



**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 January 3, 2015 (MMWR<sup>1</sup> week 53).

### **Situation Update:**

- The CDC reports that influenza activity continues to remain high overall and is likely to continue for several weeks. Activity is beginning to decline in parts of the country and is increasing in others; as a result, it is too soon to tell whether influenza activity has peaked yet this season.
- Influenza A (H3N2) viruses have all been identified as most common in the U.S. this season. Very few 2009 influenza A (H1N1) and influenza B positive specimens have been reported.
- The severity of flu disease so far this season is similar to some previous seasons in which influenza A (H3N2) viruses have circulated predominately. H3N2 seasons cause more severe disease for young children and elderly adults, as indicated by hospitalizations and deaths, compared to H1N1.
- The CDC continues to recommend vaccination as flu viruses are circulating. The vaccine can still prevent infection and may also prevent serious flu-related complications. This includes people who may already have gotten the flu this season because flu vaccines protect against three or four different viruses and it is possible other viruses will circulate later in the season.
- Nationwide, 5.6% of patient visits reported through the U.S. Outpatient Influenza-like Illness Surveillance Network (ILINet) were due to influenza-like illness (ILI). This percentage decreased from last week but remains above the national baseline of 2.0% for the seventh consecutive week.
- In Texas, the percentage of visits for influenza-like illness as reported by ILINet providers was 12.83%, a high level of ILI activity. Locally, the percentage of visits was 11.59%.
- Influenza A (H3N2) viruses have all been identified as most common in the U.S. this season. Very few 2009 influenza A (H1N1) and influenza B positive specimens have been reported.
- Nationally, the percentage of specimens testing positive for influenza viruses in the United States decreased to 24.7%. Of the 7,515 specimens tested at the CDC, 7,218 (96.0%) were influenza A viruses and 297 (4.0%) were influenza B viruses. Of the 2,494 influenza A viruses that were subtyped, 99.7% were H3 viruses and 0.3% were H1N1.



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- Flu activity in Texas continues to be widespread. Statewide, 24.03% specimens tested in influenza surveillance labs were positive for influenza; 1,085 (90.27%) of the 1,202 influenza-positive tests were influenza A viruses and 117 (9.73%) were influenza B viruses. Of the 153 influenza A viruses that were subtyped, 100.00% were H3 viruses.
- Six Travis County specimens were tested for influenza testing during week 53. Two specimens were influenza A but were not subtyped; one tested positive for influenza B, and one was negative.
- Antiviral resistance was tested on 546 specimens; all viruses showed susceptibility to oseltamivir (Tamiflu), zanamir (Relenza), and [peramir \(Rapivab\)](#). Doctors should consider antivirals for people at high risk of serious complications.
- Nationwide, the proportion of deaths attributed to pneumonia and influenza is above the epidemic threshold of 6.9%. During the 2012-2013 influenza season the proportion of deaths attributed to pneumonia and influenza peaked at 9.9%. This was the highest recorded proportion of deaths attributed to pneumonia and influenza in nearly a decade but was comparable to past severe seasons.<sup>16</sup>
- Locally, the number of deaths attributed to pneumonia and influenza has trended near seasonal levels.
- There have been seven deaths in Travis County residents that have listed influenza as a cause of death this season.
- Twenty-six pediatric influenza related deaths have been reported nationally. With the exception of the 2009 H1N1 pandemic, the number of flu-associated pediatric deaths has ranged from 37 to 171 since 2004-2005, when pediatric flu deaths became reportable.<sup>16</sup>
- Six pediatric influenza deaths have been reported in Texas this season, none in Travis County.



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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.***

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** <sup>4,5,6</sup>

Week Ending	11/22/2014	11/29/2014	12/6/2014	12/13/2014	12/20/2014	12/27/2014	1/3/2015	1/10/2015
MMWR Week	47	48	49	50	51	52	53	1
# Influenza Rapid Tests Performed	693	1125	1873	3208	4502	3842	2985	2845
# Total Positive Influenza Tests	148	321	622	1334	1946	1622	1036	963
% Positive Influenza Tests	21.4%	21.4%	21.4%	41.6%	43.2%	42.2%	34.7%	33.8%
# Positive A Influenza	115	288	567	1261	1846	1546	972	88
# Positive B Influenza	31	31	49	68	94	69	61	70
# Non-Differentiated Influenza <sup>3</sup>	2	2	6	5	6	7	3	13

Data source: Austin/Travis County Influenza surveillance reporters

**Figure 2. Travis County Confirmed Influenza Test Results:** <sup>2,9,10</sup>

	12/1/2013 - 2/1/2014	2/2/2014 - 4/5/2014	4/6/2014 - 6/7/2014	6/8/2014 - 8/9/2014	8/10/2014 - 10/11/2014	10/12/2014 - 02/14/2015
MMWR Week	49-5	6-14	15-23	24-32	25-41	42-6
Influenza A (Total Positive PCR Tests)	91	5	1	0	1	41
Subtype	Seasonal H1N1	83	2	0	0	0
	Season H3N2	2	3	1	0	35
	Not Subtyped	13	0	0	0	9
Influenza B (Total Positive PCR Tests)	1	6	0	0	0	3
PCR Negative Specimens	123	17	4	7	4	34

\* 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<sup>11, 14</sup>**

<b>Week 53</b>	
Number of labs reporting flu tests	19
Number of specimens tested	5003
Number of positive specimens (%) <sup>T</sup>	1202 (24.03%)
Percentage of total tests that were antigen detection tests	72.06%
<b>Positive specimens by type/subtype [n (%)]</b>	
<b>Influenza A</b>	<b>1085 (90.27%)</b>
Subtyping performed	153 (14.1%)
A (H1N1)	0 (0.0%)
A (H3N2)	153 (100.0%)
Subtyping not performed	932 (85.9%)
<b>Influenza B</b>	<b>117 (9.73%)</b>

**Texas Antigenic Characterization<sup>11</sup>**

Since September 28, 2014, CDC has reported antigenic characterization results from 10 influenza A (H3N2) viruses and 8 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) [10]**

- Three (30%) viruses were related to A/Texas/50/2012, the influenza A (H3N2) component of the 2014-2015 Northern Hemisphere influenza vaccine.
- Seven (70%) 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.

**Influenza B [8]**

- Yamagata lineage [1]: One (12.5%) influenza B/Yamagata-lineage virus has 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.
- Victoria lineage [7]: Seven (87.5%) 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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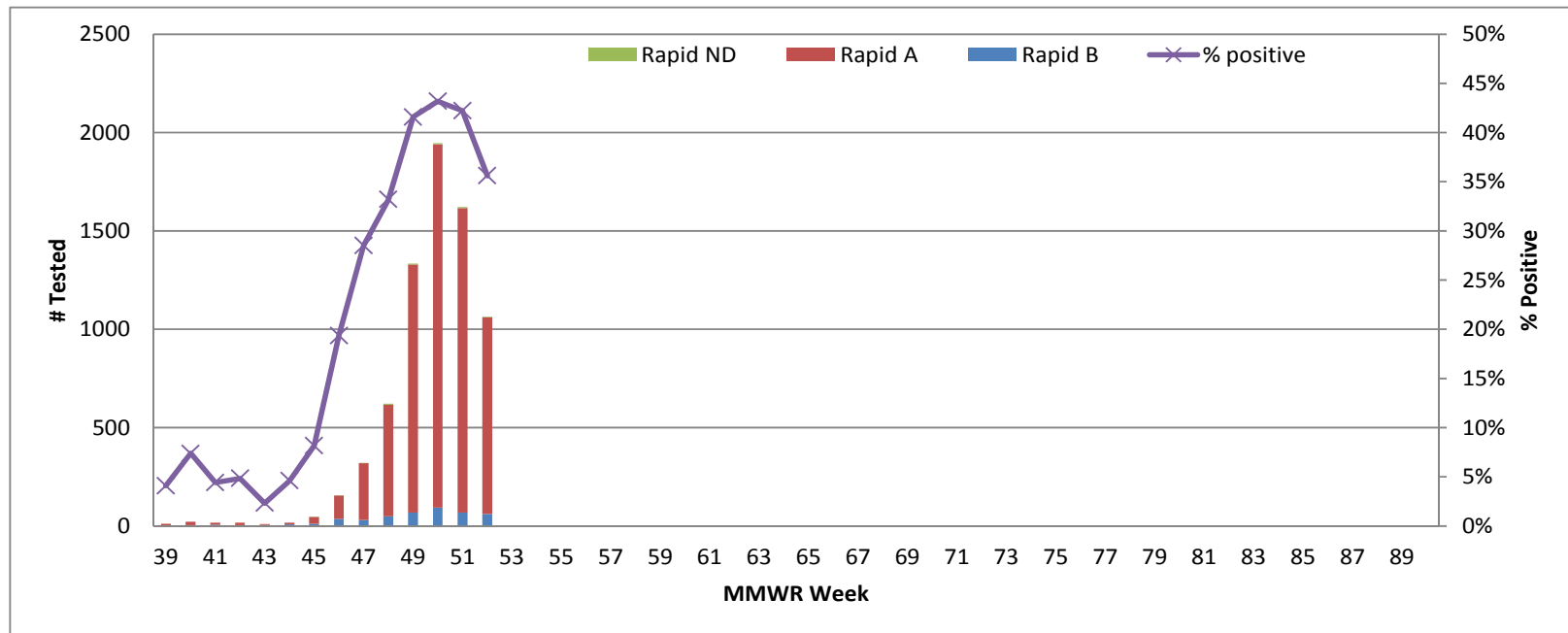


**Figure 4. Texas Antiviral Resistance<sup>11</sup>**

- Five 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.

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

**Figure 5. Number Tested and Percent Positive Rapid Influenza Tests by Week, Travis County: 2012-2013 Influenza Season<sup>4,5,6,8</sup>**



Data source: Austin/Travis County Influenza surveillance reporters

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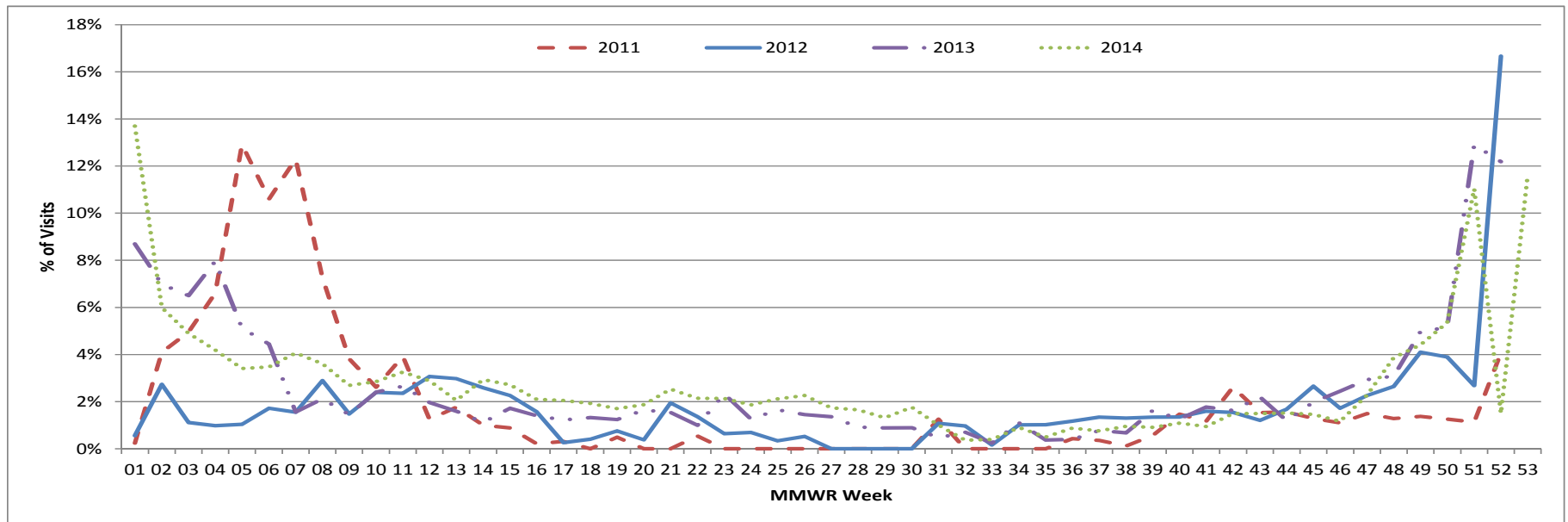
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**Figure 6. Texas Respiratory Laboratory Results:**

<b>Virus</b>	<b>Number of Laboratories Testing</b>	<b>Tests Performed</b>	<b>Positive Tests</b>	<b>Percentage of Tests Positive</b>
Adenovirus (respiratory)	8	929	32	3.44%
HMPV	7	903	32	3.54%
Parainfluenza virus	8	919	31	3.37%
Rhinovirus	6	688	108	15.70%
RSV <sup>T</sup>	14	2357	686	29.10%

**Figure 7. Percentage of Visits Due to Influenza-like-Illness Reported by Travis County Participants in ILINet: 2009-2013<sup>8</sup>**



Data source: CDC ILI.net system

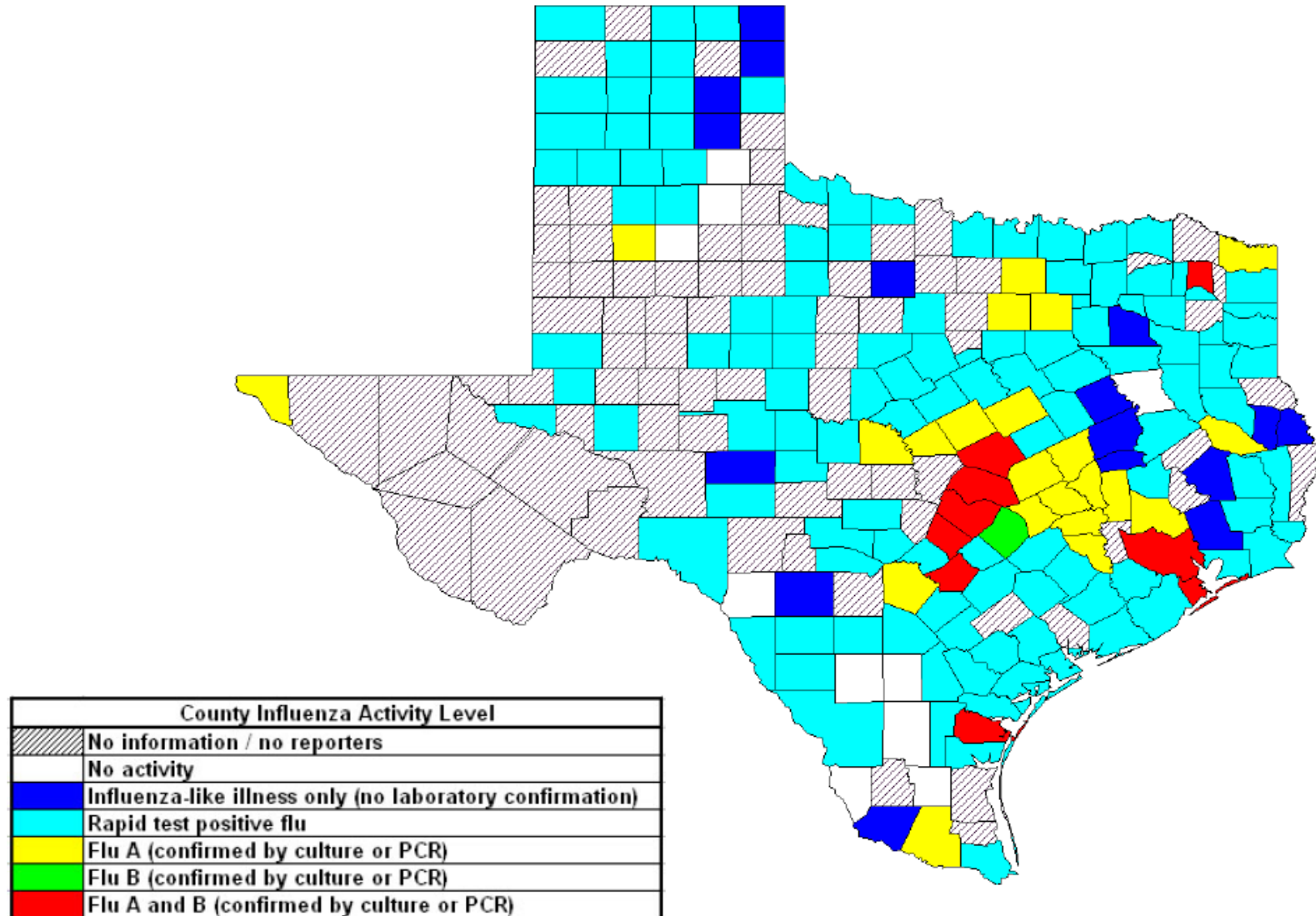
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Figure 8. Statewide Influenza Activity<sup>10,12,13</sup>



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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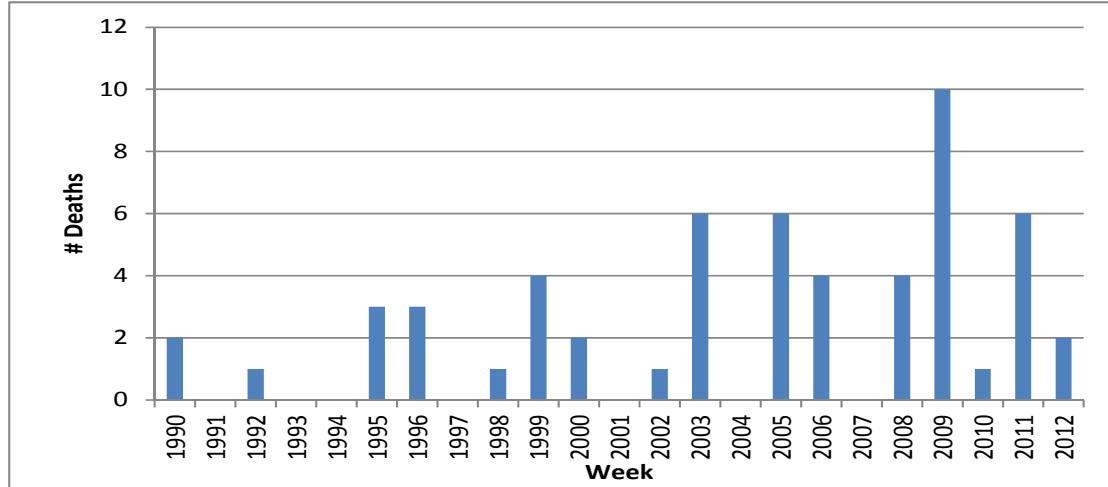




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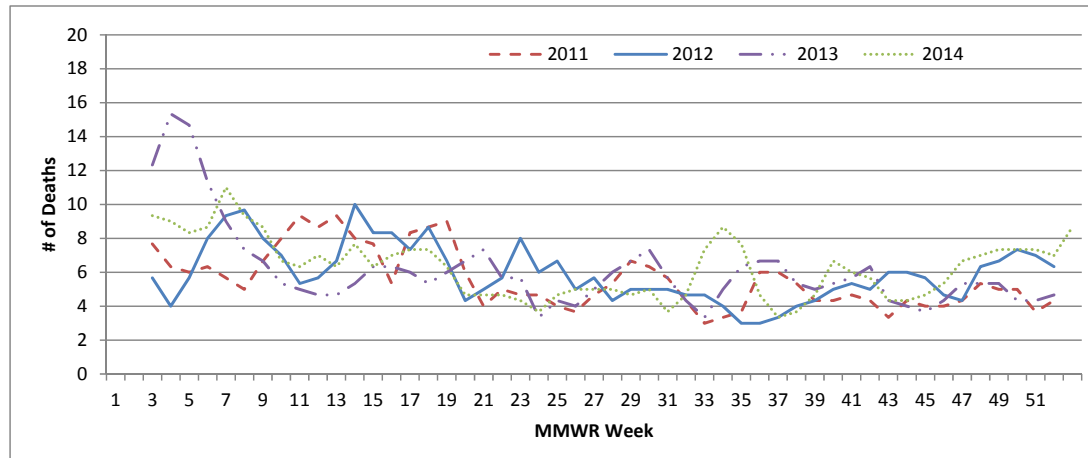


**Figure 9. Annual Influenza Related Mortality,  
Travis County: 1990-2009**



Data source: Texas Department of State Health Services <http://soupfin.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>

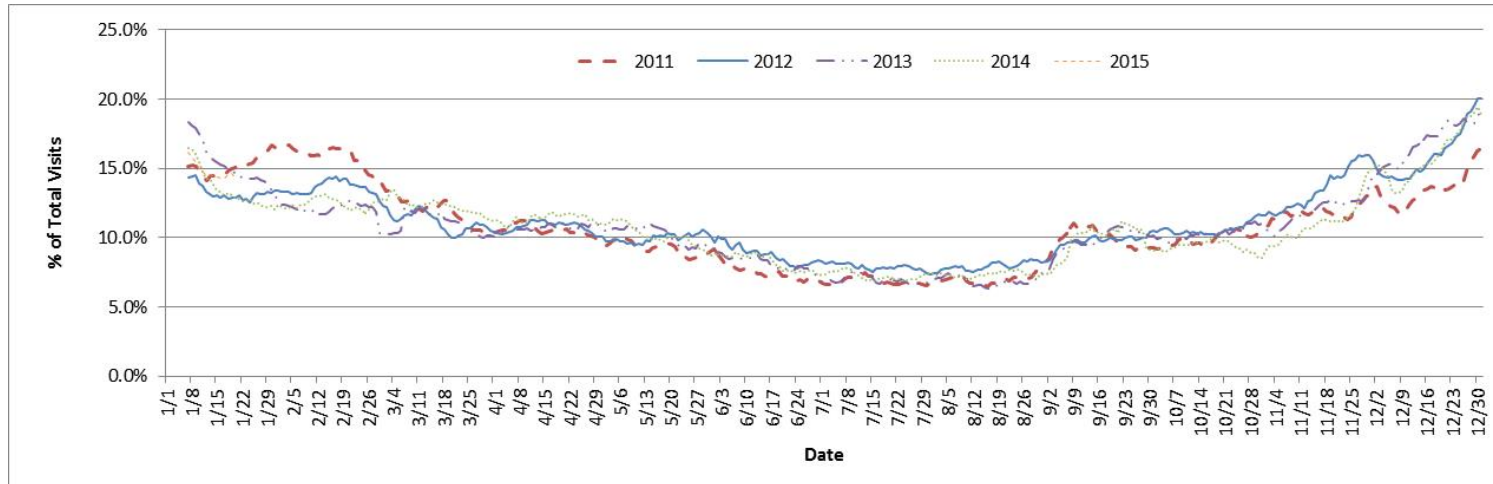
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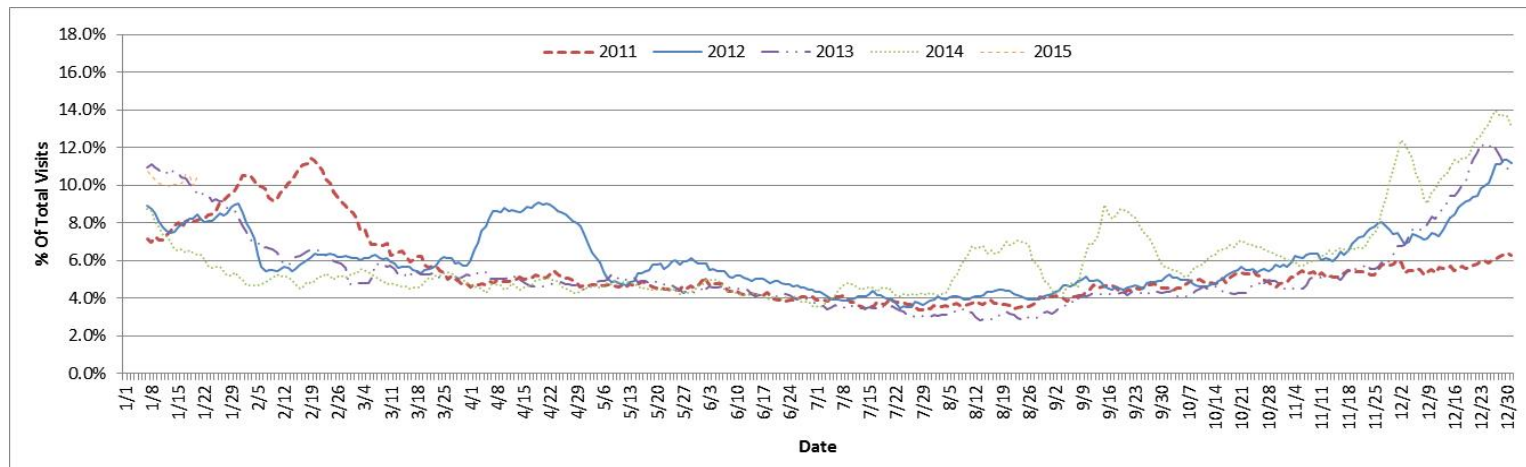


**Figure 11. RODS Syndromic Surveillance for the Respiratory Prodrome Category,  
Travis County: 2010-2013**



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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*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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