



Houston Department of
Health and Human Services

Office of Surveillance & Public Health Preparedness
Bureau of Epidemiology

Influenza Surveillance Weekly Report
CDC MMWR Week 11: March 15- 21, 2015

Influenza Activity by County, State, and National Levels

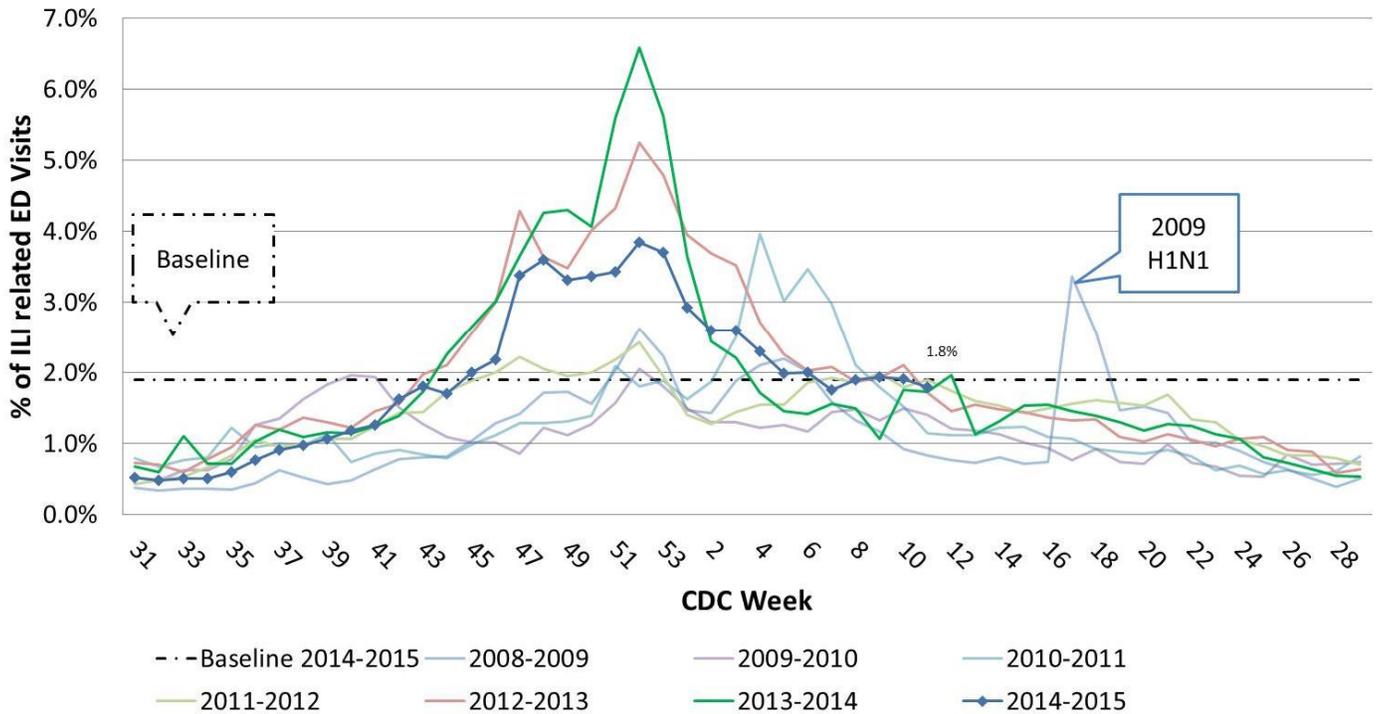
| Houston/ Harris County: Week 11 | Texas: Week 11 | CDC: Week 11 |
|------------------------------------|-------------------|-----------------|
| Elevated | Elevated | Elevated |

Highlights

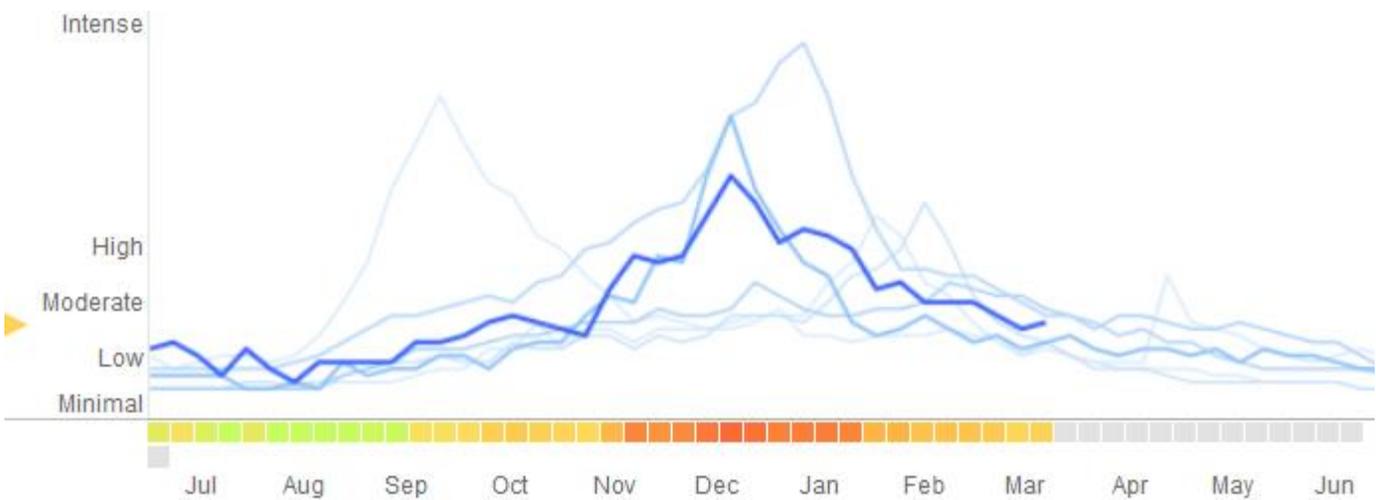
- The percentage of reported influenza-like illness (ILI) in Houston/Harris county **decreased** from 1.9% in week 10 to 1.8% in week 11.
- The percentage of flu test positives in Houston **decreased** from 16.7% in week 10 to 7.7 % in week 11.
- During the 2014-2015 influenza season, zero (0) Houston influenza-associated pediatric deaths have been reported.
- In week 11, 13 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 A H1N1 (0), Influenza B (1).
- Cumulatively this season, the City of Houston Bureau of Laboratory Services has tested 350 surveillance specimens. Of the 134 positive lab results, the Influenza A/H3 accounts for 108 (80.6%) of the positives.
- At the national level during week 11, 10.6 % of specimens tested and reported to the CDC were positive for influenza. The proportion of out-patient visits for ILI 2.2% was **above** the national baseline 2.0% and the proportion of deaths attributed to pneumonia and influenza 7.4% was **above** the epidemic threshold of 7.2% for week 11.

Syndromic Surveillance: 2014-2015 Influenza Season

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



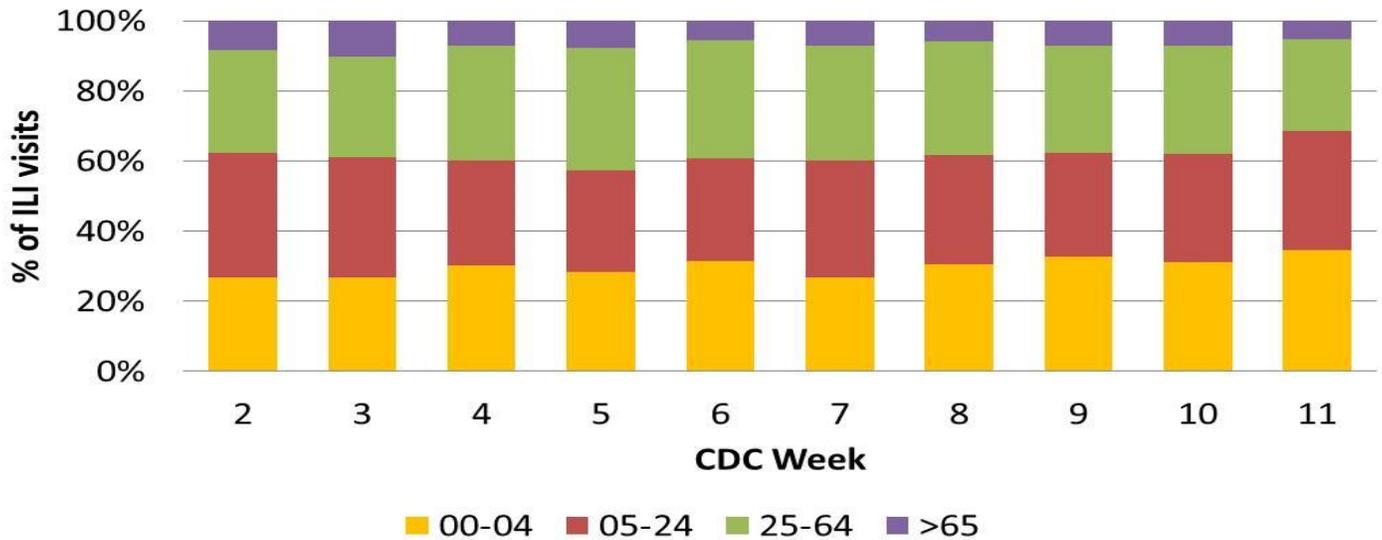
Google Flu Trends



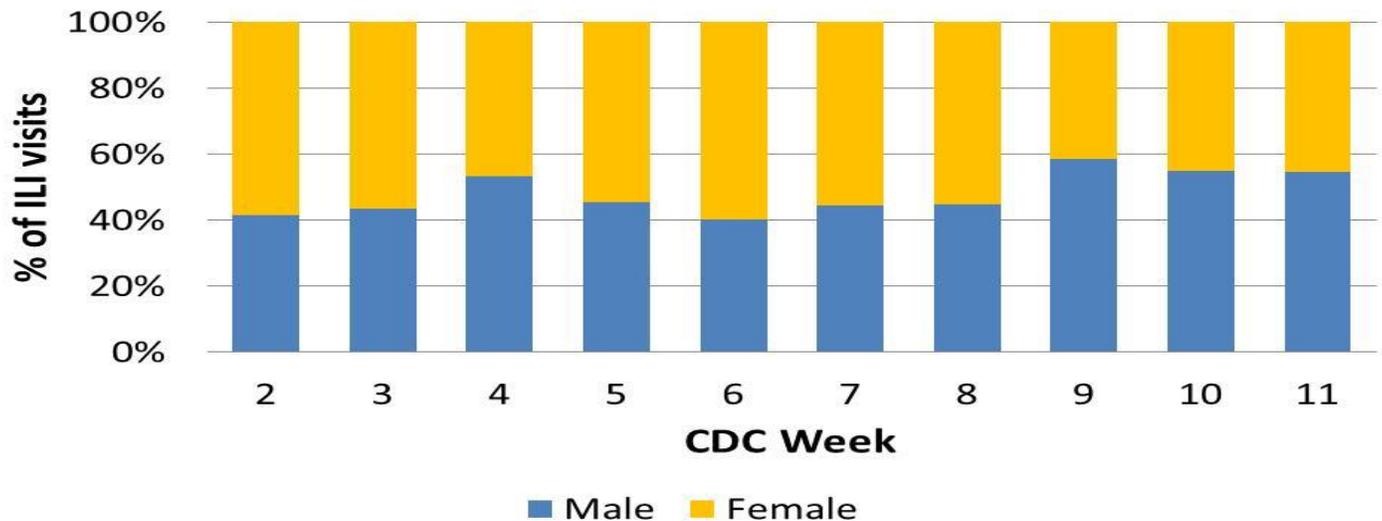
NOTE: Houston/Harris County ILI activity is assessed using information provided by surveillance participants in the Real-time Outbreak Disease Surveillance System (RODS). For week 11, 36 surveillance participants reported ILI information to Houston Department of Health and Human Services. Influenza-like 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



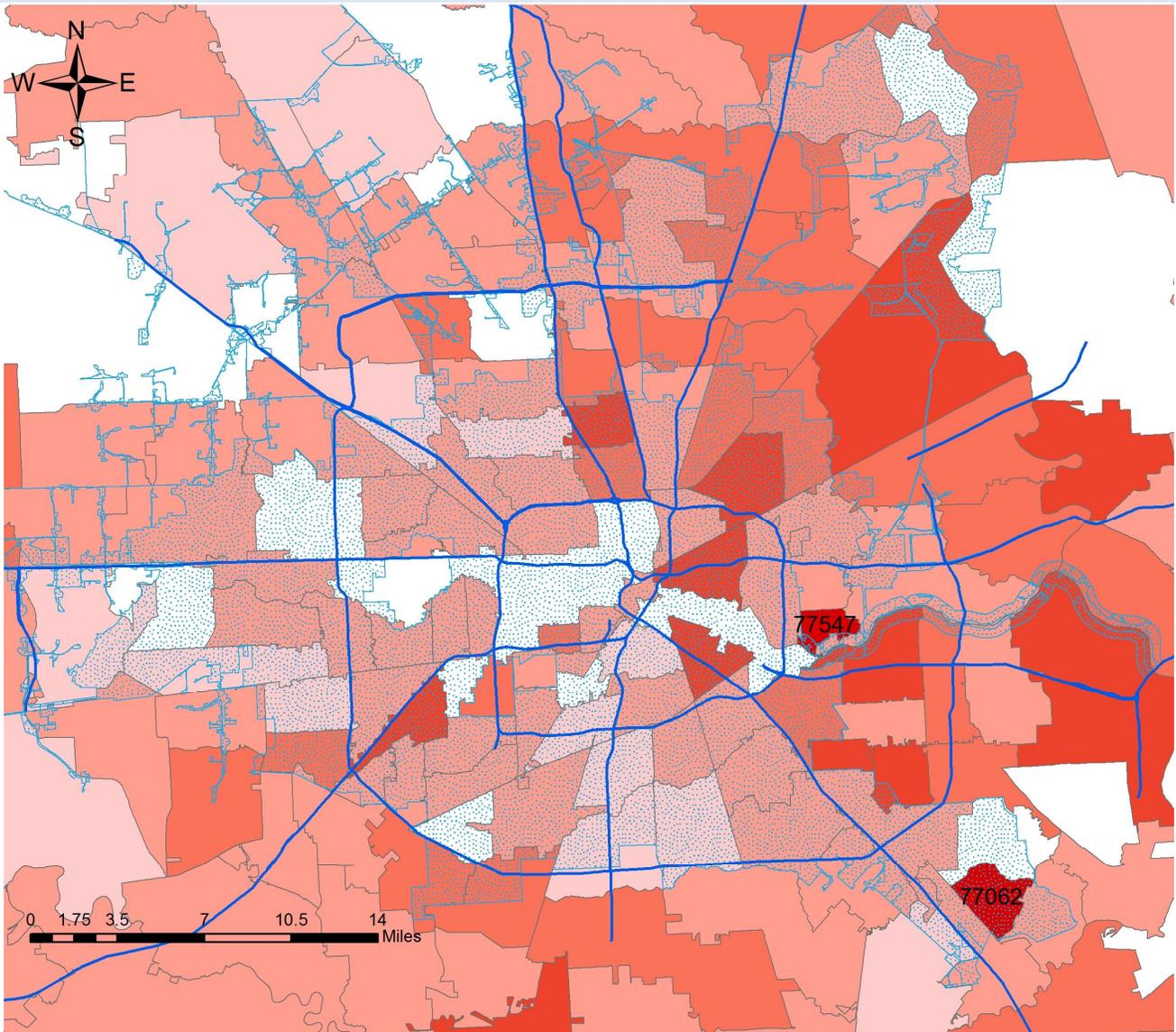
ILI % by Gender, Houston/Harris County, 2014-2015



In week 11, 1.8% of emergency department (ED) visits were due to influenza-like illness (ILI) complaints. Of the 696 patients presenting with ILI, the age group that recorded the most ED visits was the 0-4 year olds (35.1%).

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 11, 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

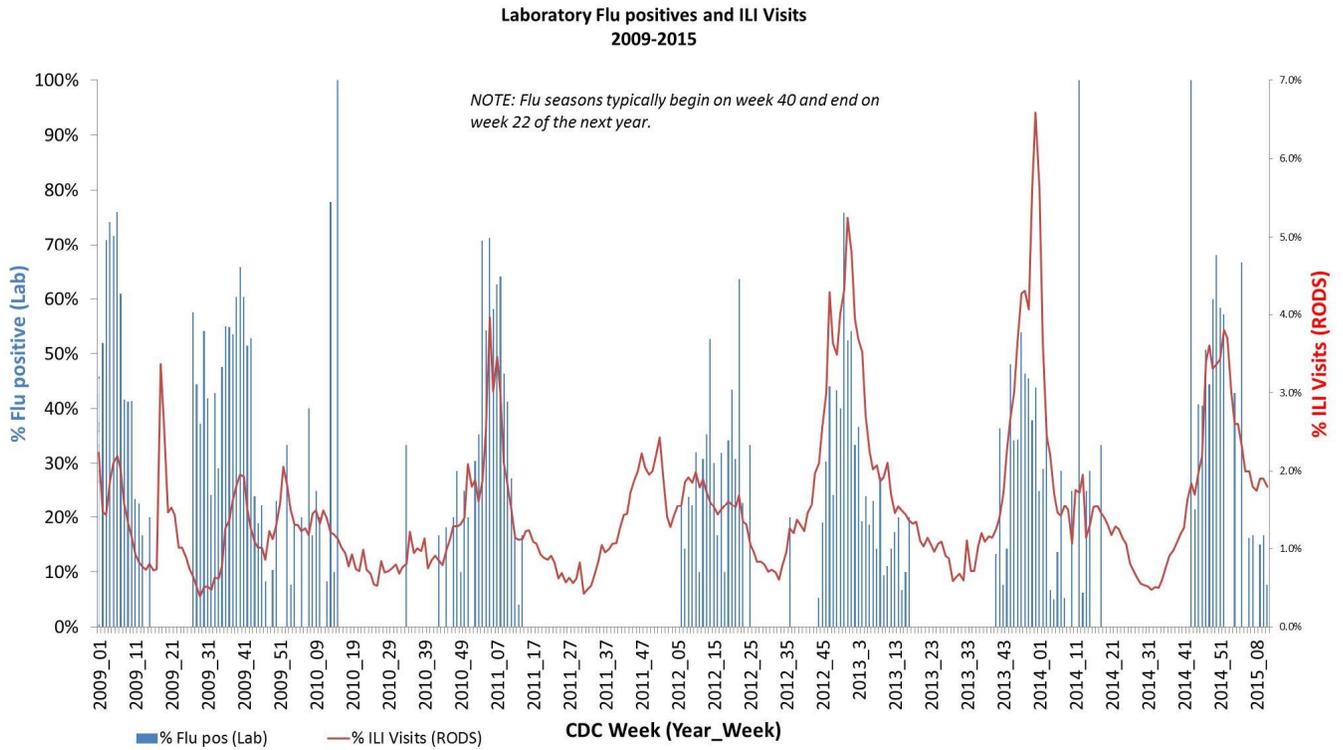
2013-2014 %ILI of ED Visits by Zip Code

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

During week 11, the zip codes that have the greatest percentage of ED visits related to ILI (6.0% or greater) are: 77062, 77547

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.

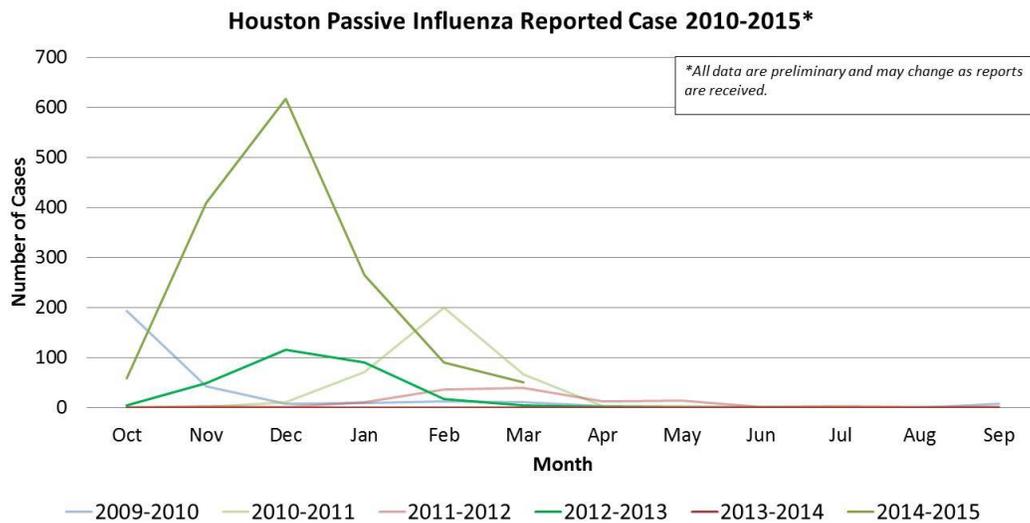
Laboratory Surveillance: Influenza Rapid Test Results, Houston



| CDC Week Number | 09 (Mar 01-07) | 10 (Mar 08-14) | 11 (Mar 15-21) |
|--------------------------------|-------------------|-------------------|-------------------|
| # of Influenza Tests Performed | 20 | 12 | 13 |
| % Influenza Positive | 15% | 16.7% | 7.7% |
| # Influenza A Positive | 0 | 1 | 0 |
| % Influenza A Positive | 0% | 50% | 0% |
| # Influenza B Positive | 3 | 1 | 1 |
| % Influenza B Positive | 100.0% | 50% | 100.0% |
| # Non-differentiated Positive | 0 | 0 | 0 |
| % Non-differentiated Positive | 0% | 0% | 0% |

Passive Surveillance

In week 11, there were 6 additional laboratory confirmed influenza cases from the prior week. In the month of March 2015 the largest proportion of patients reported with influenza among those in the age group of 05 to 24 (44.9%) and 25 to 64 (30.6%). Males accounted for 71.4% of lab confirmed case in March.



School Surveillance

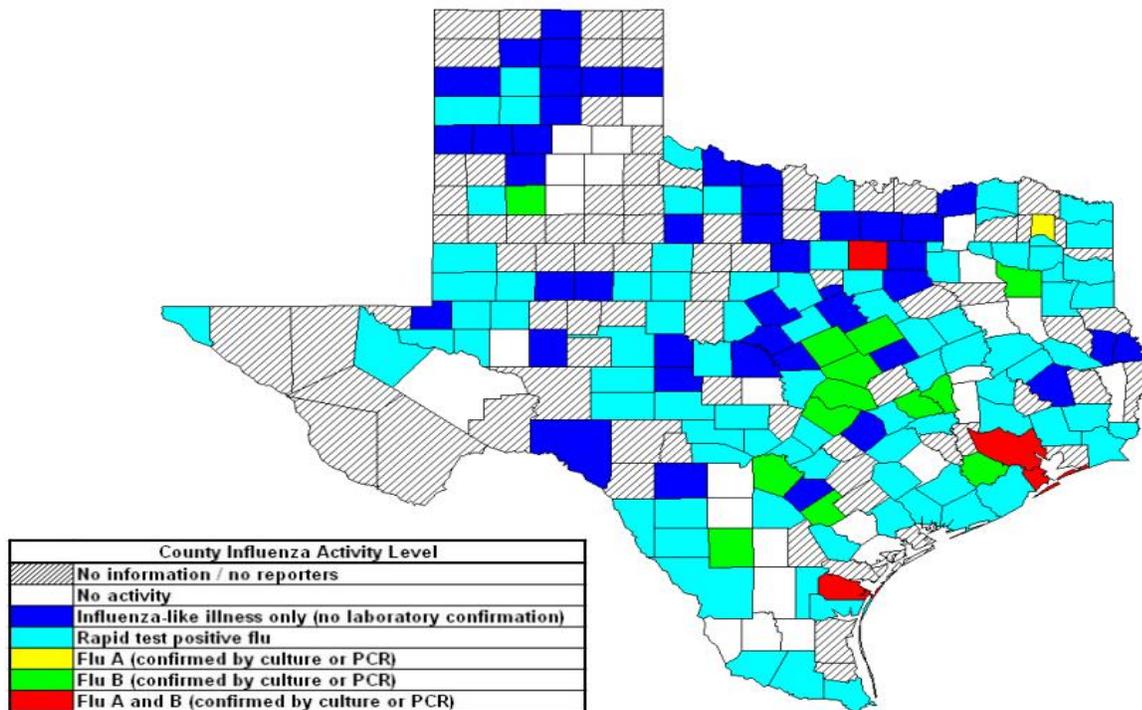
Table 1: ILI and Influenza Cases by Type and School Type¹ per Month

| | Total Cases | Lab Confirmed | | Flu A | Flu B | A+B | Unclassified | | Elem Schools | Middle Schools | High Schools | Mul ² -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 | 18.8% | 3 | 4 | 0 | 11 | | 72 | 4 | 9 | 5 |
| Mar | | | | | | | | | | | | |
| Apr | | | | | | | | | | | | |
| Total | 310 | 35 | 9.8% | 18 | 4 | 0 | 18 | | 217 | 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 Flu A, 4 as Flu B and 11 were unclassified.

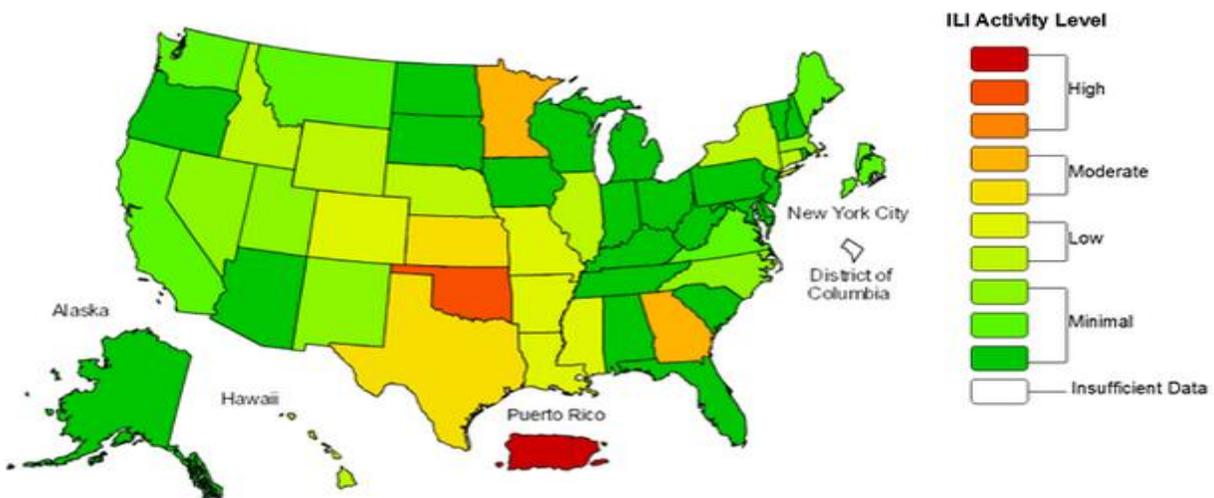
NOTE: Data on student ILI and influenza cases is collected from 306 schools within Houston Independent School District. ¹School will be counted more than once if more than one case from the same school is reported during the

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 11 ending Mar 21, 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/>

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