

Influenza Surveillance Report

www.infectiousdisease.dhh.louisiana.gov

Week 11: 3/12/17 - 3/17/17

Influenza activity remains elevated 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 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.

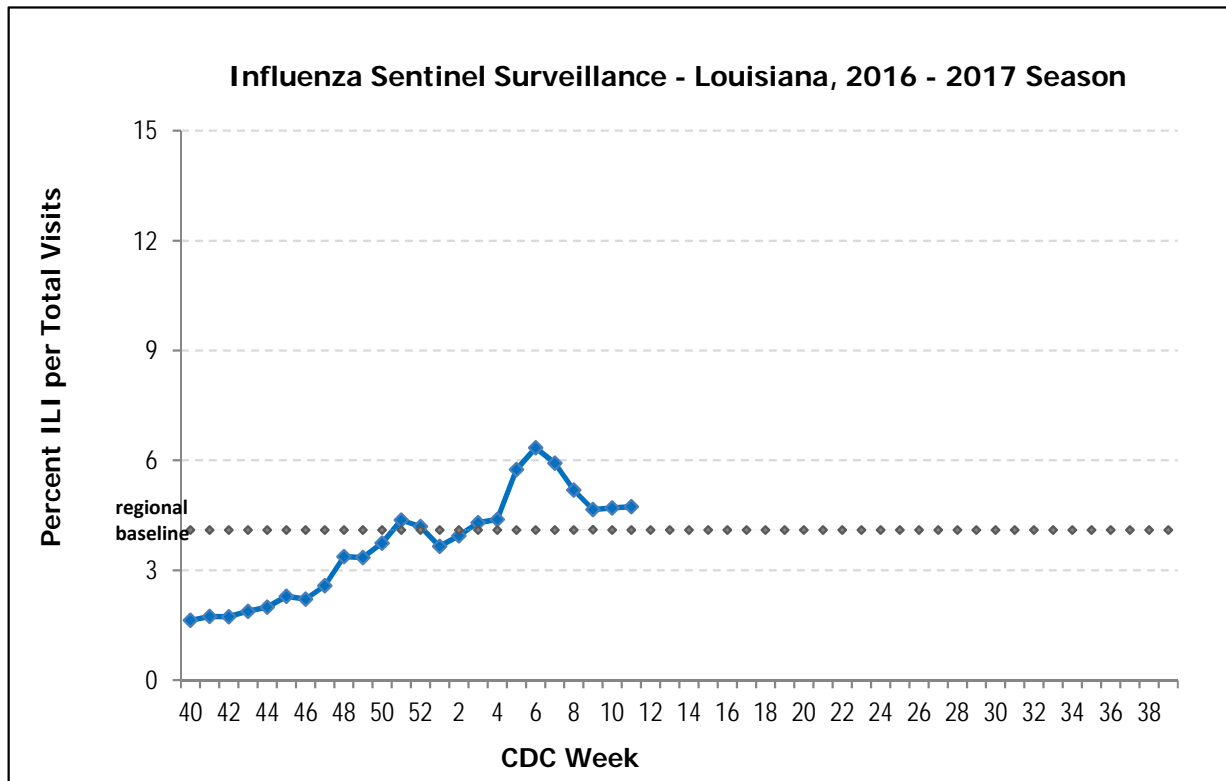


Laboratory testing: Not all sentinel sites have access to laboratory testing. However, many hospitals and physicians' offices do perform some influenza testing. Sites that test for influenza report the number of positive tests each week and the total number of tests performed each week. This information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

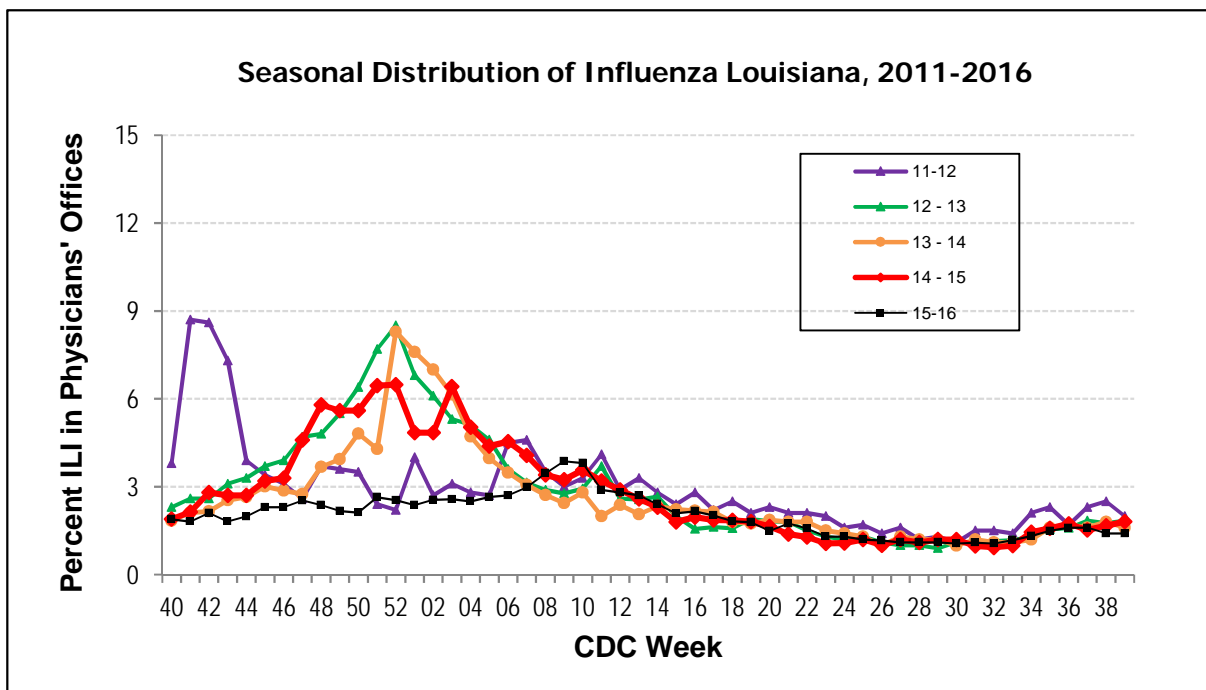
- Page 2 : ILI Activity
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- Page 4: Geographic Distribution
- Page 5-6: Regional & National Data

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.

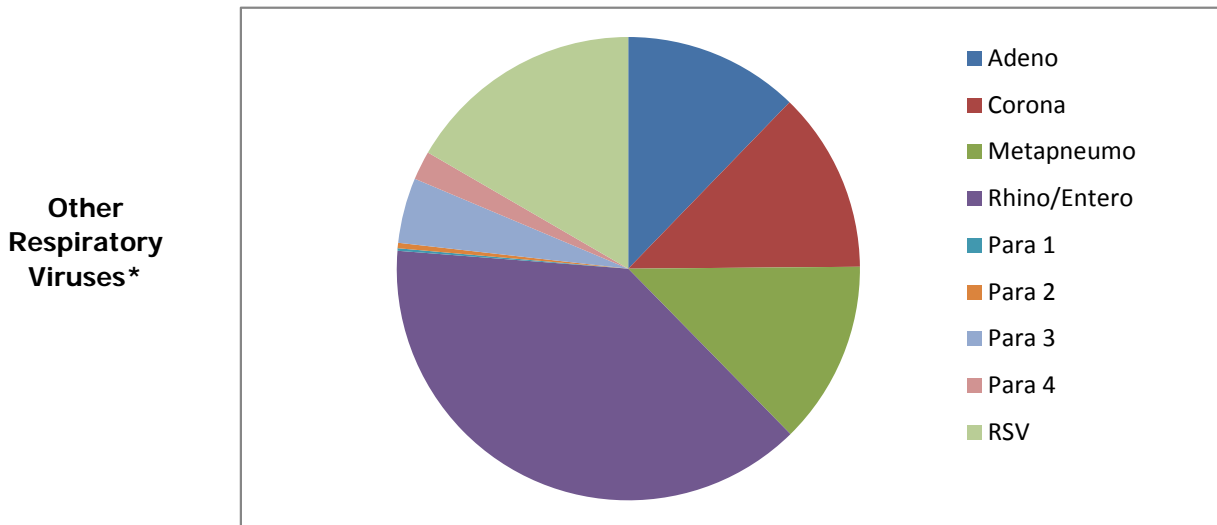
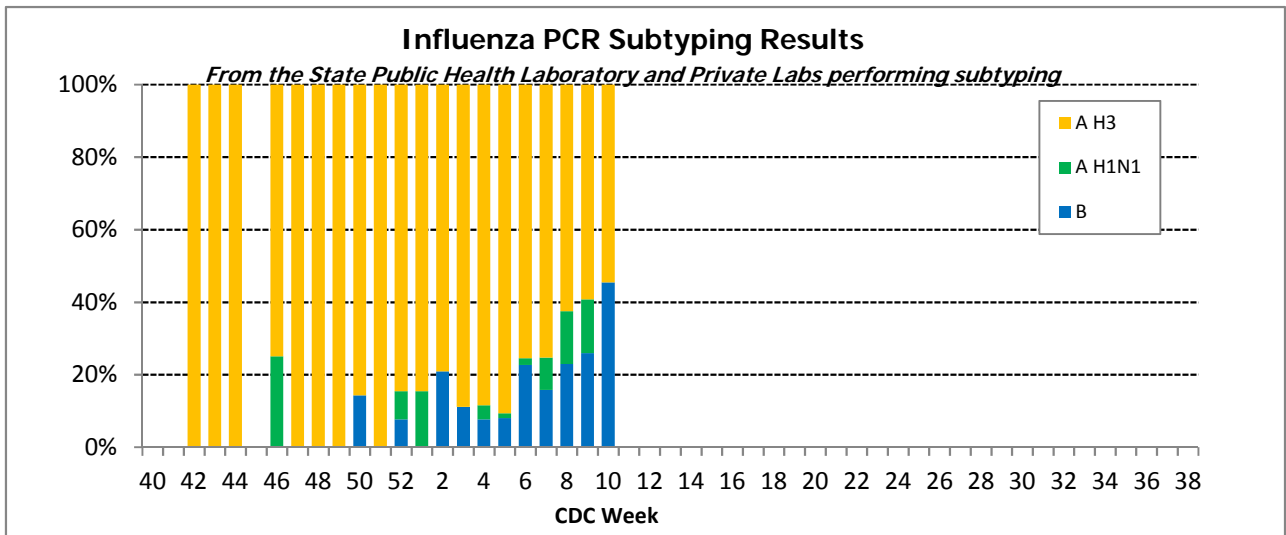
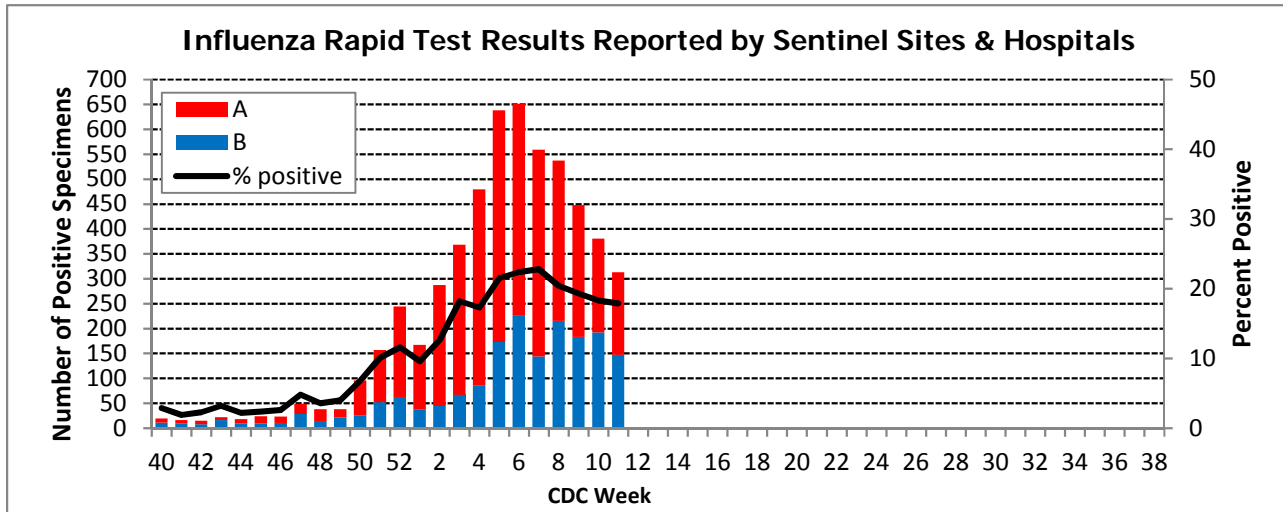


This graph shows the data on ILI surveillance among sentinel physicians' over the past 5 seasons to enable comparisons with previous years and better estimate the amplitude of this season's influenza transmission.



2016-2017 Season

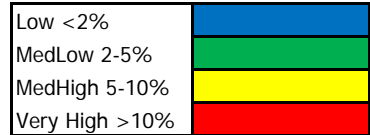
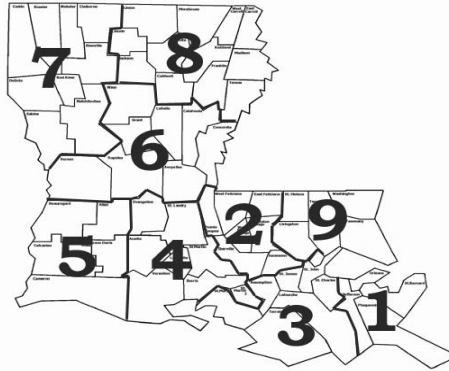
Virologic Surveillance



*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.

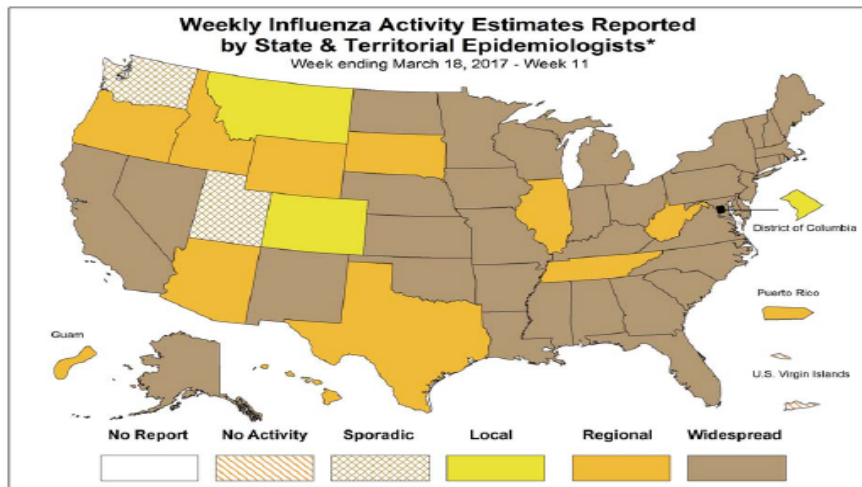
2016-2017 Season

Geographical Distribution of ILI



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

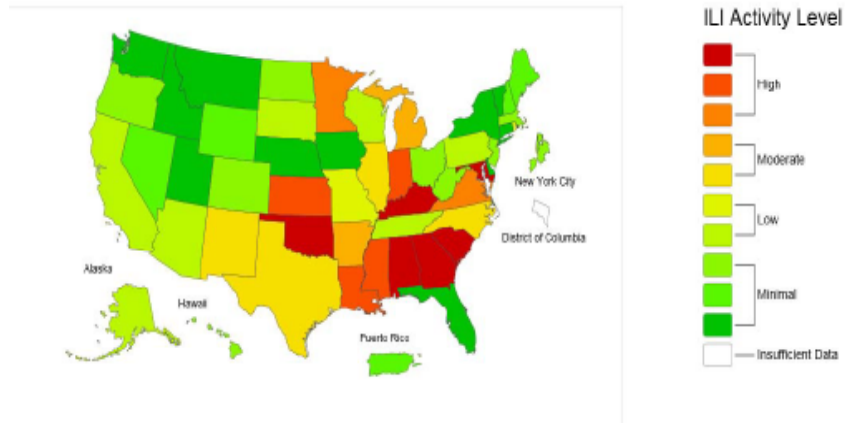
Geographic Spread of Influenza as Assessed by State and Territorial Epidemiologists



* 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 11 ending Mar 18, 2017

ILINet Activity Indicator Map



2016-2017 Season

National Surveillance

During week 11, influenza activity decreased, but 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.

Two influenza-associated pediatric deaths were reported.

Proportion of outpatient visits for influenza-like illness (ILI) was 3.2%, which is above the national baseline of 2.2%.

Clinical Laboratory Data

	Week 11	Data Cumulative since October 2, 2016 (week 40)
No. of specimens tested	24,680	647,455
No. of positive specimens (%)	4,416 (17.9%)	92,505 (14.3%)
<i>Positive specimens by type</i>		
Influenza A	2,343 (53.1%)	73,640 (79.6%)
Influenza B	2,073 (46.9%)	18,865 (20.4%)

Public Health Laboratory Data

	Week 11	Data Cumulative since October 2, 2016 (week 40)
No. of specimens tested	1,389	65,061
No. of positive specimens*	707	31,673
<i>Positive specimens by type/subtype</i>		
Influenza A	428 (60.5%)	27,537 (86.9%)
A(H1N1)pmd09	17 (4.0%)	721 (2.6%)
H3	375 (87.6%)	26,482 (96.2%)
Subtyping not performed	36 (8.4%)	334 (1.2%)
Influenza B	279 (39.5%)	4,136 (13.1%)
Yamagata lineage	144 (51.6%)	1,998 (48.3%)
Victoria lineage	30 (10.8%)	1,076 (26.0%)
Lineage not performed	105 (37.6%)	1,062 (25.7%)

HHS Surveillance Region Data:

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
201707	9	429	1	11	185	0	25	2	8	28	6687	1696	25.36	1362	334
201708	7	338	3	13	140	0	16	0	8	27	5918	1375	23.23	1065	310
201709	9	210	0	9	85	0	12	1	7	28	5722	1163	20.33	841	322
201710	7	208	0	7	65	0	26	0	6	26	5094	1082	21.24	749	333
201711	6	66	0	3	17	0	9	0	1	22	3011	479	15.91	314	165

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 24, 2017

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
201707	267	1274	3139	1738	787	438	7376	104283	7.1	8.8
201708	289	1299	2853	1507	763	425	6847	108307	6.3	8.2
201709	277	1130	2248	1374	588	381	5721	103351	5.5	6.8
201710	282	1039	2055	1367	650	349	5460	103681	5.3	6.5
201711	274	920	1596	1103	581	292	4492	94959	4.7	5.5

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	208	0 (0.0)	202	0 (0.0)	208	0 (0.0)
Influenza A (H3N2)	1,404	0 (0.0)	1,404	0 (0.0)	942	0 (0.0)
Influenza B	476	0 (0.0)	476	0 (0.0)	476	0 (0.0)

Antigenic Characterization: CDC has antigenically characterized 1,069 influenza viruses [176 influenza A (H1N1)pdm09, 547 influenza A (H3N2), and 346 influenza B viruses] collected by U.S. laboratories since October 1, 2016.

Influenza A Virus [723]

A (H1N1)pdm09 [176]: All 176 (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) [547]: 535 of 547 (97.8%) 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 [346]

Victoria Lineage [167]: 154 of 167 (92.2%) 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 [179]: All 179 (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.