

Texas Influenza Surveillance Report 2013–2014 Season/2013 MMWR Week 49

(December 1, 2013 – December 7, 2013)

Report produced on 12/13/2013

Summary

Statewide influenza-like illness (ILI) activity continues to increase and is above baseline levels. Influenza activity is increasing steadily. All Texas Regions have reported laboratory confirmed influenza, and the percentage of specimens positive for influenza is over 10%. The level of influenza intensity is high.

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 influenza activity level reported to CDC (geographic spread of influenza)	No Change	Regional	Regional	--
Statewide ILINet Activity Indicator assigned by CDC (intensity of influenza-like illness)	No Change	10-High	10-High	--
Percentage of specimens positive for influenza	▲ 3.55%	19.02%	15.47%	1
Percentage of visits due to ILI (ILINet)	▲ 1.15%	8.17%	7.02%	3
Number of regions reporting increased flu/ILI activity	▲ 3	6	3	5
Number of regions reporting decreased flu/ILI activity	No Change	0	0	5
Number of variant/novel influenza infections	No Change	0	0	5
Number of ILI/influenza outbreaks	No Change	0	0	5
Number of pediatric influenza deaths	No New Cases	0	0	5

[†]Data displayed were reported in last week's flu report. Data may change as more reports are received.

Laboratory Results

Influenza

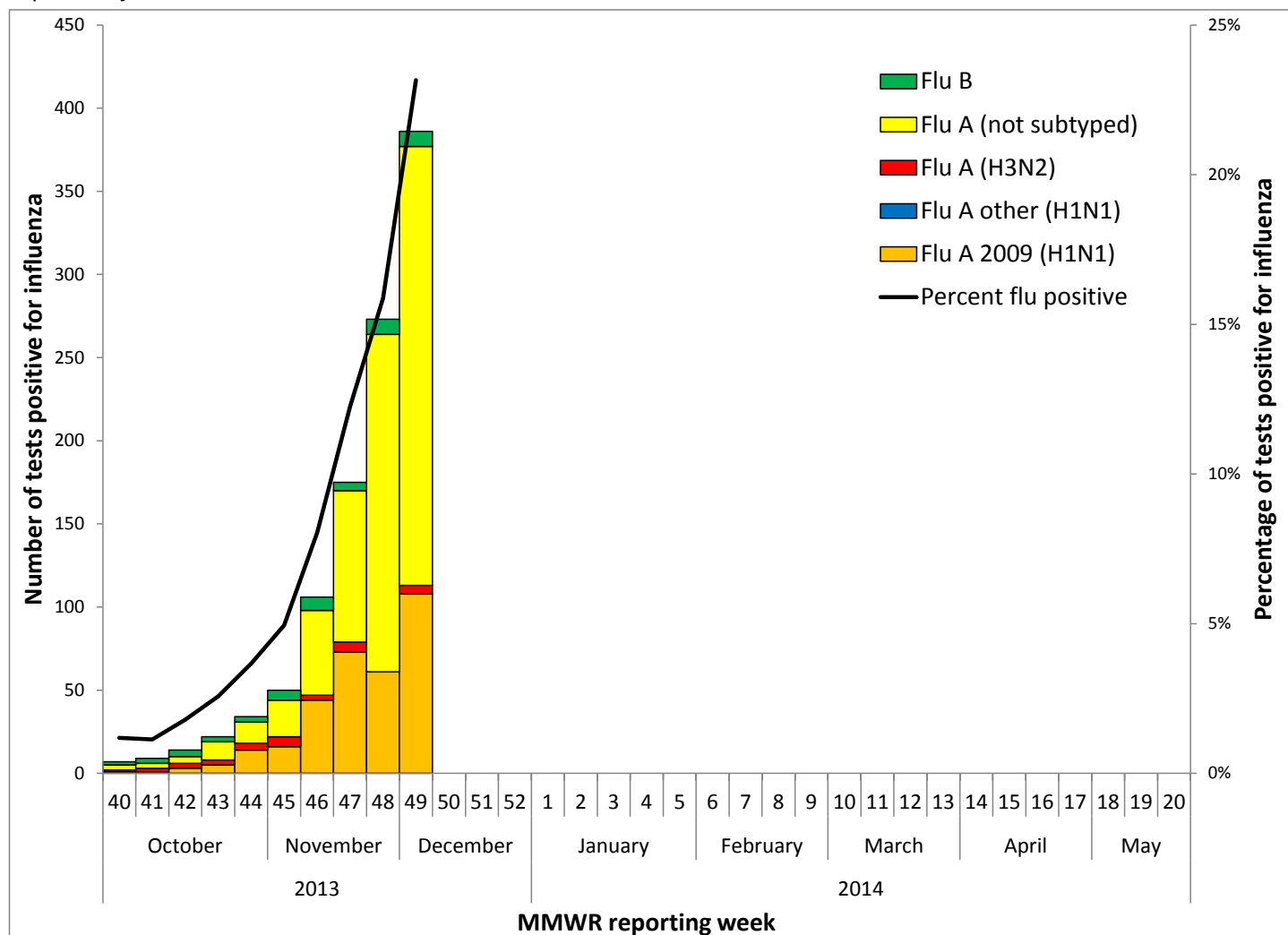
Hospital laboratories across Texas voluntarily report influenza tests (antigen, culture, and PCR) to the National Respiratory and Enteric Virus Surveillance System (NREVSS). Providers throughout Texas also submit specimens for influenza testing (PCR) to Texas public health laboratories, including the 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 table 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 Laboratories for the Current Week

Week 49	
Number of labs reporting flu tests	18
Number of specimens tested	1667
Number of positive specimens (%) [†]	317 (19.02%)
Percentage of total tests that were antigen detection tests	66.89%
Positive specimens by type/subtype [n (%)]	
Influenza A	308 (97.2%)
Subtyping performed	44 (14.3%)
A (H1N1)	40 (90.9%)
A (H3N2)	4 (9.1%)
Subtyping not performed	264 (85.7%)
Influenza B	9 (2.8%)

[†]Laboratory data in 2013–2014 season reports may not be comparable to reports from previous seasons because of the inclusion of DSHS and LRN laboratory data for the current season.

Figure 1: Number and Percentage of Tests (Antigen, Culture, PCR) Positive for Influenza by Type and Subtype Reported by Texas Laboratories, 2013–2014 Season



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), and respiratory adenovirus. The results for the current week are summarized below.

Table 3: 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)	5	296	11	3.72%
HMPV	4	283	8	2.83%
Parainfluenza virus	6	311	9	2.89%
Rhinovirus	2	258	60	23.26%
RSV [†]	12	475	139	29.26%

[†]RSV tests displayed in the table are antigen detection tests only. Some non-NREVSS reporters also contribute to the RSV data.

Antigenic Characterization

Since September 29, 2013, CDC has reported antigenic characterization results from 13 influenza A (H1N1) viruses and two influenza A (H3N2) viruses received from the Texas Department of State Health Services (DSHS) Laboratory. The DSHS Laboratory sends a representative sample of influenza viruses to the CDC throughout the flu season.

Influenza A (H1N1) [13]

- Thirteen viruses were related to A/California/07/2009. This virus strain was included in the 2013-2014 influenza vaccine for the Northern Hemisphere.

Influenza A (H3N2) [2]

- Two viruses were related to A/Texas/50/2012, an A (H3N2) virus antigenically like the cell-propagated prototype virus A/Victoria/361/2011. This virus strain was included in the 2013-2014 influenza vaccine for the Northern Hemisphere.

Antiviral Resistance

Since October 1, 2013, 10 influenza viruses from Texas have been tested for antiviral resistance. The results are displayed below.

Table 4: Cumulative Antiviral Resistance Results from Texas Influenza Viruses, 2013-2014 Season

	Oseltamivir		Zanamivir	
	Virus samples tested (n)	Resistant viruses, number (%)	Virus samples tested (n)	Resistant viruses, number (%)
Influenza A (H1N1)	8	0 (0%)	2	0 (0%)
Influenza A (H3N2)	2	0 (0%)	2	0 (0%)
Influenza B	0	--	0	--

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

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

	Week 49
Number of providers reporting [†]	101
Number of providers reporting patient visits	101
Number (%) of providers with at least one ILI case	85 (84.2%)
Percentage of all visits due to ILI	8.17%
Texas ILINet baseline [‡] , 2013–2014	4.35%

[†]Reporting providers include both ILINet and Enhanced ILINet/IISP providers.

[‡]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.

Table 6: Percentage of Visits for Influenza-like Illness Reported by Texas ILINet Providers (as of 12/01/2013 12:30PM)

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+			
201340	125	244	424	279	129	129	1205	32650	3.69%
201341	130	308	452	295	127	116	1298	34475	3.77%
201342	127	306	434	321	137	100	1298	30976	4.19%
201343	128	305	481	325	110	111	1332	34658	3.84%
201344	125	336	417	285	149	136	1323	33475	3.95%
201345	122	273	461	290	141	103	1268	28313	4.48%
201346	120	313	594	459	168	140	1674	32323	5.18%
201347	114	345	692	514	186	112	1849	32074	5.76%
201348	115	288	433	501	157	92	1471	21023	7.00%
201349	101	324	665	760	181	50	1980	24223	8.17%

Figure 2: Percentage of Visits Due to Influenza-like Illness Reported by Texas ILINet Participants, 2013–2014 Season

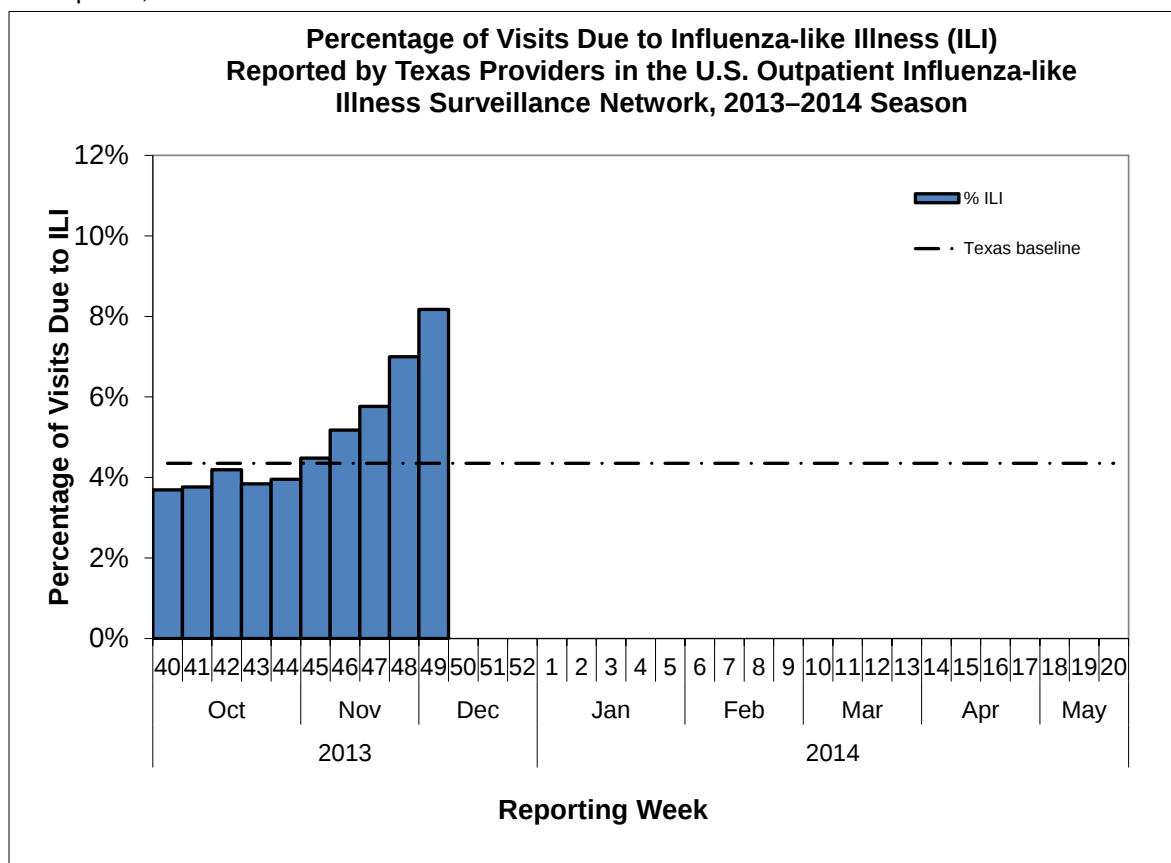
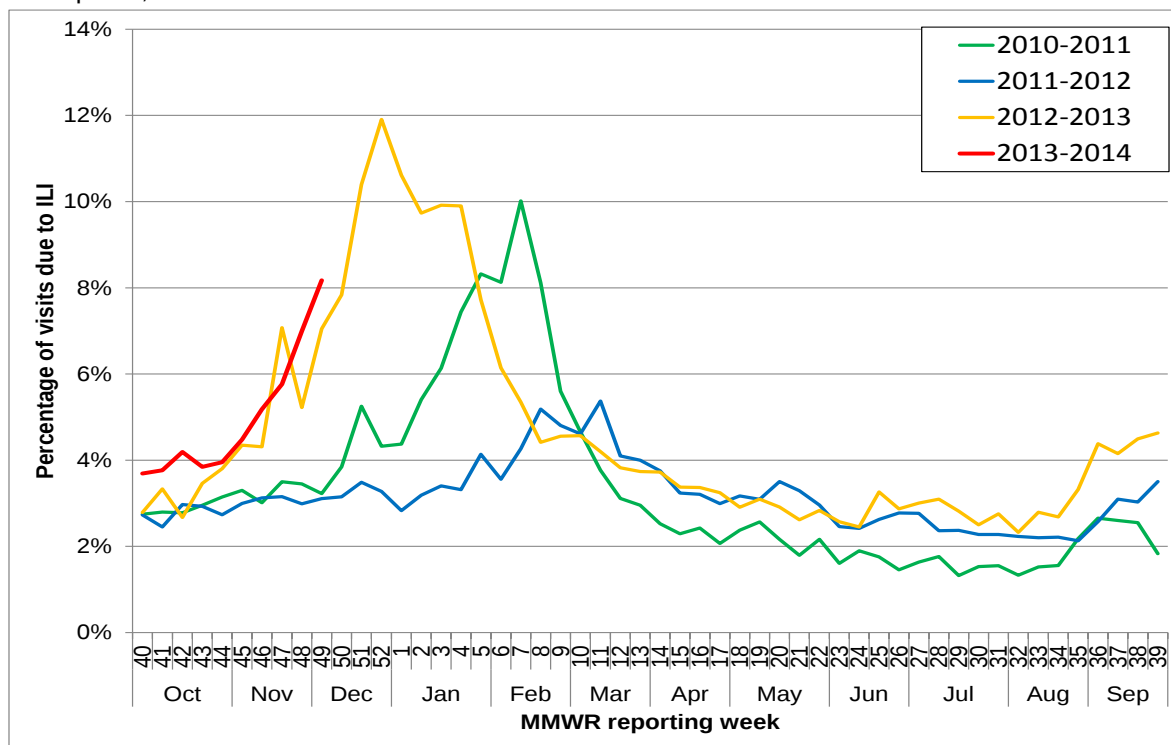


Figure 3: Percentage of Visits Due to Influenza-like Illness Reported by Texas ILINet Participants, 2010–2014 Seasons



Reports from Health Service Regions

Reports were received from all Health Service Regions (HSRs) during week 49. HSRs 1 and 9/10 reported the same level of flu activity compared to week 48. HSRs 2/3, 4/5N, 6/5S, 7, 8, and 11 reported an increased level of flu activity compared to week 48.

Variant Influenza Viruses

No variant or novel influenza viruses have been detected in Texas in 2013.

Institutional Outbreaks and School Closures

No influenza or ILI outbreaks were reported during week 49.

Influenza-Associated Pediatric Mortality

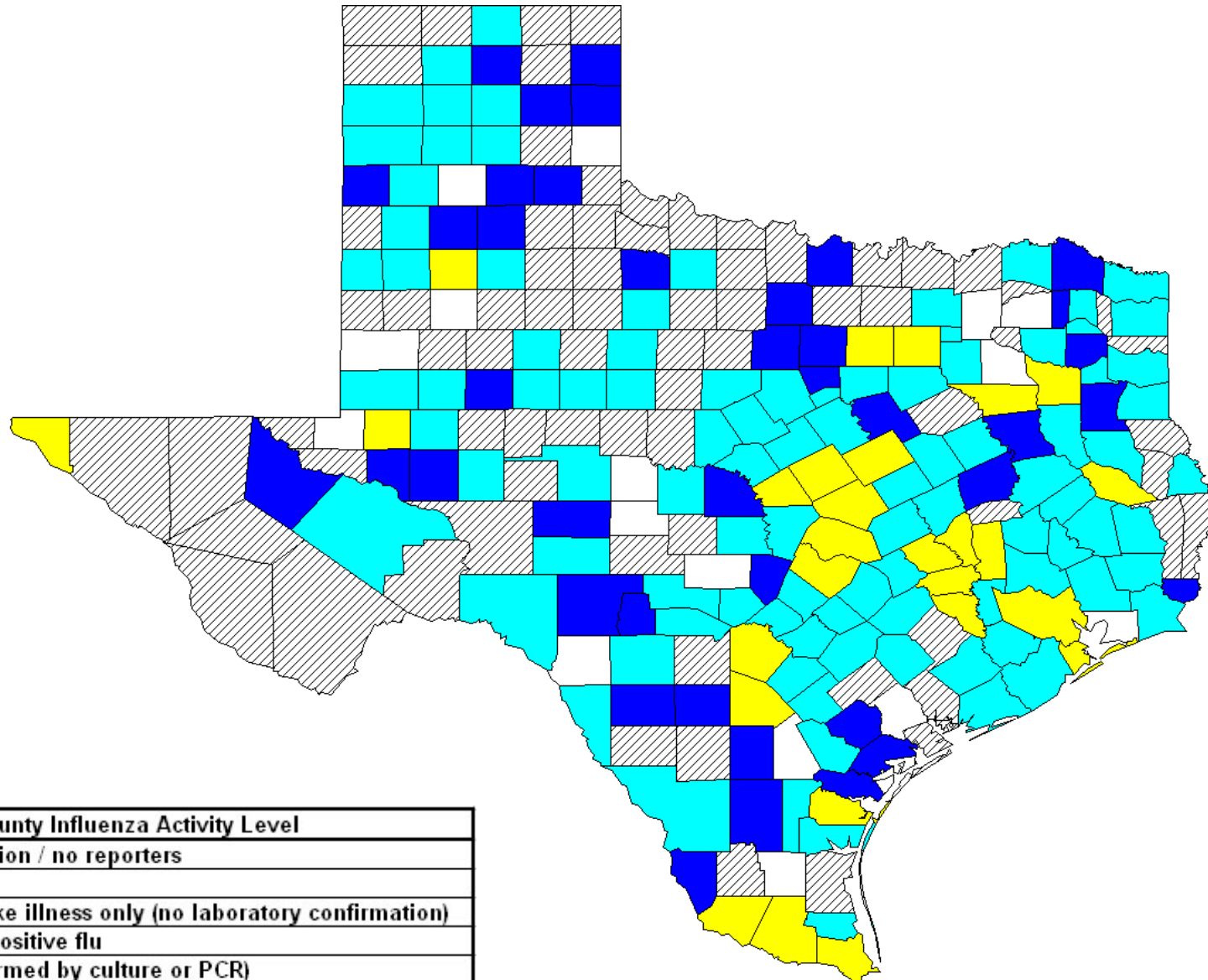
No influenza-associated pediatric deaths were reported during week 49. No influenza-associated pediatric deaths have been reported in Texas during the 2013-2014 influenza season. Cases of influenza-associated pediatric mortality (children <18 years of age) are reportable year-round and by law in Texas.

Table 7: Influenza-Associated Pediatric Deaths Reported in Texas During the 2013–2014 Season

Month of Pediatric Death	Influenza A (H1N1)	Influenza A (H3N2)	Influenza A (Not Subtyped)	Influenza B	Influenza, Not Typed / Not Differentiated	Total, All Influenza Types / Subtypes
2013						
October	0	0	0	0	0	0
November	0	0	0	0	0	0
December	0	0	0	0	0	0
Total	0	0	0	0	0	0

Statewide Influenza Activity Map

Figure 4: Texas Map Displaying the Highest Level of Influenza or ILI Activity Reported by County for the Week Ending December 7, 2013 (MMWR Week 49)



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.**

Enhanced ILINet/IISP

Providers report weekly to ILINet and submit specimens on the first 10 patients seen with ILI each week. Specimens are tested for a variety of respiratory viruses.

ILI activity

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

Outbreaks

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

Mortality

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 and novel influenza viruses: <http://www.cdc.gov/flu/avianflu/index.htm>; <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/>