

Respiratory Virus Surveillance Report¹

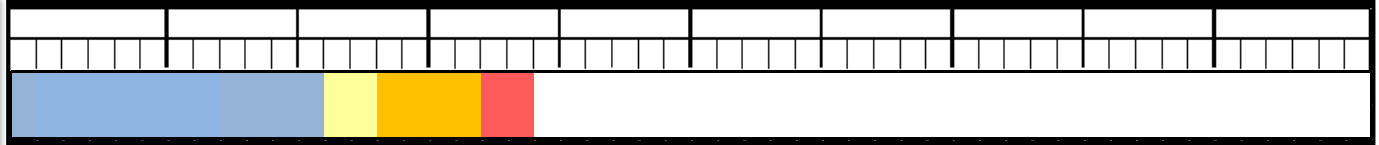
New Jersey Department of Health

Communicable Disease Service

Week ending January 13, 2018 (MMWR week 2²)

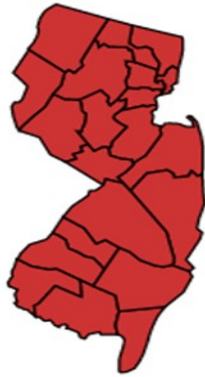


Week 40 Week 45 Week 50 Week 3 Week 8 Week 13 Week 18 Week 23 Week 28



■ No Activity
 ■ Sporadic
 ■ Local
 ■ Regional
 ■ Widespread

Influenza Activity Level³



New Jersey Activity Level: HIGH

Current week last year: **HIGH**

Regional⁴ Data

Northwest: HIGH

Northeast: HIGH

Central West: HIGH

Central East: HIGH

South: HIGH

ILI⁵ Activity

	Percent ILI/Absenteeism ⁵			Baselines
	Current Week (range by county)	Last week Current year	Current week Last year	Non-season ⁶ (Seasonal Average– low, high) ⁷
Long Term Care Facilities	1.01 (0.00, 14.49)	0.33	0.63	0.48 (0.45, 0.76)
Schools (absenteeism)	5.33 (2.59, 19.03)	6.51	5.53	3.36 (4.49, 4.86)
Emergency Departments	5.11 (0.15, 7.89)	4.80	4.75	2.21 (3.17, 3.92)

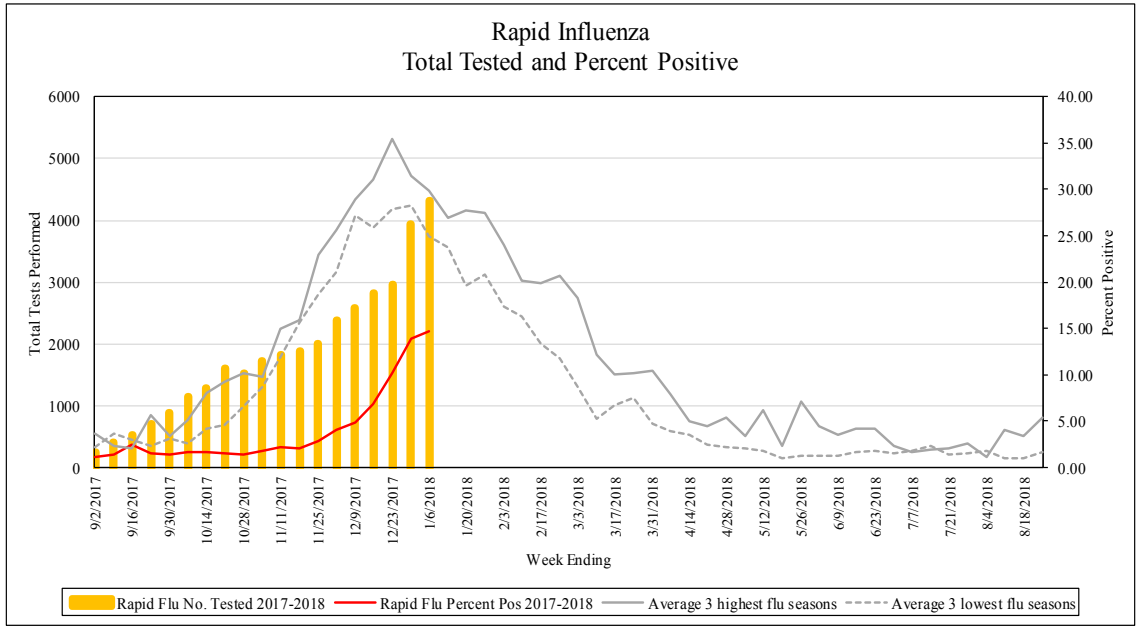
Laboratory
Testing⁸

	Current Week	Past 3 Weeks	Cumulative Total
Influenza A H1N1 (2009)	6	27	34
Influenza A H3N2	59	142	220
Influenza B	105	267	401
Rapid Influenza Tests	638	1492	2159

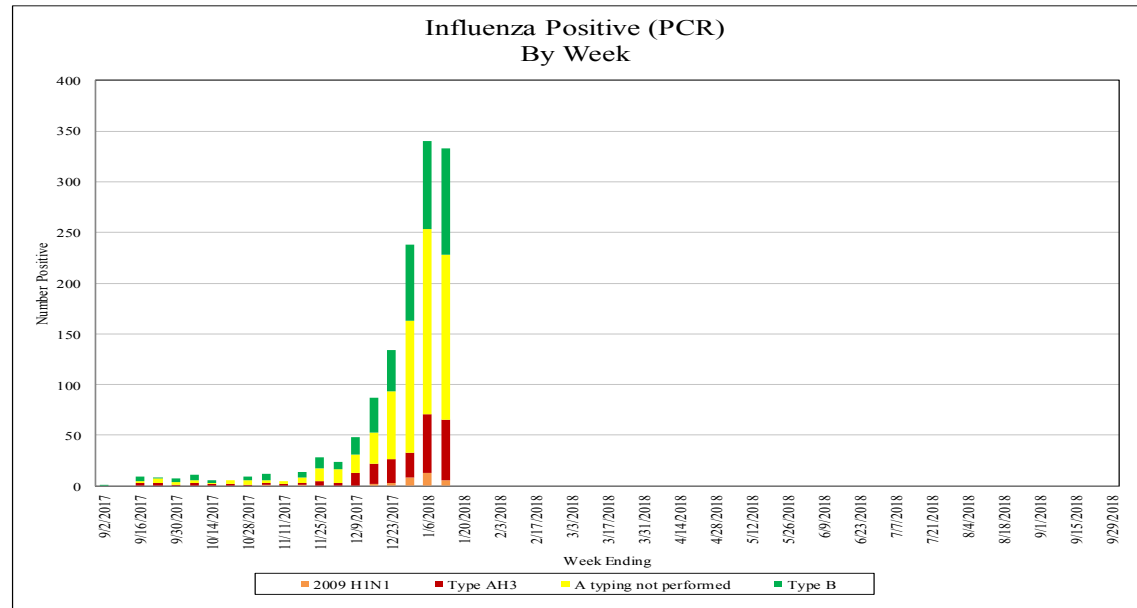
Report also available at <http://nj.gov/health/cd/statistics/flu-stats/>

Virologic Surveillance⁸

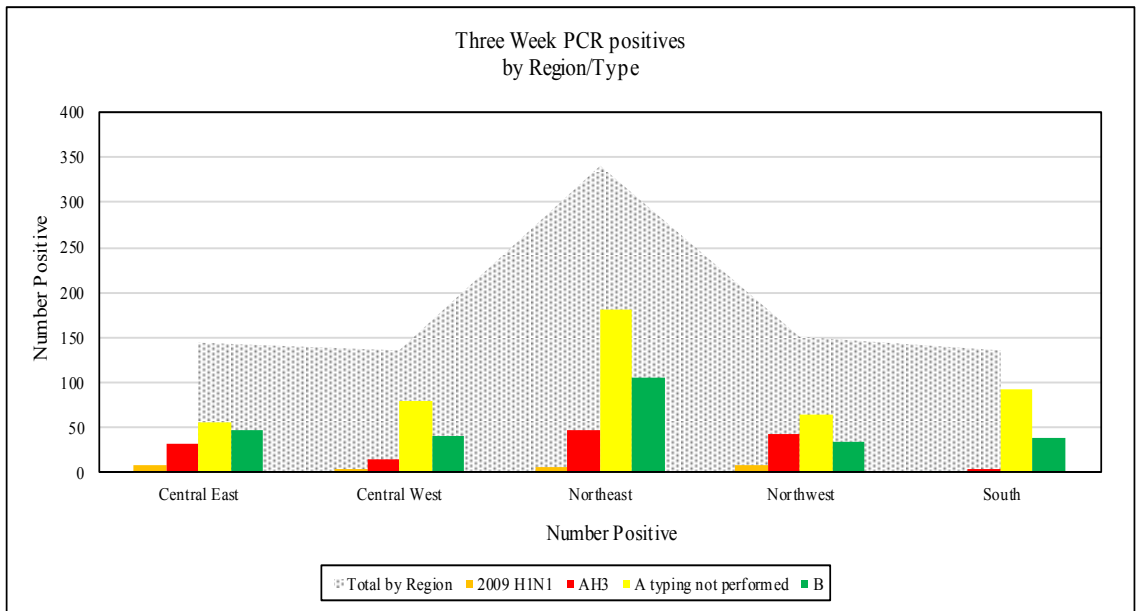
Influenza Rapid Antigen Result by Week



Influenza Positive Specimens (PCR)

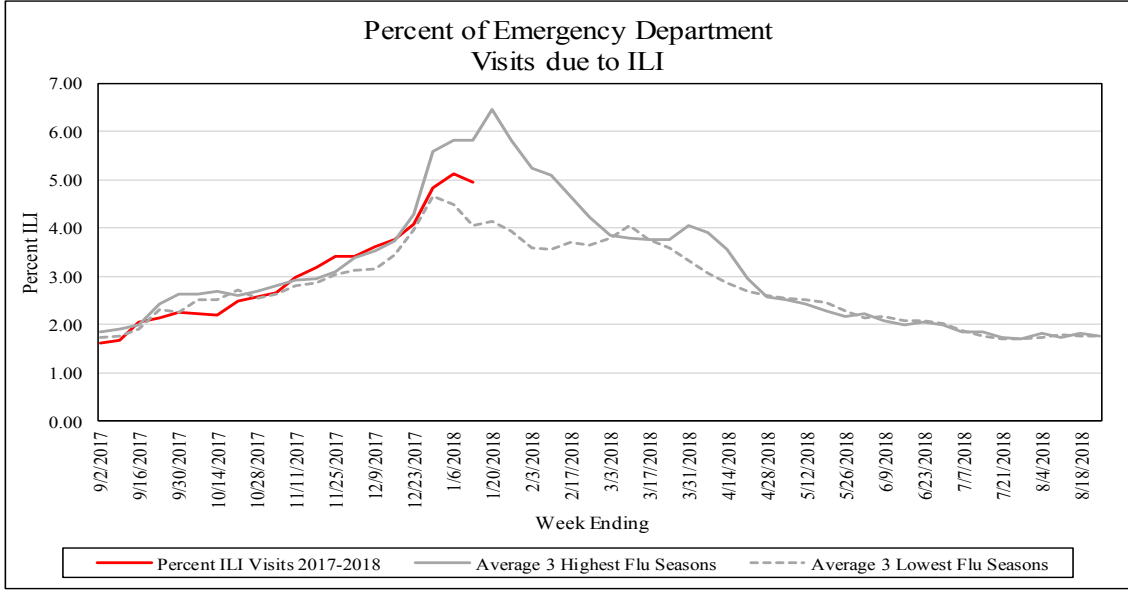


Influenza Positive Specimens (PCR) by Region⁴/Type

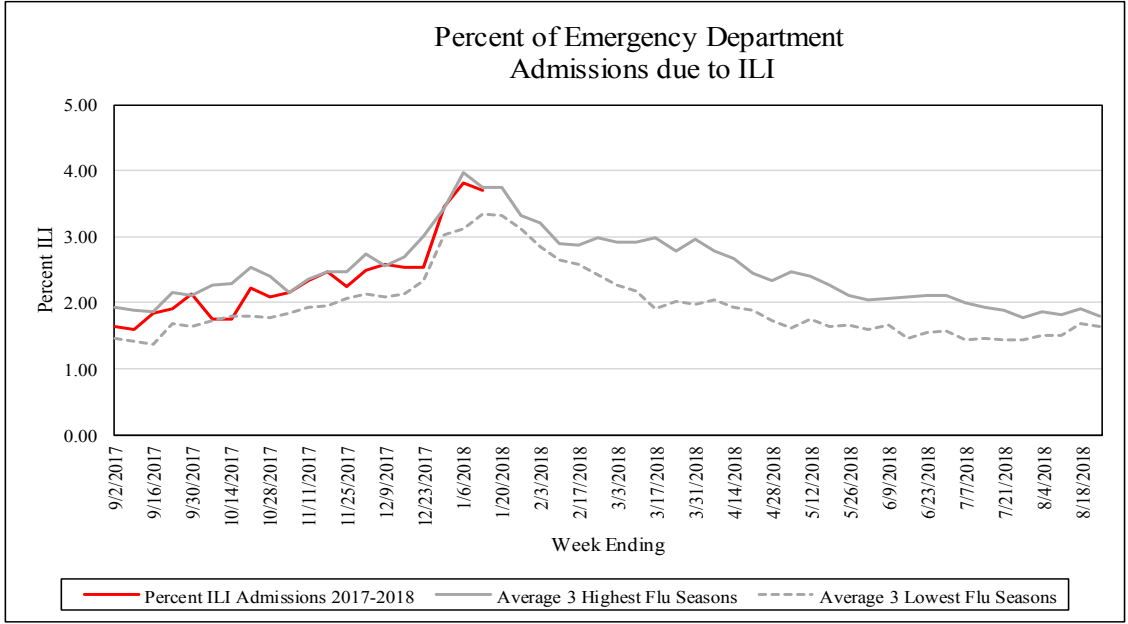


Influenza-Like Illness (ILI) Surveillance

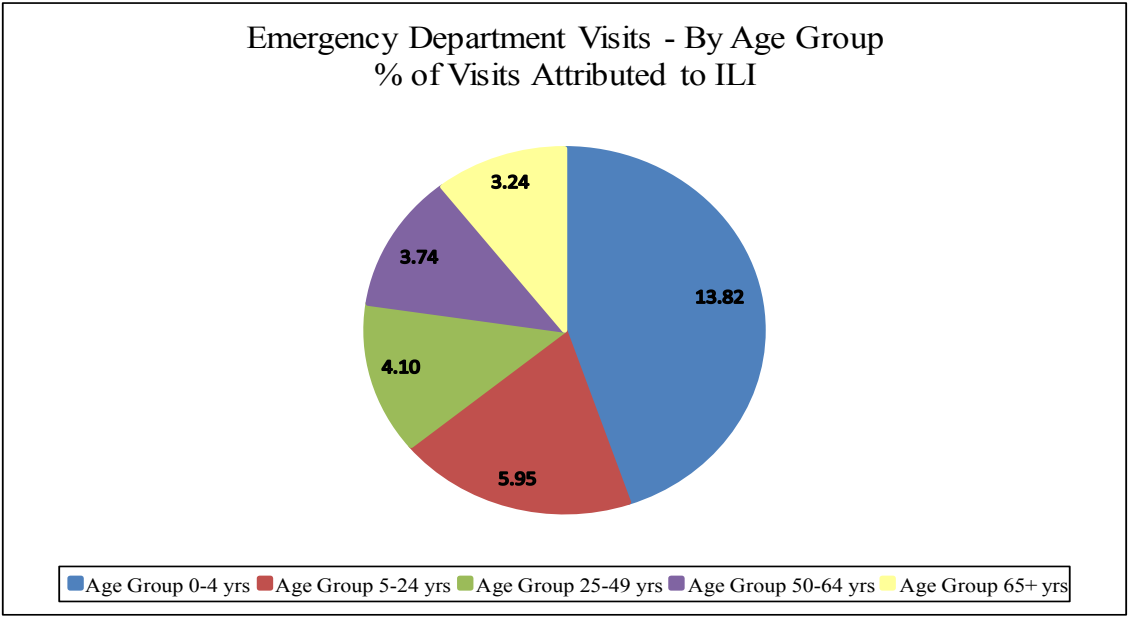
**Emergency Department⁹ Visits
Percent due to ILI**



**Emergency Department⁹
Percent of Admissions due to ILI**

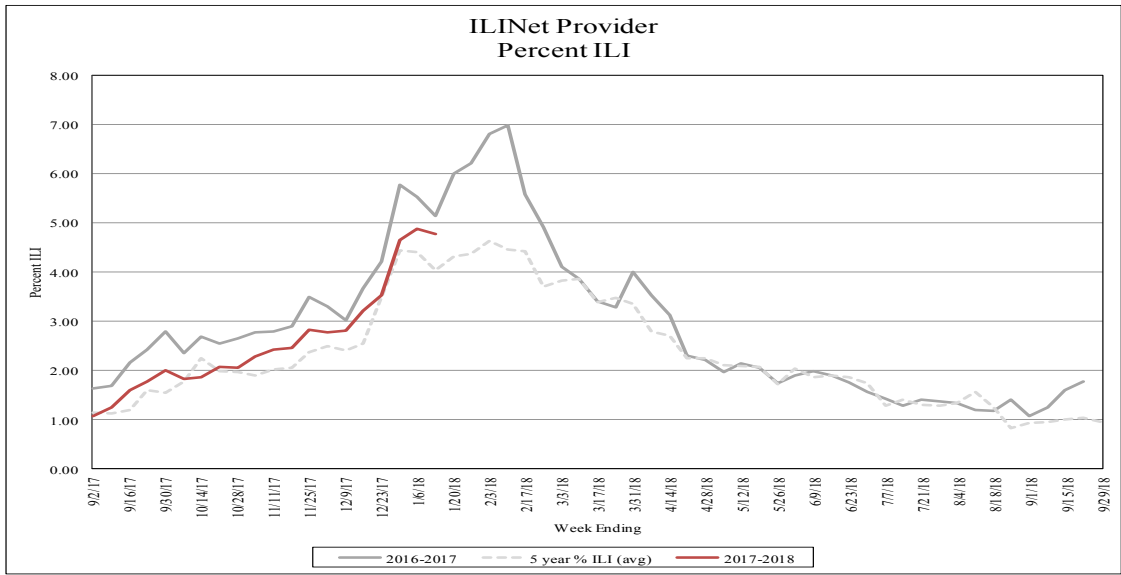


**Emergency Department⁹ Visits
Percent of ILI By Age Group**

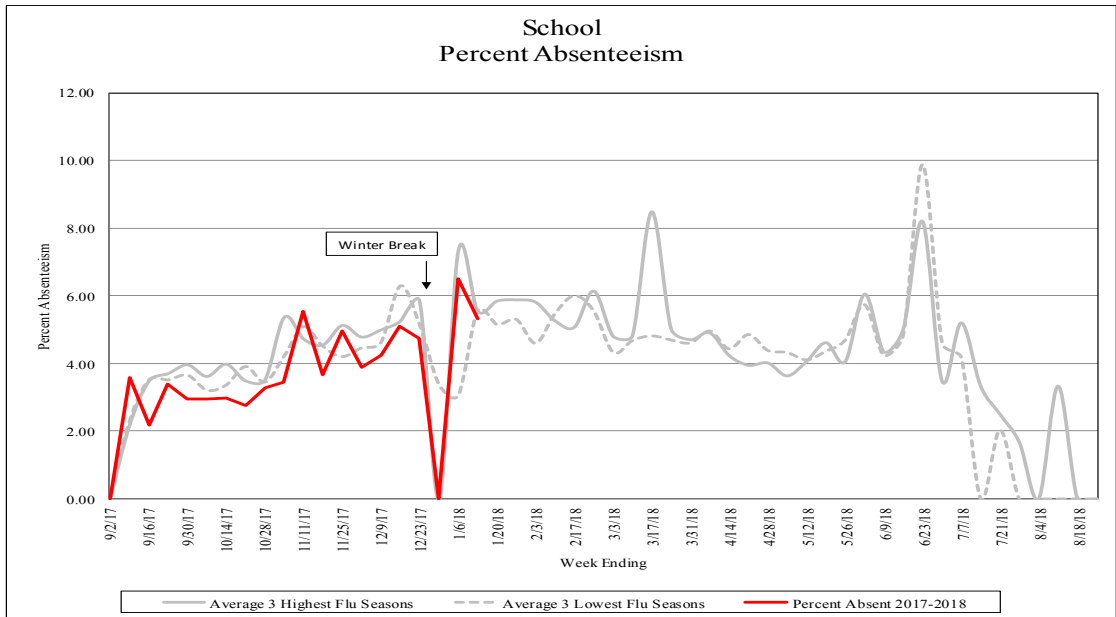


Influenza-Like Illness (ILI) Surveillance

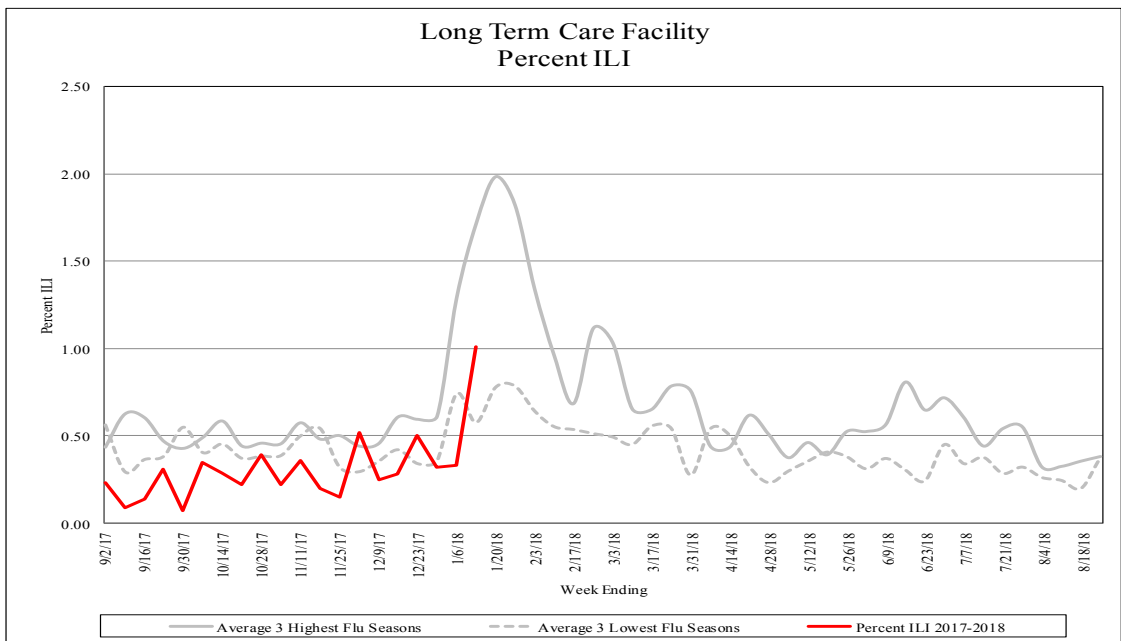
ILI Net Providers



School Absenteeism



Long Term Care Facilities



Influenza-Like Illness (ILI) Surveillance

Long Term Care Outbreaks

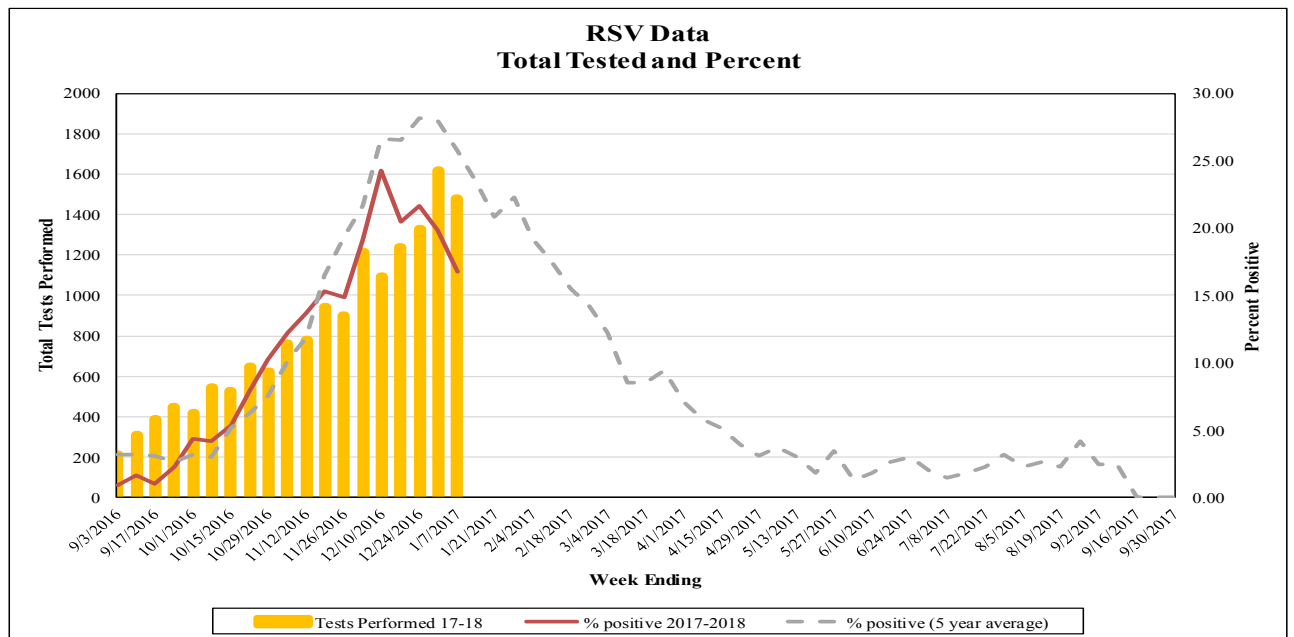
Respiratory Outbreaks in Long Term Care Facilities ¹⁰	
Cumulative Outbreaks 2017-2018 Season	29
No. outbreaks last 3 weeks	15
Regions with recent outbreaks	NW, NE, CW, CE, S

Pediatric Influenza Mortality¹¹

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	20	16	1

Viral Respiratory Surveillance Non-Influenza

Respiratory Syncytial Virus Percent Positive



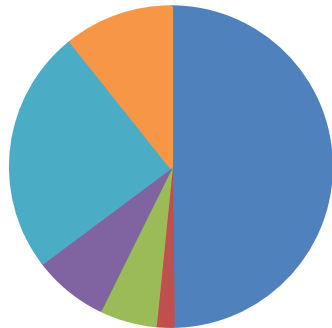
Viral Respiratory Surveillance Non-Influenza

Positive Non-Influenza Tests ¹²

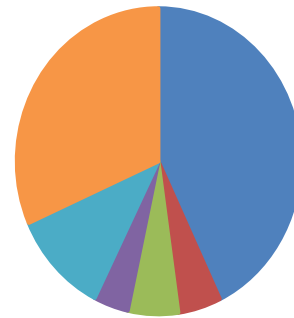
Total Tests Positive for a Respiratory Virus Other than Influenza

	Respiratory Syncytial Virus	Parainfluenza	Adenovirus	Human Metapneumovirus	Corona Viruses	Rhinovirus
Past Three Weeks	140	5	16	21	69	30
17-18 Season	456	52	61	42	117	336

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
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°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°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.

Table 1				
Influenza Activity Level—Definitions for State Activity				
<u>NJ Level</u>	<u>CSTE Level</u>	<u>Definition</u>		
		<u>ILI Activity/Outbreaks</u>		<u>Lab Activity</u>
Low	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
Moderate	Local	Increase in ILI activity OR ≥ 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 ≥ 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
High	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

Table 2			
Influenza Activity Level—Definitions for Public Health Regions			
<u>NJ Level</u>	<u>Definition</u>		
	<u>ILI Activity/Outbreaks</u>		<u>Lab Activity</u>
Low	Low ILI activity detected OR one lab confirmed outbreak anywhere in the region	AND	Sporadic isolation of laboratory confirmed influenza anywhere in the region
Moderate	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
High	Increased ILI activity in more than half of the counties in the region OR ≥ 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	142	0	0	26	168
	BERGEN	262	4	44	137	447
	BURLINGTON	81	0	1	56	138
	CAMDEN	179	0	5	95	279
	CAPE MAY	48	0	0	5	53
	CUMBERLAND	5	0	0	3	8
	ESSEX	107	4	20	64	195
	GLOUCESTER	61	0	4	9	74
	HUDSON	134	2	17	41	194
	HUNTERDON	58	0	17	21	96
	MERCER	42	1	10	64	117
	MIDDLESEX	80	2	11	46	139
	MONMOUTH	303	0	3	145	451
	MORRIS	74	5	27	46	152
	OCEAN	196	2	2	112	312
	PASSAIC	40	4	9	30	83
	SALEM	3	0	1	0	4
	SOMERSET	45	2	7	16	70
	SUSSEX	11	0	15	16	42
	UNION	38	7	31	34	110
	WARREN	45	1	2	9	57
	Total	1954	34	226	975	3189

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	617	11	47	337		1012
Central West	145	3	34	101		283
Northeast	503	10	81	242		836
Northwest	170	10	53	101		334
South	519	0	11	194		724
Total	1954	34	226	975		3189

*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: 01/09/2018



COUNTY	Long Term Care			Schools			Hospital Emergency Dept		
	# Enrolled	# Reports Rec'd	% ILI	# Enrolled	# Reports Rec'd	% Absent	# Enrolled	# Reports Rec'd	% ILI
January 9, 2018 MMWR WEEK 2									
ATLANTIC	2	0	0.00	34	13	6.62	4	4	3.87
BERGEN	10	5	0.58	30	15	3.10	6	6	4.94
BURLINGTON	7	5	0.27	98	61	6.04	4	4	4.53
CAMDEN	1	0	0.00	8	7	8.81	8	7	6.58
CAPE MAY	3	0	0.00	11	6	5.35	1	1	3.95
CUMBERLAND	5	5	1.23	12	10	17.38	3	3	4.97
ESSEX	9	3	0.00	4	1	2.85	8	7	5.74
GLOUCESTER	3	0	0.00	4	1	9.12	2	2	3.27
HUDSON	4	2	1.20	15	8	3.52	6	6	4.80
HUNTERDON	4	4	2.45	11	10	3.95	1	1	4.51
MERCER	1	0	0.00	30	21	3.52	5	4	7.56
MIDDLESEX	13	4	0.00	21	16	3.47	6	6	4.58
MONMOUTH	6	1	3.92	40	24	4.02	5	5	5.23
MORRIS	3	1	14.49	10	6	2.59	4	4	3.78
OCEAN	9	5	0.70	6	5	10.62	4	4	4.71
PASSAIC	10	1	0.99	27	11	4.53	3	3	6.15
SALEM	0	0	0.00	4	4	19.03	1	1	6.25
SOMERSET	5	1	1.68	23	14	2.62	1	1	6.14
SUSSEX	3	2	0.00	4	2	5.17	2	2	0.15
UNION	2	0	0.00	47	28	3.65	5	5	4.02
WARREN	6	1	0.00	18	12	3.88	2	2	7.89
NW Region	22	5	1.39	59	31	3.96	11	11	4.96
NE Region	23	10	0.69	49	24	3.25	20	19	5.24
CW Region	10	5	2.29	64	45	3.28	7	6	6.91
CE Region	30	10	0.71	114	73	4.12	20	20	4.65
South Region	21	10	0.95	171	102	7.83	23	22	5.04
State Total	106	40	1.01	457	275	5.33	81	78	5.11

SURVEILLANCE DATE: 01/09/2018



County	RSV Tests		Rapid Flu Tests	
	# Positive	Total Tests Performed	# Positive	Total Tests Performed
January 9, 2018 MMWR WEEK 2				
ATLANTIC	8	39	64	371
BERGEN	42	197	106	500
BURLINGTON	13	27	8	46
CAMDEN	6	21	28	291
CAPE MAY	6	24	8	93
CUMBERLAND	2	10	15	132
ESSEX	4	83	15	449
GLOUCESTER	1	5	17	176
HUDSON	1	4	10	42
HUNTERDON	16	126	27	126
MERCER	10	61	87	334
MIDDLESEX	22	129	3	22
MONMOUTH	64	308	127	951
MORRIS	3	46	38	192
OCEAN	3	21	50	422
PASSAIC	0	0	0	0
SALEM	0	0	0	0
SOMERSET	0	0	0	0
SUSSEX	15	116	26	116
UNION	30	238	7	38
WARREN	2	22	2	22
NW Region	20	184	66	330
NE Region	47	284	131	991
CW Region	26	187	114	460
CE Region	119	696	187	1433
South Region	36	126	140	1109
State Total	248	1477	638	4323