



## Houston Department of Health and Human Services

### Office of Surveillance & Public Health Preparedness *Bureau of Epidemiology*

## Influenza Surveillance Weekly Report CDC MMWR Week 14: April 05 to 11, 2015

### Influenza Activity by County, State, and National Levels

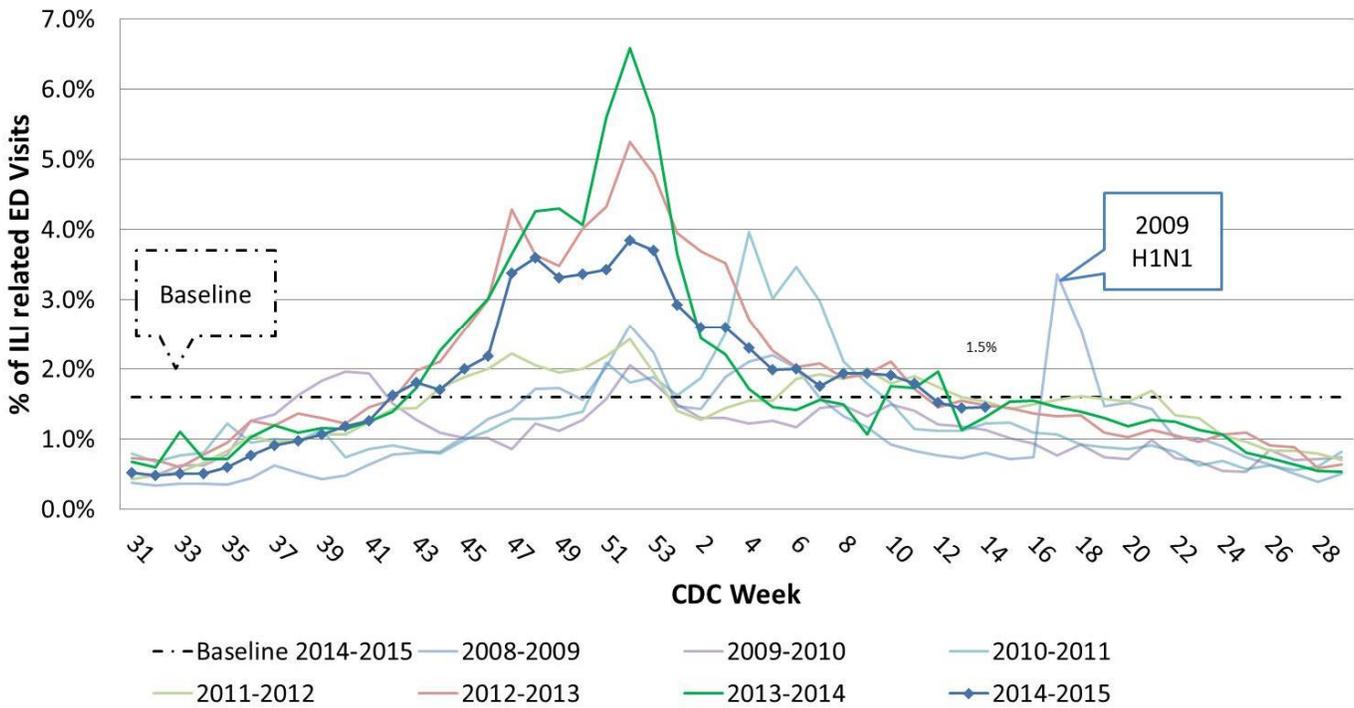
Houston/ Harris County: Week 14	Texas: Week 14	CDC: Week 14
Decreasing	Decreasing	Decreasing

### Highlights

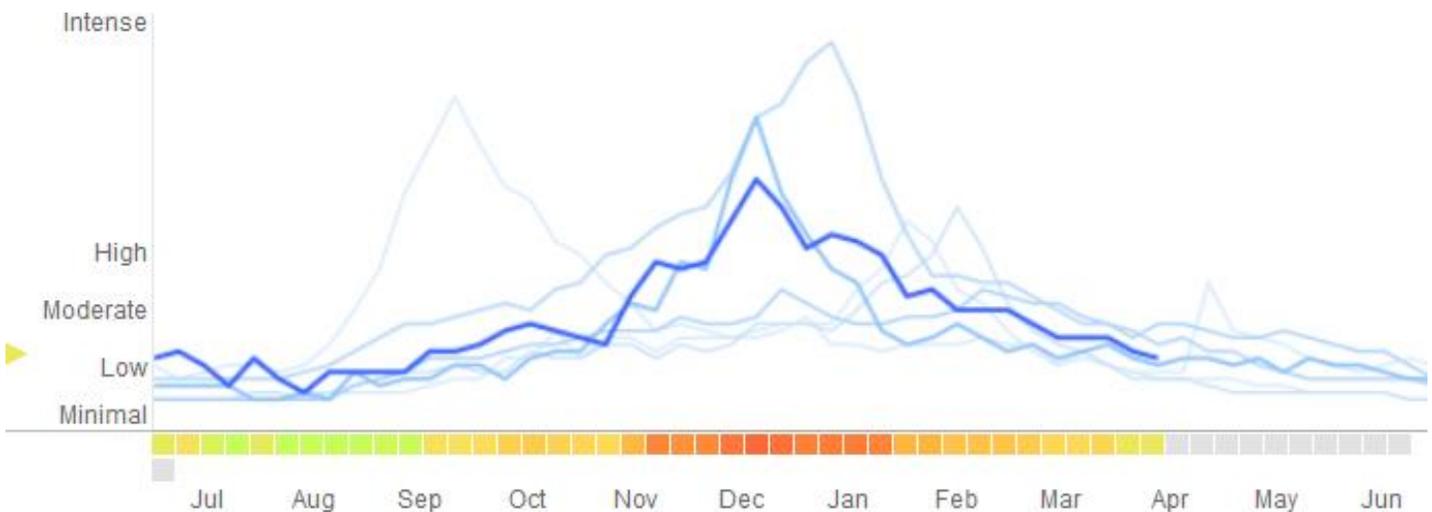
- The percentage of reported influenza-like illness (ILI) in Houston/Harris county **increased** from 1.4% in week 13 to 1.5% in week 14.
- The percentage of flu test positives in Houston **decreased** from 33% in week 13 to 19% in week 14.
- During the 2014-2015 influenza season, one (1) Houston influenza-associated pediatric death is been reported.
- In week 14, 16 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 (0), Influenza B Victoria (3).**
- Cumulatively this season, the City of Houston Bureau of Laboratory Services has tested 383 surveillance specimens. Of the 143 positive lab results, the A/H3 accounts for 110 (28.7%) of the positives.
- At the national level during week 14, 9.6 % of specimens tested and reported to the CDC were positive for influenza. The proportion of outpatient visits for ILI 1.8% was **below** the national baseline 2.0% and the proportion of deaths attributed to pneumonia and influenza 6.1% was below the threshold of 7.0%.

Syndromic Surveillance: 2014-2015 Influenza Season

Comparison of ILI-Related ED Visits in Houston/Harris County



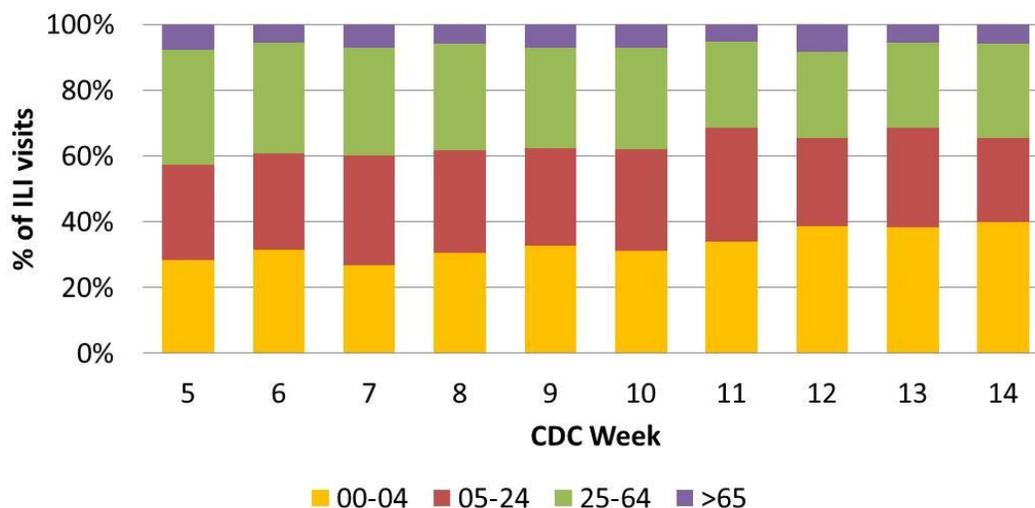
Google Flu Trends



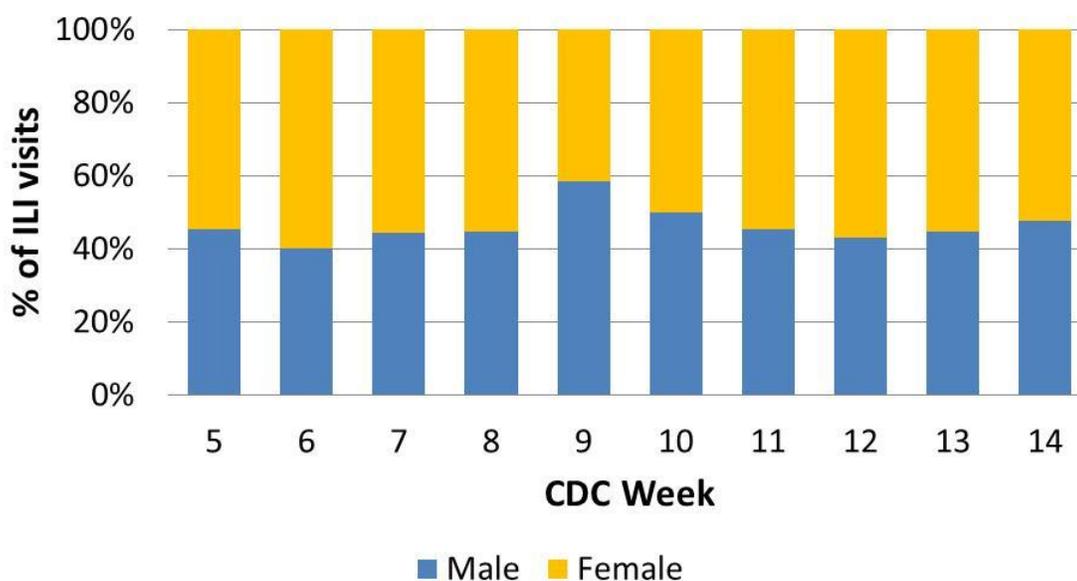
NOTE: Houston/Harris County ILI activity is assessed using information provided by surveillance participants in the Real-time Outbreak Disease Surveillance System (RODS). For week 14, 36 surveillance participants reported ILI information to Houston Department of Health and Human Services. Influenza-like 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

**ILI % by Age Groups, Houston/Harris County, 2014-2015**



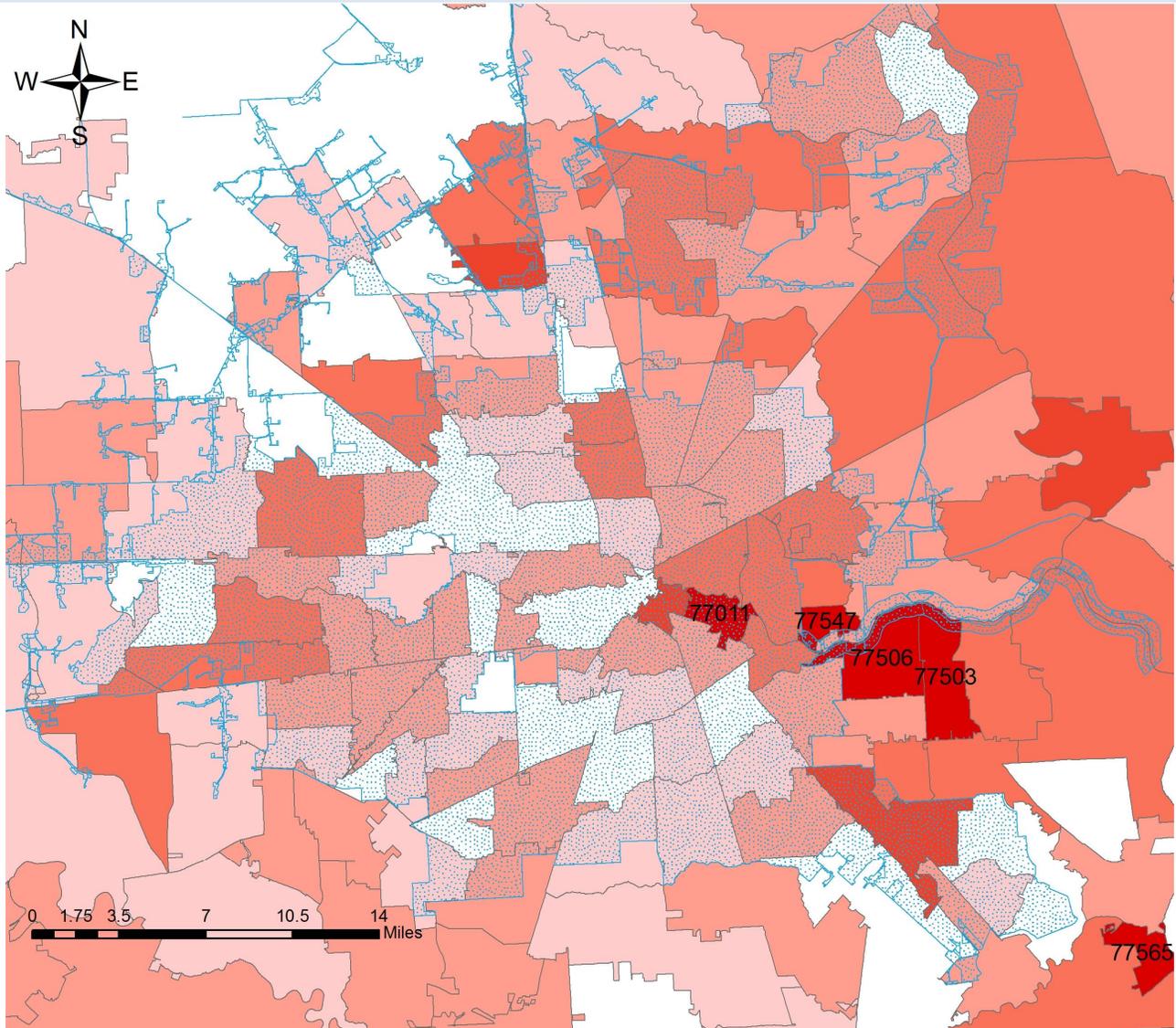
**ILI % by Gender, Houston/Harris County, 2014-2015**



In week 14, 1.4% of emergency department (ED) visits were due to influenza-like illness (ILI) complaints. Of the 582 patients presenting with ILI, the age group that recorded the most ED visits was the 0 to 4 year olds 40%. Females accounted for 52% of ILI visits.

*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 14, 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**

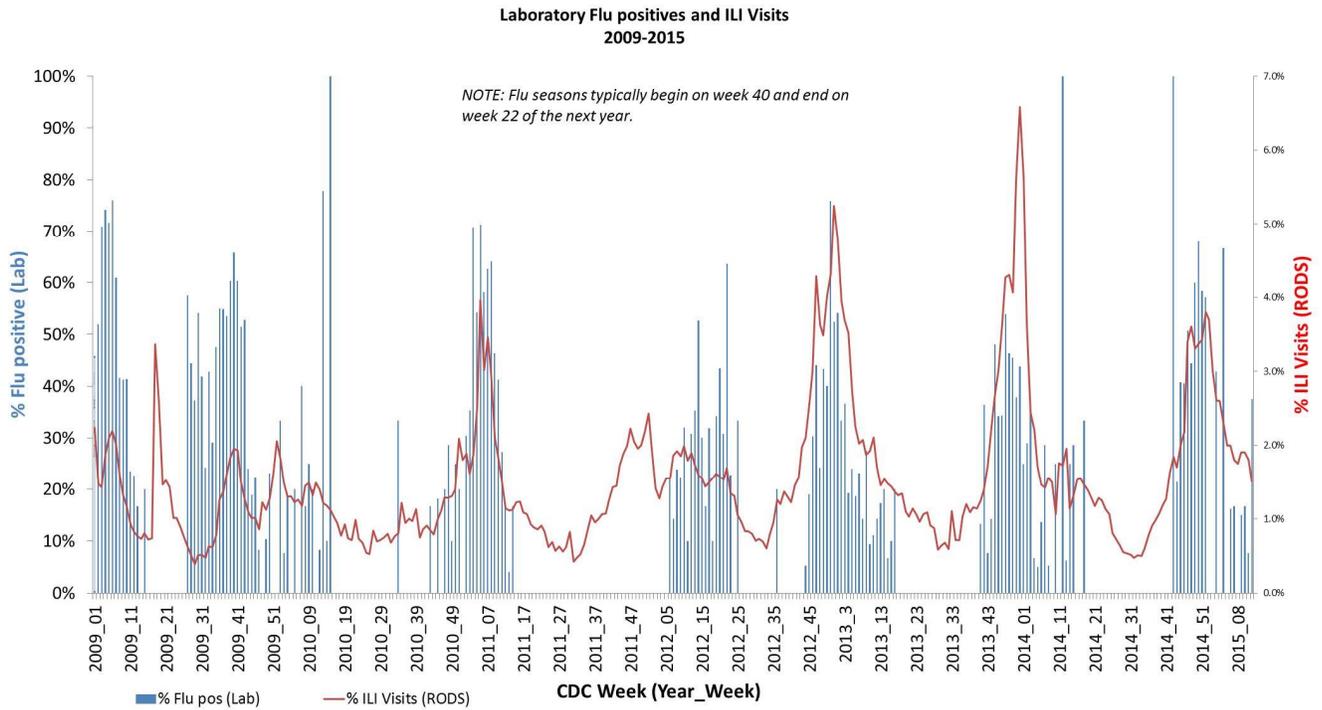
 City of Houston City Limit

**2014-2015 %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 14, the ZIP codes that have the greatest percentage of ED visits related to ILI (6.0% or greater) are: 77011, 77547, 77506, 77503, 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.*



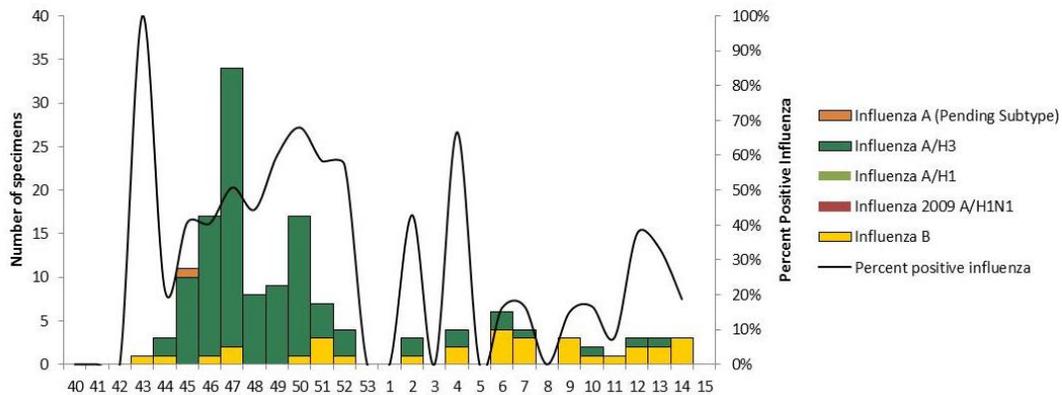
CDC Week Number	12 (Mar 22–28)	13 (Mar 29— Apr 04)	14 (Apr 5–11)
# of Influenza Tests Performed	08	09	16
% Influenza Positive	37.5%	33.3%	18.8%
# Influenza A Positive	1	1	0
% Influenza A Positive	33.3%	33.3%	0%
# Influenza B Positive	2	2	3
% Influenza B Positive	66.7%	66.7%	100%
# Non-differentiated 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 tested 383 specimens from sentinel providers and detected, among the influenza positives, Influenza A/H3 (28.7%) and Influenza B (8.4%). 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 (14) and influenza B / Yamagata (8) were detected.
- For MMWR week 14, among the specimens tested by PCR 19% 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 41%.

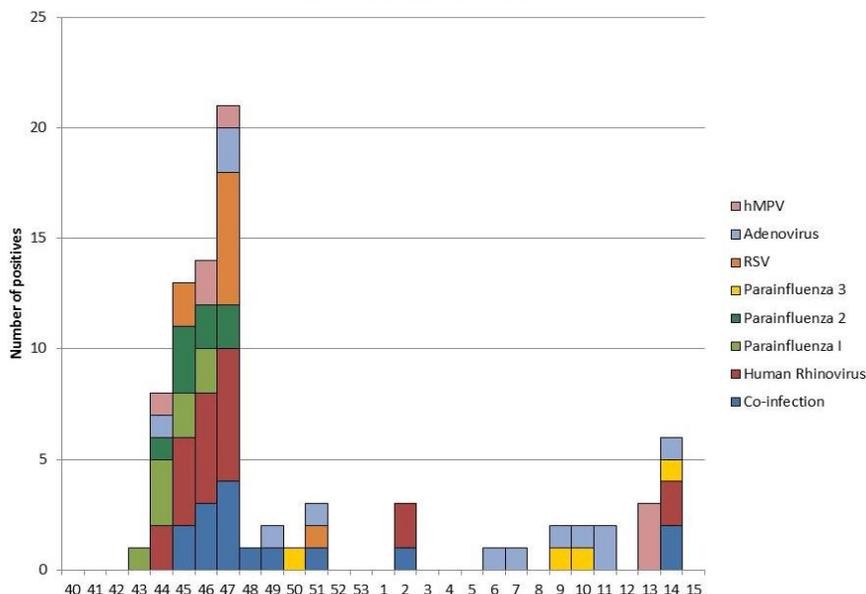
### Influenza virus



### Non-influenza respiratory virus surveillance

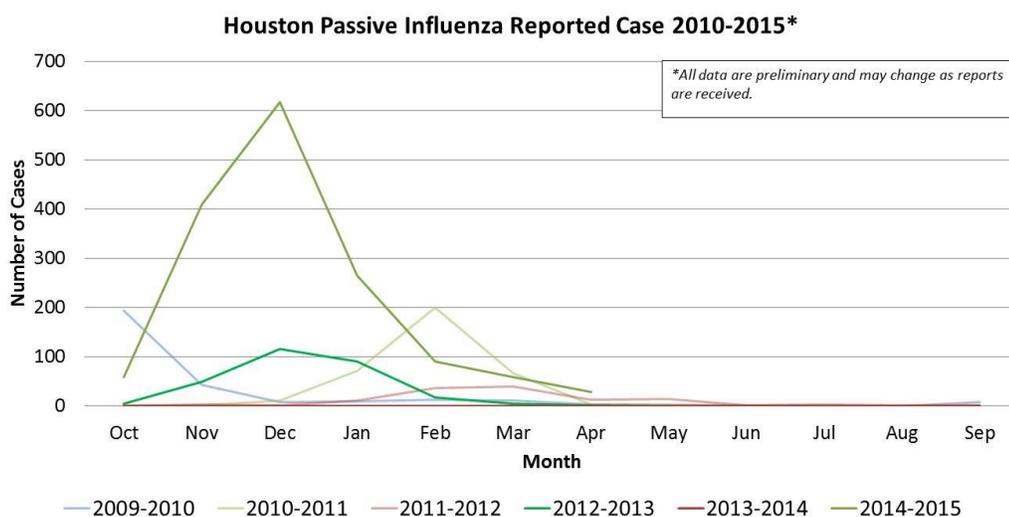
- During the 2014-2015 season, among the specimens tested by culture or respiratory virus panel the following non-influenza respiratory viruses were detected: human rhinovirus (5.6%), respiratory syncytial virus (2.4%), parainfluenza 2 (2.2%), parainfluenza 3 (1.1%), adenovirus (3.2%), human metapneumovirus (1.9%) and coinfection (4.0%).

### Non-influenza viruses



## Passive Surveillance

In week 14, there were 12 additional laboratory confirmed influenza cases from the prior week. The largest proportion of patients reported with influenza during MMWR week 14 were 5 to 24 years (40%) and 25 to 64 (40%) . Seventy percent (70%) of males thirty percent (30%) of females were lab confirmed.



## School Surveillance

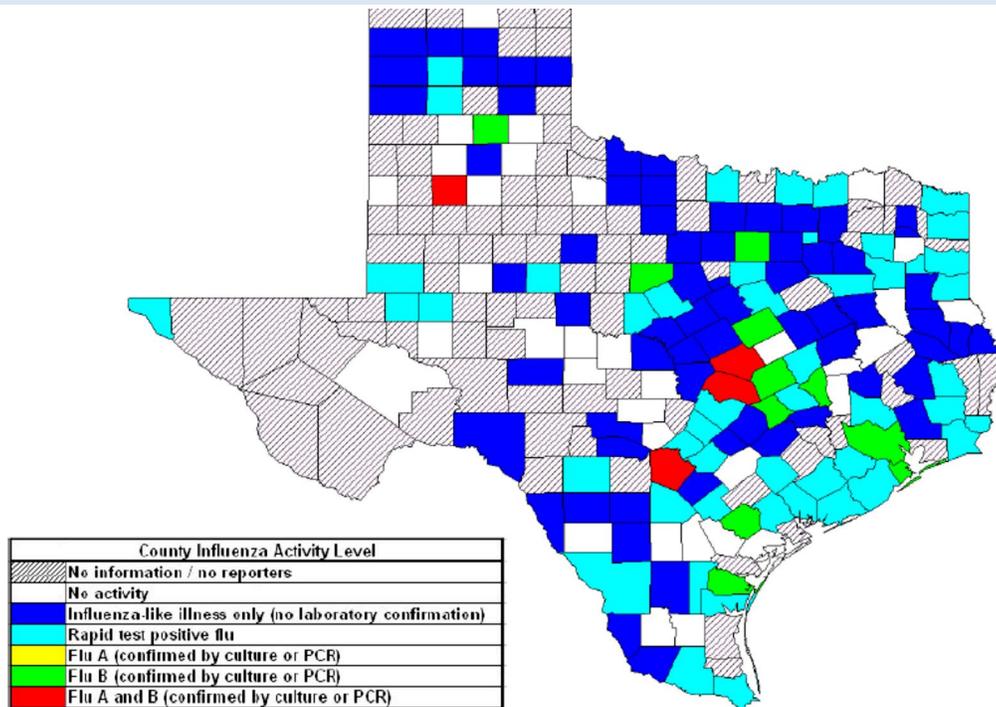
Table 1: ILI and Influenza Cases by Type and School Type<sup>1</sup> per Month

	Total Cases	Lab Confirmed		Flu A	Flu B	A+B	Unclassified	Elem Schools	Middle Schools	High Schools	Mul <sup>2</sup> -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	59	0	0	0	0	0	3	33	10	15	1
Apr											
<b>Total</b>	<b>459</b>	<b>53</b>	<b>13.3%</b>	<b>21</b>	<b>4</b>	<b>0</b>	<b>32</b>	<b>322</b>	<b>62</b>	<b>62</b>	<b>13</b>

ILI cases in HISD students decreased in March 2015 (n=59) compared to February 2015 (n=90) . There were 0 laboratory confirmed flu cases seen in March.

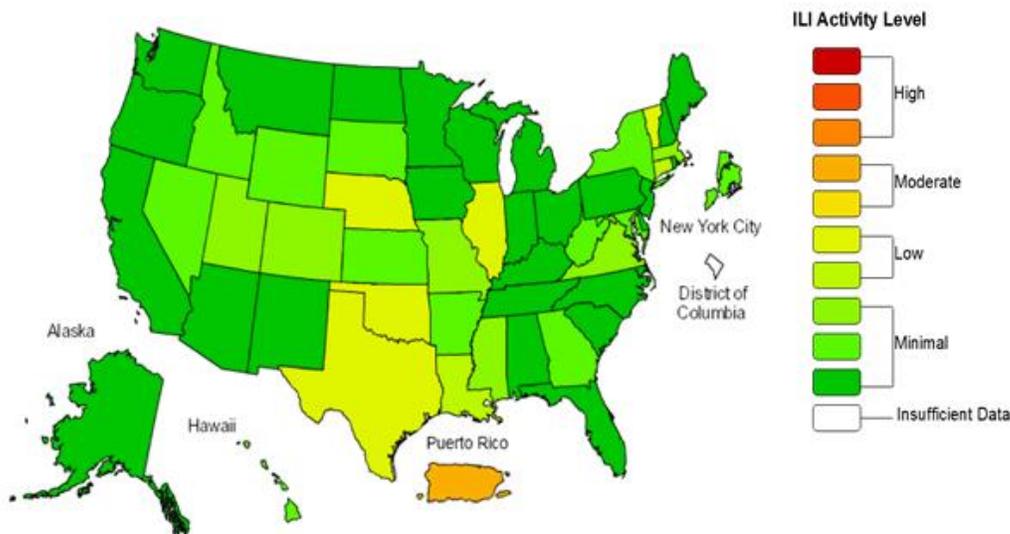
NOTE: Data on student ILI and influenza cases is collected from 306 schools within Houston Independent School District. <sup>1</sup>School will be counted more than once if more than one case from the same school is reported during the

Texas and National Influenza and ILI Activity



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/>

Influenza-Like Illness (ILI) Activity Level Indicator Determined by Data Reported to ILINet  
 2014-15 Influenza Season Week 13 ending Apr 04, 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  $\geq 100^{\circ}\text{F}$ ) 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**