



Bexar County Influenza Report, 2023-2024 Season
MMWR Week 51
(December 17, 2023 – December 23, 2023)

Summary of Influenza Activity

The San Antonio Metropolitan Health District (Metro Health) Epidemiology Program conducts influenza surveillance to monitor changes in influenza activity levels and the geographic spread. The influenza activity level considers factors such as influenza-like illness (ILI) and percentage of positives tests within local hospitals. ILI is defined as fever with a temperature of $\geq 100^{\circ}\text{F}$ and a cough and/or sore throat¹. The 2023-2024 influenza season began October 1, 2023 (Week 40) and ends in late May 2024.

Compared to the previous week:

- The percentage of specimens positive for influenza by hospitals increased (9.6%).
- The percentage of visits due to ILI increased (24.9%).
- There were no influenza-associated pediatric deaths reported.
- There were no influenza-associated outbreaks reported this week.
- There were no variant/novel influenza infections reported this week.
- Influenza activity level in Bexar County is **Moderate**.
- Geographic spread is **Widespread**.

Table 1: Summary of Bexar County Influenza activity level, 2023-2024

	Percent Change from Previous Week	Current Week 51	Previous Week 50	Data Cumulative since October 1, 2023 (Week 40)
Percentage of specimens positive for influenza by hospitals⁺	▲ 9.6%	26.2%	23.9%	11.8%
Percentage of visits due to ILI⁺⁺	▲ 24.9%	9.9%	7.9%	6.8%
Number of variant/novel influenza infections	N/A	0	-	0
Number of pediatric influenza deaths	N/A	0	-	0
Influenza activity level⁺⁺⁺	N/A	Moderate	Low	N/A
Influenza geographic spread⁺⁺⁺⁺	N/A	Widespread	Widespread	N/A

Note: Influenza data in this table may include updates from the previous week's influenza report with any new reports received.

▼ Decrease ▲ Increase.

+ Based on NREVSS and local hospital data.

++ Based on ILINet data.

+++ Based on ILINet data and NREVSS data.

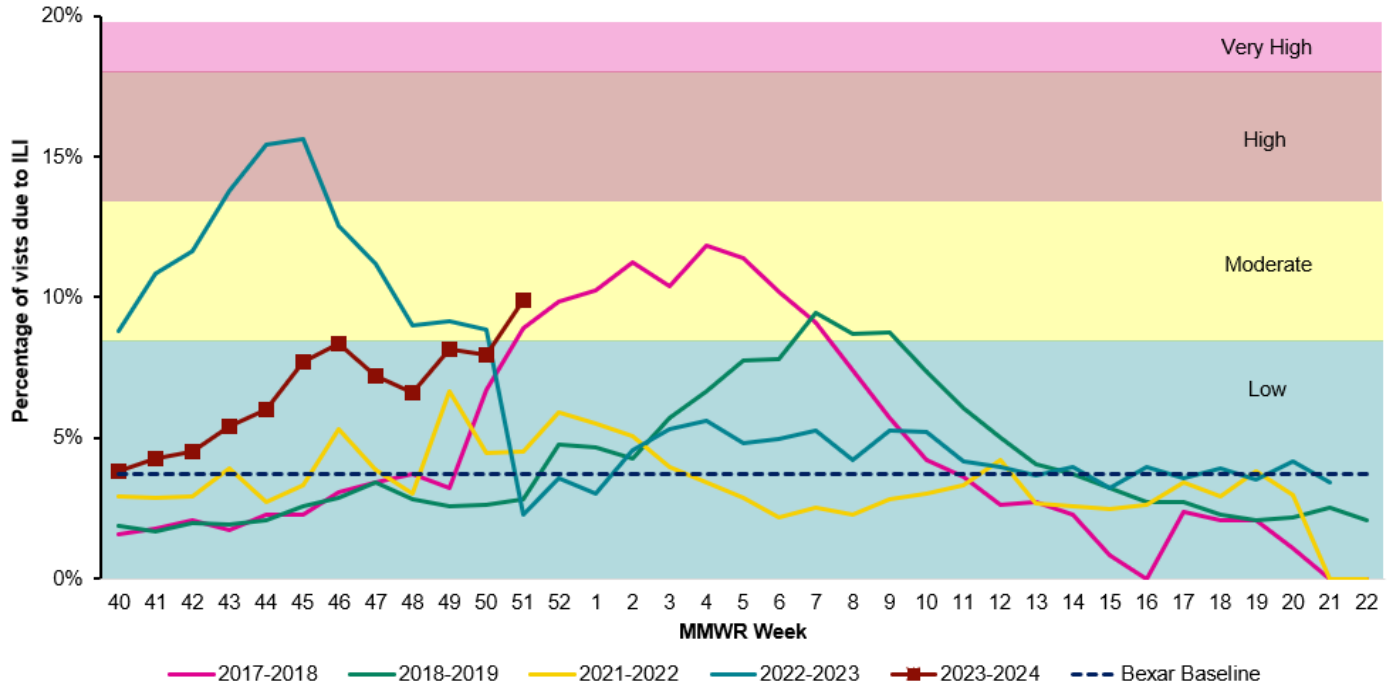
++++ +Based on TxS2 data.

N/A: Not applicable.

U.S. Outpatient Influenza-like Illness Surveillance Network (ILINet)

Information on patient visits to health care providers for influenza-like illness (ILI) is collected throughout Bexar County. Health care providers voluntarily report this information to ILINet.

Figure 1: Percentage of Visits Due to ILI Reported by Bexar County ILINet Participants 2017-2024 Seasons

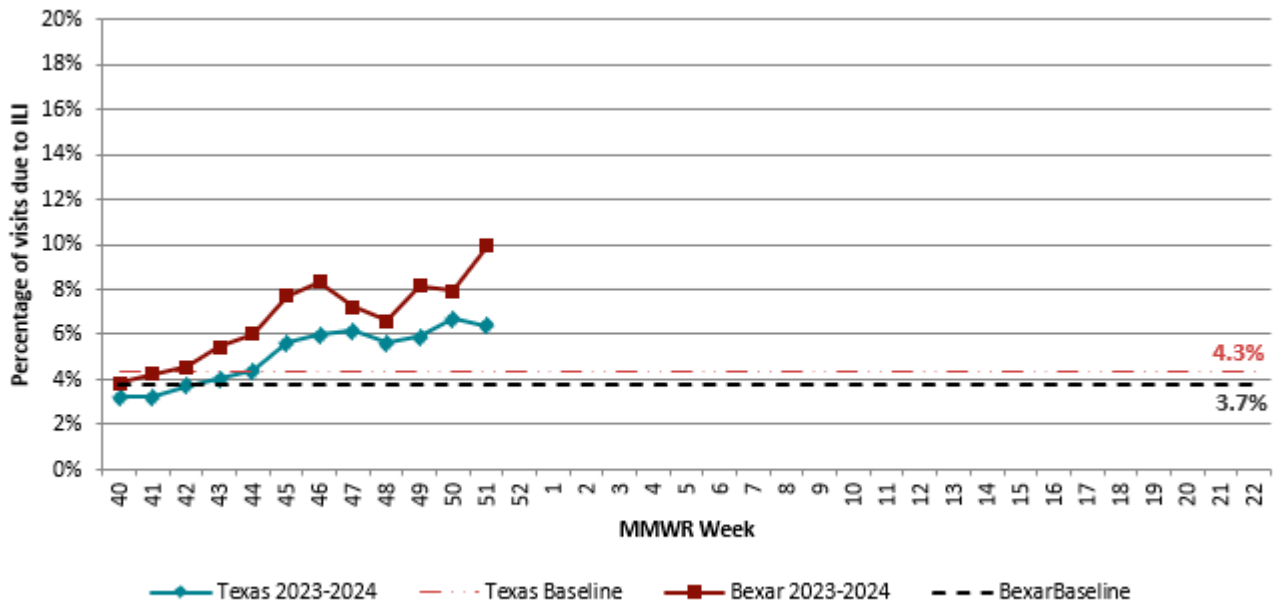


Note: Due to COVID-19 pandemic the 2019-2020 and 2020-2021 seasons were excluded from calculating the intensity thresholds.

The line graph in Figure 1 shows the percentage of visits due to ILI reported by Bexar County ILINet participants. Data from four previous influenza seasons from 2017-2023, and the current 2023-2024 influenza season are shown.

For 2023-2024 influenza season, the ILI percentage for Week 51 is 9.9%, which is higher than the Bexar County baseline of 3.7%. The activity level is considered moderate.

Figure 2: Percentage of Visits Due to ILI Reported by ILINet Participants, Texas, and Bexar County, 2023-2024

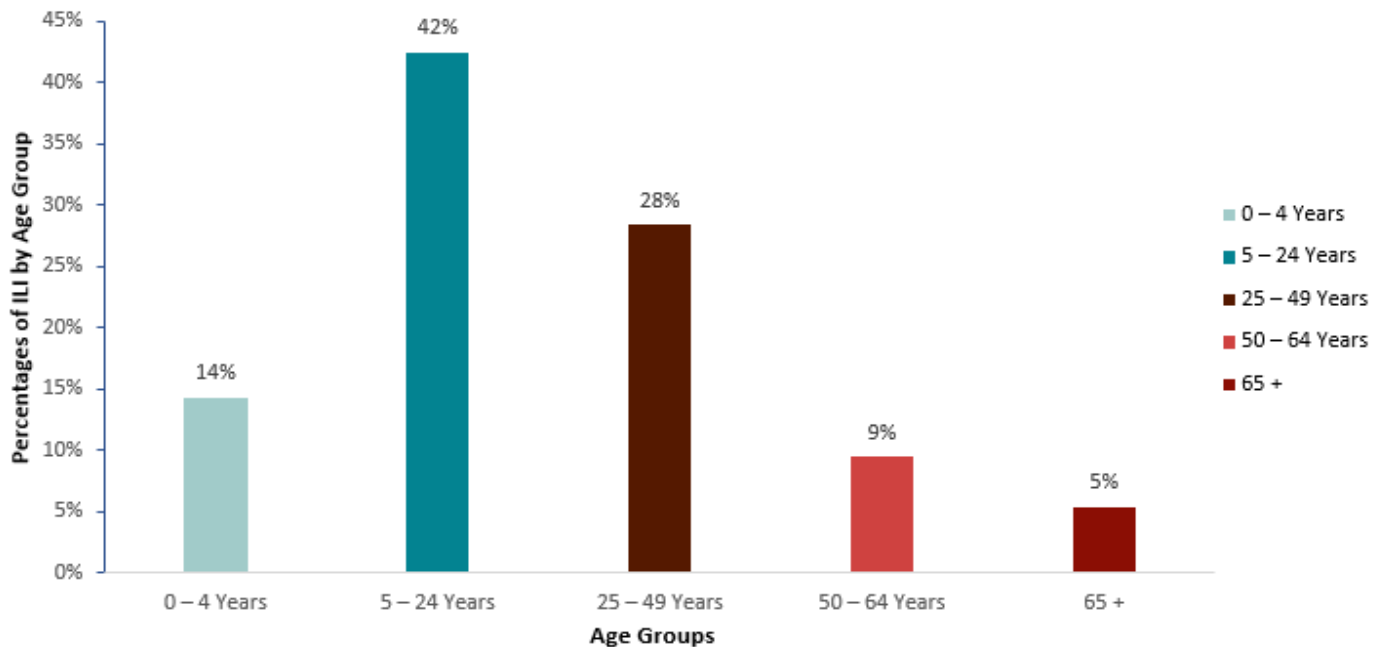


For the current week, Bexar County ILI activity is at 9.9% and is higher than the Bexar County baseline of 3.7%, while Texas ILI activity is at 6.4%, which is above the Texas baseline of 4.3%.

Texas Syndromic Surveillance (TxS2)

The TxS2 statewide syndromic surveillance system is hosted by the Texas Department of State Health Services (DSHS) for use by health jurisdictions and health care providers in the state of Texas for enhanced surveillance of emerging public health conditions or threats. Hospital providers throughout Bexar County voluntarily report data based on chief complaints of ILI from patient clinical encounters.

Figure 3: ILI Percentages Reported by Age Group in TxS2 for MMWR Week 51



The bar chart in Figure 3 illustrates the percentage of ILI by age group from TxS2. For this week, 14% are 0-4 years of age, 42% are 5-24 years of age, 28% are 25-49 years of age, 9% are 50-64 years of age, and 5% are 65+ years of age group. Overall, the age group of 5-24 years had the highest percentage of ILI (42%) followed by 25-49 age group (28%) during week 51.

Hospital Laboratory Results

Hospital laboratories voluntarily report influenza test results through the National Respiratory and Enteric Virus Surveillance System (NREVSS). The results are provided in the table below (Table 2).

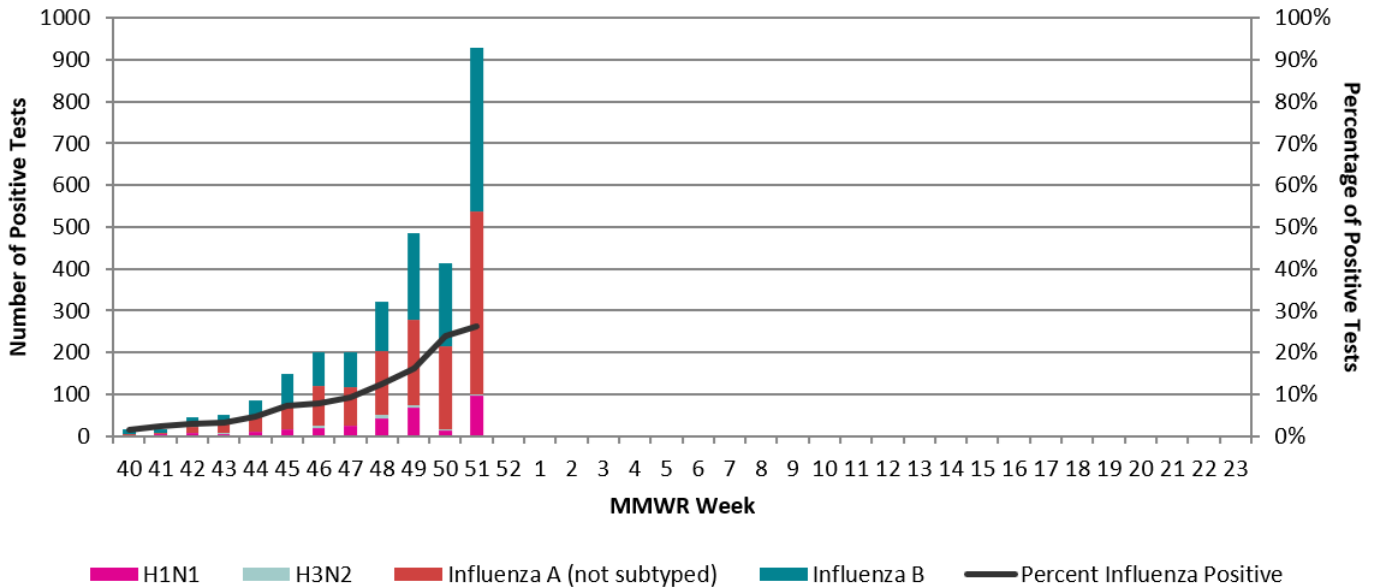
Table 2: Influenza testing performed in Bexar County for the Current and Previous Week and Cumulative Since October 1, 2023

	Current Week 51		Previous Week 50		Cumulative since October 1, 2023 Week 40	
	Count	Percent	Count	Percent	Count	Percent
Number of specimens tested	3594	-	1730	-	24704	-
Number of positive Influenza specimens	943	26.2%	414	23.9%	2922	11.8%
Influenza A, total	538	▲57.1%	216	52.2%	1658	56.7%
Subtyping performed	101	18.8%	15	6.9%	338	20.4%
<i>H1N1</i>	97	96.0%	14	93.3%	310	91.7%
<i>H3N2</i>	4	4.0%	1	6.7%	28	8.3%
Subtyping not performed	437	81.2%	201	93.1%	1320	79.6%
Influenza B, total	405	▼42.9%	198	47.8%	1264	43.3%

Note: Influenza data included in this table may vary from week to week.
▼Decrease ▲ Increase.

Table 2 provides summary of influenza testing performed in Bexar County for the current and previous weeks in addition to cumulative counts and percents since October 1, 2023. The percent of positive specimens tested for the current week is 26.2%, an increase from the previous week (23.9%). Influenza A percent for the current week is 57.1%, which increased from the previous week (52.2%). Influenza B percent for the current week is 42.9%, this decreased from the previous week (47.8%). Overall, influenza A comprises more positive specimens than influenza B for this week.

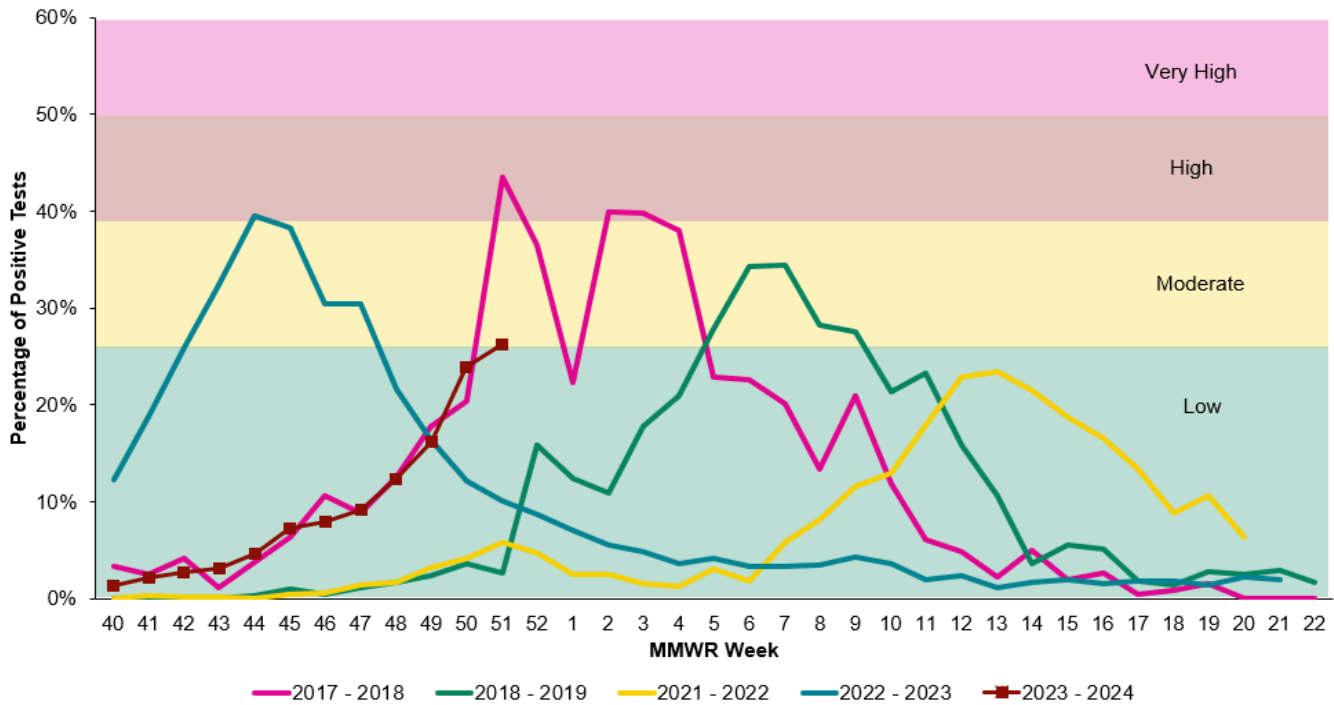
Figure 4: Number and Percentage of Positive Influenza (PCR), Bexar County, 2023-2024



The graph in Figure 4 shows the number of positive influenza (PCR) tests for H1N1, H3N2, influenza A (not subtyped), influenza B and percent influenza positive results in Bexar County during the 2023-2024 season.

For the current week, influenza A (not subtyped) has the highest number of positive test results at 437. Ninety-seven results were identified as H1N1. Four results were identified as H3N2, and 405 results were identified as influenza B. The overall percentage of positive tests is 26.2%.

Figure 5: Percent Positive Hospital Labs, Bexar County, 2017-2024 Seasons



Note: Due to the COVID-19 pandemic the 2019-2020 and 2020-2021 seasons were excluded from calculating the severity thresholds.

The line graph in Figure 5 shows the percentage of positive hospital labs reported by Bexar County NREVSS participants. Data from four previous influenza seasons from 2017-2023 and the current 2023-2024 influenza season are shown.

For 2023-2024 influenza season, the percent positive hospital labs in Bexar County for the current week is 26.2% and is moderate.

Sentinel Provider and Public Health Laboratory Testing

Sentinel Providers are recruited throughout Bexar County to submit influenza test results (both antigen, PCR) to Metro Health on a weekly basis. These sites are called Sentinel Providers. These providers also submit specimens for testing to Metro health’s public health laboratory. Eleven facilities are participating this year. The results from the participating providers are summarized in Table 3 below.

Table 3: Influenza testing performed by Bexar County Sentinel Providers

	Current Week 51		Previous Week 50		Cumulative since October 1, 2023 Week 40	
	Count	Percent	Count	Percent	Count	Percent
Number of positive specimens	454	39.8%	375	36.4%	2299	28.7%
Influenza A, total	213	▼46.9%	199	53.1%	993	43.2%
PCR	0	0.0%	4	2.0%	4	0.4%
Subtyping performed	0	0.0%	0	0.0%	0	0.0%
<i>H1N1</i>	0	0.0%	0	0.0%	0	0.0%
<i>H3N2</i>	0	0.0%	0	0.0%	0	0.0%
Subtyping not performed	0	0.0%	0	0.0%	0	0.0%
Antigen rapid test	213	100.0%	195	98.0%	989	99.6%
Influenza B, total	241	▲53.1%	176	46.9%	1306	56.8%
PCR	0	0.0%	0	0.0%	0	0.0%
Antigen rapid test	241	100.0%	176	100.0%	1306	100.0%

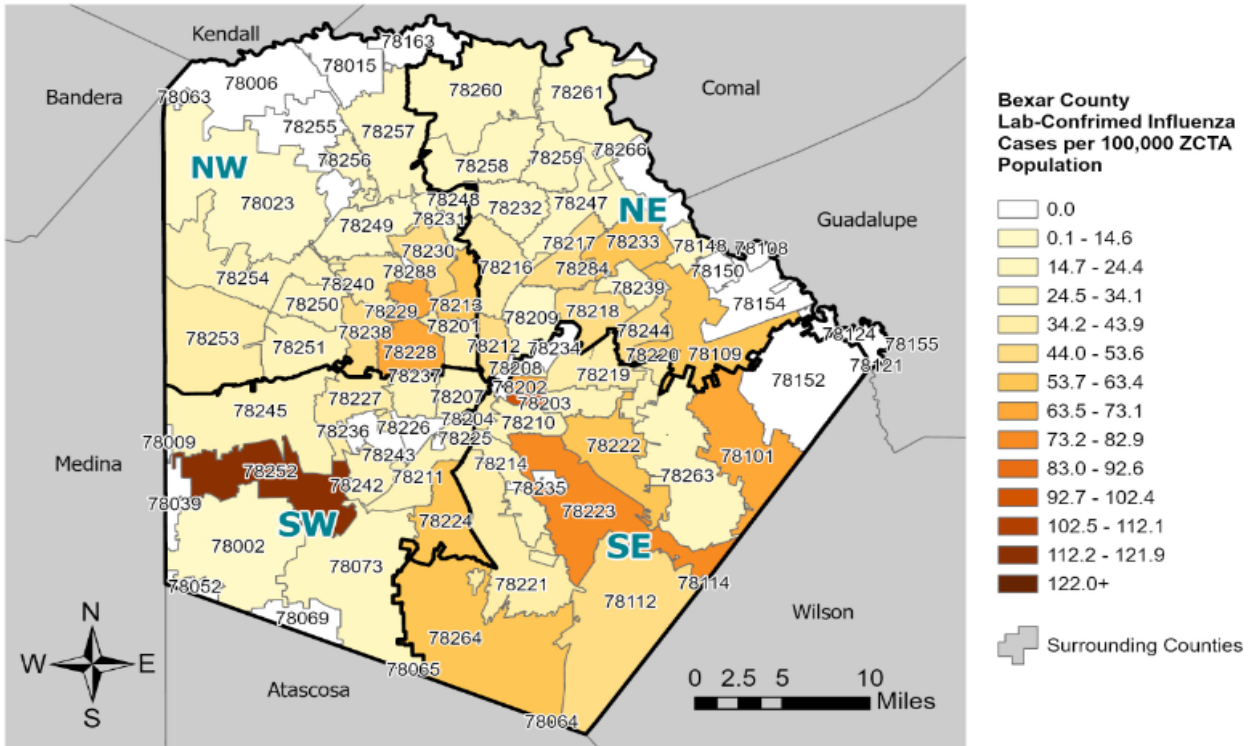
Note: Influenza data included in this table may not be comparable to previous flu seasons because providers vary by year.

▼Decrease ▲ Increase.

This table provides a summary of influenza testing performed by Bexar County Sentinel Providers for the current and previous week in addition to the cumulative counts and percents since October 1, 2023. The percent of positive specimens tested for the current week is 39.8%. Influenza A percent for the current week is 46.9%, which decreased from the previous week (53.1%). Influenza B percent for the current week is 53.1%, an increase from the previous week (46.9%). Overall, sentinel providers are reporting more influenza B this week than influenza A.

Maps

Map 1: Bexar County Reported Lab-Confirmed Influenza Cases by Zip Code for MMWR Week 51

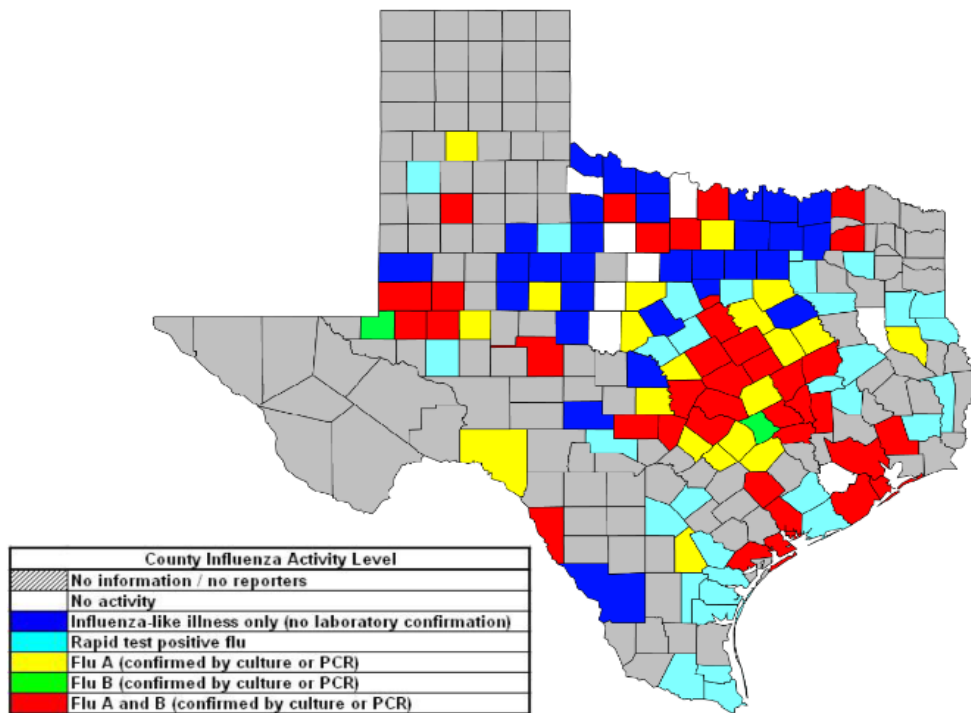


Note: Data is not representative of all lab-confirmed influenza cases that visited Bexar County hospitals during the reporting week and the number of hospitals reporting varies each week. Bexar County zip code population data is obtained from American Community Survey 2021 5-year estimates.

The Bexar County map (Map 1) demonstrates the geographic spread of lab-confirmed influenza cases per 100,000 zip code tabulation area (ZCTA) population using GIS. These are based on a quadrant-based system for Bexar County. The map was created using discharge diagnosis information in TxS2.

During Week 51, the geographic spread in Bexar County was Widespread.

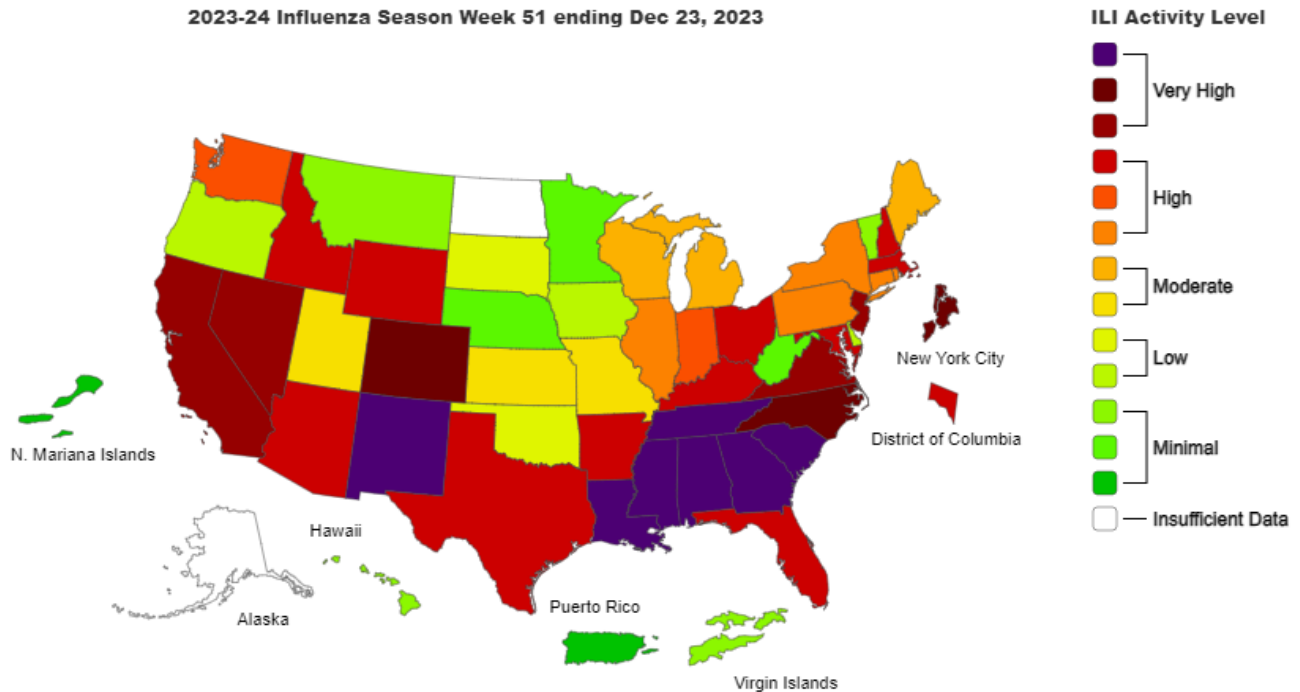
Map 2: Texas Map Displaying the Highest Level of Influenza or ILI Activity Reported by County for MMWR Week 51



The State of Texas map (Map 2) displays the level of influenza or ILI Activity reported by Counties for Week 51. 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. Based on the data provided from table 2, Bexar County currently has lab confirmed flu A and B detected. The majority of reporting counties are experiencing ILI activity and flu detected through rapid tests and there are also counties that show activity of flu A and B (confirmed by culture or PCR).

Source: [Texas Influenza \(Flu\) Surveillance Data](#)

Map 3: US Influenza Activity Estimates for MMWR Week 51



This is a United States map (Map 3) displaying ILI activity level from minimal to very high. The map is made available from the Centers for Disease Control and Prevention, found here: [Weekly US Map: Influenza Summary Update](#). The map shows that Texas is in high activity. While some states have moderate activity, very few states are in minimal to low activity, and this week majority of the United States are showing high and very high activity.

- **View More Bexar County Weekly Influenza Reports on Metro Health’s Website:**
[2023 - 2024 METRO HEALTH WEEKLY INFLUENZA REPORT](#)
- **COVID-19** continues to be present in Bexar County. Additional data can be found on the Metro Health’s website: [COVID-19 San Antonio](#)
- **For questions about influenza surveillance and reporting for Bexar County,** email Metro Health’s Influenza Surveillance Coordinator:
Purnima Batter at purnima.batter@sanantonio.gov

Appendix

Definitions

- *Influenza-like illness (ILI): Is defined as fever with a temperature of $\geq 100^{\circ}\text{F}$ and a cough and/or sore throat¹.*
- *Influenza (flu): is a contagious respiratory illness caused by influenza viruses that infect the nose, throat, and sometimes the lungs. Flu can cause mild to severe illness, and at times can lead to death. Flu symptoms include some or all of these symptoms: fever or feeling feverish/chills, cough, sore throat, runny or stuffy nose, muscle or body aches, headaches, fatigue (tiredness), and some people may have vomiting and diarrhea, though this is more common in children than adults⁴.*
- *Influenza Discharge Diagnosis ICD Codes: J09, J10, and J11.*
 - Query in the Discharge Diagnosis and ICD10 Discharge Diagnosis fields utilizing the Texas Syndromic Surveillance System (TxS2).
- *Quadrants: Four geographic areas that separate Bexar County into Northwest (NW), Northeast (NE), Southwest (SW), and Southeast (SE).*
- *Influenza geographic spread activity:*
 - No activity = No or low lab-confirmed influenza activity.
 - Sporadic = Isolated cases of lab-confirmed influenza in Bexar County.
 - Localized = Lab-confirmed influenza within one to two Bexar quadrants.
 - Widespread = Lab-confirmed influenza in three or more Bexar quadrants.

Indicator Methodologies:

- *Activity Level Measurements:*
Intensity thresholds are calculated for activity measures to assess influenza season severity; for Bexar County these measurements are 1) ILI Activity and 2) Hospital Laboratory Percentage of Positive Tests. Thresholds are determined by looking at historical data to assign severity levels (low, moderate, high, very high) to weekly data points as well as overall seasons using the MEM (moving epidemic model) methodology ([mem package in R](#)). This methodology was published in the [American Journal of Epidemiology](#), October 2017. Due to the COVID-19 pandemic the 2019-2020 and 2020-2021 seasons were excluded from calculating the intensity thresholds. The indicator with the highest intensity level is used to determine the weekly influenza activity level.

Intensity Level	Definitions	
	ILI Activity	Hospital Percent of Positive Tests
Low	< 8.5%	< 25.1%
Moderate	8.5% - 13.5%	25.1% - 39.0%
High	13.6% - 18.0%	39.1% - 50.0%
Very High	$\geq 18.1\%$	$\geq 50.1\%$

- ***Bexar County Map Breaks:***
Collected influenza diagnosis data is used to produce a measure of influenza diagnosis by Zip Code. Breaks are based on the rate of individuals diagnosed with influenza per 100,000 ZCTA population and are compared to the mean influenza diagnosis rate per 100,000 ZCTA population during weeks with little or no influenza virus circulation during 2023. The first break is calculated as a rate below the mean. The second break is calculated as less than one standard deviation above the mean. The third break is calculated as a rate more than one standard deviation but less than two standard deviations above the mean and so on until the last break. *This methodology was published on CDC's [U.S. Influenza Surveillance: Purpose and Methods](#).*
- ***Seasonal Baseline:***
Bexar County seasonal baseline was calculated using a method similar to CDC's National/Regional baseline calculation. For further information on this method, please visit: [U.S. Influenza Surveillance: Purpose and Methods](#). Baseline for Texas was provided by the Texas Department of State Health Services.

References:

1. Centers for Disease Control and Prevention, National Center for Immunization and Respiratory Disease (NCIRD). U.S. Influenza Surveillance: Purpose and Methods
2. Biggerstaff, M., Kniss, K., Jernigan, D.B., Brammer, L., Bresee, J., Garg, S., Burns, E., & Reed, C. (2018). Systematic Assessment of Multiple Routine and Near Real-Time Indicators to Classify the Severity of Influenza Seasons and Pandemics in the United States, 2003–2004 Through 2015–2016, *American Journal of Epidemiology*, 187(5), 1040–1050. <https://doi.org/10.1093/aje/kwx334>
3. Texas Department of State Health Services, Texas Syndromic Surveillance (TxS2). DSHS Texas Syndrome Surveillance
4. Centers for Disease Control and Prevention, National Center for Immunization and Respiratory Disease (NCIRD). Key Facts About Influenza