



Houston Department of Health and Human Services

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

Influenza Surveillance Weekly Report CDC MMWR Week 15: April 12- 18, 2015

Influenza Activity by County, State, and National Levels

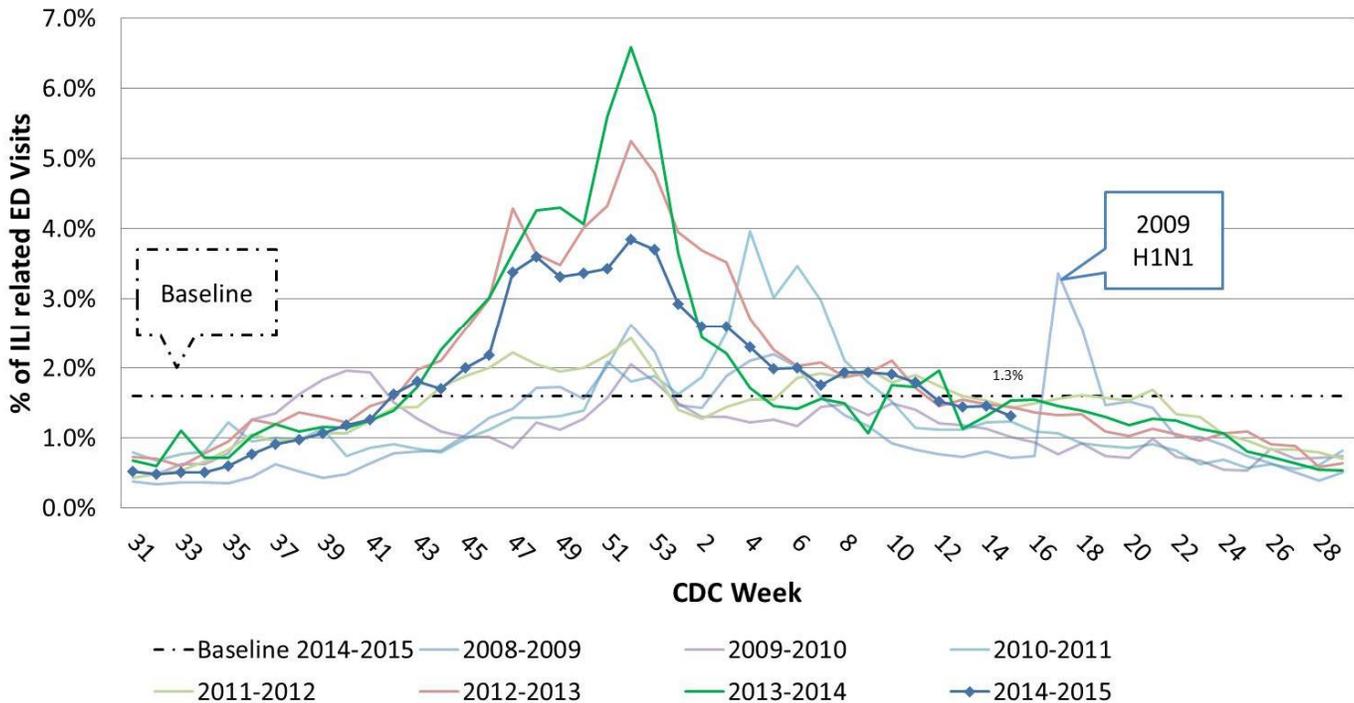
Houston/ Harris County: Week 15	Texas: Week 15	CDC: Week 15
Decreased	Decreased	Decreased

Highlights

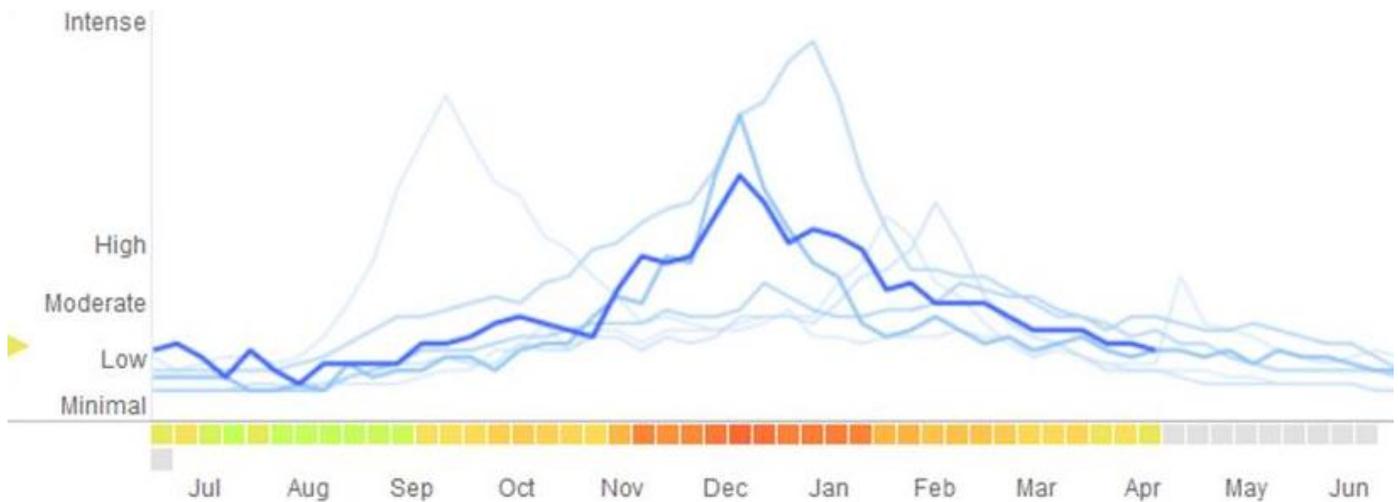
- The percentage of reported influenza-like illness (ILI) in Houston/Harris county **decreased** from 1.5% in week 14 to 1.3% in week 15.
- The percentage of flu test positives in Houston **cannot be compared** from 19% in week 14 to 0% in week 15 because there were no influenza specimens submitted from through the sentinel providers.
- During the 2014-2015 influenza season, one (1) Houston influenza-associated pediatric death has been reported.
- In week 15, zero (0) surveillance specimens were tested by the City of Houston Bureau of Laboratory Services.
- 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 15, 7.6 % of specimens tested and reported to the CDC were positive for influenza. The proportion of outpatient visits for ILI 1.4% was **below** the national baseline 2.0% and the proportion of deaths attributed to pneumonia and influenza 6.7% was **below** the epidemic threshold of 7.0% for week 15.

Syndromic Surveillance: 2014-2015 Influenza Season

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



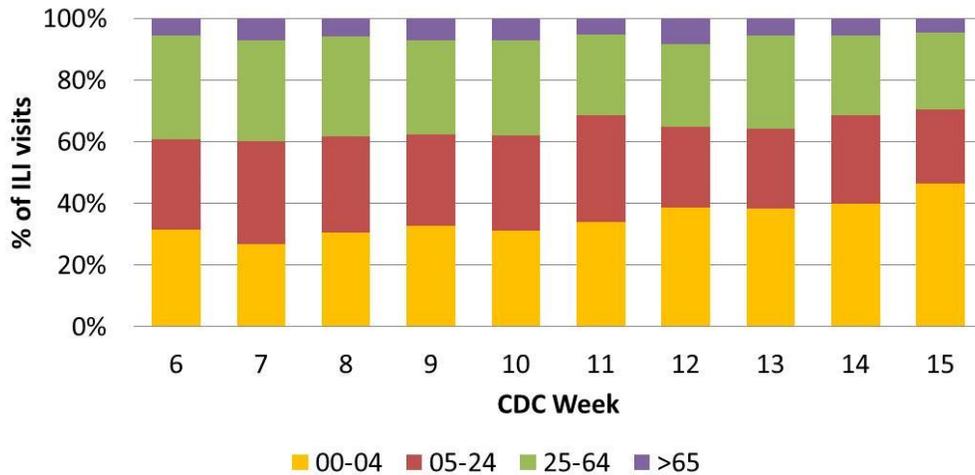
Google Flu Trends



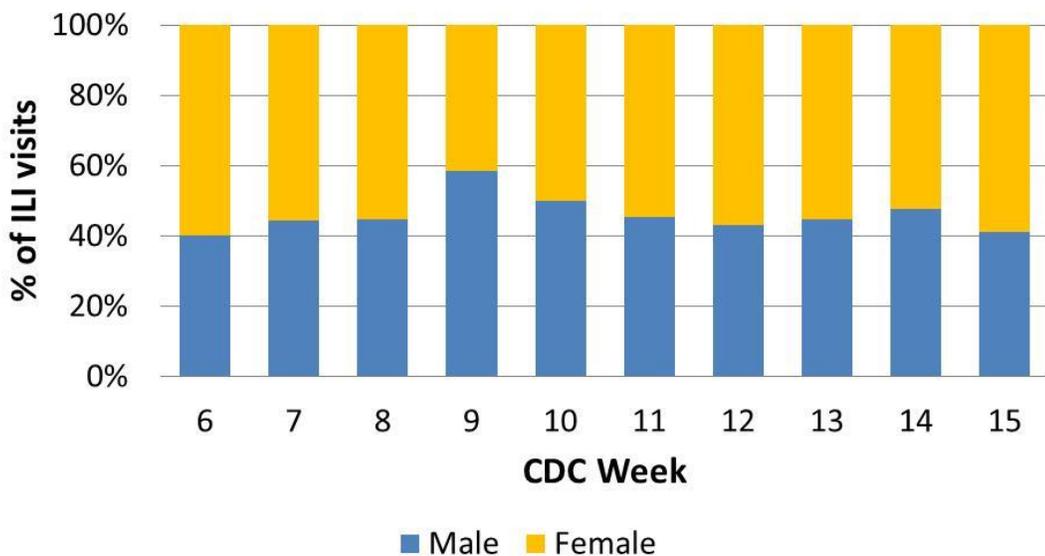
NOTE: Houston/Harris County ILI activity is assessed using information provided by surveillance participants in the Real-time Outbreak Disease Surveillance System (RODS). For week 15, 36 surveillance participants reported ILI information to Houston Department of Health and Human Services. Influenza-like 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



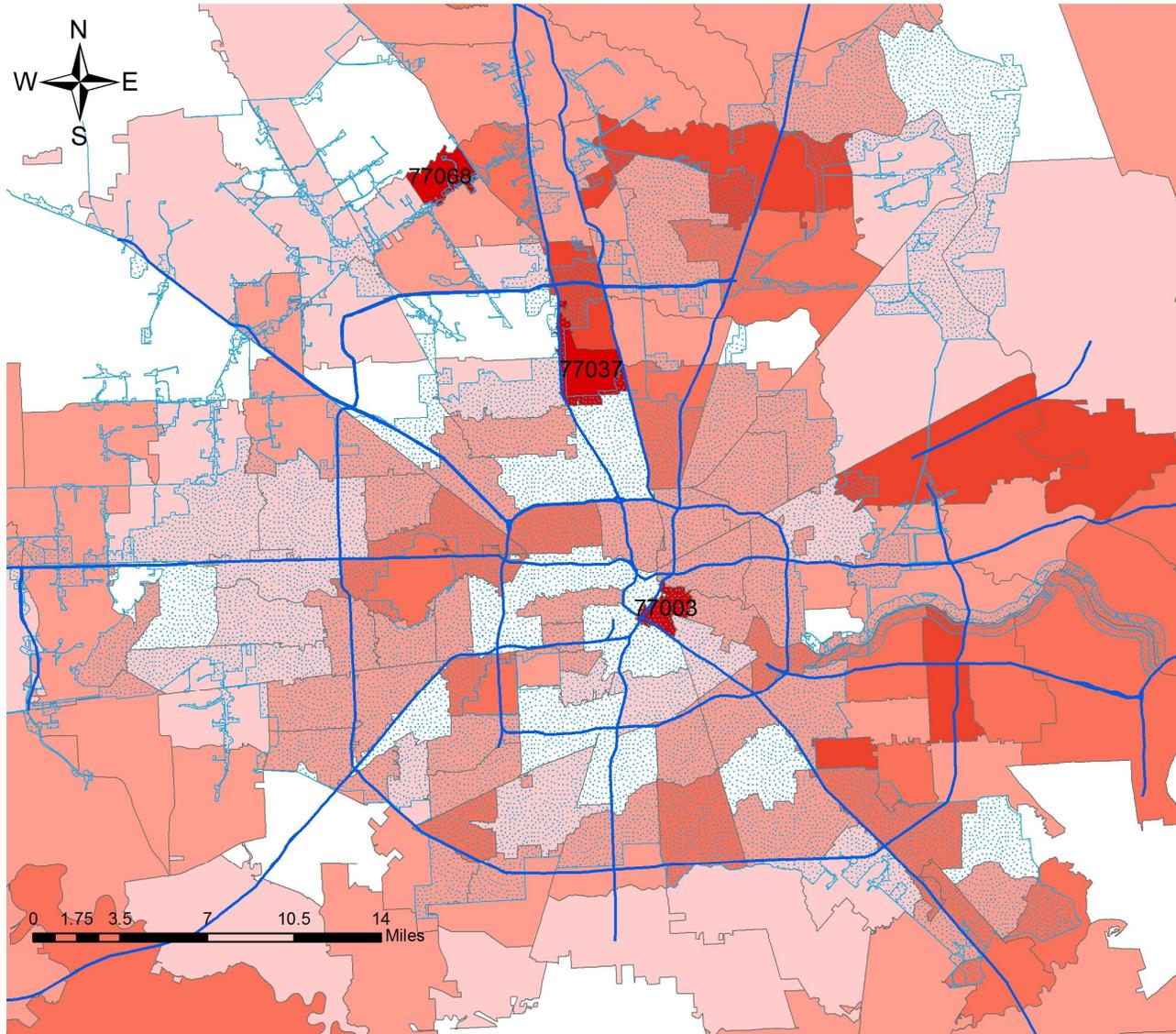
ILI % by Gender, Houston/Harris County, 2014-2015



In week 15, 1.3% of emergency department (ED) visits were due to influenza-like illness (ILI) complaints. Of the 507 patients presenting with ILI, the age group that recorded the most ED visits was the 00–04 year olds 47.0%.

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Syndromic Surveillance: Geographic Distribution Map



Legend

City of Houston City Limit

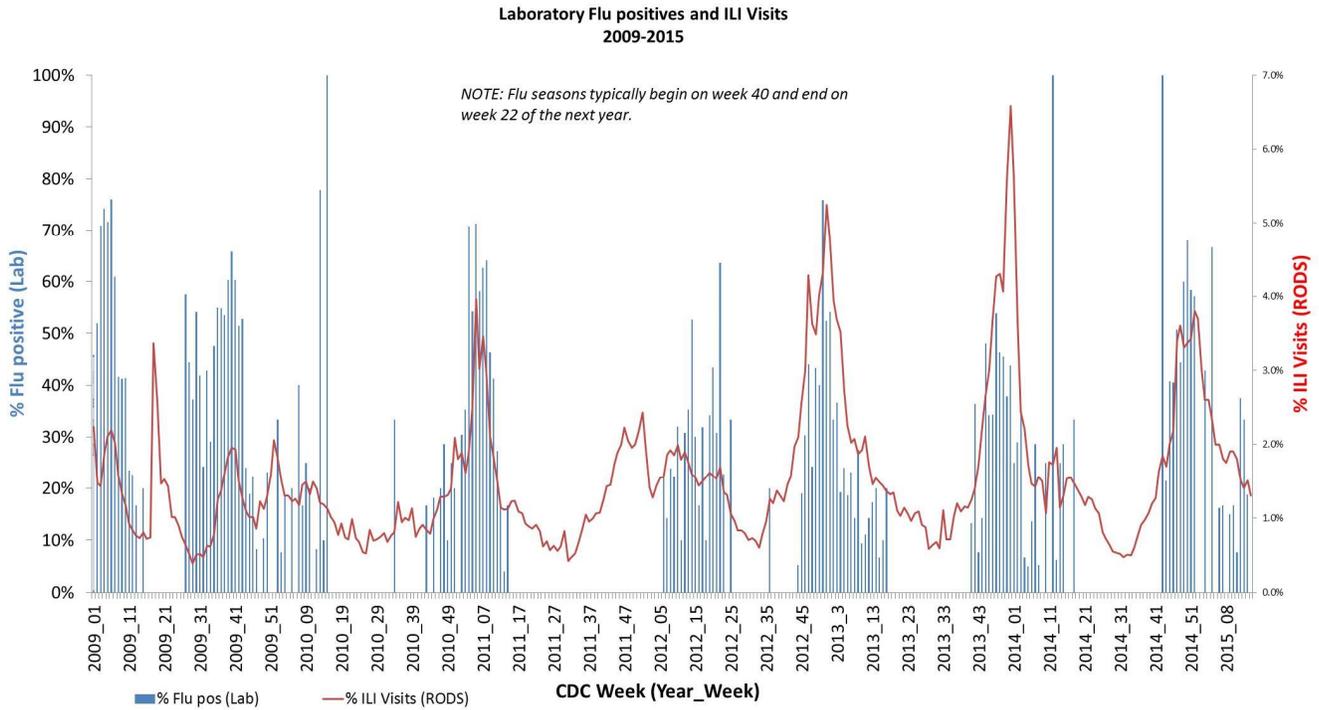
2014-2015 %ILI of ED Visits by Zip Code

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

During week 15, the ZIP codes that have the greatest percentage of ED visits related to ILI (6.0% or greater) are: 77068, 77037, and 77003

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



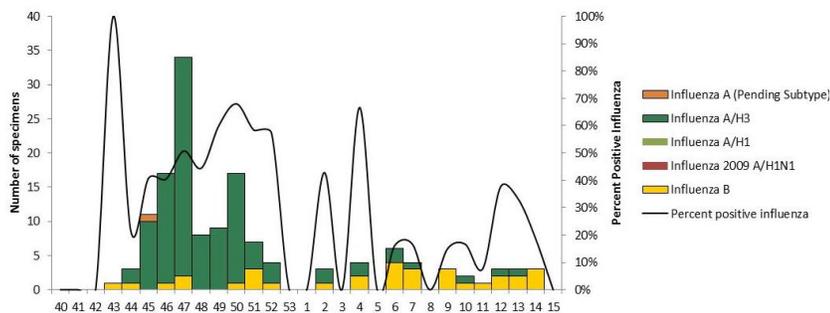
CDC Week Number	13 (Mar 29—Apr 04)	14 (Apr 5—11)	15 (Apr 12 - 18)
# of Influenza Tests Performed	09	16	0
% Influenza Positive	33.3%	18.8%	0%
# Influenza A Positive	1	0	0
% Influenza A Positive	33.3%	0%	0%
# Influenza B Positive	2	3	0
% Influenza B Positive	66.7%	100%	0%
# Non-differentiated Positive	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 15, there were no specimens tested for influenza virus. 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%.

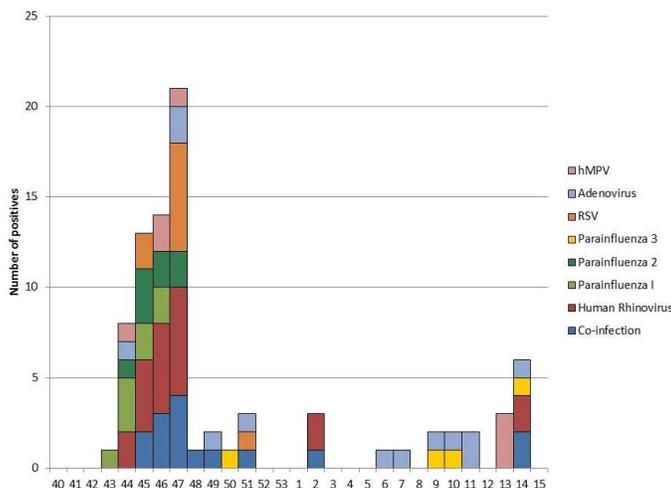
Influenza virus



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 co-infection (4.0%).

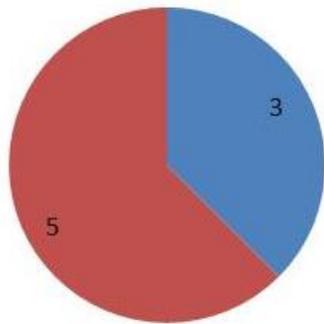
Non-influenza viruses



Passive Surveillance

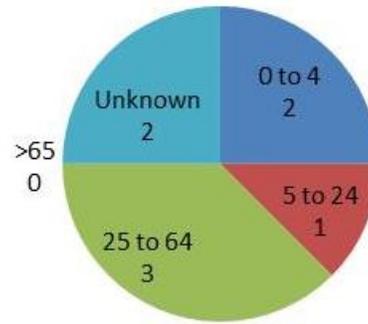
In week 15, there were eight (8) additional laboratory confirmed influenza cases from the prior week. The largest proportion of patients reported with influenza in Week 15 was among those in the age group of 25 to 64 (3 cases). Males and females were equally affected.

Influenza Counts by type



■ Influenza A ■ Influenza B

Influenza Counts by age group



■ 0 to 4 ■ 5 to 24 ■ 25 to 64 ■ >65 ■ Unknown

School Surveillance

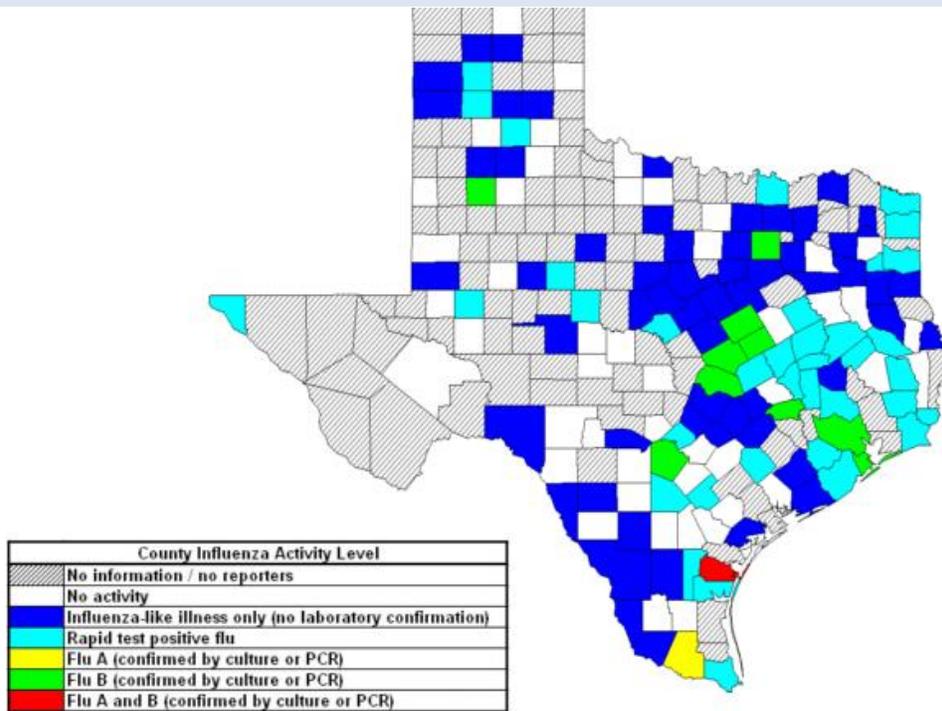
Table 1: ILI and Influenza Cases by Type and School Type¹ per Month

	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	20.0%	3	4	0	11	72	4	9	5
Mar	59	0	0	0	0	0	3	33	10	15	1
Apr											
Total	459	53	13.3%	21	4	0	32	322	62	62	13

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.

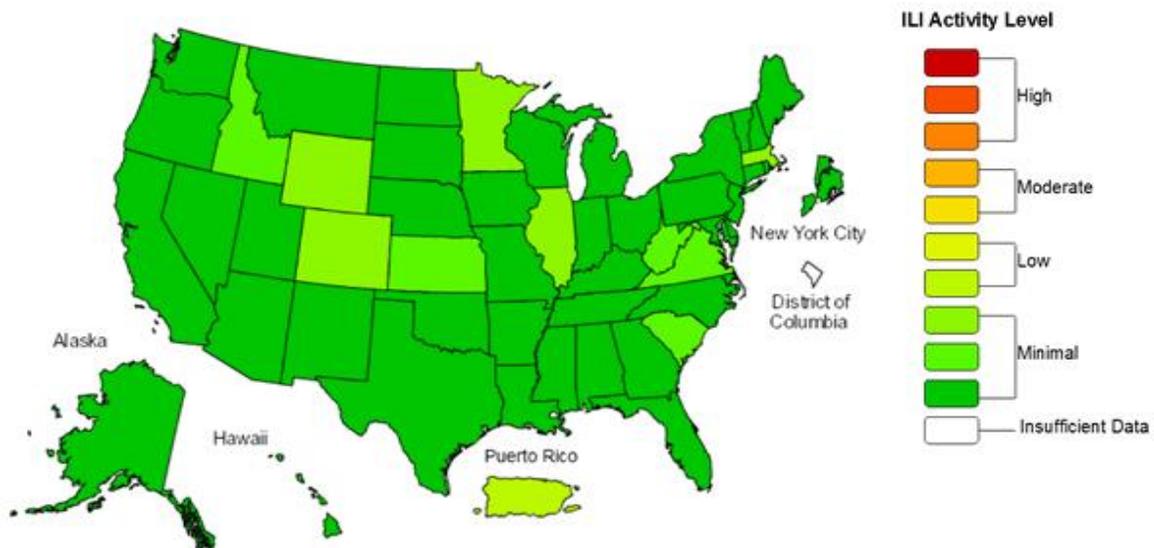
NOTE: Data on student ILI and influenza cases is collected from 306 schools within Houston Independent School District. ¹School will be counted more than once if more than one case from the same school is reported during the month.

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 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 15 ending Apr 18, 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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