

Influenza Surveillance Report

www.infectiousdisease.dhh.louisiana.gov

Week 43: 10/23/16 - 10/29/16

Influenza activity remains low in Louisiana. The most commonly reported other respiratory viruses are Rhino/Enterovirus and Adenovirus.

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.

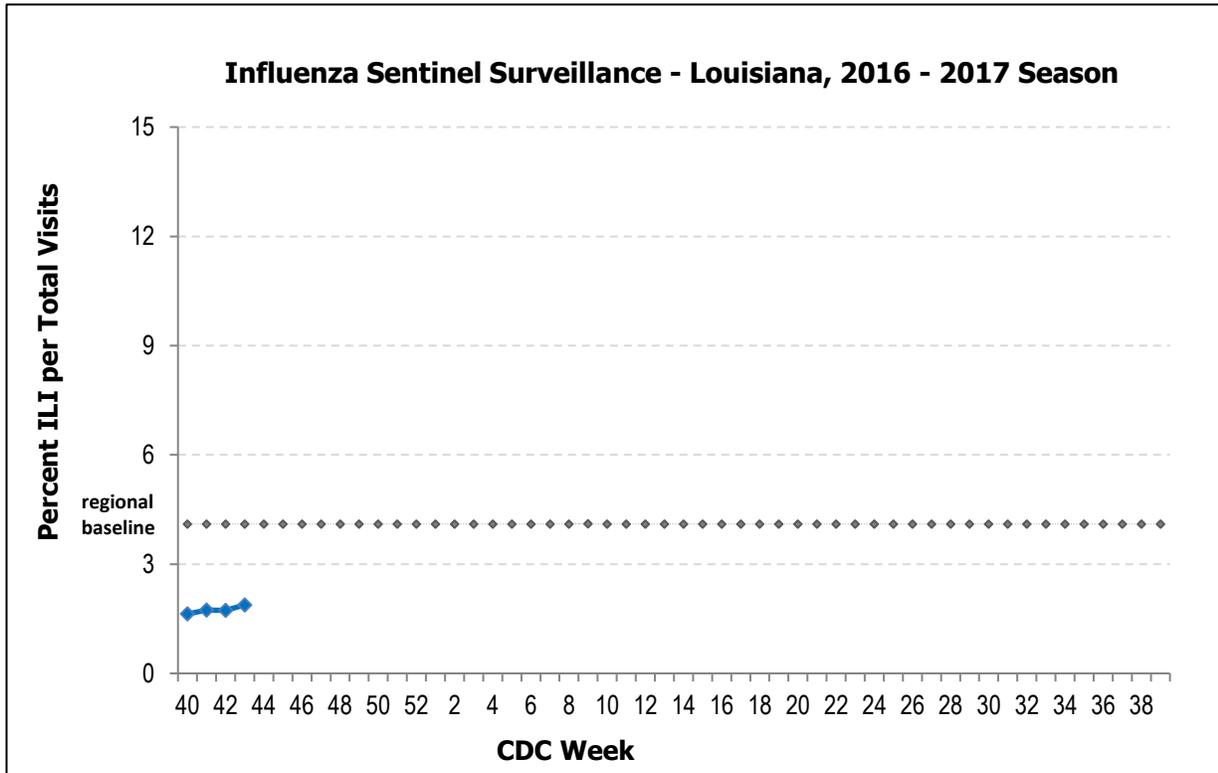


Laboratory testing: Not all sentinel sites have access to laboratory testing. However, many hospitals and physicians' offices do perform some influenza testing. Sites that test for influenza report the number of positive tests each week and the total number of tests performed each week. This information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

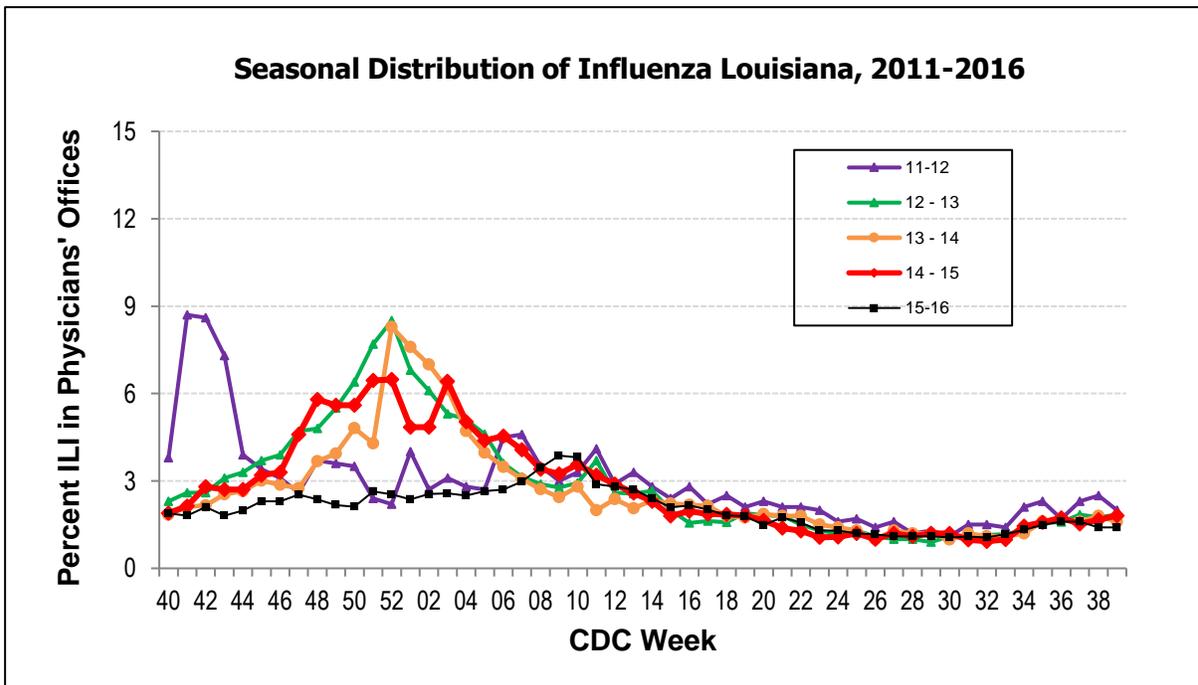
Page 2 : ILI Activity
Page 3: Virologic Surveillance
Page 4: Geographic Distribution
Page 5-6: Regional & National Data

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.

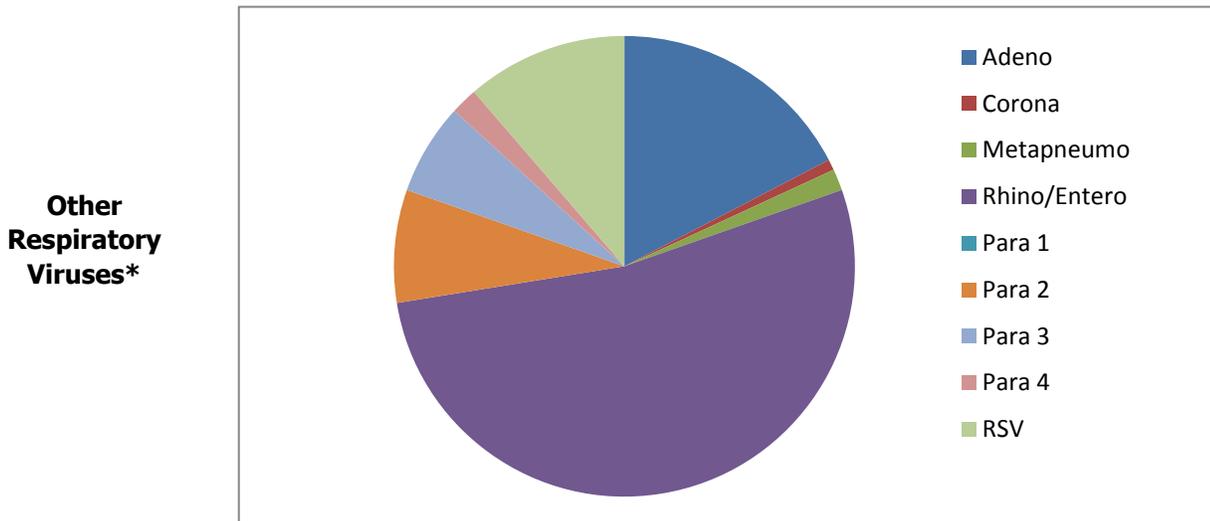
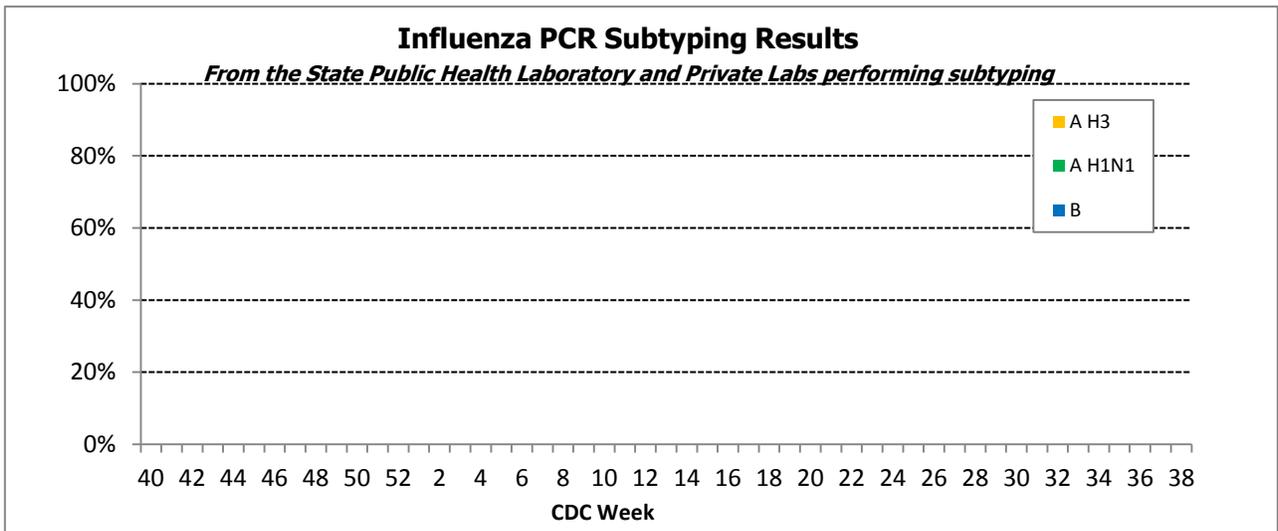
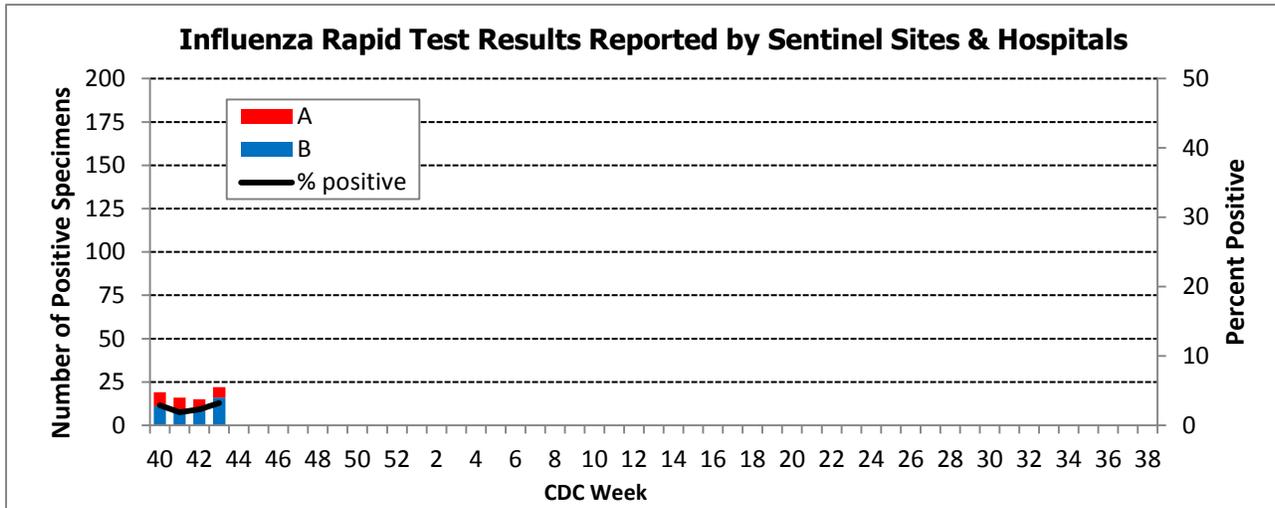


This graph shows the data on ILI surveillance among sentinel physicians' over the past 5 seasons to enable comparisons with previous years and better estimate the amplitude of this season's influenza transmission.



2016-2017 Season

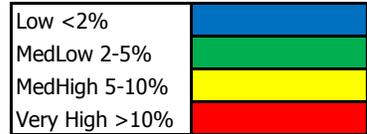
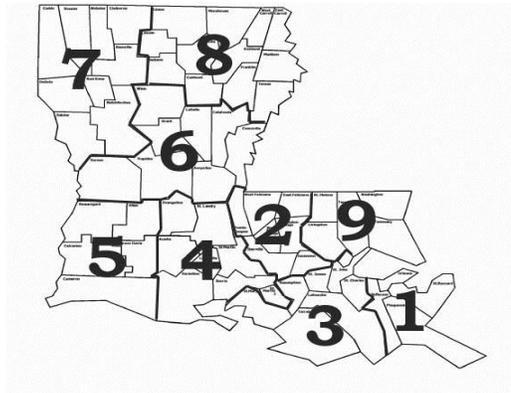
Virologic Surveillance



*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.

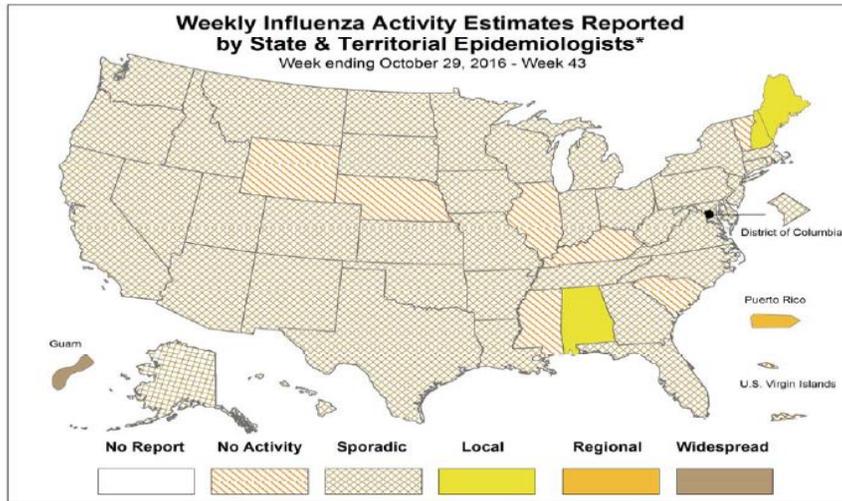
2016-2017 Season

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 43 ending Oct 29, 2016

ILINet Activity Indicator Map



2016-2017 Season

National Surveillance

During week 43, influenza activity was low in the United States.

The proportion of deaths attributed to pneumonia and influenza (P&I) was below the system-specific epidemic threshold.

Two influenza-associated pediatric deaths were reported that occurred during the 2015-2016 season. Proportion of outpatient visits for influenza-like illness (ILI) was 1.3%, which is below the national baseline of 2.2%.

Clinical Laboratory Data

	Week 43	Cumulative
Specimens tested	10,890	49,484
Positive specimens	177 (1.6%)	761 (1.5%)
<i>Positive specimens by type</i>		
Influenza A	116 (65.5%)	444 (58.3%)
Influenza B	61 (34.5%)	317 (41.7%)

Public Health Laboratory Data

	Week 43	Cumulative
Specimens tested	493	2,822
Positive specimens	33	239
<i>Positive specimens by type/subtype</i>		
Influenza A	28 (84.8%)	217 (90.8%)
A (2009 H1N1)	6 (21.4%)	25 (11.5%)
A (H3)	21 (75.0%)	184 (84.8%)
A (subtyping not performed)	1 (3.6%)	8 (3.7%)
Influenza B	5 (15.2%)	22 (9.2%)
Yamagata lineage	1 (20.0%)	7 (31.8%)
Victoria lineage	0 (0.0%)	3 (13.6%)
Lineage not performed	0 (0.0%)	12 (54.5%)

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, November 4, 2016*

CDC 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 ILI	Total Patient Visits	Unweighted % ILI	Weighted % ILI
201640	237	487	582	308	117	94	1588	96019	1.7	1.9
201641	239	463	593	286	97	98	1537	92621	1.7	1.8
201642	231	449	520	286	106	101	1462	92311	1.6	1.7
201643	208	494	600	276	97	72	1539	82560	1.9	2.0
<i>Totals</i>							6126	363511		

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
201640	7	37	0	1	0	0	0	0	0	30	1705	39	2.29	25	14
201641	6	33	0	0	0	0	0	0	0	29	1788	26	1.45	14	12
201642	8	54	0	1	0	0	0	1	2	28	1776	18	1.01	10	8
201643	5	28	0	1	0	0	0	0	1	24	1405	16	1.14	12	4
Total	0	152	0	3	0	0	0	1	3	.	6674	99	1.48	61	38

2016-2017 Season

Antiviral Resistance:

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

	Viruses tested (n)	Resistant Viruses, Number (%)	Viruses tested (n)	Resistant Viruses, Number	Viruses tested (n)	Resistant Viruses, Number (%)
		Oseltamivir		Zanamivir		Peramivir
2009 Influenza A (H1N1)	0	0 (0%)	0	0 (0%)	0	0 (0%)
Influenza A (H3N2)	7	0 (0%)	7	0 (0%)	7	0 (0%)
Influenza B	3	0 (0%)	3	0 (0%)	3	0 (0%)

Antigenic Characterization: During May 22 – October 29, 2016, CDC has antigenically characterized 173 influenza viruses [19 influenza A (H1N1)pdm09, 86 influenza A (H3N2), and 68 influenza B viruses] collected by U.S. laboratories.

Influenza A Virus [105]

A (H1N1)pdm09 [19]: All 19 (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) [86]: 73 (84.9%) of 86 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, 12 of 13 (92.3%) are more closely related to A/Switzerland/9715293/2013), a virus belonging to genetic group 3C.3a.

Influenza B Virus [68]

Victoria Lineage [31]: All 31 (100%) 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 [37]: All 37 (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.