

## South Carolina Department of Health and Environmental Control

### Division of Acute Disease Epidemiology

Week Ending November 2, 2013 (MMWR Week 44)

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

#### MMWR Week 44 at a Glance:

##### Influenza Activity Level: LOCAL

Note: Activity level definitions are found on page 13

**ILI Activity Status (South Carolina baseline is 2.05%\*):** The state ILI percentage was .49%. These data reflect reports from 14 (46.7%) providers.

**SC Viral Isolate and RT-PCR Activity:** Three positive specimens were reported. Since 9/29/13, 15 positive specimens have been reported.

**Positive Rapid Flu Test Activity:** One hundred seventy seven positive rapid tests were reported. Since 9/29/13, 455 positive rapid tests have been reported.

**Hospitalizations:** Six lab confirmed hospitalizations were reported. Since 9/29/13, 22 lab confirmed hospitalizations have been reported.

**Deaths:** No lab confirmed deaths were reported.

#### *In this issue:*

I. ILINet	2
II. Virologic surveillance	5
III. Rapid antigen tests	8
IV. Hospitalizations and deaths	9
V. Syndromic surveillance	10
VI. Activity level definitions	13
VII. SC influenza surveillance components	14
VIII. National surveillance	15

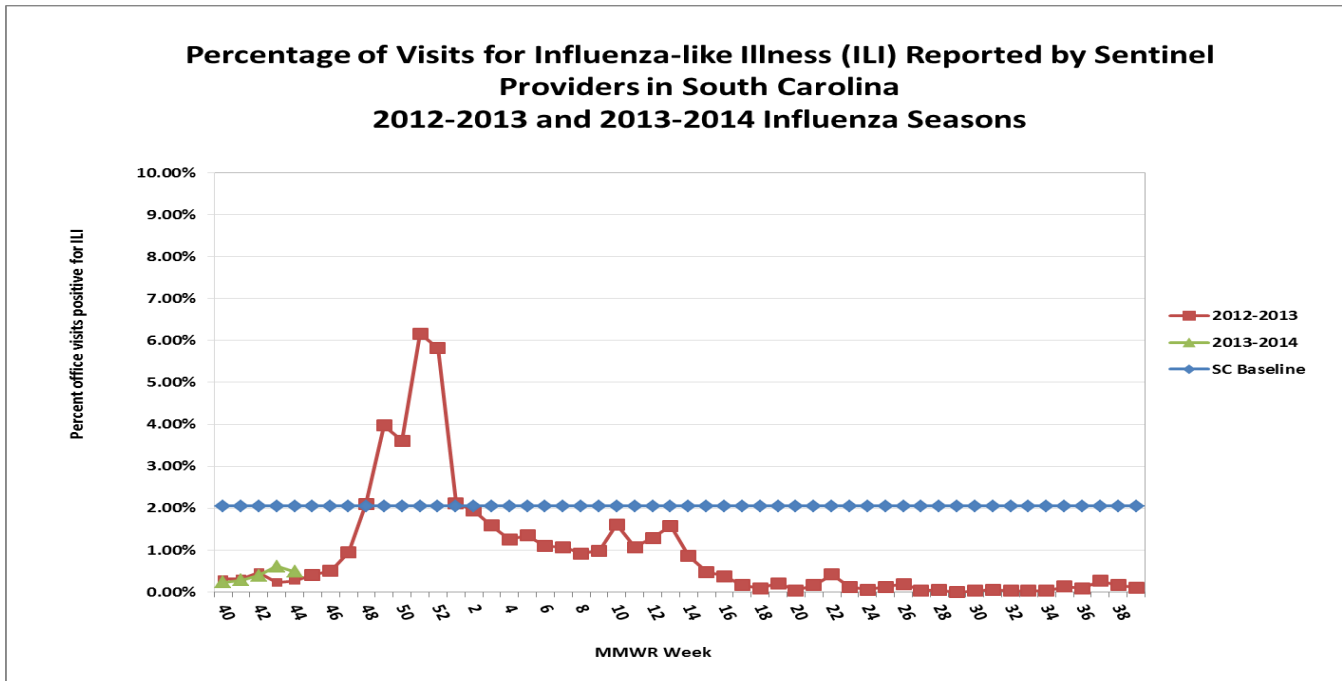
# Flu Watch

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

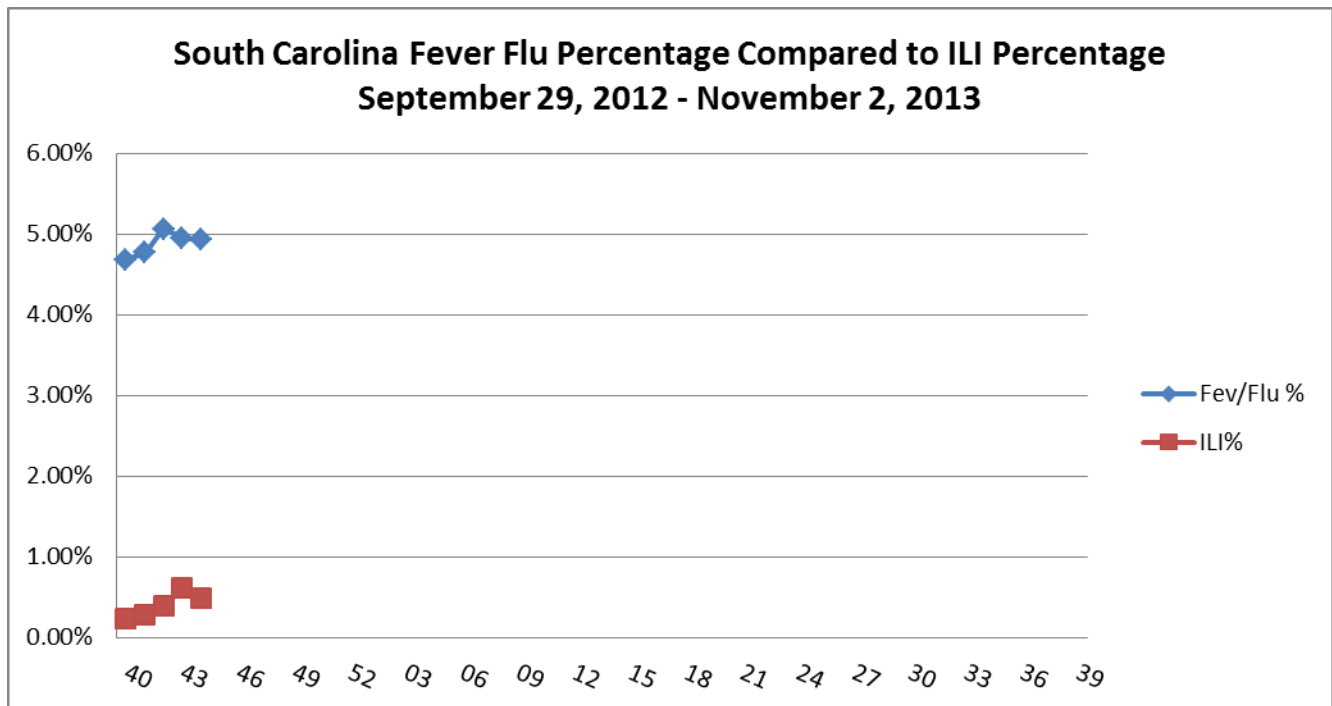
	<i>Current week</i>	<i>Previous week</i>	<i>Change from previous week</i>
Percent of ILI visits reported by ILINet providers	.49%	.61%	▼ .12%
Percent of fever-flu ER visits reported by hospitals	4.93%	4.98%	▼ .05%
Number of positive confirmatory tests	3	5	▼ 2
Number of lab confirmed flu hospitalizations	6	7	▼ 1
Number of lab confirmed flu deaths	0	0	0

## I. ILINet Influenza-Like Illness Surveillance

During the most recent MMWR week, .49% of patient visits to SC ILINet providers were due to ILI. This is below the state baseline (2.05%). This ILI percentage compares to .27% this time last year. Reports were received from providers in 10 counties, representing all 4 regions. The statewide percentage of ER visits with fever-flu syndrome was 4.93%.



\*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.

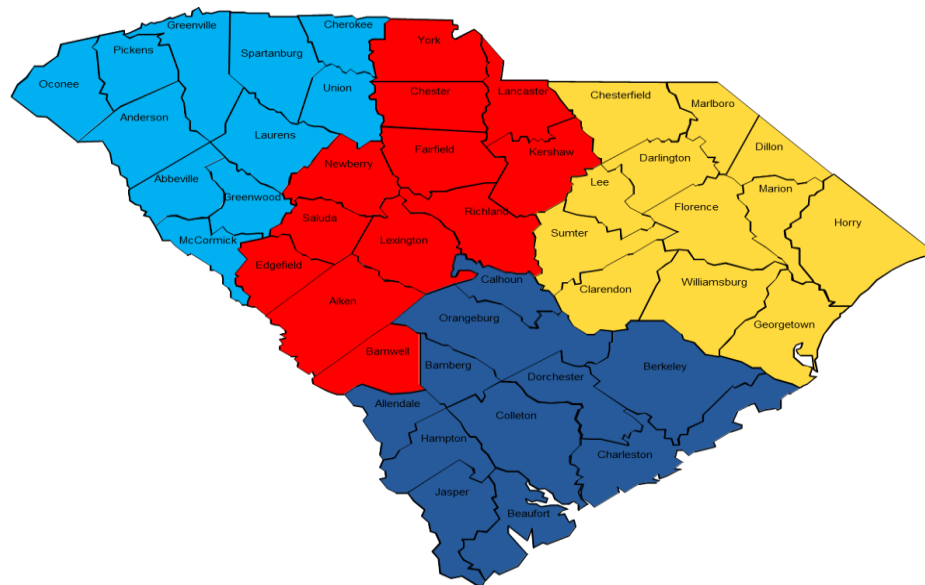


\*Only includes hospitals participating in SC syndromic surveillance

## Influenza-Like Illness Reported by Sentinel Providers October 27, 2013 – November 2, 2013

County	ILI %	County	ILI %
Abbeville	---	Greenwood	NR
Aiken	0%	Hampton	NR
Allendale	---	Horry	NR
Anderson	0%	Jasper	NR
Bamberg	---	Kershaw	NR
Barnwell	---	Lancaster	---
Beaufort	NR	Laurens	NR
Berkeley	9.64%	Lee	---
Calhoun	---	Lexington	NR
Charleston	NR	Marion	---
Cherokee	---	Marlboro	---
Chester	---	McCormick	NR
Chesterfield	---	Newberry	---
Clarendon	---	Oconee	---
Colleton	---	Orangeburg	---
Darlington	---	Pickens	0%
Dillon	NR	Richland	.28%
Dorchester	NR	Saluda	0%
Edgefield	---	Spartanburg	0%
Fairfield	---	Sumter	NR
Florence	.11%	Union	---
Georgetown	NR	Williamsburg	---
Greenville	.09%	York	1.29%

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



\*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 (10/27/13 – 11/2/13)</i>		
	<b>BOL</b>	<b>Other clinical labs</b>
Number of specimens tested	5	-
Number of positive specimens	0	3
Influenza A unsubtype		1
Influenza A H1N1		2
Influenza A H3N2		
Influenza B		
Other		
Includes culture, RT-PCR, DFA, and IFA		

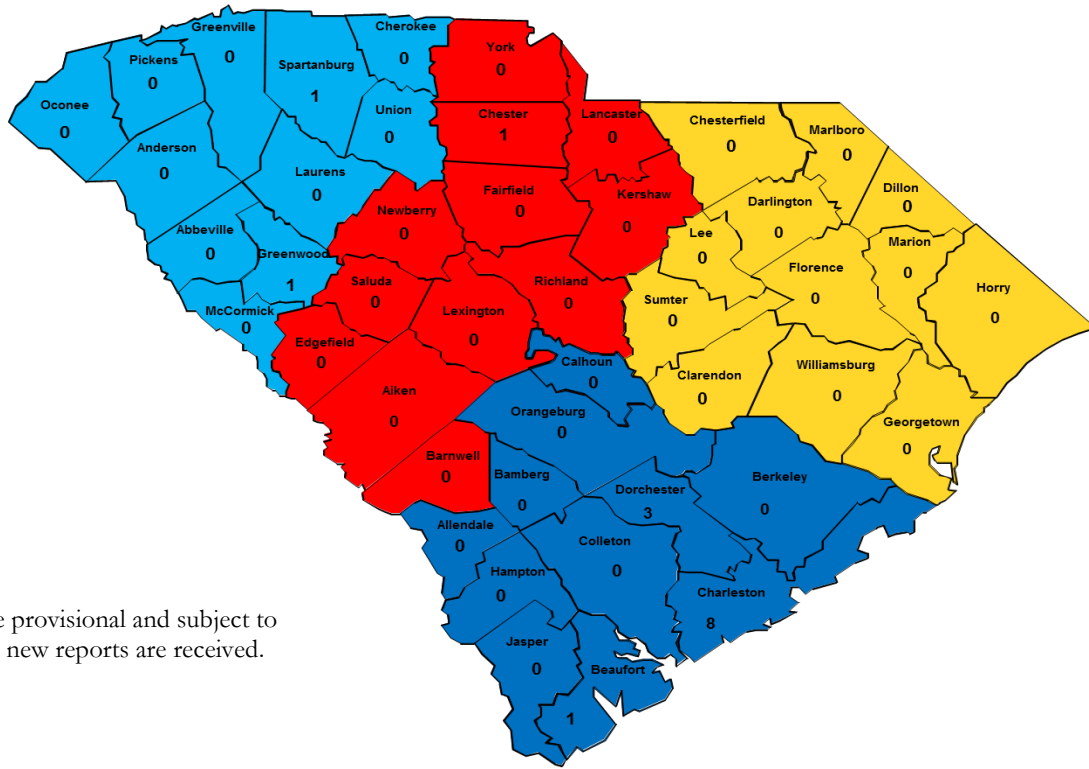
For the current MMWR reporting week, three positive specimens were reported.

<i>Positive confirmatory influenza test results*</i> <i>Cumulative (09/29/13 – 11/2/13)</i>		
	<b>BOL</b>	<b>Other clinical labs</b>
Number of specimens tested	28	NA
Number of positive specimens	3 (10.7%)	12
Influenza A unsubtype		1 (8.3%)
Influenza A H1N1	3 (100%)	10 (83.3%)
Influenza A H3N2		
Influenza B		1 (8.3%)
Other		
Includes culture, RT-PCR, DFA, and IFA		

**Positive Confirmatory Tests by County  
Current Week 10/27/13 – 11/2/13**

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		Greenwood		Richland	
Calhoun		Hampton		Saluda	
Charleston	2	Horry		Spartanburg	1
Cherokee		Jasper		Sumter	
Chester		Kershaw		Union	
Chesterfield		Lancaster		Williamsburg	
Clarendon		Laurens		York	
Colleton		Lee		Unknown	
Darlington		Lexington			

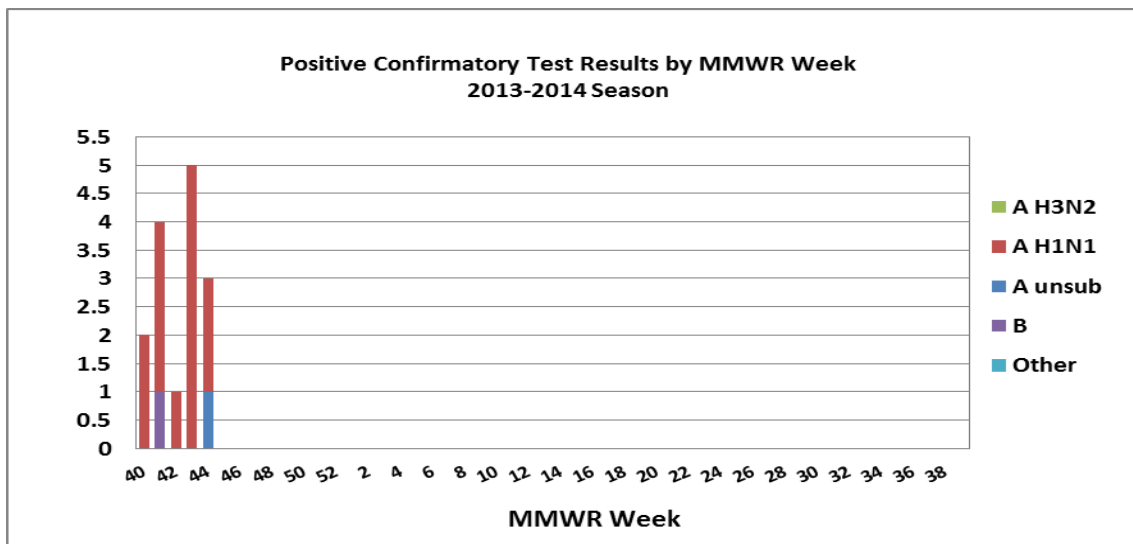
**Map of Positive Confirmatory Tests by County  
Cumulative 09/29/13 – 11/2/13**



All data are provisional and subject to change as new reports are received.

**Positive Confirmatory Tests by County and Type  
Cumulative 9/29/13-11/2/13**

	A H1N1	A H3N2	B	A Unsub	Unk		A H1N1	A H3N2	B	A Unsub	Unk
<b>Upstate</b>											
Abbeville						McCormick					
Anderson						Oconee					
Cherokee						Pickens					
Greenwood	1					Spartanburg				1	
Greenville						Union					
Laurens											
<b>Midlands</b>											
Aiken						Lancaster					
Barnwell						Lexington					
Chester	1					Newberry					
Edgefield						Richland					
Fairfield						Saluda					
Kershaw						York					
<b>Pee Dee</b>											
Chesterfield						Horry					
Clarendon						Lee					
Darlington						Marion					
Dillon						Marlboro					
Florence						Sumter					
Georgetown						Williamsburg					
<b>Low Country</b>											
Allendale						Colleton					
Bamberg						Dorchester	3				
Beaufort	1					Hampton					
Berkeley						Jasper					
Calhoun						Orangeburg					
Charleston	7		1								
<b>Unknown County</b>											



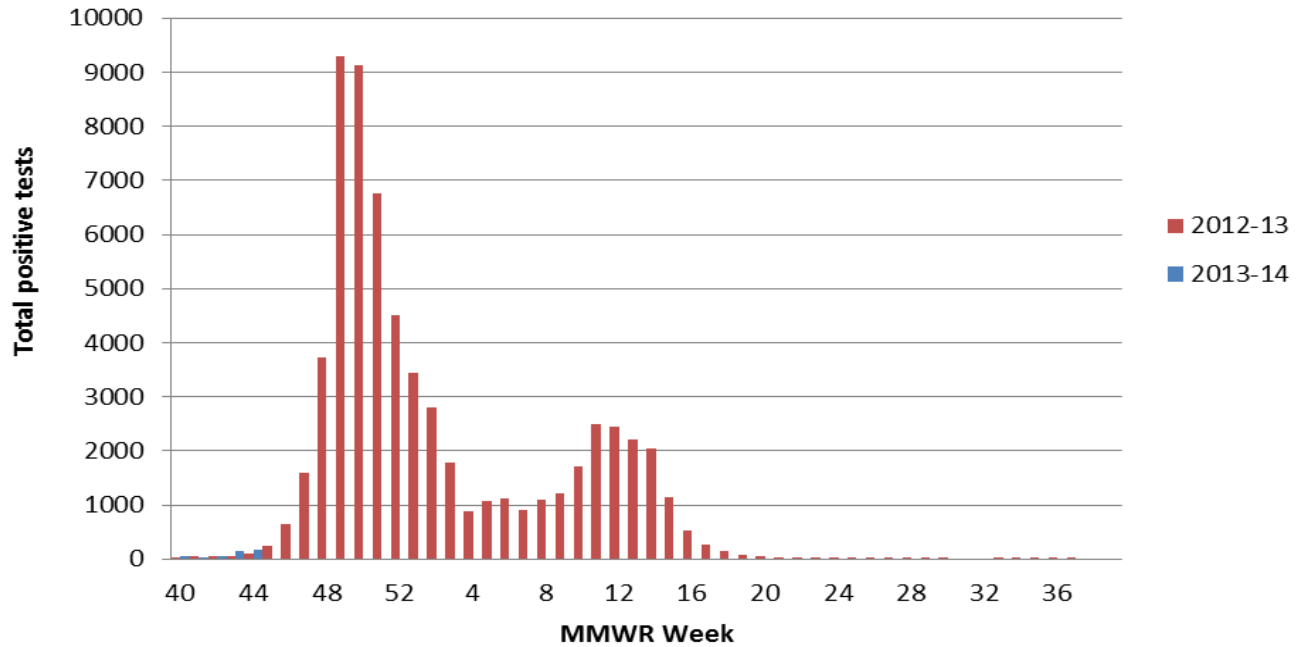
### III. Positive Rapid Antigen Tests

For the current MMWR reporting week, 177 positive rapid antigen tests were reported. Of these, 145 were influenza A, 3 were influenza A/B, 27 were influenza B and 2 were unknown. This compares to 90 this time last year.

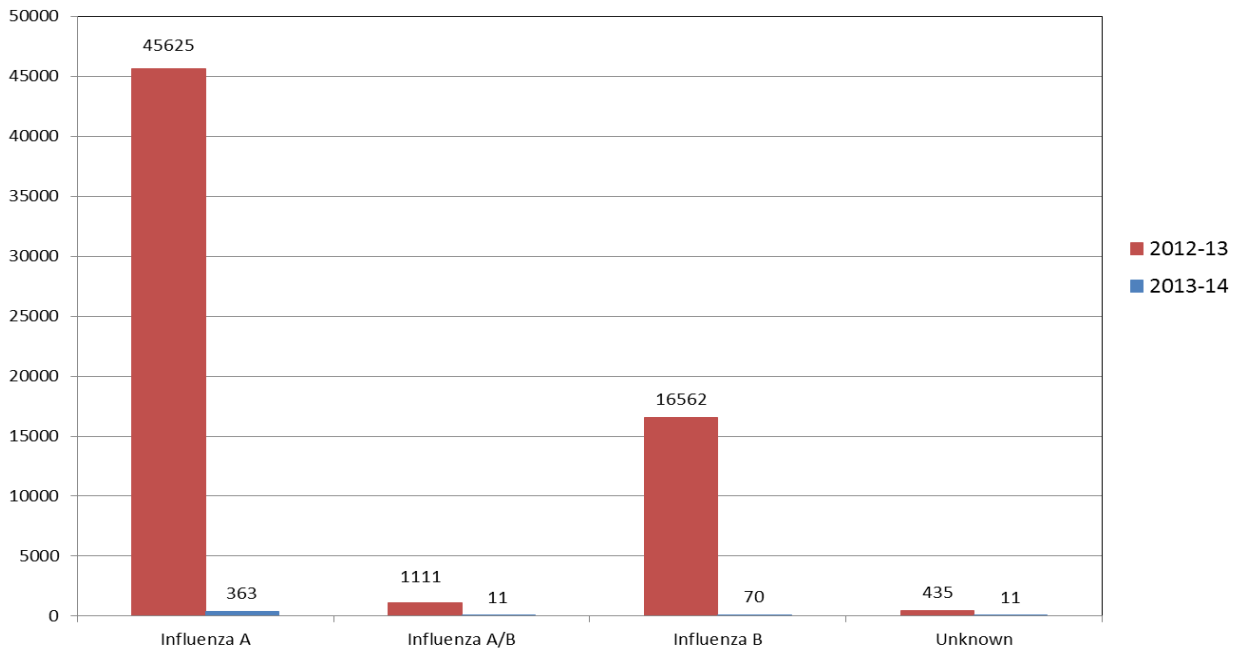
Positive Rapid Flu Tests by County Current Week 10/27/13 – 11/2/13)					
County	Positive Tests	County	Positive Tests	County	Positive Tests
Abbeville		Dillon		Lexington	5
Aiken		Dorchester	21	Marion	
Allendale		Edgefield		Marlboro	
Anderson		Fairfield	4	McCormick	
Bamberg		Florence	3	Newberry	
Barnwell		Georgetown	2	Oconee	5
Beaufort		Greenville	7	Orangeburg	
Berkeley	7	Greenwood		Pickens	7
Calhoun		Hampton		Richland	9
Charleston	64	Horry	13	Saluda	
Cherokee		Jasper		Spartanburg	3
Chester		Kershaw	1	Sumter	
Chesterfield		Lancaster		Union	
Clarendon		Laurens		Williamsburg	
Colleton		Lee		York	16
Darlington	10				

Positive Rapid Flu Tests by County and Type Cumulative (9/29/13 – 11/2/13)															
County	A	A/B	B	Unk/ Other	County	A	A/B	B	Unk/ Other	County	A	A/B	B	Unk/ Other	
Abbeville					Dillon					Lexington	7		2		
Aiken	2				Dorchester	48	2			Marion					
Allendale					Edgefield					Marlboro					
Anderson	5		2		Fairfield	3	1			McCormick					
Bamberg					Florence	10		10		Newberry	2		2		
Barnwell					Georgetown	2		1		Oconee	7		2		
Beaufort	7		1		Greenville	19	2	7		Orangeburg				9	
Berkeley	10				Greenwood					Pickens	7		1		
Calhoun					Hampton					Richland	18	1	13		
Charleston	127	1	8		Horry	20	1	6	2	Saluda					
Cherokee					Jasper					Spartanburg	7				
Chester	1				Kershaw	9		2		Sumter	2				
Chesterfield	1				Lancaster	1				Union	3	1			
Clarendon	6	2			Laurens					Williamsburg					
Colleton	1				Lee					York	31		5		
Darlington	6		7												

## Positive Rapid Tests by MMWR Week 2012-13 vs 2013-14



## Positive Rapid Tests by Type 2012-13 vs 2013-14 September 29, 2013 - November 2, 2013



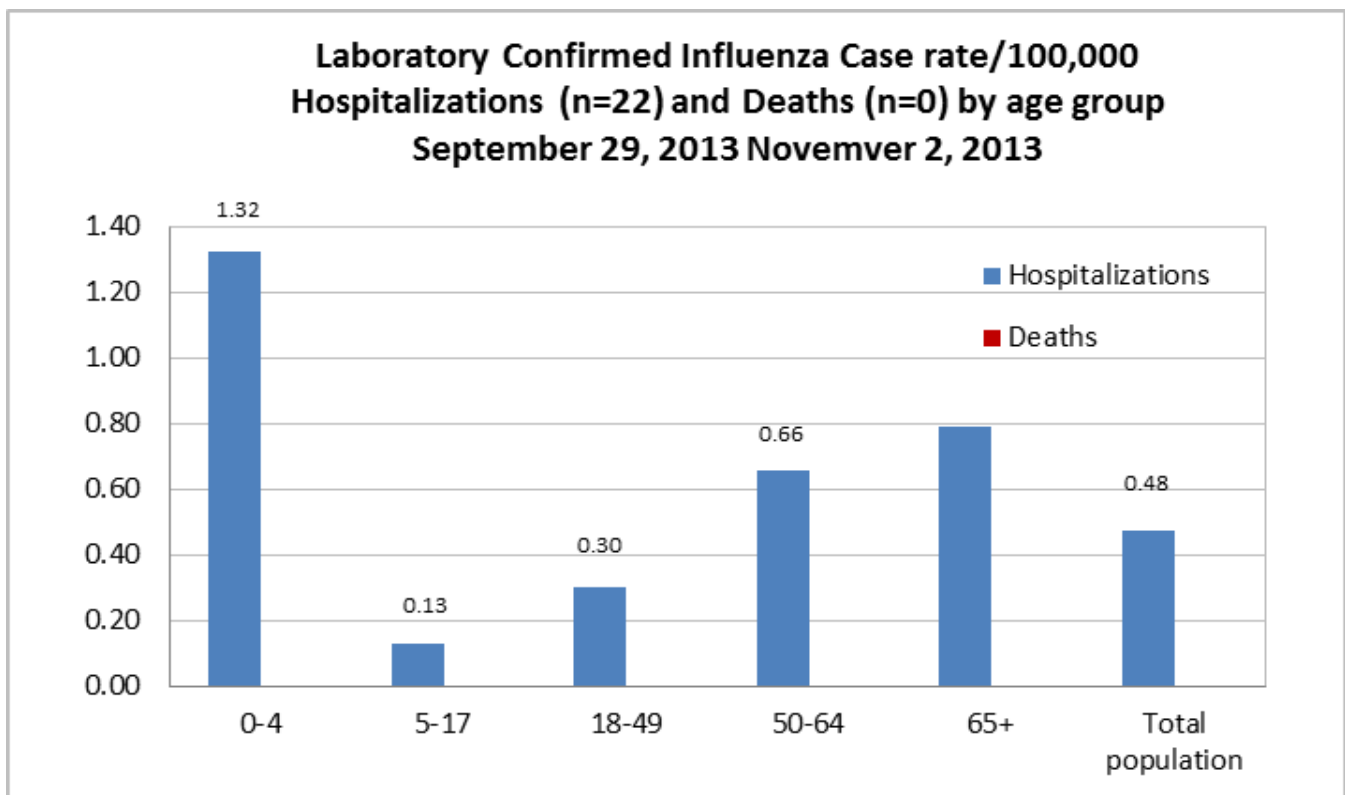


## IV. Influenza hospitalizations and deaths

For the current MMWR reporting week, 6 lab confirmed influenza hospitalizations were reported. No lab confirmed influenza deaths were reported.\*

	Total number*	
Number of Reporting Hospitals (Current week)	46	
	<i>Current MMWR Week (10/27/13-11/2/13)</i>	<i>Cumulative (since 09/29/13)</i>
Hospitalizations	6	22
Deaths	0	0

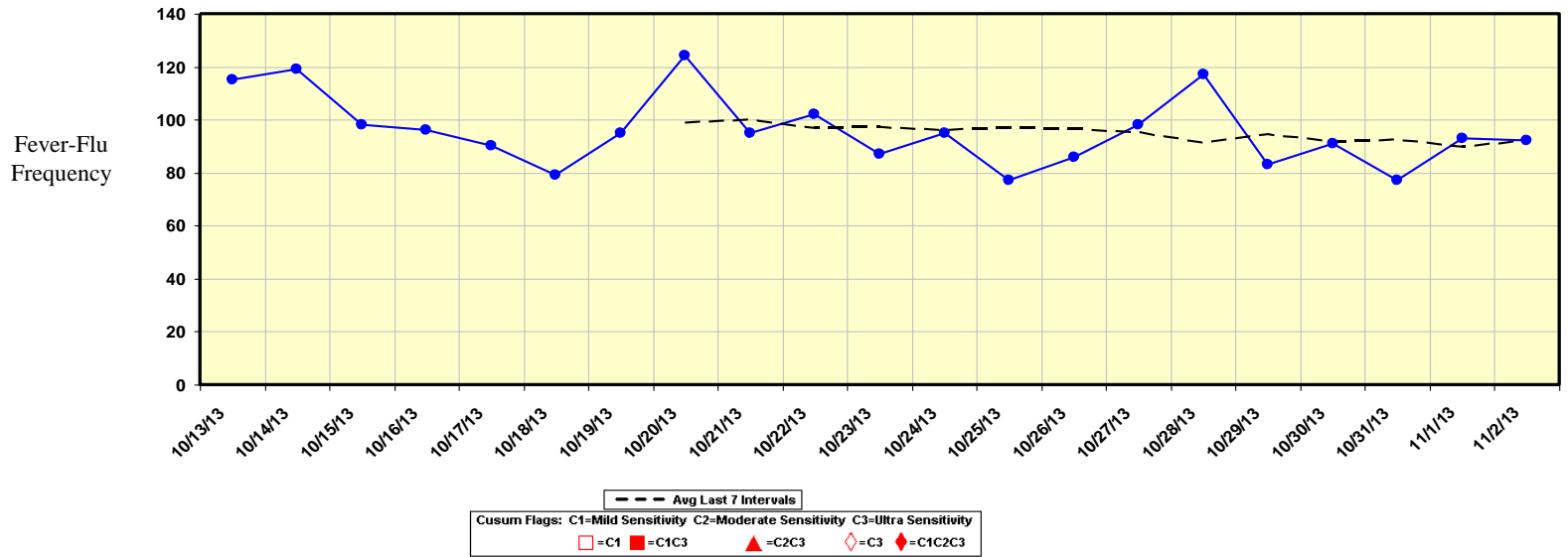
\* Lab confirmation for hospitalizations and deaths includes culture, PCR, DFA, IFA, and rapid test.



## 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

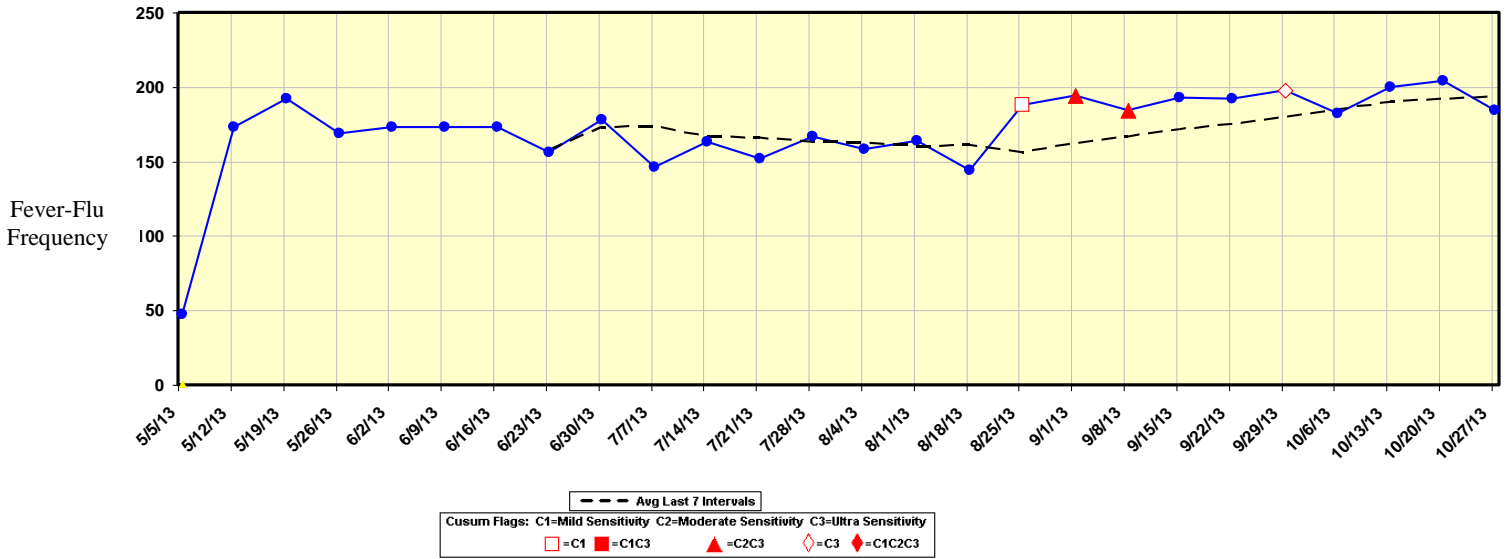
The SC Statewide Fever-Flu Syndrome graph above illustrates the daily counts of hospital emergency department (ED) visits with an Influenza-like Illness (ILI) for the past 21 days. A total of 22 hospital facilities are reporting to the SC-DARTS system. These 22 include: AnMed Health (Upstate Region); 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); Hampton Regional (Low Country Region); and Mount Pleasant (Low Country Region).

#### Statewide CUSUM Flag Alerts Description:

No flags for the past week.

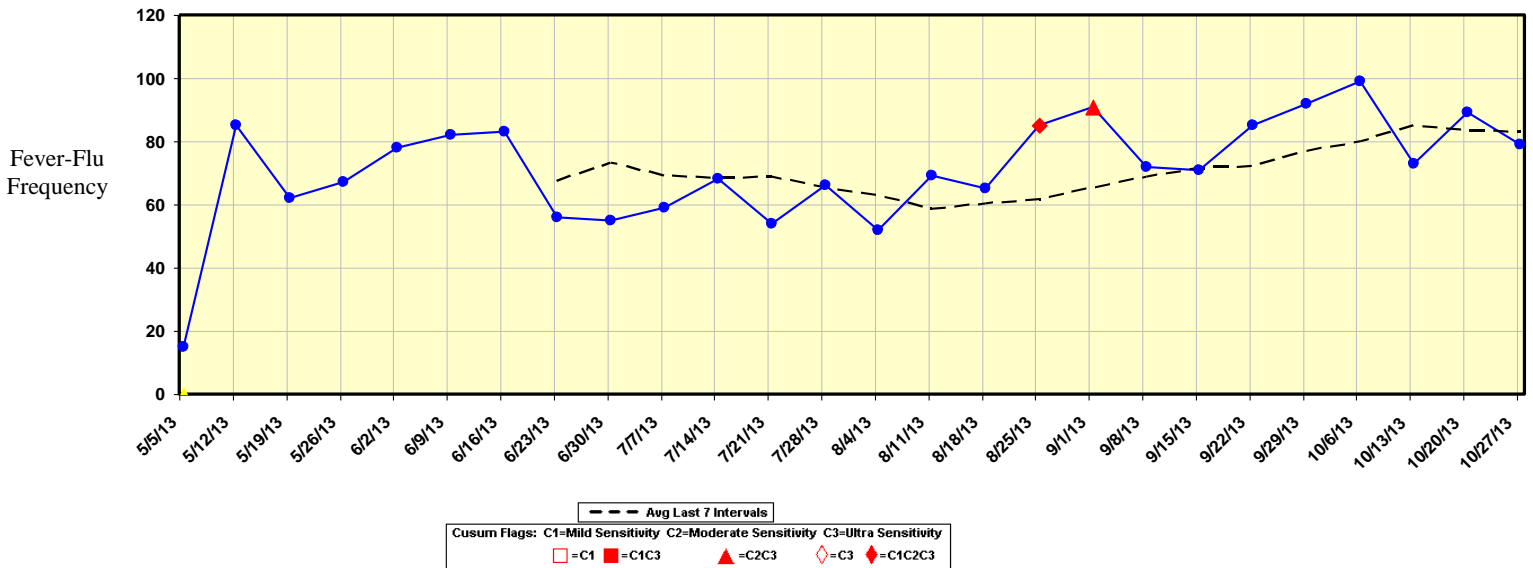
Below are the fever-flu syndrome graphs by Region for the past 180 days (weekly interval).

### Upstate Region - Fever Flu Syndrome



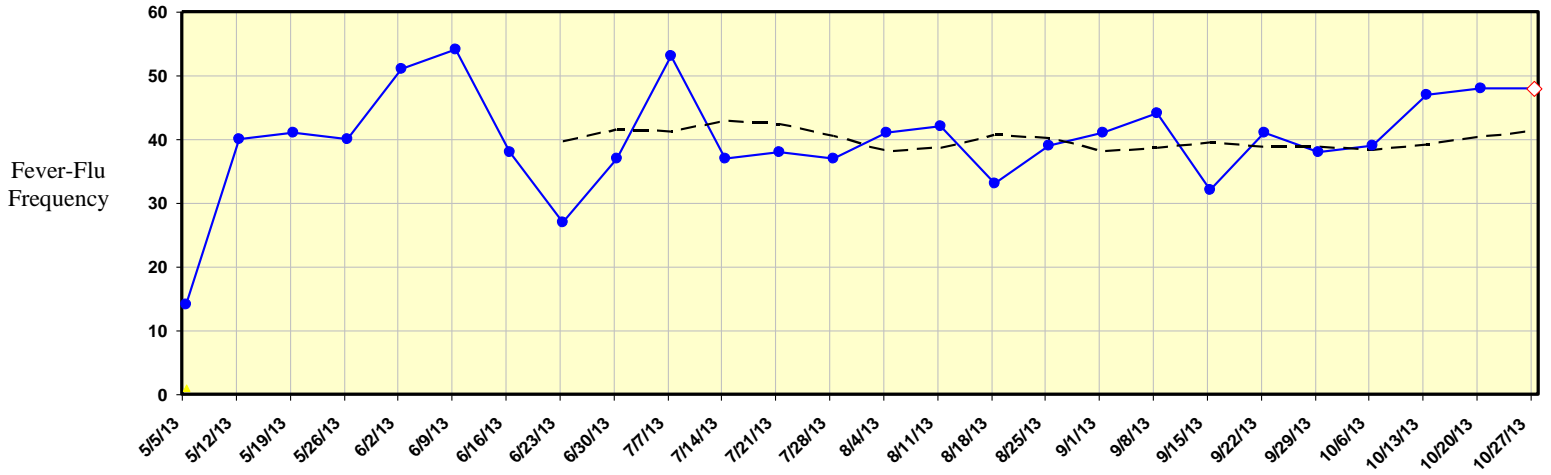
Upstate Region Hospitals (# of Facilities): AnMed Health (3); Self-Regional (1); Oconee Medical Center (1); Greenville Hospital System (4); Palmetto Health Easley (1)

### Midlands Region - Fever Flu Syndrome



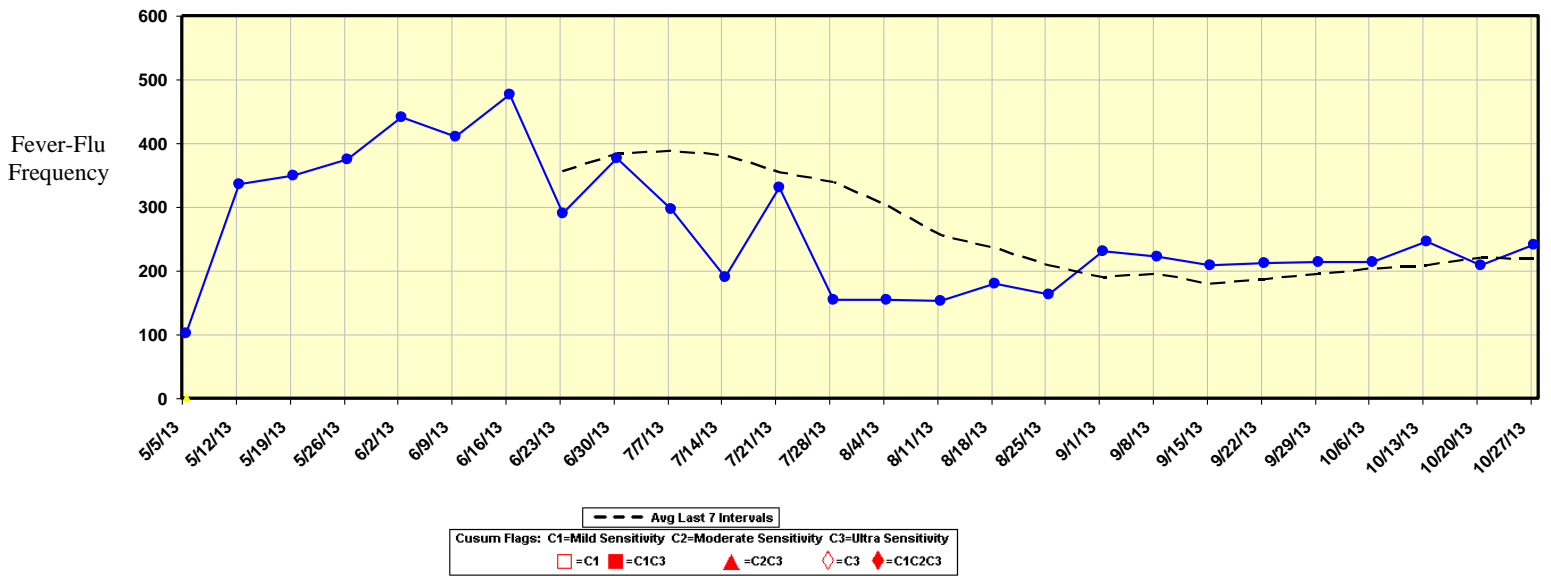
Midlands Region Hospitals (# of Facilities): Palmetto Health Baptist (1); Palmetto Health Richland (1); Kershaw Health (1); Elgin Urgent Care (1)

**Pee Dee Region - Fever Flu Syndrome**



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

**Low Country Region - Fever Flu Syndrome**



--- Avg Last 7 Intervals  
 Cusum Flags: C1=Mild Sensitivity C2=Moderate Sensitivity C3=Ultra Sensitivity  
 □=C1 ■=C1C3 ▲=C2C3 ◇=C3 ◆=C1C2C3

Low Country Region Hospitals (# of Facilities): Medical University of South Carolina (1); Roper (1); St. Francis (1); Trident (1); Hampton Regional (1); Colleton (1); Mount Pleasant (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>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
	Increased ILI in 2-3 regions	<b>And</b>	Recent (within the past 3 weeks) lab confirmed influenza in the affected regions
<b>Widespread</b>	<b>OR</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>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 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](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  $\geq 100^{\circ}\text{F}$ ) 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: **Kelly Johnson at 803-898-1588 or [johnsok@dhec.sc.gov](mailto:johnsok@dhec.sc.gov)**.

## VIII. National Surveillance MMWR Week 43 (10/20-10/26)

During week 43 (October 20-26, 2013), influenza activity remained low in the United States.

- **Viral Surveillance:** Of 3,241 specimens tested and reported by U.S. World Health Organization (WHO) and National Respiratory and Enteric Virus Surveillance System (NREVSS) collaborating laboratories during week 43, 145 (4.5%) 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:** No influenza-associated pediatric deaths were reported.
- **Outpatient Illness Surveillance:** The proportion of outpatient visits for influenza-like illness (ILI) was 1.2%, below the national baseline of 2.0%. All 10 regions reported ILI below region-specific baseline levels. Three states experienced low ILI activity, 47 states and New York City experienced minimal ILI activity and the District of Columbia had insufficient data.
- **Geographic Spread of Influenza:** The geographic spread of influenza in Puerto Rico and one state was reported as regional; 4 states reported local influenza activity; Guam and 30 states reported sporadic influenza activity; 15 states reported no influenza activity, and the District of Columbia 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>

