

Influenza Surveillance Report

www.infectiousdisease.dhh.louisiana.gov

Week 8: 2/19/17 - 2/25/17

Influenza activity decreased slightly but remains high in Louisiana. The percent of influenza positives remains high at both clinical labs and the state public health laboratory. Higher activity of other respiratory viruses is also being reported with Rhino/Enterovirus, RSV, Coronavirus, Metapneumovirus, and Adenovirus being the most prevalent.

The Influenza Surveillance Summary Report describes the results of the tracking done by the Louisiana Office of Public Health Infectious Disease Epidemiology Section (IDEpi). This report relies on data supplied by sentinel surveillance sites, including hospital emergency departments (ED), laboratories and physicians' offices. Sentinel sites provide weekly data on Influenza Like Illness (ILI) and/or laboratory confirmed cases.

Taken together, ILI surveillance and laboratory surveillance provide a clear picture of the influenza activity occurring in Louisiana each week. If you have any questions about our surveillance system or would like more information, please contact Julie Hand at 504-568-8298 or julie.hand@la.gov.

ILI is defined as an illness characterized by cough and/or cold symptoms and a fever of 100° F or greater in the absence of a known cause. While not every case of ILI is a case of influenza, the CDC has found that trends in ILI from sentinel sites are a good proxy measure of the amount of influenza activity in an area. For this reason, all states and territories participating in the national surveillance program monitor weekly ILI ratios from their sentinel surveillance sites.

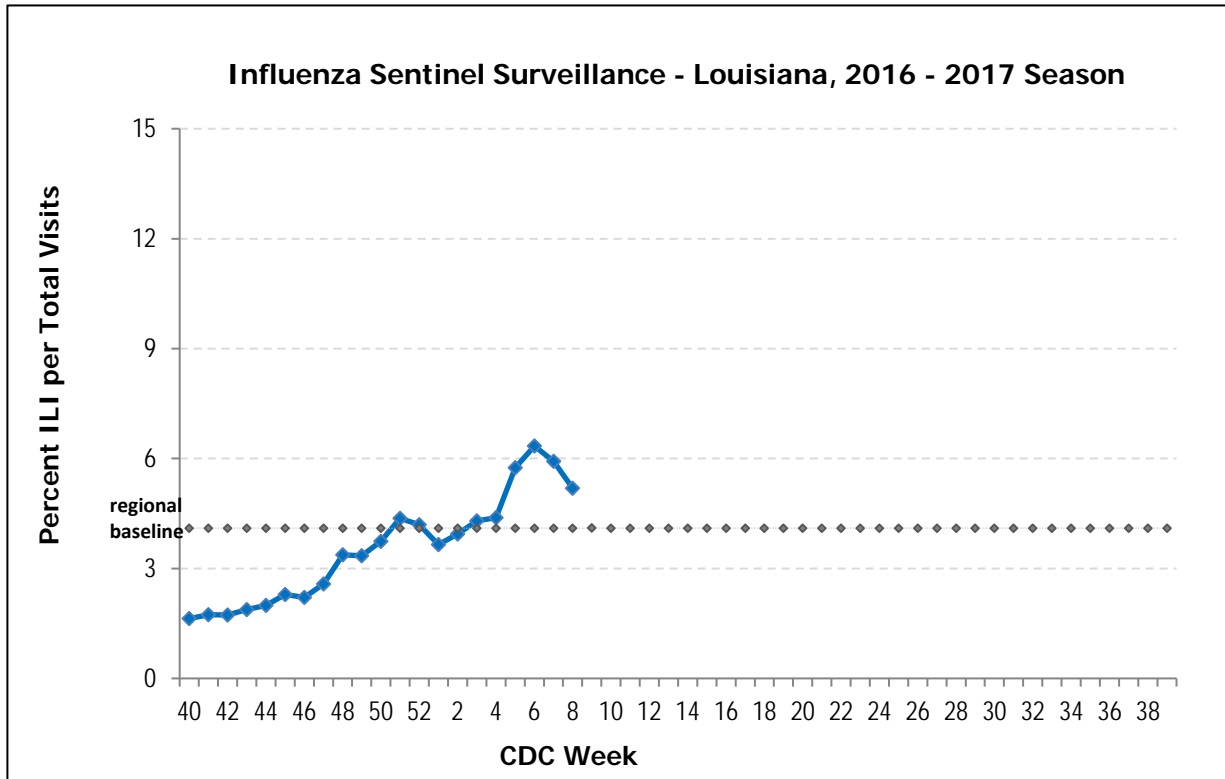


Laboratory testing: Not all sentinel sites have access to laboratory testing. However, many hospitals and physicians' offices do perform some influenza testing. Sites that test for influenza report the number of positive tests each week and the total number of tests performed each week. This information is included on page 3 of this report.

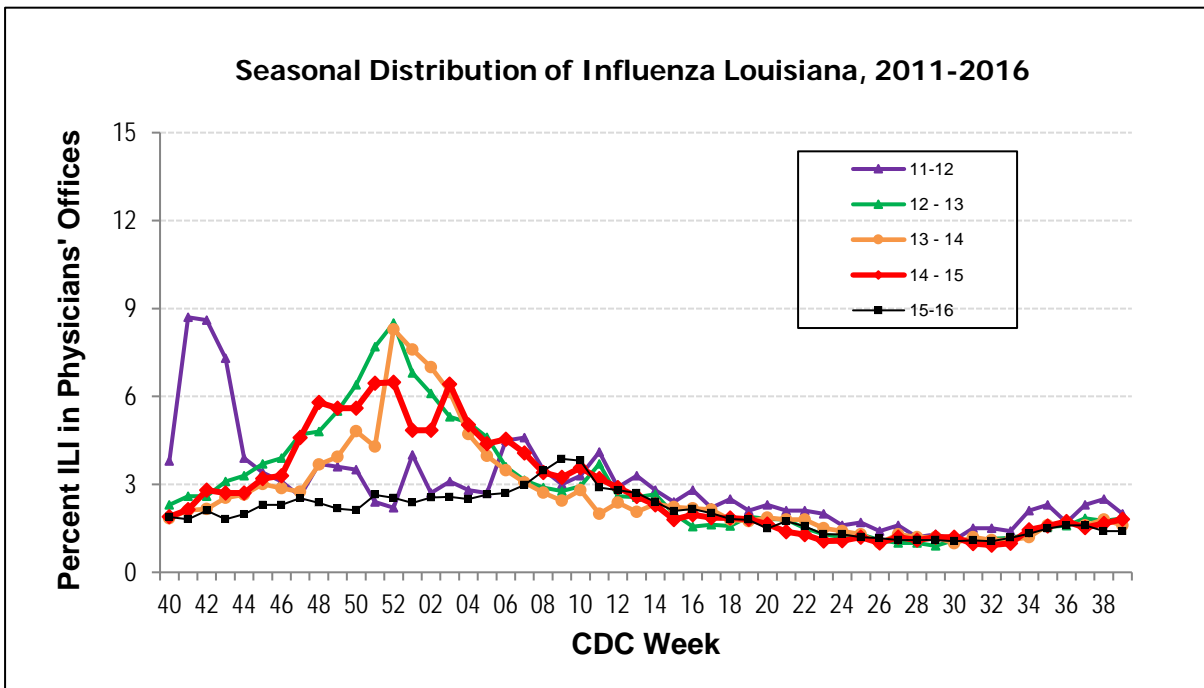
- Page 2 : ILI Activity
- Page 3: Virologic Surveillance
- Page 4: Geographic Distribution
- Page 5-6: Regional & National Data

2016-2017 Season

This graph shows the percentage of visits for ILI over the total number of visits for sentinel surveillance sites. This is the best approach to estimate the magnitude of influenza transmission. ILI counts do include some viral infections other than influenza, but experience over the last 50 years has shown that this approach is a reliable method to estimate influenza transmission. It does not show which strain of influenza virus is responsible. The page on lab surveillance does show the proportion of specimens attributable to each virus strain.

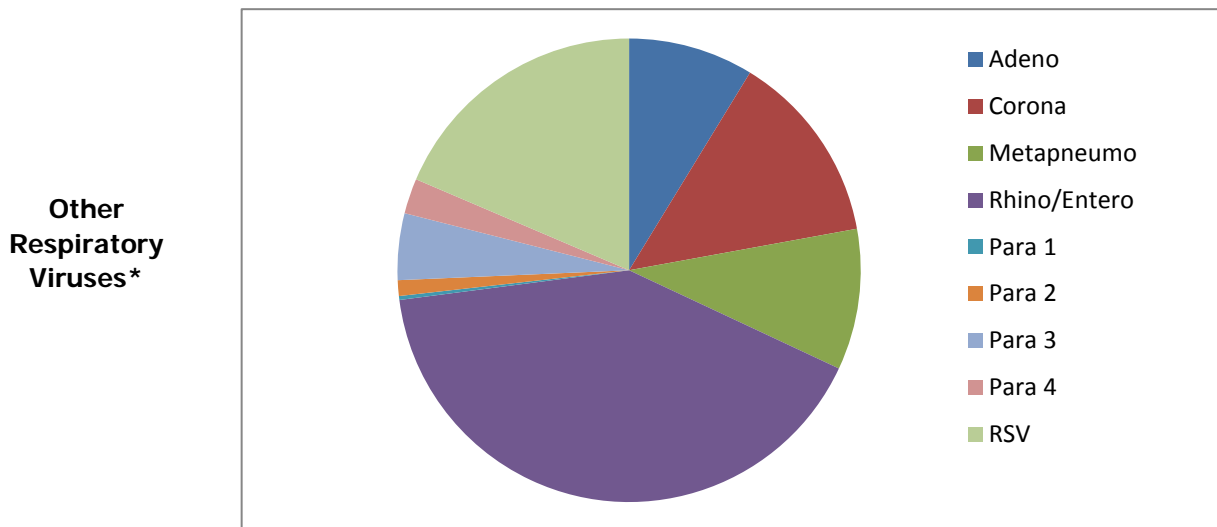
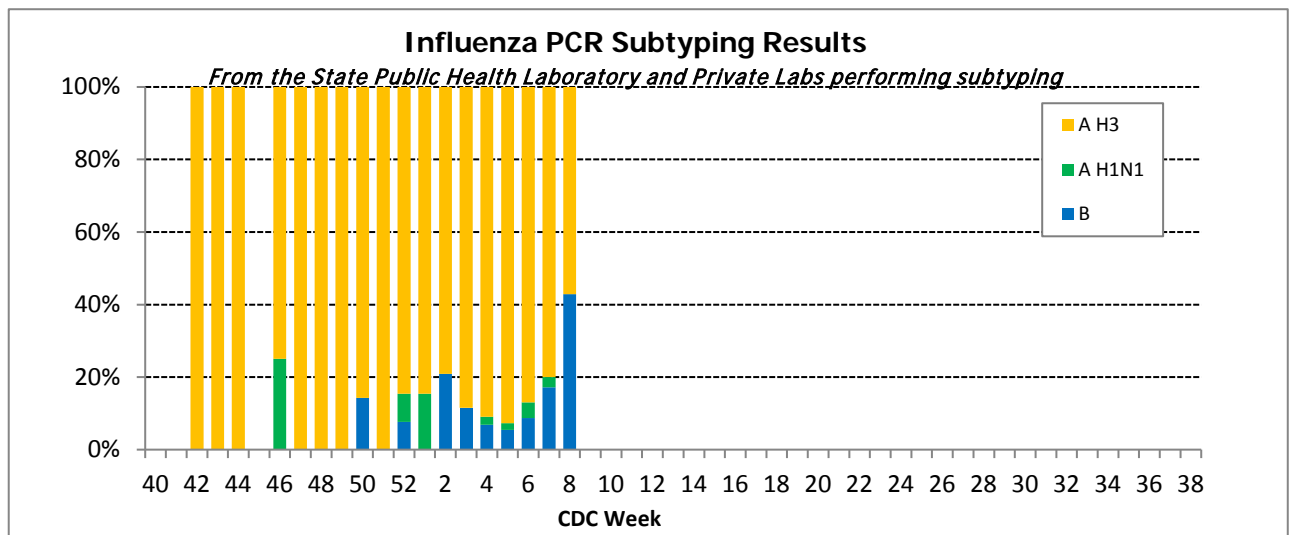
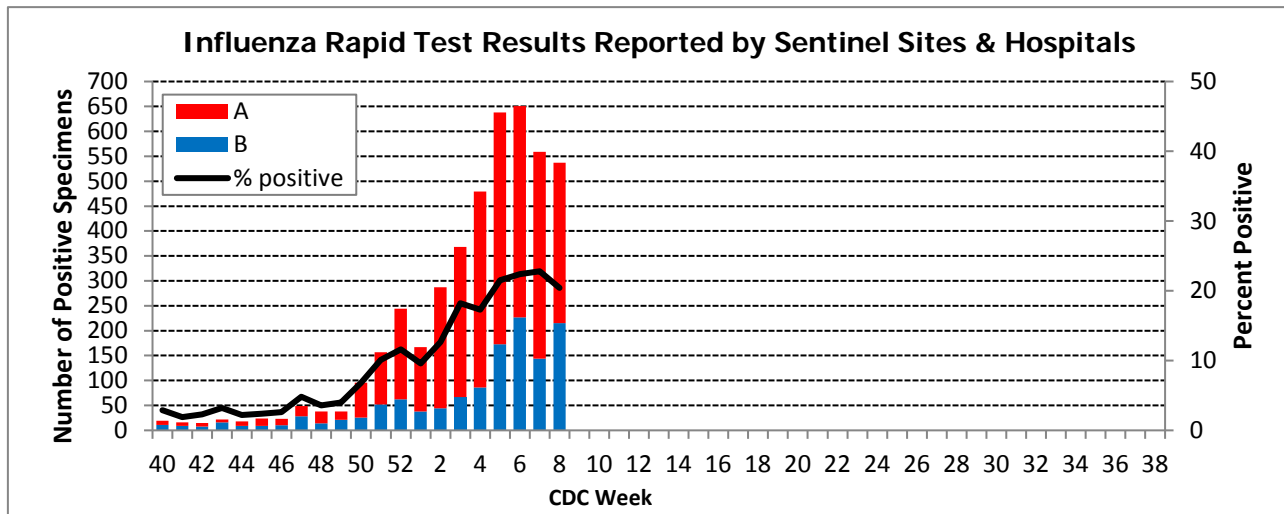


This graph shows the data on ILI surveillance among sentinel physicians' over the past 5 seasons to enable comparisons with previous years and better estimate the amplitude of this season's influenza transmission.



2016-2017 Season

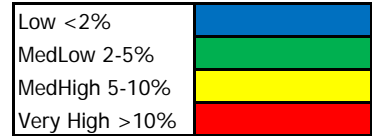
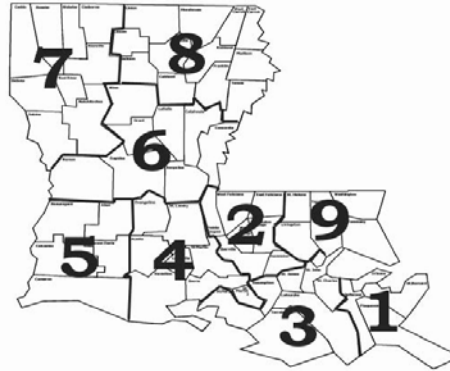
Virologic Surveillance



*Based on results from the State Public Health Laboratory Respiratory Virus Panel (RVP) Testing and other labs reporting RVP results over the last 4 weeks.

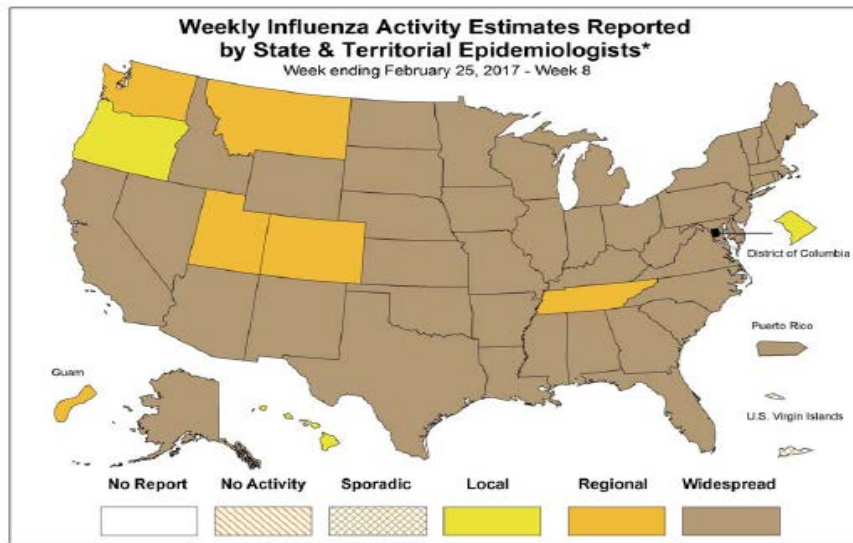
2016-2017 Season

Geographical Distribution of ILI



* %ILI over the last 4 weeks based on sentinel surveillance data

Geographic Spread of Influenza as Assessed by State and Territorial Epidemiologists



* This map indicates geographic spread & does not measure the severity of influenza activity

Influenza-Like Illness (ILI) Activity Level Indicator Determined by Data Reported to ILINet 2016-17 Influenza Season Week 8 ending Feb 25, 2017

ILINet Activity Indicator Map



2016-2017 Season

National Surveillance

During week 8, influenza activity remained elevated in the United States.

The proportion of deaths attributed to pneumonia and influenza (P&I) was above the system-specific threshold in the National Center for Health Statistic (NCHS) Mortality Surveillance System.

Six influenza-associated pediatric deaths were reported.

Proportion of outpatient visits for influenza-like illness (ILI) was 4.8%, which is above the national baseline of 2.2%.

Clinical Laboratory Data

	Week 8	Data Cumulative since October 2, 2016 (week 40)
No. of specimens tested	35,124	535,763
No. of positive specimens (%)	8,515 (24.2%)	70,953 (13.2%)
<i>Positive specimens by type</i>		
Influenza A	6,300 (74.0%)	59,631 (84.0%)
Influenza B	2,215 (26.0%)	11,322 (16.0%)

Public Health Laboratory Data

	Week 8	Data Cumulative since October 2, 2016 (week 40)
No. of specimens tested	1,924	52,547
No. of positive specimens*	1,070	24,517
<i>Positive specimens by type/subtype</i>		
Influenza A	884 (82.6%)	22,167 (90.4%)
A(H1N1)pmd09	26 (2.9%)	534 (2.4%)
H3	804 (91.0%)	21,303 (96.1%)
Subtyping not performed	54 (6.1%)	330 (1.5%)
Influenza B	186 (17.4%)	2,350 (9.6%)
Yamagata lineage	82 (44.1%)	1,067 (45.4%)
Victoria lineage	27 (14.5%)	707 (30.1%)
Lineage not performed	77 (41.4%)	576 (24.5%)

HHS Surveillance Region Data:

*U.S. Outpatient Influenza-like Illness Surveillance Network (ILINet) 2016-2017 Influenza Season
HHS Region 6 (AR, LA, NM, OK, and TX) (Baseline: 4.1%) Data as of Friday, March 3, 2017*

Week	# Sites Reporting	ILI 0-4 years	ILI 5-24 years	ILI 25-49 years	ILI 50-64 years	ILI 65 years and older	Total Patient ILI	Total Visits	% Unweighted ILI	% Weighted ILI
201705	289	1436	3191	1476	676	409	7188	111220	6.5	8.2
201706	294	1558	3942	1921	904	542	8867	114728	7.7	10.0
201707	265	1270	3133	1736	785	435	7359	103880	7.1	8.9
201708	280	1272	2774	1490	758	417	6711	103394	6.5	8.3

Region 6 (AR, LA, NM, OK, TX)

CDC Week	Public Health Labs	Public Health Specimens Tested	AUNK	AH1N1 pdm09	AH3N2	AH3N2v B	BVic	BYam	Clinical Labs	Clinical Specimens Tested	Clinical Flu Positive	% Positive	A	B
201705	9	360	2	4	152	0	4	2	12	29	5794	1315	22.70	1098 217
201706	10	349	0	4	163	0	3	2	9	29	7125	1827	25.64	1491 336
201707	7	327	1	2	134	0	13	2	6	27	6493	1645	25.33	1316 329
201708	6	169	0	5	62	0	5	0	6	20	5312	1276	24.02	985 291

2016-2017 Season

Antiviral Resistance:

Neuraminidase Inhibitor Resistance Testing Results on Samples Collected Since October 1, 2016

	Oseltamivir		Zanamivir		Peramivir	
	Virus Samples tested (n)	Resistant Viruses, Number (%)	Virus Samples tested (n)	Resistant Viruses, Number (%)	Virus Samples tested (n)	Resistant Viruses, Number (%)
Influenza A (H1N1)pdm09	152	0 (0.0)	152	0 (0.0)	152	0 (0.0)
Influenza A (H3N2)	954	0 (0.0)	954	0 (0.0)	753	0 (0.0)
Influenza B	311	0 (0.0)	311	0 (0.0)	311	0 (0.0)

Antigenic Characterization: CDC has antigenically characterized 766 influenza viruses [112 influenza A (H1N1)pdm09, 399 influenza A (H3N2), and 255 influenza B viruses] collected by U.S. laboratories since October 1, 2016.

Influenza A Virus [511]

A (H1N1)pdm09 [112]: All 112 (100%) influenza A (H1N1)pdm09 viruses were antigenically characterized using ferret post-infection antisera as A/California/7/2009-like, the influenza A (H1N1) component of the 2016-2017 Northern Hemisphere vaccine.

A (H3N2) [399]: 387 of 399 (97.0%) influenza A (H3N2) viruses were antigenically characterized as A/Hong Kong/4801/2014-like, a virus that belongs in genetic group 3C.2a and is the influenza A (H3N2) component of the 2016-2017 Northern Hemisphere vaccine, by HI testing or neutralization testing. Among the viruses which reacted poorly with ferret antisera raised against A/Hong Kong/4801/2014-like viruses, 9 out of 12 (75%) are more closely related to A/Switzerland/9715293/2013, a virus belonging to genetic group 3C.3a.

Influenza B Virus [255]

Victoria Lineage [134]: 123 of 134 (91.8%) B/Victoria-lineage viruses were antigenically characterized using ferret post-infection antisera as B/Brisbane/60/2008-like, which is included as an influenza B component of the 2016-2017 Northern Hemisphere trivalent and quadrivalent influenza vaccines.

Yamagata Lineage [121]: All 121 (100%) B/Yamagata-lineage viruses were antigenically characterized using ferret post-infection antisera as B/Phuket/3073/2013-like, which is included as an influenza B component of the 2016-2017 Northern Hemisphere quadrivalent influenza vaccines.