



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



Travis County Influenza Surveillance

This report contains data for the 2014-2015 Influenza Season through May 30, 2015 (MMWR¹ week 20).

Situation Update:

- The CDC reports that flu activity continues to decline and flu-like illness has been below the baseline of 2.0% for the seventh consecutive week. Influenza B viruses now account for 88% of all influenza viruses reported.
- Influenza A (H3N2) viruses have been identified as most common in the U.S. this season, although influenza B viruses accounted for 88% of the influenza viruses reported this past week.
- Nationwide, 1.2% of patient visits reported through the U.S. Outpatient Influenza-like Illness Surveillance Network (ILINet) were due to influenza-like illness (ILI). In Texas, the percentage of visits for influenza-like illness as reported by ILINet providers was 5.07%, a low level of ILI activity. Locally, the percentage of visits was 1.66%.
- Nationally, the percentage of specimens testing positive for influenza viruses in the United States decreased slightly to 2.9%. Of the 2,193 specimens tested at the CDC, 63% were influenza A viruses and 37% were influenza B viruses. Of the 1,383 influenza A viruses that were subtyped, 96% were H3 viruses and 4% were H1N1.
- The level of Flu activity in Texas is local. Statewide, 0.50% specimens tested in influenza surveillance labs were positive for influenza; 4 (100%) were influenza B viruses. One specimen from Travis County was tested negative for influenza this past week.
- Antiviral resistance was tested on 4,192 specimens. All specimens except one were susceptible to Oseltamivir (Tamiflu), [peramir \(Rapivab\)](#), and zanamir (Relenza). The resistant specimen, a H1N1 specimen, was resistant to Tamiflu and [peramir \(Rapivab\)](#), but showed susceptibility to zanamir (Relenza). The one virus accounts for 1.6% of the H1N1 viruses analyzed for antiviral resistance this season.
- Nationwide, the proportion of deaths attributed to pneumonia and influenza is below epidemic threshold of 6.6%. Locally, the number of deaths attributed to pneumonia and influenza returned to historical trends.
- There have been 17 deaths in Travis County residents, including one pediatric influenza related death, that have listed influenza as a cause of death this season.



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- One hundred and forty-one pediatric influenza related deaths have been reported nationally. Sixteen pediatric influenza deaths have been reported in Texas this season, one in Travis County.

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.

Other Helpful Resources: [Texas Department of State Health Services \(DSHS\)](#)
[World Health Organization \(WHO\)](#)
[Centers for Disease Control and Prevention \(CDC\)](#)



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

Week Ending	4/11/2015	4/18/2015	4/25/2015	5/2/2015	5/9/2015	5/16/2015	5/23/2015	5/30/2015
MMWR Week	13	14	15	16	17	18	19	20
# Influenza Rapid Tests Performed	495	223	150	129	119	46	51	54
# Total Positive Influenza Tests	51	16	12	6	8	8	1	2
% Positive Influenza Tests	10.3%	7.2%	8.0%	4.7%	6.7%	17.4%	2.0%	3.7%
# Positive A Influenza	9	3	2	0	0	2	0	0
# Positive B Influenza	42	13	9	6	7	5	0	2
# Non-Differentiated Influenza ³	0	0	1	0	1	1	1	0

Data source: Austin/Travis County Influenza surveillance reporters

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

	4/6/2014 - 6/7/2014	6/8/2014 - 8/9/2014	8/10/2014 - 10/11/2014	10/12/2014 - 02/14/2015	02/14/2015 - 05/08/2015	05/09/2015- 7/11/2015
MMWR Week	15-23	24-32	25-41	42-7	8-17	18-27*
Influenza A (Total Positive PCR Tests)	1	0	1	60	3	0
Subtype	Seasonal H1N1	0	0	0	0	0
	Season H3N2	1	0	1	49	0
	Not Subtyped	0	0	0	14	0
Influenza B (Total Positive PCR Tests)	0	0	0	14	2	0
PCR Negative Specimens	4	7	4	45	5	5

* 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

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

Week 20	
Number of labs reporting flu tests	15
Number of specimens tested	807
Number of positive specimens (%) [†]	4 (0.50%)
Percentage of total tests that were antigen detection tests	34.20%
Positive specimens by type/subtype [n (%)]	
Influenza A	0 (0.00%)
Subtyping performed	0 (0.00%)
A (H1N1)	0 (0.00%)
A (H3N2)	0 (0.00%)
Subtyping not performed	0 (0.00%)
Influenza B	4 (100.00%)

Figure 4. Texas Antiviral Resistance¹¹

	Oseltamivir		Zanamivir		Peramivir[^]	
	Virus samples tested (n)	Resistant viruses, number (%)	Virus samples tested (n)	Resistant viruses, number (%)	Virus samples tested (n)	Resistant viruses, number (%)
Influenza A (H1N1)	0	0 (0%)	0	0 (0%)	0	0 (0%)
Influenza A (H3N2)	96	0 (0%)	96	0 (0%)	96	0 (0%)
Influenza B	21	0 (0%)	21	0 (0%)	21	0 (0%)

- One hundred and seventeen influenza viruses from Texas that have been tested for antiviral resistance since September 28, 2014. No influenza viruses have tested positive for mutations that confers resistance to oseltamivir or zanamivir.



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Texas Antigenic Characterization¹¹

Since September 28, 2014, CDC has reported antigenic characterization results from 36 influenza A (H3N2) viruses and 24 influenza B 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 (H3N2) [63]

- Three (4.8%) viruses were related to A/Texas/50/2012, the influenza A (H3N2) component of the 2014-2015 Northern Hemisphere influenza vaccine.
- Twenty-seven (42.9%) viruses belonged to a genetic group that typically shows reduced titers to A/Texas/50/2012. These viruses were characterized by sequencing or pyrosequencing, because these viruses did not grow to sufficient titers for antigenic characterization due to changes in biological properties of the viruses.
- Thirty-one (49.2%) viruses tested showed reduced titers with antiserum produced against A/Texas/50/2012 and were antigenically similar to A/Switzerland/9715293/2013, the H3N2 virus selected for the 2015 Southern Hemisphere influenza vaccine. A/Switzerland/9715293/2013 is related to, but antigenically and genetically distinguishable, from the A/Texas/50/2012 vaccine virus. A/Switzerland-like H3N2 viruses were first detected in the United States in small numbers in March of 2014 and began to increase through the spring and summer.
- Two (3.2%) viruses tested showed reduced titers with antiserum produced against A/Texas/50/2012 and A/Switzerland/9715293/2013.

Influenza B [45]

- Yamagata lineage [20]: Nineteen (42.2%) influenza B/Yamagata-lineage viruses have been characterized from Texas. A B/Massachusetts/2/2012-like virus is included as an influenza B component of the 2014-2015 Northern Hemisphere trivalent and quadrivalent influenza vaccines. One (2.2%) of the B/Yamagata-lineage viruses tested showed reduced titers to B/Massachusetts/2/2012. It is expected that a proportion of all isolates tested will exhibit somewhat reduced titers compared with the homologous titer for the reference strain.
- Victoria lineage [25]: Twenty-five (55.6%) influenza B/Victoria-lineage viruses were characterized as B/Brisbane/60/2008-like, which is included as an influenza B component of the 2014-2015 Northern Hemisphere quadrivalent influenza vaccine.



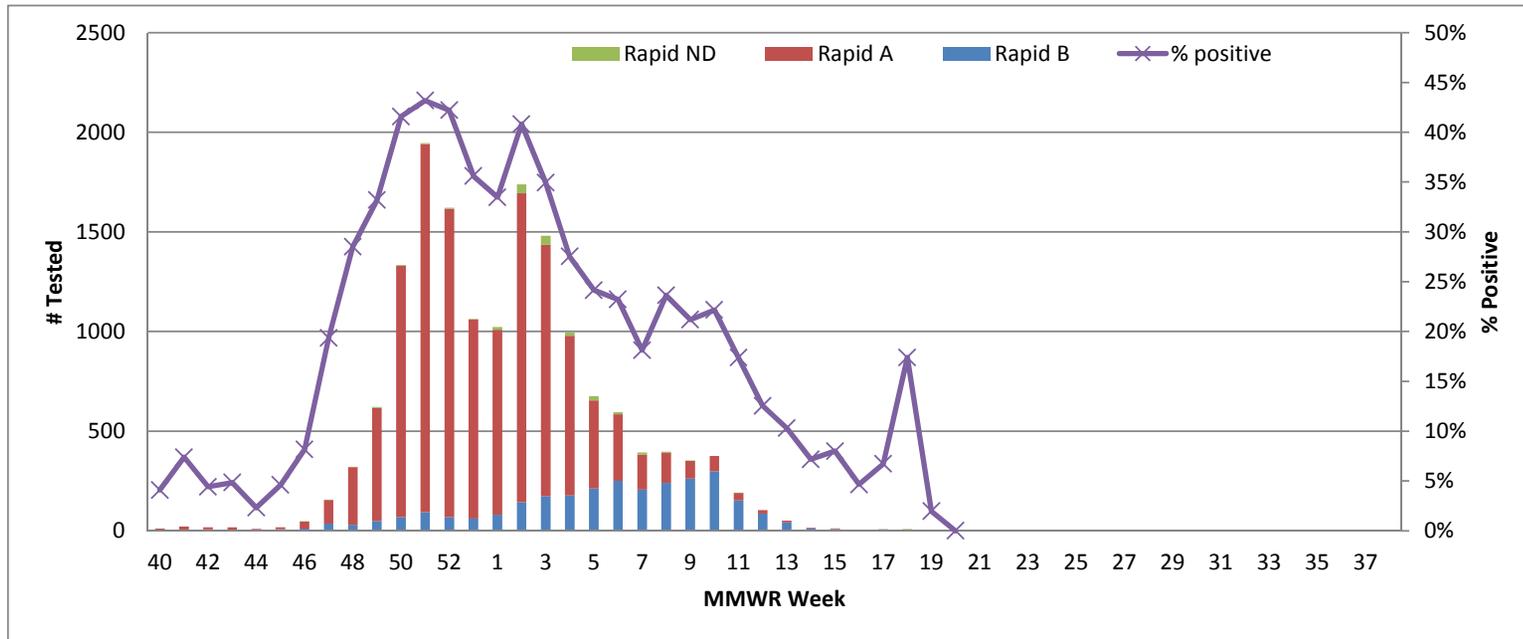
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Figure 5. Texas Respiratory Laboratory Results:

Virus	Number of Laboratories Testing	Tests Performed	Positive Tests	Percentage of Tests Positive
Adenovirus (respiratory)	9	539	33	6.12%
HMPV	9	558	29	5.20%
Parainfluenza virus	10	701	61	8.70%
Rhinovirus	8	445	109	24.49%
RSV ^{†A}	14	626	13	2.08%

Figure 6. 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

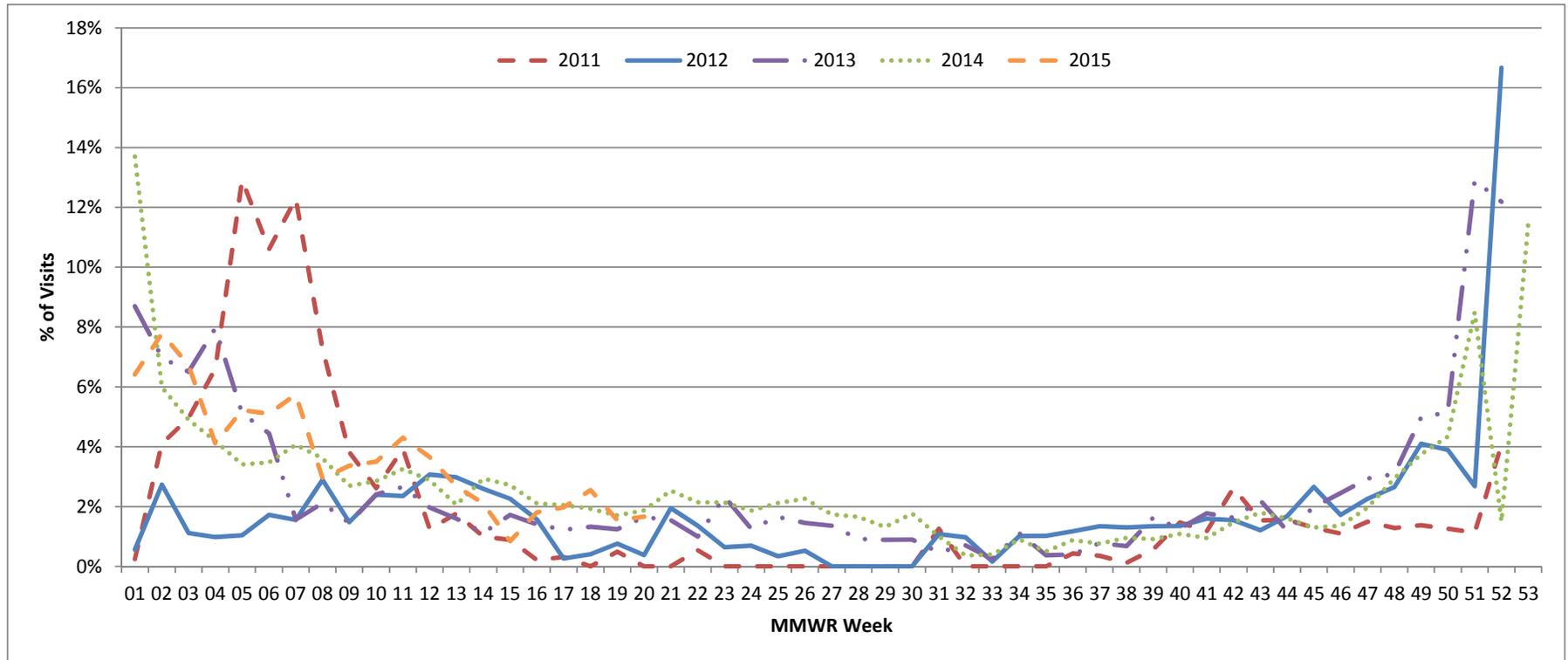
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Figure 7. Percentage of Visits Due to Influenza-like-Illness Reported by Travis County Participants in ILINet: 2009-2013⁸



Data source: CDC ILI.net system

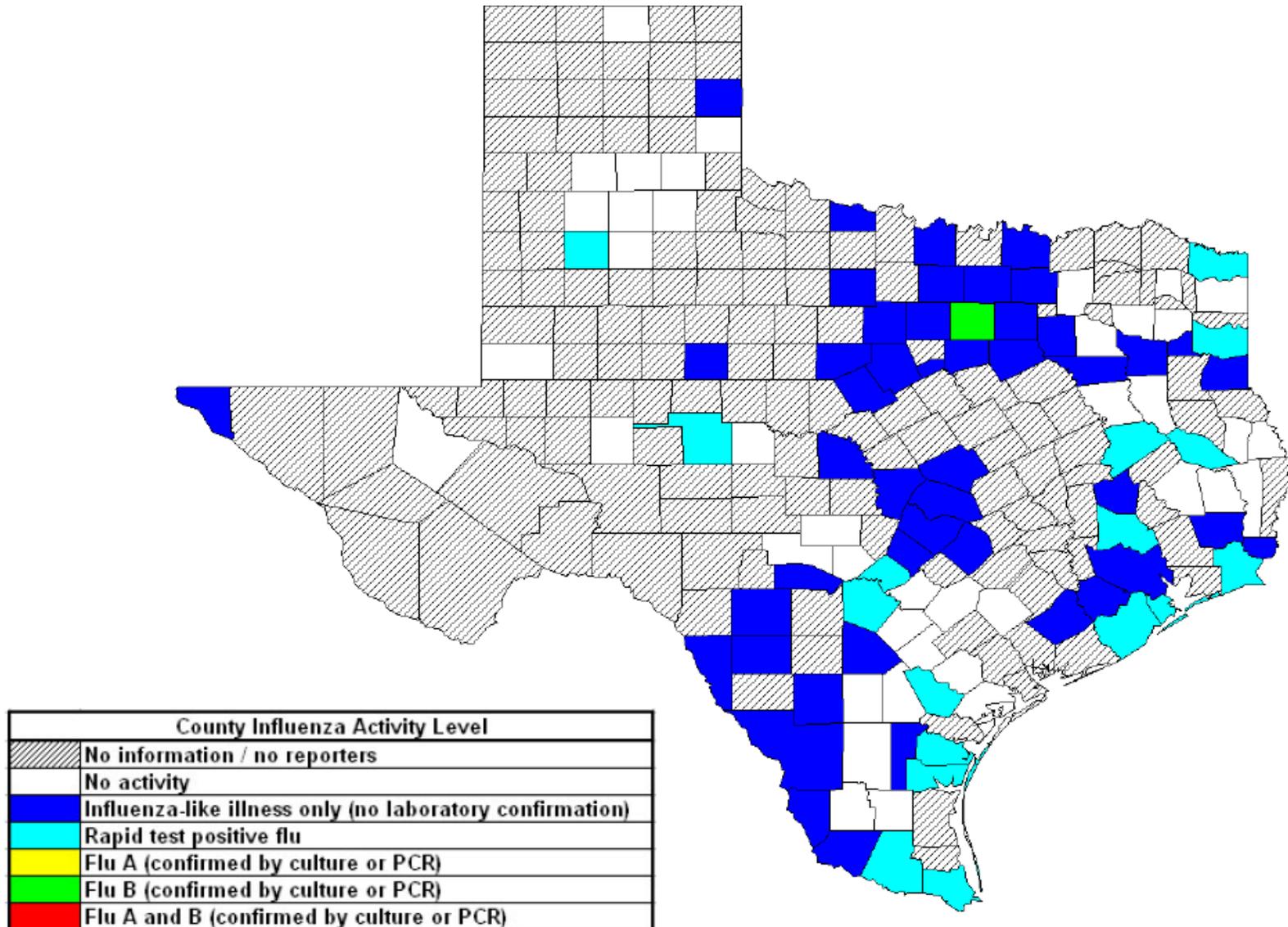
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Figure 8. Statewide Influenza Activity^{10,12,13}



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

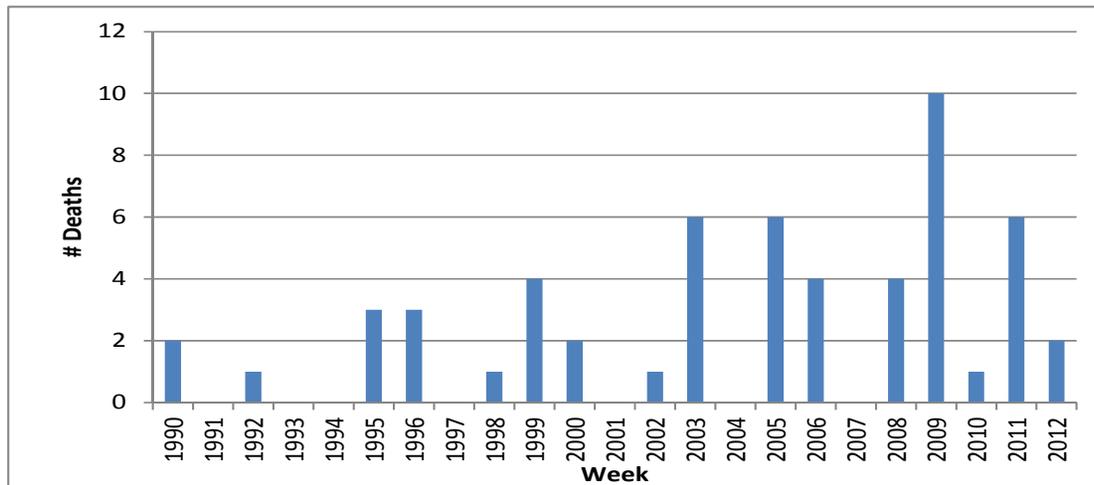
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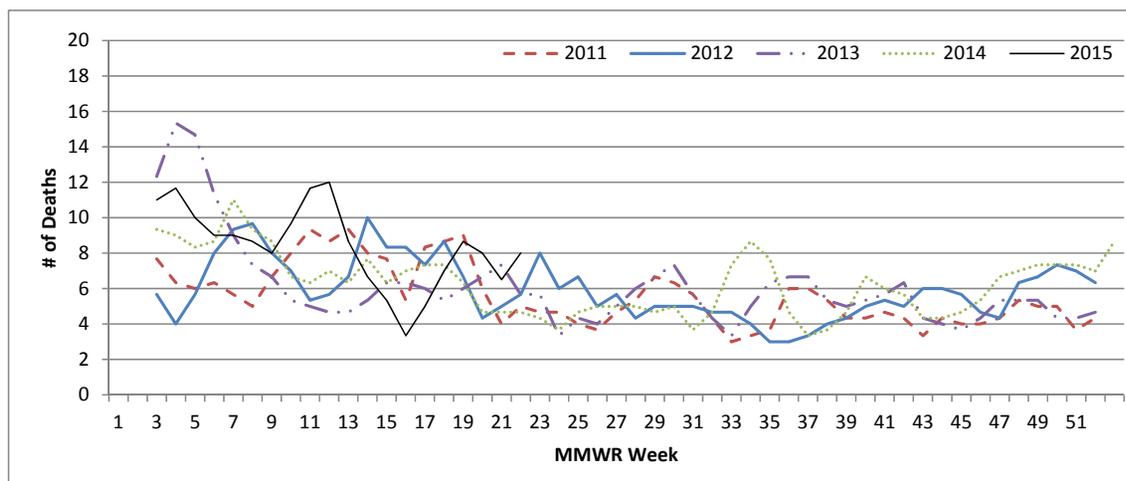


**Figure 9. Annual Influenza Related Mortality,
Travis County: 1990-2009**



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>

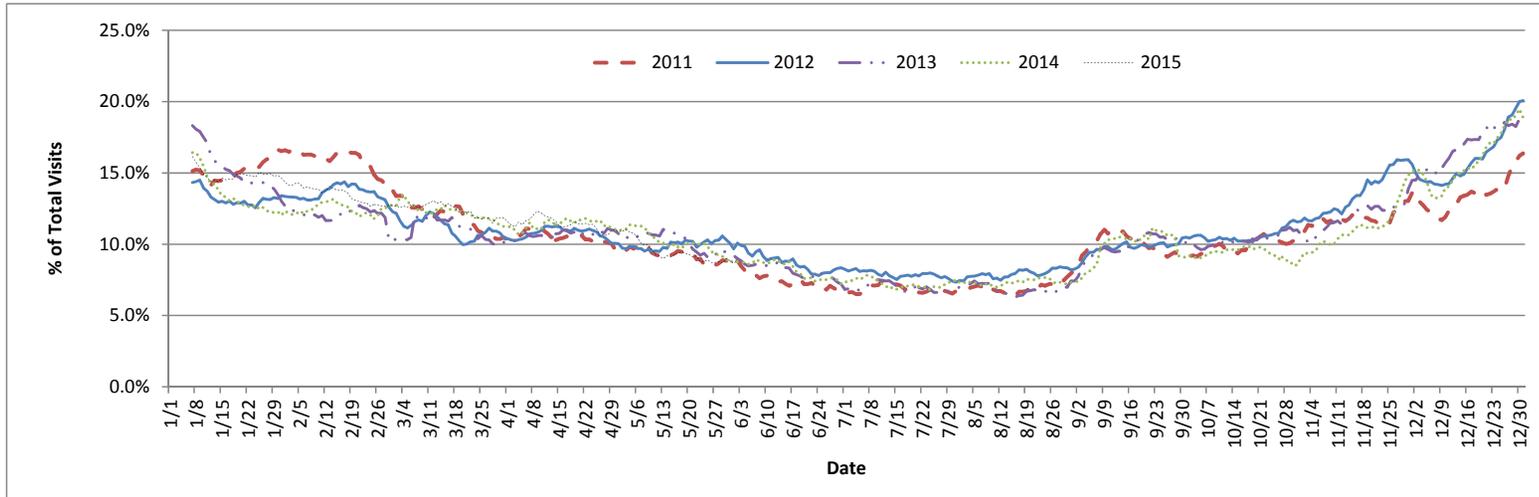
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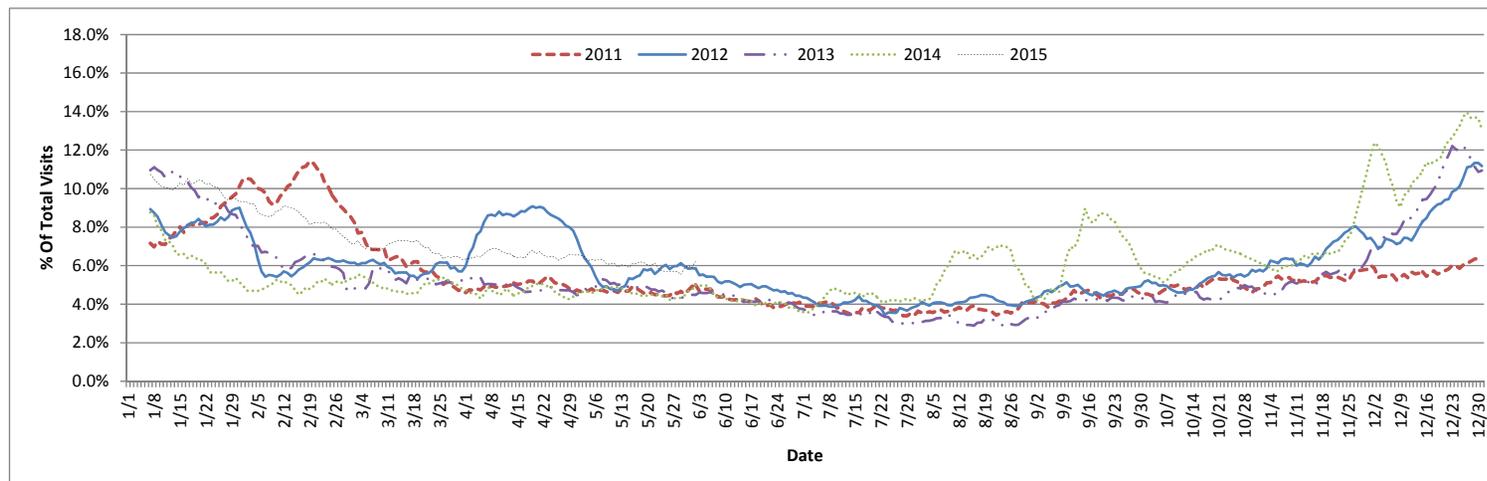


Figure 11. RODS Syndromic Surveillance for the Respiratory Prodrome Category, Travis County: 2010-2013



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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For additional information about Influenza surveillance, contact:

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

- 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 CDC: Flu Activity Expands; Severity Similar to Past H3N2 Seasons <http://www.cdc.gov/flu/news/flu-activity-expands.htm>

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