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

Travis County Influenza Surveillance

This report contains data for the 2012-2013 Influenza Season through February 2, 2013 (MMWR week 5).

Situation Update:

- Nationwide Influenza activity remains elevated overall, but is decreasing. Travis County is experiencing similar trends; Influenza-Like-Illness (ILI) and other indicators remain elevated, but have been decreasing over the past few weeks.
- The CDC reports that the percentage of respiratory specimens testing positive for Influenza during the past week has continued to decrease. Locally, this percentage has started to trend downwards in the past week.
- The Center for Disease Control and Prevention (CDC) is showing multiple states, including Texas, experiencing a moderate to high level of flu activity.
- The number of deaths attributed to pneumonia and influenza continues to decrease nationally.

Epidemiologic Overview:

- The proportion of individuals seeking medical attention for ILI continues to decrease both nationally and locally but remains higher than national baselines. This trend is also reflected in the number of rapid tests[1] performed and specimens collected. Both have decreased in the past few weeks.
- Travis County saw a high amount of Influenza B early in the season through both rapid testing and Polymerase Chain Reaction (PCR)[2] confirmatory testing. As the season has progressed, seasonal Influenza A (predominantly the H3[3] strain) has increased with reporting numbers equivalent to or higher than that of Influenza B.
- Reports of influenza deaths[4] in the adult population of Travis County started in January and have started to drop off in the past few weeks. One pediatric Influenza death has been reported in Austin/Travis County area this season.
- The Department of State Health Services (DSHS) reported three new pediatric influenza deaths which occurred during MMWR week 5 in Texas. There have been 12 pediatric deaths this season in Texas.

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.

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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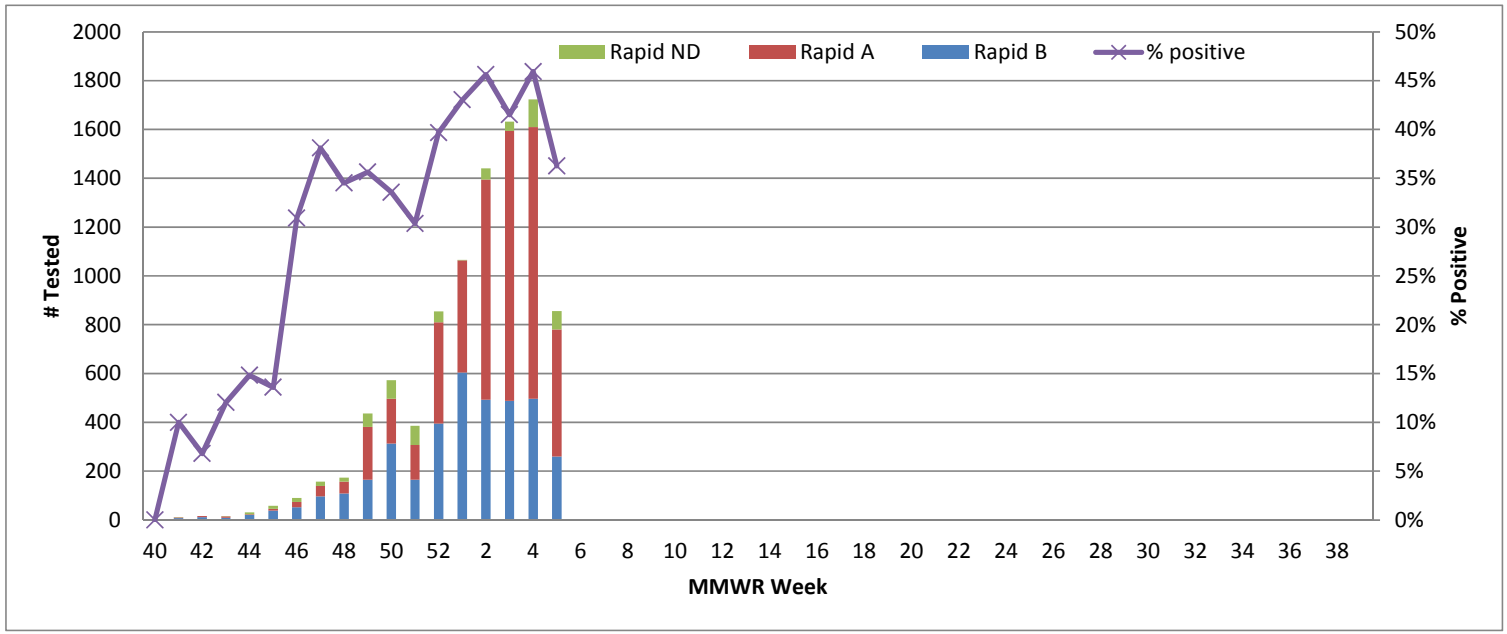
Figure 1. Influenza Surveillance, Travis County Providers[4,5,6]

Week Ending	12/15/2012	12/22/2012	12/29/2012	1/5/2013	1/12/2013	1/19/2013	1/26/2013	2/2/2013
MMWR Week	50	51	52	1	2	3	4	5
# Influenza Rapid Tests Performed	1707	1271	2155	2477	3159	3932	3751	2360
# Total Positive Influenza Tests	573	386	855	1066	1441	1632	1723	856
% Positive Influenza Tests	33.6%	30.4%	39.7%	43.0%	45.6%	41.5%	45.9%	36.3%
# Positive A Influenza	184	142	414	459	902	1106	1114	520
# Positive B Influenza	313	165	396	605	493	488	496	261
# Non-Differentiated Influenza[3]	76	79	45	2	46	38	113	75

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[4,5,6,7]



Data source: Austin/Travis County Influenza surveillance reporters

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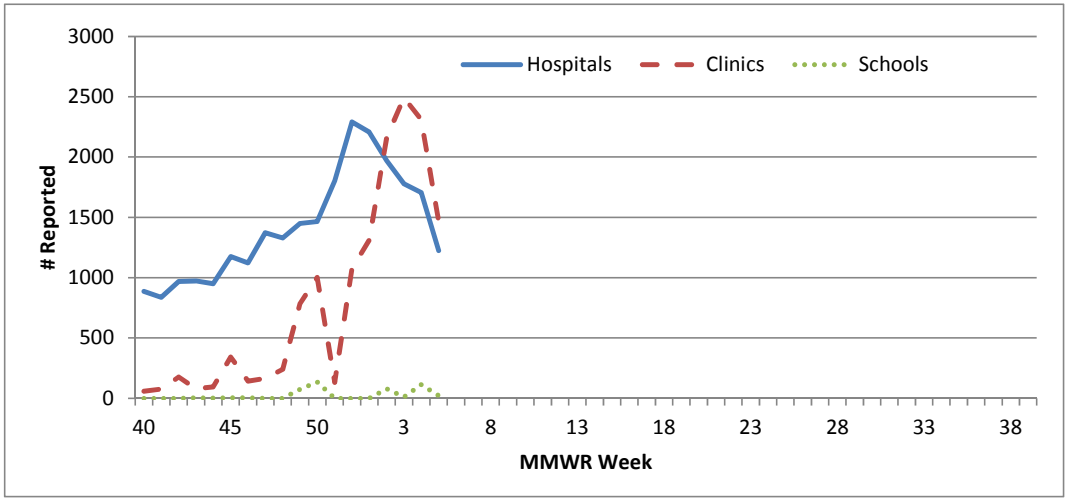
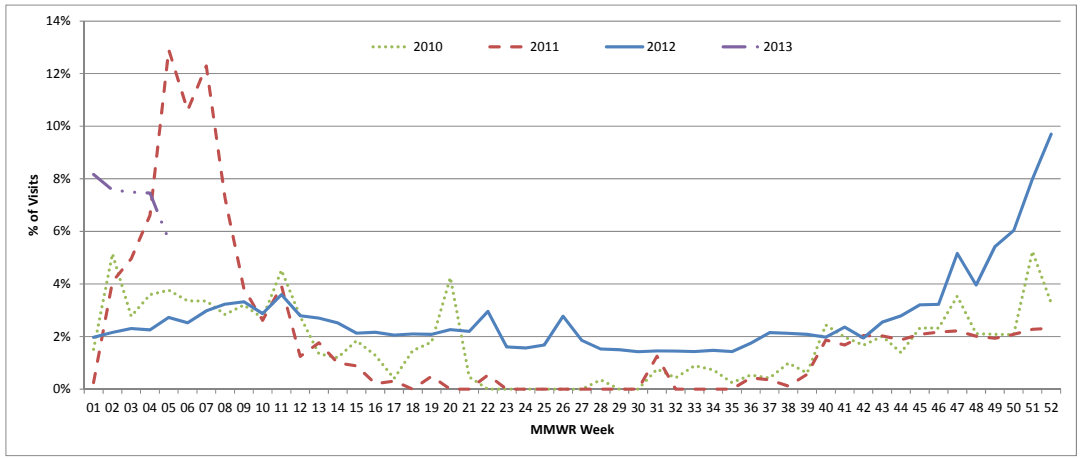
Figure 3. Rapid Influenza Tests by Week and Provider Type, Travis County: 2012-2013 Influenza Season[4,5,6,7]



Data source: Austin/Travis County Influenza surveillance reporters

Figure 4. Percentage of Visits Due to Influenza-like-Illness Reported by Travis County Participants in ILINet: 2009-2013[8]



Data source: CDC ILI.net system

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Figure 5. Travis County Confirmed Influenza Test Results:[1,9,10]

		3/18/2012 - 5/19/2012	05/20/2012 - 7/21/2012	07/22/2012 - 9/22/2012	09/23/2012 - 11/24/2012	11/25/2012 - 1/26/2013	1/27/2013 - 3/23/2013
MMWR Week		11-19	20-28	29-37	38-46	47-3	4-12*
Influenza A (Total Positive PCR Tests)		13	1	0	3	20	18
Subtype	Seasonal H1N1	13	0	0	0	0	2
	Season H3N2	0	1	0	3	20	16
	Not Subtyped	0	0	0	0	0	0
Influenza B (Total Positive PCR Tests)		4	1	0	4	27**	1
PCR Negative Specimens		2	0	1	2	22	7

* 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

Texas Antigenic Characterization Reported by MMWR Week 5:[11]

Since September 1, 2012, CDC has reported antigenic characterization results from three Influenza A (H1N1) viruses, 13 Influenza A (H3N2) viruses, and 25 Influenza B viruses received from the Texas Department of State Health Services (DSHS) Laboratory.

Influenza A (H1N1) [3]
• Three viruses were related to A/California/07/2009. This virus strain was included in the 2012-2013 Influenza vaccine for the Northern Hemisphere.

Influenza A (H3N2) [13]
• Thirteen viruses were related to A/Victoria/361/2011. This virus strain was included in the 2012-2013 Influenza vaccine for the Northern Hemisphere.

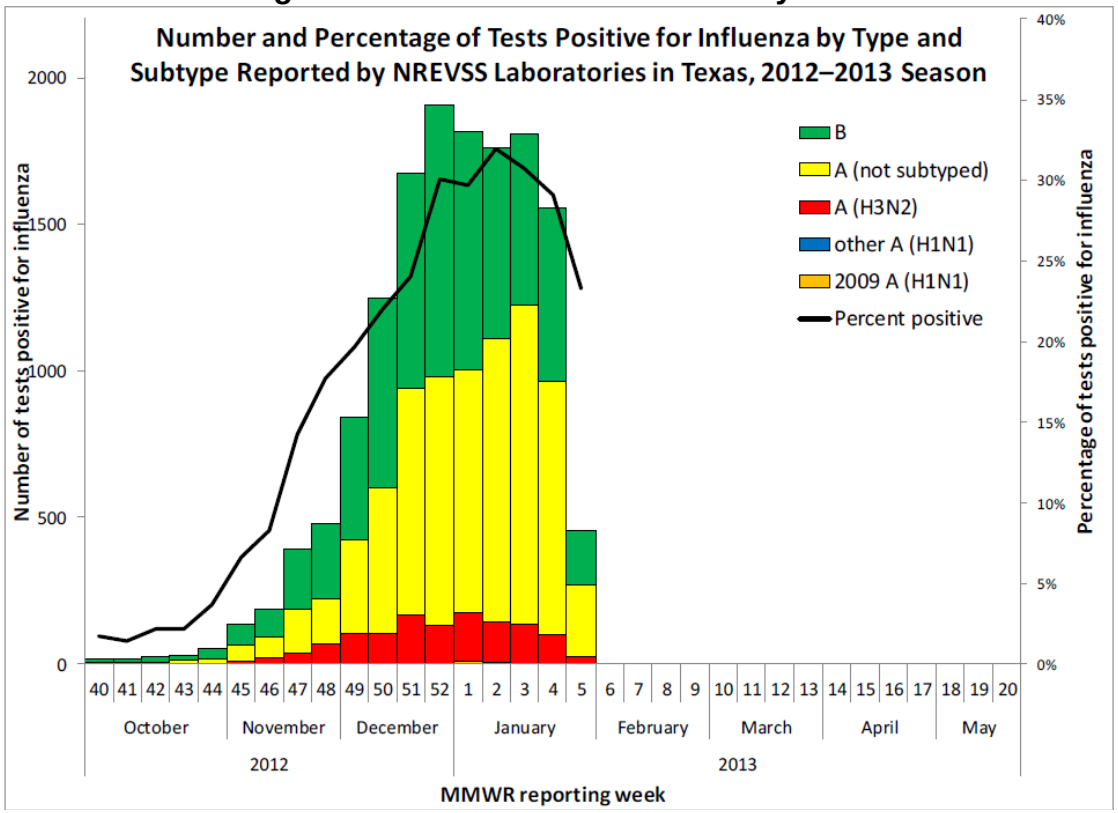
Influenza B [25]
• Twenty-three (92%) viruses were related to B/Wisconsin/01/2010 (Yamagata lineage). This Influenza B lineage was included in the 2012-2013 Influenza vaccine for the Northern Hemisphere.
• Two (8%) viruses were related to B/Brisbane/60/2008 (Victoria lineage). This Influenza B lineage was not included in the 2012-2013 Influenza vaccine for the Northern Hemisphere.

The national antigenic characterization and antiviral resistance testing results may be found in the CDC weekly flu report at http://www.cdc.gov/flu/weekly/. The DSHS Laboratory sends a representative sample of influenza viruses to the CDC throughout the flu season. Since September 1, 2012, CDC has reported antigenic characterization results from one Influenza A (H1N1) virus, nine Influenza A (H3N2) viruses, and 13 Influenza B viruses received from the Texas Department of State Health Services (DSHS) Laboratory.

Texas Antiviral Resistance Reported by MMWR Week 5:[11]

No antiviral resistance results for Texas for the 2012-2013 season are available at this time.
For more information on antiviral medications, please see http://www.cdc.gov/flu/professionals/antivirals/index.htm.

Figure 6. DSHS NREVSS Laboratory Data



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 7. Statewide Influenza Activity[10,12,13]

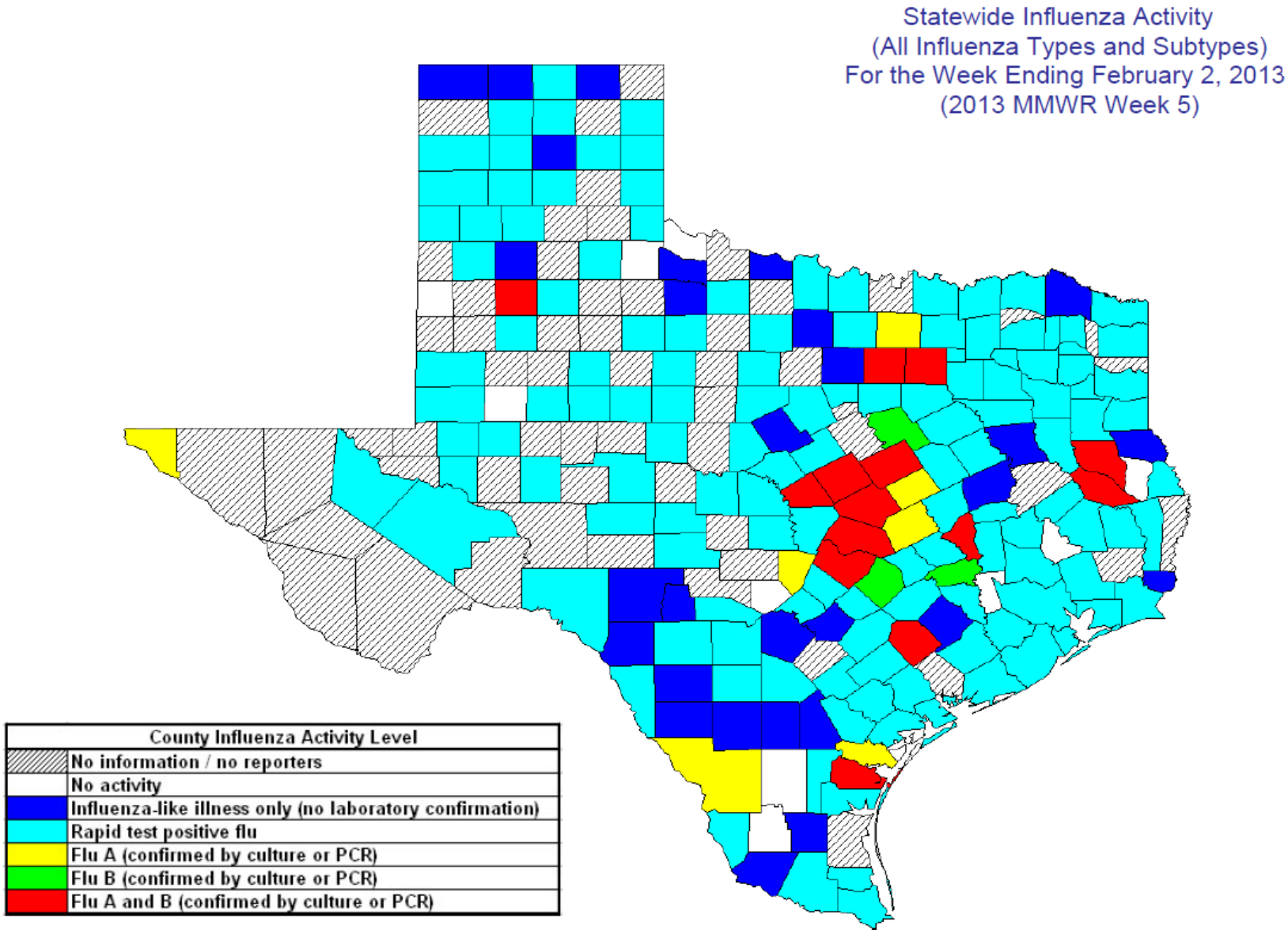

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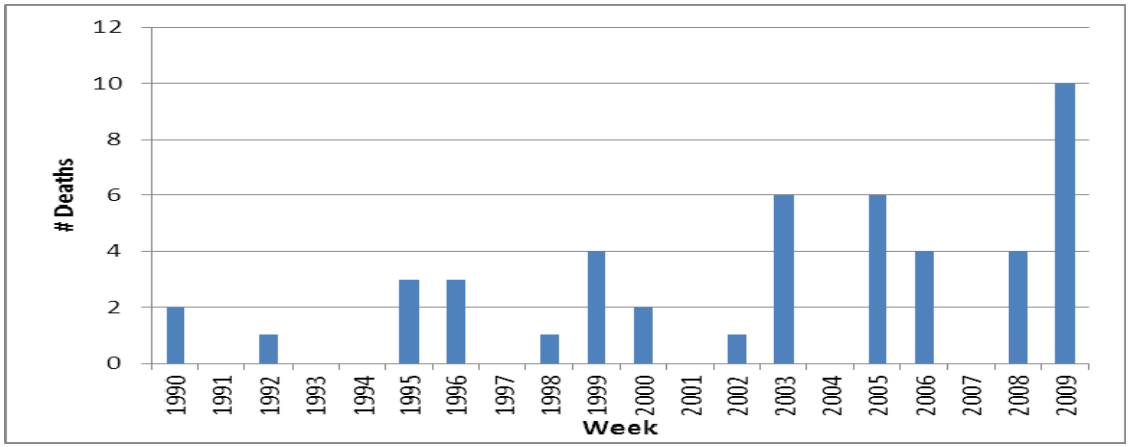
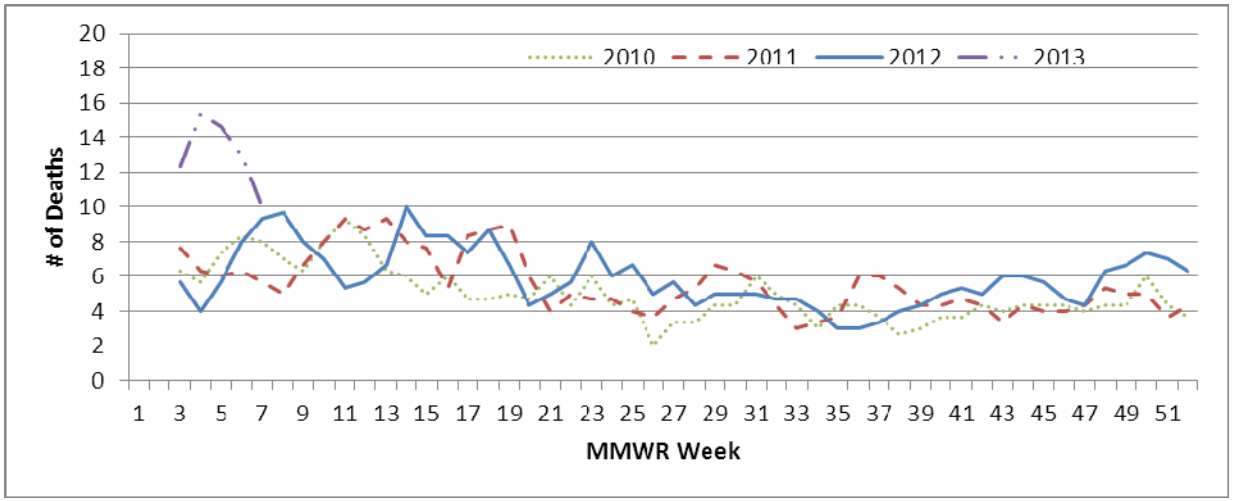
Figure 8. Annual Influenza Related Mortality, Travis County: 1990-2009



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

Figure 9. 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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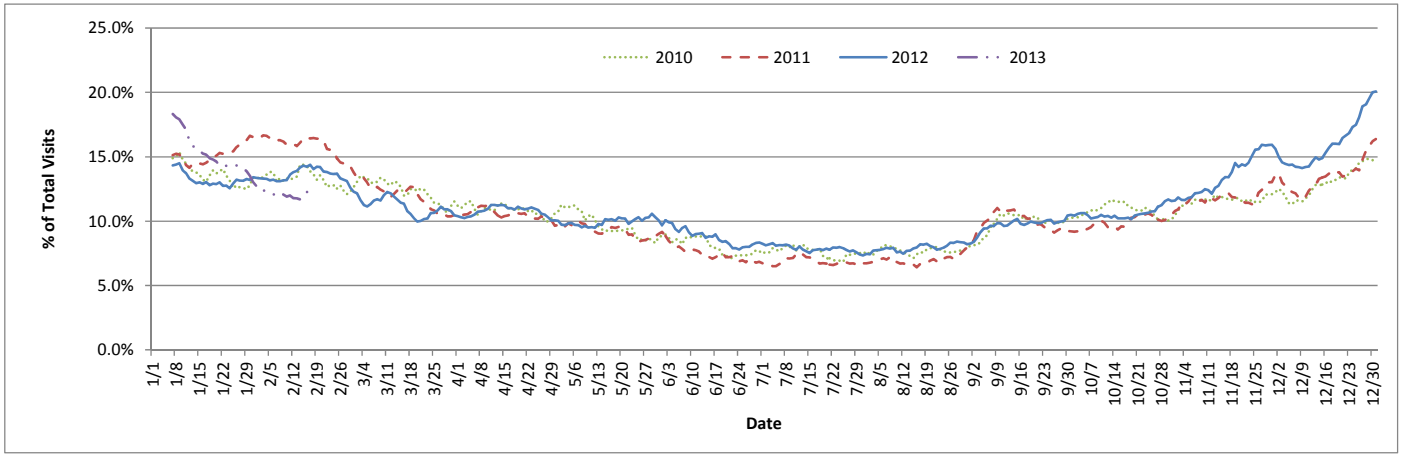
Figure 10. RODS Syndromic Surveillance for the Respiratory Prodrome Category, Travis County: 2010-2013



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

Figure 11. RODS Syndromic Surveillance for Influenza-Like-Illness, Travis County: 2010-2013

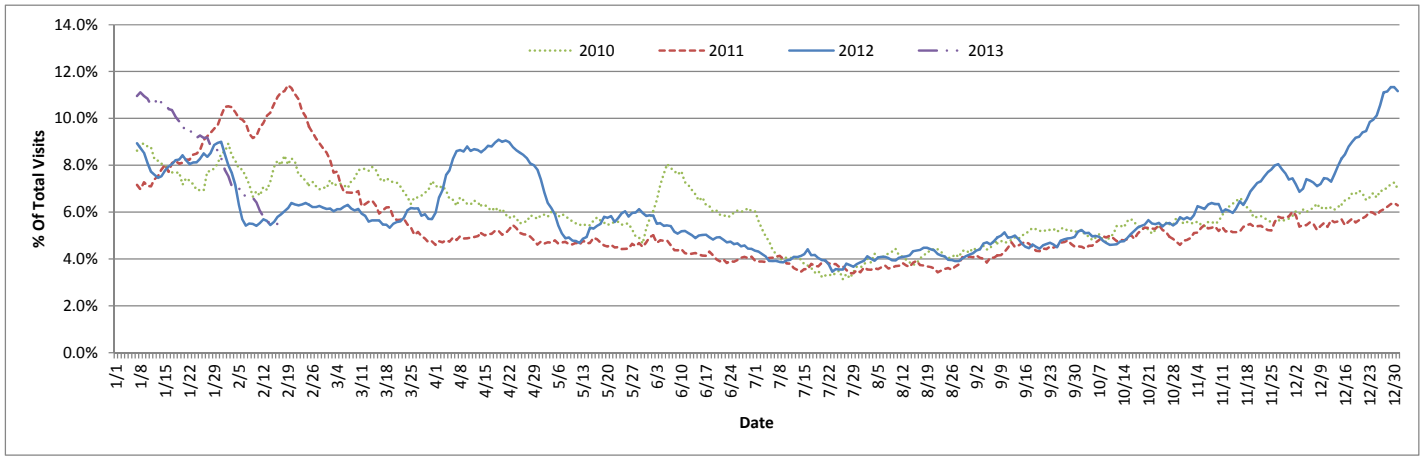


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Figure 12. Other Respiratory Viruses Reported for Texas: MMWR Week 5

Virus	Number of Laboratories Testing	Tests Performed	Positive Tests	Percentage of Tests Positive
Adenovirus (respiratory)	5	738	8	1.08%
HMPV	4	438	7	1.60%
Parainfluenza virus	5	738	19	2.57%
Rhinovirus	3	421	98	23.28%
RSV	18	865	236	27.28%

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

[1] 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.

[2] Influenza A is commonly split into 2 subtypes: H1N1 and H3N2. Both strains can circulate each influenza season.

[3] Influenza deaths, other than pediatric deaths, are not reportable in Texas. Current season mortality data is obtained from the City of Austin Office of Vital Records and only reflect deaths that occur within the city limits and list influenza as a cause of death on the death certificate.

[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.

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