



# 4

## MODULE 4

# Emergency Preparedness: Prevention, Response and Recovery

Tamar Klaiman, PhD, MPH  
Assistant Professor of Health Policy and Public Health  
University of the Sciences



**Public Health**  
Learning Modules

Using **Healthy People 2020**  
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# 4

## Part 3: Response



# Objective

- Describe the process for emergency response for different scales/types of emergencies citing specific examples

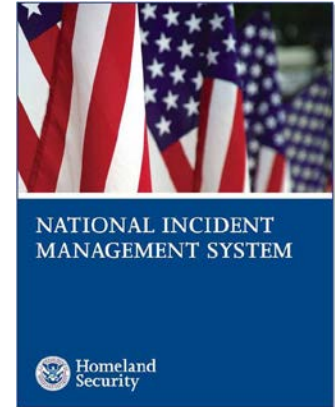
# Outline

- **Governmental response chain**
- Surveillance, Epidemiology, and Situational awareness
- Vulnerable populations
- Unintended consequences post emergency (disease, illness, etc.)

# National Incident Management System (NIMS)

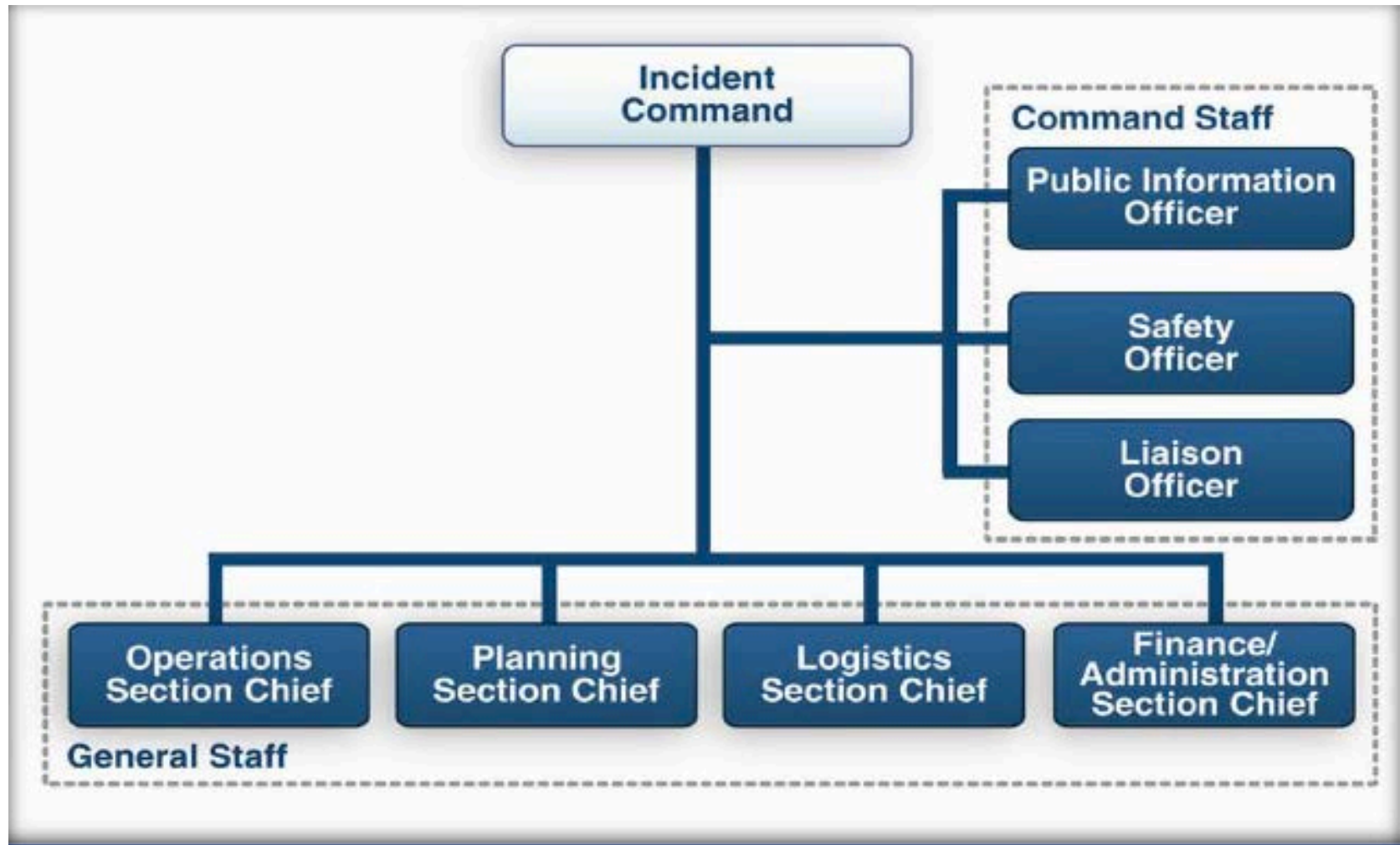
- Standardized approach to incident management that is scalable and flexible
- Enhanced cooperation and interoperability among responders
- Comprehensive all-hazards preparedness
- Efficient resource coordination among jurisdictions or organizations
- Reflects best practices and lessons learned

# NIMS (Cont'd)



- NIMS preparedness focuses on:
  - Planning
  - Procedures and Protocols
  - Training and Exercises
  - Personnel Qualifications and Certification
  - Equipment Certification
- Enhanced through partnerships at all levels of government, private sector, and nongovernmental organizations

# Incident Command System (ICS)



# Multi-Agency Coordination System

- Multi-agency coordination system defined:
  - process that allows all levels of government to work together more effectively
  - occurs across different disciplines
  - can occur on a regular basis whenever personnel from different agencies interact



# Public Information

- Consists of processes, procedures, and systems for communicating timely, accurate, and accessible information related to an incident
- Public information functions must be coordinated and integrated across jurisdictions and across functional agencies

# Governmental Response Chain



# Outline

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# Definitions

Surveillance - monitoring of behavior and activities for the purpose of influencing, managing, directing, or protecting

Epidemiology - the study of the patterns, causes, and effects of health and disease conditions

Situational awareness - perception of environmental elements with respect to time and/or space, the comprehension of their meaning, and the projection of their status after some variable has changed

# Surveillance, Epidemiology, and Situational Awareness: H1N1

1. Identification of pH1N1 in California children
  - NHRC surveillance → Marshfield → Wisconsin → CDC
2. Recognition that apparently unconnected outbreaks throughout Mexico were a PHEIC
  - Surveillance and identification of pH1N1 at NML and CDC
3. Identification of pH1N1 outbreak in New York City high school
  - traditional surveillance and lab capacity in NYC and CDC

# Contributions of advances in global surveillance and notification systems

- Investments in global surveillance & notification systems made an importance difference
  - Enabling the earlier development and deployment of a pandemic vaccine
  - Triggering local, national, and global public health
- Enhanced lab capacity in US and Canada led to earlier detection and characterization of pH1N1
  - NHRC, CDC, state and local capacity in the U.S.
  - Trilateral agreement among U.S., Canada, and Mexico

# Hurricane Katrina Response

- August 23, 2005 - Initial Hurricane Advisory
- August 26 - National Hurricane Center states that storm is “rapidly strengthening”; states of emergency issued
- August 28 - Mayor of New Orleans, Ray Nagin, issues a mandatory evacuation order; thousands leave the city
- Evening of August 28 - thousands who were unable or chose not to leave New Orleans and go to the SuperDome
- August 29 - levees begin to fail



# Katrina Response (Cont'd)

- August 31 -public health emergency declared in Louisiana, Mississippi, Alabama, and Florida; Louisiana Governor Kathleen Blanco orders all remaining residents to leave New Orleans, but transportation is not available
- September 1 - New Orleans Mayor Ray Nagin issues a "desperate SOS" for help from the federal government
- September 2 -U.S. National Guard troops arrive in New Orleans to distribute food and water to stranded residents; work to repair the city's levees, pumping out floodwaters, and finding homes for displaced residents is underway



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- **Vulnerable populations**
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# Vulnerable Populations Defined

## Vulnerable populations

- Any individual, group, or community circumstances that create barriers to obtaining or understanding information or the ability to react as the general population
- Circumstances that may create barriers include, but are not limited to:
  - Age
  - Physical, mental, emotional, or cognitive status
  - Culture
  - Ethnicity
  - Religion
  - Language
  - Citizenship
  - Geography
  - Socioeconomic status

# Vulnerable Population Examples

- Hurricane Katrina
  - low SES and with no transportation



- H1N1
  - pregnant women, young children, and individuals who were immune compromised

- September 11, 2001
  - people with physical disabilities, language barriers



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# Major Challenges to a Response

- Care
- Cooperation
- Transportation
- Situational Awareness

# Unintended Consequences

- Insurance Challenges
- Financial Impacts
- Political Disputes
- Legal Implications

# Summary

- Emergency responses require integration across many sectors.
- There are flexible, scalable systems in place to assist in emergency responses.
- Prior emergencies can teach us lessons about what worked well and what can be improved upon in future emergency responses.