Influenza Surveillance Report

www.infectiousdisease.dhh.louisiana.gov   **Week 1: 1/1/17 - 1/7/17**

Influenza activity decreased slightly this week in Louisiana and is just below the regional baseline. The percent of influenza positives remains high at both at 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.

Tracking Surveillance

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.
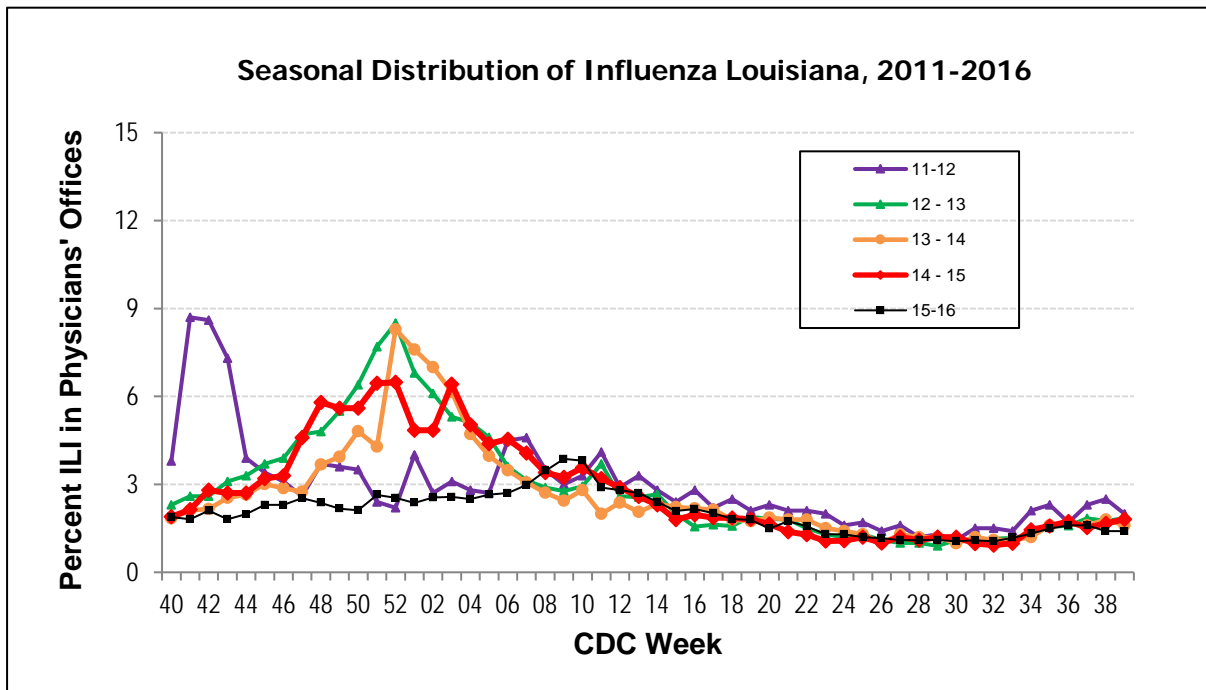
2016-2017 Season

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.

Influenza Sentinel Surveillance - Louisiana, 2016 - 2017 Season
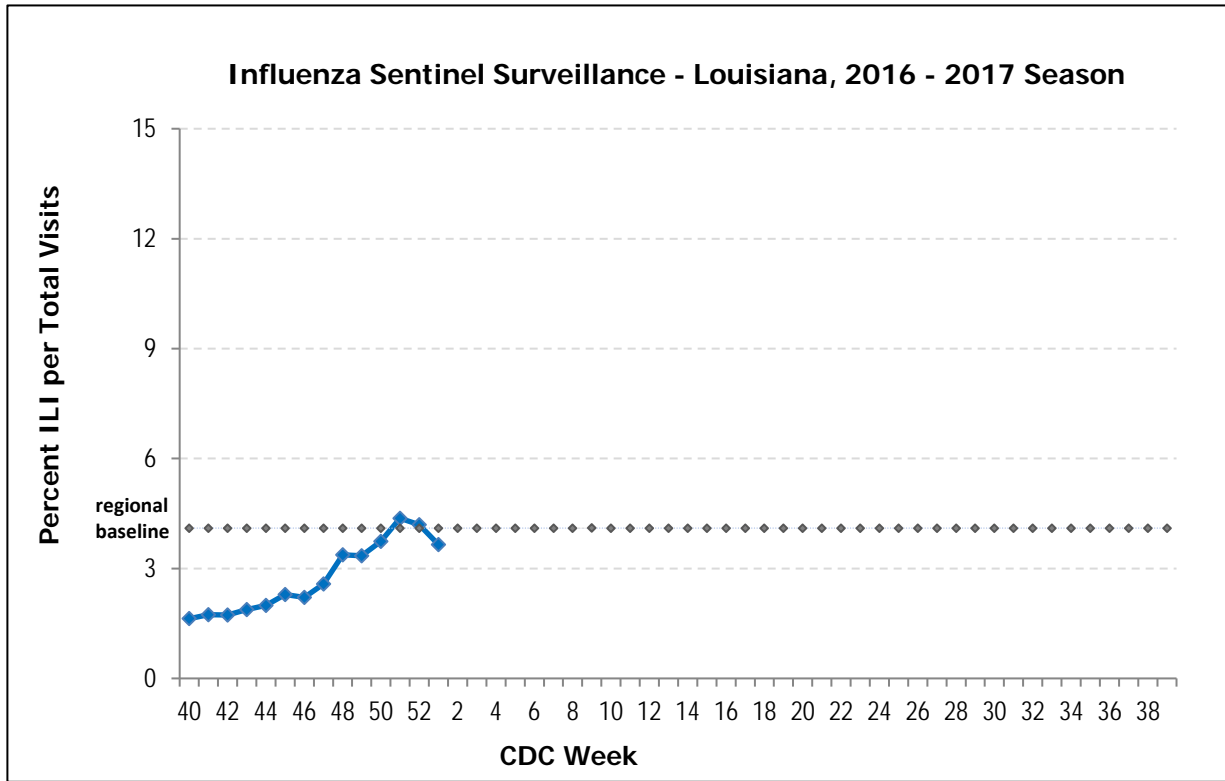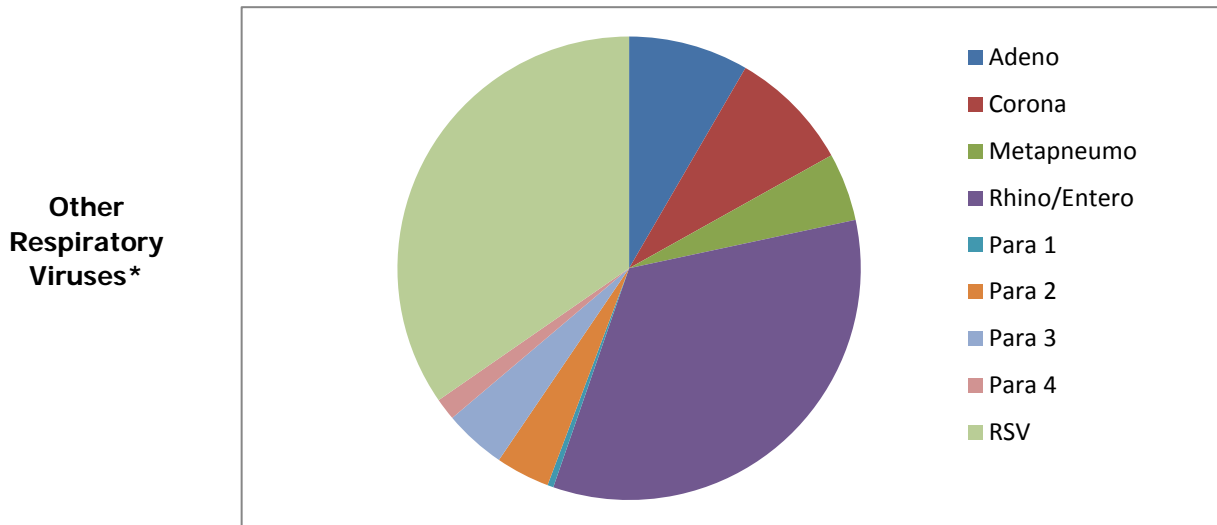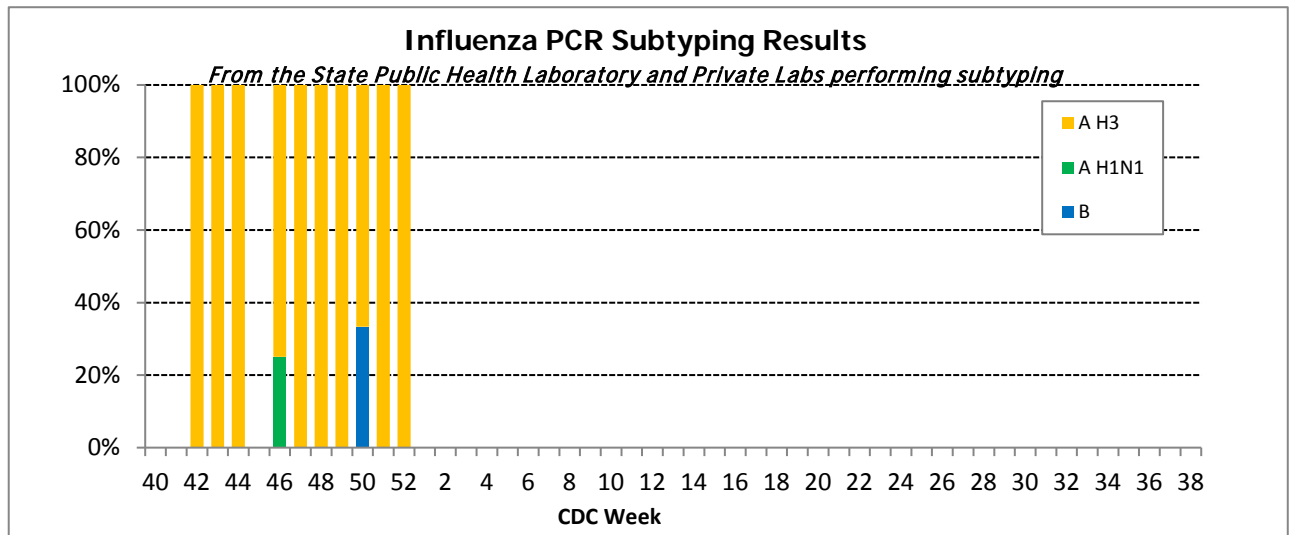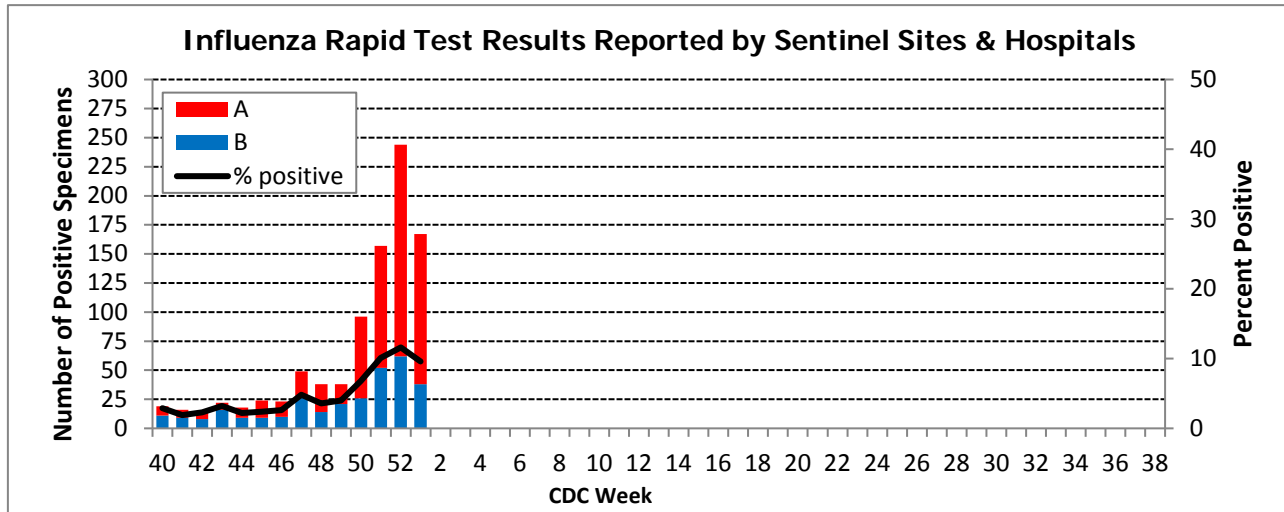
This graph shows the data on ILI surveillance among sentinel physicians' over the past 5 seasons to enable comparisons with previous years and better estimate the amplitude of this season's influenza transmission.

Seasonal Distribution of Influenza Louisiana, 2011-2016

2016-2017 Season

Virologic Surveillance

Influenza Rapid Test Results Reported by Sentinel Sites & Hospitals

Influenza PCR Subtyping Results
From the State Public Health Laboratory and Private Labs performing subtyping

Other Respiratory Viruses*
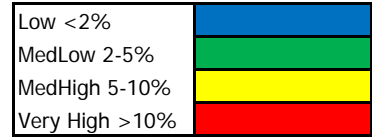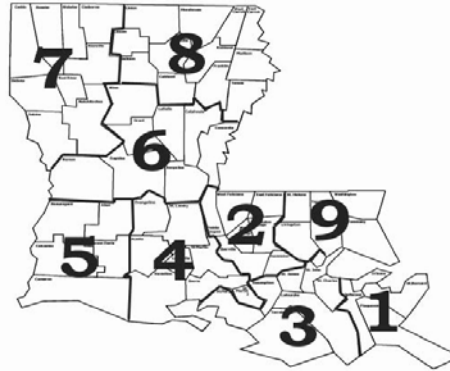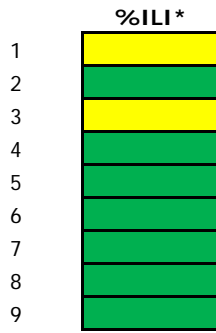

*Based on results from the State Public Heatlh Laboratory Respiratory Virus Panel (RVP) Testing and other labs reporting RVP results over the last 4 weeks.

Geographical Distribution of ILI

%ILI*

1	
2	
3	
4	
5	
6	
7	
8	
9	

Low <2%	
MedLow 2-5%	
MedHigh 5-10%	
Very High >10%	

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

Geographic Spread of Influenza as Assessed by State and Territorial Epidemiologists

Weekly Influenza Activity Estimates Reported by State & Territorial Epidemiologists*
Week ending January 7, 2017 - Week 1

No Report   No Activity   Sporadic   Local   Regional   Widespread
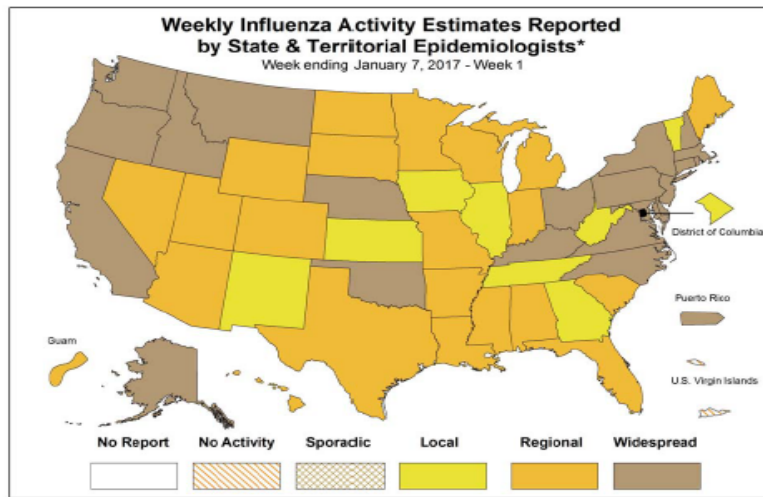
* This map indicates geographic spread & does not measure the severity of influenza activity

ILINet Activity Indicator Map

Influenza-Like Illness (ILI) Activity Level Indicator Determined by Data Reported to ILINet
2016-17 Influenza Season Week 1 ending Jan 07, 2017

ILI Activity Level: High, Moderate, Low, Minimal, Insufficient Data

National Surveillance

During week 1, influenza activity increased 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 Statistics (NCHS) Mortality Surveillance System.

Three 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 1	Data Cumulative since October 2, 2016 (week 40)
No. of specimens tested	25,797	259,647
No. of positive specimens (%)	3,580 (13.9%)	15,026 (5.8%)
Positive specimens by type		
Influenza A	3,287 (91.8%)	12,709 (84.6%)
Influenza B	293 (8.2%)	2,317 (15.4%)

Public Health Laboratory Data

	Week 1	Data Cumulative since October 2, 2016 (week 40)
No. of specimens tested	1,973	21,365
No. of positive specimens*	928	6,016
Positive specimens by type/subtype		
Influenza A	885 (95.4%)	5,572 (92.6%)
A(H1N1)pmd09	21 (2.4%)	177 (3.2%)
H3	833 (94.1%)	5,261 (94.4%)
Subtyping not performed	31 (3.5%)	134 (2.4%)
Influenza B	43 (4.6%)	444 (7.4%)
Yamagata lineage	15 (34.9%)	123 (27.7%)
Victoria lineage	12 (27.9%)	174 (39.2%)
Lineage not performed	16 (37.2%)	147 (33.1%)

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, January 13, 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
201650	287	977	1145	618	331	165	3236	94989	3.4	3.4
201651	289	1116	1109	750	390	251	3616	91026	4.0	3.9
201652	275	1151	795	849	447	302	3544	88302	4.0	4.2
201701	278	951	854	969	438	297	3509	91755	3.8	4.2

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
201650	10	138	0	2	25	0	2	4	1	29	3201	152	4.75	124	28
201651	9	77	0	1	16	0	0	1	1	28	3250	245	7.54	175	70
201652	8	79	0	2	27	0	3	1	0	26	3759	282	7.50	211	71
201701	8	42	0	4	12	0	2	0	0	23	3298	301	9.13	232	69

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	51	0 (0.0)	51	0 (0.0)	51	0 (0.0)
Influenza A (H3N2)	317	0 (0.0)	317	0 (0.0)	251	0 (0.0)
Influenza B	81	0 (0.0)	81	0 (0.0)	81	0 (0.0)

Antigenic Characterization: CDC has antigenically characterized 235 influenza viruses [37 influenza A (H1N1)pdm09, 139 influenza A (H3N2), and 59 influenza B viruses] collected by U.S. laboratories since October 1, 2016.

Influenza A Virus [176]

A (H1N1)pdm09 [37]: All 37 (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) [139]: 132 of 139 (95.0%) 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 out of 7 (85.7%) are more closely related to A/Switzerland/9715293/2013, a virus belonging to genetic group 3C.3a.

Influenza B Virus [59]

Victoria Lineage [31]: 28 of 31 (90.3%) 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 [28]: All 28 (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.