

Influenza Surveillance Report

www.infectiousdisease.dhh.louisiana.gov

Week 49: 12/4/16 - 12/10/16

Influenza activity is increasing in Louisiana but remains below the regional baseline. The most commonly reported other respiratory viruses are Rhino/Enterovirus, Adenovirus, and RSV.

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

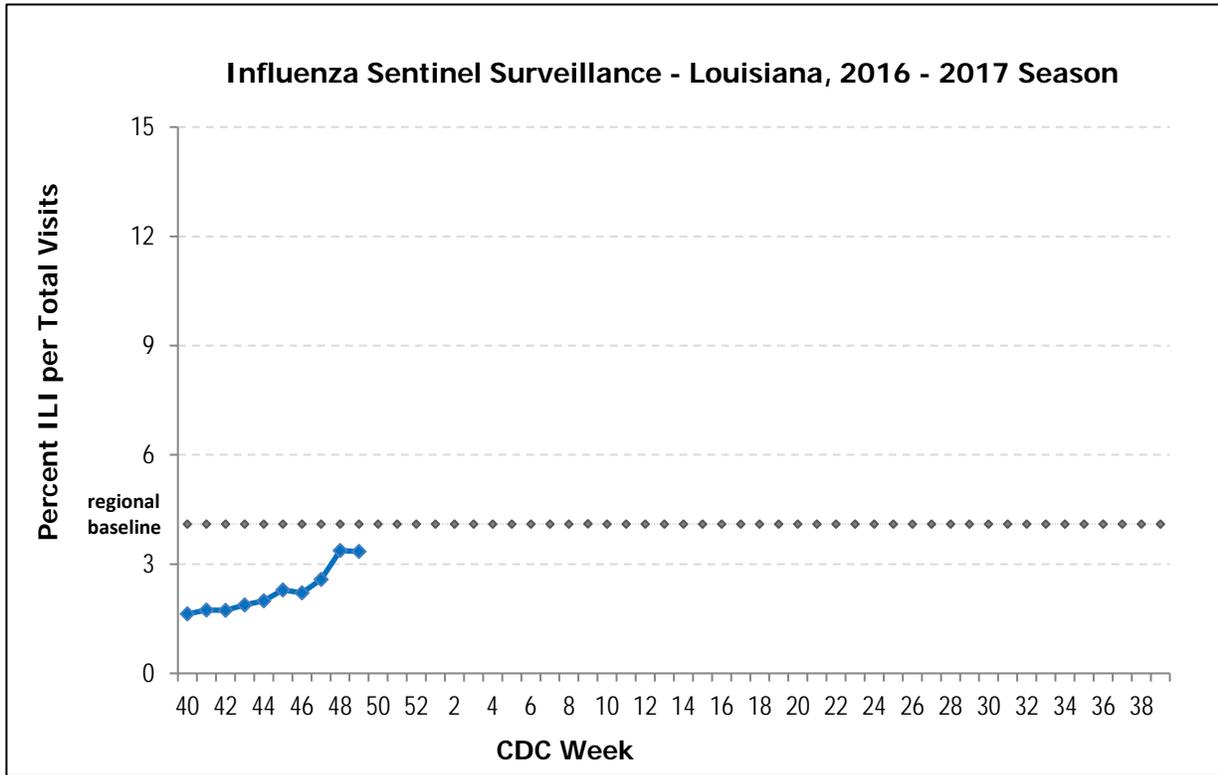
Page 3: Virologic Surveillance

Page 4: Geographic Distribution

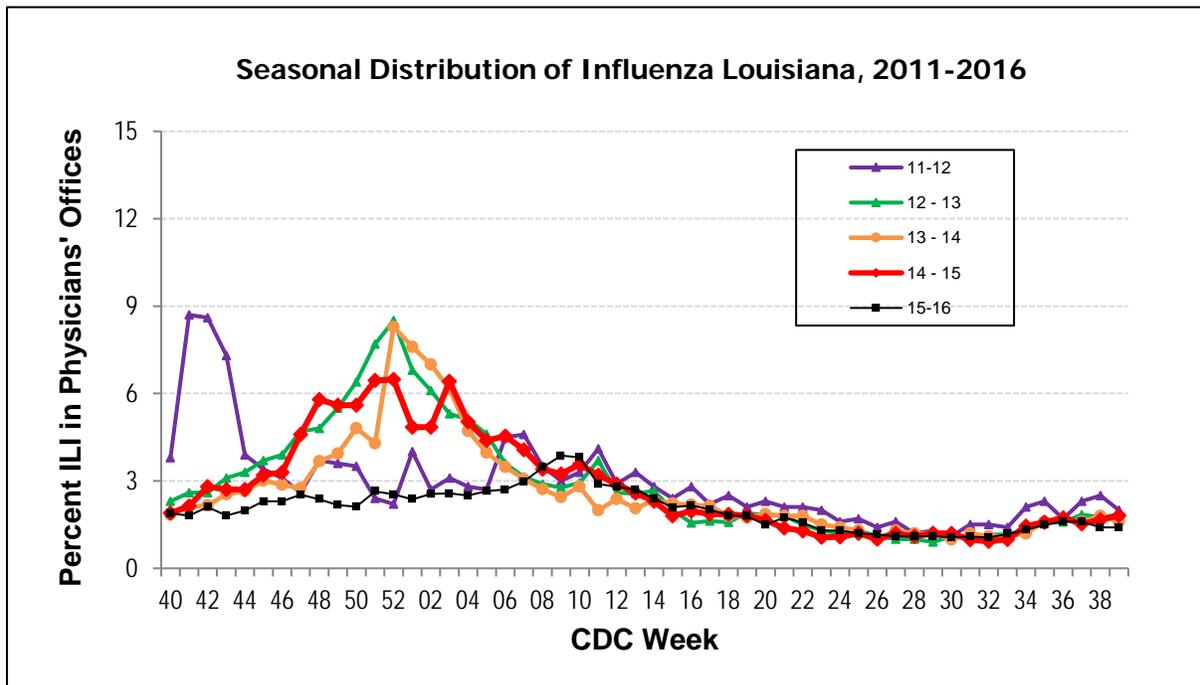
Page 5-6: Regional & National Data

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.

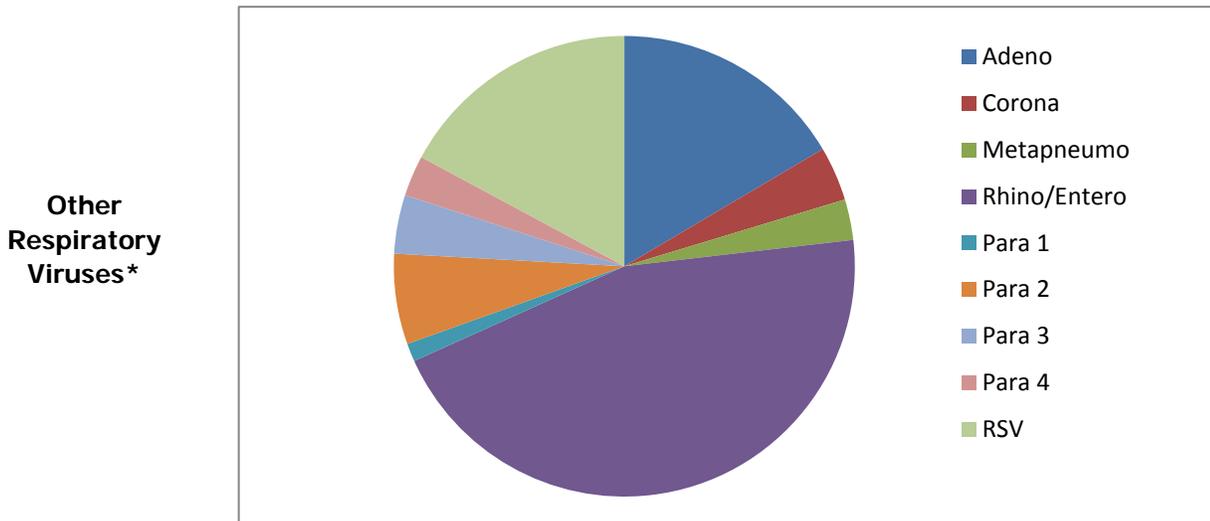
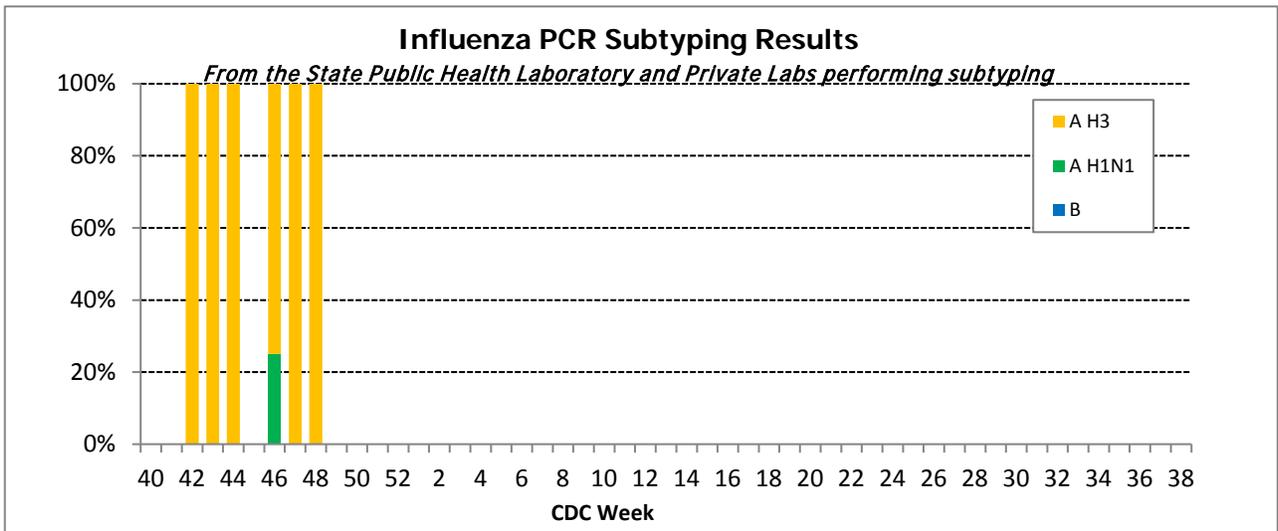
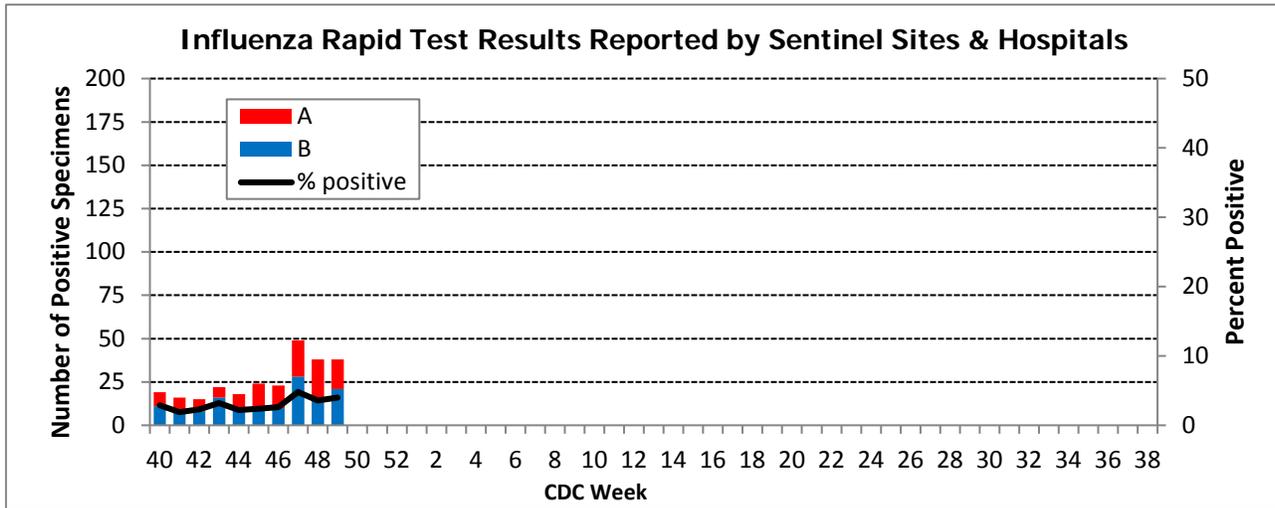


This graph shows the data on ILI surveillance among sentinel physicians' over the past 5 seasons to enable comparisons with previous years and better estimate the amplitude of this season's influenza transmission.



2016-2017 Season

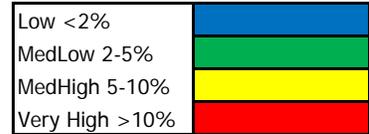
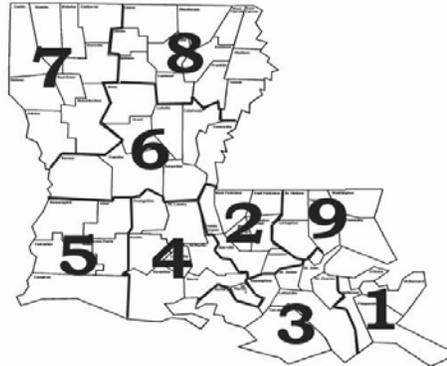
Virologic Surveillance



*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.

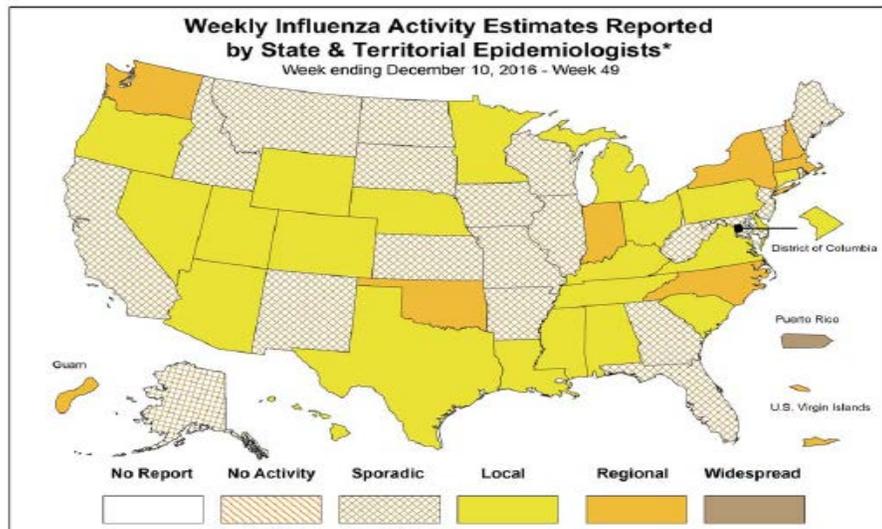
2016-2017 Season

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

ILINet Activity Indicator Map

Influenza-Like Illness (ILI) Activity Level Indicator Determined by Data Reported to ILINet
2016-17 Influenza Season Week 49 ending Dec 10, 2016



2016-2017 Season

National Surveillance

During week 49, influenza activity increased slightly in the United States.

Due to data processing problems, the mortality surveillance data was not published this week.

No influenza-associated pediatric deaths were reported.

Proportion of outpatient visits for influenza-like illness (ILI) was 1.9%, which is below the national baseline of 2.2%.

Clinical Laboratory Data

	Week 49	Data Cumulative since October 2, 2016 (week 40)
No. of specimens tested	15,117	157,423
No. of positive specimens (%)	728 (4.8%)	3,928 (2.5%)
Positive specimens by type		
Influenza A	575 (79.0%)	2,720 (69.2%)
Influenza B	153 (21.0%)	1,208 (30.8%)

Public Health Laboratory Data

	Week 49	Data Cumulative since October 2, 2016 (week 40)
No. of specimens tested	928	10,585
No. of positive specimens*	206	1,533
Positive specimens by type/subtype		
Influenza A	198 (96.1%)	1,396 (91.1%)
A(H1N1)pmd09	6 (3.0%)	85 (6.1%)
H3	158 (79.8%)	1,201 (86.0%)
Subtyping not performed	34 (17.2%)	110 (7.9%)
Influenza B	8 (3.9%)	137 (8.9%)
Yamagata lineage	2 (25.0%)	29 (21.2%)
Victoria lineage	3 (37.5%)	47 (34.3%)
Lineage not performed	3 (37.5%)	61 (44.5%)

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, December 16, 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	Patient Visits	Total	%	%
						and older					
201645	241	630	611	344	141	114	1840	89845	2.0	2.1	
201646	241	697	704	326	148	125	2000	95466	2.1	2.3	
201647	275	716	586	373	173	136	1984	83841	2.4	2.5	
201648	277	839	798	537	295	156	2625	96967	2.7	2.5	
201649	274	814	960	585	289	159	2807	93339	3.0	2.9	
Totals							19369	938424			

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

CDC Week	Public Health Labs	Public Health Specimens Tested	AUNK_POS	AH1N1 pdm09	AH3N2	AH3N2v	B	BVic	BYam	Clinical Labs	Clinical Specimens Tested	Clinical Flu Positive	% Positive	A	B
201645	7	77	0	1	2	0	0	2	0	29	2371	41	1.73	20	21
201646	8	107	0	3	4	0	0	0	0	29	2744	67	2.44	40	27
201647	8	61	0	0	6	0	0	0	0	27	2345	45	1.92	31	14
201648	7	96	0	2	5	0	1	0	0	26	2646	50	1.89	28	22
201649	7	53	0	1	7	0	0	0	0	22	1933	66	3.41	44	22
Total	0	720	0	12	33	0	1	5	5	.	21445	438	2.04	250	188

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)pmd09	28	0 (0.0)	28	0 (0.0)	28	0 (0.0)
Influenza A (H3N2)	119	0 (0.0)	119	0 (0.0)	95	0 (0.0)
Influenza B	31	0 (0.0)	31	0 (0.0)	31	0 (0.0)

Antigenic Characterization: CDC has antigenically characterized 64 influenza viruses [24 influenza A (H1N1)pdm09, 26 influenza A (H3N2), and 14 influenza B viruses] collected by U.S. laboratories since October 1, 2016.

Influenza A Virus [50]

A (H1N1)pdm09 [24]: All 24 (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) [26]: All 26 (100%) 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.

Influenza B Virus [14]

Victoria Lineage [6]: 5 of 6 (83%) 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 [8]: All 8 (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.