

BIOTERRORISM AND PUBLIC HEALTH EMERGENCY PREPAREDNESS AND RESPONSE:

A NATIONAL COLLABORATIVE TRAINING PLAN

Strengthening Preparedness at the Frontlines
Executive Summary
February 2002

Centers for Disease Control and Prevention

I. BACKGROUND

The recent terrorist attacks on New York and Washington, D.C. and the episodes of anthrax exposure demonstrated the urgent need for a well prepared and trained front-line workforce which includes public health and medical care professionals, first responders, and community volunteers. Without preparation in core competencies of bioterrorism and emergency preparedness, the capacity of agencies and communities may be unpredictable. Individuals will be called upon to respond beyond their readiness. Extraordinary partnership is required among federal, state and local agencies, educational institutions, and professional organizations to assure a systematic approach to training which will achieve an effective and sustained public health response.

In November 2000, a CDC workgroup outlined a national training plan for bioterrorism preparedness and response.¹ It was developed as an adjunct to support the CDC *Strategic Plan for Preparedness and Response*² and to address the lessons learned during a national preparedness exercise, code-named "TOP OFF", conducted from May 20-23, 2000.³ The plan outlined training required by CDC personnel (leadership, operations center, field deployed teams) to implement the agency's *BT Event Response Operational Plan* and strategies for training public health and medical facility personnel in collaboration with partners. In addition, the need to incorporate bioterrorism preparedness, response, and recovery competencies into an overall national workforce development initiative for front-line public health professionals in State and local agencies was addressed.^{4,5}

The *Global and National Implementation Plan for Public Health Workforce Development*⁶ lists six strategic elements that are essential in a systematic approach to preparing a competent workforce. These elements were applied in developing a training plan to address public health emergency/bioterrorism preparedness and response and include:

1. Monitor workforce composition and identify target audience needs.
2. Identify required competencies and develop related curriculum.
3. Design an integrated learning delivery system.
4. Use incentives to assure competency (e.g. certification and credentialing).
5. Conduct evaluation and research.
6. Assure financial support, coordination, and accountability.

The national training plan for bioterrorism preparedness and response was endorsed by the CDC Bioterrorism Steering Committee in January 2001 and revised based on partner feedback and lessons learned from the events of 9/11 and anthrax outbreaks (Fall 2001).

II. PURPOSE

This document summarizes the current status CDC activities related to national training strategies to enhance preparedness at the front line of public health. The report identifies the core content and elements of training; the key target audiences; and the strategies being deployed to implement the plan. In addition, in specific instances, incentives strategies (e.g., certification) are in place to assure preparedness.

III. GOAL

Front-line public health and health care professionals prepared to respond to bioterrorism and other current and emerging health threats.

IV. OBJECTIVES

1. All public health and health care professionals can identify the basic capacities required for bioterrorism and public health emergency preparedness and response.
2. All local and state health departments, in collaboration with community-based emergency management entities have in place the basic capacities needed for bioterrorism and public health emergency preparedness and response.
3. CDC, in collaboration with public health and healthcare professional organizations, governmental partners at local, state, and federal level, private enterprises, and communities, establishes a system to maintain individual and organizational competencies required for an effective national response to bioterrorism and other health threats.

V. ASSUMPTIONS

1. An effective national training plan must address the needs of multiple audiences, the use of multiple strategies, and the need for multiple partnerships to implement the strategies.
2. The elements of bioterrorism preparedness include:
 - 2.1 A community bioterrorism and public health emergency plan that has been tested and practiced through exercises (i.e., system readiness).
 - 2.2 Assurance that the full range of public health core capacities (seven) is available and accessible, including:
 - i. Workforce of adequate numbers of trained personnel
 - ii. Surveillance and epidemiology
 - iii. Communications
 - iv. Information systems with high speed access to timely, accurate information
 - v. Laboratory systems
 - vi. Policy and evaluation
 - 2.3 A workforce that meets or exceeds bioterrorism-specific competencies identified and validated by national experts and linked to core competencies for public health practice.
3. "Readiness" at the community level means having in place (1) a preparedness plan that meets predetermined criteria and (2) a workforce that can demonstrate an understanding of preparedness, their local plan, their agency's role in the plan, and their individual responsibilities under the plan, through completion of a training program and evidence of knowledge and skill gained through certification, post-training examination, or other incentive strategies.
4. To establish a sustainable system for maintaining workforce competency, the national bioterrorism and public health emergency training plan must build on CDC and partner resources (including ASTHO, NACCHO, AAMC, ASPH, NALBOH, APHL, NPHIC, APICE, CSTE, IDSA, AMA etc.) and the technical expertise of professional medical (e.g., nursing, allied health) societies.

VI. KEY TARGET AUDIENCES

The Nation's public health workforce consists of 500,000 individuals working at local, state and federal agencies, schools of public health, and related organizations. In addition, health professionals and others in hospitals, community based agencies, and voluntary health organizations, up to 3 million persons, are important contributors to our public health system. All of these individuals are critical to a timely, correct response to real or threatened bioterrorism or other emergency that threatens the public's health.

Public health professionals at state and local public health agencies: administrators, professionals (physicians, nurses, health educators, communication specialists, environmental scientists, epidemiologists, allied health personnel etc.), and where appropriate, technical staff (technicians, information system specialists) and support personnel (clerical, maintenance, security).

Health care professionals in health care facilities, clinics, and provider organizations: physicians and nurses and allied health professionals (administrators and technical and support personnel), as appropriate.

Emergency responders: traditional first responders such as emergency medical technicians, fire fighters, and police.

Business communities: "at risk" industries such as transportation and communications.

VII. CORE CONTENT AREAS FOR TRAINING

Health professions education provided through or supported by CDC should build upon models established by existing disciplines (i.e., medicine, nursing, environmental health, laboratory science, health education, health communications, healthcare administration). This requires collaboration and partnerships with professional organizations and accrediting bodies.

Approaches to public health preparedness education should reflect cross-cutting, not silo approaches, and should model the interdisciplinary collaboration required in real-time clinical and public health practice. Strategies should address training needs along the continuum of health professions career development and can be implemented simultaneously, if resources are available. Milestones in career development include: pre-professional education, professional education, post-professional education (internships/residencies), and professional practice (entry through advanced).

Key content areas include:

- weapons of mass destruction – diagnosis, treatment, and consequences of biological, chemical, and radiological events; coordination within public health system. (Special emphasis on Biological agents: Category A -anthrax, smallpox, tularemia, botulism, plague, viral hemorrhagic fevers and Category B/C, as needed.)
- surveillance and epidemiologic issues in bioterrorism
- laboratory systems -- agents, specimen collection and handling, chain of custody, and notification systems
- incident and unified command system -- basic for non-traditional responders; leadership issues in emergency management
- health risk communications and media relations; patient education
- worker safety issues including personal protective equipment; vaccinations
- information technology – training and use in all equipment needed in responds
- legal authority -- interface of public health with crime scene and law enforcement
- national pharmaceutical stockpile logistics

VIII. STRATEGIES FOR IMPLEMENTING NATIONAL TRAINING PLAN

Strategies used will build on CDC and partner resources. CDC will broaden its extensive network of partnerships by enhancing support to existing partners (such as schools of public health, Centers for Public Health Preparedness, IDSA, AAMC, APICE, CSTE, APHL etc.) and creating new collaborative relationships with organizations representing key target audiences (e.g. ACEP).

Examples of key partnerships include:

Target Audience	Partners
Public health professionals	State/local health departments; ASTHO and affiliates, NACCHO
Health care professionals including practicing physicians	Centers for Public Health Preparedness, professional societies, national organizations, AAMC
Emergency responders	FEMA, NEMA , others: DOD, DOJ,
Business communities	health plans, pharmaceutical companies, Washington Business Group on Health, etc.

Key training strategies include:

- awareness-level courses such as "BT 101"; Weapons of Mass Destruction Basics course based on core competencies
- discipline-specific courses which focus on detection, diagnosis, and treatment of specific BT agents (anthrax, smallpox, etc.)
- table top exercises to test readiness
- skill-building exercises such as simulations, drills, practice sessions
- certification and credentialing (CME, CNE, other)
- multiple delivery modes (e.g., self-instruction via Web, CD-ROM, journal articles; instructor-led courses; and professional meetings and conferences)

IX. SELECTED ACCOMPLISHMENTS

To date, CDC and its partners offered education and training to approximately 2 million public health and health care professionals. Appendix 1 provides specific examples of partnership efforts.

Other related accomplishments include:

1. *CDC Responds* series reached 1.4 million viewers. The series encompasses a broad range of topics including medical management of anthrax, smallpox, infection control, laboratory issues, and health-risk communication. Over 44,000 videos were freely disseminated to health care professionals through the Public Health Foundation.
2. Infectious Disease Society of America (IDSA) was funded to develop BT-specific training materials for infectious disease professionals that will be posted on their Web site.
3. Centers for Public Health Preparedness (CPHP), a CDC-funded national network of 14 Centers in schools of public health and local health departments, trained more than 200,000 public health and health care professionals. The CPHP's prepared over 180 educational products and have developed an inventory of faculty expertise and assets available for emergencies (local, regional, or national).
4. Association of American Medical Colleges (AAMC) initiated a national program, "*First Contact, First Response*", to address bioterrorism preparedness needs for medical students, residents, and practicing physicians.
5. *Model Public Health Law* was disseminated by the Johns Hopkins and Georgetown University Center for Public Health Law.

6. "Core Competencies for Public Health Emergency Preparedness" were disseminated to all local health departments and at APHA's national public health meeting.
7. National Pharmaceutical Stockpile, via train-the-trainer programs and conferences, prepared over 400 state and local representatives responsible for implementing bioterrorism training within their jurisdictions.
8. Existing relationships with national public health organizations and professional societies (e.g. ASTHO, NACCHO, AAMC, ASPH, NALBOH, APHL, NPHIC, APICE, CSTE, etc.) enhances training to the front line.
9. National Emergency Management Association (NEMA) is developing educational materials specific to bioterrorism that will help traditional first responders understand their role in bioterrorism events.
10. Federal Emergency Management Association (FEMA) is developing a "BT 101" course focused on state and local public health staff. Course will help attendees understand existing emergency response systems and how bioterrorism response fits into the overarching model.
11. National Association of City and County Health Officials (NACCHO) is collaborating with CDC and ASTHO to implement a "BT 101" training course for local public health workers.
12. National Public Health Information Coalition (NPHIC) entered a cooperative agreement to develop and disseminate health-risk communications training, nationally, to meet the needs of state and local health officials and communication's officers.
13. Courses on food- and water-borne illness were conducted for state and local health agency staff (including laboratorians) to understand the implications for food and water in bioterrorism as potential delivery vehicles for infection.
14. Memorandum of Understanding with the National Guard (CDC-Public Health Training Network) to make available distance learning sites and capacities when needed for national emergencies. This greatly expands capacities to reach national audiences for in-depth training purposes.

X. NEXT STEPS

CDC will continue and accelerate implementation of the national collaborative training plan by taking specific actions:

- Convene and coordinate training components of the current bioterrorism program administered in state and local health departments. (The five bioterrorism focus areas are: A. Planning/Emergency Response; B. Epi/Surveillance; C. Laboratory Capacity D. National Pharmaceutical Stockpile, and E. Health Alert Network.)
 - Assure that public health infrastructure funding provided by CDC to state and local agencies will strengthen the foundation needed for response and accelerate implementation and facilitation of sustained readiness.
 - Strengthen relationships with medical professional organizations (APICE, ISDA, AAMC, etc.) to maximize reach to physicians and other health care professionals, nationwide.
 - Continue partnerships with other HHS and Federal agencies involved in bioterrorism preparedness (FEMA, DOJ, DOD, etc.)
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1. Bioterrorism Preparedness and Response: A National Public Health Training Plan, November 7, 2000. A report from the CDC POST TOP OFF Training Workgroup.
2. Biological and Chemical Terrorism: Strategic Plan for Preparedness and Response, *MMWR* April 21, 2000, Vol 49, No RR04;1-14
3. Post TOP OFF Action Plan. Phase I - Improving CDC's Immediate Response Capabilities. CDC Workgroup
4. USDHHS, CDC, Public Health Practice Program Office. Strategic Plan for Public Health Workforce Development: Report from the Task Force on Public Health Workforce Development, Atlanta, GA, 1999.
5. Lichtveld, M. et.al. Partnership for Front-Line Success: A Call for a National Action Agenda on Workforce Development. *J Public Health Management Practice*, 2001, 7(4), 1-7.
6. A Global and National Implementation Plan for Public Health Workforce Development - At A Glance. www.phppo.cdc.gov/workforce.
