



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

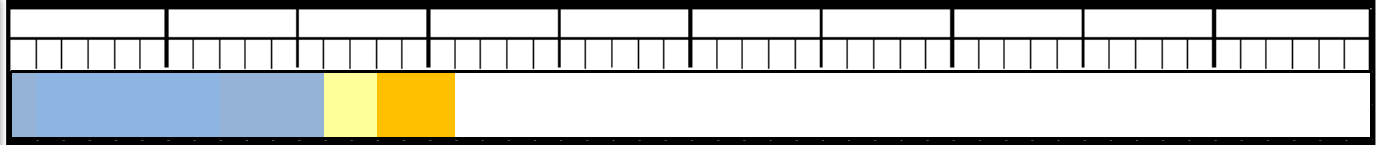
New Jersey Department of Health

Communicable Disease Service

Week ending December 23, 2017 (MMWR week 51<sup>2</sup>)

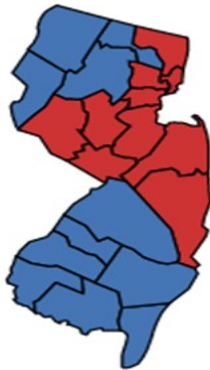


Week 40   Week 45   Week 50   Week 3   Week 8   Week 13   Week 18   Week 23   Week 28



No Activity  
  Sporadic  
  Local  
  Regional  
  Widespread

## Influenza Activity Level<sup>3</sup>



**New Jersey Activity Level: MODERATE**

Current week last year: **MODERATE**

### Regional<sup>4</sup> Data

**Northwest: MODERATE**

**Northeast: HIGH**

**Central West: HIGH**

**Central East: HIGH**

**South: MODERATE**

## ILI<sup>5</sup> Activity

Percent ILI/Absenteeism <sup>5</sup>				Baselines
	Current Week (range by county)	Last week Current year	Current week Last year	Non-season <sup>6</sup> (Seasonal Average– low, high) <sup>7</sup>
Long Term Care Facilities	0.50 (0.00, 1.33)	0.28	0.18	0.48 (0.45, 0.76)
Schools (absenteeism)	4.73 (2.93, 7.26)	5.09	5.75	3.36 (4.49, 4.86)
Emergency Departments	3.78 (0.48, 5.63)	3.62	4.34	2.21 (3.17, 3.92)

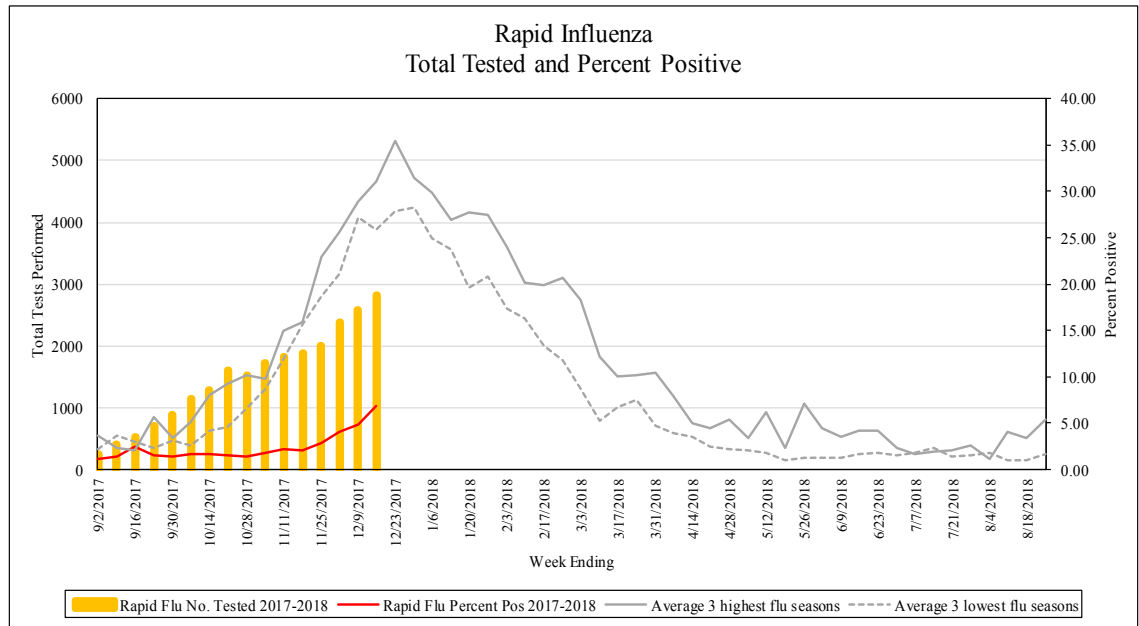
## Laboratory Testing<sup>8</sup>

	Current Week	Past 3 Weeks	Cumulative Total
Influenza A H1N1 (2009)	0	0	2
Influenza A H3N2	17	49	71
Influenza B	31	76	118
Rapid Influenza Tests	192	413	667

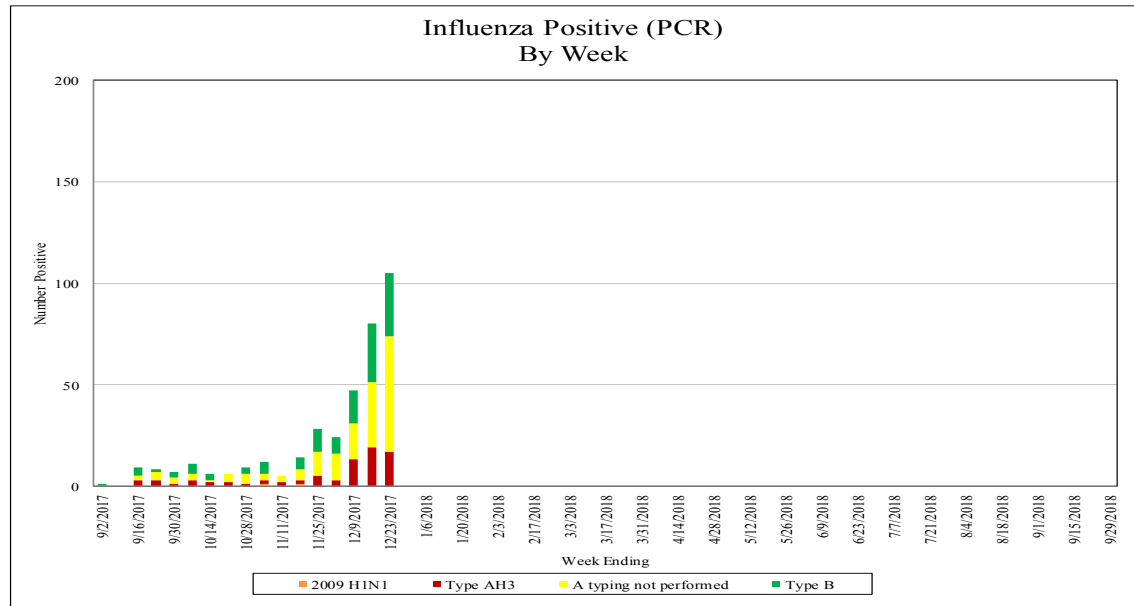
Report also available at <http://nj.gov/health/cd/statistics/flu-stats/>

# Virologic Surveillance<sup>8</sup>

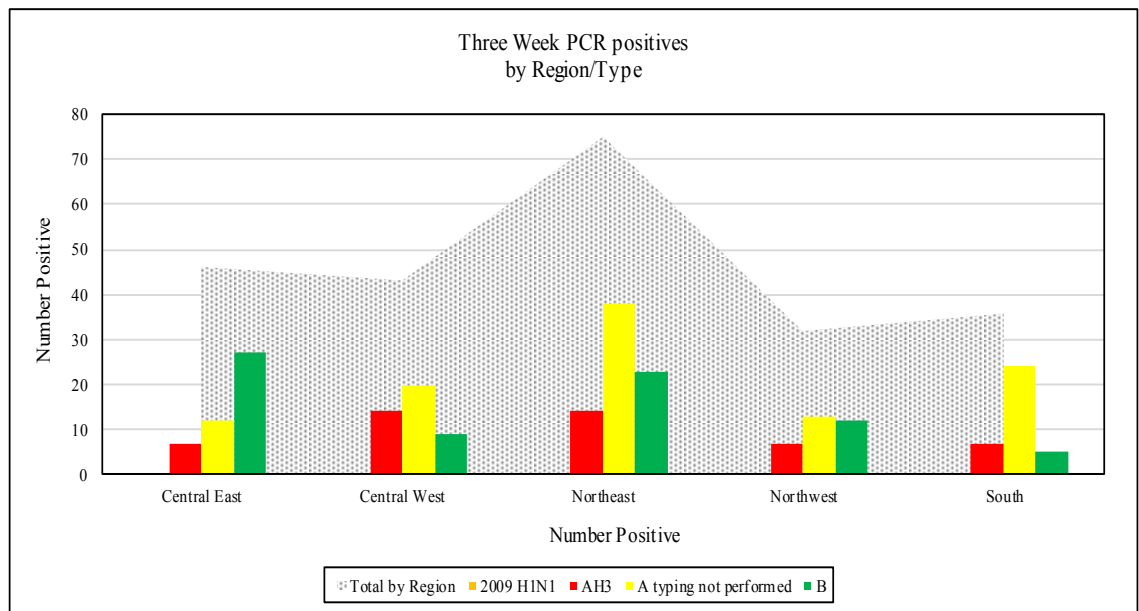
## Influenza Rapid Antigen Result by Week



## Influenza Positive (PCR) Specimens (PCR)

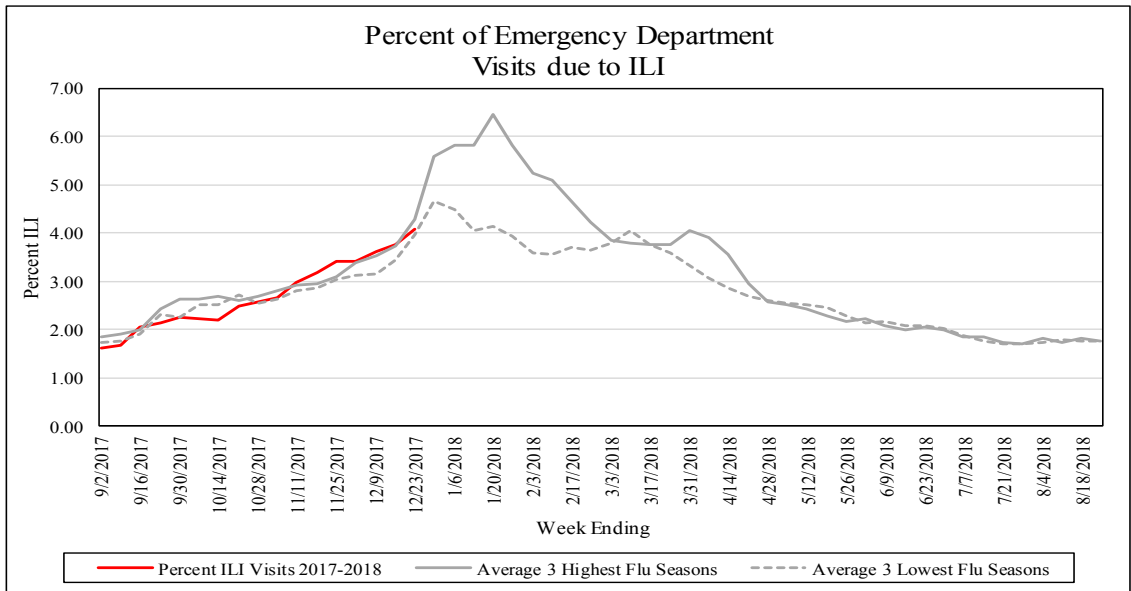


## Influenza Positive Specimens (PCR) by Region<sup>4</sup>/Type

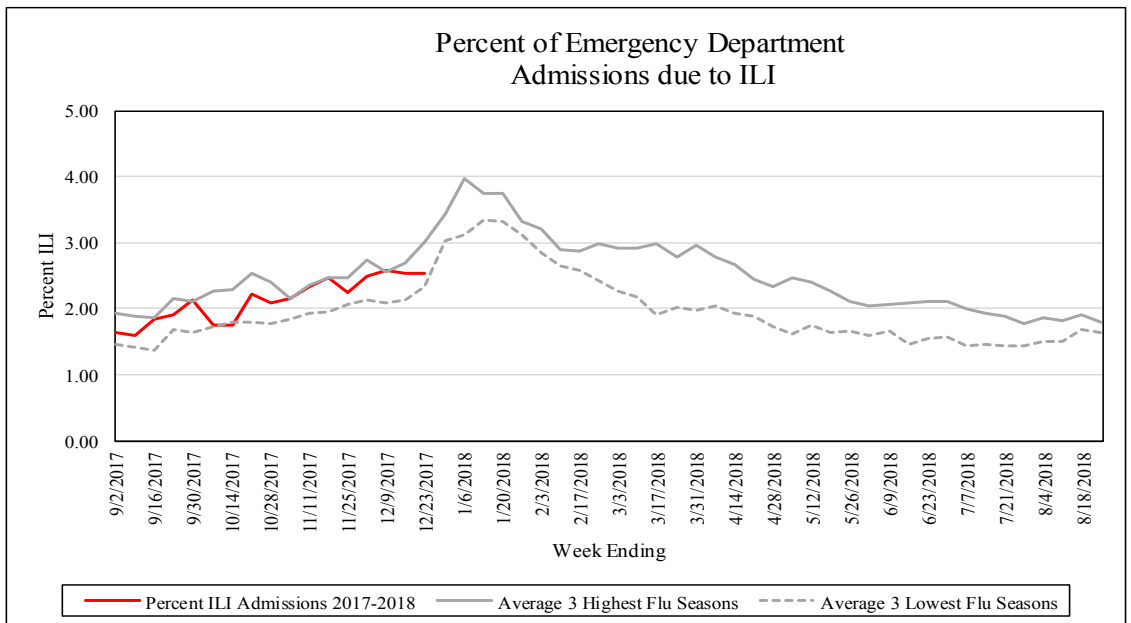


# Influenza-Like Illness (ILI) Surveillance

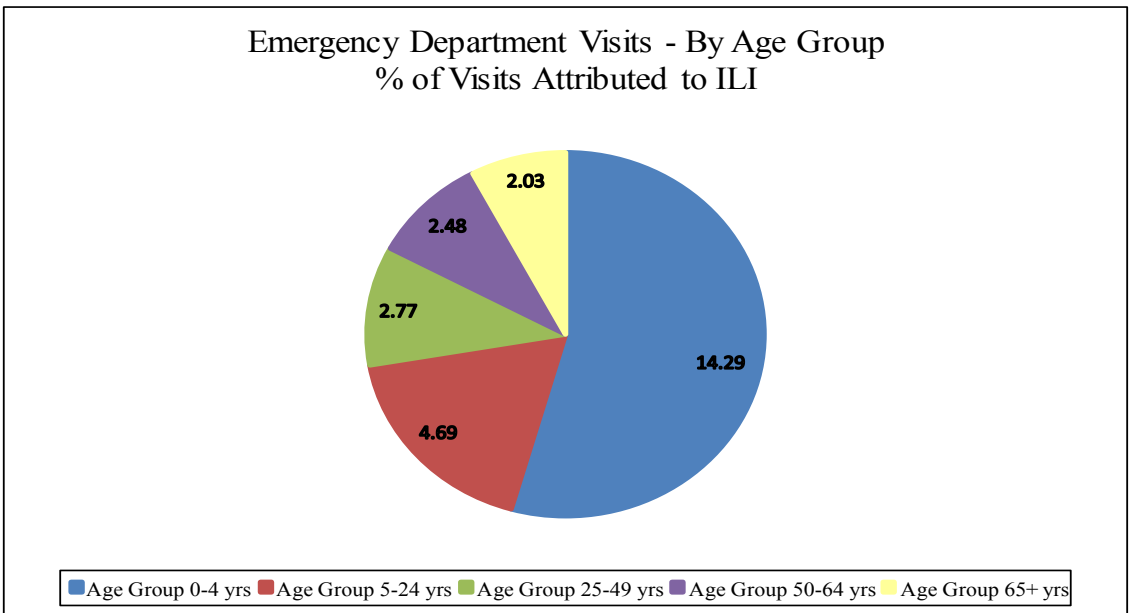
Emergency Department<sup>9</sup> Visits  
Percent due to ILI



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

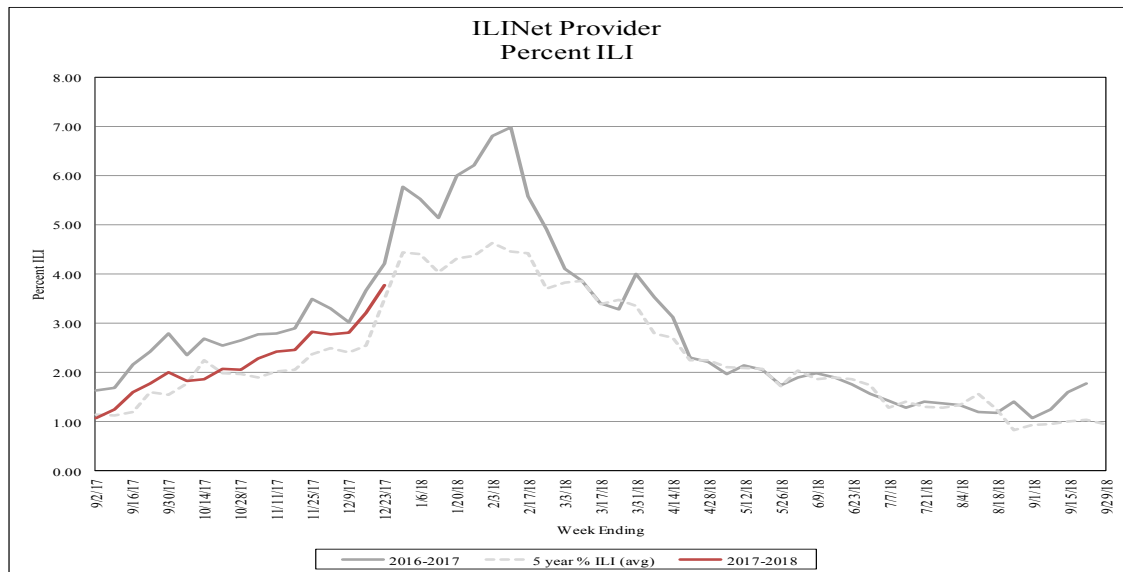


Emergency Department<sup>9</sup> Visits  
Percent of ILI By Age Group

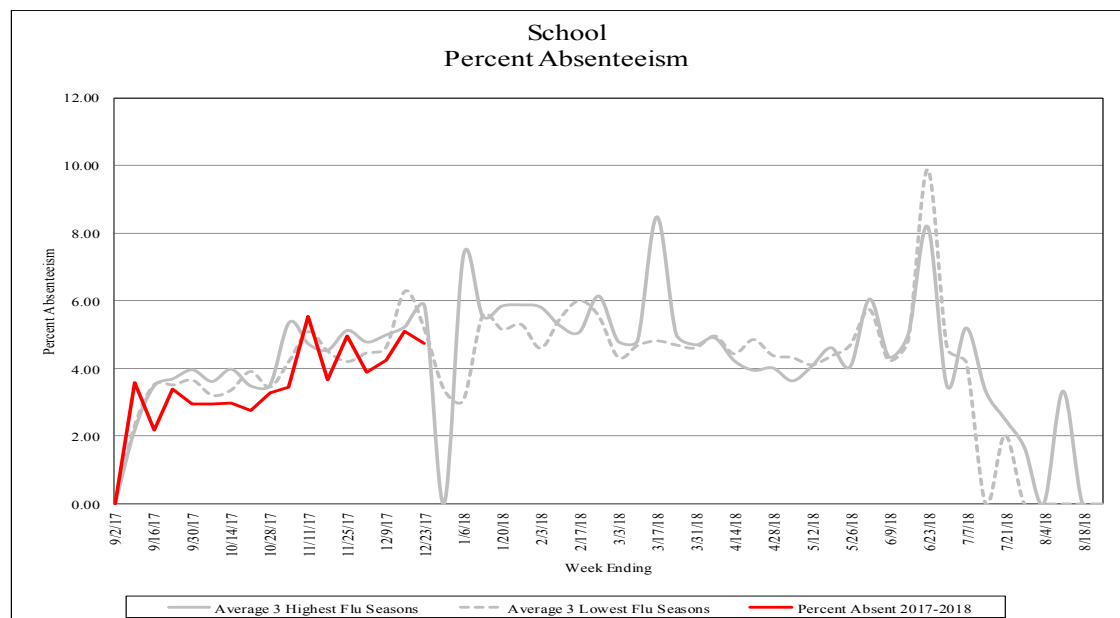


# Influenza-Like Illness (ILI) Surveillance

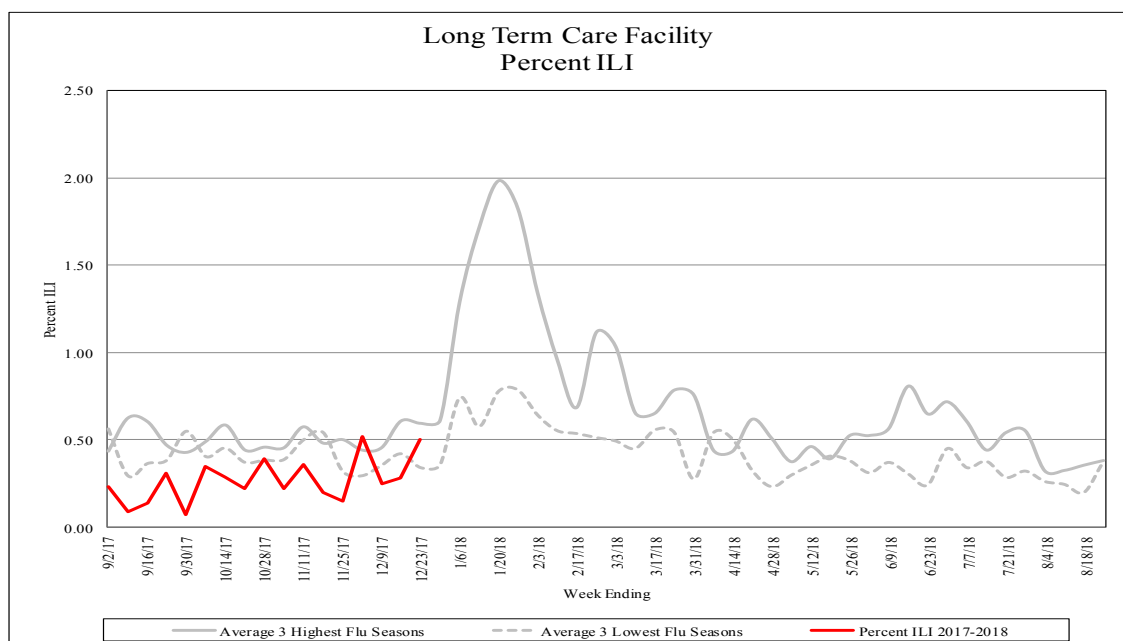
## ILI Net Providers<sup>5</sup>



## School Absenteeism<sup>5</sup>



## Long Term Care Facilities<sup>5</sup>



## Influenza-Like Illness (ILI) Surveillance

### Long Term Care Outbreaks

#### Respiratory Outbreaks in Long Term Care Facilities<sup>10</sup>

**Cumulative Outbreaks 2017-2018 Season**

**9**

**No. outbreaks last 3 weeks**

**4**

**Regions with recent outbreaks**

**NW, NE, CE**

### 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**

**9**

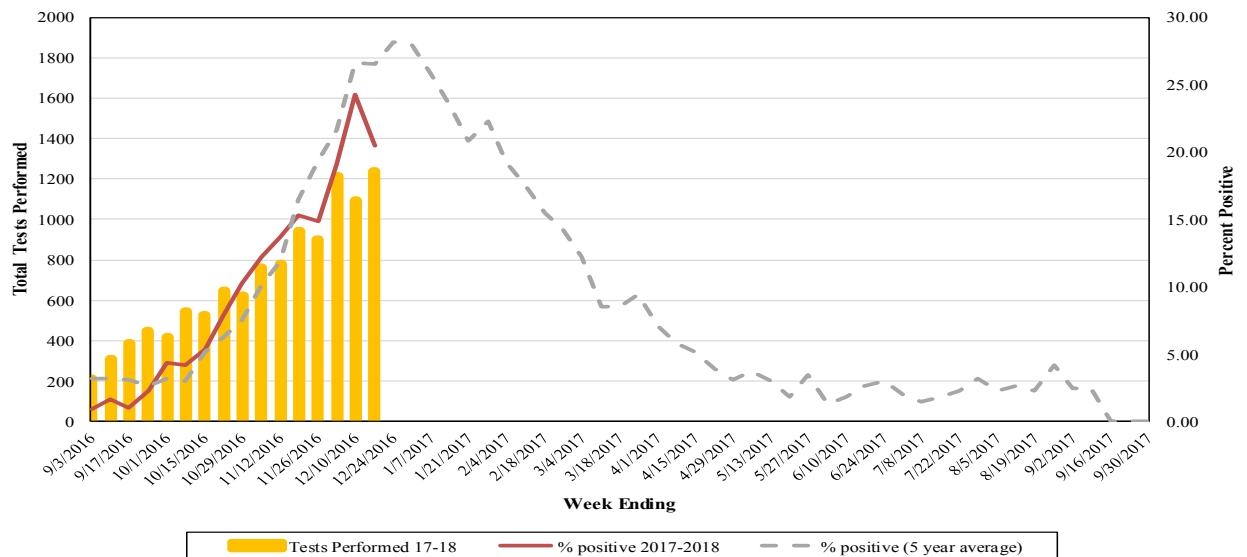
**8**

**0**

## Viral Respiratory Surveillance Non-Influenza

### Respiratory Syncytial Virus Percent Positive

**RSV Data  
Total Tested and Percent**



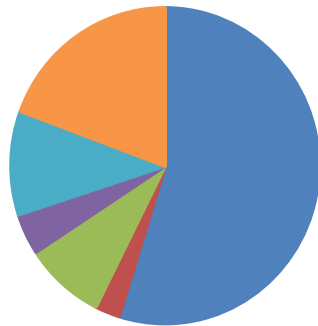
## Viral Respiratory Surveillance Non-Influenza

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

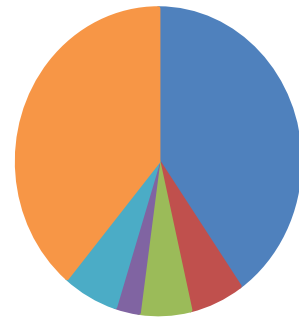
Total Tests Positive for a Respiratory Virus Other than Influenza

	Respiratory Syncytial Virus	Parainfluenza	Adenovirus	Human Metapneumovirus	Corona Viruses	Rhinovirus
Past Three Weeks	170	8	26	13	33	60
17-18 Season	310	47	45	21	48	299

Count of Positive Results by Type in the Past Three Weeks



Count of Positive Result by Type in the 17-18 Season



■ Respiratory Syncytial Virus
 ■ Parainfluenza
 ■ Adenovirus
 ■ Human Metapneumovirus
 ■ Corona Viruses
 ■ Rhinovirus

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. Non-season baseline is calculated by taking the average of statewide percentages of ILI for a 10 year (2008, 2009, 2010, 2011, 2012, 2013, 2014, 2015, 2016 and 2017) period 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: 11-12, 15-16, 16-17), ED (High: 12-13, 14-15, 16-17; Low: 10-11, 11-12, 15-16) and schools (High: 10-11, 12-13, 16-17; Low: 11-12, 13-14, 14-15). 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 7, 2017. 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: 10-11, 11-12, 12-13; Low: 13-14, 15-16, 16-17.
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. Data presented represents the week prior to the current report week.
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. 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.

<b>Table 1</b> <b>Influenza Activity Level—Definitions for State Activity</b>				
<u>NJ Level</u>	<u>CSTE Level</u>	<u>Definition</u>		
		<u>ILI Activity/Outbreaks</u>		<u>Lab Activity</u>
<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>			
<u>NJ Level</u>	<u>Definition</u>		
	<u>ILI Activity/Outbreaks</u>		<u>Lab Activity</u>
<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.



## INFLUENZA LABORATORY REPORTS BY COUNTY

**Counts represent total positive specimens  
from week ending October 7, 2017 to current MMWR week**

**Source: CDRSS**

Frequency	COUNTY(COUNTY)	RESULT				
		Influenza A - Typing not performed	Influenza A 2009 H1N1	Influenza AH3	Influenza B	Total
	ATLANTIC	23	0	0	8	31
	BERGEN	66	0	16	40	122
	BURLINGTON	18	0	0	23	41
	CAMDEN	40	0	3	23	66
	CAPE MAY	15	0	0	2	17
	CUMBERLAND	4	0	0	0	4
	ESSEX	28	0	6	18	52
	GLOUCESTER	16	0	4	1	21
	HUDSON	26	0	8	8	42
	HUNTERDON	8	0	8	2	18
	MERCER	14	0	7	21	42
	MIDDLESEX	23	0	4	20	47
	MONMOUTH	81	0	2	41	124
	MORRIS	20	1	5	9	35
	OCEAN	53	1	0	38	92
	PASSAIC	12	0	3	8	23
	SOMERSET	14	0	5	5	24
	SUSSEX	3	0	2	6	11
	UNION	15	0	5	10	30
	WARREN	7	0	0	6	13
	Total	486	2	78	289	855

## INFLUENZA LABORATORY REPORTS BY REGION

Counts represent total positive specimens  
from week ending October 7, 2017 to current MMWR week

Source: CDRSS

Frequency	Table of REGION by RESULT					
	REGION	RESULT				
		Influenza A - Typing not performed	Influenza A 2009 H1N1	Influenza AH3	Influenza B	Total
	Central East	172	1	11	109	293
	Central West	36	0	20	28	84
	Northeast	120	0	30	66	216
	Northwest	42	1	10	29	82
South	116	0	7	57	180	
Total	486	2	78	289	855	

*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*

# NJ ACTIVE INFLUENZA-LIKE ILLNESS SURVEILLANCE STATISTICS

## SURVEILLANCE DATE: 12/19/2017



COUNTY	Long Term Care			Schools			Hospital Emergency Dept		
	# Enrolled	# Reports Rec'd	% ILI	# Enrolled	# Reports Rec'd	% Absent	# Enrolled	# Reports Rec'd	% ILI
<b>December 19, 2017 MMWR WEEK 51</b>									
ATLANTIC	2	0	0.00	43	13	4.64	4	4	2.29
BERGEN	10	4	0.27	33	14	4.73	6	6	3.81
BURLINGTON	7	4	0.00	98	64	5.06	4	4	5.30
CAMDEN	1	0	0.00	8	7	6.15	7	7	4.40
CAPE MAY	3	0	0.00	11	7	4.38	1	1	2.96
CUMBERLAND	5	4	1.33	12	9	6.24	3	3	3.90
ESSEX	9	2	0.00	4	1	4.14	8	7	4.79
GLOUCESTER	3	0	0.00	4	1	2.93	2	2	2.76
HUDSON	4	2	1.22	15	6	4.76	6	6	3.78
HUNTERDON	4	4	1.14	11	9	4.34	1	1	2.02
MERCER	1	0	0.00	30	20	4.28	5	4	5.15
MIDDLESEX	13	5	0.36	21	17	5.24	6	6	3.18
MONMOUTH	5	1	0.00	9	7	4.98	5	5	3.62
MORRIS	3	1	0.00	10	6	3.38	4	4	1.92
OCEAN	9	6	0.00	6	4	7.26	4	4	2.47
PASSAIC	10	2	0.32	27	11	4.59	3	3	4.95
SALEM	0	0	0.00	4	4	5.71	1	1	5.44
SOMERSET	5	1	0.83	23	16	4.49	1	1	5.63
SUSSEX	3	1	0.00	4	2	4.49	2	2	0.48
UNION	2	0	0.00	47	23	3.43	5	5	2.90
WARREN	6	1	0.00	18	10	4.26	2	2	5.11
<b>NW Region</b>	22	5	0.20	59	29	4.25	11	11	3.49
<b>NE Region</b>	23	8	0.54	52	21	4.71	20	19	4.23
<b>CW Region</b>	10	5	1.07	64	45	4.37	7	6	4.85
<b>CE Region</b>	29	12	0.13	83	51	4.57	20	20	3.09
<b>South Region</b>	21	8	0.89	180	105	5.11	22	22	3.87
<b>State Total</b>	<b>105</b>	<b>38</b>	<b>0.50</b>	<b>438</b>	<b>251</b>	<b>4.73</b>	<b>80</b>	<b>78</b>	<b>3.78</b>

# NJ ACTIVE INFLUENZA-LIKE ILLNESS SURVEILLANCE STATISTICS

## SURVEILLANCE DATE: 12/19/2017



County	RSV Tests		Rapid Flu Tests		
	# Positive	Total Tests Performed	# Positive	Total Tests Performed	
December 19, 2017 MMWR WEEK 51					
ATLANTIC	8	33	11	159	
BERGEN	48	192	21	303	
BURLINGTON	9	29	0	0	
CAMDEN	7	21	8	180	
CAPE MAY	0	27	5	63	
CUMBERLAND	0	0	0	0	
ESSEX	46	221	12	528	
GLOUCESTER	0	0	4	94	
HUDSON	0	2	1	19	
HUNTERDON	11	70	2	70	
MERCER	5	64	39	218	
MIDDLESEX	18	91	10	70	
MONMOUTH	51	191	39	556	
MORRIS	12	33	2	99	
OCEAN	3	17	26	211	
PASSAIC	13	44	9	171	
SALEM	0	0	0	0	
SOMERSET	0	0	0	0	
SUSSEX	5	63	3	63	
UNION	17	138	0	20	
WARREN	0	0	0	0	
<b>NW Region</b>	30	140	14	333	
<b>NE Region</b>	94	415	34	850	
<b>CW Region</b>	16	134	41	288	
<b>CE Region</b>	89	437	75	857	
<b>South Region</b>	24	110	28	496	
<b>State Total</b>	253	1236	192	2824	