

**New Jersey Department of Health and Senior Services**  
**Communicable Disease Service**  
**Influenza Activity Summary**  
**Week Ending April 30, 2011 (MMWR Week 17)**

**Influenza Activity Level:**     **LOCAL**

Interpretation: There were three counties, one in the northwest, one in the central east and one in the south that experienced increases in ILI activity and no counties experienced an outbreak in a long term care facility. One county in the northwest had an increase in ILI activity, lab confirmed influenza and/or outbreaks in long term care facilities increasing the state activity level at local. NJ has experienced no activity during this same week in the 2009-2010 season and during the 2008-2009 season widespread activity was detected.

**No Activity:** No increase in ILI activity detected AND no laboratory-confirmed cases of influenza in the previous 3 weeks

**Sporadic:** No increase in ILI activity detected AND laboratory-confirmed-cases anywhere in the state within previous 3 weeks OR at least one laboratory-confirmed outbreak in an institution anywhere in the state

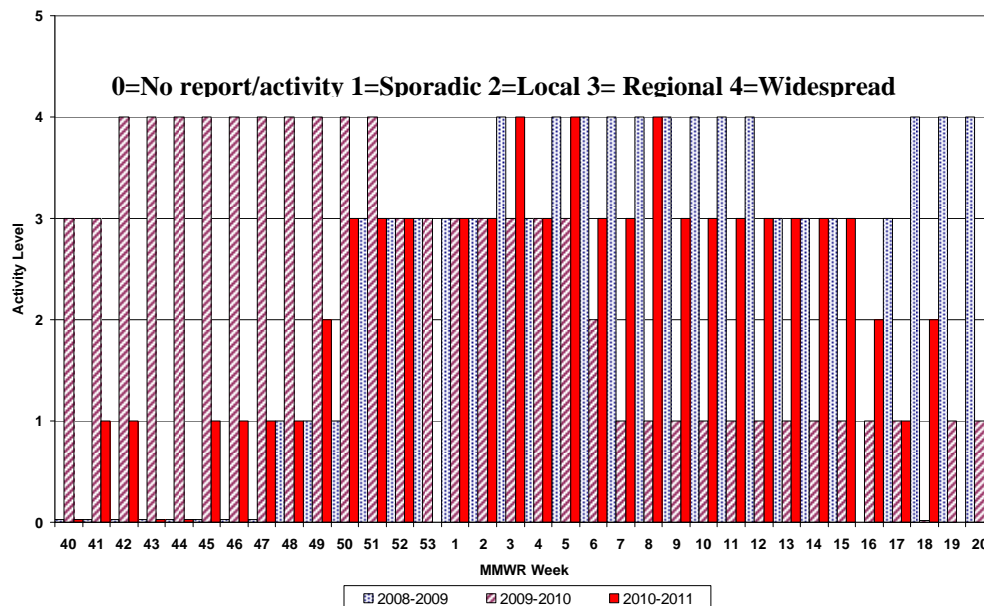
**Local:** Increases in ILI activity detected in a single county AND laboratory-confirmed cases from that same county within the previous 3 weeks OR confirmed outbreaks in 2 or more institutions in a single county

**Regional:** Increases in ILI activity detected in  $\geq 2$  but  $\leq 10$  counties AND laboratory confirmed cases from these same counties in the past 3 weeks OR confirmed outbreaks institutions in  $\geq 2$  but  $\leq 10$  counties

**Widespread:** Increases in ILI activity detected in  $> 10$  counties OR institutional outbreaks in  $> 10$  counties AND laboratory-confirmed influenza cases in previous 3 weeks.

**Note:** Systems used to detect changes in ILI activity include: ILINet (i.e., sentinel providers), school absenteeism data, ED ILI visits and admission collected via Hippocrates and EpiCenter systems, LTCF ILI data, LTCF outbreak data, and information on influenza mortality (122 city, influenza associated death report). Virologic surveillance data from PHEL will be used as the primary data source for the above levels. However, rapid influenza test data and commercial laboratory data will also be considered when determining the appropriate activity levels.

**Statewide Influenza Activity Levels**



## **Regional Data**

<b>Region</b>	<b>Counties in Region</b>	<b>Activity Level</b>
NW Region	Morris, Passaic, Sussex, Warren	<b>LOCAL</b>
NE Region	Bergen, Essex, Hudson	<b>SPORADIC</b>
CW Region	Hunterdon, Mercer, Somerset	<b>SPORADIC</b>
CE Region	Middlesex, Monmouth, Ocean, Union	<b>SPORADIC</b>
South Region	Atlantic, Burlington, Camden, Cape May, Salem, Cumberland, Gloucester	<b>SPORADIC</b>

No Activity- No increase in ILI activity detected **AND** no laboratory-confirmed cases in the public health region

Sporadic – No increase in ILI activity detected **AND** laboratory-confirmed cases anywhere in the public health region **OR** at least one laboratory confirmed outbreak in an institution anywhere in the public health region

Local – Increases in ILI activity detected in a single county of the public health region **AND** laboratory-confirmed cases from that same county within the previous 3 weeks (other counties may be above baseline without lab confirmed cases) **OR** confirmed outbreaks in 2 or more institutions in a single county of a public health region

Regional – Increases in ILI activity detected in at least half of the counties of public health region **AND** laboratory-confirmed cases from these same counties in the past 3 weeks **OR** confirmed outbreaks institutions in at least half of counties of public health region counties

Widespread – Not used for public health region data

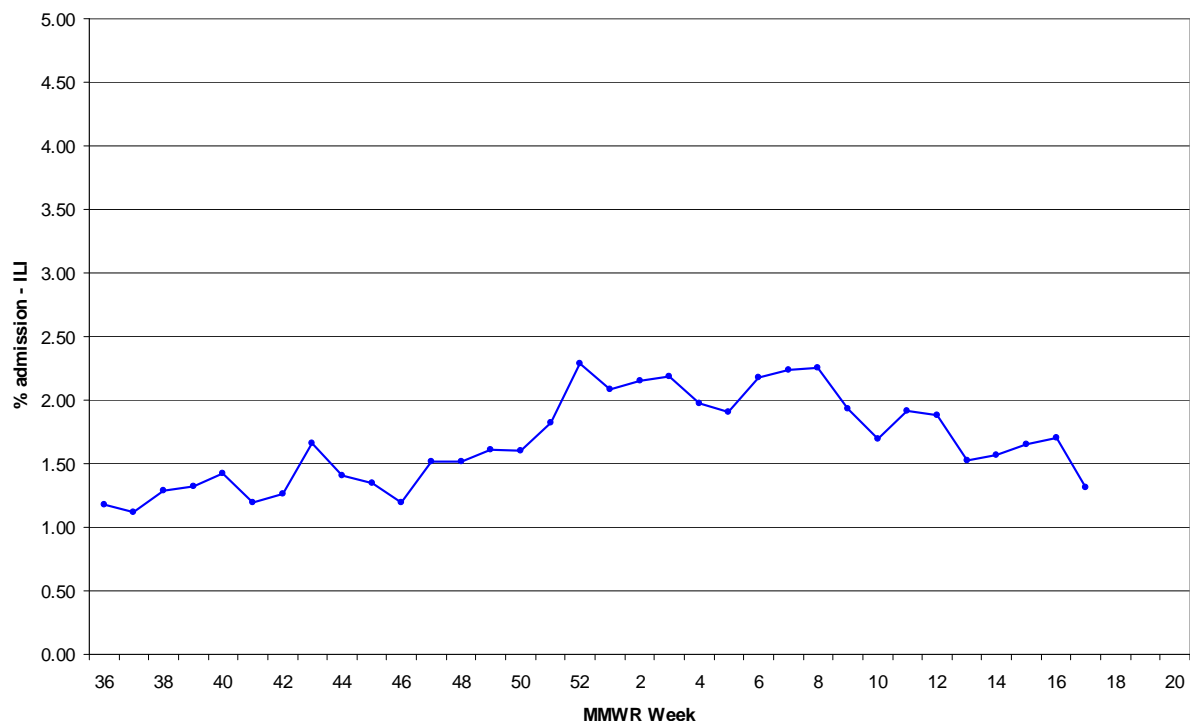
## Influenza Hospitalizations/Deaths

Influenza-associated hospitalizations are reported daily from hospital facilities using the Hippocrates or EpiCenter data systems. Data is aggregated by week and a percentage of admissions (i.e., number of admission associated with ILI divided by total admissions) is calculated. Additionally, a subset of these facilities also report hospitalization by age group (data not shown). Data from influenza-associated deaths are extracted from CDRSS. Only deaths associated with laboratory-confirmed influenza are included in these statistics.

<b>NJ Influenza-Associated Hospitalizations and Deaths by Current MMWR week and Cumulative Total -Week 40 ( 2010) to present</b>		
	<b>Hospitalizations**</b>	<b>Deaths</b>
<b>Week 17</b>	152	0
<b>Cumulative</b>	6023	8

\*\*Data represents both laboratory confirmed and syndromic illness. This number represents almost all acute care facilities in NJ and is not longer a subset. This reporting differs from information previously published during the 2009-2010 season and cannot be compared.

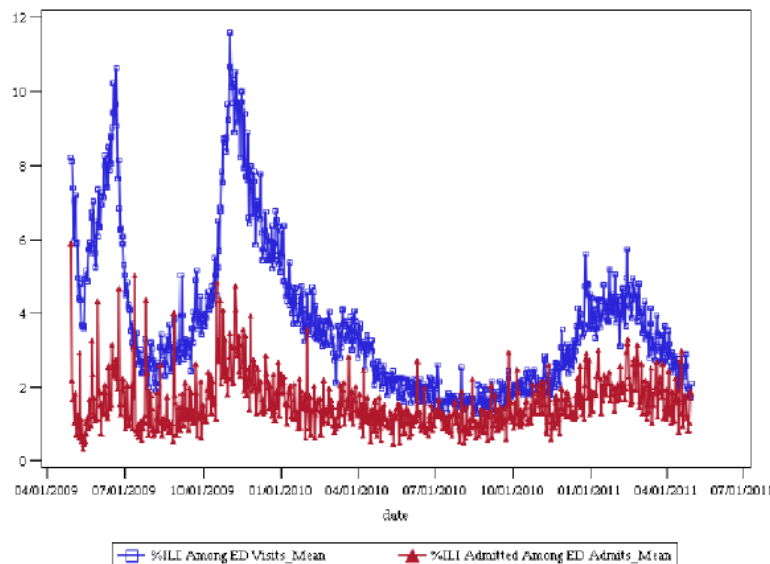
**Percent Admission- ILI**



## **Syndromic Surveillance – Enhanced Emergency Department (ED) Surveillance for Influenza-like Illness (ILI)**

**NOTE:** *The number of ED visits, hospital admissions, ED visits due to ILI, and hospital admissions due to ILI are reported each day by acute care facilities statewide. These data are captured via daily surveys sent using the Hippocrates system or electronic data feeds from EpiCenter.*

***Line Plot of %ILI Among ED Visits (Mean) and %ILI Admits Among ED Admits (Mean)***



### **Summary of Emergency Department (ED) Visits and Admits Surveillance**

During 4/24/11 - 4/30/11, daily surveillance for ED visits and admissions from all 78 acute care facilities resulted in 18 ED visit blips (three in Hudson; two in Bergen, Mercer, Monmouth, and Salem-Cumberland; one in each, Burlington, Essex, Middlesex, Newark, Passaic, Somerset, and Warren) and eight admission blips (two in Essex and Mercer; one in each, Bergen, Middlesex, Monmouth, and Warren). During 4/24/11 - 4/30/11, the daily facility response rate ranged from 80% to 90% with an average of 86% for the week. Nine visit and four admission blip responses were received and none was ILI-related.

### **Summary of Enhanced Emergency Department (ED) Surveillance for Influenza-like Illness (ILI)**

During 4/24/11 - 4/30/11, 78 acute care facilities reported an aggregate total of 1,455 ED visits due to ILI (2% of total ED visits) and an aggregate total of 152 admissions due to ILI (10% of total ILI ED visits). During 4/24/11 - 4/30/11, the daily facility response rate ranged from 80% to 90% with an average of 86% for the week. These reports resulted in five ED ILI visit blips (Camden, Essex, Hudson, Salem-Cumberland, and Somerset). There was a decrease in ILI activity for the week ending 4/30/11 when compared to the previous week ending 4/23/11 ( $p=0.004$ ). The mean daily percentage of ED visits for ILI during the week ending 4/30/11 was 2%, compared to 2.5% for the previous week. The mean percentage of ED visits due to ILI ranged from 1.7% to 2.6% during 4/24/11 - 4/30/11. The mean percentage of ED visits due to ILI (averaged over the previous four influenza seasons) for this same week (MMWR Week 17) was approximately 4%.

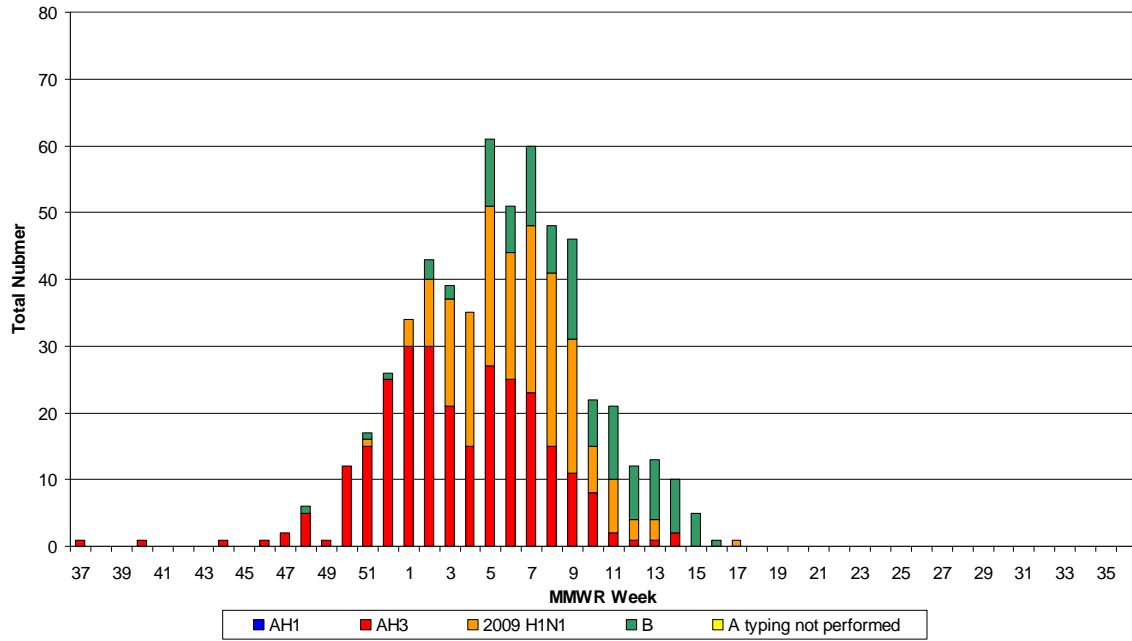
## **Laboratory Surveillance**

As of week 17, 569 samples have been found to be positive by viral culture or PCR for influenza AH1, AH3, novel AH1N1 or influenza B. Please see graphs on next page for weekly distribution of influenza test performed by PCR and rapid antigen tests.

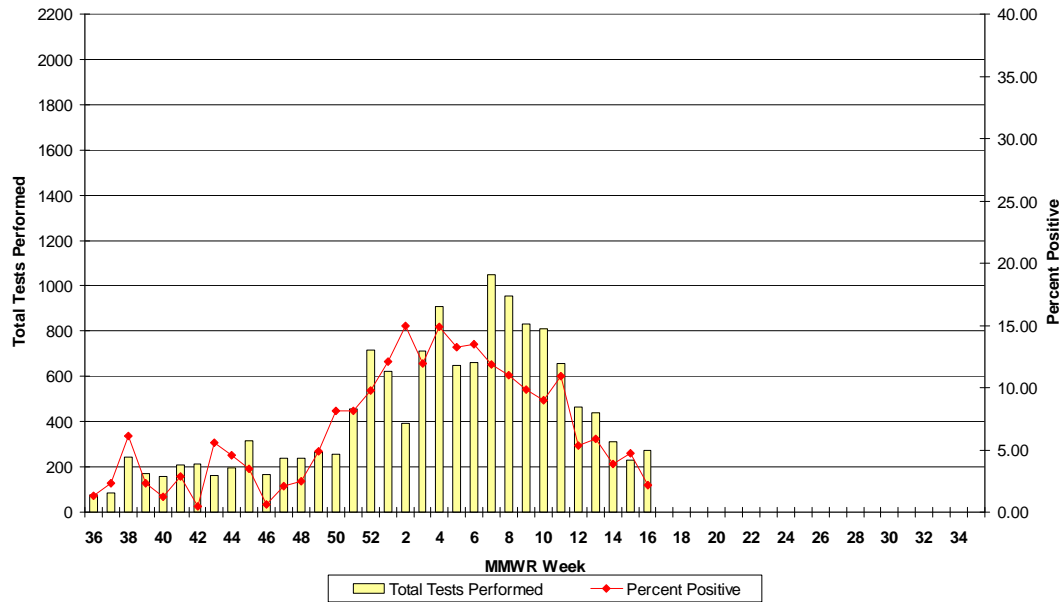
	MMWR Week 40 to present week					MMWR Week 15,16,17				
	A H1	A H3	A (subtyping not done)	B	2009 Influenza A H1N1	A H1	A H3	A (subtyping not done)	B	2009 Influenza A H1N1
Atlantic County	0	26	0	6	7	0	0	0	0	0
Bergen County	0	34	0	8	5	0	0	0	0	0
Burlington County	0	3	0	0	0	0	0	0	0	0
Camden County	0	10	0	1	9	0	0	0	0	0
Cape May County	0	10	0	2	5	0	0	0	0	0
Cumberland County	0	3	0	5	2	0	0	0	1	0
Essex County	0	5	0	5	2	0	0	0	0	0
Gloucester County	0	5	0	5	42	0	0	0	1	0
Hudson County	0	0	0	0	0	0	0	0	0	0
Hunterdon County	0	30	0	5	5	0	0	0	0	0
Mercer County	0	18	0	8	10	0	0	0	0	0
Middlesex County	0	14	0	11	24	0	0	0	1	1
Monmouth County	0	10	0	8	19	0	0	0	0	0
Morris County	0	27	0	11	13	0	0	0	1	0
Ocean County	0	0	0	0	1	0	0	0	0	0
Passaic County	0	9	0	1	1	0	0	0	0	0
Salem County	0	0	0	0	0	0	0	0	0	0
Somerset County	0	8	0	0	0	0	0	0	0	0
Sussex County	0	3	0	0	1	0	0	0	0	0
Union County	0	33	0	10	23	0	0	0	0	0
Warren County	0	26	0	22	18	0	0	0	2	0
Unknown	0	0	0	0	0	0	0	0	0	0
<b>State Total</b>	0	274	0	108	187	0	0	0	6	1

\*Rapid influenza test data is acquired from facilities reporting rapid influenza tests via NREVSS or CDRSS ILI module. Culture/PCR results are obtained from the LIMS system at PHEL. The county of the facility reporting is utilized to report the laboratory findings.

**Influenza Laboratory Report  
Positive Specimens by PCR and Culture by Week  
2010-2011 Influenza Season**



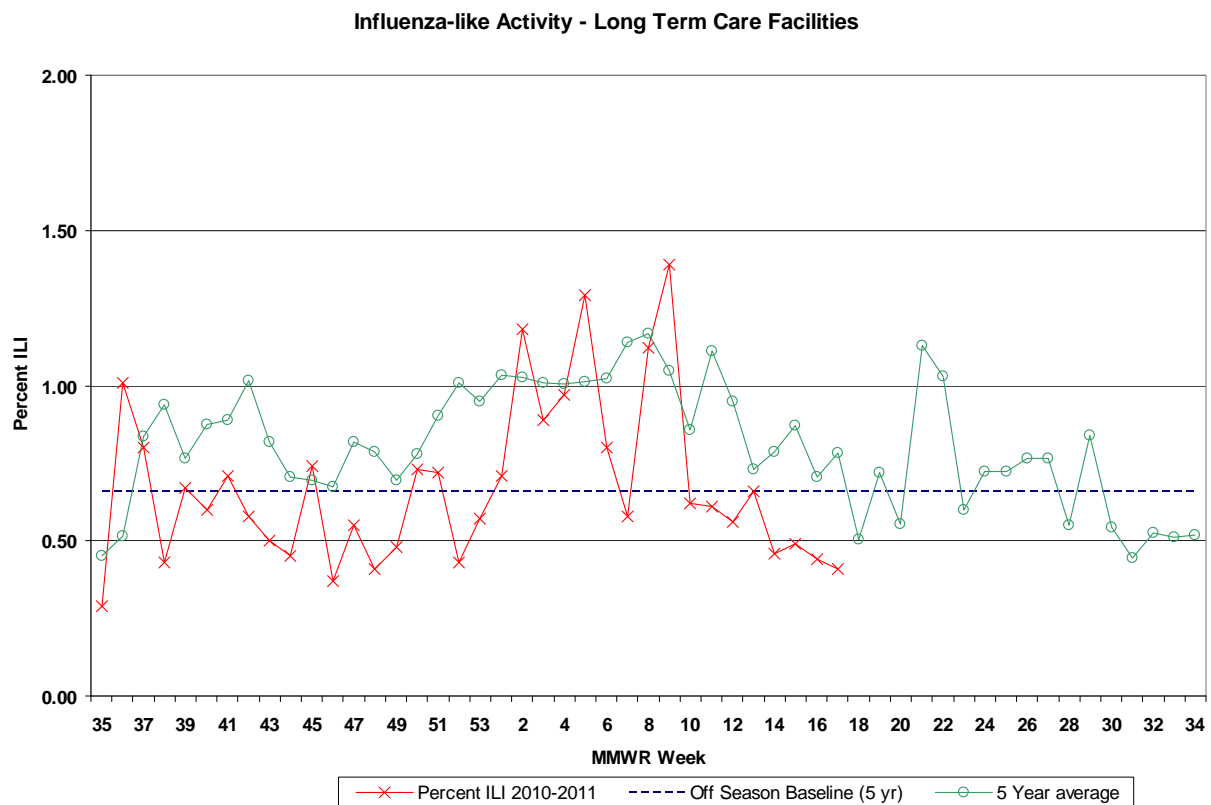
**Influenza Rapid Antigen Tests  
Total and Percent Positive  
2010-2011 Influenza Season**



## Influenza-like Illness (ILI) Surveillance\*

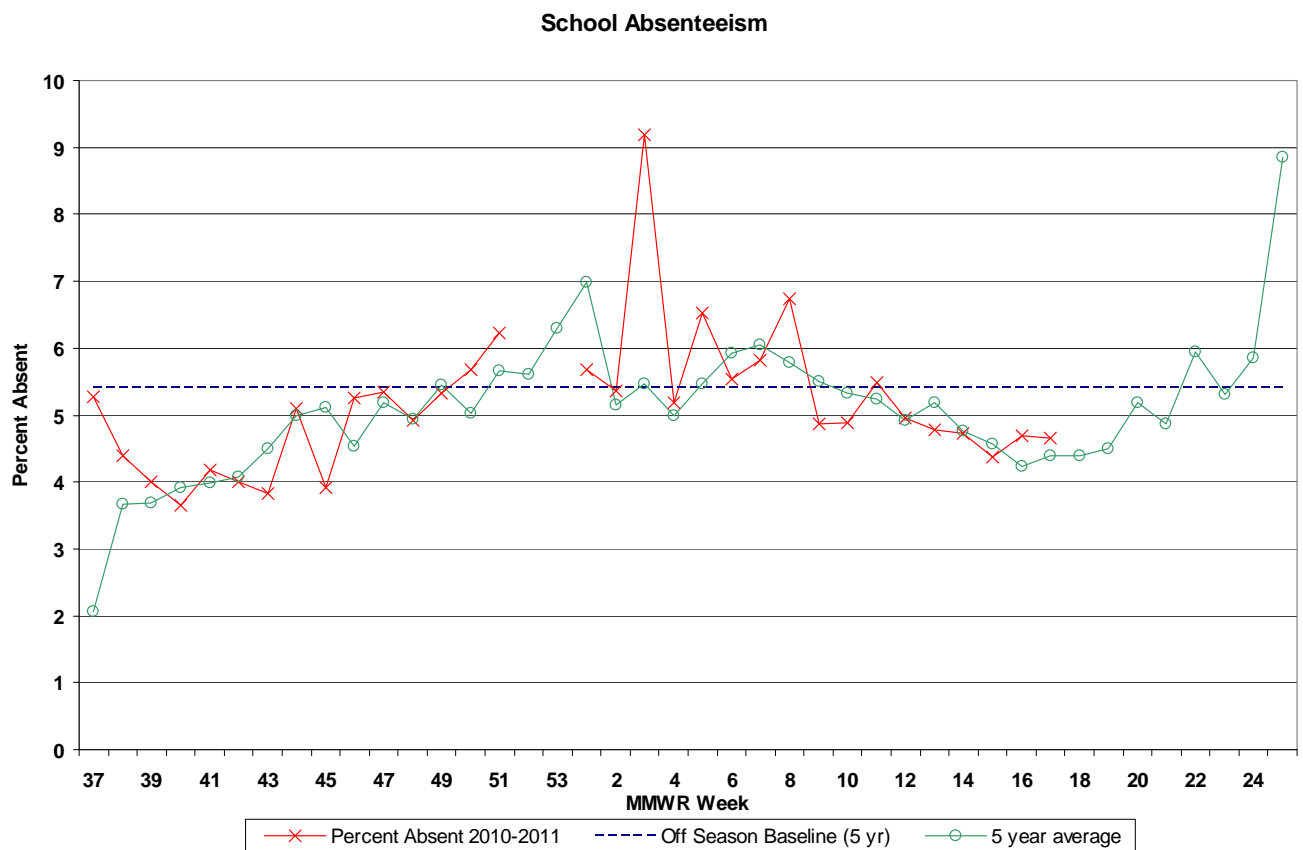
### Long-term Care Facilities

During week 17, 0.41% ILI was reported statewide from long term care facilities. This is a decrease compared to the previous week (0.44%). The percent ILI for each county ranged from 0.00% to 2.70%. The percent ILI for this same week last year was 0.58% in long-term care facilities. The percent ILI for the northwest (1.24%) public health region was above the state baseline (0.66%). No new reports of respiratory outbreaks in an institutional setting were received in week 17.



## School Absenteeism

During week 17, schools reported 4.65% absenteeism. This is a decrease compared to the previous week (4.69%). The percent absenteeism for each county ranged from 2.78 to 7.61%. The percent absent for this same week last year was 4.39%. The percent absenteeism for the central west (5.89%) public health region was found to be above the state baseline (5.42%).

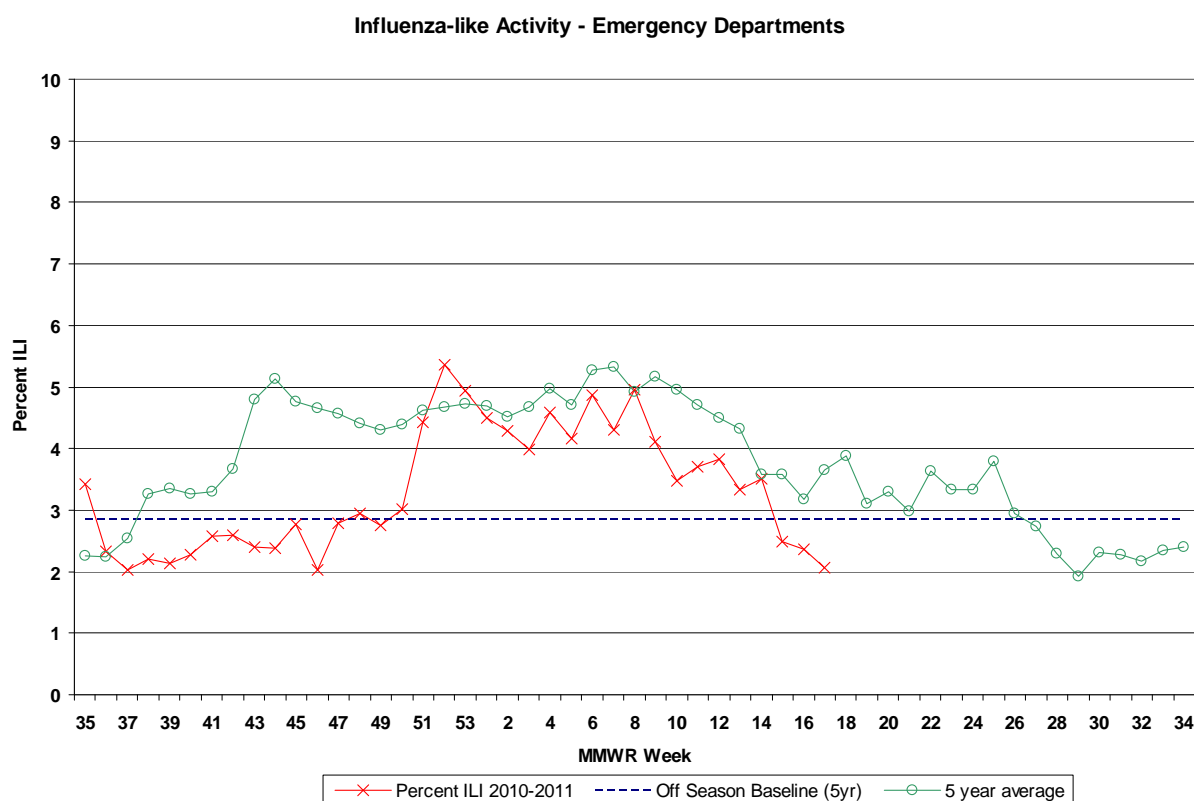




## Emergency Departments

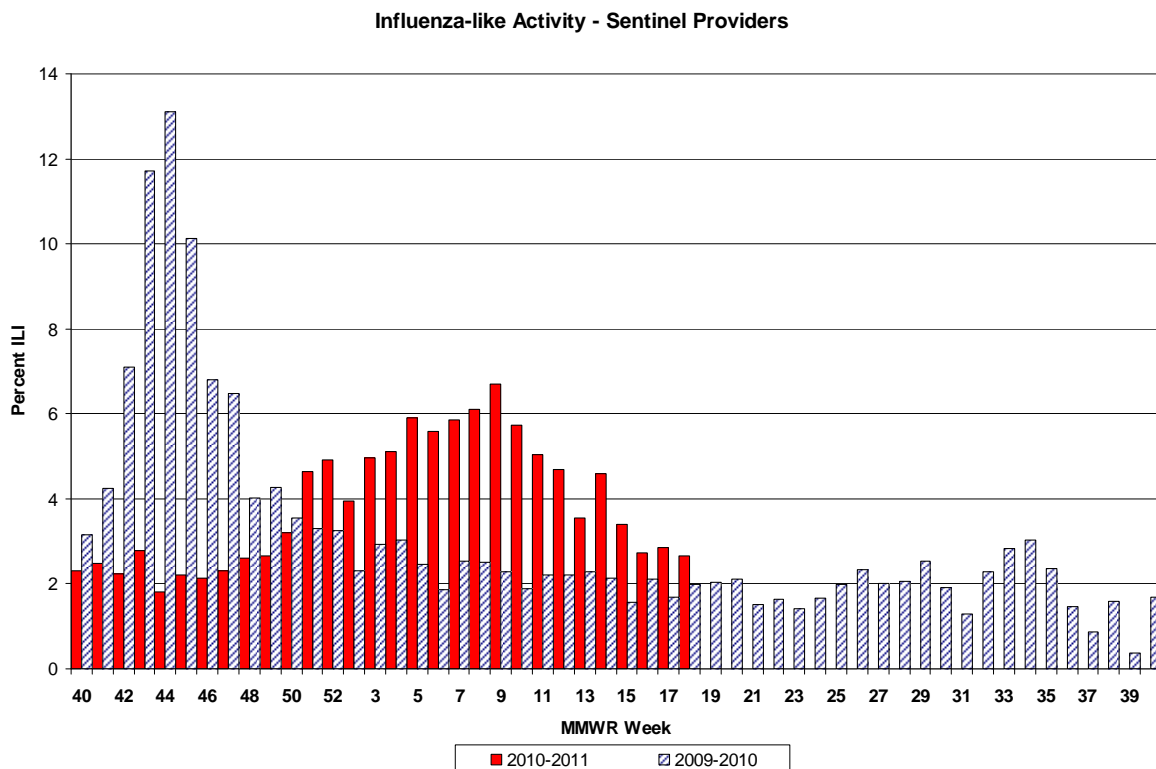
**NOTE:** Data presented below is from daily ED data extracted from Hippocrates survey responses of EpiCenter on the Tuesday of each week. Because this data only represents one day of data, it is likely less accurate for detecting true trends than the syndromic data presented above.

During week 17, 2.07% of ILI was reported statewide from emergency departments. This is a decrease compared to the previous week (2.37%). The percent ILI for each county ranged from 0.00 to 8.06%. The percent ILI for this same week last year was 3.04% in emergency departments. The percent ILI for the central east (3.09%) public health region was found to be above the state baseline (2.84%).



## **Sentinel Provider Surveillance**

During week 17, 2.66% of sentinel provider patient visits were due to ILI. These data reflect reports from eight (11%) of the 70 enrolled sentinel providers. Sentinel provider patient visits due to ILI in week 16 was 2.85%. These data reflect reports from seventeen (24%) of the 70 enrolled sentinel providers. The 5-year average of sentinel provider patient visits due to ILI is 2.53%.



## **Pediatric Influenza Surveillance**

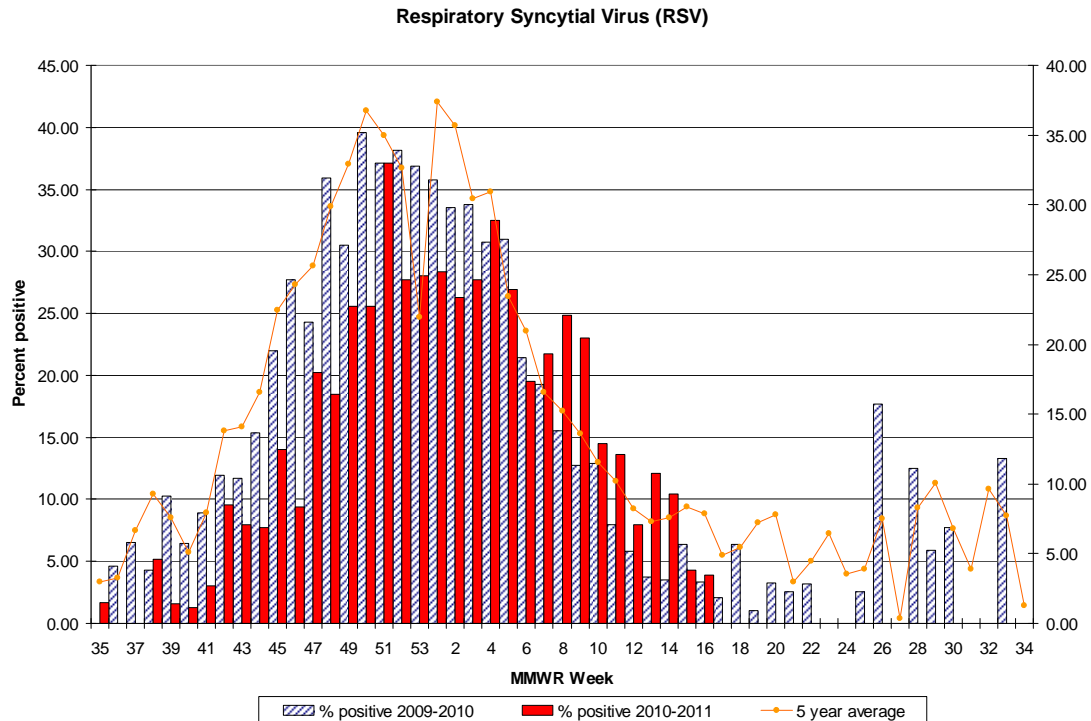
To date, NJDHSS has received 49 reports of pediatric influenza meeting the case definition.

## **122 City Mortality Report**

During week 16, 6.32% of all deaths reported by the vital statistics offices in 6 New Jersey cities (i.e., Camden, Elizabeth, Jersey City, Newark, Paterson, Trenton) were due to pneumonia or influenza. This is an increase compared to the previous week (4.38%). The percentage of death due to pneumonia or influenza for this same week last year was 4.46%.

## **RSV Reports**

During week 16, 3.94% of all RSV samples tested were positive. This is a decrease from the previous week 4.31%. The percent of samples positive for RSV for this same week last year was 3.36%.



## **Additional Information**

For additional information regarding influenza surveillance please visit the following websites.

<http://nj.gov/health/flu/surveillance.shtml>

<http://www.cdc.gov/flu/>

### **Technical notes:**

- Baseline is calculated by taking the average of statewide percentages of ILI for a 5 year (2006, 2007, 2008, 2009, 2010) period during months when influenza is less likely to be circulating (May-August). MMWR week 53 occurred in the 2008-2009 influenza season only, for seasons occurring 2005-2008 an average of the two weeks adjoining week 53 were used.
- Five year average is an average of the 2005-2006, 2006-2007, 2007-2008, 2008-2009, 2009-2010 influenza seasons.

	Long Term Care			Schools			Hospital Emergency Department		
County	# Enrolled	# Reports Rec'd	% ILI	# Enrolled	# Reports Rec'd	% Absent	# Enrolled	# Reports Rec'd	% ILI
<b>April, 26, 2011 12:00 AM MMRW WEEK 17</b>									
ATLANTIC	4	2	0.00	19	0	0.00	5	4	1.05
BERGEN	3	1	0.00	35	11	4.05	5	5	1.76
BURLINGTON	6	2	0.00	115	48	4.64	3	3	1.05
CAMDEN	5	0	0.00	17	0	0.00	7	5	1.54
CAPE MAY	6	4	0.00	11	8	6.03	1	1	8.06
CUMBERLAND	6	2	1.13	18	0	0.00	3	3	0.31
ESSEX	25	4	0.23	46	6	3.59	11	8	2.32
GLOUCESTER	5	1	0.00	6	0	0.00	2	1	1.52
HUDSON	13	1	0.00	127	53	5.19	6	6	2.40
HUNTERDON	4	4	0.00	8	8	2.78	1	1	0.00
MERCER	11	1	2.70	26	17	4.01	5	5	2.03
MIDDLESEX	2	0	0.00	136	0	0.00	5	5	4.37
MONMOUTH	14	2	0.00	24	13	5.90	5	5	1.25
MORRIS	4	0	0.00	5	0	0.00	4	4	0.52
OCEAN	7	1	0.00	80	4	5.87	4	4	5.28
PASSAIC	9	2	1.19	31	10	3.86	3	2	0.00
SALEM	4	1	0.00	19	0	0.00	1	0	0.00
SOMERSET	6	4	0.45	85	19	2.98	2	0	0.00
SUSSEX	5	4	1.63	22	14	4.73	2	1	0.00
UNION	4	2	0.00	195	0	0.00	5	4	0.57
WARREN	8	3	0.81	36	12	7.61	2	1	1.94
<b>NW Region</b>	26	9	1.24	94	36	5.10	11	8	0.42
<b>NE Region</b>	41	6	0.11	208	70	4.96	22	19	2.18
<b>CW Region</b>	21	9	0.51	119	44	3.38	8	6	1.77
<b>CE Region</b>	27	5	0.00	435	17	5.89	19	18	3.09
<b>South Region</b>	36	12	0.33	205	56	4.89	22	17	1.53
<b>State Total</b>	<b>151</b>	<b>41</b>	<b>0.41</b>	<b>1061</b>	<b>223</b>	<b>4.65</b>	<b>82</b>	<b>68</b>	<b>2.07</b>

	RSV Tests		Flu Tests		
County	# Positive	Total Tests Performed	# Positive	Total Tests Performed	
April, 26, 2011 12:00 AM MMRW WEEK 17					
ATLANTIC	0	0	0	0	
BERGEN	0	26	1	29	
BURLINGTON	0	15	2	26	
CAMDEN	0	12	0	0	
CAPE MAY	0	2	0	3	
CUMBERLAND	3	21	0	0	
ESSEX	0	30	0	69	
GLOUCESTER	0	0	0	0	
HUDSON	2	13	0	0	
HUNTERDON	0	4	1	26	
MERCER	1	28	0	0	
MIDDLESEX	0	0	0	0	
MONMOUTH	1	35	1	77	
MORRIS	0	0	1	14	
OCEAN	0	0	0	0	
PASSAIC	0	0	0	0	
SALEM	0	0	0	0	
SOMERSET	0	0	0	0	
SUSSEX	0	5	0	11	
UNION	0	8	0	8	
WARREN	1	4	0	10	
NW Region	1	9	1	35	
NE Region	2	69	1	98	
CW Region	1	32	1	26	
CE Region	1	43	1	85	
South Region	3	50	2	29	
State Total	8	203	6	273	