

# Flu Watch



South Carolina's Weekly Influenza Surveillance Report  
South Carolina Department of Health and Environmental Control  
Division of Acute Disease Epidemiology  
<http://www.scdhec.gov/health/disease/acute/flu.htm>

Week Ending October 17, 2009 (MMWR Week 41)

## Highlights:

### Influenza Activity Level: Regional

Note: Activity level definitions are found on page 12

**ILI Activity Status (South Atlantic ILI baseline is 2.2%):** BELOW baseline in the Upstate (1.25%) and ABOVE baseline in the Midlands (5.35%) and along the Coast (10.58%). State ILI is 6.06%. The South Atlantic baseline is 2.2%\*. These data reflect reports from 20 (22.5%) providers.

Note: See county map on page 3 for regional descriptions

**SC Viral Isolate and RT-PCR Activity:** During the reporting week, 90 specimens tested positive for influenza. Since October 4, 2009, 146 specimens tested by our Bureau of Labs (BOL) have been positive for influenza. A total of 68 positive specimens have been reported by other labs.

**Positive Rapid Flu Test Activity:** There were 3350 positive tests reported.

**Hospitalizations:** 82 hospitalizations were reported. Since September 1, 2009, 456 hospitalizations have been reported.

**Deaths:** 5 deaths were reported. Since September 1, 2009, 16 deaths have been reported.

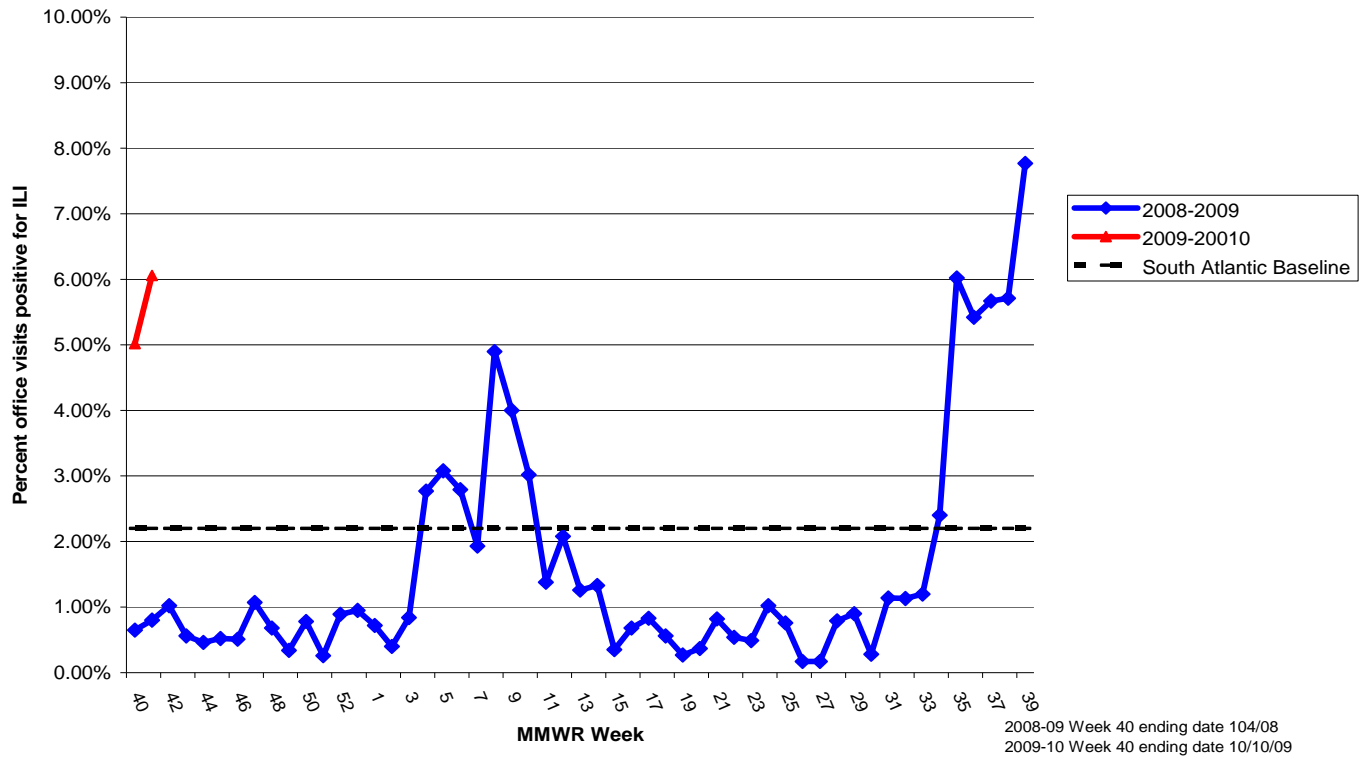
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\*The South Atlantic region consists of Delaware, Florida, Georgia, Maryland, North Carolina, South Carolina, Virginia, Washington, D.C., West Virginia. The baseline is the mean percentage of patient visits for ILI during non-influenza weeks for the previous three seasons plus two standard deviations.

## I. ILINet Influenza-Like Illness Surveillance

During MMWR week 41, ending October 17, 2009, 6.06% of patient visits to SC ILNet providers were due to ILI. This percentage is above regional (2.2%) and national (2.4%) baselines. This compares to .80% this time last year. Reports were received from providers in 16 counties, representing all 8 regions. The percentage of visits ranged from 0% to 30.81%.

**Percentage of Visits for Influenza-like Illness (ILI) Reported by Sentinel Providers in South Carolina, 2007-2008 and 2008-2009 Influenza Seasons**



Reported Influenza-Like Illness by Sentinel Providers  
October 11, 2009-October 17, 2009

County	ILI %	County	ILI %
Abbeville	NS	Greenwood	NS
Aiken	0%	Hampton	NS
Allendale	NS	Horry	2.38%
Anderson	5.19%	Jasper	8.76%
Bamberg	NS	Kershaw	7.74%
Barnwell	NS	Lancaster	NE
Beaufort	NS	Laurens	NS
Berkeley	30.81%	Lee	NE
Calhoun	NS	Lexington	2.86%
Charleston	11.07%	Marion	NS
Cherokee	NS	Marlboro	NS
Chester	NE	McCormick	NS
Chesterfield	NE	Newberry	NS
Clarendon	NS	Oconee	NS
Colleton	NS	Orangeburg	NS
Darlington	NS	Pickens	0%
Dillon	2.38%	Richland	7.59%
Dorchester	NS	Saluda	NS
Edgefield	NE	Spartanburg	NS
Fairfield	1.22%	Sumter	NS
Florence	1.71%	Union	NE
Georgetown	13.77%	Williamsburg	NS
Greenville	0.92%	York	NS
			13.13%

NS: No reports received  
NE: No enrolled providers



Geographic Region	ILI %	# of Reporters
Upstate-Regions 1 -2	1.25	3
Midlands-Regions 3-5	5.35	8
Coastal-Regions 6-8	10.58	5

## II. Virologic Surveillance

169 specimens were tested by BOL. Of these, 66 (39.1%) were positive. Another 24 positive specimens were reported by other clinical labs. Since October 4, 2009, 214 specimens tested have been positive for influenza.

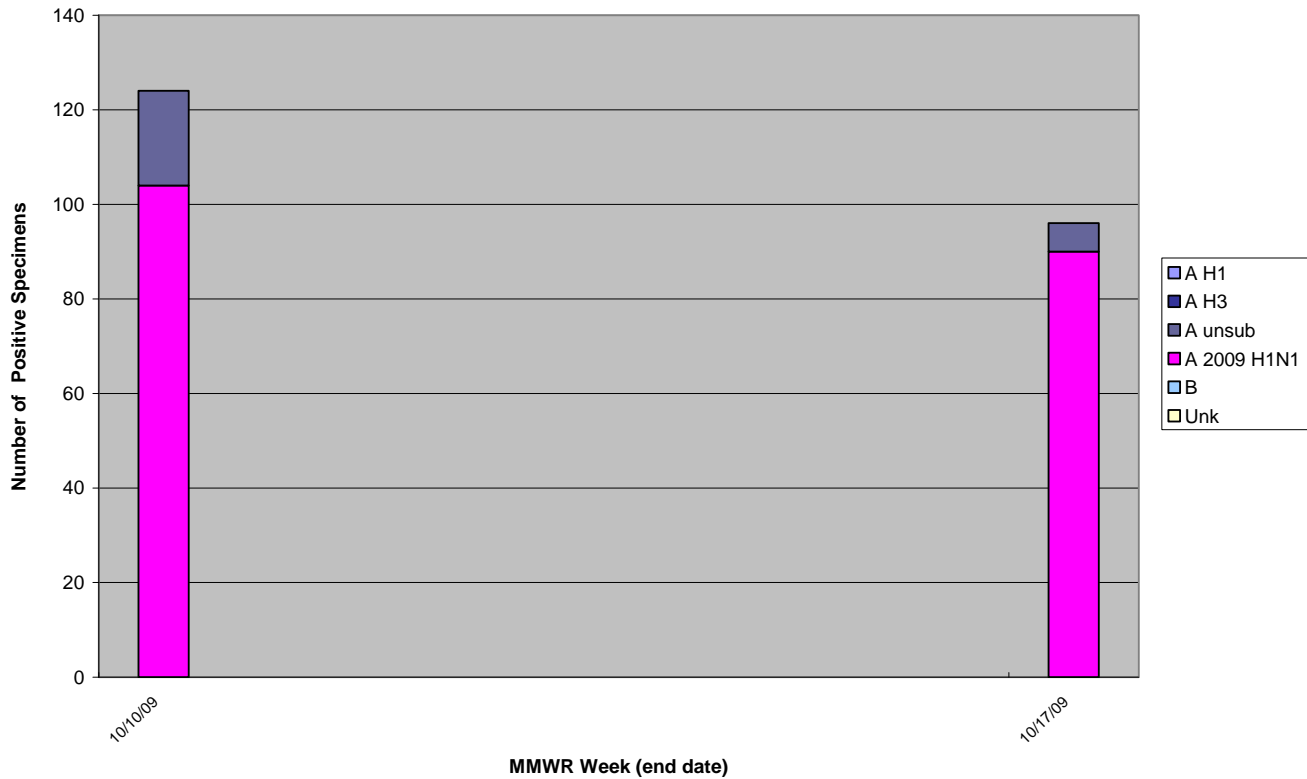
Positive confirmatory influenza test results Current MMWR Week (10/11/09-10/17/09)		
	BOL	Other clinical labs
Number of specimens tested	169	
Number of positive specimens	66	24
Positive specimens by type/subtype		
A (H1)		
A (H3)		
A (unsubtyped)		6
A (2009 H1N1)	66	18
Influenza B		
*Culture and/or RT-PCR (SC residents)		

Positive confirmatory influenza test results Cumulative (10/04/09-10/17/09)		
	BOL	Other clinical labs
Number of specimens tested	346	
Number of positive specimens	146	68
Positive specimens by type/subtype		
Influenza A		
A (H3)		
A (unsubtyped)		26
A (2009 H1N1)	146	42
Influenza B		
Unk		
Other		
*Culture and/or RT-PCR (SC residents)		

Positive Confirmatory tests by County  
October 4, 2009-October 17, 2009

County	Total	County	Total
Abbeville	1	Hampton	
Aiken	6	Horry	3
Allendale		Jasper	1
Anderson	6	Kershaw	3
Bamberg	5	Lancaster	1
Barnwell	2	Laurens	2
Beaufort	16	Lee	2
Berkeley	4	Lexington	4
Calhoun		Marion	2
Charleston	5	Marlboro	
Cherokee		McCormick	
Chester	2	Newberry	2
Chesterfield	2	Oconee	3
Clarendon		Orangeburg	3
Colleton	13	Pickens	2
Darlington	14	Richland	8
Dillon	1	Saluda	
Dorchester	2	Spartanburg	20
Edgefield		Sumter	
Fairfield	1	Union	
Florence	17	Williamsburg	1
Georgetown	4	York	
Greenville	10	Unknown	45
Greenwood	1		

### Influenza Culture and RT-PCR Results by MMWR Week



### III. Positive Rapid Flu

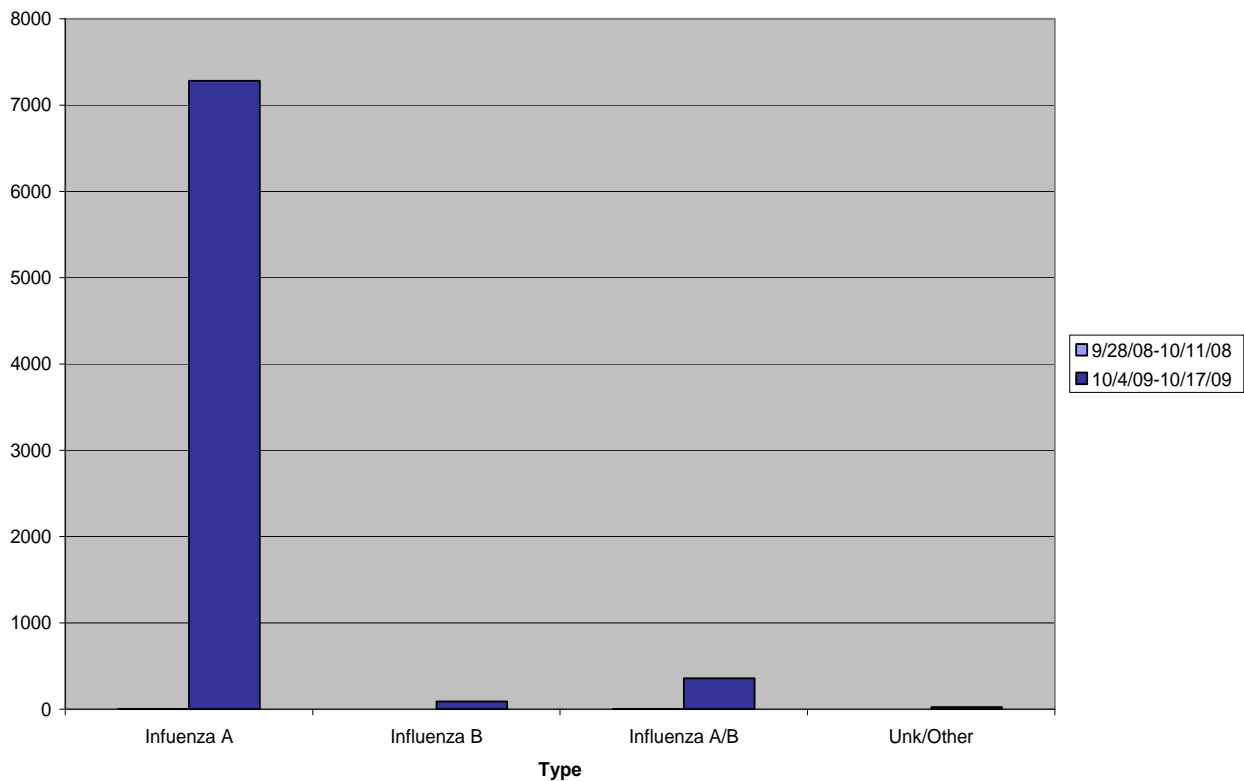
There were 3350 positive rapid antigen tests reported for the week ending October 17, 2009. Of these, 3146 were influenza A, 151 influenza A/B, 45 influenza B, and 8 unknown. Since October 4, 2009, 7751 positive rapid antigen tests have been reported.

#### Positive Rapid Flu Tests by County October 11, 2009-October 17, 2009

County	Positive Tests	County	Positive Tests
Abbeville	6	Greenwood	22
Aiken	80	Horry	306
Allendale	2	Kershaw	78
Anderson	83	Lancaster	80
Bamberg	2	Laurens	26
Berkeley	26	Lee	18
Charleston	254	Lexington	125
Cherokee	8	Marion	8
Chester	12	Marlboro	3
Chesterfield	21	Newberry	29
Clarendon	139	Oconee	10
Colleton	1	Orangeburg	31
Darlington	72	Pickens	117
Dillon	1	Richland	366

Dorchester	91	Saluda	3
Edgefield	6	Spartanburg	160
Fairfield	10	Sumter	95
Florence	287	Union	1
Georgetown	71	Williamsburg	10
Greenville	480	York	210

Positive Rapid Antigen Tests 2008-09 vs 2009-10



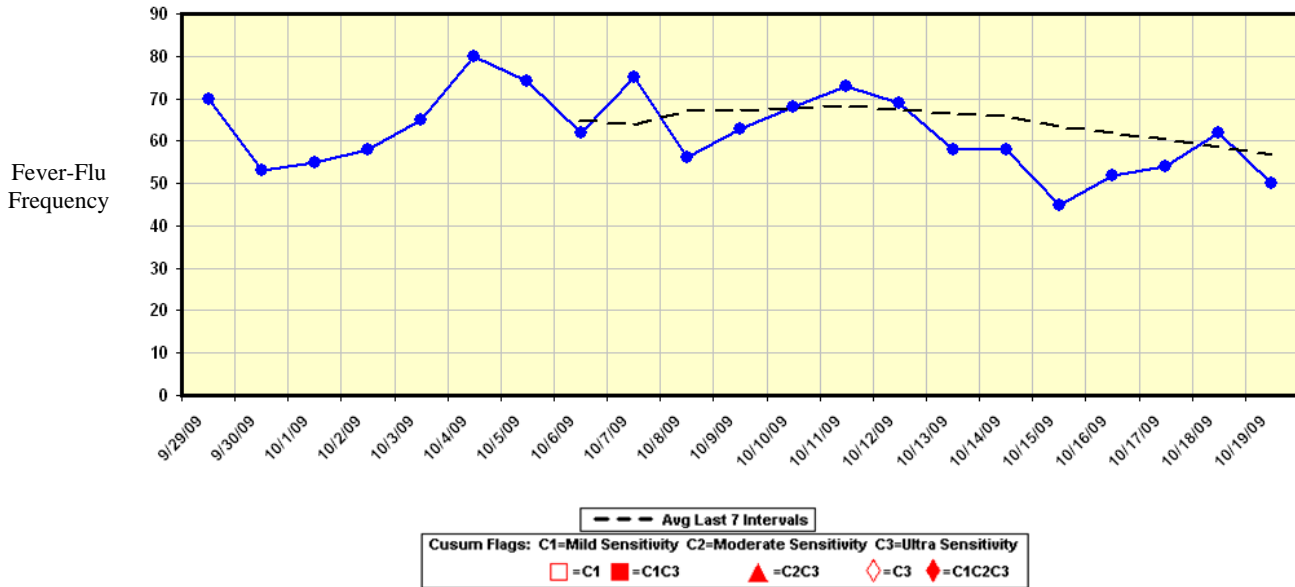
#### IV. Influenza hospitalizations and deaths

A total of 82 lab confirmed influenza hospitalizations were reported by 50 hospitals during the past week. 5 lab confirmed influenza deaths were reported. Since September 1, 2009, 456 lab confirmed hospitalizations and 16 lab confirmed deaths have been reported.

	Total number	
<b>Number of Hospitals Reporting (current week)</b>	50	
	<i>Current MMWR (10/11-10/17)</i>	<i>Cumulative (since 9/1/09)</i>
<b>Hospitalizations</b>	82	456
<b>Deaths</b>	5	16

**Syndromic Report:**

SC 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

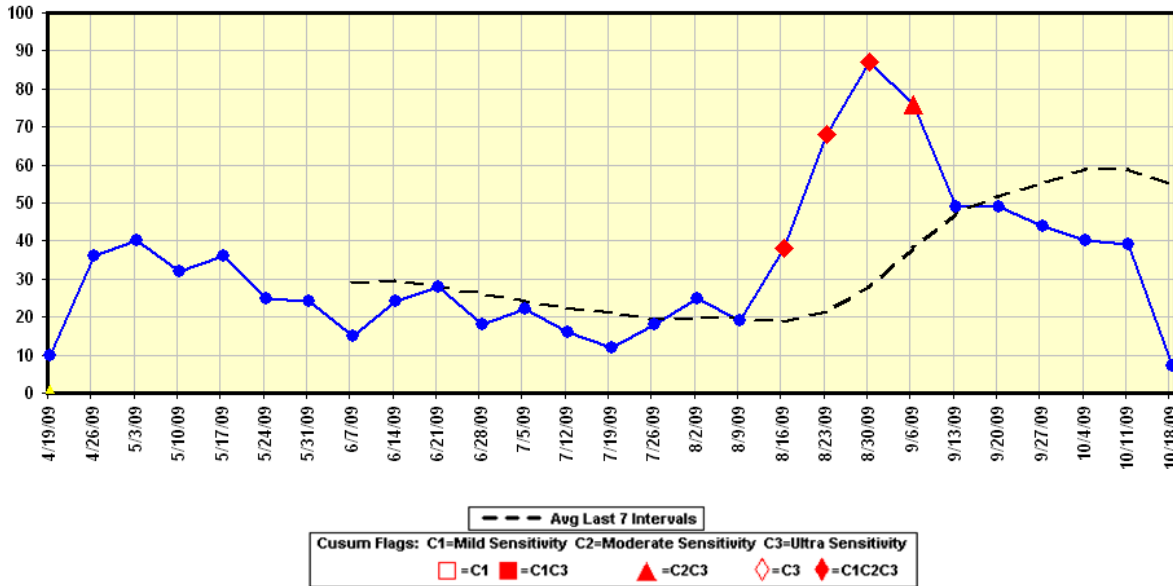
The SC Statewide Fever Flu Syndrome graph above illustrates the daily counts of hospital emergency department visits with an Influenza-like Illness (ILI) for the past 21 days. A total of 9 hospital facilities are reporting to the SCAAN system. These nine include: Self Regional (Region 1); Palmetto Health Alliance (Region 2 & 3); Greenville Hospital System (Region 2); Medical University of South Carolina (Region 7).

**Statewide CUSUM Flag Alerts Description:**

There are currently no statistically significant fever-flu alerts at the statewide level. There were also no fever-flu alerts found during the analysis by region for this week.

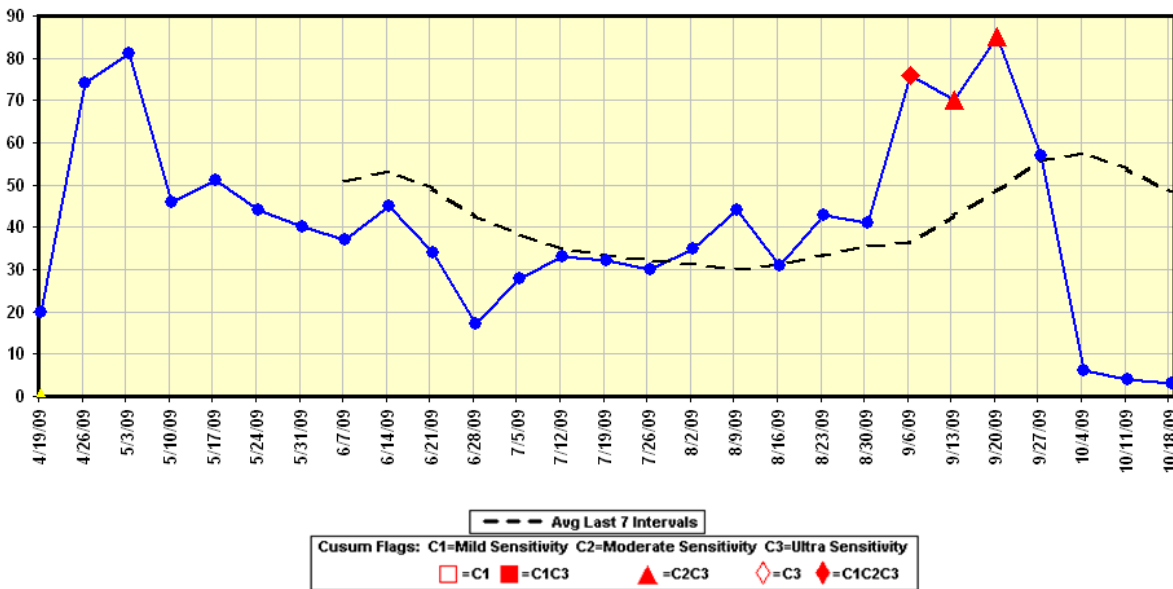
Below are the fever flu syndrome graphs by Region for the past 180 days (weekly interval).

Region 1 - Fever Flu Syndrome



Region1 Hospitals (# of Facilities): Self-Regional (1)

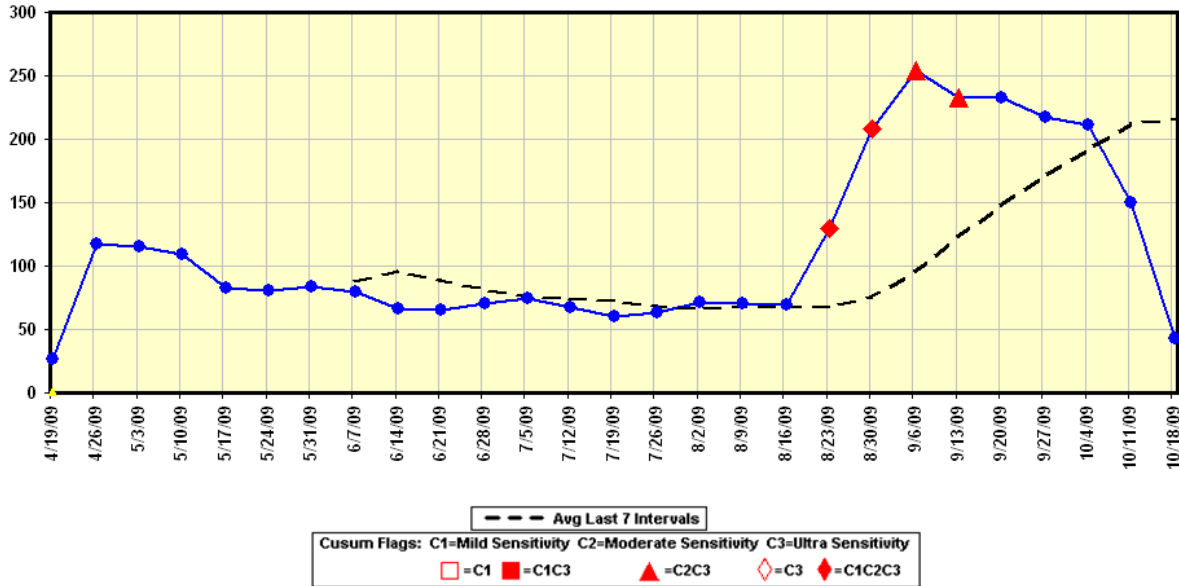
Region 2 - Fever Flu Syndrome



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

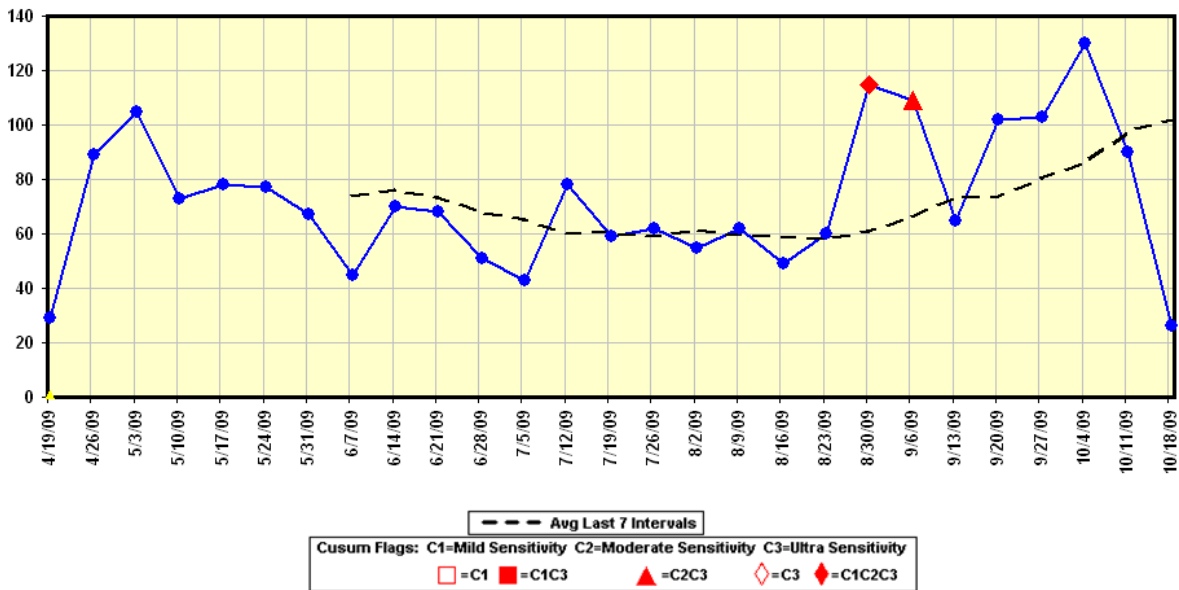


**Region 3 - Fever Flu Syndrome**



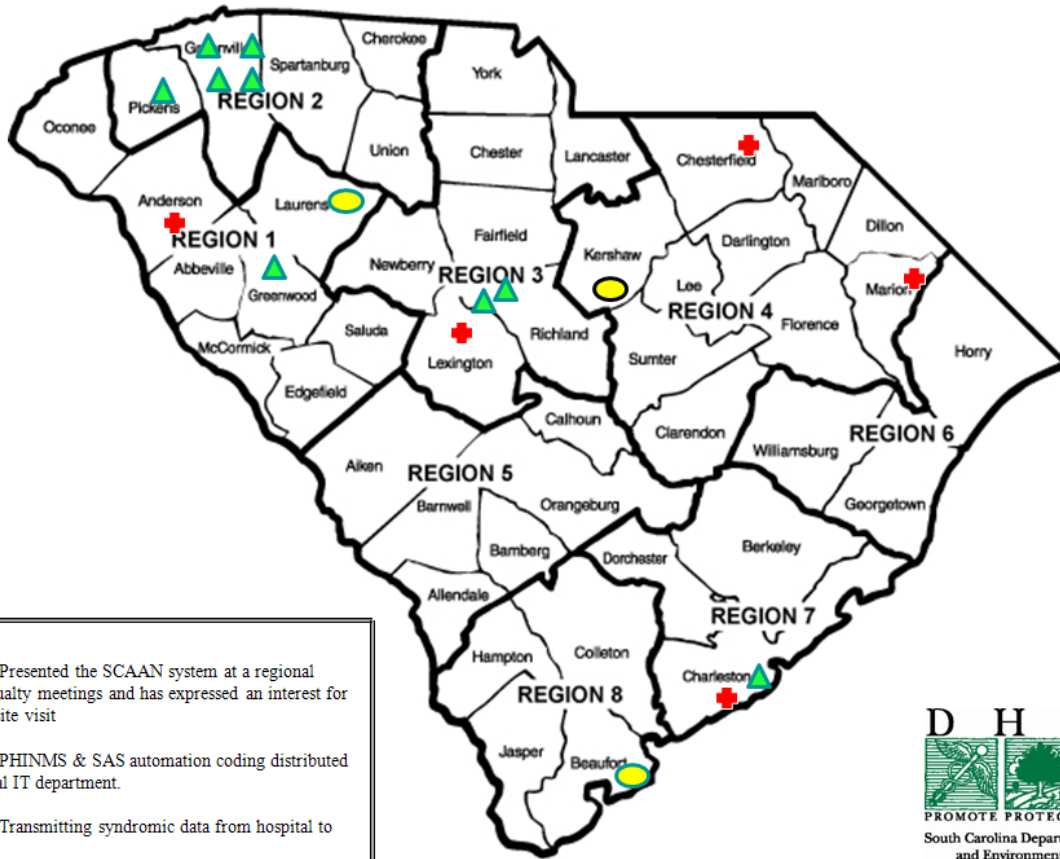
Region 3 Hospitals (# of Facilities): Palmetto Health Baptist (1), Palmetto Health Richland (1)

**Region 7 - Fever Flu Syndrome**



Region 7 Hospitals (# of Facilities): Medical University of South Carolina (1)

# SCAAN: Hospital ED Coverage as of Sept. 1, 2009



## VI. 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.

### South Carolina Influenza Surveillance Systems:

#### Mandatory reporting:

##### Positive Influenza Culture Reporting

Positive influenza culture results from commercial laboratories should be reported to DHEC within 7 days electronically via CHES or using a DHEC 1129 card.

##### Positive Rapid Antigen Test Reporting

DHEC requires weekly submission to the local health department of summary numbers of positive rapid influenza tests and influenza type identified. 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 now 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 a provider, contact the Acute Disease Epidemiology influenza surveillance coordinator at [springcb@dhec.sc.gov](mailto:springcb@dhec.sc.gov).

## VII. 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>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.