

# Influenza Surveillance Report

[www.infectiousdisease.dhh.louisiana.gov](http://www.infectiousdisease.dhh.louisiana.gov)

Week 52: 12/25/16 - 12/31/16

**Influenza activity continues to be elevated in Louisiana and slightly above regional baseline. The percent of influenza positives is increasing 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](mailto: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

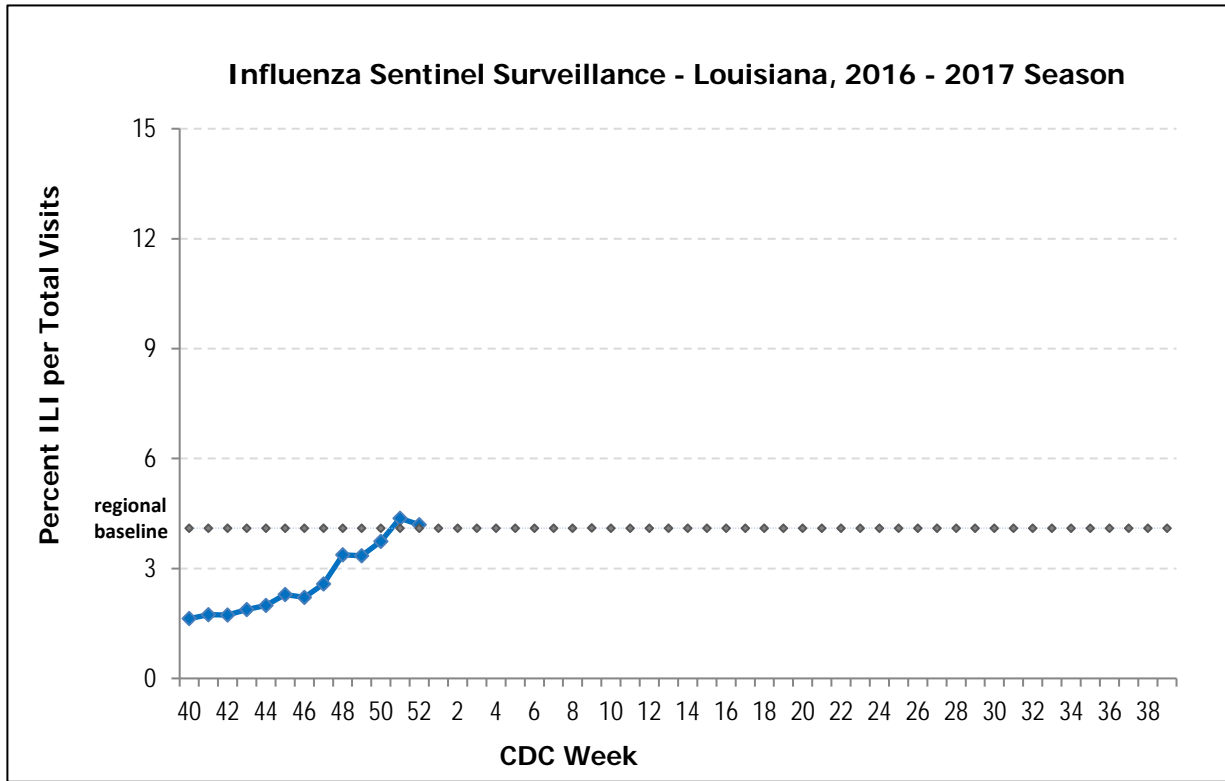
Page 3: Virologic Surveillance

Page 4: Geographic Distribution

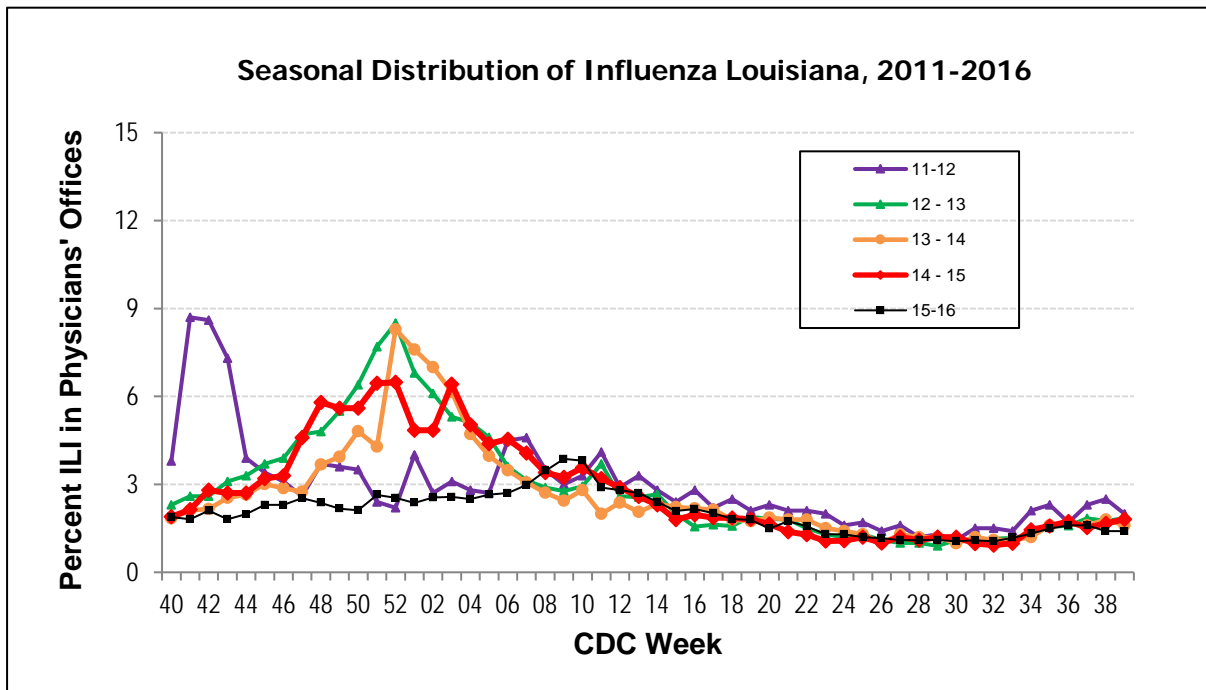
Page 5-6: Regional & National Data

## 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.

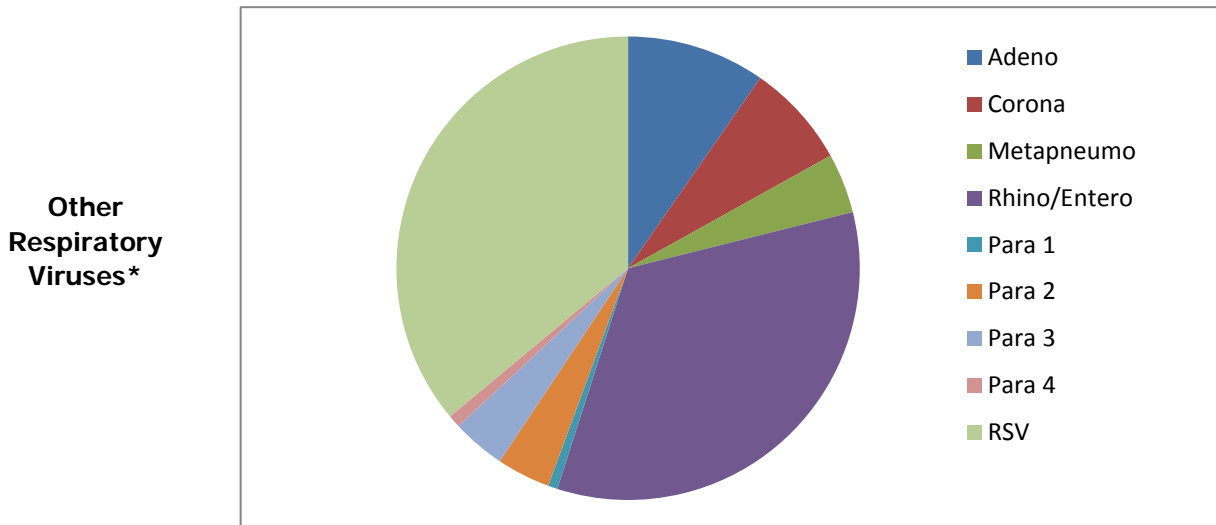
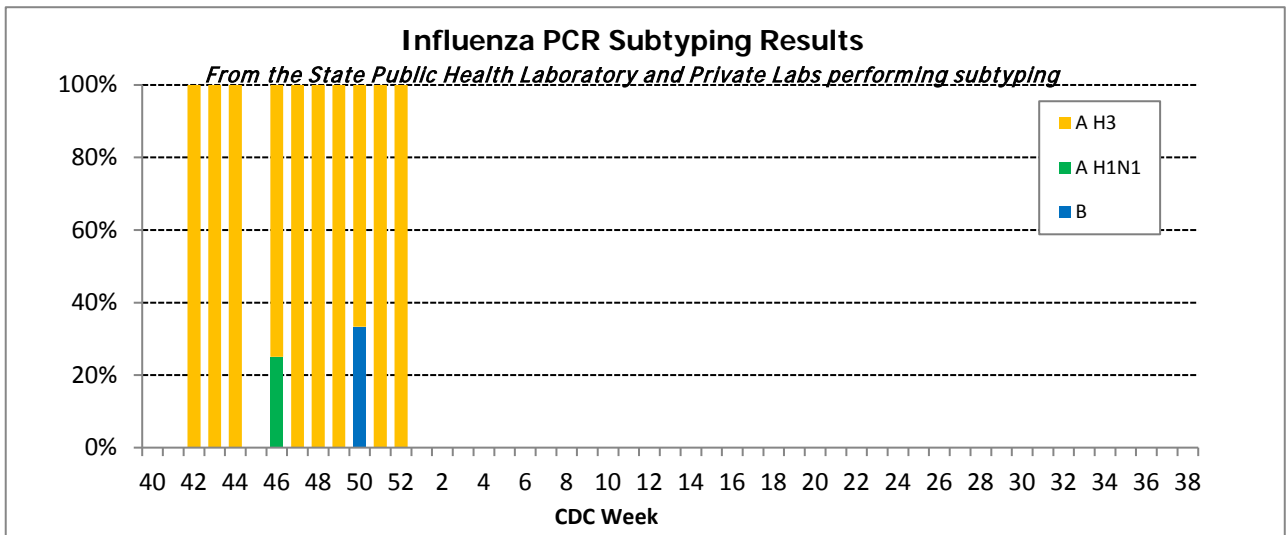
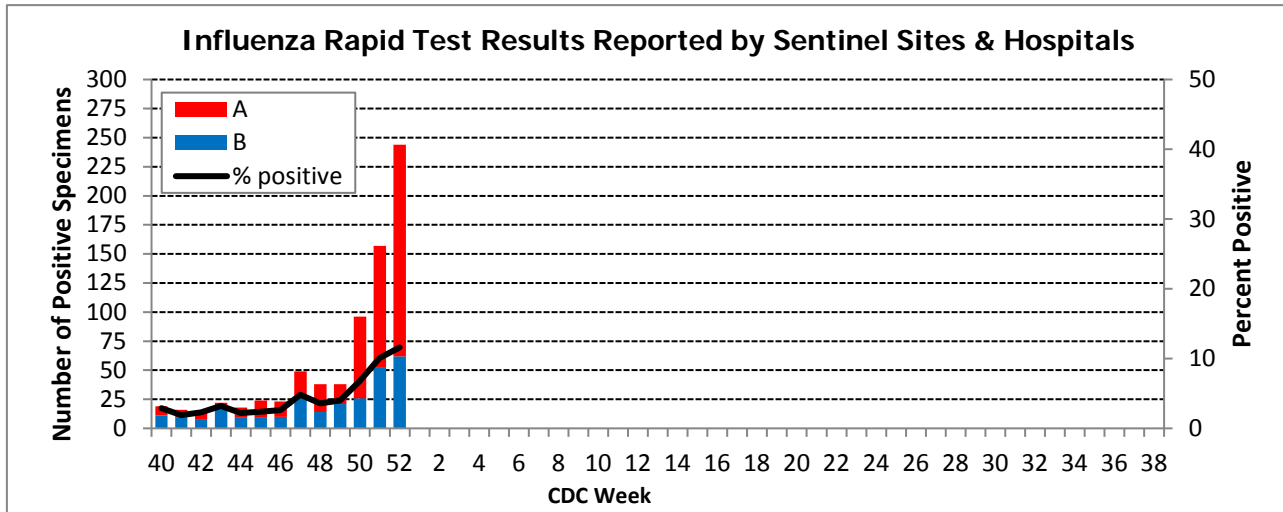


This graph shows the data on ILI surveillance among sentinel physicians' over the past 5 seasons to enable comparisons with previous years and better estimate the amplitude of this season's influenza transmission.



# 2016-2017 Season

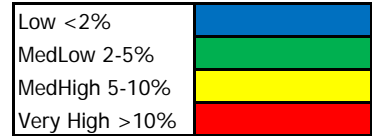
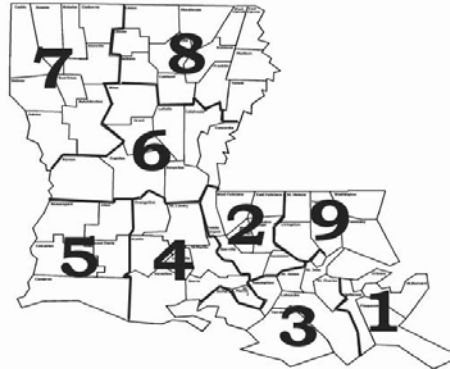
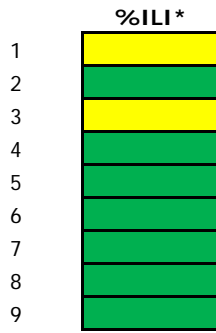
## Virologic Surveillance



\*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.

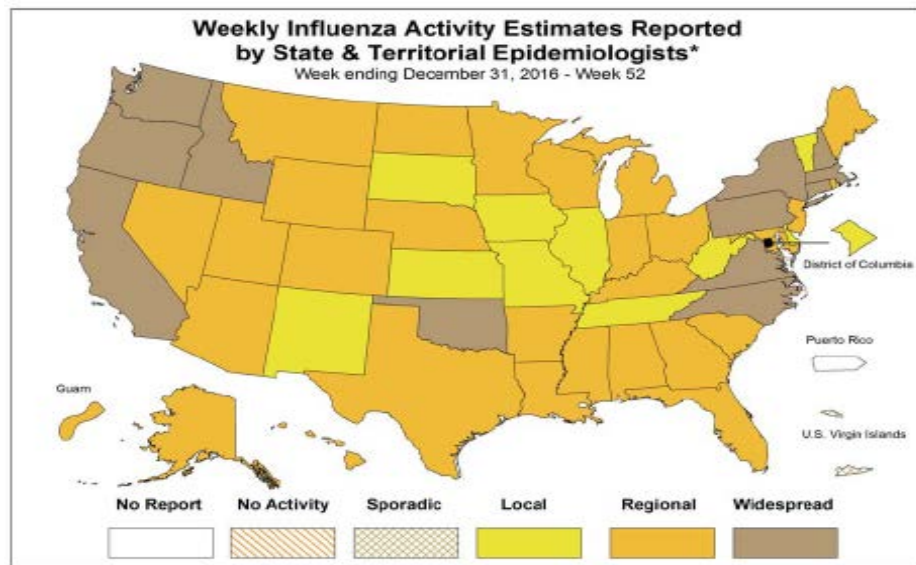
# 2016-2017 Season

## 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



Influenza-Like Illness (ILI) Activity Level Indicator Determined by Data Reported to ILINet  
2016-17 Influenza Season Week 52 ending Dec 31, 2016

## ILINet Activity Indicator Map



## 2016-2017 Season

### National Surveillance

During week 52, 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.

No influenza-associated pediatric deaths were reported.

Proportion of outpatient visits for influenza-like illness (ILI) was 3.4%, which is above the national baseline of 2.2%.

### Clinical Laboratory Data

	Week 52	Data Cumulative since October 2, 2016 (week 40)
No. of specimens tested	21,564	228,434
No. of positive specimens (%)	2,955 (13.7%)	10,920 (4.8%)
<i>Positive specimens by type</i>		
Influenza A	2,702 (91.4%)	8,948 (81.9%)
Influenza B	253 (8.6%)	1,972 (18.1%)

### Public Health Laboratory Data

	Week 52	Data Cumulative since October 2, 2016 (week 40)
No. of specimens tested	952	16,972
No. of positive specimens*	433	3,793
<i>Positive specimens by type/subtype</i>		
Influenza A	405 (93.5%)	3,479 (91.7%)
A(H1N1)pmd09	4 (1.0%)	127 (3.7%)
H3	333 (82.2%)	3,193 (91.8%)
Subtyping not performed	68 (16.8%)	159 (4.6%)
Influenza B	28 (6.5%)	314 (8.3%)
Yamagata lineage	7 (25.0%)	78 (24.8%)
Victoria lineage	11 (39.3%)	107 (34.1%)
Lineage not performed	10 (35.7%)	129 (41.1%)

### 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 6, 2017***

						ILI 65 years and older	Total ILI	Total Patient Visits	% Unweighted ILI	% Weighted ILI
CDC	# Sites	ILI 0-4 years	ILI 5-24 years	ILI 25-49 years	ILI 50-64 years					
201649	292	839	978	590	293	161	2861	96447	3.0	2.9
201650	284	977	1145	618	331	165	3236	94567	3.4	3.4
201651	269	1020	1054	743	390	247	3454	87901	3.9	3.7
201652	259	1120	772	817	431	275	3415	85440	4.0	4.1

#### Region 6 (AR, LA, NM, OK, TX)

CDC Week	Public Health Labs	Public Health Specimens Tested	AUNK_POS	AH1N1 pdm09	AH3N2	AH3N2v	B	BVic	BYam	Clinical Labs	Clinical Specimens Tested	Clinical Flu Positive	% Positive	A	B
201649	10	98	0	1	17	0	0	0	0	30	2537	81	3.19	50	31
201650	9	133	0	2	22	0	2	4	1	28	3188	151	4.74	124	27
201651	9	72	0	1	12	0	0	1	1	27	3204	241	7.52	171	70
201652	6	29	1	0	14	0	1	0	0	18	2894	210	7.26	156	54

## 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	43	0 (0.0)	43	0 (0.0)	43	0 (0.0)
Influenza A (H3N2)	176	0 (0.0)	176	0 (0.0)	145	0 (0.0)
Influenza B	66	0 (0.0)	66	0 (0.0)	66	0 (0.0)

**Antigenic Characterization:** CDC has antigenically characterized 173 influenza viruses [37 influenza A (H1N1)pdm09, 93 influenza A (H3N2), and 43 influenza B viruses] collected by U.S. laboratories since October 1, 2016.

#### Influenza A Virus [130]

**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) [93]:** 90 of 93 (96.8%) 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, all 3 (100%) are more closely related to A/Switzerland/9715293/2013, a virus belonging to genetic group 3C.3a.

#### Influenza B Virus [43]

**Victoria Lineage [28]:** 27 of 28 (96.4%) 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 [15]:** All 15 (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.