



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 April 19, 2014 (MMWR¹ week 16).

Situation Update:

- Flu activity is low across the country but a wave of influenza B activity is affecting parts of the country.
- This week, influenza B viruses account for 56% of viruses nationally and are causing an increase in influenza-like-illness (ILI) in parts of the country. In Texas, the percentage of visits for influenza-like illness as reported by ILINet providers was 5.44% which is a moderate level of ILI activity. Locally, the percentage of visits was 2.10%.
- Nationally, pneumonia and influenza deaths remain below the epidemic threshold and are at 6.3% of total deaths. Locally these deaths have trended near or below seasonal levels and 21 deaths have been attributed to influenza.
- Nationally, there have been 89 pediatric influenza-associated influenza deaths, 18 reported in Texas. There have been two pediatric influenza-associated deaths in Travis County.
- The percentage of specimens testing positive for influenza is at 12.0% nationally. There was a decrease statewide; the percent positive for the week is 7.72%. Locally, no specimens were submitted for influenza testing.
- The 2009 H1N1 viruses have predominated this influenza season, though this week the influenza B accounts for the largest proportion of circulating viruses. Additionally, influenza A(H3) is increasing as well. It is not uncommon for a second wave of influenza to occur toward the end of the season. It is possible for significant influenza activity to continue into May.
- Of the 606 positive specimens tested nationally, 43.9% were influenza A and 56.1% were influenza B. Subtyping was performed on 141 influenza A specimens; 90% were H3 and 10% were 2009 H1N1. Statewide, influenza A comprises 20% of the specimens submitted. Further testing performed on three of these specimens show H3N2 accounts for 100% of the influenza A.



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



- Of the 2408 influenza specimens antigenically characterized by the CDC so far this year, 1854 specimens matched the influenza A H1N1 component and 301 specimens matched the influenza A H3N2 component in the trivalent and quadravalent influenza vaccines. Of the 247 influenza B specimens, 172 specimens matched the component found in both trivalent and quadravalent influenza vaccines and the other 75 specimens matched the second B strain of the quadravalent influenza vaccine.
- In Texas, characterization has been performed on 84 influenza A (H1N1) viruses and 20 influenza A (H3N2) viruses both matching components of the trivalent and quadravalent influenza vaccines. Additionally, six influenza B viruses match the B component of the trivalent vaccine while 11 have been characterized as the additional B component found in the quadravalent vaccine but not in the trivalent vaccine.
- Some antiviral resistance to oseltamivir (Tamiflu) has been seen in 59 out of 5812 specimens tested (1.2%), all of which were 2009 H1N1. High levels of resistance to adamantanes continue to occur among 2009 H1N1 and H3N2 viruses. Adamantanes are not effective against influenza B. Texas has had 374 specimens tested; three have been resistant to oseltamivir (Tamiflu).

H5N1:

- Canada reported the first case of influenza A H5N1 in a human ever detected in the Americas. No cases of H5N1 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.
- H5N1 infections are rare and these viruses do not spread easily from person to person. The CDC is not recommending that the public take any special actions regarding H5N1 in response to this case.
- For more information, visit [H5N1 Influenza](#).

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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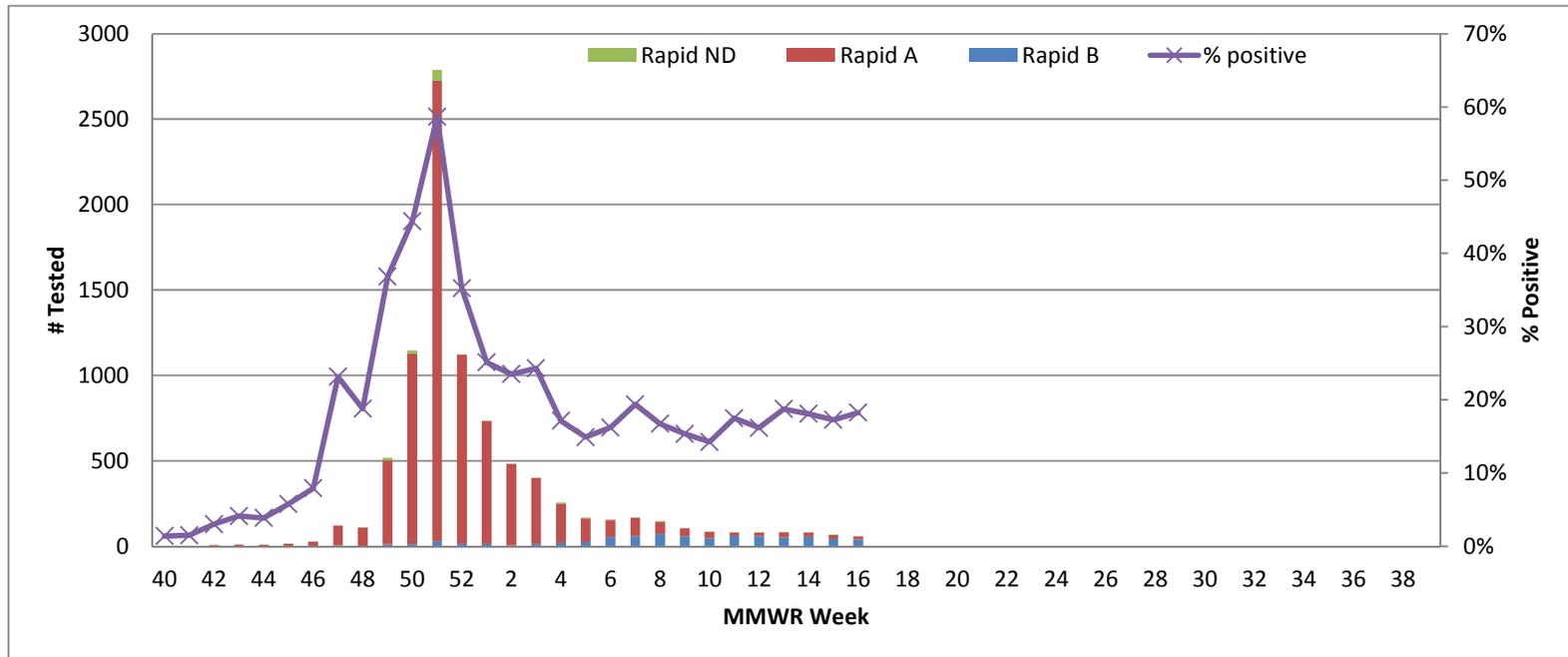


Figure 1. Influenza Surveillance, Travis County Providers ^{4,5,6}

Week Ending	3/1/2014	3/8/2014	3/15/2014	3/22/2014	3/29/2014	4/5/2014	4/12/2014	4/19/2014
MMWR Week	9	10	11	12	13	14	15	16
# Influenza Rapid Tests Performed	684	604	469	505	468	431	390	318
# Total Positive Influenza Tests	105	86	82	83	82	84	68	58
% Positive Influenza Tests	15.4%	14.2%	17.5%	16.4%	17.5%	19.5%	17.4%	18.2%
# Positive A Influenza	47	36	20	19	22	32	19	17
# Positive B Influenza	58	48	61	59	59	50	48	41
# Non-Differentiated Influenza ³	0	2	1	5	1	2	1	0

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

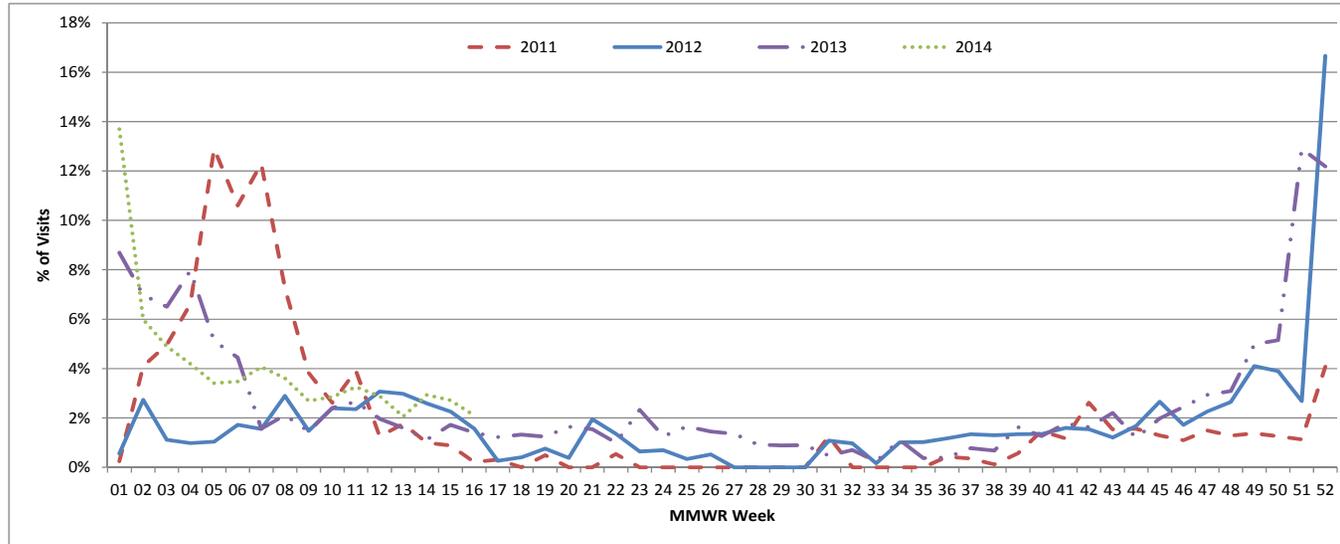
Austin/Travis County influenza surveillance does not attempt to capture all cases of influenza or influenza-like illness. These data should be used for trending purposes over time and for identifying types/strains of influenza that are occurring in the Austin area rather than for estimating the total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

	05/26/2013 - 7/27/2013	7/28/2013 - 9/28/2013	09/29/2013 - 11/30/2013	12/1/2013 - 2/1/2014	2/2/2014 - 4/5/2014	4/6/2014 - 6/7/2014
MMWR Week	22-30	31-39	40-48	49-5	6-14	15-23
Influenza A (Total Positive PCR Tests)	0	1	6	91	5	0
Subtype	Seasonal H1N1	0	1	6	83	2
	Season H3N2	0	0	0	2	3
	Not Subtyped	0	0	0	13	0
Influenza B (Total Positive PCR Tests)	0	0	0	1	6	0
PCR Negative Specimens	0	9	13	123	17	3

* Incomplete data.

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 16	
Number of labs reporting flu tests	13
Number of specimens tested	1036
Number of positive specimens (%) [†]	80 (7.72%)
Percentage of total tests that were antigen detection tests	63.13%
Positive specimens by type/subtype [n (%)]	
Influenza A	16 (20.00%)
Subtyping performed	3 (18.8%)
A (H1N1)	0 (0.0%)
A (H3N2)	3 (100.0%)
Subtyping not performed	13 (81.2%)
Influenza B	64 (80.00%)

[†]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 6. Texas Antiviral Resistance¹¹

	Oseltamivir		Zanamivir	
	Virus samples tested (n)	Resistant viruses, number (%)	Virus samples tested (n)	Resistant viruses, number (%)
Influenza A (H1N1)	354	3 (0.85%)	75	0 (0%)
Influenza A (H3N2)	15	0 (0%)	15	0 (0%)
Influenza B	5	0 (0%)	5	0 (0%)

- Since October 1, 2013, three influenza viruses from Texas have shown resistance to Oseltamivir (Tamiflu).

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Texas Antigenic Characterization¹¹

Influenza A (H1N1) [84]

- Eighty-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) [20]

- Twenty 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.

Influenza B [17]

- Yamagata lineage [6]: Six (35%) influenza B/Yamagata-lineage virus has been characterized from Texas. B/Massachusetts/2/2012-like is included as an influenza B component of the 2013-2014 Northern Hemisphere trivalent and quadrivalent influenza vaccines.
- Victoria lineage [11]: Eleven (65%) influenza B/Victoria-lineage viruses were characterized as B/Brisbane/60/2008-like, which is included as an influenza B component of the 2013-2014 Northern Hemisphere quadrivalent influenza vaccine.

Figure 7. Texas Respiratory Laboratory Results⁵

Virus	Number of Laboratories Testing	Tests Performed	Positive Tests	Percentage of Tests Positive
Adenovirus (respiratory)	3	361	18	4.99%
HMPV	4	263	21	7.98%
Parainfluenza virus	4	470	20	4.26%
Rhinovirus	2	232	44	18.97%
RSV [†]	11	554	13	2.35%

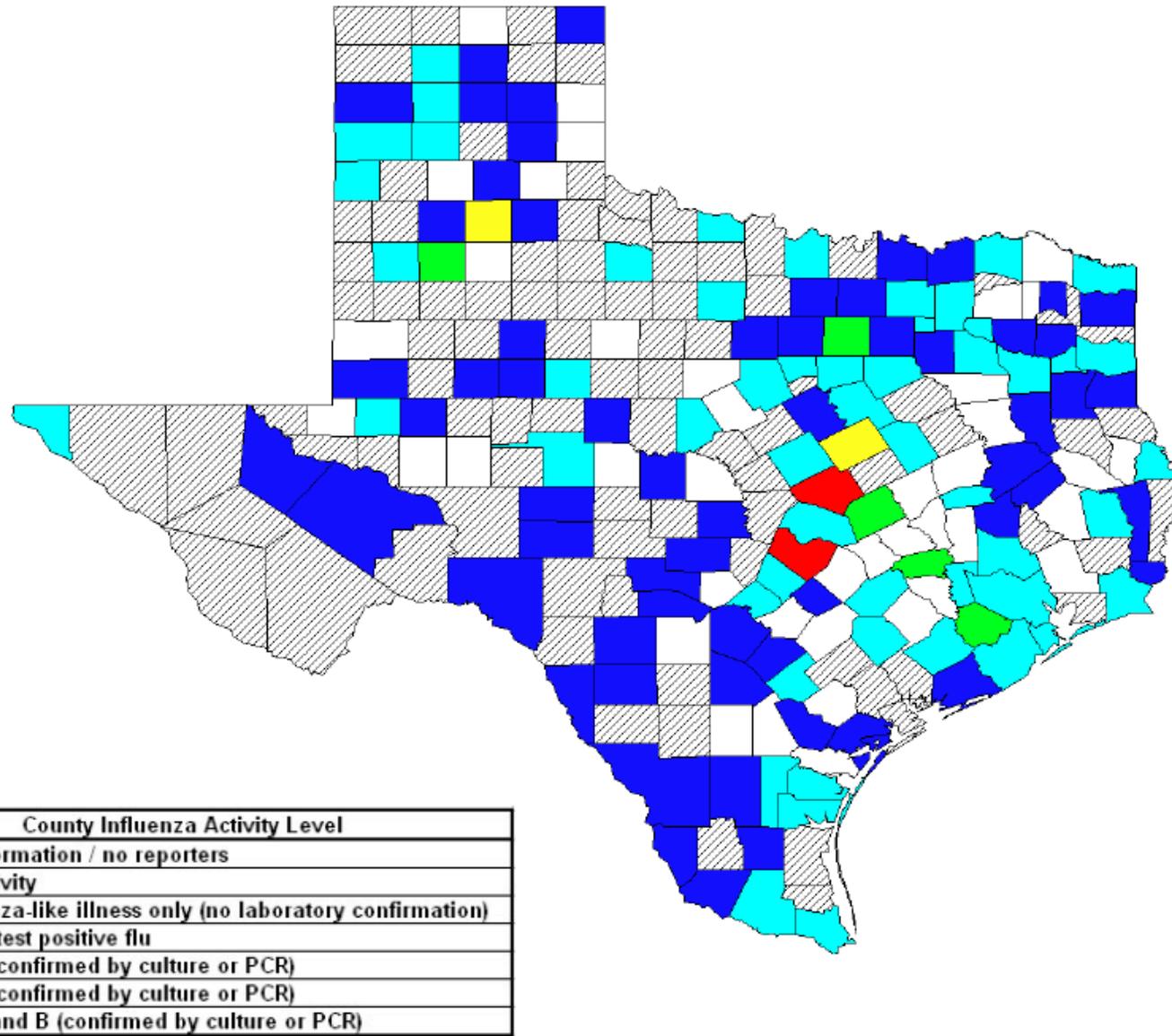
[†]RSV tests displayed in the table are antigen detection tests only. Some non-NREVSS reporters also contribute to the RSV data.



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Epidemiology and Health Statistics Unit



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



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

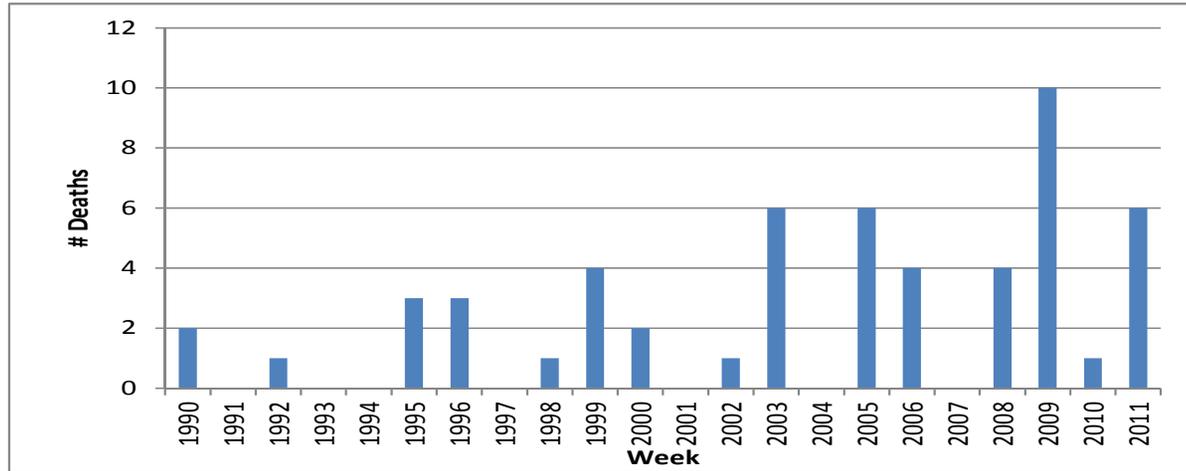
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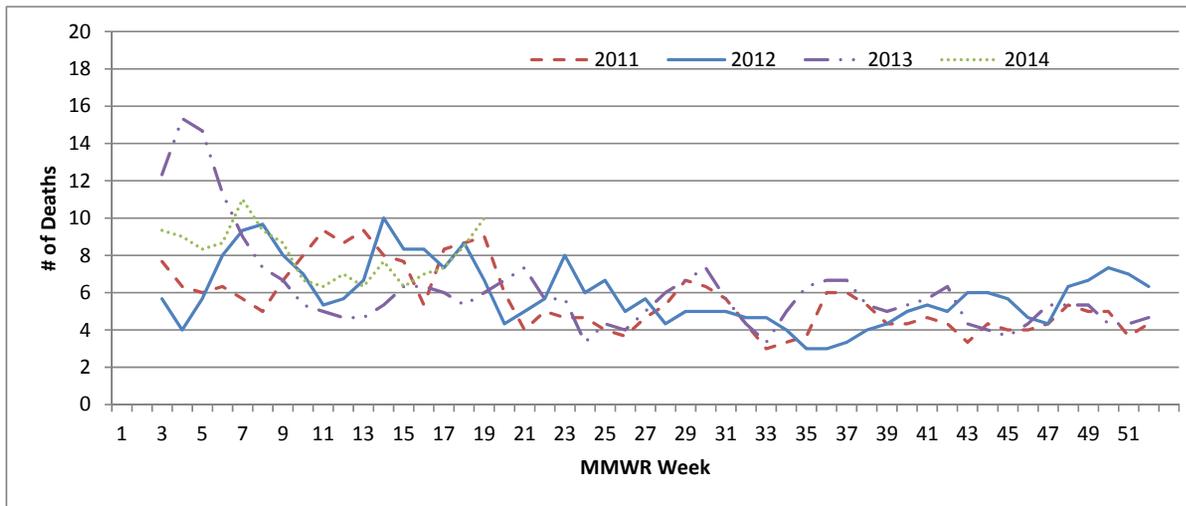


**Figure 9. Annual Influenza Related Mortality,
Travis County: 1990-2010**



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/mmwmort.asp>

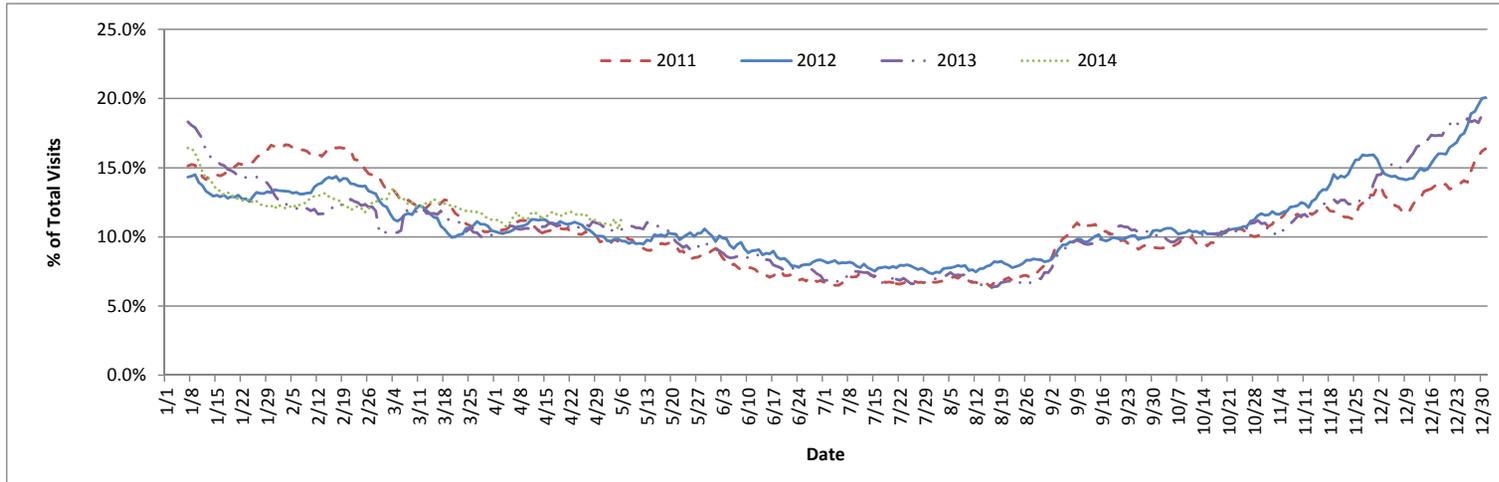
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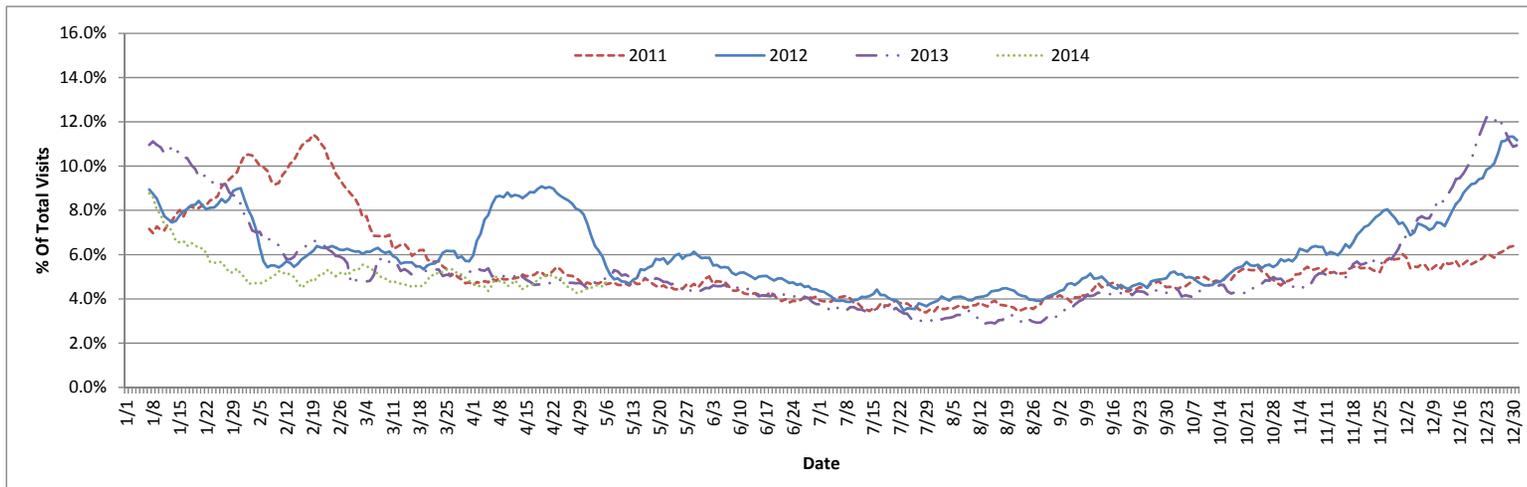


**Figure 11. RODS Syndromic Surveillance for the Respiratory Prodrôme Category,
Travis County: 2010-2013**



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.