

Influenza Surveillance Report

www.infectiousdisease.dhh.louisiana.gov

Week 16: 4/16/17 - 4/22/17

Influenza activity is low in Louisiana. The number of influenza B laboratory reports (rapid and PCR) continues to increase. Rhino/Enterovirus remains the most prevalent non-influenza respiratory virus reported.

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.

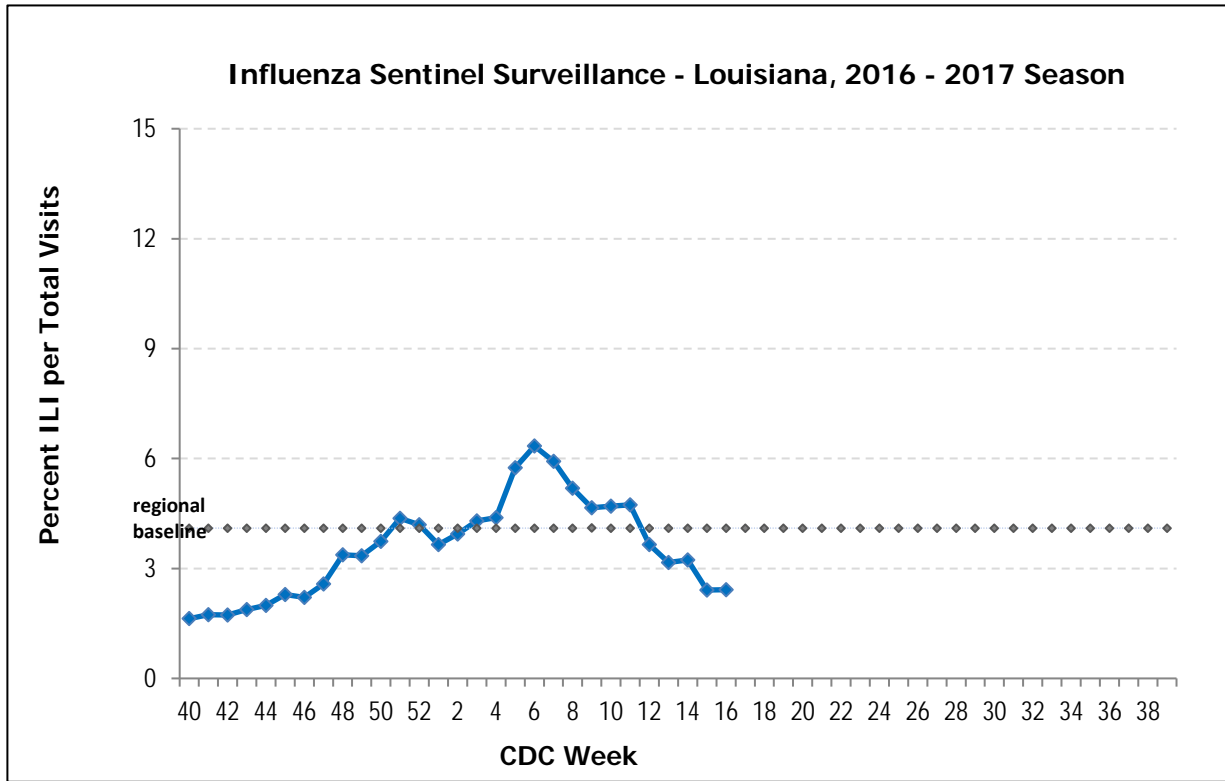


Laboratory testing: Not all sentinel sites have access to laboratory testing. However, many hospitals and physicians' offices do perform some influenza testing. Sites that test for influenza report the number of positive tests each week and the total number of tests performed each week. This information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

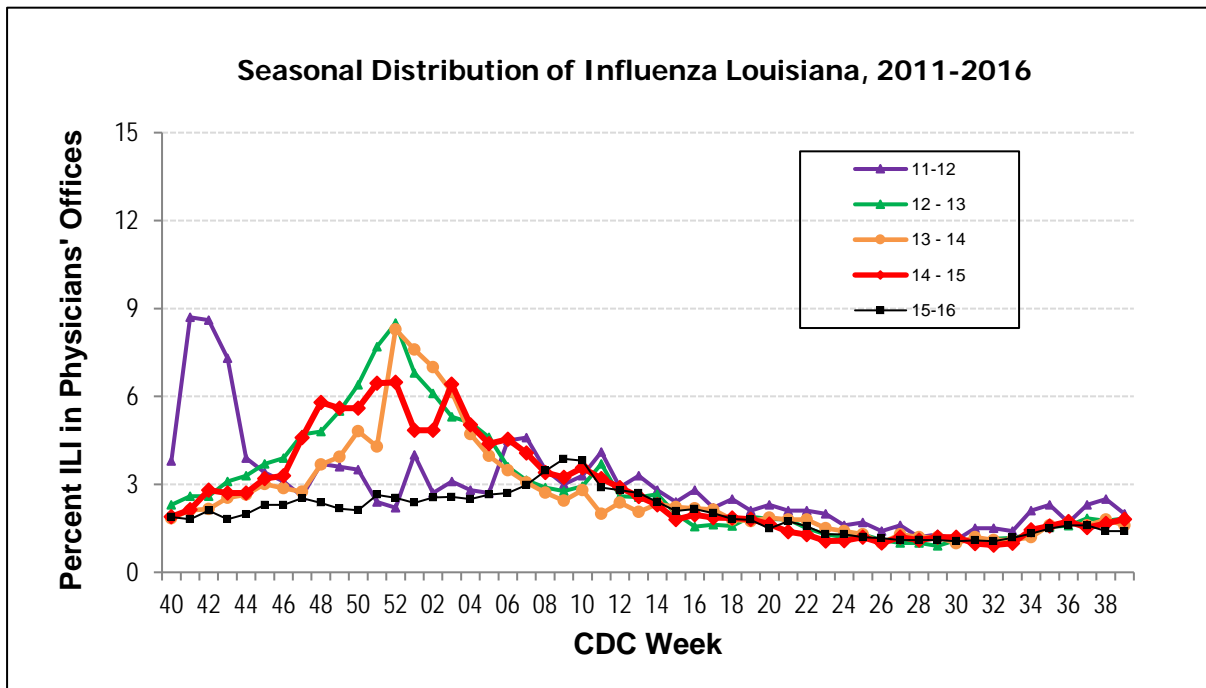
- Page 2 : ILI Activity
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- Page 4: Geographic Distribution
- Page 5-6: Regional & National Data

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.

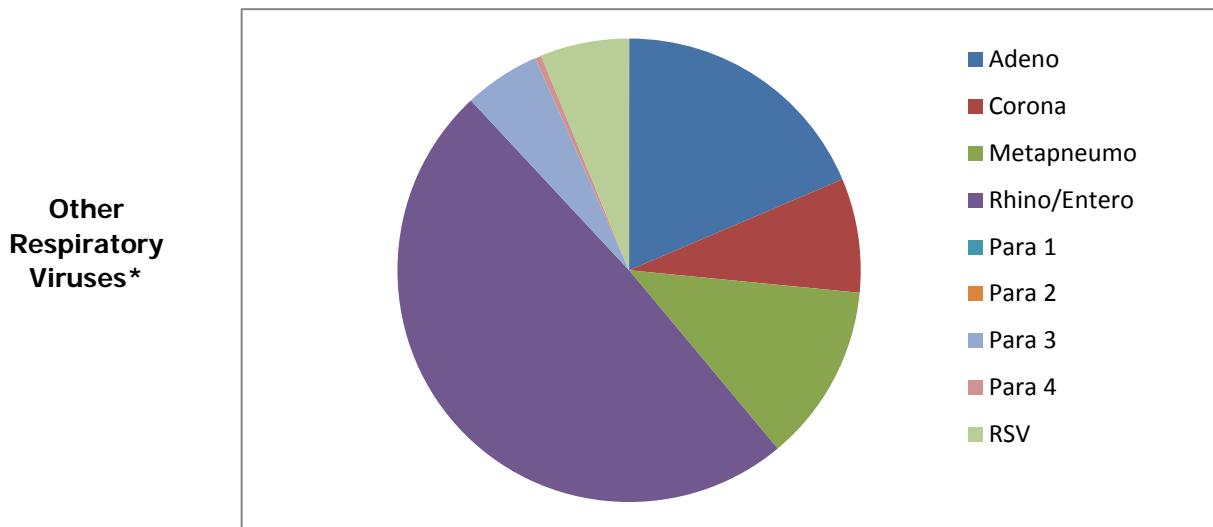
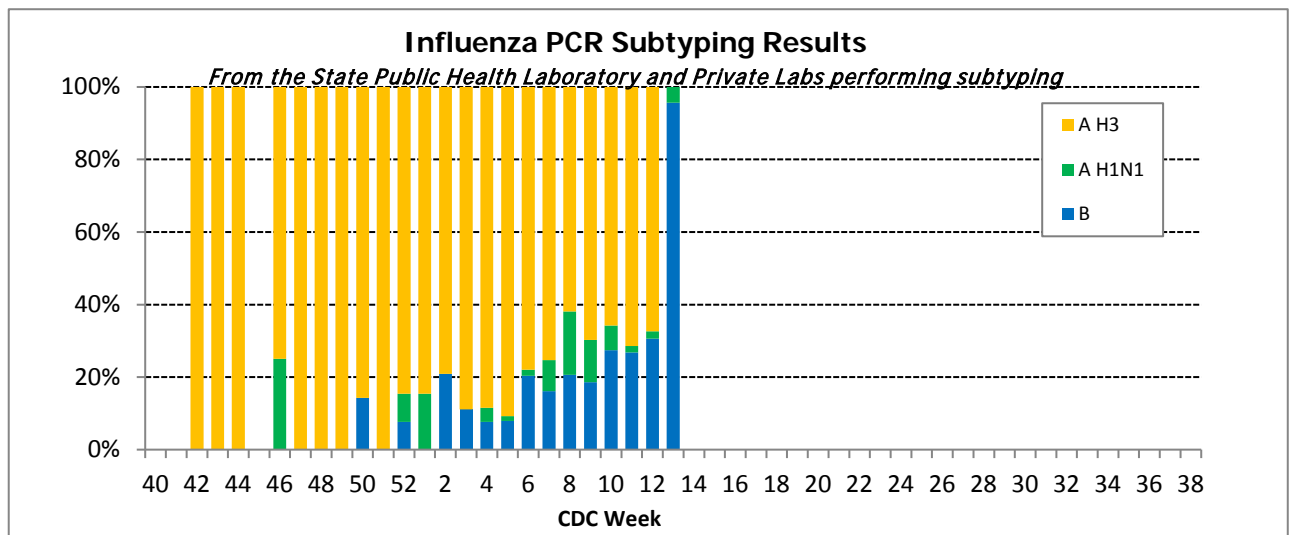
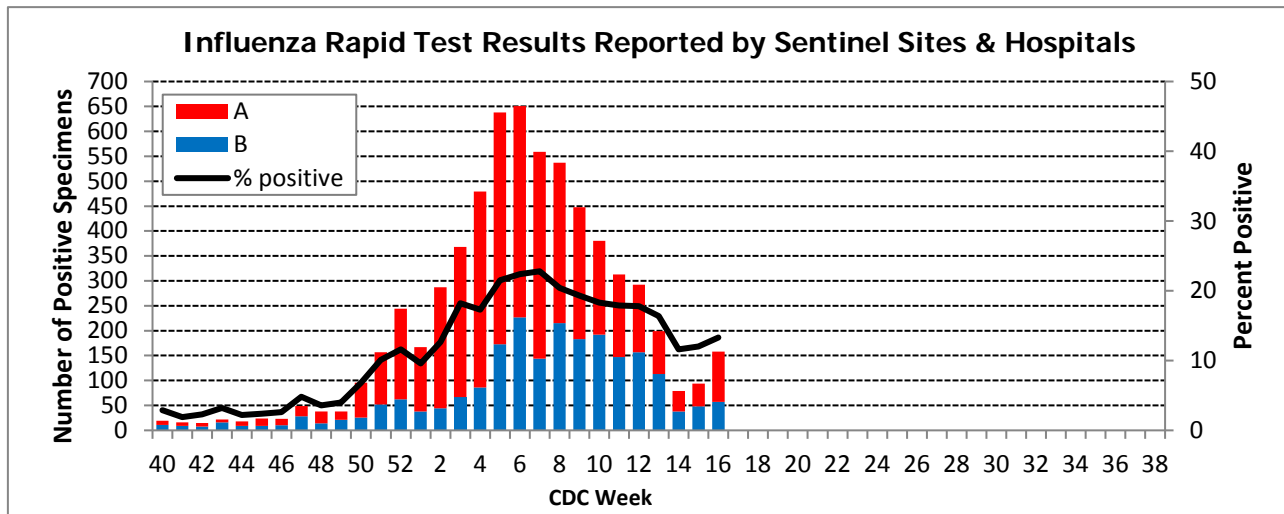


This graph shows the data on ILI surveillance among sentinel physicians' over the past 5 seasons to enable comparisons with previous years and better estimate the amplitude of this season's influenza transmission.



2016-2017 Season

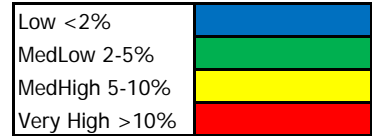
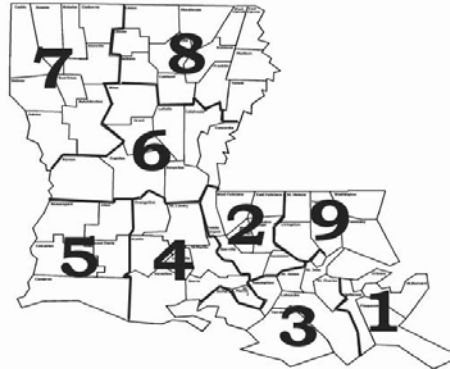
Virologic Surveillance



*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.

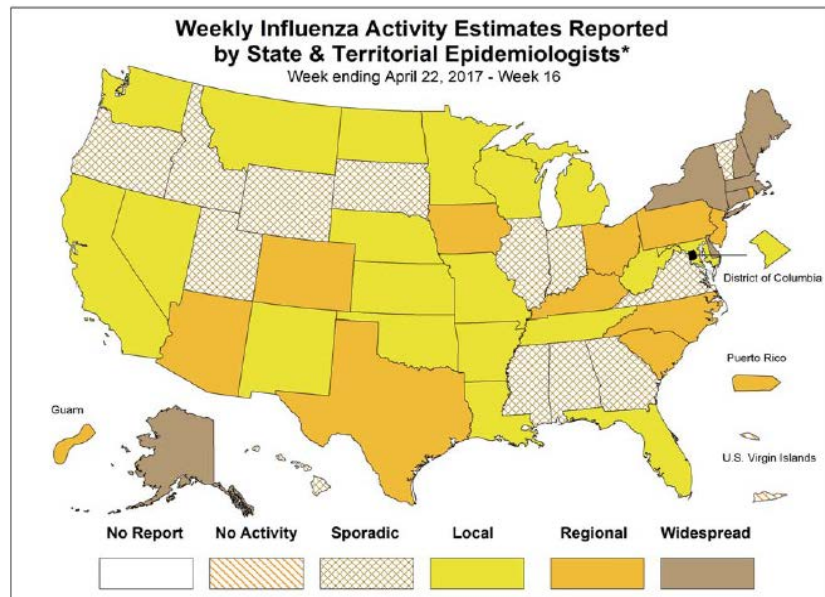
2016-2017 Season

Geographical Distribution of ILI



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

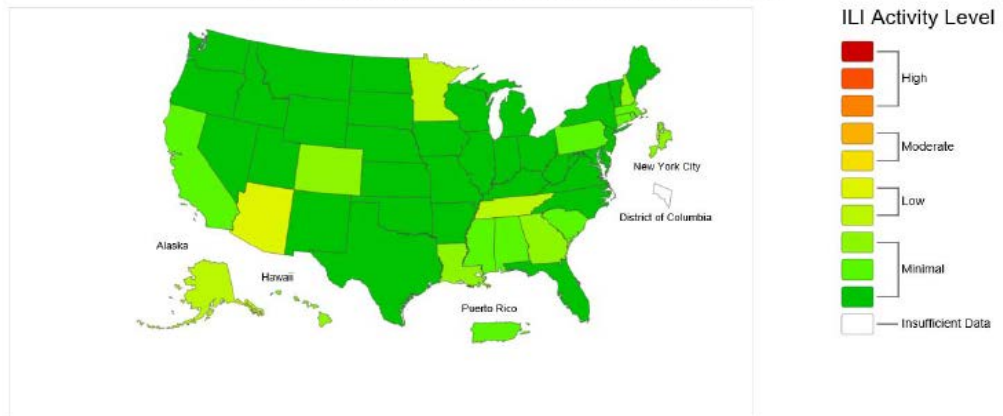
Geographic Spread of Influenza as Assessed by State and Territorial Epidemiologists



* 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 16 ending Apr 22, 2017

ILINet Activity Indicator Map



2016-2017 Season

National Surveillance

During week 16, influenza activity decreased in the United States.

The proportion of deaths attributed to pneumonia and influenza (P&I) was below 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 1.8%, which is below the national baseline of 2.2%.

Clinical Laboratory Data

	Week 16	Data Cumulative since October 2, 2016 (week 40)
No. of specimens tested	14,889	780,386
No. of positive specimens (%)	1,426 (9.6%)	114,386 (14.7%)
Positive specimens by type		
Influenza A	366 (25.7%)	82,359 (72.0%)
Influenza B	1,060 (74.3%)	32,027 (28.0%)

Public Health Laboratory Data

	Week 16	Data Cumulative since October 2, 2016 (week 40)
No. of specimens tested	597	78,425
No. of positive specimens*	215	38,611
Positive specimens by type/subtype		
Influenza A	66 (30.7%)	30,989 (80.3%)
A(H1N1)pdm09	2 (3.0%)	846 (2.7%)
H3	58 (87.9%)	29,804 (96.2%)
Subtyping not performed	6 (9.1%)	339 (1.1%)
Influenza B	149 (69.3%)	7,622 (19.7%)
Yamagata lineage	84 (56.4%)	4,059 (53.3%)
Victoria lineage	21 (14.1%)	1,747 (22.9%)
Lineage not performed	44 (29.5%)	1,816 (23.8%)

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, April 28, 2017										
						ILI 65 years and older	Total	%	%	
CDC	# Sites	ILI 0-4 years	ILI 5-24 years	ILI 25-49 years	ILI 50-64 years		Total	Patient	Unweighted	Weighted
Week	Reporting						ILI	Visits	ILI	ILI
201712	251	817	1399	899	425	246	3786	100705	3.8	4.5
201713	262	717	1195	765	335	191	3203	99102	3.2	3.8
201714	280	701	1115	690	320	191	3017	98436	3.1	3.4
201715	238	607	913	518	226	143	2407	94999	2.5	3.0
201716	252	587	753	450	232	179	2201	84652	2.6	3.4

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
201712	11	231	0	3	71	0	34	0	13	28	3813	686	17.99	354	332
201713	9	209	0	2	33	0	27	5	20	28	3639	463	12.72	221	242
201714	9	113	0	1	14	0	8	3	8	28	3049	344	11.28	139	205
201715	8	94	0	0	16	0	4	4	9	27	2657	248	9.33	88	160
201716	6	50	1	0	4	0	6	0	2	20	1307	64	4.90	30	34

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	291	0 (0.0)	277	0 (0.0)	291	0 (0.0)
Influenza A (H3N2)	2,071	0 (0.0)	2,071	0 (0.0)	1,169	0 (0.0)
Influenza B	694	0 (0.0)	694	0 (0.0)	694	0 (0.0)

Antigenic Characterization: CDC has antigenically characterized 1,479 influenza viruses [253 influenza A (H1N1)pdm09, 647 influenza A (H3N2), and 579 influenza B viruses] collected by U.S. laboratories since October 1, 2016.

Influenza A Virus [900]

A (H1N1)pdm09 [253]: 251 of 253 (99.2%) 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) [647]: 625 of 647 (96.6%) 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, 18 out of 22 (81.8%) are more closely related to A/Switzerland/9715293/2013, a virus belonging to genetic group 3C.3a.

Influenza B Virus [579]

Victoria Lineage [267]: 240 of 267 (89.9%) 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 [312]: All 312 (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.