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Shelter Surveillance in TX

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Objectives



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- Review basis for conducting shelter surveillance in Texas
- Describe SMOC shelter surveillance operations during the Hurricane Harvey response
- Share upcoming changes



Harvey making landfall
on San Jose Island
(Source: NSW)

Epidemiological Basis for Shelter Surveillance



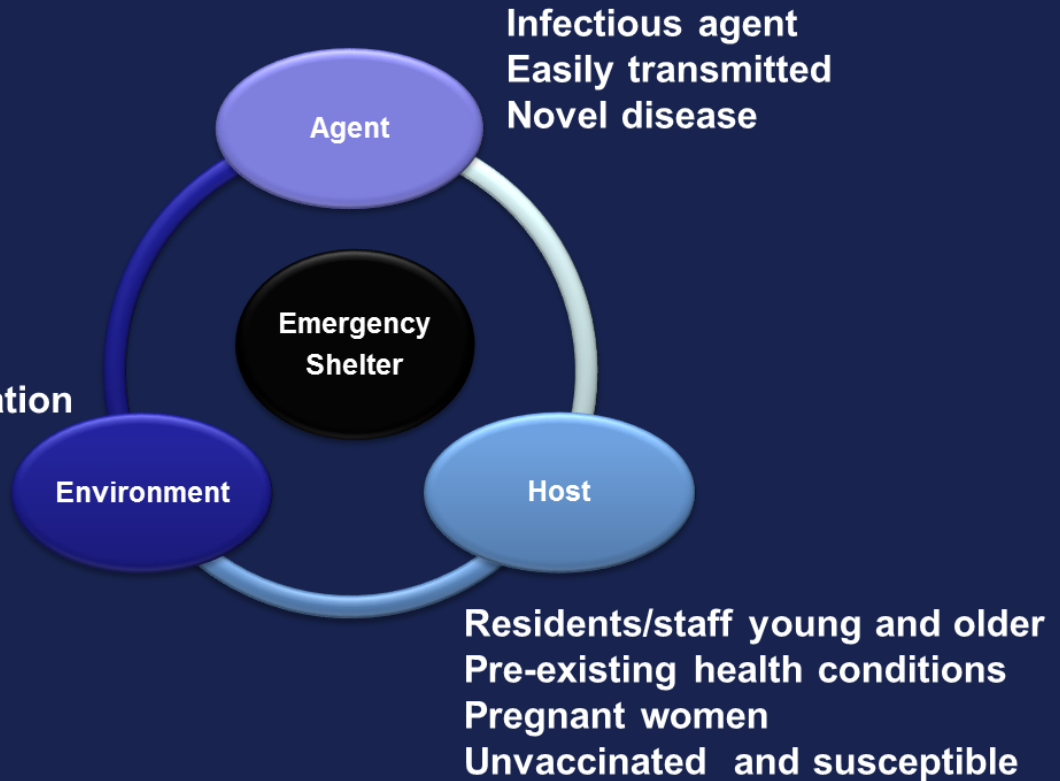
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Epidemiologic Triad

Crowded living conditions
Limited hygiene and sanitation



Legal Basis for Shelter Surveillance



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- 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

Hurricane Harvey Response



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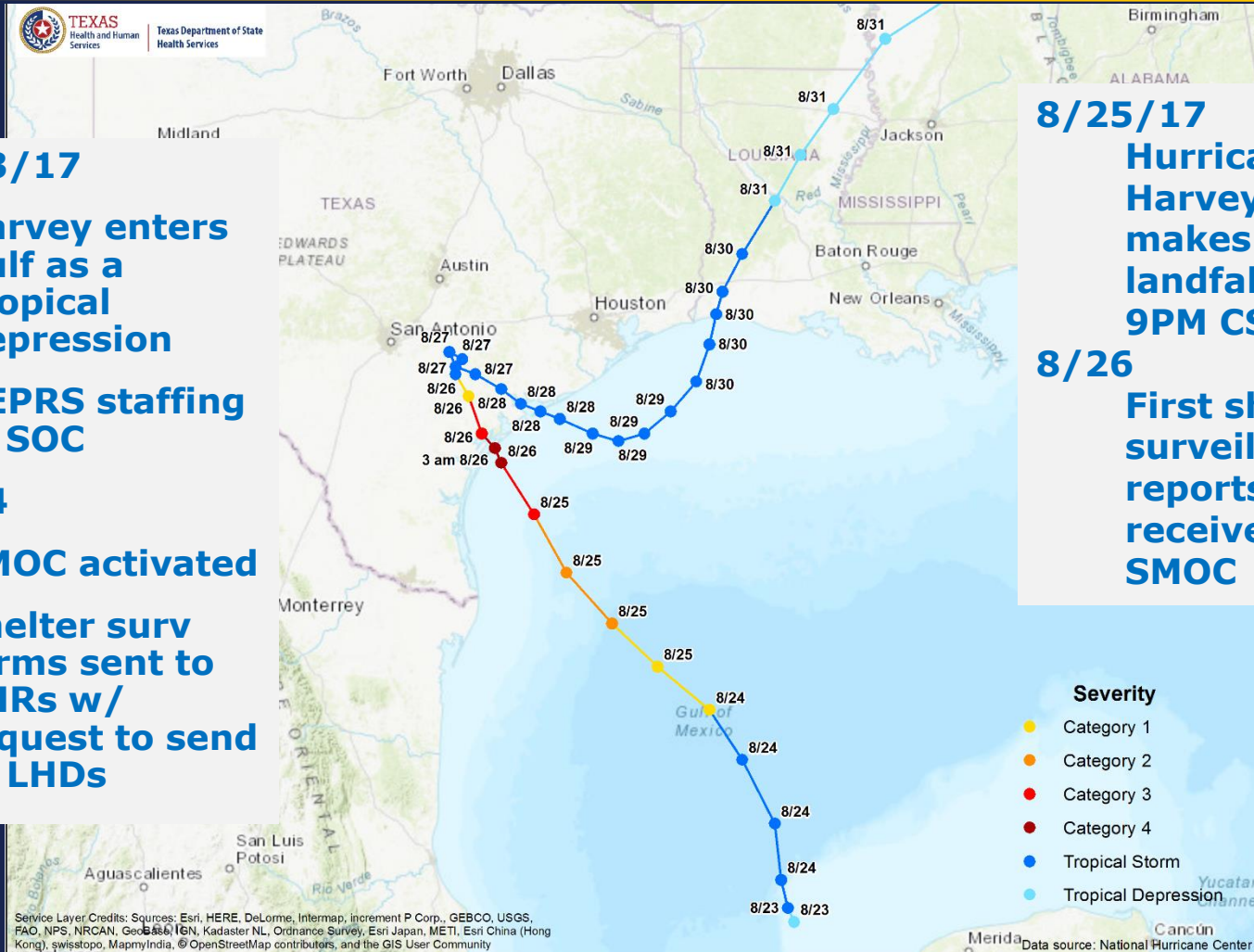
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8/23/17

- **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



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10/5/17

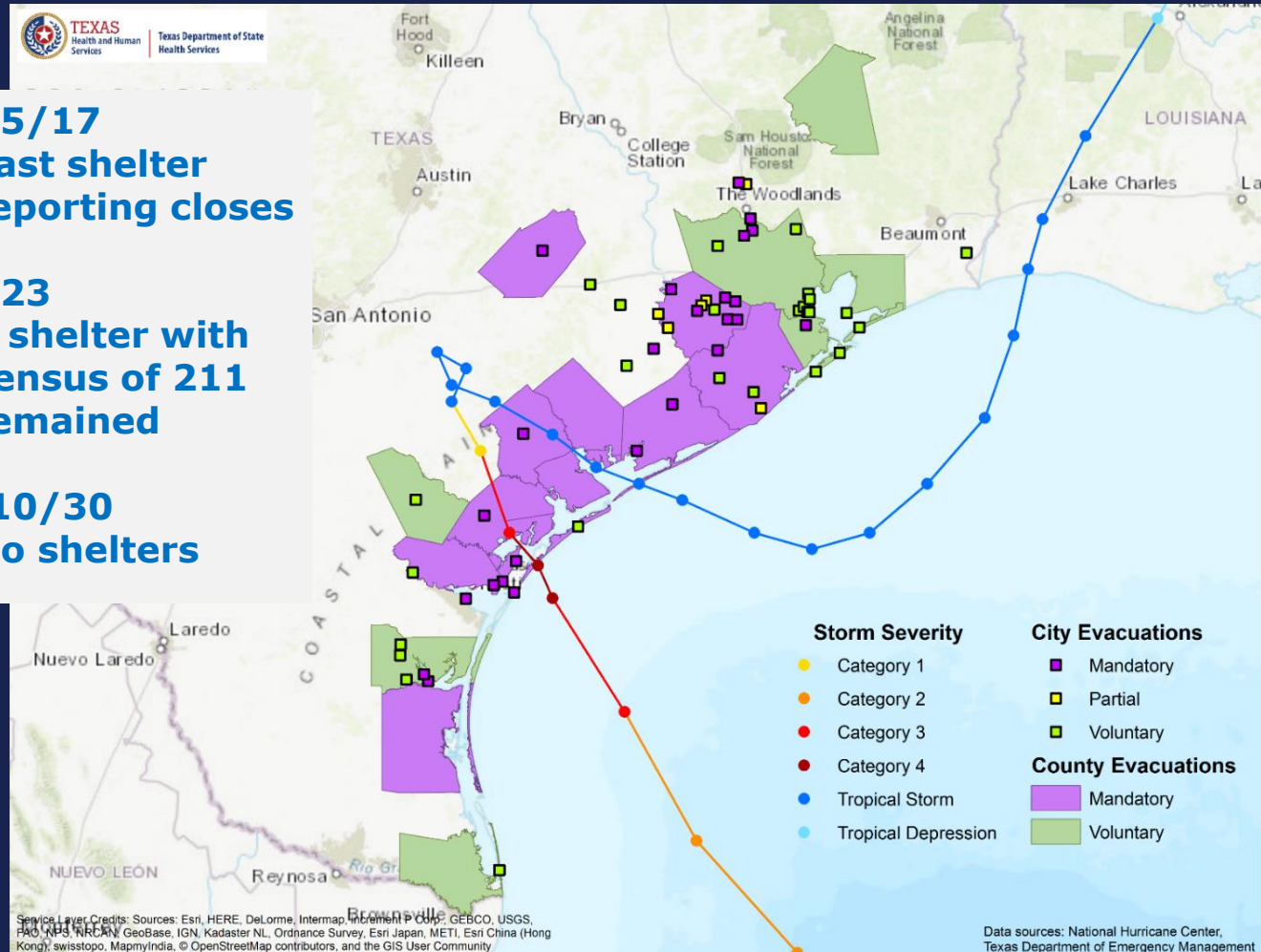
- Last shelter reporting closes

10/23

- 1 shelter with census of 211 remained

By 10/30

- No shelters



10/5/2018

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



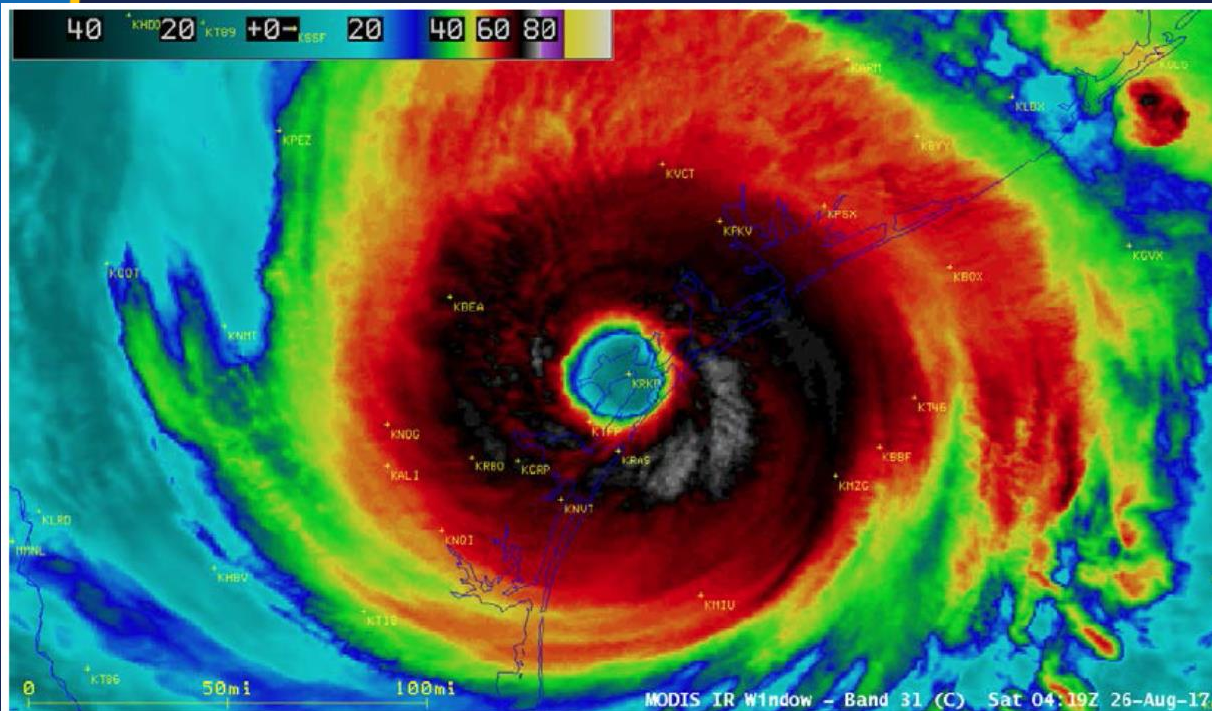
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Hurricane Harvey Stats

2nd costliest hurricane in U.S. history



NASA TERRA MODIS INFRARED IMAGE OF HARVEY AT 0419 UTC 26 AUGUST 2017 JUST AFTER LANDFALL AS A CATEGORY 4 HURRICANE IN TEXAS. IMAGE COURTESY OF UW/CIMSS.

*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



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Health dept staff working shelter surveillance activities by phase



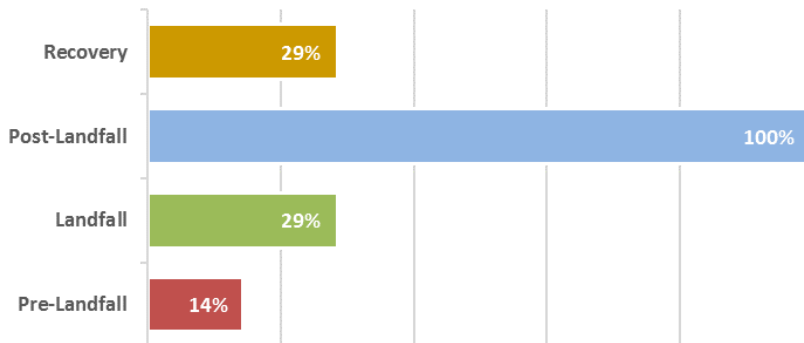
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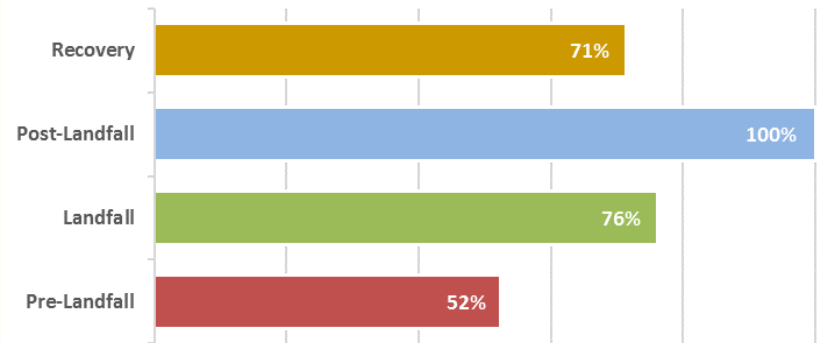
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**DSHS SMOC Shelter Surveillance Team,
7 Staff**



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



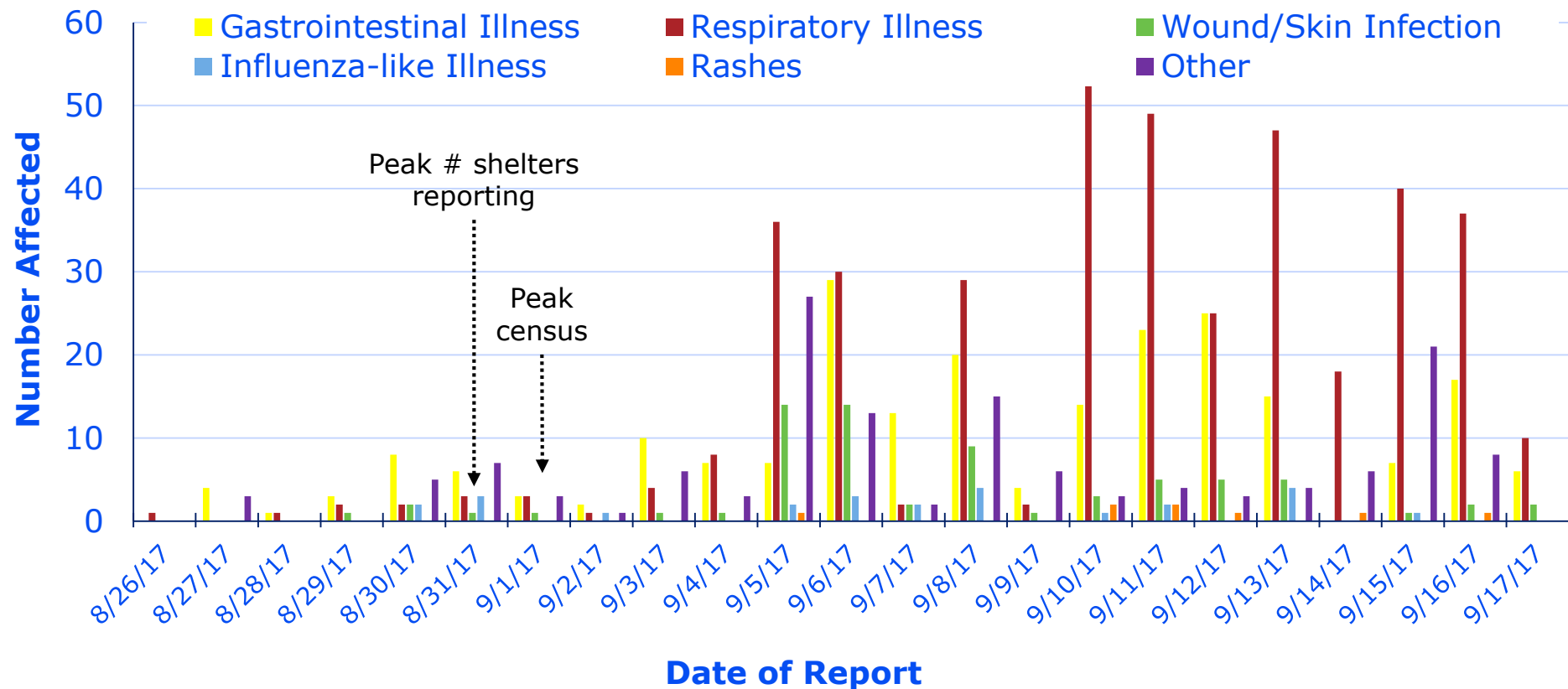
Hurricane Harvey Shelter Surveillance

Number Affected by Date of Report, Aug. 26 – Sept. 17, 2017



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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



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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



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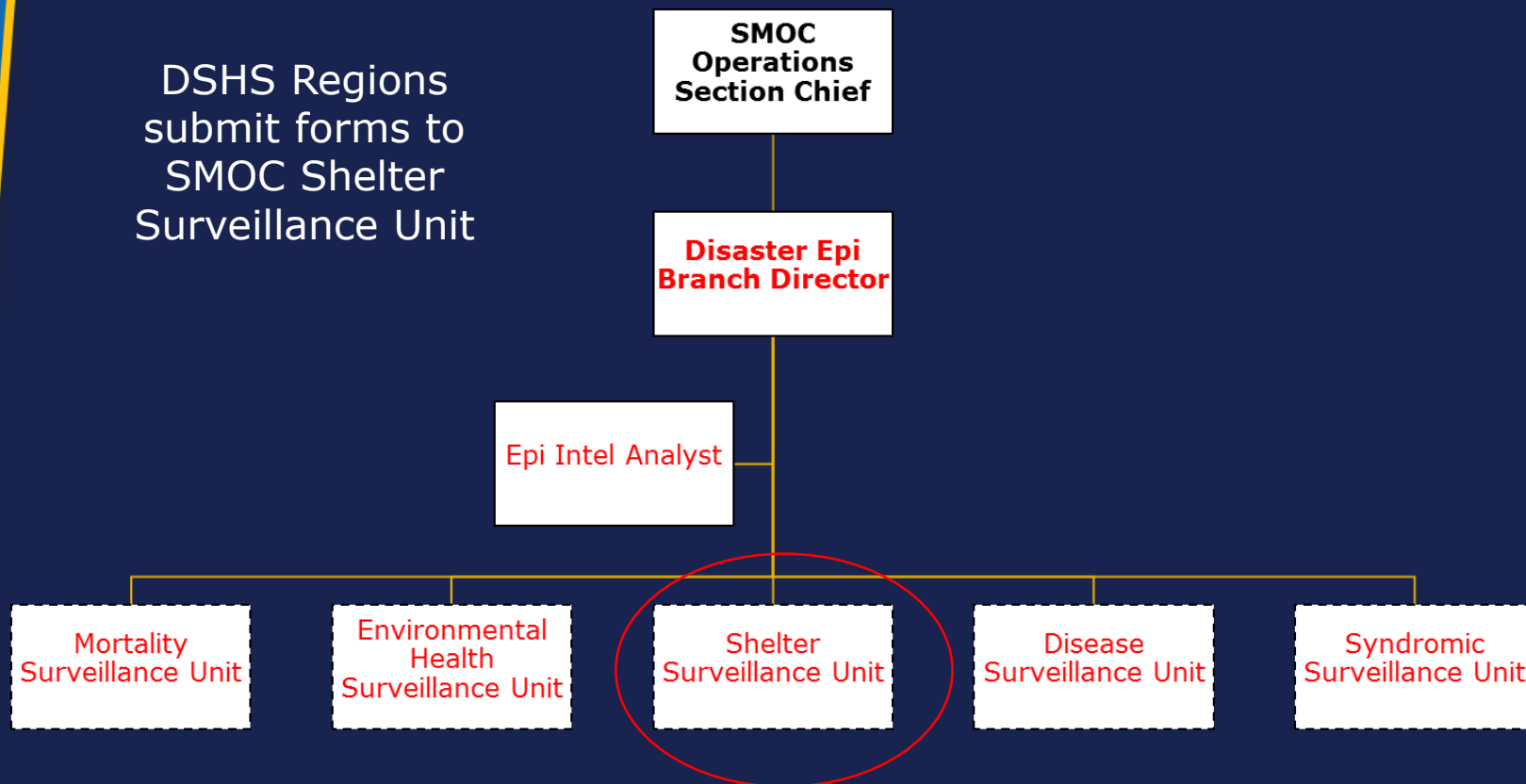
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Upcoming changes

New SMOC Disaster Epi Branch

DSHS Regions
submit forms to
SMOC Shelter
Surveillance Unit



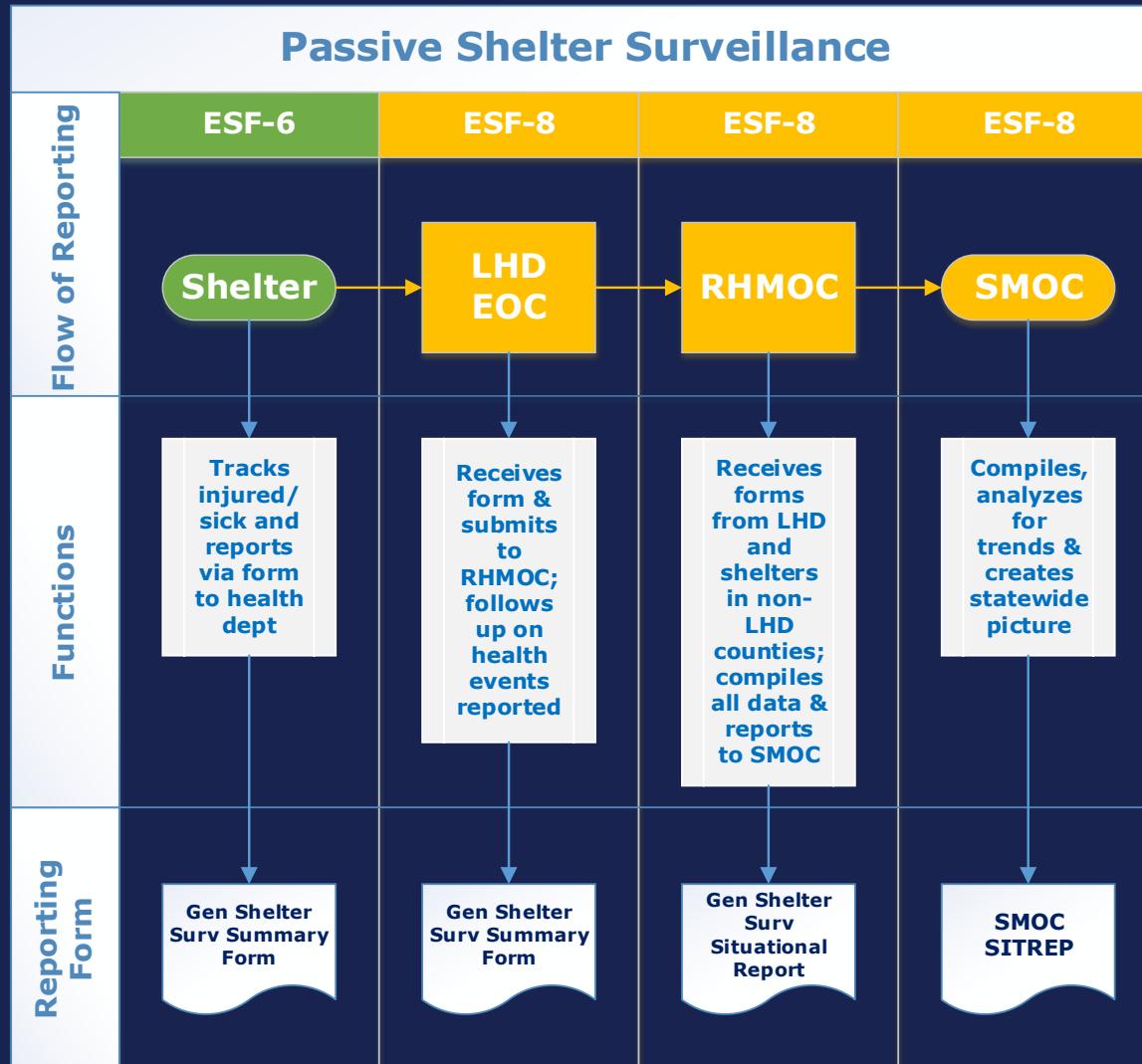
Shelter Surveillance Concept for Texas



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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



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Summary

- Legal and epidemiological basis for shelter surveillance
- Harvey lessons learned being incorporated into shelter surveillance operations
- Passive surveillance concept applied to shelter surveillance



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Thank you

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