2016-2017 Season

Influenza Surveillance Report

Week 44: 10/30/16 - 11/5/16

Influenza activity remains low in Louisiana but is slowly increasing each week. The first positives of the season were identified at the state public health laboratory this week and they were all influenza A/H3. The most commonly reported other respiratory viruses are Rhino/Enterovirus, Adenovirus, and RSV.

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

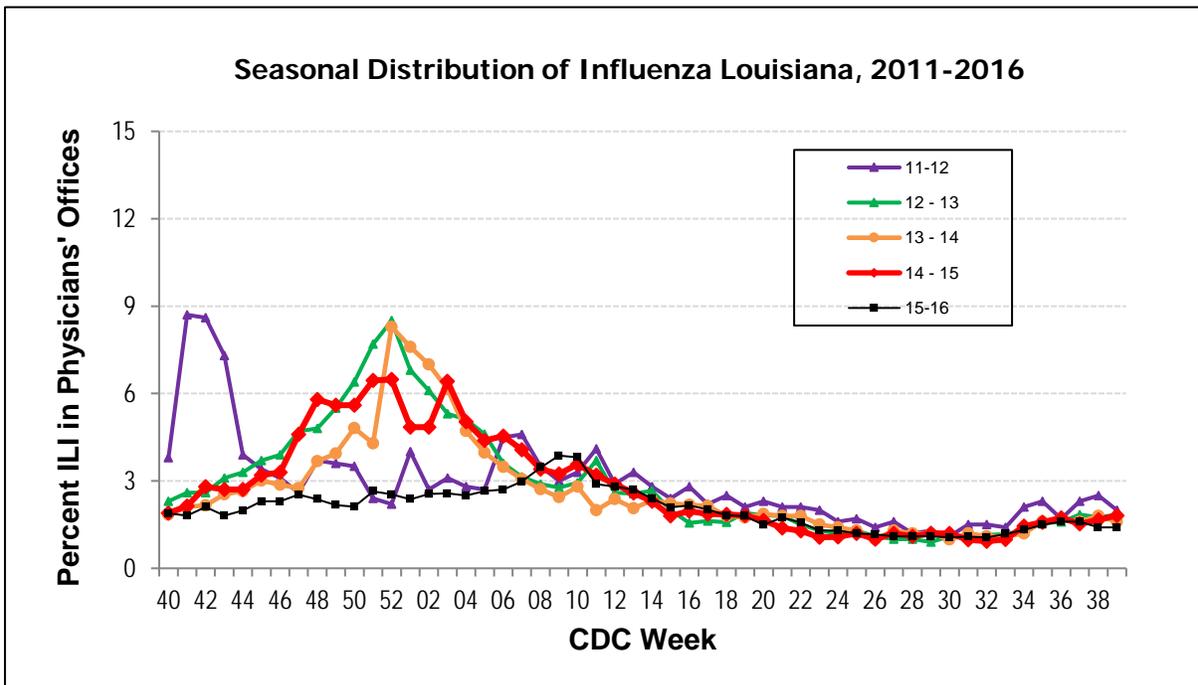This graph shows the percentage of visits for ILI over the total number of visits for sentinel surveillance sites. This is the best approach to estimate the magnitude of influenza transmission. ILI counts do include some viral infections other than influenza, but experience over the last 50 years has 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.
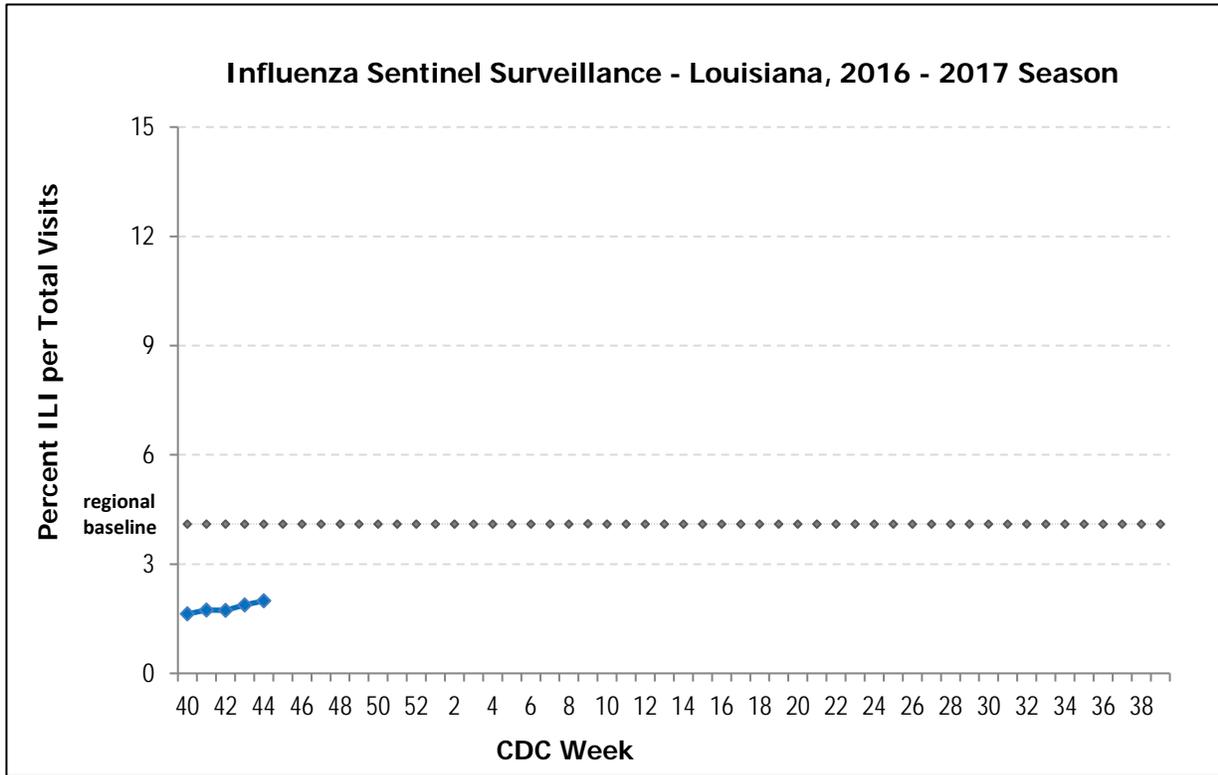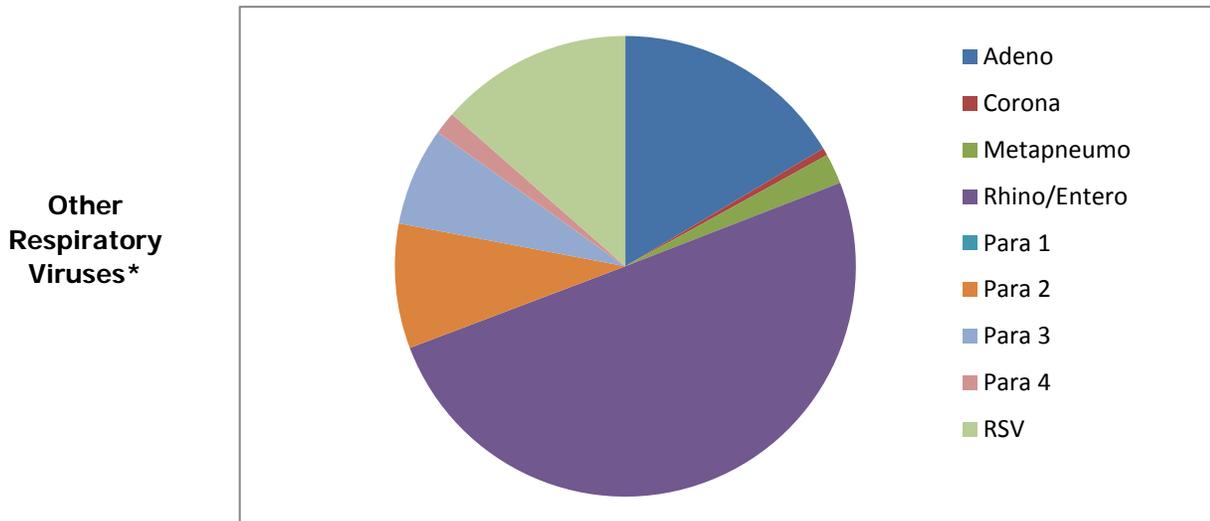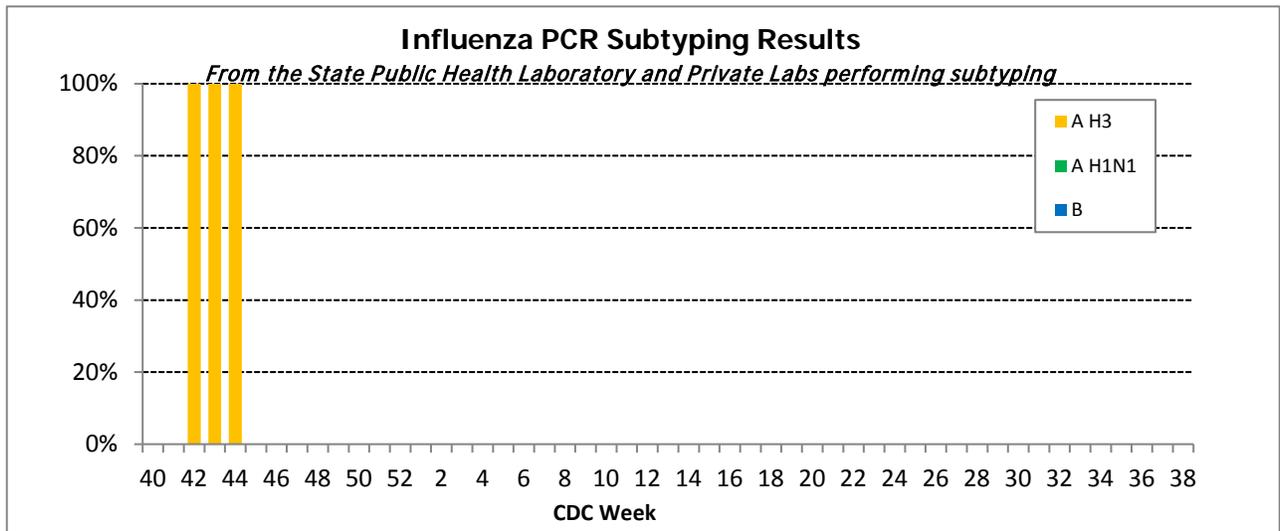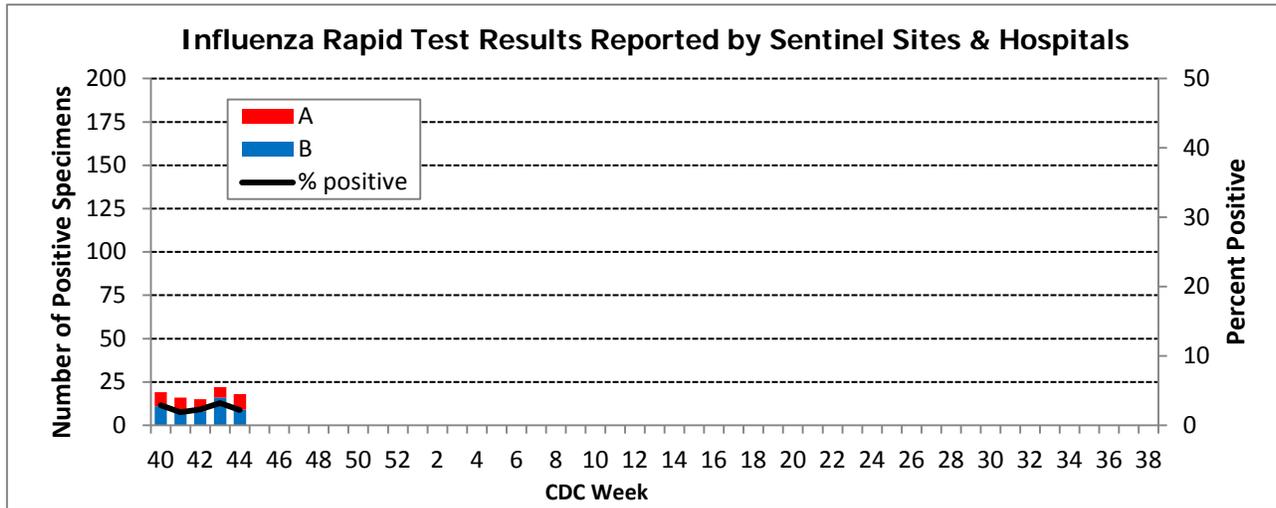

This graph shows the data on ILI surveillance among sentinel physicians' over the past 5 seasons to enable comparisons with previous years and better estimate the amplitude of this season's influenza transmission.

2016-2017 Season

Virologic Surveillance

Influenza Rapid Test Results Reported by Sentinel Sites & Hospitals

Legend:
- A (red)
- B (blue)
- % positive (black line)

Y-axis (left): Number of Positive Specimens (0–200)
Y-axis (right): Percent Positive (0–50)
X-axis: CDC Week (40 through 38)

Influenza PCR Subtyping Results

From the State Public Health Laboratory and Private Labs performing subtyping

Legend:
- A H3 (yellow)
- A H1N1 (green)
- B (blue)

Y-axis: 0%–100%
X-axis: CDC Week (40 through 38)

Other Respiratory Viruses*

Pie chart legend:
- Adeno
- Corona
- Metapneumo
- Rhino/Entero
- Para 1
- Para 2
- Para 3
- Para 4
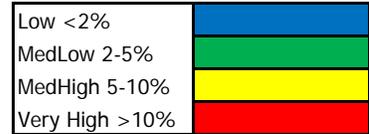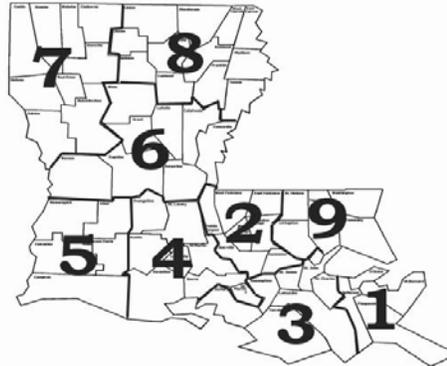- RSV

*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.
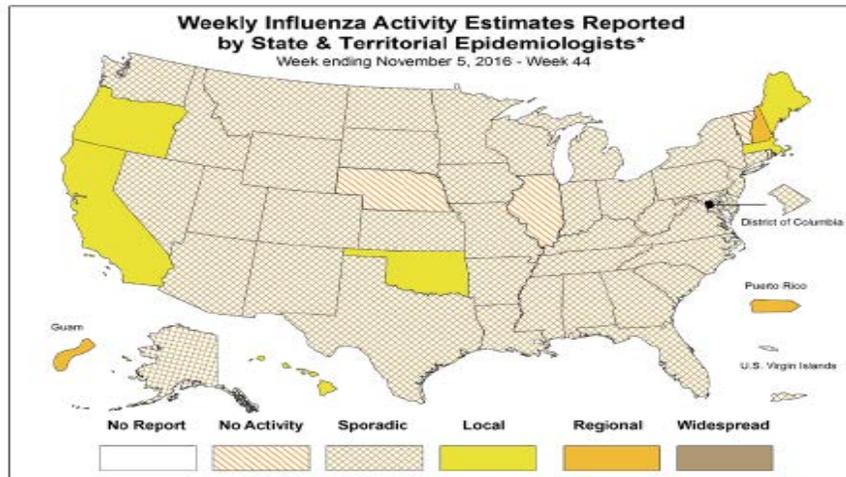
Geographical Distribution of ILI

%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 November 5, 2016 - Week 44

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 44 ending Nov 5, 2016

ILI Activity Level

High
Moderate
Low
Minimal
Insufficient Data
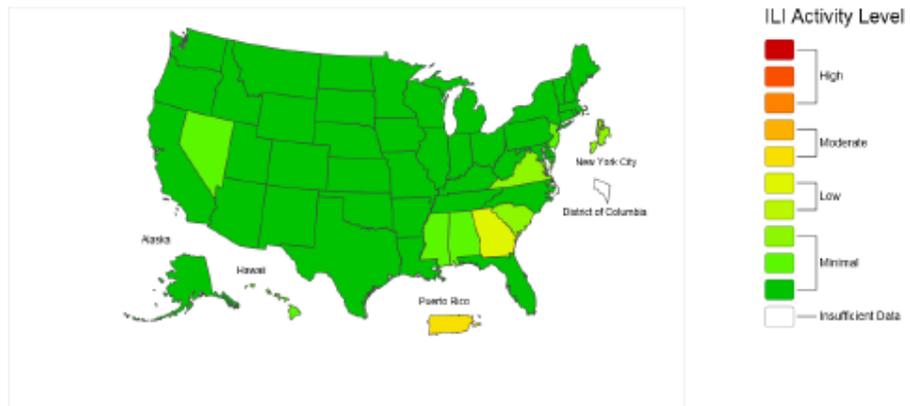
National Surveillance

During week 44, influenza activity was low in the United States.

The proportion of deaths attributed to pneumonia and influenza (P&I) was below the system-specific epidemic threshold.

No influenza-associated pediatric deaths were reported.

Proportion of outpatient visits for influenza-like illness (ILI) was 1.4%, which is below the national baseline of 2.2%.

Clinical Laboratory Data

	Week 44	Data Cumulative since October 2, 2016 (week 40)
No. of specimens tested	12,410	64,421
No. of positive specimens (%)	268 (2.2%)	1,060 (1.6%)
Positive specimens by type		
Influenza A	163 (60.8%)	626 (59.1%)
Influenza B	105 (39.2%)	434 (40.9%)

Public Health Laboratory Data

	Week 44	Data Cumulative since October 2, 2016 (week 40)
No. of specimens tested	572	3,874
No. of positive specimens*	34	351
Positive specimens by type/subtype		
Influenza A	31 (91.2%)	320 (91.2%)
A(H1N1)pmd09	5 (16.1%)	36 (11.3%)
H3	18 (58.1%)	267 (83.4%)
Subtyping not performed	8 (25.8%)	17 (5.3%)
Influenza B	3 (8.8%)	31 (8.8%)
Yamagata lineage	1 (33.3%)	10 (32.3%)
Victoria lineage	0 (0%)	6 (19.4%)
Lineage not performed	2 (66.7%)	15 (48.4%)

HHS Surveillance Region Data:

U.S. Outpatient Influenza-like Illness Surveillance Network (ILINet) 2016-2017 Influenza Season
HHS Region 5 (IL, IN, MI, MN, OH, and WI) (Baseline: 1.9%) Data as of Friday, November 11, 2016

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
201641	244	317	377	142	88	64	988	92022	1.1	1.0
201642	238	345	523	148	93	69	1178	93606	1.3	1.1
201643	242	370	498	175	72	72	1187	91993	1.3	1.2
201644	212	369	437	178	77	53	1114	84247	1.3	1.1
Totals							5507	457483		

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
201641	7	34	0	0	0	0	0	0	0	29	1788	26	1.45	14	12
201642	9	58	0	1	1	0	0	2	3	28	1776	18	1.01	10	8
201643	6	53	0	1	2	0	0	0	2	25	1639	28	1.71	17	11
201644	6	20	0	0	0	0	0	0	0	20	1324	16	1.21	10	6
Total	0	202	0	3	3	0	0	2	5	.	8232	127	1.54	76	51

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	0	0 (0.0)	0	0 (0.0)	0	0 (0.0)
Influenza A (H3N2)	16	0 (0.0)	16	0 (0.0)	16	0 (0.0)
Influenza B	10	0 (0.0)	10	0 (0.0)	10	0 (0.0)

Antigenic Characterization: During May 22 – November 5, 2016, CDC has antigenically characterized 182 influenza viruses [19 influenza A (H1N1)pdm09, 88 influenza A (H3N2), and 75 influenza B viruses] collected by U.S. laboratories.

Influenza A Virus [107]

A (H1N1)pdm09 [19]: All 19 (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) [88]: 75 (85.2%) of 88 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, 12 of 13 (92.3%) are more closely related to A/Switzerland/9715293/2013, a virus belonging to genetic group 3C.3a.

Influenza B Virus [75]

Victoria Lineage [36]: All 36 (100%) 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 [39]: All 39 (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.