



Respiratory Virus Surveillance Report¹

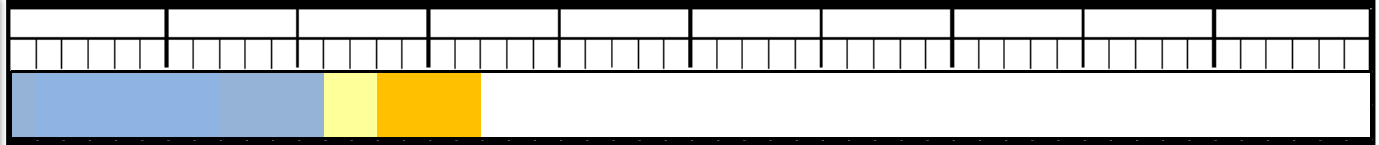
New Jersey Department of Health

Communicable Disease Service

Week ending December 30, 2017 (MMWR week 52²)

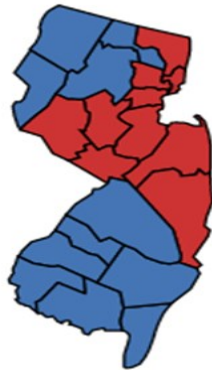


Week 40 Week 45 Week 50 Week 3 Week 8 Week 13 Week 18 Week 23 Week 28



■ No Activity
 ■ Sporadic
 ■ Local
 ■ Regional
 ■ Widespread

Influenza Activity Level³



New Jersey Activity Level: MODERATE

Current week last year: **MODERATE**

Regional⁴ Data

Northwest: MODERATE

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	0.32 (0.00, 1.60)	0.50	0.21	0.48 (0.45, 0.76)
Schools (absenteeism)	CLOSED	4.73	CLOSED	3.36 (4.49, 4.86)
Emergency Departments	4.02 (0.58, 7.17)	3.78	4.75	2.21 (3.17, 3.92)

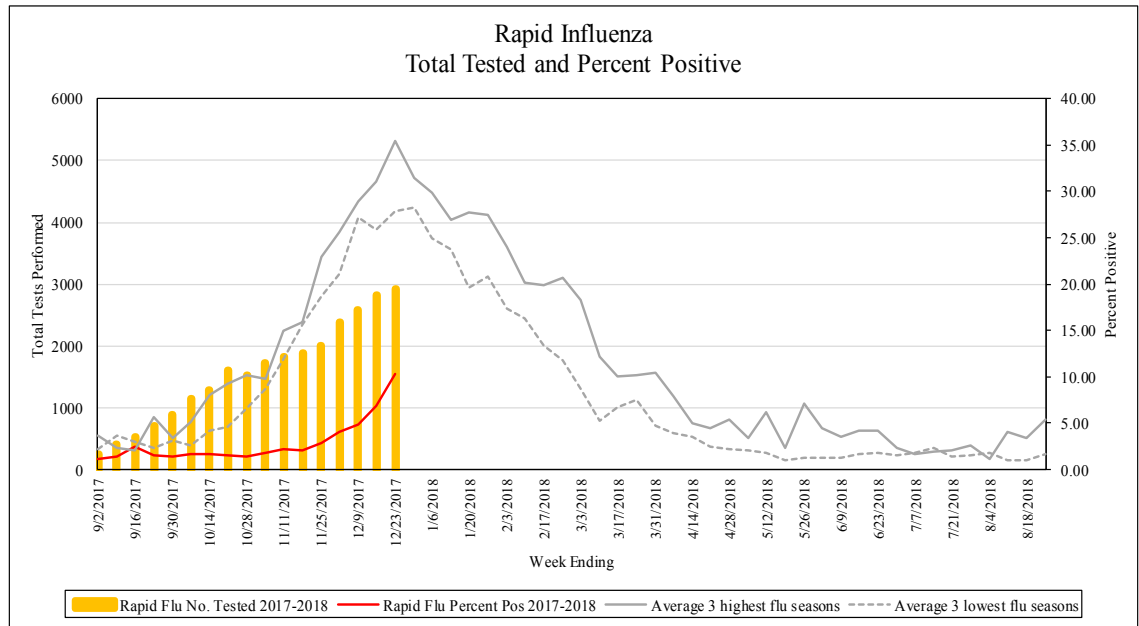
Laboratory Testing⁸

	Current Week	Past 3 Weeks	Cumulative Total
Influenza A H1N1 (2009)	4	7	9
Influenza A H3N2	15	54	89
Influenza B	50	119	178
Rapid Influenza Tests	300	617	967

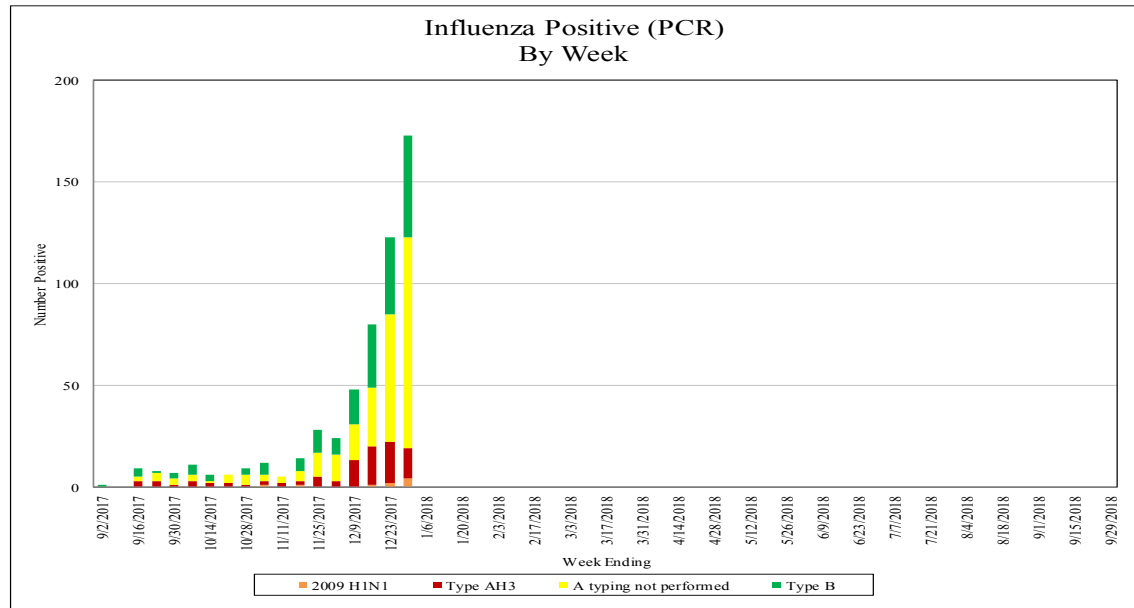
Report also available at <http://nj.gov/health/cd/statistics/flu-stats/>

Virologic Surveillance⁸

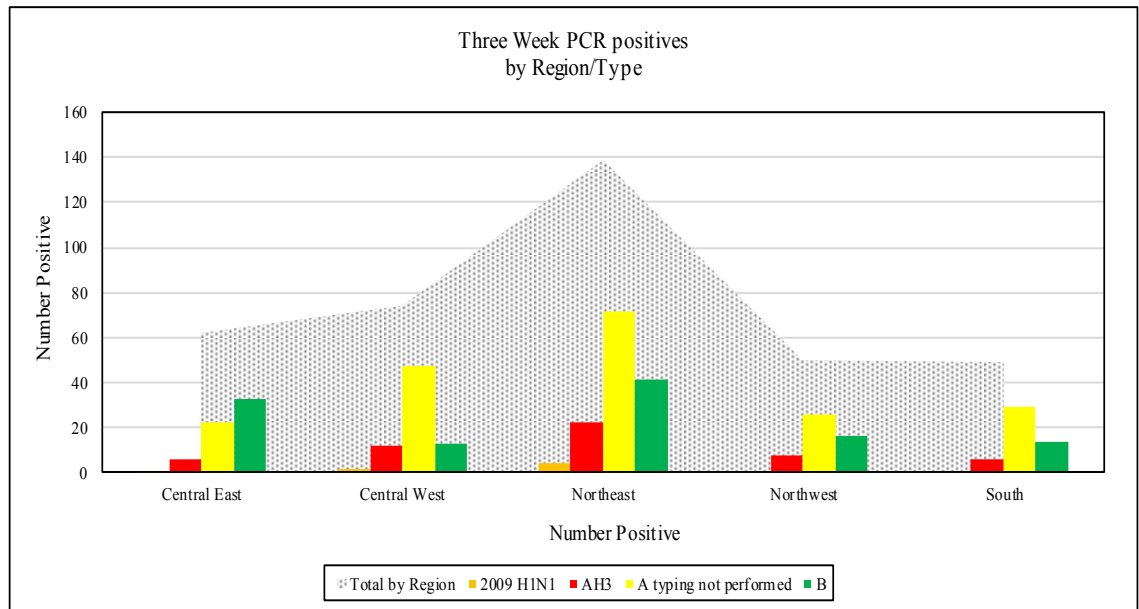
Influenza Rapid Antigen Result by Week



Influenza Positive Specimens (PCR)

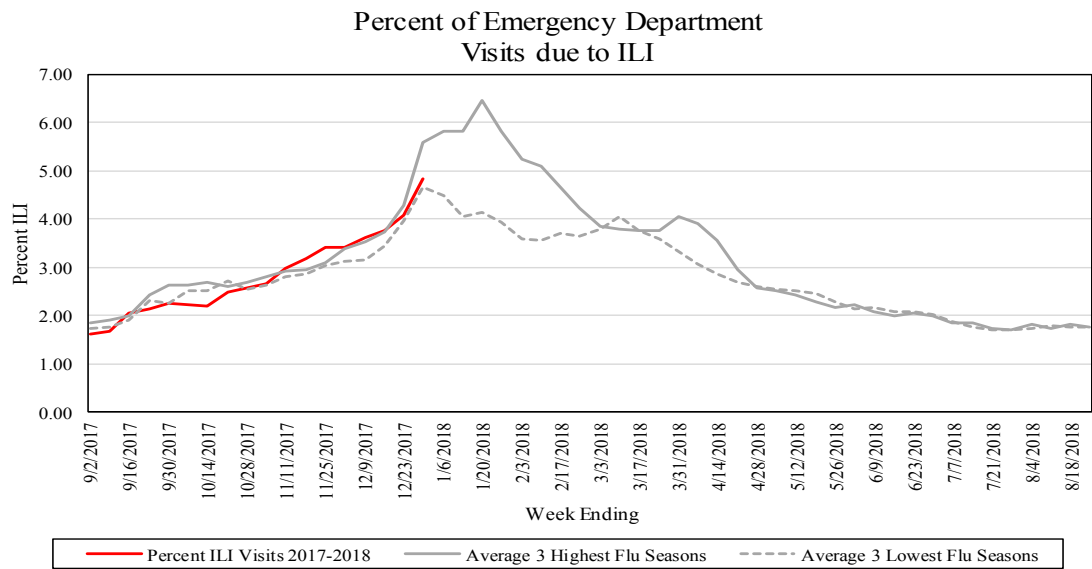


Influenza Positive Specimens (PCR) by Region⁴/Type

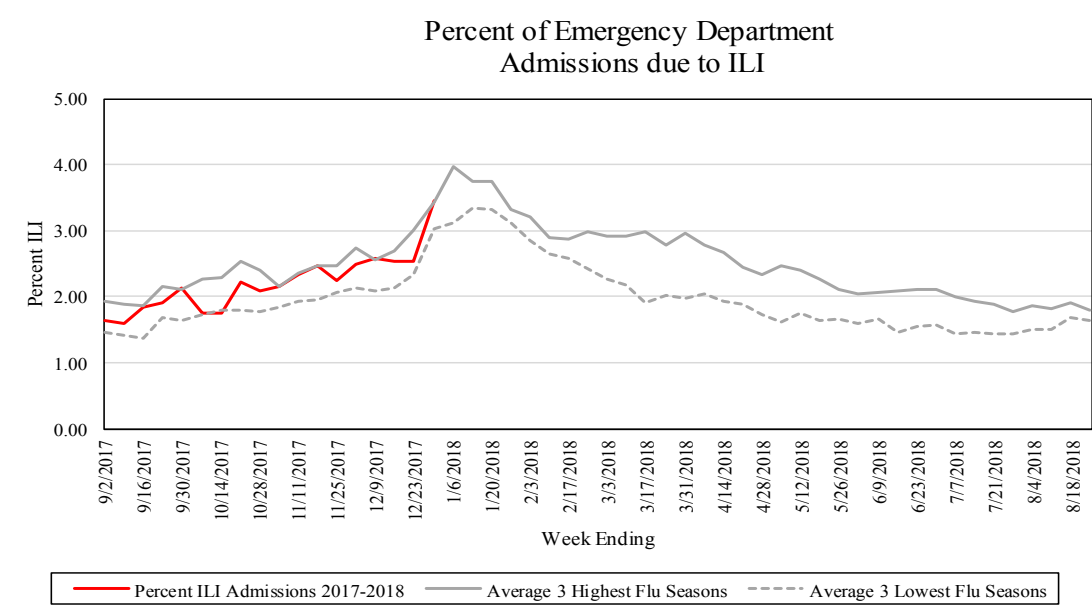


Influenza-Like Illness (ILI) Surveillance

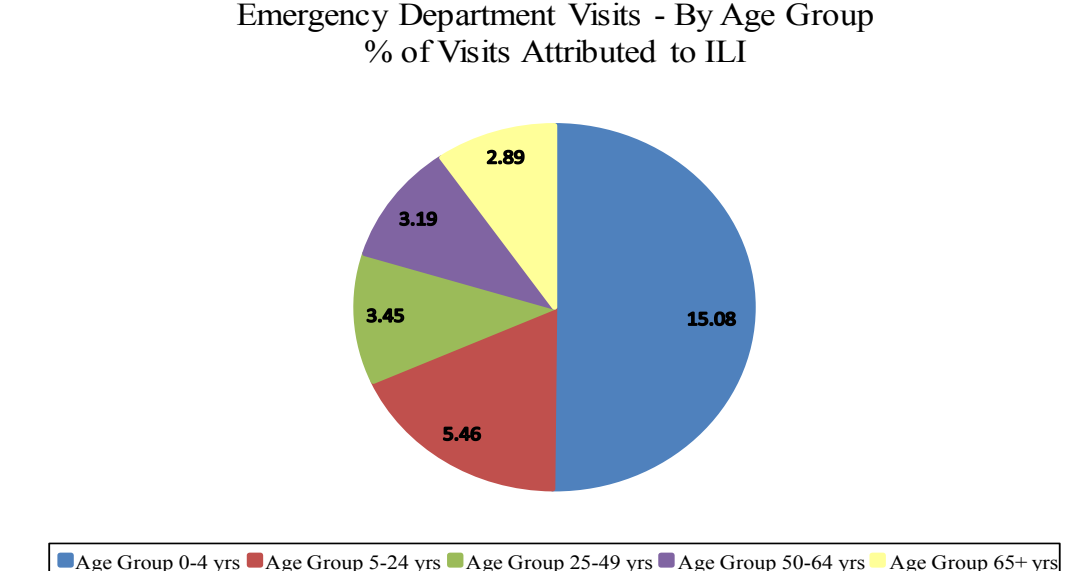
Emergency Department⁹ Visits
Percent due to ILI



Emergency Department⁹
Percent of Admissions due to ILI

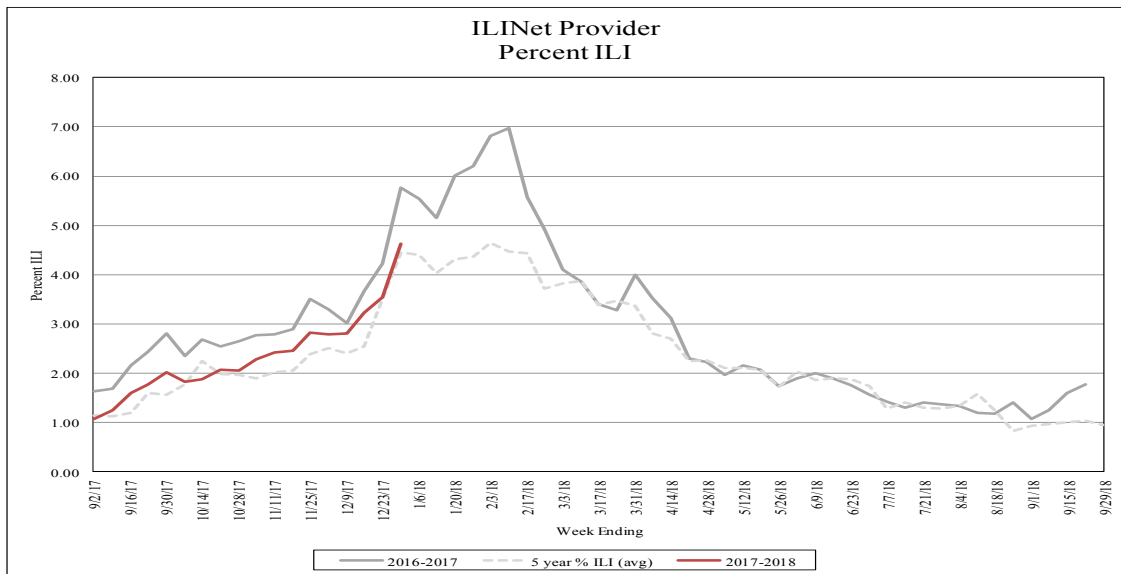


Emergency Department⁹ Visits
Percent of ILI By Age Group

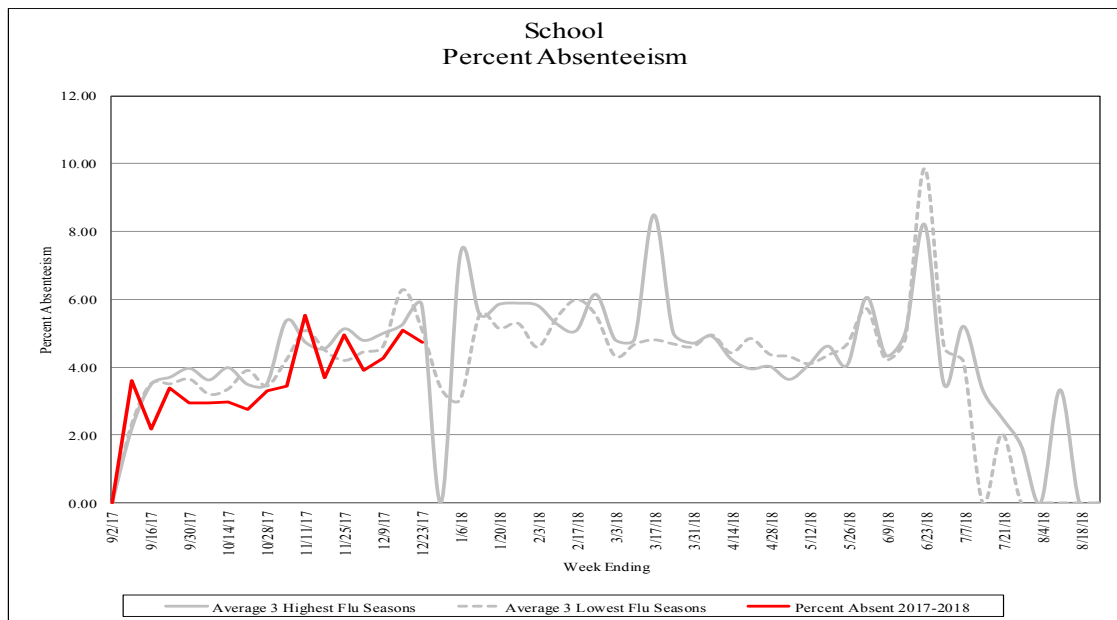


Influenza-Like Illness (ILI) Surveillance

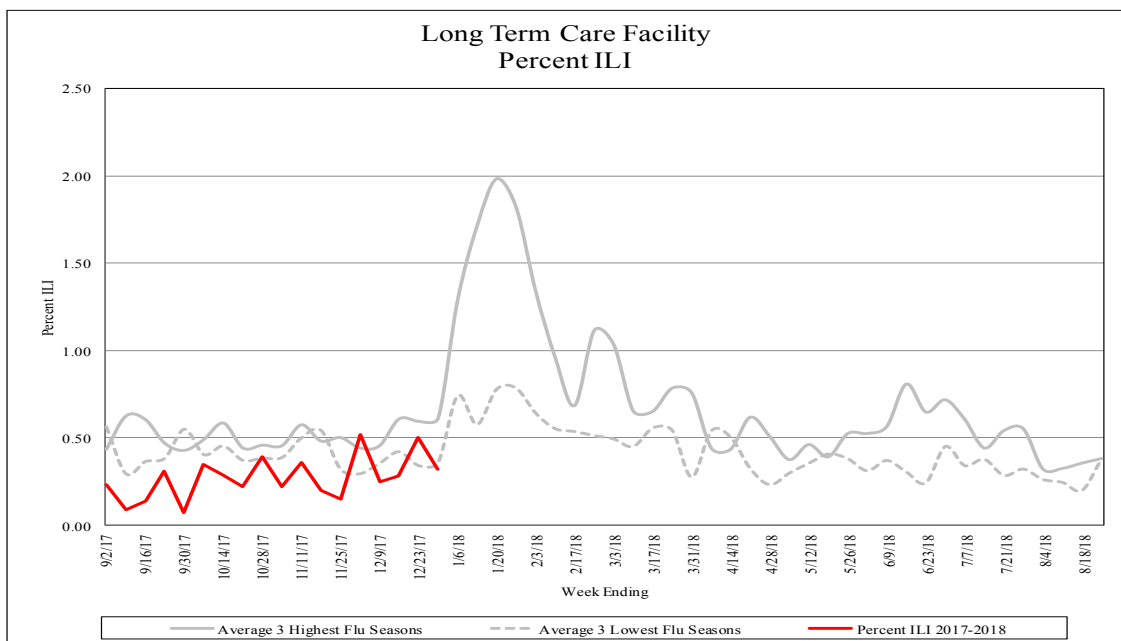
ILI Net Providers⁵



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

13

No. outbreaks last 3 weeks

8

Regions with recent outbreaks

NW, NE, CW, CE

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

12

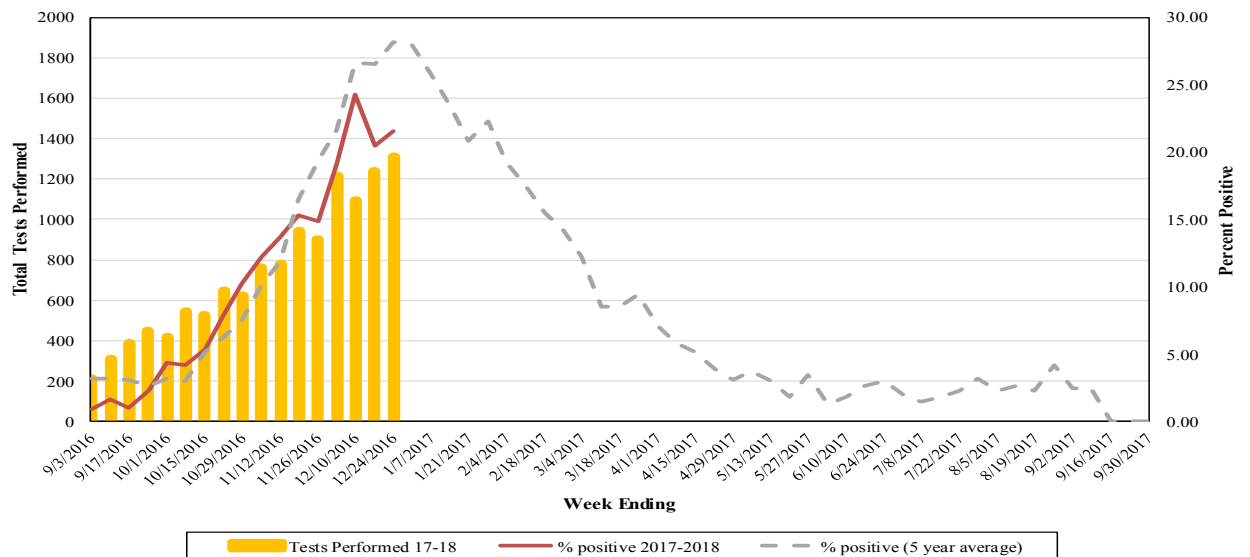
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Viral Respiratory Surveillance Non-Influenza

Respiratory Syncytial Virus Percent Positive

**RSV Data
Total Tested and Percent**



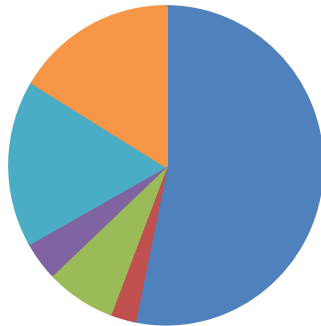
Viral Respiratory Surveillance Non-Influenza

Positive Non-Influenza Tests¹²

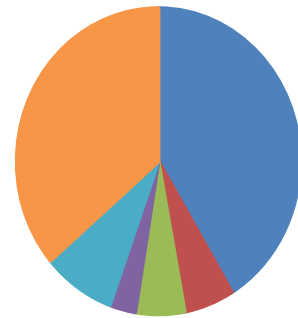
Total Tests Positive for a Respiratory Virus Other than Influenza

	Respiratory Syncytial Virus	Parainfluenza	Adenovirus	Human Metapneumovirus	Corona Viruses	Rhinovirus
Past Three Weeks	164	8	22	12	52	50
17-18 Season	363	50	49	26	72	318

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				
		Influenza A - Typing not performed	Influenza A 2009 H1N1	Influenza AH3	Influenza B	Total
	ATLANTIC	41	0	0	11	52
	BERGEN	109	2	23	61	195
	BURLINGTON	26	0	0	29	55
	CAMDEN	63	0	4	35	102
	CAPE MAY	27	0	0	2	29
	CUMBERLAND	4	0	0	1	5
	ESSEX	37	1	8	30	76
	GLOUCESTER	26	0	4	3	33
	HUDSON	32	1	8	12	53
	HUNTERDON	30	0	11	6	47
	MERCER	17	1	7	42	67
	MIDDLESEX	35	1	5	25	66
	MONMOUTH	126	0	3	72	201
	MORRIS	29	1	6	23	59
	OCEAN	80	1	0	60	141
	PASSAIC	15	0	3	11	29
	SOMERSET	21	1	5	6	33
	SUSSEX	7	0	4	8	19
	UNION	19	0	5	14	38
	WARREN	18	0	0	8	26
	Total	762	9	96	459	1326

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	260	2	13	171	446
	Central West	68	2	23	54	147
	Northeast	178	4	39	103	324
	Northwest	69	1	13	50	133
	South	187	0	8	81	276
Total	762	9	96	459	1326	

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: 12/26/2017

COUNTY	Long Term Care			Schools			Hospital Emergency Dept		
	# Enrolled	# Reports Rec'd	% ILI	# Enrolled	# Reports Rec'd	% Absent	# Enrolled	# Reports Rec'd	% ILI
December 26, 2017 MMWR WEEK 52									
ATLANTIC	2	0	0.00	34	0	0.00	4	4	2.75
BERGEN	10	3	0.15	30	0	0.00	6	6	3.55
BURLINGTON	7	5	0.00	98	0	0.00	4	4	4.12
CAMDEN	1	0	0.00	8	0	0.00	7	7	4.70
CAPE MAY	3	0	0.00	11	0	0.00	1	1	5.18
CUMBERLAND	5	1	0.00	12	0	0.00	3	3	4.11
ESSEX	9	0	0.00	4	0	0.00	8	7	4.97
GLOUCESTER	3	0	0.00	4	0	0.00	2	2	3.12
HUDSON	4	2	1.45	15	0	0.00	6	6	3.94
HUNTERDON	4	4	1.60	11	0	0.00	1	1	1.75
MERCER	1	1	0.00	30	0	0.00	5	4	6.13
MIDDLESEX	13	4	0.21	21	0	0.00	6	6	3.35
MONMOUTH	6	2	0.00	22	0	0.00	5	5	3.65
MORRIS	3	1	1.47	10	0	0.00	4	4	2.40
OCEAN	9	5	0.00	6	0	0.00	4	4	3.66
PASSAIC	10	2	0.00	27	0	0.00	3	3	5.37
SALEM	0	0	0.00	4	0	0.00	1	1	4.66
SOMERSET	5	1	0.00	23	0	0.00	1	1	4.10
SUSSEX	3	2	0.00	4	0	0.00	2	1	0.58
UNION	2	1	0.00	47	0	0.00	5	5	3.17
WARREN	6	1	0.00	18	0	0.00	2	2	7.17
NW Region	22	6	0.11	59	0	0.00	11	10	4.01
NE Region	23	5	0.59	49	0	0.00	20	19	4.27
CW Region	10	6	1.05	64	0	0.00	7	6	5.25
CE Region	30	12	0.06	96	0	0.00	20	20	3.45
South Region	21	6	0.00	171	0	0.00	22	22	4.01
State Total	106	35	0.32	439	0	0.00	80	77	4.02

NJ ACTIVE INFLUENZA-LIKE ILLNESS SURVEILLANCE STATISTICS

SURVEILLANCE DATE: 12/26/2017



County	RSV Tests		Rapid Flu Tests		
	# Positive	Total Tests Performed	# Positive	Total Tests Performed	
December 26, 2017 MMWR WEEK 52					
ATLANTIC	8	24	8	142	
BERGEN	47	196	29	275	
BURLINGTON	13	20	2	32	
CAMDEN	4	18	9	205	
CAPE MAY	4	15	8	75	
CUMBERLAND	10	18	4	74	
ESSEX	34	198	43	519	
GLOUCESTER	2	7	5	109	
HUDSON	2	7	1	37	
HUNTERDON	12	87	14	87	
MERCER	19	71	44	251	
MIDDLESEX	5	26	0	10	
MONMOUTH	51	216	68	648	
MORRIS	25	130	4	86	
OCEAN	4	13	42	270	
PASSAIC	0	0	0	0	
SALEM	0	0	0	0	
SOMERSET	0	0	0	0	
SUSSEX	10	104	19	104	
UNION	32	158	0	0	
WARREN	0	0	0	0	
NW Region	35	234	23	190	
NE Region	83	401	73	831	
CW Region	31	158	58	338	
CE Region	92	413	110	928	
South Region	41	102	36	637	
State Total	282	1308	300	2924	