

New Jersey Department of Health and Senior Services
Communicable Disease Service
Influenza Activity Summary
Week Ending December 18, 2010 (MMWR Week 50)

Influenza Activity Level: **REGIONAL**

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

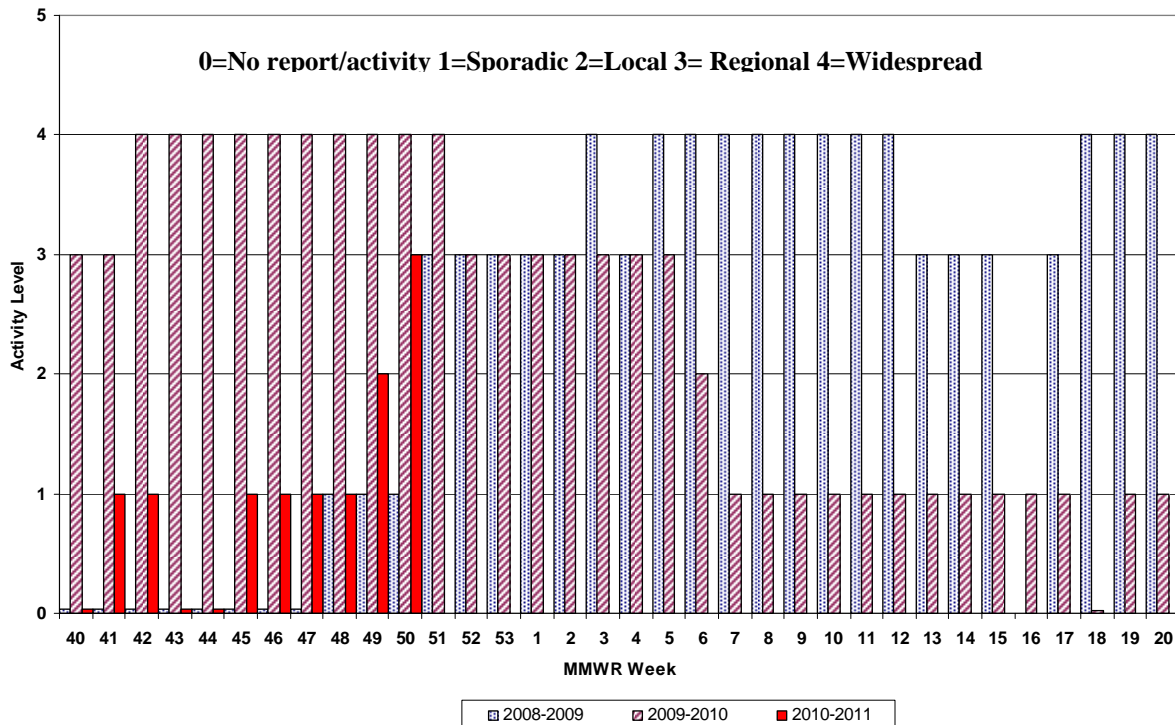
Local: Increases in ILI activity detected in a single county AND laboratory-confirmed cases from that same county within the previous 3 weeks **OR** confirmed outbreaks in 2 or more institutions in a single county

Regional: Increases in ILI activity detected in ≥ 2 but ≤ 10 counties AND laboratory confirmed cases from these same counties in the past 3 weeks **OR** confirmed outbreaks institutions in ≥ 2 but ≤ 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	SPORADIC
NE Region	Bergen, Essex, Hudson	SPORADIC
CW Region	Hunterdon, Mercer, Somerset	LOCAL
CE Region	Middlesex, Monmouth, Ocean, Union	SPORADIC
South Region	Atlantic, Burlington, Camden, Cape May, Salem, Cumberland, Gloucester	LOCAL

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

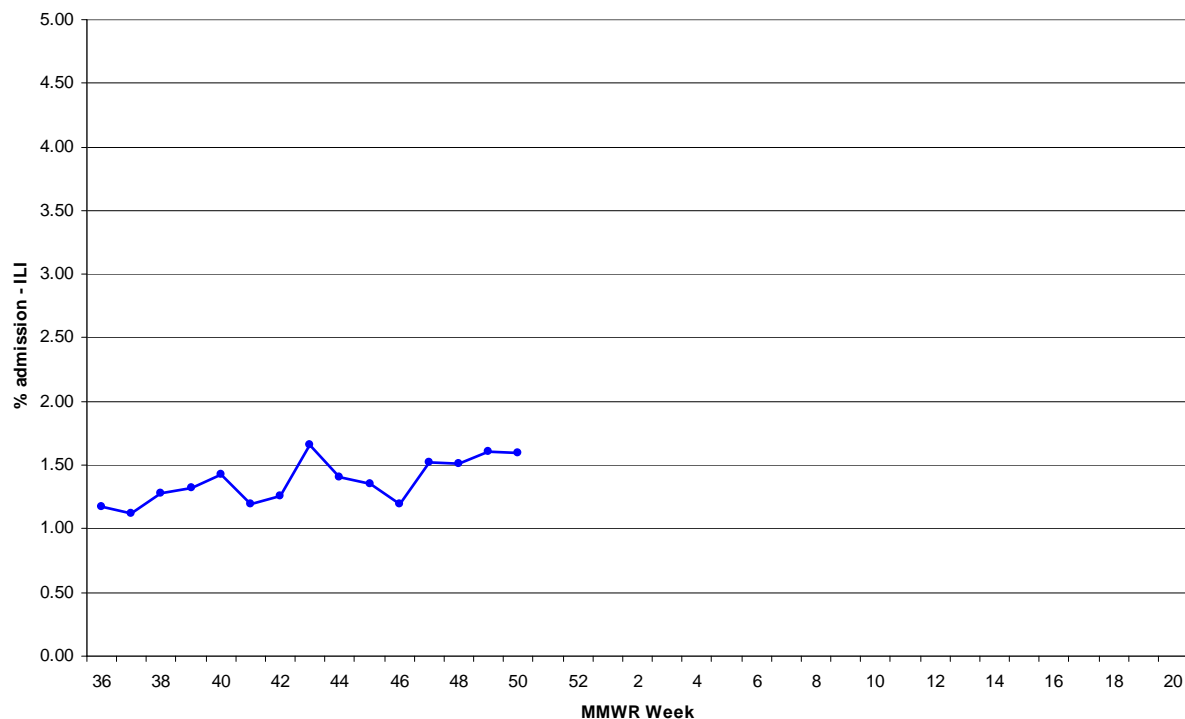
Influenza Hospitalizations/Deaths

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 50	185	0
Cumulative	1745	0

**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.

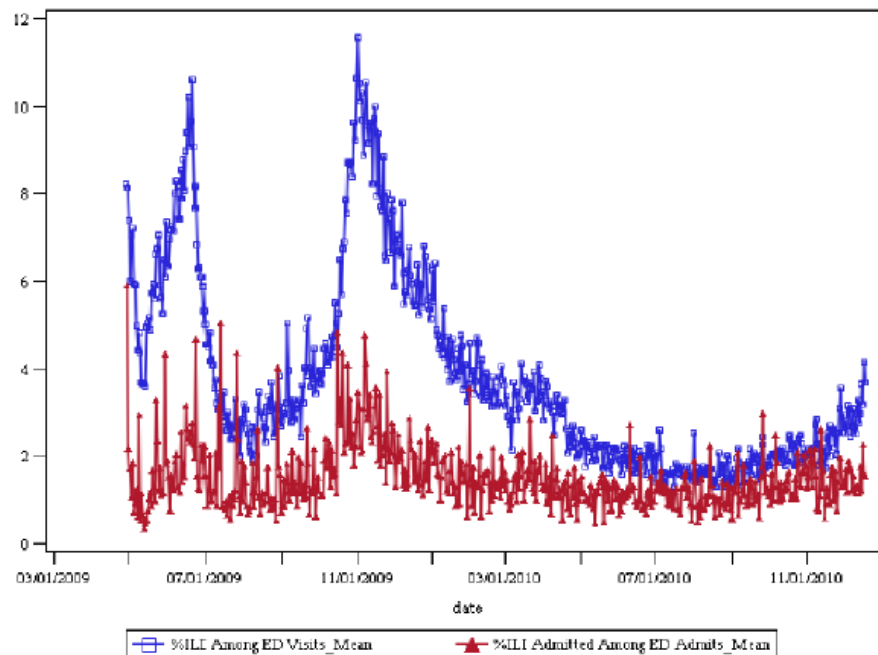
Percent Admission- ILI



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

Daily surveillance for ED visits and admissions from 75 of 78 acute care facilities resulted in four ED visit blips (two in Camden; one in each, Hudson and Union) and three ED admission blips (Bergen, Middlesex, and Monmouth) from 12/12/10 to 12/18/10. One visit and two admission blip responses were received. The visit blip in Hudson was ILI-related.

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

During 12/12/10 - 12/18/10, 75 of 78 acute care facilities reported an aggregate total of 2,164 ED visits due to ILI (4 % of total ED visits) and an aggregate total of 185 admissions due to ILI (9% of total ILI ED visits). These reports resulted in 14 ED ILI visit blips (two in each, Hudson, Mercer, and Ocean; one in each, Burlington, Camden, Essex, Hunterdon, Monmouth, Sussex, Union, and Warren). There was an increase in ILI activity for the week ending 12/18/10 when compared to the previous week ending 12/11/10 ($p = 0.02$). The mean daily percentage of ED visits for ILI during the week ending 12/18/10 was 3.4%, compared to 2.8% for the previous week. The mean percentage of ED visits due to ILI ranged from 2.7% to 4.2% during 12/12/10 - 12/18/10. The mean percentage of ED visits due to ILI (averaged over the previous four influenza seasons) for this same week (MMWR Week 50) was approximately 4.5%.

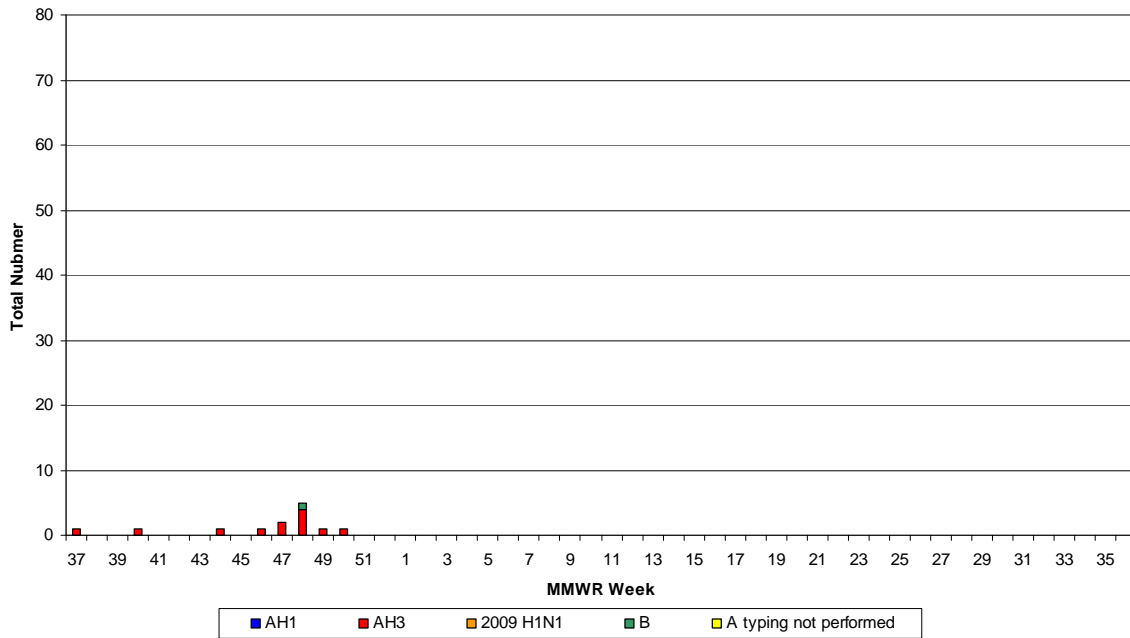
Laboratory Surveillance

As of week 50, twelve 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.

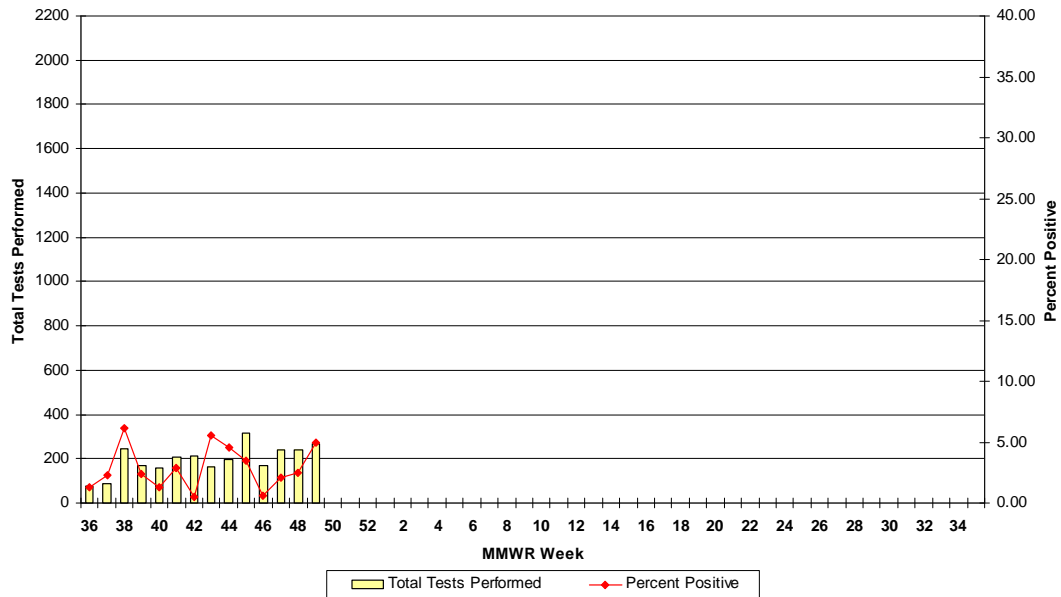
	MMWR Week 40 to present week					MMWR Week 48, 49, 50				
	A H1	A H3	A (subtyping not done)	B	2009 Influenza A H1N1	A H1	A H3	A (subtyping not done)	B	2009 Influenza A H1N1
Atlantic County	0	3	0	0	0	0	2	0	0	0
Bergen County	0	1	0	0	0	0	0	0	0	0
Burlington County	0	0	0	0	0	0	0	0	0	0
Camden County	0	0	0	0	0	0	0	0	0	0
Cape May County	0	0	0	0	0	0	0	0	0	0
Cumberland County	0	0	0	0	0	0	0	0	0	0
Essex County	0	0	0	0	0	0	0	0	0	0
Gloucester County	0	0	0	0	0	0	0	0	0	0
Hudson County	0	0	0	0	0	0	0	0	0	0
Hunterdon County	0	2	0	0	0	0	1	0	0	0
Mercer County	0	1	0	1	0	0	1	0	1	0
Middlesex County	0	1	0	0	0	0	1	0	0	0
Monmouth County	0	0	0	0	0	0	0	0	0	0
Morris County	0	0	0	0	0	0	0	0	0	0
Ocean County	0	0	0	0	0	0	0	0	0	0
Passaic County	0	0	0	0	0	0	0	0	0	0
Salem County	0	0	0	0	0	0	0	0	0	0
Somerset County	0	0	0	0	0	0	0	0	0	0
Sussex County	0	0	0	0	0	0	0	0	0	0
Union County	0	3	0	0	0	0	1	0	0	0
Warren County	0	0	0	0	0	0	0	0	0	0
Unknown	0	0	0	0	0	0	0	0	0	0
State Total	0	11	0	1	0	0	6	0	1	0

*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**



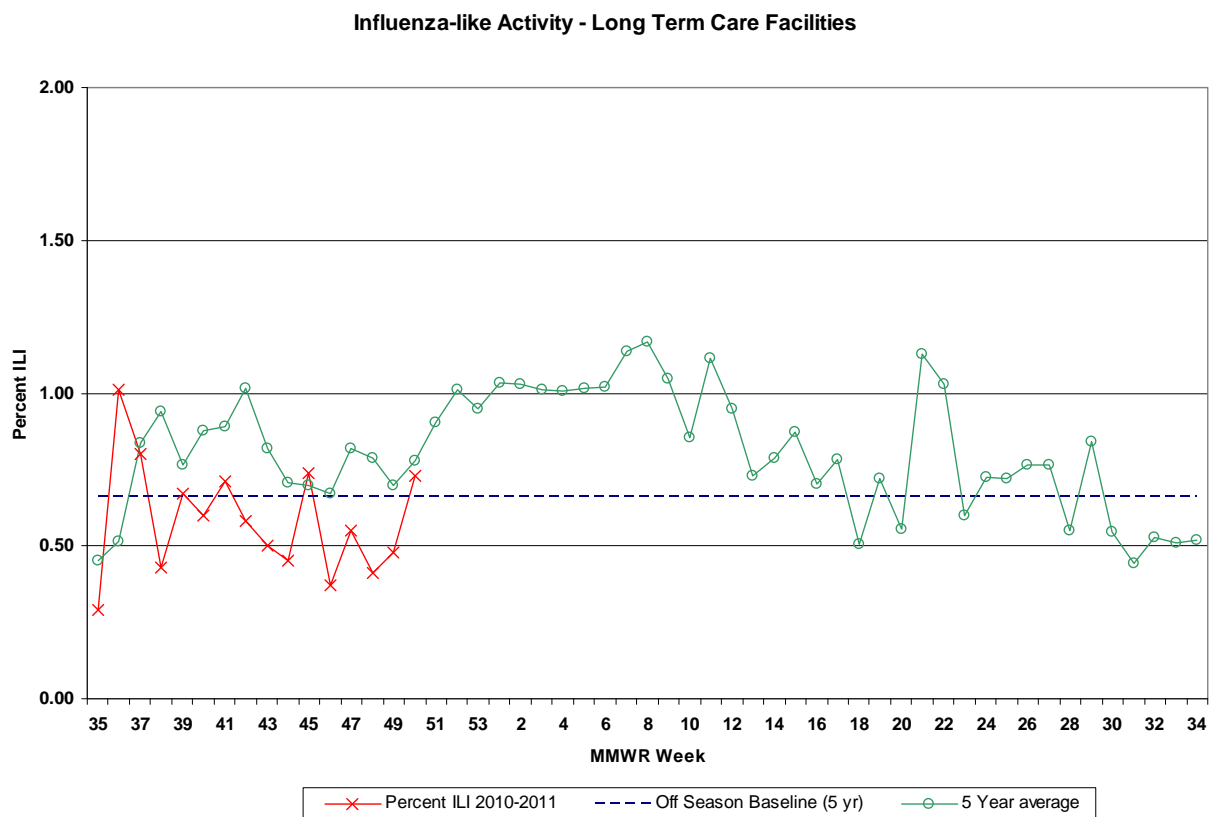
**Influenza Rapid Antigen Tests
Total and Percent Positive
2010-2011 Influenza Season**



Influenza-like Illness (ILI) Surveillance*

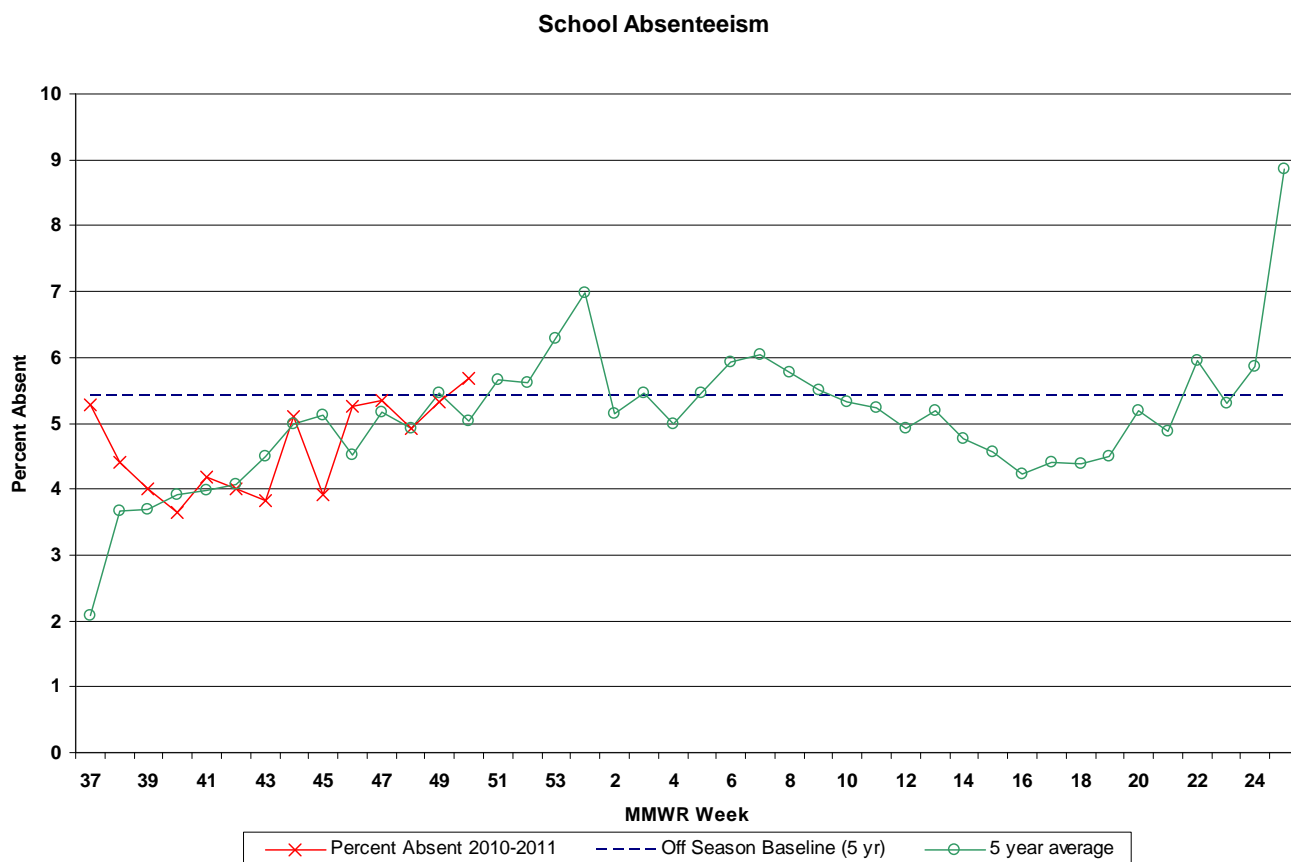
Long-term Care Facilities

During week 50, 0.73% ILI was reported statewide from long term care facilities. This is an increase compared to the previous week (0.48%). The percent ILI for each county ranged from 0.00% to 5.14%. The percent ILI for this same week last year was 0.69% in long-term care facilities. The percent ILI for the northwest (1.43%) and south (0.95%) public health regions were above the state baseline (0.66%). Two new reports of respiratory outbreaks in an institutional setting were received in week 50. One of these outbreaks was confirmed to be influenza AH3.



School Absenteeism

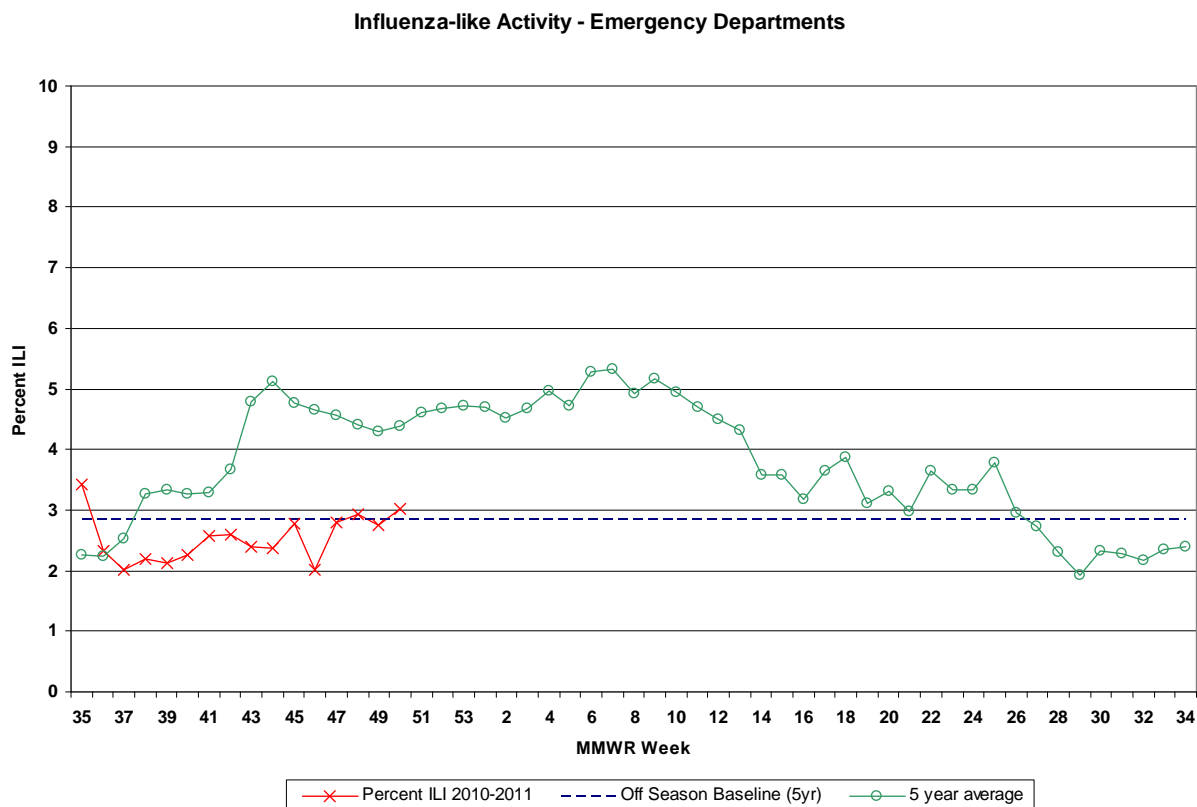
During week 50, schools reported 5.68% absenteeism. This is an increase compared to the previous week 5.33%. The percent absenteeism for each county ranged from 3.63 to 7.22%. The percent absent for this same week last year was 4.68%. The percent ILI for the northeast (6.54%), central east (6.13%) and south (5.51%) public health regions were above the state baseline (5.42%).



Emergency Departments

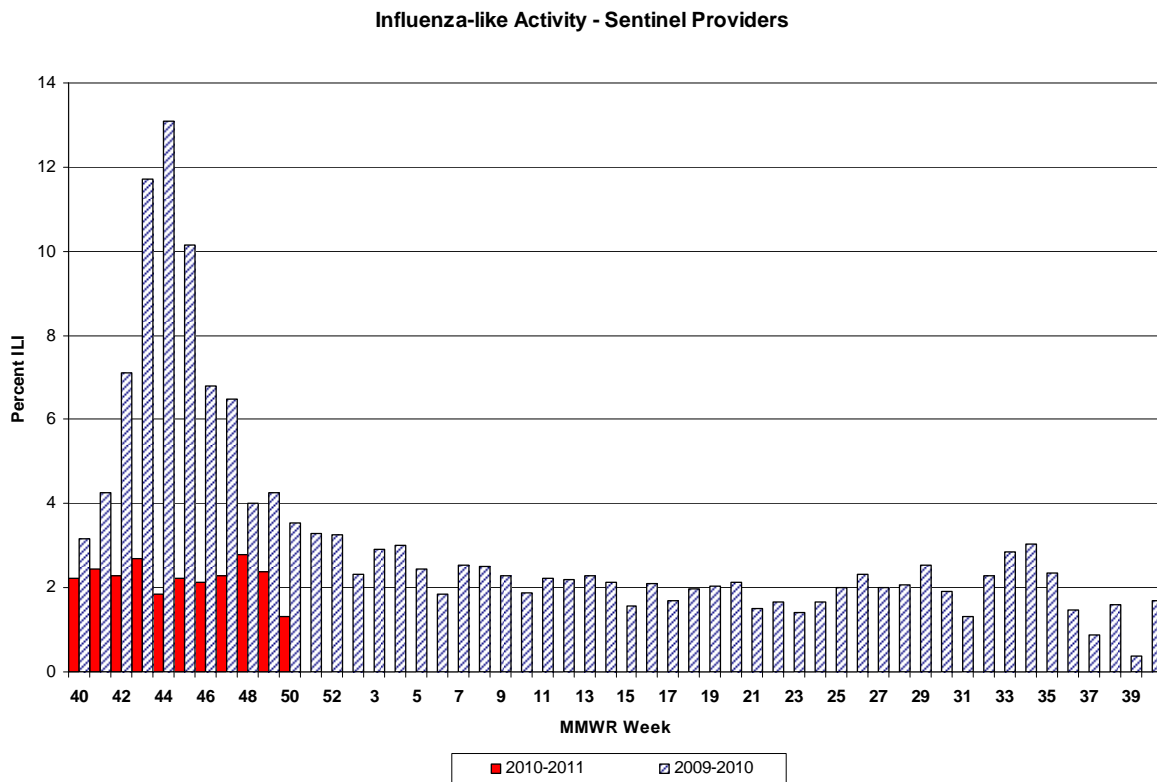
NOTE: Data presented below is from daily ED data extracted from Hippocrates survey responses of EpiCenter on the Tuesday of each week. Because this data only represents one day of data, it is likely less accurate for detecting true trends than the syndromic data presented above.

During week 50, 3.02% of ILI was reported statewide from emergency departments. This is an increase compared to the previous week (2.76%). The percent ILI for each county ranged from 0.00 to 10.71%. The percent ILI for this same week last year was 6.14% in emergency departments. The percent ILI for the northeast (3.56%), central west (3.03%) and central east (4.01%) public health regions were found to be above the state baseline (2.84%).



Sentinel Provider Surveillance

During week 50, 1.32% of sentinel provider patient visits were due to ILI. These data reflect reports from ten (14%) of the 70 enrolled sentinel providers. During week 49, 2.39% of sentinel provider patient visits were due to ILI. These data reflect reports from nineteen (27%) of the 70 enrolled sentinel providers. The 5-year average of sentinel provider patient visits due to ILI is 2.53%.



Pediatric Influenza Surveillance

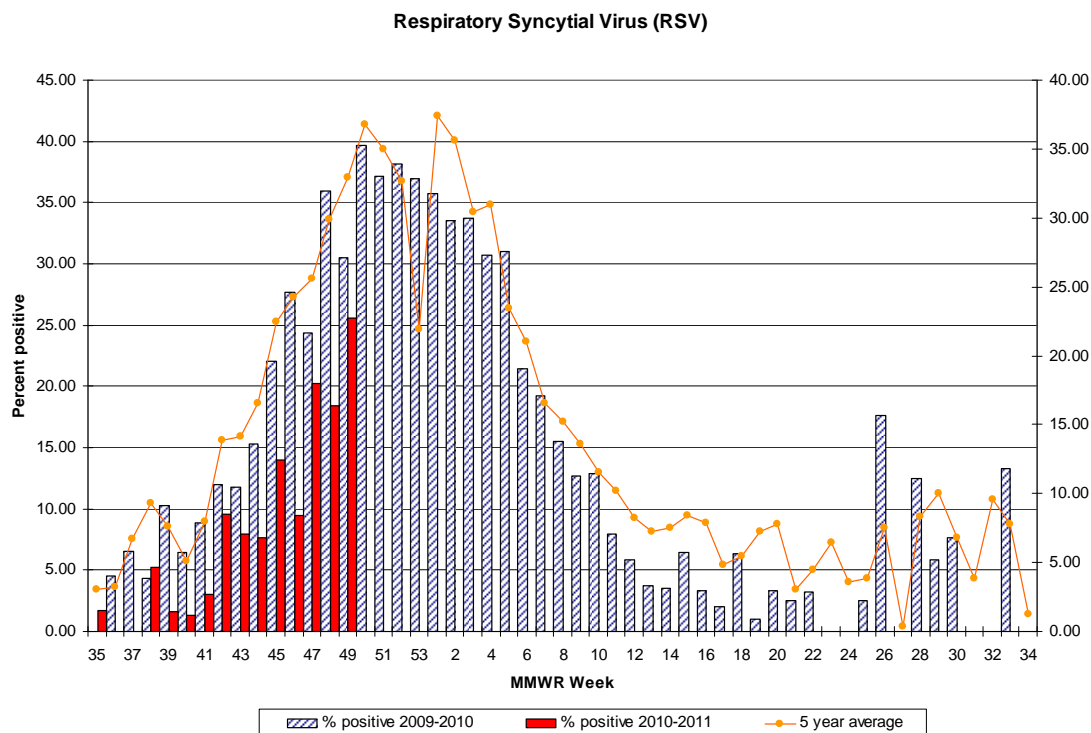
To date, NJDHSS has received 12 reports of pediatric influenza meeting the case definition.

122 City Mortality Report

During week 49, 3.73% 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 (5.26%). The percentage of death due to pneumonia or influenza for this same week last year was 7.89%.

RSV Reports

During week 49, 25.57% of all RSV samples tested were positive. This is an increase from the previous week 18.46%. The percent of samples positive for RSV for this same week last year was 30.52%.



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
December, 14, 2010 12:00 AM	MMRW WEEK 50								
ATLANTIC	4	1	1.84	19	10	7.22	4	4	0.43
BERGEN	3	1	0.00	31	24	5.26	5	4	3.13
BURLINGTON	6	2	0.00	115	62	4.83	3	3	0.89
CAMDEN	7	0	0.00	17	1	5.00	7	5	1.58
CAPE MAY	6	1	0.00	11	10	6.79	1	1	10.71
CUMBERLAND	6	1	3.07	19	9	7.17	3	3	0.33
ESSEX	24	6	0.00	47	11	3.72	11	8	3.84
GLOUCESTER	5	3	1.59	6	6	4.96	2	2	3.66
HUDSON	13	3	0.97	124	69	7.10	6	4	3.38
HUNTERDON	4	4	0.70	8	8	3.71	1	1	1.22
MERCER	11	5	0.57	26	18	4.99	5	5	3.51
MIDDLESEX	2	0	0.00	135	0	0.00	5	5	3.99
MONMOUTH	14	2	0.90	24	17	6.71	5	5	2.21
MORRIS	4	1	0.39	5	4	4.56	4	3	1.36
OCEAN	6	1	0.00	81	14	6.94	4	4	8.09
PASSAIC	9	2	1.14	32	17	3.63	6	1	1.56
SALEM	4	2	0.00	19	0	0.00	1	1	0.00
SOMERSET	6	2	0.74	85	21	3.88	2	1	1.96
SUSSEX	5	5	0.72	22	20	5.99	2	2	2.80
UNION	4	2	0.00	219	30	5.24	5	5	1.47
WARREN	8	3	5.14	36	19	6.28	2	2	2.00
NW Region	26	11	1.43	95	60	5.33	14	8	1.68
NE Region	40	10	0.27	202	104	6.54	22	16	3.56
CW Region	21	11	0.65	119	47	4.30	8	7	3.03
CE Region	26	5	0.23	459	61	6.13	19	19	4.01
South Region	38	10	0.95	206	98	5.51	21	19	1.82
State Total	151	47	0.73	1081	370	5.68	84	69	3.02



County	RSV Tests		Flu Tests		
	# Positive	Total Tests Performed	# Positive	Total Tests Performed	
December, 14, 2010 12:00 AM	MMRW WEEK 50				
ATLANTIC	0	0	0	0	
BERGEN	1	3	0	5	
BURLINGTON	4	9	2	13	
CAMDEN	3	18	0	0	
CAPE MAY	0	5	0	3	
CUMBERLAND	16	36	0	0	
ESSEX	9	38	3	46	
GLOUCESTER	0	7	0	0	
HUDSON	11	37	0	0	
HUNTERDON	0	9	0	25	
MERCER	0	5	0	0	
MIDDLESEX	22	79	0	0	
MONMOUTH	12	67	7	133	
MORRIS	3	11	0	0	
OCEAN	0	0	0	0	
PASSAIC	0	0	0	0	
SALEM	0	0	0	0	
SOMERSET	0	0	0	0	
SUSSEX	0	5	0	18	
UNION	9	22	0	11	
WARREN	0	1	1	11	
NW Region	3	17	1	29	
NE Region	21	78	3	51	
CW Region	0	14	0	25	
CE Region	43	168	7	144	
South Region	23	75	2	16	
State Total	90	352	13	265	