



**Austin/Travis County Health and Human Services Department
Epidemiology and Health Statistics Unit**



Travis County Influenza Surveillance

This report contains data for the 2013-2014 Influenza Season through December 14, 2013 (MMWR¹ week 50).

Situation Update:

- National flu activity is increasing in parts of the country. Influenza like illness (ILI) has moved above baseline nationally and four states (Alabama, Louisiana, Mississippi, and Texas) are experiencing high ILI activity.
- In Texas, the percentage of visits for influenza-like illness as reported by ILINet providers was 9.25% which is a high level of ILI activity. Locally, the percentage of visits was 6.08%.
- Nationally, pneumonia and influenza deaths are below the epidemic threshold. Locally these deaths have trended near seasonal levels and one of these deaths has been attributed to influenza. A second death, suspected of being caused by influenza, has been reported.
- Nationally, 17.8% of the specimens tested were positive for influenza, increasing slightly over the previous week. There was also an increase statewide; the percent positive was 30.45% up from 15.47%. Locally 10 out of 13 specimens submitted for testing were positive for influenza.
- Of the 1301 positive specimens tested nationally, 97% were influenza A and 3% were influenza B. Subtyping was performed on 575 influenza A specimens, 3% were H3 and 97% were 2009 H1N1. Statewide, influenza A comprises 98.9% of the specimens submitted. Further testing performed on 179 of these specimens show H1N1 accounts for 96.1% of the influenza A.
- Of the 317 influenza specimens characterized by the CDC so for this year, 265 specimens matched the influenza A H1N1 component, 31 specimens matched the influenza A H3N2 both of which are components in the trivalent and quadravalent influenza vaccines. The remaining six specimens were influenza B, two specimens matched the component found in both trivalent and quadravalent influenza vaccines and the other four specimens matched the second B strain of the quadravalent influenza vaccine.
- In Texas, characterization has been performed on 24 influenza A (H1N1) viruses and two influenza A (H3N2) viruses both matching components of the trivalent and quadravalent influenza vaccines.



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- Some antiviral resistance to oseltamivir (Tamiflu) has been seen in seven out of 589 specimens tested. High levels of resistance to adamantanes continues to occur among 2009 H1N1 and H3N2 viruses. Adamantanes are not effective against influenza B. Texas has had 10 specimens tested none have been resistant to oseltamivir (Tamiflu) or zanamivir (Relenza).

H3N2v:

- Nationally, there have been 19 cases of H3N2 variant reported this summer; none were from Texas. One person was hospitalized and no deaths have occurred.
- All cases of H3N2v have mostly been associated with prolonged exposure to pigs at agricultural fairs. Limited human-to-human spread of this virus has been detected in the past but no sustained or community spread has been identified. CDC reports that it is possible for sporadic infections and even localized outbreaks to continue to occur.

H7N9:

- No cases of H7N9 have been reported in the United States. The CDC reports the risk to people in the United States is considered to be low at this time.
- For more information, visit [H7N9 Influenza](#).



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Preventive Actions:

- The CDC recommends that anyone six months of age and older should be vaccinated for the flu every flu season. Individuals who are at high risk are especially advised to be vaccinated. High risk individuals are as follows:
 - Persons 65 years of age and older
 - Pregnant women
 - Individuals with certain chronic medical conditions, including diabetes, asthma, heart and lung disease
 - Health care workers
 - Individuals who live with and/or care for high risk individuals
- In addition to the vaccine, there are certain preventive measures an individual can take to prevent the flu:
 - Wash your hands often with soap and water, or use an alcohol-based hand sanitizer if soap is not available.
 - Practice proper sneezing and coughing measures.
 - Avoid touching your nose, mouth and eyes.
 - Avoid coming into contact with an individual who is sick.
 - If you are sick, stay home until you are fever free for 24 hours without the use of fever-reducing medications.

Although these preventive actions are highly recommended they do not take the place of the flu vaccine.

For additional information about Influenza surveillance, contact:

The Austin/Travis County Health and Human Services Epidemiology and Health Statistics Unit at (512) 972-5555

Other Helpful Resources:

[Texas Department of State Health Services \(DSHS\)](#)

[Centers for Disease Control and Prevention \(CDC\)](#)

[World Health Organization \(WHO\)](#)



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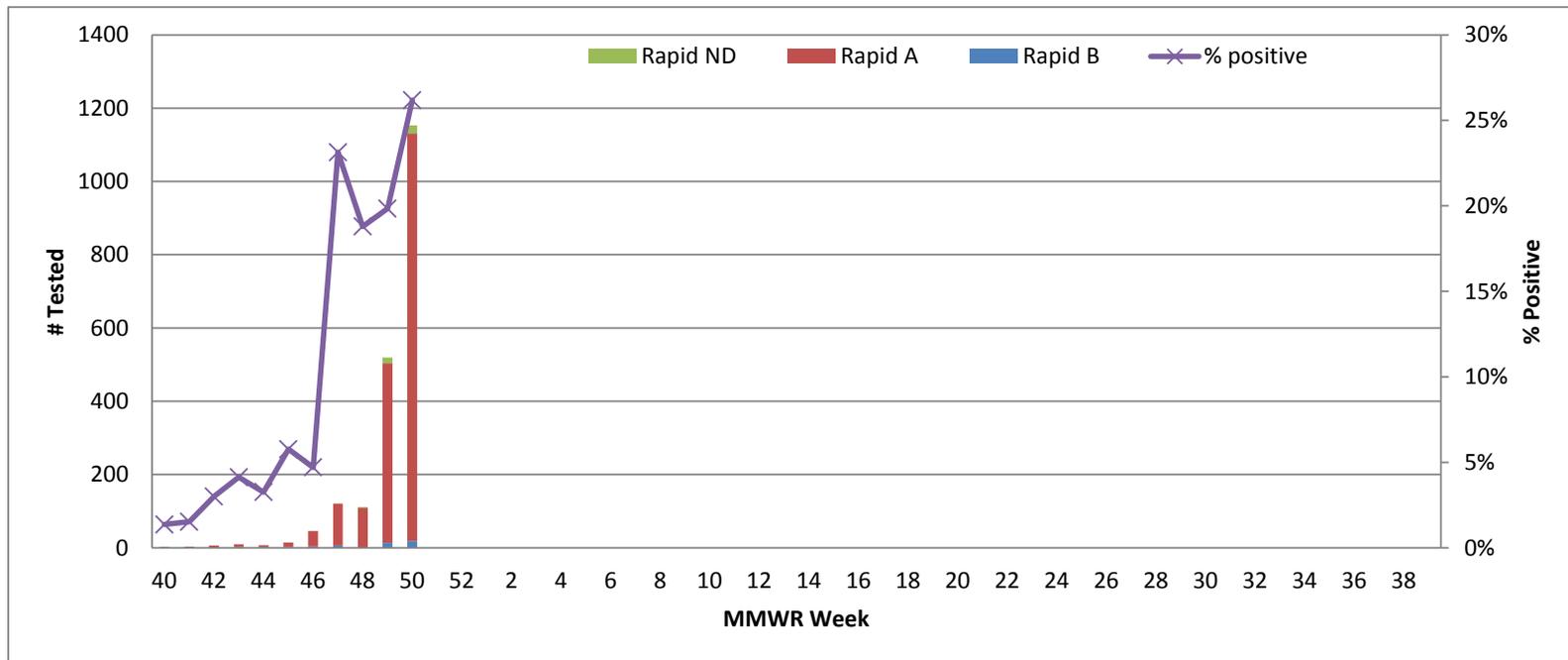


Figure 1. Influenza Surveillance, Travis County Providers ^{4,5,6}

Week Ending	10/26/2013	11/2/2013	11/9/2013	11/16/2013	11/23/2013	11/30/2013	12/7/2013	12/14/2013
MMWR Week	43	44	45	46	47	48	49	50
# Influenza Rapid Tests Performed	212	215	156	222	523	592	2614	4404
# Total Positive Influenza Tests	12	7	5	17	121	112	519	1153
% Positive Influenza Tests	5.7%	3.3%	3.2%	7.7%	23.1%	18.9%	19.9%	26.2%
# Positive A Influenza	11	4	3	14	115	107	490	1112
# Positive B Influenza	1	3	2	3	6	1	14	19
# Non-Differentiated Influenza ³	0	0	0	0	0	4	15	22

Data source: Austin/Travis County Influenza surveillance reporters

Figure 2. Number Tested and Percent Positive Rapid Influenza Tests by Week, Travis County: 2012-2013 Influenza Season ^{4,5,6,8}



Data source: Austin/Travis County Influenza surveillance reporters

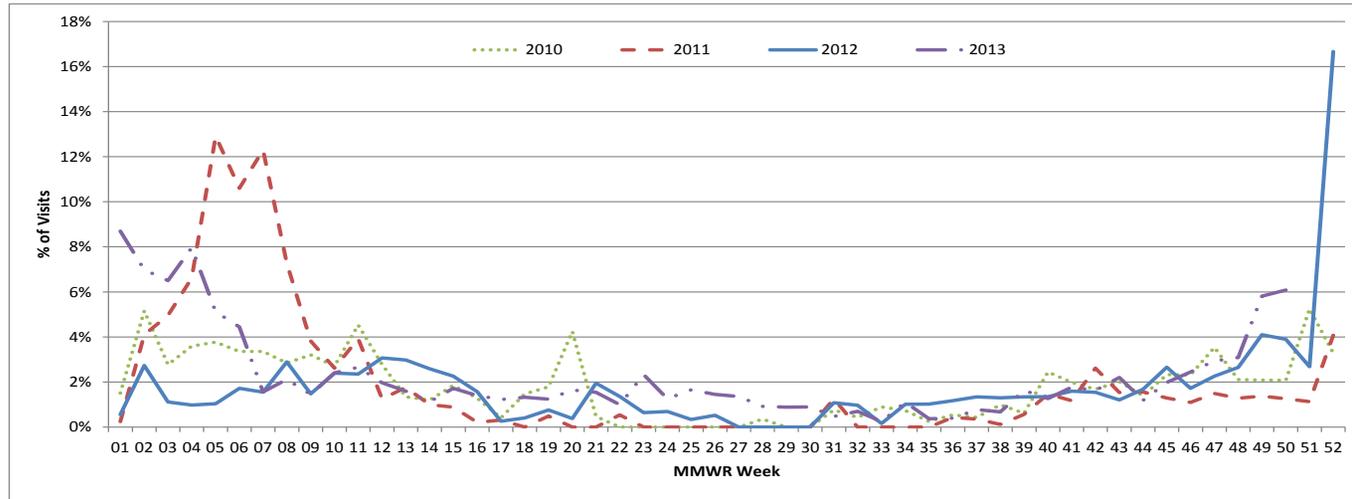
Austin/Travis County influenza surveillance does not attempt to capture all cases of influenza or influenza-like illness. These data should be used for trending purposes over time and for identifying types/strains of influenza that are occurring in the Austin area rather than for estimating the total number of cases.



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Figure 3. Percentage of Visits Due to Influenza-like-Illness Reported by Travis County Participants in ILINet: 2009-2013⁸



Data source: CDC ILI.net system

Figure 4. Travis County Confirmed Influenza Test Results.^{2,9,10}

	1/20/2013 - 3/23/2013	3/24/2013 - 5/25/2013	05/26/2013 - 7/27/2013	7/28/2013 - 9/28/2013	09/29/2013 - 11/30/2013	12/1/2013 - 12/28/2013
MMWR Week	4-12	13-21	22-30	31-39	40-48	49-5*
Influenza A (Total Positive PCR Tests)	29	1	0	1	6	12
Subtype	Seasonal H1N1	3	1	0	6	5
	Season H3N2	26	0	0	0	1
	Not Subtyped	0	0	0	0	0
Influenza B (Total Positive PCR Tests)	4	0	0	0	0	0
PCR Negative Specimens	28	6	0	9	13	16

* Incomplete data.

** 1 test was culture confirmed rather than PCR confirmed

Data source: Austin/Travis County Influenza surveillance reporters and the Department of State Health Services lab

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Figure 5. Influenza Testing by Texas Laboratories^{11, 14}

Week 50	
Number of labs reporting flu tests	17
Number of specimens tested	2105
Number of positive specimens (%) [†]	641 (30.45%)
Percentage of total tests that were antigen detection tests	60.90%
Positive specimens by type/subtype [n (%)]	
Influenza A	634 (98.9%)
Subtyping performed	179 (28.2%)
A (H1N1)	172 (96.1%)
A (H3N2)	7 (3.9%)
Subtyping not performed	455 (71.8%)
Influenza B	7 (1.1%)

[†]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.

Texas Antigenic Characterization¹¹

Influenza A (H1N1) [24]

- Twenty-four 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.



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Figure 6. Texas Antiviral Resistance¹¹

	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	--

- Since October 1, 2013, 10 influenza viruses from Texas have been tested for antiviral resistance.

Figure 7. Texas Respiratory Laboratory Results⁵

Virus	Number of Laboratories Testing	Tests Performed	Positive Tests	Percentage of Tests Positive
Adenovirus (respiratory)	6	538	20	3.72%
HMPV	5	525	9	1.71%
Parainfluenza virus	6	538	14	2.60%
Rhinovirus	4	509	108	21.22%
RSV [†]	12	491	139	28.31%

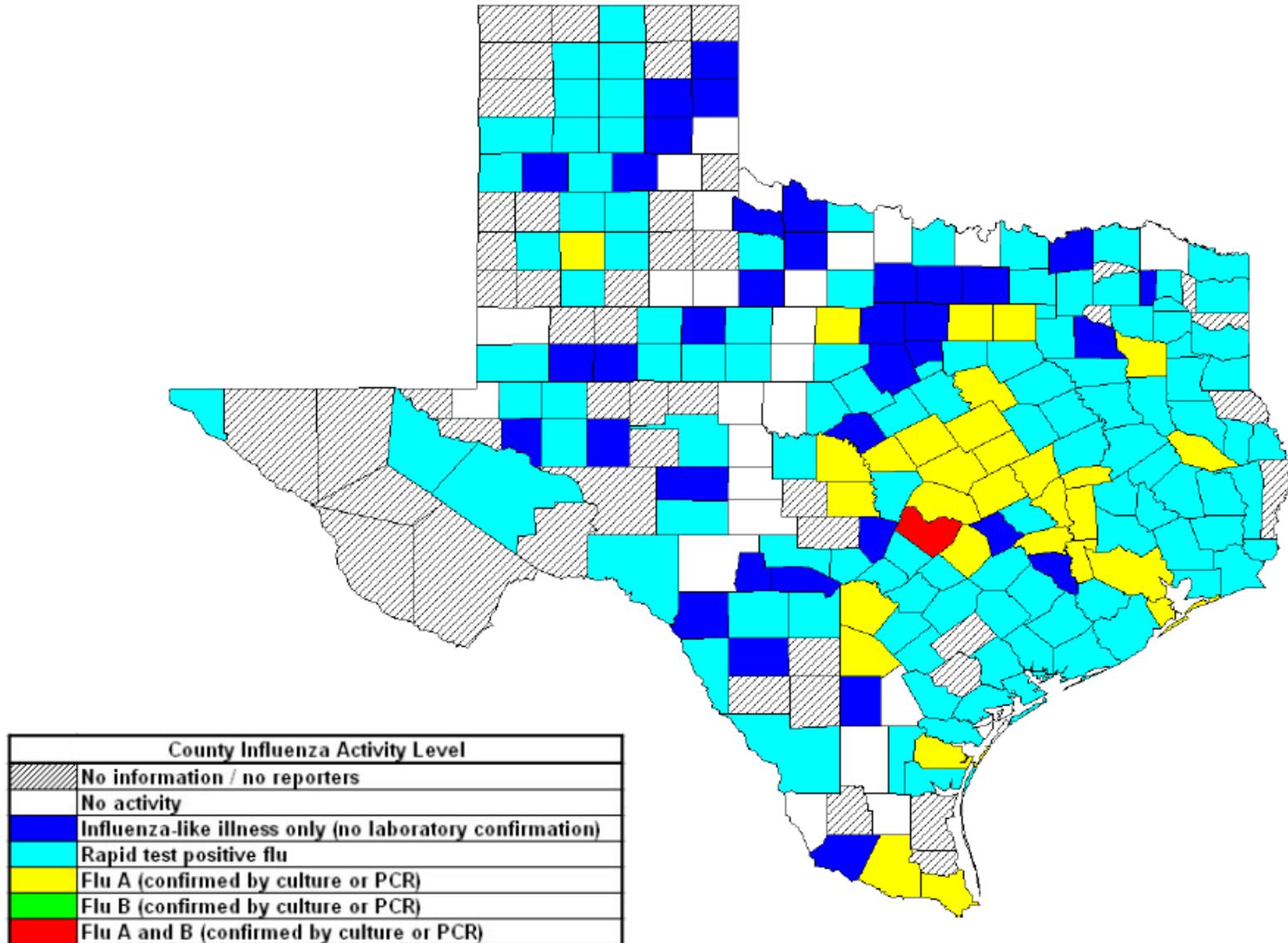
[†]RSV tests displayed in the table are antigen detection tests only. Some non-NREVSS reporters also contribute to the RSV data.



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Figure 8. Statewide Influenza Activity^{10,12,13}



This chart was obtained from the Texas Influenza Surveillance Report <http://www.dshs.state.tx.us/idcu/disease/Influenza/surveillance/2013/>

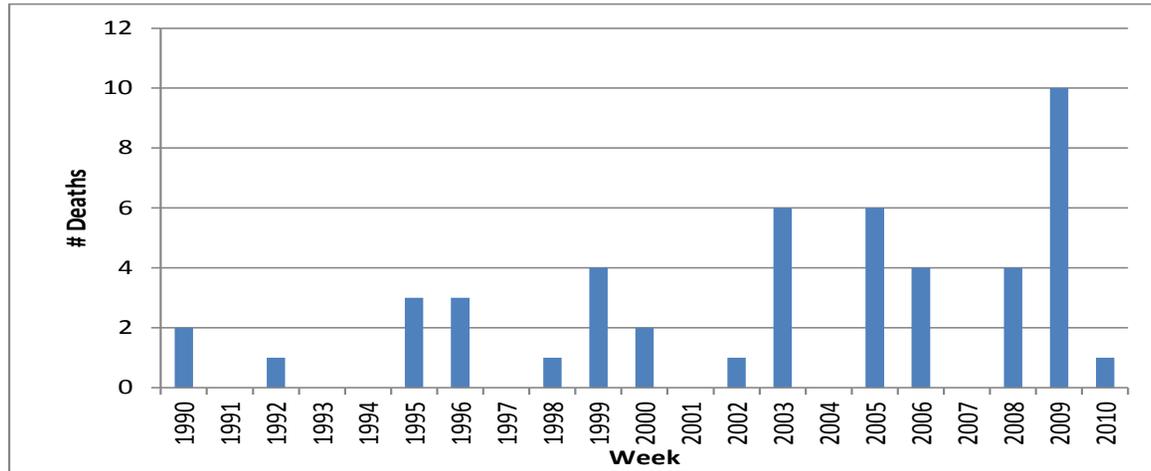
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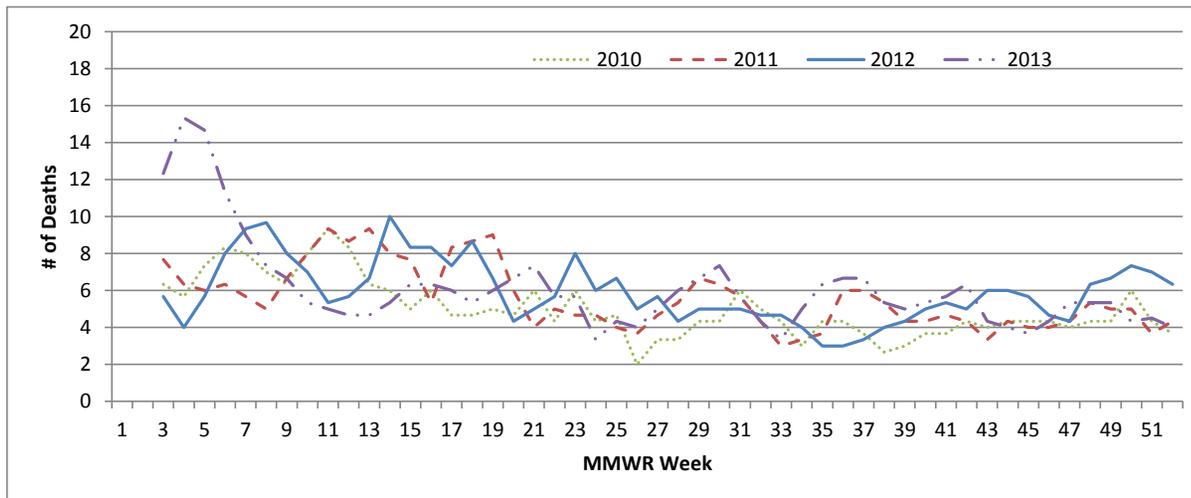


**Figure 9. Annual Influenza Related Mortality,
Travis County: 1990-2010**



Data source: Texas Department of State Health Services <http://soupin.tdh.state.tx.us/deathdoc.htm> Data as of September 12, 2012

**Figure 10. City of Austin Pneumonia and Influenza Mortality:
2010-2013**



Data source: Center for Disease Control and Prevention 122 Cities Mortality: <http://wonder.cdc.gov/mmwr/mmwrmort.asp>

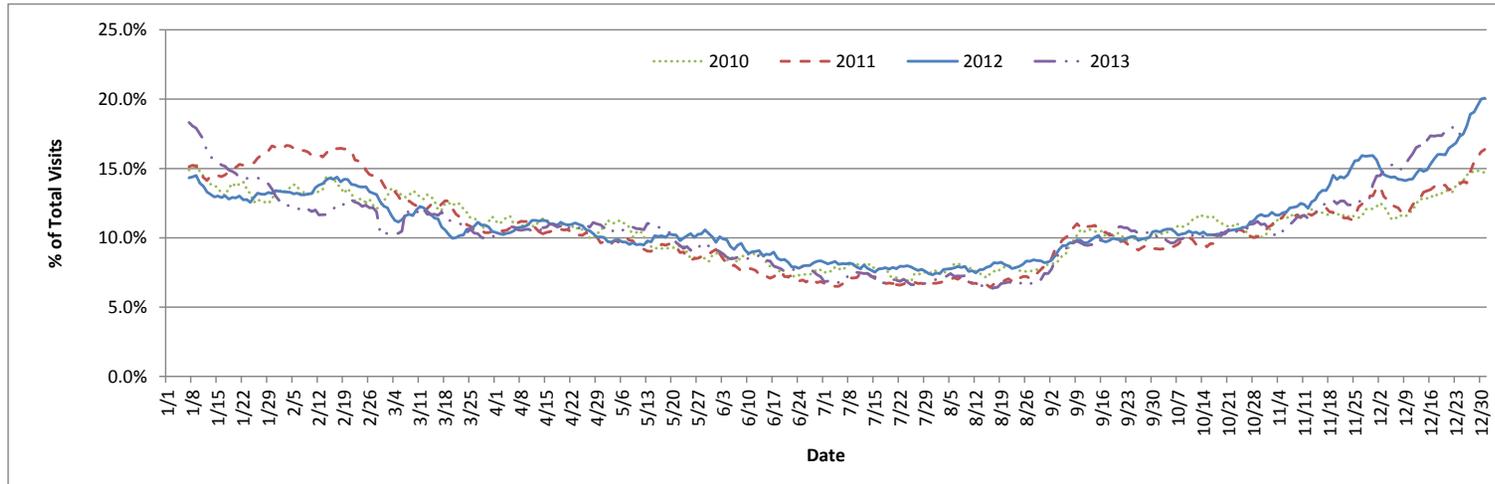
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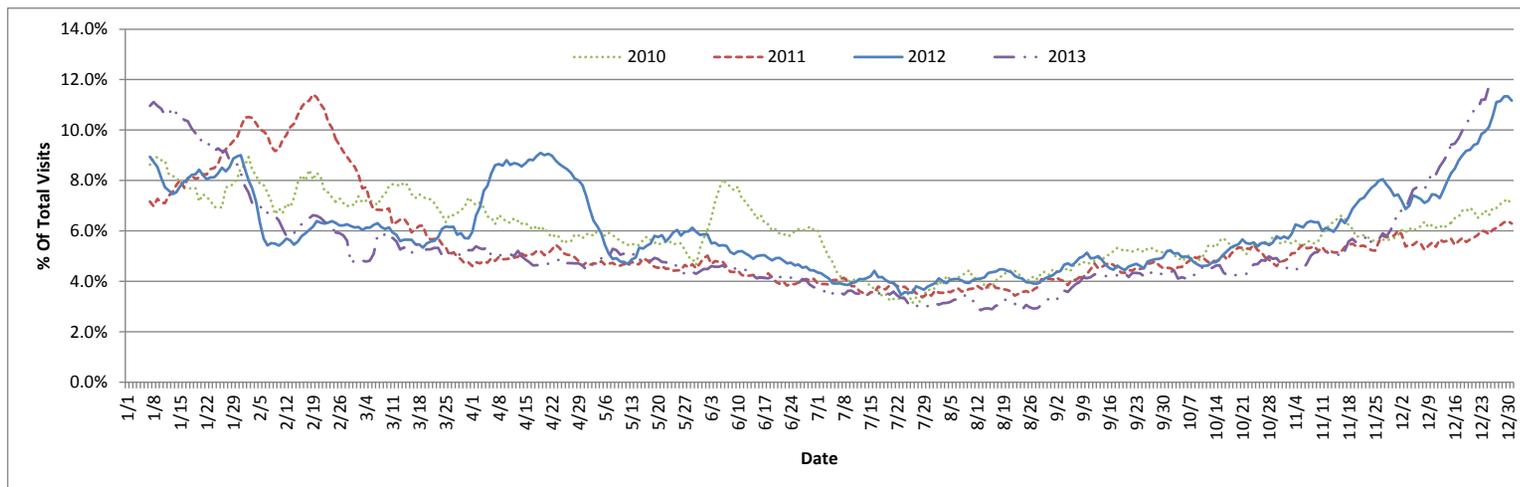


**Figure 11. RODS Syndromic Surveillance for the Respiratory Prodrome Category,
Travis County: 2010-2013**



Data source: University of Pittsburgh Real-time Outbreak and Disease Surveillance System. Data is an aggregation of Austin area chief complaint hospital data

**Figure 12. RODS Syndromic Surveillance for Influenza-Like-Illness,
Travis County: 2010-2013**



Data source: University of Pittsburgh Real-time Outbreak and Disease Surveillance System. Data is an aggregation of Austin area chief complaint hospital data

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- 1 MMWR is the Morbidity and Mortality weekly report week published by the CDC.
- 2 PCR testing is performed for specimens referred by area sentinel Influenza surveillance reporters. Providers interested in becoming sentinel providers may call the Austin/Travis County Health and Human Services Epidemiology and Health Statistics Unit at (512) 972-5555.
- 3 Influenza A is commonly split into 2 subtypes: H1N1 and H3N2. Both strains can circulate each Influenza season.
- 4 Influenza is not a reportable condition in Texas; therefore, data is provided by sentinel surveillance reporters and is only a sample of the Influenza activity occurring in the Austin/Travis County area.
- 5 Data represent rapid Influenza testing; these tests provide quick results reporting only Influenza A or B (no subtyping). Early in the flu season, results should be used with caution due to false positive results which can occur, especially during times when Influenza activity is low.
- 6 Influenza data is collected from a variety of reporters; the number of reporters can vary from week to week.
- 7 Non-Differentiated refers to rapid test results that do not differentiate between Influenza A and B.
- 8 Data for Austin/Travis County ILI reporters only; the number of reporters can vary from week to week.
- 9 Influenza is confirmed via PCR testing and a further subtyping may be performed. PCR testing is performed for specimens referred by area Influenza surveillance reporters.
- 10 Positive laboratory results are reported according to specimen collection date or date received in the lab if the former is unknown.
- 11 Antigenic characterization and antiviral resistance is obtained from the Texas Influenza Surveillance Report <http://www.dshs.state.tx.us/idcu/disease/Influenza/surveillance/2013/>.
- 12 Influenza activity level corresponds to the current MMWR week only and does not reflect the previous weeks' activity.
- 13 The majority of Influenza cases are not reportable by law to the Texas Department of State Health Services. This map contains data from sentinel sites and does not represent all Influenza cases in the state.
- 14 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.
- 15 Some non-NREVSS reporters also contribute to the RSV data.
- 16 Percentages based on the total number of specimens B positive and subtyped A specimens.

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