

# Flu Watch

Week Ending May 4, 2013 (MMWR Week 18)

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

<i>In this issue:</i>	
I. ILINet	2
II. Virologic surveillance	4
III. Rapid antigen tests	7
IV. Hospitalizations and deaths	8
V. Syndromic surveillance	11
VI. Activity level definitions	14
VII. SC influenza surveillance components	15
VIII. National Surveillance	16

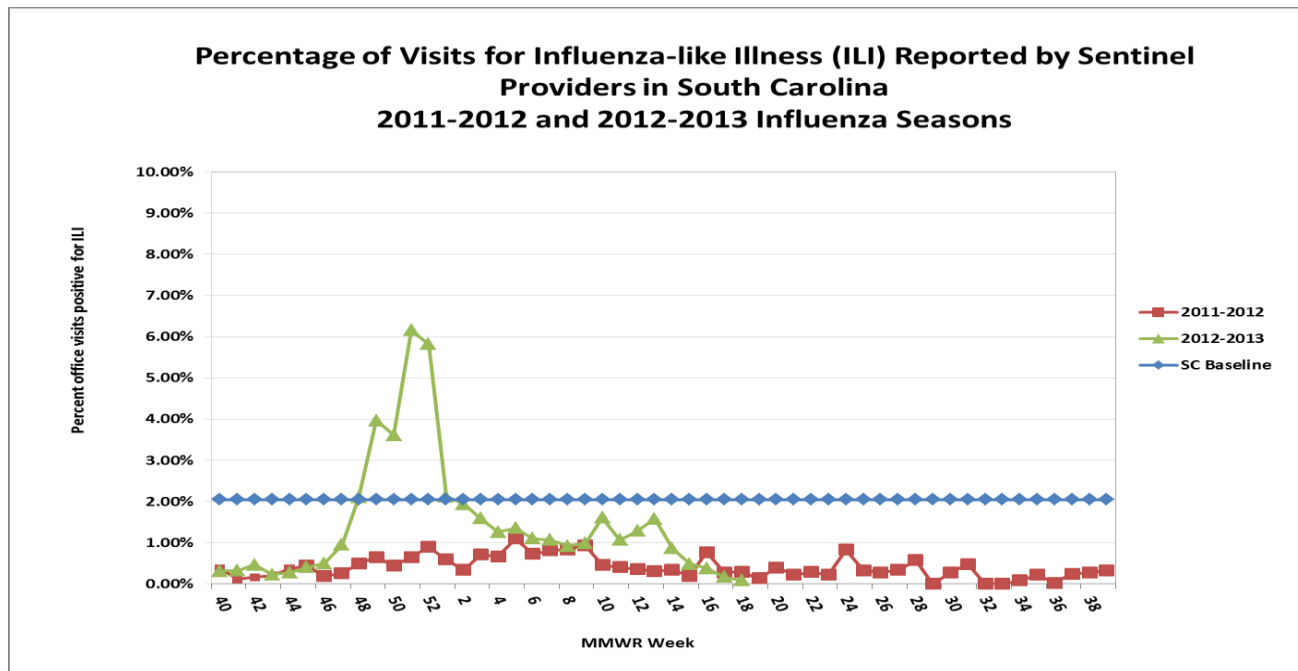
MMWR Week 18 at a Glance:
<p><b>Influenza Activity Level: SPORADIC</b>            Note: Activity level definitions are found on page 14</p> <p><b>ILI Activity Status (South Carolina baseline is 2.05%*):</b> Below baseline in the Upstate Region (0%), the Midlands Region (.20%), and the Pee Dee Region (.21%). No ILI reports were received from the Low Country Region. The state ILI percentage was .09%. These data reflect reports from 11 (34.4%) providers.</p> <p><b>SC Viral Isolate and RT-PCR Activity:</b> 3 positive specimens were reported. Since 9/30/12, 1175 positive specimens have been reported.</p> <p><b>Positive Rapid Flu Test Activity:</b> 140 positive rapid tests were reported. Since 9/30/12, 58,543 positive rapid tests have been reported.</p> <p><b>Hospitalizations:</b> 4 lab confirmed hospitalizations were reported. Since 9/30/12, 1712 hospitalizations have been reported.</p> <p><b>Deaths:</b> No lab confirmed deaths were reported. Since 9/30/12, 46 deaths have been reported.</p>

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

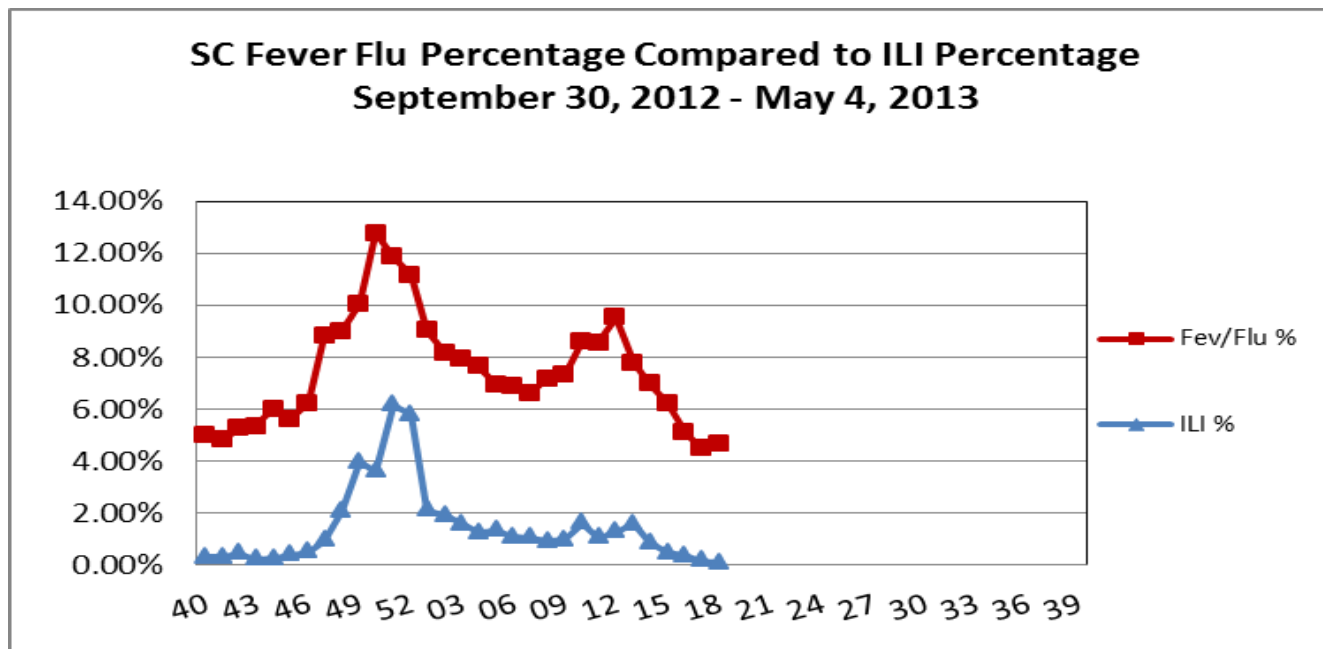
	<i>Current week</i>	<i>Previous week</i>	<i>Change from previous week</i>
Percent of ILI visits reported by ILINet providers	.09%	.17%	▼ .08
Number of positive confirmatory tests	7	11	▼ 4
Number of lab confirmed flu hospitalizations	4	7	▼ 3
Number of lab confirmed flu deaths	0	2	▼ 2

## I. ILINet Influenza-Like Illness Surveillance

During the most recent MMWR week, .09% of patient visits to SC ILINet providers were due to ILI. This is below the state baseline (2.05%). This ILI percentage compares to .29 % 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 4.66%.



\*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.



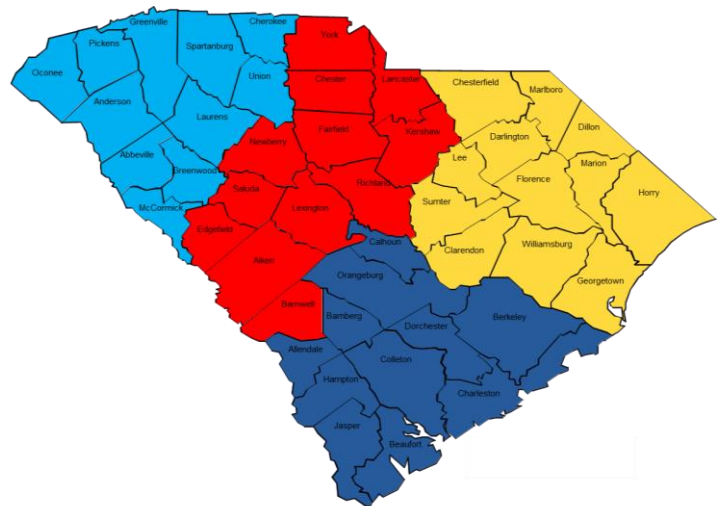
\*Only includes hospitals participating in SC syndromic surveillance

## Influenza-Like Illness Reported by Sentinel Providers April 28, 2013 – May 4, 2013

County	ILI %	County	ILI %
Abbeville	---	Greenwood	NR
Aiken	0%	Hampton	NR
Allendale	---	Horry	NR
Anderson	NR	Jasper	NR
Bamberg	---	Kershaw	0%
Barnwell	---	Lancaster	---
Beaufort	NR	Laurens	NR
Berkeley	NR	Lee	---
Calhoun	---	Lexington	NR
Charleston	NR	Marion	---
Cherokee	---	Marlboro	---
Chester	---	McCormick	0%
Chesterfield	---	Newberry	---
Clarendon	---	Oconee	---
Colleton	---	Orangeburg	---
Darlington	---	Pickens	0%
Dillon	NR	Richland	.31%
Dorchester	NR	Saluda	0%
Edgefield	---	Spartanburg	0%
Fairfield	---	Sumter	NR
Florence	.21%	Union	---
Georgetown	NR	Williamsburg	---
Greenville	0%	York	0%

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

Region	ILI %	# of Reporters
Upstate (Light blue)	0	5
Midlands (Red)	.20	5
Pee Dee (Yellow)	.23.21	1
Low Country (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 (4/28/13 – 5/4/13)</i>		
	<b>BOL</b>	<b>Other clinical labs</b>
<b>Number of specimens tested</b>	6	-
<b>Number of positive specimens</b>	0	3
<b>Influenza A unsubtype</b>		1
<b>Influenza A H1N1</b>		
<b>Influenza A H3N2</b>		
<b>Influenza B</b>		2
<b>Other</b>		

Includes culture, RT-PCR, DFA, and IFA

During the previous MMWR week, 3 positive specimens were reported.

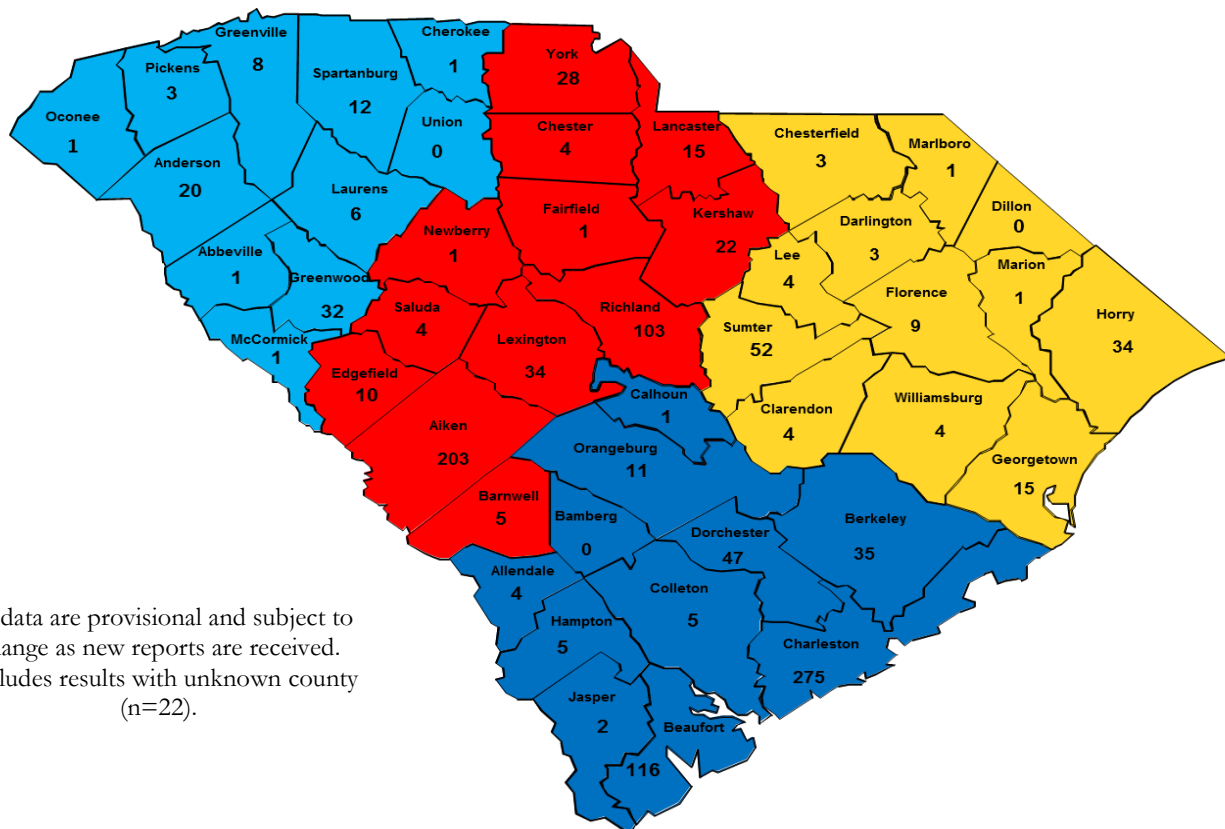
<i>Positive confirmatory influenza test results*</i> <i>Cumulative (09/30/12 – 5/4/13)</i>		
	<b>BOL</b>	<b>Other clinical labs</b>
<b>Number of specimens tested</b>	508	NA
<b>Number of positive specimens</b>	318 (62.6%)	857
<b>Influenza A unsubtype</b>		325 (37.9%)
<b>Influenza A H1N1</b>	24 (7.5%)	19 (2.2)
<b>Influenza A H3N2</b>	245 (77%)	311 (36.3%)
<b>Influenza B</b>	49 (15.4%)	199 (23.2%)
<b>Other</b>		3 (.35%)

Includes culture, RT-PCR, DFA, and IFA

**Positive Confirmatory Tests by County  
Current Week 4/28/13 – 5/4/13**

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

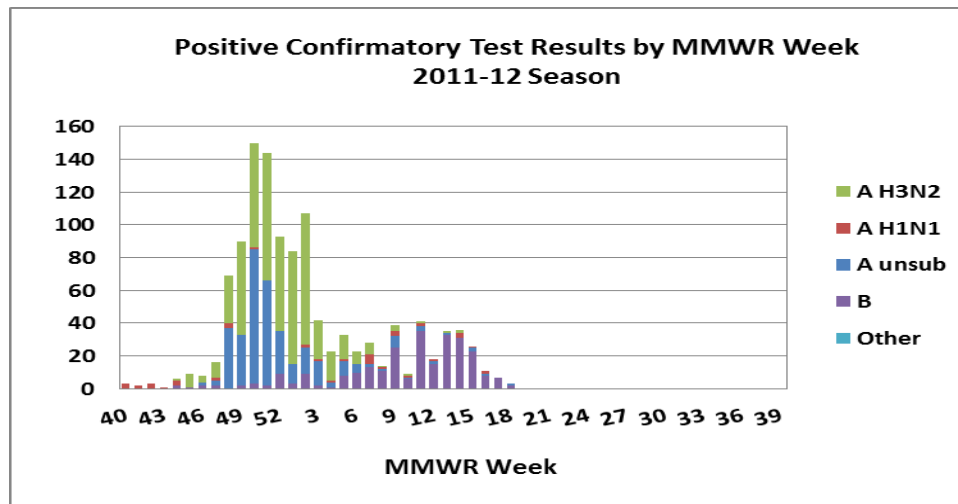
**Map of Positive Confirmatory Tests by County  
Cumulative 09/30/12 – 5/4/13**



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 – 5/4/13**

	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	6	5	1	Oconee		1			
Cherokee				1		Pickens		3			
Greenwood		22	8	3		Spartanburg	2		5	5	
Greenville		2	1	5		Union					
Laurens		2		4							
<b>Midlands</b>											
Aiken	6	3	50	144	1	Lancaster		3	5	7	
Barnwell			2	3		Lexington		5	5	24	
Chester			2	2		Newberry				1	
Edgefield		1	3	6		Richland	3	16	24	60	
Fairfield			1			Saluda			3		
Kershaw	2	8	7	4		York	1	13	4	13	
<b>Pee Dee</b>											
Chesterfield		1	1	1		Horry	2	19	5	8	
Clarendon	1	2	1			Lee		2		2	
Darlington		1	1	1		Marion			1		
Dillon						Marlboro		1			
Florence		1	3	5		Sumter		32	16	4	
Georgetown		5	10			Williamsburg			1	3	
<b>Low Country</b>											
Allendale	4					Colleton			5		
Bamberg						Dorchester		38	9		
Beaufort	17	80	10	8	1	Hampton		2	1	2	
Berkeley		17	18			Jasper		2			
Calhoun				1		Orangeburg		4	3	3	
Charleston	4	214	48	8							
Unknown		16	4	2							

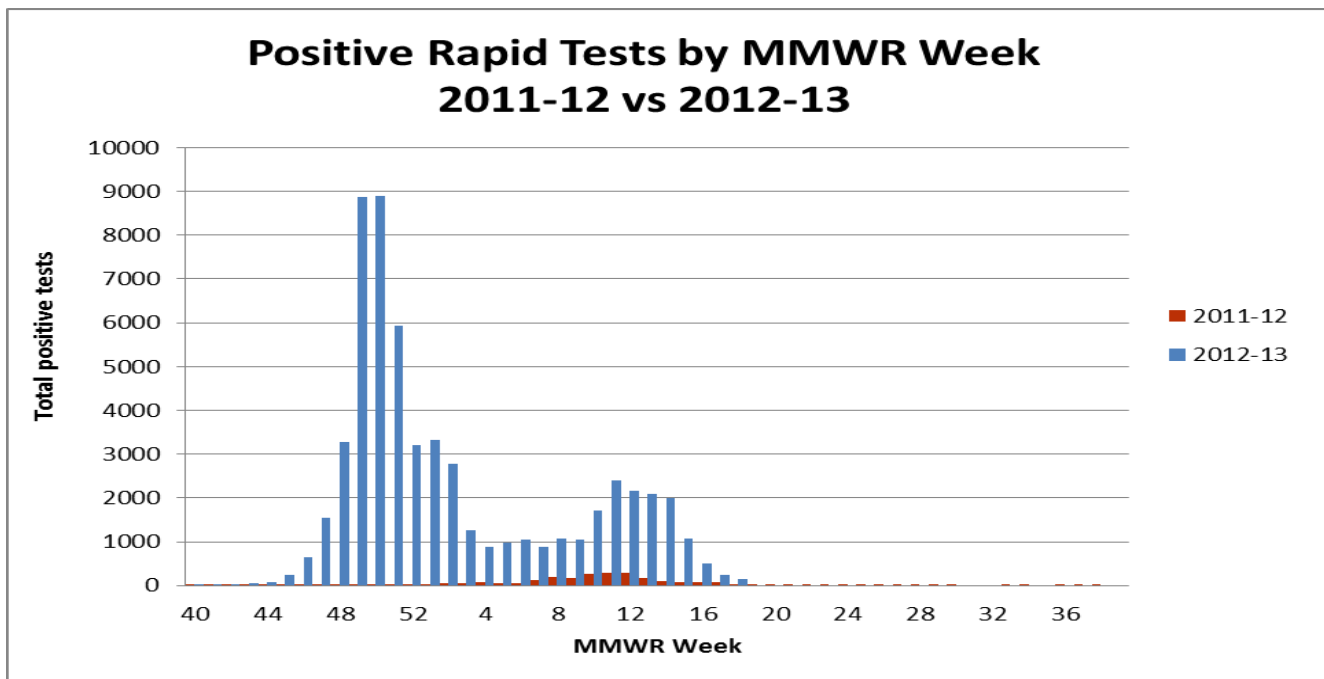


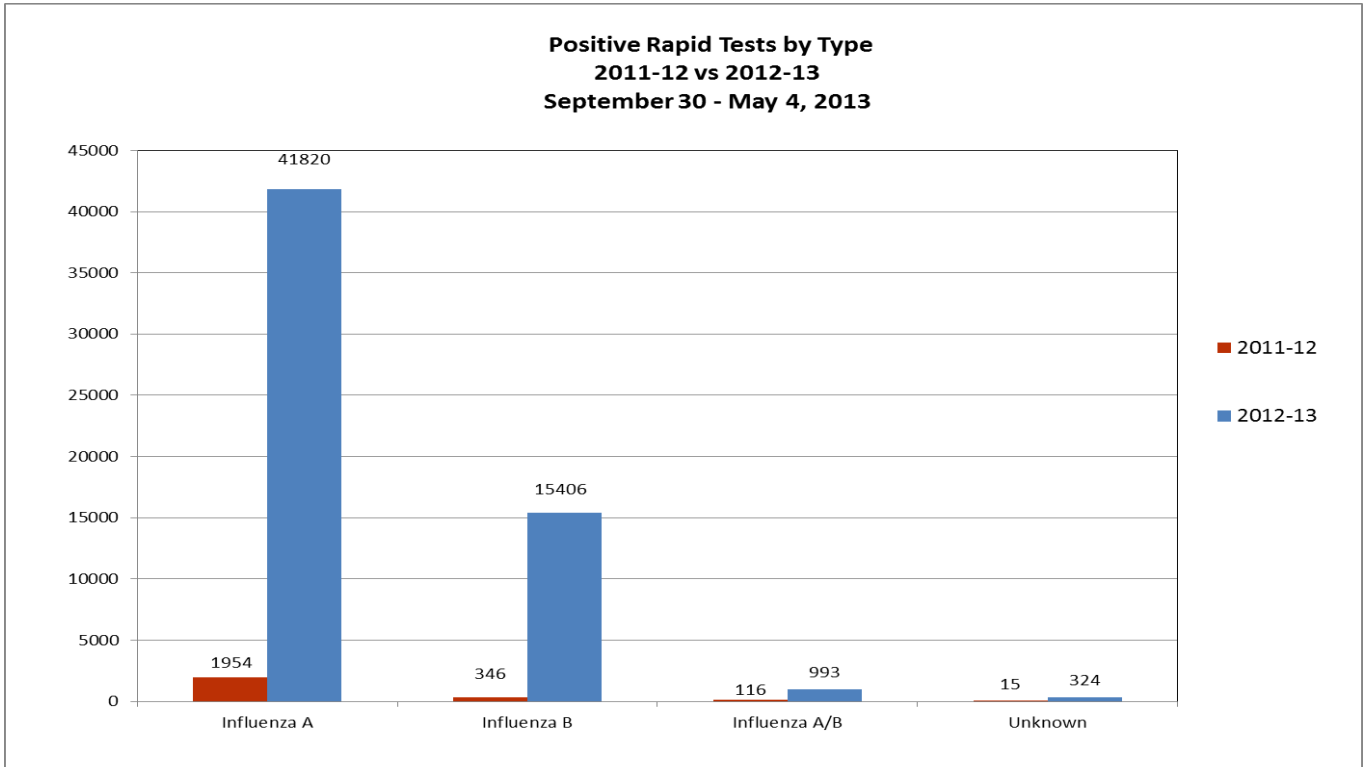
### III. Positive Rapid Antigen Tests

During the past MMWR week, 140 positive rapid antigen tests were reported. Of these, 34 were influenza A, 103 were influenza B, and 3 were influenza A/B. This compares to 27 this time last year. 58,543 positive rapid tests have been reported this year.

#### Positive Rapid Flu Tests by County April 28, 2013 – May 4, 2013

County	Positive Tests	County	Positive Tests	County	Positive Tests
Abbeville		Dillon		Lexington	1
Aiken		Dorchester	30	Marion	
Allendale		Edgefield		Marlboro	
Anderson		Fairfield		McCormick	
Bamberg		Florence	15	Newberry	1
Barnwell		Georgetown	20	Oconee	
Beaufort	1	Greenville	11	Orangeburg	
Berkeley	4	Greenwood	2	Pickens	
Calhoun		Hampton		Richland	16
Charleston	20	Horry	1	Saluda	
Cherokee		Jasper		Spartanburg	4
Chester		Kershaw	1	Sumter	2
Chesterfield		Lancaster	3	Union	
Clarendon		Laurens		Williamsburg	1
Colleton		Lee	1	York	4
Darlington	3				





#### IV. Influenza hospitalizations and deaths

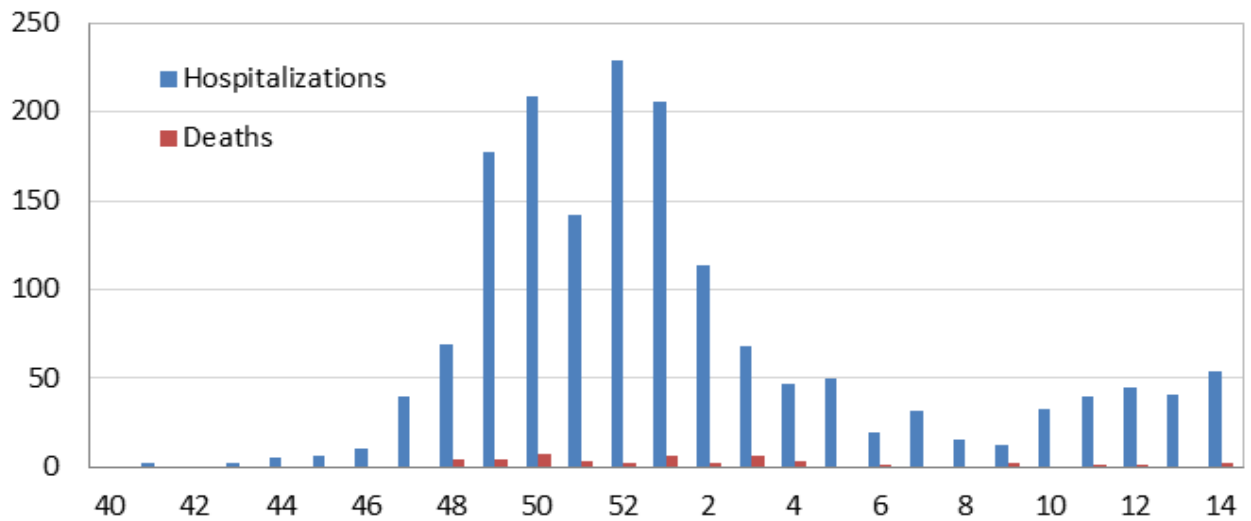
During the past MMWR week, 4 lab confirmed\* influenza hospitalizations were reported. No lab confirmed influenza deaths were reported.

	Total number*	
<b>Number of Reporting Hospitals (Current week)</b>	39	
	<i>Current MMWR Week (4/28/13-5/4/13)</i>	<i>Cumulative (since 09/30/12)</i>
<b>Hospitalizations</b>	4	1712
<b>Deaths</b>	0	46

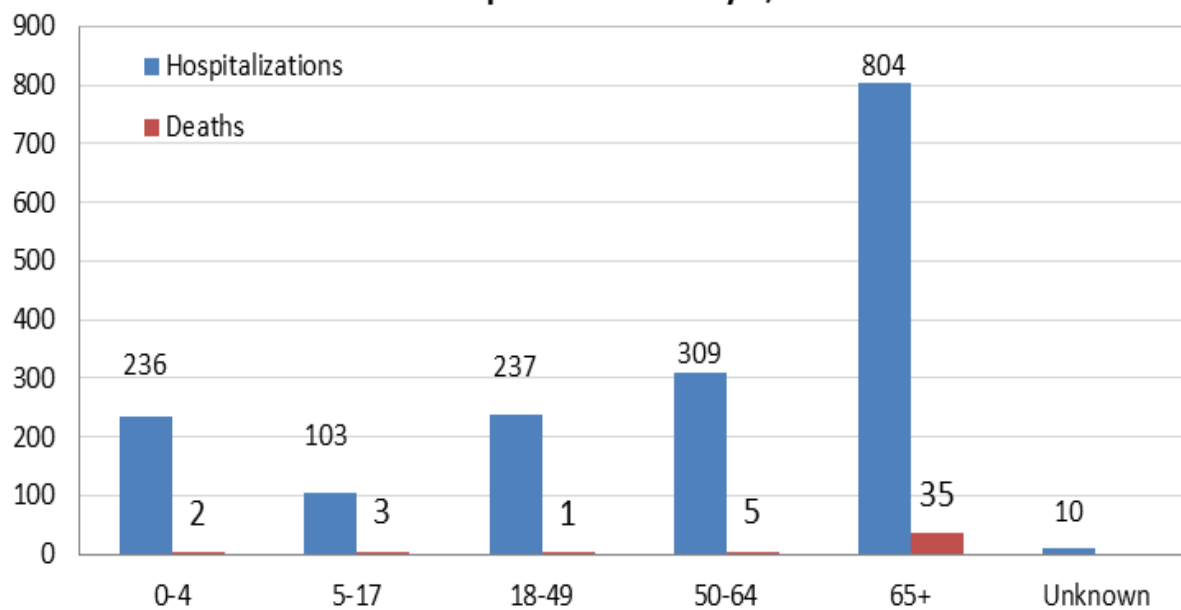
\*These data are provisional. Lab confirmation for hospitalizations and deaths includes culture, PCR, DFA, IFA, and rapid test.



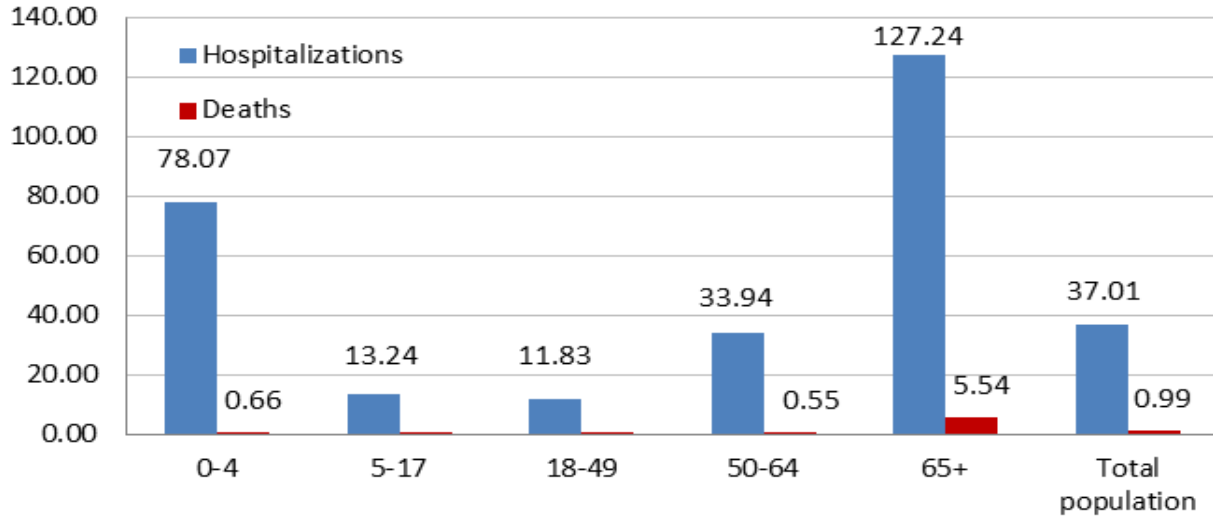
**Reported Cases of Laboratory Confirmed Influenza  
Hospitalizations and Deaths  
by MMWR week  
September 30, 2012 May 4, 2013**



**Reported Cases of Laboratory Confirmed Influenza  
Hospitalizations (n=1712) and Deaths (n=46)  
September 30 - May 4, 2013**



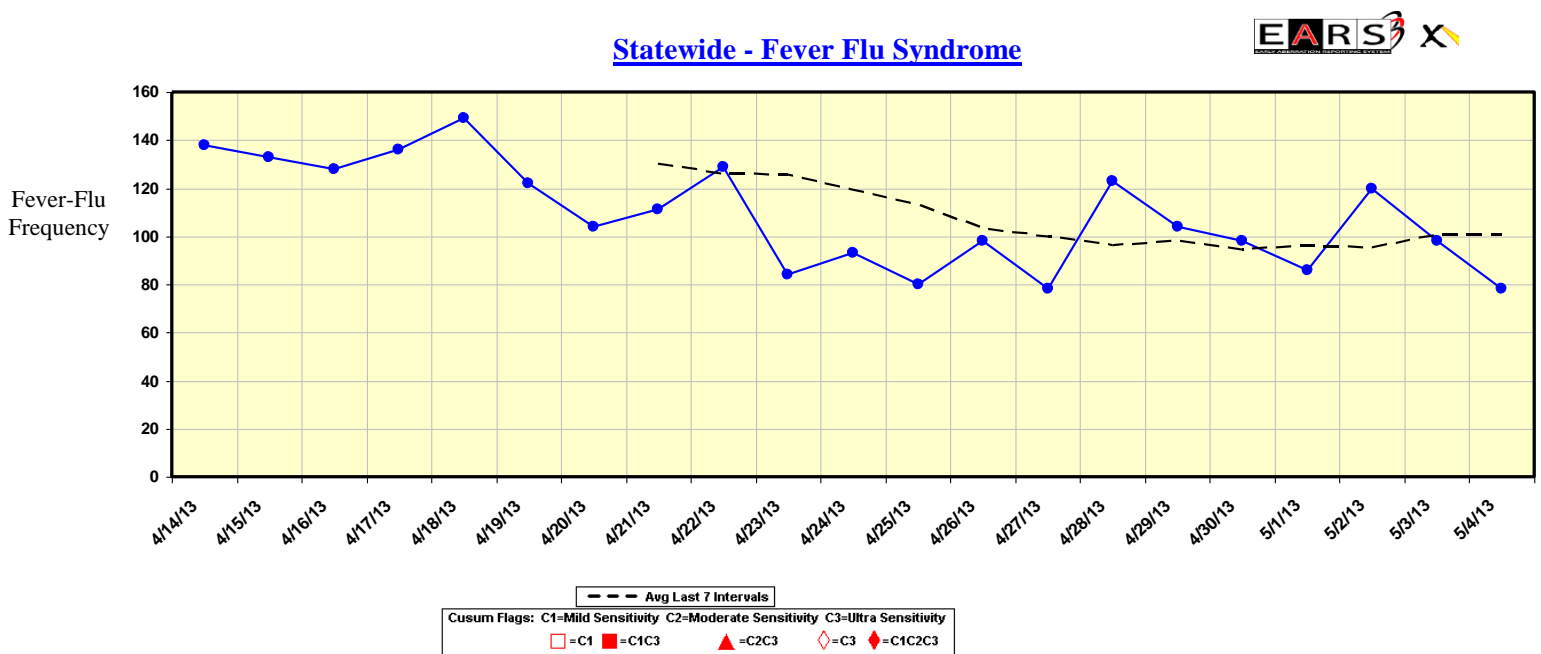
**Laboratory Confirmed Influenza Case rate/100,000  
Hospitalizations (n=1712) and Deaths (n=46) by age group  
September 30, 2012 - May 4, 2013**



**Lab Confirmed Influenza Deaths by County  
September 30, 2012 – May 4, 2013**

County	Deaths	County	Deaths
Aiken	4	Lexington	4
Barnwell	1	Marion	1
Beaufort	2	McCormick	2
Charleston	1	Newberry	1
Cherokee	1	Oconee	4
Chesterfield	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>46</b>		

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



### 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

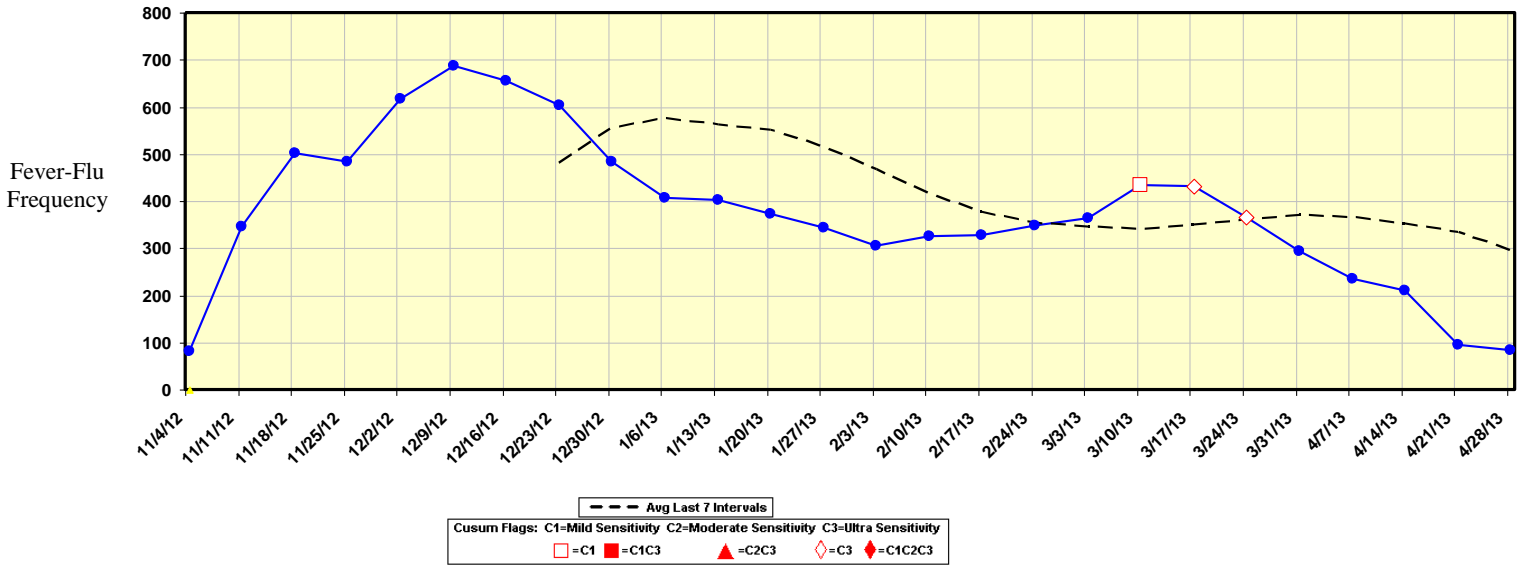
The SC Statewide Fever-Flu Syndrome graph above illustrates the daily counts of hospital emergency department (ED) visits with an Influenza-like Illness (ILI) for the past 21 days. A total of 21 hospital facilities are reporting to the SC-DARTS system. These 21 include: AnMed Health (Upstate Region);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

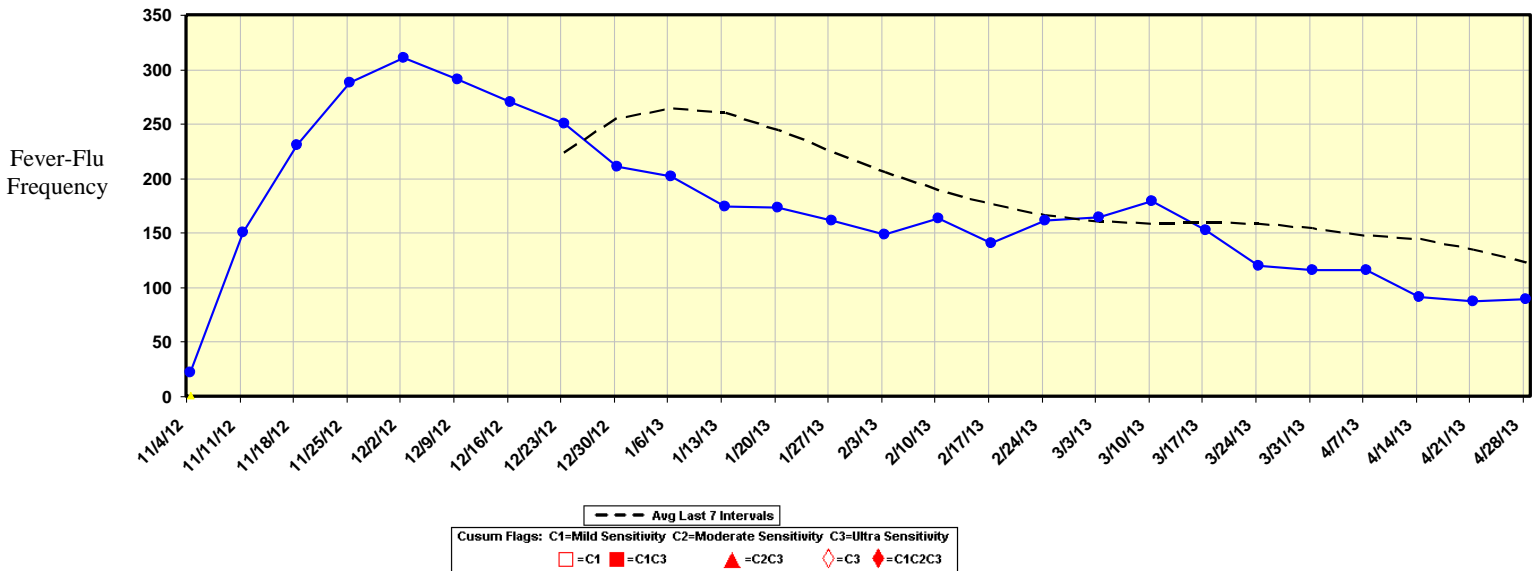
Below are the fever-flu syndrome graphs by Region for the past 180 days (weekly interval).

### Upstate Region - Fever Flu Syndrome



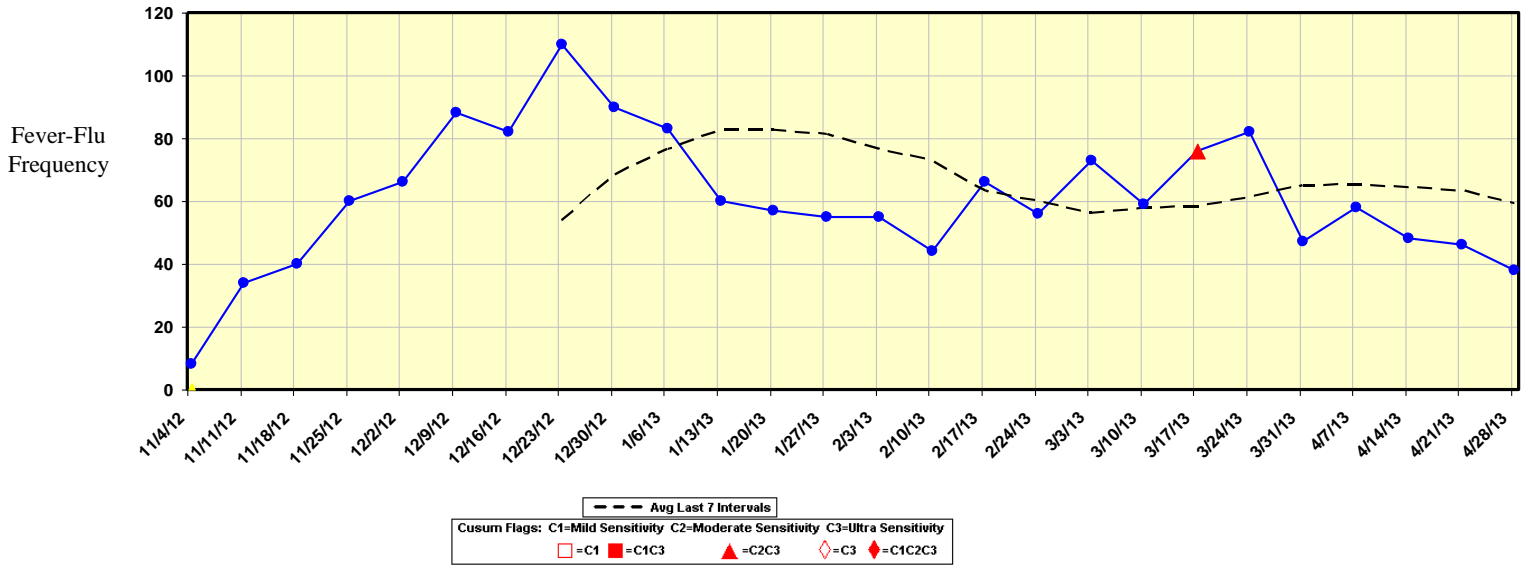
Upstate Region Hospitals (# of Facilities): AnMed Health (3); Self-Regional (1); Oconee Medical Center (1); Greenville Hospital System (4); Palmetto Health Easley (1)

### Midlands Region - Fever Flu Syndrome



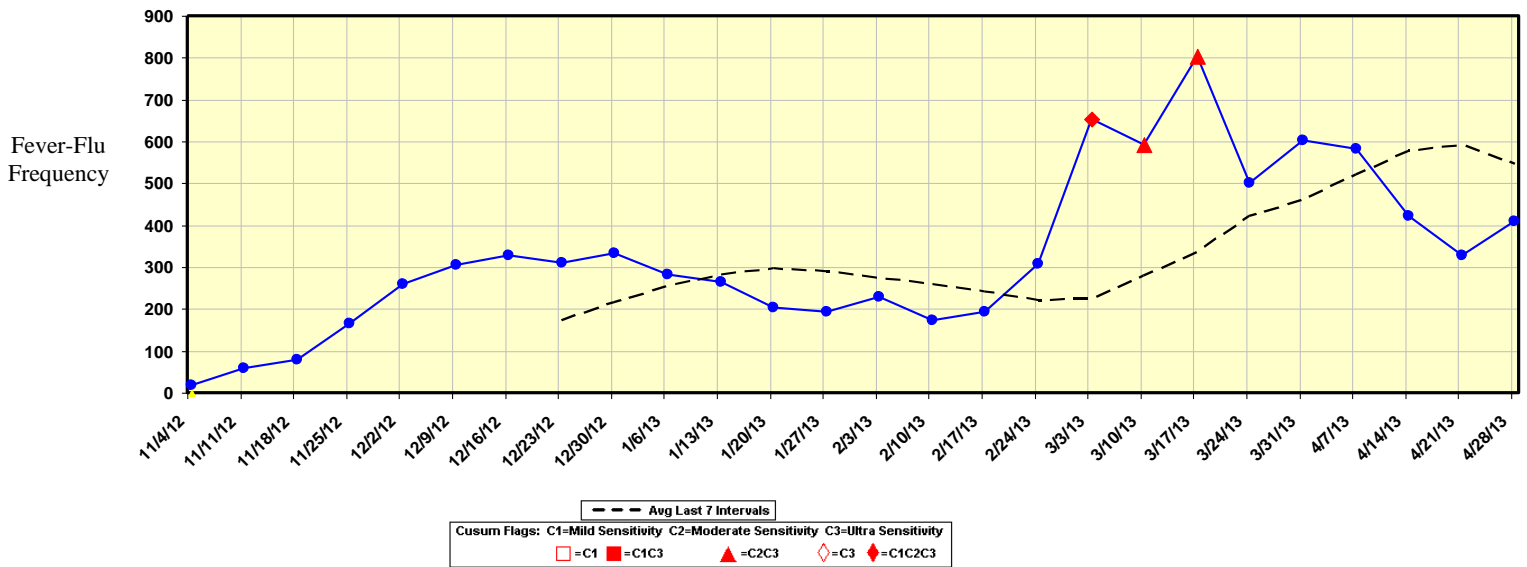
Midlands Region Hospitals (# of Facilities): Palmetto Health Baptist (1); Palmetto Health Richland (1); Kershaw Health (1); Elgin Urgent Care (1)

**Pee Dee Region - Fever Flu Syndrome**



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

**Low Country 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>	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>OR</b>		
<b>Regional</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>OR</b>		
<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 17(4/21-4/27)

During week 17 (April 21-27, 2013), influenza activity decreased in the United States.

- **Viral Surveillance:** Of 2,746 specimens tested and reported by collaborating laboratories, 177 (6.5%) were positive for influenza.
- **Pneumonia and Influenza Mortality:** The proportion of deaths attributed to pneumonia and influenza (P&I) was below the epidemic threshold.
- **Influenza-Associated Pediatric Deaths:** Seven pediatric deaths were reported.
- **Influenza-Associated Hospitalizations:** A cumulative rate for the season of 44.2 laboratory-confirmed influenza-associated hospitalizations per 100,000 population was reported. Of reported hospitalizations, 50% were among adults 65 years and older.
- **Outpatient Illness Surveillance:** The proportion of outpatient visits for influenza-like illness (ILI) was 1.0%. This is below the national baseline of 2.2%. All 10 regions reported ILI below region-specific baseline levels. One state experienced low activity; 48 states and New York City experienced minimal activity, and the District of Columbia and 1 state had insufficient data.
- **Geographic Spread of Influenza:** Puerto Rico and 3 states reported regional influenza activity; 6 states reported local influenza activity; the District of Columbia, Guam, and 36 states reported sporadic influenza activity; 5 states 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>

