

Preparing for and Responding to Bioterrorism

Information for the Public Health Workforce



Consequence Management: for Public Health Professional Staff (Module B)

Developed by

Jennifer Brennan Braden, MD, MPH

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**Northwest Center for Public Health Practice
University of Washington
Seattle, Washington**

*This manual and the accompanying MS Powerpoint® slides are current as of Dec 2002.
Please refer to <http://nwcphp.org/bttrain/> for updates to the material.

Acknowledgements

This manual and the accompanying MS PowerPoint® slides were prepared for the purpose of educating the public health workforce in relevant aspects of bioterrorism preparedness and response. Instructors are encouraged to freely use portions or all of the material for its intended purpose.

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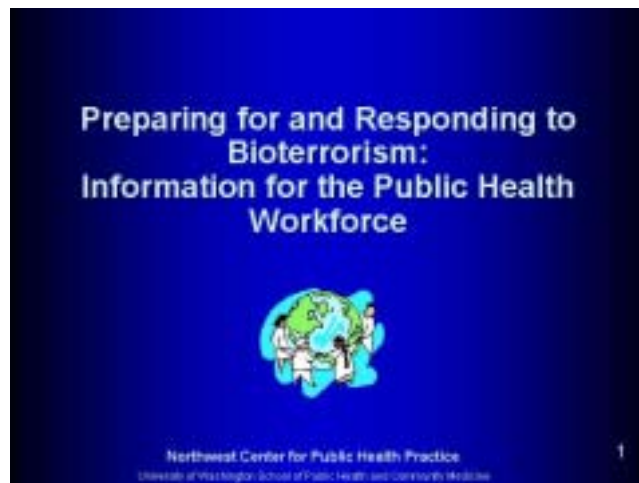
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About This Course



Preparing for and Responding to Bioterrorism: Information for the Public Health Workforce is intended to provide public health employees with a basic understanding of bioterrorism preparedness and response and how their work fits into the overall response. The course was designed by the Northwest Center for Public Health Practice in Seattle, Washington, and Public Health—Seattle & King County’s Communicable Disease, Epidemiology & Immunization section. The target audience for the course includes public health leaders and medical examiners, clinical, communicable disease, environmental health, public information, technical and support staff, and other public health professional staff. Health officers may also want to review the more detailed modules on diseases of bioterrorism in *Preparing for and Responding to Bioterrorism: Information for Primary Care Clinicians*: Northwest Center for Public Health Practice (available at <http://nwcp.org/bttrain>). Public health workers are a very heterogeneous group, and the level of detailed knowledge needed in the different aspects of bioterrorism preparedness and response will vary by job description and community. Therefore, the curriculum is divided into modules, described in Appendix A.

The course incorporates information from a variety of sources, including the Centers for Disease Control and Prevention, the United States Army Medical Research Institute in Infectious Disease (USAMRIID), the Working Group on Civilian Biodefense, the Federal Emergency Management Agency, Public Health—Seattle & King County, and the Washington State Department of Health, among others (a complete list of references is given at the end of the manual). The curriculum reflects the core competencies and capacities outlined in the following documents:

CDC. Bioterrorism preparedness and response: core capacity project 2001 (draft), August 2001.

<http://www.bt.cdc.gov/Documents/CoreCapacity082801.pdf>

CDC. Cooperative Agreement U90/CCUXXXXXX-03-X Public Health Preparedness and Response for Bioterrorism.

<http://www.bt.cdc.gov/Planning/CoopAgreementAward/index.asp>

CDC. The public health response to biological and chemical terrorism: interim planning guidance for state public health officials, July 2001.

www.bt.cdc.gov/Documents/Planning/PlanningGuidance.PDF

Center for Health Policy, Columbia University School of Nursing. Core public health worker competencies for emergency preparedness and response, April 2001: <http://cpmcnet.columbia.edu/dept/nursing/institute-centers/chphsr/>

Center for Health Policy, Columbia University School of Nursing. Bioterrorism and emergency readiness: competencies for all public health workers (preview version II), November 2002. <http://cpmcnet.columbia.edu/dept/nursing/institute-centers/chphsr/>

The course is not copyrighted and may be used freely for the education of public health employees and other biological emergency response partners.

Course materials will be updated on an as-needed basis with new information (e.g., guidelines and consensus statements, research study results) as it becomes available. For the most current version of the curriculum, please refer to: <http://nwcphp.org/bttrain>.

How to Use This Manual

This manual provides the instructor with additional useful information related to the accompanying MS PowerPoint® slides. The manual and slides are divided into six topic areas: Introduction to Bioterrorism, Emergency Response Planning, Diseases of Bioterrorist Potential, Health Surveillance and Epidemiologic Investigation, Consequence Management, and Communications. Links to Web sites of interest are included in the lower right-hand corner of some slides and can be accessed by clicking the link while in the “Slide Show” view. Blocks of material in the manual are periodically summarized in the “Key Point” sections, to assist the instructor in deciding what material to include in a particular presentation. A Summary of Key Points is indicated in bold, at the beginning of each module.

The level of detailed knowledge required may vary for some topics by job duties. Therefore, less detailed custom shows are included in the Emergency Response Planning and Diseases of Bioterrorist Potential: Overview modules for those workers without planning oversight or health care responsibilities, respectively. In addition, there are three Consequence Management modules: for public health leaders, for public health professionals, and for other public health staff (see Appendix A).

Consequence Management



Summary of Key Points (Slides 44-46)

1. The initial and primary response to the consequences of a terrorist event occurs at the local level.
2. ESF 8 provides for federal assistance to supplement state and local efforts in response to a public health emergency.
3. Medical, practical, and feasibility considerations are important in the decision to implement quarantine.
4. Individual, community, and event-specific factors influence the psychological response to a public health emergency.
5. Most individuals will function adequately following a traumatic event, but a few will need psychological or medical intervention.
6. Many emotional reactions of disaster survivors stem from living problems brought about by the disaster.
7. The psychological response and long-term effects following a traumatic event are influenced by an individual's unique combination of health, developmental level, resources, and experiences.

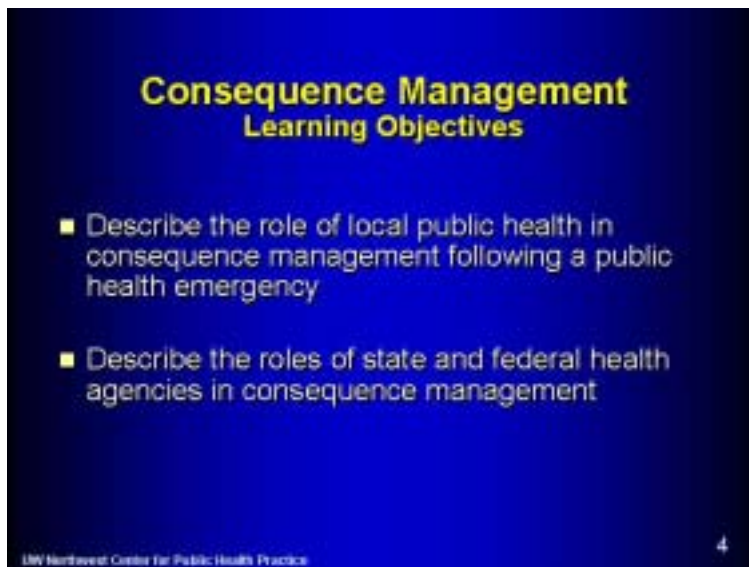
8. Anxiety responses are most likely following a biological attack, but depression, physical symptoms, and substance use may also occur.

Slide 1: Curriculum Title

Slide 2: Acknowledgements

Slide 3: Module Title

Learning Objectives (Slides 4-6)

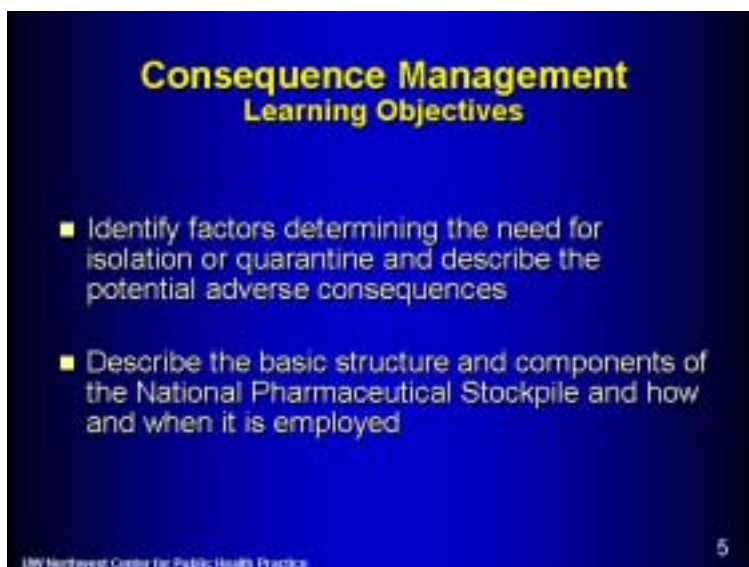


**Consequence Management
Learning Objectives**

- Describe the role of local public health in consequence management following a public health emergency
- Describe the roles of state and federal health agencies in consequence management

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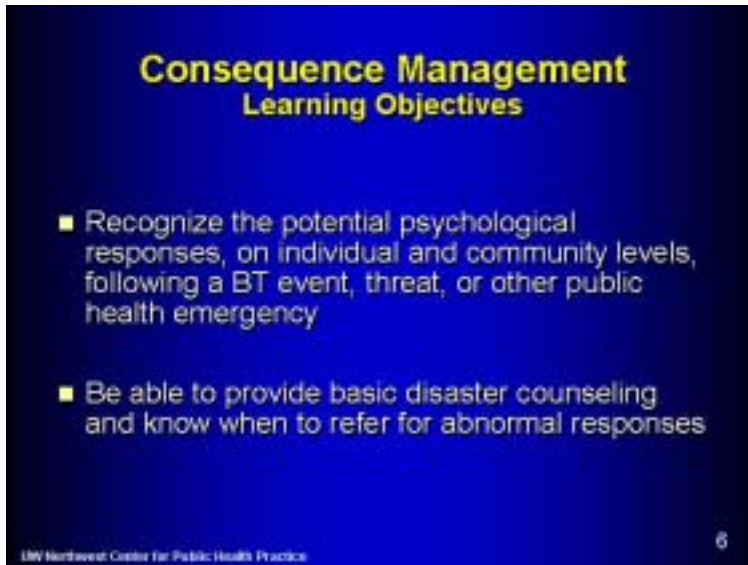


**Consequence Management
Learning Objectives**

- Identify factors determining the need for isolation or quarantine and describe the potential adverse consequences
- Describe the basic structure and components of the National Pharmaceutical Stockpile and how and when it is employed

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The learning objectives for this module are:

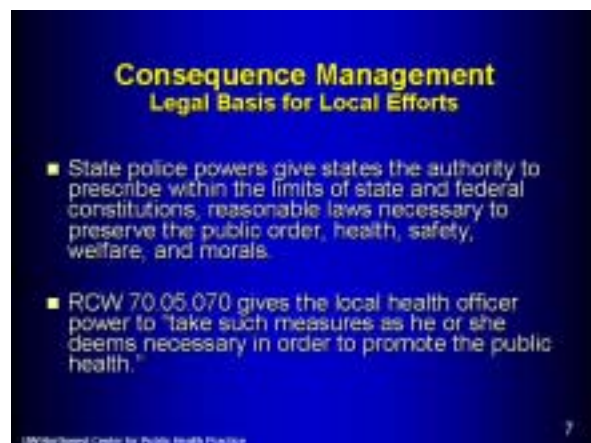
1. Describe the role of public health in consequence management following a public health emergency
2. Describe the roles of state and federal health agencies in consequence management
3. Identify factors determining the need for isolation or quarantine and describe the potential adverse consequences
4. Describe the basic structure and components of the National Pharmaceutical Stockpile and how and when it is employed
5. Recognize the potential psychological responses, on individual and community levels, following a BT event, threat, or other public health emergency
6. Be able to provide basic disaster counseling and know when to refer for abnormal responses

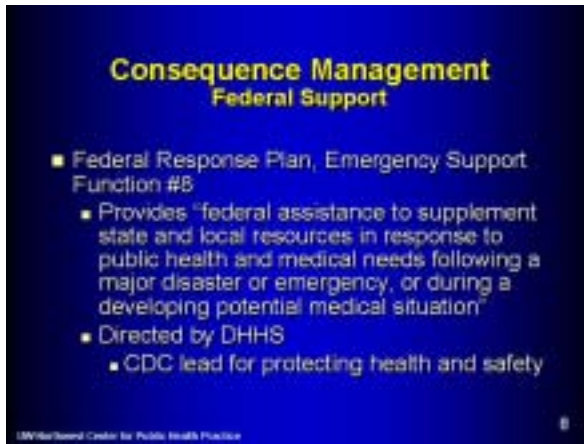
Legal Basis and Role of Public Health (Slides 7-12)

Key Points

1. States have the primary responsibility for managing the consequences of terrorism.
2. CDC, in coordination with FEMA, provides federal assistance to states in response to medical and health needs following a public health emergency.
3. The roles of public health in consequence management include:
 - Resource allocation and coordination
 - Communication and education
 - Public health control measures

Slide 7 summarizes the legal basis behind public health efforts to address the health consequences of an event and describes the powers of the health officer in Washington State. State police powers are included in the 10th amendment of the U.S. Constitution.





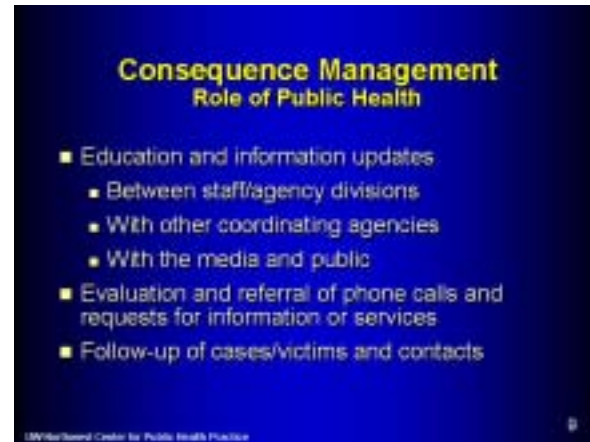
Consequence management can be divided into two phases: the response phase and the recovery phase. The *response phase* consists of the initial actions taken following an event (or suspected event) and includes interventions to eliminate the source of exposure, prevent further exposure, treat those infected, and provide prophylaxis to those exposed. The *recovery phase* consists of actions taken to address long-term effects of the event, and lasts until normal operations resume without restrictions stemming from the event. Examples of recovery phase activities include long-term follow-up of cases and exposed persons, clean-up of contaminated areas, and evaluation of morbidity and mortality related to an event. Involvement of federal agencies other than FEMA in support of local efforts depends on the nature of the terrorist incident (slide 8).

In the case of biological terrorism, the Department of Health and Human Services will activate the Health and Medical Services Support Plan for the Federal Response to Acts of Chemical/Biological Terrorism (through Emergency Support Function #8), in coordination with FEMA. State and local corollaries to ESF 8 do exist. The Washington Department of Health is the lead agency in Washington's State ESF 8 and provides assistance to local jurisdictions when requested.

Consequence Management: Role of Public Health

(Slides 9-10)

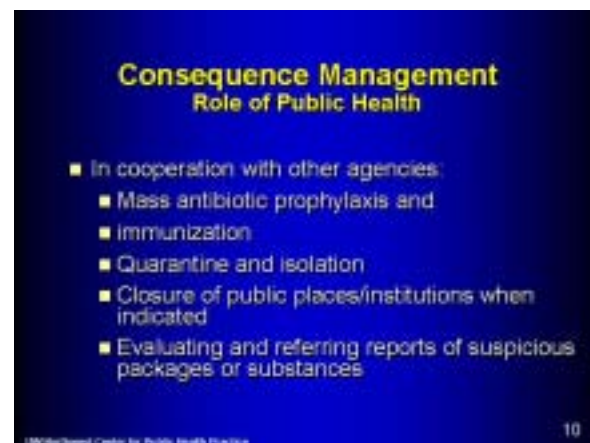
The next two slides outline the role of public health in consequence management following a biological emergency. Educating and informing the public is one of the Ten Essential Services for Public Health. Communication is especially important in situations calling for coordination between multiple agencies and in crisis, or high-concern, situations. All involved parties should be updated regularly on the course of events. Communication issues will be discussed more thoroughly in the “Communication and Informatics” module. The health department will likely be inundated with calls following an event. Many of the questions and requests will not be answerable by the individual receiving the call, and thus, protocols for initial assessment and referral will need to be established.



**Consequence Management
Role of Public Health**

- Education and information updates
 - Between staff/agency divisions
 - With other coordinating agencies
 - With the media and public
- Evaluation and referral of phone calls and requests for information or services
- Follow-up of cases/victims and contacts

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**Consequence Management
Role of Public Health**

- In cooperation with other agencies:
 - Mass antibiotic prophylaxis and immunization
 - Quarantine and isolation
 - Closure of public places/institutions when indicated
 - Evaluating and referring reports of suspicious packages or substances

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Consequence Management: Protocols and Procedures

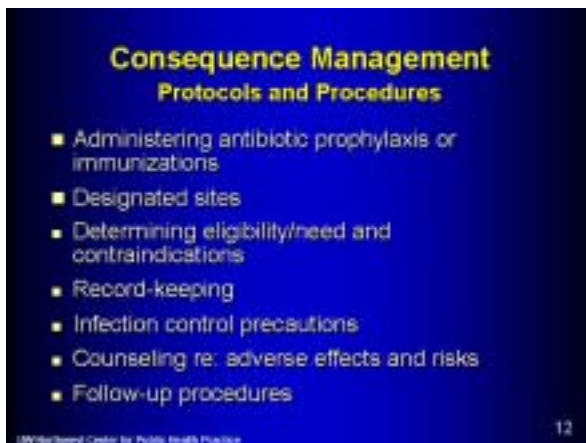
(Slides 11-12)



**Consequence Management
Protocols and Procedures**

- Be familiar with your agency's protocols and procedures in an emergency for:
 - Triage calls and clinic patients
 - Quarantine and isolation
 - Designated quarantine sites
 - Designated staff
 - Infection control precautions
 - Prerequisites or precautions for entering and exiting facilities

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**Consequence Management
Protocols and Procedures**

- Administering antibiotic prophylaxis or immunizations
- Designated sites
- Determining eligibility/need and contraindications
- Record-keeping
- Infection control precautions
- Counseling re: adverse effects and risks
- Follow-up procedures

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Any large illness or disease outbreak will tax the resources of the health department and the community. Knowing how to manage the flow of clients and staff will be critical to the orderly and efficient care and provision of services. The delivery of mass antibiotic prophylaxis and immunizations will likely require additional space, beyond the health department clinic(s) usually used for provision of health services. Public health workers involved in the health care and education of community members should familiarize themselves with their agency's emergency protocols and procedures prior to an actual event.

Quarantine and Isolation (Slides 13-19)

Key Points

1. When confined to a specific locale, the legal authority for quarantine rests with state and local health authorities.
2. The decision to quarantine should take into consideration
 - The risk of disease transmission
 - The ability to maintain the quarantine
 - The potential effectiveness and consequences of the quarantine

Slide 13 lists the CDC definitions for isolation and quarantine. Isolation—the *separation* of a *contagious* individual or small group *from everyone else*—is much easier to implement, and more positively received than quarantine. Quarantine—the *restriction in activities* of *exposed* individuals (only a portion of whom may actually be contagious) from those not exposed—may be difficult to implement and maintain and may be received negatively by those affected. Population-wide quarantine measures may include suspension of large public gatherings, closure of public places, restriction of travel (air, rail, water, motor vehicle, and pedestrian), or *cordon sanitaire* (a line around a quarantined area guarded to prevent spread of disease by restricting passage into and out of the area).

CDC Definition: Quarantine vs. Isolation

- **Isolation**
The separation of a person or group of persons from other people to prevent the spread of infection
- **Quarantine**
Restriction of activities or limitation of freedom of movement of those *presumed exposed* to a communicable disease in such a manner as to prevent effective contact with those not so exposed

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CDC Definition: Quarantine vs. Isolation

- Quarantine measures may include:
 - Suspension of public gatherings
 - Closure of public places
 - Restriction of travel
 - Cordon sanitaire

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Quarantine
Legal authority – Local Level

- When confined to a specific locale (community, state) – rests with local and/or state health authorities (police power)
- Few states have specific policies/procedures for deciding whether quarantine is warranted in a specific situation
- Be familiar with the laws pertaining to quarantine or that might be interpreted as applying to quarantine existing in your state

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The authority for quarantine usually rests with the local jurisdiction or state (the latter if an infectious disease affects more than one community or has the potential to spread to other jurisdictions). The federal government can provide assistance to state and local authorities in enforcing quarantine, when requested. The federal government can also enact quarantine by executive decision if a risk of transmission of disease across state lines exists, or when the risk pertains to persons arriving in the United States from outside the country. Once the president decides to enact quarantine, the Centers for Disease Control and Prevention are given authority to manage the quarantine.

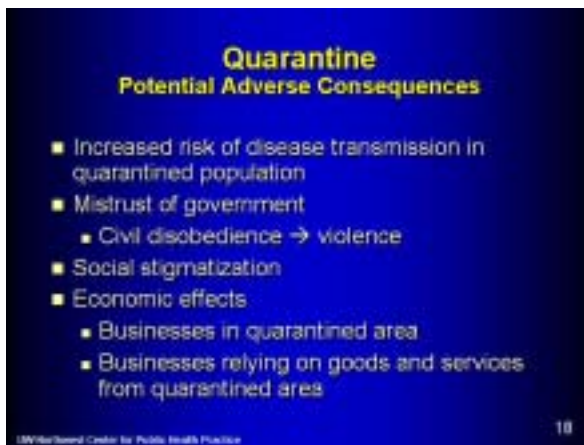
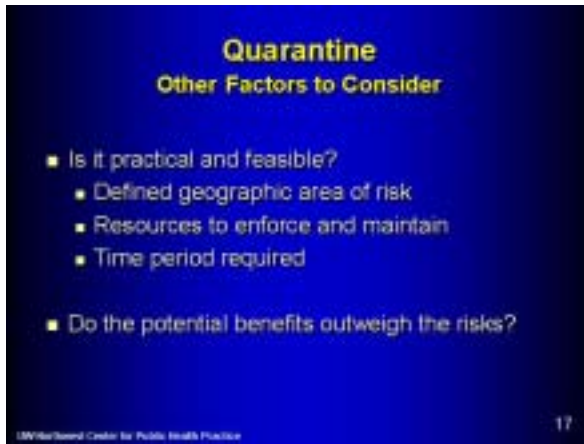
Quarantine and Isolation: Factors to Consider (Slides 16-18)

Neither isolation nor quarantine is warranted if the disease is not transmitted person-to-person. If the disease is transmitted person-to-person, isolation during the infectious period is usually sufficient. The decision to quarantine depends on a combination of factors, including the presence of an asymptomatic infectious period (i.e., the person is contagious to others before symptoms are recognized or a diagnosis has been established). Other medical issues that may be considered by the health officer or medical epidemiologist include the infectious dose (i.e., how contagious is it?), the extent of the outbreak, the amount of contact and closeness required to spread illness (i.e., are only close contacts at risk?), the susceptibility of the population (i.e., how many people are already immune to the disease?), and the mode of transmission (e.g., airborne transmission can reach more people, more “covertly” than direct contact; the latter can be avoided without strict isolation of the infected individual).

Medical Reasons for Isolation or Quarantine

- Isolation
 - Disease transmitted person-to-person
 - i.e., plague pneumonia, smallpox, viral hemorrhagic fevers
 - Degree of isolation appropriate for mode of transmission (e.g., respiratory, direct contact)
- Quarantine
 - Disease may be transmitted by exposed persons, prior to recognition of symptoms or diagnosis
 - Smallpox infectious at rash onset, but rash may be overlooked in early stages

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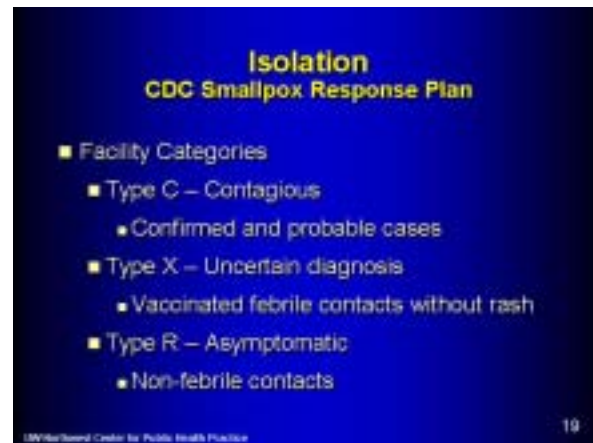


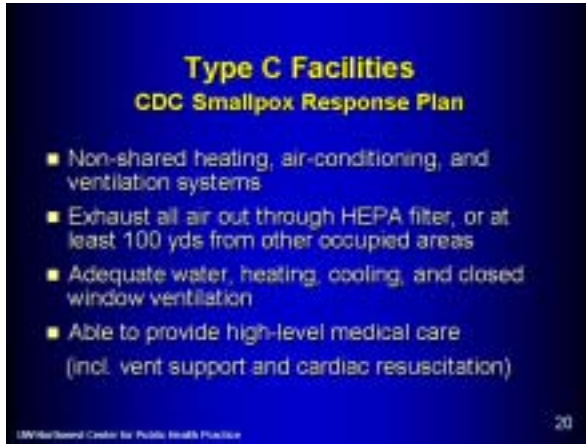
Beyond the medical indications, quarantine also needs to be practical and feasible to implement. The basic concept behind quarantine is preventing unexposed individuals from becoming exposed. If a geographic area of risk for exposure cannot be defined, the boundaries of the quarantine cannot be accurately established, and it will not be successful. The concept of quarantine may carry negative connotations, making enforcement and maintenance potentially difficult. Quarantine restricts the freedom of movement of healthy, as well as ill, individuals, disrupts their normal routine, and may separate them from family members and loved ones. Businesses located in the quarantine area may suffer due to lack of customers and resources; and businesses outside of the quarantined area may suffer if they rely on supplies from locations within the quarantined area. If the reasons given by public health officials for implementing a quarantine are not accepted by members of the general public, civil disobedience or social unrest may result, and law enforcement may be called on to enforce the quarantine. The quarantine will not be successful if it is not maintained for the full period of infectiousness. In addition,

provisions for basic needs such as food, bathing, and laundry will need to be established and maintained at the quarantine site. Besides the risks already mentioned, quarantine also poses a risk for disease transmission within the quarantined area. Persons presumed exposed, but not actually infected, are at risk for acquiring infection.

Smallpox Isolation (Slides 19-22)

Slide 19 describes the proposed plans for quarantine and isolation facilities/locations in a smallpox outbreak, as outlined in CDC's Smallpox Response Plan. The establishment of three types of facilities, based on case status, will help to minimize transmission of smallpox from infected individuals to those exposed but not necessarily infected (i.e., individuals being monitored for the development of smallpox). Non-febrile contacts of cases (i.e., persons who have had contact with individuals confirmed or suspected of having smallpox) will be monitored for fever, and transferred to a Type X facility, should fever develop. All individuals entering a Type X or Type C facility (including staff) will be vaccinated for smallpox at the time of entry. A Type R facility may be a person's home. The following slides summarize the requirements of the Type C, X, and R facilities. Please refer to the CDC Smallpox Response Plan and Guidelines for more details on preparation of the facilities and transportation of confirmed or suspected smallpox cases to the facilities (www.bt.cdc.gov/agent/smallpox/response-plan/index.asp).

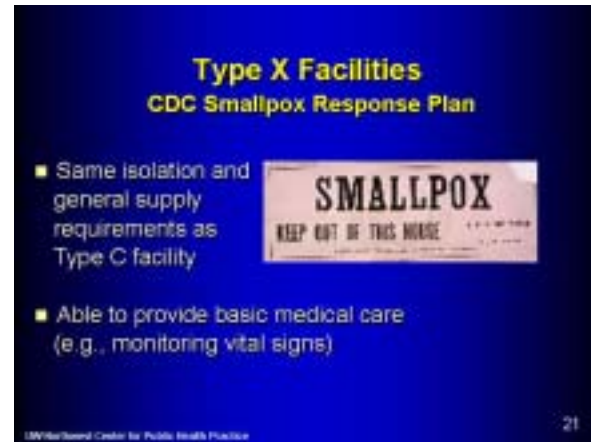




The purpose of a Type C facility is to house individuals with smallpox and thus minimize the exposure of susceptible individuals to contagious individuals. Anyone entering or admitted to a Type C facility must be vaccinated, including confirmed, probable, and suspected smallpox cases and facility staff (e.g., health care, environmental services). The requirements for a Type C facility are listed in slide 20. Type C facilities must be able to provide the following medical services: supportive care with IV fluids, antibiotics, and so on, skin care, oxygen monitoring and oxygen, medical vital signs monitoring, cardiac and respiratory resuscitation, and ventilatory support.

Prior to confirmation of a smallpox outbreak or activation of the designated Type C facility, confirmed or suspected smallpox patients may be admitted to a hospital facility that also houses non-smallpox patients if the facility has negative pressure isolation rooms with 1) negative air pressure in relation to the corridor and surrounding areas and all exhaust externally vented away from air intakes or where people may pass and 2) a toilet, sink, bath, and shower for the patient. Air exhaust should be separated by more than 25 feet from the air intake. Unless the number of smallpox patients is sufficiently low to allow for appropriate strict isolation precautions in the hospital facility, the smallpox patients should be transferred to a Type C facility as soon as possible, and the room, equipment, and other materials decontaminated as outlined in CDC's Smallpox Response Plan.

The purpose of a Type X facility is to house a febrile contact during the observation period for further development of symptoms of smallpox (i.e., rash). If rash develops during the observation period, the individual should be moved to a Type C facility. Type X facilities need to supply only basic medical care functions such as monitoring vital signs.



Type X Facilities
CDC Smallpox Response Plan

- Same isolation and general supply requirements as Type C facility
- Able to provide basic medical care (e.g., monitoring vital signs)

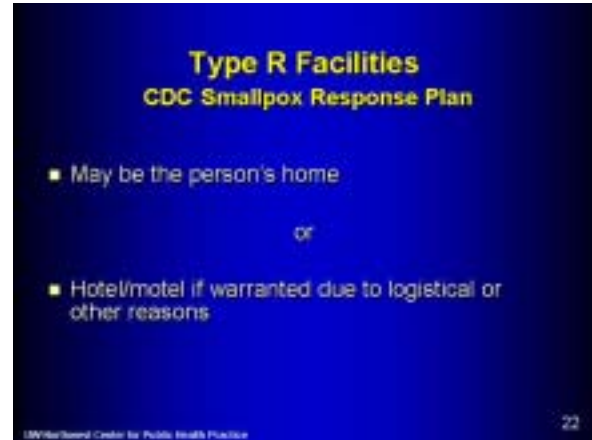
SMALLPOX
KEEP OUT OF THIS HOUSE

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Division of Field Epidemiology

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Asymptomatic contacts are not considered infectious and thus may remain in their own homes. They may continue routine daily activities as long as they remain within 20 miles of their city of residence and monitor their temperatures twice daily. If an asymptomatic contact develops two successive fevers $\geq 101^{\circ}\text{F}$, they should be transported from their home to a Type X or Type C facility, as appropriate.



Type R Facilities
CDC Smallpox Response Plan

- May be the person's home

or

- Hotel/motel if warranted due to logistical or other reasons

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National Pharmaceutical Stockpile

Key Point (Slides 23-25)

The National Pharmaceutical Stockpile is a national resource that will provide antibiotics and medical supplies to communities in the event of a biological or chemical attack.

National Pharmaceutical Stockpile
Purpose

- Provides resources to respond to both biologic and chemical attacks
- Requested by governor
- Managed by Centers for Disease Control

www.nps... 23

National Pharmaceutical Stockpile
Push Packages

- Contain color-coded inventory
- Pharmaceuticals - stock rotated before expiration
- IV supplies, airway supplies, ventilators
- Bandages and personal protective equipment

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National Pharmaceutical Stockpile
Vendor-Managed Inventory

- Agreements with pharmaceutical manufacturers to make large stocks available on demand
- Shipped to arrive within 24-36 hours after requested
- VA hospitals have an agreement with CDC to assist in the procurement and maintenance of NPS

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The National Pharmaceutical Stockpile (NPS) (slides 23-25) provides resources for management of a biological or chemical attack. The NPS is managed by CDC and is deployed in response to a request from a state's governor, in consultation with CDC, for federal assistance. State and local health jurisdictions must have plans to efficiently manage and distribute the contents of the NPS at the local level. The NPS consists of several identical 12-hour "Push Packages" located at distribution centers throughout the U.S. (slide 23). The Push Packages contain pharmaceuticals, intravenous and airway supplies, emergency medications, bandages, and dressings. Medications are rotated to ensure they are not outdated. Additional medications and supplies specific to the event would be available within 24-36 hours of request through Vendor-Managed Inventory (VMI), a system of rapidly mobilizing medications and supplies with the cooperation of the manufacturers and distributors of pharmaceuticals and other supplies (slide 25).

Psychological Response to a Public Health Emergency (Slides 26-46)

The psychological response to a public health emergency is not limited solely to a reaction to the event. Community members may feel vulnerable and unsafe, concerned that the event will be repeated. Public health interventions intended to manage current, and prevent future, health consequences of the event may elicit a negative response from community members, especially if the interventions are perceived as infringing on individual rights. Consistent and accurate communication is important in an emergency; myths and rumors spread quickly and may result in unwarranted anxiety and panic. Slides 26-46 describe the psychological aspects of a public health disaster, emergency, or other traumatic event. The role of public health in addressing the psychological consequences of a traumatic event is summarized in slide 27. The role of the allied health professional in the psychological aftermath of trauma is outlined in slide 28. Active listening and referral to specialized care, when indicated, are important roles for the health care provider.

Talking through one's emotions is an important part of the recovery process. Communication about medical risks is another important role. Anxiety may be due to perceived risks that are not true risks, and education may serve to relieve unnecessary fears.

Psychological Response to A Public Health Emergency

- Reaction to the event itself
- Anticipation of future events
- Reaction to public health measures taken to manage/control disease and injury
 - Isolation and quarantine
 - Prophylactic measures
 - Prioritization/rationing of resources
- Reaction to misinformation (e.g., myths, rumors)

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Psychological Aftermath of Crisis Role of Public Health

- Educating and informing clinicians and the public about current risks and protective measures
- Coordination of and referral to medical and social support resources
- Ensuring the needs of populations at-risk for psychological sequelae are addressed

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The Psychological Aftermath of Crisis Additional Roles for the Allied Health Professional

- Active listening and encouragement
- Basic disaster/crisis counseling
- Identification and referral of abnormal stress responses
- Encouragement of re-entry into social roles, when appropriate
- Discouragement of repeated exposure to trauma (e.g., TV replays, newspaper articles)
- Communication of medical risks, as appropriate

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Key Concepts of Disaster Mental Health (Slides 29-30)

Key Point

Psychological effects following a disaster extend beyond the injured individuals and, to a certain degree, are normal and expected.

Key Concepts of Disaster Mental Health

- Two types of disaster trauma
 - Individual
 - Community
- Most people pull together and function during and after a disaster, but their effectiveness is diminished
- Social support systems are crucial to recovery

Source: US DHS, Key Concepts of Disaster Mental Health
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Key Concepts of Disaster Mental Health

- Disaster stress and grief reactions are normal responses to an abnormal situation.
- Many emotional reactions of disaster survivors stem from living problems brought about by the disaster.
- Most people do not see themselves as needing mental health services following disaster and will not seek such services.

Source: US DHS, Key Concepts of Disaster Mental Health
 10/10/02 Center for Public Health Practice 30

There are two aspects to disaster trauma—the effects on the individual and the effects on the community as a whole. Individual effects of disaster trauma include the physical and psychological consequences for those injured (or infected, in the case of a biological attack), as well as psychological consequences for the injured person’s loved ones. Individuals with no direct connection to the trauma other than awareness can experience psychological symptoms as well, especially in the case of terrorism, where events often occur without warning and, thus, leave people anticipating future events. Disasters can affect the physical resources—human and material—of a community, as well as the behavior and cohesion of the community. Disasters stress the physical and emotional resources of people, but most people function adequately, and may need only temporary assistance with living problems brought about by the disaster (for example, the need for financial assistance, temporary accommodations).

Psychological Responses to Disaster and Trauma (Slides 31-38)

Key Points

1. Normal responses to trauma and disaster include depression, anxiety symptoms, and behavioral changes.
2. Anxiety and uncertainty predominate following a biological attack.
3. The response of children to trauma and disaster reflects their developmental level.

Some of the possible psychological and behavioral responses to disaster and trauma are listed in slides 31-38. Note that depression, physical symptoms, and anxiety are **normal** reactions following trauma and disaster and do not necessarily imply pathology (unless DSM IV criteria are met or symptoms cause significant impairment in normal functioning).

Psychological and Behavioral Responses to Trauma and Disaster

- **Depression**
 - Sadness
 - Demoralization
 - Isolation/withdrawal
 - Difficulty concentrating
 - Sleep and appetite disturbances
- **Physical Complaints**
 - Fatigue
 - Aches and pains
 - Stomach and intestinal complaints
 - Headache
 - Skin rashes

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Psychological and Behavioral Responses to Trauma and Disaster


- **Anxiety**
 - Re-experiencing
 - Numbing
 - Hyperarousal
 - Shock and disbelief
 - Fear
 - Panic
 - Anger
 - Irritability
- **Behavioral**
 - ↑ substance use
 - alcohol, caffeine, tobacco
 - Interpersonal conflict
 - Impaired work/school performance

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Children and Adolescents (Slides 33-37)

Responses to Trauma - Children

- After any disaster, children are most afraid that:
 - The event will happen again
 - Someone will be injured or killed
 - They will be separated from the family
 - They will be left alone



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Children are particularly vulnerable following a traumatic event. They have fewer skills and less life experience than adults. They have had fewer opportunities and time to develop coping mechanisms, and must rely on their parents or care givers to keep them safe. Many of the signs of distress in children are similar to those seen in adults. Distress may manifest itself differently in children, however, depending on their developmental level. Developmentally specific responses to trauma are outlined in the following slides for school-age children (slide 35) and adolescents (slide 36).

Responses to Trauma - Children


- Influenced by developmental stage
- May include:
 - Depressed or irritable mood
 - Decreased school performance
 - Increased dependence and clinginess
 - Changes in appetite - ↑ or ↓
 - Sleep disturbances
 - Physical complaints (e.g., stomach aches, headache)



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Responses to Trauma School-Age Children


- Preschool-2nd grade
 - Separation anxiety
 - Avoidance
 - Regressive symptoms
 - Fear of the dark
- 3rd-6th graders
 - Re-enactment through traumatic play
 - Withdrawal from friends
 - Aggressive behavior at home or school
 - Hyperactivity that wasn't present earlier



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Responses to Trauma Adolescents

- Increased risk-taking behavior
- Decline in previous responsible behavior
- Social withdrawal
- Apathy
- Rebellion at home or school



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Slide 37 gives advice to parents for helping children cope after trauma. It is important for both adults and children to be able to talk openly about their feelings and concerns with someone they trust, following a traumatic event.

Helping Children Cope After Trauma

- Assume they know a disaster has occurred
- Talk with them calmly and openly at their level
- Ask what they think has happened, and about their fears
- Share your own fears and reassure
- Emphasize the normal routine
- Limit media re-exposure
- Allow expression in private ways (i. e., drawing)

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Psychological Responses Following a Biological Terrorist Attack (Slide 38)

Many of the psychological responses following a biological attack will be similar to those following other disasters and traumas. Individuals and communities will grieve over the loss of loved ones and may feel a loss of safety in their community. Fear and anxiety are likely to be predominant emotions, however.

Psychological Responses Following a Biological Terrorist Attack

- Magical thinking about microbes and viruses
- Fear of invisible agents
- Fear of contagion
- Attribution of arousal symptoms to infection
- Scapegoating
- Panic and paranoia
- Loss of faith in social institutions

Source: Borden et al. JAMA 1997;278(5):625-7

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Factors Influencing Response to and Risk of Psychiatric Sequelae Following a Traumatic Event (Slides 39-41)

Key Point


Internal and external factors, pre and post-event, may make some individuals more at risk for long-term adjustment problems or psychiatric sequelae following a traumatic event.

Factors Influencing Response to Traumatic Events

- Degree and nature of exposure
- Developed coping mechanisms/strategies
- Available resources and support
- Ability to understand what occurred/is happening
- Developmental level
- Personal meaning of the event

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At-risk Populations for Psychiatric Sequelae Following Traumatic Stress

- Those exposed to the dead and injured
 - Eye witnesses and those endangered by event
 - Emergency first-responders
 - Medical personnel caring for victims
- The elderly 
- The very young

Source: Rothstein et al. Disaster and Public Health Practice, 2004. ISW/Stratford Center for Public Health Practice 40

At-risk Populations for Psychiatric Sequelae Following Traumatic Stress

- Those with a history of exposure to other traumas or with recent or subsequent major life stressors or emotional strain
- Chronic poverty, homelessness, unemployment, or discrimination 
- Those with chronic medical or psychological disorders

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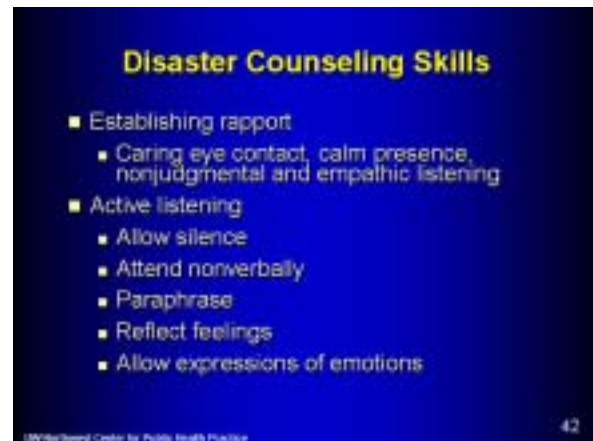
Factors influencing an individual's response to a traumatic event are listed in slide 39 and include innate, predisposing factors, factors pertaining to the event/exposure, and factors pertaining to the time following the event. The ability to cope with stress requires appraisal of both the stressor and the individual's available resources or coping mechanisms and development of a coping strategy. The magnitude and severity of the stressor, the strength and availability of resources, and the ability to develop a coping strategy are each important in determining the individual's risk for negative sequelae. These basic concepts are reflected in the list of factors increasing an individual's risk for long-term adjustment problems and psychiatric problems (slides 40-41).

Disaster Counseling (Slides 42-45)

Key Point

Disaster counseling skills include establishing rapport, active listening, problem solving, and referral for services.

Basic disaster counseling skills are listed in slides 42 and 43. The most important part of helping people recover emotionally following a disaster or traumatic event is listening. Many emotional problems following a disaster stem from living problems brought about by the disaster; thus problem solving and resource referral are important elements of disaster counseling. Recognition of abnormal emotional responses and referral for treatment are other important aspects of disaster counseling.

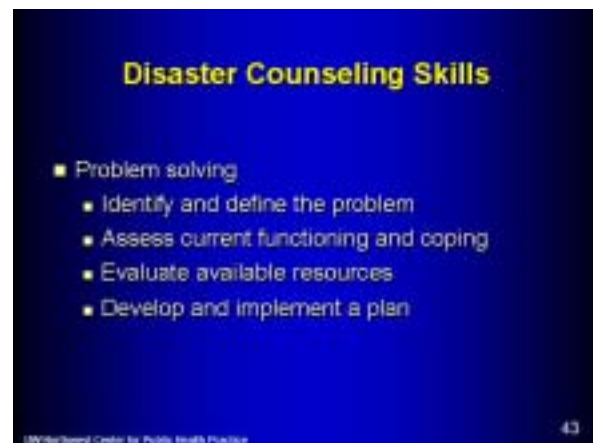


Disaster Counseling Skills

- Establishing rapport
 - Caring eye contact, calm presence, nonjudgmental and empathic listening
- Active listening
 - Allow silence
 - Attend nonverbally
 - Paraphrase
 - Reflect feelings
 - Allow expressions of emotions

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Disaster Counseling Skills

- Problem solving
 - Identify and define the problem
 - Assess current functioning and coping
 - Evaluate available resources
 - Develop and implement a plan

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When to Refer for Mental Health Services

- Symptoms are persistent and overwhelm or interfere with the person's normal functioning
 - Depression
 - Anxiety
 - Repeated thoughts/memories of traumatic event
- Disorientation
- Psychotic symptoms – hallucinations, delusions
- Suicidal thoughts or plans

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Slides 44-45 summarize abnormal responses that warrant further evaluation or treatment.

When to Refer for Mental Health Services

- Inability to care for self
- Problematic use of alcohol or drugs
 - Includes use of illegal, as well as overuse of legal substances
- Domestic violence/abuse

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Stress Management for Public Health Workers (Slide 46)

Stress Management for Public Health Workers

- Take care of yourself:
 - Get sufficient sleep
 - Eat regular meals
 - Keep caffeine and alcohol consumption moderate
 - Talk through your feelings with a safe confident
 - Family member
 - Mental health or other health care provider
 - Seek help when feelings overwhelm or interfere with your ability to function

US War/Infectious Disease Center for Public Health Practice 46

Public health workers also need to be aware of their own emotions and needs, particularly when their work places them close to the effects of the traumatic event.

Summary of Key Points (Slides 47-49)

Summary of Key Points

- The initial and primary response to the consequences of a terrorist event occurs at the local level.
- ESF 6 provides for federal assistance to supplement state and local efforts in response to a public health emergency.
- Medical, practical, and feasibility considerations are important in the decision to implement quarantine.

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Summary of Key Points

- Individual, community, and event-specific factors influence the psychological response to a public health emergency.
- Most individuals will function adequately following a traumatic event, but a few will need psychological or medical intervention.
- Many emotional reactions of disaster survivors stem from living problems brought about by the disaster.

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Summary of Key Points

- The psychological response and long-term effects following a traumatic event are influenced by an individual's unique combination of health, developmental level, resources, and experiences.
- Anxiety responses are most likely following a biological attack, but depression, physical symptoms, and substance use may also occur.

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Resources (Slide 50-51)

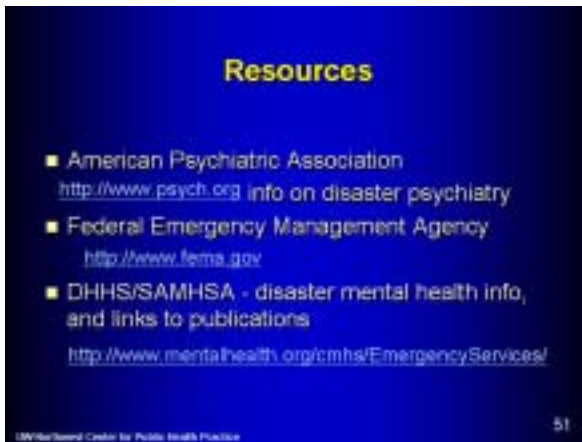


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Resources

- American Psychiatric Association
<http://www.psych.org> info on disaster psychiatry
- Federal Emergency Management Agency
<http://www.fema.gov>
- DHHS/SAMHSA - disaster mental health info, and links to publications
<http://www.mentalhealth.org/cmhs/EmergencyServices/>

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Appendix A: Modules (MS[®] Powerpoint files)

Introduction to Bioterrorism

One module (33 slides)

Emergency Response Planning

One module, with one custom show for personnel without planning oversight responsibilities

- Public health leaders (36 slides)

- Other public health staff (24 slides)

Diseases of Bioterrorist Potential

Six modules

- Overview (25 slides, with 20-slide custom show for staff without health care responsibilities)

- Anthrax (29 slides)

- Smallpox (44 slides)

- Plague and Botulism (33 slides)

- Tularemia and VHF (38 slides)

- Environmental Sampling and Decontamination (43 slides)

Health Surveillance & Epidemiologic Investigation

One module (32 slides)

Consequence Management

Three modules

- Public health leaders (51 slides)

- Public health professional staff (51 slides)

- Other public health staff (30 slides)

Communication & Informatics

One module (42 slides)

Appendix B: Glossary

Bulbar: Referring to the cranial nerves

Coagulopathy: A disease affecting the coagulability (clotting) of the blood

Confluent: Joining, running together

Conjunctivitis: Inflammation of the conjunctiva; “red eye”

Depigmentation: Loss of pigmentation (color)

Diplopia: Double vision

Dyspnea: Shortness of breath

Edema: An accumulation of an excessive amount of watery fluid in cells or tissues

Enanthem: A mucous membrane eruption (rash)

Epistaxis: Nose bleed

Erythema: Redness

Eschar: A thick, coagulated crust or slough

Exanthem: A skin eruption (rash) occurring as a symptom of an acute viral or coccal disease

HAZMAT: Hazardous materials management; HAZMAT workers respond to discharges and/or releases of oil, chemical, biological, radiological, or other hazardous substances .

Hematemesis: Vomiting of blood

Hemoptysis: Coughing up blood

Hemorrhagic mediastinitis: Bloody inflammation in the chest cavity

Hypotension: Low blood pressure

Indolent ulcer: Chronic ulcer, showing no tendency to heal

Leukocytosis: Elevated white blood cell count

Lymphadenitis: Inflammation of a lymph node or lymph nodes

Lymphadenopathy: A disease process (e.g., swelling) affecting a lymph node or nodes

Macule: A small, discolored patch or spot on the skin, neither elevated above nor depressed below the skin's surface

Malaise: General ill feeling

Myalgia: Muscle aches

Papule: A small, circumscribed solid elevation on the skin

Percutaneous: Denoting the passage of substances through unbroken skin; passage through the skin by needle puncture

Petechiae: Pin-head sized hemorrhagic spots in the skin

Pharyngitis: Inflammation of the tissues of the pharynx; "Sore throat"

Pleuropulmonary: Relating to the pleura and the lungs

Preauricular: Anterior to the auricle of the ear

Prodrome: An early or premonitory symptom of a disease

Prophylaxis: Prevention of a disease, or of a process that can lead to disease

Prostration: A marked loss of strength, as in exhaustion

Pustule: A small circumscribed elevation of the skin, containing purulent material

Sepsis: The presence of various pus-forming and other pathogenic organisms, or their toxins, in the blood or tissues

Stomatitis: Inflammation of the mucous membrane of the mouth

Vesicle: A small, circumscribed elevation on the skin containing fluid (I.e., blister)

*Reference: Stedman's Medical Dictionary, 26th Ed.

Preparing for and Responding to Bioterrorism Instructor's Manual Series

In the wake of the 2001 anthrax attacks, thousands of people and organizations across the country have scrambled for information on how to protect themselves, their families, and their employees from anthrax and other potential agents of bioterrorism. Health officials have been flooded with requests to deliver presentations on bioterrorism preparedness and response at community forums, clinical conferences, business meetings, and other public venues. Potential instructors and trainers, however, have been handicapped by the lack of up-to-date, basic orientation resources on bioterrorism preparedness and response.

Preparing for and Responding to Bioterrorism: Information for the Public Health Workforce is a series of train-the-trainer resources that addresses the public health aspects of bioterrorism. It is scientifically accurate, up-to-date (as of the date of publication), and immediately relevant to the public health workforce. The series consists of thirteen PowerPoint™ slide sets, each accompanied by a detailed instructor's manual. The slide sets cover emergency response planning, surveillance and epidemiologic response, diseases of bioterrorist potential, consequence management, and communication and informatics. They are flexible and can be customized for local community needs. Included in each slide set and instructor's manual is a list of resources, references, and contacts for further information on bioterrorism preparedness and response—before, during, and after an incident.

We hope these resources will help the public health workforce to plan for and respond to public health emergencies, including a bioterrorist attack, and facilitate coordination between public health and other emergency responders.

Cover image: Medicine vials

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