

Flu Watch

Week Ending March 9, 2013 (MMWR Week 10)

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

<i>In this issue:</i>		MMWR Week 10 at a Glance:	
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II. Virologic surveillance	4	ILI Activity Status (South Carolina baseline is 2.05%*): Below baseline in the Upstate Region (.60%). Above baseline in the Midlands Region (2.28%) and in the Pee Dee Region (3.61%). No reports were received from the Low Country Region. The state ILI percentage was 1.61%. These data reflect reports from 13 (40.6%) providers.	
III. Rapid antigen tests	7	SC Viral Isolate and RT-PCR Activity: 9 positive specimens were reported. Since 9/30/12, 986 positive specimens have been reported.	
IV. Hospitalizations and deaths	8	Positive Rapid Flu Test Activity: 1618 positive rapid tests were reported. Since 9/30/12, 47,715 positive rapid tests have been reported.	
V. Syndromic surveillance	11	Hospitalizations: 32 lab confirmed hospitalizations were reported. Since 9/30/12, 1485 hospitalizations have been reported.	
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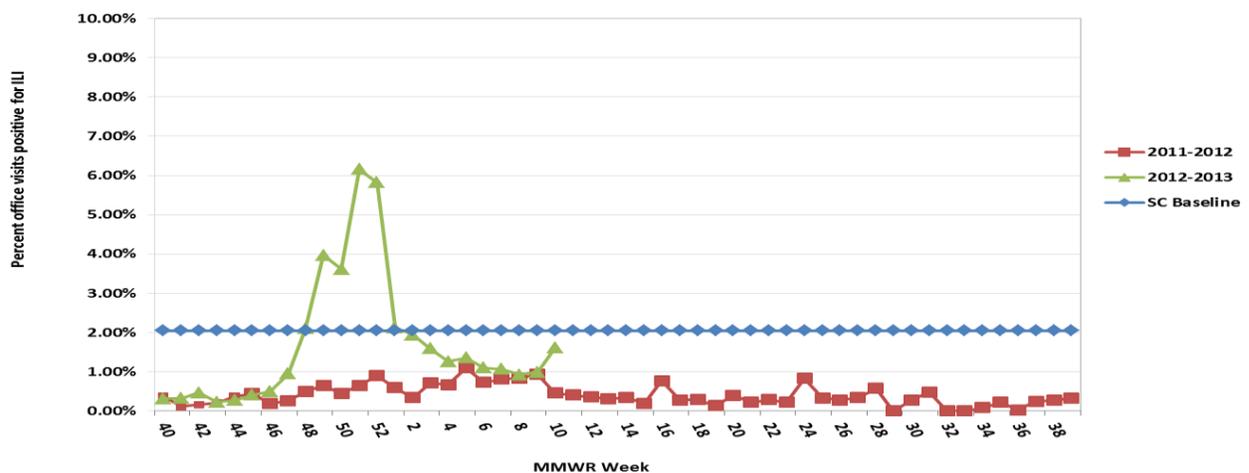
Summary of ILI Activity, Positive Confirmatory Tests, and Influenza Associated Hospitalizations and Deaths

	<i>Current week</i>	<i>Previous week</i>	<i>Change from previous week</i>
Percent of ILI visits reported by ILINet providers	1.61%	.99%	▲ .62
Number of positive confirmatory tests	9	32	▼ 23
Number of lab confirmed flu hospitalizations	32	12	▲ 20
Number of lab confirmed flu deaths	0	2	▼ 2

I. ILINet Influenza-Like Illness Surveillance

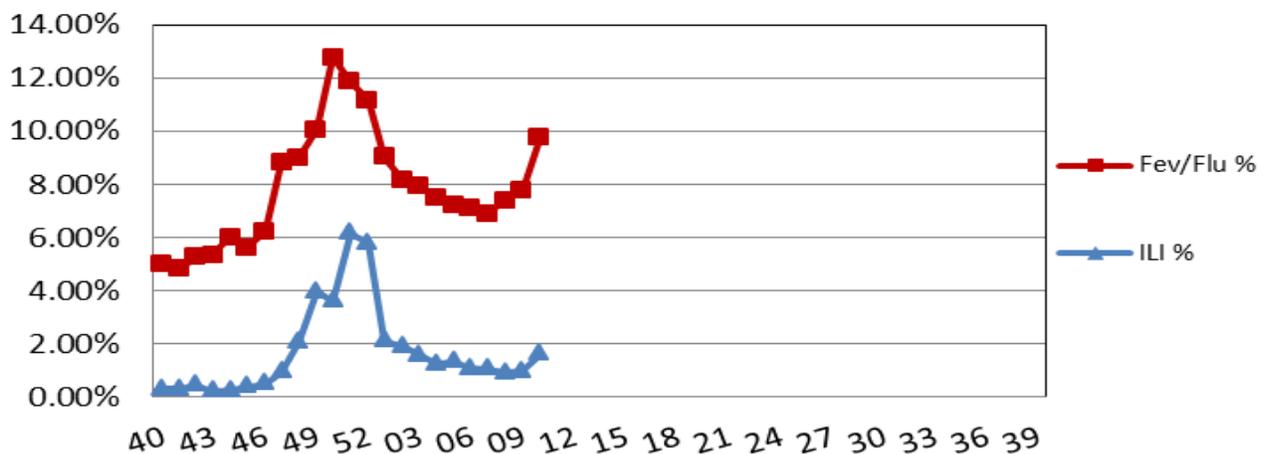
During the most recent MMWR week, 1.61% of patient visits to SC ILINet providers were due to ILI. This is below the state baseline (2.05%). This ILI percentage compares to .46% this time last year. Reports were received from providers in 10 counties, representing 3 of the 4 regions. The statewide percentage of ER visits with fever-flu syndrome was 9.78%.

**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 9, 2013**



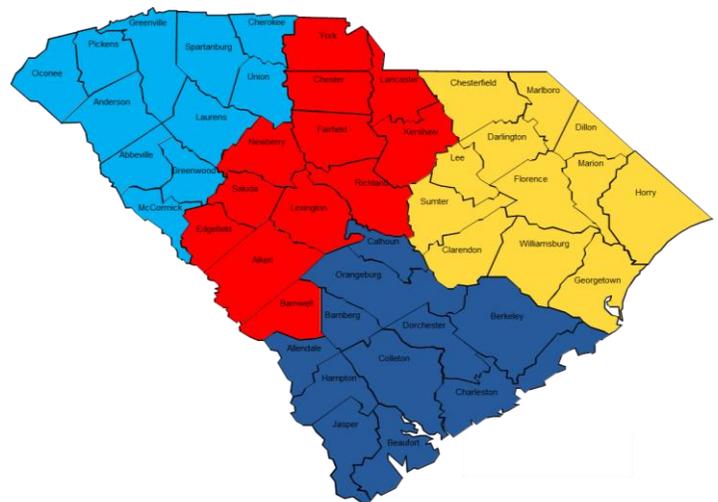
*Only includes hospitals participating in SC syndromic surveillance

Influenza-Like Illness Reported by Sentinel Providers March 3, 2013 – March 9, 2013

County	ILI %	County	ILI %
Abbeville	---	Greenwood	NR
Aiken	.66%	Hampton	NR
Allendale	---	Horry	NR
Anderson	NR	Jasper	NR
Bamberg	---	Kershaw	2.07%
Barnwell	---	Lancaster	---
Beaufort	NR	Laurens	NR
Berkeley	NR	Lee	---
Calhoun	---	Lexington	8.03%
Charleston	NR	Marion	---
Cherokee	---	Marlboro	---
Chester	---	McCormick	.58%
Chesterfield	---	Newberry	---
Clarendon	---	Oconee	---
Colleton	---	Orangeburg	---
Darlington	---	Pickens	NR
Dillon	NR	Richland	NR
Dorchester	NR	Saluda	0%
Edgefield	---	Spartanburg	.65%
Fairfield	---	Sumter	NR
Florence	1.05%	Union	---
Georgetown	6.99%	Williamsburg	---
Greenville	.59%	York	1.04%

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

Region	ILI %	# of Reporters
Upstate (Light blue)	.60	6
Midlands (Red)	2.28	4
Pee Dee (Yellow)	3.61	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* Current MMWR Week (3/3/13 – 3/9/13)</i>		
	BOL	Other clinical labs
Number of specimens tested	4	-
Number of positive specimens	2	7
Influenza A untyped		1
Influenza A H1N1		1
Influenza A H3N2		1
Influenza B	2	4
Other		

Includes culture, RT-PCR, DFA, and IFA

During the previous MMWR week, 9 positive specimens were reported.

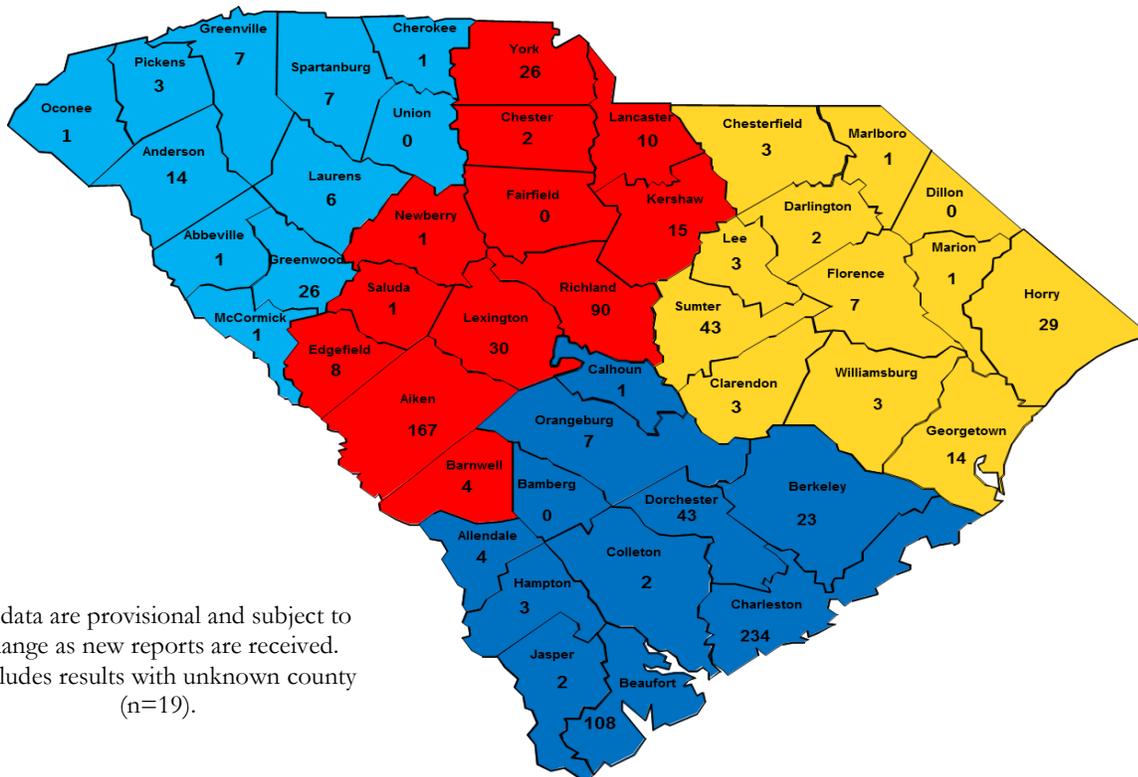
<i>Positive confirmatory influenza test results* Cumulative (09/30/12 – 3/9/13)</i>		
	BOL	Other clinical labs
Number of specimens tested	434	NA
Number of positive specimens	292 (67.3%)	694
Influenza A untyped		312 (45%)
Influenza A H1N1	22 (7.5%)	11 (1.6)
Influenza A H3N2	241 (82.5%)	308 (44.4%)
Influenza B	29 (9.9%)	62 (8.9%)
Other		1 (.14%)

Includes culture, RT-PCR, DFA, and IFA

**Positive Confirmatory Tests by County
Current Week 3/3/13 – 3/9/13**

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

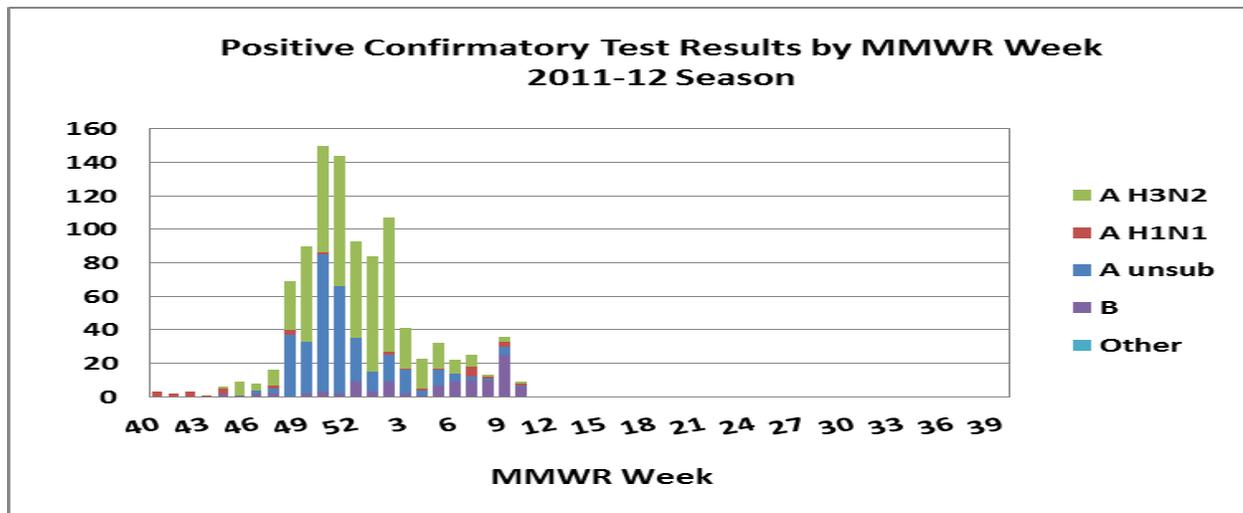
**Map of Positive Confirmatory Tests by County
Cumulative 09/30/12 – 3/9/13**



All data are provisional and subject to change as new reports are received. Excludes results with unknown county (n=19).

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

	A H1N1	A H3N2	B	A Unsub	Unk		A H1N1	A H3N2	B	A Unsub	Unk
Upstate											
Abbeville		1				McCormick		1			
Anderson		8	1	5		Oconee		1			
Cherokee				1		Pickens		3			
Greenwood		22	1	3		Spartanburg	1		2	4	
Greenville		2		5		Union					
Laurens		2		4							
Midlands											
Aiken	2	3	21	140	1	Lancaster		3			7
Barnwell			1	3		Lexington		5	1		24
Chester				2		Newberry					1
Edgefield		1	1	6		Richland	2	16	14		58
Fairfield						Saluda					
Kershaw	2	8	1	4		York		10	3		13
Pee Dee											
Chesterfield		1	1	1		Horry		19	4		6
Clarendon	1	2				Lee		2			1
Darlington		1		1		Marion			1		
Dillon						Marlboro		1			
Florence		1	1	5		Sumter		32	8		3
Georgetown		5	9			Williamsburg					3
Low Country											
Allendale	4					Colleton			2		
Bamberg						Dorchester		38	5		
Beaufort	17	79	4	8		Hampton		1			2
Berkeley		17	6			Jasper		2			
Calhoun				1		Orangeburg		4			3
Charleston	3	212	11	8							
Unknown		16	2	1							

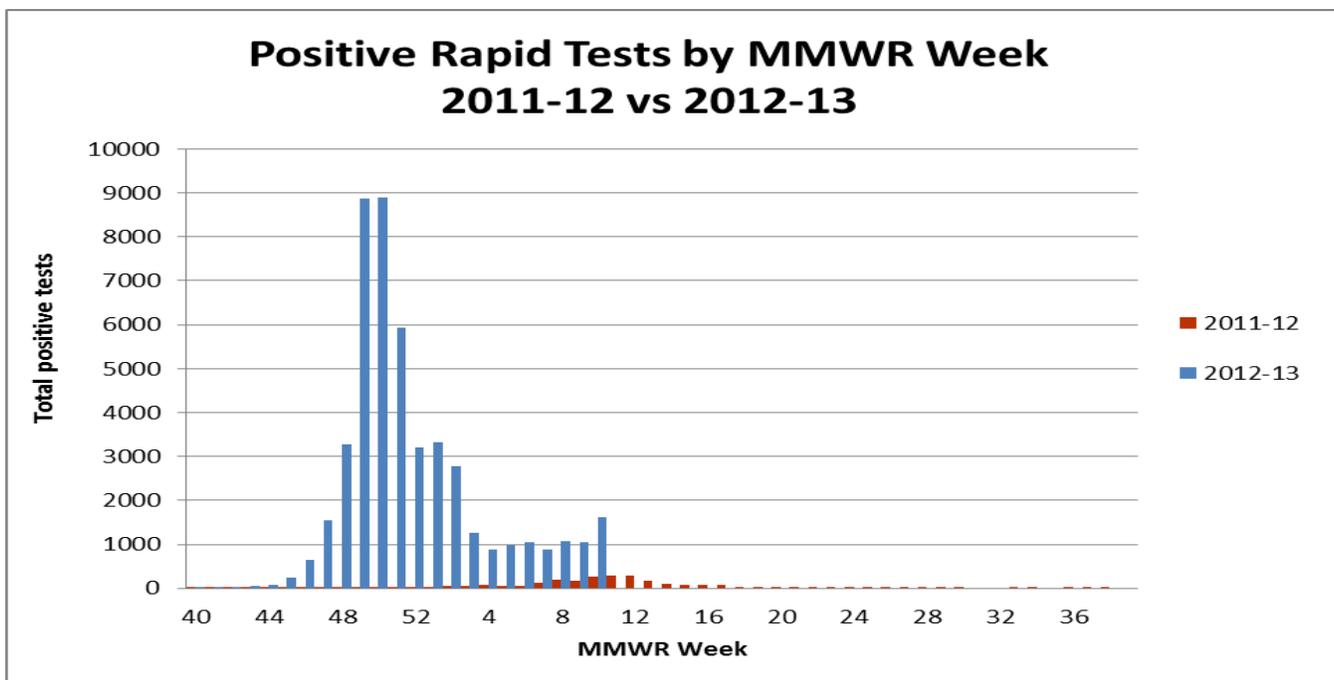


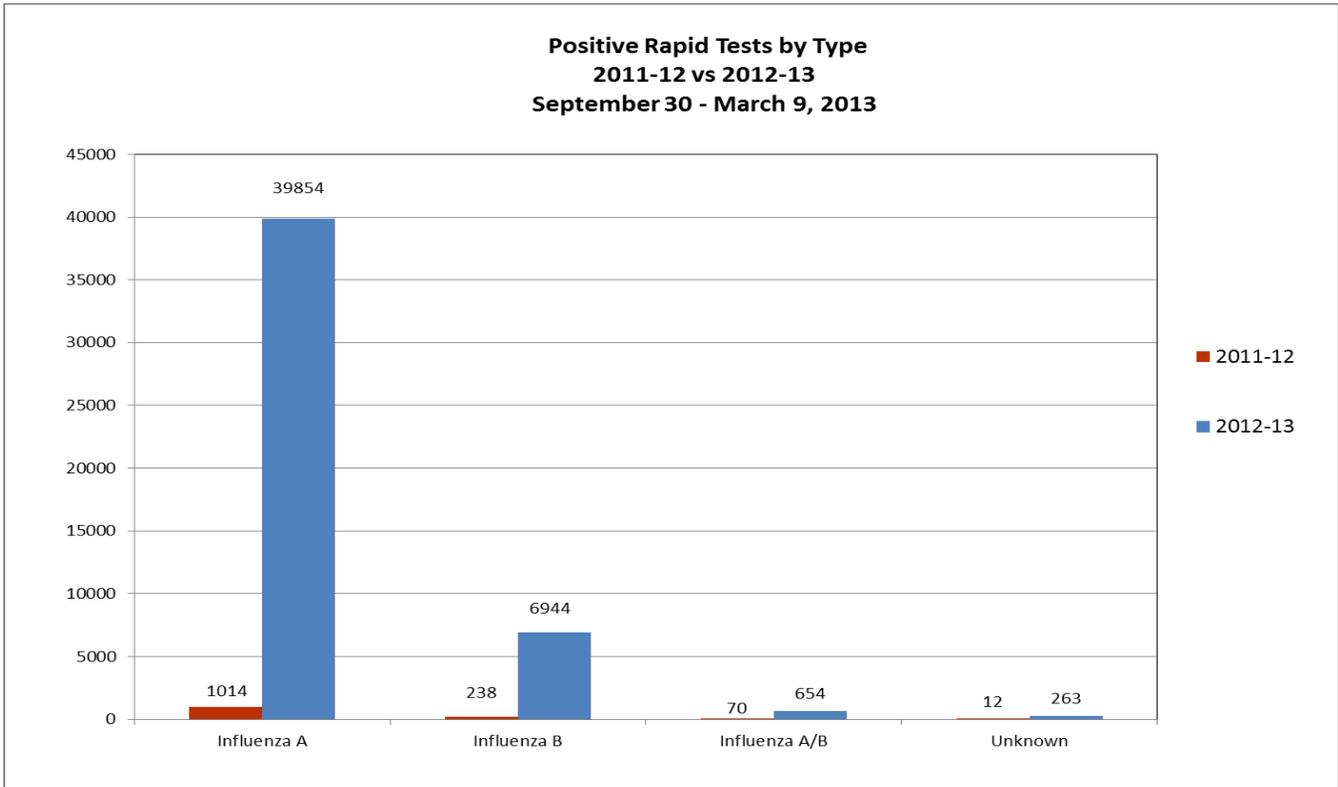
III. Positive Rapid Antigen Tests

During the past MMWR week, 1618 positive rapid antigen tests were reported. Of these, 386 were influenza A, 1201 were influenza B, 27 were influenza A/B, and 4 were unknown. This compares to 255 this time last year. 47,715 positive rapid tests have been reported this year.

Positive Rapid Flu Tests by County March 3, 2013 – March 9, 2013

County	Positive Tests	County	Positive Tests	County	Positive Tests
Abbeville		Dillon	10	Lexington	151
Aiken	13	Dorchester	83	Marion	
Allendale	4	Edgefield	6	Marlboro	
Anderson	38	Fairfield	12	McCormick	
Bamberg		Florence	90	Newberry	16
Barnwell	3	Georgetown	97	Oconee	
Beaufort		Greenville	182	Orangeburg	17
Berkeley	15	Greenwood	5	Pickens	8
Calhoun		Hampton		Richland	148
Charleston	74	Horry	203	Saluda	
Cherokee	2	Jasper		Spartanburg	77
Chester	9	Kershaw	43	Sumter	44
Chesterfield	25	Lancaster	47	Union	9
Clarendon	29	Laurens	4	Williamsburg	13
Colleton		Lee	3	York	78
Darlington	60				





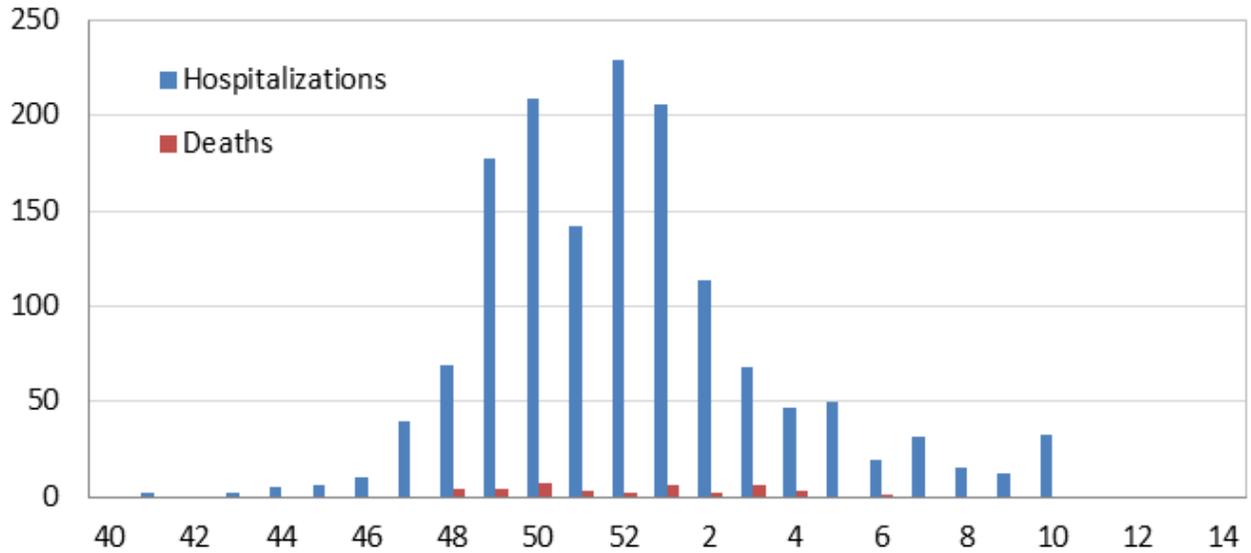
IV. Influenza hospitalizations and deaths

During the past MMWR week, 32 lab confirmed* influenza hospitalizations were reported. No lab confirmed deaths were reported.

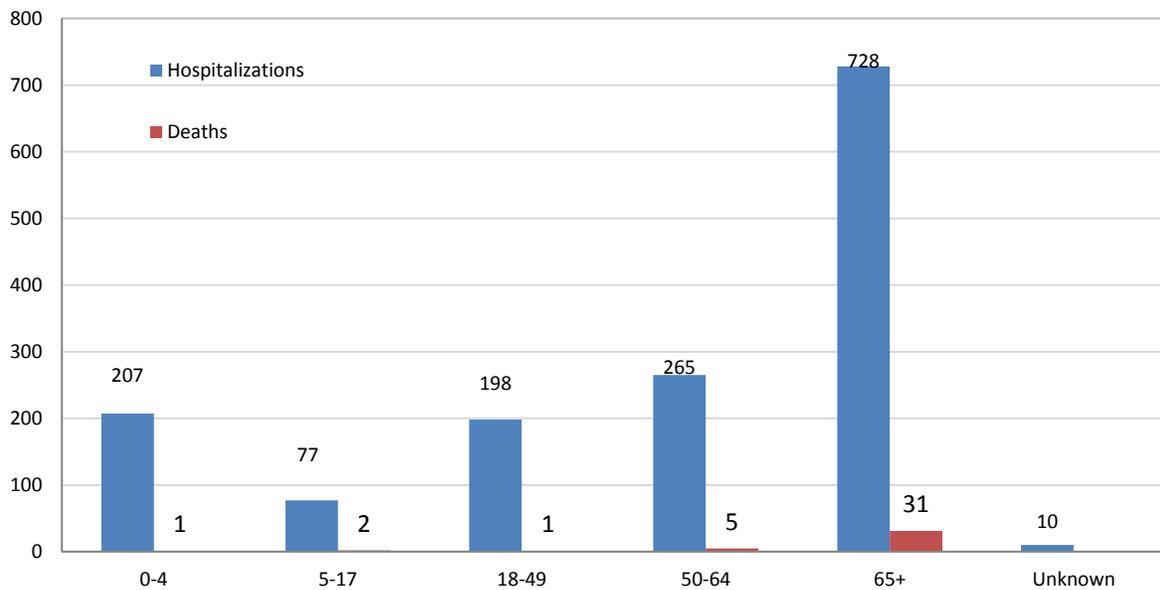
	Total number*	
Number of Reporting Hospitals (Current week)	52	
	<i>Current MMWR Week (3/3/13-3/9/13)</i>	<i>Cumulative (since 09/30/12)</i>
Hospitalizations	32	1485
Deaths	0	40

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

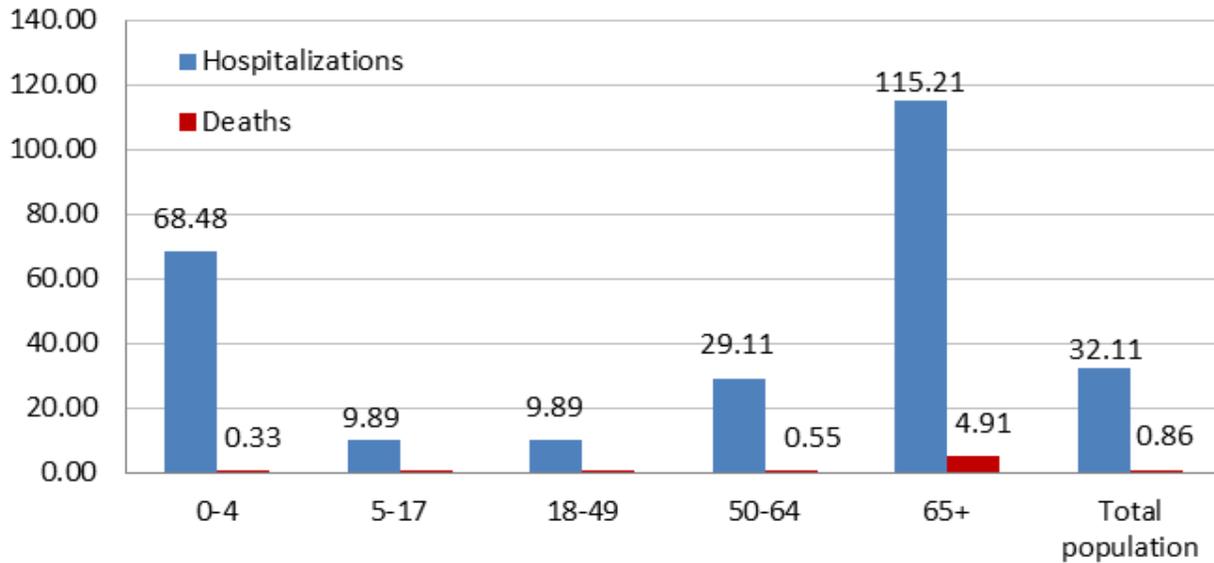
**Reported Cases of Laboratory Confirmed Influenza
Hospitalizations and Deaths
by MMWR week
September 30, 2012 March 9, 2013**



**Reported Cases of Laboratory Confirmed Influenza
Hospitalizations (n=1485) and Deaths (n=40)
September 30 - March 9, 2013**



**Laboratory Confirmed Influenza Case rate/100,000
Hospitalizations (n=1485) and Deaths (n=40) by age group
September 30, 2012 - March 9, 2013**

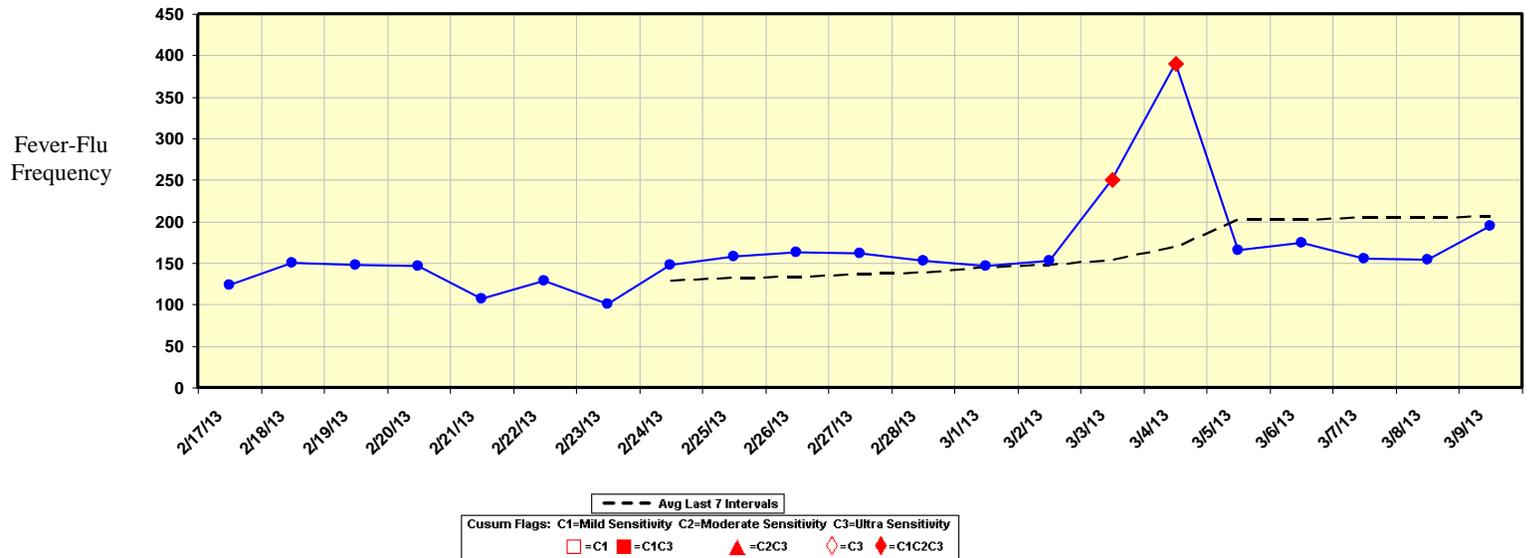


**Lab Confirmed Influenza Deaths by County
September 30, 2012 – March 9, 2013**

County	Deaths	County	Deaths
Aiken	2	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	1
Horry	1	Williamsburg	1
Jasper	1	York	2
Total Deaths		40	

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

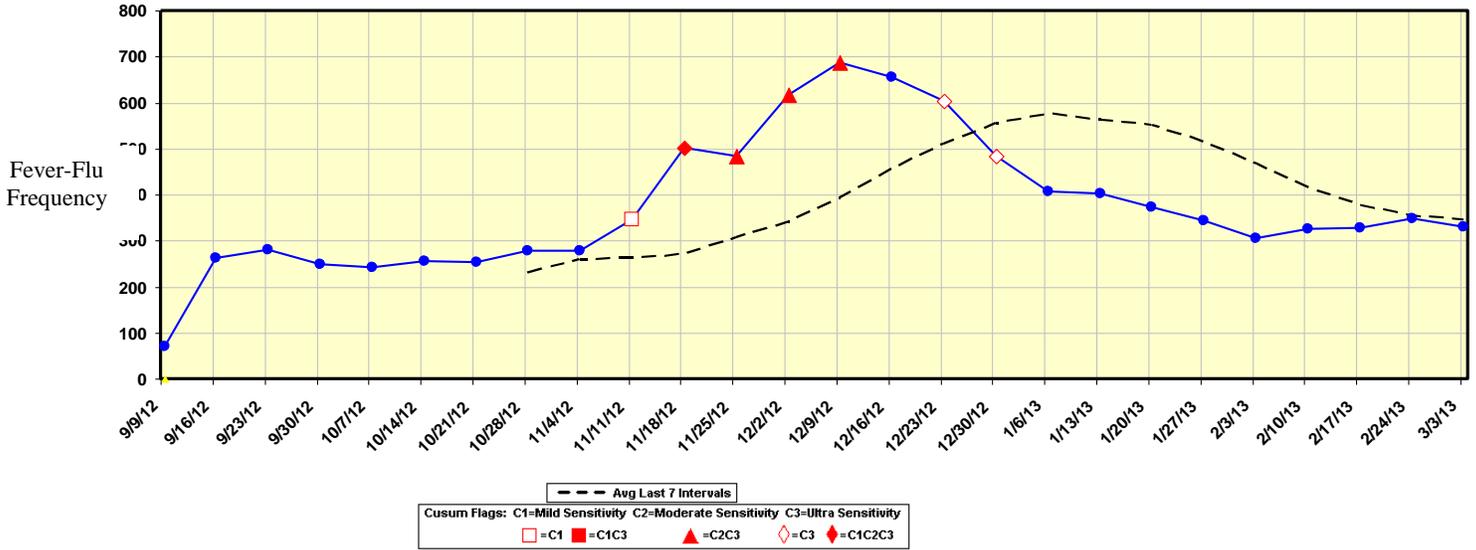
The SC Statewide Fever-Flu Syndrome graph above illustrates the daily counts of hospital emergency department (ED) visits with an Influenza-like Illness (ILI) for the past 21 days. A total of **21 hospital** facilities are reporting to the SC-DARTS system. These 21 include: AnMed Health (Upstate Region); 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.

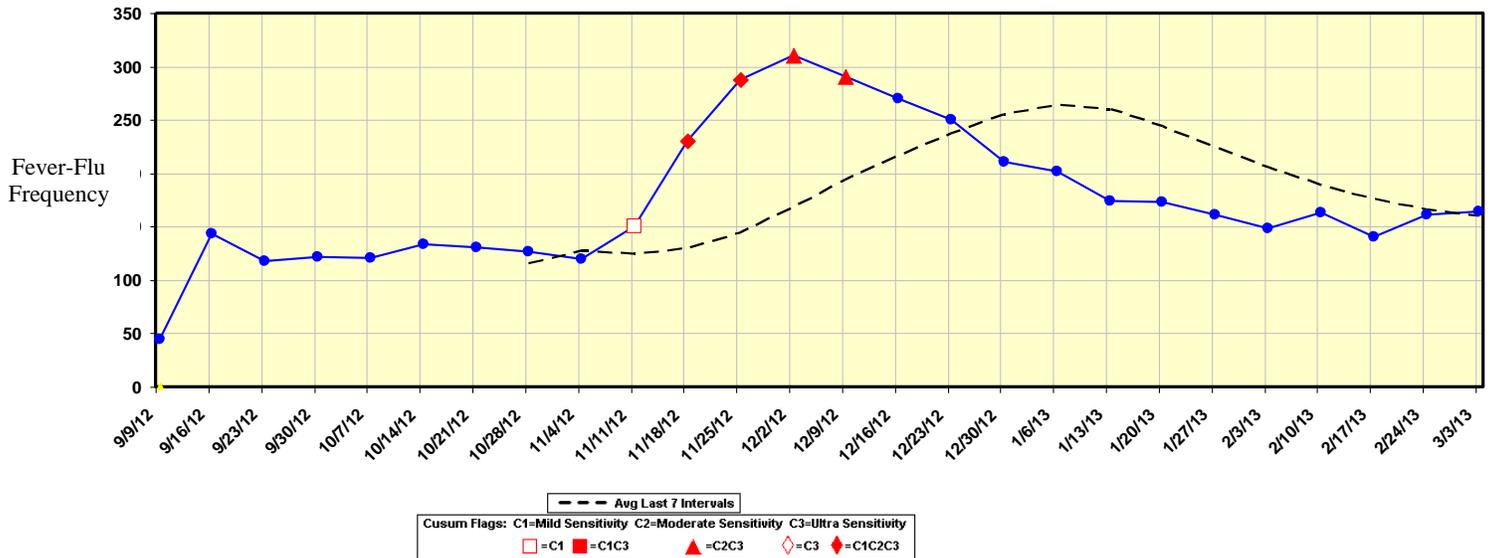
Below are the fever-flu syndrome graphs by Region for the past 180 days (weekly interval).

Upstate Region - Fever Flu Syndrome



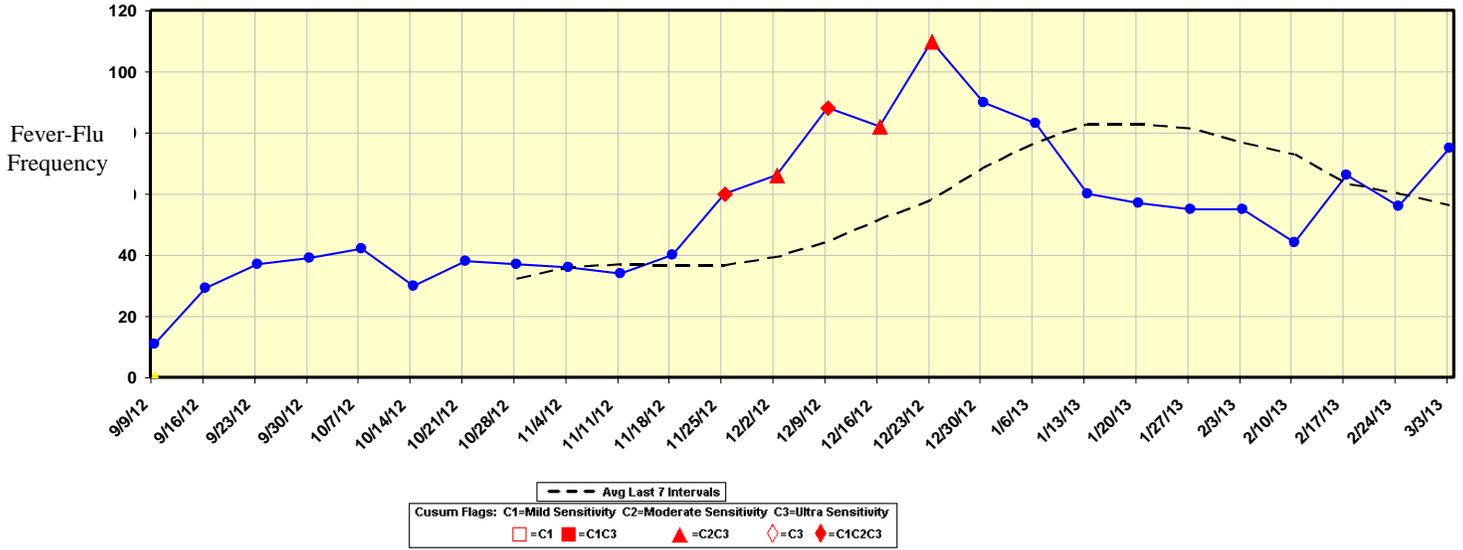
Upstate Region Hospitals (# of Facilities): AnMed Health (3); Self-Regional (1); Oconee Medical Center (1); Greenville Hospital System (4); Palmetto Health Easley (1)

Midlands Region - 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 - 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
No activity	Low	And	No lab confirmed cases
Sporadic	Not increased	And	Isolated lab-confirmed cases
	OR		
Local	Not increased	And	Lab confirmed outbreak in one institution
	Increased ILI in 1 region; ILI activity in other regions is not increased	And	Recent (within the past 3 weeks) lab evidence of influenza in region with increased ILI
OR			
Regional	2 or more institutional outbreaks (ILI or lab confirmed) in 1 region; ILI activity in other regions is not increased	And	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
	Increased ILI in 2-3 regions	And	Recent (within the past 3 weeks) lab confirmed influenza in the affected regions
OR			
Widespread	Institutional outbreaks (ILI or lab confirmed) in 2-3 regions	And	Recent (within the past 3 weeks) lab confirmed influenza in the affected regions
	Increased ILI and/or institutional outbreaks (ILI or lab confirmed) in at least 4 of the regions	And	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 CHESS 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.

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**.

VIII. National Surveillance MMWR Week 9 (2/24-3/2)

During week 9 (February 24 – March 2, 2013), influenza activity remained elevated in the United States, but decreased in most areas.

- **Viral Surveillance:** Of 6,259 specimens tested and reported by collaborating laboratories, 1,074 (17.2%) 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 38.5 laboratory-confirmed influenza-associated hospitalizations per 100,000 population was reported. Of reported hospitalizations, over 51% were among adults 65 years and older.
- **Outpatient Illness Surveillance:** The proportion of outpatient visits for influenza-like illness (ILI) was 2.3%. This is above the national baseline of 2.2%. Seven of 10 regions reported ILI at or above region-specific baseline levels. Four states experienced moderate activity; 13 states and New York City experienced low activity; 33 states experienced minimal activity, and the District of Columbia had insufficient data.
- **Geographic Spread of Influenza:** Nine states reported widespread influenza activity; Puerto Rico and 24 states reported regional influenza activity; the District of Columbia and 13 states reported local influenza activity; 4 states reported sporadic influenza activity; Guam reported no influenza activity, and the U.S. Virgin Islands did not report.

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

