Chapter Objectives

1) Understand the response phase in the context of comprehensive emergency management, & describe inaccuracies in the "command post" image of emergency managers

2) Define the response phase of disasters & identify some of the major activities typically undertaken during that period

3) Describe the process of issuing disaster warnings & identify the characteristics of effective disaster warnings that lead people to take appropriate protective actions

4) Discuss various myths about how individuals, organizations, & communities respond to disasters, & identify sources of those myths

5) Contrast myths with research-based findings on how individuals, organizations, & communities actually respond to disasters, & identify various sources & limitations of community resilience

6) Situate the response phase in an international context, & identify relevant issues to consider in applying research findings to developing countries

7) Identify the most common problems that arise during the response phase & discuss effective principles of emergency management to overcome those challenges
Key Points

- There are many myths about how people behave in disaster, all of which assume:
  - Chaos
  - Social breakdown
  - Irrationality
  - Helplessness
- The reality of how people respond to disasters is quite different
  - Individuals are resourceful
  - Organizations are adaptive
  - Communities are resilient
- Effective disaster response emphasizes:
  - Coordination
  - Communication
  - Flexibility

The Command Post View of Emergency Management

- People envision an Emergency Manager:
  - Working in an ultra-modern, high-tech EOC
  - Monitoring several info sources simultaneously
  - Fielding non-stop telephone calls from the field
  - Making split-second, life-saving decisions
- This imagery:
  - Ignores the other phases of disaster
  - Envisions chaos
  - Assumes need for command & control

The Command Post View of Emergency Management (cont.)

- Ignores the other phases of disaster
  - EMs spend time across all four phases
    - Actual disaster events are rare
    - EMs have numerous job responsibilities
  - However, EMs will spend considerable time thinking about response activities
    - Efforts spent in other phases will pay dividends when it comes to responding to actual disasters
The Command Post View of Emergency Management (cont.)

- Envisions chaos
  - Disaster myth assumes the need for a strong leader to make the right decisions to keep everyone in line
  - History indicates there will be "order in disorder" or "organized-disorganization"
    - Individuals, communities, & organizations are incredibly resilient

- Assumes need for command & control
  - This assumption based on the notion that disasters create chaos & that society is fragile
  - Envisions post-disaster environment like a war-time scenario
    - Thus, drives a military model view of control
  - Reality is that EMs are more effective when coordinating & communicating, vice commanding & controlling
    - Decentralized, flexible, problem-solving approach
    - Better than rigid, hierarchical, centralized approach

Getting Started: Defining Response

- The response phase is defined as activities, "...designed to provide emergency assistance for casualties...seek to reduce the probability of secondary damage...and to speed recovery operations" (National Governor’s Report 1979, pp. 13-14)
- Tierney, Lindell, & Perry (2001, p. 81) define disaster response activities as, "...actions taken at the time a disaster strikes that are intended to reduce threats to life safety, to care for victims, & to contain secondary hazards & community losses"
Getting Started: Defining Response (cont.)

There are two sets of demands that emergency managers must address during the response phase:

1) *Disaster-induced demands*
   - Involve the need to care for victims & deal with physical damage & social disruption caused by the event

2) *Response-induced demands*
   - Include the need to coordinate the activities of the multitude of individuals & organizations involved in the response

Typical Response Activities

Drabek (1986) separates response activities into two sub-phases:

1) *Pre-impact mobilization:*
   - Warning the public
   - Initiating evacuation
   - Establishing shelters
   - Mobilizing personnel & resources, etc.

2) *Post-impact emergency actions:*
   - Search & rescue
   - Providing medical care to the injured, etc.

Typical Response Activities (cont.)

Tierney et al. (2001: 75) categorizes four related activities:

1) *Emergency Assessment*
   - Monitoring hazards
   - Damage assessment

2) *Expedient Hazard Mitigation*
   - Sandbagging
   - Boarding windows

3) *Protective Response*
   - Search & rescue
   - Emergency medical services
   - Sheltering

4) *Incident Management*
   - Activating EOC
   - Inter-agency & inter-governmental coordination
Disaster Warnings

- Critical first step in the response phase
- Disasters vary in length of forewarning
  - Public must be educated about the hazards in their communities
- Thus, warnings can be considered both a preparedness & a response activity
- Goal is to lessen the burden on emergency management & 1st responders
- Disaster warnings have been studied for years
  - However, public officials continue to develop ineffective warning systems

The Warning Process

- Hurricane Katrina
  - Many people did not evacuate
  - Assumptions:
    - Everyone in the impacted area received warning messages
    - That the messages were clear & interpreted the same way by everyone who received them
    - The residents had a level playing field in terms of ability to evacuate

The Warning Process (cont.)

- Hurricane Katrina
  - Reality:
    - People do not always receive & interpret warning messages in the same manner
    - Messages are not always effectively worded & delivered
    - Social factors impact the ability of people to heed warnings & take protective actions
      - Socioeconomic status
      - Disability
  - Warnings are a social process that involves several steps
The Warning Process (cont.)

- Receiving the warning
- Understanding the warning
- Believing the warning is credible
- Confirming the threat
- Personalizing the threat
- Determining whether protective action is needed & feasible
- Taking protective action


Taking Protective Action

- The nature of the hazard determines what protective actions are appropriate
- The primary protective actions are:
  - Temporary public sheltering
  - Evacuating

Evacuation & Temporary Sheltering

- Shelters & housing activities cut across all phases of disasters
- Shelters in place
  - Common in tornadoes & hazardous materials releases
  - Warning message should provide specific instructions (e.g., going into a basement or safe room, keeping windows closed, etc.)
- Temporary public sheltering
  - Urges people to evacuate their homes & go to designated locations for safety
    - Churches
    - School gyms
    - Large arenas/stadiums
    - Convention centers
Evacuation & Temporary Sheltering (cont.)
- Major research into public sheltering shows:
  - Few people show up at shelters during & immediately after disasters
  - Most people just stay put
  - Usage rates tend to be relatively low because of people’s reliance on friends & family
  - Many emergency managers over-estimate the amount of shelter use
  - New shelters should be opened “as-needed” as existing ones begin to fill up

Factors Affecting Evacuation & Public Shelter Usage
- Protective actions are more likely to be taken when there are higher levels of overall community preparedness
- Those more likely to take protective action include:
  - Women
  - Non-minorities
  - Households with:
    - Children present
    - Higher levels of education & socioeconomic status
    - Greater knowledge about & heightened perception of risk
    - Higher levels of community involvement

Factors Affecting Evacuation & Public Shelter Usage (cont.)
- Impediments to evacuating & using public shelters include:
  - Fear of looting
  - Pet/service animal ownership
  - Physical disabilities
  - Ineffective warnings
    - Too vague
    - Contradictory
    - Weather alerts with no consideration for the hearing impaired
Characteristics of Effective Disaster Warnings

- Effective warning messages persuade those who receive them to take protective actions
- Established warning systems
  - Outdoor sirens
  - Emergency Alert System (TV, radio, etc.)
- Newer warning technologies
  - Cell phones
  - SMS/text alerts
  - Social media (Facebook, Twitter)
- Very little is known about how & to what extent people use new technologies during disasters

Characteristics of Effective Disaster Warnings (cont.)

- Studies suggest disaster warnings are most effective when:
  - Broadcast frequently across multiple media
  - Consistent in content & tone over time & across media outlets
  - Crafted to reach diverse audiences
  - Specific & accurate about where the hazard is taking place & to whom the message applies
  - Clear (no technical jargon) with specific instructions on what actions to take, when, & why
  - Truthful & authoritative & delivered by an identifiable & credible source

Sources: Mileti 1999; Aguirre 1988; National Science & Technology Council 2008; National Research Council 2010

Characteristics of Effective Disaster Warnings (cont.)

- Other research suggests that community evacuation can be enhanced when EMS:
  - Encourage family planning for evacuation
  - Promote media consistency
  - Utilize forceful but not mandatory evacuation policies
  - Allay public fears of looting
  - Facilitate transportation
  - Establish Family Message Centers

Source: Drabek 2010
Disaster Response: Myths & Realities

**Myth-based view:**
- Assumes that society is fragile & disasters cause a breakdown in social order, which leads to lawlessness, conflict, & chaos

**Research-based view:**
- Recognizes that society is resilient & during the response phase disasters typically result in:
  - Increased helping behavior
  - Consensus
  - Enhanced social solidarity

The Myth-Based View of Disaster Response

- **Individual-level myths**
  - Panic
  - Shock & dependency (e.g., PTSD)

- **Organizational-level myths**
  - Assumes that organizations will suffer personnel shortages & be largely ineffective
  - Only emergency-related organizations will respond
  - Role abandonment will occur

- **Community-level myths**
  - Social disorganization & conflict
  - Increased crime & widespread looting

Sources of Disaster Myths

- **Mass Media**
- **Institutional interests** (e.g., security contractors & technology firms)
- **Society at large**—images of chaos reaffirm the need for social order (Quarantelli 2002)
The Research-Based View of Disaster Response
- Individuals, organizations, & communities exhibit resilience during disasters
- Resilience:
  - The ability of individuals & social units to absorb & rebound from the impacts of a disaster
- While some societies & segments of society are more resilient than others, the overall concept of resilience has been confirmed by research

The Research-Based View of Disaster Response (cont.)
- Individual-level realities
  - Self-efficacy (i.e., disaster victims as “first-responders”)
  - Convergence behavior
    - Mass influx of people, supplies, donations, & information
  - Lack of panic
    - Maintenance of social norms & relationships
- Organizational-level realities
  - Involvement of numerous & diverse organizations
  - Role embracement rather than role abandonment
- Community-level realities
  - Crime rates drop & social solidarity increases
  - “Therapeutic communities”

The Research-Based View of Disaster Response (cont.)
- Fritz (1961, p. 694) argued, “contrary to the traditional pictures of man & society in the process of disintegration, disaster studies show that human societies have enormous resilience & recuperative power…”
Sources & Limitations of Community Resilience

Sources
- Relatively low impacts of U.S. disasters
- Disasters are shared experiences (unifying effect)
- "Emergency consensus" on community priorities
- Social capital ensures community survival & provides guidance & resources for responding
  - Cultural values & traditions
  - Social norms & obligations
  - Social relationships

Sources & Limitations of Community Resilience (cont.)

Limitations
- Catastrophic events may severely limit the ability of the community/society to effectively rebound
- Vulnerable populations are more severely impacted than others
- Technological disasters sometimes produce conflict & "corrosive communities"

Disaster Response in International Context

Disasters are particularly devastating for the least developed countries of the world
- Account for the vast majority of disaster-related deaths

Heightened vulnerability stems from:
- Extreme poverty
- Vulnerable physical infrastructure
- Sizable death tolls of disasters negatively impact social capital
- Weak or ineffective political institutions.
- Lack of effective warning systems
- Increased presence of technological hazards
Disaster Response & the Principles of Effective Emergency Management

- Two most common problems identified about disaster response
  1) Lack of coordination among responding organizations
  2) Breakdown of communications

Disaster Response & the Principles of Effective Emergency Management (cont.)

- Problems of coordination & communication can be alleviated through:
  - **Comprehensive Emergency Management (CEM)**
    - CEM recognizes commonalities among different types of disasters (i.e., all-hazards)
      - Emphasizes all four phases of disasters

Disaster Response & the Principles of Effective Emergency Management (cont.)

- Problems of coordination & communication can be alleviated through:
  - **Integrated Emergency Management (IEM)**
    - IEM recognizes that all kinds of organizations are involved in responding to disasters
    - Coordination facilitated through:
      - Enhanced EOC design (more like a communications hub than a command post)
      - Appropriate incident management frameworks (NIMS)
      - Appropriate use of new technologies (GIS/GPS/WebEOC)
Disaster Response & the Principles of Effective Emergency Management (cont.)

Flexibility in EM
- Individual-level improvisation
  - Using doors to evacuate the wounded
- Organizational-level adaptation
  - Relocation of NYC's EOC on 9/11

Factors that can limit flexibility
- Internal organizational characteristics
  - Strict adherence to written rules
  - Task specialization
  - Diffusion of responsibility
  - Overreliance on technology
- External constraints
  - Bureaucracies & centralization
  - Legal liability

Working & Volunteering in Response

Emergency managers work in such places as local, county, state & federal emergency management agencies & offices of homeland security
First-responders work for police & fire departments & in emergency medical services

Volunteer opportunities include:
- Red Cross
- Salvation Army
- Citizen Corps
- Community Emergency Response Teams (CERT)
- Medical Reserve Corps
- Map Your Neighborhood programs & others

Additional training can include:
- FEMA Independent Courses on the National Incident Management System
- Voluntary organizations
- Basic first aid & cardio-pulmonary resuscitation (CPR) courses, & others