

New Jersey Department of Health and Senior Services
Communicable Disease Service
Influenza Activity Summary
Week Ending January 8, 2011 (MMWR Week 1)

Influenza Activity Level: **REGIONAL**

Interpretation: Three counties, two in the northwest and one in the south public health region, experienced increases in ILI activity and had confirmed cases of influenza. NJ has experienced regional activity in the past two influenza seasons.

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

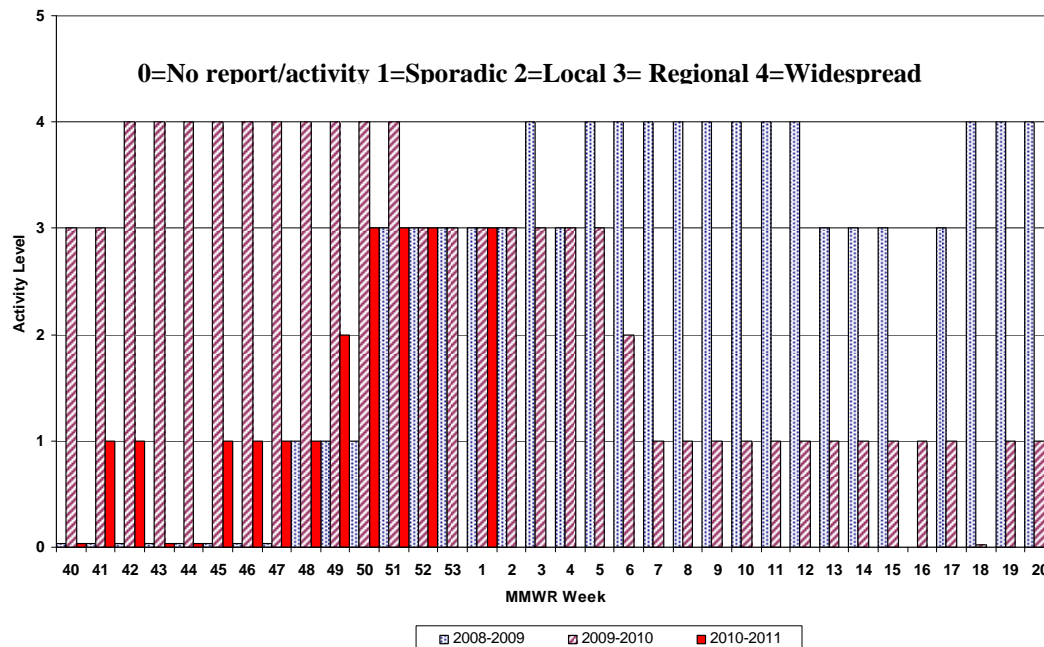
Local: Increases in ILI activity detected in a single county AND laboratory-confirmed cases from that same county within the previous 3 weeks OR confirmed outbreaks in 2 or more institutions in a single county

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	REGIONAL
NE Region	Bergen, Essex, Hudson	SPORADIC
CW Region	Hunterdon, Mercer, Somerset	SPORADIC
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

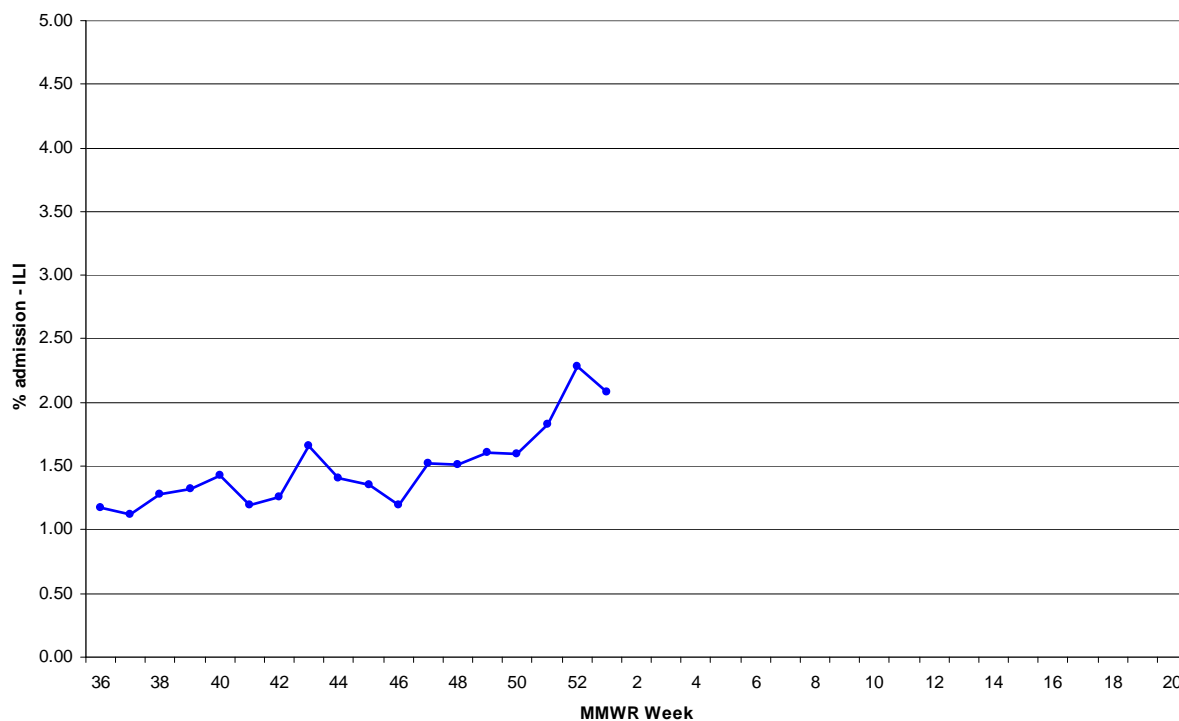
Influenza Hospitalizations/Deaths

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 1	269	0
Cumulative	2448	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.

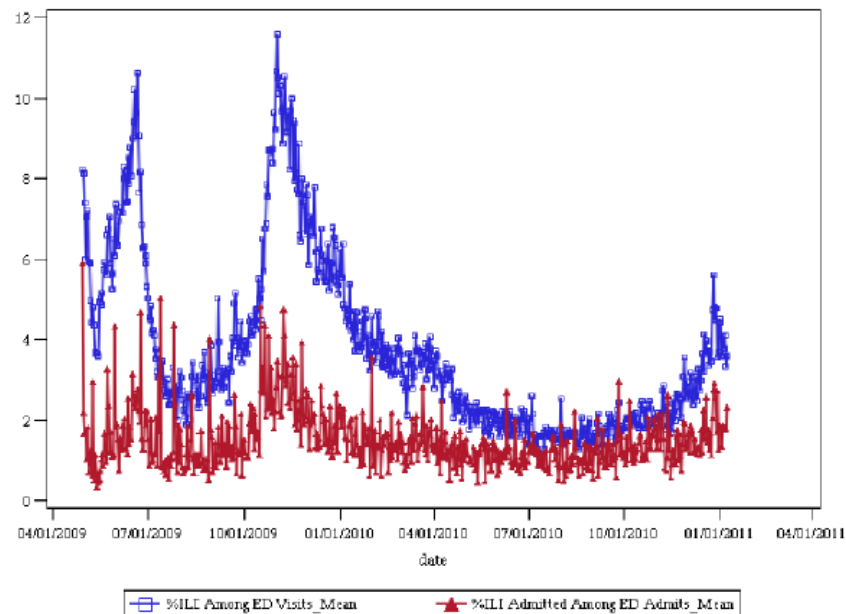
Percent Admission- ILI



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 11 ED visit blips (two in each, Mercer, Salem-Cumberland, and Union; one in each, Atlantic, Bergen, Hudson, Monmouth, and Newark) and 12 admission blips (three in each, Bergen and Salem-Cumberland; one in each, Burlington, Camden, Hudson, Hunterdon, Middlesex, and Monmouth) from 1/2/11 to 1/8/11. 11 ED visit blip responses 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 1/2/11 - 1/8/11, 75 of 78 acute care facilities reported an aggregate total of 2,835 ED visits due to ILI (4% of total ED visits) and an aggregate total of 269 admissions due to ILI (10% of total ILI ED visits). These reports resulted in 12 ED ILI visit blips (two in each, Union and Warren; one in each, Camden, Essex, Gloucester, Hudson, Hunterdon, Monmouth, Ocean, and Salem-Cumberland). There was a **decrease** in ILI activity for the week ending 1/8/11 when compared to the previous week ending 1/1/11 ($p = 0.03$). The mean daily percentage of ED visits for ILI during the week ending 1/8/11 was 3.8%, compared to 4.5% for the previous week. The mean percentage of ED visits due to ILI ranged from 3.3% to 4.4% during 1/2/11 - 1/8/11. The mean percentage of ED visits due to ILI (averaged over the previous four influenza seasons) for this same week (MMWR Week 1) was approximately 4.8%.

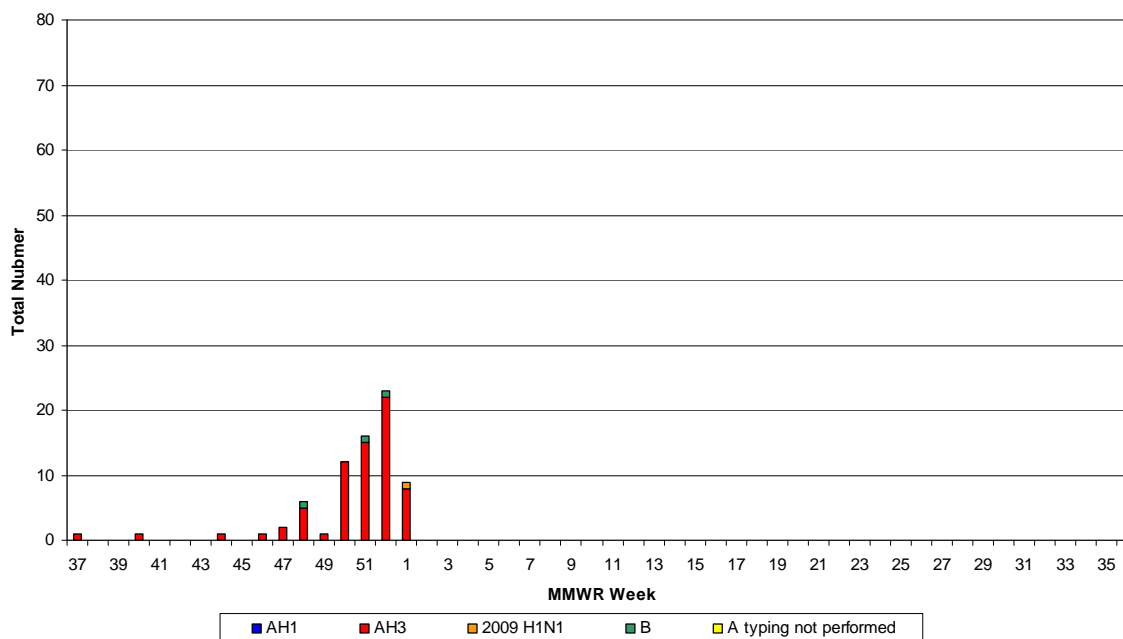
Laboratory Surveillance

As of week 1, seventy-two 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.

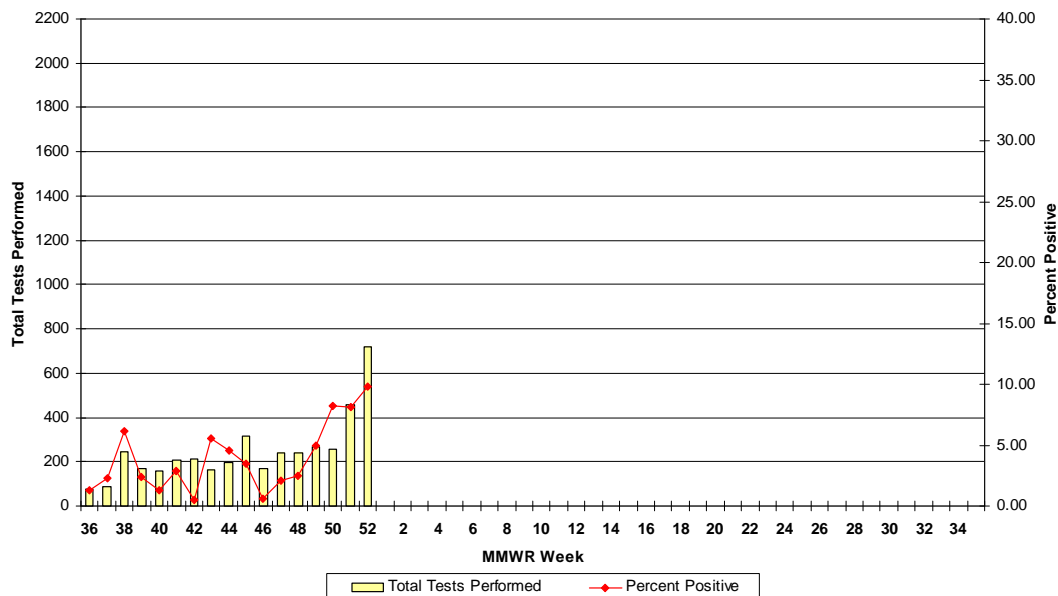
	MMWR Week 40 to present week					MMWR Week 51, 52, 1				
	A H1	A H3	A (subtyping not done)	B	2009 Influenza A H1N1	A H1	A H3	A (subtyping not done)	B	2009 Influenza A H1N1
Atlantic County	0	10	0	1	0	0	7	0	1	0
Bergen County	0	4	0	0	0	0	1	0	0	0
Burlington County	0	1	0	0	0	0	1	0	0	0
Camden County	0	1	0	0	0	0	1	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	1	0	0	0	0	1	0	0	0
Gloucester County	0	1	0	0	0	0	1	0	0	0
Hudson County	0	0	0	0	0	0	0	0	0	0
Hunterdon County	0	9	0	0	0	0	5	0	0	0
Mercer County	0	5	0	1	0	0	3	0	0	0
Middlesex County	0	2	0	0	1	0	1	0	0	1
Monmouth County	0	0	0	0	0	0	0	0	0	0
Morris County	0	9	0	0	0	0	8	0	0	0
Ocean County	0	0	0	0	0	0	0	0	0	0
Passaic County	0	6	0	1	0	0	3	0	1	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	13	0	0	0	0	8	0	0	0
Warren County	0	6	0	0	0	0	5	0	0	0
Unknown	0	0	0	0	0	0	0	0	0	0
State Total	0	68	0	3	1	0	45	0	2	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**



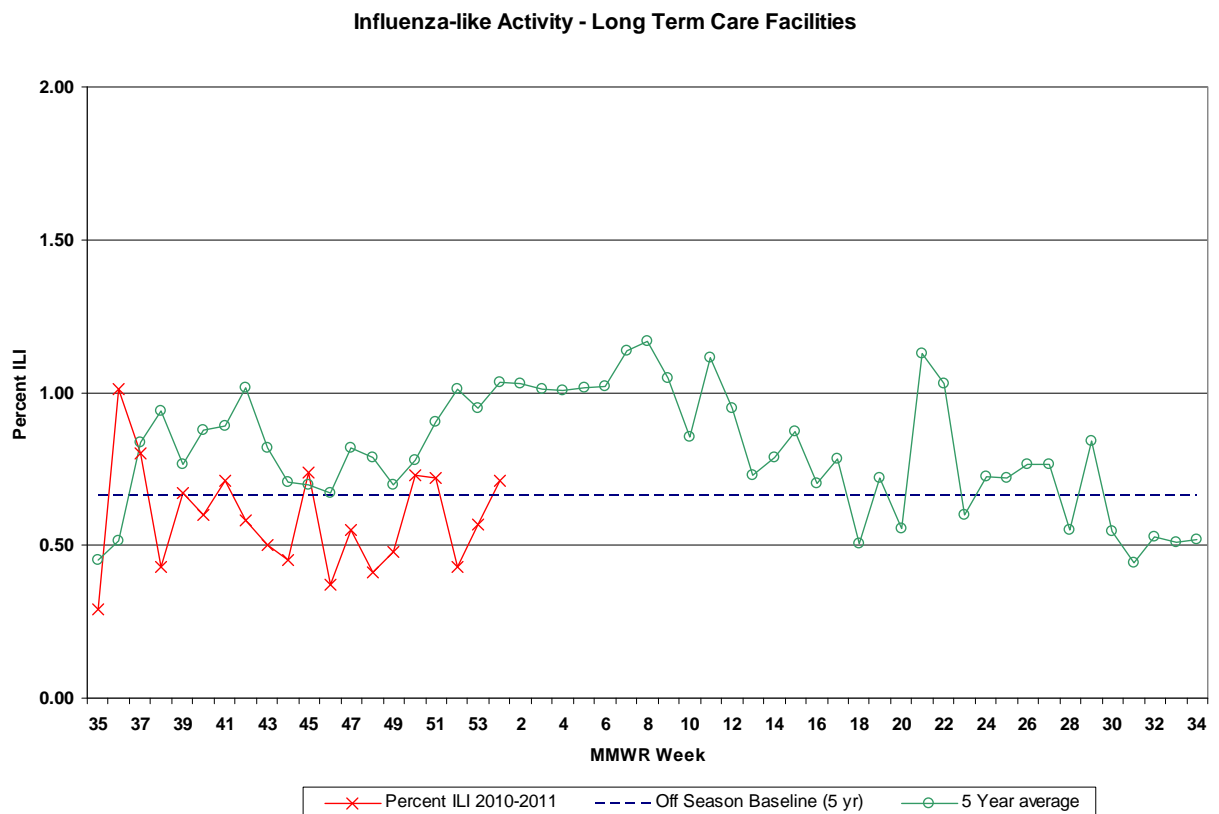
**Influenza Rapid Antigen Tests
Total and Percent Positive
2010-2011 Influenza Season**



Influenza-like Illness (ILI) Surveillance*

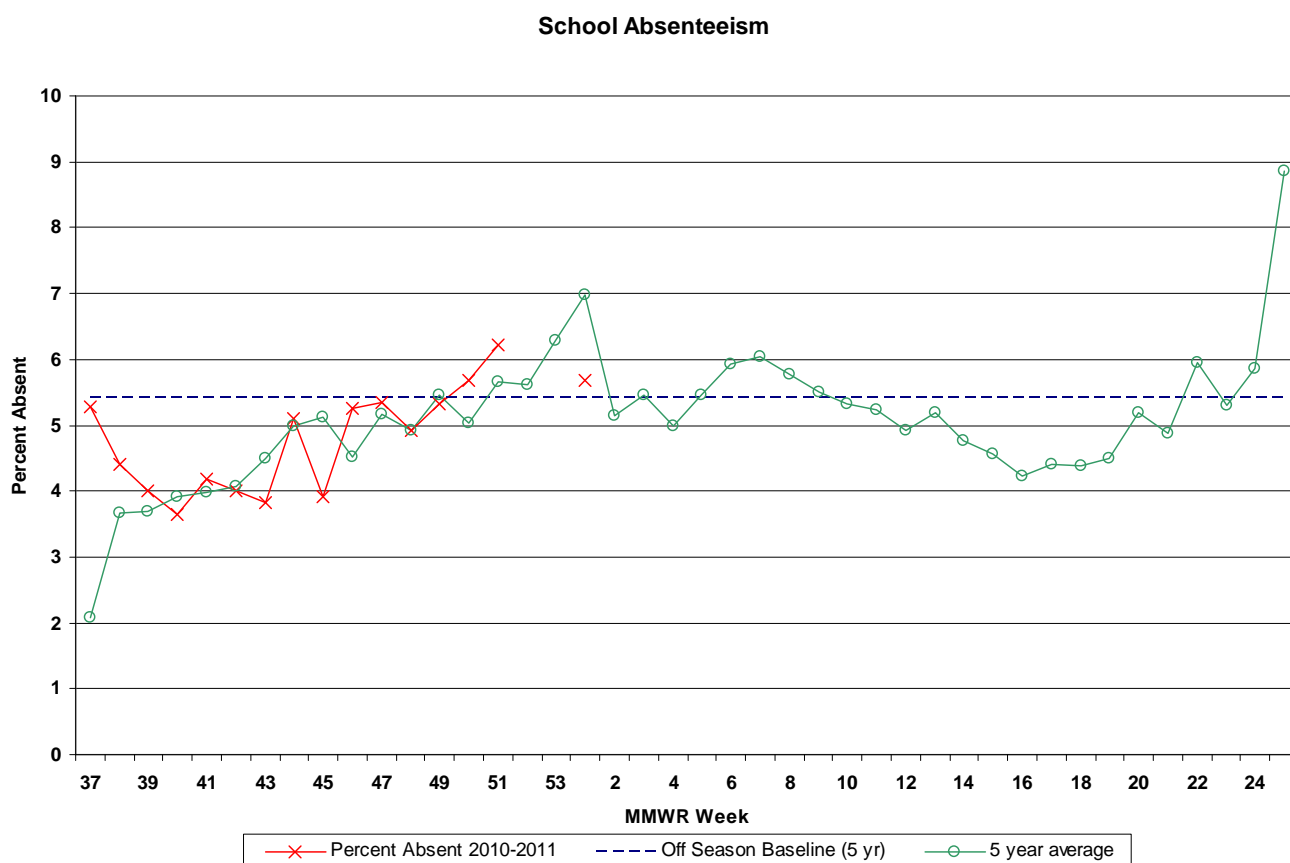
Long-term Care Facilities

During week 1, 0.71% ILI was reported statewide from long term care facilities. This is an increase compared to the previous week (0.43%). The percent ILI for each county ranged from 0.00% to 6.02%. The percent ILI for this same week last year was 0.67% in long-term care facilities. The percent ILI for the northwest (1.34%), central west (0.78) and south (0.71) public health regions were above the state baseline (0.66%). One new report of respiratory outbreaks in an institutional setting was received in week 1.



School Absenteeism

During week 1, schools reported 5.68% absenteeism. All schools were closed the previous week. The percent absenteeism for each county ranged from 3.36 to 8.01%. The percent absent for this same week last year was 4.84%. The percent absenteeism for northeast (6.98%), central east (5.99%) and South (5.67%) public health regions were found to be at or above the state baseline (5.42%).

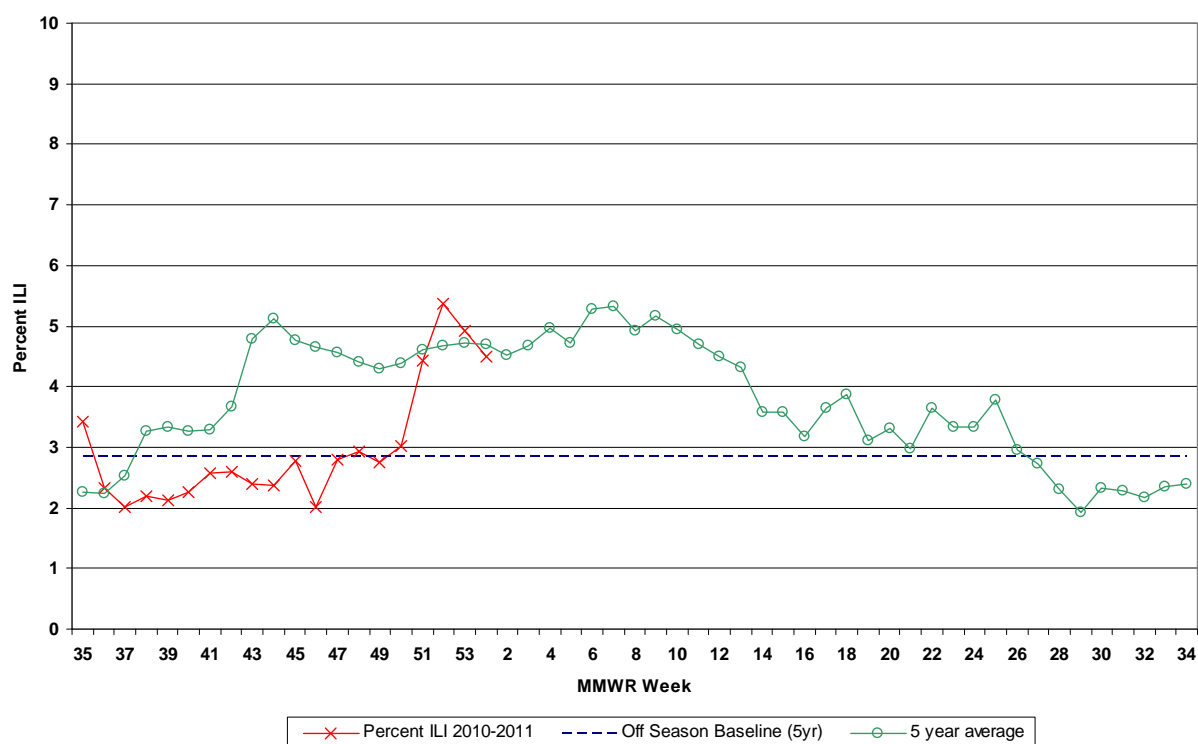


Emergency Departments

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.

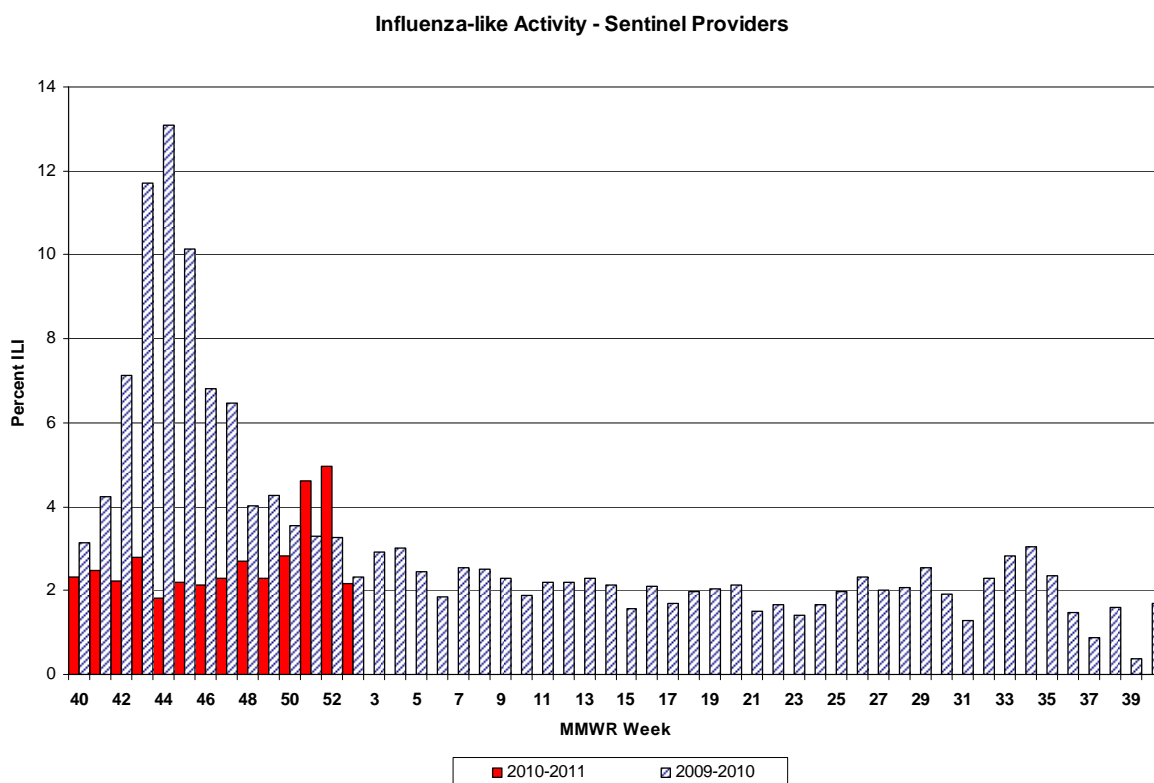
During week 1, 4.49% of ILI was reported statewide from emergency departments. This is a decrease compared to the previous week (5.36%). The percent ILI for each county ranged from 0.00% to 12.11%. The percent ILI for this same week last year was 4.78% in emergency departments. The percent ILI for the northeast (5.01%), central west (5.12%), and central east (6.14%) public health region was found to be above the state baseline (2.84%).

Influenza-like Activity - Emergency Departments



Sentinel Provider Surveillance

During week 1, 2.18% 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 52 was 4.96%. These data reflect reports from eighteen (26%) of the 70 enrolled sentinel providers. The 5-year average of sentinel provider patient visits due to ILI is 2.53%



Pediatric Influenza Surveillance

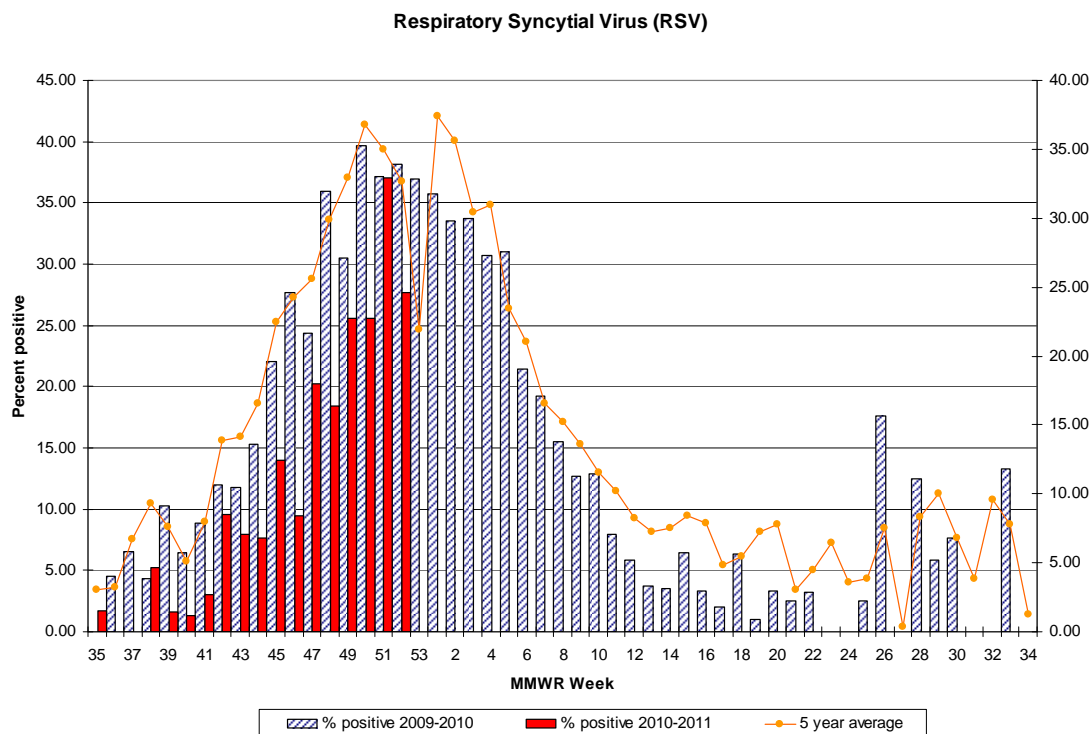
To date, NJDHSS has received 16 reports of pediatric influenza meeting the case definition.

122 City Mortality Report

During week 52, 9.17% of all deaths reported by the vital statistics offices in 6 New Jersey cities (i.e., Camden, Elizabeth, Jersey City, Newark, Paterson and Trenton) were due to pneumonia or influenza. This is an increase compared to the previous week (4.65%). The percentage of death due to pneumonia or influenza for this same week last year was 6.03%.

RSV Reports

During week 52, 27.73% of all RSV samples tested were positive. This is a decrease from the previous week 37.10%. The percent of samples positive for RSV for this same week last year was 38.11%.



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 all other seasons 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
January, 4, 2011 12:00 AM MMRW WEEK 1									
ATLANTIC	4	1	3.45	17	8	7.41	3	3	0.40
BERGEN	3	1	0.00	31	26	4.23	5	4	4.19
BURLINGTON	5	2	0.00	111	59	5.09	3	3	3.02
CAMDEN	5	0	0.00	15	0	0.00	4	3	3.97
CAPE MAY	6	3	1.01	10	10	6.75	1	1	9.73
CUMBERLAND	6	2	0.67	18	6	6.88	3	3	0.90
ESSEX	20	4	0.00	43	11	3.41	8	6	4.77
GLOUCESTER	5	4	0.28	6	4	4.69	2	1	0.57
HUDSON	13	2	3.04	114	68	8.01	6	4	6.50
HUNTERDON	4	3	1.38	8	8	3.36	1	1	0.00
MERCER	10	3	0.00	24	21	4.75	5	5	6.47
MIDDLESEX	2	0	0.00	134	0	0.00	5	5	6.32
MONMOUTH	14	3	0.00	22	16	6.89	5	4	4.21
MORRIS	4	1	1.22	5	5	4.04	4	3	4.58
OCEAN	7	1	0.00	80	6	7.88	4	3	12.11
PASSAIC	6	1	3.31	30	16	3.85	4	1	0.50
SALEM	4	0	0.00	19	0	0.00	1	1	0.00
SOMERSET	6	4	0.65	73	22	3.38	2	1	1.94
SUSSEX	4	4	0.50	19	19	4.96	2	2	3.13
UNION	4	2	0.00	194	26	4.45	5	4	1.28
WARREN	7	2	6.02	36	19	6.28	2	2	1.18
NW Region	21	8	1.34	90	59	4.95	12	8	2.38
NE Region	36	7	0.59	188	105	6.98	19	14	5.01
CW Region	20	10	0.78	105	51	3.94	8	7	5.12
CE Region	27	6	0.00	430	48	5.99	19	16	6.14
South Region	35	12	0.71	196	87	5.67	17	15	2.31
State Total	139	43	0.71	1009	350	5.68	75	60	4.49

	RSV Tests		Flu Tests		
County	# Positive	Total Tests Performed	# Positive	Total Tests Performed	
January, 4, 2011 12:00 AM	MMRW WEEK 1				
ATLANTIC	0	0	0	0	
BERGEN	2	2	2	42	
BURLINGTON	3	14	4	32	
CAMDEN	0	0	0	0	
CAPE MAY	1	2	0	6	
CUMBERLAND	14	41	0	0	
ESSEX	17	65	27	248	
GLOUCESTER	1	20	0	0	
HUDSON	10	58	0	0	
HUNTERDON	3	10	3	36	
MERCER	8	21	0	0	
MIDDLESEX	35	108	0	0	
MONMOUTH	26	98	19	195	
MORRIS	2	6	8	56	
OCEAN	0	0	0	0	
PASSAIC	0	0	0	0	
SALEM	0	0	0	0	
SOMERSET	0	0	0	0	
SUSSEX	3	12	3	29	
UNION	11	32	2	32	
WARREN	1	5	2	41	
NW Region	6	23	13	126	
NE Region	29	125	29	290	
CW Region	11	31	3	36	
CE Region	72	238	21	227	
South Region	19	77	4	38	
State Total	137	494	70	717	