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The Future of Influenza (Flu) Surveillance in Texas

Emilio Gonzales

Overview

1. Considerations for Influenza (Flu) Surveillance
2. Goals for the Upcoming Season and Year
3. Projected Timeframes



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Considerations: Respiratory Disease Surveillance

- Structure of influenza surveillance reporter network
 - “Pan-Respiratory” disease surveillance?
 - Idea of expanded sentinel surveillance which incorporates multiple respiratory diseases
 - COVID-19 surveillance?
 - RSV surveillance and data?
- Increasing participation and associated data management
- Influenza Sequencing Center



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Goals for 23-24 Flu Season

1. Increasing participation
 - a. NREVSS
(National Respiratory and Enteric Virus Surveillance System)
 - b. ILINet
(Influenza-Like Illness Network)
 - c. Public Health Lab (PHL) Sample Submissions
2. Improved Outbreak Reporting
3. Better Data Visualization and Access



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Increasing Flu Surveillance Participation



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- NREVSS
 - 33 reporters currently (22-23 Season)
 - Largest percentage of testing comes from PHR 3 and 7
 - 26% and 24% respectively
 - **GOAL:**
 - Increase reporters by 7, to bring us to 40 reporters
 - Target areas with lower reporting
- ILINet
 - 65 reporters currently (22-23 Season)
 - **GOAL:**
 - Increase reporters by 15, to bring us to 80 reporters
 - Target areas with lower participation

Increasing Flu Surveillance Participation



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- PHL sample submissions
 - 22-23 Season to Date
 - 3676 specimens tested, 525 positives
 - Right Size Goals for Novel Influenza Detection
 - 182 positives per week during peak (>4 weeks)
 - 52 positives per week during 'shoulders' (weeks 40-20)
 - 1 positives per week during summer (year-round)
- **GOAL:**
 - Aim to meet Right Size novel testing outlined above
 - Additional aim for Sequencing Center
 - 90 specimens tested per week (weeks 40-39 / the year)
 - Avg. of 10 positives per week (weeks 40-39/ the year)

Improving Outbreak Reporting



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- Working towards a more streamlined reporting
 - Qualtrics/Survey based report
 - Initial scaled down report for providers
 - Follow-up completed by local health jurisdiction
- Reminding and educating providers, schools, facilities of what constitutes an outbreak
 - Required reporting

Respiratory Disease Data Visualization and Access



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- Influenza Dashboard
 - Historical data (~5 years)
 - Interactive visualizations
 - Regional breakout of data
 - Predictive model for influenza
- Includes other respiratory diseases
 - RSV, Adenovirus, Parainfluenza, etc.
- Aim to utilize data dashboard to inform health departments (HD's), providers, and the public



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Texas Influenza Surveillance Report

Flu | Activity Report | Detailed Lab View | Detailed ILI View | HSR Regional Surveillance Report | P & I Mortality Surveillance | Forecast | Methods | Emilio's Page | Summer Report | Advanced Analytics | Page 11



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Flu A % Positive

133

Flu B % Positive

0

Adenovirus % Positive

3.4

RSV % Positive

22

Rhinovirus & Enterovirus % Positive

271

Parainfluenza % Positive

52

MMWR Week

27

Year

2022

Key Indicators*

Indicator	Current Week	▲ Previous Week
Number of pediatric influenza deaths	0	0
Number of variant/novel influenza infections	2	1
Number of ILI/influenza outbreaks	5	2
Statewide ILINet Activity Indicator assigned by CDC (intensity of influenza-like illness)	High	Minimal

Activity Level by Region**

HSR_Group	▲ Activity Code	Average
1	3	3
2/3	4	4
4/5N	3	3
6/5S	4	4
7	3	3
8	4	4
9/10	4	4
11	3	3

*For Key Indicators, green indicates no activity for that indicator. Yellow represents a value of 1-5 for each indicator, orange represents a value of 6-9, and red a value of 10 or higher.

**For Activity Level by Region, an average activity level value of 0 is represented by green, a value between 1-3.5 is orange, and values above 3.5 are red.

Please note, some aspects of influenza surveillance may be affected by current COVID-19 response activities. For information about COVID-19 in Texas, please visit the [Texas COVID-19 website](#).

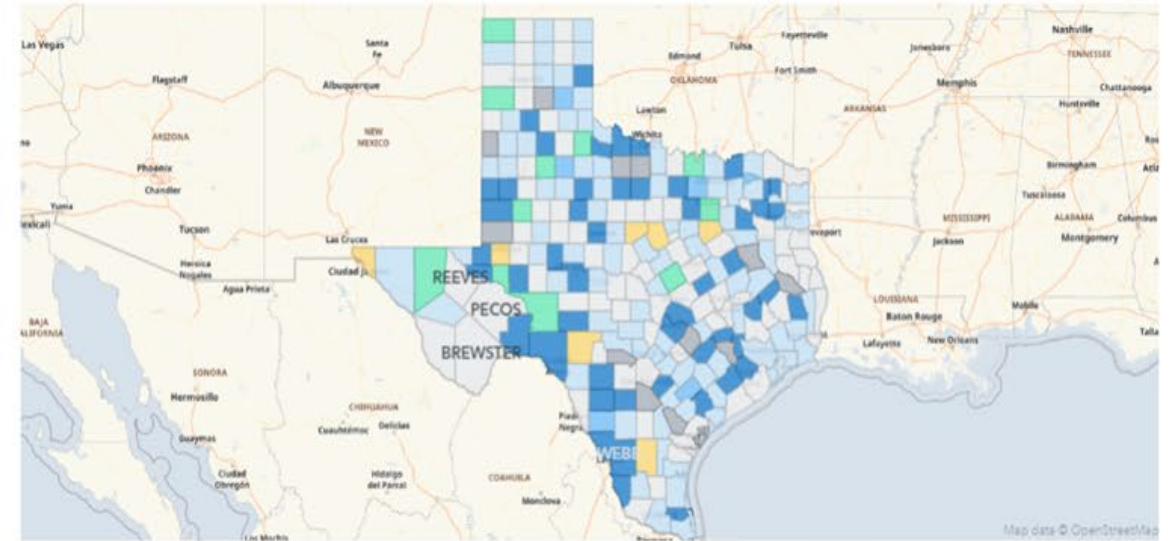
Compared to the previous week, the percentage of specimens testing positive for influenza reported by hospital laboratories has increased. The percentage of patient visits due to influenza-like illness (ILI) has decreased. No influenza-associated pediatric deaths were reported. No influenza-associated institutional outbreaks or school closures were reported.

For information about national influenza activity, visit CDC FluView at <https://www.cdc.gov/flu/weekly/index.htm>.

< Activity Level by County | Influenza Like Illness | Influenza Like Illness by Age Group | ILI by MMWR Week and Year | ILI & Avg Weekly Temperature >

The majority of influenza cases are not reportable by law in Texas. This map contains data from sentinel sites and only displays influenza and ILI cases that were reported to public health. Positive laboratory results are reported according to specimen collection date, or date received in the laboratory if the former is unknown.

Activity Level by County



*preliminary sample of influenza dashboard, material has likely changed



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Influenza Test Data - Current Week

Pathogen Group	Test/Pathogen Name	Percent/Count
Influenza	Flu_H1N109_Percent_POS	0.00
	FluPanAH1N1Pos	0.00
	FLUB_POS	7.00
	AH3N2POS	8.00
	Flu_B_Percent_POS	9.33
	Flu_A_UNK_Percent_POS	13.17
	Flu_AH3N2_Percent_POS	17.21
	AUNK_POS	27.00
	FLU TEST	10162.00

Other Respiratory Pathogens - Non-Influenza

Pathogen Group	Test/Pathogen Name	Percent/Count
Other	Adenovirus_Percent_POS	7.17
	HMPVPOS	29.00
Seasonal COVID	COVID_Percent_POS	22.05
Parainfluenza	Parainfluenza_Percent_POS	59.17
RSV	RSV_Percent_POS	118.56

Influenza Laboratory Testing Notes

In response to the COVID-19, influenza testing at Texas Public Health Laboratories has significantly decreased to increase capacity for SARS-CoV-2 testing. Hospital laboratories across Texas voluntarily report influenza tests (antigen, culture, and PCR) to the National Respiratory and Enteric Virus Surveillance System (NREVSS). Providers throughout Texas also submit specimens for influenza testing (PCR) to Texas public health laboratories, including the Texas Department of State Health Services (DSHS) state laboratory in Austin and the nine Texas Laboratory Response Network (LRN) laboratories. The results reported by Texas NREVSS participants and public health laboratories for the current week are summarized in the two tables below. Additional influenza test results (rapid tests, culture, PCR) and ILI activity were reported from providers and public health departments throughout the state (see county map at the end of this report).

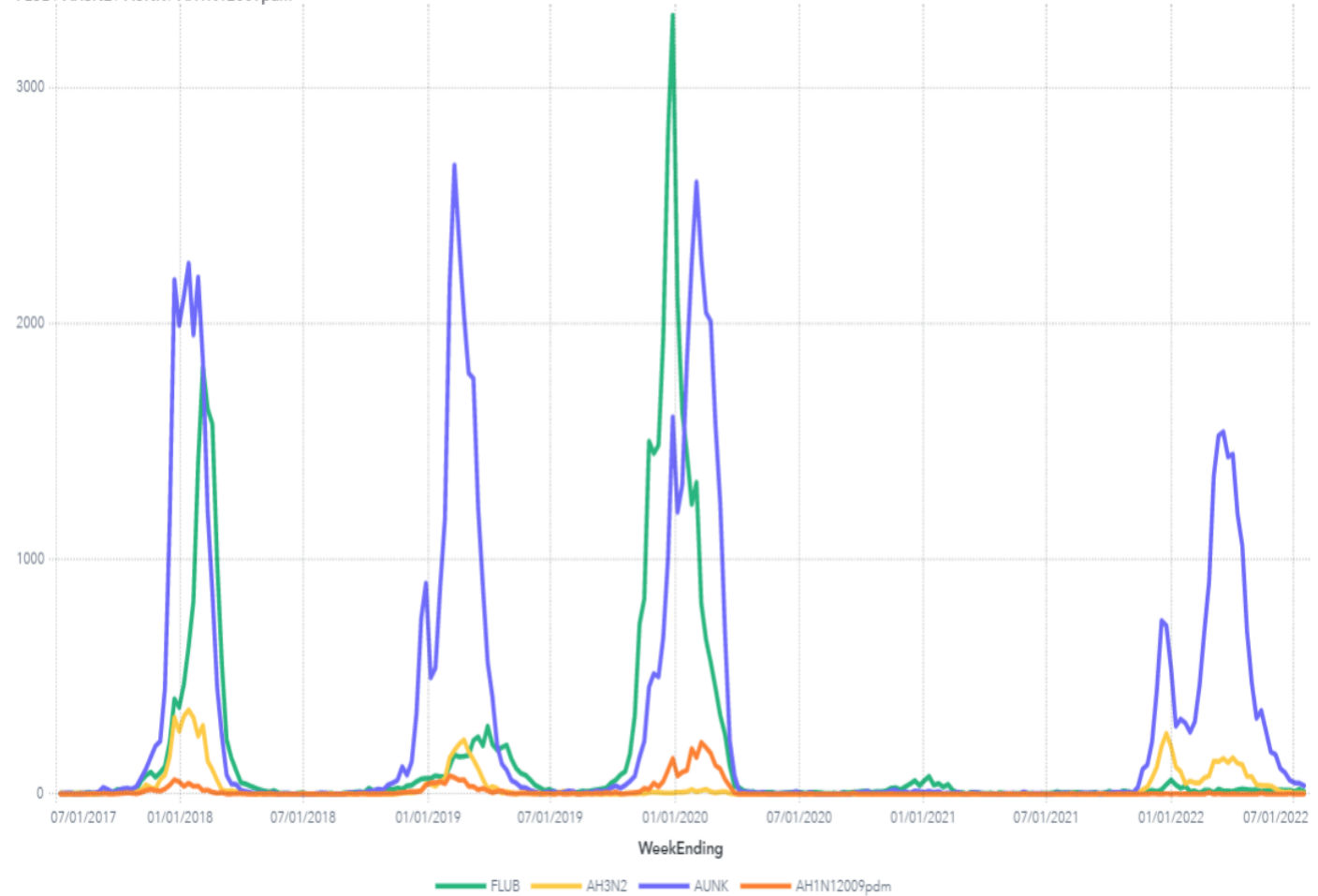
< Flu Type and Strain All Respiratory Viruses - Trends Seasonal COVID RSV A/B Viruses Parainfluenza 1-4 Rhino/Enterovirus Human Metapneumovirus >

07/08/2017 to 07/08/2017

07/08/2017

07/16/2022

FLUB / AH3N2 / AUNK / AH1N12009pdm



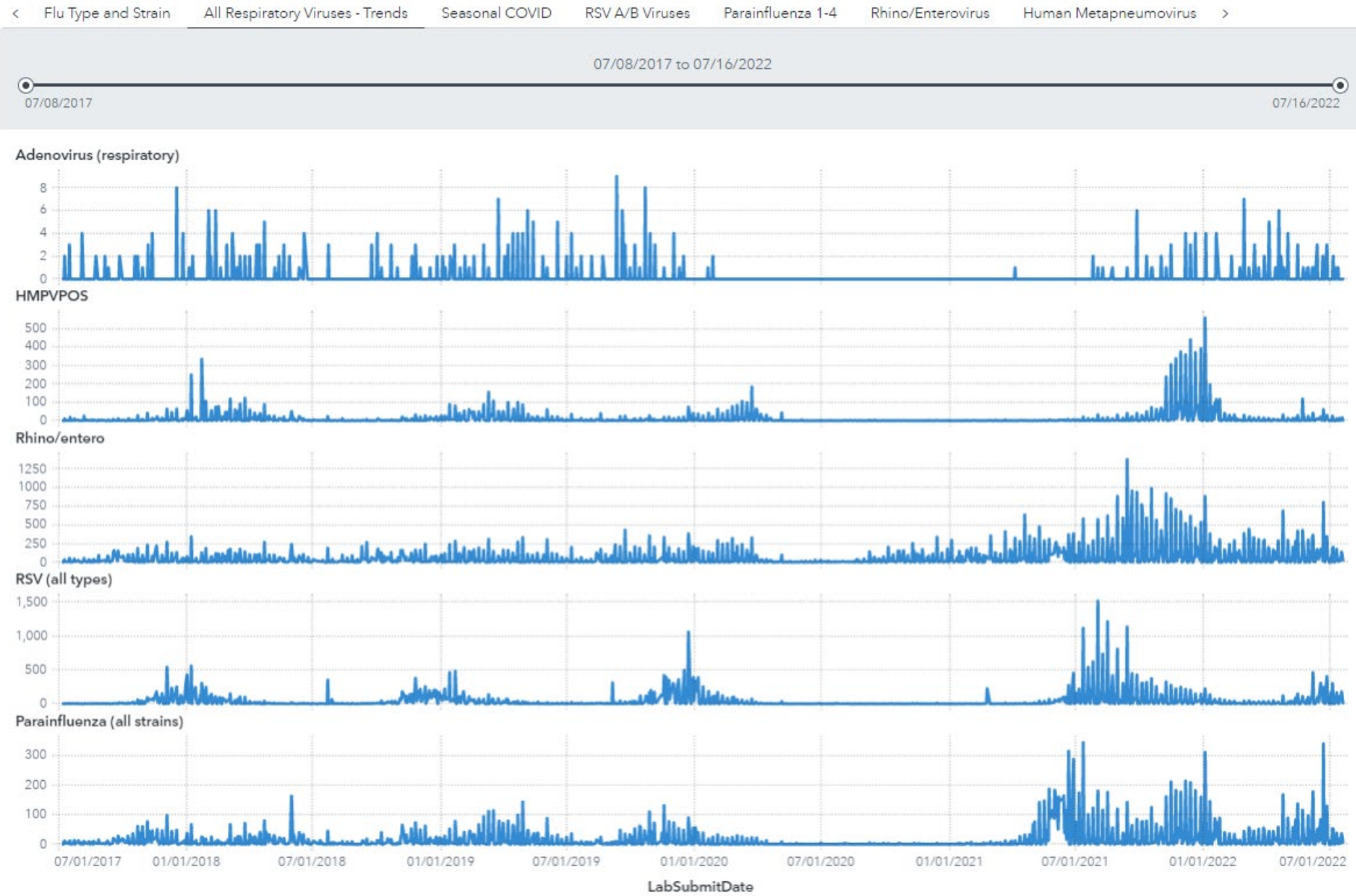
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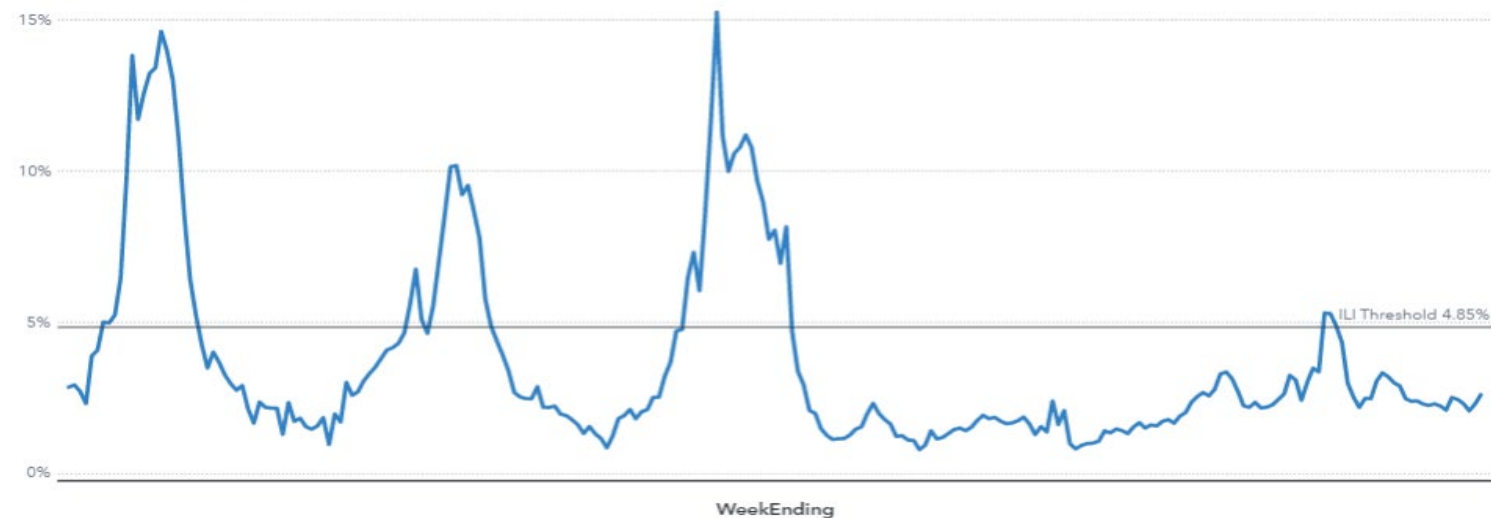


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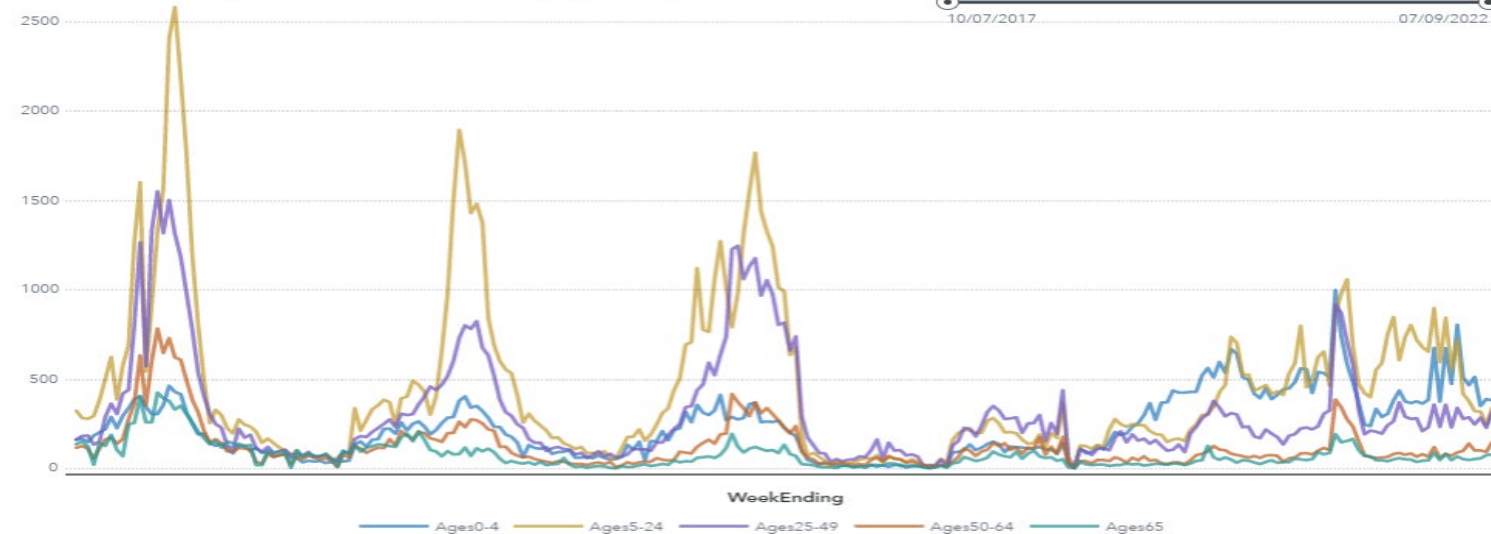
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ILI by WeekEnding



ILI Patient Count by MMWR Week and Year by Age Group

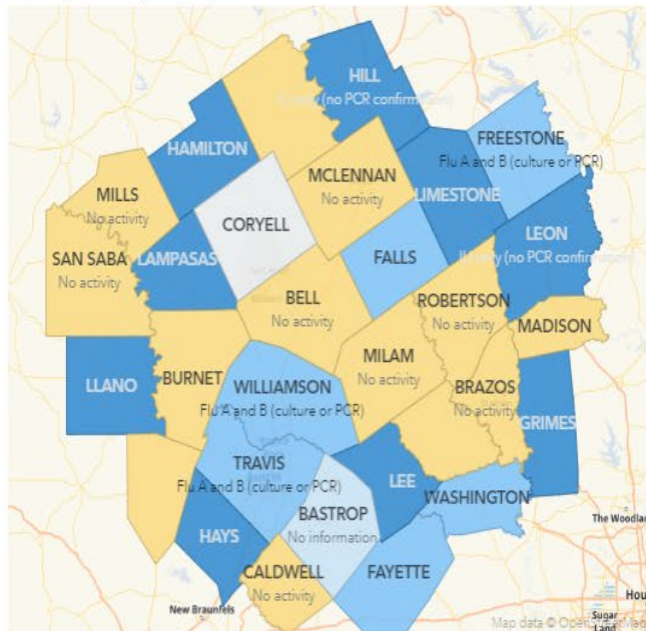


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Texas Influenza Surveillance Report 2022-2023

Regional View

Activity Level by County

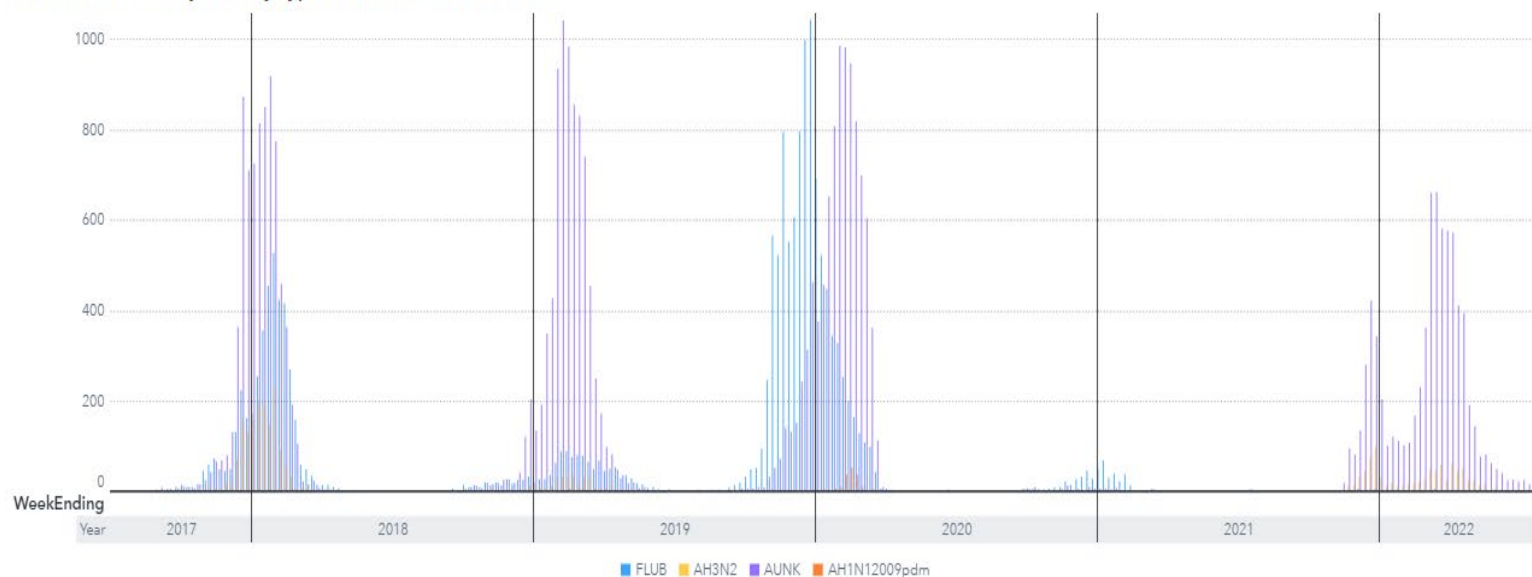


Activity Level
 ■ Flu A and B (culture or PCR) ■ ILI only (no PCR confirmation) ■ No activity
 ■ No information ■ Rapid test positive

Influenza Lab Data

Pathogen Group	Test/Pathogen Name	Percent/Count
Influenza	Flu_B_Percent_POS	0.00
	Flu_H1N109_Percent_POS	0.00
	FLUB_POS	0.00
	FluPanAH1N1Pos	0.00
	Flu_AH3N2_Percent_POS	0.09
	Flu_A_UNK_Percent_POS	0.43
	AH3N2POS	1.00
	AUNK_POS	5.00
	FLU_TEST	1170.00

Influenza Laboratory Data by Type and Strain, 2017-Present



*preliminary sample of influenza dashboard, material has likely changed

Projected Timeframes

1. Dashboard Completed by October, fully launched by 2024
2. Updated Influenza Surveillance Handbook by October, 2023
3. Outbreak Report Survey by January 2024
4. Ongoing efforts for increased recruitment and participation in influenza surveillance



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Thank You

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