Current Projects

ESSENCE Enhancement

Functional enhancements include adding interactive user text analysis and social usage features. These will aid in query development and sharing. Data source enhancements include adding data feeds from EMS and Poison Control. Other enhancements needed are database configuration, data flow configuration, query wizard design, and any back-end detection and algorithmic modifications needed to support the new data sources.
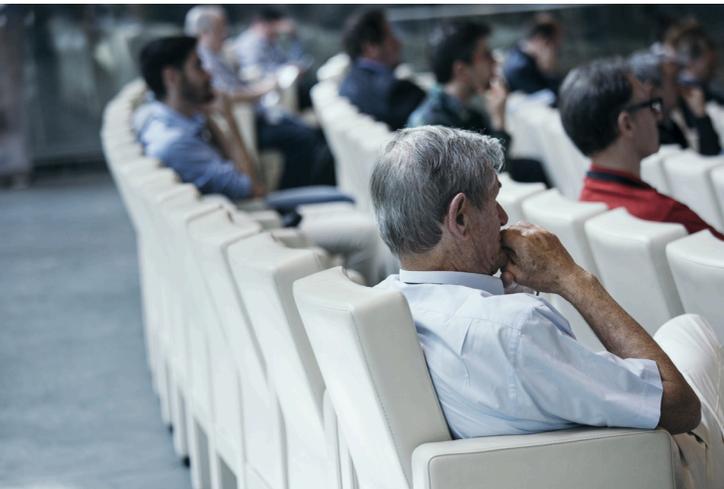
Regional Opioid Workshops

DSHS scheduled eight regional workshops, one in each Public Health Region. The purpose of the workshops is to enhance local capacity to use advanced analytics and visualization methods available with Texas Health Data and ESSENCE. The regional workshops focus these platforms for opioid and other substance abuse surveillance, identifying potential "hotspots" of activity, and improving data linkages of existing data sources. Invited attendees include DSHS, LHDs, hospitals, local government, and law enforcement.

Syndromic Data in Action

- Infectious disease outbreaks (flu, Zika, Norovirus)
- Mass gatherings (Super Bowl)
- Disasters (Harvey)
- Injuries (drug overdoses, falls)
- Chronic illnesses (Asthma)

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Texas Syndromic Surveillance (TxS2)
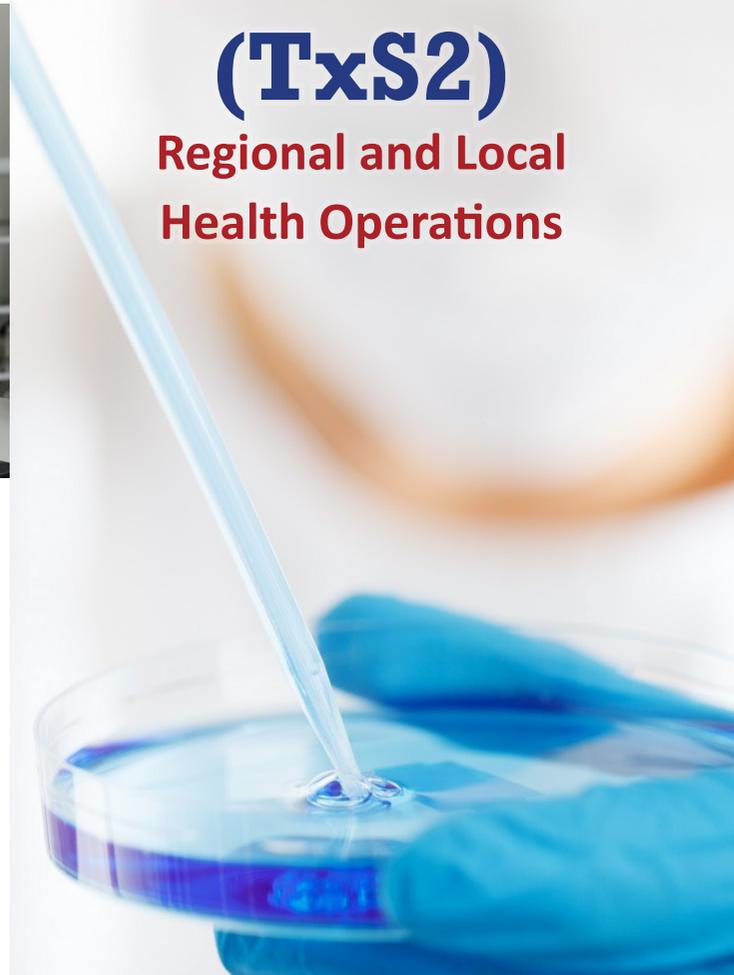
Regional and Local Health Operations

What is Syndromic Surveillance?

Syndromic Surveillance allows for early detection of abnormal disease patterns that could result in high morbidity and mortality using near real-time data.

The basic steps of how syndromic surveillance works are as follows:

1. A patient goes to an emergency department.

2. The facility's Electronic Health Record (EHR) captures the patient's information.

3. The syndromic surveillance system receives selected elements of the EHR.

4. The system analyzes the information for trends and abnormalities. Then the system creates alerts for aberrations in the data.

5. Hospitals can use the data to conduct additional analysis by viewing alerts and running queries. The information is available for public health authorities.

Department of State Health Services (DSHS) stores the data in a secure database. LHDs, DSHS PHRs, DSHS central office, and data providers can access the data through the analysis software known as ESSENCE (Electronic Surveillance System for the Early Notification of Community-based Epidemics.) Johns Hopkins University Applied Physics Laboratory developed ESSENCE.

FAQ

Who is eligible to participate?
Hospitals with emergency departments, free-standing emergency centers and urgent care centers are eligible to participate.

How much does it cost?
Participation is free! The only cost is for the information technology personnel required to make and manage the connection.

Is the data in TxS2 confidential?
Yes, data in TxS2 is secure and confidential as it's Protected Health Information (PHI.) DSHS stores all data in secure databases accessed only by authorized users.

What type of agreement do is required?
Data providers and LHDs must sign a Memorandum of Understanding (MOU) with DSHS. Individual users must sign a User Access Agreement.

What are the technical specifications for TxS2?
DSHS configured TxS2 to support the Public Health Information Network Messaging Guide for Syndromic Surveillance.

How does data get into TxS2? How often is it updated?
The EHR automatically captures and sends the data to TxS2. The expectation is to have hospitals submit data at least once every 24 hours.

How does viewing data work?
Hospitals can view data from within their hospital. Local Health Departments (LHDs) can view data from within their Public Health Region. DSHS staff can view statewide data. All users can view aggregate data.

How is TxS2 beneficial for data providers?
TxS2 is beneficial for the early detection of abnormal disease patterns within the facility and uses a proprietary algorithm that allows for statewide comparisons.
How is TxS2 beneficial for public health officials?
Public Health officials can use the system for early event detection, situational awareness and querying the data for syndromes of interest.

How many hospitals submit data to TxS2?
There are more than 250 hospitals submitting data to TxS2, with more added each month.

What data is available in TxS2?
Currently, hospital emergency department (ED) data is the only data source. There are plans to add Poison and Emergency Medical Services data by the end of 2019. DSHS will consider other data sources in the future.

How is this related to the Tarrant County system or the Houston Health Department system?
The two systems feed their data into TxS2. Facilities located in PHR 2/3 should submit to Tarrant. Similarly, facilities located in PHR 6/5S should submit to Houston.