

Chapter 44

Care of Patients During Disasters, Bioterrorism Attacks, and Pandemic Infections

Theory Objectives

- State the difference between an emergency situation and a disaster.
- Discuss an emergency preparedness plan for a health care facility.
- Compare the stages of psychological response that occur with a disaster.
- Describe the parameters used in the triage system for victims after a disaster.

Theory Objectives (cont.)

- Identify responsibilities and duties of the nurse in the care of disaster victims.
- Explain safety measures to be employed for a chemical emergency or an earthquake.
- Demonstrate knowledge of measures to be taken in the event of a nuclear disaster.
- Explain warning signs that suggest a bioterrorism attack has occurred.

Theory Objectives (cont.)

- Differentiate the signs and symptoms of the various agents that could be used for a terrorist attack.
- Explain the importance of debriefing of health care personnel after a disaster.

Clinical Practice Objectives

- Participate in a disaster drill.
- Teach a group of adults how to prepare safe water after a disaster has disrupted the water supply.
- Identify the measures you would take for your own safety when assisting others after a disaster has occurred.

Disaster Preparedness and Response

- A disaster exists when the number of casualties exceeds the resource capabilities of the area
- Natural disasters include epidemics, earthquakes, explosions, hurricanes, tornadoes, fires, floods, and transportation accidents

Disaster Preparedness and Response (cont.)

- Man-made disasters may result from attacks with chemical, biologic, nuclear, and conventional weapons
- Terrorist attacks are classified as disasters

Disaster Preparedness and Response (cont.)

- Preparing disaster supplies
- Community preparedness
 - Fire safety
 - Earthquake safety
 - Tornado, hurricane, and flood safety
- Hospital preparedness
- Triage

Red Cross Volunteers



Audience Response Question 1

In reviewing disaster preparedness information, the nurse asks community members, “If there is a hurricane ‘watch,’ what would you do?” Which response(s) would be correct? *(Select all that apply.)*

1. Bring inside any outdoor furniture, trash cans, potted plants, toys, etc., that could be picked up by the wind.
2. Fill your car’s gas tank.
3. Have cash on hand.
4. Check batteries and stock up on canned food, first-aid supplies, drinking water, and medications.
5. Stay in a mobile home.

Psychological Responses to Disaster

- Signs and symptoms of emotional shock
- Stages
 - Impact stage
 - Heroic stage
 - Honeymoon stage
 - Disillusionment stage
 - Reconstruction stage

Disaster Triage System

- Class I: Emergent (red)
- Class II: Urgent (yellow)
- Class III: Nonurgent (green)
- Class IV: Minor (white)
- Class V: Dead or expected to die (black)

Triage Tags

CONTAMINATED

Personal Property Receipt/Evidence Tag
 *R1234567*

Destination _____ Via _____
 *R1234567*

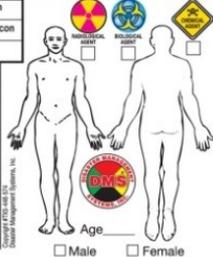
All Risk® TRIAGE TAG DMS-05420
Made in the USA

S L U D G E M
Salivation Lacrimation Urination Defecation G.I. Distress Emesis Miosis

AUTO INJECTOR TYPE: 1 2 3
 1 2 3

Yes No Primary Decon
 Yes No Secondary Decon
 Solution _____

<input type="checkbox"/> Blast Injury
<input type="checkbox"/> Blunt Trauma
<input type="checkbox"/> Burn
<input type="checkbox"/> C-Spine
<input type="checkbox"/> Cardiac
<input type="checkbox"/> Crushing
<input type="checkbox"/> Fracture
<input type="checkbox"/> Laceration
<input type="checkbox"/> Penetrating Injury



Other: _____

VITAL SIGNS

Time	B/P	Pulse	Respiration

Time	Drug Solution	Dose

 *R1234567*

CONTAMINATED

EVIDENCE

Comments/Information

Patient's Name _____

DMS-05420

RESPIRATIONS Yes No
R

PERFUSION - 2 Sec. + 2 Sec.
P

MENTAL STATUS Can Do Can't Do
M

Move the Walking Wounded ➔ **MINOR**
 No Respirations After Head Tilt ➔ **MORGUE**
 Respirations - Over 30 ➔ **IMMEDIATE**
 Perfusion - Capillary Refill Over 2 Seconds ➔ **IMMEDIATE**
 Mental Status - Unable to Follow Simple Commands ➔ **IMMEDIATE**
 Otherwise ➔ **DELAYED**




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PERSONAL INFORMATION

NAME _____

ADDRESS _____

CITY _____ ST _____ ZIP _____

PHONE _____

COMMENTS _____ RELIGIOUS PREF. _____

EVIDENCE

MORGUE 0
 *R1234567*

MORGUE 0
 *R1234567*

Age M F U

MORGUE
Pulseless/Non-Breathing 0

IMMEDIATE 1
 *R1234567*

IMMEDIATE 1
 *R1234567*

Age M F U Chief Complaint _____

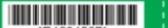
IMMEDIATE
Life Threatening Injury 1

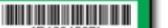
DELAYED 2
 *R1234567*

DELAYED 2
 *R1234567*

Age M F U Chief Complaint _____

DELAYED
Serious Non Life Threatening 2

MINOR 3
 *R1234567*

MINOR 3
 *R1234567*

Age M F U Chief Complaint _____

MINOR
Walking Wounded 3

Triage During Disasters

- Victims with life-threatening conditions and a good chance of survival are cared for first
- When there are more victims of a disaster than medical personnel to treat them, those who are likely to survive are treated first; these patients are given green tags
- The mortally wounded and those who are not expected to survive are attended later, and these patients are issued a black tag

Disasters

- Nursing responsibilities
- Nursing roles and management
- Care of special populations
- Water and food safety
- Nursing management in reconstruction stage

Chemical Disaster

- Indications that a chemical attack has occurred might include
 - Fog-like or low-lying cloud suddenly appearing in the atmosphere
 - Many dead birds, domestic animals, or insects within a particular area
 - Many dead, dying, or sick people in an area or downwind from a suspicious cloud or fog
 - An atypical, unexplained odor for the location

Nuclear Disaster

- Amount of damage to each person
- Decontamination
- Acute radiation sickness syndrome
 - Bone marrow syndrome
 - Gastrointestinal syndrome
 - Cardiovascular/central nervous system syndrome

Decontamination Drill



Decontamination Drill (cont.)



Nuclear Disaster

- Treatment of particulate radiation exposure
 - Chelating agents
 - Isotope-specific blocking agents
 - Excretion agents
 - Diluting agents

Biologic Disaster

- Bioterrorism
- Nursing role
- Recognizing a bioterrorism event

Recognizing a Bioterrorism Event

- Certain signs or events may present a warning that a bioterrorism attack has occurred. Some of the signs include (Peterman, 2010)
- Rapidly progressing flu-like illness, particularly in the young and among those previously healthy
- Rapidly progressive respiratory illness, especially in young, previously healthy people

Recognizing a Bioterrorism Event (cont.)

- Unusual or extensive rashes, especially if preceded by flu-like symptoms
- Flaccid muscle paralysis
- Severe bleeding disorders
- A large group of patients with food-borne illness
- Sudden death of many animals in the community

Bioterrorism

- Nursing management
 - Strict adherence to infection control procedures and policies
 - Debriefing

Biologic Agents

- Category A agents
- Category B agents
- Category C agents

Biologic Disaster

- Anthrax
- Botulism
- Plague
- Smallpox
- Tularemia
- Viral hemorrhagic fevers

Face Lesions on a Boy with Smallpox



Comparison of Smallpox and Chickenpox Lesions



Pandemic (Airborne Respiratory) Infection

- Teach people to be prepared to stay at home for at least two weeks
- Reassure people that basic measures for prevention of respiratory infection can be effective
 - Healthy lifestyle to support the immune system
 - Washing hands and covering the mouth during coughing or sneezing, disposing of tissues, and staying away from public places if at all possible