

# Flu Watch

Week Ending March 23, 2013 (MMWR Week 12)

*All data are provisional and may change as more reports are received.*

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MMWR Week 12 at a Glance:
<p><b>Influenza Activity Level: LOCAL</b>            Note: Activity level definitions are found on page 14</p> <p><b>ILI Activity Status (South Carolina baseline is 2.05%*):</b> Below baseline in the Upstate Region (.39%) and the Midlands Region (1.02%). Above baseline in the Pee Dee Region (3.51%). No reports were received from the Low Country Region. The state ILI percentage was 1.29%. These data reflect reports from 16 (50%) providers.</p> <p><b>SC Viral Isolate and RT-PCR Activity:</b> 22 positive specimens were reported. Since 9/30/12, 1026 positive specimens have been reported.</p> <p><b>Positive Rapid Flu Test Activity:</b> 2151 positive rapid tests were reported. Since 9/30/12, 52,359 positive rapid tests have been reported.</p> <p><b>Hospitalizations:</b> 44 lab confirmed hospitalizations were reported. Since 9/30/12, 1569 hospitalizations have been reported.</p> <p><b>Deaths:</b> One lab confirmed death was reported. Since 9/30/12, 42 deaths have been reported.</p>

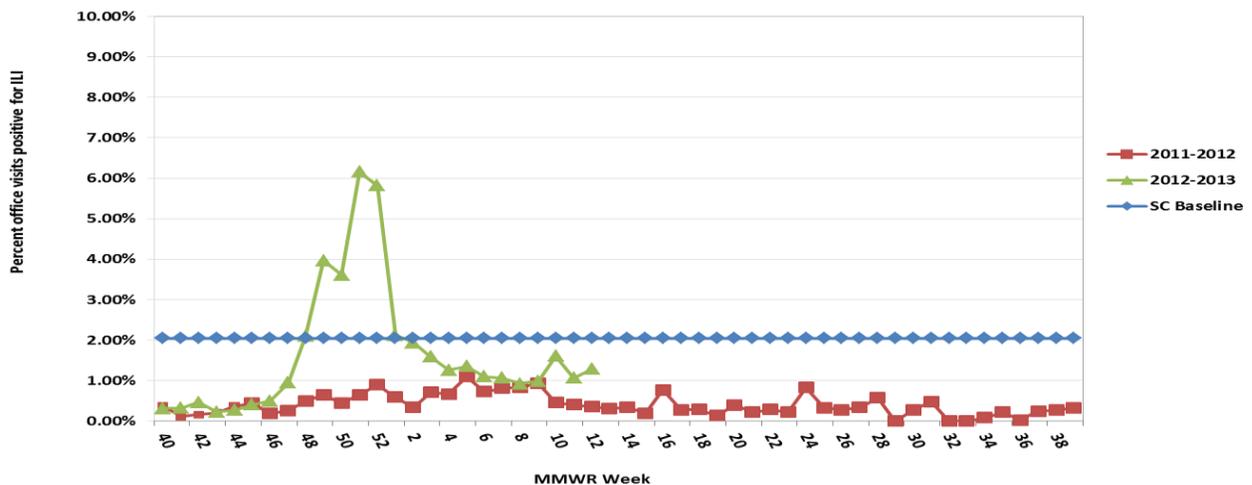
Summary of ILI Activity, Positive Confirmatory Tests, and Influenza Associated Hospitalizations and Deaths

	<i>Current week</i>	<i>Previous week</i>	<i>Change from previous week</i>
Percent of ILI visits reported by ILINet providers	1.29%	1.07%	▲ .22
Number of positive confirmatory tests	22	32	▼ 10
Number of lab confirmed flu hospitalizations	44	39	▲ 5
Number of lab confirmed flu deaths	1	1	0

## I. ILINet Influenza-Like Illness Surveillance

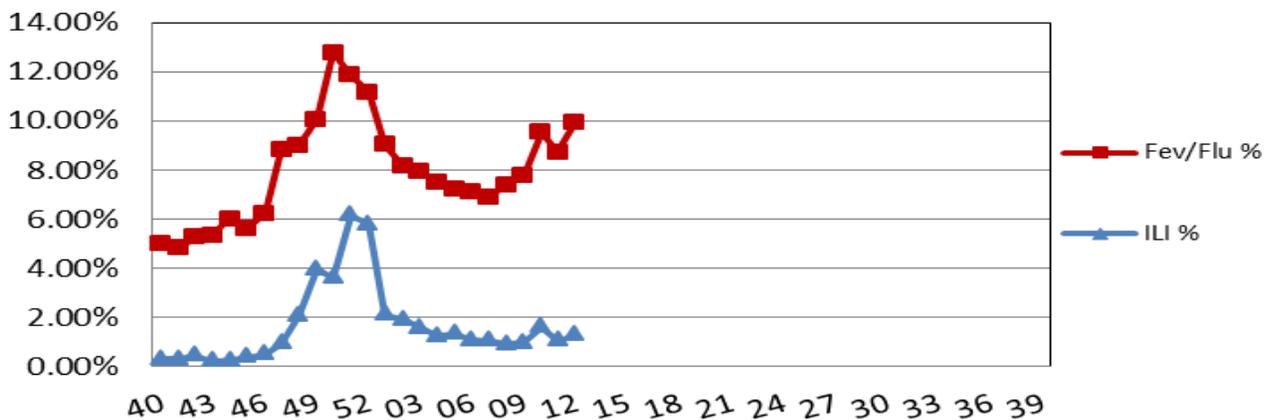
During the most recent MMWR week, 1.29% of patient visits to SC ILINet providers were due to ILI. This is below the state baseline (2.05%). This ILI percentage compares to .36 % this time last year. Reports were received from providers in 13 counties, representing 3 of the 4 regions. The statewide percentage of ER visits with fever-flu syndrome was 9.97%.

**Percentage of Visits for Influenza-like Illness (ILI) Reported by Sentinel Providers in South Carolina  
2011-2012 and 2012-2013 Influenza Seasons**



\*The SC baseline is the mean percentage of patient visits for ILI during non-influenza weeks (weeks when percent of positive lab tests was below 20%) for the previous three seasons plus two standard deviations.

**SC Fever Flu Percentage Compared to ILI Percentage  
September 30, 2012 - March 23, 2013**



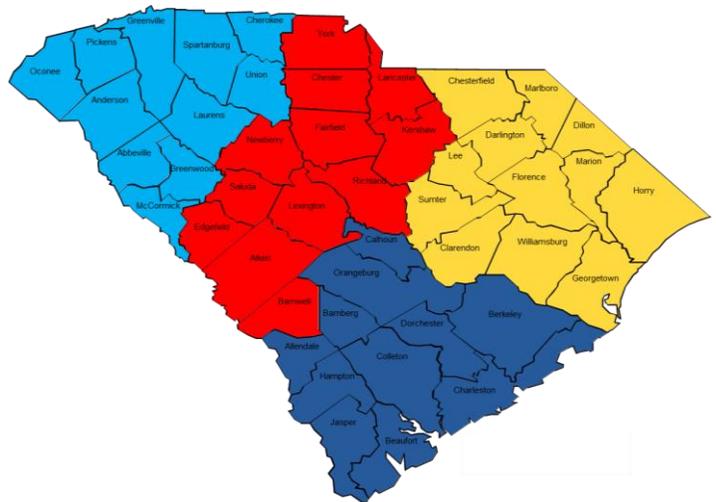
\*Only includes hospitals participating in SC syndromic surveillance

## Influenza-Like Illness Reported by Sentinel Providers March 17, 2013 – March 23, 2013

County	ILI %	County	ILI %
Abbeville	---	Greenwood	NR
Aiken	.34%	Hampton	NR
Allendale	---	Horry	NR
Anderson	0%	Jasper	NR
Bamberg	---	Kershaw	.32%
Barnwell	---	Lancaster	---
Beaufort	NR	Laurens	NR
Berkeley	NR	Lee	---
Calhoun	---	Lexington	5.08%
Charleston	NR	Marion	---
Cherokee	---	Marlboro	---
Chester	---	McCormick	1.47%
Chesterfield	---	Newberry	---
Clarendon	---	Oconee	---
Colleton	---	Orangeburg	---
Darlington	---	Pickens	0%
Dillon	NR	Richland	.49%
Dorchester	NR	Saluda	0%
Edgefield	---	Spartanburg	.18%
Fairfield	---	Sumter	NR
Florence	.94%	Union	---
Georgetown	7.01%	Williamsburg	---
Greenville	.40%	York	5.26%

NR: No reports received  
 ---: No enrolled providers

Region	ILI %	# of Reporters
Upstate (Light blue)	.17	6
Midlands (Red)	2.29	7
Pee Dee (Yellow)	1.85	3
Coastal (Dark blue)	-	0



\*County ILI percentages are affected by the number of reporting providers within that county.

## II. Virologic Surveillance

<i>Positive confirmatory influenza test results*</i> <i>Current MMWR Week (3/ 1 7/13 – 3/ 23/13)</i>		
	<b>BOL</b>	<b>Other clinical labs</b>
<b>Number of specimens tested</b>	13	-
<b>Number of positive specimens</b>	7	15
<b>Influenza A unsubtype</b>		2
<b>Influenza A H1N1</b>	1	1
<b>Influenza A H3N2</b>	2	
<b>Influenza B</b>	4	11
<b>Other</b>		1

Includes culture, RT-PCR, DFA, and IFA

During the previous MMWR week, 22 positive specimens were reported.

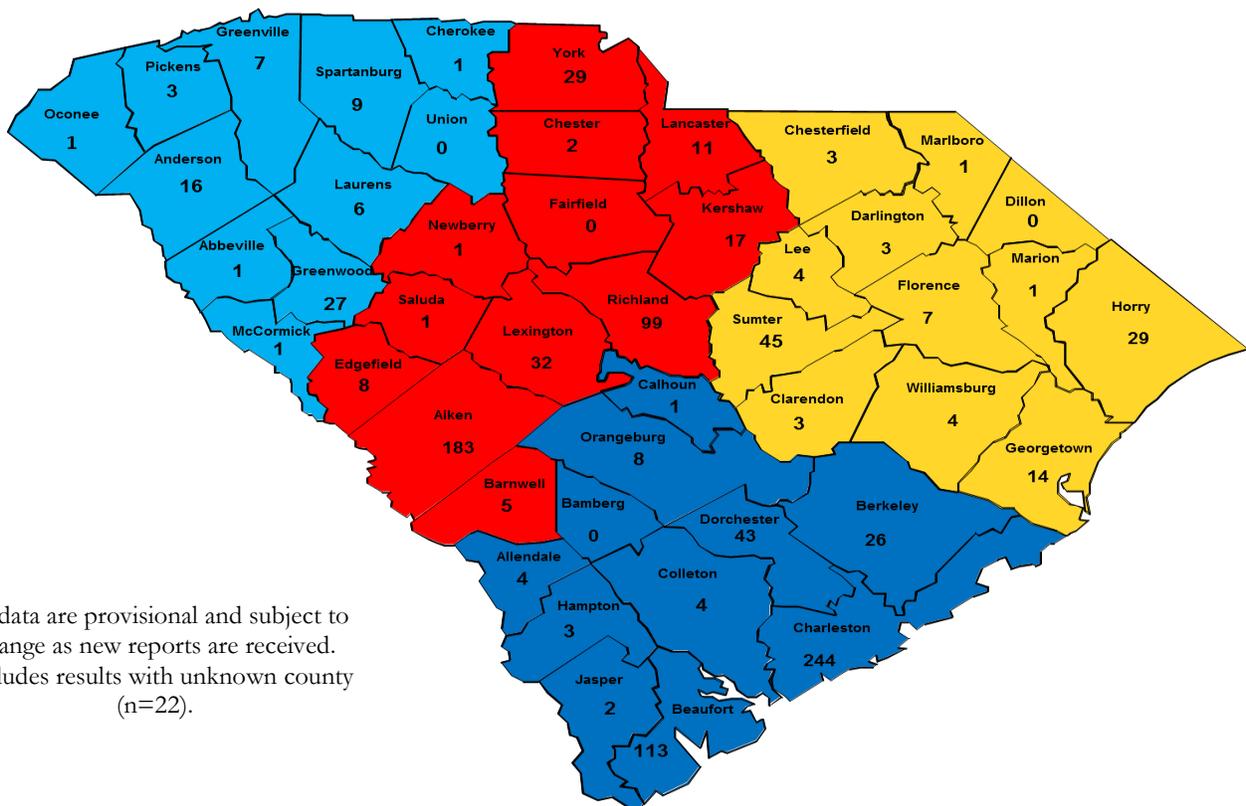
<i>Positive confirmatory influenza test results*</i> <i>Cumulative (09/30/12 – 3/23/13)</i>		
	<b>BOL</b>	<b>Other clinical labs</b>
<b>Number of specimens tested</b>	461	NA
<b>Number of positive specimens</b>	302 (65.5%)	746
<b>Influenza A unsubtype</b>		319 (42.8%)
<b>Influenza A H1N1</b>	24 (7.9%)	13 (1.7)
<b>Influenza A H3N2</b>	243 (80.5%)	309 (41.4%)
<b>Influenza B</b>	35 (11.6%)	102 (13.7%)
<b>Other</b>		3 (.4%)

Includes culture, RT-PCR, DFA, and IFA

**Positive Confirmatory Tests by County  
Current Week 3/17/13 – 3/23/13**

County	Positive Tests	County	Positive Tests	County	Positive Tests
Abbeville		Dillon		Marion	
Aiken	6	Dorchester		Marlboro	
Allendale		Edgefield		McCormick	
Anderson	2	Fairfield		Newberry	
Bamberg		Florence		Oconee	
Barnwell		Georgetown		Orangeburg	
Beaufort	3	Greenville		Pickens	
Berkeley		Greenwood	1	Richland	2
Calhoun		Hampton		Saluda	
Charleston	2	Horry		Spartanburg	
Cherokee		Jasper		Sumter	
Chester		Kershaw	1	Union	
Chesterfield		Lancaster	1	Williamsburg	
Clarendon		Laurens		York	3
Colleton	1	Lee		Unknown	
Darlington		Lexington			

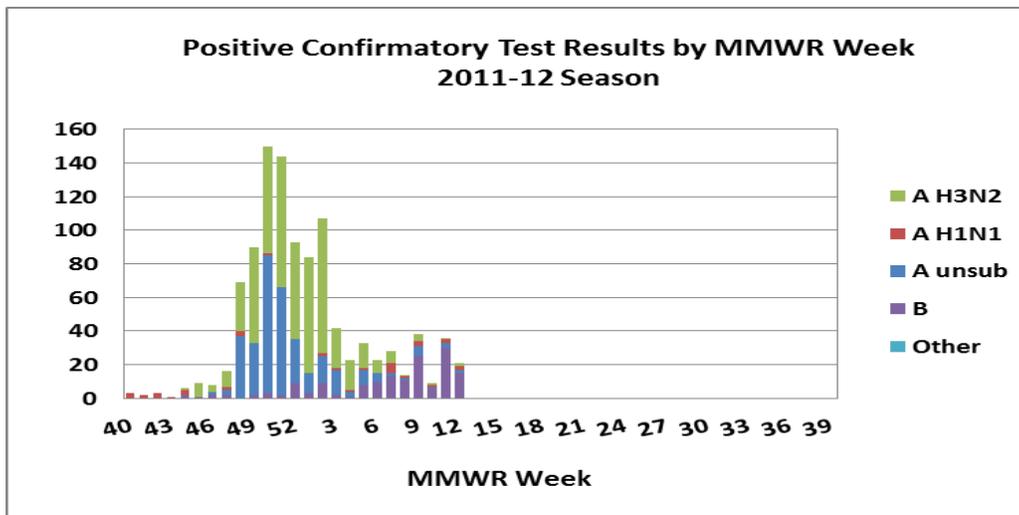
**Map of Positive Confirmatory Tests by County  
Cumulative 09/30/12 – 3/23/13**



All data are provisional and subject to change as new reports are received. Excludes results with unknown county (n=22).

**Positive Confirmatory Tests by County and Type  
Cumulative 9/30/12 – 3/23/13**

	A H1N1	A H3N2	B	A Unsub	Unk		A H1N1	A H3N2	B	A Unsub	Unk
<b>Upstate</b>											
Abbeville		1				McCormick		1			
Anderson		8	2	5	1	Oconee		1			
Cherokee				1		Pickens		3			
Greenwood		22	2	3		Spartanburg	2		3	4	
Greenville		2		5		Union					
Laurens		2		4							
<b>Midlands</b>											
Aiken	3	3	34	142	1	Lancaster		3	1	7	
Barnwell			2	3		Lexington		5	3	24	
Chester				2		Newberry				1	
Edgefield		1	1	6		Richland	3	16	20	60	
Fairfield						Saluda					
Kershaw	2	8	2	4		York	1	12	3	13	
<b>Pee Dee</b>											
Chesterfield		1	1	1		Horry		19	4	6	
Clarendon	1	2				Lee		2		2	
Darlington		1	1	1		Marion			1		
Dillon						Marlboro		1			
Florence		1	1	5		Sumter		32	10	3	
Georgetown		5	9			Williamsburg			1	3	
<b>Low Country</b>											
Allendale	4					Colleton			4		
Bamberg						Dorchester		38	5		
Beaufort	17	80	7	8	1	Hampton		1		2	
Berkeley		17	9			Jasper		2			
Calhoun				1		Orangeburg		4		3	
Charleston	3	213	19	8							
Unknown		16	4	2							

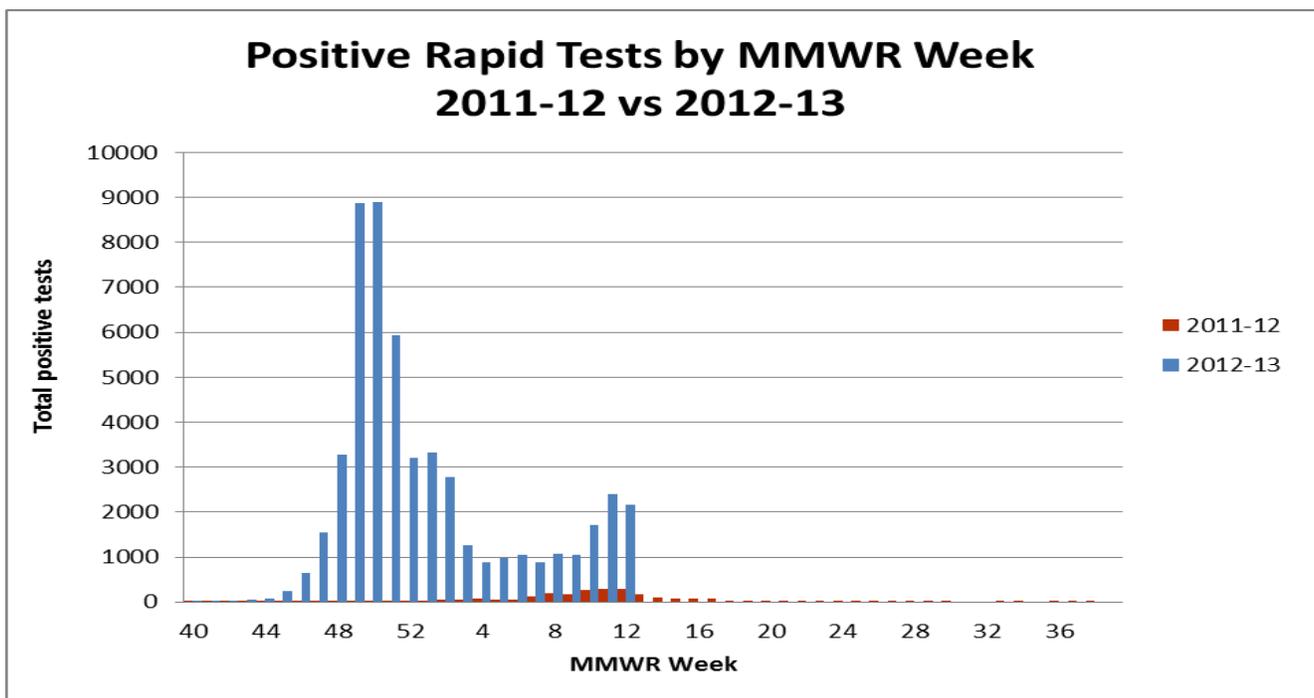


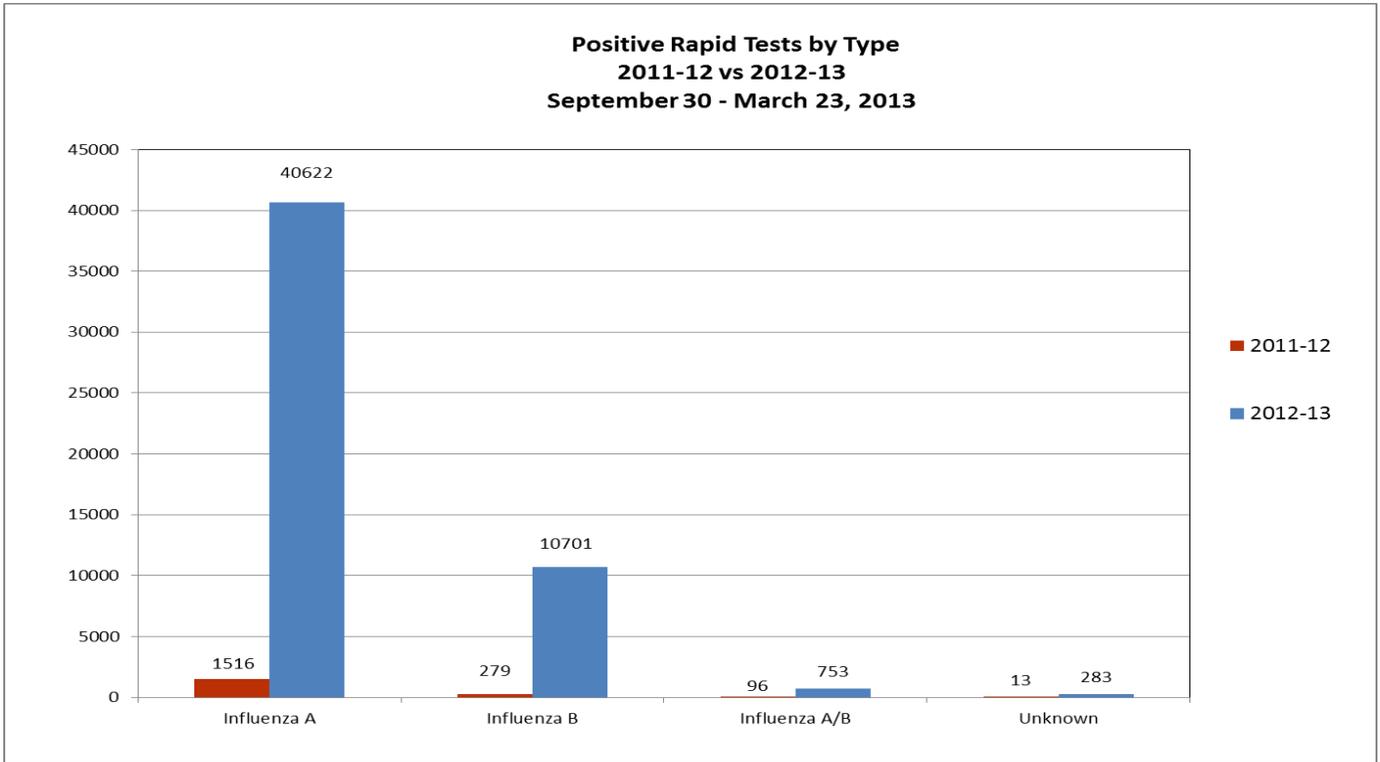
### III. Positive Rapid Antigen Tests

During the past MMWR week, 2151 positive rapid antigen tests were reported. Of these, 325 were influenza A, 1744 were influenza B, 62 were influenza A/B, and 20 were unknown. This compares to 289 this time last year. 52,359 positive rapid tests have been reported this year.

#### Positive Rapid Flu Tests by County March 17, 2013 – March 23, 2013

County	Positive Tests	County	Positive Tests	County	Positive Tests
Abbeville	15	Dillon	16	Lexington	102
Aiken	42	Dorchester	85	Marion	7
Allendale	2	Edgefield	10	Marlboro	17
Anderson	48	Fairfield	7	McCormick	
Bamberg		Florence	289	Newberry	9
Barnwell	3	Georgetown	144	Oconee	6
Beaufort		Greenville	139	Orangeburg	19
Berkeley	28	Greenwood	45	Pickens	1
Calhoun		Hampton		Richland	110
Charleston	173	Horry	190	Saluda	
Cherokee		Jasper		Spartanburg	113
Chester	4	Kershaw	55	Sumter	76
Chesterfield	3	Lancaster	59	Union	5
Clarendon	40	Laurens	4	Williamsburg	10
Colleton		Lee	1	York	156
Darlington	118				





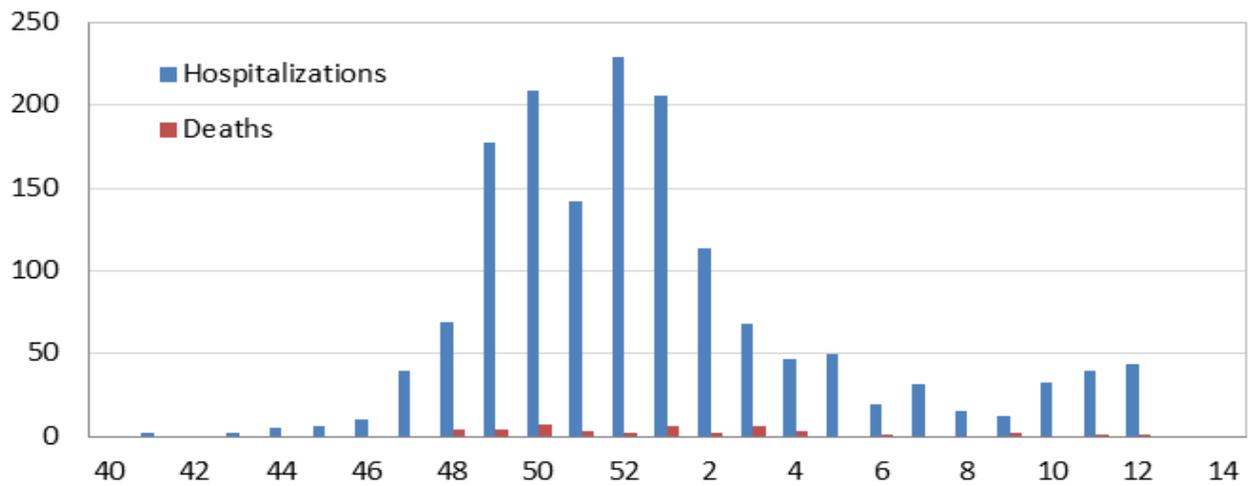
#### IV. Influenza hospitalizations and deaths

During the past MMWR week, 44 lab confirmed\* influenza hospitalizations were reported. One lab confirmed death was reported.

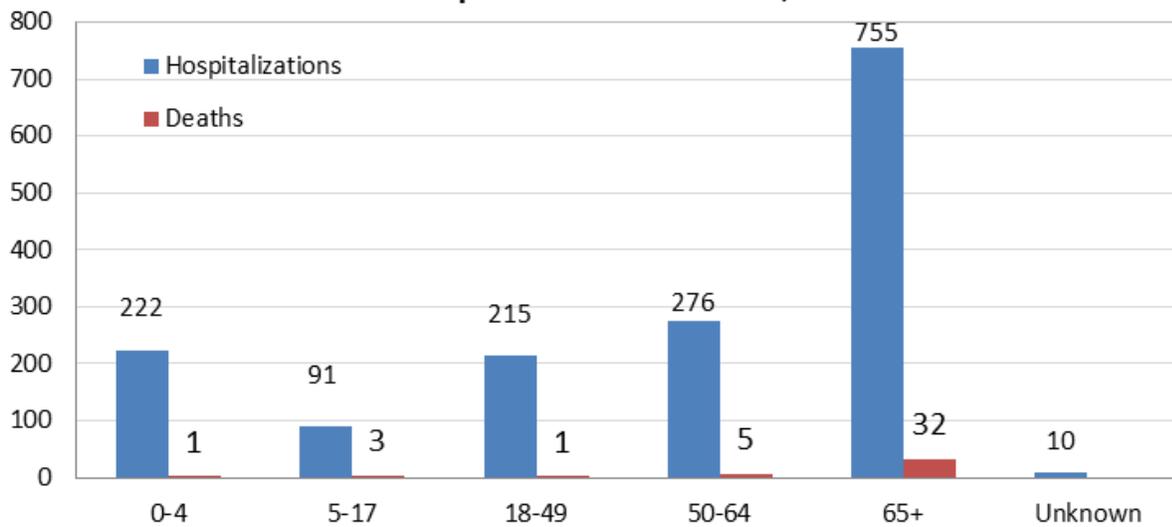
	Total number*	
<b>Number of Reporting Hospitals (Current week)</b>	50	
	<i>Current MMWR Week (3/17/13-3/23/13)</i>	<i>Cumulative (since 09/30/12)</i>
<b>Hospitalizations</b>	44	1569
<b>Deaths</b>	1	42

\*These data are provisional. Lab confirmation for hospitalizations and deaths includes culture, PCR, DFA, IFA, and rapid test.

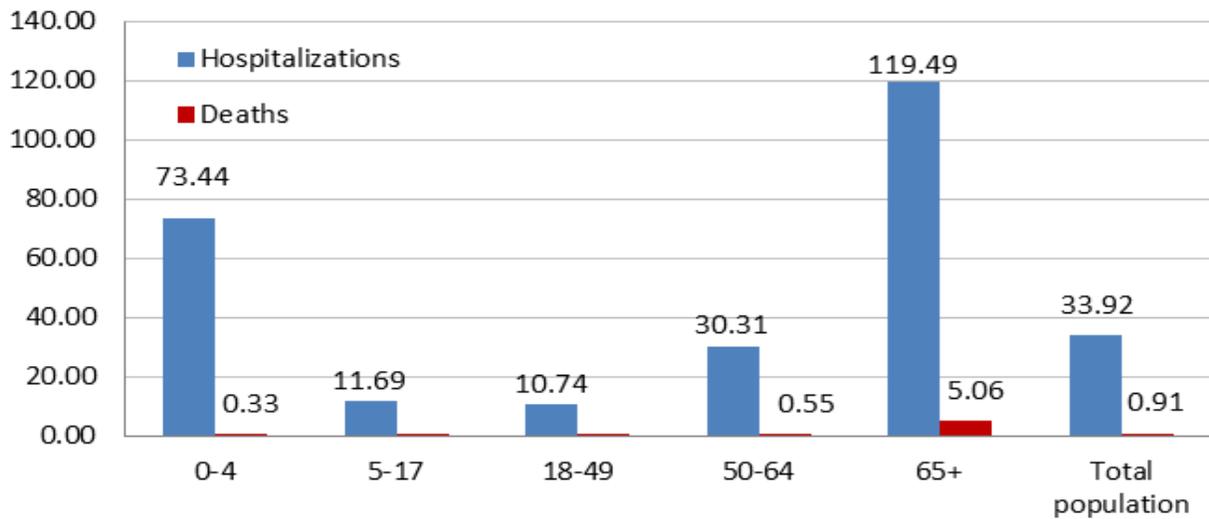
**Reported Cases of Laboratory Confirmed Influenza  
Hospitalizations and Deaths  
by MMWR week  
September 30, 2012 March 23, 2013**



**Reported Cases of Laboratory Confirmed Influenza  
Hospitalizations (n=1569) and Deaths (n=42)  
September 30 - March 23, 2013**



**Laboratory Confirmed Influenza Case rate/100,000  
Hospitalizations (n=1569) and Deaths (n=42) by age group  
September 30, 2012 - March 23, 2013**



**Lab Confirmed Influenza Deaths by County  
September 30, 2012 – March 9, 2013**

County	Deaths	County	Deaths
Aiken	3	Lexington	4
Barnwell	1	McCormick	1
Beaufort	2	Newberry	1
Charleston	1	Oconee	4
Cherokee	1	Pickens	3
Clarendon	1	Richland	4
Georgetown	1	Spartanburg	2
Greenville	6	Sumter	2
Horry	1	Williamsburg	1
Jasper	1	York	2
<b>Total Deaths</b>		<b>42</b>	

## V. South Carolina Disease Alerting, Reporting & Tracking System (SC-DARTS)

### Statewide - Fever Flu Syndrome



#### Cumulative Sums Analysis (CUSUM):

- C1 = Flags because of sharp rise in counts from 1 day to the next
- C2 = Flags because of aberrant, initial, rapid rise in counts and peak in counts
- C3 = Flags because of a gradual rise in counts over a short time

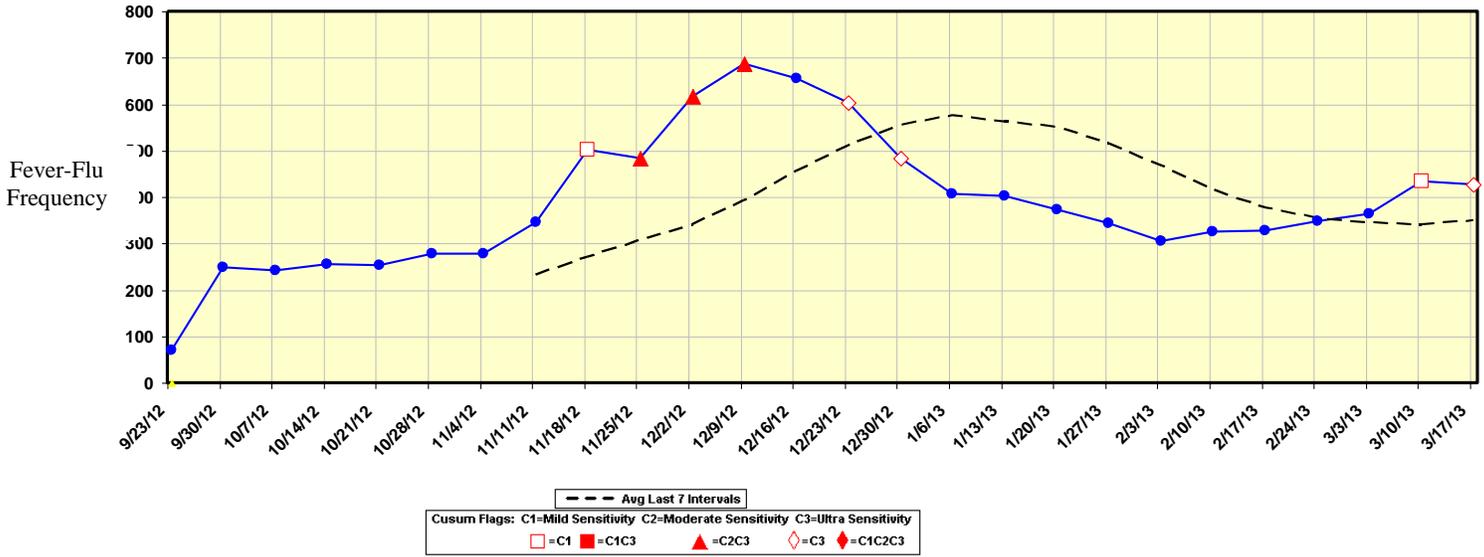
The SC Statewide Fever-Flu Syndrome graph above illustrates the daily counts of hospital emergency department (ED) visits with an Influenza-like Illness (ILI) for the past 21 days. A total of 21 hospital facilities are reporting to the SC-DARTS system. These 21 include: AnMed Health (Upstate Region); Self Regional (Upstate Region); Oconee Medical Center (Upstate Region); Palmetto Health Alliance (Upstate and Midlands Regions); Greenville Hospital System (Upstate Region); Kershaw Health (Midlands Region); McLeod Health (Pee Dee Region); Elgin Urgent Care (Midlands Region); Medical University of South Carolina (Low Country Region); Roper (Low Country Region); St. Francis (Low Country Region); Trident (Low Country Region); Colleton (Low Country Region); and Hampton Regional (Low Country Region).

#### Statewide CUSUM Flag Alerts Description:

No flags for the past week.

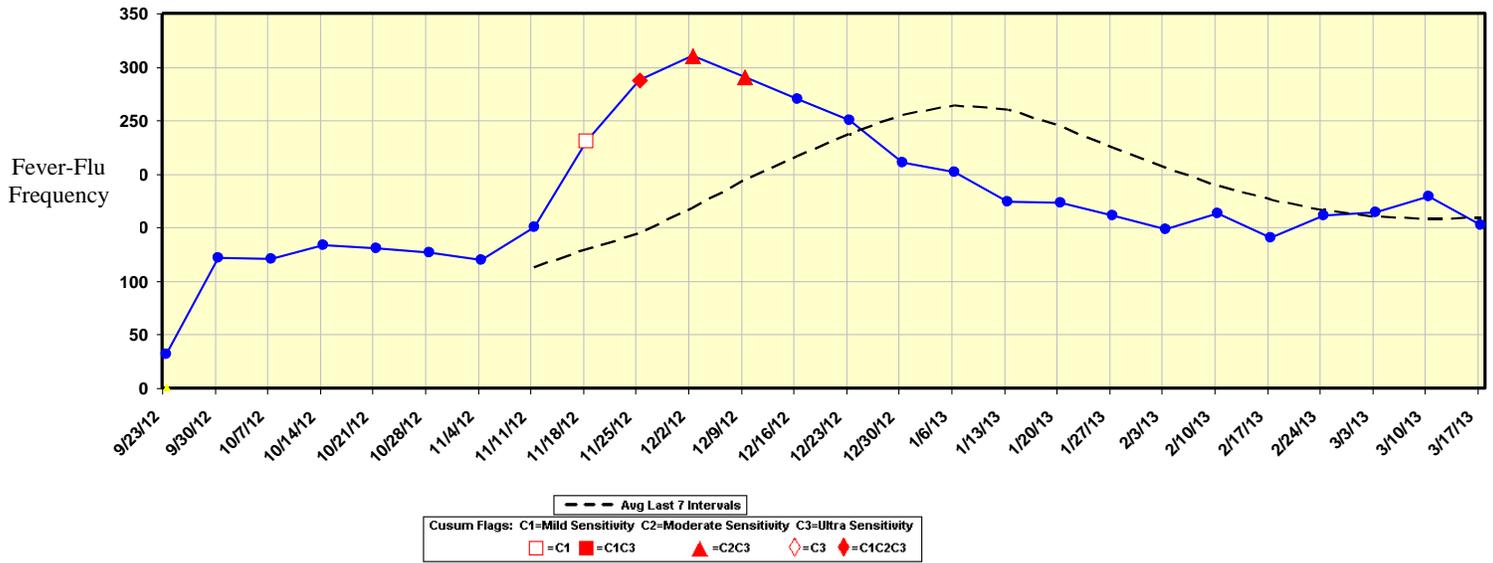
Below are the fever-flu syndrome graphs by Region for the past 180 days (weekly interval).

### Upstate Region - Fever Flu Syndrome



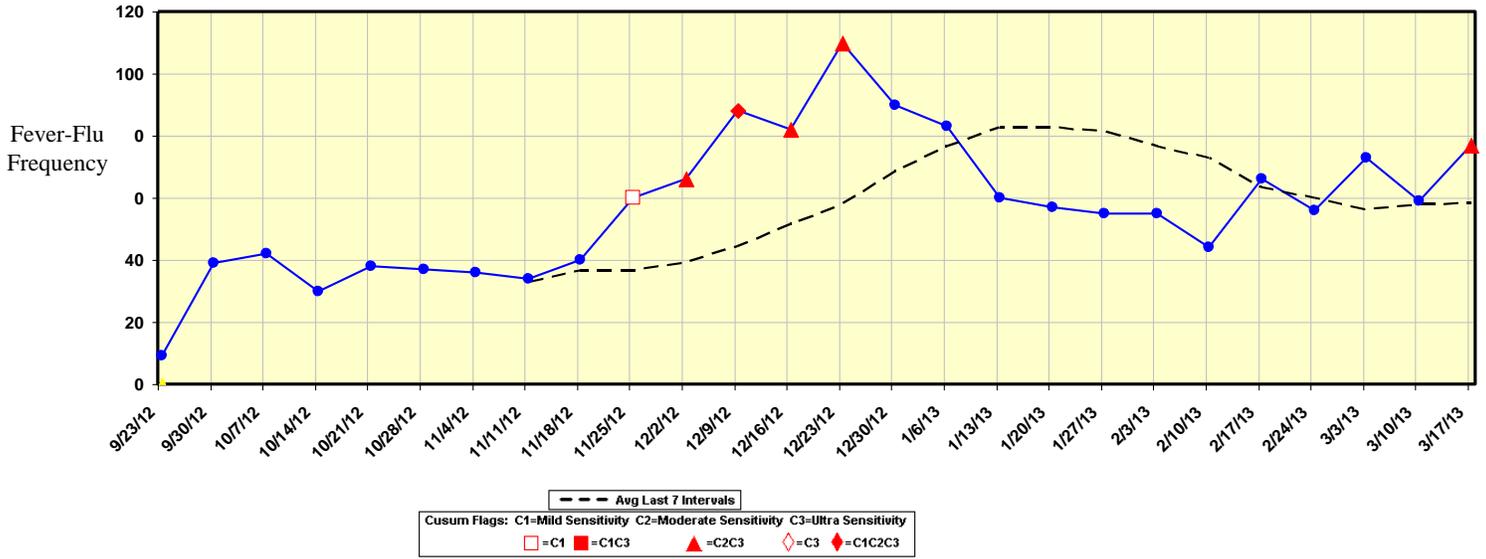
Upstate Region Hospitals (# of Facilities): AnMed Health (3); Self-Regional (1); Oconee Medical Center (1); Greenville Hospital System (4); Palmetto Health Easley (1)

### Midlands - Fever Flu Syndrome



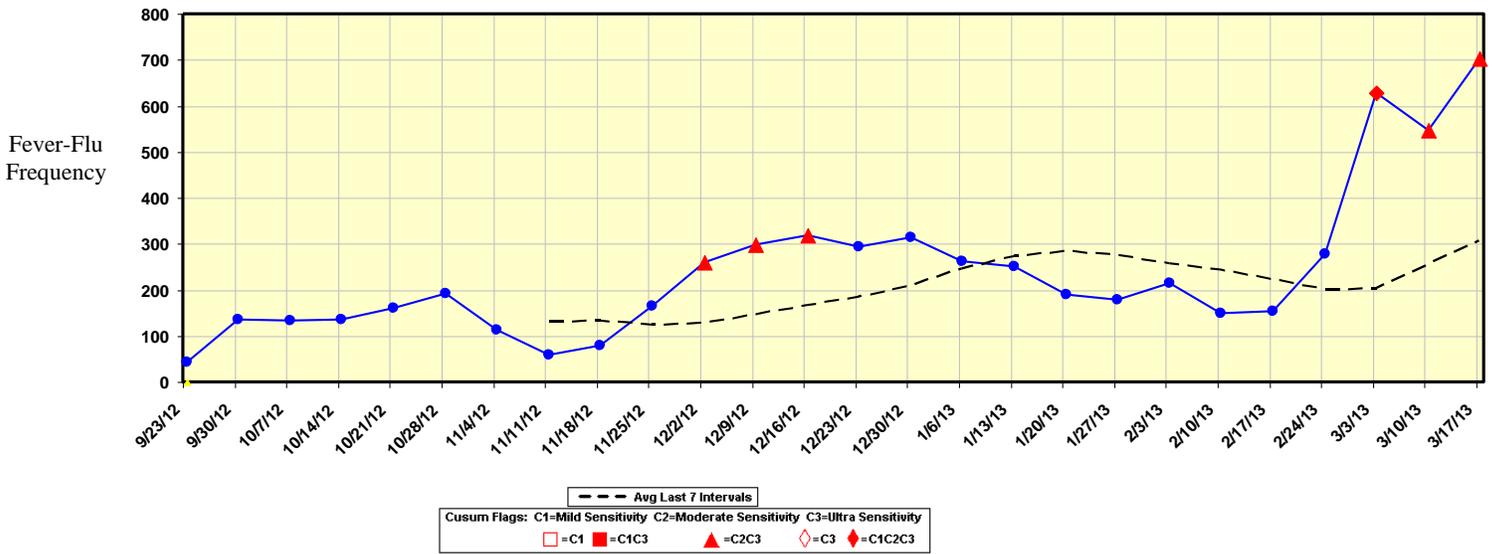
Midlands Region Hospitals (# of Facilities): Palmetto Health Baptist (1); Palmetto Health Richland (1); Kershaw Health (1); Elgin Urgent Care (1)

**Pee Dee Region - Fever Flu Syndrome**



**Pee Dee Region Hospitals (# of Facilities): McLeod Health (1)**

**Low Country Region - Fever Flu Syndrome**



**Low Country Region Hospitals (# of Facilities): Medical University of South Carolina (1); Roper (1); St. Francis (1); Trident (1); Hampton Regional (1); Colleton (1)**

## VI. Influenza activity levels

Activity Level	ILI activity/Outbreaks		Laboratory data
<b>No activity</b>	Low	<b>And</b>	No lab confirmed cases
<b>Sporadic</b>	Not increased	<b>And</b>	Isolated lab-confirmed cases
	<b>OR</b>		
<b>Local</b>	Not increased	<b>And</b>	Lab confirmed outbreak in one institution
	Increased ILI in 1 region; ILI activity in other regions is not increased	<b>And</b>	Recent (within the past 3 weeks) lab evidence of influenza in region with increased ILI
<b>Regional</b>	<b>OR</b>		
	2 or more institutional outbreaks (ILI or lab confirmed) in 1 region; ILI activity in other regions is not increased	<b>And</b>	Recent (within the past 3 weeks) lab evidence of influenza in region with the outbreaks; virus activity is no greater than sporadic in other regions
<b>Regional</b>	Increased ILI in 2-3 regions	<b>And</b>	Recent (within the past 3 weeks) lab confirmed influenza in the affected regions
	<b>OR</b>		
<b>Regional</b>	Institutional outbreaks (ILI or lab confirmed) in 2-3 regions	<b>And</b>	Recent (within the past 3 weeks) lab confirmed influenza in the affected regions
	<b>OR</b>		
<b>Widespread</b>	Increased ILI and/or institutional outbreaks (ILI or lab confirmed) in at least 4 of the regions	<b>And</b>	Recent (within the past 3 weeks) lab confirmed influenza in the state.

## VII. South Carolina Influenza Surveillance Components

South Carolina influenza surveillance consists of mandatory and voluntary reporting systems for year-round influenza surveillance. These networks provide information on influenza virus strain and subtype and influenza disease burden.

### Mandatory Reporting

#### Positive confirmatory test reporting

Positive influenza culture, PCR, DFA, and IFA results from commercial laboratories should be reported to DHEC within 7 days electronically via CHESSE or using a DHEC 1129 card.

#### Positive rapid antigen test reporting

*Summary numbers* of positive rapid influenza tests and influenza type identified should be sent to the regional health department by fax or email before noon on Monday for the preceding week.

#### Influenza death reporting

Lab confirmed influenza deaths in adults should be reported to DHEC within 7 days. Lab confirmed influenza deaths in children under age 18 should be reported within 24 hours. These include results from viral culture, PCR, rapid flu tests, DFA, IFA or autopsy results consistent with influenza. Hospitals should report deaths to their regional health department by noon on Monday for the preceding week.

#### Influenza hospitalizations

DHEC requires weekly submission of laboratory confirmed influenza hospitalizations. Hospitals should report these to their regional health department by noon on Monday for the preceding week.

For additional information about ILINet or to become an ILINet provider, contact the Acute Disease Epidemiology influenza surveillance coordinator at [springcb@dhec.sc.gov](mailto:springcb@dhec.sc.gov).

### Voluntary Networks

#### Influenza-Like Illness (ILINet) Sentinel Providers Network

ILINet focuses on the number of patients presenting with influenza-like symptoms in the absence of another known cause. ILI is defined as fever (temperature of  $U \geq U100^{\circ}F$ ) plus a cough and/or a sore throat in the absence of another known cause. Providers submit weekly reports to the CDC of the total number of patients seen in a week and the subset number of those patients with ILI symptoms by age group.

#### South Carolina Disease Alerting, Reporting & Tracking System (SC-DARTS)

SC-DARTS is a collaborative network of syndromic surveillance systems within South Carolina. Currently our network contains the following data sources: SC Hospital Emergency Department (ED) chief-complaint data, Poison Control Center call data, Over-the-Counter (OTC) pharmaceutical sales surveillance, and CDC's BioSense Biosurveillance system. The hospital ED syndromic surveillance system classifies ED chief complaint data into appropriate syndrome categories (ex: Respiratory, GI, Fever, etc.). These syndrome categories are then analyzed using the cumulative sum (CUSUM) methodology to detect any significant increases. Syndromic reports are distributed back to the hospital on a daily basis.

To join the SC-DARTS system or for more information, please contact: **Alecia Alianell at 803-898-0269 or [alianeat@dhec.sc.gov](mailto:alianeat@dhec.sc.gov)**.

## VIII. National Surveillance MMWR Week 11 (3/10-3/16)

During week 11 (March 10 – 16, 2013), influenza activity remained elevated in the United States, but decreased in most areas.

- **Viral Surveillance:** Of 5,526 specimens tested and reported by collaborating laboratories, 899 (16.3%) were positive for influenza.
- **Pneumonia and Influenza Mortality:** The proportion of deaths attributed to pneumonia and influenza (P&I) was above the epidemic threshold.
- **Influenza-Associated Pediatric Deaths:** Six pediatric deaths were reported.
- **Influenza-Associated Hospitalizations:** A cumulative rate for the season of 40.6 laboratory-confirmed influenza-associated hospitalizations per 100,000 population was reported. Of reported hospitalizations, 51% were among adults 65 years and older.
- **Outpatient Illness Surveillance:** The proportion of outpatient visits for influenza-like illness (ILI) was 2.2%. This is at the national baseline of 2.2%. Three of 10 regions reported ILI above region-specific baseline levels. One state experienced high ILI activity; 5 states experienced moderate activity; 6 states and New York City experienced low activity; 38 states experienced minimal activity, and the District of Columbia had insufficient data.
- **Geographic Spread of Influenza:** Seven states reported widespread influenza activity; Puerto Rico and 8 states reported regional influenza activity; 26 states reported local influenza activity; 9 states reported sporadic influenza activity; Guam reported no influenza activity, and the U.S. Virgin Islands and the District of Columbia did not report.

A description of surveillance methods is available at: <http://www.cdc.gov/flu/weekly/overview.htm>

