



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

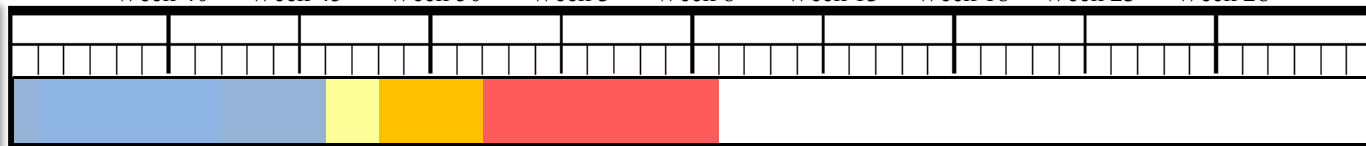
New Jersey Department of Health

Communicable Disease Service

Week ending March 3, 2018 (MMWR week 9<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	0.31 (0.00, 1.06)	1.21	0.41	0.48 (0.45, 0.76)
Schools (absenteeism)	4.13 (3.03, 6.21)	5.75	4.30	3.36 (4.49, 4.86)
Emergency Departments	9.10 (0.55, 15.52)	11.99	3.92	2.21 (3.17, 3.92)

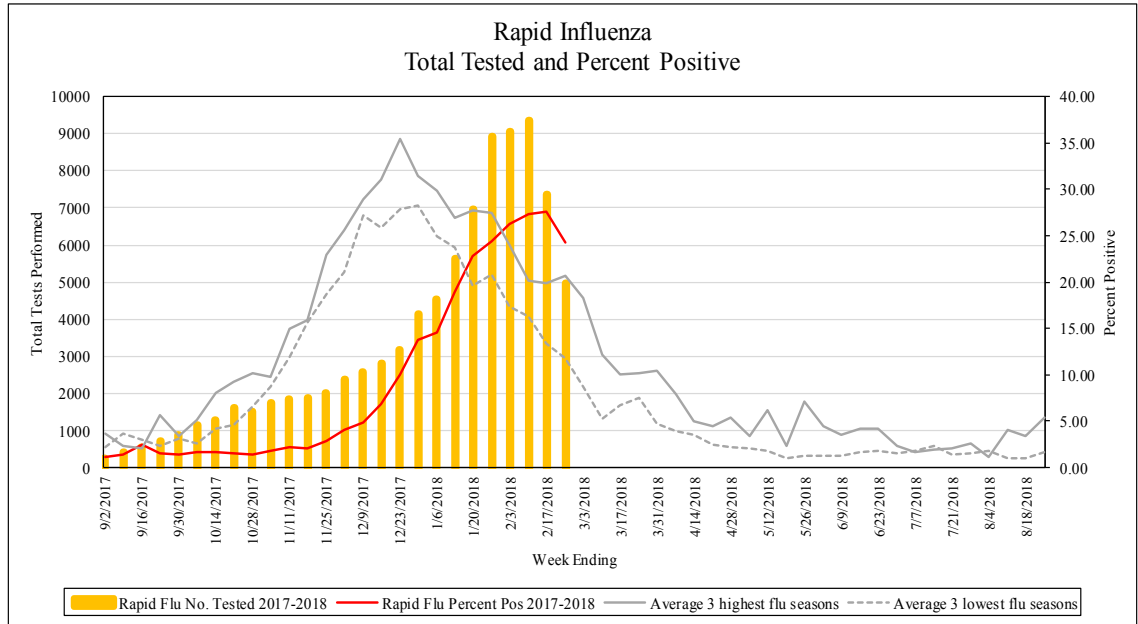
## Laboratory Testing<sup>8</sup>

	Current Week	Past 3 Weeks	Cumulative Total
Influenza A H1N1 (2009)	10	109	310
Influenza A H3N2	24	236	1360
Influenza B	173	1291	3285
Rapid Influenza Tests	1205	5796	15240

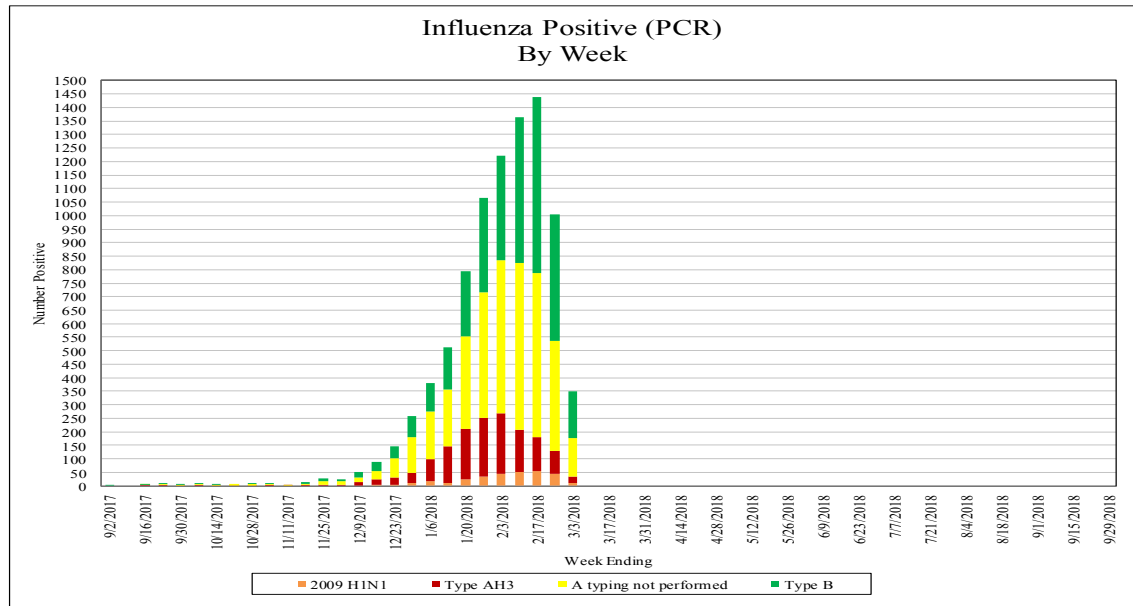
Report also available at <http://nj.gov/health/cd/statistics/flu-stats/>

# Virologic Surveillance<sup>8</sup>

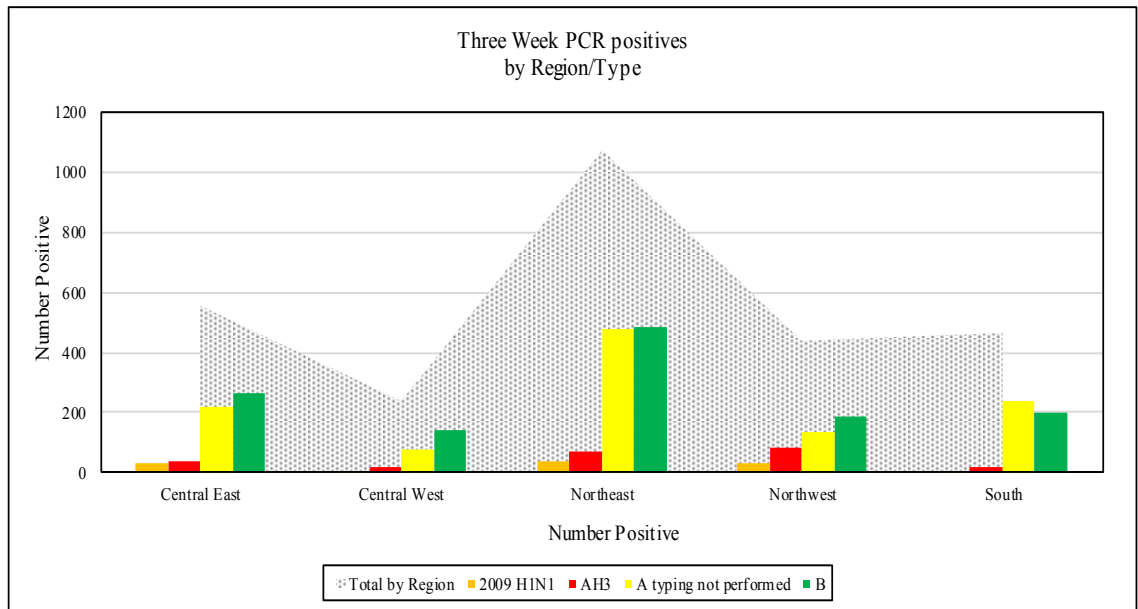
## Influenza Rapid Antigen Result by Week



## Influenza Positive (PCR) Specimens (PCR)

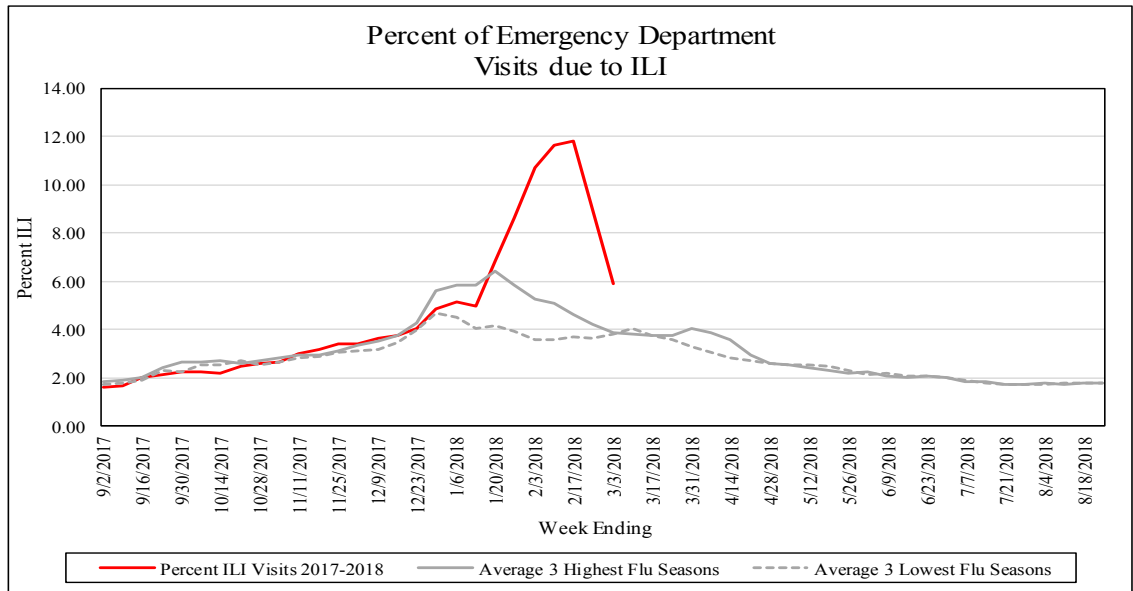


## Influenza Positive Specimens (PCR) by Region<sup>4</sup>/Type

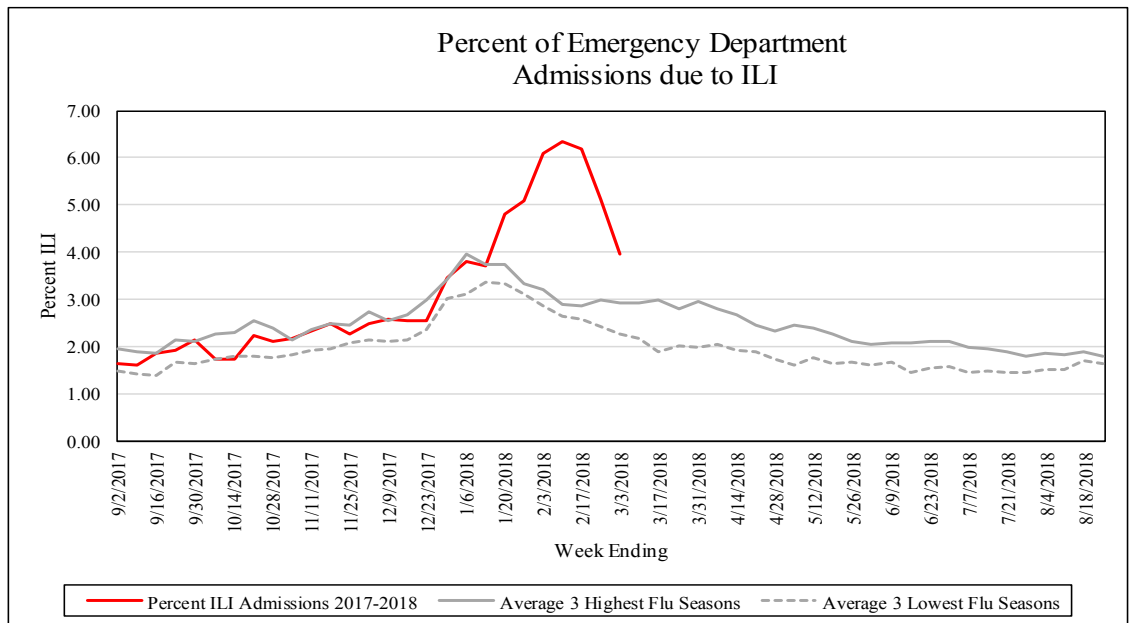


# Influenza-Like Illness (ILI) Surveillance

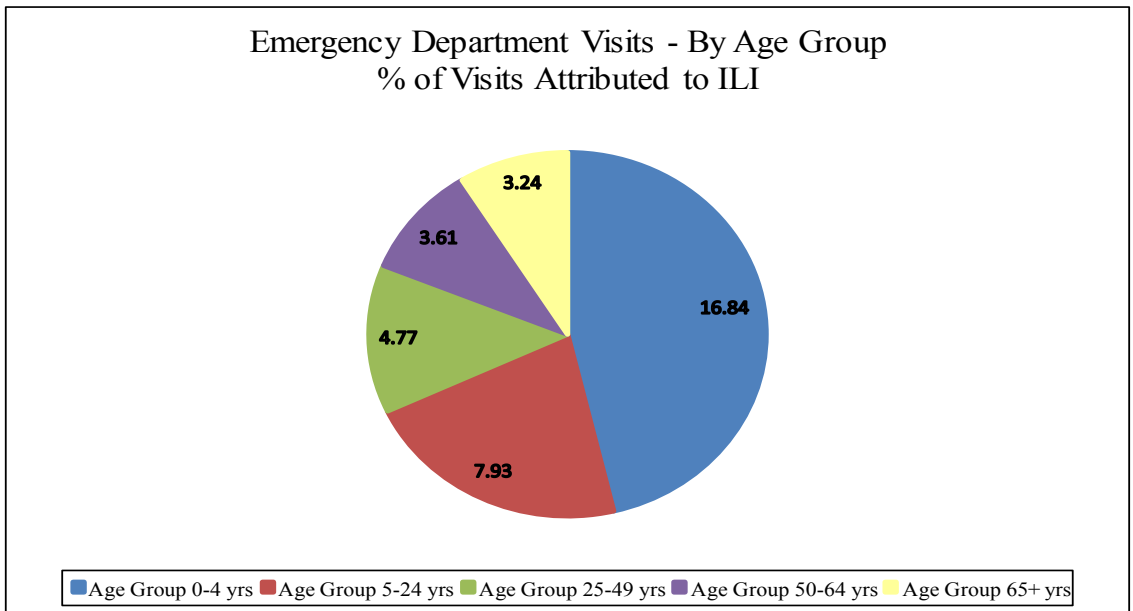
Emergency Department<sup>9</sup> Visits  
Percent due to ILI



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

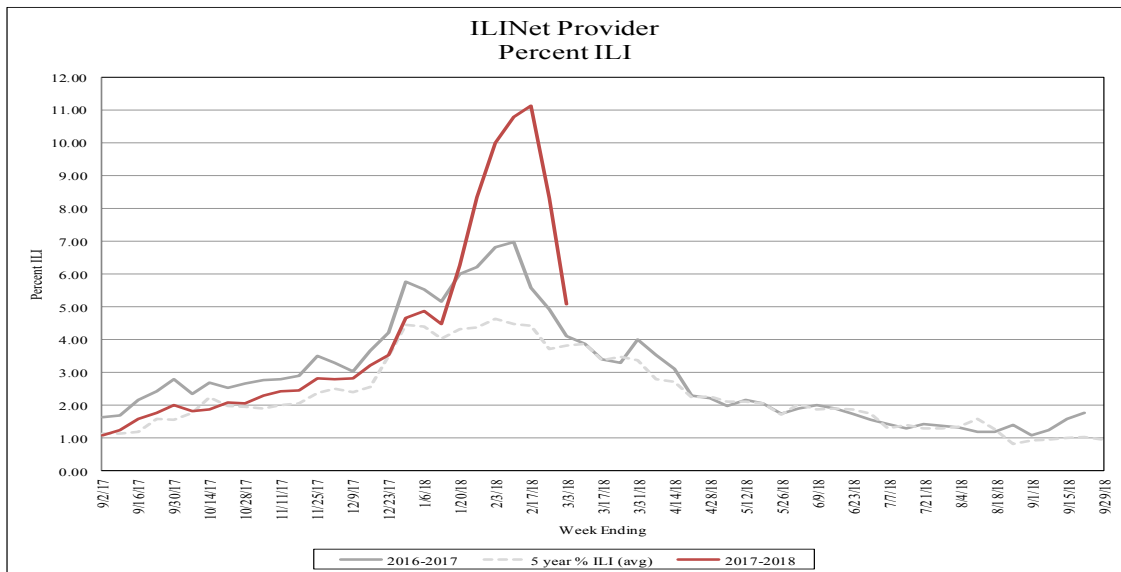


Emergency Department<sup>9</sup> Visits  
Percent of ILI By Age Group

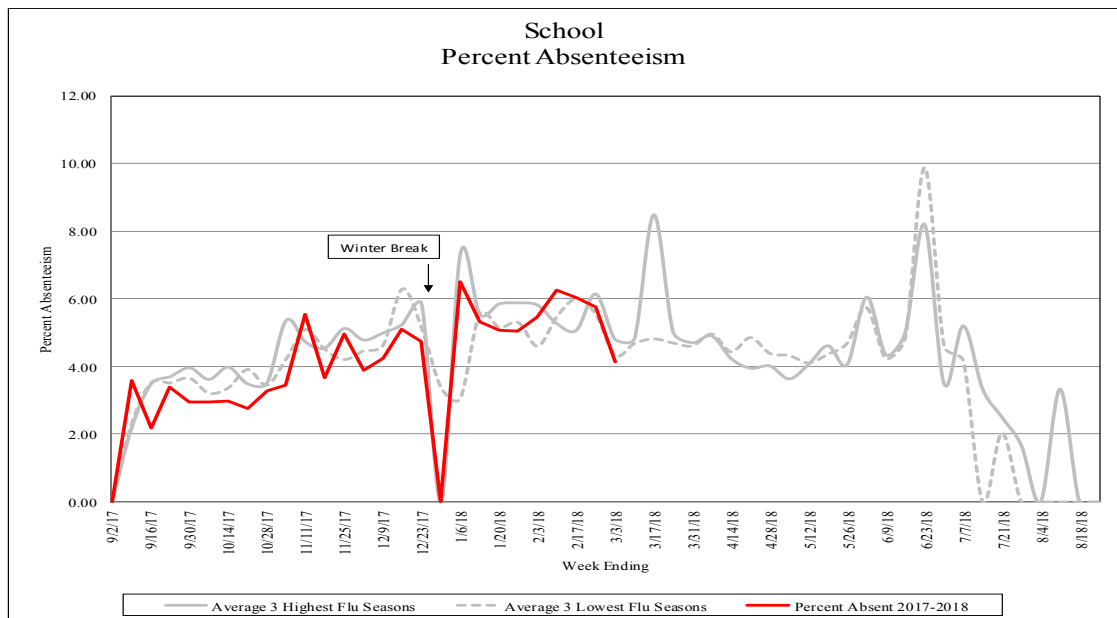


# Influenza-Like Illness (ILI) Surveillance

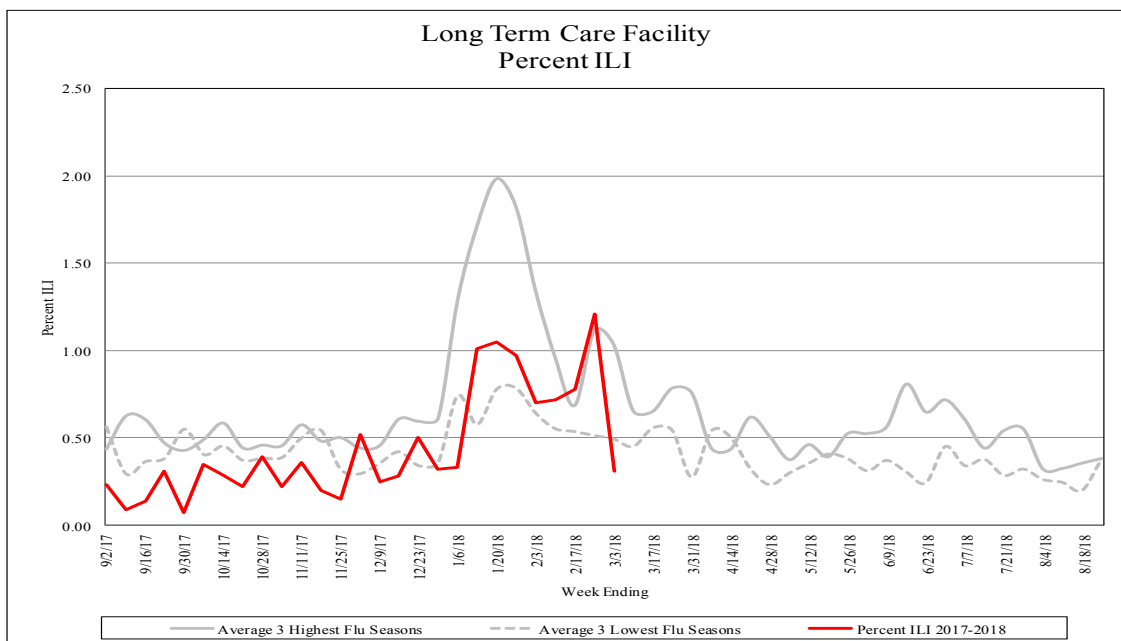
## ILI Net Providers<sup>5</sup>



## 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

166

No. outbreaks last 3 weeks

24

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

114

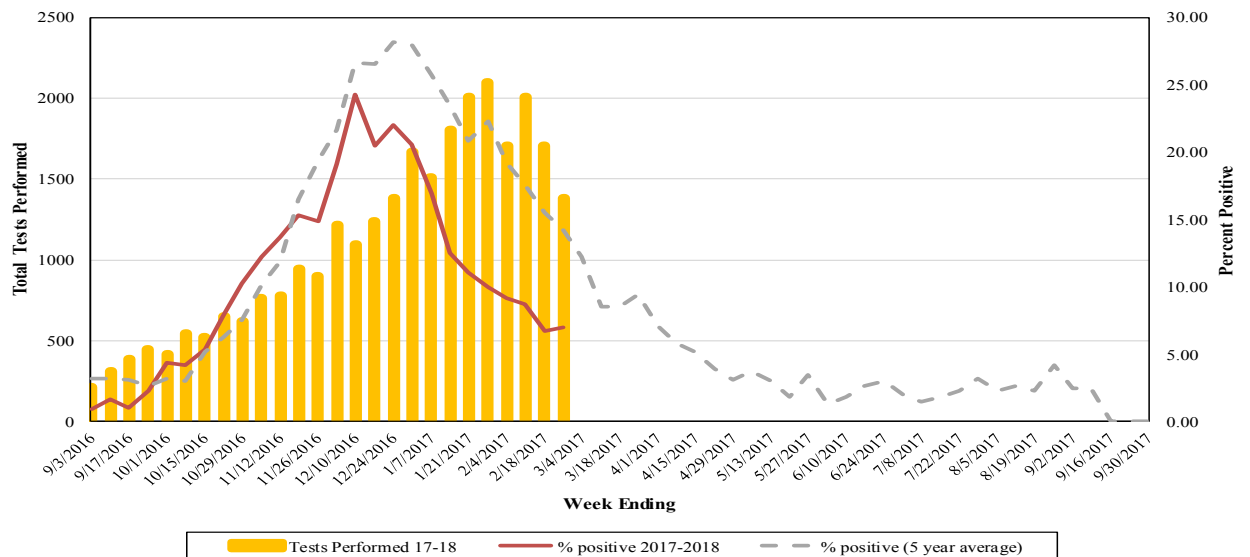
48

3

## Viral Respiratory Surveillance Non-Influenza

### Respiratory Syncytial Virus Percent Positive

RSV Data  
Total Tested and Percent



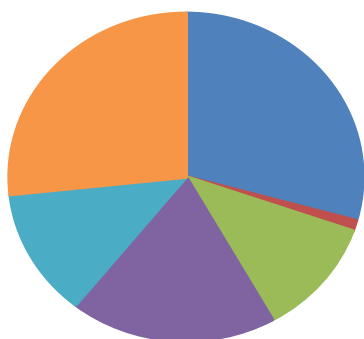
## Viral Respiratory Surveillance Non-Influenza

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

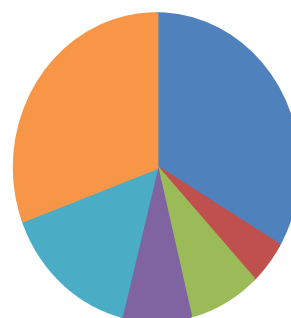
**Total Tests Positive for a Respiratory Virus Other than Influenza**

	Respiratory Syncytial Virus	Parainfluenza	Adenovirus	Human Metapneumovirus	Corona Viruses	Rhinovirus
<b>Past Three Weeks</b>	56	2	22	36	24	51
<b>17-18 Season</b>	831	72	129	124	244	485

Count of Positive Results by Type in the  
Past Three Weeks



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



<span style="display: inline-block; width: 15px; height: 15px; background-color: blue; margin-right: 5px;"></span> Respiratory Syncytial Virus	<span style="display: inline-block; width: 15px; height: 15px; background-color: red; margin-right: 5px;"></span> Parainfluenza	<span style="display: inline-block; width: 15px; height: 15px; background-color: green; margin-right: 5px;"></span> Adenovirus	<span style="display: inline-block; width: 15px; height: 15px; background-color: purple; margin-right: 5px;"></span> Human Metapneumovirus	<span style="display: inline-block; width: 15px; height: 15px; background-color: teal; margin-right: 5px;"></span> Corona Viruses	<span style="display: inline-block; width: 15px; height: 15px; background-color: orange; margin-right: 5px;"></span> Rhinovirus
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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	727	0	12	398	1137
	BERGEN	1544	58	210	1132	2944
	BURLINGTON	594	0	7	368	969
	CAMDEN	1012	1	29	673	1715
	CAPE MAY	284	0	0	95	379
	CUMBERLAND	31	0	1	38	70
	ESSEX	846	38	123	550	1557
	GLOUCESTER	256	1	24	142	423
	HUDSON	1326	26	62	598	2012
	HUNTERDON	130	2	42	129	303
	MERCER	319	4	26	446	795
	MIDDLESEX	631	12	45	424	1112
	MONMOUTH	1282	3	16	866	2167
	MORRIS	398	34	224	298	954
	OCEAN	1000	24	23	653	1700
	PASSAIC	919	31	90	626	1666
	SALEM	11	3	1	10	25
	SOMERSET	140	5	54	139	338
	SUSSEX	51	5	66	79	201
	UNION	424	60	299	461	1244
	WARREN	76	3	14	27	120
	Total	12001	310	1368	8152	21831

## 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	3337	99	383	2404	6223
	Central West	589	11	122	714	1436
	Northeast	3716	122	395	2280	6513
	Northwest	1444	73	394	1030	2941
	South	2915	5	74	1724	4718
	Total	12001	310	1368	8152	21831

*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: 02/27/2018**

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 27, 2018 MMWR WEEK 9</b>									
ATLANTIC	2	0	0.00	36	17	5.44	4	4	7.07
BERGEN	11	3	0.84	33	21	3.63	6	6	7.50
BURLINGTON	7	4	1.06	101	73	4.34	4	4	8.62
CAMDEN	1	0	0.00	8	7	6.05	8	7	9.08
CAPE MAY	3	0	0.00	12	7	4.37	1	1	7.22
CUMBERLAND	5	5	0.56	12	10	6.21	3	3	9.13
ESSEX	9	2	0.00	4	1	4.32	8	7	11.74
GLOUCESTER	3	0	0.00	4	1	3.97	2	2	6.40
HUDSON	4	0	0.00	15	8	3.80	6	6	9.05
HUNTERDON	4	4	0.23	11	11	3.99	1	1	6.48
MERCER	1	1	0.89	31	20	3.35	5	4	9.78
MIDDLESEX	13	5	0.35	21	17	3.76	6	6	8.72
MONMOUTH	6	1	0.00	68	42	4.42	5	5	8.08
MORRIS	3	1	0.00	10	6	3.03	4	4	4.93
OCEAN	10	6	0.00	6	4	5.91	4	4	8.07
PASSAIC	10	3	0.00	30	17	3.93	3	3	11.09
SALEM	0	0	0.00	5	4	3.45	1	0	0.00
SOMERSET	5	1	0.00	23	15	3.37	1	1	9.69
SUSSEX	3	1	0.20	4	2	4.37	2	2	0.55
UNION	2	0	0.00	56	32	3.10	5	5	15.52
WARREN	6	0	0.00	19	11	4.02	2	2	10.88
<b>NW Region</b>	22	5	0.10	63	36	3.83	11	11	8.00
<b>NE Region</b>	24	5	0.42	52	30	3.72	20	19	9.80
<b>CW Region</b>	10	6	0.30	65	46	3.50	7	6	9.40
<b>CE Region</b>	31	12	0.13	151	95	3.90	20	20	9.58
<b>South Region</b>	21	9	0.68	178	119	4.73	23	21	8.25
<b>State Total</b>	<b>108</b>	<b>37</b>	<b>0.31</b>	<b>509</b>	<b>326</b>	<b>4.13</b>	<b>81</b>	<b>77</b>	<b>9.10</b>

# NJ ACTIVE INFLUENZA-LIKE ILLNESS SURVEILLANCE STATISTICS

## SURVEILLANCE DATE: 02/27/2018



County	RSV Tests		Rapid Flu Tests		
	# Positive	Total Tests Performed	# Positive	Total Tests Performed	
February 27, 2018 MMWR WEEK 9					
ATLANTIC	3	29	46	298	
BERGEN	14	137	282	903	
BURLINGTON	6	58	25	99	
CAMDEN	1	13	35	259	
CAPE MAY	0	5	40	181	
CUMBERLAND	0	0	0	0	
ESSEX	16	232	121	660	
GLOUCESTER	0	1	14	84	
HUDSON	1	7	20	93	
HUNTERDON	9	160	45	160	
MERCER	4	26	111	315	
MIDDLESEX	7	88	46	183	
MONMOUTH	14	118	169	783	
MORRIS	1	35	23	76	
OCEAN	0	66	63	296	
PASSAIC	7	65	162	562	
SALEM	0	0	0	0	
SOMERSET	0	0	0	0	
SUSSEX	0	0	0	0	
UNION	14	324	0	0	
WARREN	0	17	3	17	
<b>NW Region</b>	8	117	188	655	
<b>NE Region</b>	31	376	423	1656	
<b>CW Region</b>	13	186	156	475	
<b>CE Region</b>	35	596	278	1262	
<b>South Region</b>	10	106	160	921	
<b>State Total</b>	97	1381	1205	4969	