



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

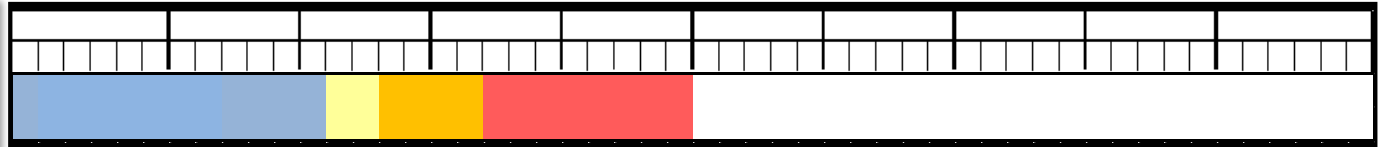
New Jersey Department of Health

Communicable Disease Service

Week ending February 24, 2018 (MMWR week 8<sup>2</sup>)

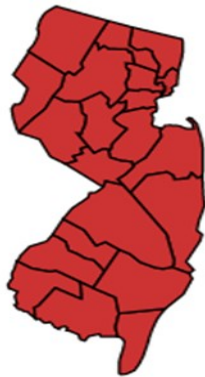


Week 40    Week 45    Week 50    Week 3    Week 8    Week 13    Week 18    Week 23    Week 28



■ 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 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	1.21 (0.00, 5.04)	0.78	0.43	0.48 (0.45, 0.76)
Schools (absenteeism)	5.75 (3.25, 8.10)	6.05	5.77	3.36 (4.49, 4.86)
Emergency Departments	11.99 (0.26, 15.11)	11.83	5.20	2.21 (3.17, 3.92)

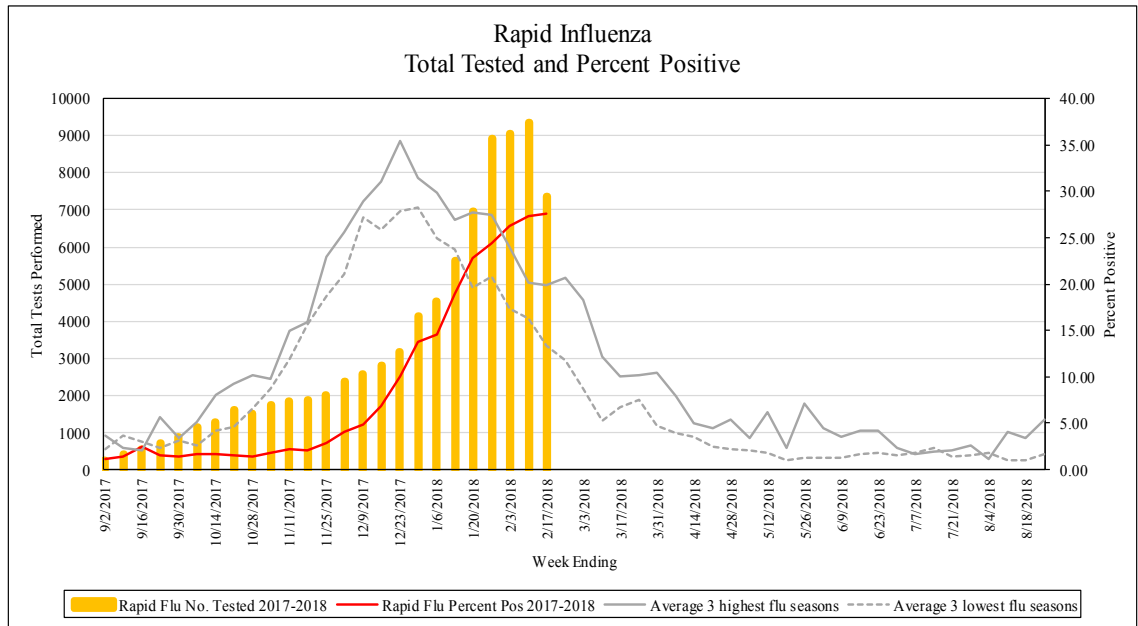
## Laboratory Testing<sup>8</sup>

	Current Week	Past 3 Weeks	Cumulative Total
Influenza A H1N1 (2009)	31	135	279
Influenza A H3N2	57	330	1230
Influenza B	369	1551	2987
Rapid Influenza Tests	2036	6973	14035

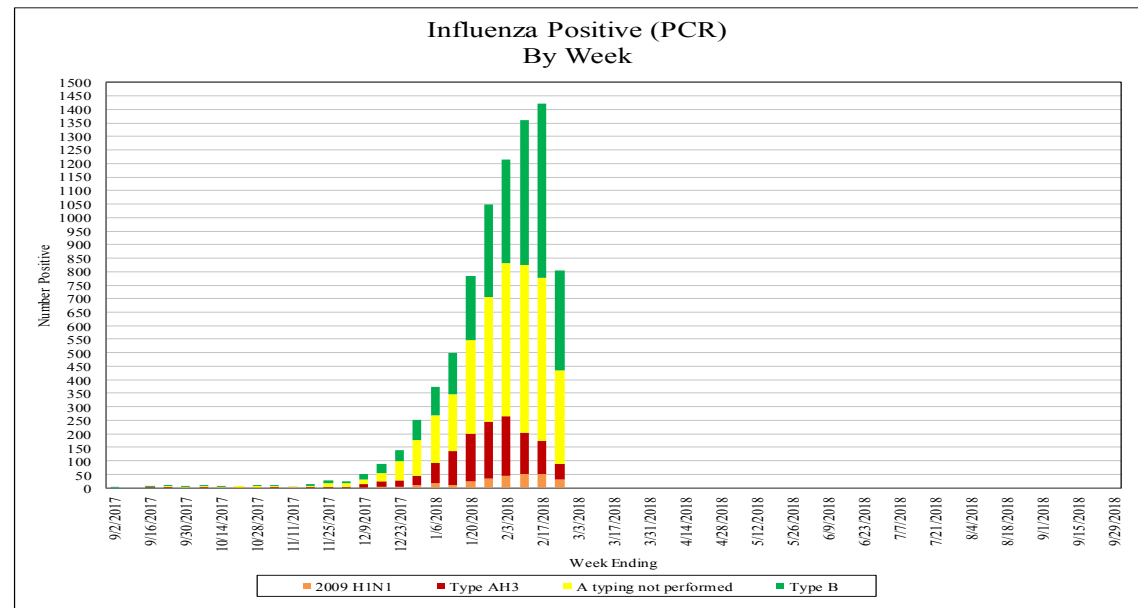
Report also available at <http://nj.gov/health/cd/statistics/flu-stats/>

# Virologic Surveillance<sup>8</sup>

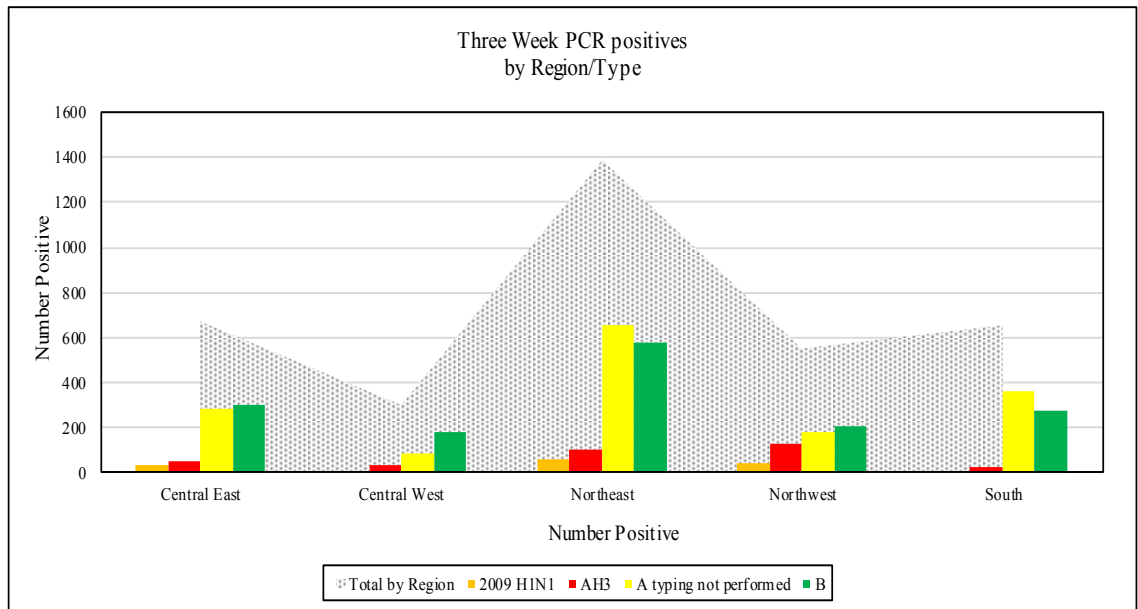
## Influenza Rapid Antigen Result by Week



## Influenza Positive (PCR) Specimens (PCR)

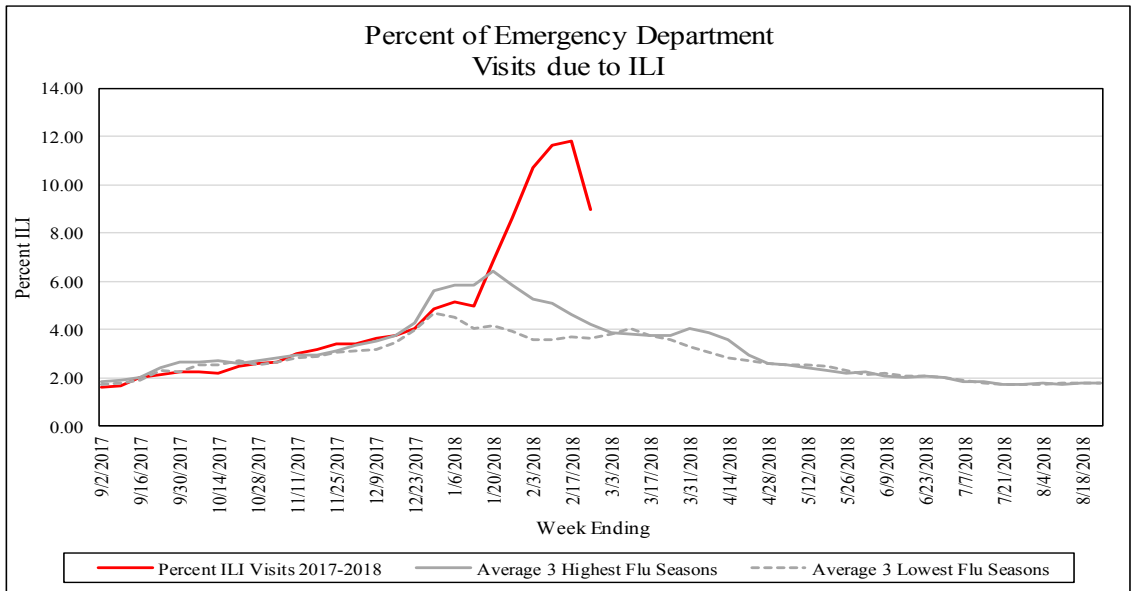


## Influenza Positive Specimens (PCR) by Region<sup>4</sup>/Type

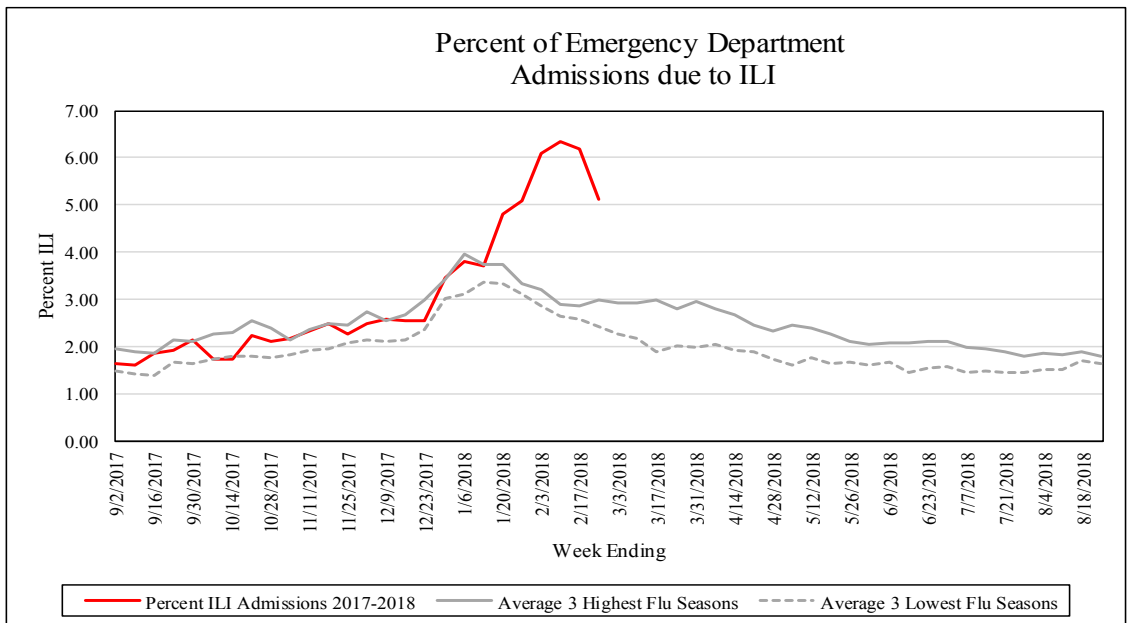


# Influenza-Like Illness (ILI) Surveillance

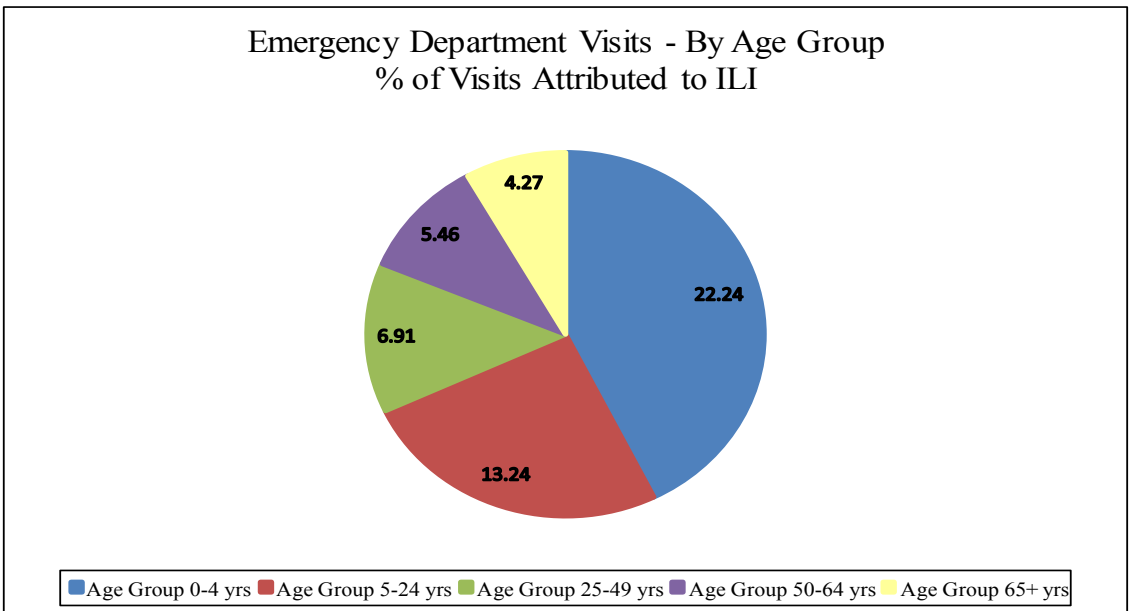
Emergency Department<sup>9</sup> Visits  
Percent due to ILI



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

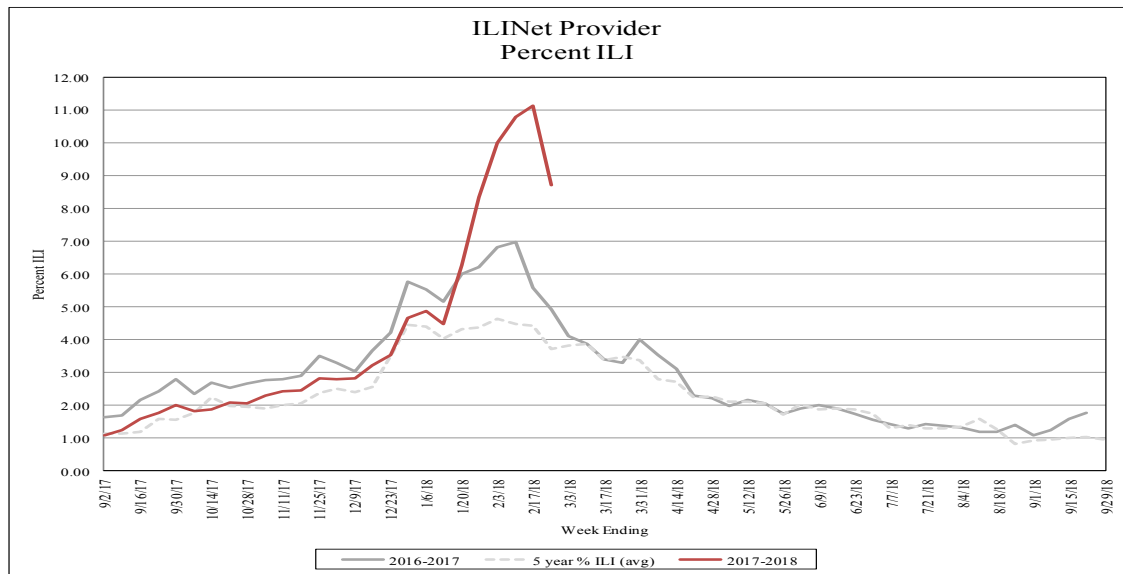


Emergency Department<sup>9</sup> Visits  
Percent of ILI By Age Group

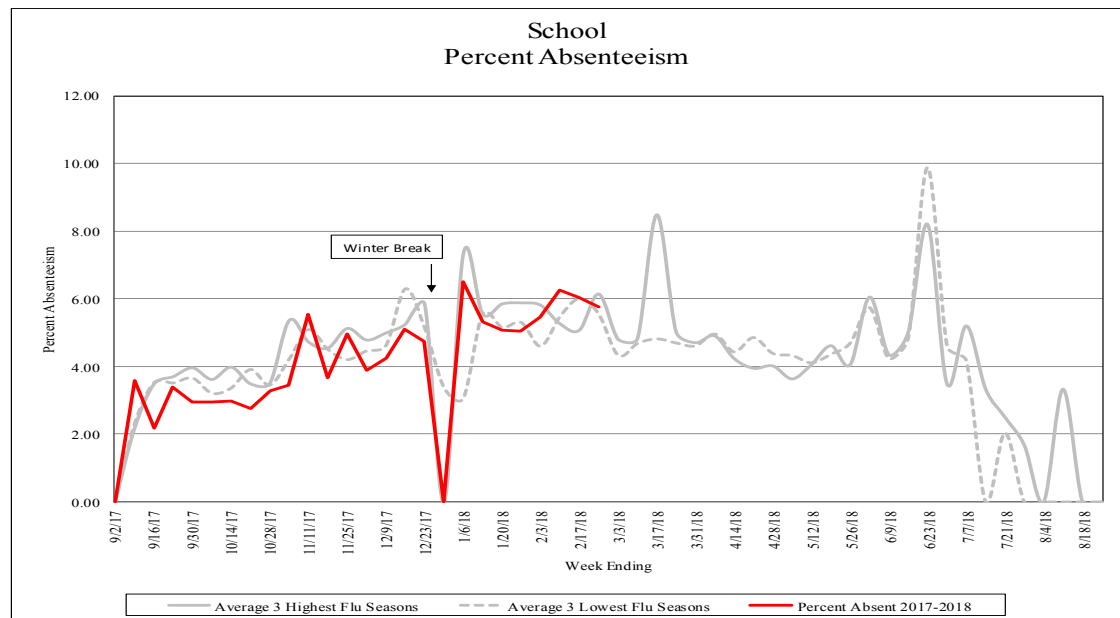


# Influenza-Like Illness (ILI) Surveillance

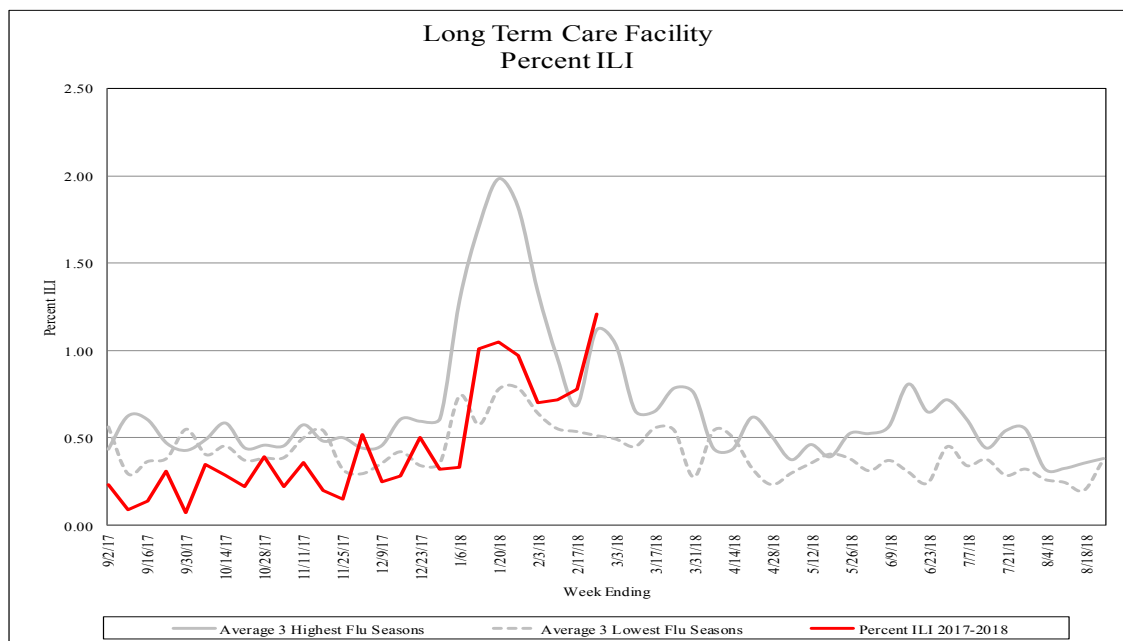
## ILI Net Providers<sup>5</sup>



## 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**

**151**

**No. outbreaks last 3 weeks**

**29**

**Regions with recent outbreaks**

**NW, NE, CW, CE, 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**

**97**

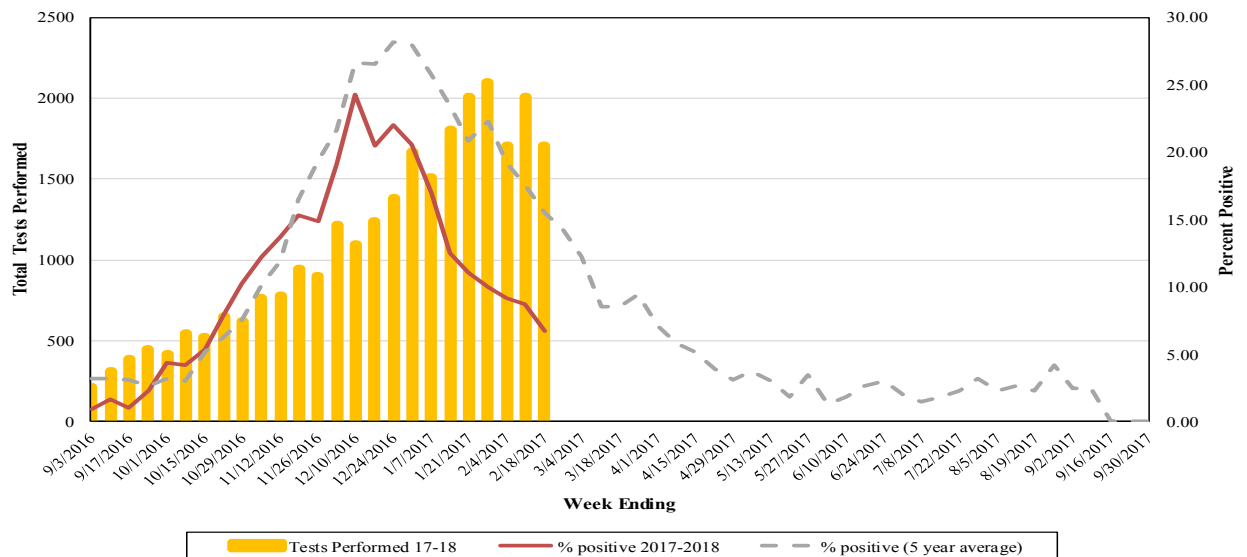
**43**

**3**

## Viral Respiratory Surveillance Non-Influenza

### Respiratory Syncytial Virus Percent Positive

**RSV Data  
Total Tested and Percent**



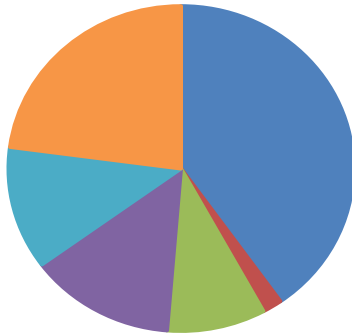
## Viral Respiratory Surveillance Non-Influenza

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

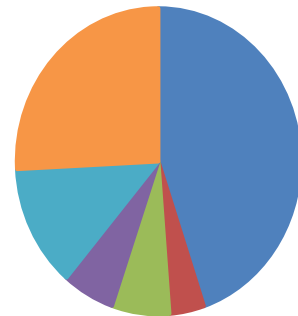
Total Tests Positive for a Respiratory Virus Other than Influenza

	Respiratory Syncytial Virus	Parainfluenza	Adenovirus	Human Metapneumovirus	Corona Viruses	Rhinovirus
<b>Past Three Weeks</b>	109	5	25	37	33	62
<b>17-18 Season</b>	792	70	116	105	229	456

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). Data presented represents information for the week prior to the current report week. Current week data presented on ED Chart on page 3.
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	707	0	12	359	1078
	BERGEN	1477	51	202	1035	2765
	BURLINGTON	567	0	6	349	922
	CAMDEN	989	0	28	637	1654
	CAPE MAY	282	0	0	83	365
	CUMBERLAND	29	0	1	33	63
	ESSEX	790	37	117	495	1439
	GLOUCESTER	245	1	22	136	404
	HUDSON	1266	24	54	543	1887
	HUNTERDON	123	2	41	114	280
	MERCER	299	4	25	430	758
	MIDDLESEX	599	12	43	385	1039
	MONMOUTH	1215	1	14	815	2045
	MORRIS	381	32	210	273	896
	OCEAN	943	21	20	614	1598
	PASSAIC	859	28	86	544	1517
	SALEM	11	3	1	10	25
	SOMERSET	131	5	52	128	316
	SUSSEX	48	5	61	73	187
	UNION	397	51	261	417	1126
	WARREN	72	3	14	25	114
	Total	11430	280	1270	7498	20478

## 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	3154	85	338	2231	5808
	Central West	553	11	118	672	1354
	Northeast	3533	112	373	2073	6091
	Northwest	1360	68	371	915	2714
	South	2830	4	70	1607	4511
	Total	11430	280	1270	7498	20478

*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**

**SURVEILLANCE DATE: 02/20/2018**

COUNTY	Long Term Care			Schools			Hospital Emergency Dept		
	# Enrolled	# Reports Rec'd	% ILI	# Enrolled	# Reports Rec'd	% Absent	# Enrolled	# Reports Rec'd	% ILI
<b>February 20, 2018 MMWR WEEK 8</b>									
ATLANTIC	2	0	0.00	36	10	7.15	4	4	8.79
BERGEN	11	4	0.97	33	5	5.68	6	5	10.10
BURLINGTON	7	2	0.00	101	48	6.36	4	4	10.42
CAMDEN	1	0	0.00	8	7	6.20	8	7	12.69
CAPE MAY	3	0	0.00	12	6	5.56	1	1	9.64
CUMBERLAND	5	4	2.67	12	9	6.54	3	3	11.81
ESSEX	9	3	0.00	4	0	0.00	8	7	14.89
GLOUCESTER	3	0	0.00	4	1	6.50	2	2	10.34
HUDSON	4	0	0.00	15	3	6.03	6	6	13.30
HUNTERDON	4	4	1.80	11	9	5.36	1	1	8.46
MERCER	1	1	0.00	30	10	4.82	5	4	13.86
MIDDLESEX	13	4	0.79	21	16	5.34	6	6	10.65
MONMOUTH	6	0	0.00	67	32	6.00	5	5	12.16
MORRIS	3	0	0.00	10	5	6.27	4	4	5.72
OCEAN	10	3	0.00	6	4	8.10	4	4	12.02
PASSAIC	10	2	0.28	30	2	3.25	3	3	15.11
SALEM	0	0	0.00	5	3	6.05	1	1	14.08
SOMERSET	5	1	5.04	23	12	4.58	1	1	11.97
SUSSEX	3	1	0.00	4	3	5.48	2	2	0.26
UNION	2	0	0.00	56	21	5.03	5	5	13.95
WARREN	6	0	0.00	19	10	4.96	2	2	13.56
<b>NW Region</b>	22	3	0.26	63	20	5.12	11	11	10.49
<b>NE Region</b>	24	7	0.73	52	8	5.80	20	18	13.13
<b>CW Region</b>	10	6	2.07	64	31	4.85	7	6	12.95
<b>CE Region</b>	31	7	0.45	150	73	5.64	20	20	11.99
<b>South Region</b>	21	6	2.38	178	84	6.38	23	22	11.15
<b>State Total</b>	<b>108</b>	<b>29</b>	<b>1.21</b>	<b>507</b>	<b>216</b>	<b>5.75</b>	<b>81</b>	<b>77</b>	<b>11.99</b>

# NJ ACTIVE INFLUENZA-LIKE ILLNESS SURVEILLANCE STATISTICS

## SURVEILLANCE DATE: 02/20/2018



County	RSV Tests		Rapid Flu Tests		
	# Positive	Total Tests Performed	# Positive	Total Tests Performed	
February 20, 2018 MMWR WEEK 8					
ATLANTIC	3	29	88	427	
BERGEN	11	200	328	1006	
BURLINGTON	4	24	44	135	
CAMDEN	2	14	95	386	
CAPE MAY	0	9	63	239	
CUMBERLAND	0	7	106	384	
ESSEX	18	279	170	872	
GLOUCESTER	0	1	31	159	
HUDSON	0	9	44	135	
HUNTERDON	8	182	57	182	
MERCER	5	41	192	566	
MIDDLESEX	8	100	114	281	
MONMOUTH	24	212	278	1169	
MORRIS	4	56	31	137	
OCEAN	5	75	168	544	
PASSAIC	7	72	221	740	
SALEM	0	0	0	0	
SOMERSET	0	0	0	0	
SUSSEX	0	0	0	0	
UNION	15	396	0	0	
WARREN	0	0	6	18	
<b>NW Region</b>	11	128	258	895	
<b>NE Region</b>	29	488	542	2013	
<b>CW Region</b>	13	223	249	748	
<b>CE Region</b>	52	783	560	1994	
<b>South Region</b>	9	84	427	1730	
<b>State Total</b>	114	1706	2036	7380	