Shelter Surveillance in TX

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Objectives

• Review basis for conducting shelter surveillance in Texas

• Describe SMOC shelter surveillance operations during the Hurricane Harvey response

• Share upcoming changes
Epidemiological Basis for Shelter Surveillance

**Epidemiologic Triad**

- **Agent**: Infectious agent
  - Easily transmitted
  - Novel disease

- **Environment**: Crowded living conditions
  - Limited hygiene and sanitation

- **Host**: Residents/staff young and older
  - Pre-existing health conditions
  - Pregnant women
  - Unvaccinated and susceptible

Source: CDC, Environmental Health Training in Emergency Response Shelters presentation
Legal Basis for Shelter Surveillance

- Chapter 418 Texas Govt Code
  - Establishes state emergency management plan
  - Governor’s disaster declaration activates plan
  - Plan maintained by Texas Division of Emergency Management (TDEM)

- Plan assigns DSHS as lead state agency for public health and medical (also known as ESF-8)
  - Plan’s Annex H (2013) describes ESF-8 activities
    - Shelter surveillance is an ESF-8 activity
    - LHDs/PHRs conduct shelter surveillance
    - DSHS [HQ] provides shelter surveillance tools with min. data requirements to be collected statewide

10/5/2018
Hurricane Harvey Response

8/23/17
- Harvey enters Gulf as a Tropical Depression
- HEPRS staffing at SOC

8/24
- SMOC activated
- Shelter surv forms sent to PHRs w/ request to send to LHDs

8/25/17
- Hurricane Harvey makes landfall, 9PM CST

8/26
- First shelter surveillance reports received at SMOC
Shelter Surveillance Operations

10/5/17
• Last shelter reporting closes

10/23
• 1 shelter with census of 211 remained

By 10/30
• No shelters

Source:  DSHS State Medical Operation Center data and Texas Division of Emergency Management data
Hurricane Harvey Stats

2nd costliest hurricane in U.S. history

Highest storm total rainfall record in U.S.
- 60.58 in near Netherland, TX

SE TX areas experienced 1000-yr floods or greater

Shelter Surveillance

• SMOC received shelter surveillance information from 8/26 – 10/5/17

• 8/31/17 - Peak # of shelters reporting
  • 55 different shelters reporting with 4,413 total census

• 9/1/17 – Peak census among shelters reporting
  • 5,808 total census across 48 shelters reporting
Health dept staff working shelter surveillance activities by phase

**DSHS SMOC Shelter Surveillance Team, 7 Staff**

- **Recovery**: 29%
- **Post-Landfall**: 100%
- **Landfall**: 29%
- **Pre-Landfall**: 14%

**Regional and Local Health Departments, 21 Jurisdictions**

- **Recovery**: 71%
- **Post-Landfall**: 100%
- **Landfall**: 76%
- **Pre-Landfall**: 52%

Source: Hurricane Harvey Shelter Surveillance Survey, DSHS Health Emergency Preparedness and Response Section
Lessons Learned

• Capture better data
  • ~ 250 different shelters open & active in TX
  • At most captured 55 different shelters
  • Situational awareness on only 22%

• Ask about...
  • Listing of different shelters known to Regions or LHDs
    • # different shelters open and active
    • # of different shelters where surveillance was established
    • # of different shelters reporting
    • Gain situational awareness of gaps in shelter surveillance
Lessons Learned

• Ask about...
  - daily # complaints received for each event/syndrome, (previously asking only about increases)

• Provide...
  - Standardization for how individual complaints are categorized into health events
Upcoming changes

New SMOC Disaster Epi Branch

DSHS Regions submit forms to SMOC Shelter Surveillance Unit

- SMOC Operations Section Chief
- Disaster Epi Branch Director
- Epi Intel Analyst
- Mortality Surveillance Unit
- Environmental Health Surveillance Unit
- Shelter Surveillance Unit
- Disease Surveillance Unit
- Syndromic Surveillance Unit
Shelter Surveillance Concept for Texas

Passive Shelter Surveillance

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<th>Flow of Reporting</th>
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<td>Gen Shelter Surv Situational Report</td>
<td>SMOC SITREP</td>
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10/5/2018
24-Hour Reporting Period for Shelters

- Shelter reporting period within a 24-hr EOC operational period
- Allows for next day creation of statewide picture
- American Red Cross uses a standard reporting period
  - 4PM - 3:59PM

- Shelter reporting period within a 12-hr EOC operational period
- Up to 2-day delay in creating statewide picture
Summary

• Legal and epidemiological basis for shelter surveillance

• Harvey lessons learned being incorporated into shelter surveillance operations

• Passive surveillance concept applied to shelter surveillance
Thank you

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