New Jersey Department of Health and Senior Services
Communicable Disease Service
Influenza Activity Summary
Week Ending February 12, 2011 (MMWR Week 6)

Influenza Activity Level: REGIONAL

Interpretation: Nine counties, two in the northwest, one in the northeast, two in the central east and four in the south public health region, experienced increases in ILI activity and 4 counties experienced outbreaks in long term care facilities. A total of seven counties have had increases in ILI activity, lab confirmed influenza and/or outbreaks in long term care facilities decreasing the state activity level to regional. NJ has experienced local activity during this same week in the 2009-2010 season and during the 2008-2009 influenza 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

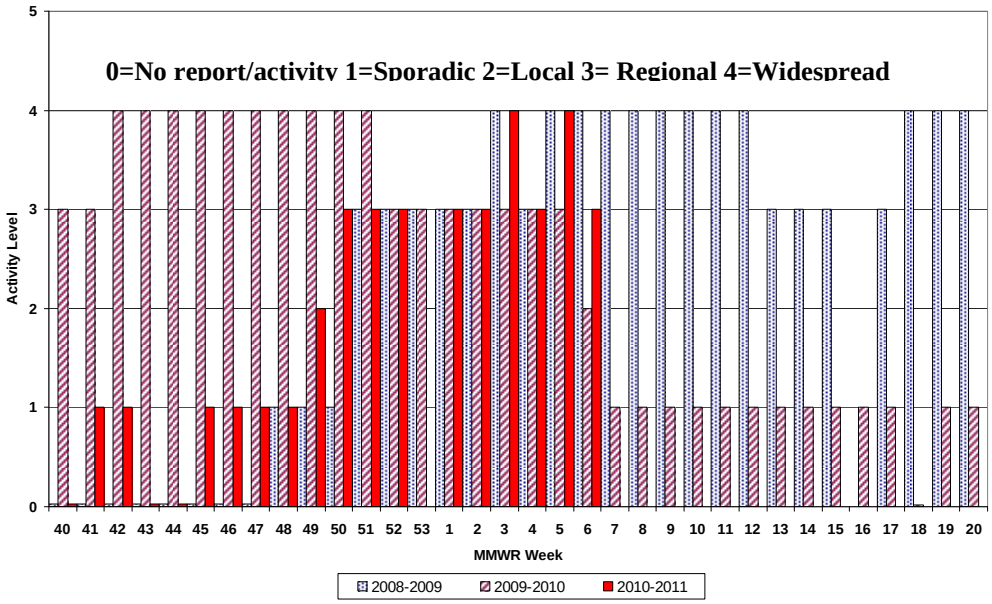
Local: Increases in ILI activity detected in a single county **AND** laboratory-confirmed cases from that same county within the previous 3 weeks **OR** confirmed outbreaks in 2 or more institutions in a single county

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

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

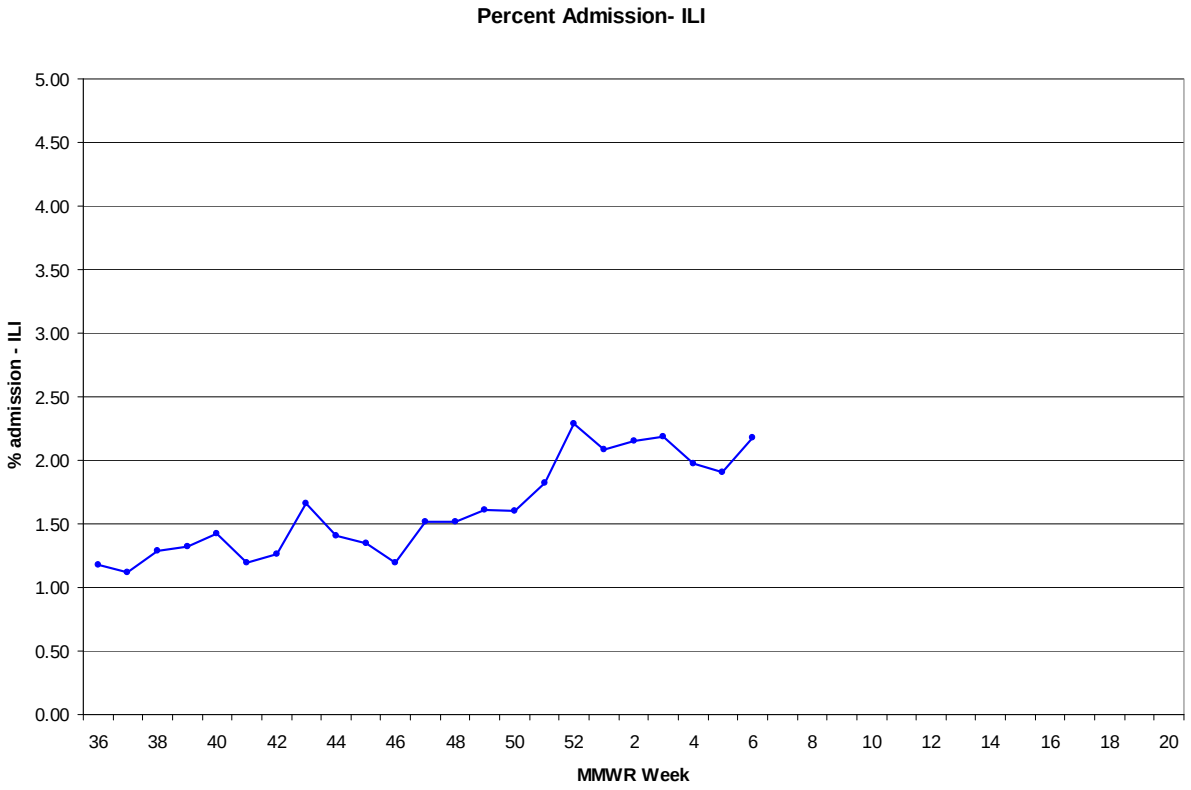
No Activity- No increase in ILI activity detected **AND** no laboratory-confirmed cases in the public health region
Sporadic – No increase in ILI activity detected **AND** laboratory-confirmed cases anywhere in the public health region **OR** at least one laboratory confirmed outbreak in an institution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

NJ Influenza-Associated Hospitalizations and Deaths by Current MMWR week and Cumulative Total -Week 40 (2010) to present		
	Hospitalizations**	**Deaths**
Week 6	270	0
Cumulative	3690	3

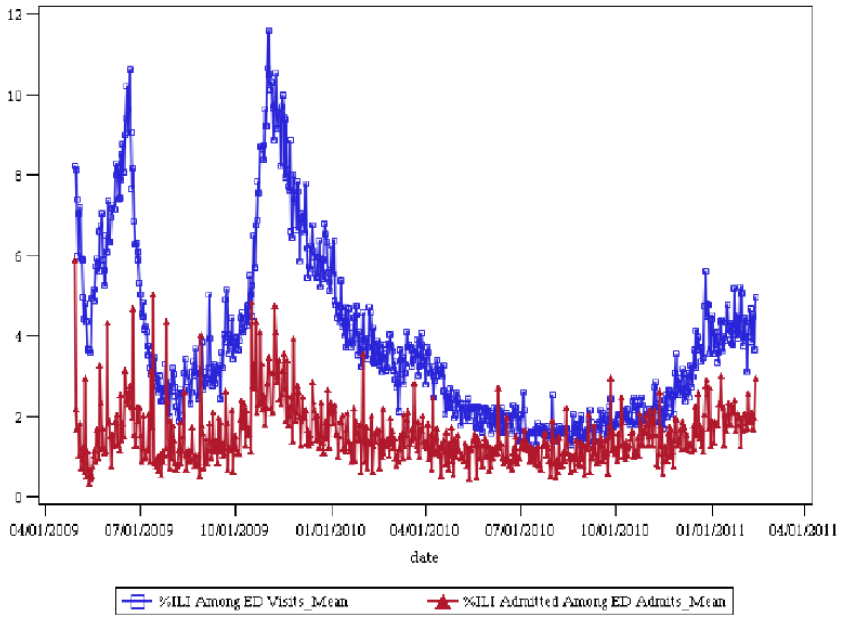
**Data represents both laboratory confirmed and syndromic illness. This number represents almost all acute care facilities in NJ and is not longer a subset. This reporting differs from information previously published during the 2009-2010 season and cannot be compared.



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

Daily surveillance for ED visits and admissions from 76 of 78 acute care facilities resulted in 10 ED visit blips (three in Hudson; two in each, Monmouth and Ocean; one in each, Camden, Middlesex, and Newark) and 10 admission blips (three in Hudson; two in each, Bergen, Morris, and Salem-Cumberland; one in Essex) from 2/6/11 to 2/12/11. Seven visit and eight admission blip responses were received and none was ILI-related.

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

During 2/6/11 - 2/12/11, 76 of 78 acute care facilities reported an aggregate total of 3070 ED visits due to ILI (5% of total ED visits) and an aggregate total of 270 admissions due to ILI (9% of total ILI ED visits). These reports resulted in 16 ED ILI visit blips (three in Bergen; two in each, Burlington and Union; one in each, Atlantic, Camden, Essex, Hudson, Mercer, Middlesex, Monmouth, Morris, and Salem-Cumberland). There was no significant change in ILI activity for the week ending 2/12/11 when compared to the previous week ending 2/5/11 (p= 0.23). The mean daily percentage of ED visits for ILI during the week ending 2/12/11 was 4.4%, compared to 4.1% for the previous week. The mean percentage of ED visits due to ILI ranged from 3.7% to 5% during 2/6/11 - 2/12/11. The mean percentage of ED visits due to ILI (averaged over the previous four influenza seasons) for this same week (MMWR Week 6) was approximately 5%

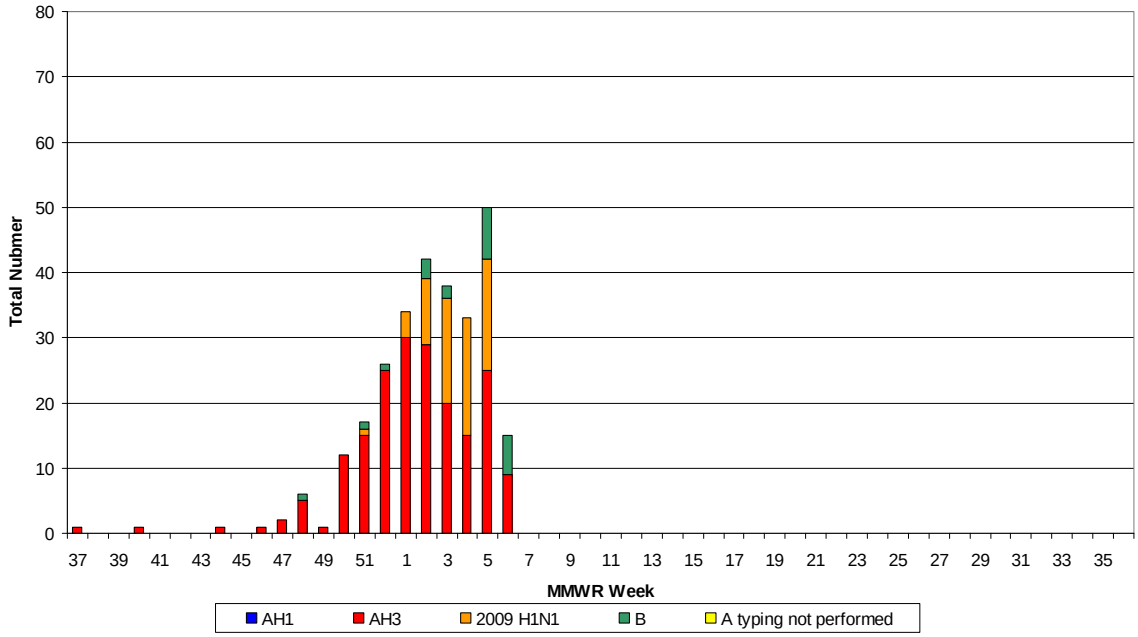
Laboratory Surveillance

As of week 6, 280 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.

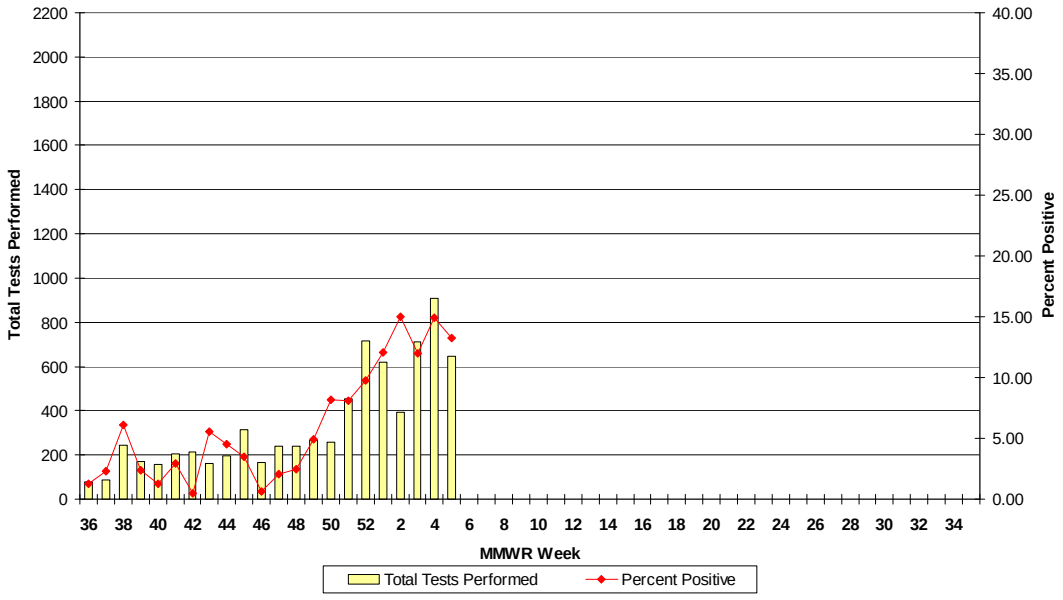
	MMWR Week 40 to present week					MMWR Week 4, 5, 6				
	A H1	**A H3**	**A (subtyping not done)**	**B**	**2009 Influenza A H1N1**	**A H1**	**A H3**	**A (subtyping not done)**	**B**	**2009 Influenza A H1N1**
Atlantic County	0	23	0	3	0	0	5	0	1	0
Bergen County	0	26	0	2	3	0	5	0	0	0
Burlington County	0	1	0	0	0	0	0	0	0	0
Camden County	0	8	0	0	5	0	3	0	0	4
Cape May County	0	4	0	1	1	0	4	0	1	1
Cumberland County	0	2	0	1	1	0	2	0	1	0
Essex County	0	4	0	2	0	0	3	0	2	0
Gloucester County	0	3	0	0	21	0	2	0	0	17
Hudson County	0	0	0	0	0	0	0	0	0	0
Hunterdon County	0	19	0	0	1	0	5	0	0	0
Mercer County	0	11	0	4	4	0	2	0	3	3
Middlesex County	0	8	0	1	7	0	3	0	1	2
Monmouth County	0	4	0	2	5	0	2	0	2	1
Morris County	0	22	0	0	3	0	3	0	0	0
Ocean County	0	0	0	0	0	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	4	0	0	0	0	4	0	0	0
Sussex County	0	2	0	0	0	0	0	0	0	0
Union County	0	27	0	4	12	0	4	0	2	6
Warren County	0	15	0	1	2	0	2	0	1	1
Unknown	0	0	0	0	0	0	0	0	0	0
State Total	0	192	0	22	66	0	49	0	14	35

*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



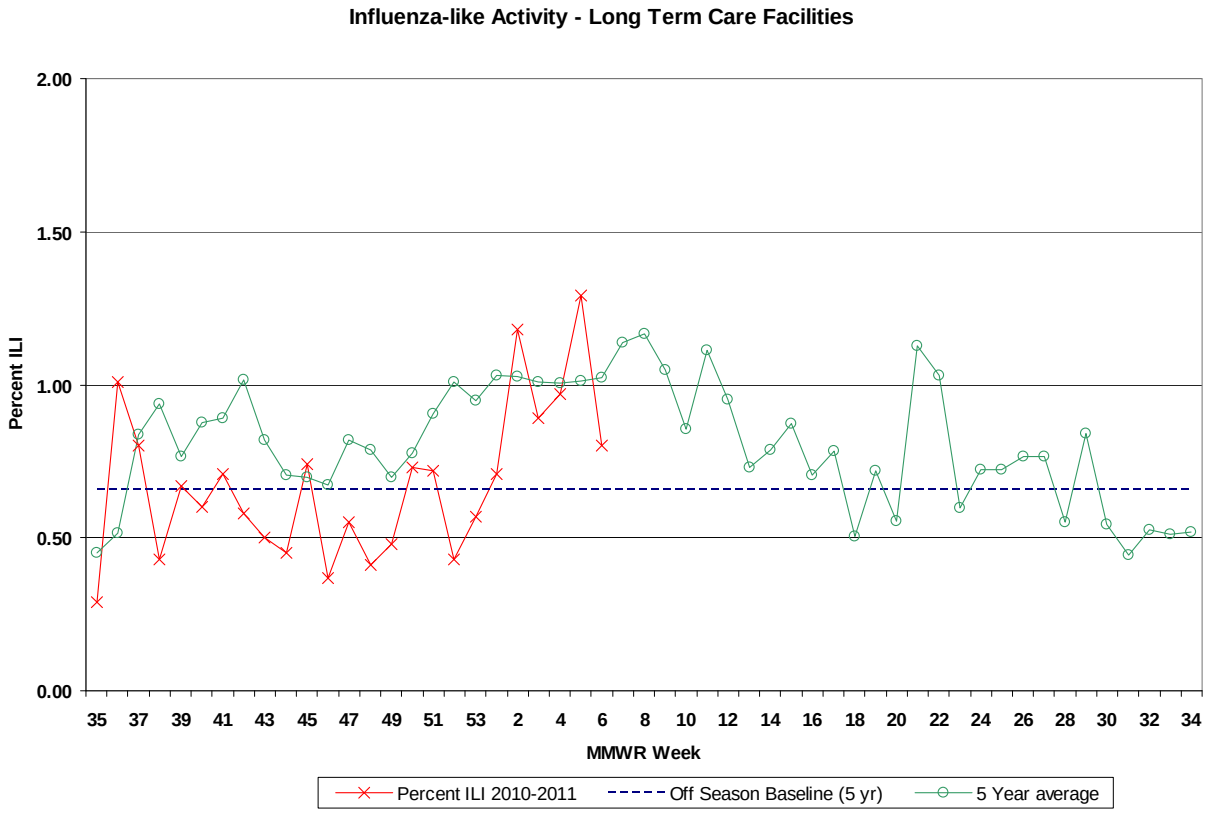
Influenza Rapid Antigen Tests
Total and Percent Positive
2010-2011 Influenza Season



Influenza-like Illness (ILI) Surveillance*

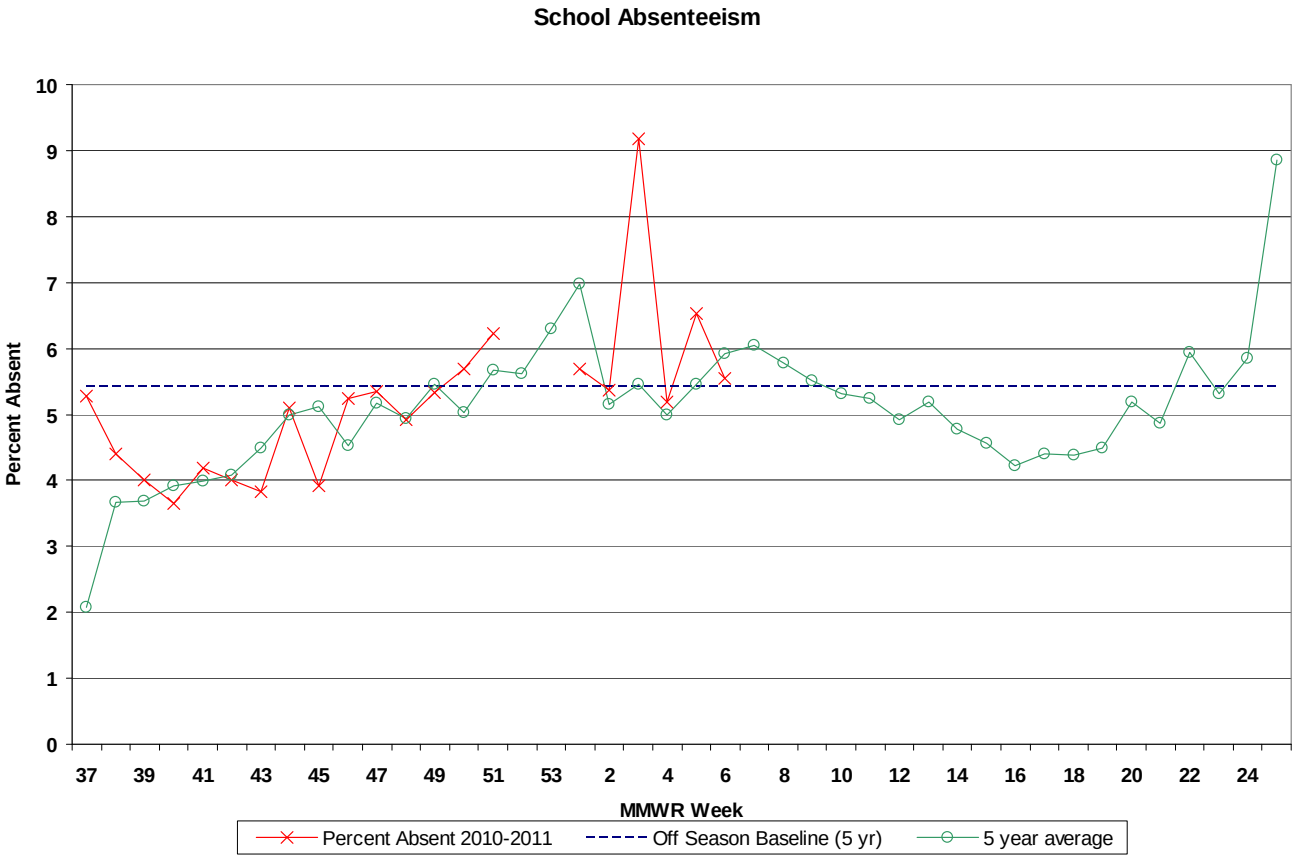
Long-term Care Facilities

During week 6, 0.80% ILI was reported statewide from long term care facilities. This is a decrease compared to the previous week (1.29%). The percent ILI for each county ranged from 0.00% to 2.85%. The percent ILI for this same week last year was 0.70% in long-term care facilities. The percent ILI for the northwest (0.77%), central west (0.82%) and south (1.31%) public health regions were above the state baseline (0.66%). Seven new reports of respiratory outbreaks in an institutional setting were received in week 6.



School Absenteeism

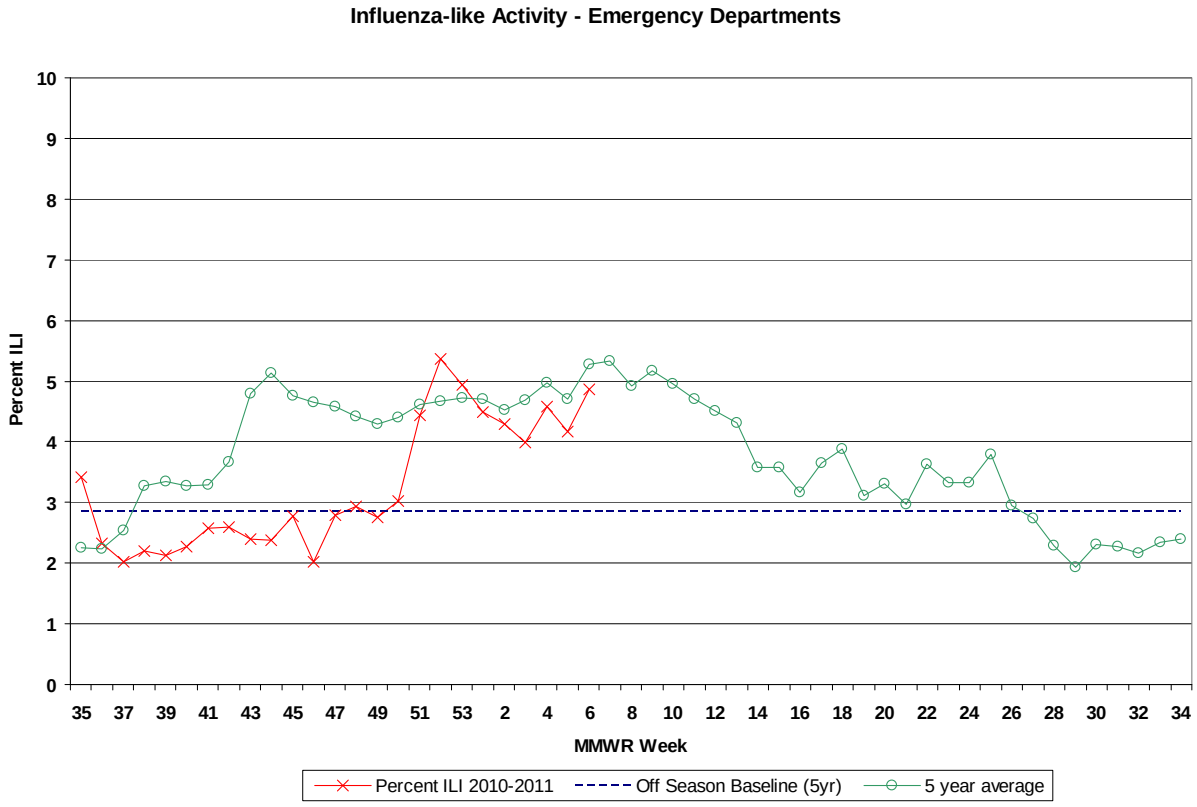
During week 6, schools reported 5.54% absenteeism. This is a decrease compared to the previous week (6.53%). The percent absenteeism for each county ranged from 3.39 to 8.39%. The percent absent for this same week last year was 5.21%. The percent absenteeism for the northeast (5.63%), central east (7.08%) and south (6.00%) public health regions were 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 6, 4.87% of ILI was reported statewide from emergency departments. This is an increase compared to the previous week (4.17%). The percent ILI for each county ranged from 0.00 to 25.66%. The percent ILI for this same week last year was 3.73% in emergency departments. The percent ILI for the northeast (5.01%), central west (5.73%), central east (6.50%) and south (3.99%) public health regions were found to be above the state baseline (2.84%).



Sentinel Provider Surveillance

During week 6, 5.00% of sentinel provider patient visits were due to ILI. These data reflect reports from nine (13%) of the 70 enrolled sentinel providers. Sentinel provider patient visits due to ILI in week 5 was 5.88%. These data reflect reports from twenty-one (30%) of the 70 enrolled sentinel providers. The 5-year average of sentinel provider patient visits due to ILI is 2.53%.
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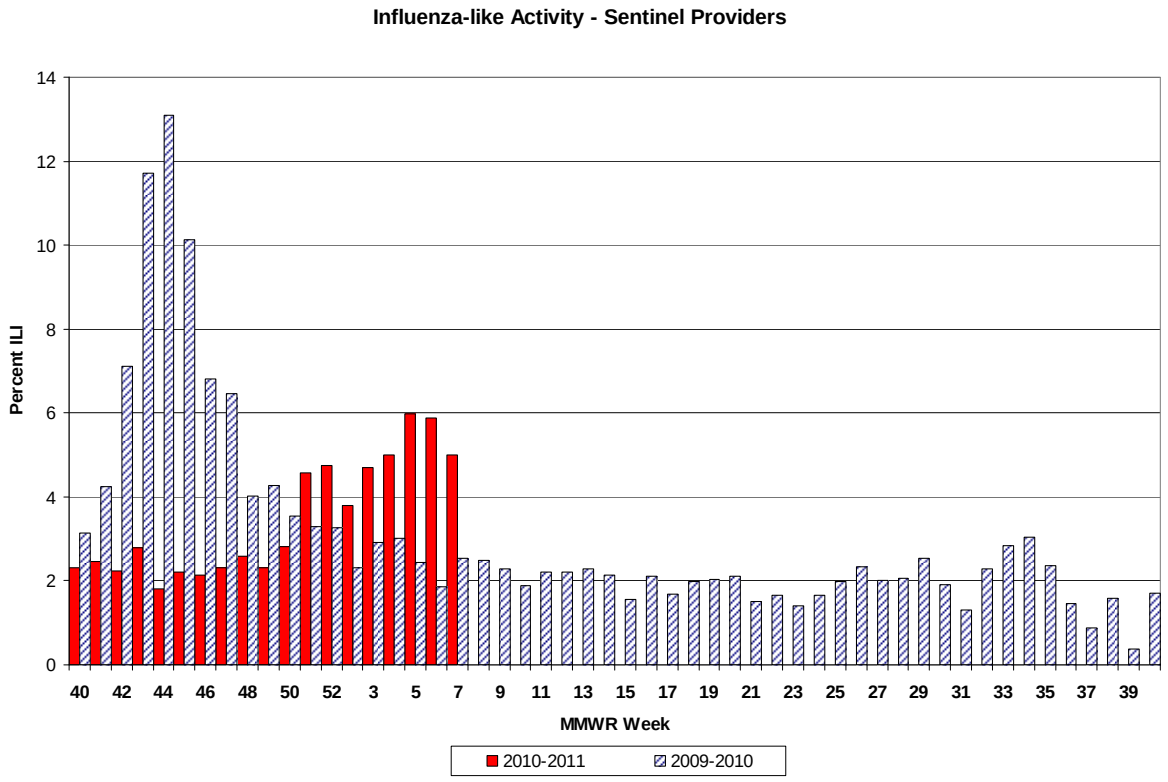


Pediatric Influenza Surveillance

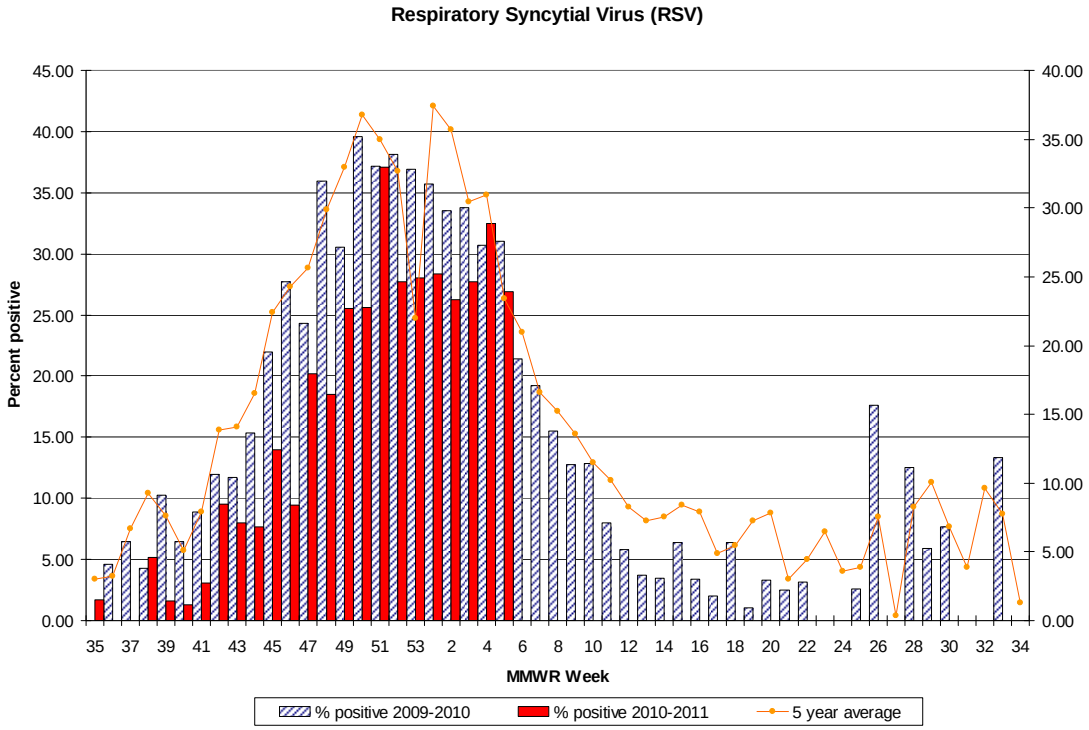
To date, NJDHSS has received 31 reports of pediatric influenza meeting the case definition.

122 City Mortality Report

During week 5, 5.45% 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 a decrease compared to the previous week (5.93%). The percentage of death due to pneumonia or influenza for this same week last year was 4.71%.

RSV Reports

During week 5, 26.94% of all RSV samples tested were positive. This is a decrease from the previous week 32.50%. The percent of samples positive for RSV for this same week last year was 30.99%.



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.