

Influenza Surveillance Report

www.infectiousdisease.dhh.louisiana.gov

Week 5: 1/29/17 - 2/4/17

Influenza activity continued to increase this week in Louisiana. The percent of influenza positives remains high at both clinical labs and the state public health laboratory. The most commonly reported other respiratory viruses are RSV and Rhino/Enterovirus.

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.

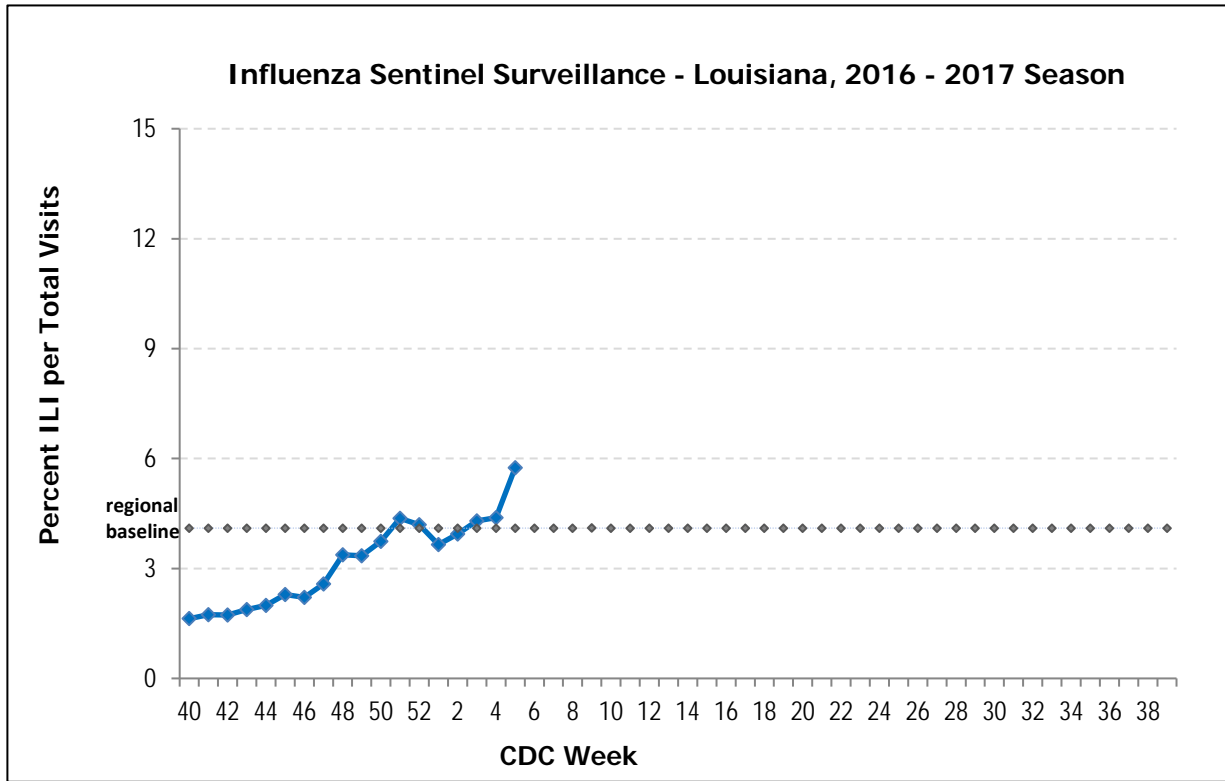


Laboratory testing: Not all sentinel sites have access to laboratory testing. However, many hospitals and physicians' offices do perform some influenza testing. Sites that test for influenza report the number of positive tests each week and the total number of tests performed each week. This information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

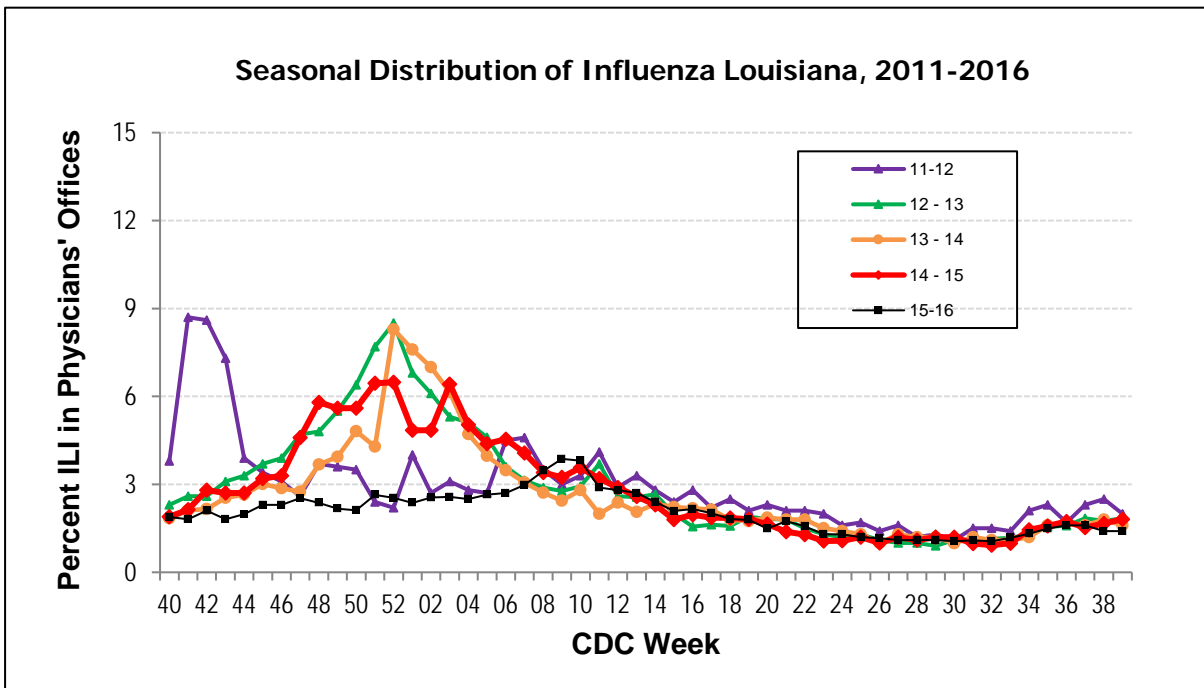
Page 2 : ILI Activity
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Page 4: Geographic Distribution
Page 5-6: Regional & National Data

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.

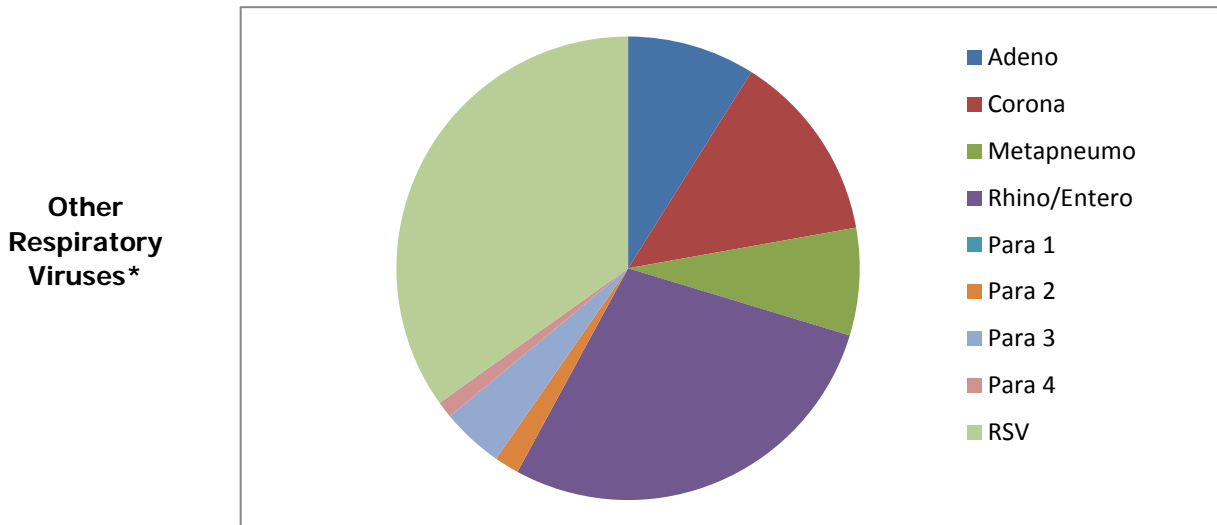
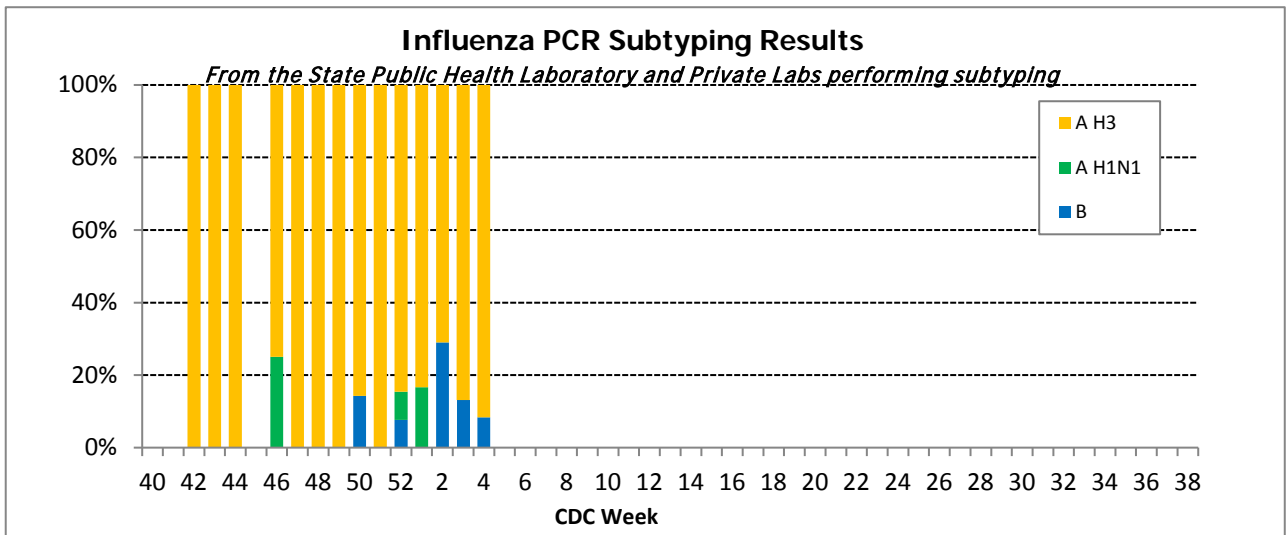
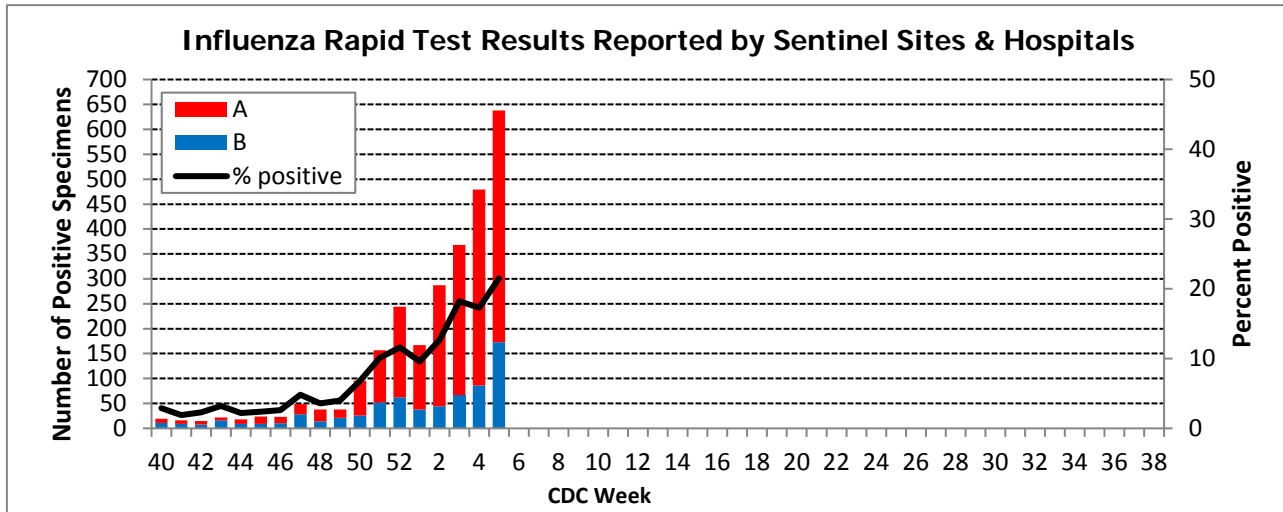


This graph shows the data on ILI surveillance among sentinel physicians' over the past 5 seasons to enable comparisons with previous years and better estimate the amplitude of this season's influenza transmission.



2016-2017 Season

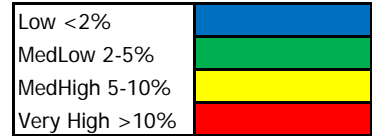
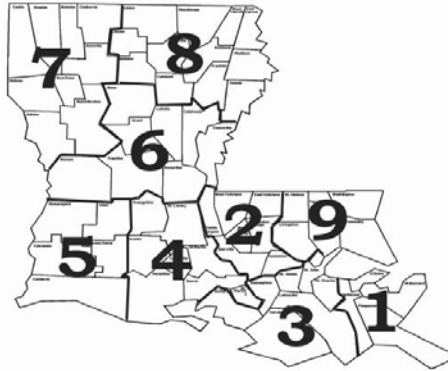
Virologic Surveillance



*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.

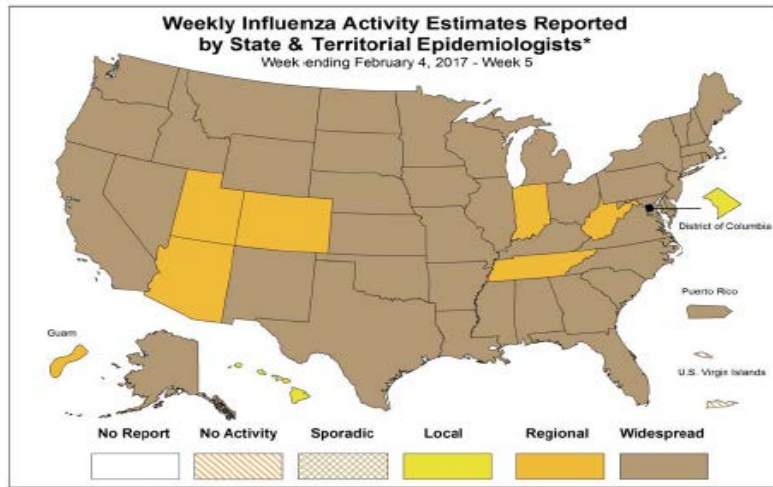
2016-2017 Season

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 5 ending Feb 04, 2017

ILINet Activity Indicator Map



2016-2017 Season

National Surveillance

During week 5, influenza activity increased 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.

Five influenza-associated pediatric deaths were reported.

Proportion of outpatient visits for influenza-like illness (ILI) was 4.8%, which is above the national baseline of 2.2%.

Clinical Laboratory Data

	Week 5	Data Cumulative since October 2, 2016 (week 40)
No. of specimens tested	27,409	392,901
No. of positive specimens (%)	5,722 (20.9%)	38,244 (9.7%)
Positive specimens by type		
Influenza A	5,017 (87.7%)	33,488 (87.6%)
Influenza B	705 (12.3%)	4,756 (12.4%)

Public Health Laboratory Data

	Week 5	Data Cumulative since October 2, 2016 (week 40)
No. of specimens tested	2,469	38,141
No. of positive specimens*	1,397	15,781
Positive specimens by type/subtype		
Influenza A	1,245 (89.1%)	14,606 (92.6%)
A(H1N1)pmd09	28 (2.2%)	362 (2.5%)
H3	1,142 (91.7%)	13,973 (95.7%)
Subtyping not performed	75 (6.0)	271 (1.9%)
Influenza B	152 (10.9%)	1,174 (7.4%)
Yamagata lineage	65 (42.8%)	460 (39.1%)
Victoria lineage	29 (19.1%)	391 (33.3%)
Lineage not performed	58 (38.2%)	324 (27.6%)

HHS Surveillance Region Data:

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
201701	87	3638	11	41	1855	0	24	38	49	232	31685	4276	13.50	3924	352
201702	86	3981	29	41	1970	0	35	41	61	226	31000	4664	15.05	4281	383
201703	86	3889	27	49	2003	0	44	51	84	222	31349	5577	17.79	5020	557
201704	85	3807	41	36	2015	0	44	45	80	210	31554	5694	18.05	5054	640
201705	76	2469	75	28	1142	0	58	29	65	178	27409	5722	20.88	5017	705

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, February 10, 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
201701	295	983	879	978	442	303	3585	94175	3.8	4.1
201702	292	968	1430	948	532	335	4213	101460	4.2	4.9
201703	284	1020	1825	1046	506	297	4694	101375	4.6	5.4
201704	277	1138	2076	1052	531	270	5067	101388	5.0	6.1
201705	232	1258	2817	410	570	329	5384	100127	6.3	8.0

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	94	0 (0.0)	94	0 (0.0)	94	0 (0.0)
Influenza A (H3N2)	633	0 (0.0)	633	0 (0.0)	519	0 (0.0)
Influenza B	194	0 (0.0)	194	0 (0.0)	194	0 (0.0)

Antigenic Characterization: CDC has antigenically characterized 484 influenza viruses [74 influenza A (H1N1)pdm09, 267 influenza A (H3N2), and 143 influenza B viruses] collected by U.S. laboratories since October 1, 2016.

Influenza A Virus [341]

A (H1N1)pdm09 [74]: All 74 (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) [267]: 258 of 267 (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, 6 of 9 (66.7%) are more closely related to A/Switzerland/9715293/2013, a virus belonging to genetic group 3C.3a.

Influenza B Virus [143]

Victoria Lineage [77]: 70 of 77 (90.9%) 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 [66]: All 66 (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.