Tracking Injury Deaths Related to Hurricane Ike, Texas (2008)

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Outline

• Orientation to Public Health in Texas
• The Public Health Challenge – Tracking Deaths Related to Hurricane Ike
• Surveillance Effort Described
• Results
• Innovative Characteristics
• Barriers and Obstacles
• Impact
• STIPDA’s Disaster Epi Forum
Texas Background

• 24 + million population

• Contains 3 of the 10 largest cities in the nation (Houston, San Antonio, and Dallas)

• 254 counties (population range from 60 – 3.9 million)

• Roughly 800 x 800 miles
Public Health in Texas

- System is complex

- DSHS is responsible for oversight and implementation of public health and behavioral health services

- Texas is “home rule” state – local autonomy
  - 144 local health departments or districts
  - ~ 80% of state population is served by local health departments
Background

• No State Medical Examiner in Texas;
  – a mixed ME and Justice of the Peace system exists

• DSHS and CDC provided 2 trainings on disaster related mortality

• DSHS developed standardized mortality form modeled after CDC’s
Hurricane Ike  (9/13/2008)

- Category 2 but with a storm surge equal to a category 4 storm
- Storm tides with 10-15 foot surges
- Winds up to 110 mph
- Rainfall 10+ inches
- 1.9 million evacuated
- Power lost to 4.5 million people
Ike Surveillance Objectives

1. Report the number of deaths attributed to Ike,

2. Describe the cause of deaths, and

3. Identify strategies to prevent or reduce future hurricane-related mortality
Data Reporters

- Medical Examiners
- Justices of the Peace (e.g., coroners)
- Forensic Center
- Public Health Officials
- Hospitals
Data Elements

- Collected preliminary information
  - demographics
  - circumstances,
  - causes, and dates of deaths

- Completed forms faxed or emailed daily to DSHS
Results

- The majority of deaths were indirectly related to the hurricane
- Results indicated that injury was the leading cause of death
- Carbon monoxide poisoning, drowning, and hit by fallen trees were the leading causes of injury-related deaths

(David J. Phillip-Pool/Getty Images)
Deaths Due to Injury

- Total: 47 Deaths (64%)

Top Five Causes of Injury:
- Carbon Monoxide Exposure
- Drowning
- Hit by Falling Tree Limb
- Burns
- Firearm (suicide)
Proper Use of Gas-Powered Generators

Hurricane Ike, Texas 2008
Unintentional Carbon Monoxide Poisonings Deaths
(Six incidents resulted in 7 deaths)

Source: Texas Department of State Health Services, Community Preparedness, Strategic Preparedness, Tracy Heywood, January 2009
Safe Preparedness Activities

- A child was struck and killed by a falling tree limb cut down in preparation for the hurricane.

- A man was electrocuted when he drilled into live wiring while reinforcing his roof with additional screws.
Safe Recovery/Cleanup Activities

- Four individuals were killed by falling trees during cleanup activities.
  - This included a utility company employee who was killed when he was hit by a falling tree while clearing debris from power lines.
Innovative Characteristics

- Active and timely surveillance system
- Provided training to local and regional health departments in advance
- Collaborative effort
  - Local, regional, state, and federal with data reporters
- State injury program provided “surge” epi capacity
Barriers and Obstacles

- Communicating a consistent case definition
- Collecting data from storm impacted areas
- Competing local priorities (data collection vs. search/rescue or disaster response)
Impact

• Surveillance critical in determining the magnitude, manner, cause and circumstances of deaths
• Provided daily information to local, state, federal public health and emergency management
• Served as an early warning alert system to detect patterns where public health action could be taken
• Helpful in responding to media requests
Acknowledgements

• Participating data reporters
• DSHS Disaster Surveillance Workgroup
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• Tracy Haywood
STIPDA’s Disaster Epidemiology Special Interest Group (SIG) is Forming!

• A forum for STIPDA members to:
  – Express ideas,
  – Learn of best practices, and
  – Contribute to expert discussions with peers and colleagues

• To learn more about how you can join and participate, please contact David Zane (Texas) (david.zane@dshs.state.tx.us)