

Respiratory Virus Surveillance Report¹

New Jersey Department of Health

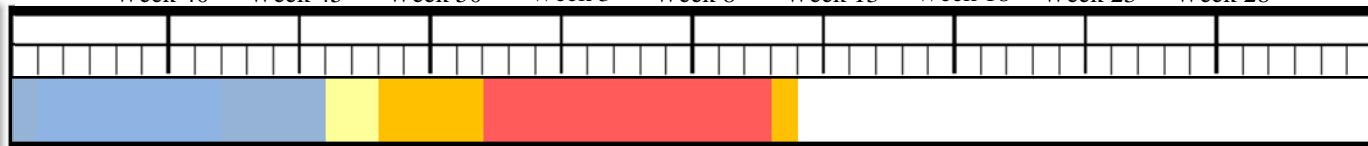
Communicable Disease Service

Week ending March 24, 2018 (MMWR week 12²)



Influenza Activity Level³

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



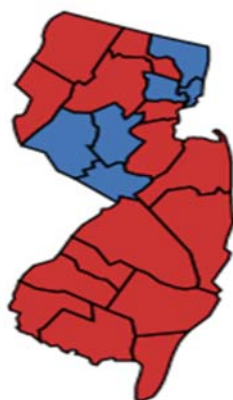
No Activity

Sporadic

Local

Regional

Widespread



New Jersey Activity Level: **MODERATE**

Current week last year: **HIGH**

Regional⁴ Data

Northwest: **HIGH**

Northeast: **MODERATE**

Central West: **MODERATE**

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	0.48 (0.00, 4.55)	0.44	0.56	0.48 (0.45, 0.76)
Schools (absenteeism)	4.14 (2.36, 8.42)	4.75	4.26	3.36 (4.49, 4.86)
Emergency Departments	3.90 (0.30, 5.43)	4.68	3.56	2.21 (3.17, 3.92)

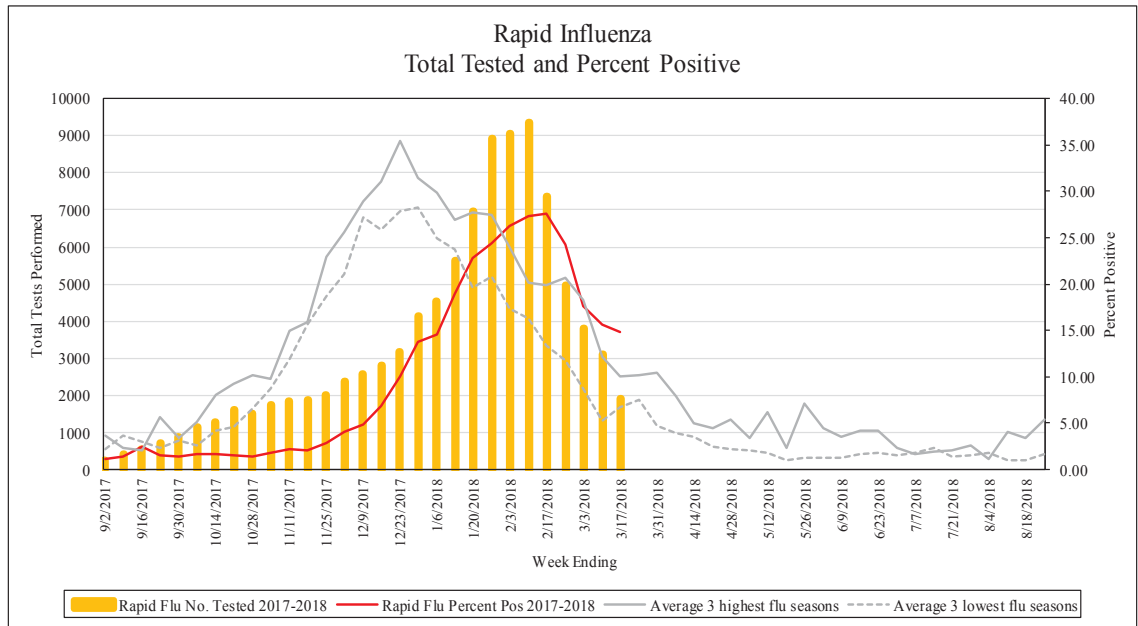
Laboratory Testing⁸

	Current Week	Past 3 Weeks	Cumulative Total
Influenza A H1N1 (2009)	13	43	438
Influenza A H3N2	10	67	1595
Influenza B	76	338	3808
Rapid Influenza Tests	286	1445	16685

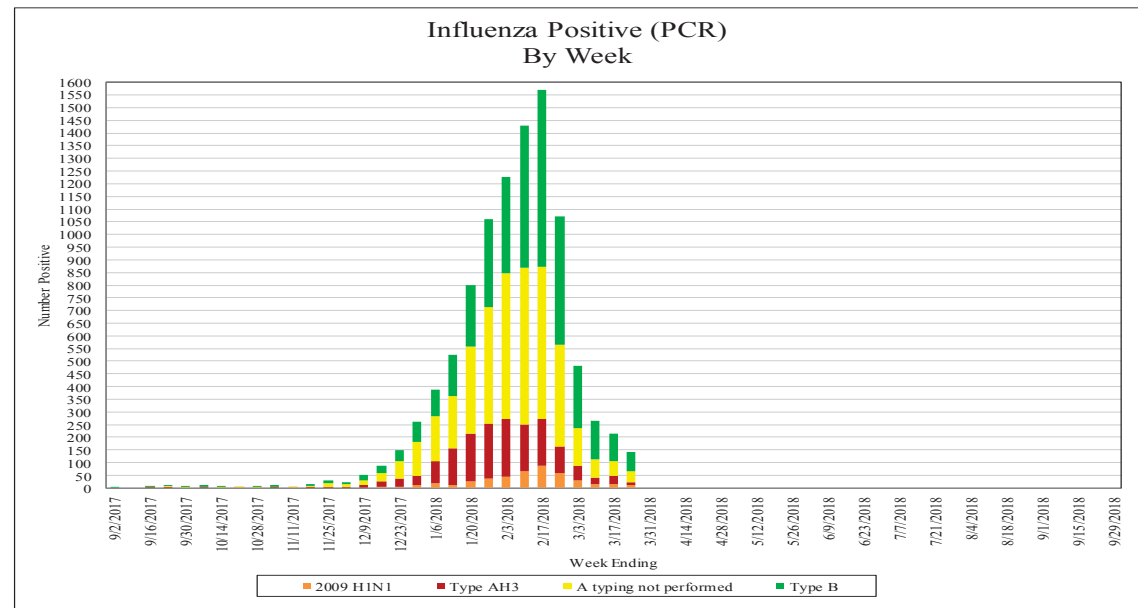
Report also available at <http://nj.gov/health/cd/statistics/flu-stats/>

Virologic Surveillance⁸

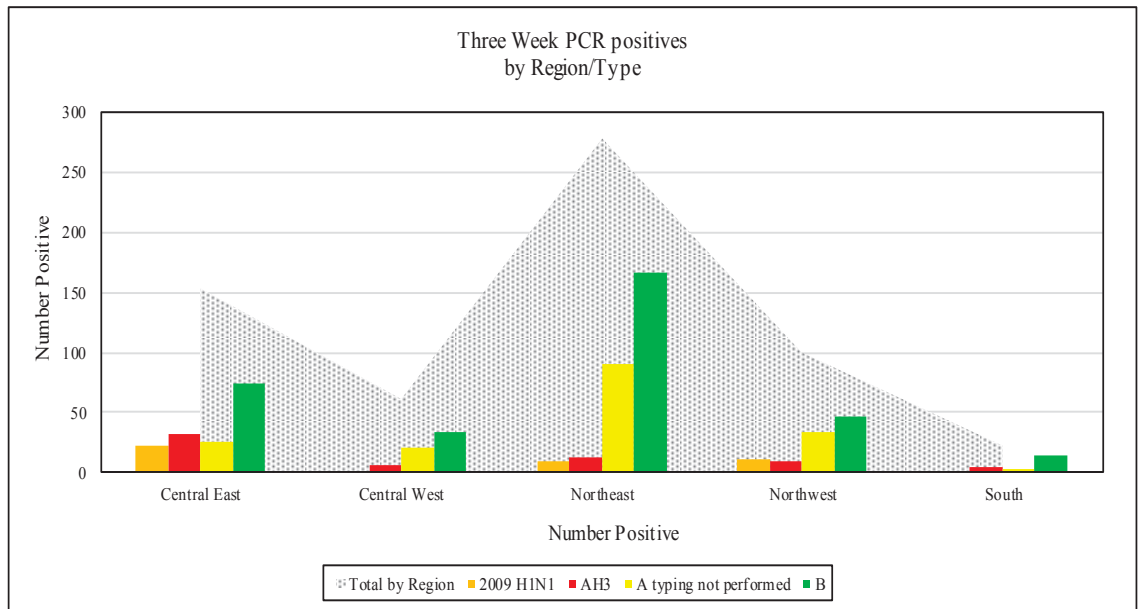
Influenza Rapid Antigen Result by Week



Influenza Positive Specimens (PCR)

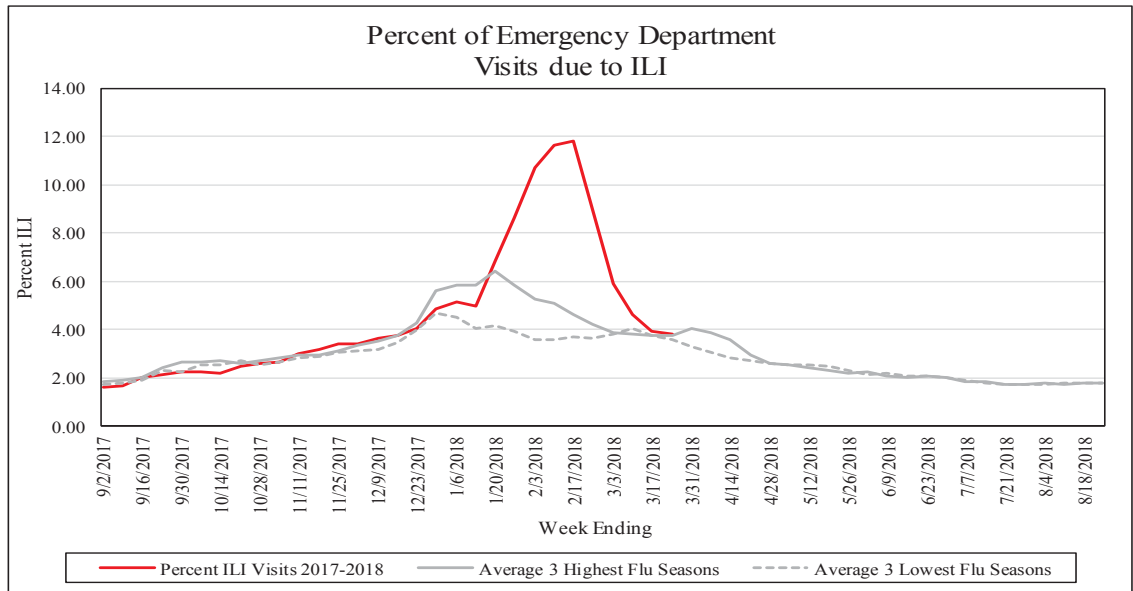


Influenza Positive Specimens (PCR) by Region⁴/Type

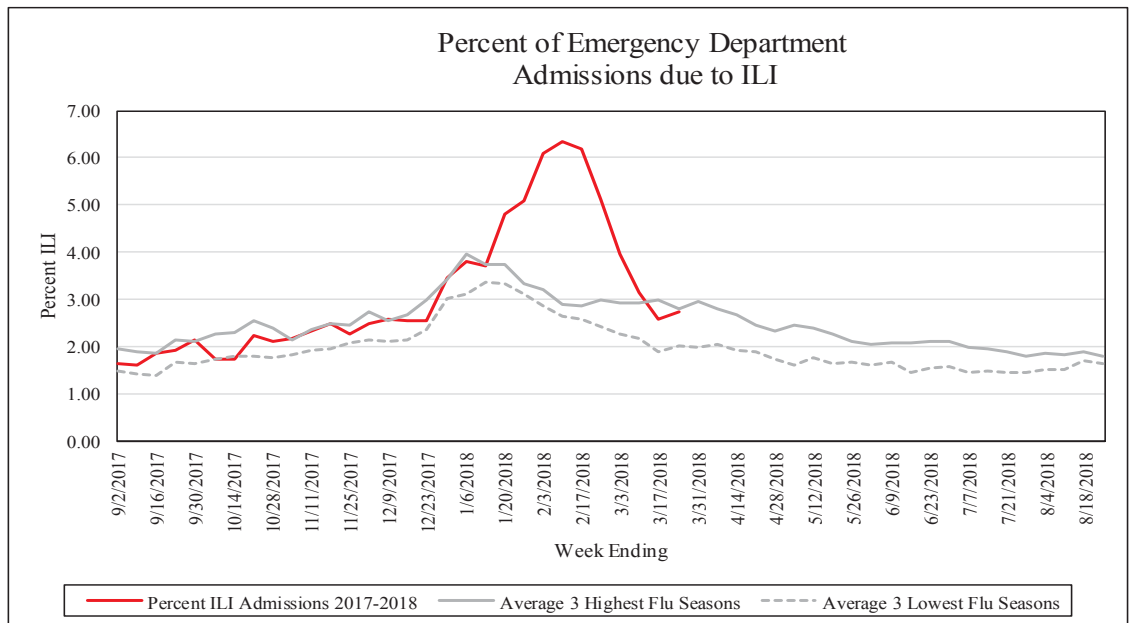


Influenza-Like Illness (ILI) Surveillance

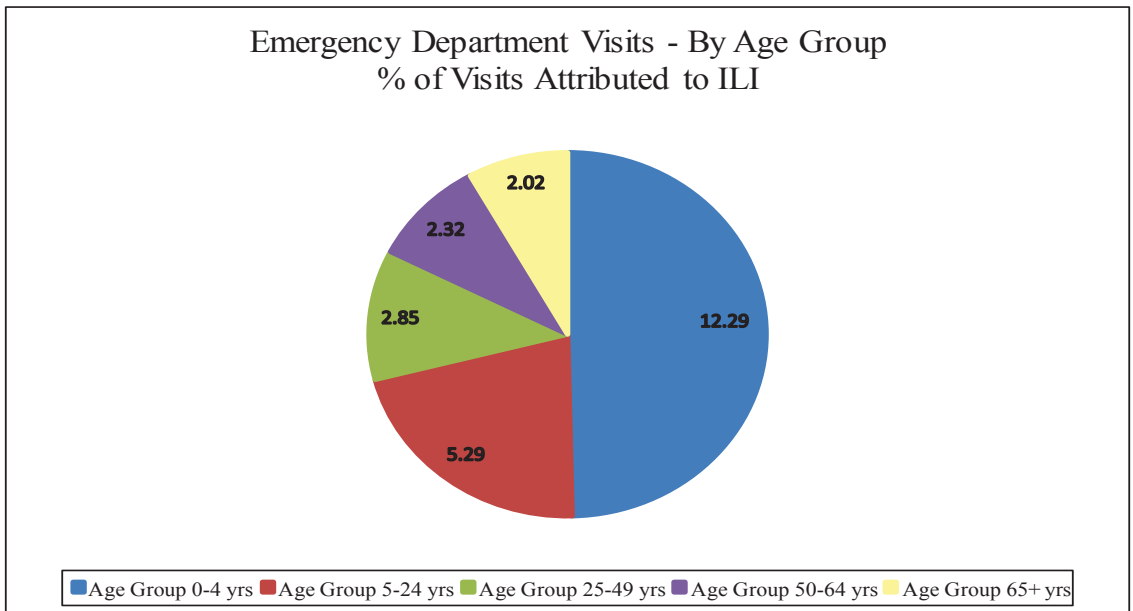
Emergency Department⁹ Visits
Percent due to ILI



Emergency Department⁹
Percent of Admissions due to ILI

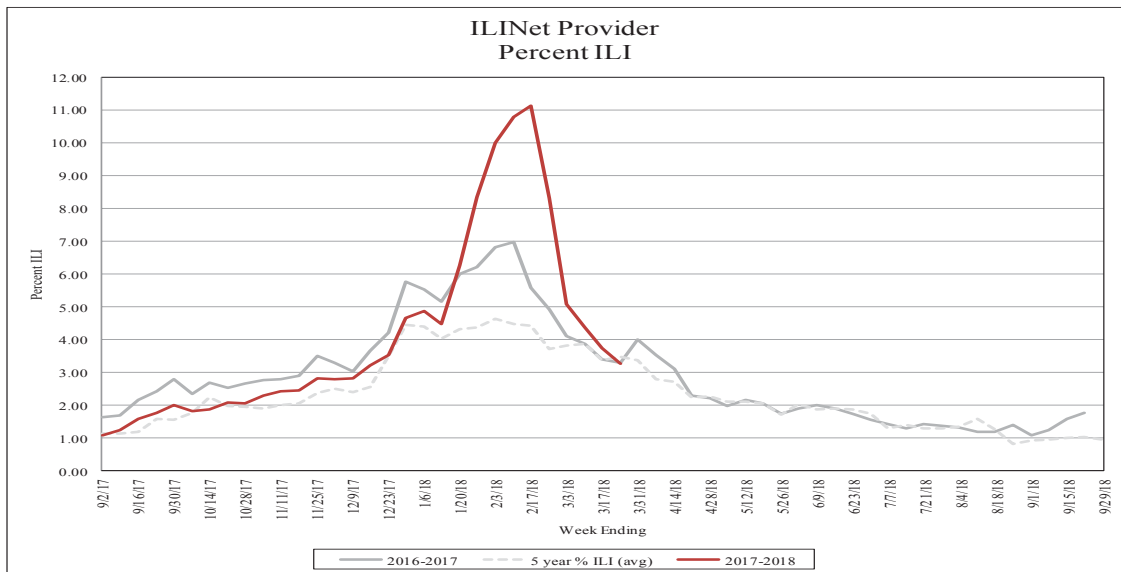


Emergency Department⁹ Visits
Percent of ILI By Age Group

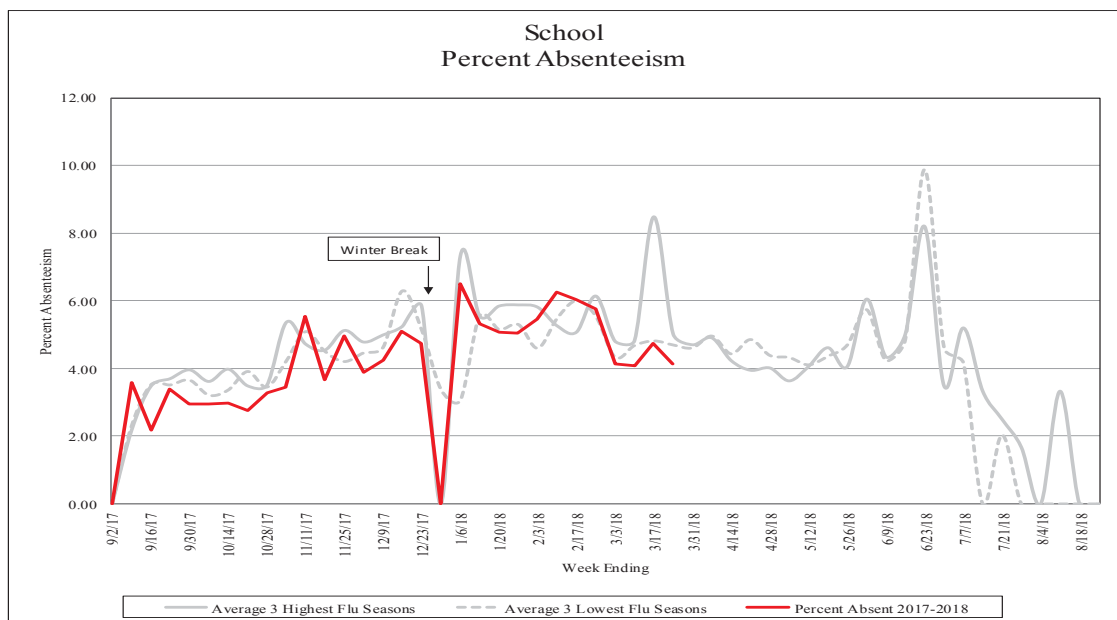


Influenza-Like Illness (ILI) Surveillance

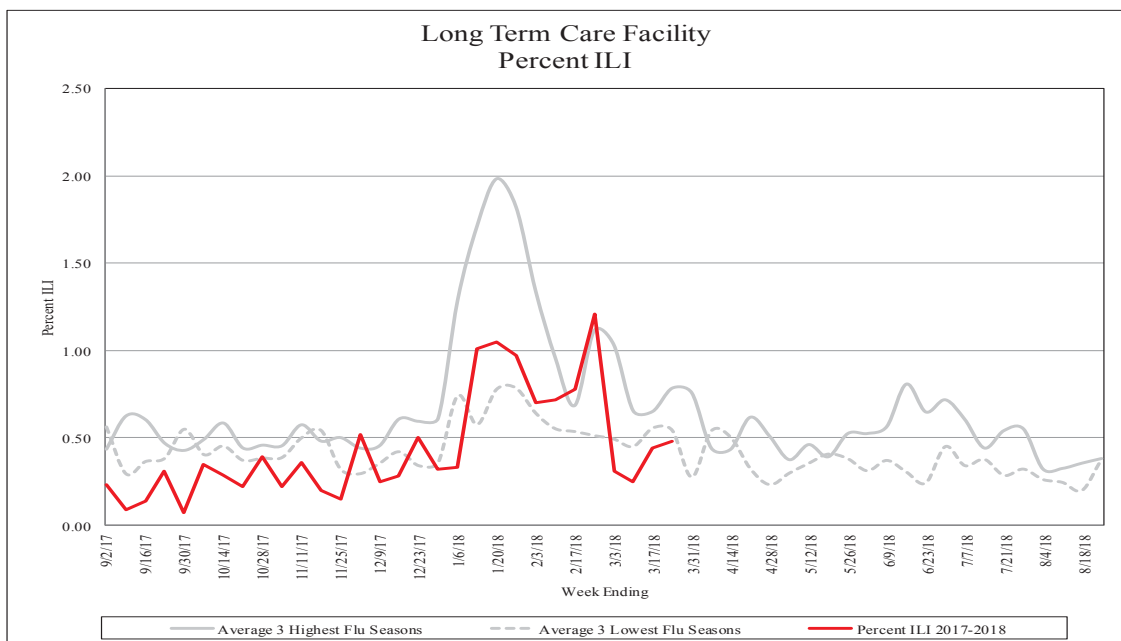
ILI Net Providers⁵



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

177

No. outbreaks last 3 weeks

8

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

133

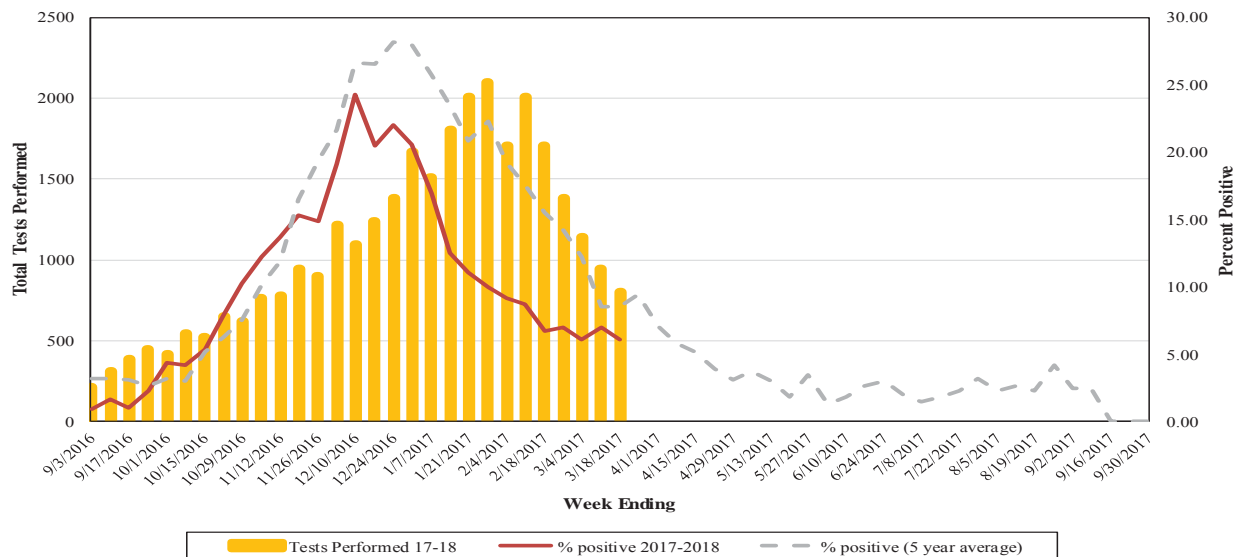
53

3

Viral Respiratory Surveillance Non-Influenza

Respiratory Syncytial Virus Percent Positive

RSV Data
Total Tested and Percent



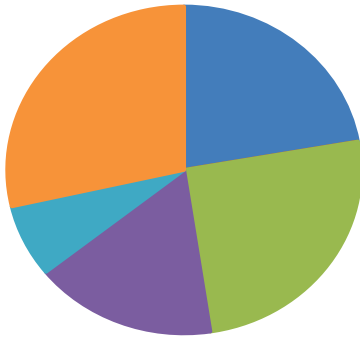
Viral Respiratory Surveillance Non-Influenza

Positive Non-Influenza Tests¹²

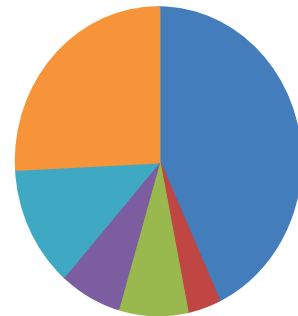
Total Tests Positive for a Respiratory Virus Other than Influenza

	Respiratory Syncytial Virus	Parainfluenza	Adenovirus	Human Metapneumovirus	Corona Viruses	Rhinovirus
Past Three Weeks	28	0	32	21	9	36
17-18 Season	853	74	155	138	250	510

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). 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.

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	773	0	12	466	1251
	BERGEN	1645	66	229	1309	3249
	BURLINGTON	611	0	7	387	1005
	CAMDEN	1053	1	35	720	1809
	CAPE MAY	312	0	0	120	432
	CUMBERLAND	32	0	1	39	72
	ESSEX	917	55	143	650	1765
	GLOUCESTER	264	1	24	152	441
	HUDSON	1389	33	68	669	2159
	HUNTERDON	145	2	45	146	338
	MERCER	362	4	29	473	868
	MIDDLESEX	668	14	50	479	1211
	MONMOUTH	1387	3	25	945	2360
	MORRIS	410	40	238	333	1021
	OCEAN	1040	44	31	708	1823
	PASSAIC	997	38	99	730	1864
	SALEM	11	3	1	10	25
	SOMERSET	151	8	71	169	399
	SUSSEX	62	7	70	89	228
	UNION	446	116	416	592	1570
	WARREN	81	4	14	32	131
	Total	12756	439	1608	9218	24021

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	3541	177	522	2724	6964
	Central West	658	14	145	788	1605
	Northeast	3951	154	440	2628	7173
	Northwest	1550	89	421	1184	3244
	South	3056	5	80	1894	5035
	Total	12756	439	1608	9218	24021

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

NJ ACTIVE INFLUENZA-LIKE ILLNESS SURVEILLANCE STATISTICS

SURVEILLANCE DATE: 03/20/2018



COUNTY	Long Term Care			Schools			Hospital Emergency Dept		
	# Enrolled	# Reports	% ILI	# Enrolled	# Reports	% Absent	# Enrolled	# Reports	% ILI
March 20, 2018 MMWR WEEK 12									
ATLANTIC	2	0	0.00	36	7	6.32	4	4	3.01
BERGEN	11	3	0.46	34	9	2.97	6	6	3.88
BURLINGTON	7	3	0.00	101	45	4.24	4	4	3.53
CAMDEN	1	0	0.00	8	7	4.75	8	7	3.66
CAPE MAY	3	0	0.00	12	6	4.60	1	1	3.92
CUMBERLAND	5	3	1.19	12	8	8.42	3	3	4.80
ESSEX	9	3	0.36	4	1	3.25	8	7	4.92
GLOUCESTER	3	0	0.00	4	0	0.00	2	2	2.24
HUDSON	4	0	0.00	15	6	3.68	6	6	3.70
HUNTERDON	4	2	2.15	11	9	3.80	1	1	2.83
MERCER	1	0	0.00	31	9	2.53	5	4	4.62
MIDDLESEX	13	5	0.00	21	16	3.63	6	6	3.88
MONMOUTH	6	1	0.00	69	16	4.20	5	5	3.93
MORRIS	3	0	0.00	10	5	2.36	4	4	2.21
OCEAN	10	4	0.00	6	2	5.60	4	4	2.60
PASSAIC	10	1	0.00	30	10	5.13	3	3	5.03
SALEM	0	0	0.00	5	3	4.75	1	1	2.58
SOMERSET	5	1	0.00	23	8	2.82	1	1	4.33
SUSSEX	3	1	4.55	4	2	3.67	2	2	0.30
UNION	2	0	0.00	57	19	3.12	5	5	4.93
WARREN	6	1	0.00	19	7	5.14	2	2	5.43
NW Region	22	3	0.38	63	24	4.44	11	11	3.68
NE Region	24	6	0.43	53	16	3.30	20	19	4.30
CW Region	10	3	1.41	65	26	3.07	7	6	4.35
CE Region	31	10	0.00	153	53	3.68	20	20	3.86
South Region	21	6	0.95	178	76	5.01	23	22	3.46
State Total	108	28	0.48	512	195	4.14	81	78	3.90

NJ ACTIVE INFLUENZA-LIKE ILLNESS SURVEILLANCE STATISTICS

SURVEILLANCE DATE: 03/20/2018

County	RSV Tests		Rapid Flu Tests		
	# Positive	Total Tests Performed	# Positive	Total Tests Performed	
March 20, 2018 MMWR WEEK 12					
ATLANTIC	0	12	38	180	
BERGEN	8	109	36	179	
BURLINGTON	0	0	7	28	
CAMDEN	0	5	5	75	
CAPE MAY	0	6	14	66	
CUMBERLAND	0	0	0	0	
ESSEX	5	160	78	560	
GLOUCESTER	0	1	0	27	
HUDSON	0	3	2	24	
HUNTERDON	4	82	10	82	
MERCER	9	35	38	206	
MIDDLESEX	6	67	10	70	
MONMOUTH	0	55	24	231	
MORRIS	1	26	4	62	
OCEAN	0	0	12	66	
PASSAIC	0	0	0	0	
SALEM	0	0	0	0	
SOMERSET	0	0	0	0	
SUSSEX	6	66	6	66	
UNION	9	166	0	0	
WARREN	1	8	2	8	
NW Region	8	100	12	136	
NE Region	13	272	116	763	
CW Region	13	117	48	288	
CE Region	15	288	46	367	
South Region	0	24	64	376	
State Total	49	801	286	1930	