

Background

- Over **200 million disaster** deaths occurred worldwide in the last century
- Health professionals play a critical role in disasters
- All-hazards principles and practices are important



Michael Rieger/FEMA

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What is a disaster?

“An event and its consequences that result in a serious disruption of the functioning of a community or a society because widespread human, material, economic or environmental losses and/or damage that exceed the capacity of the affected area to respond without external assistance to save lives, preserve property, and maintain the stability and integrity of the affected area.”

Operational Definition
Disaster = Needs > Resources

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Categories of Disaster



Natural Human Systems Failure War and Conflict

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All-Hazards Preparedness

A uniform approach to prepare and respond to any given hazard or event that may affect the community regardless of cause...

... to do the greatest good for the greatest number of potential survivors



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The PRE-DISASTER Paradigm™

Planning and Practice

Resilience

Education and Training

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PRE-DISASTER Paradigm™ Planning and Practice

- At-risk populations
- Identify stakeholders
- Develop a valid plan
- Training and education/ exercise and drills
- Plan review and revision



Aaron Skolnik/FEMA

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PRE-DISASTER Paradigm™
Planning and Practice

Risk Analysis

Assess potential vulnerabilities → **Understand the consequences**

When we understand our vulnerabilities, we can mitigate and plan for them

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PRE-DISASTER Paradigm™
Planning and Practice

Continuity of Operations

- Each stakeholder must identify mission-critical functions to meet the demands
- Contingency planning must support these mission-critical functions

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PRE-DISASTER Paradigm™
Planning and Practice

Health System Surge


- **Surge capacity**
Where do you put the extra patients?
- **Surge capability**
How do you take care of them?

Space
↓
Staffing
↓
Supplies
↓
Systems

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PRE-DISASTER Paradigm™
Planning and Practice

- Plans must follow legal and ethical principles
- Plans are guided by acceptable scientific and medical practice
- Plans must aid decision making




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PRE-DISASTER Paradigm™
Resilience



Tim Burkitt/FEMA



Ruth Kennedy/FEMA

Ability of individuals and communities to adapt and overcome adversity due to disaster

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PRE-DISASTER Paradigm™
Education and Training

- Essential to the workforce and **community**
- Competency based
- Standardized
- Setting performance expectations



Ruth Kennedy/FEMA

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The DISASTER Paradigm™

Detection

Incident Management

Safety and Security

Assess Hazards

Support

Triage and Treatment

Evacuation

Recovery



Yuisa Rios/FEMA


Always ask
Are my needs > resources?

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The DISASTER Paradigm™

Detection

- Situational awareness:
 - Is a disaster present?
 - What has happened?
 - What is needed now?
 - Whom should I call?



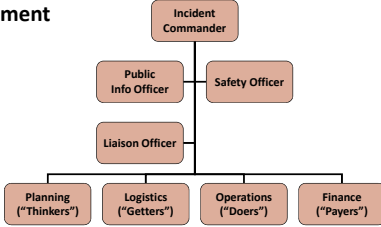
Casey Deshong/FEMA

Detection is awareness!

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The DISASTER Paradigm™

Incident Management



National Incident Management System

Emergency Management Command and Control

Improves Coordination and Communication and Reduces Redundancy

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**The DISASTER Paradigm™
Incident Management**



Communication is challenging:

- Establish plans and protocols
- Establish key relationships
- Understand the equipment
- Drill and exercise

Make effective use of technology

Information Sharing
Effective = Timely + Accurate

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**The DISASTER Paradigm™
Incident Management**

- Educate and inform the community
- Reduce fear and panic
- Guide and direct
- Controlled message

**Risk communication
is important and vital**

One voice ... one message.

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**The DISASTER Paradigm™
Safety and Security**

Priorities:

- 1st – Self and team
- 2nd – Uninjured public
- 3rd – Casualties
- 4th – Environment

Action steps: mitigate a dangerous or threatening situation

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The DISASTER Paradigm™ Assess Hazards

environmental exposure

contamination
animals and insects
motor vehicle crashes
structural collapses/crises
blood / body fluid exposure
secondary explosive devices
equipment-related injuries
smoke and toxic gases fire
downed power lines
ruptured gas lines
gunman/snipers
explosions
air / water
flooding

hazardous materials release
disruption

Recognition of likely causes
of safety and security
concerns

Risk of causing additional
casualties

Sean Covant, MD/ Preston Fedor, MD
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The DISASTER Paradigm™ Support

Support is logistics:

- **What** do I have?
- **What** is needed?
- **Where** is it?
- **When** will it arrive?
- **What** if it is unavailable?



Don Jacks/FEMA

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The DISASTER Paradigm™ Triage and Treatment

Disaster triage must...

- Work with a large number of casualties
- Be easily performed
- Prioritize both treatment and transport
- Be standardized

TRIAGE TAG

Scene Observations

Chemical

Biological

Radiological

Explosive

Other

Treatment

Site: _____

Unit: _____

Name: _____

DOB: _____

Sex: _____

Height: _____

Weight: _____

Blood Type: _____

Allergies: _____

Medical History: _____

Current Medication: _____

Other: _____

DECEASED

EXPECTANT

Minimal

Delayed

Immediate

Tom Lehman, NTC-W

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Special Considerations

- Unique or special medical needs populations
 - Age: Including the very young and the very old
 - Functional or access needs secondary to motor, sensory and cognitive limitations
- Unique social situations
 - Cultural, religious, or ethnic communities
 - Language usage
 - Rural or isolated communities

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The DISASTER Paradigm™ Evacuation



Win Henderson/FEMA

- Relocation due to disaster
- Getting affected to safety
- Transportation methods

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PRE-DISASTER Paradigm™ Recovery

Following disaster, community needs:

1. Relief
2. Rehabilitation
3. Restoration



Leo Anderson and Steve Sumwat/FEMA


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**PRE-DISASTER Paradigm™
Recovery**

After-Action Review (AAR)

- Structured analysis of disaster response
- Done as soon as possible
- Identify gaps and weaknesses



Hans Pennink/FEMA

**AAR is a duty
not an option!**

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Planning and Practice
Resilience
Education and Training
Detection
Incident Management
Safety and Security
Assess Hazards
Support
Triage and Treatment
Evacuation
Recovery



Are my needs > resources?

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Question 1

Approximately how many disaster-related deaths occurred in the last century?

- a. 100,000
- b. 200,000
- c. 120,000,000
- d. 200,000,000

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Question 2
Which of the following is NOT a category of disasters?

- a. Human systems failure
- b. Natural
- c. War and conflict
- d. Drowning
- e. All are disaster categories

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Question 3
Which of the following does the "P" in the PRE-DISASTER Paradigm™ represent?

- a. Planning and preparation
- b. Planning and priorities
- c. Planning and practice
- d. Planning and participation

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Lesson Summary

- A standardized, competency-based approach to disaster training and education is important
- Utilizing an all-hazards disaster approach is important to planning and preparation
- The PRE-DISASTER Paradigm™ and DISASTER Paradigm™ are helpful learning and organizational tools

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