

# Respiratory Virus Surveillance Report<sup>1</sup>

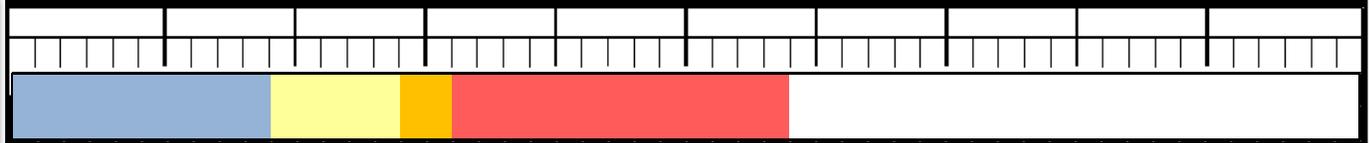
New Jersey Department of Health

Communicable Disease Service

Week ending March 23, 2019 (MMWR week 12<sup>2</sup>)

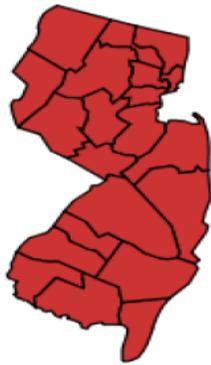


Week 40    Week 45    Week 50    Week 3    Week 8    Week 13    Week 18    Week 23    Week 28



■ No Activity   
 ■ Sporadic   
 ■ Local   
 ■ Regional   
 ■ Widespread

Influenza Activity Level<sup>3</sup>



**New Jersey Activity Level: HIGH**

Current week last year: **HIGH**

**Regional<sup>4</sup> Data**

**Northwest: HIGH**

**Northeast: HIGH**

**Central West: HIGH**

**Central East: HIGH**

**South: HIGH**

ILI<sup>5</sup> Activity

	Percent Influenza-like Illness/Absenteeism <sup>5</sup>			Baselines
	Current Week (range by county)	Last week Current year	Current week Last year	Off Season <sup>6</sup> (Seasonal Average– low, high) <sup>7</sup>
<b>Long Term Care Facilities</b>	0.25 (0.00, 0.66)	0.37	0.48	0.48 (0.45, 0.76)
<b>Schools (absenteeism)</b>	4.27 (2.59, 7.31)	4.91	4.14	3.36 (4.37, 4.86)
<b>Emergency Departments</b>	4.09 (2.20, 6.75)	4.45	3.90	2.21 (3.17, 4.26)

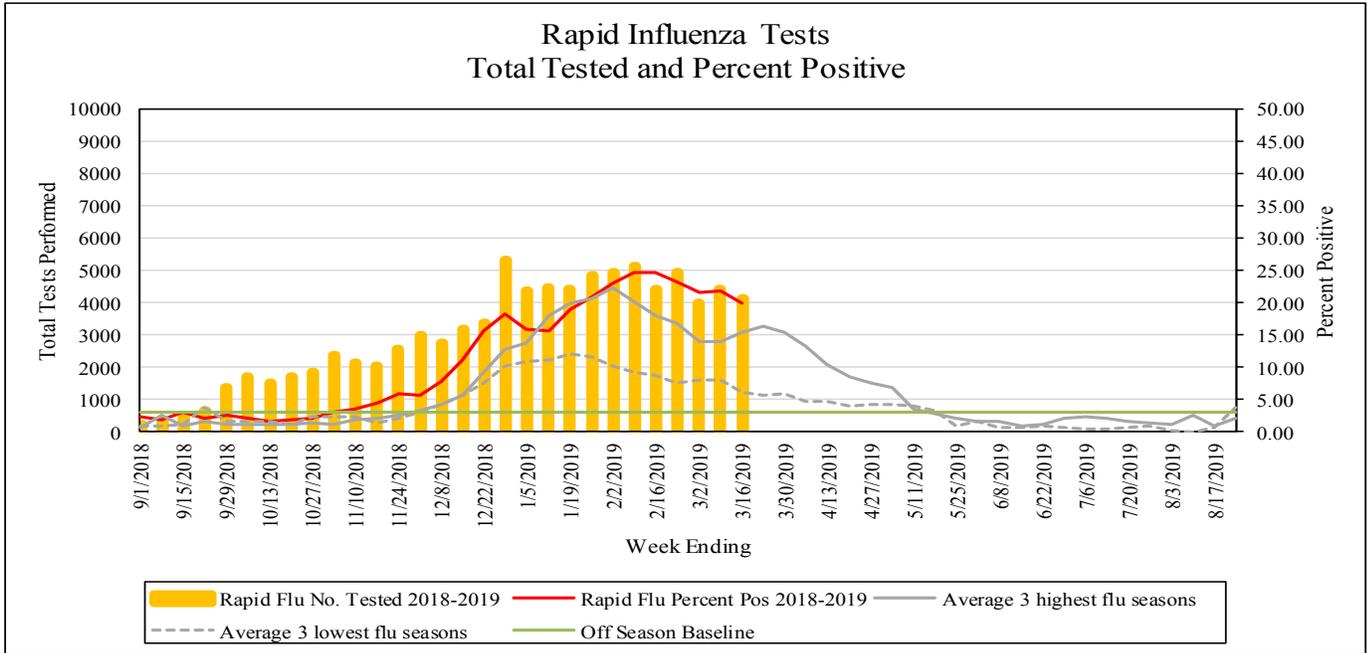
Laboratory  
Testing<sup>8</sup>

		Current Week	Past 3 Weeks	Cumulative Total
PCR	<b>Influenza A H1N1 (2009)</b>	12	84	2223
	<b>Influenza A H3N2</b>	80	393	1925
	<b>Influenza B</b>	11	39	211
	<b>Rapid Influenza Tests</b>	830	2662	13324

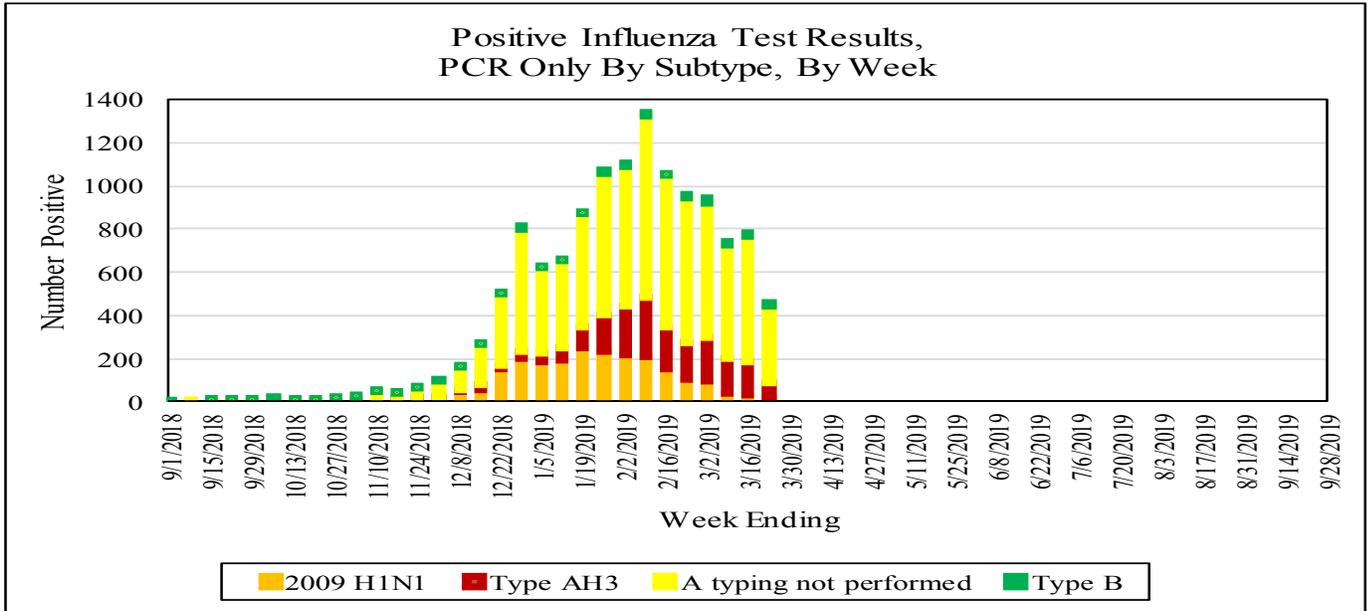
Report also available at <http://nj.gov/health/cd/statistics/flu-stats/>

# Virologic Surveillance<sup>8</sup>

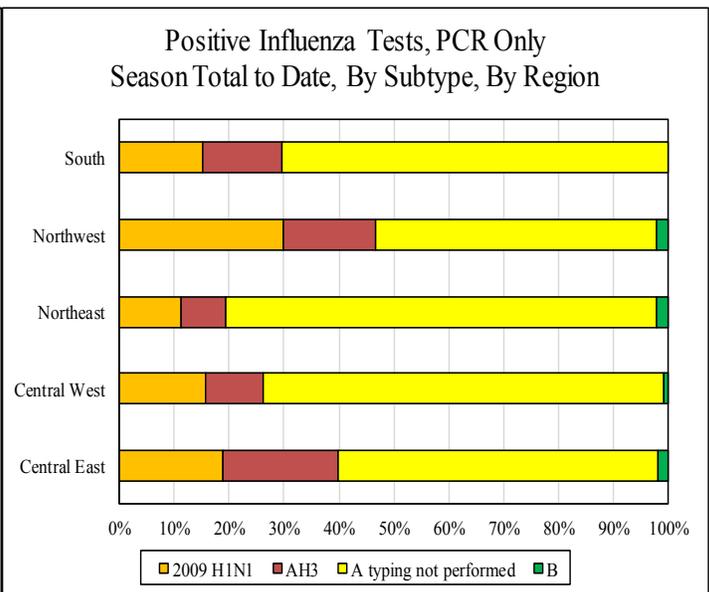
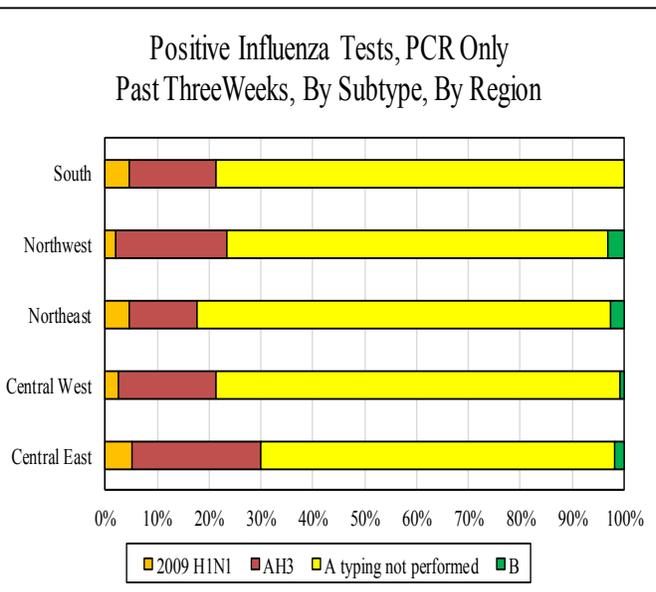
## Rapid Influenza Tests Results by Week



## Influenza Positive Specimens (PCR)

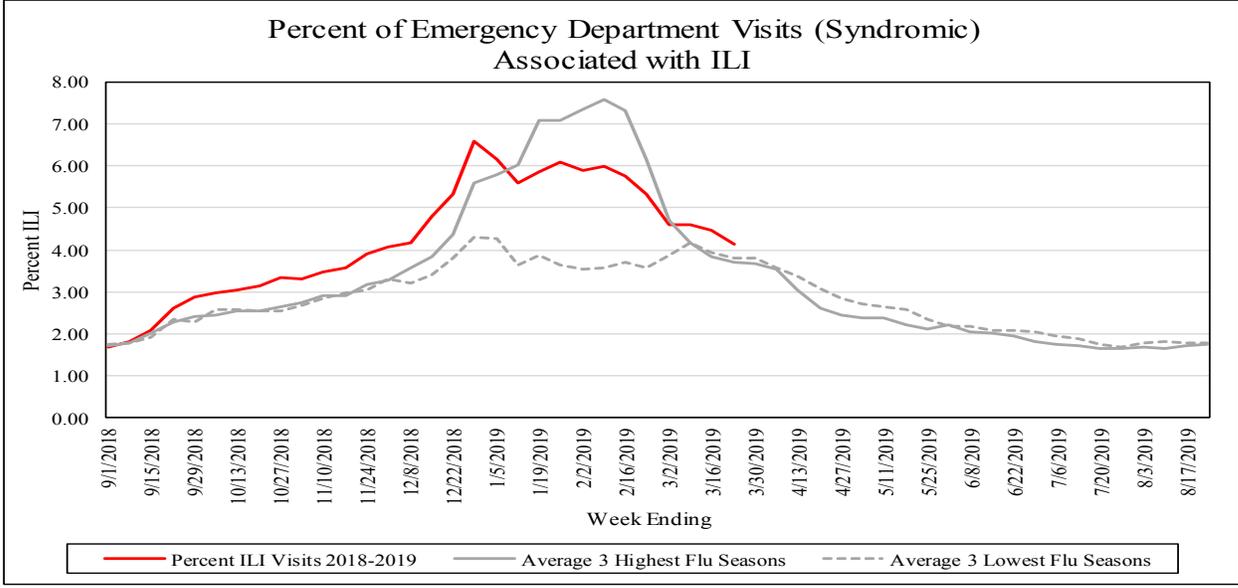


## Influenza Positive Specimens (PCR) by Region<sup>4</sup>/Type

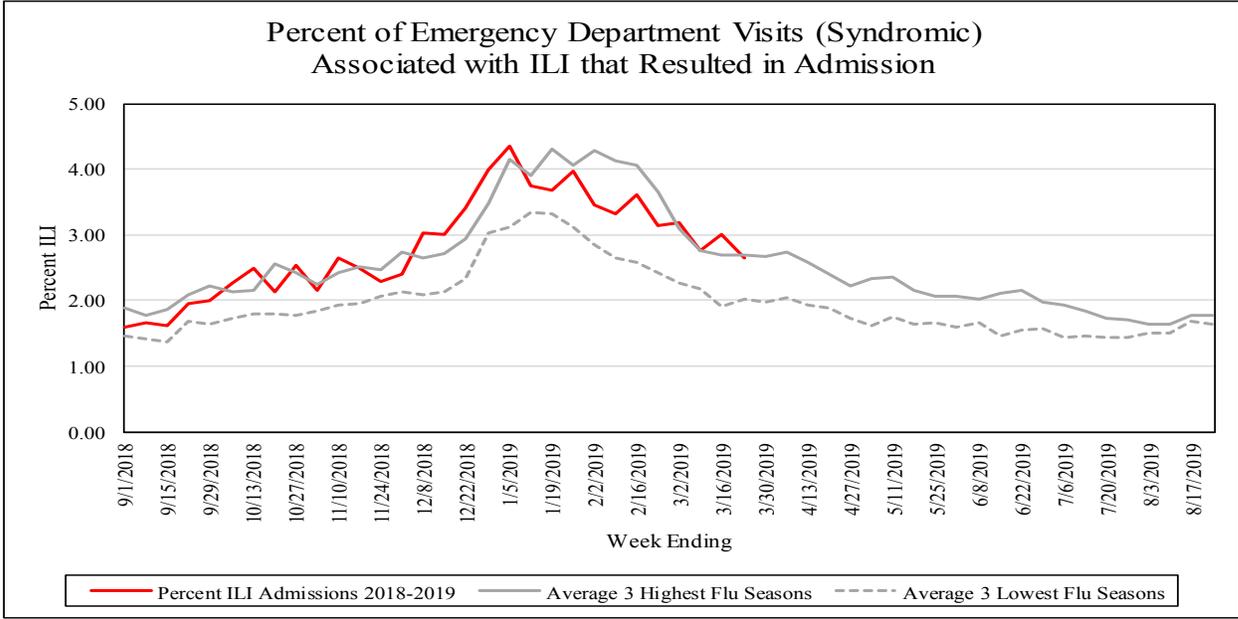


# Influenza-Like Illness (ILI) Surveillance

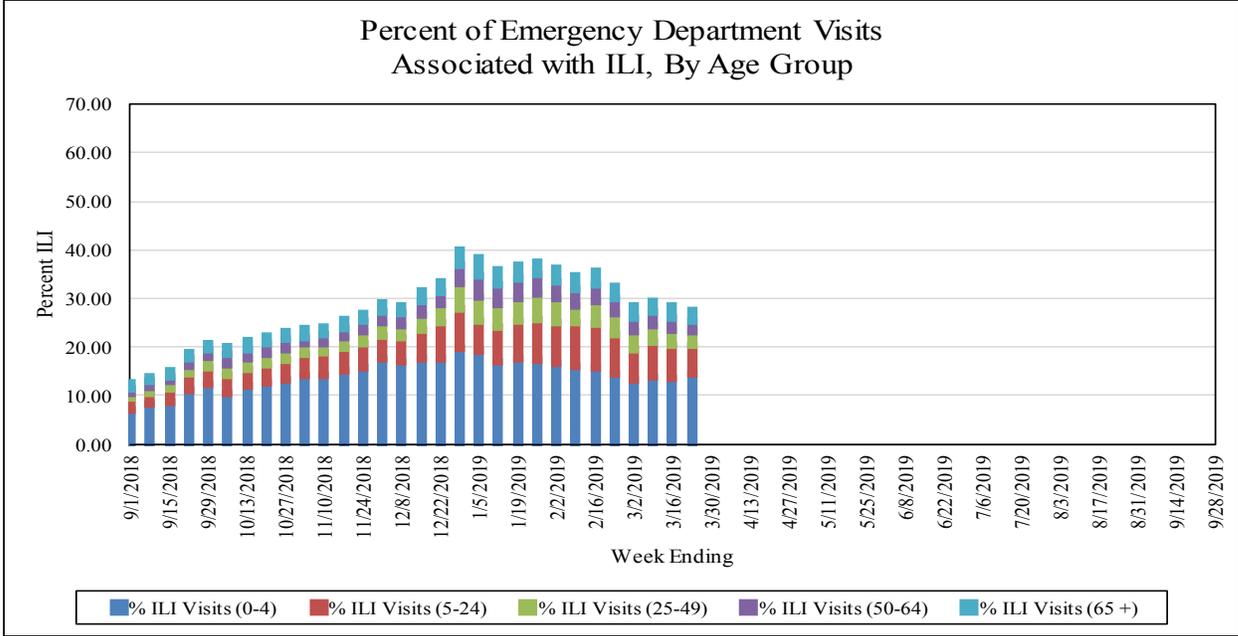
**Emergency Department<sup>9</sup> Visits  
Percent due to ILI**



**Emergency Department<sup>9</sup>  
Percent of Admissions due to ILI**

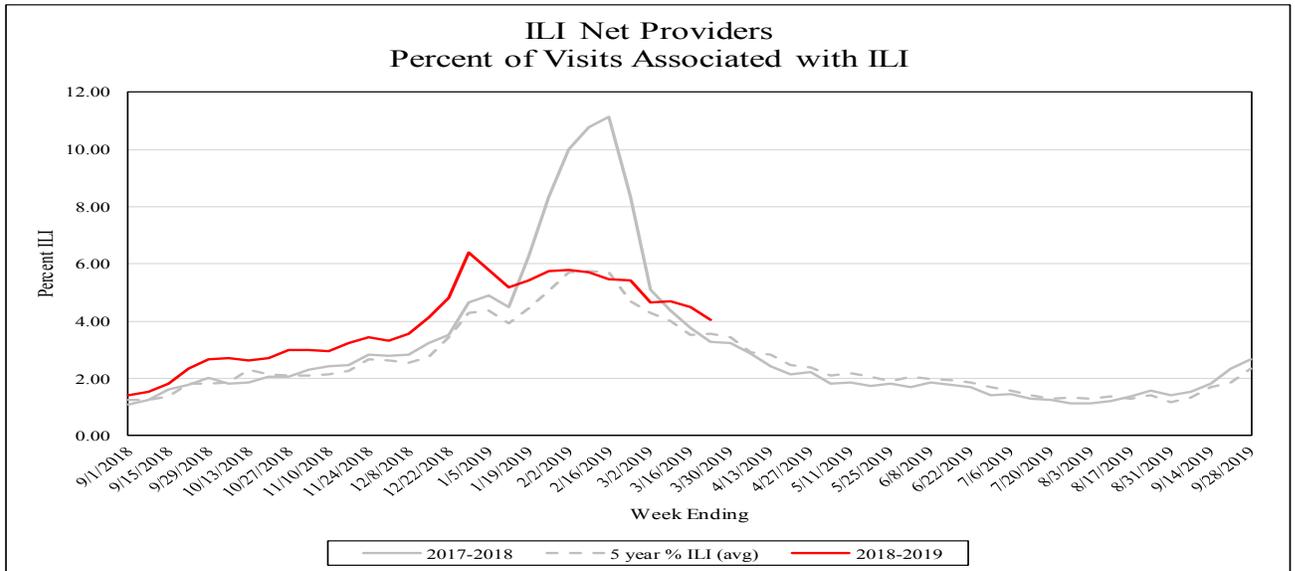


**Emergency Department<sup>9</sup> Visits  
Percent of ILI By Age Group**

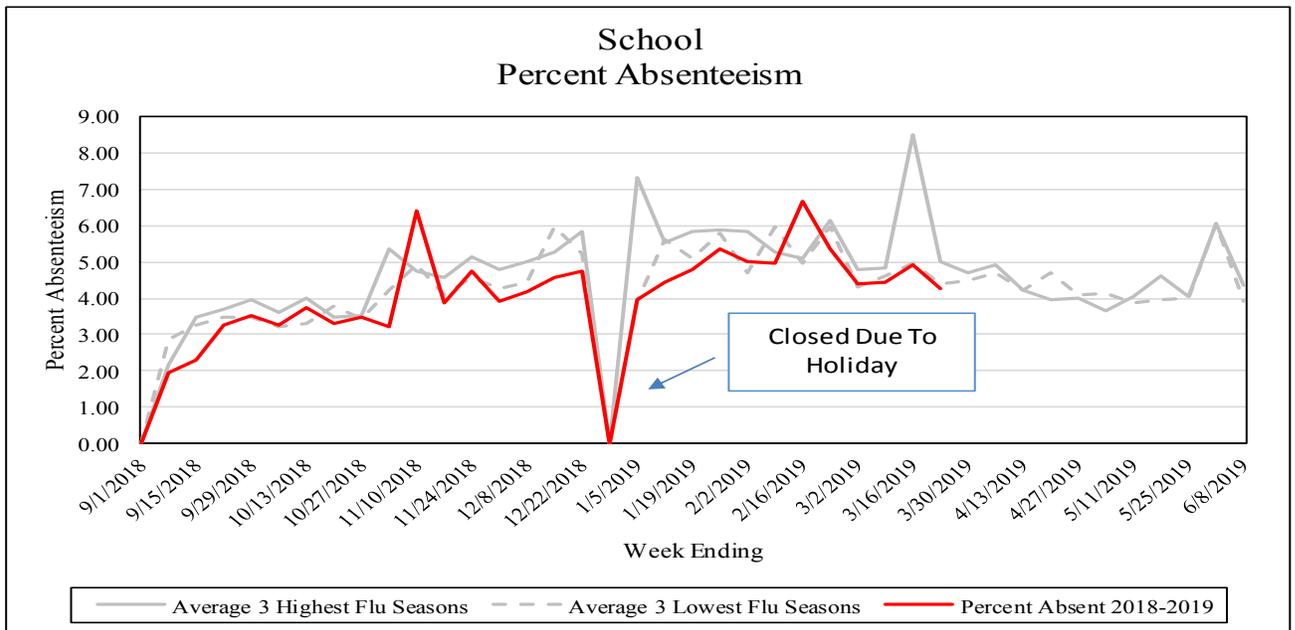


# Influenza-Like Illness (ILI) Surveillance

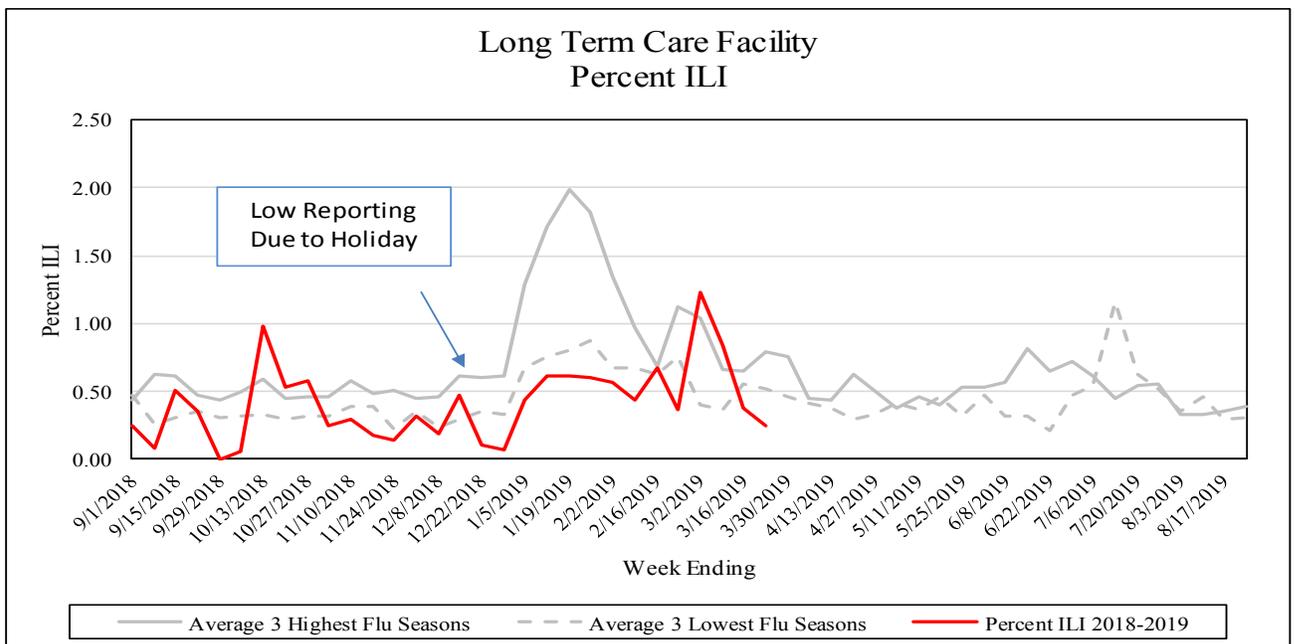
## ILI Net Providers



## School Absenteeism



## Long Term Care Facilities



# Influenza-Like Illness (ILI) Surveillance

## Long Term Care Outbreaks

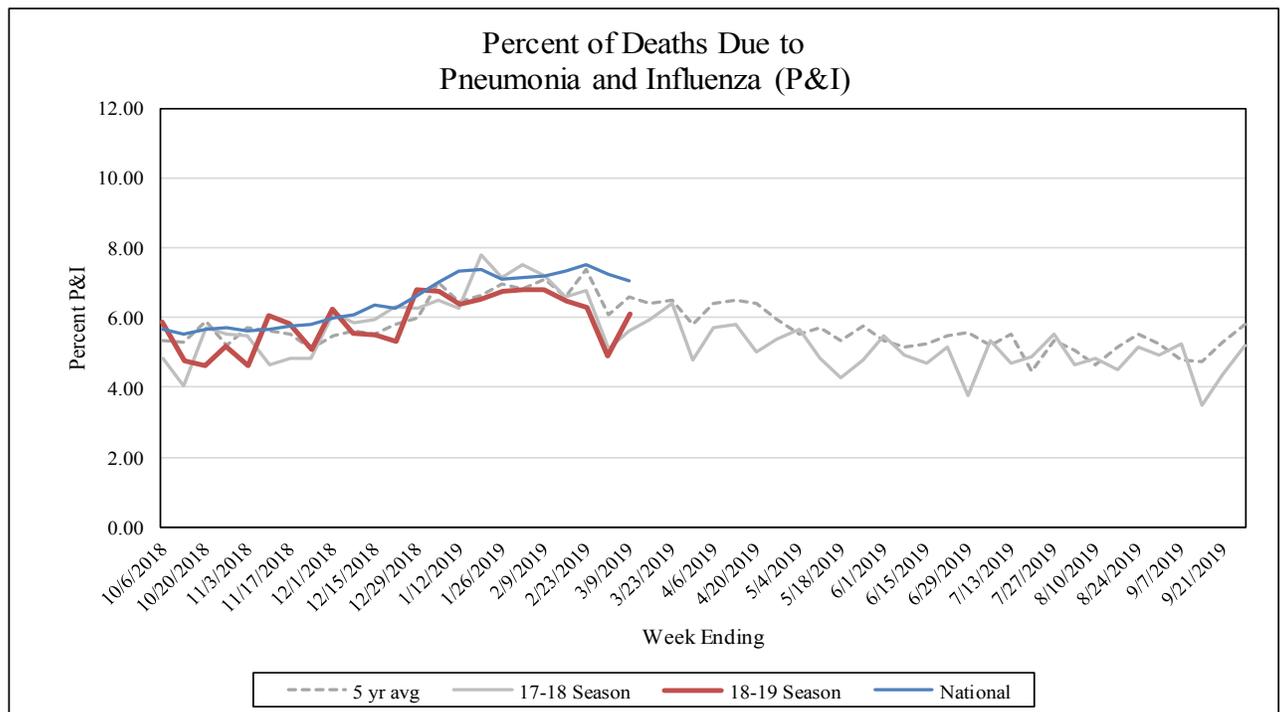
Respiratory Outbreaks in Long Term Care Facilities <sup>10</sup>	
Cumulative Outbreaks 2018-2019 Season	115
No. outbreaks last 3 weeks	25
Regions with recent outbreaks	NE, NW, CE, CW, S

## Pediatric Influenza Mortality<sup>11</sup>

Influenza Season	US (fatal)	NJ (severe)	NJ (fatal)
2012-2013	171	89	7
2013-2014	108	54	6
2014-2015	146	33	1
2015-2016	85	47	1
2016-2017	109	39	0
2017-2018	180	61	5
2018-2019	76	37	4

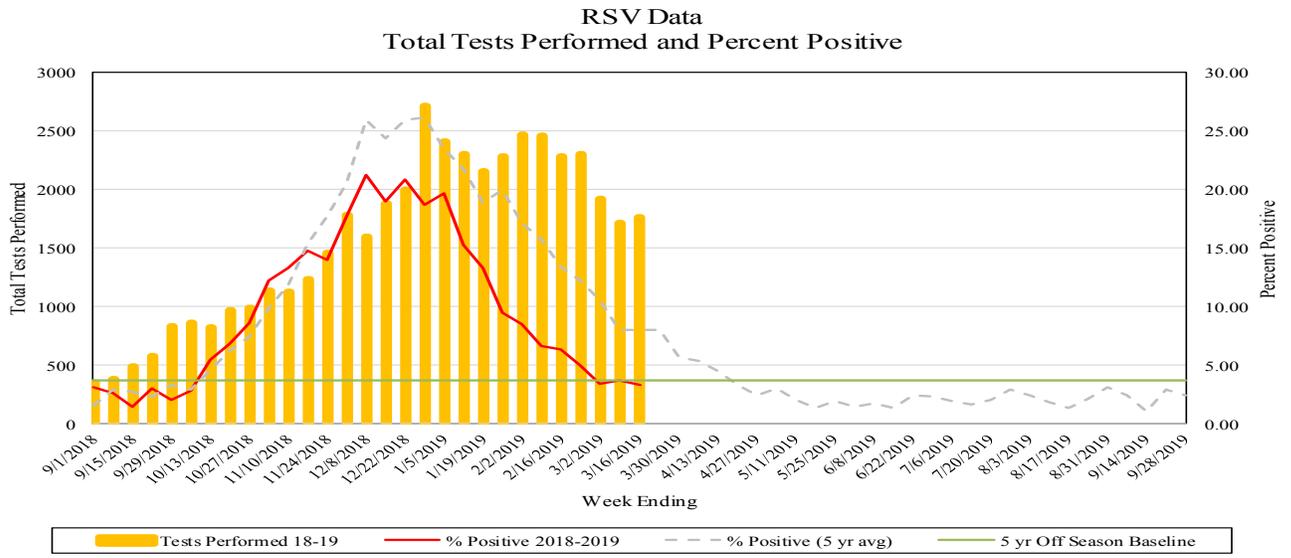
National Center for Health Statistics—Pneumonia and Influenza Mortality  
<https://gis.cdc.gov/grasp/fluview/mortality.html>

## Percent of Deaths Due to Pneumonia and Influenza<sup>12</sup>



# Viral Respiratory Surveillance Non-Influenza<sup>13</sup>

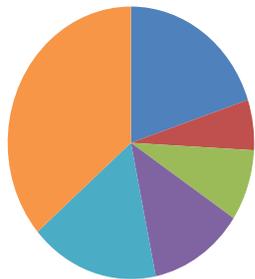
Respiratory Syncytial Virus<sup>8</sup>



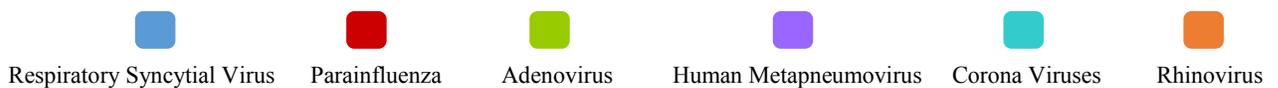
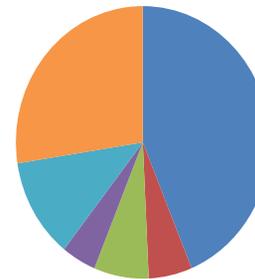
## Total Tests Positive for a Respiratory Virus Other than Influenza

	Respiratory Syncytial Virus	Parainfluenza	Adenovirus	Human Metapneumovirus	Corona Viruses	Rhinovirus
<b>Past Three</b>	40	12	17	25	34	73
<b>18-19 Season</b>	1328	168	212	134	361	834

Non-Influenza Respiratory Virus  
Number of Positive Results in the Past Three Weeks, by Virus



Non-Influenza Respiratory Virus  
Number of Positive Results Cumulative to Date, by Virus



Positive Non-Influenza Tests<sup>12</sup>

For additional information regarding influenza surveillance please visit the following websites.

<http://nj.gov/health/flu/surveillance/shtml>

<http://www.cdc.gov/flu/>

## Footnotes:

1. This report contains surveillance information about influenza and other viral respiratory illnesses collected by the New Jersey Department of Health, Communicable Disease Service.
2. The Morbidity and Mortality Weekly Report (MMWR) week is the week of the epidemiologic year used by the Centers for Disease Control and Prevention (CDC) for disease reporting. is assigned by the reporting local or state health department for the purposes of MMWR disease incidence reporting and publishing. MMWR weeks begin on a Saturday and end on a Sunday and are assigned a numeric value ranging from 1 to 53, although most years consist of 52 weeks. Week ending dates and associated MMWR weeks can be found at: [http://www.nj.gov/health/cd/documents/flu/mmwr\\_weeks.pdf](http://www.nj.gov/health/cd/documents/flu/mmwr_weeks.pdf)
3. Activity levels for the state and region are defined in Tables 1 and 2 at the end of this document.
4. The following is a breakdown of counties contained within each public health region: Northwest: Morris, Passaic, Sussex, Warren; Northeast: Bergen, Essex, Hudson; Central West: Hunterdon, Mercer, Somerset; Central East: Middlesex, Monmouth, Ocean, Union; South: Atlantic, Burlington, Camden, Cape May, Salem, Cumberland, Gloucester.
5. Influenza-like illness (ILI) is defined as fever ( $> 100^{\circ}\text{F}$  [ $37.8^{\circ}\text{C}$ ], oral or equivalent) and cough and/or sore throat (in the absence of a known cause other than influenza). For long term care facilities, fever is defined as  $2^{\circ}\text{F}$  above baseline temperature. ILI Activity from long term care (LTC) facilities and absenteeism data from schools is collected in the ILI Module of the Communicable Disease Reporting and Surveillance System (CDRSS). LTCs and schools report their total census and number ill with ILI or number absent, respectively. Emergency department (ED) data is aggregate weekly totals of syndromic ILI visits and total ED registrations as recorded in EpiCenter (e.g., NJDOH syndromic surveillance system).
6. Off season baseline is calculated by taking the average of statewide percentages of ILI for a 10 year period (2009 through and including 2018) during months when influenza is less likely to be circulating (May-August).
7. Three year seasonal averages are determined by calculating the average percent ILI/absenteeism for each influenza season (October to May) beginning with the 2010-2011 season. These averages are ranked and the three highest and lowest overall season averages were selected. The three highest and lowest numbers were then averaged to obtain a single high and single low value. The season which contribute to the high and low value vary by entity type and are as follows: LTCF (High: 10-11, 12-13, 14-15; Low: 15-16, 16-17, 17-18), ED (High: 12-13, 16-17, 17-18; Low: 10-11, 11-12, 15-16) and schools (High: 10-11, 12-13, 16-17; Low: 11-12, 13-14, 17-18). A week by week average was also calculated using the average of the seasons listed above for each entity type.
8. Laboratory testing: Real-time polymerase chain reaction (PCR) results for influenza (AH1N1, AH3N2, and B) are obtained from electronic laboratory transmission submitted by acute care, commercial and public health laboratories to CDRSS. Rapid influenza test data and respiratory syncytial virus data are acquired from facilities reporting via the National Respiratory and Enteric Virus Surveillance System (NREVSS) or CDRSS ILI module. Counts for cumulative totals begin with week ending October 6, 2018. Three week count data includes current week and two prior weeks. Data presented for rapid influenza testing represents information for the week prior to the current report week. Three year seasonal averages for rapid influenza tests are determined by calculating the average percent positive for each influenza season (October to May) beginning with the 2010-2011 season. These averages are ranked and the three highest and lowest overall season averages were selected. The three highest and lowest numbers were then averaged to obtain a single high and single low value for each week. The season which contribute to the high and low value for rapid influenza chart are as follows: High: 13-14, 16-17, 17-18; Low: 10-11, 11-12, 14-15. Off season baseline is calculated by taking the average of percent positivity for a 10 year period (2009 through and including 2018) during the months when influenza is less likely to be circulating (May-August).
9. Daily visits and admissions associated with ILI from emergency department data is collected via EpiCenter (i.e., NJDOH syndromic surveillance). Prior to 2017-2018 season, data on ILI visits were only recorded on one day per week usually on Tuesday. Beginning in the 2017-2018 season, weekly aggregate data is being recorded for ILI visits and admissions.
10. Only LTCF outbreaks reported to NJDOH that receive an outbreak number are recorded in this report.
11. Data presented for New Jersey are for cases confirmed as of the current reporting week. Data presented for the United States represent data reported for the prior MMWR week. This data can be viewed at <https://www.cdc.gov/flu/weekly/>
12. Records of all deaths in New Jersey are maintained by the New Jersey Department of Health, Office of Vital Statistics and Registry and are submitted to the National Center for Health Statistics (NCHS). Pneumonia and influenza (P&I) deaths are identified from these records and are compiled by the week of death occurrence and percent P&I deaths is calculated. There is also a 2-4 week lag period between the week the deaths have occurred and when the data for that week is reported.
13. Select laboratories in New Jersey report the total number of tests performed and the total positive for a number of non-influenza respiratory viruses through the National Respiratory and Enteric Virus Surveillance System (NREVSS). Information about the CDC NREVSS system can be found at: <https://www.cdc.gov/surveillance/nrevss/labs/index.html> NREVSS data is combined with non-influenza test data from the NJDOH State Public Health and Environmental Laboratory (PHEL) and aggregate total for the season as well as those found positive in the last three weeks are displayed. The RSV season is based upon the 5 year average of percent positivity and runs from the two consecutive weeks where percent positivity is at or above 10% through two consecutive weeks where it is below 10%. Off season for this report is determined to be week 10-43 (March to October and the baseline is determined by averaging the percent positivity from the 5 year average during those weeks.

<b>Table 1</b>				
<b>Influenza Activity Level—Definitions for State Activity</b>				
<b><u>NJ Level</u></b>	<b><u>CSTE Level</u></b>	<b><u>Definition</u></b>		
		<b><u>ILI Activity/Outbreaks</u></b>		<b><u>Lab Activity</u></b>
<b>Low</b>	No Activity	ILI activity at or below baseline AND no detected outbreaks	AND	No lab confirmed cases
	Sporadic	Low ILI activity detected OR one lab confirmed outbreak anywhere in the state	AND	Sporadic isolation of laboratory confirmed influenza
<b>Moderate</b>	Local	Increase in ILI activity OR $\geq 2$ lab confirmed outbreaks in one public health region (Other regions not experiencing increased ILI activity)	AND	Recent (within 3 weeks) laboratory activity in the region with increased ILI
	Regional	Increase in ILI activity OR $\geq 2$ lab confirmed outbreaks in at least 2 public health regions (Other regions not experiencing ILI activity)	AND	Recent (within 3 weeks) laboratory activity in the region with increased ILI
<b>High</b>	Widespread	Increase in ILI activity OR two or more lab confirmed outbreaks in $> 2$ public health regions	AND	Recent (within 3 weeks) laboratory activity in the region with increased ILI

<b>Table 2</b>			
<b>Influenza Activity Level—Definitions for Public Health Regions</b>			
<b><u>NJ Level</u></b>	<b><u>Definition</u></b>		
	<b><u>ILI Activity/Outbreaks</u></b>		<b><u>Lab Activity</u></b>
<b>Low</b>	Low ILI activity detected OR one lab confirmed outbreak anywhere in the region	AND	Sporadic isolation of laboratory confirmed influenza anywhere in the region
<b>Moderate</b>	Increased ILI activity in less than half of the counties in the region OR two lab confirmed outbreaks in the public health region	AND	Recent (within 3 weeks) laboratory activity in the same counties of the region with increased ILI
<b>High</b>	Increased ILI activity in more than half of the counties in the region OR $\geq 3$ lab confirmed outbreaks in the region	AND	Recent (within 3 weeks) laboratory activity in more than half of the counties in the region with increased ILI

*Notes:*

ILI activity: Systems used to detect increases in ILI activity include: ILINet (i.e., sentinel providers), school absenteeism data, ED ILI visits and admissions collected via EpiCenter, LTCF ILI data, respiratory outbreak data and information on influenza mortality (National Center for Health Statistics).

Lab Activity: NJPHL and commercial laboratories positive influenza tests identified by PCR and culture will be used as the primary data source for the above levels. However, rapid influenza test data will also be considered when determining the appropriate activity levels.

SURVEILLANCE DATE: 03/19/2019



COUNTY	Long Term Care			Schools			Hospital Emergency Dept		
	# Enrolled	# Reports Rec'd	% ILI	# Enrolled	# Reports Rec'd	% Absent	# Enrolled	# Reports Rec'd	% ILI
March 19, 2019 12:00 AM MMWR WEEK 12									
ATLANTIC	1	0	0.00	38	8	5.64	4	4	2.42
BERGEN	12	1	0.00	37	9	3.75	6	6	3.77
BURLINGTON	6	4	0.36	102	46	4.69	4	4	4.03
CAMDEN	1	0	0.00	8	7	4.55	8	7	4.38
CAPE MAY	3	0	0.00	13	4	5.21	1	1	6.75
CUMBERLAND	5	4	0.66	12	9	7.31	3	3	3.94
ESSEX	9	2	0.52	4	2	4.00	8	7	5.02
GLOUCESTER	3	0	0.00	4	1	5.84	2	2	2.46
HUDSON	4	0	0.00	16	6	3.25	6	6	4.02
HUNTERDON	4	4	0.00	11	8	4.08	1	1	3.62
MERCER	1	0	0.00	32	15	3.94	5	4	4.55
MIDDLESEX	15	1	0.00	22	14	3.33	6	6	3.89
MONMOUTH	6	0	0.00	67	31	4.00	5	5	3.62
MORRIS	3	1	0.00	11	4	4.72	4	4	4.07
OCEAN	10	1	0.00	8	2	2.59	4	4	2.96
PASSAIC	10	5	0.15	30	12	4.30	3	3	5.76
SALEM	0	0	0.00	5	2	4.13	1	1	4.61
SOMERSET	5	0	0.00	22	10	3.65	1	1	4.02
SUSSEX	3	0	0.00	4	1	3.96	1	1	4.84
UNION	2	0	0.00	56	16	3.58	5	5	4.38
WARREN	6	0	0.00	18	6	4.31	2	2	2.20
NW Region	22	6	0.13	63	23	4.35	10	10	4.70
NE Region	25	3	0.14	57	17	3.52	20	19	4.39
CW Region	10	4	0.00	65	33	3.85	7	6	4.34
CE Region	33	2	0.00	153	63	3.69	20	20	3.74
South Region	19	8	0.58	182	77	5.13	23	22	3.76
State Total	109	23	0.25	520	213	4.27	80	77	4.09

## SURVEILLANCE DATE: 03/19/2019



County	RSV Tests		Rapid Flu Tests	
	# Positive	Total Tests Performed	# Positive	Total Tests Performed
March 19, 2019 12:00 AM MMWR WEEK 12				
ATLANTIC	1	37	58	239
BERGEN	7	195	62	307
BURLINGTON	7	359	16	68
CAMDEN	0	2	45	340
CAPE MAY	0	16	38	147
CUMBERLAND	0	0	0	0
ESSEX	8	148	134	751
GLOUCESTER	1	4	27	199
HUDSON	0	4	0	36
HUNTERDON	4	135	27	135
MERCER	2	31	76	326
MIDDLESEX	5	131	65	329
MONMOUTH	8	133	115	509
MORRIS	1	228	18	100
OCEAN	2	50	63	284
PASSAIC	2	41	67	293
SALEM	0	0	4	28
SOMERSET	0	0	0	0
SUSSEX	0	0	0	0
UNION	10	251	15	63
WARREN	0	0	0	0
NW Region	3	269	85	393
NE Region	15	347	196	1094
CW Region	6	166	103	461
CE Region	25	565	258	1185
South Region	9	418	188	1021
<b>State Total</b>	<b>58</b>	<b>1765</b>	<b>830</b>	<b>4154</b>