

**BIOTERRORISM AND EMERGENCY
PUBLIC HEALTH PREPAREDNESS AND
RESPONSE**

**A NATIONAL COLLABORATIVE TRAINING
PLAN**

**Strengthening Preparedness at the
Frontlines
Progress Report**

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Centers for Disease Control and Prevention

Bioterrorism and Emergency Preparedness and Response: A National Public Health Training Plan

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.⁰ It was developed as an adjunct to support the CDC strategic plan for Preparedness and Response² 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 frontline 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/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 of CDC activities related to national training strategies to enhance preparedness at the frontline 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

Frontline public health and health care professionals prepared to respond to bioterrorism and other current and emerging health threats.

IV. OBJECTIVES

2. 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 the 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, employ multiple training strategies and promote multiple partnerships to implement those strategies.
2. The elements of bioterrorism preparedness include:
 - 2.1 A community bioterrorism/public health emergency plan that has been tested and practiced through exercises (System Readiness);
 - 2.2 Assurance that the full range of public health core capacities (seven) are available and accessible, including:
 - ii. Workforce -adequate numbers of trained personnel
 - iii. Surveillance and epidemiology
 - iv. Communications
 - v. Information systems -high speed access to timely, accurate information
 - vi. Laboratory systems
 - vii. Policy and evaluation
 - 2.3 A workforce that meets or exceed 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/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 (nursing, allied health) societies.

VI. KEY TARGET AUDIENCES

The Nation’s public health workforce consists of 500,000 individuals working 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 to any other emergency that threatens the public’s health.

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

Health care professionals - primary focus on physicians and nurses and other allied health professionals in health care facilities, clinics and provider organizations as appropriate; includes healthcare administrators and other technical and support personnel.

Emergency responders - primary focus on traditional first responders - emergency medical technicians, fire and police.

Business community - primary focus on 'at risk' industries (transportation, communications); others tbd.

VII. CORE CONTENT AREAS FOR TRAINING

Health professions education provided through or supported by CDC builds upon models established by existing disciplines (i.e., medicine, nursing, environmental health, laboratory science, health education, health communications, healthcare/public 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: preprofessional 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 radiologic events and coordination within public health system. Special emphasis on Biological agents - Category A -anthrax, smallpox, tularemia, botulism, plague, viral hemorrhagic fevers; Category B/C as needed;
- Surveillance and epidemiologic issues in bioterrorism
- Laboratory systems - agents, specimen collection/handling, chain of custody, 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/use in all equipment needed in responds;
- Legal authorities; interface of public health with crime scene/law enforcement
- National pharmaceutical stockpile -logistics

VIII. STRATEGIES FOR IMPLEMENTING NATIONAL TRAINING PLAN

1. Strategies used will build on CDC and partner resources.
2. 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 (ACEP, IDSA, APIC), national organizations, AAMC
Emergency Responders	FEMA, NEMA , others: DOD, DOJ.
Business Community	Health Plans, Pharmaceutical Companies, Washington Business Group on Health, etc.

2. Key Training Strategies include:
- awareness level courses such as "BT 101"; WMD Basics course based on core competencies
 - discipline-specific courses- focus on detection, diagnosis and treatment of specific BT agents (anthrax, smallpox, etc.)
 - table top exercises to test readiness

- simulations/drills/practice sessions
- certification and credentialing (CME, CNE, other)
- use of multiple delivery modes (self-instruction via web, CD-ROM, journal articles; instructor-led courses-face to face, other; professional meetings/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; series encompasses broad range of topics including medical management of anthrax, smallpox, infection control and laboratory issues and health/risk communication. Over 44,000 videos were disseminated for free through the Public Health Foundation to health care professionals.
2. Infectious Disease Society of America (IDSA) was funded to develop BT specific training materials for infectious disease professionals. All information will be posted on website.
3. Centers for Public Health Preparedness (CPHP)- a CDC funded national network of 14 CPHP in Schools of Public Health and local health department trained more than 200,000 public health and health care professionals; prepared 180 + educational products; have developed and inventory of faculty expertise and assets available for local/regional/national emergencies.
4. Association of American Medical Colleges (AAMC): initiates "*First Contact, First Response*" national program to address BT preparedness needs for medical students, residents and practicing physicians.
5. *Model Public Health Law* disseminated by Johns Hopkins/Georgetown University Center for Public Health Law.
6. Disseminated core competencies for public health emergency preparedness to all local health departments and at national public health meeting (APHA).
7. National Pharmaceutical Stockpile, via train-the-trainer programs and conferences prepared over 400 state/local representatives responsible for implementing bioterrorism training within their jurisdictions.
8. Existing relationships with national organizations and professional societies such as (e.g. ASTHO, NACCHO, AAMC, ASPH, APIC, IDSA, APHL, NPHIC, ACEP, CSTE, etc.) enhance training for 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 BT event.
10. Federal Emergency Management Association (FEMA) is developing a "BT 101" course focused on training state and local public health staff. Course will help attendees understand existing emergency response systems and how BT response fits into 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): cooperative agreement to develop/disseminate health/risk communications training nationally to meet needs of state/local health officials and communications officers.
13. Several Food and Water-borne illness courses have been conducted for state and local health agency staff to include laboratory staff to help them understand the implications of BT with food and water being potential delivery vehicles for infection.

14. Memorandum of Understanding with National Guard (CDC-Public Health Training Network) to make distance learning sites/capacities available 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. Key next steps include:

- Convene and coordinate training components of the current BT program administered in state and local health departments. There are five focus areas in current fundings: 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 (APIC, ISDA, ACEP, AAMC) to maximize the reach to physicians and other health care professionals nationwide.
- Continue partnerships with other HHS and Federal agencies involved in BT preparedness (FEMA, DOJ, DOD, etc.)

DRAFT

0.1. 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, 2004; 113(16):RR4; 1-14

3. Post TOP OFF Action Plan. Phase I - Improving CDC's Immediate Response Capabilities. CDC Workgroup

4. U.S. Department of Health and Human Services, Centers for Disease Control and Prevention, Public Health Practice Program Office. Strategic Plan for Public Health Workforce Development: Report from the Task Force on Public Health Workforce Development, Atlanta, GA: CDC, 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.