

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

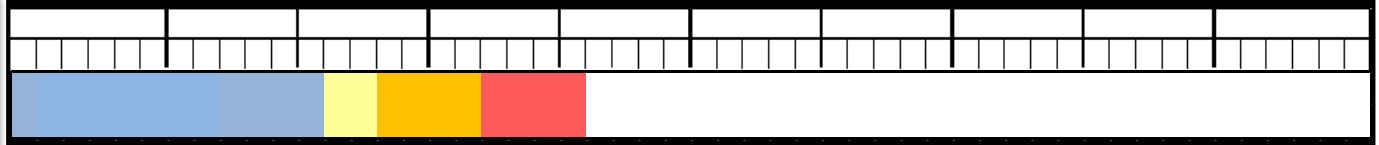
New Jersey Department of Health

Communicable Disease Service

Week ending January 27, 2018 (MMWR week 4<sup>2</sup>)

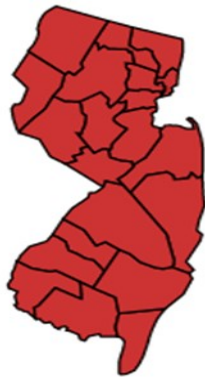


Week 40    Week 45    Week 50    Week 3    Week 8    Week 13    Week 18    Week 23    Week 28



■ 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>
<b>Long Term Care Facilities</b>	0.97 (0.00, 3.96)	1.05	1.14	0.48 (0.45, 0.76)
<b>Schools (absenteeism)</b>	5.04 (3.68, 9.85)	5.07	5.94	3.36 (4.49, 4.86)
<b>Emergency Departments</b>	6.79 (0.68, 9.43)	4.92	5.45	2.21 (3.17, 3.92)

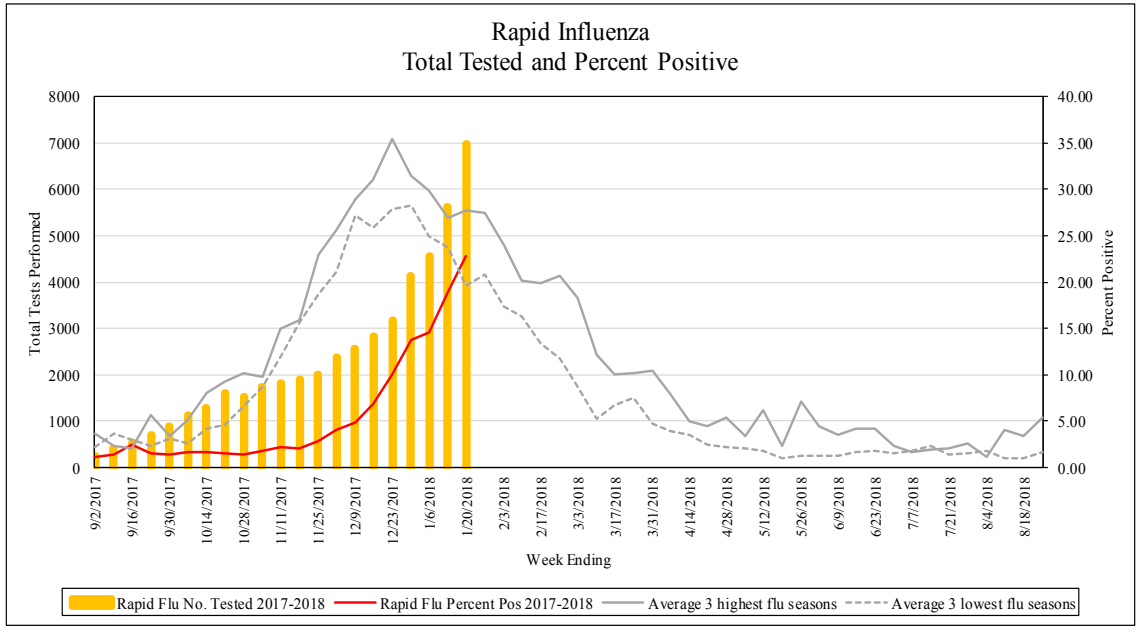
Laboratory  
Testing<sup>8</sup>

	Current Week	Past 3 Weeks	Cumulative Total
<b>Influenza A H1N1 (2009)</b>	8	34	65
<b>Influenza A H3N2</b>	93	346	532
<b>Influenza B</b>	195	555	862
<b>Rapid Influenza Tests</b>	1596	3323	4880

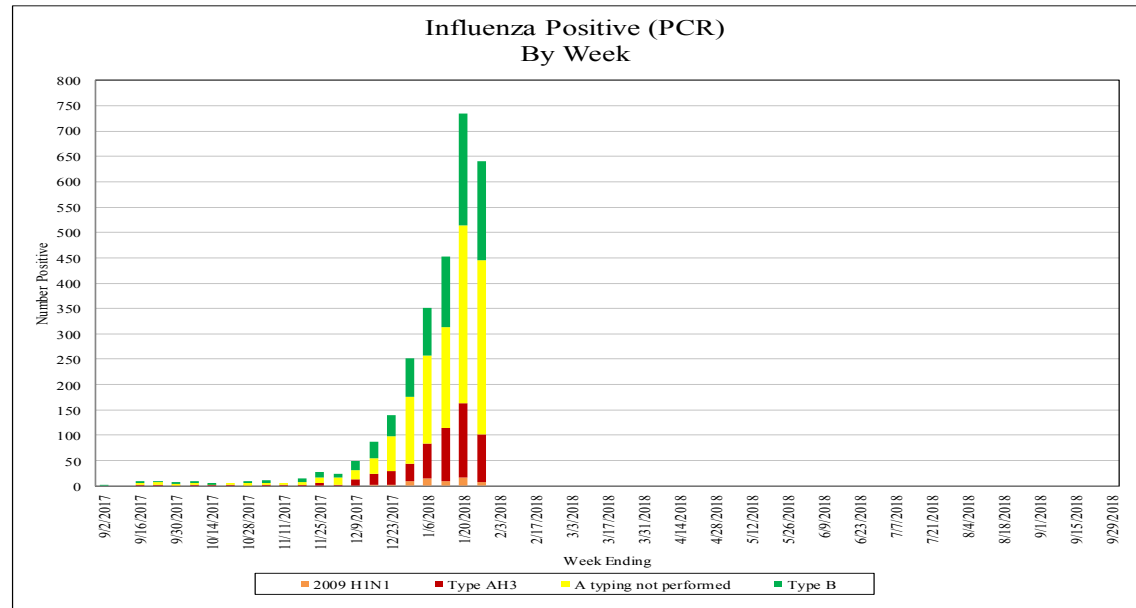
Report also available at <http://nj.gov/health/cd/statistics/flu-stats/>

# Virologic Surveillance<sup>8</sup>

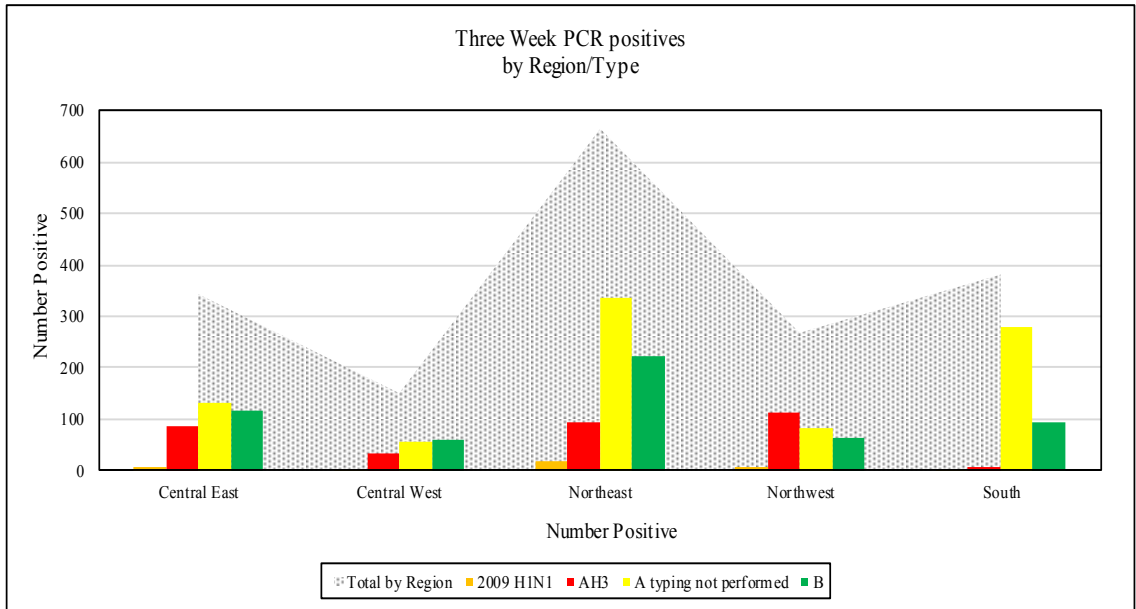
## Influenza Rapid Antigen Result by Week



## Influenza Positive Specimens (PCR)

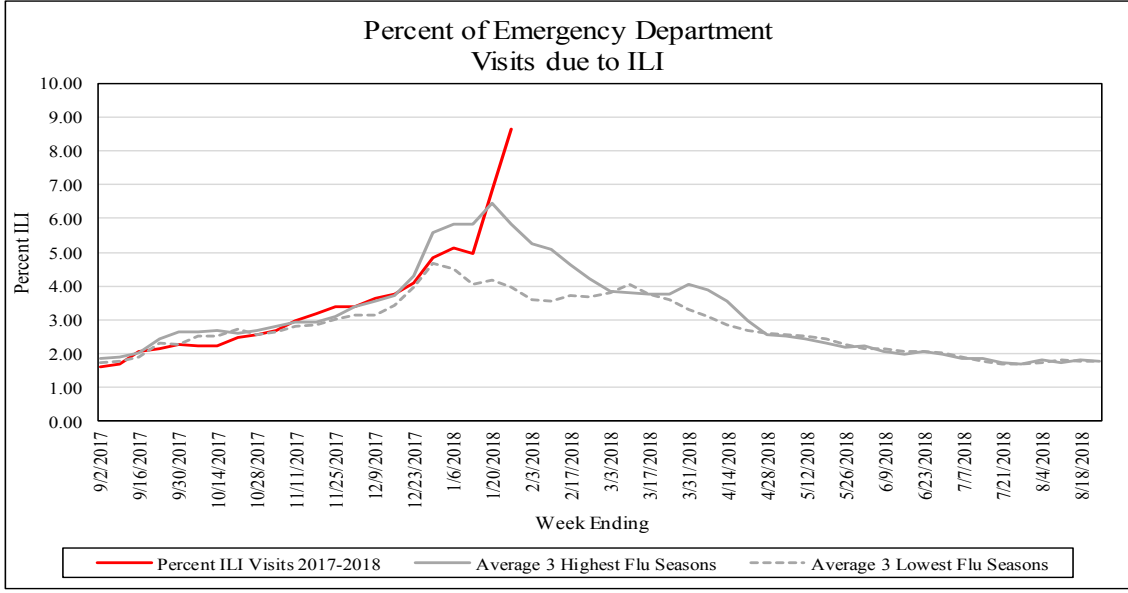


## Influenza Positive Specimens (PCR) by Region<sup>4</sup>/Type

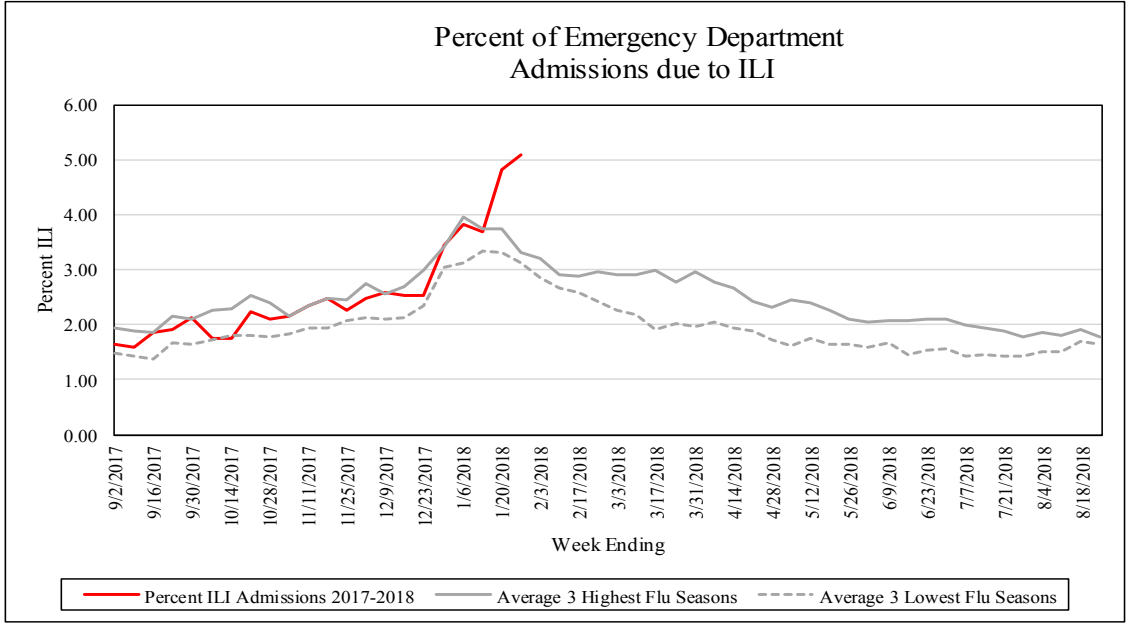


# Influenza-Like Illness (ILI) Surveillance

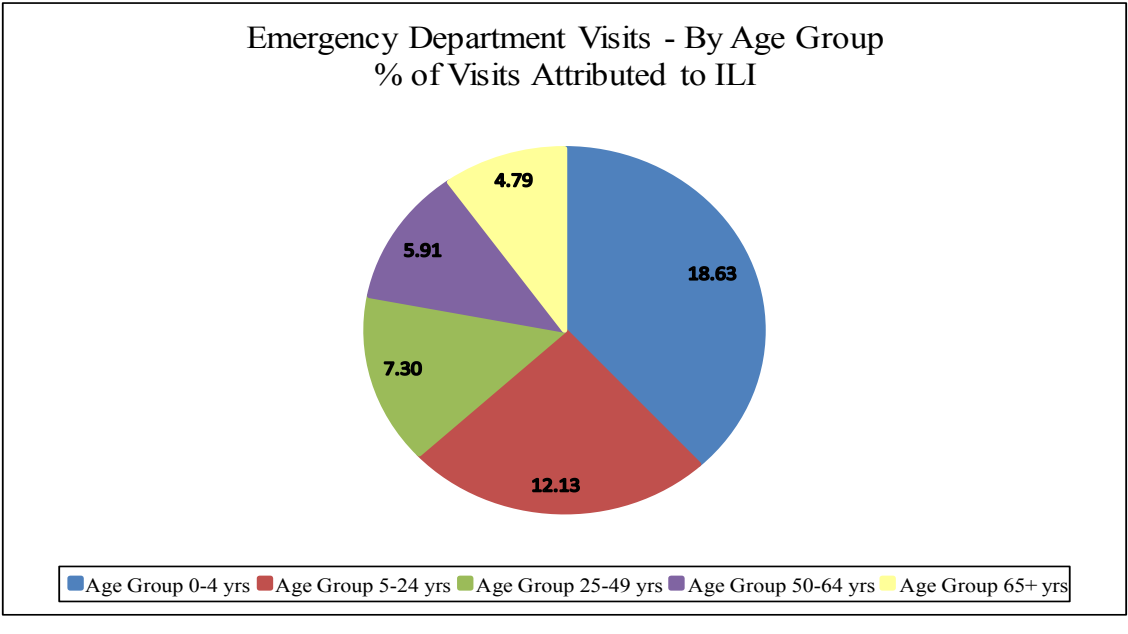
**Emergency Department<sup>9</sup> Visits  
Percent due to ILI**



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

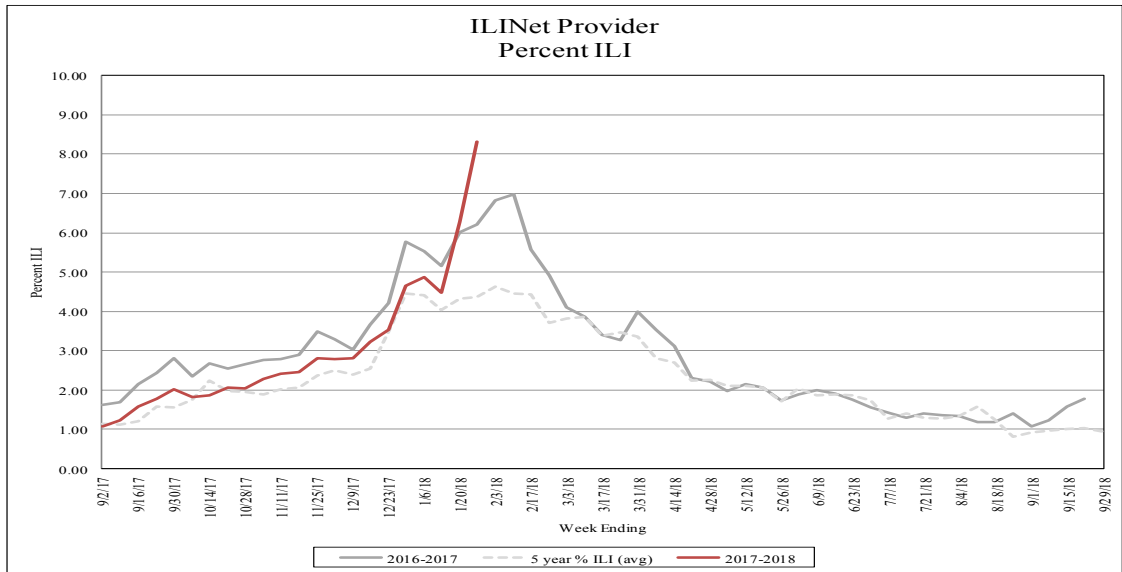


**Emergency Department<sup>9</sup> Visits  
Percent of ILI By Age Group**

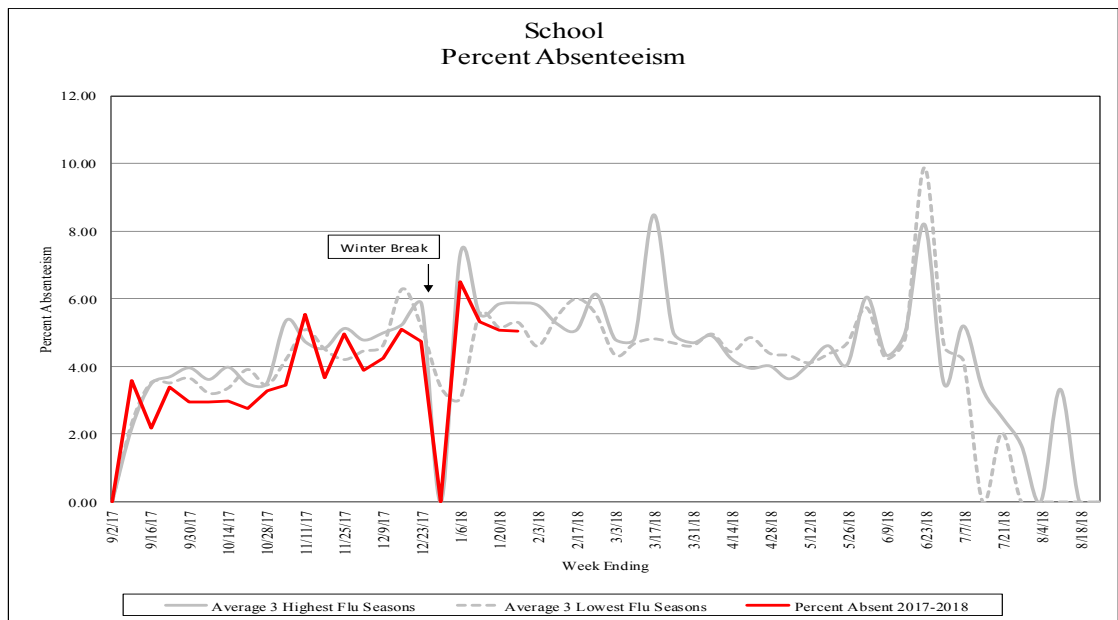


# Influenza-Like Illness (ILI) Surveillance

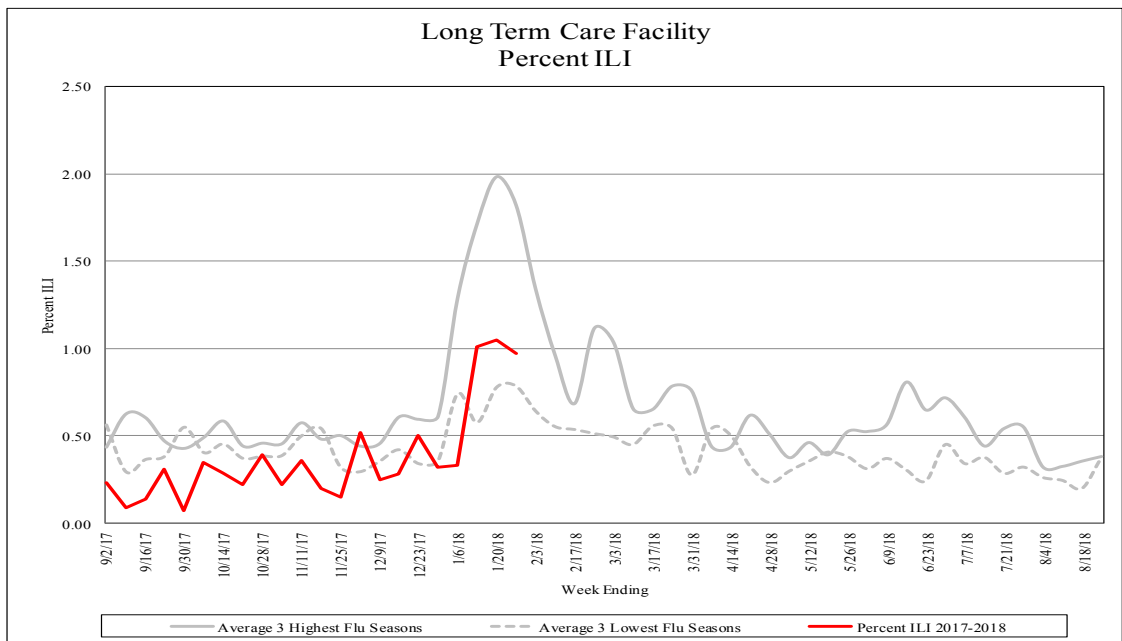
## ILI Net Providers



## School Absenteeism



## Long Term Care Facilities



## Influenza-Like Illness (ILI) Surveillance

### Long Term Care Outbreaks

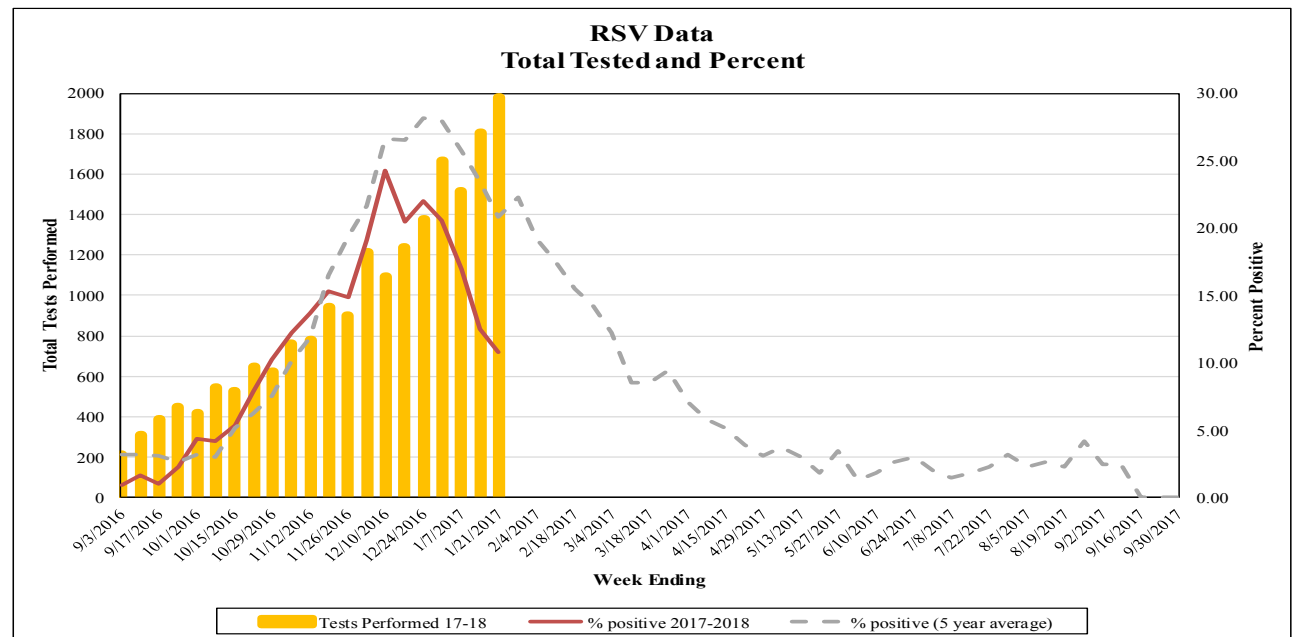
Respiratory Outbreaks in Long Term Care Facilities <sup>10</sup>	
Cumulative Outbreaks 2017-2018 Season	72
No. outbreaks last 3 weeks	43
Regions with recent outbreaks	NW, NE, CW, CE, S

### 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	37	26	1

## Viral Respiratory Surveillance Non-Influenza

### Respiratory Syncytial Virus Percent Positive



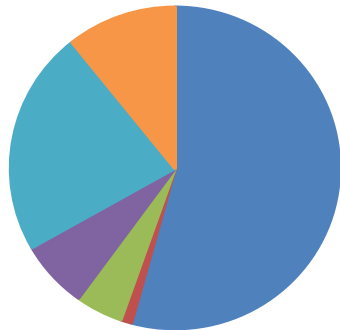
# Viral Respiratory Surveillance Non-Influenza

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

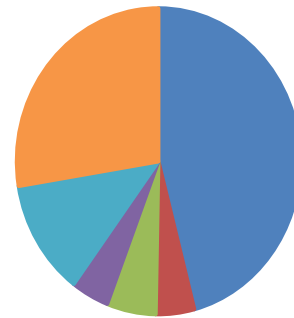
**Total Tests Positive for a Respiratory Virus Other than Influenza**

	Respiratory Syncytial Virus	Parainfluenza	Adenovirus	Human Metapneumovirus	Corona Viruses	Rhinovirus
<b>Past Three Weeks</b>	152	3	13	19	63	30
<b>17-18 Season</b>	608	58	74	57	162	365

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>				
<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.



## 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				Total
		Influenza A - Typing not performed	Influenza A 2009 H1N1	Influenza AH3	Influenza B	
	ATLANTIC	324	0	7	75	406
	BERGEN	550	11	90	321	972
	BURLINGTON	234	0	2	116	352
	CAMDEN	437	0	5	238	680
	CAPE MAY	114	0	0	17	131
	CUMBERLAND	9	0	0	4	13
	ESSEX	291	10	43	166	510
	GLOUCESTER	135	1	5	37	178
	HUDSON	429	4	29	147	609
	HUNTERDON	69	0	28	35	132
	MERCER	78	2	16	130	226
	MIDDLESEX	210	2	21	105	338
	MONMOUTH	581	0	5	297	883
	MORRIS	167	7	91	110	375
	OCEAN	453	5	6	229	693
	PASSAIC	146	6	25	68	245
	SALEM	2	0	1	2	5
	SOMERSET	69	2	21	32	124
	SUSSEX	24	0	27	27	78
	UNION	93	14	107	98	312
	WARREN	53	1	6	10	70
	<b>Total</b>	<b>4468</b>	<b>65</b>	<b>535</b>	<b>2264</b>	<b>7332</b>

## 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					Total
	Influenza A - Typing not performed	Influenza A 2009 H1N1	Influenza AH3	Influenza B		
Central East	1337	21	139	729		2226
Central West	216	4	65	197		482
Northeast	1270	25	162	634		2091
Northwest	390	14	149	215		768
South	1255	1	20	489		1765
<b>Total</b>	<b>4468</b>	<b>65</b>	<b>535</b>	<b>2264</b>		<b>7332</b>

*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: 01/23/2018**



COUNTY	Long Term Care			Schools			Hospital Emergency Dept		
	# Enrolled	# Reports Rec'd	% ILI	# Enrolled	# Reports Rec'd	% Absent	# Enrolled	# Reports Rec'd	% ILI
<b>January 23, 2018 MMWR WEEK 4</b>									
ATLANTIC	2	0	0.00	35	11	6.96	4	4	4.98
BERGEN	10	2	0.17	30	15	5.02	6	6	5.95
BURLINGTON	7	4	1.47	98	71	5.21	4	4	5.93
CAMDEN	1	0	0.00	8	7	6.81	8	7	7.58
CAPE MAY	3	0	0.00	11	7	5.50	1	1	6.01
CUMBERLAND	5	5	0.99	12	9	8.66	3	3	6.02
ESSEX	9	3	0.74	4	1	3.92	8	7	8.46
GLOUCESTER	3	0	0.00	4	1	9.85	2	2	5.13
HUDSON	4	3	2.82	15	7	3.68	6	6	6.61
HUNTERDON	4	4	1.10	11	10	4.25	1	1	6.31
MERCER	1	1	0.00	30	25	4.01	5	4	9.43
MIDDLESEX	13	5	1.01	21	18	4.53	6	6	5.96
MONMOUTH	6	1	3.96	64	62	5.30	5	5	7.55
MORRIS	3	1	0.00	10	6	4.93	4	4	3.87
OCEAN	9	5	0.41	6	5	6.33	4	4	7.50
PASSAIC	10	3	0.44	27	13	5.24	3	3	8.52
SALEM	0	0	0.00	4	4	7.93	1	1	5.01
SOMERSET	5	1	0.84	23	16	3.69	1	1	8.14
SUSSEX	3	2	0.38	4	3	3.93	2	1	0.68
UNION	2	0	0.00	50	30	4.25	5	5	5.46
WARREN	6	0	0.00	18	12	5.19	2	2	8.91
<b>NW Region</b>	<b>22</b>	<b>6</b>	<b>0.38</b>	<b>59</b>	<b>34</b>	<b>5.06</b>	<b>11</b>	<b>10</b>	<b>6.21</b>
<b>NE Region</b>	<b>23</b>	<b>8</b>	<b>1.36</b>	<b>49</b>	<b>23</b>	<b>4.49</b>	<b>20</b>	<b>19</b>	<b>7.24</b>
<b>CW Region</b>	<b>10</b>	<b>6</b>	<b>0.88</b>	<b>64</b>	<b>51</b>	<b>3.94</b>	<b>7</b>	<b>6</b>	<b>8.78</b>
<b>CE Region</b>	<b>30</b>	<b>11</b>	<b>0.92</b>	<b>141</b>	<b>115</b>	<b>4.93</b>	<b>20</b>	<b>20</b>	<b>6.58</b>
<b>South Region</b>	<b>21</b>	<b>9</b>	<b>1.12</b>	<b>172</b>	<b>110</b>	<b>5.84</b>	<b>23</b>	<b>22</b>	<b>6.26</b>
<b>State Total</b>	<b>106</b>	<b>40</b>	<b>0.97</b>	<b>485</b>	<b>333</b>	<b>5.04</b>	<b>81</b>	<b>77</b>	<b>6.79</b>

**SURVEILLANCE DATE: 01/23/2018**



County	RSV Tests		Rapid Flu Tests	
	# Positive	Total Tests Performed	# Positive	Total Tests Performed
January 23, 2018 MMWR WEEK 4				
ATLANTIC	1	34	83	401
BERGEN	30	184	214	728
BURLINGTON	0	0	9	55
CAMDEN	1	16	75	389
CAPE MAY	3	16	19	122
CUMBERLAND	4	16	41	237
ESSEX	35	292	168	1145
GLOUCESTER	1	4	33	230
HUDSON	0	7	17	61
HUNTERDON	17	128	34	128
MERCER	6	53	177	490
MIDDLESEX	5	117	5	21
MONMOUTH	29	265	338	1390
MORRIS	27	249	57	259
OCEAN	7	24	138	622
PASSAIC	14	48	107	384
SALEM	0	0	0	0
SOMERSET	0	0	0	0
SUSSEX	13	203	67	203
UNION	19	287	3	75
WARREN	1	36	11	36
<b>NW Region</b>	55	536	242	882
<b>NE Region</b>	65	483	399	1934
<b>CW Region</b>	23	181	211	618
<b>CE Region</b>	60	693	484	2108
<b>South Region</b>	10	86	260	1434
<b>State Total</b>	213	1979	1596	6976