off a wave of biodefense initiatives, the United States has a “highly disturbing” lack of readiness for attacks with biological agents, a leading bioterrorism expert recently told Congress.

“[Seven] years after anthrax was mailed to members of the U.S. Congress and to media organizations, the immediacy and potentially strategic

*(Continued on page 12)*

**Table 1: Actions Required for Implementation of HSPD-21 - National Strategy for Public Health and Medical Preparedness**

Implementation Action	Responsible Party	Due Date
<b>Biosurveillance</b>		
Establish an operational national epidemiologic surveillance system for human health	Secretary of HHS	
Establish an Epidemiologic Surveillance Federal Advisory Committee to ensure that the federal government is meeting the goal of enabling state and local government public health surveillance capabilities	Secretary of HHS in coordination with the secretaries of defense, veterans affairs, and homeland security	Within 180 days after the date of HSPD-21
<b>Countermeasure Stockpiling and Distribution</b>		
Develop templates that provide minimum operational plans to enable communities to distribute and dispense countermeasures to their populations within 48 hours after a decision to do so	Secretary of HHS in coordination with the secretary of homeland security	
(1) Publish an initial template or templates; (2) establish standards and performance measures for state and local government countermeasure distribution systems; and (3) establish a process to gather performance data from state and local participants on a regular basis to assess readiness	Secretary of HHS in coordination with the secretary of homeland security	Within 270 days after the date of HSPD-21
Commence collecting and using performance data and metrics as conditions for future public health preparedness grant funding	Secretary of HHS in coordination with the secretary of homeland security	Within 180 days after the completion of the tasks set in the previous row
Develop federal government capabilities	Secretary of HHS in	Within 270 days

and plans to complement or supplement state and local government distribution capacity, as appropriate and feasible, if such entities' resources are deemed insufficient to provide access to countermeasures in a timely manner in the event of a catastrophic health event	coordination with the secretaries of defense, veterans affairs, and homeland security and the attorney general	after the date of HSPD-21
Ensure that the priority-setting process for the acquisition of medical countermeasures and other critical medical materiel for the Strategic National Stockpile (SNS) is transparent and risk-informed with respect to the scope, quantities, and forms of the various products	Secretary of HHS	
Establish a formal mechanism for the annual review of SNS composition and development of recommendations that utilizes input from accepted national risk assessments and threat assessments, national planning scenarios, national modeling resources, and subject matter experts	Secretary of HHS in coordination with the secretaries of defense, homeland security, and veterans affairs	Within 180 days after the date of HSPD-21
Establish a process to share relevant information regarding the contents of the SNS with federal, state, and local government health officers with appropriate clearances and a need to know	Secretary of HHS	Within 90 days after the date of HSPD-21
Develop protocols for sharing countermeasures and medical goods between the SNS and other federal stockpiles and shall explore appropriate	Secretary of HHS in coordination with the secretaries of state, defense, agriculture,	Within 180 days after the date of HSPD-21

<p>reciprocal arrangements with foreign and international stockpiles of medical countermeasures to ensure the availability of necessary supplies for use in the United States</p>	<p>veterans affairs, and homeland security</p>	
<p><b>Mass Casualty Care</b></p>		
<p>Directly engage relevant state and local government, academic, professional, and private sector entities and experts to provide feedback on the review of the National Disaster Medical System (NDMS) and national medical surge capacity required by the Pandemic and All-Hazards Preparedness Act (PAHPA) (Public Law 109-417)</p>	<p>Secretary of HHS in coordination with the secretaries of defense, veterans affairs, and homeland security</p>	
<p>Identify...high-priority gaps in mass casualty care capabilities, and shall submit to the assistant to the president for homeland security and counterterrorism a concept plan that identifies and coordinates all federal, state, and local government and private sector public health and medical disaster response resources, and identifies options for addressing critical deficits, in order to achieve the system attributes described in this strategy</p>	<p>Secretary of HHS</p>	<p>Within 270 days after the completion of the review of NDMS and national medical surge capacity</p>
<p>Build upon the analysis of federal facility use to provide enhanced medical surge capacity in disasters required by section 302 of PAHPA to analyze the use of federal medical facilities as a foundational element</p>	<p>Secretary of HHS in coordination with the secretaries of defense, veterans affairs, and homeland security</p>	<p>Within 180 days after the date of HSPD-21</p>

of public health and medical preparedness; and develop and implement plans and enter into agreements to integrate such facilities more effectively into national and regional education, training, and exercise preparedness activities		
Lead an interagency process, in coordination with the secretaries of defense, veterans affairs, and homeland security and the attorney general, to identify any legal, regulatory, or other barriers to public health and medical preparedness and response from federal, state, or local government or private sector sources that can be eliminated by appropriate regulatory or legislative action and...submit a report on such barriers to the assistant to the president for homeland security and counterterrorism	Secretary of HHS	Within 120 days after the date of HSPD-21
Establish a federal advisory committee for disaster mental health	Secretary of HHS in coordination with the secretaries of defense, veterans affairs, and homeland security	Within 180 days after the date of HSPD-21
Submit to the secretary of Health and Human Services recommendations for protecting, preserving, and restoring individual and community mental health in catastrophic health event settings, including pre-event, intra-event, and post-event education, messaging, and interventions	Federal advisory committee for disaster mental health	Within 180 days after the establishment of the Federal Advisory Committee for Disaster Mental Health

**Community Resilience**

<p>Ensure that core public health and medical curricula and training developed pursuant to PAHPA address the needs to improve individual, family, and institutional public health and medical preparedness; enhance private citizen opportunities for contributions to local, regional, and national preparedness and response; and build resilient communities</p>	<p>Secretary of HHS in coordination with the secretaries of defense, veterans affairs, and homeland security</p>	
<p>Submit to the president for approval, through the assistant to the president for homeland security and counterterrorism, a plan to promote comprehensive community medical preparedness</p>	<p>Secretary of HHS in coordination with the secretaries of defense, commerce, labor, education, veterans affairs, and homeland security and the attorney general</p>	<p>Within 270 days after the date of HSPD-21</p>

**Risk Awareness**

<p>Prepare an unclassified briefing for non-health professionals that clearly outlines the scope of the risks to public health posed by relevant threats and catastrophic health events (including attacks involving weapons of mass destruction); coordinate such briefing with the heads of other relevant executive departments and agencies; ensure that full use is made of Department of Defense expertise and resources; and ensure that all State governors and the mayors and senior county officials from the 50 largest metropolitan statistical areas in the United</p>	<p>Secretary of homeland security, in coordination with the secretary of HHS</p>	<p>Within 150 days after the date of HSPD-21</p>
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States receive such briefing, unless specifically declined		
Establish a mechanism by which up-to-date and specific public health threat information shall be relayed, to the greatest extent possible and not inconsistent with the established guidance relating to the information sharing environment, to relevant public health officials at the state and local government levels and shall initiate a process to ensure that qualified heads of state and local government entities have the opportunity to obtain appropriate security clearances so that they may receive classified threat information when applicable	Secretary of homeland security, in coordination with the attorney general, the secretary of HHS, and the director of national intelligence	Within 180 days after the date of HSPD-18
<b>Education and Training</b>		
Develop and thereafter maintain processes for coordinating federal grant programs for public health and medical preparedness using grant application guidance, investment justifications, reporting, program performance measures, and accountability for future funding in order to promote cross-sector, regional, and capability-based coordination, consistent with section 201 of PAHPA and the National Preparedness Guidelines developed pursuant to Homeland Security Presidential Directive-8 of December 17, 2003 (“National Preparedness”)	Secretary of HHS in coordination with the secretary of homeland security	Within 180 days after the date of HSPD-21

<p>Develop a mechanism to coordinate public health and medical disaster preparedness and response core curricula and training across executive departments and agencies, to ensure standardization and commonality of knowledge, procedures, and terms of reference within the federal government that also can be communicated to state and local government entities, as well as academia and the private sector</p>	<p>Secretary of HHS in coordination with the secretaries of defense, transportation, veterans affairs, and homeland security, and consistent with section 304 of PAHPA</p>	<p>Within 1 year after the date of HSPD-21</p>
<p>Establish an academic joint program for disaster medicine and public health housed at a National Center for Disaster Medicine and Public Health at the Uniformed Services University of the Health Sciences</p>	<p>Secretaries of HHS and defense, in coordination with the secretaries of veterans affairs and homeland security</p>	<p>Within 1 year after the date of HSPD-21</p>
<p><b>Disaster Health System</b></p>		
<p>Commission the Institute of Medicine to lead a forum engaging federal, state, and local governments, the private sector, academia, and appropriate professional societies in a process to facilitate the development of national disaster public health and medicine doctrine and system design and to develop a strategy for long-term enhancement of disaster public health and medical capacity and the propagation of disaster public health and medicine education and training</p>	<p>Secretary of HHS</p>	<p>Within 180 days after the date of HSPD-21</p>
<p>Submit to the president through the assistant to the president for homeland security and counterterrorism, and</p>	<p>Secretary of HHS</p>	<p>Within 120 days after the date of HSPD-21</p>

<p>commence the implementation of a plan to use current grant funding programs, private payer incentives, market forces, Centers for Medicare and Medicaid Services requirements, and other means to create financial incentives to enhance private sector health care facility preparedness in such a manner as to not increase health care costs</p>		
<p>Establish within the Department of Health and Human Services an office for emergency medical care</p>	<p>Secretary of HHS in coordination with the secretaries of transportation and homeland security</p>	<p>Within 180 days after the date of HSPD-21</p>
<p>.</p>		

Source: Used with permission from the Center for Biosecurity of the University of Pittsburgh Medical Center.

(Continued from page 3)

significance of the bioweapons threat is not widely appreciated, nor is the country prepared to cope with the consequences of major bioattacks," **Tara O'Toole**, MD, MPH, director and CEO of the Center for Biosecurity of the University of Pittsburgh Medical Center, told the Senate Committee on Homeland Security and Governmental Affairs.

Though she gave credit to the recent major federal strategy changes to address the problems, O'Toole primarily warned about present inadequacies and imminent threats. For example, O'Toole argued for an investment in electronic health care records and rapid diagnostic tests as a practical alternative to over-relying on systems such as the Biowatch program, which uses environmental sensors to detect bioterrorism agents at major events and likely target areas.

"There is, I believe, a mistaken assumption that a great deal of health data will be available — for example, the number of people who are ill or admitted to hospitals with certain diagnoses or the availability and locale of critical resources such as available hospital beds, equipment, drugs, etc.," she told the committee at an October 2007 hearing. "But the health care industry is a decade behind the rest of the economy in digitalizing its business functions and the clinical side of health care. Thus, there are likely to be dangerous delays in gathering the basic information that will be needed to manage the crisis . . . Specifically, I would suggest that national investments in rapid diagnostic tests and in electronic health records and digital links between hospitals and public health agencies will yield more benefits — for both routine and emergency use—than additional investments in environmental sensors or syndromic surveillance technologies."

### ***Terror regrouping***

Ominously, recent analysis indicates that al-Qa'ida has regrouped to become stronger and more resilient and presents a greater threat to the United States than at any time since before 9/11, she said. "Key judgments of a July 2007 national intelligence estimate include the assessment that: 'al-Qa'ida will continue to try to acquire and employ chemical, biological, radiological or nuclear material in attacks and would not hesitate to use them,'" O'Toole testified. ". . . Yet, in spite of all these sobering reports and expert

findings, progress in preparing the country to mitigate the consequences of a bioattack has been slow and modest."

In particular, O'Toole noted that the nation faces the following current realities:

There is no conduct of operations plan to guide national or local response to an anthrax attack.

The country has inadequate supplies of anthrax vaccine stockpiled; it would require years at present production capacity to produce enough to immunize the military or the civilian population.

Only a handful of cities or states could distribute materials from the Strategic National Stockpile in a timely manner.

The country is unprepared to cope with the medical demands of a mass casualty event.

There are no approved point-of-care diagnostic tests that physicians could use to diagnose (and rule out) anthrax or any other bioterror threat agent — this is critical in a context of scarce, potentially life-saving resources.

Should there be a covert biological attack on U.S. civilians, it is highly unlikely that the national command structure, or governors, or mayors would have even rudimentary situational awareness during a bioattack.

### ***Agents will increase with tech gains***

In addition, the BioShield program, created in 2004 to allow development and acquisition of essential medical countermeasures for the Strategic National Stockpile (SNS), is underfunded to meet the broad range of emerging threats, she said. Still, the program has \$3.6 billion of the \$5.6 billion appropriated in 2004. "[But] when one considers that the average cost of drug development is \$800 million — and this is before a single pill or vaccine is purchased — it is obvious that \$5.6 billion is not sufficient to protect the nation against the range of potential biothreats, let alone chemical, radiological, or nuclear threats," O'Toole argued.

The Department of Homeland Security released a biothreat assessment in 2006 that "identified more than a dozen pathogens, which, if released in a single attack, could plausibly kill thousands of people," she said. "It is important to understand that the number and variability of potential bioweapons agents will increase as bioengineering techniques become more accessible — this is happening at a rapid pace all over the globe."

The shift last year to development of more broad-spectrum countermeasures — which could

be used to treat or prevent more than a single bioweapons agent – should help solve this problem, but we are playing catch-up, she noted. “This flexible defense strategy is a rational way to go, but it must be recognized that development of such new drugs traditionally takes 10 years or more,” she said.

Moreover, medical countermeasures degrade over time — they have shelf lives and must be renewed periodically, she noted. The traditional approach to vaccine and drug manufacture is to build facilities dedicated to the production of a single product. FDA licensure is linked to approval of manufacturing processes in a particular plant for a particular product, she said. “For many of the products in the SNS — anthrax vaccine for example — the government is the only customer,” O’Toole said. “Thus, maintaining the manufacturing capacity to ensure periodic refreshment of the SNS requires maintaining a ‘warm base’ — an entire manufacturing plant that exists only to supply the U.S. government’s needs. This is an expensive proposition.”

The United States still has the world’s best scientific research base and the most powerful technological prowess, “but our technical imagination has to be matched by strategic thinking and wise choices,” she said. “We have made some progress in the past six years, but our activities to date do not reflect a commitment to a national security priority. It is time to think anew about the biothreat and what we should do about it.” ■

## Should public safety workers be offered anthrax vaccine?

*Consensus statement questioned by some*

Scholars at the Institute for Biosecurity at the Saint Louis University School of Public Health are circulating a consensus statement calling for anthrax vaccine to be offered to civilian emergency responders and critical infrastructure workers.

“I strongly feel if one believes that the use of a biological agent is possible, and there is even some probability that it will occur, it is irresponsible for leadership not to offer vaccine protection for the first responder community,” says **William S.**

**Stanhope**, MA, PA associate director for special projects at the biosecurity institute. “The current policies have federal law enforcement agencies protect their workers but they do not afford the same degree of protection to the non-federal response community. It is discriminatory.”

Regarding the charge of discrimination, the Food and Drug Administration states on its web site that “because of biological warfare threats, the military has had an active vaccination program against anthrax.” It is unclear which federal officials are immunized, but the FDA officially recommends anthrax vaccine “for individuals who may come in contact with animal products that may be contaminated with *Bacillus anthracis* spores and for individuals engaged in diagnostic or investigational activities, which may bring them in contact with *Bacillus anthracis* spores. It is also recommended for persons at high risk, such as veterinarians and others handling potentially infected animals.”

The St. Louis University consensus statement reads:

“Recognizing the reality of documented attempts of radical terrorist groups to develop and deploy anthrax as a weapon of terror, the undersigned are unanimous in their belief that the ‘civilian’ Emergency Responder and Critical Infrastructure workforce should be offered the same level of prospective protection afforded to their federal counterparts. We urge the Department of Health and Human Services, the CDC Advisory Committee on Immunization Practices, and the Department of Homeland Security to immediately clear all barriers to the funding, acquisition, and delivery of Anthrax Vaccine Adsorbed [AVA] to the Emergency Responder/Critical Infrastructure workforce on a voluntary basis.

Moreover, we believe that AVA availability should be prioritized to the Emergency Responder/Critical Infrastructure workforce in the UASI [Urban Area Security Initiative] cities and any other communities known or self-assessed to be at high risk for future terrorist attacks. Further recognizing the difficulties encountered during previous smallpox vaccination efforts, we strongly recommend that a reasoned, rational, and realistic education program be developed reflective of the threat and relative risk of another bioterrorist attack using *B. anthracis*. That education program should include a careful delineation of the efficacy and safety of AVA, the FDA-approved indications, and a discussion of the

relative risks and benefits of voluntary immunization with AVA vs. relying on a post-exposure strategy that depends on antibiotics.”

In addition to Stanhope, the statement is signed by the St. Louis institute’s director R. Gregory Evans, PhD, MPH as well as several public safety officials representing police and fire departments.

### **No need, no demand?**

However, the need for the vaccine and any widespread support for its use were openly questioned by an infection control consultant who works with the public safety community. “I lecture all across the country and I have not heard this issue — the need for this — voiced by anybody,” says **Katherine West**, BSN, MEd, CIC, an infection control consultant with Infection Control/Emerging Concepts in Manassas, VA.

People exposed to anthrax can be effectively treated with antibiotics within five days of the exposure in most cases, she reminds. “They’re leaving out the whole issue of an incubation period,” she says. “The reality is that someone in a mall [will be exposed] and they’re going to be diagnosed later at a hospital or a private doctor’s office. Then [the attack] will be put together, but there is not going to be a massive EMS response.”

Indeed, an indoor exposure could play out in such a fashion, but there likely will be many public safety people already on duty at a prime target such as a presidential debate, Stanhope says. “There will be an ample number of people from the law enforcement and public safety sector likely to be on site where the indoor release occurs,” he says. “If you take a presidential debate like we had in St. Louis, for example, I can assure you that proportionally there were a lot more people from the public safety community of greater St. Louis physically present inside the auditorium than there were people from the presidential candidate protection details, the [Secret Service] and the FBI.”

Those federal officials are immunized for anthrax, but exposed public safety workers would be left to scramble for treatment in the

## **CE/CME questions**

1. Though it promises no funding, Homeland Security Presidential Directive 21 (HSPD-21) states that it will “explore options to relieve current pressures” on which area of health care?  
A. Intensive care units  
B. Hospital security  
C. Emergency departments  
D. All of the above
2. Critical components of HSPD-21 include:  
A. biosurveillance.  
B. mass casualty care.  
C. community resilience.  
D. All of the above
3. Given the wide variety of current and potential bioweapons agents, government planners have shifted to “broad spectrum” countermeasures that could be used to treat or prevent more than a single bioweapons agent.  
A. True  
B. False
4. In general, people exposed to anthrax can be effectively treated with antibiotics within how many days post-exposure?  
A. five  
B. 10  
C. 14  
D. 21

**Answer Key: 1. C; 2. D; 3. A; 4. A**

## **CE/CME instructions**

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## **COMING IN FUTURE MONTHS**

■ DHS planning scenarios for various attacks

■ Emerging infection on bioweapon?

■ Communication breakdowns in emergency response

■ Bringing out the dead: The mortuary hospital interface

■ Should firemen be trained in terror surveillance?

aftermath, he emphasizes. "My concern is that we are not affording protection to the non-federal, non-military people that we are putting in harm's way in these various indoor venues," Stanhope says.

Indoor release of anthrax is one of the most likely scenarios for a bioterrorism incident because it is relatively easy to manufacture in small quantities, he says. "It is our belief that any young person coming out of a graduate program in the biological sciences at any of the major universities today has the capacity to produce some quantity of anthrax — to isolate it from the soil," he says. "I can think of a dozen places I could go right now to get anthrax. We think that not only can they isolate it, but they can propagate it in a clandestine 'kitchen' laboratory and make an agent."

Such anthrax will not be of cold-war bioweapons caliber, nor would it likely be produced in sufficient quantity to attempt an outdoor attack, he adds. "That's not efficient unless you have pounds of dry agent," he says. "But if you use a relatively small quantity of agent in a carefully contrived indoor release you can end up with an inhaled dose hundreds of times an [infectious] dose."

The vaccine should be made available to public safety workers on a strictly voluntary basis and not offered with any coercion or pressure, he adds. Still, West argues that since the vaccine is

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approved for such a narrow group of people, public safety officials that take it will essentially have to "sign their legal rights away" regarding adverse effects. On the other hand, flu vaccine is a recommended approach to emergency planning for public safety workers to better identify and rule out biological agents. The anthrax vaccine also is contraindicated for the immune-compromised, pregnant women, and those who are breast feeding, she adds. ■

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**CE/CME objectives**

**A**fter reading each issue of *Bioterrorism Watch*, the infection control professional will be able to do the following:

- identify the particular clinical, legal or educational issue related to bioterrorism;
- describe how the issue affects health care providers, hospitals, or the health care industry in general;
- cite solutions to the problems associated with bioterrorism, based on guidelines from the federal Centers for Disease Control and Prevention or other authorities, and/or based on independent recommendations from clinicians and bioterrorism experts. ■