Influenza & Other Respiratory Viruses Surveillance Report

2019-2020 Season

Week 39, Ending September 26, 2020

Viral Respiratory Disease Surveillance Program

Infectious Disease Epidemiology

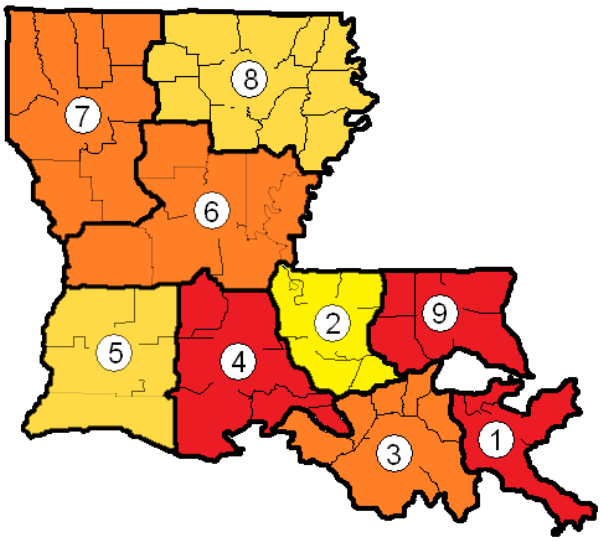
LOUISIANA DEPARTMENT OF HEALTH

The first Louisiana COVID-19 case was identified in March 2020. The pandemic impacted Influenza-like Illness (ILI) surveillance, activity, and testing. Healthcare seeking behaviors changed drastically during the beginning of the pandemic causing very low numbers for ILI surveillance and testing for influenza significantly dropped as COVID-19 testing became more widespread. COVID-like illness (CLI) surveillance is being conducted along with ILI (page 2) and will be presented weekly in the 2020-2021 influenza surveillance reports. Other changes to surveillance include expansion of ILI activity measures from ten to thirteen levels (minimal to very high) and discontinuation of the national geographic spread

Statewide ILI Activity

Minimal			Low		Moderate		High			Very High		
1	2	3	4	5	6	7	8	9	10	11	12	13

2019-2020 Season: Average Regional ILI Activity



Overall Severity* 2019-2020 Season

MODERATE

ILI – Moderate
Laboratory –Moderate
Mortality – Very High

2019-2020 Season Predominant Subtype

B/Victoria

*For the 2019-2020 influenza season, Infectious Disease Epidemiology began using a new methodology to determine influenza season severity – the Moving Epidemic Method (MEM). Based on data from past seasons, key indicators are used to develop intensity thresholds (ITs) to classify the severity of the season from low to very high. **Activity of influenza and severity are separate measures.** For example, ILI activity in 2018-2019 was similar to levels seen in 2017-2018 but last season was not as severe as 2017-2018 when we saw record numbers of hospitalizations and mortality. The indicators chosen to assess severity in Louisiana are: 1) ILI activity, 2) Laboratory Activity, and 3) Mortality Data. Severity is estimated based on data for all three indicators. Previous season rankings and further on MEM methodology can be found on page 10.

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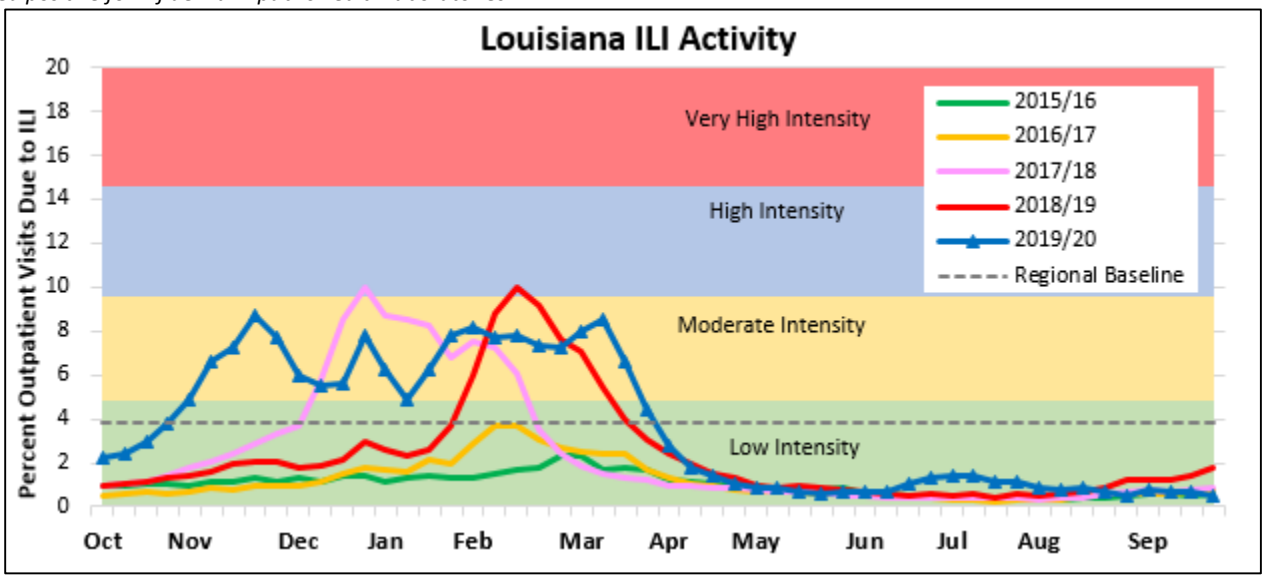
Note: *This report includes data from numerous sources and should be viewed as preliminary each surveillance week. The information may be updated in future reports as additional data are received.*

ILI Activity

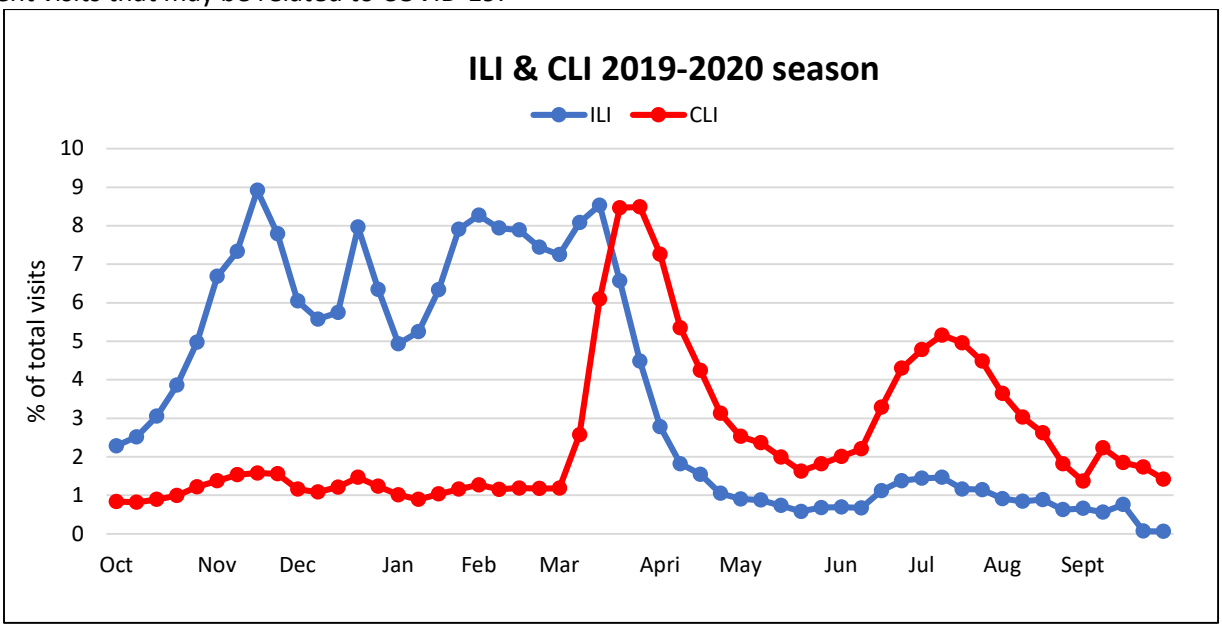
In March 2020, visits reported through the U.S. Outpatient Influenza-like illness Surveillance Network (ILINet) due to influenza-like illness (ILI) decreased and have remained extremely low through the summer months. ILI is defined as fever >100°F and cough and/or sore throat in the absence of another diagnosis.

Note: Regional baselines are calculated by CDC at the beginning of the influenza season. Louisiana is in Region 6 which also includes: Arkansas, Texas, New Mexico, and Oklahoma. The Region 6 baseline for the 2019-2020 season is 3.8%. The regional baselines are developed by calculating the mean percentage of ILI visits during non-influenza weeks for the previous three seasons and adding two standard deviations. A non-influenza week is defined as periods of two or more consecutive weeks in which each week accounted for less than 2% of the season's total number of specimens that tested positive for influenza in public health laboratories.



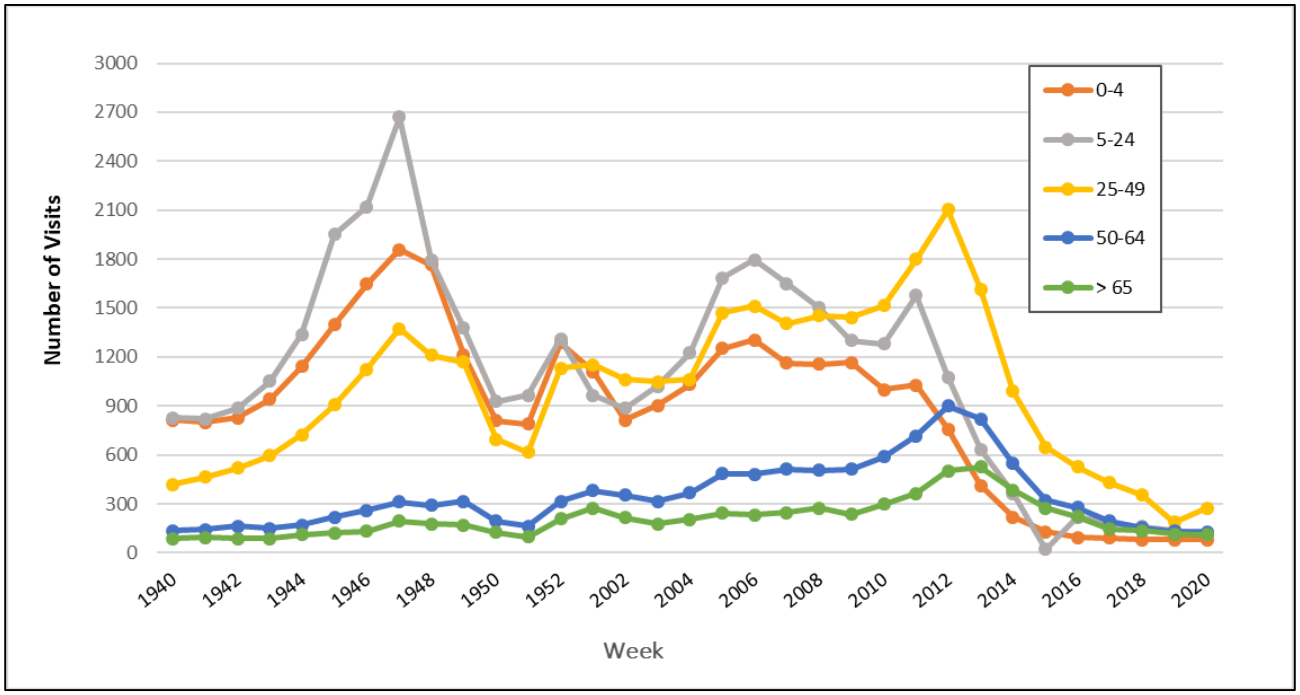
ILI & CLI Activity

In addition to ILINet, COVID-19 surveillance is being monitored through the National Syndromic Surveillance Program (NSSP) using a CLI syndrome. CLI is defined as fever and cough or shortness of breath or difficulty breathing or the presence of a coronavirus diagnosis code. ILI and CLI are used to monitor trends in outpatient and emergency department visits that may be related to COVID-19.



Louisiana ILI Activity by Age Group:

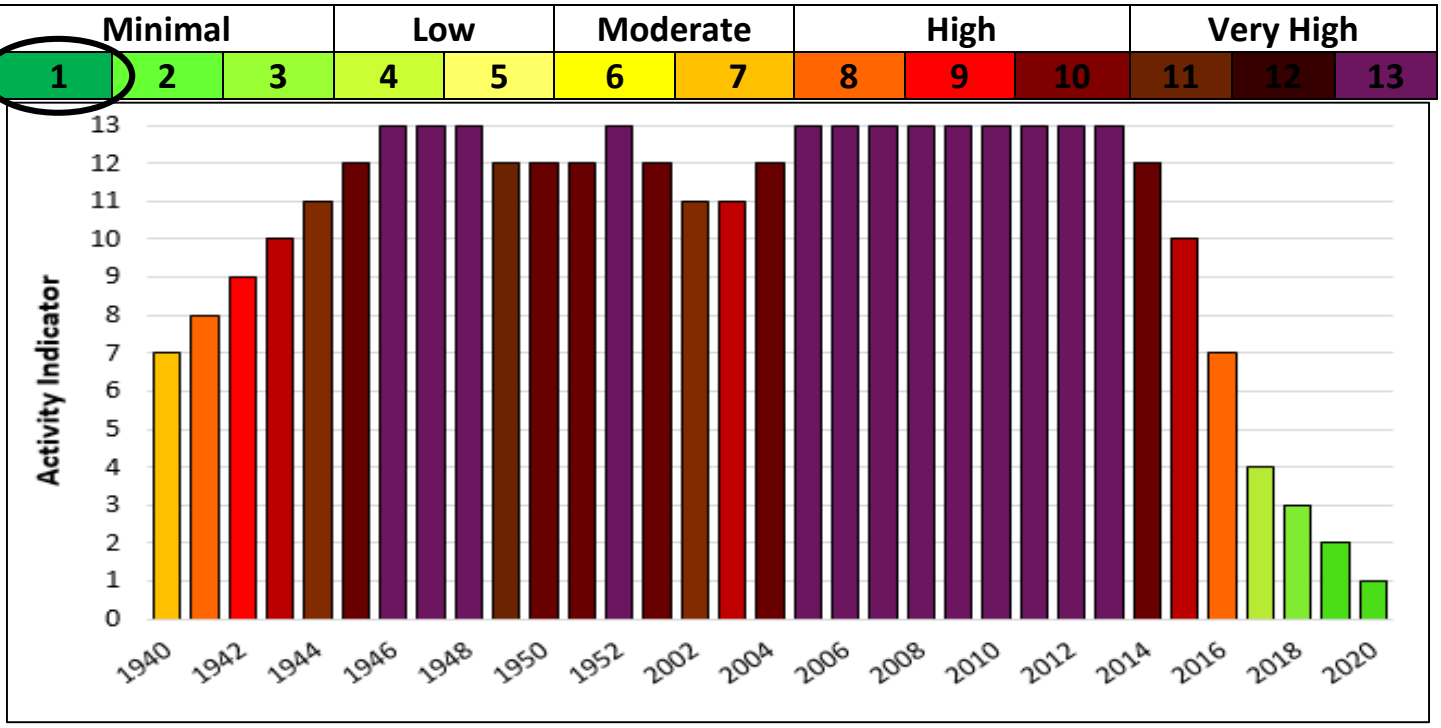
ILINet activity is reported by age group: 0-4 years, 5-24 years, 25-49 years, 50-64 years, and ≥65 years. Below is the cumulative summary of the 2019-20 influenza season by age group.



Age Group in Years	Cumulative data 2019/20 Season
0-4	29,162
5-24	35,844
25-49	33,003
50-64	11,536
≥65	6,868
Total	116,413

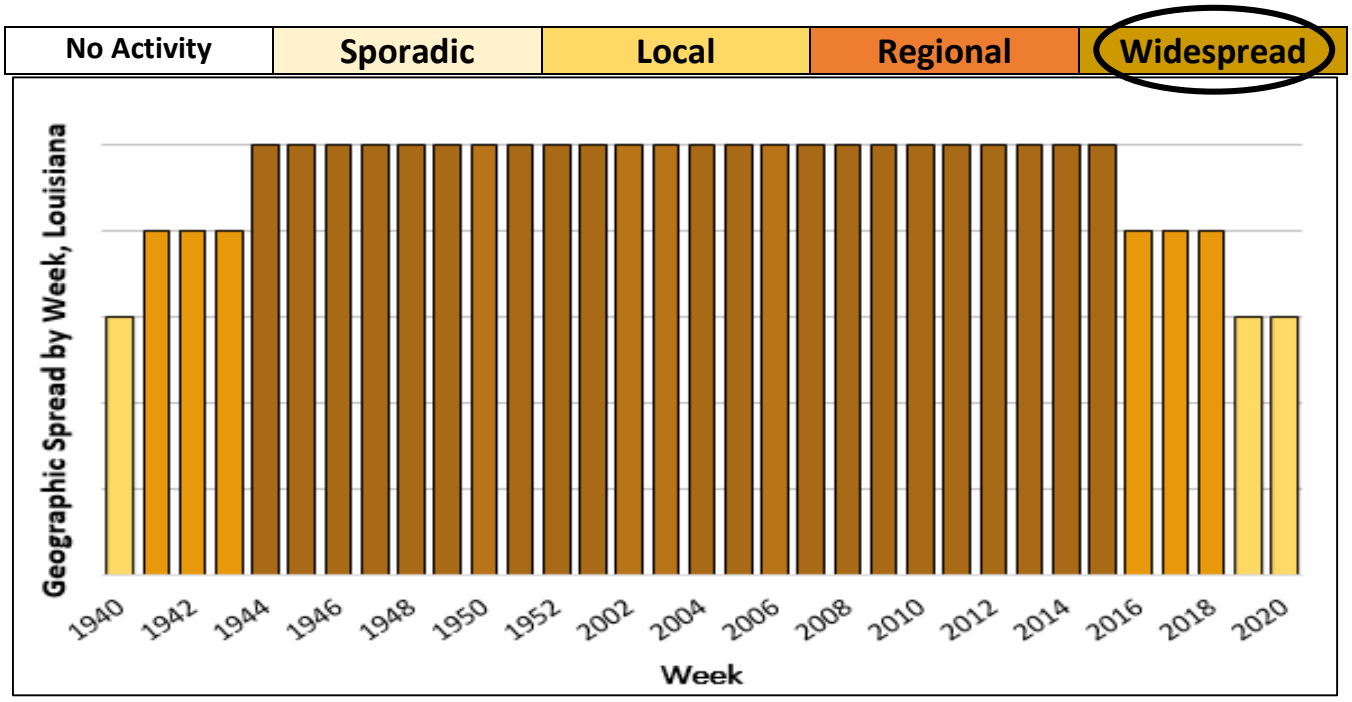
CDC ILINet Activity Indicator:

ILI Activity Levels compare the mean reported percent of visits due to ILI for the current week to the mean reported percent of visits due to ILI for non-influenza weeks. The 13 activity levels correspond to the number of standard deviations below, at, or above the mean for the current week compared with the mean of the non-influenza weeks. *For more information, refer to page 10 of report.* **Insufficient data weeks 1946, 1949, and 1950 due to system outages.**



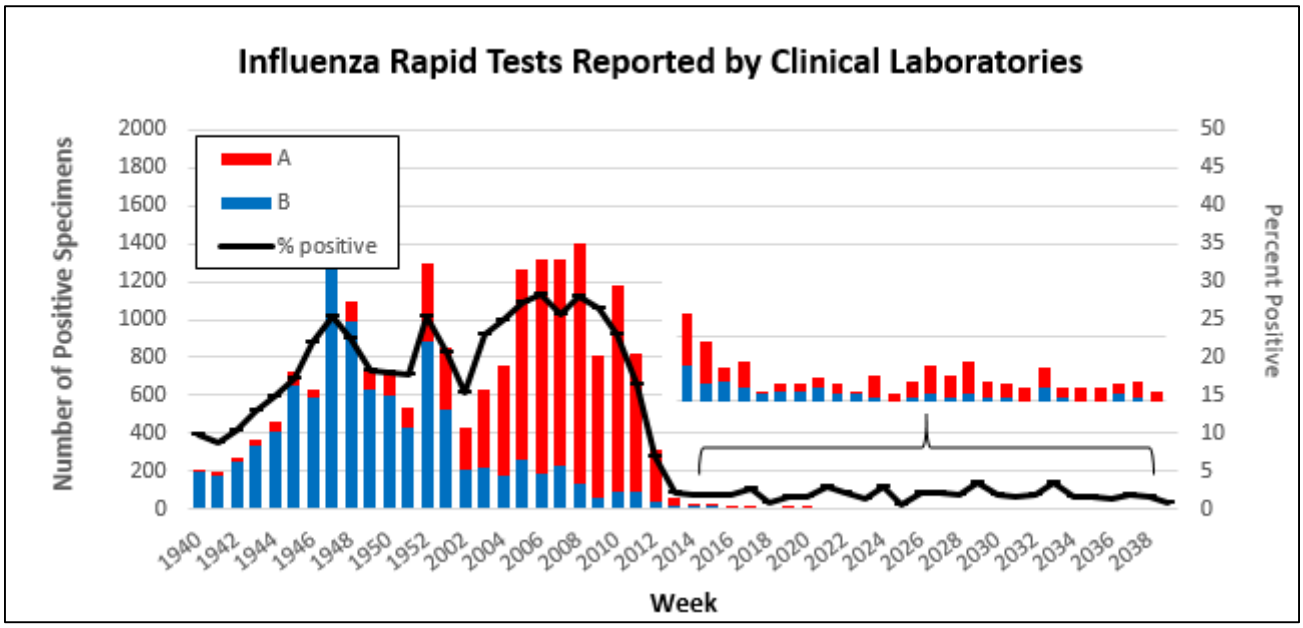
Geographic Spread of Influenza:

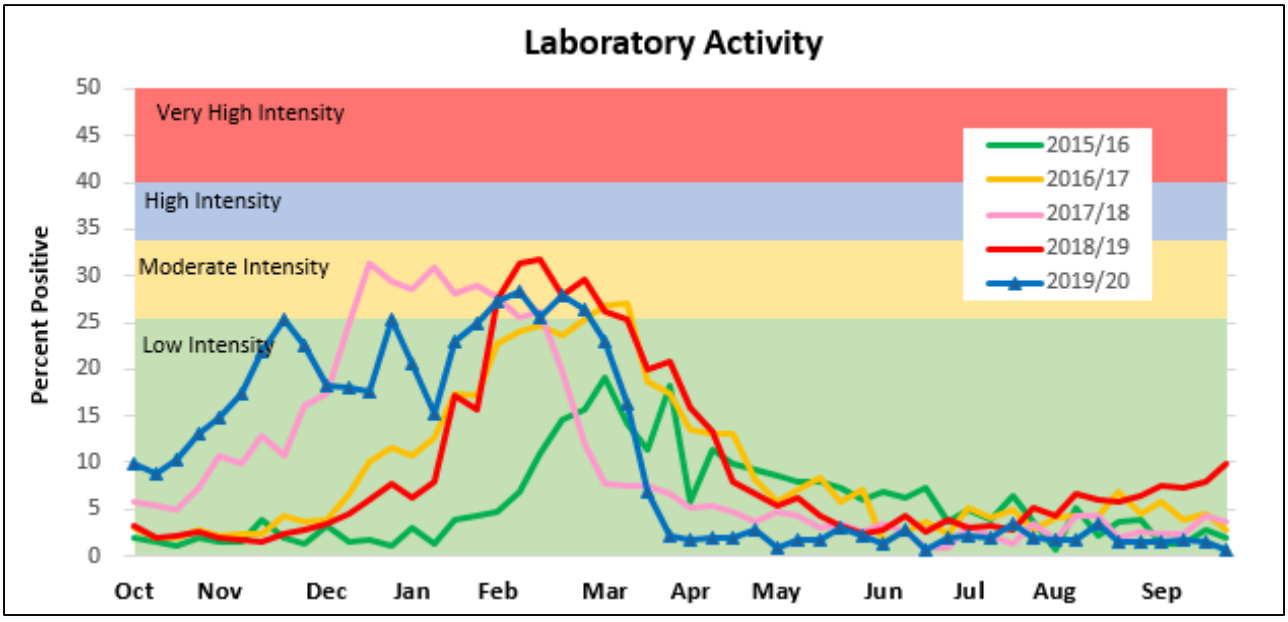
States report estimated level of geographic spread of influenza activity weekly to CDC. This level does not measure the intensity of influenza activity. *For more information, refer to page 11 of report.*



Virologic Surveillance:

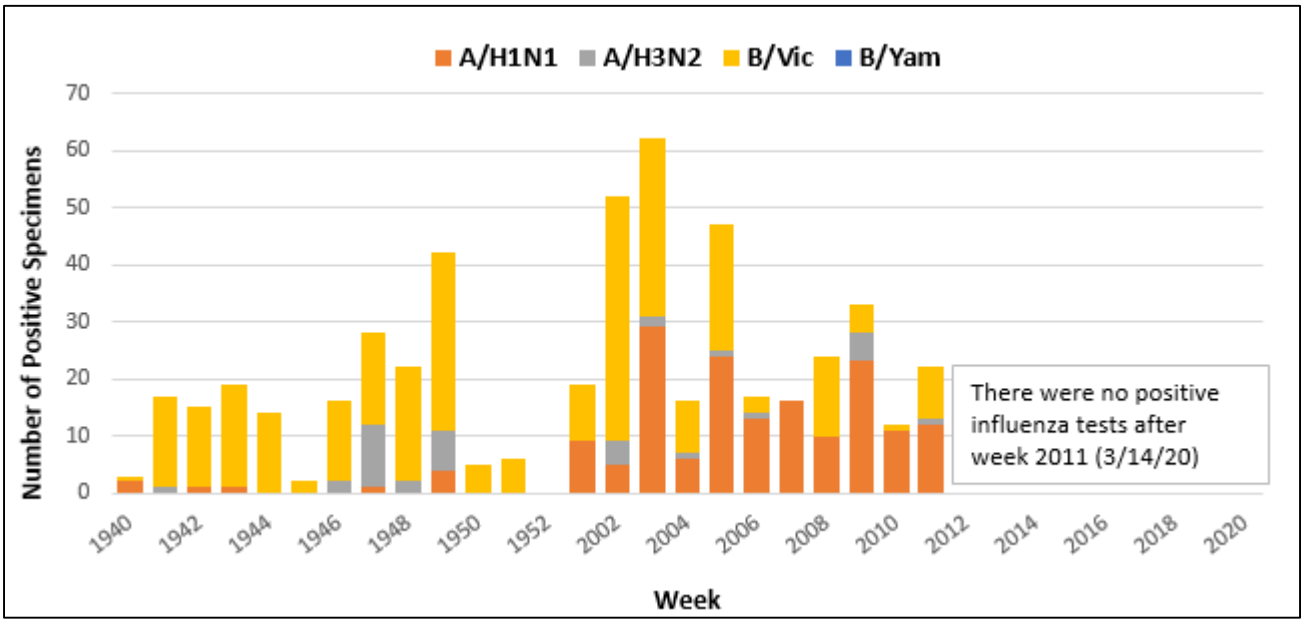
Louisiana virologic surveillance for respiratory viruses consists of data reported by clinical laboratories throughout the state and testing done at the State Public Health Laboratory. Data on influenza testing is presented below, data for other respiratory viruses is on page 9 of report.





Summary of Influenza Testing, Louisiana State Public Health Laboratory

	Cumulative 2019/20 Season
Number of specimens tested	1,282
Number of positive specimens	509
Influenza A/H1N1	167
Influenza A/H3	38
Influenza B/Victoria	304
Influenza B/Yamagata	0



Summary of Influenza Viruses Antigenically Characterized by CDC that Match Vaccine Strains

Influenza Subtype/Lineage	Vaccine Strain	Louisiana Characterized/Matched	U.S. Characterized/Matched
Influenza A/H1N1	A/Brisbane/02/2018	7/8	113/131
Influenza A/H3	A/Kansas/14/2017	1/5	31/76
Influenza B/Victoria	B/Colorado/06/2017	2/5	95/146
Influenza B/Yamagata	B/Phuket/3073/2013	0/0	10/10

Summary of Influenza Viruses Genetically Characterized by CDC

U.S.

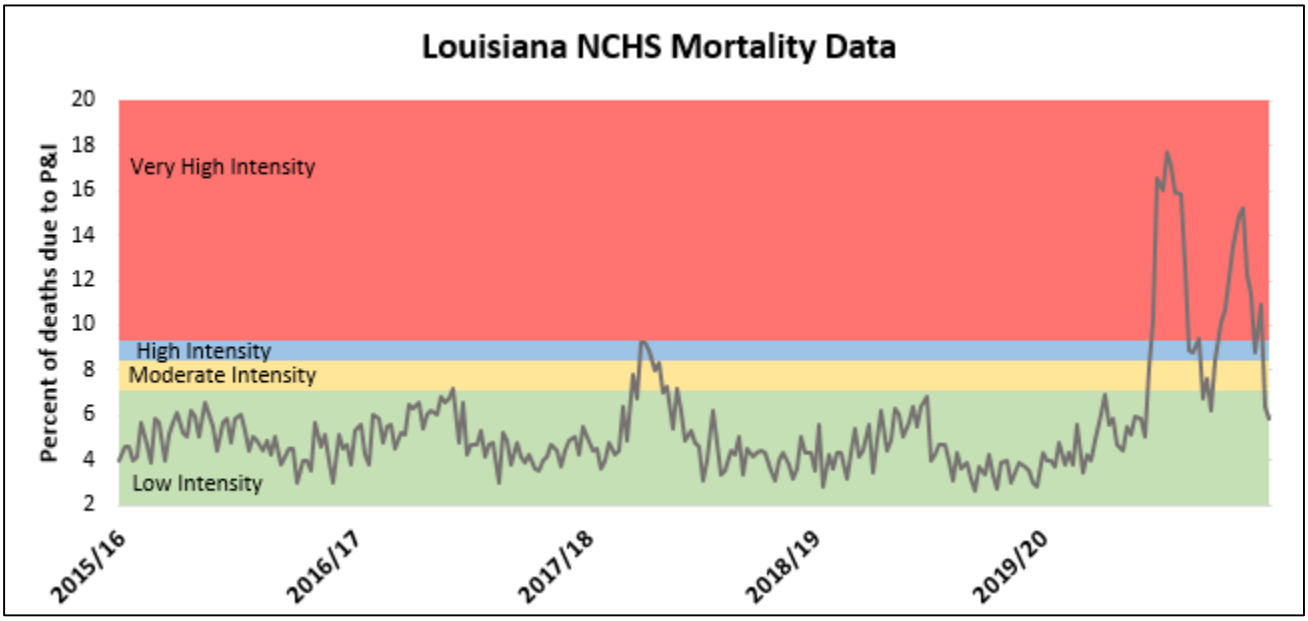
Virus Subtype or Lineage	Genetic Characterization				
	Total # of Subtype/Lineage Tested	Clade	Number (% of subtype/lineage tested)	Subclade	Number (% of subtype/lineage tested)
A/H1	840				
		6B.1A	840 (100%)		
A/H3	497				
		3C.2a	467 (94.0%)	2a1	467 (94.0%)
				2a2	0
				2a3	0
				2a4	0
		3C.3a	30 (6.0%)	3a	30 (6.0%)
B/Victoria	909				
		V1A	909 (100%)	V1A	0
				V1A.1	60 (6.6%)
				V1A.3	849 (93.4%)
B/Yamagata	90				
		90	79 (100%)		

Louisiana

Virus Subtype or Lineage	Genetic Characterization				
	Total # of Subtype/Lineage Tested	Clade	Number (% of subtype/lineage tested)	Subclade	Number (% of subtype/lineage tested)
A/H1	20				
		6B.1A	20 (100%)		20 (100%)
A/H3	21				
		3C.2a	19 (90%)	2a1	19 (90.4%)
				2a2	0
				2a3	0
				2a4	0
		3C.3a	2 (10%)	3a	2 (9.6%)
B/Victoria	23				
		V1A	23 (100%)	V1A	0
				V1A.1	2 (8.7%)
				V1A.3	21 (91.3%)

Mortality Surveillance:

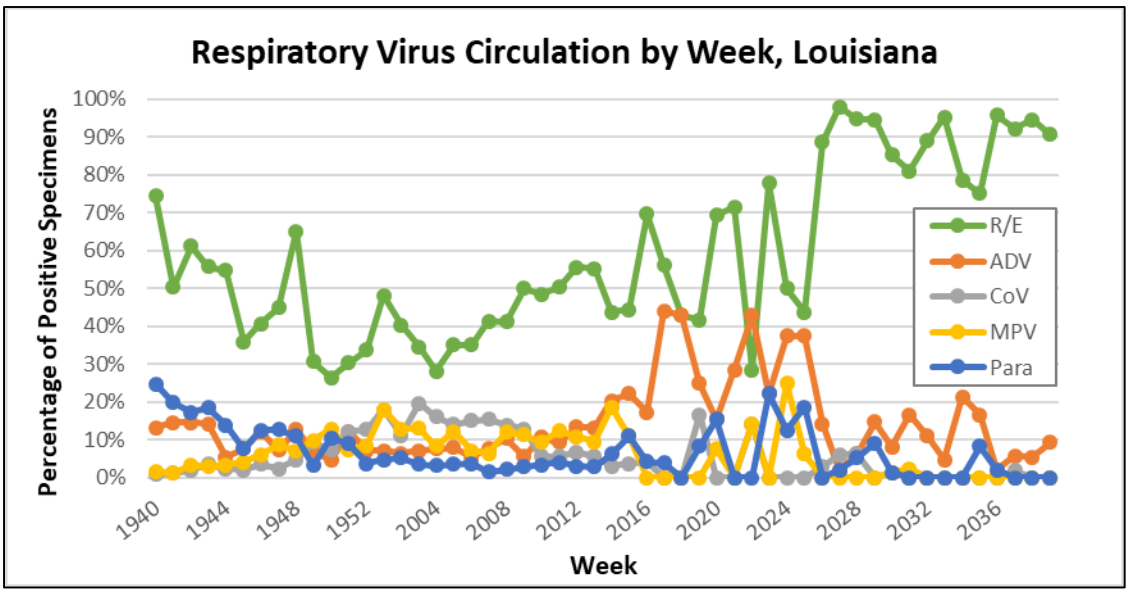
The National Center for Health Statistics (NCHS) collects death certificate data from state vital statistics offices for all deaths occurring in the U.S. Pneumonia and influenza (P&I) deaths are identified based on ICD-10 multiple cause of death codes. NCHS surveillance data are aggregated by the week of death occurrence. To allow for collection of enough data to produce a stable P&I percentage, NCHS surveillance data are released one week after the week of death. The NCHS surveillance data based on P&I percentage for earlier weeks are continually revised and may increase or decrease as new and updated death certificate data are received from the states by NCHS.



Non-Influenza Respiratory Viruses Update:

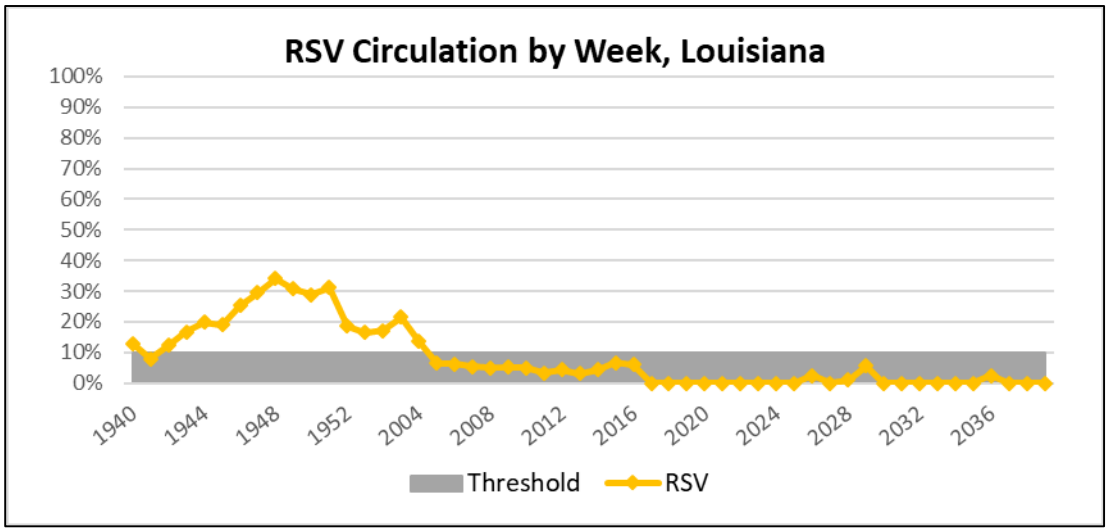
Surveillance for non-influenza respiratory virus surveillance is based on data from clinical laboratories statewide and testing done at the state public health laboratory. Data is collected on the following viruses: Rhino/Enterovirus (R/E), Adenovirus (ADV), Coronavirus (CoV), Human Metapneumovirus (MPV), Parainfluenza 1-4 (Para), and Respiratory Syncytial virus (RSV). RSV data is analyzed apart from other respiratory viruses due to the high prevalence of testing and seasonality of the virus.

CoV circulation represents Human Coronavirus types 229E, NL63, OC43, and HKUL; it does not include COVID-



RSV usually circulates during fall, winter, and spring, but the timing and severity of RSV season can vary from year to year. RSV season onset is defined as the first week of two consecutive weeks when the percent positive of ALL laboratory confirmed tests are greater than or equal to 10%. The end of RSV season is defined as the first of two consecutive weeks when the percent positive of ALL laboratory confirmed tests are less than 10%.
Information on National RSV surveillance can be found at: https://www.cdc.gov/surveillance/nrevss/rsv/index.html

RSV Season Status: OFF



Indicator Methodologies:

- **Intensity/Severity Measurements:** Intensity thresholds are calculated for activity measures to assess influenza season severity; for Louisiana these measurements are 1) ILI Activity, 2) Laboratory Activity, and 3) Mortality Data. Establishing these thresholds based on historical data allow epidemiologists to assign severity levels (low, moderate, high, very high) to weekly data points and overall seasons. This methodology was published in the American Journal of Epidemiology, October 2017.

Season	Severity Ranking
2015-2016	Low
2016-2017	Low
2017-2018	High
2018-2019	Moderate

- **ILI Activity Level Indicator:** Collected ILI data is used to produce a measure of ILI activity by state. Activity levels are based on the percent of outpatient visits in a state due to ILI and are compared to the average percent of ILI visits that occur during weeks with little or no influenza virus circulation. Activity levels range from minimal, which would correspond to ILI activity from outpatient clinics being below, or only slightly above, the average, to high, which would correspond to ILI activity from outpatient clinics being much higher than average. Intensity does not measure geographic spread within the state. For example, outbreaks occurring in a single city could cause the state to display high activity levels.
- **Geographic Spread Levels:**
  No Activity: No laboratory-confirmed cases of influenza and no reported increase in the number of cases of ILI.
  Sporadic: Small numbers of laboratory-confirmed influenza cases or a single laboratory-confirmed influenza outbreak has been reported, but there is no increase in cases of ILI.
  Local: Outbreaks of influenza or increases in ILI cases and recent laboratory-confirmed influenza in a single region of the state.
  Regional: Outbreaks of influenza or increases in ILI and recent laboratory confirmed influenza in at least two but less than half the regions of the state with recent laboratory evidence of those regions.
  Widespread: Outbreaks of influenza or increases in ILI cases and recent laboratory-confirmed influenza in at least half of the regions of the state with recent laboratory evidence of influenza in the state.