

## Background

Austin Public Health (APH) utilized the Realtime Outbreak and Disease Surveillance (RODS) system up until November 30, 2018. During the period of use, APH created a robust process to request keywords to be implemented into the Chief Complaint field of an emergency department (ED) visit to allow for the analysis of patients during various incidents and events in the Austin Metropolitan area.

## Process

APH Public Health Emergency Preparedness (PHEP) epidemiologist identifies keywords. The keywords are sent to the APH Medical Director/Health Authority who creates a memorandum (memo) outlining the use of the keyword including the timeline for use and the directions to place it in the free-text chief complaint area during patient triage. The memo is sent to local hospital system emergency department doctors and directors, a Travis County Medical Society distribution list, and the Capital Area Trauma Regional Advisory Council (CATRAC) who sends it to hospital safety officers and trauma coordinators.

## Not a One-Way Street

The process is a two-way partnership and hospitals sometimes request a keyword for use when they notice changes or want to investigate total hospital impact. In 2018, dockless electric scooters were introduced into Austin. In September 2018, a doctor at Dell Seton Medical Center noticed an increase in scooters and sent a request to APH to add the keyword “scooter”. APH was able to initiate the process and the surveillance lead to the first of its kind study with the Center for Disease Detection (CDC) studying risk factors related to injuries with scooters.

**Table 1:** Table of events and incident keyword use at APH including dates and keyword used.

Event/Incident	Dates	Keyword(s)
South By Southwest	March Yearly	SXSW
Austin City Limits	October Yearly	Fest, ACL
Formula 1 Grand Prix	October Yearly	F1
Hurricane Harvey	August-September 2017	Hurricane Harvey, Evacuee
Austin Water Boil Water Notice	October 2018	Boil
Electric Scooters	September 2018 - Ongoing	Scooter

## Data Sharing with Partners

### Reports

Reports are generated from ED visits containing the keyword. Analysis within the reports can include:

- Age/Gender
- Home Zip code
- Syndrome
- Visits over time

### Partners

Reports are shared via APH’s website, WebEOC, and/or email. Reports are shared internally within APH as well as with partners including:

- Travis County Health and Human Services
- Capital Area Public Health and Medical Preparedness Coalition
- Public Health Region 7
- Austin/Travis County Homeland Security and Emergency Management
- Austin Regional Intelligence Center
- Local Hospital Systems

### Use of Reports

Reports have been used in varying ways throughout the metropolitan area:

- Hospital Surge Staffing
- Initiating CDC Epi-Aid Survey for Scooters
- Identifying Potential Locations for Cooling Centers
- Situational Awareness

## How TXS2 will Improve This

### Increased Reporting Sources

Onboarding includes:

- A new hospital system
- Free-standing Emergency Departments

### Detailed Queries

The TXS2 system allows detailed queries within the system, allowing for easier data analysis and identification of keywords and keyword misspellings.

### Refined Case Definitions

The TXS2 system includes more categories that are reported including discharge diagnosis and ICD-10 codes, which will allow for more robust case definitions related to events/incidents where keywords are utilized. This will allow patients to be identified even if the keyword was missed in the busy ED environment.

### Long-Term Studies & Data Comparisons

Medical Record Numbers are reported within TXS2, this allows APH to request patient information and possibly review medical records of patients. The patient information can then be compared to other sources such as Emergency Medical Services.

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