



Houston Department of
Health and Human Services

Office of Surveillance & Public Health Preparedness
Bureau of Epidemiology

Influenza Surveillance Weekly Report
CDC Week 52: December 21- 27, 2014

Influenza Activity by County, State, and National Levels

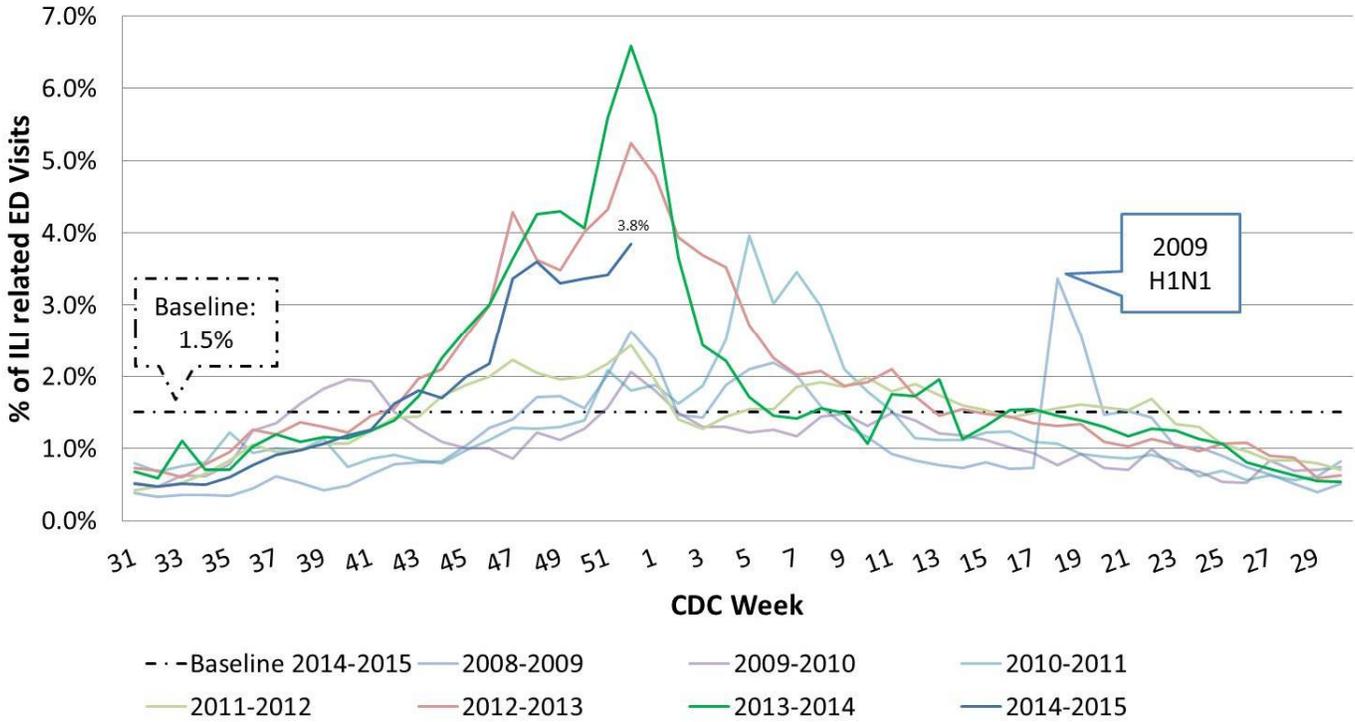
Houston/ Harris County: Week 52	Texas: Week 52	CDC: Week 52
High	High	High

Highlights

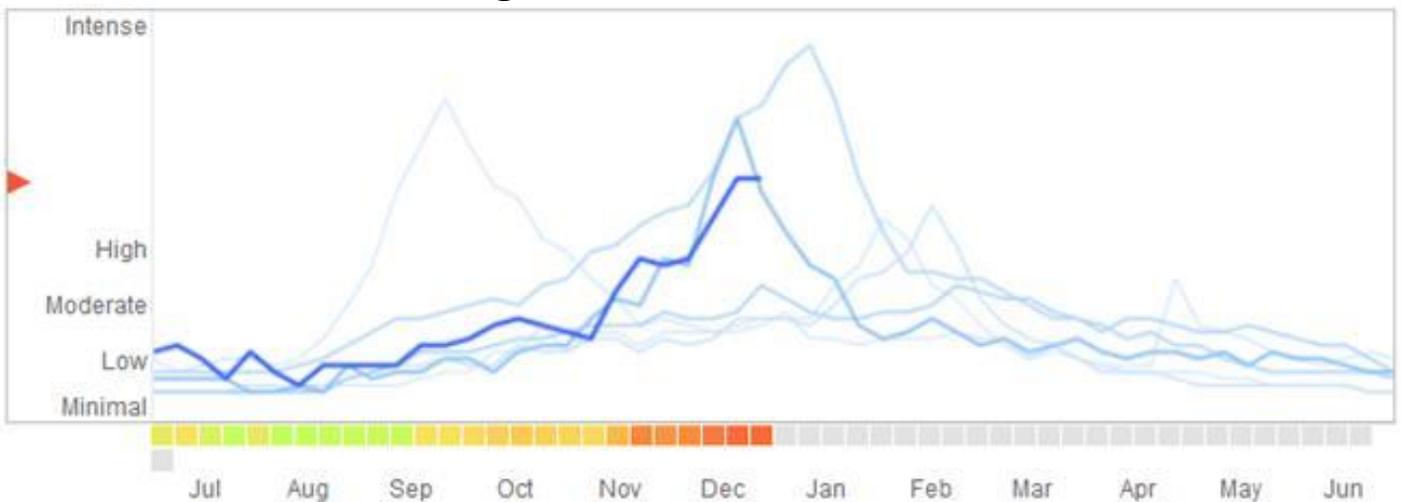
- The percentage of reported influenza-like illness (ILI) in Houston/Harris county **increased** from 3.4% in week 51 to 3.8% in week 52.
- The percentage of flu test positives in Houston **decreased** from 58.33% in week 51 to 57.14% in week 52.
- During the 2014-2015 influenza season, zero (0) Houston influenza-associated pediatric deaths have been reported.
- In week 52, 7 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 (3), Influenza A H1N1 (0), Influenza B (1).
- Cumulatively this season, the City of Houston Bureau of Laboratory Services has tested 229 surveillance specimens. Of the 111 positive lab results, the Flu A H3 strain accounts for 100 (90.09%) of the positives.
- At the national level during week 52, 30.4% of specimens tested and reported to the CDC were positive for influenza. The proportion of outpatient visits for ILI (5.9%) was **above** the national baseline (2.0%) and the proportion of deaths attributed to pneumonia and influenza (6.8%) was **below** the epidemic threshold of 6.9% for week 52.

Syndromic Surveillance: 2014-2015 Influenza Season

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



Google Flu Trends in Houston

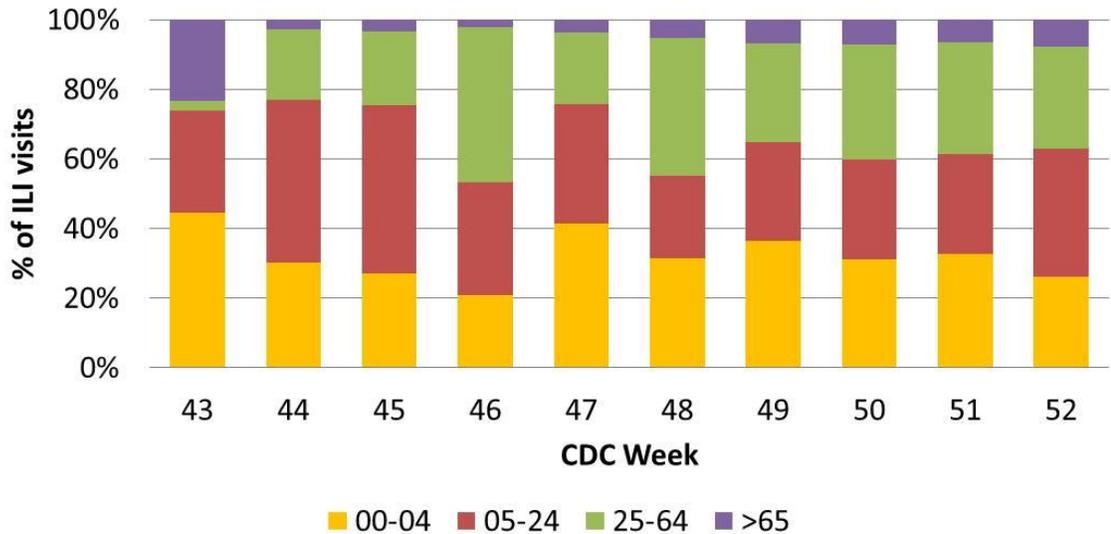


Data Source: Google Flu Trends (<http://www.google.org/flutrends>)

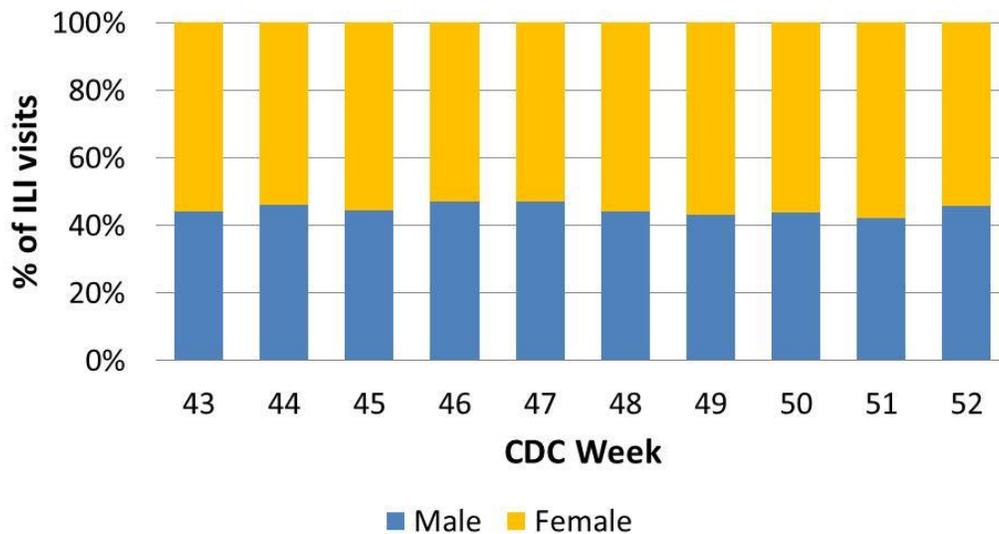
NOTE: Houston/Harris County ILI activity is assessed using information provided by surveillance participants in the Real-time Outbreak Disease Surveillance System (RODS). For week 52, 36 surveillance participants reported ILI information to Houston Department of Health and Human Services. Influenza-like 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 Gender and Age Distribution

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



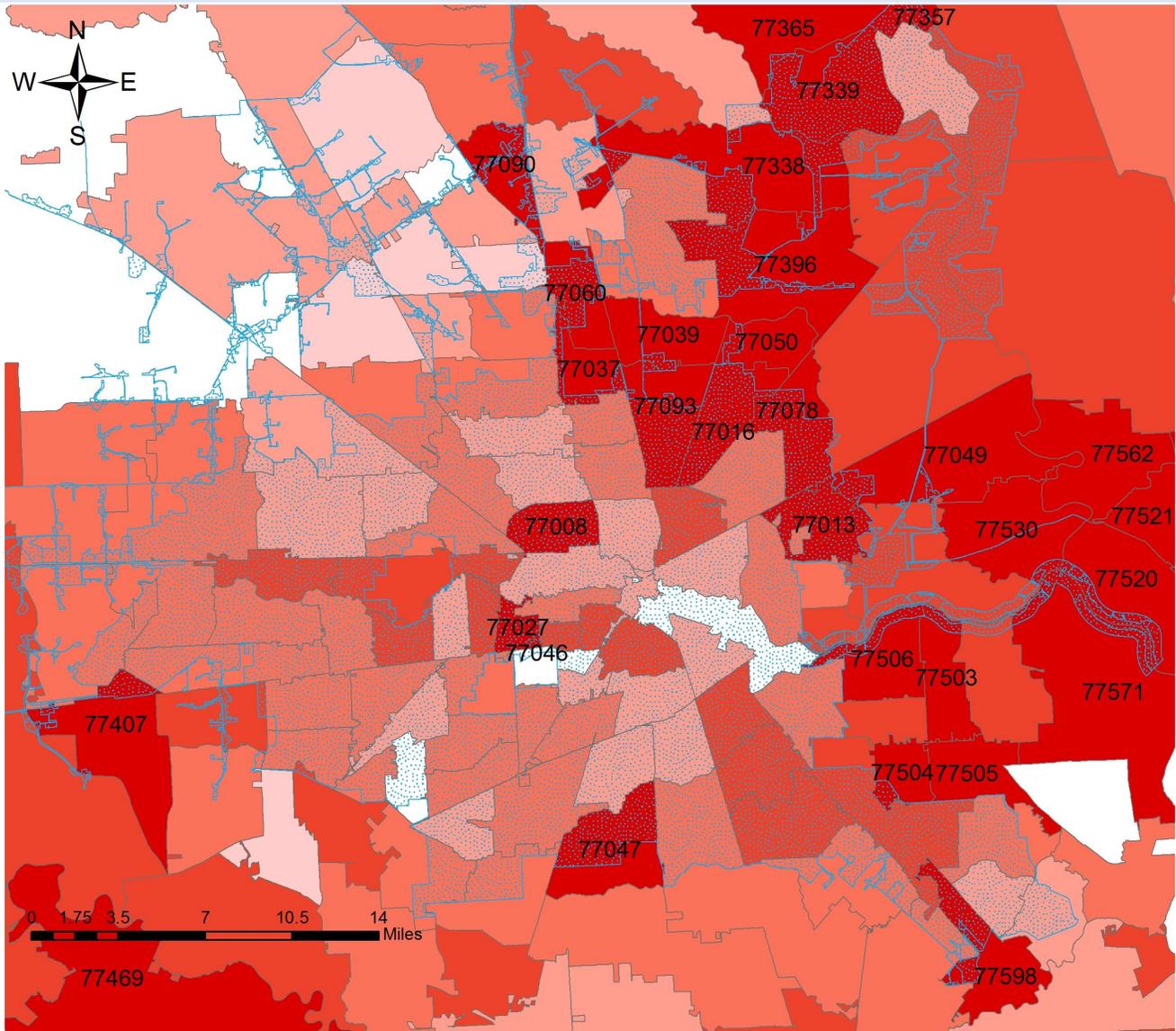
ILI % by Gender, Houston/Harris County, 2014-2015



In week 52, 3.8% of emergency department (ED) visits were due to influenza-like illness (ILI) complaints. Of the 1461 patients presenting with ILI, the age groups that recorded the most ED visits were 05-24 years (37%). Fifty-four percent (54%) of the ILI complaints were among females.

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 52, 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

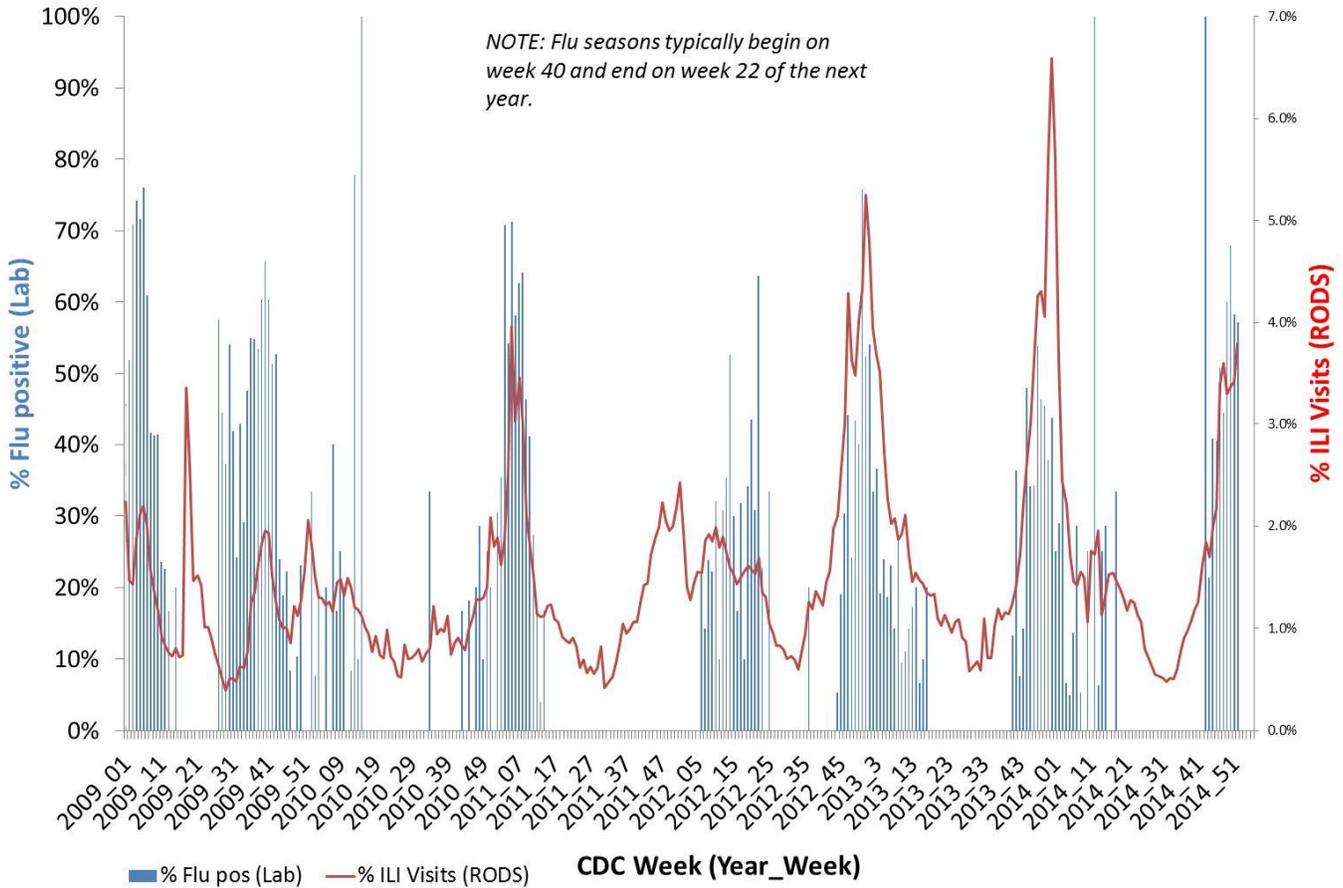
-  0% - 1.1%
-  1.11% - 2.5%
-  2.51% - 4%
-  4.01% - 6%
-  6.01% - 12.5%

During week 52, the zip codes that have the greatest percentage of ED visits related to ILI (6.0% or greater) are: 77008, 77013, 77016, 77027, 77037, 77039, 77046, 77047, 77049, 77050, 77060, 77078, 77090, 77093, 77213, 77220, 77258, 77274, 77301, 77303, 77306, 77320, 77325, 77328, 77335, 77338, 77339, 77354, 77357, 77363, 77365, 77372, 77378, 77382, 77396, 77402, 77404, 77407, 77410, 77414, 77419, 77441, 77444, 77445, 77446, 77453, 77464, 77466, 77469, 77480, 77481, 77482, 77485, 77486, 77497, 77503, 77504, 77505, 77506, 77508, 77512, 77516, 77518, 77520, 77521, 77530, 77533, 77541, 77562, 77571, 77574, 77577, 77588, 77598, 77665, 77701, 77705, 77777, 77845, 77873

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

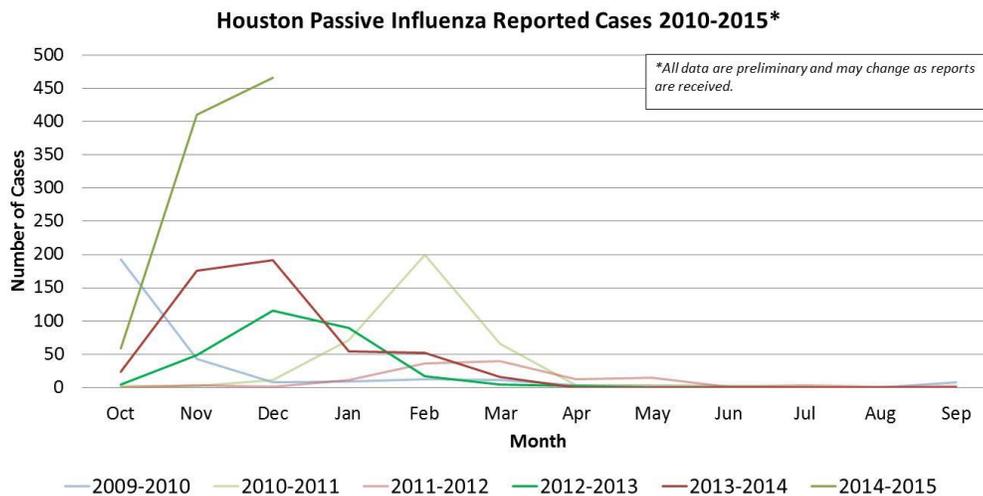
Laboratory Flu positives and ILI Visits
2009-2014



CDC Week Number	50 (Dec 7–13)	51 (Dec 14–20)	52 (Dec 21 to 27)
# of Influenza Tests Performed	25	12	7
% Influenza Positive	68.0%	58.3%	57.1%
# Influenza A Positive	16	4	3
% Influenza A Positive	94.1%	57.1%	75.0%
# Influenza B Positive	1	3	1
% Influenza B Positive	5.9%	42.9%	25.0%
# Non-differentiated Positive	0	0	0
% Non-differentiated Positive	0.0%	0.0%	0.0%

Passive Surveillance

In week 52, there were (120) additional lab confirmed influenza cases from the prior week. So far this influenza season, Flu A accounts for 93% of the influenza cases and Flu B accounts for 7% of the influenza cases. Age groups 0 to 4 years (36%) and 5 to 24 years (38%) account for the majority of lab confirmed influenza cases.



School Surveillance

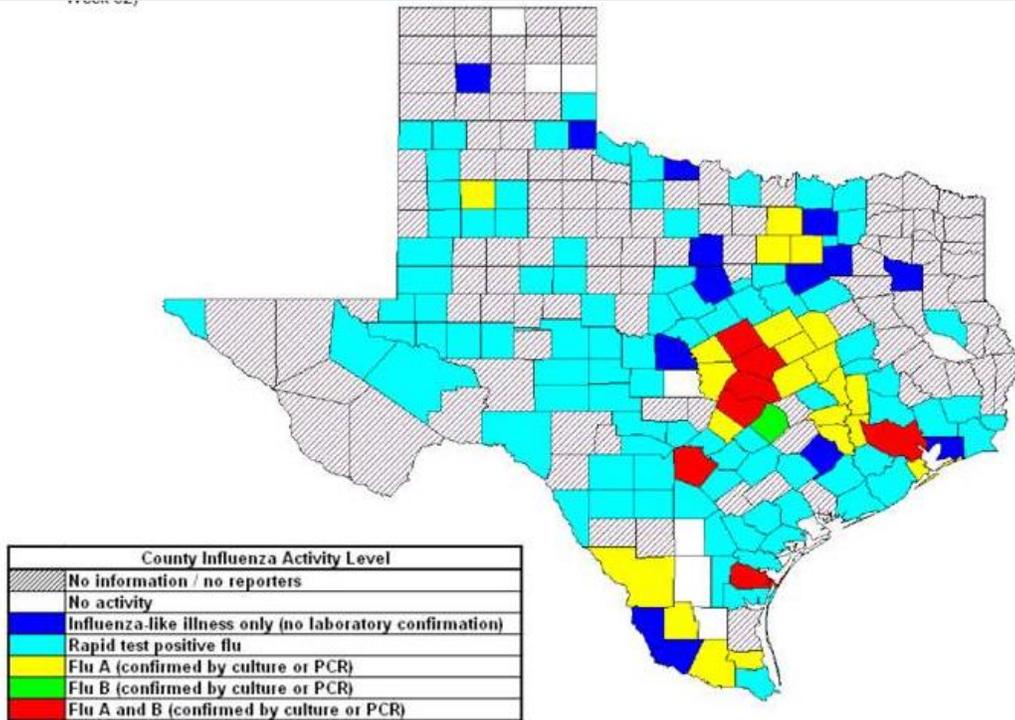
Table 1: ILI and Influenza Cases by Type and School Type¹ per Month

	Total Cases	Lab Confirmed		Flu A	Flu B	A+B	Unclassified	Elem Schools	Middle Schools	High Schools	Mul ² -Level Schools
		#	%								
Aug											
Sep	1	0	0	0	0	0	0	1	0	0	0
Oct	131	8	6%	3	0	0	5	127	4	0	0
Nov	307	49	16%	12	2	1	25	218	24	21	44
Dec	279	45	16%	9	1	0	35	161	26	46	46
Jan											
Feb											
Mar											
Apr											
Total											

ILI cases decreased from November to December. There were 45 laboratory confirmed flu cases seen in December and nine were confirmed as influenza A.

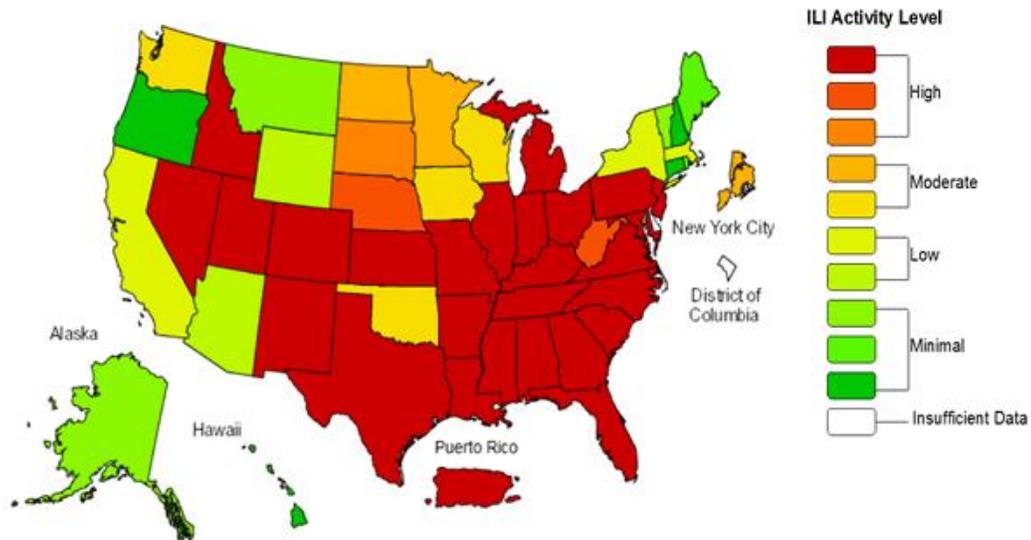
NOTE: Student ILI is collected from 306 schools within Houston Independent School District. ¹School will be counted more than once if more than one case from the same school is reported during the month.

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 only displays influenza and ILI cases that were reported to public health. 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 52 ending Dec 27, 2014



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://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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