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Health Services

Texas Syndromic Surveillance System

Overview



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- History
- What is Syndromic Surveillance?
- Governance Structure
- Configuration & Connection
- Current Status
- Uses
- Future Activities

History of SyS in TX

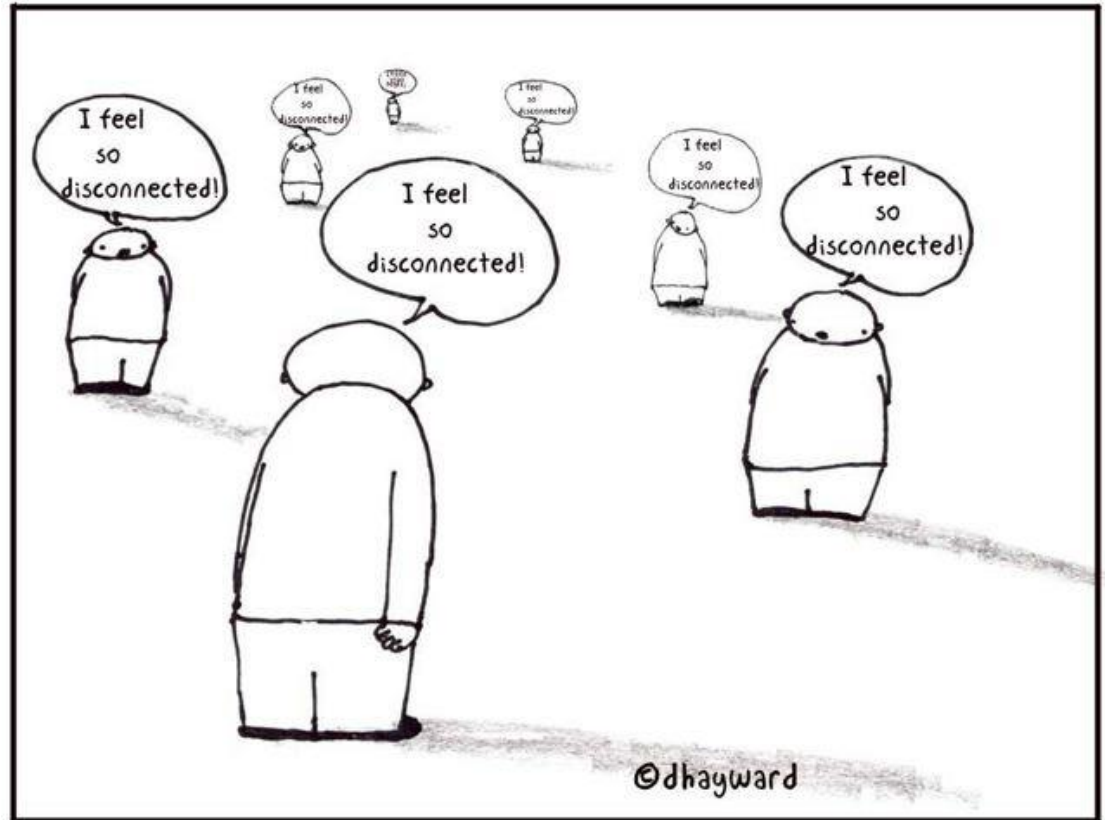


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- In 2011 there were 6 separate systems that did not share data.
- In 2018 there are 4.



Syndromic Surveillance

- Texas does not have legislative mandate
- DSHS has authority to operate under Chapter 81
- Promoting Interoperability (Meaningful Use)



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Syndromic Surveillance

The purpose of syndromic surveillance is to detect as early as possible abnormal disease patterns that could result in high morbidity and mortality.

1. Early event detection
2. Situational awareness
3. Retrospective analysis



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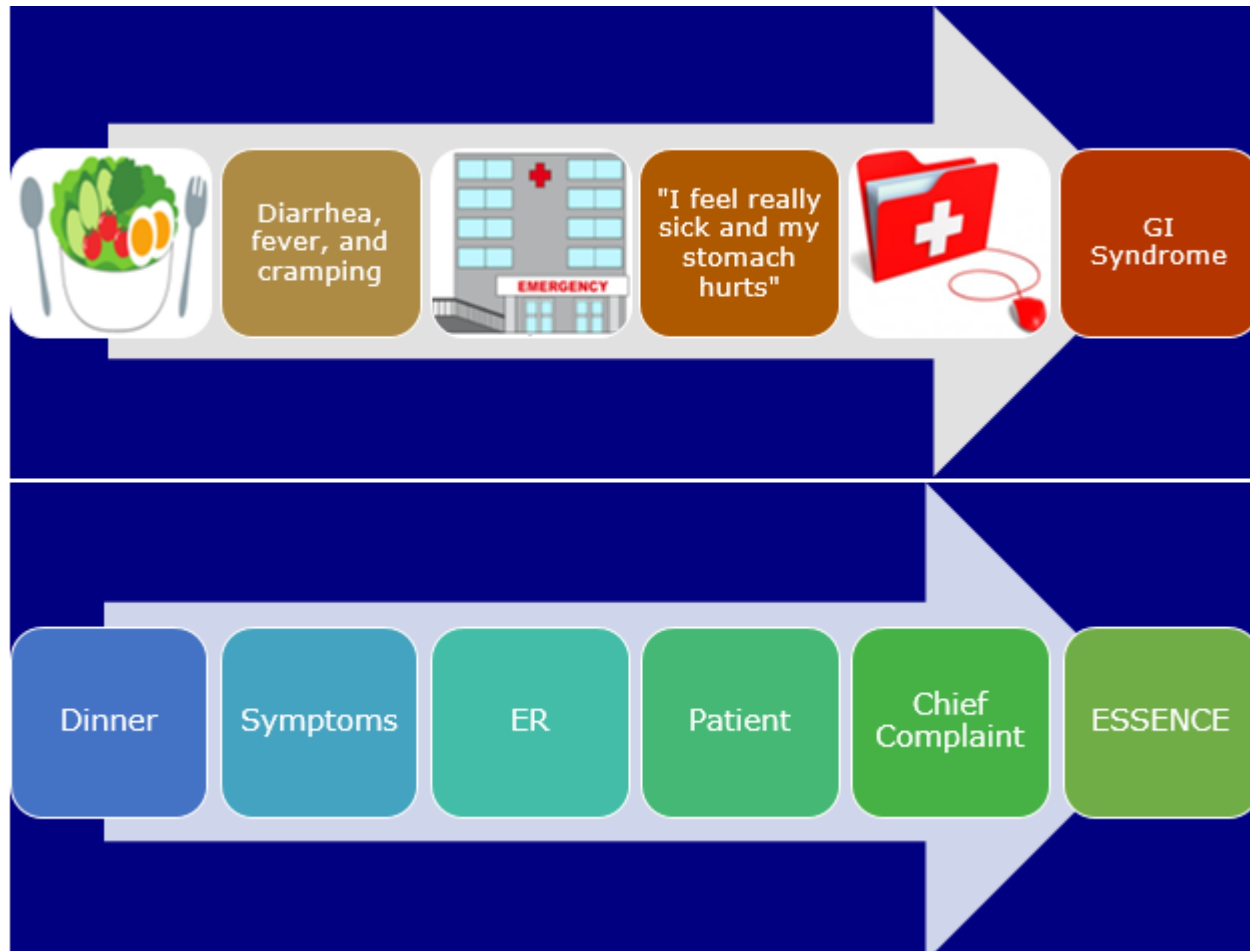
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Syndromic Concept



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Governance Structure



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- Governance Council
- Regional Advisory Committees



Configuration & Connection



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- Hospitals in 2/3 submit to Tarrant
- Hospitals in 6/5S submit to Houston
- All others connect directly to TxS2



Memorandum of Understanding



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- Data Provider MOU
- System User MOU
- LHD MOU



Data Sharing/Viewing

- Hospitals = Hospital/System
- LHDs = PHR
- DSHS = Statewide
- All = Aggregate Data



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Electronic Surveillance System for the Early Notification of Community-based Epidemics

48 Data Elements*



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- Facility Identifier
- Facility Name
- Facility/Visit Type
- Message
- Date/Time
- Unique Patient Identifier/Medical Record Number
- Unique Visit Identifier
- Gender
- Race
- Age/Age Units
- Patient Zip Code
- Patient County
- Chief Complaint/Reason for Visit
- Admit or Encounter Date/Time
- Date of Onset
- Patient Class
- Admission Type
- Discharge Disposition
- Triage Notes
- Travel History
- Clinical Impression
- Pregnancy Status
- Height
- Weight
- BMI
- Systolic and Diastolic Blood Pressure
- Initial Temperature
- Initial Pulse Oximetry
- Smoking Status

13 Syndromes



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- Botulism-like
- Exposure
- Fever
- Gastrointestinal Illness
- Hemorrhagic Illness
- Influenza-like Illness
- Injury
- Neurological
- Other
- Rash
- Records of Interest
- Respiratory
- Shock/Coma

*Plus unlimited user defined queries

Current Status



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- 117 hospitals directly to TxS2
- 104 to TxS2 via Tarrant County
- 100+ testing
- LHD & Hospital users have credentials
- New data sources
- Data quality
- National Syndromic Surveillance Program (NSSP)



ESSENCE Uses



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Routine Queries

- ED visit counts
- Asthma-like
- Diabetes-related
- Cardiac events

Seasonal Queries

- Cold/winter weather
- Carbon monoxide
- Heat-related illness
- Swimming/drowning

Substance Use Queries

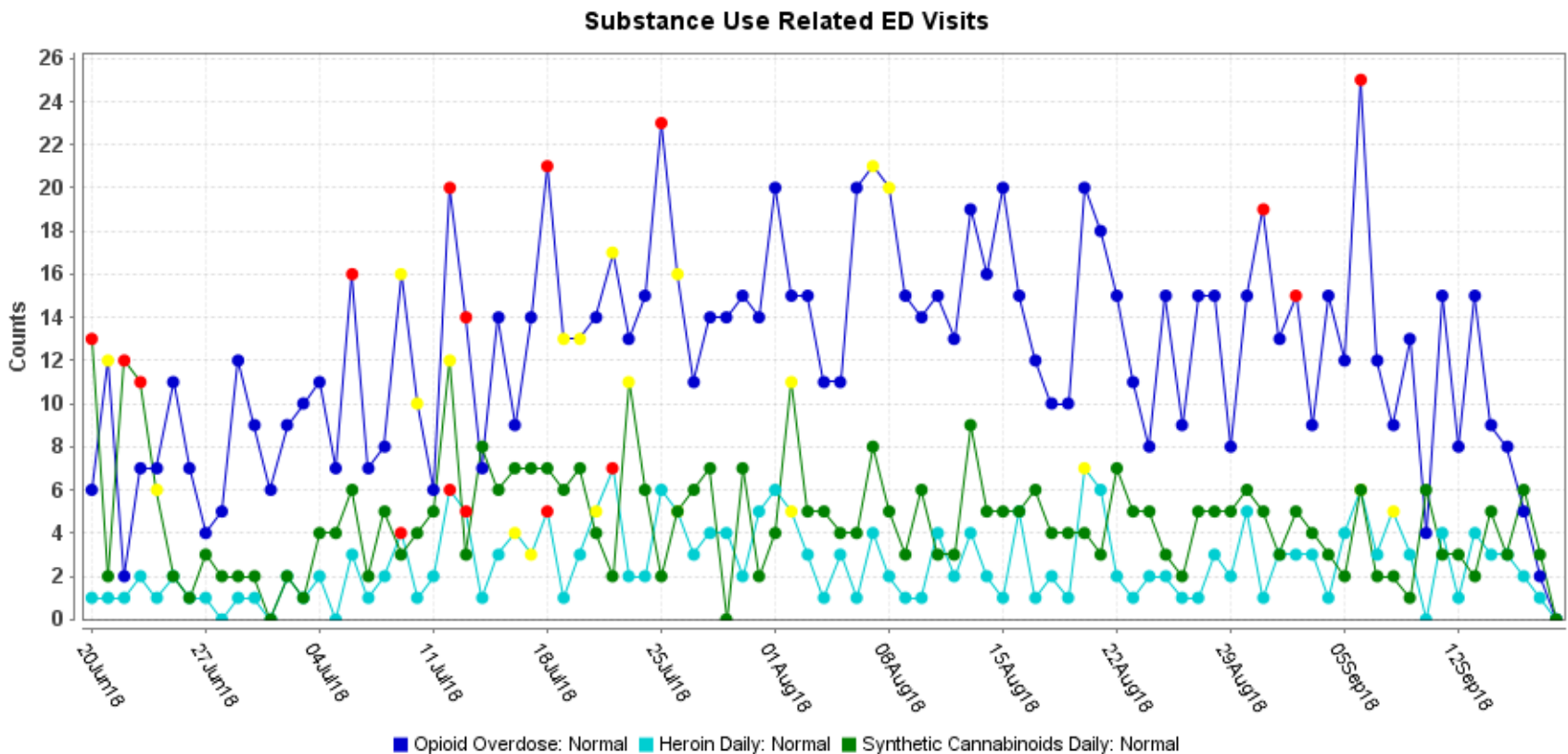
- Opioid
- Heroin
- Synthetic Cannabinoids
- Methamphetamine

Public Health Event Queries

- Rain/Precipitation/Flood
- Hurricane
- Zika
- Arbovirus

ESSENCE Uses

- Substance Use (Opioids, Meth, & Synthetic Cannabinoids)



ESSENCE Uses



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Syndromic Surveillance Success Stories



Lessons Learned

This study highlights the utility of syndromic surveillance data for conducting timely analyses associated with disasters.

- **Disaster preparedness efforts should be coordinated across geographic boundaries** to account for population mobility during an event.

Syndromic Surveillance Shows Medical Surge in Dallas–Fort Worth during Hurricane Harvey, 2017

Public Health Problem

Hurricane Harvey made landfall in Texas on August 25, 2017, resulting in 88 fatalities and more than \$125 billion in damages to infrastructure. In Houston, flooding created a toxic mix of chemicals, sewage, biohazards, and 8 million cubic yards of garbage. The level of biohazard exposure, as well as injuries from trauma among persons residing in affected areas, was widespread and likely contributed to increases in emergency department (ED) visits in Houston and cities that received persons evacuating from the hurricane.

Health scientists with Tarrant County Public Health worked with CDC to investigate the medical surge associated with Hurricane Harvey in Dallas–Fort Worth (DFW) metroplex EDs. Evacuees from 60 Texas counties with disaster declarations sought care outside the storm impact zone, many in DFW. The health scientists looked at spatial and temporal variation in ED visits to DFW hospitals attributable to the storm.

Future Activities



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- Onboard Houston Health Department
- Decommission TALHO
- Potential Data Sources
- Training
- Development of Use Cases
- Success Stories
- Continued Recruitment



Opioid CoAg



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- CDC funding opportunity
- Enhancements
- Opioid surveillance
- Beneficial for other surveillance and disaster response
- Real-time data sources to be integrated into one platform



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Questions

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