



Respiratory Virus Surveillance Report¹

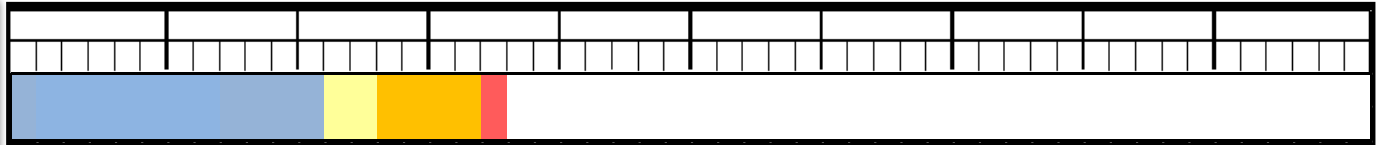
New Jersey Department of Health

Communicable Disease Service

Week ending January 6, 2018 (MMWR week 1²)

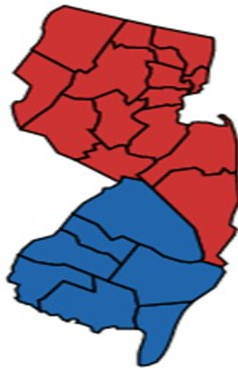


Week 40 Week 45 Week 50 Week 3 Week 8 Week 13 Week 18 Week 23 Week 28



■ 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: MODERATE

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	0.33 (0.00, 1.13)	0.32	1.32	0.48 (0.45, 0.76)
Schools (absenteeism)	6.51 (3.79, 10.98)	CLOSED	6.03	3.36 (4.49, 4.86)
Emergency Departments	4.80 (0.30, 6.87)	4.02	5.11	2.21 (3.17, 3.92)

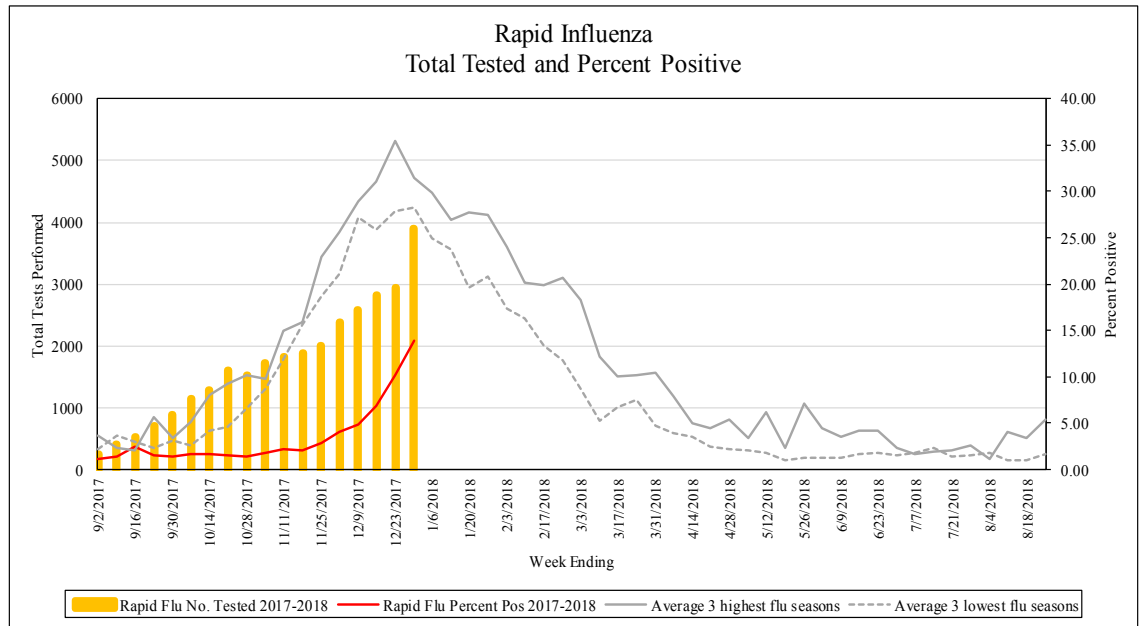
Laboratory Testing⁸

	Current Week	Past 3 Weeks	Cumulative Total
Influenza A H1N1 (2009)	7	14	17
Influenza A H3N2	20	60	114
Influenza B	65	171	261
Rapid Influenza Tests	543	1037	1512

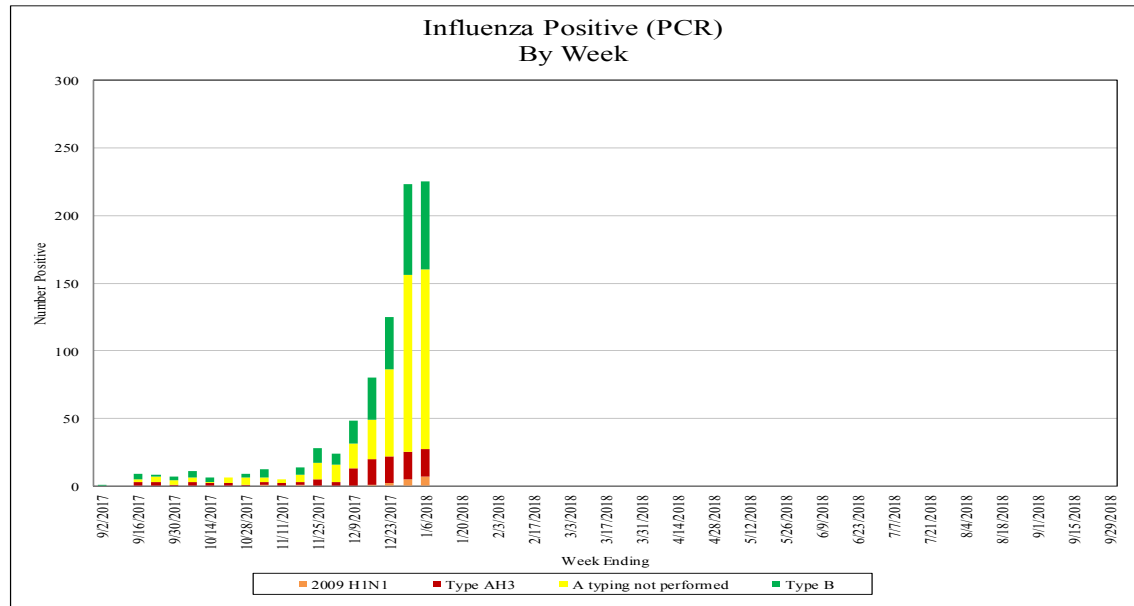
Report also available at <http://nj.gov/health/cd/statistics/flu-stats/>

Virologic Surveillance⁸

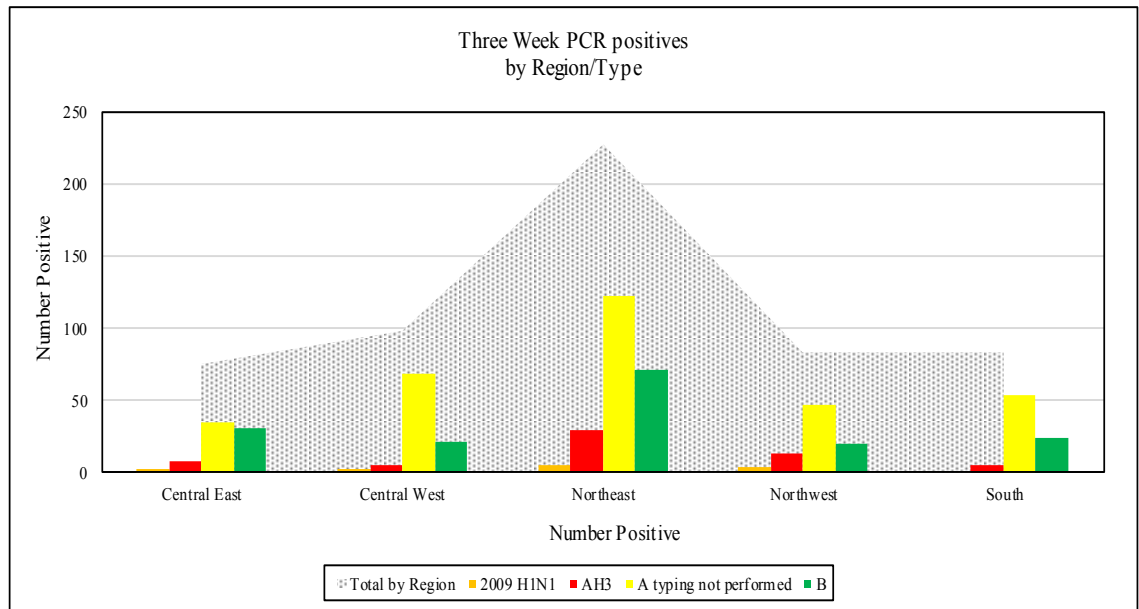
Influenza Rapid Antigen Result by Week



Influenza Positive (PCR) Specimens (PCR)

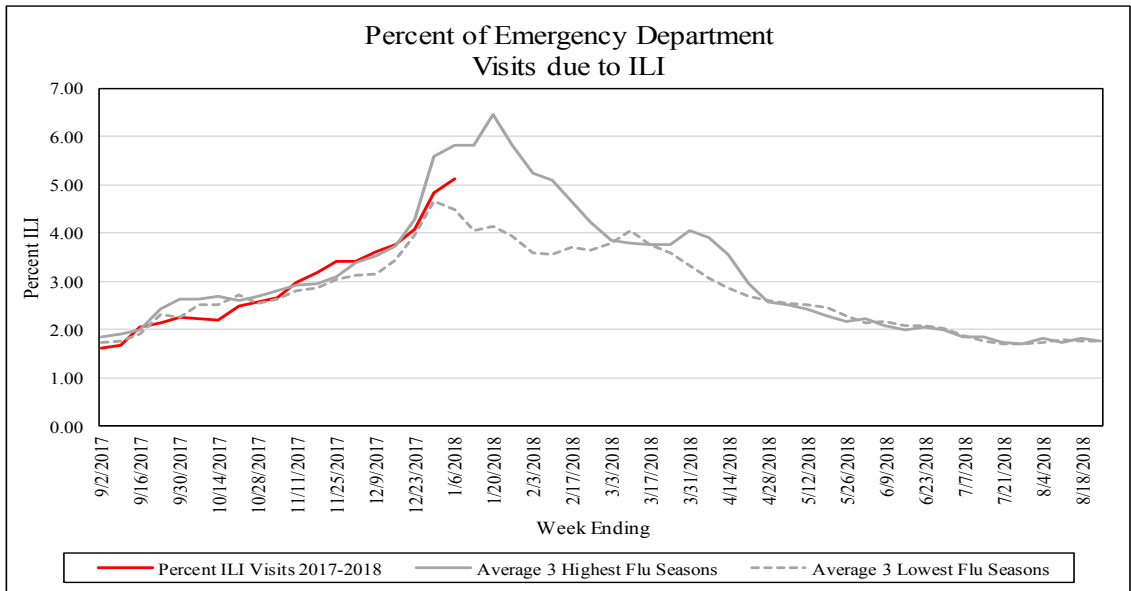


Influenza Positive Specimens (PCR) by Region⁴/Type

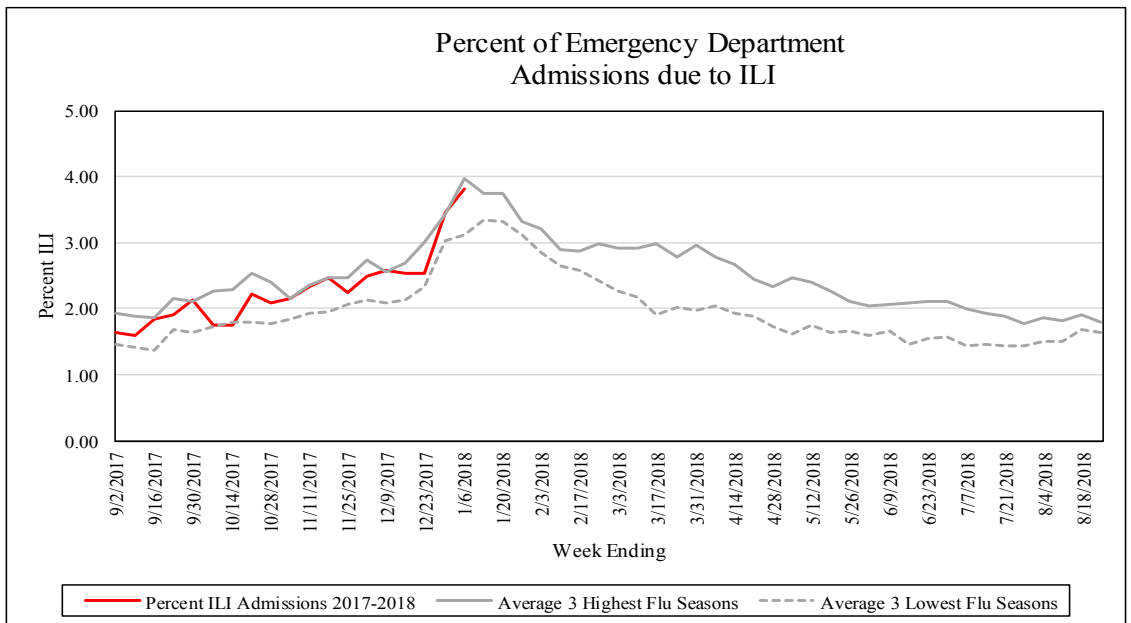


Influenza-Like Illness (ILI) Surveillance

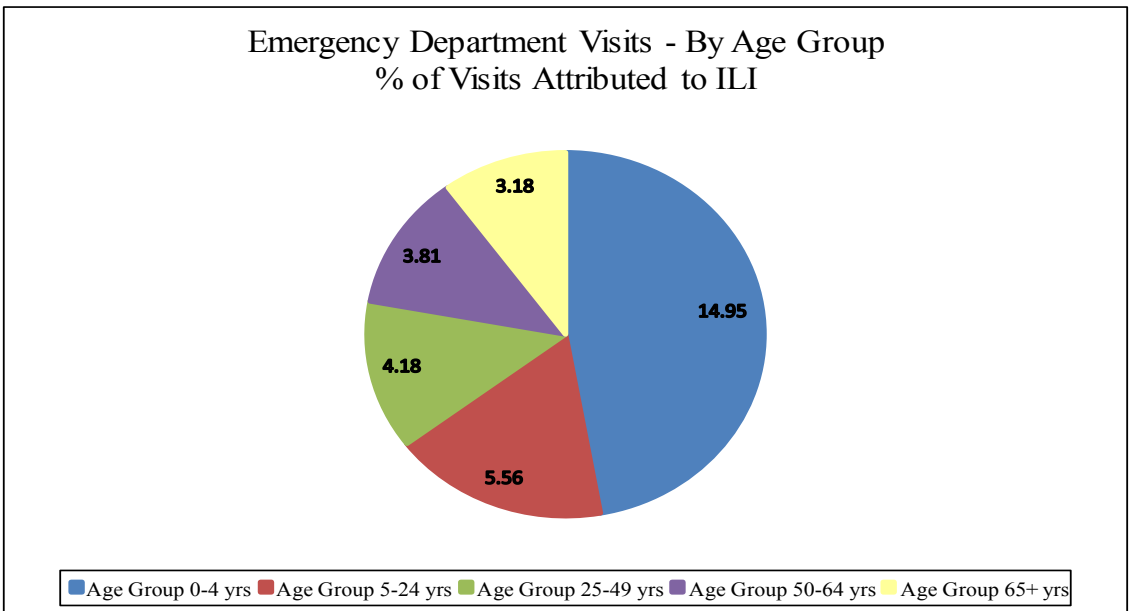
Emergency Department⁹ Visits
Percent due to ILI



Emergency Department⁹
Percent of Admissions due to ILI

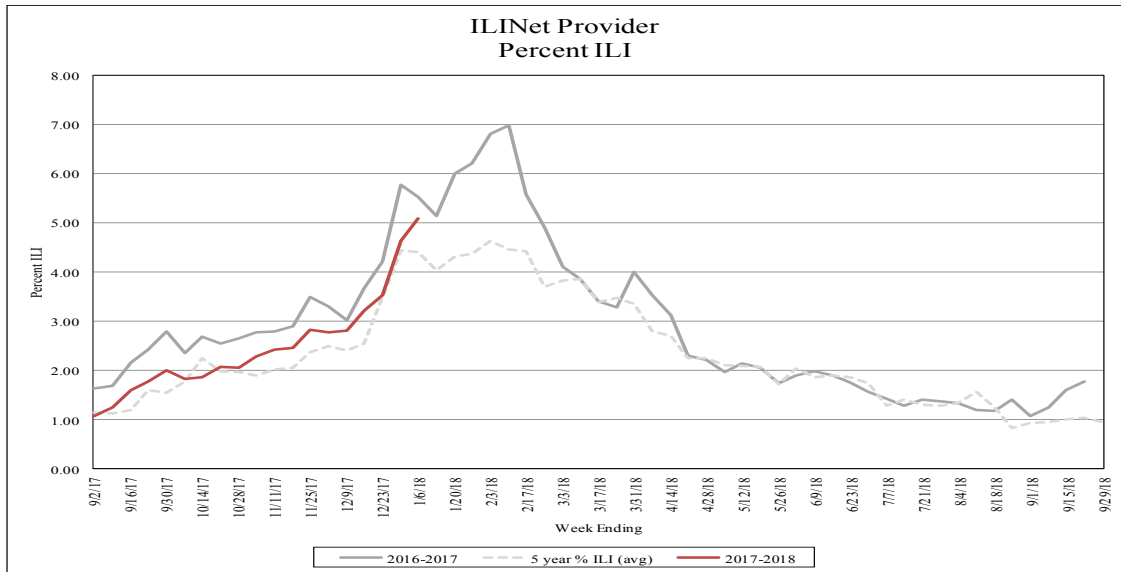


Emergency Department⁹ Visits
Percent of ILI By Age Group

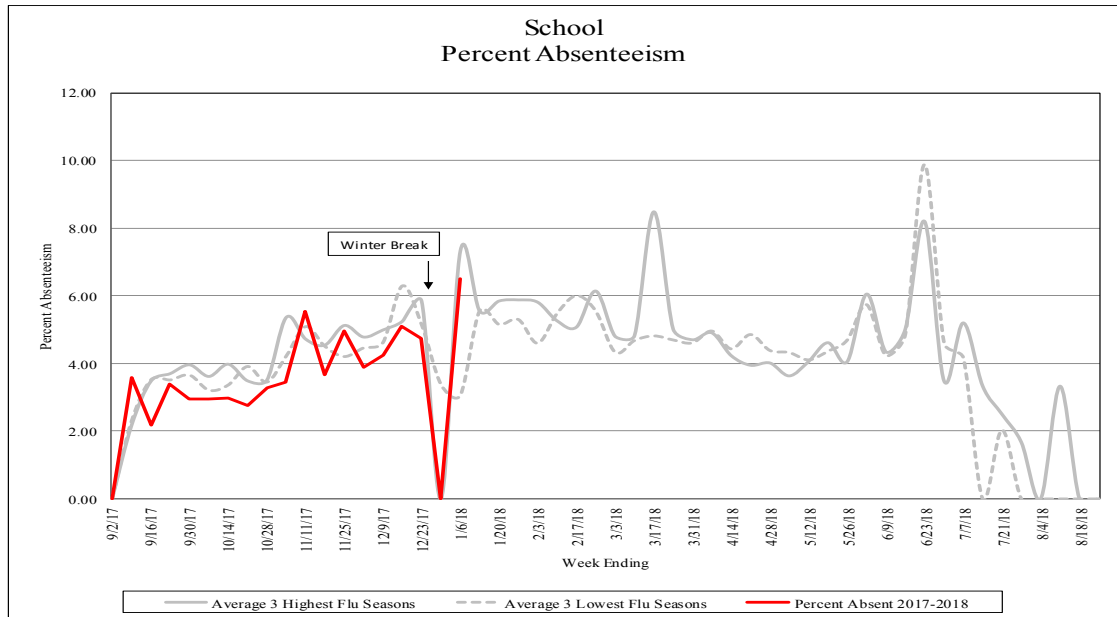


Influenza-Like Illness (ILI) Surveillance

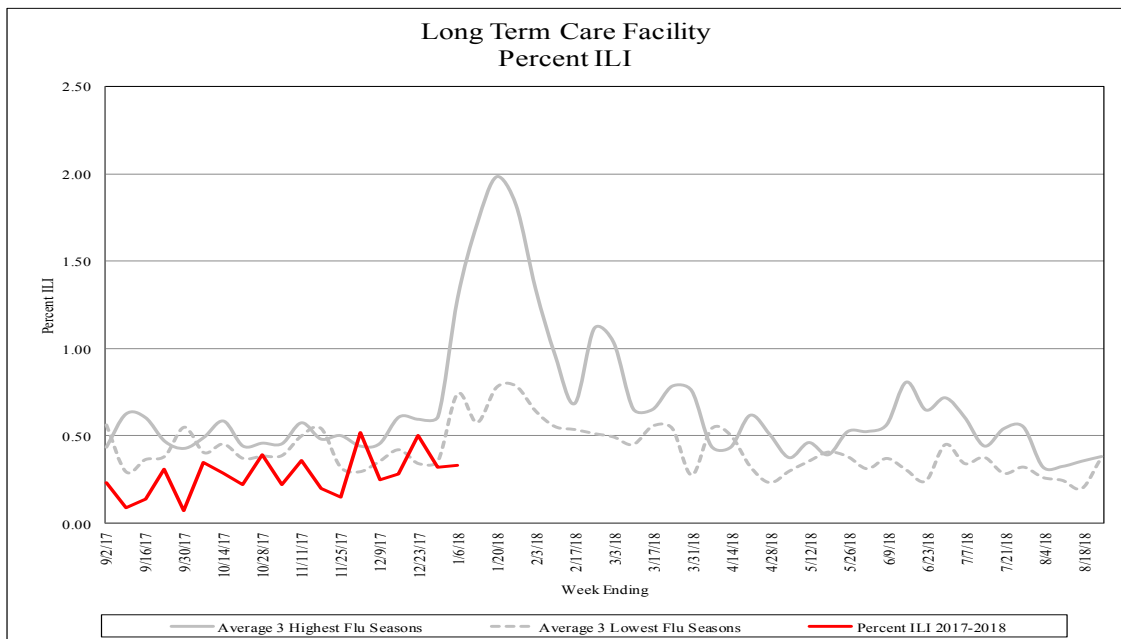
ILI Net Providers⁵



School Absenteeism⁵



Long Term Care Facilities⁵



Influenza-Like Illness (ILI) Surveillance

Long Term Care Outbreaks

Respiratory Outbreaks in Long Term Care Facilities¹⁰

Cumulative Outbreaks 2017-2018 Season

16

No. outbreaks last 3 weeks

9

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

13

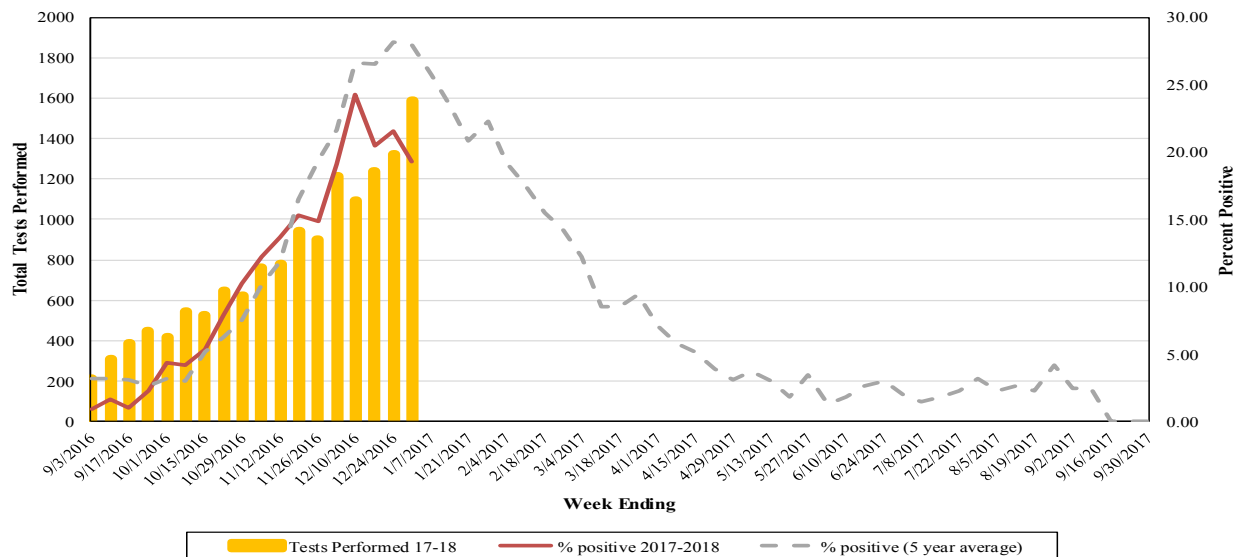
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Viral Respiratory Surveillance Non-Influenza

Respiratory Syncytial Virus Percent Positive

**RSV Data
Total Tested and Percent**



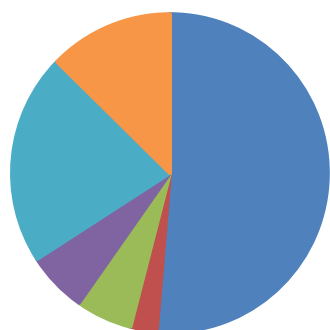
Viral Respiratory Surveillance Non-Influenza

Positive Non-Influenza Tests ¹²

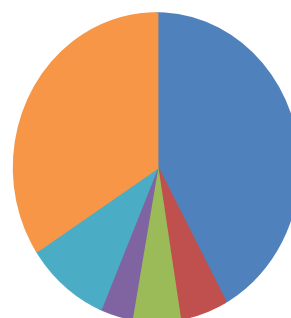
Total Tests Positive for a Respiratory Virus Other than Influenza

	Respiratory Syncytial Virus	Parainfluenza	Adenovirus	Human Metapneumovirus	Corona Viruses	Rhinovirus
Past Three Weeks	134	7	15	16	56	33
17-18 Season	396	51	51	34	89	321

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
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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
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				
		Influenza A - Typing not performed	Influenza A 2009 H1N1	Influenza AH3	Influenza B	Total
	ATLANTIC	77	0	0	16	93
	BERGEN	177	3	33	96	309
	BURLINGTON	51	0	0	43	94
	CAMDEN	104	0	4	58	166
	CAPE MAY	39	0	0	3	42
	CUMBERLAND	4	0	0	2	6
	ESSEX	59	1	11	38	109
	GLOUCESTER	41	0	4	3	48
	HUDSON	55	1	8	16	80
	HUNTERDON	46	0	11	11	68
	MERCER	29	1	7	53	90
	MIDDLESEX	56	1	6	30	93
	MONMOUTH	194	0	3	102	299
	MORRIS	51	2	11	33	97
	OCEAN	135	1	0	78	214
	PASSAIC	24	3	5	16	48
	SALEM	1	0	0	0	1
	SOMERSET	30	2	6	9	47
	SUSSEX	11	0	4	9	24
	UNION	24	2	8	19	53
	WARREN	34	0	0	8	42
	Total	1242	17	121	643	2023

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	409	4	17	229	659
	Central West	105	3	24	73	205
	Northeast	291	5	52	150	498
	Northwest	120	5	20	66	211
South	317	0	8	125	450	
Total	1242	17	121	643	2023	

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: 01/02/2018

COUNTY	Long Term Care			Schools			Hospital Emergency Dept		
	# Enrolled	# Reports Rec'd	% ILI	# Enrolled	# Reports Rec'd	% Absent	# Enrolled	# Reports Rec'd	% ILI
January 2, 2018 MMWR WEEK 1									
ATLANTIC	2	0	0.00	34	13	8.24	4	4	2.66
BERGEN	10	3	0.45	30	9	7.71	6	6	4.46
BURLINGTON	7	3	0.00	98	56	6.21	4	4	5.07
CAMDEN	1	0	0.00	8	0	0.00	8	7	5.40
CAPE MAY	3	0	0.00	11	7	7.14	1	1	3.61
CUMBERLAND	5	3	1.13	12	10	10.98	3	3	4.47
ESSEX	9	2	0.00	4	1	7.24	8	7	5.98
GLOUCESTER	3	0	0.00	4	1	8.46	2	2	3.45
HUDSON	4	1	0.94	15	7	9.69	6	6	4.74
HUNTERDON	4	4	0.68	11	8	4.84	1	1	4.73
MERCER	1	0	0.00	30	23	5.89	5	4	7.40
MIDDLESEX	13	4	0.00	21	16	6.69	6	6	3.87
MONMOUTH	6	1	0.00	24	17	7.73	5	5	5.58
MORRIS	3	1	0.00	10	5	3.79	4	4	2.36
OCEAN	9	3	0.22	6	5	8.07	4	4	4.39
PASSAIC	10	4	0.00	27	9	5.75	3	3	6.47
SALEM	0	0	0.00	4	3	6.20	1	1	4.31
SOMERSET	5	1	0.00	23	16	5.13	1	1	5.11
SUSSEX	3	2	0.19	4	2	7.44	2	2	0.30
UNION	2	0	0.00	47	28	5.43	5	5	3.83
WARREN	6	0	0.00	18	11	4.21	2	2	6.87
NW Region	22	7	0.08	59	27	5.09	11	11	4.45
NE Region	23	6	0.44	49	17	8.74	20	19	5.20
CW Region	10	5	0.53	64	47	5.42	7	6	6.63
CE Region	30	8	0.10	98	66	6.47	20	20	4.42
South Region	21	6	0.84	171	90	7.14	23	22	4.42
State Total	106	32	0.33	441	247	6.51	81	78	4.80

NJ ACTIVE INFLUENZA-LIKE ILLNESS SURVEILLANCE STATISTICS

SURVEILLANCE DATE: 01/02/2018



County	RSV Tests		Rapid Flu Tests		
	# Positive	Total Tests Performed	# Positive	Total Tests Performed	
January 2, 2018 MMWR WEEK 1					
ATLANTIC	10	34	31	229	
BERGEN	45	193	74	405	
BURLINGTON	0	0	3	34	
CAMDEN	2	18	21	268	
CAPE MAY	5	22	12	104	
CUMBERLAND	0	0	0	0	
ESSEX	44	254	55	715	
GLOUCESTER	0	7	13	147	
HUDSON	6	16	2	44	
HUNTERDON	15	137	33	137	
MERCER	17	66	71	327	
MIDDLESEX	17	117	13	27	
MONMOUTH	82	303	96	785	
MORRIS	7	39	29	154	
OCEAN	2	20	56	333	
PASSAIC	0	0	0	0	
SALEM	0	0	0	0	
SOMERSET	0	0	0	0	
SUSSEX	16	129	30	129	
UNION	36	211	0	40	
WARREN	2	20	4	20	
NW Region	25	188	63	303	
NE Region	95	463	131	1164	
CW Region	32	203	104	464	
CE Region	137	651	165	1185	
South Region	17	81	80	782	
State Total	306	1586	543	3898	