

Influenza Surveillance Report

www.infectiousdisease.dhh.louisiana.gov

Week 14: 4/2/17 - 4/8/17

Influenza activity remains low in Louisiana. The percent of influenza positives also continues to decrease. The number of influenza B laboratory reports (rapid and PCR) continues to increase.

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

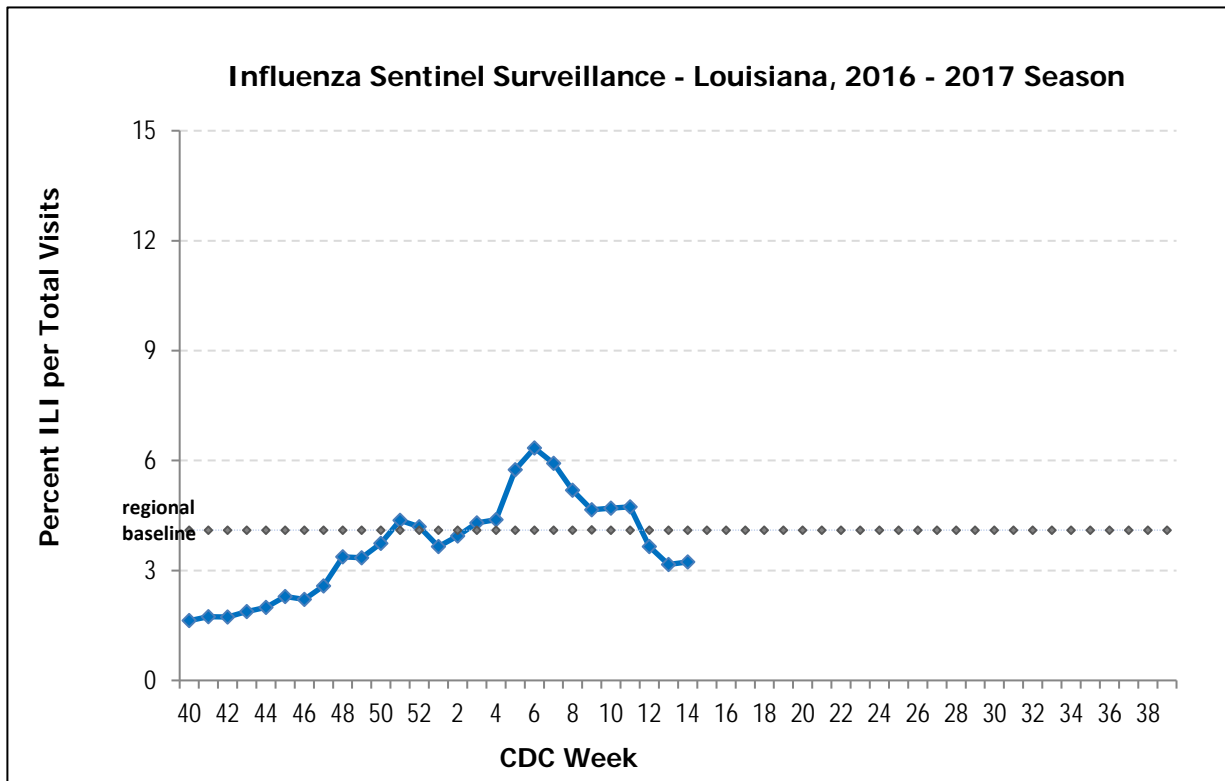
Page 3: Virologic Surveillance

Page 4: Geographic Distribution

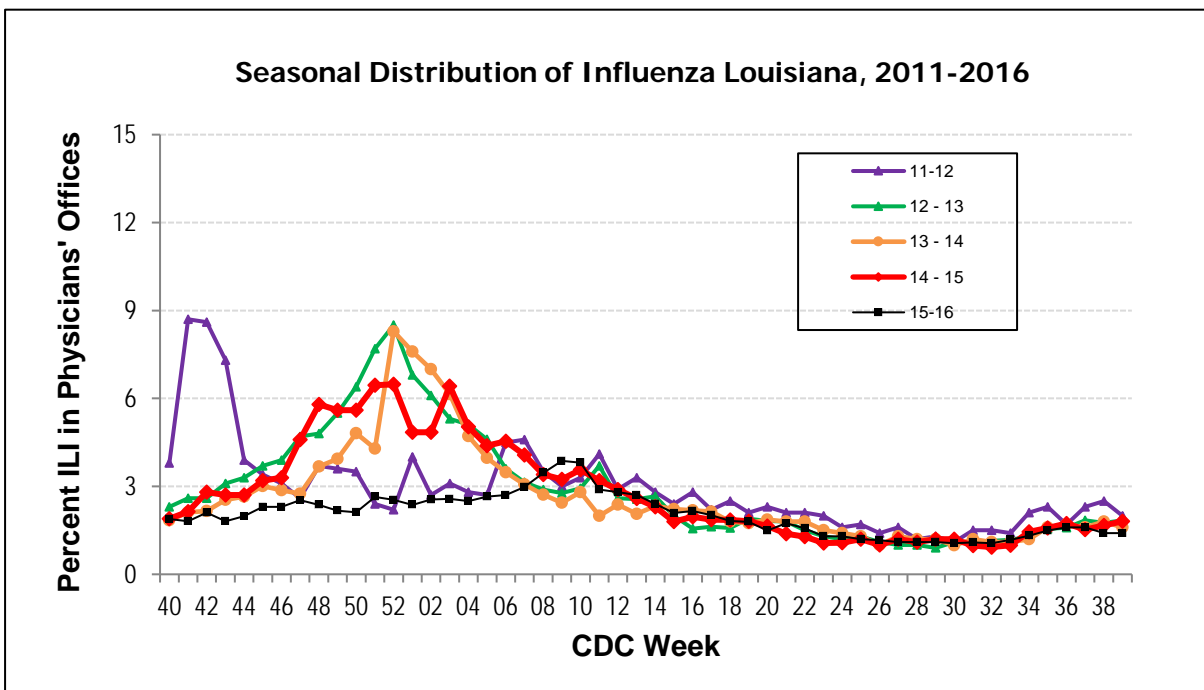
Page 5-6: Regional & National Data

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.

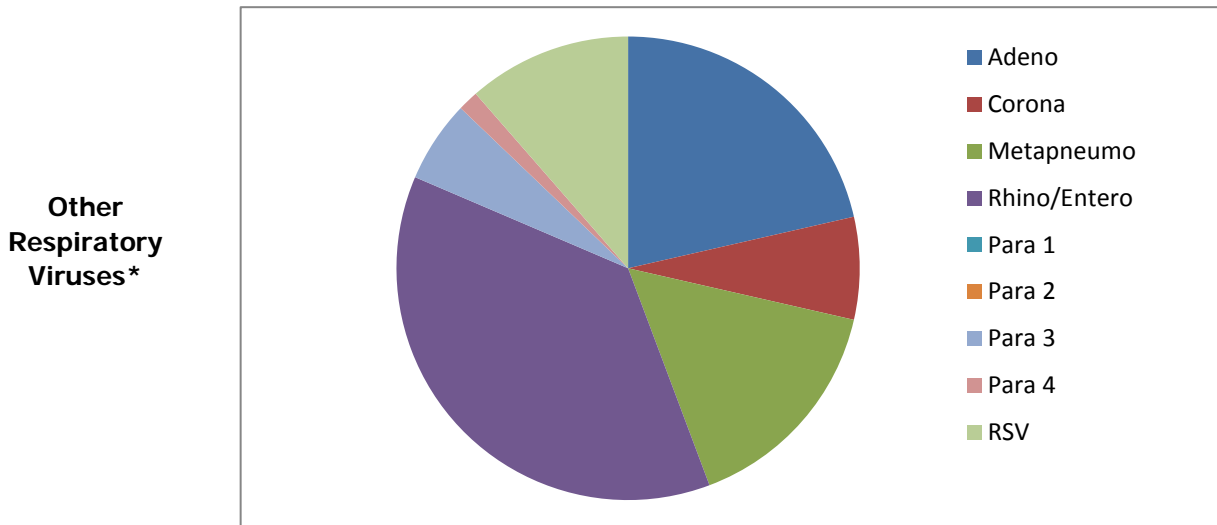
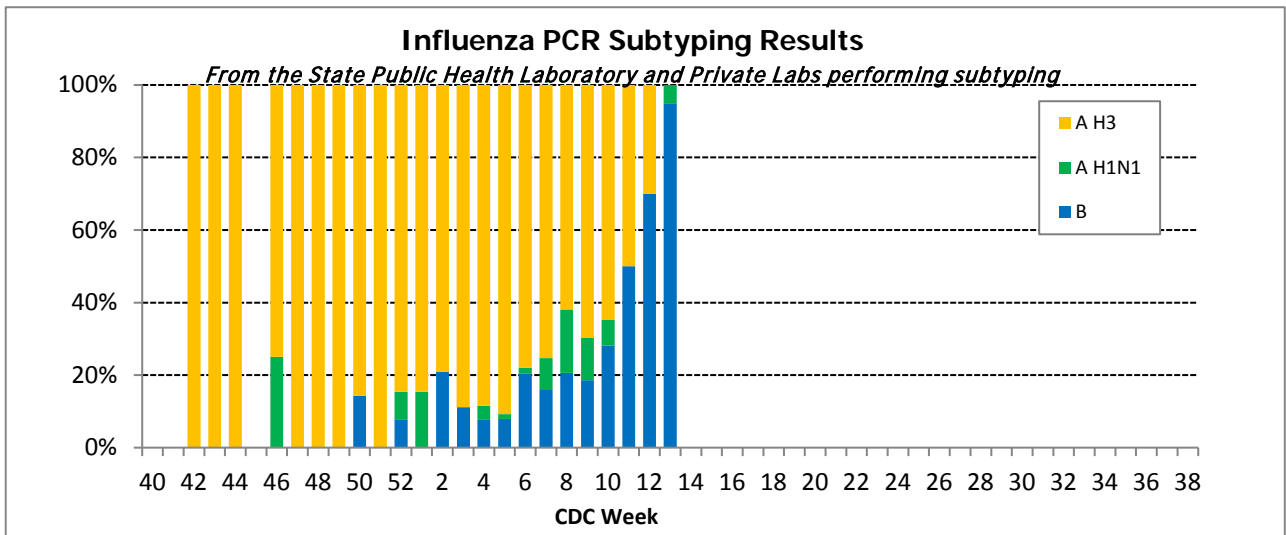
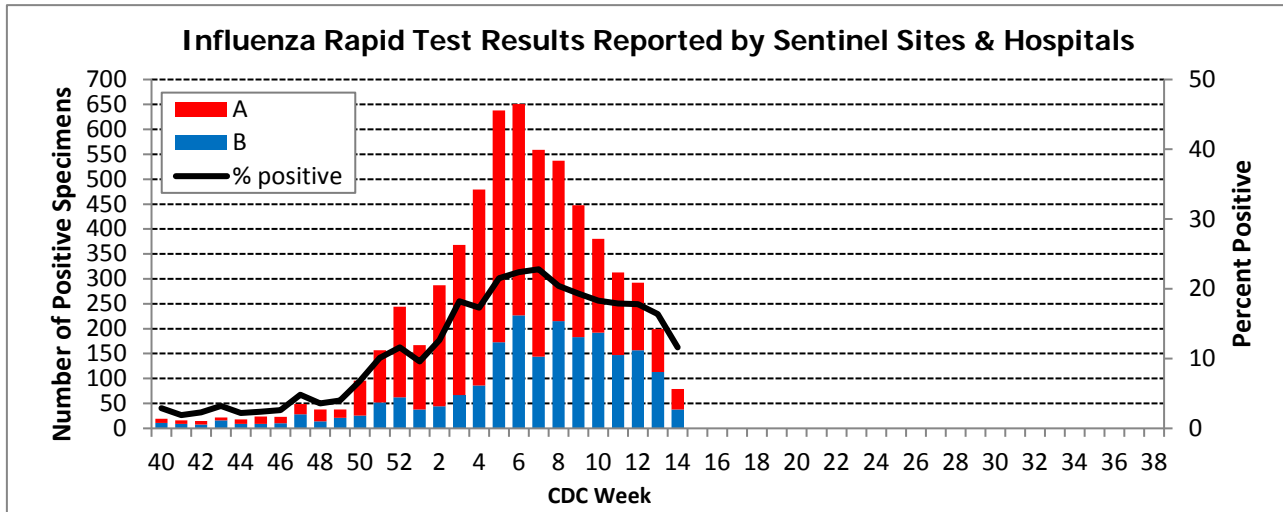


This graph shows the data on ILI surveillance among sentinel physicians' over the past 5 seasons to enable comparisons with previous years and better estimate the amplitude of this season's influenza transmission.



2016-2017 Season

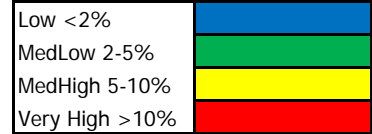
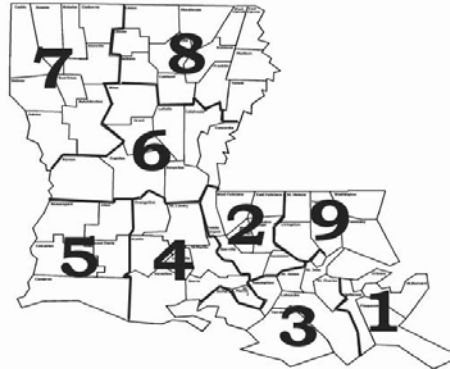
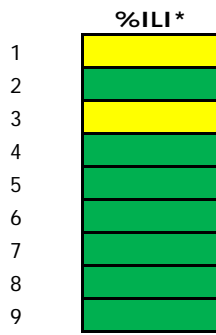
Virologic Surveillance



*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.

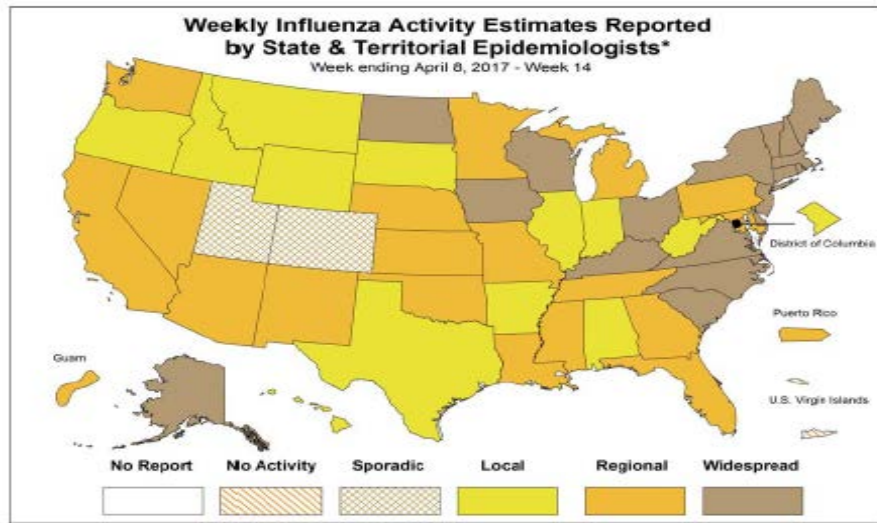
2016-2017 Season

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 14 ending Apr 08, 2017

ILINet Activity Indicator Map



2016-2017 Season

National Surveillance

During week 14, influenza activity decreased but remained elevated 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.

Five influenza-associated pediatric deaths were reported, four that occurred during the 2016-2017 influenza season. Proportion of outpatient visits for influenza-like illness (ILI) was 2.6%, which is above the national baseline of 2.2%.

Clinical Laboratory Data

	Week 14	Data Cumulative since October 2, 2016 (week 40)
No. of specimens tested	20,079	736,103
No. of positive specimens (%)	3,044 (15.2%)	108,878 (14.8%)
<i>Positive specimens by type</i>		
Influenza A	981 (32.2%)	80,632 (74.1%)
Influenza B	2,063 (67.8%)	28,246 (25.9%)

Public Health Laboratory Data

	Week 14	Data Cumulative since October 2, 2016 (week 40)
No. of specimens tested	922	74,544
No. of positive specimens*	356	36,649
<i>Positive specimens by type/subtype</i>		
Influenza A	138 (38.8%)	30,211 (82.4%)
A(H1N1)pdm09	6 (4.3%)	826 (2.7%)
H3	123 (89.1%)	29,033 (96.1%)
Subtyping not performed	9 (6.5%)	352 (1.2%)
Influenza B	218 (61.2%)	6,438 (17.6%)
Yamagata lineage	132 (60.6%)	3,304 (51.3%)
Victoria lineage	22 (10.1%)	1,528 (23.7%)
Lineage not performed	64 (29.4%)	1,608 (24.9%)

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 14, 2017***

						ILI 65 years and older	Total ILI	Total Patient Visits	% Unweighted ILI	% Weighted ILI
CDC Week	# Sites Reporting	ILI 0-4 years	ILI 5-24 years	ILI 25-49 years	ILI 50-64 years					
201711	287	945	1651	1116	590	301	4603	97445	4.7	5.5
201712	247	800	1373	887	421	245	3726	96845	3.8	4.5
201713	256	700	1167	753	331	186	3137	95147	3.3	3.8
201714	265	683	1083	673	314	181	2934	91049	3.2	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
201711	9	221	0	6	75	0	19	1	11	27	4678	897	19.17	548	349
201712	9	200	0	2	64	0	20	0	12	27	3702	662	17.88	344	318
201713	7	180	0	2	27	0	20	4	20	27	3570	458	12.83	219	239
201714	6	63	0	1	8	0	0	2	5	20	1990	197	9.90	78	119

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	261	0 (0.0)	252	0 (0.0)	261	0 (0.0)
Influenza A (H3N2)	1,717	0 (0.0)	1,717	0 (0.0)	1,084	0 (0.0)
Influenza B	626	0 (0.0)	626	0 (0.0)	626	0 (0.0)

Antigenic Characterization: CDC has antigenically characterized 1,336 influenza viruses [221 influenza A (H1N1)pdm09, 628 influenza A (H3N2), and 487 influenza B viruses] collected by U.S. laboratories since October 1, 2016.

Influenza A Virus [849]

A (H1N1)pdm09 [221]: 220 of 221 (99.5%) 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) [628]: 606 of 628 (96.5%) 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 [487]

Victoria Lineage [235]: 217 of 235 (92.3%) 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 [252]: All 252 (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.