

Texas Influenza Surveillance Report 2022-2023 Season/ 2023 MMWR Week 01

(January 1, 2023 – January 7, 2023)
Report produced on 01/13/2023

Summary

*This report excludes COVID-19 data. For information about COVID-19 in Texas, please visit www.dshs.texas.gov/coronavirus.

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

Table 1: Summary of Texas Influenza (Flu) and Influenza-like Illness (ILI) Activity for the Current Week

Texas Surveillance Component	Change from Previous Week	Current Week	Previous Week [†]	Page of Report
Statewide ILINet Activity Indicator assigned by CDC (intensity of influenza-like illness)	Decreased	High	Very High	-
Percentage of specimens positive for influenza by hospital laboratories	▼ 2.78%	7.55%	10.33%	1
Percentage of visits due to ILI (ILINet)	▼ 1.23%	5.30%	6.53%	4
Number of regions reporting increased flu/ILI activity	▼ 2	3	4	5
Number of regions reporting decreased flu/ILI activity	▲ 1	5	4	5
Number of variant/novel influenza infections	No change	0	0	5
Number of ILI/influenza outbreaks	Increased	2	1	5
Number of pediatric influenza deaths	Increased	2	0	6-7

[†]Data displayed have been updated since last week's flu report with any new reports received.

Laboratory Results

Influenza

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).

Table 2: Influenza Testing Performed by Texas Hospital Laboratories for the Current Week

	Week 01	Season to Date Week Ending: January 7, 2023
Number of labs reporting flu tests	18	
Number of specimens tested	9700	167571
Number of positive specimens (%)	732 (7.55%)	36209 (21.61%)
Percentage of total tests that were antigen detection tests	30.52%	
Positive specimens by type/subtype [n (%)]		
Influenza A	684 (93.44%)	35459 (97.93%)
Subtyping performed	110 (18.54%)	5858 (16.53%)
A (H1N1)	56 (50.90%)	1553 (26.51%)
A (H3N2)	54 (49.09%)	4305 (73.49%)
Subtyping not performed	574 (78.42%)	29601 (83.48%)
Influenza B	48 (6.56%)	750 (2.07%)

Figure 1: Number and Percentage of Tests (Antigen, Culture, PCR) Positive for Influenza by Type and Subtype Reported by Texas Hospital Laboratories, 2022-2023 Season

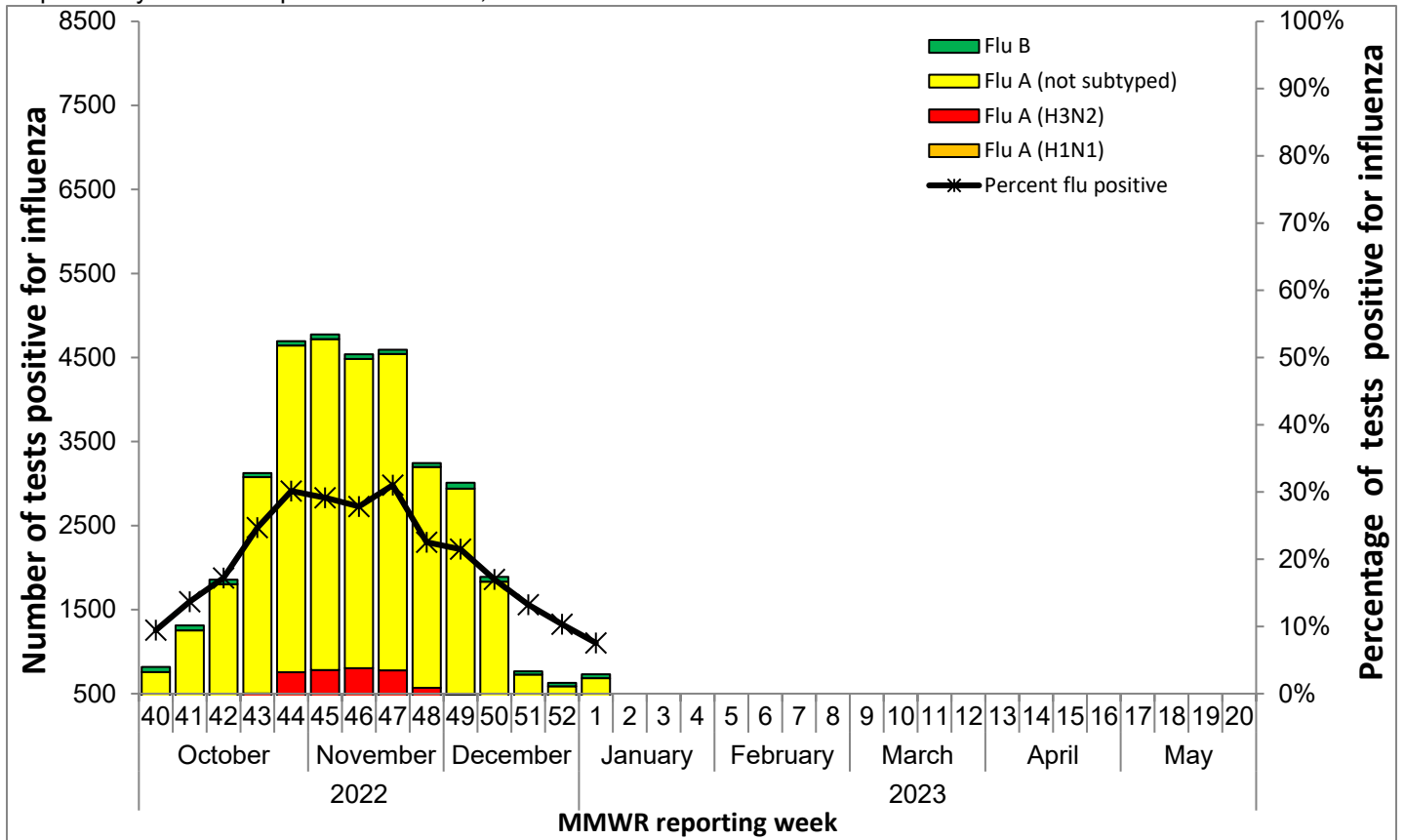
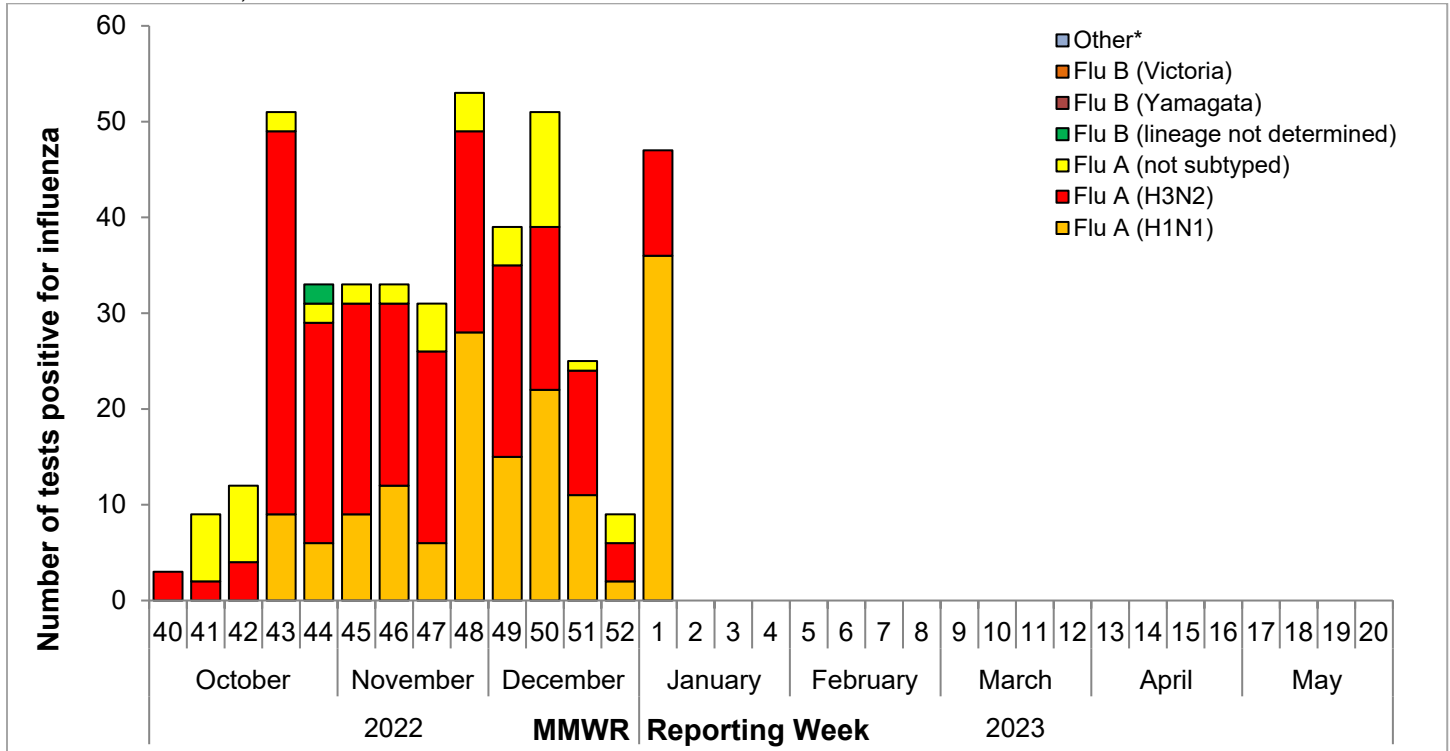


Table 3: Influenza Testing Performed by Texas Public Health Laboratories for the Current Week

	Week 01	Season to Date Week Ending: January 7, 2023
Number of labs reporting flu tests	3	
Number of specimens tested	229	1956
Number of positive specimens (%)	47 (20.52%)	429 (21.93%)
Positive specimens by type/subtype/lineage [n (%)]		
Influenza A	47 (100.00%)	427 (99.53%)
Subtyping performed	47 (100.00%)	375 (87.82%)
A (H1N1)	36 (76.60%)	156 (41.60%)
A (H3N2)	11 (23.40%)	219 (58.40%)
Subtyping not performed	0 (0.00%)	52 (12.18%)
Influenza B	0 (0.00%)	2 (0.47%)
Lineage testing performed	0 (0.00%)	0 (0.00%)
B/Victoria	0 (0.00%)	0 (0.00%)
B/Yamagata	0 (0.00%)	0 (0.00%)
Lineage testing not performed	0 (0.00%)	2 (100.00%)
Other*	0 (0.00%)	0 (0.00%)

*Other denotes specimens with coinfections (i.e. one specimen was positive for both influenza A (H1N1) and influenza A (H3N2))

Figure 2: Number of Tests (PCR) Positive for Influenza by Type, Subtype, and Lineage Reported by Texas Public Health Laboratories, 2022-2023 Season



*Other denotes specimens with coinfections (i.e. one specimen was positive for both influenza A (H1N1) and influenza A (H3N2))

Other Respiratory Viruses

The NREVSS system collects information on a variety of respiratory viruses in addition to influenza including parainfluenza virus, respiratory syncytial virus (RSV), rhinovirus, human metapneumovirus (HMPV), seasonal coronavirus, and respiratory adenovirus. The results for the current week are summarized below.

Table 4: Non-Influenza Respiratory Virus Testing Performed by Texas NREVSS Laboratories for the Current Week

Virus	Number of Laboratories Testing	Tests Performed	Positive Tests	Percentage of Tests Positive
Adenovirus (respiratory)	14	2276	269	11.82%
HMPV	14	2276	215	9.45%
Parainfluenza virus	14	2276	96	4.22%
Rhino/enterovirus	13	2264	445	19.66%
RSV [†]	17	5406	258	4.77%
Seasonal coronavirus (does not include MERS-CoV or COVID-19)	19	2368	205	8.66%

[†] RSV tests displayed in the table are a combination of antigen detection, PCR, and culture tests. Some non-NREVSS reporters also contribute to the RSV data.

[^] Numbers and percentage may differ from the weekly RSV report. The weekly RSV report may be accessed at <https://www.dshs.state.tx.us/RSV/disease/rsv-Data.aspx>.

Antigenic Characterization

Antigenic characterization data for Texas specimens are not currently available. The DSHS Laboratory sends a representative sample of influenza viruses to the CDC throughout the flu season.

Antiviral Resistance

Antiviral resistance testing data for Texas specimens are not currently available.

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

Table 5: Texas ILINet Reporting and Patient Visit Summary for the Current Week

	Week 01
Number of providers reporting	52
Number of providers reporting patient visits	51
Number (%) of providers with at least one ILI case	43 (84%)
Percentage of all visits due to ILI	5.30%
Texas ILINet baseline [‡] , 2022-2023	4.85%

[‡]The baseline is the mean percentage of patient visits for ILI during non-influenza weeks for the previous three seasons plus two standard deviations. A “non-influenza week” is defined as a week that accounted for less than 2% of the season’s total number of specimens that tested positive for influenza

Special Note: The case definition was changed to capture respiratory pathogens causing illness, including CoVID-19, through the ILINet. The Influenza-like Illness (ILI) case definition for the 2022-2023 season is a patient with fever ($\geq 100^{\circ}\text{F}$, 37.8°C) AND cough and/or sore throat. There is no longer a restriction on the cause.

Table 6: Percentage of Visits for Influenza-like Illness Reported by Texas ILINet Providers (as of 01/12/2023 09:28 AM)

Week	Providers Reporting	Number of ILI Cases by Age Group (Years)					Total ILI (all ages)	Total Patients	% ILI
		0-4	5-24	25-49	50-64	65+			
202240	59	894	1298	272	104	62	2630	56384	4.66%
202241	62	1101	1590	401	164	72	3328	61532	5.41%
202242	60	1113	1874	448	201	84	3720	61711	6.03%
202243	61	1460	2704	573	226	106	5069	65582	7.73%
202244	62	1569	3068	692	269	128	5726	66979	8.55%
202245	61	1405	2524	573	431	130	5063	51247	9.88%
202246	50	1106	1833	437	159	142	3677	37234	9.88%
202247	61	1431	1874	1058	377	208	4948	53884	9.18%
202248	59	1347	1928	1141	438	285	5139	62945	8.16%
202249	56	1168	1932	890	379	251	4620	58369	7.92%
202250	57	1074	1576	793	324	226	3993	56616	7.05%
202251	54	785	1017	742	303	217	3064	45677	6.71%
202252	50	966	934	1093	485	393	3871	58798	6.58%
202301	52	611	733	750	390	248	2732	51568	5.30%

Figure 3: Percentage of Visits Due to Influenza-like Illness Reported by Texas ILINet Participants, 2022-2023 Season

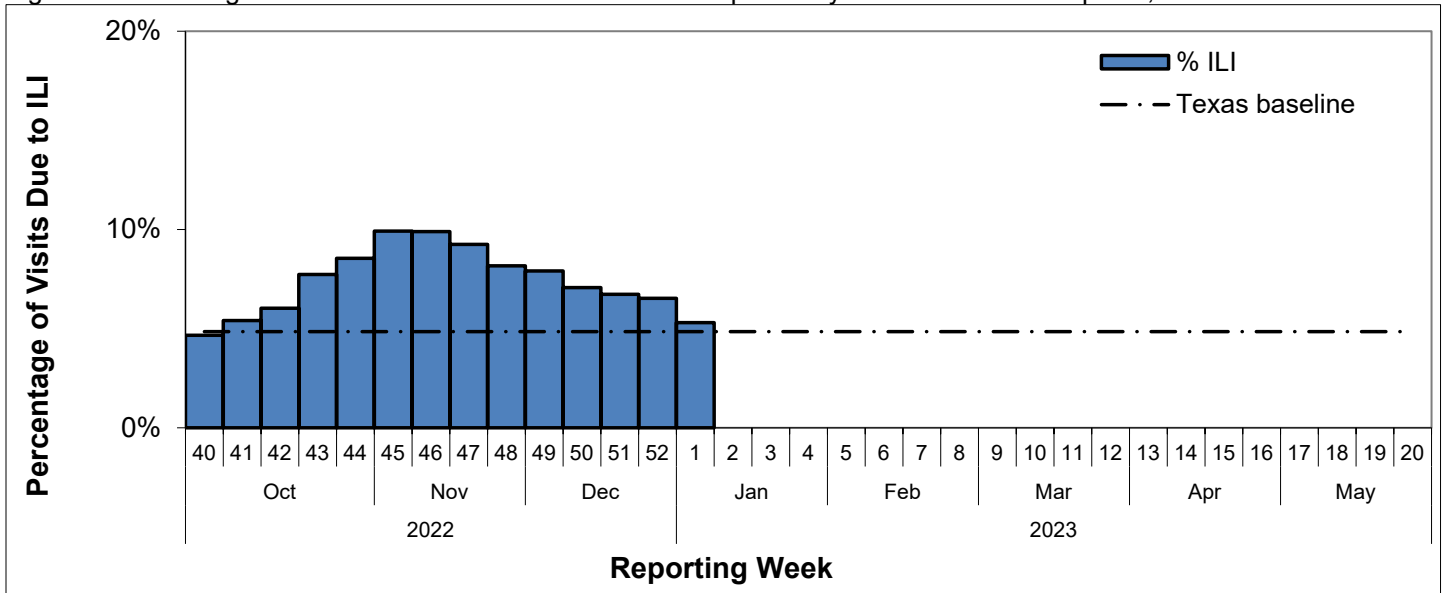
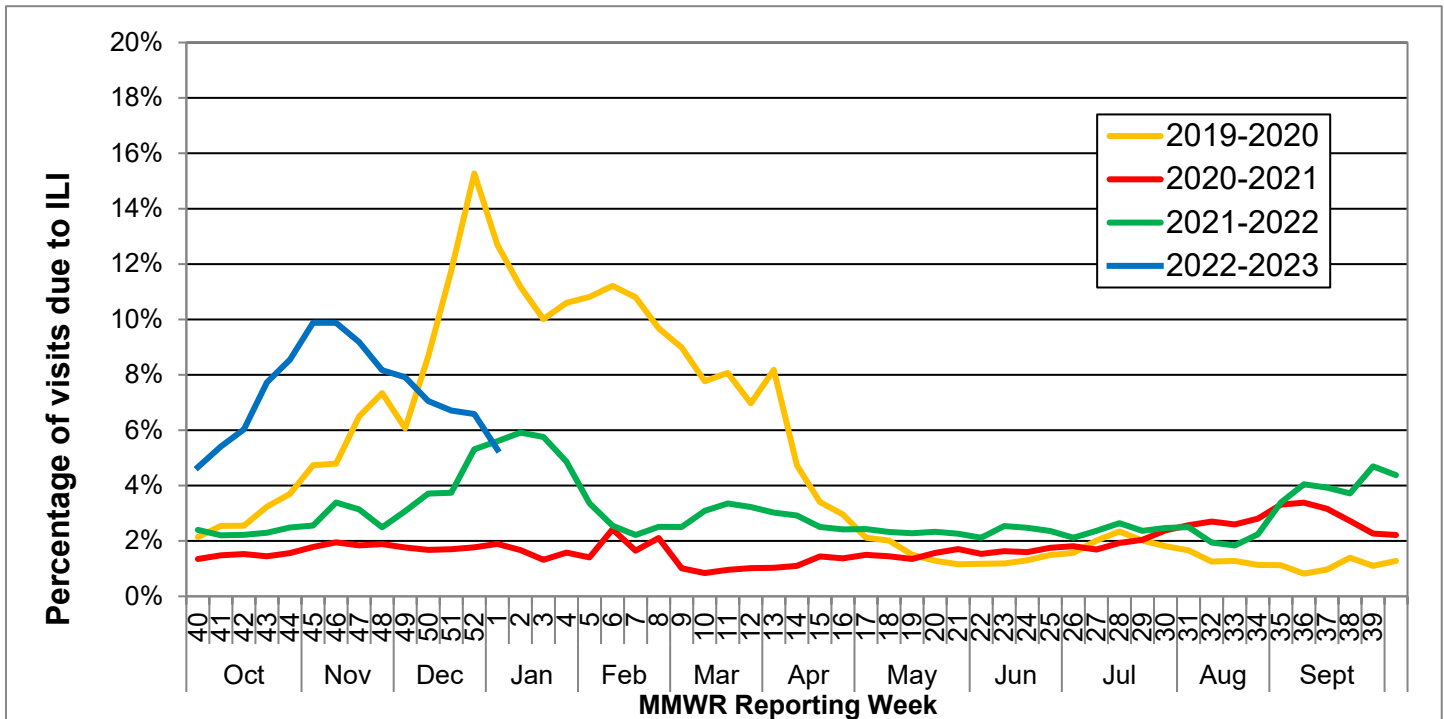


Figure 4: Percentage of Visits Due to Influenza-like Illness Reported by Texas ILINet Participants, 2019–2023 Seasons



Note: The 2020-2021 Flu Season contains MMWR week 202053. For graphical display compatibility with seasons containing 52 weeks, average values were generated using MMWR week 52 and 1 for Seasons: 2019-2020, 2021-2022, and 2022-23.

Reports from Health Service Regions

Reports were received from eight Health Service Regions (HSRs) during week 01.

Table 7: Influenza Activity compared to week 52 by Health Service Region (HSR)

Influenza Activity Comparison	
Increased	6/5S, 9/10, 11
Same	
Decreased	1, 2/3, 4/5N, 7, 8
Unsure	

Variant Influenza Viruses

No variant or novel influenza viruses have been detected in Texas during the 2022-2023 season.

Institutional Outbreaks and School Closures

2 newly identified institutional outbreak was reported in week 01.

Newly identified outbreaks were reported from Public Health Region 4/5N. Both occurred in school facilities but flu types have yet to be identified. One outbreak involved 5 cases and the second involved 20 cases. No school closures have been reported.

Outbreaks will continue to be monitored until closure. Health departments remain in communication with facilities experiencing these outbreaks to offer outbreak guidance, and aid when necessary.

P&I Mortality Surveillance Data

*Deaths due to COVID-19 may be classified as pneumonia deaths or influenza deaths (deaths due to “flu” or “flu-like illness”) in the absence of positive SARS-CoV-2 test results. Pneumonia and influenza (P&I) death data are obtained from death certificates of Texas residents whose underlying or contributing cause(s) of death is reported as pneumonia or influenza. P&I deaths are identified based on ICD-10 multiple cause of death codes. P&I deaths are based on ICD-10 pneumonia and influenza mortality codes.

Two thousand six hundred and forty-six (2646) P&I deaths have been reported in Texas during the 2022-2023 influenza season.

Table 8: Texas P&I Deaths Occurring October 2, 2022– January 7, 2023* by Age

Age Category (years)	Number of P&I Deaths ⁺	Mortality Rate (per 100,000)
0 - 4	13	0.59
5 - 17	<10	-
18 - 49	164	1.19
50 - 64	446	8.48
65 +	2015	45.68
Overall	2646	8.49

*NOTE: Data are provisional and subject to change, errors, and duplicates

+ If the cell count is less than 10, the number of P&I deaths is suppressed and <10 is written in the cell.

Table 9: Texas P&I Deaths Occurring October 2, 2022– January 7, 2023* by Health Service Region (HSR)

HSR	Number of P&I Deaths ⁺	Mortality Rate (per 100,000)
1	118	12.28
2/3	752	8.53
4/5N	200	12.86
6/5S	609	7.03
7	286	8.09
8	267	6.32
9/10	159	15.22
11	255	10.73
Unknown	-	-
Overall	2646	8.49

*NOTE: Data are provisional and subject to change, errors, and duplicates

+ If the cell count is less than 10, the number of P&I deaths is suppressed and <10 is written in the cell.

Influenza-Associated Pediatric Mortality

Two influenza associated pediatric mortalities were reported in week 01 but occurred in December and November respectively.

The first case concerned an eight-year-old female with an underlying condition. The patient tested PCR positive for Influenza A and COVID-19. No immunization records were identified for this case. The second case concerned a three-year-old with underlying conditions. The patient tested PCR positive for influenza A. Records indicate the child was vaccinated for the current season and had received flu vaccinations in prior seasons. EAIDU influenza surveillance is awaiting further medical records for more detail.

Nine pediatric mortalities have been reported in Texas during the 2022-2023 influenza season.

Cases of influenza-associated pediatric mortality (children <18 years of age) are reportable year-round by law in Texas.

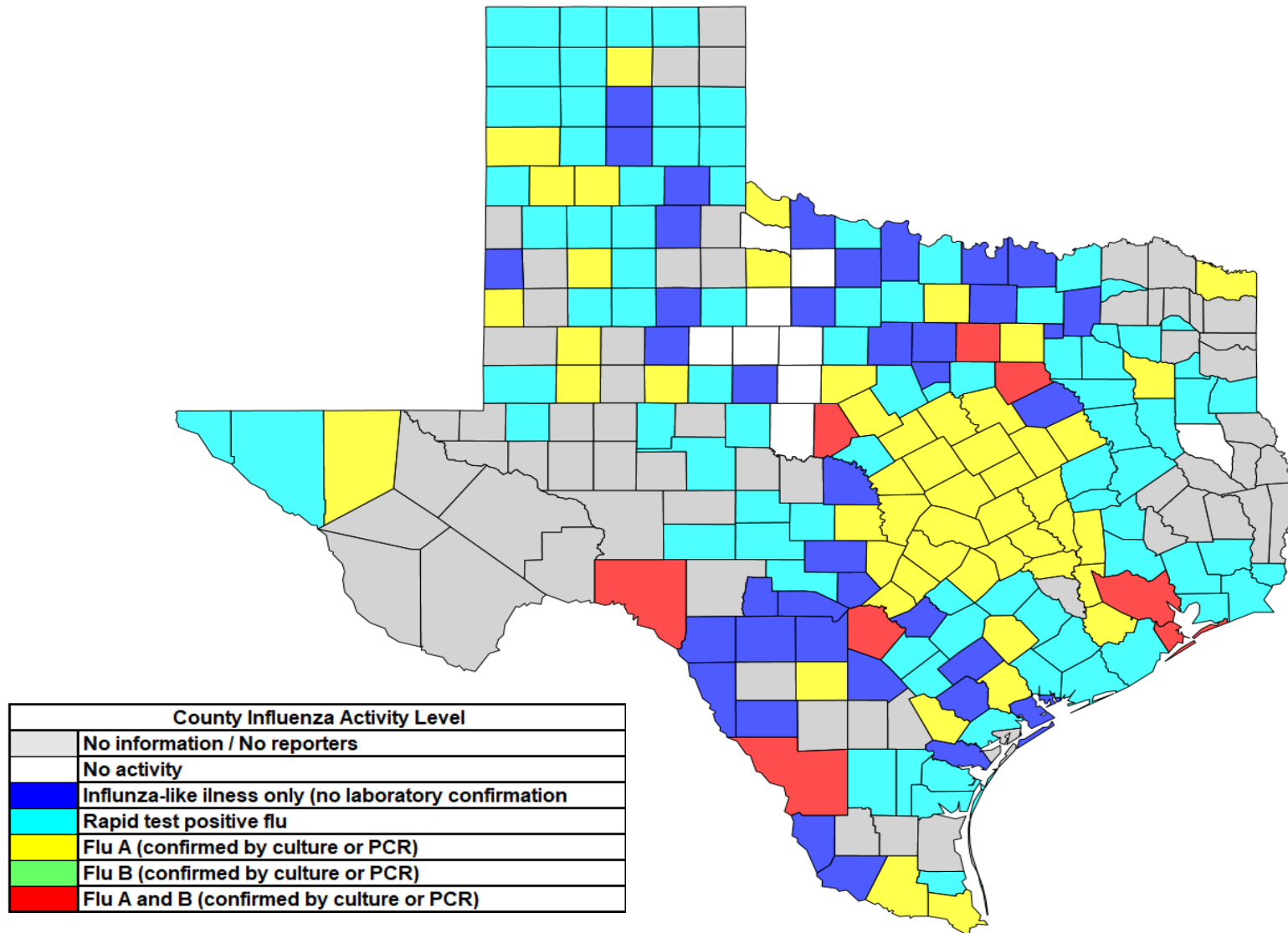
Table 10: Influenza-Associated Pediatric Deaths Reported in Texas during the 2022-2023 Season

Month of Pediatric Death	Influenza A (H1N1)	Influenza A (H3N2)	Influenza A (Not Subtyped)	Influenza B	Influenza, Not Typed / Not Differentiated	Influenza virus co-infection: A (not subtyped) and B	Total, All Influenza Types / Subtypes
2022							
October	0	2	0	1	0	0	3
November	0	2	1	0	0	0	3
December	0	1	2	0	0	0	3
Total*	0	5	3	1	0	0	9

*Total count of typed cases may be adjusted as lab testing and case investigation is completed.

Statewide Influenza Activity Map

Figure 5: Texas Map Displaying the Highest Level of Influenza or ILI Activity Reported by County for the Week Ending January 07, 2023 (MMWR Week 01)



Please note: 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.

Texas Influenza Surveillance Components and Measures

Activity codes (see <http://www.cdc.gov/flu/weekly/overview.htm>)

Statewide influenza activity level

A code reported weekly by states and territories to CDC indicating the geographic spread of influenza in the state. Levels are no activity, sporadic, local, regional, and widespread.

ILINet Activity Indicator

A statewide level of influenza-like illness intensity (on a scale of 1-10, with 1 being the lowest level) assigned to each state weekly by CDC based on data reported through ILINet.

Morbidity

Novel/variant influenza

Thorough investigations are performed on all cases of novel/variant influenza. *This condition is reportable by law in Texas.*

Texas ILINet

Providers voluntarily report weekly to CDC's ILINet system on the number of outpatient visits for ILI and total outpatient visits. Providers may submit up to 5 specimens per month for influenza testing. See <http://www.dshs.state.tx.us/idcu/disease/influenza/surveillance/ILINet/> for information on how to become an ILINet provider.

ILI activity

Non-ILINet providers report ILI or influenza data weekly to local or regional health departments.

Outbreaks

Healthcare, schools, childcare, and correctional facilities report ILI and influenza outbreaks to health departments in Texas. *This condition is reportable by law in Texas.*

Mortality

Pneumonia and Influenza (P&I) Mortality Surveillance

The DSHS Vital Statistics Unit collects death certificate information for all deaths on Texas residents from various partners such as funeral homes and local registrars around the state. The death certificates are then sent to the National Center for Health Statistics (NCHS) where the cause of death and underlying causes of death on the death certificates are coded with ICD-10 mortality codes. Once death certificates are coded, the information is sent back to DSHS Center for Health Statistics (CHS). CHS produces a Weekly Pneumonia and Influenza (P&I) Death Report and sends it to the State Influenza Surveillance Coordinator for inclusion in the Texas Weekly Flu Report. P&I deaths are identified based on ICD-10 multiple cause of death codes, and in particular, pneumonia and influenza mortality codes. Delays inherent in death reporting and coding practices may cause the number of reported P&I deaths to vary considerably each week.

Influenza-associated pediatric deaths

Deaths that are associated with influenza in children < 18 years of age are reported to health departments in Texas. *This condition is reportable by law in Texas.* <http://www.dshs.state.tx.us/idcu/disease/IAPM/>

Laboratory

DSHS Austin laboratory

Providers voluntarily submit specimens to the DSHS Austin laboratory for influenza PCR testing throughout the season. Providers sign up for this program through their local health departments.

Laboratory Response Network (LRN) laboratories

Providers voluntarily submit specimens to one of the 9 Texas LRNs for influenza PCR testing throughout the season. Providers sign up for this program through their local health departments.

NREVSS

Laboratories voluntarily report influenza and other respiratory virus data weekly through the CDC's online NREVSS reporting system. **Laboratories sign up for this program by contacting DSHS.** <http://www.cdc.gov/surveillance/nrevss/>

Recommended Resources

Texas Department of State Health Services

DSHS influenza page: <http://www.texasflu.org/>

Influenza surveillance data and reports: <http://www.dshs.state.tx.us/idcu/disease/influenza/surveillance/>

Map of Texas Health Service Regions: <http://www.dshs.state.tx.us/regions/state.shtm>

Centers for Disease Control and Prevention

National FluView weekly flu report: <http://www.cdc.gov/flu/weekly/>

Variant influenza viruses: <http://www.cdc.gov/flu/swineflu/variant.htm>

Avian influenza viruses: <http://www.cdc.gov/flu/avianflu/index.htm>

Swine influenza viruses: <http://www.cdc.gov/flu/swineflu/index.htm>

Infection Control in Healthcare Facilities: <http://www.cdc.gov/flu/professionals/infectioncontrol/>

Seasonal Flu Information for Schools and Childcare Providers: <http://www.cdc.gov/flu/school/index.htm>

World Health Organization

Influenza page: <http://www.who.int/topics/influenza/en/>

Disease Outbreak News: <http://www.who.int/csr/don/en/>