Houston Department of Health and Human Services

Office of Surveillance & Public Health Preparedness
Bureau of Epidemiology

Influenza Surveillance Weekly Report

CDC MMWR Week 12: March 22ð 28, 2015

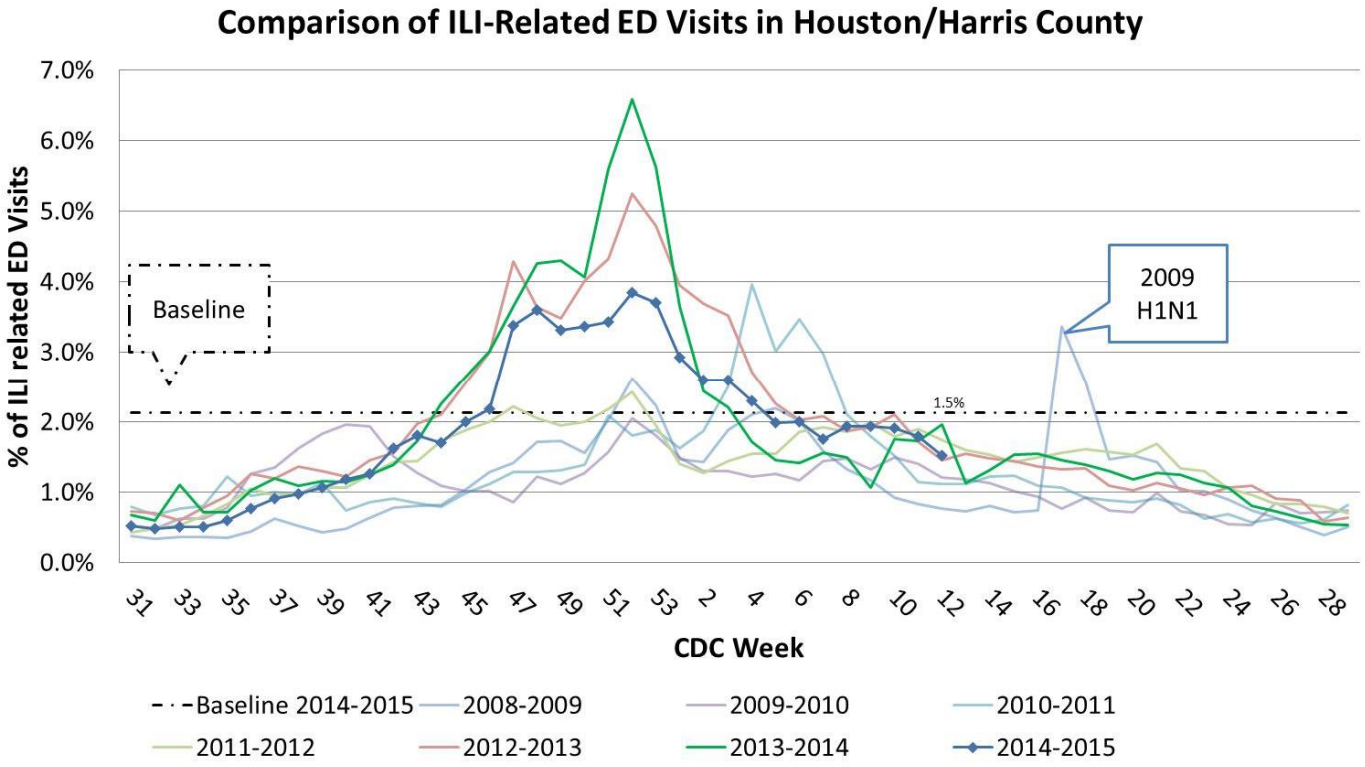
Influenza Activity by County, State, and National Levels

Houston/ Harris County: Week 12	Texas: Week 12	CDC: Week 12
Elevated	Pending	Elevated

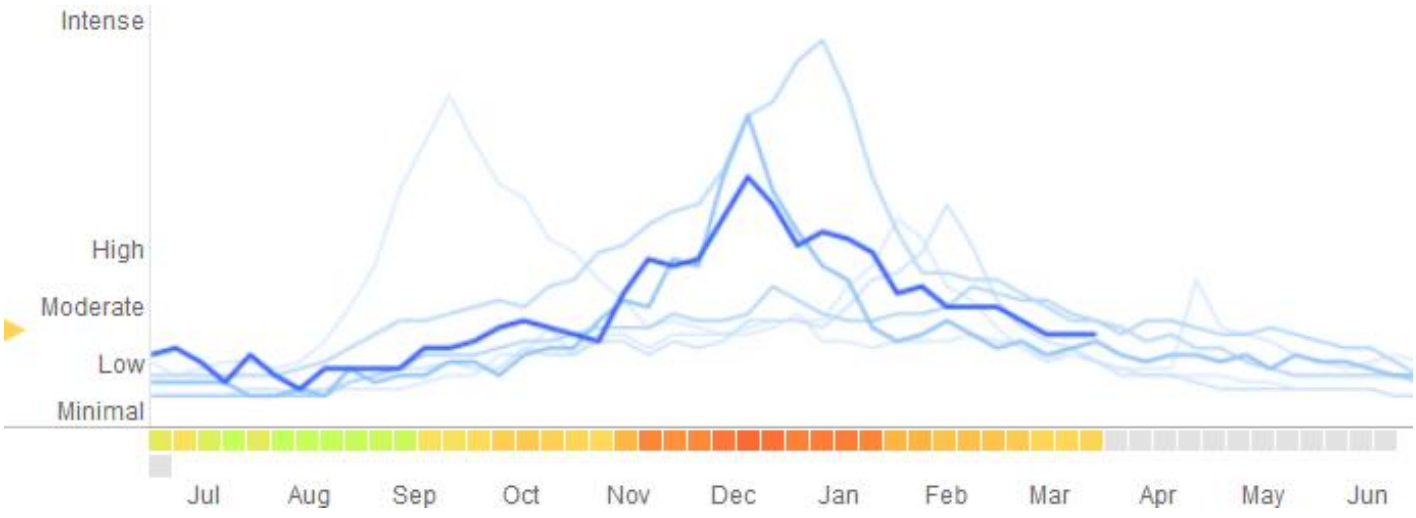
Highlights

- The percentage of reported influenza-like illness (ILI) in Houston/Harris county ***decreased*** from 1.8% in week 11 to 1.5% in week 12.
- The percentage of flu test positives in Houston ***increased*** from 7.7% in week 11 to 37.5% in week 12.
- During the 2014-2015 influenza season, one (1) Houston influenza-associated pediatric deaths have been reported.
- In week 12, eight (8) surveillance specimens were tested by the City of Houston Bureau of Laboratory Services. The following types and number of viruses were detected in these specimens:
  Influenza A H3 (1), Influenza B / Victoria (1), Influenza B / Yamagata (1).
- Cumulatively this season, the City of Houston Bureau of Laboratory Services has tested 358 surveillance specimens. Of the 137 positive lab results, the **Influenza A H3** accounts for 109 (80.0%) of the positives.
- At the national level during week 12, 10.8% of specimens tested and reported to the CDC were positive for influenza. The proportion of outpatient visits for ILI 2.0% was ***at*** the national baseline 2.0% and the proportion of deaths attributed to pneumonia and influenza 6.9% was ***below*** the epidemic threshold of 7.1% for week 12.

Syndromic Surveillance: 2014-2015 Influenza Season

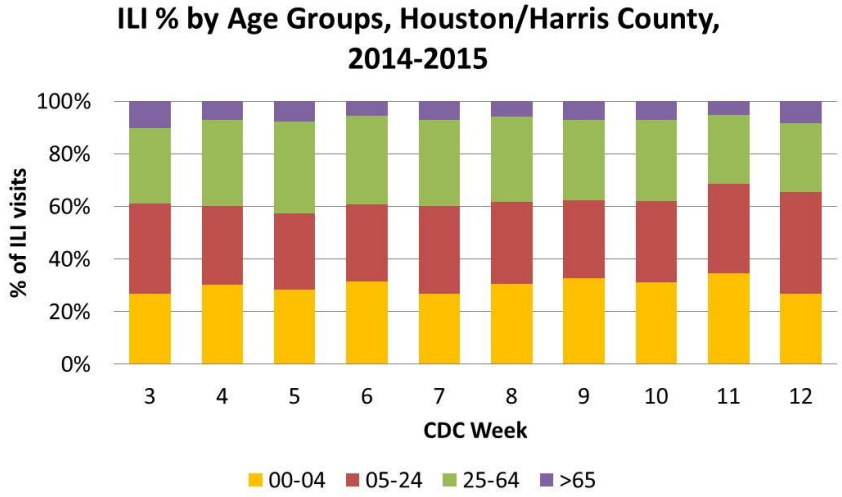


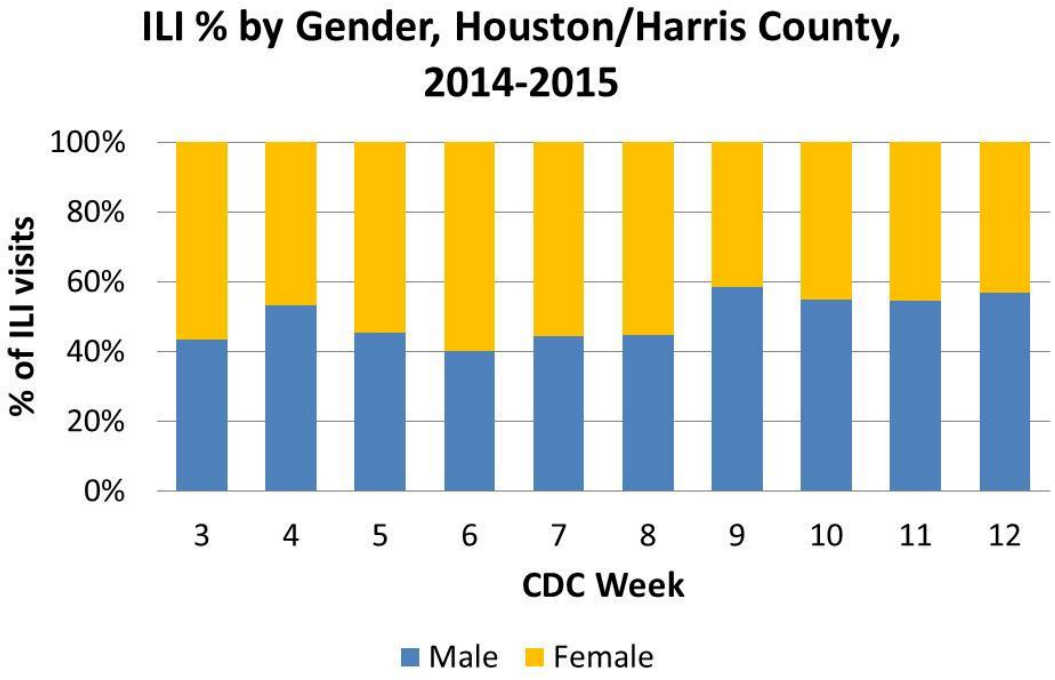
Google flu trends



NOTE: Houston/Harris County ILI activity is assessed using information provided by surveillance participants in the Real-time Outbreak Disease Surveillance System (RODS). For week 12, 36 surveillance participants reported ILI information to Houston Department of Health and Human Services. Influenza-like illness (ILI) is defined as the mention of fever AND cough, OR fever AND sore throat, OR flu in the patient's ED chief complaint. These data do not represent laboratory confirmed cases of influenza nor do they represent all ED visits in Houston/Harris County.

Syndromic Surveillance: 2014-2015 Influenza Season Age and Gender Distribution

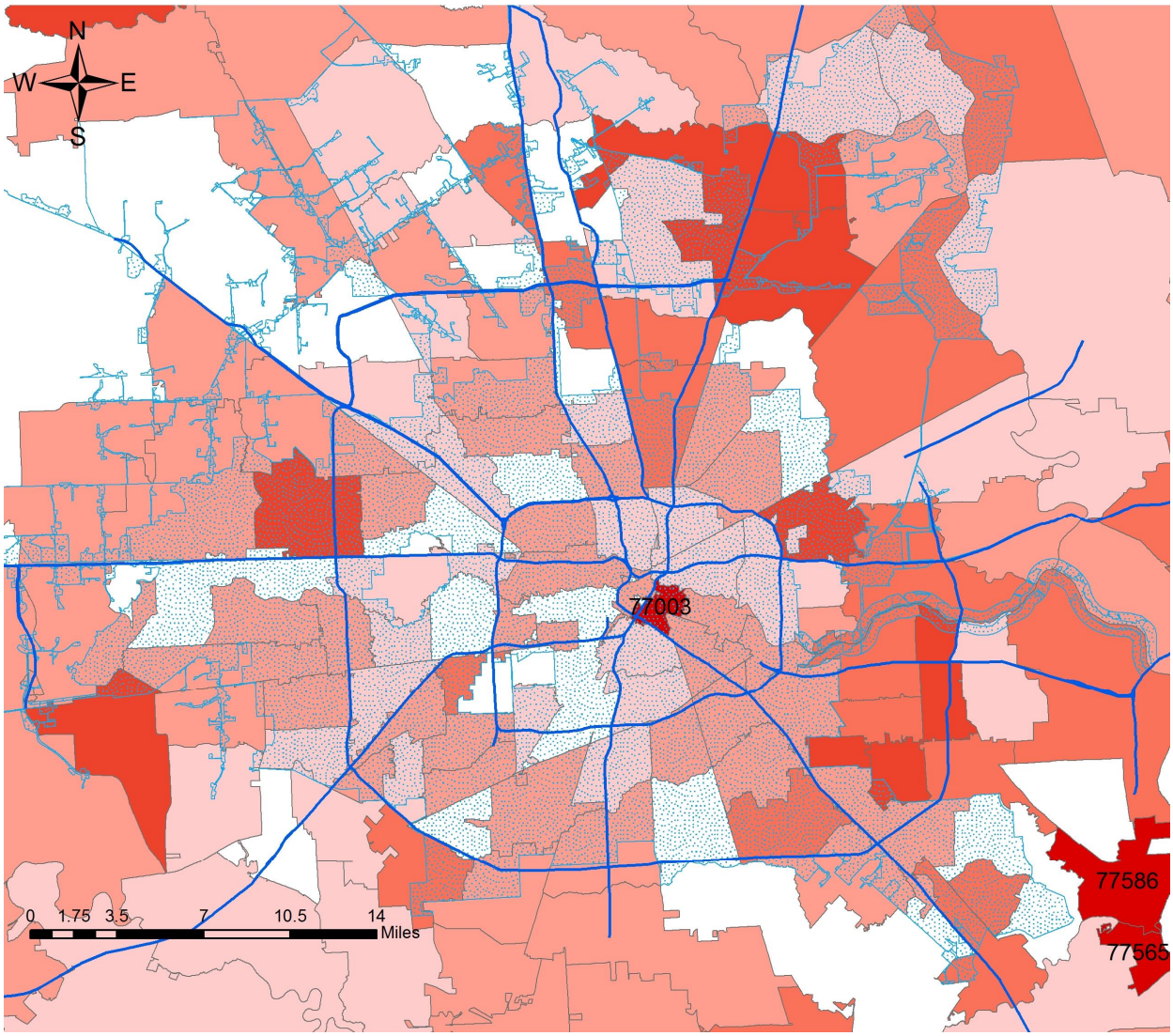




In week 12, 1.5% of emergency department (ED) visits were due to influenza-like illness (ILI) complaints. Of the 609 patients presenting with ILI, the age group that recorded the most ED visits was the 05 to 24 year olds (39.0%). Males accounted for 57% of the ILI complaints.

NOTE: Houston/Harris County ILI activity is assessed using information provided by surveillance participants in the Real-time Outbreak Disease Surveillance System (RODS). For week 12, 36 surveillance participants reported ILI information to Houston Department of Health and Human Services. Influenza-like illness (ILI) is defined as the mention of fever AND cough, OR fever AND sore throat, OR flu in the patient's ED chief complaint. These data do not represent laboratory confirmed cases of influenza nor do they represent all ED visits in Houston/Harris County.

Syndromic Surveillance: Geographic Distribution Map



Legend

City of Houston City Limit

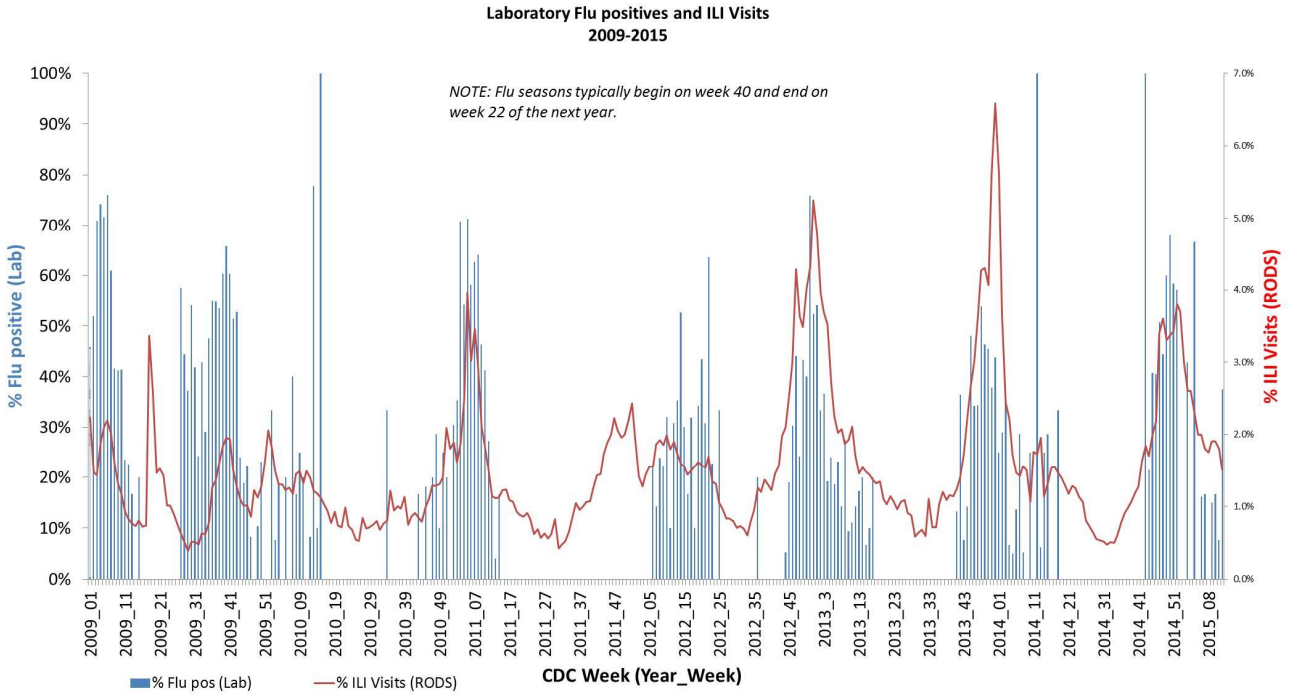
2013-2014 %ILI of ED Visits by Zip Code

- 0% - 1.1%
- 1.11% - 2.5%
- 2.51% - 4%
- 4.01% - 6%
- 6.01% - 12.5%

During week 12, the zip codes that have the greatest percentage of ED visits related to ILI (6.0% or greater) are: 77003, 77586, 77565

NOTE: Houston/Harris County ILI distribution map was created using data provided by 36 hospitals that voluntarily provide data based on chief complaints in the Real-time Outbreak Disease Surveillance System (RODS). This map reflects the percentage of ILI cases from each zip code from the total amount of cases seen in each zip code during the current week of reporting. Influenza-like illness (ILI) is defined as the mention of fever AND cough, OR fever AND sore throat, OR flu in the patient's ED chief complaint. These data do not represent laboratory confirmed cases of influenza nor do they represent all ED visits in Houston/Harris County.

Laboratory Surveillance: Influenza Rapid Test Results, Houston

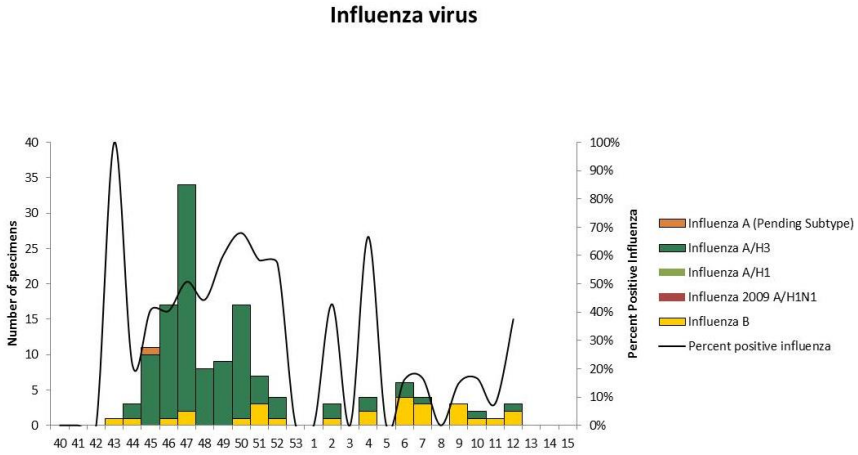


CDC Week Number	10 (Mar 08-14)	11 (Mar 15-21)	12 (Mar 22–28)
# of Influenza Tests Performed	12	13	08
% Influenza Positive	16.7%	7.7%	37.5%
# Influenza A Positive	1	0	1
% Influenza A Positive	50%	0%	33.3%
# Influenza B Positive	1	1	2
% Influenza B Positive	50%	100.0%	66.7%
# Non-differentiated Positive	0	0	0
% Non-differentiated Positive	0%	0%	0%

Laboratory Based Respiratory Viruses Surveillance: 2014-2015 Season

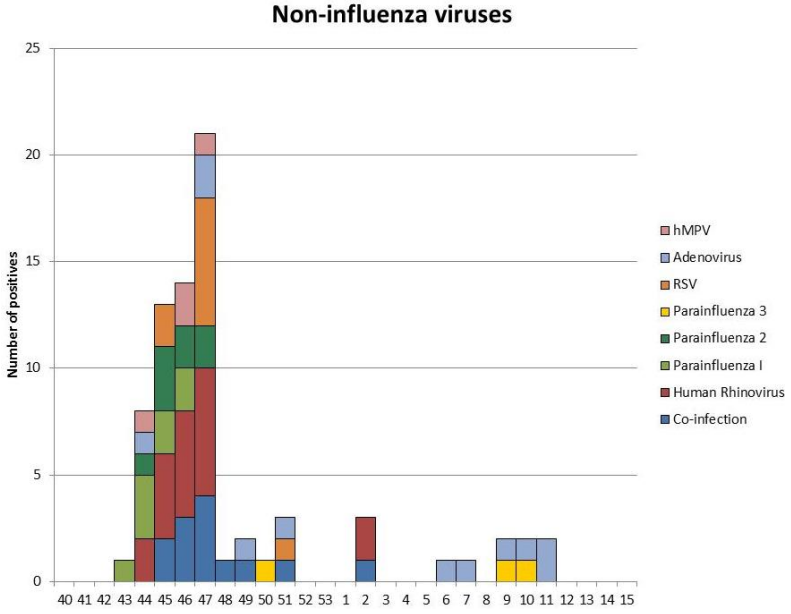
Influenza summary

- During the 2014 to 2015 flu season HDHHS OSPHP collected 358 specimens from sentinel providers and detected, among the influenza positives, Influenza A/H3 (79.6%) and Influenza B (19.7%). Since the beginning of 2015, there is an increase in the percent of influenza B positives.
- In 2015 subtype information for influenza B became available. Influenza B / Victoria (11) and influenza B / Yamagata (6) were detected.
- For MMWR week 12, among the specimens tested by PCR 37.5% were positive for influenza. This season MMWR week 50 (68%) and week 04 (67%) had the highest percent of positive influenza lab results. Among weeks with 5% or greater positive influenza lab results, the average percent of positive influenza lab results was 42%.



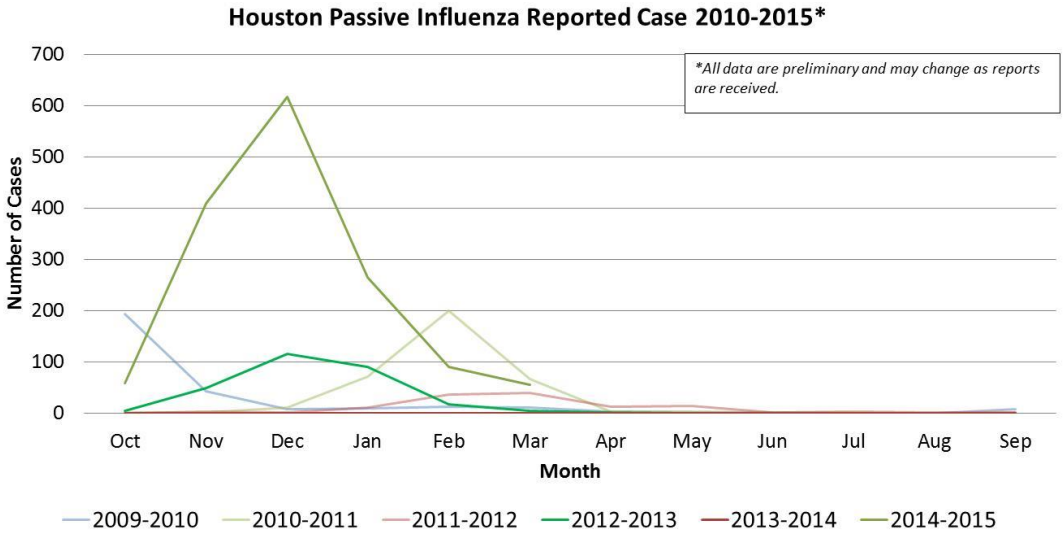
Non-influenza respiratory virus surveillance

- During the 2014-2015 season, among the specimens tested by culture or respiratory virus panel the following non-influenza respiratory viruses were detected: human rhinovirus (6%), respiratory syncy□al virus (3%), parainfluenza 2 (2%), parainfluenza 3 (1%), adenovirus (3%), and human metapneumovirus (1%).



Passive Surveillance

In week 12, there were 8 additional laboratory confirmed influenza cases from the prior week. In the month of March 2015 the largest proportion of patients reported with influenza where those in the age groups of 05 to 24 (45%) and 25 to 64 (31%). Males accounted for 71% of lab confirmed cases in March.



School Surveillance

Table 1: ILI and Influenza Cases by Type and School Type[1] per Month

	Total Cases	Lab Confirmed		Flu A	Flu B	A+B	Unclassified	Elem Schools	Middle Schools	High Schools	Multi-Level Schools
		#	%								
Aug	1	0	0.0%	0	0	0	0	1	0	0	0
Sep	12	0	0.0%	0	0	0	0	10	1	1	0
Oct	45	4	8.9%	0	0	0	4	29	4	10	2
Nov	113	2	1.8%	1	0	0	2	88	16	9	0
Dec	85	8	9.4%	5	0	0	3	52	23	7	3
Jan	54	21	38.9%	12	0	0	9	37	4	11	2
Feb	90	18	20.0%	3	4	0	11	72	4	9	5
Mar											
Apr											
Total	400	53	13.3%	21	4	0	29	289	52	47	12

ILI cases in HISD students increased in February 2015 compared to January 2015. There were 18 laboratory confirmed flu cases seen in February and 3 were confirmed as influenza Flu A, 4 as Flu B, and 11 were unclassified.

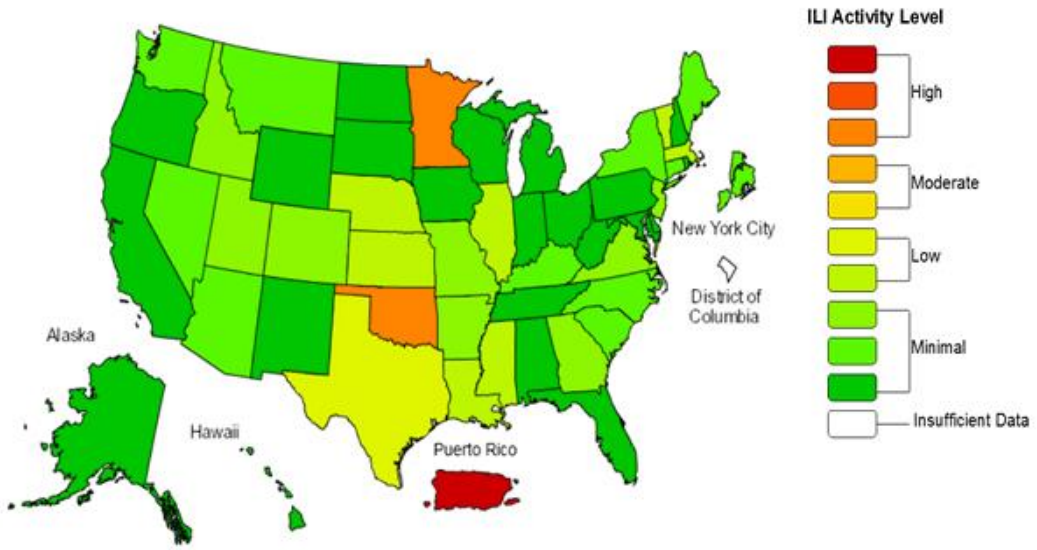
NOTE: Data on student ILI and influenza cases is collected from 306 schools within Houston Independent School District. [1]School will be counted more than once if more than one case from the same school is reported during the

Texas and National Influenza and ILI Activity

Texas map will be posted at: h□ps://www.dshs.state.tx.us/idcu/disease/influenza/surveillance/2015/

NOTE: Influenza activity level corresponds to current MMWR week only and does not reflect previous weeks' activity. 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. Positive laboratory results are reported according to specimen collection date or date received in the lab if the former is unknown.
http://www.dshs.state.tx.us/idcu/disease/influenza/surveillance/2015/

2014-15 Influenza Season Week 12 ending Mar 28, 2015



NOTE: Data collected in ILINet are used to produce a measure of ILI activity by state. Activity levels are based on the percent of outpatient visits in a state due to ILI and are compared to the average percent of ILI visits that occur during spring and fall weeks with little or no influenza virus circulation. This map uses the proportion of outpatient visits to health care providers for influenza-like illness to measure the ILI activity level within a state. It does not, however, measure the extent of geographic spread of flu within a state. Therefore, outbreaks occurring in a single city could cause the state to display high activity levels. Data collected in ILINet may disproportionately represent certain populations within a state, and therefore, may not accurately depict the full picture of influenza activity for the whole state. http://www.cdc.gov/flu/weekly/

The Houston Influenza Surveillance Weekly Report is available on the Houston Department of Health and Human Services web site at:

http://www.houstontx.gov/health/weekly-flu-report

NOTE:

Influenza-like Illness (ILI) is defined as fever (temperature ≥ 100°F) plus a cough OR a sore throat, in the absence of a known cause other than influenza.

Houston ILI baselines were determined using the same method as the Centers for Disease Control and Prevention Regional ILI baselines. The baseline is developed by calculating the mean percentage ILI of ED visits during non-influenza weeks for the previous three seasons and adding two standard deviations. A non-influenza week is defined as periods of two or more consecutive weeks in which each week accounted for less than 2% of the season's total number of specimens that tested positive for influenza.

Additional information regarding Houston, Texas and national ILI activity can be accessed at:

http://www.houstontx.gov/health/

http://http://www.dshs.state.tx.us/idcu/disease/influenza/surveillance/2015/

http://www.cdc.gov/flu/weekly/

http://www.who.int/csr/don/en/

Houston Department of Health and Human Services

Office of Surveillance and Public Health Preparedness

Bureau of Epidemiology

8000 N. Stadium Dr, 4th Floor

Houston, TX 77054

Main Epidemiology Phone Number: (832) 393-5080

Disease Reporting Fax Number: (832) 393-5232

24-Hour Contact Number: (832) 393-5080