



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

New Jersey Department of Health

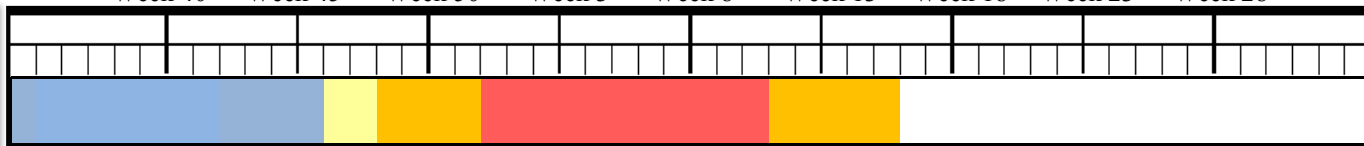
Communicable Disease Service

Week ending April 21, 2018 (MMWR week 16<sup>2</sup>)



## Influenza Activity Level<sup>3</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



**New Jersey Activity Level: MODERATE**

Current week last year: **MODERATE**

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

**Northwest:** **LOW**

**Northeast:** **LOW**

**Central West:** **MODERATE**

**Central East:** **LOW**

**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	0.19 (0.00, 0.46)	0.32	0.26	0.48 (0.45, 0.76)
Schools (absenteeism)	3.51 (2.01, 5.62)	3.95	3.24	3.36 (4.49, 4.86)
Emergency Departments	2.75 (0.44, 4.94)	3.43	2.57	2.21 (3.17, 3.92)

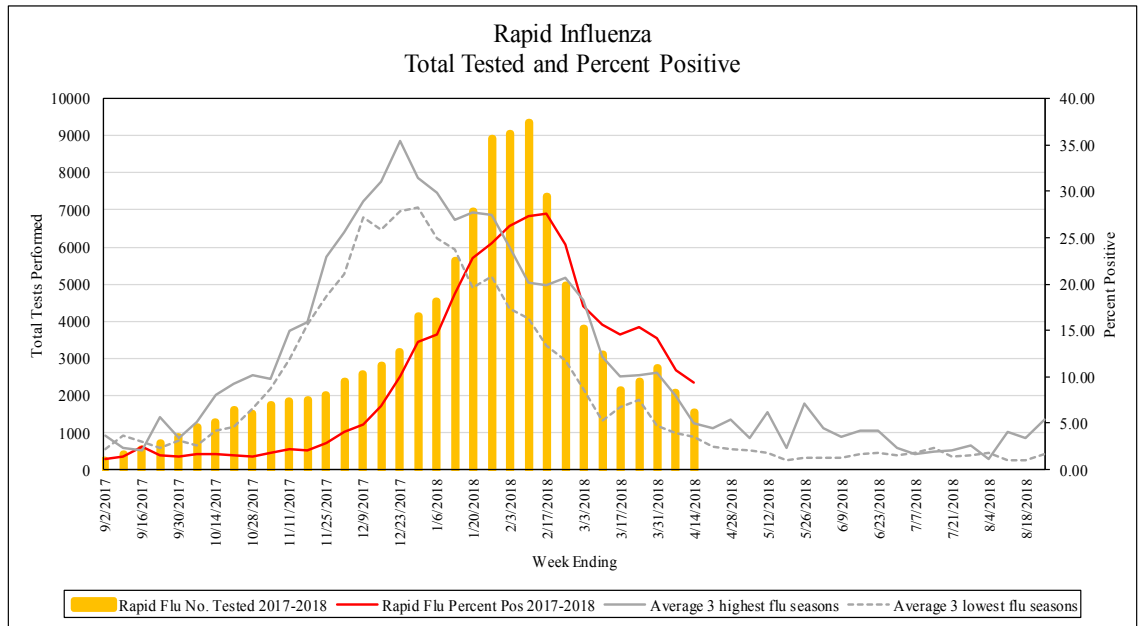
## Laboratory Testing<sup>8</sup>

	Current Week	Past 3 Weeks	Cumulative Total
Influenza A H1N1 (2009)	0	6	504
Influenza A H3N2	3	29	1651
Influenza B	31	191	4132
Rapid Influenza Tests	146	762	17841

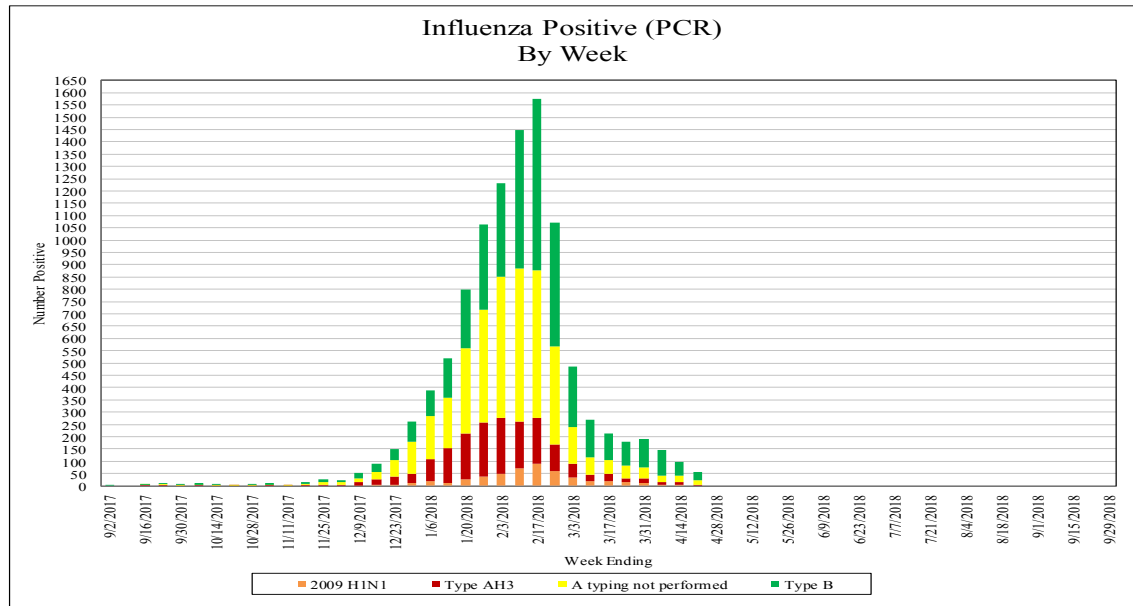
Report also available at <http://nj.gov/health/cd/statistics/flu-stats/>

# Virologic Surveillance<sup>8</sup>

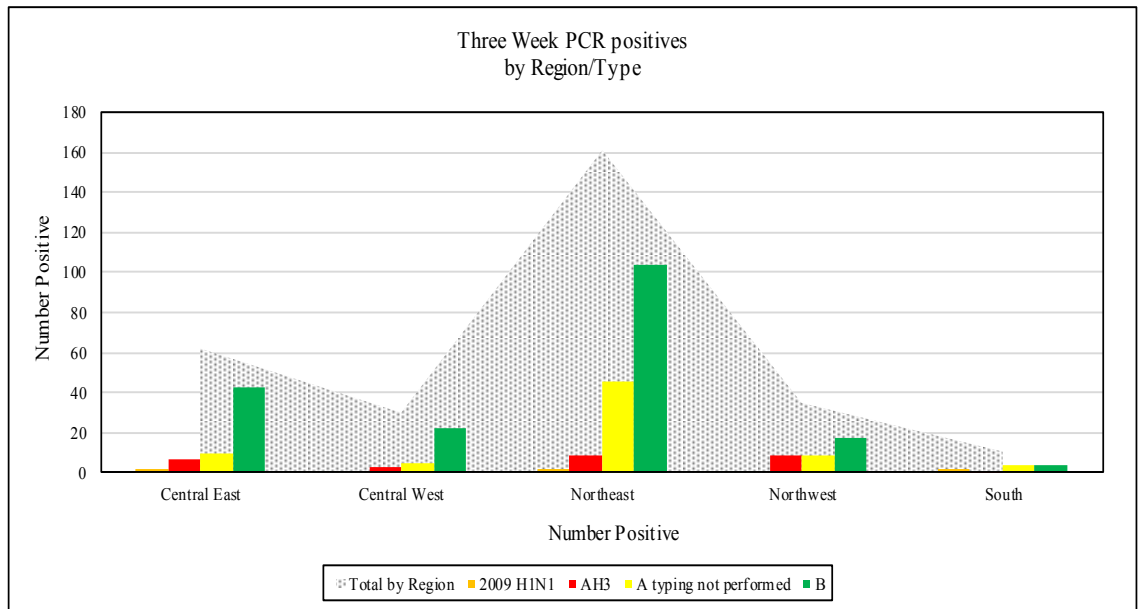
## Influenza Rapid Antigen Result by Week



## Influenza Positive Specimens (PCR)

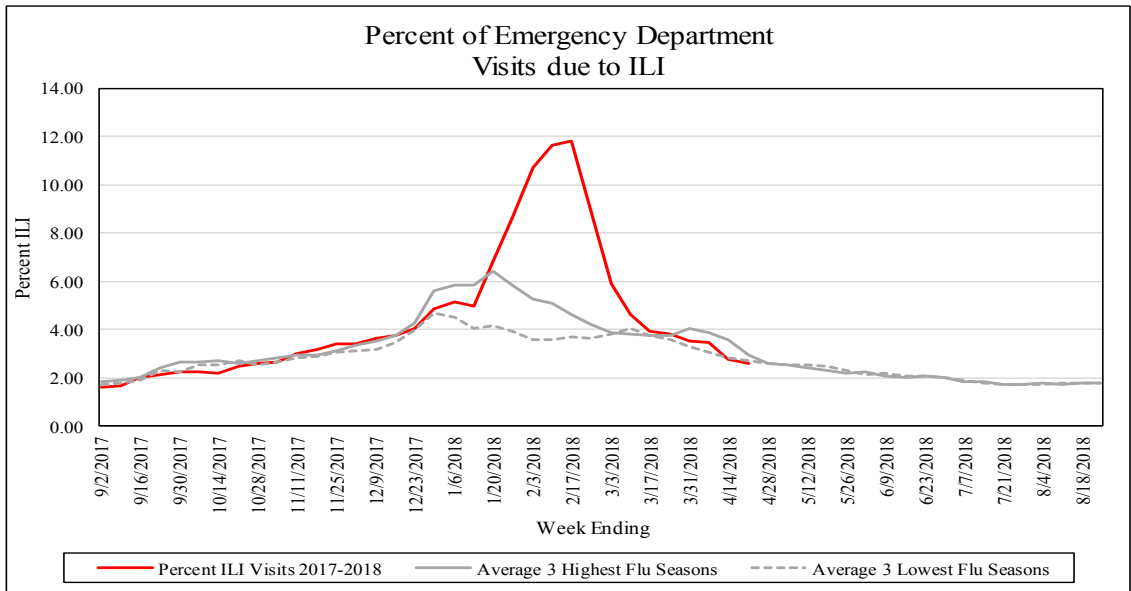


## Influenza Positive Specimens (PCR) by Region<sup>4</sup>/Type

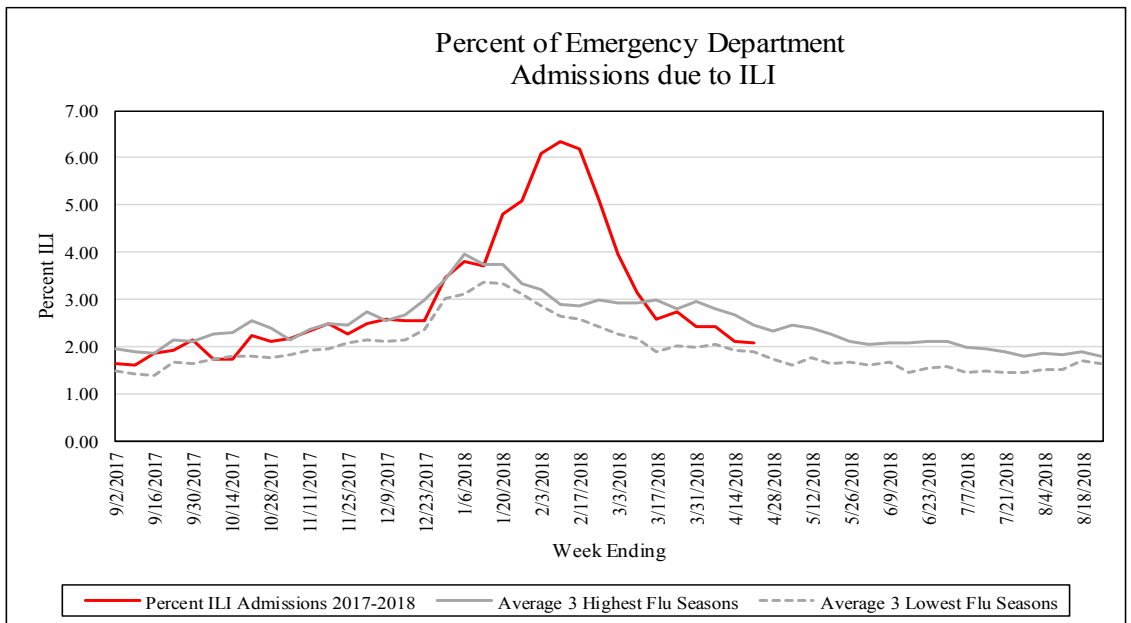


# Influenza-Like Illness (ILI) Surveillance

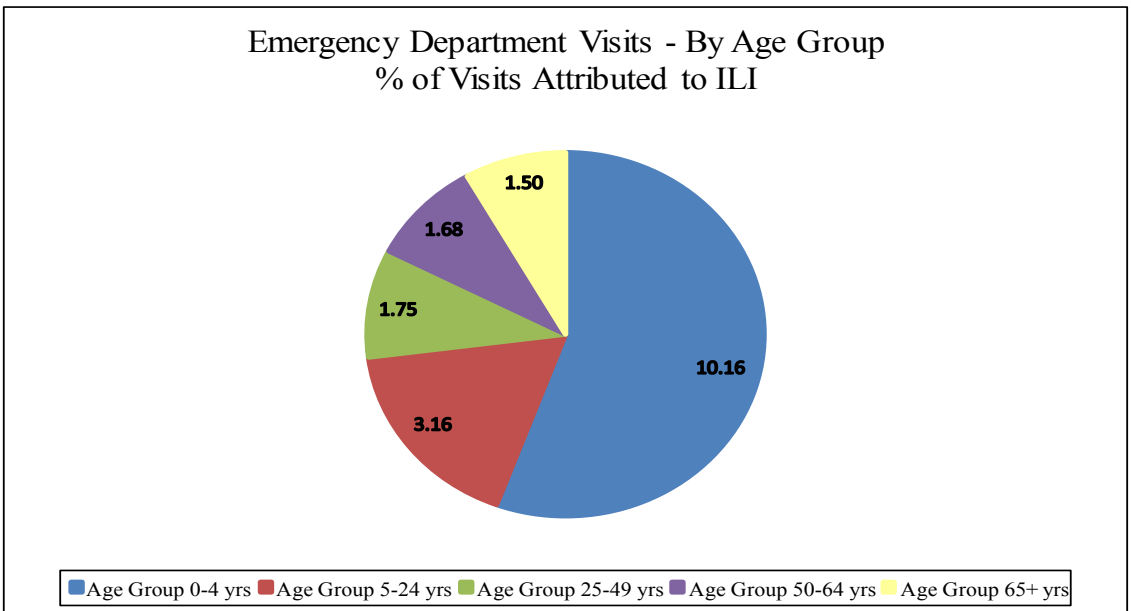
Emergency Department<sup>9</sup> Visits  
Percent due to ILI



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

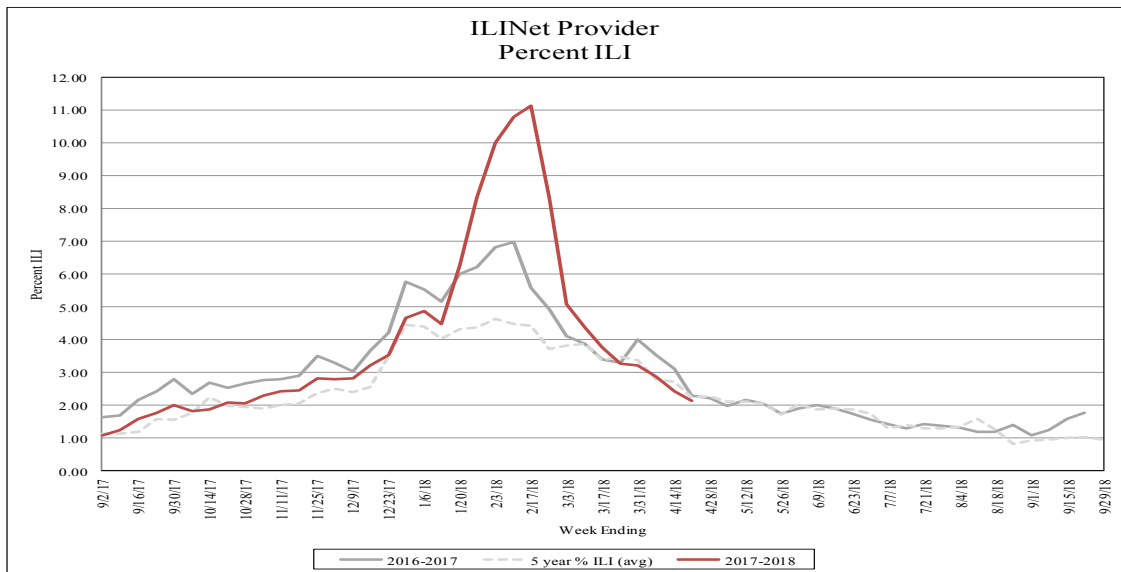


Emergency Department<sup>9</sup> Visits  
Percent of ILI By Age Group

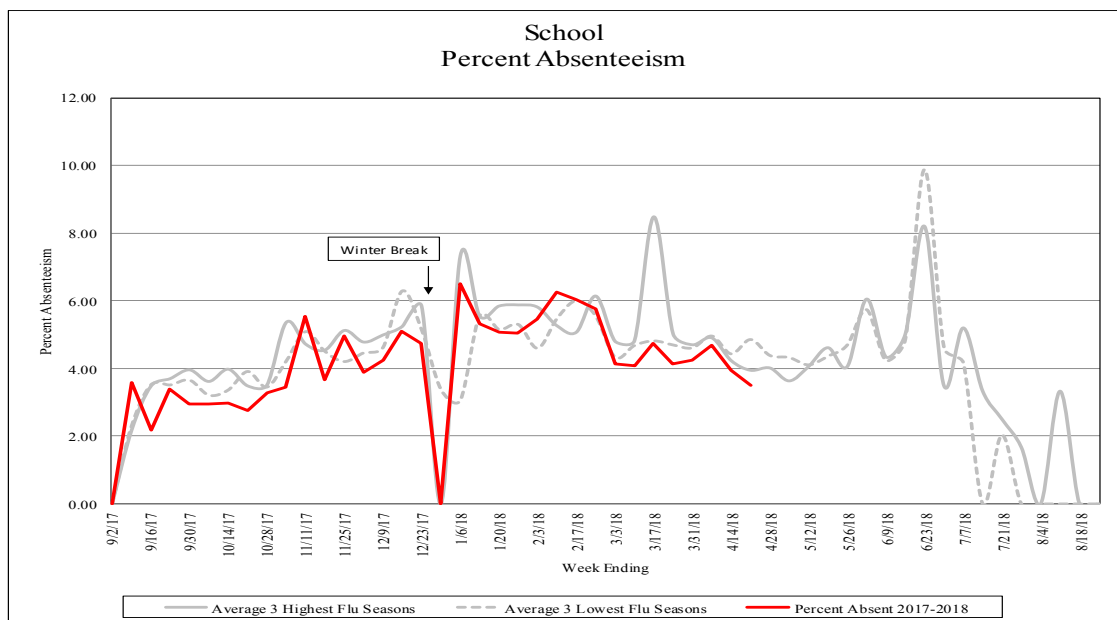


# Influenza-Like Illness (ILI) Surveillance

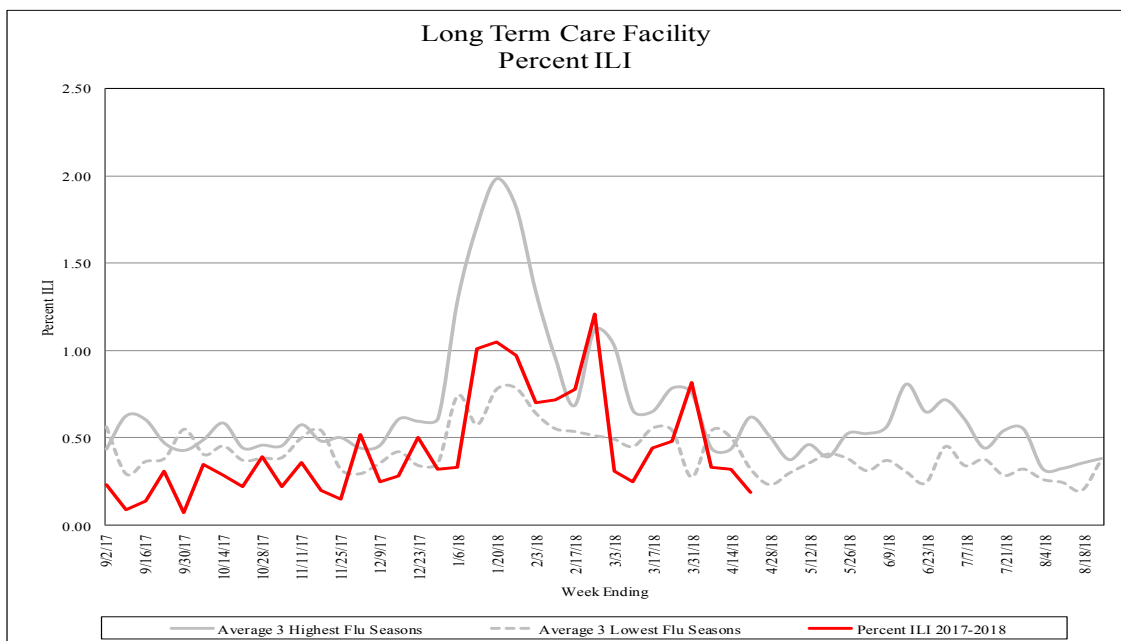
## ILI Net Providers<sup>5</sup>



## 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**

**188**

**No. outbreaks last 3 weeks**

**3**

**Regions with recent outbreaks**

**NW, NE, CW**

### 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**

**156**

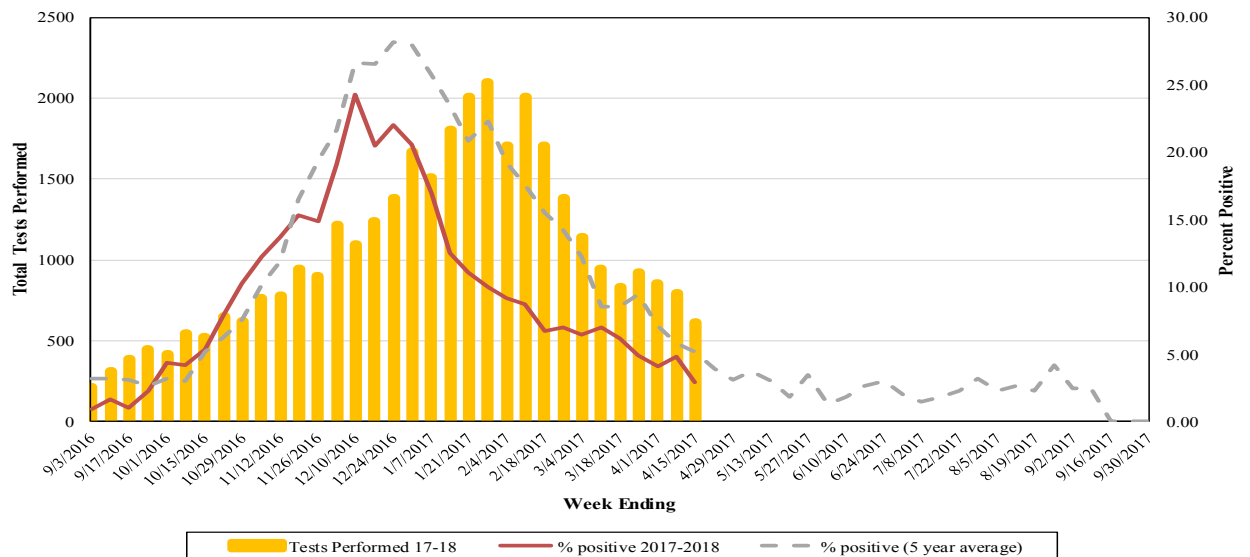
**55**

**3**

## Viral Respiratory Surveillance Non-Influenza

### Respiratory Syncytial Virus Percent Positive

**RSV Data  
Total Tested and Percent**



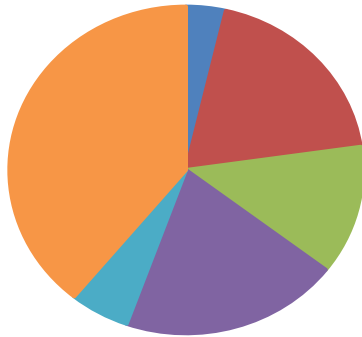
## Viral Respiratory Surveillance Non-Influenza

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

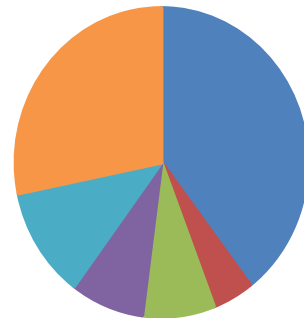
Total Tests Positive for a Respiratory Virus Other than Influenza

	Respiratory Syncytial Virus	Parainfluenza	Adenovirus	Human Metapneumovirus	Corona Viruses	Rhinovirus
Past Three Weeks	4	21	14	22	6	43
17-18 Season	885	101	178	181	259	630

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	808	8	12	513	1341
	BERGEN	1742	66	236	1452	3496
	BURLINGTON	636	0	7	404	1047
	CAMDEN	1081	1	35	743	1860
	CAPE MAY	322	0	0	140	462
	CUMBERLAND	34	1	2	40	77
	ESSEX	961	58	147	759	1925
	GLOUCESTER	267	6	24	158	455
	HUDSON	1450	35	69	753	2307
	HUNTERDON	142	6	48	163	359
	MERCER	380	14	30	487	911
	MIDDLESEX	687	18	51	513	1269
	MONMOUTH	1456	3	25	1003	2487
	MORRIS	420	41	250	364	1075
	OCEAN	1067	49	33	766	1915
	PASSAIC	1046	39	100	798	1983
	SALEM	12	3	1	11	27
	SOMERSET	159	9	73	185	426
	SUSSEX	82	16	74	102	274
	UNION	453	130	435	645	1663
	WARREN	82	4	14	34	134
	Total	13287	507	1666	10033	25493

## 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	3663	200	544	2927	7334
	Central West	681	29	151	835	1696
	Northeast	4153	159	452	2964	7728
	Northwest	1630	100	438	1298	3466
South	3160	19	81	2009	5269	
Total	13287	507	1666	10033	25493	

*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: 04/17/2018**

COUNTY	Long Term Care			Schools			Hospital Emergency Dept		
	# Enrolled	# Reports Rec'd	% ILI	# Enrolled	# Reports Rec'd	% Absent	# Enrolled	# Reports Rec'd	% ILI
<b>April 17, 2018 MMWR WEEK 16</b>									
ATLANTIC	2	0	0.00	36	10	3.94	4	4	1.79
BERGEN	11	4	0.24	34	12	2.67	6	6	2.36
BURLINGTON	7	4	0.00	101	51	3.11	4	4	2.43
CAMDEN	1	0	0.00	8	7	3.82	8	7	2.83
CAPE MAY	3	0	0.00	12	6	4.13	1	1	2.42
CUMBERLAND	5	4	0.27	12	10	5.62	3	3	2.17
ESSEX	9	1	0.00	4	0	0.00	8	7	4.16
GLOUCESTER	3	0	0.00	4	1	5.15	2	2	1.69
HUDSON	4	1	0.38	15	5	3.08	6	6	2.59
HUNTERDON	4	4	0.46	11	9	2.93	1	1	2.34
MERCER	1	1	0.00	31	13	3.49	5	4	3.19
MIDDLESEX	13	4	0.00	21	16	2.85	6	6	2.54
MONMOUTH	6	0	0.00	69	19	3.55	5	5	2.28
MORRIS	3	0	0.00	10	2	2.01	4	4	1.90
OCEAN	10	2	0.00	6	2	5.22	4	4	1.92
PASSAIC	10	1	0.00	30	10	2.45	3	3	3.50
SALEM	0	0	0.00	5	3	4.93	1	1	4.94
SOMERSET	5	0	0.00	23	15	4.99	1	1	4.23
SUSSEX	3	1	0.00	4	2	2.79	2	1	0.44
UNION	2	0	0.00	57	12	2.94	5	5	3.26
WARREN	6	0	0.00	19	7	3.00	2	2	3.52
<b>NW Region</b>	22	2	0.00	63	21	2.56	11	10	2.68
<b>NE Region</b>	24	6	0.24	53	17	2.83	20	19	3.20
<b>CW Region</b>	10	5	0.37	65	37	4.07	7	6	3.29
<b>CE Region</b>	31	6	0.00	153	49	3.25	20	20	2.50
<b>South Region</b>	21	8	0.21	178	88	3.69	23	22	2.38
<b>State Total</b>	<b>108</b>	<b>27</b>	<b>0.19</b>	<b>512</b>	<b>212</b>	<b>3.51</b>	<b>81</b>	<b>77</b>	<b>2.75</b>

# NJ ACTIVE INFLUENZA-LIKE ILLNESS SURVEILLANCE STATISTICS

## SURVEILLANCE DATE: 04/17/2018



County	RSV Tests		Rapid Flu Tests		
	# Positive	Total Tests Performed	# Positive	Total Tests Performed	
April 17, 2018 MMWR WEEK 16					
ATLANTIC	0	13	7	128	
BERGEN	0	91	13	83	
BURLINGTON	0	0	5	25	
CAMDEN	0	1	3	63	
CAPE MAY	0	7	5	48	
CUMBERLAND	0	0	0	0	
ESSEX	4	138	29	433	
GLOUCESTER	0	1	3	24	
HUDSON	0	3	1	19	
HUNTERDON	2	51	6	51	
MERCER	2	17	25	121	
MIDDLESEX	0	39	6	69	
MONMOUTH	5	97	30	326	
MORRIS	3	29	3	66	
OCEAN	0	10	10	101	
PASSAIC	0	0	0	0	
SALEM	0	0	0	0	
SOMERSET	0	0	0	0	
SUSSEX	0	0	0	0	
UNION	3	115	0	0	
WARREN	0	0	0	0	
<b>NW Region</b>	3	29	3	66	
<b>NE Region</b>	4	232	43	535	
<b>CW Region</b>	4	68	31	172	
<b>CE Region</b>	8	261	46	496	
<b>South Region</b>	0	22	23	288	
<b>State Total</b>	19	612	146	1557	