Influenza Surveillance Report

www.infectiousdisease.dhh.louisiana.gov **Week 19: 5/10/15 - 5/16/15**

Influenza activity remained low in Louisiana this week. Rhino/Enterovirus account for 46% of non-influenza viruses; another 34% were attributable to Adenovirus and Parainfluenza 3.

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.

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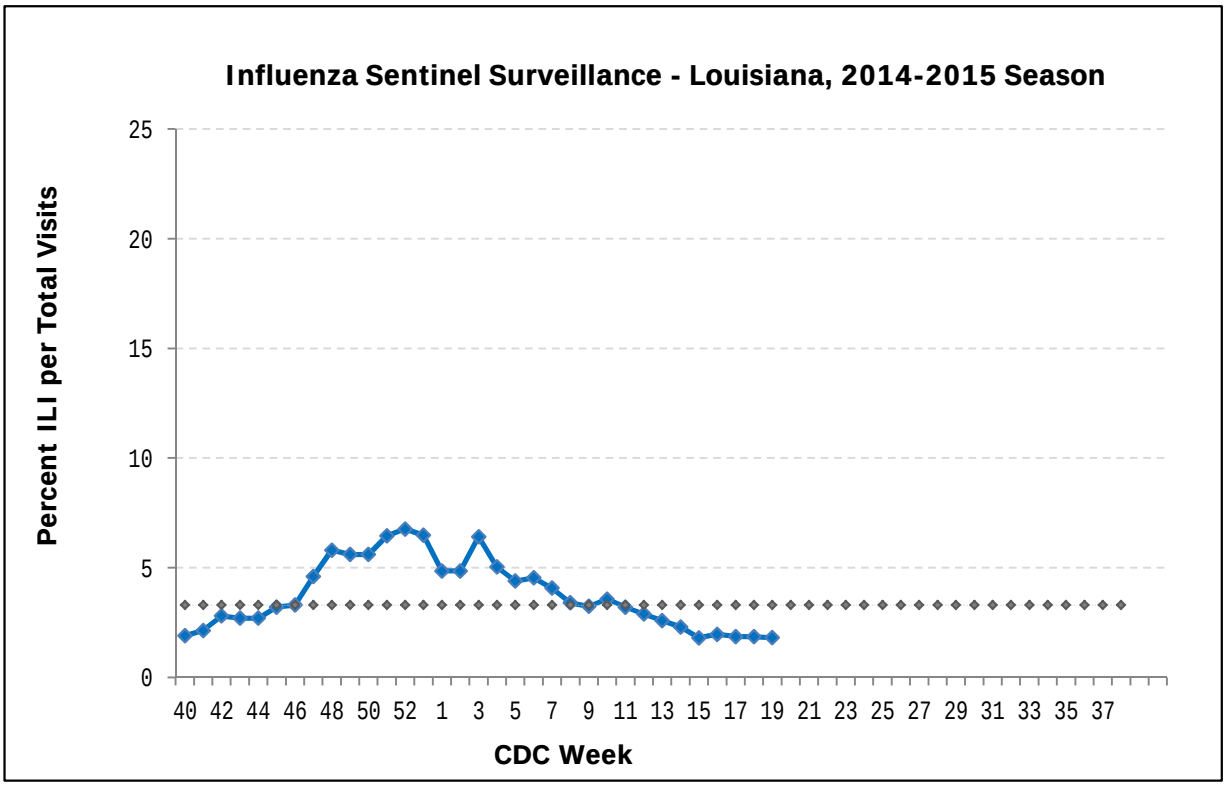
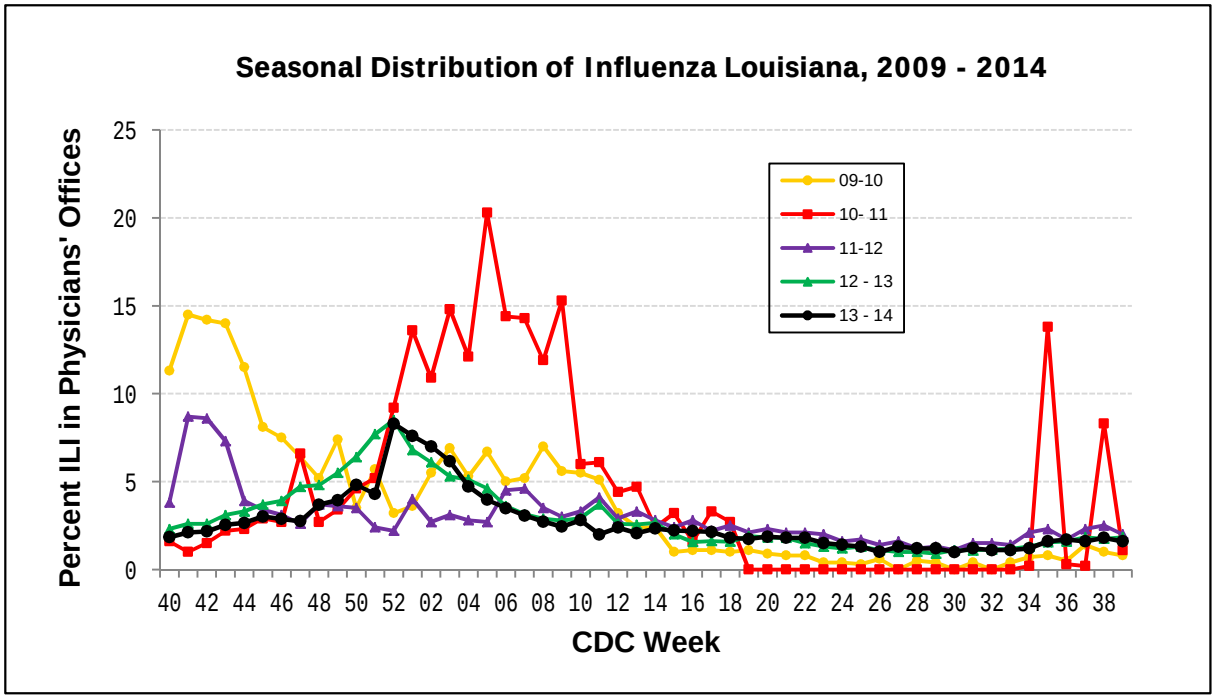
2014-2015 Season

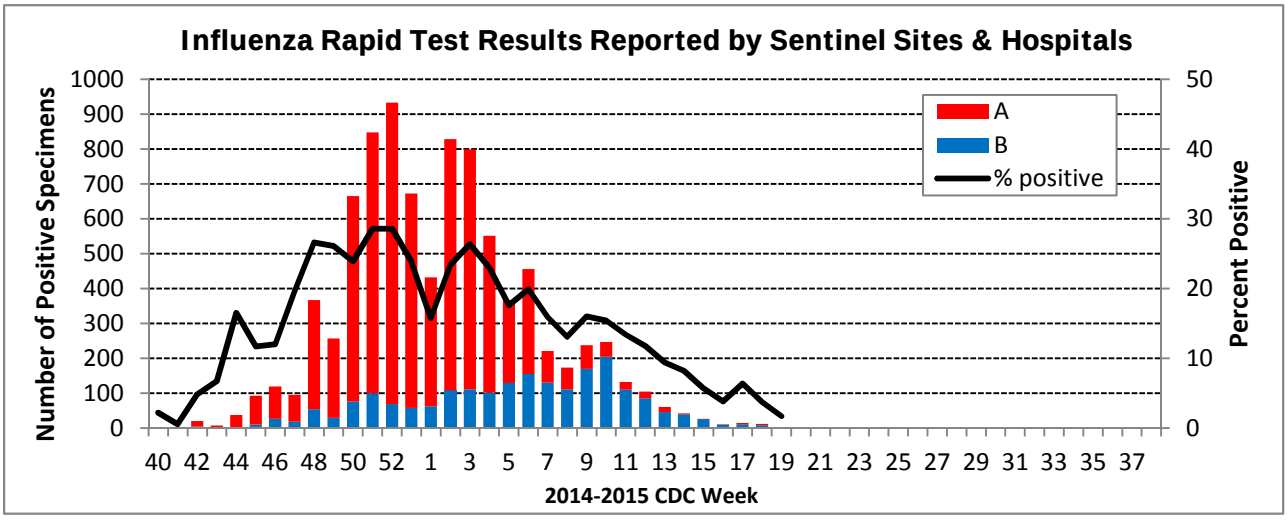
This graph shows the percentage of visits for ILI over the total number of visits for sentinel surveillance sites. This is the best approach to estimate the magnitude of influenza transmission. ILI counts do include some viral infections other than influenza, but experience over the last 50 years has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

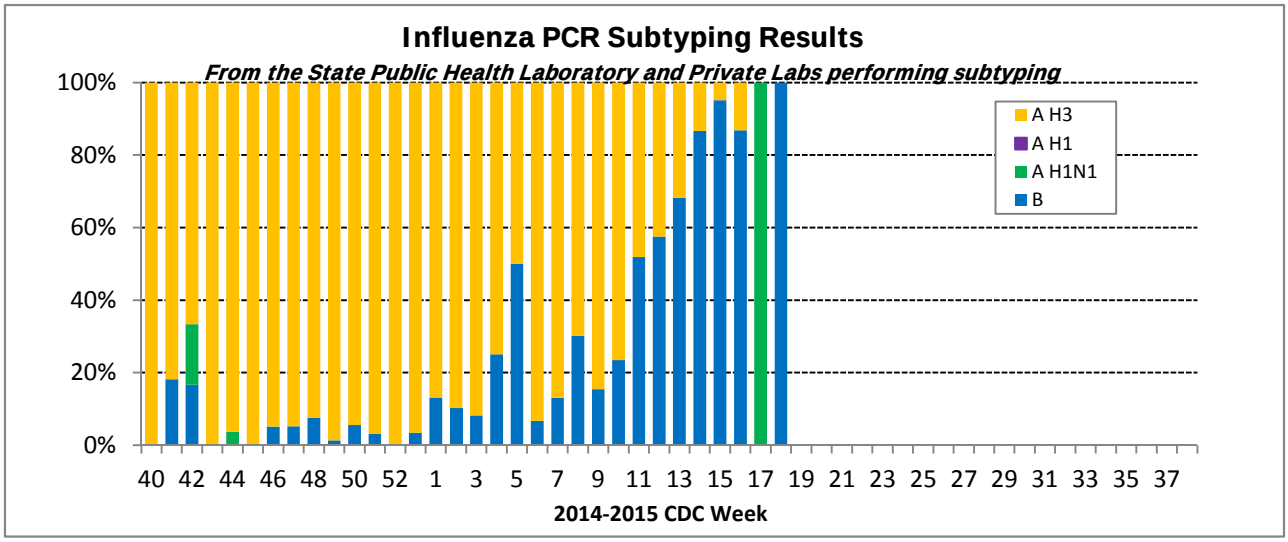


This graph shows the data on ILI surveillance among sentinel physicians' over the past 5 seasons to enable comparisons with previous years and better estimate the amplitude of this season's influenza transmission.

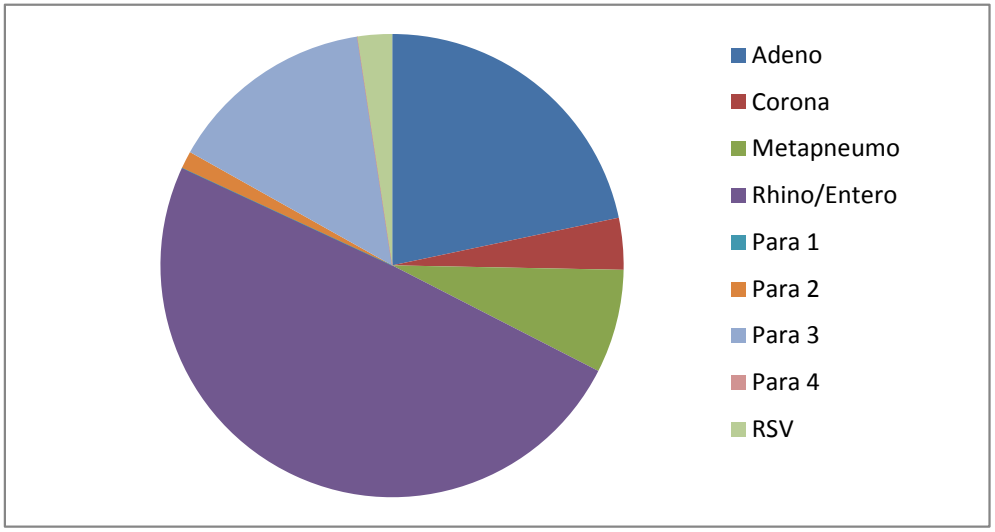


Virologic Surveillance





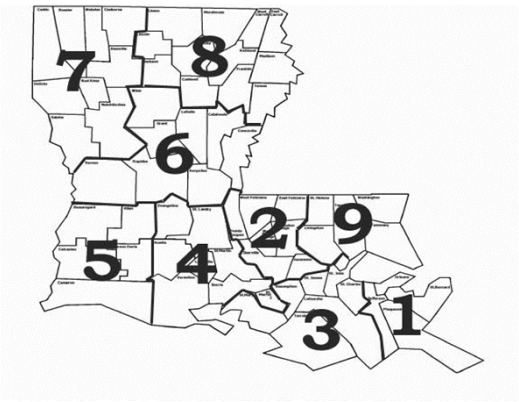
Other Respiratory Viruses*



*Based on results from the State Public Heatlh Laboratory Respiratory Virus Panel (RVP) Testing and other labs reporting RVP results during the current reporting week.

Geographical Distribution of ILI

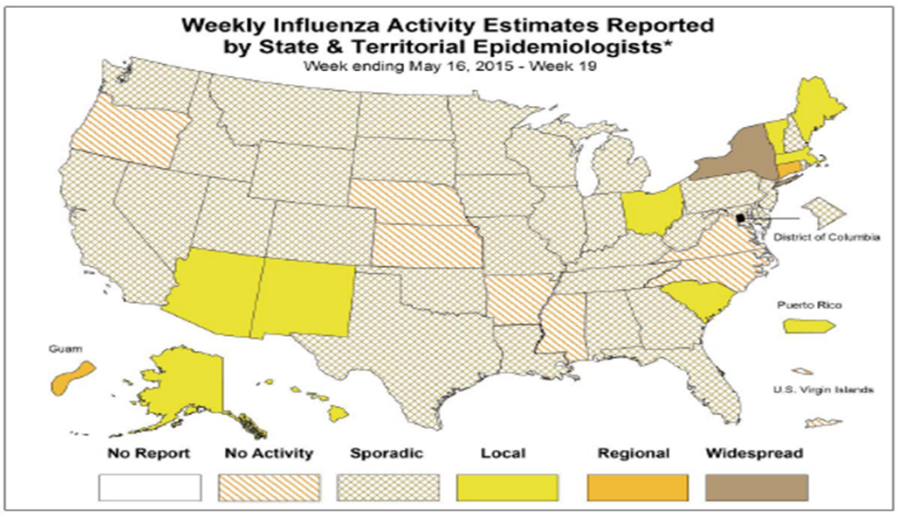
Region	% ILI *
1	
2	
3	
4	
5	
6	
7	
8	
9	



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

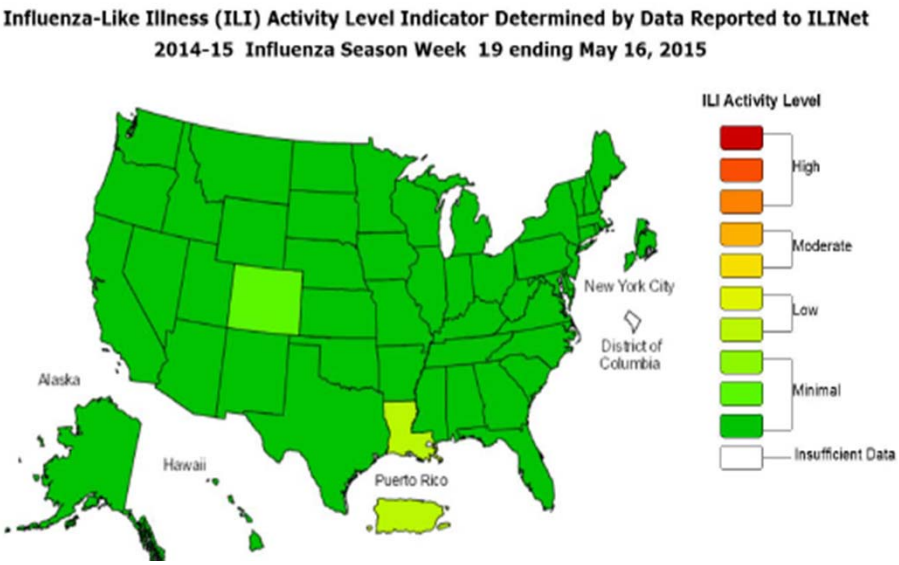
** %ILI over the last 4 weeks based on sentinel surveillance data*

Geographic Spread of Influenza as Assessed by State and Territorial Epidemiologists



* This map indicates geographic spread & does not measure the severity of influenza activity

ILINet Activity Indicator Map



National Surveillance

During week 19, influenza activity continued to decrease in the United States.

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

Three influenza-associated pediatric deaths were reported, including two influenza-associated pediatric deaths that occurred during the 2013-2014 season.

Proportion of outpatient visits for influenza-like illness (ILI) was 1.3%, which is below the national baseline of 2.0%.

	Week 19
Specimens tested	**6,553**
Positive specimens	**228 (3.5%)**
Positive specimens by type/subtype	
Influenza A	**28 (12.3%)**
A (2009 H1N1)	0 (0.0%)
A (H3)	7 (25.0%)
A (subtyping not performed)	21 (75.0%)
Influenza B	**200 (87.7%)**

Antiviral Resistance:

Neuraminidase Inhibitor Resistance Testing Results on Samples Collected Since October 1, 2014

	Viruses tested (n)	Resistant Viruses, Number (%)	Viruses tested (n)	Resistant Viruses, Number (%)	Viruses tested (n)	Resistant Viruses, Number (%)
		Oseltamivir		Zanamivir		Peramivir
Influenza A (H3N2)	3,187	0 (0.0%)	3,187	0 (0.0%)	1,678	0 (0.0%)
Influenza B	809	0 (0.0%)	809	0 (0.0%)	809	0 (0.0%)
2009 Influenza A (H1N1)	59	1 (1.7%)	53	0 (0.0%)	59	1 (1.7%)

The majority of currently circulating viruses are susceptible to the neuraminidase inhibitor antiviral medications oseltamivir and zanamivir; however, rare sporadic cases of oseltamivir-resistant 2009 influenza A (H1N1) and A (H3N2) viruses have been detected worldwide. Antiviral treatment with oseltamivir or zanamivir is recommended as early as possible for patients with confirmed or suspected influenza who have severe, complicated, or progressive illness; who require hospitalization; or who are at greater risk for serious influenza-related complications. Additional information on recommendations for treatement and chemoprophylaxis of influenza virus infection with antiviral agents is available at http://www.cdc.gov/flu/antivirals/index.htm

Antigenic Characterization:

CDC has characterized 2,083 influenza viruses (59 2009 H1N1 virus, 1,272 influenza A (H3N2) viruses, and 752 influenza B viruses) collected by U.S. laboratories since October 1, 2014 by hemagglutination inhibition (HI). All 59 2009 H1N1 viruses tested were characterized as A/California/7/2009-like, the influenza A (H1N1) component of the 2014-2015 Northern Hemisphere influenza vaccine. 244 (19.2%) of the 1,272 influenza A (H3N2) viruses tested have been characterized as A/Texas/50/2012-like, the influena A (H3N2) component of the 2014-2015 Northern Hemisphere influenza vaccine. 1,028 (80.8%) of the 1,272 viruses tested showed reduced titers with antiserum produced against A/Texas/50/2012 or belonged to a genetic group that typically shows reduced titers to A/Texas/50/2012. The majority of those with reduced titers were antigentically similar to A/Switzerland/9715293/2013, the H3N2 virus selected for the 2015 Southern Hemisphere influenza vaccine. Both B/Victoria and B/Yamagata-lineage viruses are currently circulating in the United States. 524 (69.7%) of the influenza B viruses tested belong to B/Yamagata/16/88 lineage (included in the trivalent and quadrivalent vaccines) and the remaining 228 (30.3%) belong to B/Victoria/2/87 lineage (included in the quadrivalent vaccine). Eleven (2.1%) of the B/Yamagata-lineage viruses tested showed reduced titers to B/Massachusetts/2/2012. Five (2.2%) of the B/Victoria-lineage viruses showed reduced titers to B/Brisbane/60/2008.