



Respiratory Virus Surveillance Report¹

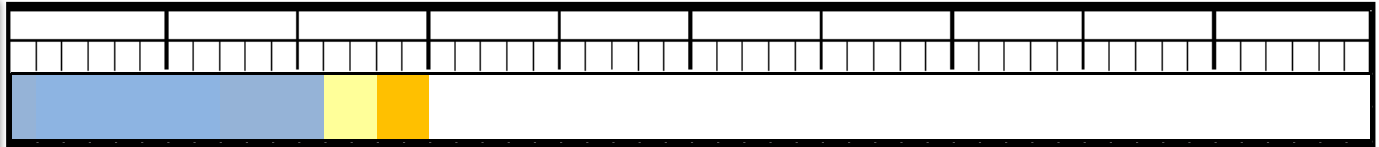
New Jersey Department of Health

Communicable Disease Service

Week ending December 16, 2017 (MMWR week 50²)

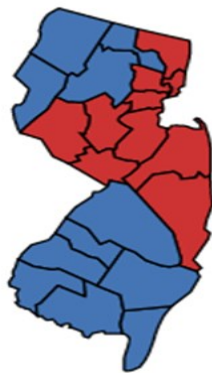


Week 40 Week 45 Week 50 Week 3 Week 8 Week 13 Week 18 Week 23 Week 28



■ 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

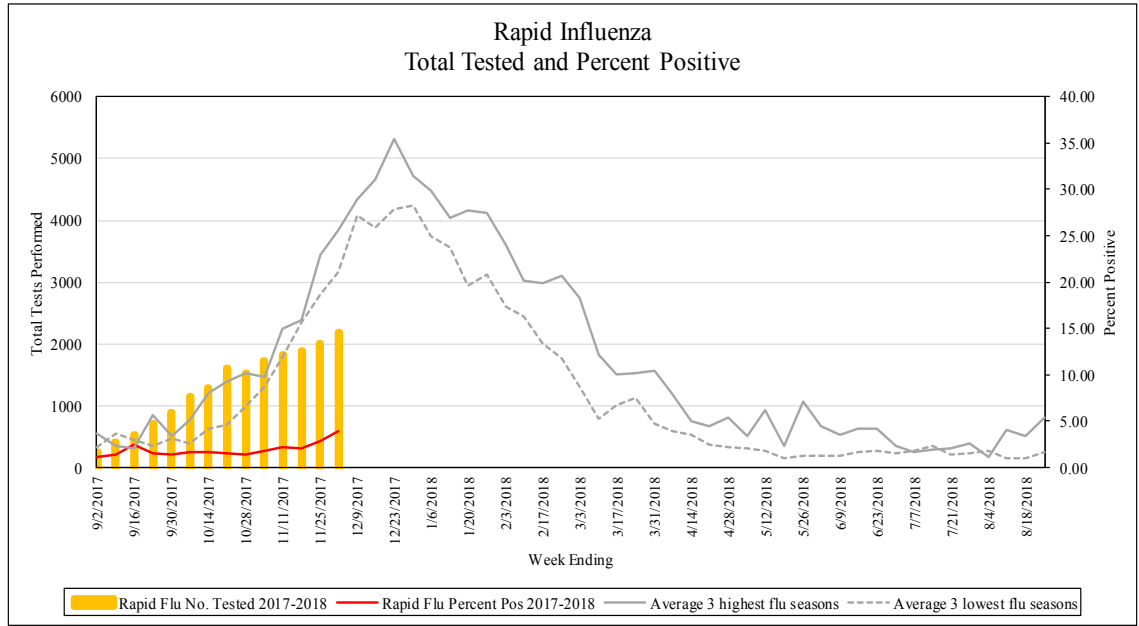
	Percent ILI/Absenteeism ⁵			Baselines
	Current Week (range by county)	Last week Current year	Current week Last year	Non-season ⁶ (Seasonal Average– low, high) ⁷
Long Term Care Facilities	0.28 (0.00, 1.53)	0.25	0.28	0.48 (0.45, 0.76)
Schools (absenteeism)	5.09 (2.58, 22.81)	4.25	4.81	3.36 (4.49, 4.86)
Emergency Departments	3.62 (0.31, 5.57)	3.39	4.04	2.21 (3.17, 3.92)

Laboratory
Testing⁸

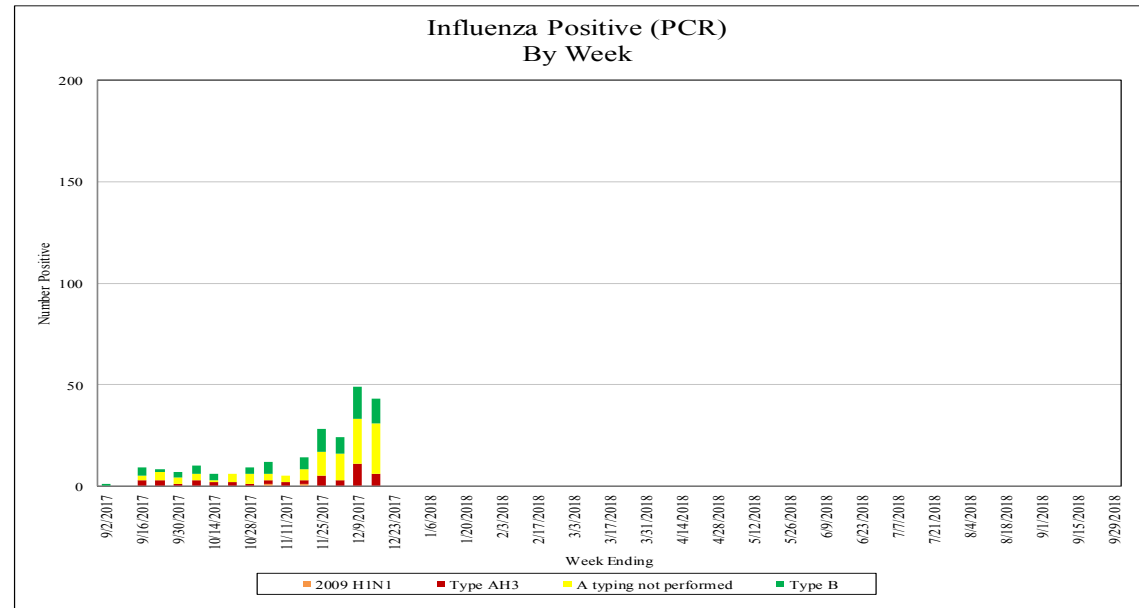
	Current Week	Past 3 Weeks	Cumulative Total
Influenza A H1N1 (2009)	0	0	2
Influenza A H3N2	6	20	39
Influenza B	12	36	69
Rapid Influenza Tests	113	256	453

Virologic Surveillance⁸

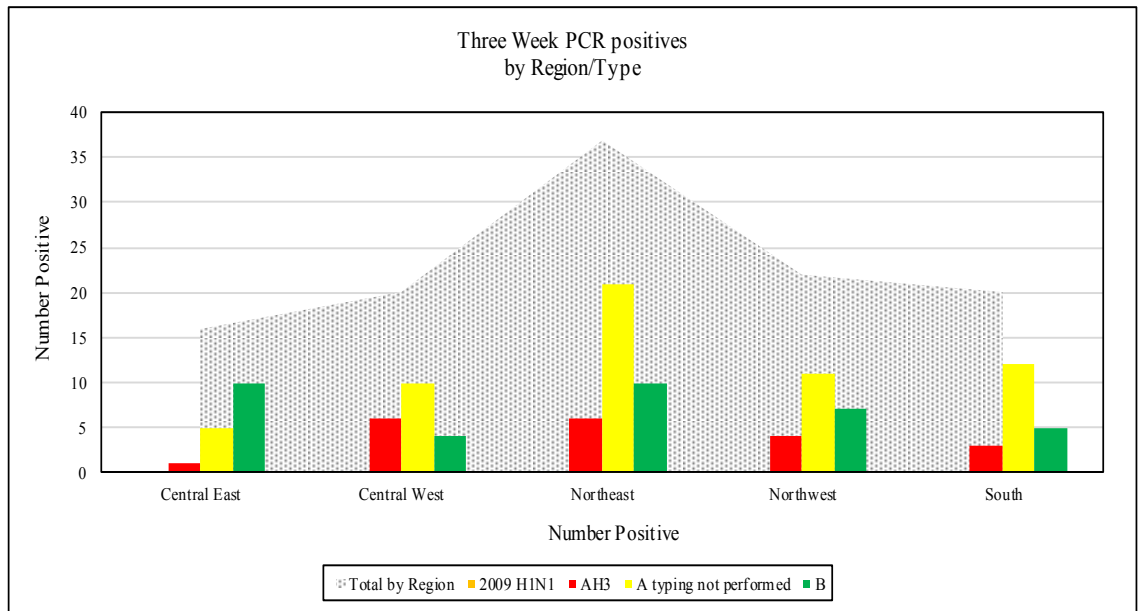
Influenza Rapid Antigen Result by Week



Influenza Positive Specimens (PCR)

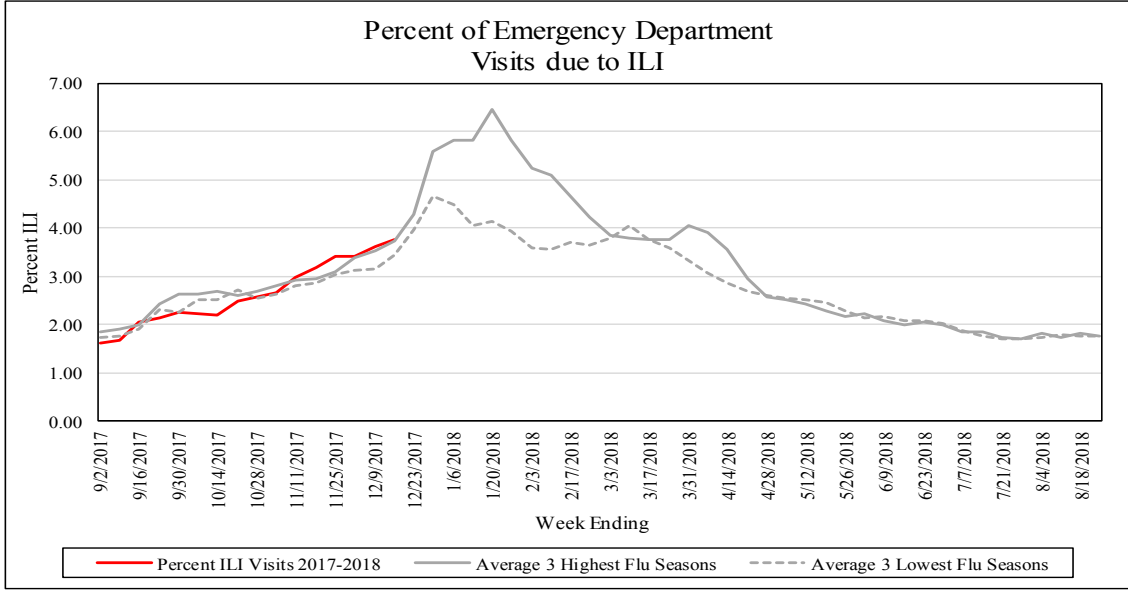


Influenza Positive Specimens (PCR) by Region⁴/Type

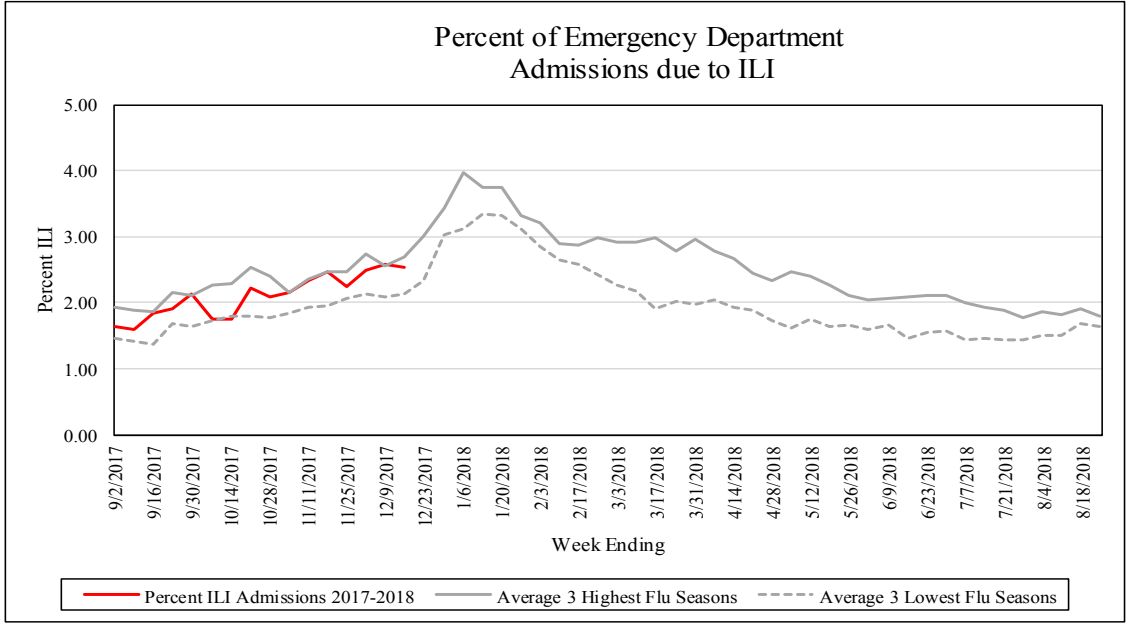


Influenza-Like Illness (ILI) Surveillance

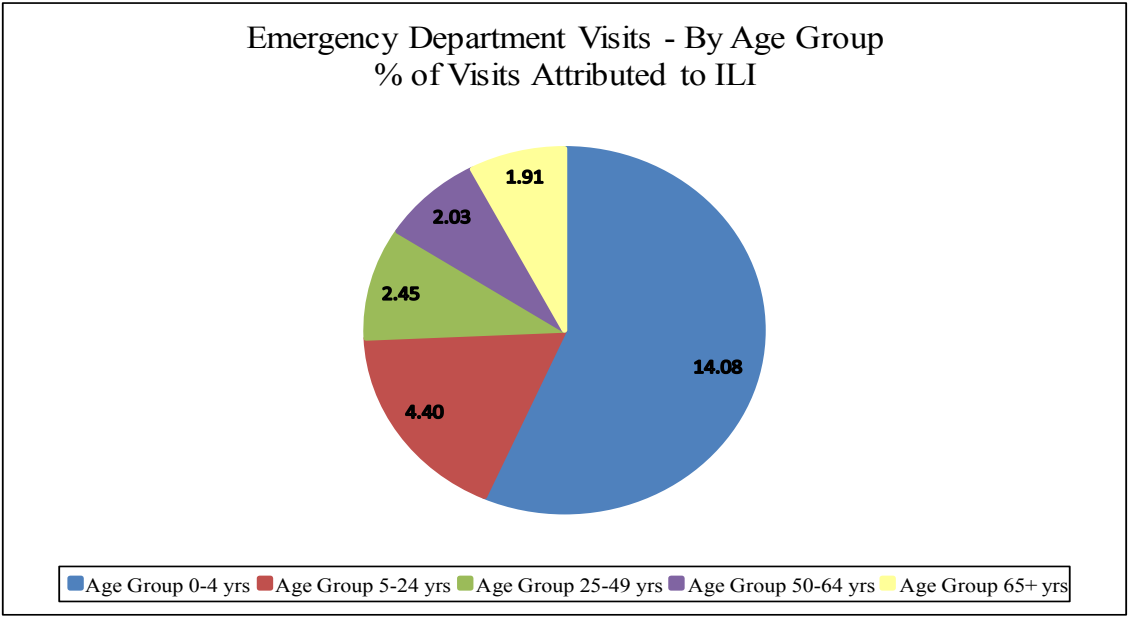
**Emergency Department's Visits
Percent due to ILI**



**Emergency Department's
Percent of Admissions due to ILI**

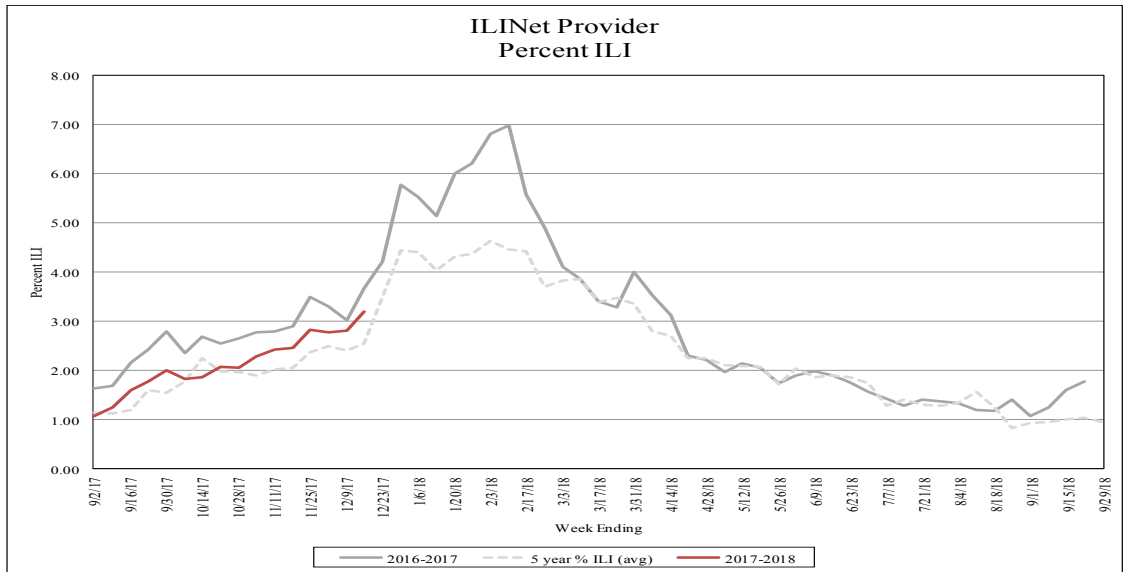


**Emergency Department's Visits
Percent of ILI By Age Group**

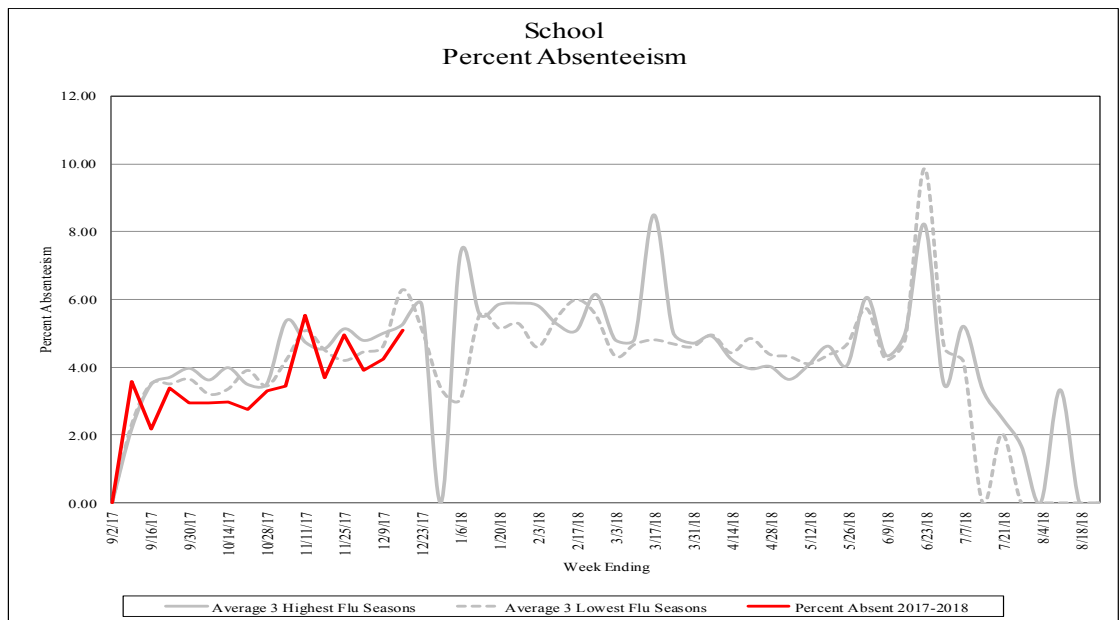


Influenza-Like Illness (ILI) Surveillance

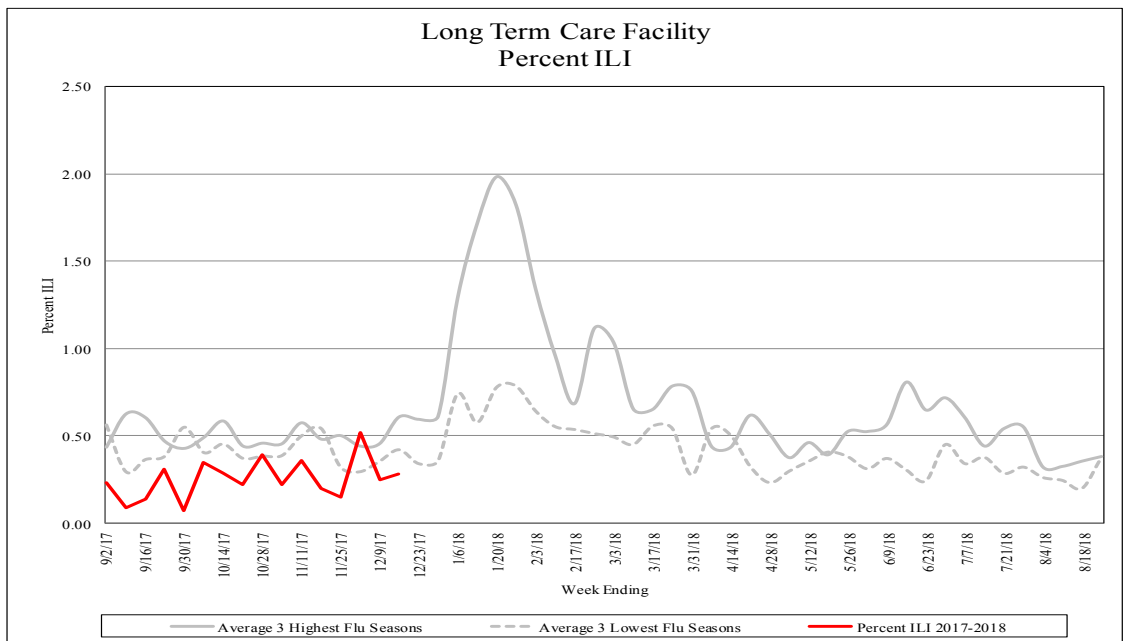
ILI Net Providers



School Absenteeism



Long Term Care Facilities



Influenza-Like Illness (ILI) Surveillance

Long Term Care Outbreaks

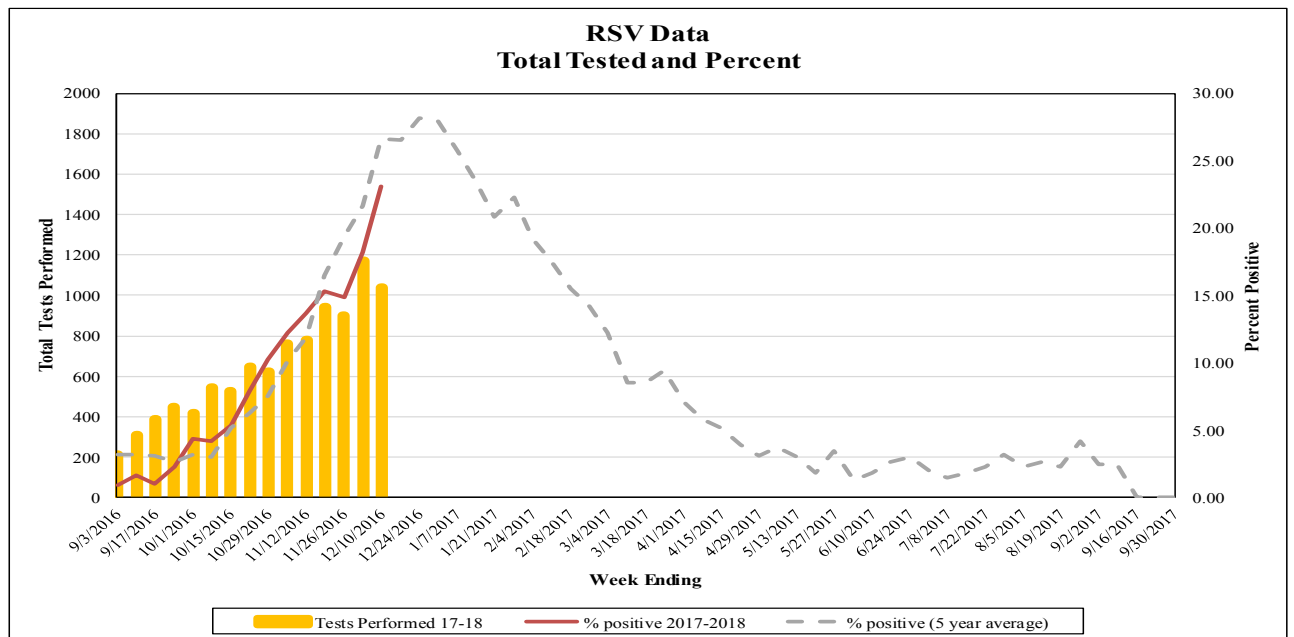
Respiratory Outbreaks in Long Term Care Facilities ¹⁰	
Cumulative Outbreaks 2017-2018 Season	8
No. outbreaks last 3 weeks	6
Regions with recent outbreaks	NW, NE, CE,S

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	8	8	0

Viral Respiratory Surveillance Non-Influenza

Respiratory Syncytial Virus Percent Positive



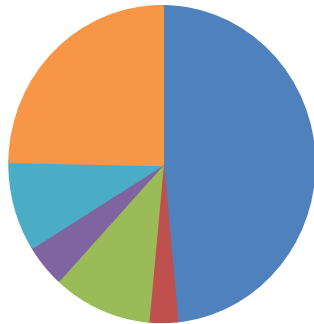
Viral Respiratory Surveillance Non-Influenza

Positive Non-Influenza Tests ¹²

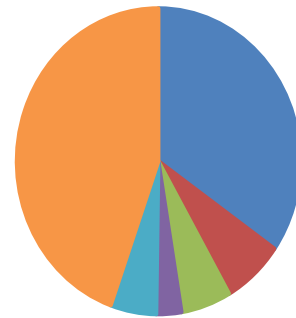
Total Tests Positive for a Respiratory Virus Other than Influenza

	Respiratory Syncytial Virus	Parainfluenza	Adenovirus	Human Metapneumovirus	Corona Viruses	Rhinovirus
Past Three Weeks	112	7	24	10	21	57
17-18 Season	219	44	36	18	33	281

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	15	0	0	8	23
	BERGEN	42	0	11	26	79
	BURLINGTON	13	0	0	19	32
	CAMDEN	24	0	2	21	47
	CAPE MAY	4	0	0	2	6
	CUMBERLAND	2	0	0	0	2
	ESSEX	18	0	4	12	34
	GLOUCESTER	11	0	1	1	13
	HUDSON	12	0	5	5	22
	HUNTERDON	4	0	5	0	9
	MERCER	7	0	2	11	20
	MIDDLESEX	12	0	1	9	22
	MONMOUTH	65	0	2	24	91
	MORRIS	17	1	3	4	25
	OCEAN	32	1	0	26	59
	PASSAIC	9	0	2	7	18
	SOMERSET	9	0	4	3	16
	SUSSEX	0	0	2	3	5
	UNION	11	0	2	4	17
	WARREN	4	0	0	4	8
	Total	311	2	46	189	548

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	120	1	5	63		189
Central West	20	0	11	14		45
Northeast	72	0	20	43		135
Northwest	30	1	7	18		56
South	69	0	3	51		123
Total	311	2	46	189		548

*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: 12/12/2017



COUNTY	Long Term Care			Schools			Hospital Emergency Dept		
	# Enrolled	# Reports Rec'd	% ILI	# Enrolled	# Reports Rec'd	% Absent	# Enrolled	# Reports Rec'd	% ILI
December 12, 2017 MMWR WEEK 50									
ATLANTIC	2	0	0.00	43	13	5.29	4	4	2.58
BERGEN	10	4	0.30	33	14	3.72	6	6	3.21
BURLINGTON	7	5	0.00	97	63	4.58	4	4	3.06
CAMDEN	1	0	0.00	8	7	8.41	7	7	4.98
CAPE MAY	3	0	0.00	11	6	5.09	1	1	2.36
CUMBERLAND	5	4	0.94	12	10	22.81	3	3	4.70
ESSEX	9	2	1.53	4	1	4.79	8	7	4.67
GLOUCESTER	3	0	0.00	4	1	5.11	2	2	2.02
HUDSON	4	1	0.00	15	6	2.58	6	6	3.17
HUNTERDON	4	4	0.44	11	10	4.76	1	1	4.20
MERCER	1	1	0.00	30	24	3.92	5	4	4.80
MIDDLESEX	13	5	0.14	21	18	4.36	6	6	3.04
MONMOUTH	5	1	0.00	9	7	5.07	5	5	3.47
MORRIS	3	1	0.00	10	5	4.64	4	4	1.70
OCEAN	9	5	0.00	6	4	5.74	4	4	3.63
PASSAIC	10	2	0.00	26	12	3.96	3	3	4.72
SALEM	0	0	0.00	4	4	6.52	1	1	2.13
SOMERSET	5	1	0.00	23	16	4.15	1	1	4.43
SUSSEX	3	2	0.00	4	1	5.13	2	1	0.31
UNION	2	0	0.00	47	27	3.40	5	5	2.60
WARREN	6	1	0.00	18	11	4.86	2	2	5.57
NW Region	22	6	0.00	58	29	4.39	11	10	3.36
NE Region	23	7	0.41	52	21	3.13	20	19	3.85
CW Region	10	6	0.30	64	50	4.15	7	6	4.65
CE Region	29	11	0.07	83	56	4.08	20	20	3.15
South Region	21	9	0.63	179	104	6.83	22	22	3.70
State Total	105	39	0.28	436	260	5.09	80	77	3.62

SURVEILLANCE DATE: 12/12/2017



County	RSV Tests		Rapid Flu Tests	
	# Positive	Total Tests Performed	# Positive	Total Tests Performed
December 12, 2017 MMWR WEEK 50				
ATLANTIC	5	21	0	92
BERGEN	41	172	8	233
BURLINGTON	6	17	1	20
CAMDEN	4	13	4	173
CAPE MAY	2	9	0	34
CUMBERLAND	1	3	1	57
ESSEX	40	208	31	576
GLOUCESTER	1	5	1	100
HUDSON	3	8	1	25
HUNTERDON	12	75	4	83
MERCER	14	47	18	175
MIDDLESEX	21	84	2	55
MONMOUTH	51	181	32	497
MORRIS	2	34	2	101
OCEAN	7	27	7	168
PASSAIC	0	0	0	0
SALEM	0	0	0	0
SOMERSET	0	0	0	0
SUSSEX	0	0	0	0
UNION	30	134	1	10
WARREN	0	0	0	0
NW Region	2	34	2	101
NE Region	84	388	40	834
CW Region	26	122	22	258
CE Region	109	426	42	730
South Region	19	68	7	476
State Total	240	1038	113	2399