



City Health Information

February 2005

The New York City Department of Health and Mental Hygiene

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PREPARATION FOR BIOTERRORISM

- The release of biologic agents has already occurred in the United States, and such releases can affect a significant portion of the population.
- Patients who become ill due to a release will present to health care providers.
- Providers can help stop or contain the spread of illness resulting from biologic agents by quickly reporting unusual symptoms or outbreaks.

It is well-documented that stores of weaponized biologic agents exist¹ and that their release has already occurred.²⁻⁴ Health care providers play an important role in the response to biological weapons. During the intentional release of anthrax in 2001, a health care provider, rather than an electronic surveillance system, detected the first case.⁵ Since biologic agents such as smallpox are highly transmissible, early identification and rapid reporting of unusual symptoms or disease clusters are vital for controlling disease transmission and reducing the number of people infected.

Health care providers are positioned to play a key role in bioterror events through early recognition of potential cases and by providing education, prophylaxis, and treatment. The following guidelines can help providers prepare for and respond to biologic release events.

Basics of Health Care Provider Preparedness

1. Learn Signs and Symptoms of Biologic Agents

Biologic agents that can be used as weapons may share the following characteristics:

- Easy dissemination or transmission
- Potential to cause widespread morbidity or mortality
- Challenge to public health preparedness⁶
- Potential to induce public panic and social disruption

Knowing the clinical signs and symptoms of such agents can help providers recognize patients who may be victims of an intentional release. Category A agents are of greatest concern and include anthrax (*Bacillus anthracis*), plague (*Yersinia pestis*), smallpox (variola major), botulism (*Clostridium botulinum* toxin), tularemia (*Francisella tularensis*), and the etiologic agents that cause hemorrhagic fevers (*filoviruses* and *arenaviruses*),⁷ including Ebola, Marburg, Lassa, and Argentine hemorrhagic fever (**Table 1**). The weaponization of these agents and the method of their delivery may affect the clinical presentation of victims. Other agents may also be used.

2. Recognize Suspicious Clusters of Disease

The aerosol release of a biologic agent during a large public event is an efficient way to expose many people simultaneously. Other modes of release are also possible; in 1984, the religious cult Rajneeshe contaminated the salad bars of several restaurants in Oregon with *Salmonella* Typhimurium, causing 751 confirmed cases.⁸ The 2001 attacks using mail contaminated with anthrax spores are another instance of a novel deployment method.

If undetected, a release of a biological agent would most likely appear as a cluster of non-specific, influenza-like illnesses.⁹ Increasing numbers of seriously ill people requiring treatment over a short period of time could quickly overwhelm an unprepared health care system. The New York City Department of Health and Mental Hygiene (NYC DOHMH) depends on health care providers' reports of unusual manifestations or clusters of illnesses (**Table 2**) to facilitate rapid public health action.

Detecting the release of an agent or a suspicious disease cluster requires asking patients about exposures during the incubation period of the likely etiologic agent.⁹ Patient responses provide clues as to whether a group of cases of the same illness are related by a common exposure (**Table 2**). For instance, if a patient presents with acute vomiting and diarrhea, providers should ask:

- Where the patient recently ate
- What public events the patient attended
- Whether others were similarly affected

NYC DOHMH epidemiologists can help clinicians evaluate patients who are involved in a suspicious disease cluster, and should be consulted quickly. NYC DOHMH will conduct additional case findings to determine the extent of the outbreak, as indicated.

During business hours, providers can call the Provider Access Line at (866) 692-3641. After hours, call the Poison Control Center at (212) 764-7667.

3. Know How to Report Potential Bioterrorism-Related Cases to the NYC DOHMH

Providers should call NYC DOHMH immediately if they suspect that a patient is ill from a potential bioterrorism agent or if they note an unusual disease manifestation. Providers should report patients' identifying and demographic information, and specific details about the current clinical illness such as date of onset and symptoms, physical examination results, and laboratory and radiologic tests. If there is a suspicious cluster, providers should add information about potential common exposures among patients. If the clinical picture is still indeterminate, the NYC DOHMH can arrange laboratory testing at the Public Health Laboratory. For the reporting of non-urgent but reportable diseases, the Universal Reporting Form (URF) should be used (visit: www.nyc.gov/html/doh/html/hcp/hcp-urf1.html).

4. Limit the Transmission of Infectious Agents

Many biologic agents of highest concern do not cause

disease via person-to-person transmission. Nevertheless, current standards of care dictate that all patients seeking health care, including those with suspected or confirmed bioterrorism-related illnesses, should be managed using Standard Precautions (**Box 1**). These precautions are designed to reduce transmission from both recognized and unrecognized sources of infection by preventing direct contact with body fluids including blood and other bodily secretions, non-intact skin (including rashes), and mucous membranes. For certain diseases such as smallpox and pneumonic plague, additional respiratory or contact precautions can reduce the likelihood of transmission (**Table 3**).

Other simple measures that reduce the spread of infectious diseases:

- Instruct registration and reception staff to alert providers of patients who present to an outpatient facility with fever and respiratory symptoms, or fever and rash.
- Immediately place persons who may have infectious

TABLE 1. EPIDEMIOLOGIC DATA ON BIOLOGIC AGENTS OF GREATEST CONCERN⁵

Agent	Microbiology	Incubation	Natural Routes of Transmission	Precautions	Case Fatality Rate
Anthrax/ <i>Bacillus anthracis</i>	Spore-forming Gram-positive bacillus	Average, 1–7 days Range, 1–60 days	Inhalation or ingestion of spores, cutaneous contact with infected animal byproducts, including meat, hide, hair, and bone meal. Person-to-person transmission is rare.	Standard, but use contact precautions if cutaneous or if associated with diarrhea	<i>Cutaneous</i> : Treated, <1% Untreated, 10–20%; <i>Inhalational</i> : Treated, ≥ 40%; Untreated, 97% GI: Treated, ≤ 40%
Plague/ <i>Yersinia pestis</i>	Gram-negative rod	1–7 days	<i>Bubonic</i> : bites from infected fleas and handling of infected tissues <i>Pneumonic</i> : aerosol person-to-person transmission	Standard. Use droplet precautions until patient is on appropriate therapy for 72 hours. Contact precautions if draining buboes present	<i>Bubonic</i> : Untreated, 50–60% <i>Pneumonic</i> : Untreated, unlikely to survive
Smallpox/ variola virus	Orthopox virus	7–17 days	Aerosol person-to-person transmission with 50% secondary attack rate	Standard, contact, and airborne	Among unvaccinated persons, 20–40%
Botulism/ <i>Clostridium botulinum</i> toxin	Neurotoxin produced by anaerobic Gram-positive rod	Average, 12–36 hours Range, 1–7 days	Ingestion of preformed toxin	Standard	Treated, 5–10%
Tularemia/ <i>Francisella tularensis</i>	Gram-negative rod	Average, 3–5 days Range, 1–14 days	Tick bites, handling infected animal byproducts such as meat or hides, eating insufficiently cooked meats, drinking contaminated water, inhaling contaminated soil	Standard; contact precautions if lesions present	<i>Inhalational</i> : Untreated, 30–60%
Hemorrhagic Fevers/eg, Ebola and Marburg viruses	<i>Filoviruses</i> and <i>Arenaviruses</i>	Average, 5–10 days Range, 2–19 days	Contact with body fluids of infected persons	Standard and contact; airborne precautions in late stages	Untreated, 50–90%

For more information about biologic agents and training, visit: www.bt.cdc.gov/training/index.asp#ph

TABLE 2. INDICATORS OF POSSIBLE BIOTERRORISM-RELATED INFECTIONS OR DISEASE CLUSTERS^{7,9}

Indicators	Examples
Occurrence of a disease that is unusual for a given geographic area or season	Plague in New York City A large cluster of influenza-like illnesses in July
Unusual clustering of illnesses by location or time	An increase in the number of influenza-like illnesses following a large public event
Atypical age distribution for common diseases	Chickenpox-like illness among adults An increase in severe acute gastroenteritis among adults
Growing numbers of increasingly serious illnesses	Previously healthy patients presenting with an unexplained febrile illness associated with sepsis, pneumonia, respiratory failure, or rash
More severe disease than expected for a given pathogen, or unusual routes of exposure	<i>Salmonella</i> causing meningitis or pneumonia in an otherwise healthy patient
Uncommon illness	Rapidly progressive descending flaccid paralysis
Illness associated with a pathognomonic sign for a biologic agent	Rapidly progressive pneumonia with a widened mediastinum on chest X-ray; pneumonia in an otherwise healthy patient
Serious illness that fails to respond to usual antibiotics	Pneumonia in an otherwise healthy person with an antibiotic resistance pattern that is significantly different from circulating strains

diseases that can spread via airborne or droplet routes in a private room.

- Ask persons with a cough to wear a surgical mask or to cover their mouths with a tissue when they cough.
- Schedule patients with fever and respiratory symptoms or rash at the end of the day.

If a patient is suspected of having contracted a bioterrorism-related illness and presents to an outpatient setting, providers should:

- Notify NYC DOHMH immediately prior to transferring the patient to an acute care facility.
- Ensure that patients are accompanied by a health care professional such as an Emergency Medical Technician (EMT) to limit the number of exposed people and to arrange for timely treatment.
- When requesting transport, inform EMT or other transport staff of the potential risk.
- Notify a staff physician at the receiving hospital of the potential diagnosis and the patient's condition.

5. Provide Information and Routine Care to Patients During an Event

Routine and Non-Emergency Care

In addition to burdens created by emergency events, New Yorkers will still require routine health care following the intentional release of a biologic agent. Maintaining routines can be reassuring to both employees and patients. Providers can keep regular office hours or expand hours to provide both non-emergency and emergency care as needed.

Recognize and Treat or Refer Cases for Mental Health Services

It is particularly important for primary care physicians to be alert for signs and symptoms of psychological dis-

Box 1. Standard Precautions

- Wash hands frequently.
- Wear utility gloves during at-risk activities.
- Avoid chapped and cracked hands and use a water-based hand lotion frequently. (Petroleum-based products break down latex.)
- Wear protective barriers such as gowns, boots, masks, and eye protection when working with blood and blood products, body fluids, or waste that may contain blood.
- Do not recap, shear, or break needles at any time. Discard needles and sharp objects in protective containers.
- Sterilize or disinfect reusable equipment.
- Place items that contain blood in a red biohazard plastic bag.
- Do not pick up broken glass with bare hands.
- Use mouthpieces or resuscitator bags whenever resuscitation is required.

stress. Professional help is indicated when emotional problems persist or worsen over time, if persons have difficulty performing everyday tasks, or if they are relying on alcohol or drugs to cope (**Table 4**). Providers should encourage patients to follow their daily routines whenever possible to reduce the stress associated with new and unfamiliar circumstances. Patients should also strive to maintain a healthy diet, regular exercise, and adequate sleep.

TABLE 3. PRECAUTIONS

Precaution	Description
Standard	Wash hands before and after entering the patient's room. Gloves and gowns should be worn to prevent exposure to blood, stools, and other bodily fluids and excretions. Use mask and eye protection or a face shield during procedures likely to aerosolize body fluids or secretions.
Contact	For patients with the potential to infect others, order a private room or group patients with the same infectious agent. Wear gloves when entering the room and a gown if clothing is likely to make contact with the patient, environmental surfaces, or patient care equipment.
Droplet	For patients with the potential to infect others, order a private room or group patients with the same infectious agent. Wear a mask when within 3 feet of the patient.
Airborne	Require a negative pressure isolation room and appropriate respiratory protection such as the N95 respirator, which must be fit tested.

Certain individuals are particularly vulnerable to psychiatric distress following a disaster:

- Persons exposed to the dead and injured, including eyewitnesses
- Emergency first-responders
- Medical and mental health personnel caring for victims
- Persons with a history of prior exposure to disaster or trauma
- Persons with a history of childhood loss or separation
- Persons with pre-existing substance abuse, psychiatric illness, or a history of having been abused
- Persons with a family history of psychiatric disorders
- Geriatric and pediatric populations
- Persons living in chronic poverty
- Persons who are homeless, or otherwise socially isolated

While most people are resilient, some, especially those with first-hand exposure or loss as a result of a disaster, will develop post-traumatic stress disorder (PTSD), a severe and persistent anxiety disorder. Symptoms that predict the likelihood of developing PTSD include avoiding thoughts about or contact with the traumatic event. PTSD requires professional treatment, and has been shown to be responsive to cognitive psychotherapy and serotonin-uptake inhibitor antidepressants.¹⁰ Primary care physicians should encourage their patients to follow the general approaches to reducing stress noted above after a disaster, as this can attenuate risk for developing PTSD.

During an emergency, patients should be assessed for PTSD, depression, and alcohol and substance abuse—known consequences of disaster and trauma. Many people can be effectively treated in the primary care setting. Referrals for acute stress disorders and for mental health specialty care can be obtained by having the patient or their family call LIFENET at (800) 543-3638. Treatment can be effective even months or years after the disaster.

Educate Patients About the Health Implications of a Disaster

Patients may ask health care professionals for information about the health implications of an emergency.

Providers should:

- Emphasize what patients can realistically do to protect themselves.
- Use clear, plain language, and listen to and address patients' concerns.
- When appropriate, admit lack of expertise and utilize NYC DOHMH resources to answer patient questions. The NYC DOHMH website, Health Alert Network (HAN), and Provider Access Line (PAL) are all excellent resources for additional information.
- Be frank with patients about the scientific uncertainties, especially during the initial days of the emergency. Acknowledge significant disagreement among experts.
- Be cautious when comparing the risk of injury or death from a biologic event with other causes of injury or death—such comparisons are often flawed because the exact circumstances are not comparable.

6. Get Accurate Information During an Emergency

Register for the Health Alert Network (HAN) to Receive NYC DOHMH Provider Alerts

The HAN is NYC DOHMH's primary mechanism for providing information on urgent and emergent public health issues to providers, hospitals, and public health officials. The HAN website allows registered subscribers to access a variety of public health-related documents, to receive urgent health alerts and up-to-date information during city emergencies, and to participate in an online community of medical providers with a particular interest in public health. In an emergency situation, the HAN compiles information from the NYC DOHMH, the Centers for Disease Control and Prevention, and other sources. Providers can subscribe to the HAN by registering with the NYC MED provider portal at: www.nyc.gov/health/nycmed.

Phone Communication

Since conventional or other weapons could interrupt electrical power, Internet services and digital phones may not function. Providers should obtain alternate means of communication before an emergency.

Cellular phones can be used until the batteries fail, but during the blackout of 2003 the system became overloaded. Providers should equip offices with at least 1 land-line telephone that does not require power from an electrical outlet. Telephone lines are on a separate system and may continue to function when electrical outlets lose power. Providers should also maintain at least 1 fax machine (some models are also powered through telephone lines) as mass faxing is a viable method for NYC DOHMH to send provider alerts. A battery-run radio or other non-electric power sources can also help keep providers informed during an emergency.

7. Understand Emergency Responsibilities at Affiliated Hospitals

Providers should become familiar with emergency preparedness plans, decontamination, and isolation procedures at their affiliated hospital(s) in advance and should attend available educational sessions about chemical, biologic, and nuclear emergencies. Providers who are not affiliated with hospitals in their area may choose to participate by agreeing to provide care to ambulatory patients or “worried well” diverted from hospitals during an event. In addition, providers with special skills (as well as language skills or the ability to work with special populations) can be especially useful to health care facilities during an event.

8. Identify and Consider Emergency Volunteer Opportunities

Point of Dispensing Clinics (PODs)

If a bioterrorism event does occur, large-scale distribution of prophylactic medications or vaccinations may become necessary. The NYC DOHMH has developed specific protocols and triage plans for citywide sites to serve as Point-of-Dispensing clinics (PODs) where health providers can dispense treatment should the need arise.

Medical Reserve Corps (MRC)

NYC DOHMH created the Medical Reserve Corps (MRC)/NYC to identify in advance a group of potential health professional volunteers who can help staff PODs. Any licensed or certified health or mental health professional who lives or works in NYC can join the MRC. Call (866) NYC-DOH1/(866) 692-3641, visit: www.medicalreserve.org, or e-mail healthmrc@health.nyc.gov for more information. NYC DOHMH provides MRC volunteers with free online continuing education (CE) credits related to preparedness, including POD training drills.

9. Devise a Personal Preparedness Plan

While it is important to prepare the medical office for emergencies, it is crucial that providers also prepare for their own personal needs and encourage their office staff to do the same. A personal preparedness plan may afford peace of mind and free providers to assist in the emergency response effort if they know their families are safe. Such preparation includes developing a household disaster plan and determining family meeting places; storing several days’ supply of essential items like water and non-perishable foods in the home; and compiling items like water, cash, and copies of important documents in a “Go-Bag” that is ready if relocation or evacuation become necessary. The NYC Office of Emergency Management has developed the “Ready New York” guide, a comprehensive source of information on ways to prepare families for disasters. To receive a copy, call 311 or visit: www.nyc.gov/oem.

The NYC DOHMH web site (www.nyc.gov/health) also lists available and upcoming training sessions for health professionals and provides information on NYC Aware, a program designed to keep NYC residents current about NYC DOHMH preparedness for possible public health emergencies, including biologic events.

TABLE 4. NORMAL, SHORT-TERM PSYCHOLOGICAL REACTIONS TO CRISIS REQUIRING REFERRAL FOR MENTAL HEALTH SERVICES IF PROLONGED

Feelings of anger, anxiety, or fear	Headaches, exhaustion, difficulty sleeping
Hopelessness, helplessness, or sadness	Worsening of chronic medical conditions
Emotional detachment	Lack of self-care
Difficulty concentrating	Abusive behavior
Avoidance of people, places, or things	Behavioral changes (eg, increased substance abuse including the abuse of prescription and over-the-counter medications)
Impaired work or school performance	
Gastrointestinal symptoms (eg, loss of appetite or overeating)	

PROVIDERS — Register for NYC MED Now! NYC MED is the one-stop portal for providers to access all New York City (NYC) Department of Health and Mental Hygiene on-line applications. This includes the Health Alert Network, Citywide Immunization Registry, Medical Reserve Corps, Universal Reporting Form, and City Health Information Continuing Medical Education. To register, visit www.nyc.gov/health/nycmed. (To register for NYC MED, you must have an email address, Windows 2000 or XP, and Internet Explorer 5.5 or higher.)

RESOURCES

General Information on Emergency Preparedness

- New York City DOHMH (New York City Aware): www.nyc.gov/html/doh/html/bt/bt.html
- Centers for Disease Control and Prevention: www.bt.cdc.gov
- United States Department of Homeland Security: www.ready.gov
- Federal Emergency Management Agency (FEMA): www.fema.gov/areyouready
- American Academy of Pediatrics (preparedness recommendations for children): www.aap.org/terrorism
- American Red Cross: www.redcross.org/services/disaster/beprepared

Report Potential Cases/Clusters to the Local/State Health Departments

- NYC DOHMH Provider Access Line: (866) NYC-DOH1
After hours (within Manhattan): (212) 764-7667
Outside Manhattan: (800) 222-1222
- NYC DOHMH Communicable Disease: (212) 788-9830
Fax: (212) 788-4268
- New York State Department of Health: (518) 473-4436
After hours Duty Officer: (866) 881-2809

- Wadsworth Center Laboratory: (518) 474-2821

Mental Health Services in NYC

- LIFENET Telephone Access, 24 Hours a Day and 7 Days a Week
In English: (800) LIFENET/(800) 543-3638
In Spanish: (800) AYUDESE/(877) 298-3373
In Chinese: (800) ASIAN LIFENET/(877) 990-8585
For other languages, call (800) LIFENET and ask for an interpreter
TTY hard of hearing: (212) 982-5284
www.800lifenet.com

Volunteer Opportunities

- Medical Reserve Corps/NYC:
(866) NYC-DOH1/(866) 692-3641
www.medicalreserve.org
email: healthmrc@health.nyc.gov

Health Alert Network (HAN)

- Register for the HAN: www.nyc.gov/health/nycmed

Personal Preparedness

- Ready NY Guide, www.nyc.gov/oem

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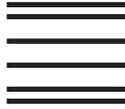
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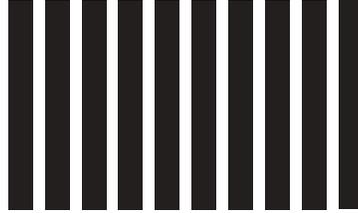


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**Continuing Medical Education/
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Preparation for Bioterrorism**

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OF HEALTH AND MENTAL HYGIENE
CITY HEALTH INFORMATION VOL. 24 No. 2
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Objectives:

- At the conclusion of the course, participants should be able to
1. Identify resources to learn how to recognize clinical signs and symptoms of potential biologic agents and identify steps to limit the spread of infectious agents in the workplace.
 2. Recognize characteristics of suspicious clusters of diseases.
 3. Know how to report potential cases or clusters of diseases.
 4. Be familiar with the NYC and NYS Health Alert Networks (HAN), as well as volunteer opportunities, such as the Medical Reserve Corps (MRC).
 5. Identify resources to create and maintain a family emergency plan and encourage employees to do the same.

Accreditation:

The continuing education (CE) activity is open to nurses, physicians (MDs, DOs), physician assistants, dentists, and dental hygienists.
The New York City Department of Health and Mental Hygiene (NYC DOHMH) is accredited by the Medical Society of the State of New York to sponsor continuing medical education for physicians. The NYC DOHMH designates this continuing medical education activity for a maximum of 1.0 hours in Category One credit toward the AMA/PRA (Physician's Recognition Award). Each physician should claim only those hours of credit that he/she actually spent on the educational activity.
Participants in CE activities sponsored by the NYC DOHMH are required to submit their name, address, and professional degree. Such information will be maintained

in the Department's CE program database. If participants in CE activities so request, the information will be used by the CE Program to verify whether a professional participated in an activity and, if the activity was associated with an exam, passed the exam.

The Department will not share information in the CE database with other organizations without permission from persons included in the database, except in certain emergencies or disasters where public health agencies deem communication with all health care providers to be essential or where required by law. Participants who provide e-mail addresses upon registration for an activity may receive electronic announcements from the Department about future CE activities as well as other public health information.

The NYC DOHMH is an approved provider of continuing education by the New York State Nurses Association, which is accredited as an approver of continuing education in nursing by the American Nurses Credentialing Center's Commission on Accreditation. A total of 1.2 contact hours will be awarded to nurses for participation in this activity.

The New York State Education Department has approved the New York City Department of Health and Mental Hygiene, Bureau of Oral Health, Programs and Policy as a sponsor of continuing education courses for dentists and dental hygienists. The State Board for Dentistry will accept its courses in those subject areas that the Department has determined are appropriate continuing professional education for dentists and dental hygienists. The Department of Health and Mental Hygiene, Bureau of Oral Health, Programs and Policy, designates this continuing dental education course for 1.0 hour.

Each dentist/hygienist should claim only those hours of credit that he/she actually spent in each of these courses. Participants must submit the accompanying exam by February 28, 2006.

CE Activity Faculty: Beatty ME, Rinchuso A, Gill K, Samuels BN, Weisflies
The Faculty does not have any financial arrangements or affiliations with any commercial entities whose products, research, or services may be discussed in these materials.

CE Activity

Preparation for Bioterrorism

1. Which of the following is likely to be a sign that an outbreak may be intentional?
- A. Disease that is unusual for a given geographic area or seasonality
 - B. Unusual clustering of illness by location or time
 - C. Unusual age distribution for common diseases
 - D. Increase in more serious illness in previously healthy patients
 - E. All of the above

2. Which of the following is not one of the 6 biologic agents at the top of the list of possible bioterrorism agents?

- A. *Bacillus anthracis* (anthrax)
- B. *Yersinia pestis* (plague)
- C. Variola major (smallpox)
- D. Avian influenza virus
- E. *Clostridium botulinum* toxin (botulism)
- F. *Francisella tularensis* (tularemia)
- G. *Flaviviruses* and *arenaviruses* (hemorrhagic fever including Ebola hemorrhagic fever, Marburg hemorrhagic fever, Lassa fever, and Argentine hemorrhagic fever)

3. For which of the following are Standard Precautions usually sufficient to prevent their further spread (you may choose more than 1 answer):

- A. Smallpox
- B. Botulism
- C. Tularemia
- D. Anthrax

- E. Pneumonic plague

4. When communicating risk information providers should:

- A. Emphasize what patients can do to minimize risk
- B. Use clear, simple language and listen to and address their patients' concerns
- C. Avoid minimizing uncertainty
- D. Disclose data gaps and areas of significant disagreement among experts
- E. Use risk comparisons with caution
- F. All of the above

5. Personal preparedness measures include:

- A. Developing a household disaster plan and determining family meeting places
- B. Storing essential items like water and non-perishable foods in your home in case you need to stay there for several days
- C. Compiling items like water, some cash, and copies of important documents in a "Go Bag" that you can take with you if you need to leave your home for several days
- D. All of the above

PLEASE PRINT LEGIBLY, and include your complete address, with city, state and zip code.

Name _____ Degree _____

Address _____

City _____ State _____ Zip Code _____

Date _____ Telephone _____

E-mail address _____

CE Activity

This issue of *City Health Information*, including the continuing education activity, can be downloaded from the publications section at nyc.gov/health. To access *City Health Information* and Continuing Education online, visit www.nyc.gov/html/doh/html/chi/chi.html

Instructions

Read this issue of *City Health Information*, including the information on the reference guide to find the correct answers to the questions. To receive continuing education credit you must answer all 5 of the 5 questions correctly. If you would like to participate in this activity by submitting the response card:

1. Complete all information on the response card, including your name, degree, mailing address, telephone number, and e-mail address. PLEASE WRITE CLEARLY

2. Select your answers to the questions and check the corresponding boxes on the response card.

3. Return the response card (or a photocopy) postmarked no later than February 28, 2006. Mail to CE Administrator, NYC Dept. of Health and Mental Hygiene, 125 Worth Street, CN-29C, New York, NY 10013.

To participate in this activity online, visit www.nyc.gov/html/doh/html/chi/chi.html. Online participants will have their responses graded and will be able to generate a certificate immediately.