

Disaster Surveillance

Centers for Disease Control and
Prevention



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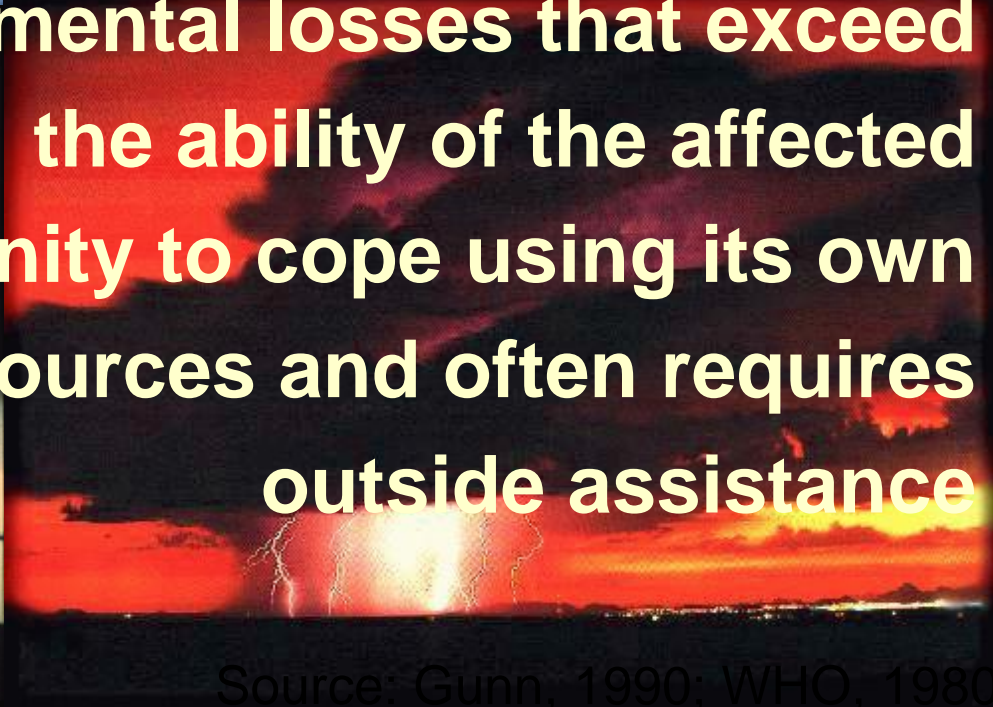


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Natural Disasters

ecological disruptions causing human, material, or environmental losses that exceed the ability of the affected community to cope using its own resources and often requires outside assistance



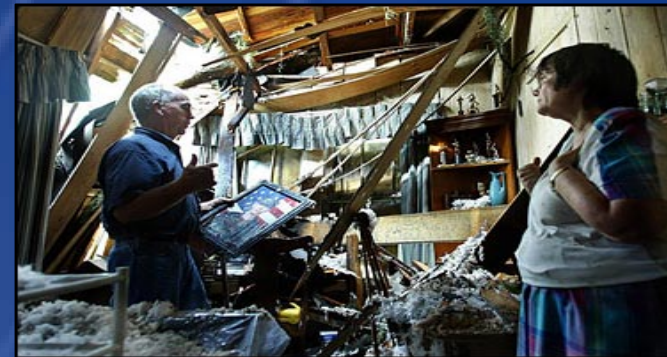
Presentation Objectives

- Recognize potential public health impacts of a natural disaster
- Describe importance and uses of disaster surveillance
- Identify data sources and critical data elements needed in disaster surveillance
- Discuss challenges in disaster surveillance
- Recognize need of coordination among fed responders for access to data e.g. EMR



Public Health Risks & Impacts after a Disaster

- Environmental hazards (e.g., debris, stray animals, heat or cold or smoke exposure)
- Contaminated food-water
- Displaced populations
- Crowding of evacuees
- Damaged health department, hospitals, clinics
- Uncertainty of community health status due to disruption of disease reporting



Disaster Epidemiology

- Use of epidemiology to assess the short- and long-term adverse health effects of disasters
- Anticipate consequences of future disasters
- Surveillance is a disaster epidemiology tool



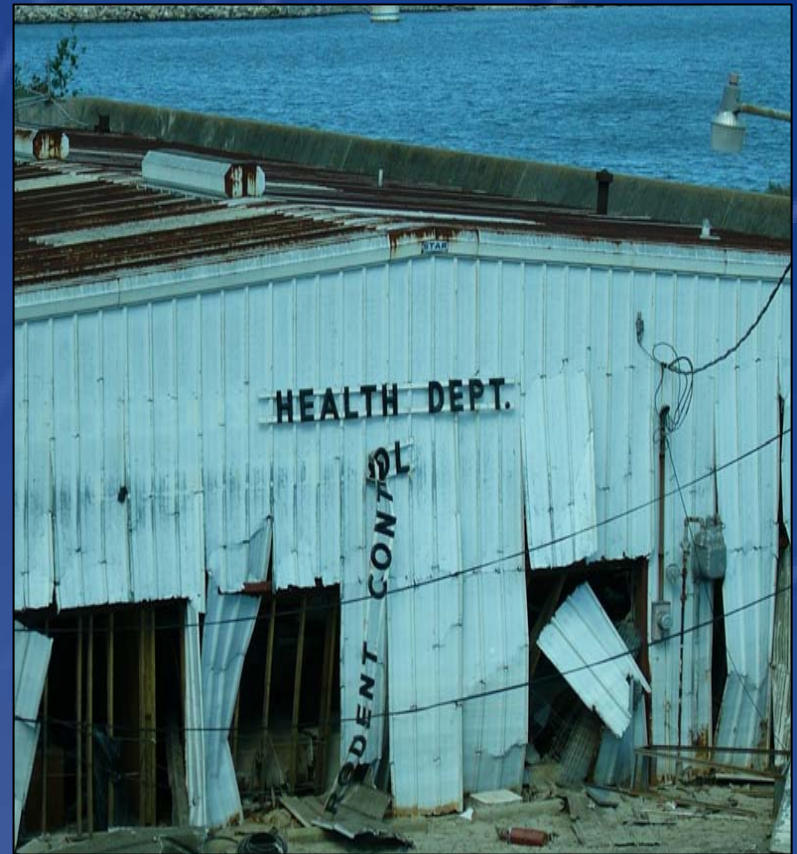
Surveillance

- **Public Health Definition: “The ongoing, systematic collection, analysis, interpretation, and dissemination of data about a health-related event for use in public health action to reduce morbidity and mortality and to improve health.”**



Importance of Active Surveillance During a Disaster

- Supplement regular reporting mechanisms
- Rapidly detect outbreaks and define health problems
- Identify groups at risks for adverse health events
- Determine needs of special populations



Importance of Active Surveillance During a Disaster (2)

- Optimize the relief response
- Monitor the effectiveness of the relief effort
- Respond to officials requests, public concerns and media inquiries

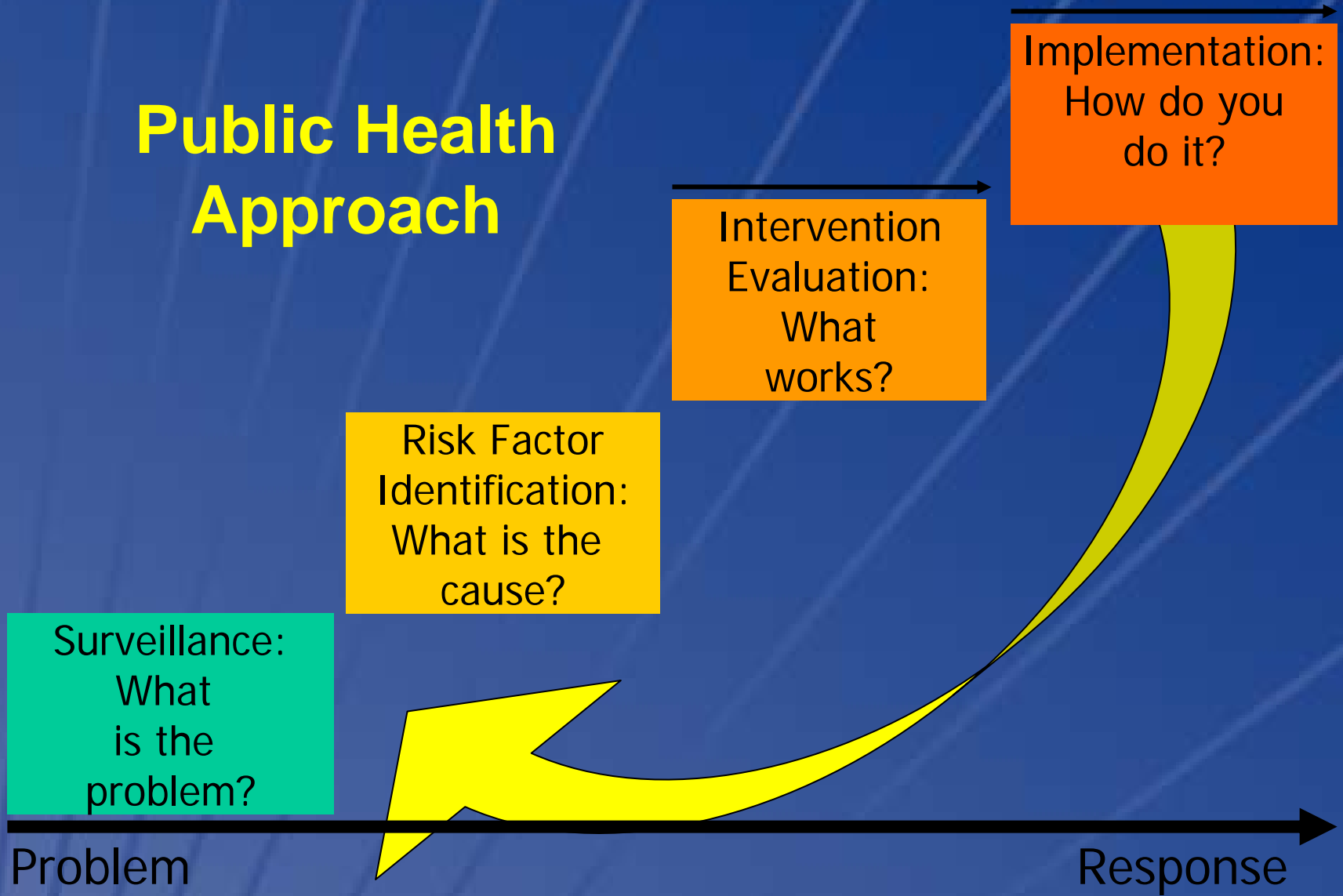


Why is NDMS detailed medical information vital to the public health disaster response?

- **What** problems are occurring?
- **Where** and **why** are they occurring?
- **Who** is affected?
- What problems are causing the greatest **morbidity** and mortality?
- What problems are **increasing or decreasing**?



Public Health Approach



Key Data Sources for Surveillance

- Hospitals, Clinics
- NDMS units
- Military Facilities
- Evacuation Centers

Methods of data collection

- Active case finding
- Record review
- Electronic aberration detection



Critical Data Elements

- **Communicable diseases**
 - Upper respir infections (e.g. TB)
 - Skin diseases (e.g. scabies)
 - GI illness (e.g. Norwalk virus)
- **Injuries (e.g. Carbon monoxide poisoning)**
- **Mental Health**
- **Vulnerable populations**
 - Pregnant and newborn clients
 - Chronic illness (e.g. Hypertension, Diabetes, COPD, Asthma, HIV)
 - Dialysis



Katrina Lessons Learned

- **Surveillance provided valuable information**
 - No significant outbreaks detected
 - Defused rumors
 - Measured burden of chronic conditions

However

- No “standardized” forms available
- Chronic illness and medication needs
- Federal and State partnerships needed to coordinate surveillance activities



Challenges for Surveillance in Disaster Settings

- **Competing priorities**
- **Various Aid agencies collecting data**
- **Logistical constraints**
- **Absent baseline information**
- **Denominator data difficult to obtain**
- **Access to medical record**



ENOUGH WAS ENOUGH!



WATT ANDERSTYAN @ 2009 Newsday



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