



# Flu Watch 2010-11 Season

South Carolina Department of Health and Environmental Control  
 Division of Acute Disease Epidemiology  
 Influenza Surveillance Weekly Report

<http://www.scdhec.gov/health/disease/acute/flu.htm>

## Week Ending October 30, 2010 (MMWR Week 43)

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

### Highlights:

#### Influenza Activity Level: Sporadic

Note: Activity level definitions are found on page 15

**ILI Activity Status (South Carolina baseline is 2.05%\*):** Below baseline in the Upstate (.18%), Midlands (.27%) and along the Coast (1.37%). The state ILI percentage was .43%. These data reflect reports from 16 (36%) providers.

Note: See map of counties on page 3 for regional descriptions

**SC Viral Isolate and RT-PCR Activity:** During the past MMWR (43) week, no positive cultures or PCRs were reported by any lab. Since October 3, 2010, 2 specimens tested by our BOL have been positive for influenza.

**Positive Rapid Flu Test Activity:** There were 43 positive rapid tests reported.

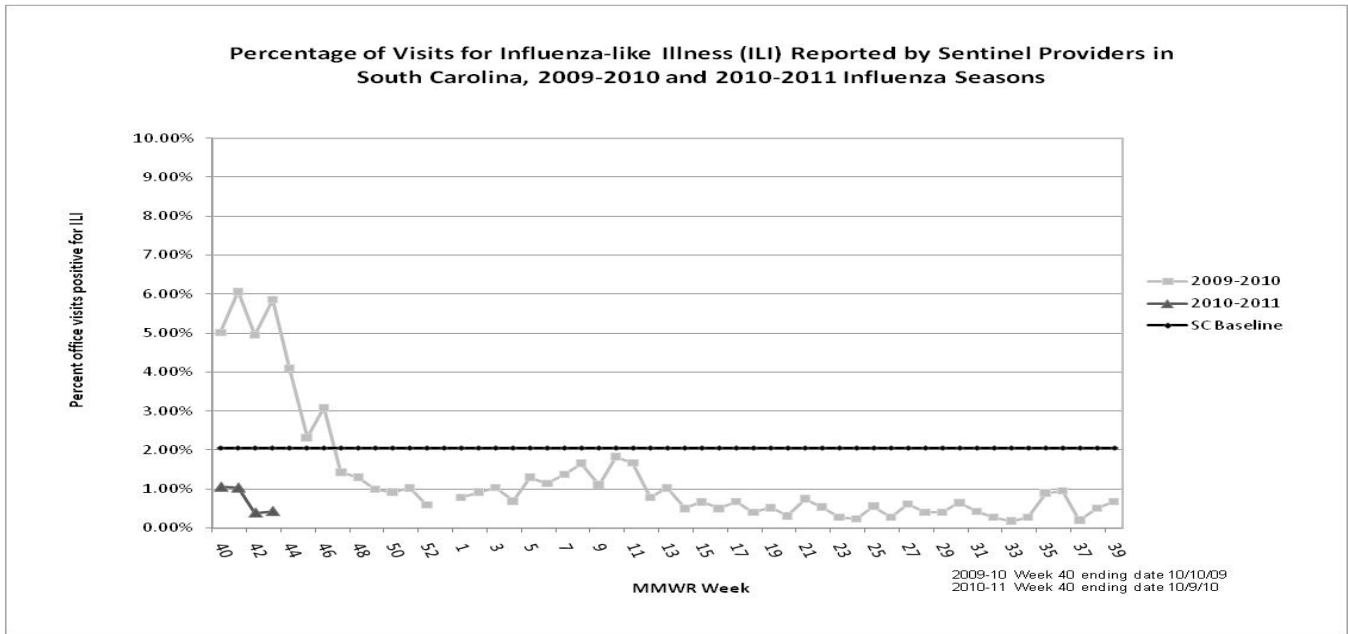
**Hospitalizations:** Three lab confirmed hospitalizations were reported. Lab confirmation includes culture, PCR, DFA, IFA, and rapid tests.

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

<b>In this issue:</b>	
	<b>Page</b>
<b>I. ILINet Influenza-Like Illness Surveillance</b> Graph of ILI comparing 09-10 and 10-11 seasons Table of ILI % by county, current MMWR week ILI by geographic region Fever Flu vs ILI	<b>2</b>
<b>II. Virologic surveillance</b> Table of confirmed culture and RT-PCR tests, current MMWR week Table of confirmed culture and RT-PCR tests, year to date Table of confirmed culture and RT-PCR tests by county, year to date	<b>4</b>
<b>III. Rapid Antigen Tests</b> Table of positive rapid tests by county, current MMWR week Graph of positive rapid tests by MMWR week, 09-10 vs 10-11 Graph of positive rapid tests by type, 09-10 vs 10-11	<b>6</b>
<b>IV. Hospitalizations and Deaths</b> Table of influenza hospitalizations and deaths, year to date Graph of influenza hospitalizations and deaths by age group Graph of influenza hospitalizations and death case rates by age group	<b>7</b>
<b>V. Syndromic surveillance</b>	<b>9</b>
<b>VI. National influenza surveillance (NEW)</b>	<b>13</b>
<b>VII. SC influenza surveillance components</b>	<b>13</b>
<b>VIII. Influenza activity level definitions</b>	<b>15</b>

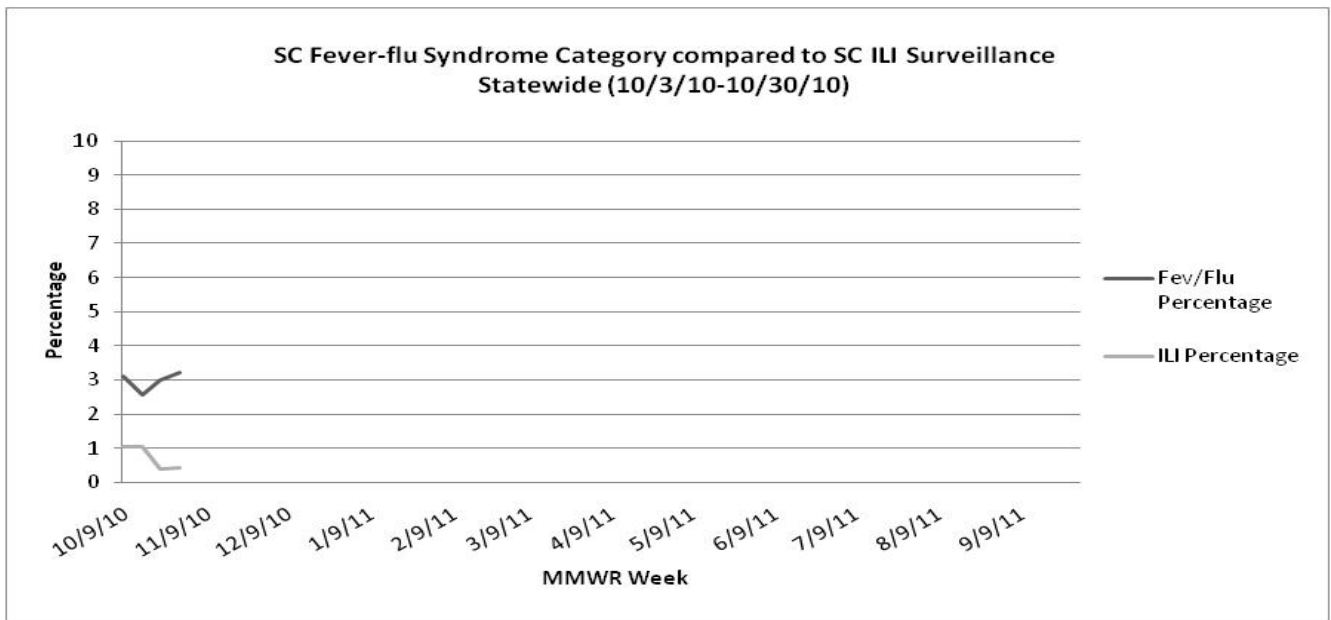
## I. ILINet Influenza-Like Illness Surveillance

During MMWR week 43 ending October 30, 2010, .43% of patient visits to SC ILINet providers were due to ILI. This is below the state baseline (2.05%). This ILI percentage compares to 5.86% this time last year. Reports were received from providers in 14 counties, representing 7 of the 8 regions.



\*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.

The statewide percentage of ER visits with the fever-flu syndrome (only includes hospitals participating in SC syndromic surveillance) was 3.22%.



Reported Influenza-Like Illness by Sentinel Providers  
October 24, 2010-October 30, 2010

County	ILI %	County	ILI %
Abbeville	---	Greenwood	0%
Aiken	0%	Hampton	NR
Allendale	---	Horry	NR
Anderson	0%	Jasper	NR
Bamberg	---	Kershaw	NR
Barnwell	---	Lancaster	---
Beaufort	NR	Laurens	NR
Berkeley	NR	Lee	---
Calhoun	---	Lexington	NR
Charleston	.64%	Marion	---
Cherokee	---	Marlboro	---
Chester	---	McCormick	0%
Chesterfield	---	Newberry	---
Clarendon	---	Oconee	---
Colleton	---	Orangeburg	---
Darlington	---	Pickens	0%
Dillon	NR	Richland	.14%
Dorchester	NR	Saluda	0%
Edgefield	---	Spartanburg	.14%
Fairfield	0%	Sumter	NR
Florence	.92%	Union	---
Georgetown	2.24%	Williamsburg	---
Greenville	.26%	York	.52%

NR: No reports received

---: No enrolled providers



Geographic Region	ILI %	# of Reporters
Upstate-Regions 1-2	.18	8
Midlands-Regions 3-5	.27	6
Coastal-Regions 6-8	1.37	2

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

## II. Virologic Surveillance

During the past MMWR week (10/24-10/30), the Bureau of Labs (BOL) tested 7 specimens. None of these were positive. There were no positive specimens reported by other clinical labs.

<b>Positive confirmatory influenza test results*</b> <b>Current MMWR Week (10/24/10-10/30/10)</b>		
	<b>BOL</b>	<b>Other clinical labs</b>
<b>Number of specimens tested</b>	7	-
<b>Number of positive specimens</b>	0	
<b>Positive specimens by type/subtype</b>		
<b>A (H1)</b>		
<b>A (H3)</b>		
<b>A (unsubtyped)</b>		
<b>A (2009 H1N1)</b>		
<b>Influenza B</b>		
<b>*Culture and/or RT-PCR</b>		

<b>Positive confirmatory influenza test results*</b> <b>Cumulative (10/3/10-10/30/10)</b>		
	<b>BOL</b>	<b>Other clinical labs</b>
<b>Number of specimens tested</b>	20	-
<b>Number of positive specimens</b>	2	
<b>Positive specimens by type/subtype</b>		
<b>Influenza A</b>		
<b>A (H3)</b>	1	
<b>A (unsubtyped)</b>		
<b>A (2009 H1N1)</b>		
<b>Influenza B</b>	1	
<b>Unk</b>		
<b>Other</b>		
<b>*Culture and/or RT-PCR</b>		

Positive Cultures and PCRs by County (2010-11)\*  
 October 3, 2010-October 30, 2010

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

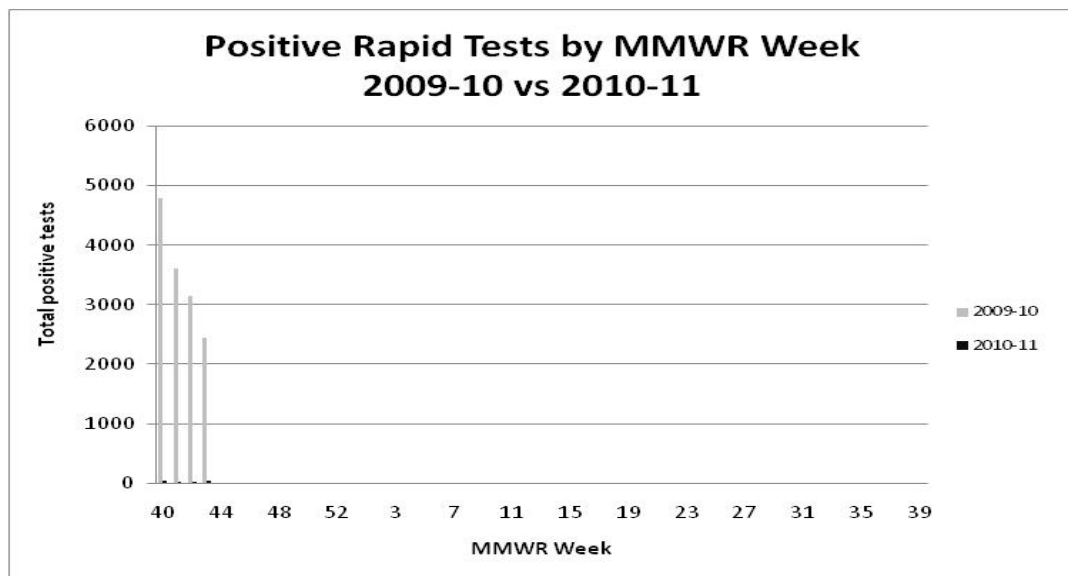
\*These data are provisional.

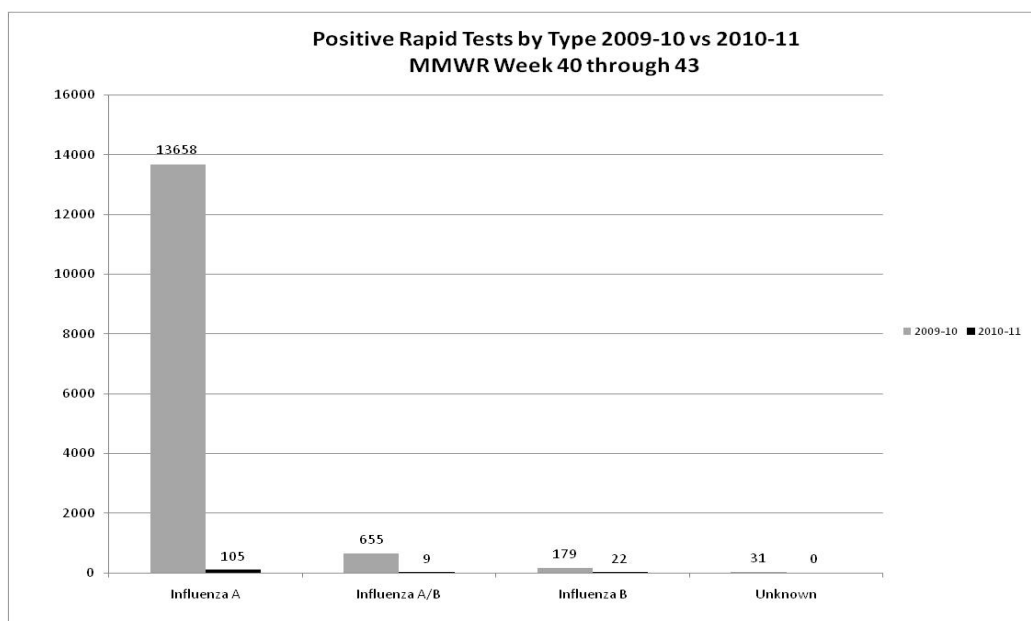
### III. Positive Rapid Antigen Tests

There were 43 positive rapid antigen tests reported for the week ending October 30, 2010. Of these, 32 were influenza A, 3 were influenza A/B, and 8 were influenza B.

Positive Rapid Flu Tests by County  
October 24, 2010 – October 30, 2010

County	Positive Tests	County	Positive Tests
Abbeville		Greenwood	
Aiken		Hampton	
Allendale		Horry	11
Anderson	1	Jasper	
Bamberg		Kershaw	1
Barnwell		Lancaster	2
Beaufort		Laurens	4
Berkeley		Lee	
Calhoun		Lexington	5
Charleston	1	Marion	
Cherokee		Marlboro	
Chester	2	McCormick	
Chesterfield		Newberry	
Clarendon		Oconee	1
Colleton		Orangeburg	
Darlington		Pickens	1
Dillon		Richland	4
Dorchester		Saluda	
Edgefield		Spartanburg	2
Fairfield		Sumter	
Florence		Union	
Georgetown	1	Williamsburg	
Greenville	1	York	2
		Unknown	4





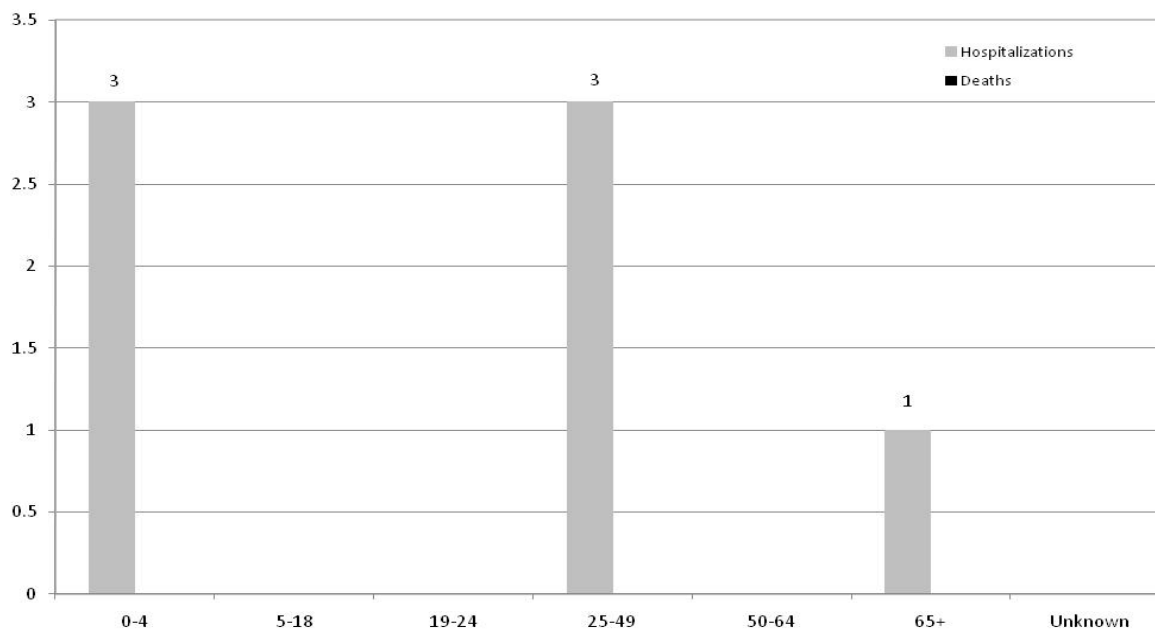
## IV. Influenza hospitalizations and deaths

There were three lab\* confirmed influenza hospitalizations during the past week. No deaths were reported.

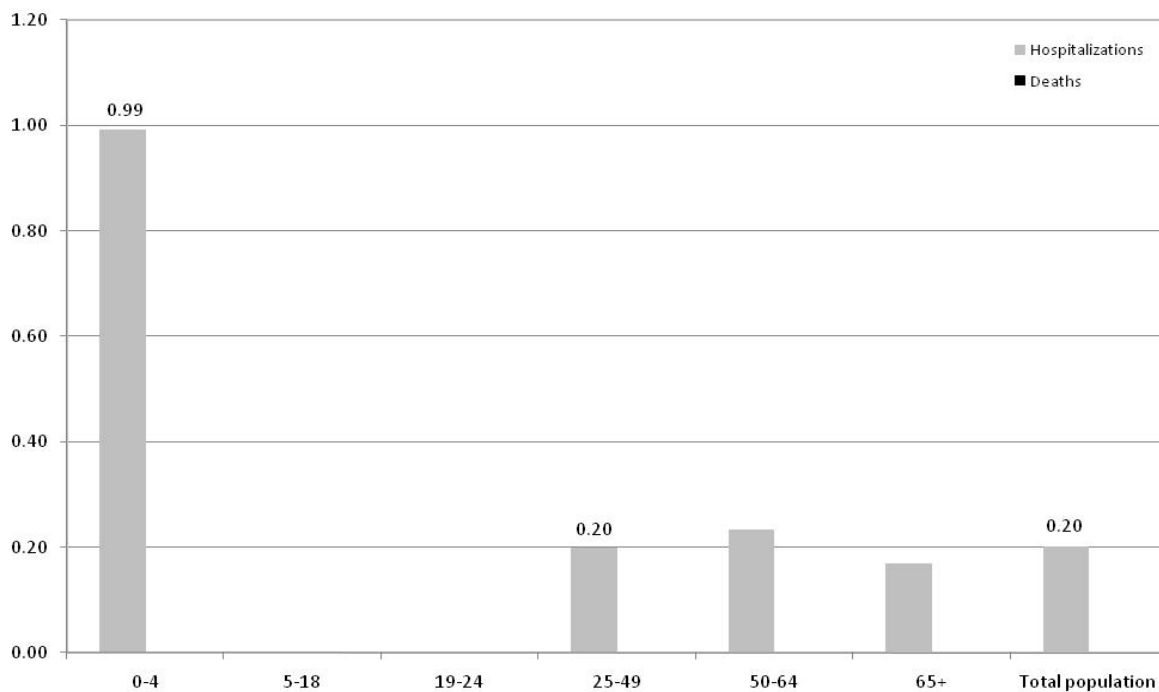
	<b>Total number*</b>	
<b>Number of Hospitals Reporting (current week)</b>	23	
	<i>Previous MMWR (10/24-10/30)</i>	<i>Cumulative (since 10/3/10)</i>
<b>Hospitalizations</b>	3	9
<b>Deaths</b>	0	0

\*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 (n=9) and Deaths (n=0) by age group  
October 3, 2010 - October 30, 2010**

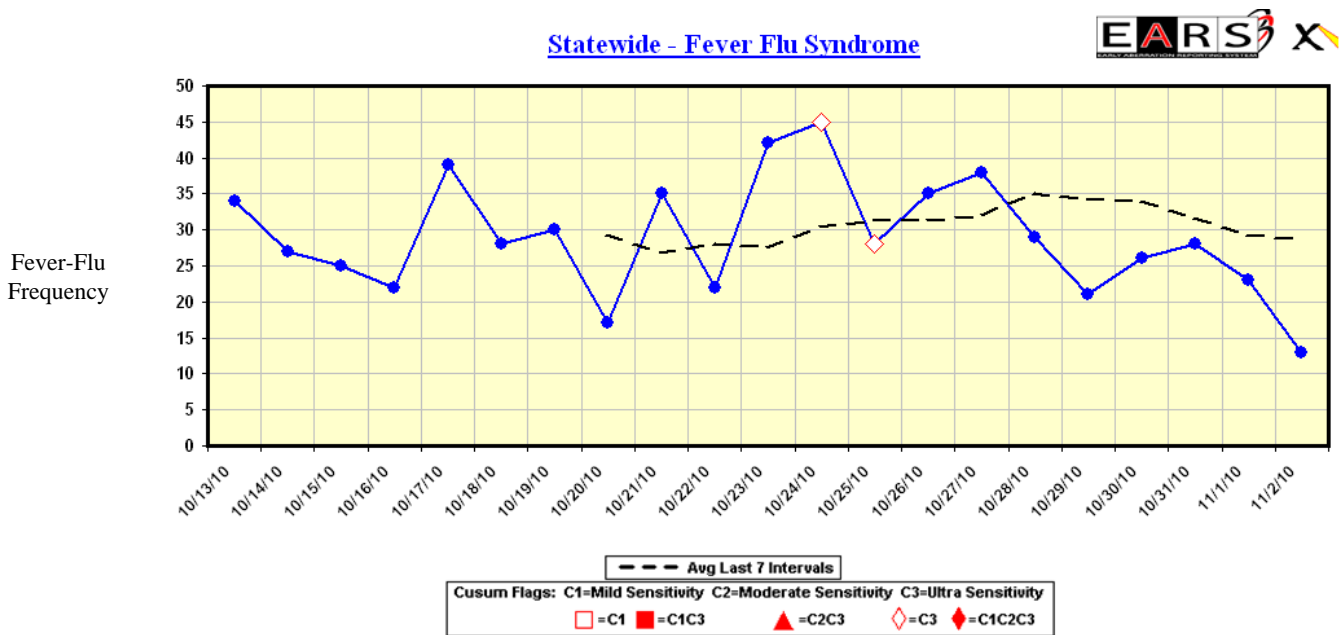


**Laboratory Confirmed Influenza Case rate/100,000  
Hospitalizations (n=9) and Deaths (n=0) by age group  
October 3, 2010 - October 30, 2010**





## V. South Carolina Aberration Alerting Network (SCAAN): Hospital ED Syndromic



### 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

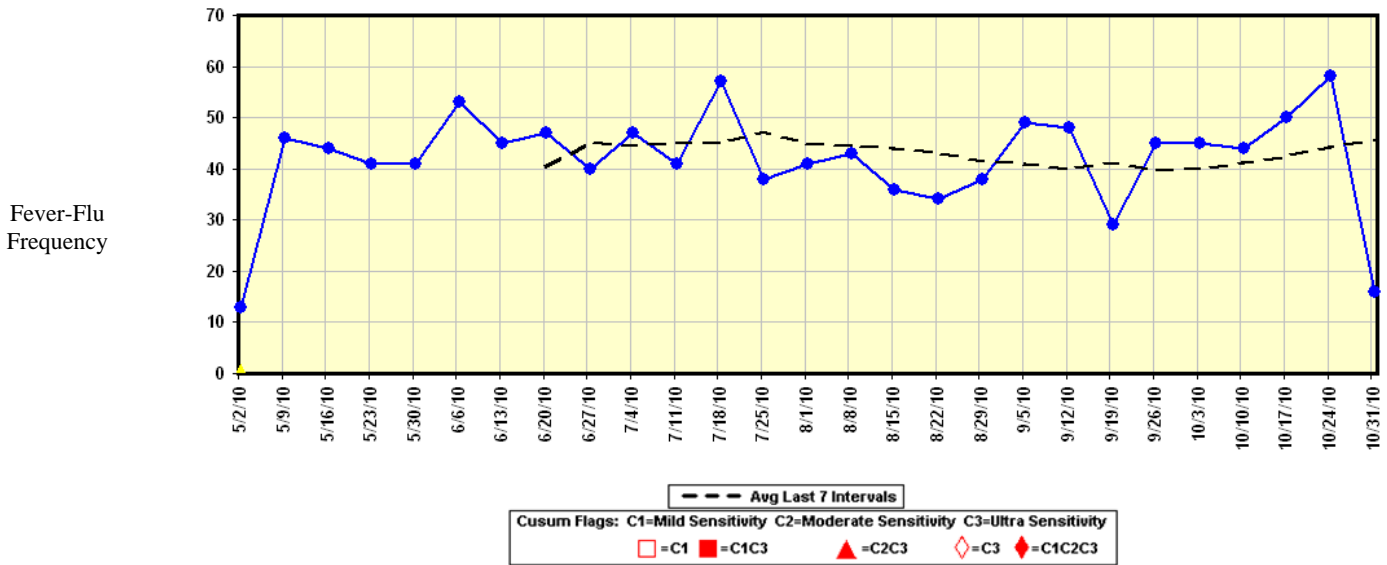
The SC Statewide Fever-Flu Syndrome graph above illustrates the daily counts of hospital emergency department (ED) visits with an Influenza-like Illness (ILI) for the past 21 days. A total of 16 hospital facilities are reporting to the SCAAN system. These 16 include: AnMed Health (Region 1); Self Regional (Region 1); Oconee Medical Center (Region 1); Palmetto Health Alliance (Region 2 & 3); Greenville Hospital System (Region 2); Kershaw Health (Region 4); McLeod Health (Region 4); Medical University of South Carolina (Region 7); Roper (Region 7); St. Francis (Region 7), and Hampton Regional (Region 8).

### Statewide CUSUM Flag Alerts Description:

No flags this week.

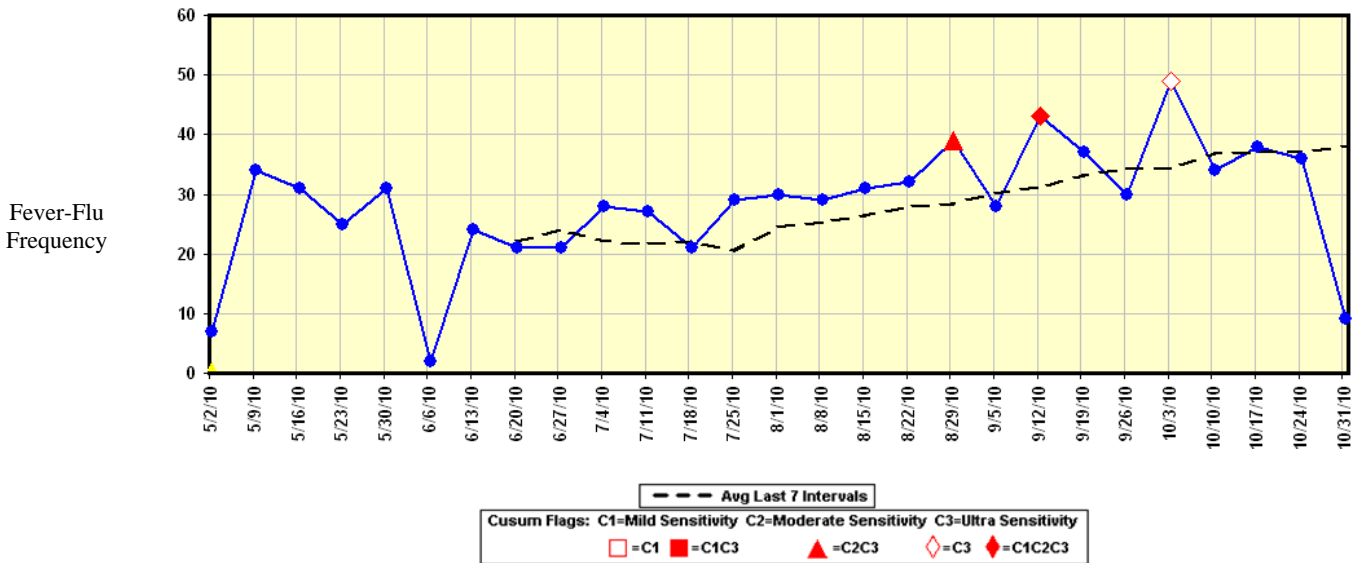
Below are the fever-flu syndrome graphs by Region for the past 180 days (weekly interval).

**Region 1 - Fever Flu Syndrome**



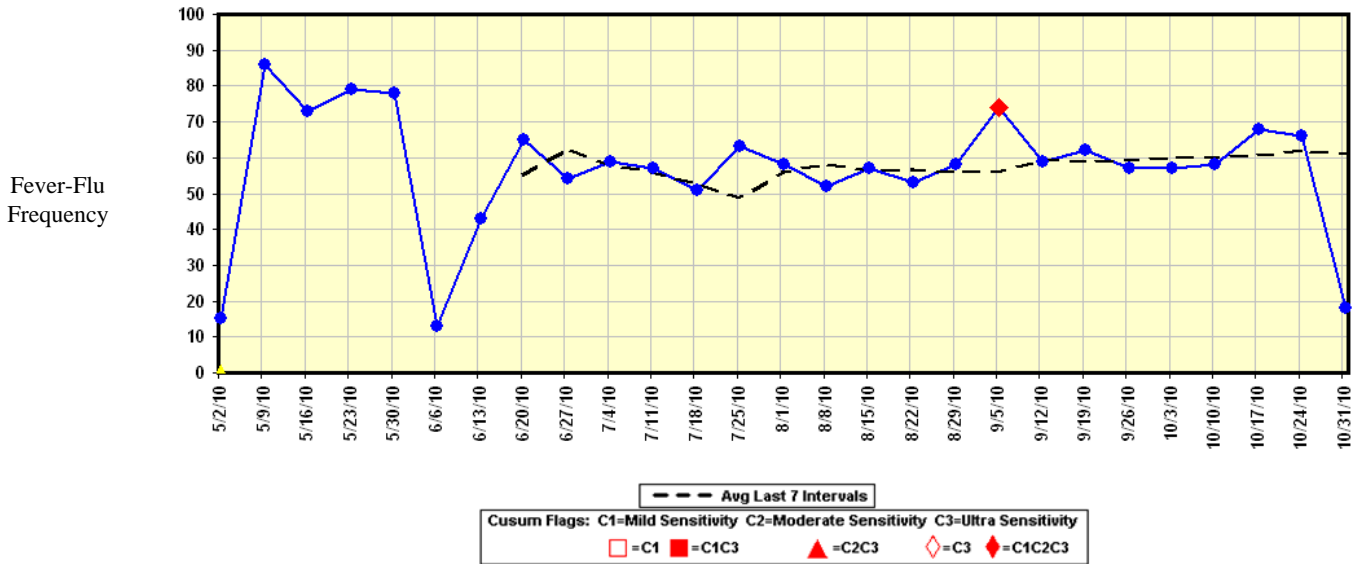
**Region1 Hospitals (# of Facilities): AnMed Health (1); Self-Regional (1); Oconee Medical Center (1);**

**Region 2 - Fever Flu Syndrome**



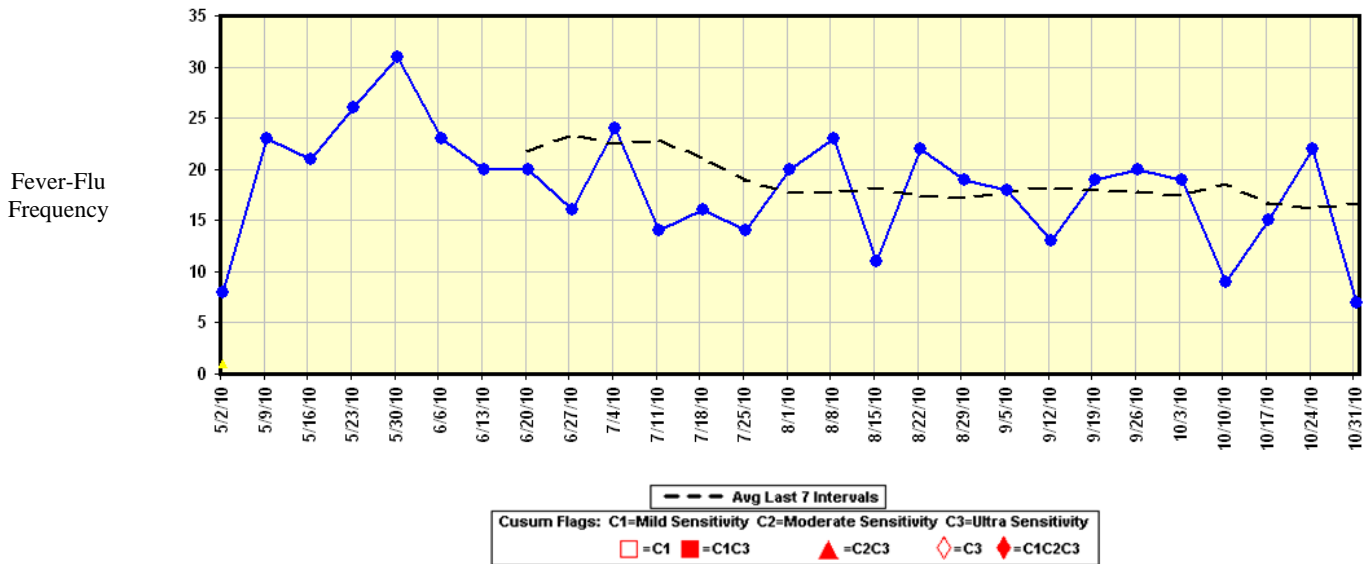
**Region 2 Hospitals (# of Facilities): Greenville Hospital System (4); Palmetto Health Easley (1)**

**Region 3 - Fever Flu Syndrome**



**Region 3 Hospitals (# of Facilities): Palmetto Health Baptist (1), Palmetto Health Richland (1)**

**Region 4 - Fever Flu Syndrome**

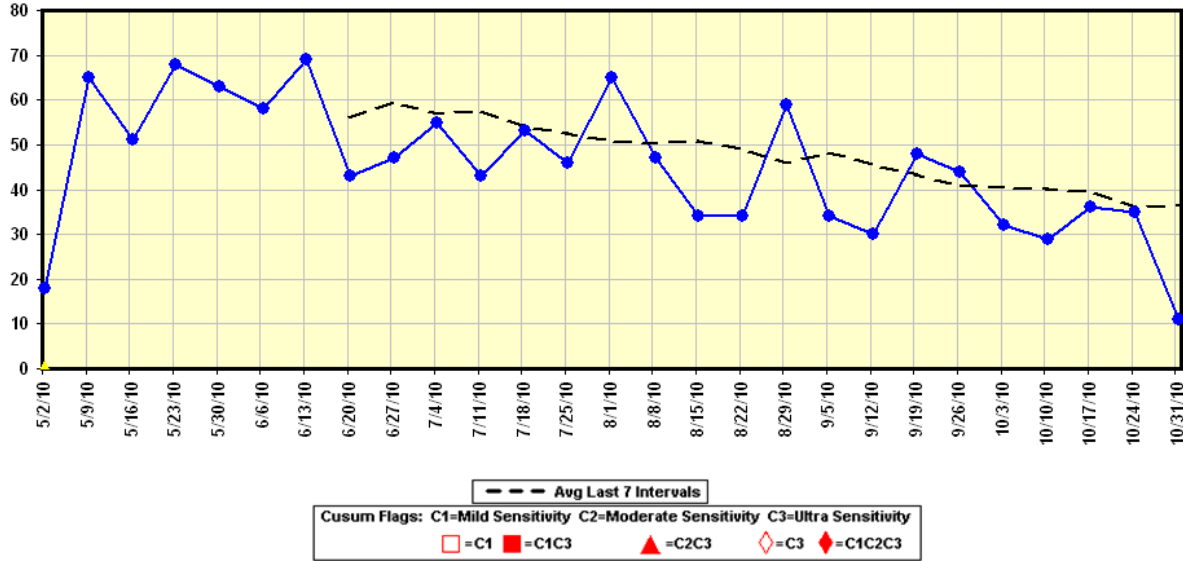


**Region 4 Hospitals (# of Facilities): Kershaw Health (1); McLeod Health (1)**

**Region 7 - Fever Flu Syndrome**



Fever-Flu Frequency

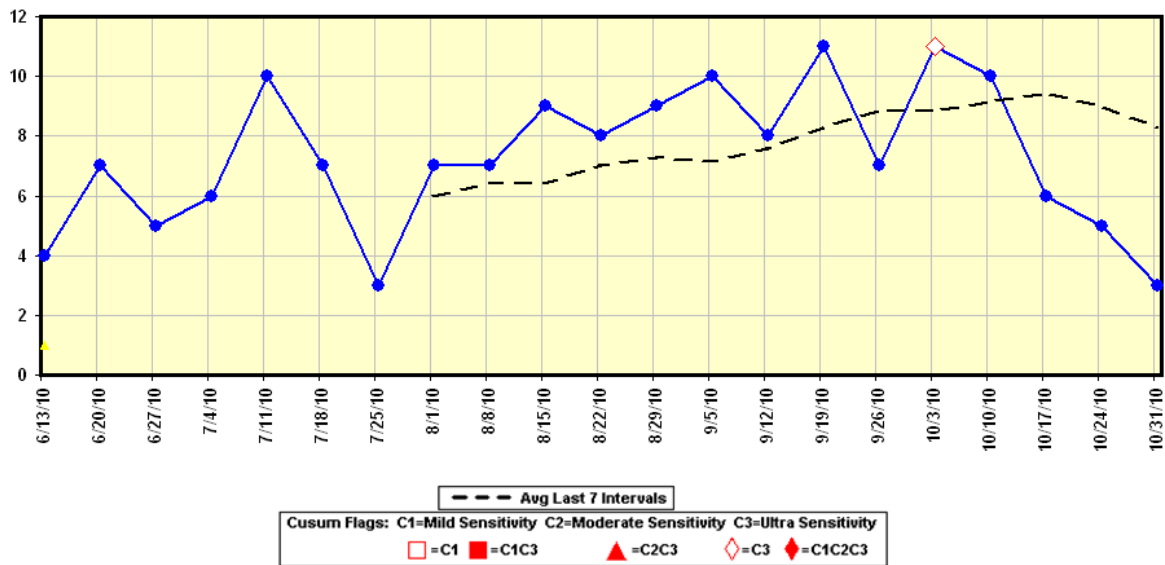


**Region 7 Hospitals (# of Facilities): Medical University of South Carolina (1), Roper (1), St. Francis (1)**

**Region 8 - Fever Flu Syndrome**



Fever-Flu Frequency



## VI. National influenza update (MMWR Week 42: 10/17-10/23)

**Note: CDC data is published on Friday for the previous MMWR week; therefore, national data reported below will lag behind SC state data by one week.**

During the week of October 17-23, ILI activity remained low. Forty-eight (3.0%) specimens tested by WHO and NREVSS labs and reported to CDC were positive for influenza. The proportion of deaths attributed to pneumonia and influenza (P&I) was below the epidemic threshold. No influenza-associated pediatric deaths were reported. The proportion of outpatient visits for influenza-like illness (ILI) was below the national baseline. Geographic spread of influenza in Guam and the U.S. Virgin Islands was assessed as regional; two states reported local influenza activity; the District of Columbia and 22 states were assessed as sporadic; 26 states reported no influenza activity.

For more information, please visit <http://www.cdc.gov/flu/weekly/>.

## VII. South Carolina Influenza Surveillance Components

### What does influenza surveillance in South Carolina consist of?

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 to the regional health department of. This should be reported by fax or email by noon on Monday for the preceding week.

##### Influenza death reporting

Lab confirmed influenza deaths, pediatric and adult, should be reported to DHEC within 7 days. 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.

#### ***Voluntary networks:***

Laboratory Viral Isolate Network

Viral isolate surveillance is essential for identifying circulating influenza strain subtype information, and the identification of new strains that may need to be included in the next year's influenza vaccine. Participating providers receive culture media, packaging, processing and shipping labels in order to submit a subset of specimens to the Bureau of Labs (BOL).

#### 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.

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).

#### South Carolina Aberration Alerting Network (SCAAN)

SCAAN 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 SCAAN system or for more information, please contact: Himel Dhotre at 803-898-1588 or [dhotrehc@dhec.sc.gov](mailto:dhotrehc@dhec.sc.gov).

## VIII. 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>Widespread</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
	Increased ILI and/or institutional outbreaks (ILI or lab confirmed) in at 4 of the regions	<b>And</b>	Recent (within the past 3 weeks) lab confirmed influenza in the state.