

# 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 31, 2009 (MMWR Week 43)

## Highlights:

### Influenza Activity Level: Widespread

Note: Activity level definitions are found on page 14

**ILI Activity Status (HHS Region 4 ILI baseline is 2.0%\*):** ABOVE baseline in the Upstate (2.82%), Midlands (4.51%), and along the Coast (7.91%). State ILI is 5.86%, an increase from the previous week. These data reflect reports from 18 (21%) 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, 88 positive specimens were reported. Since October 4, 2009, 238 specimens tested by our Bureau of Labs (BOL) have been positive for influenza. A total of 163 positive specimens have been reported by other labs.

**Positive Rapid Flu Test Activity:** There were 2234 positive tests reported.

**Hospitalizations:** 64 hospitalizations were reported. Since September 1, 2009, 622 hospitalizations have been reported.

**Deaths:** 4 deaths were reported, 1 of which occurred in a previous week. Since September 1, 2009, 24 deaths have been reported.

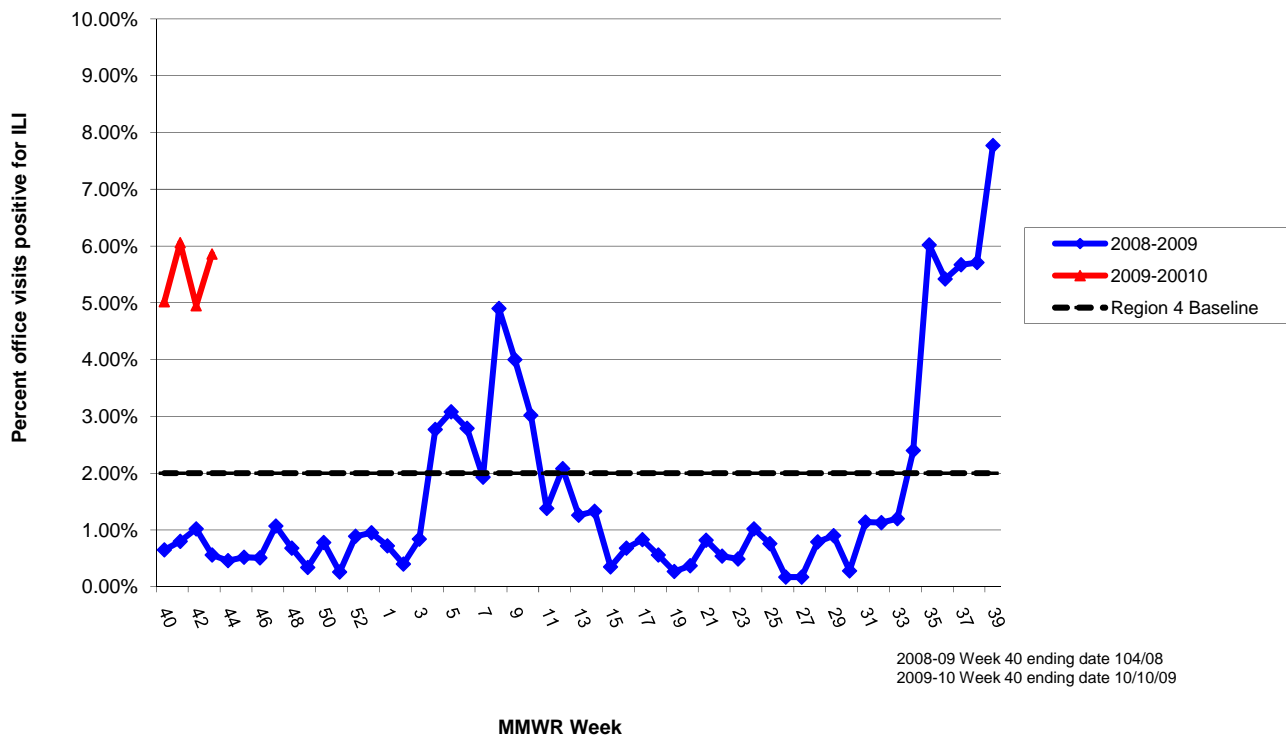
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\*HHS Region 4 consists of Alabama, Florida, Georgia, Kentucky, Mississippi, North Carolina, South Carolina, and Tennessee. The baseline is the mean percentage of patient visits for ILI during non-influenza weeks for the previous three seasons plus two standard deviations.

## I. ILINet Influenza-Like Illness Surveillance

During MMWR week 43, ending October 31, 2009, 5.86% of patient visits to SC ILNet providers were due to ILI. This percentage is above regional (2.0%) and national (2.3%) baselines. This compares to .56% this time last year. Reports were received from providers in 14 counties, representing all 8 regions. The percentage of visits ranged from 0% to 16.75%.

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 25, 2009-October 31, 2009

County	ILI %	County	ILI %
Abbeville	NS	Greenwood	NS
Aiken	0.70%	Hampton	NS
Allendale	NS	Horry	3.82%
Anderson	3.66%	Jasper	NS%
Bamberg	NS	Kershaw	NS
Barnwell	NS	Lancaster	NE
Beaufort	1.16%	Laurens	NS
Berkeley	16.75%	Lee	NE
Calhoun	NS	Lexington	2.06%
Charleston	6.91%	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	NS	Richland	6.52%
Dorchester	NS	Saluda	2.61%
Edgefield	NE	Spartanburg	6.52%
Fairfield	1.20%	Sumter	NS
Florence	2.48%	Union	NE
Georgetown	12.66%	Williamsburg	NS
Greenville	NS%	York	NS
			8.81%

NS: No reports received  
NE: No enrolled providers



Geographic Region	ILI %	# of Reporters
Upstate-Regions 1 -2	2.82	4
Midlands-Regions 3-5	4.51	7
Coastal-Regions 6-8	7.91	7

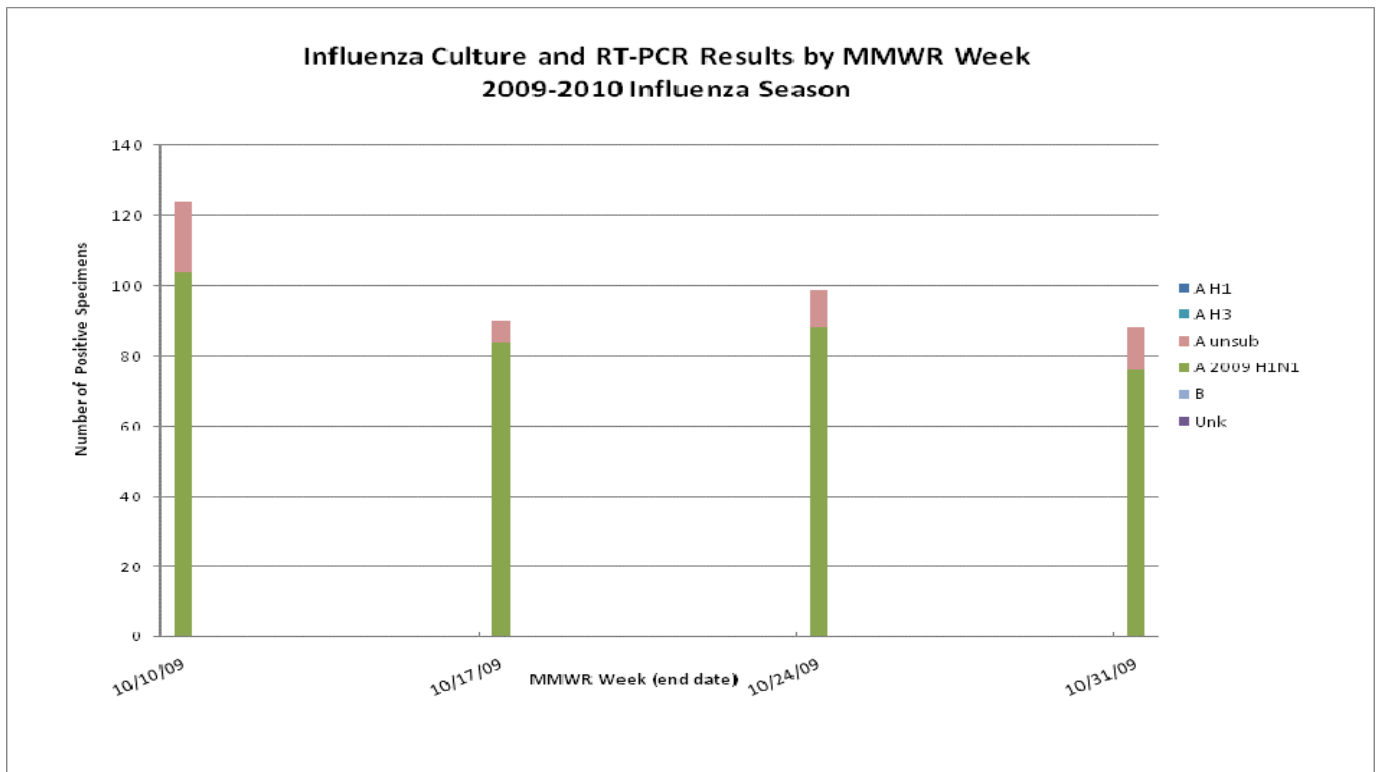
In the past week (10/25-10/31), BOL tested 118 specimens, 48 (40.7%) of which were positive. In the previous week (10/18-10/24), BOL tested 128 specimens, 44 (34.4%) of which were positive. In the past week, 40 positive specimens were reported by clinical labs. Since October 4, 2009, 401 specimens tested have been positive for influenza.

<b>Positive confirmatory influenza test results Current MMWR Week (10/25/09-10/31/09)</b>		
	<b>BOL*</b>	<b>Other clinical labs</b>
<b>Number of specimens tested</b>	118	-
<b>Number of positive specimens</b>	48 (40.7%)	40
<b>Positive specimens by type/subtype</b>		
<b>A (H1)</b>		
<b>A (H3)</b>		
<b>A (unsubtyped)</b>		12 (30%)
<b>A (2009 H1N1)</b>	48 (100%)	28 (70%)
<b>Influenza B</b>		
<b>*Culture and/or RT-PCR (SC residents)</b>		

<b>Positive confirmatory influenza test results Cumulative (10/04/09-10/31/09)</b>		
	<b>BOL*</b>	<b>Other clinical labs</b>
<b>Number of specimens tested</b>	592	-
<b>Number of positive specimens</b>	238 (40.2%)	163
<b>Positive specimens by type/subtype</b>		
<b>Influenza A</b>		
<b>A (H3)</b>		
<b>A (unsubtyped)</b>		49 (30.1%)
<b>A (2009 H1N1)</b>	238 (100%)	114 (69.9%)
<b>Influenza B</b>		
<b>Unk</b>		
<b>Other</b>		
<b>*Culture and/or RT-PCR (SC residents)</b>		

Positive Confirmatory tests by County  
October 4, 2009-October 31, 2009

County	Total	County	Total
Abbeville	1	Hampton	4
Aiken	8	Horry	16
Allendale		Jasper	2
Anderson	9	Kershaw	5
Bamberg	5	Lancaster	3
Barnwell	2	Laurens	2
Beaufort	56	Lee	6
Berkeley	6	Lexington	4
Calhoun		Marion	2
Charleston	19	Marlboro	
Cherokee	5	McCormick	
Chester	3	Newberry	4
Chesterfield	4	Oconee	4
Clarendon		Orangeburg	6
Colleton	17	Pickens	4
Darlington	19	Richland	16
Dillon	2	Saluda	
Dorchester	10	Spartanburg	33
Edgefield	1	Sumter	4
Fairfield	1	Union	
Florence	27	Williamsburg	2
Georgetown	5	York	1
Greenville	19	Unknown	63
Greenwood	1		



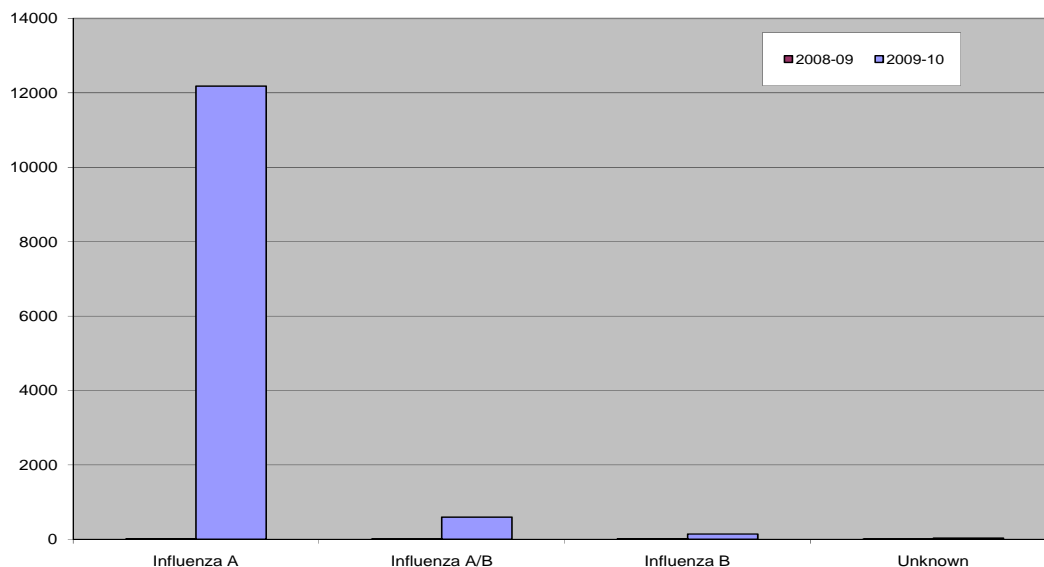
### III. Positive Rapid Flu

There were 2234 positive rapid antigen tests reported for the week ending October 31, 2009. Of these, 2098 were influenza A, 109 influenza A/B, and 27 influenza B. Since October 4, 2009, 12,950 positive rapid antigen tests have been reported.

Positive Rapid Flu Tests by County  
October 25, 2009-October 31, 2009

County	Positive Tests	County	Positive Tests
Abbeville	7	Greenwood	33
Aiken	24	Hampton	17
Allendale	3	Horry	173
Anderson	105	Jasper	
Bamberg		Kershaw	64
Barnwell		Lancaster	67
Beaufort	37	Laurens	21
Berkeley	13	Lee	1
Calhoun		Lexington	59
Charleston	174	Marion	1
Cherokee	10	Marlboro	4
Chester	19	McCormick	
Chesterfield		Newberry	9
Clarendon	5	Oconee	16
Colleton	7	Orangeburg	9
Darlington	26	Pickens	126
Dillon		Richland	258
Dorchester	45	Saluda	3
Edgefield	5	Spartanburg	142
Fairfield	5	Sumter	69
Florence	113	Union	1
Georgetown	50	Williamsburg	3
Greenville	303	York	207

Reported Positive Rapid Tests 2008-09 vs 2009-10  
MMWR Weeks 40-43



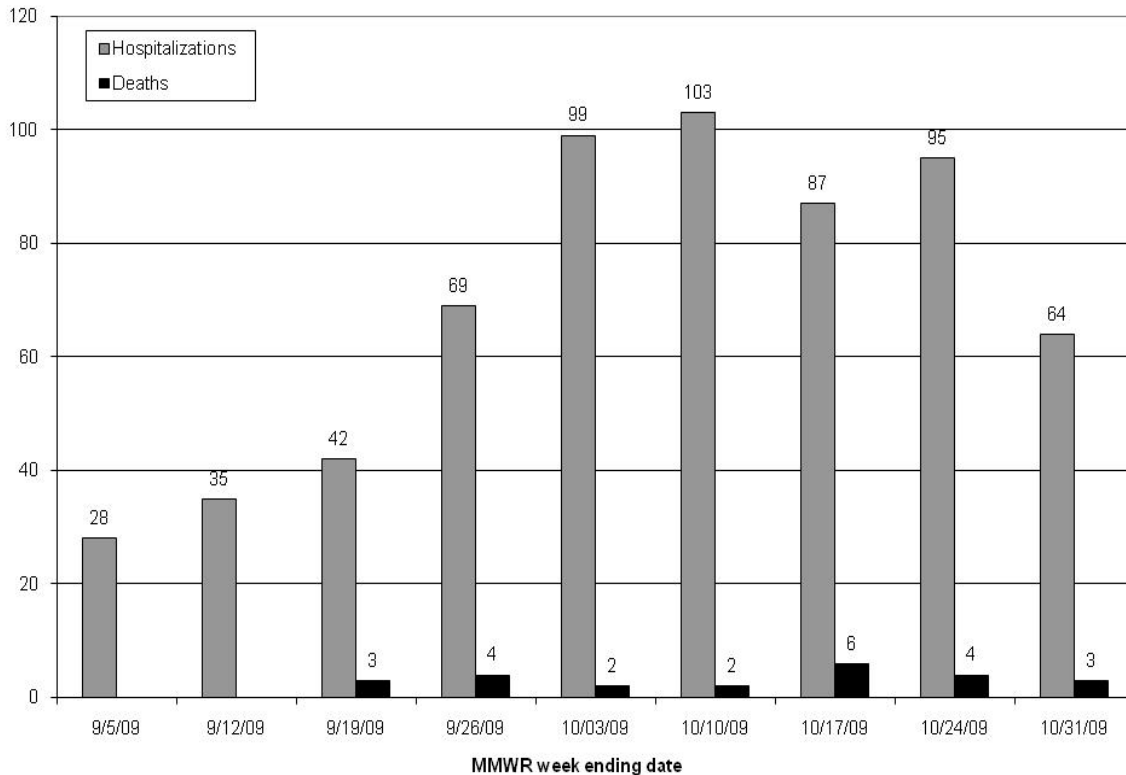
## IV. Influenza hospitalizations and deaths

A total of 64 lab confirmed influenza hospitalizations were reported by 50 hospitals during the past week. 4 lab confirmed influenza deaths were reported, 1 of which occurred during a previous week. Since September 1, 2009, 622 lab confirmed hospitalizations and 24 lab confirmed deaths have been reported.

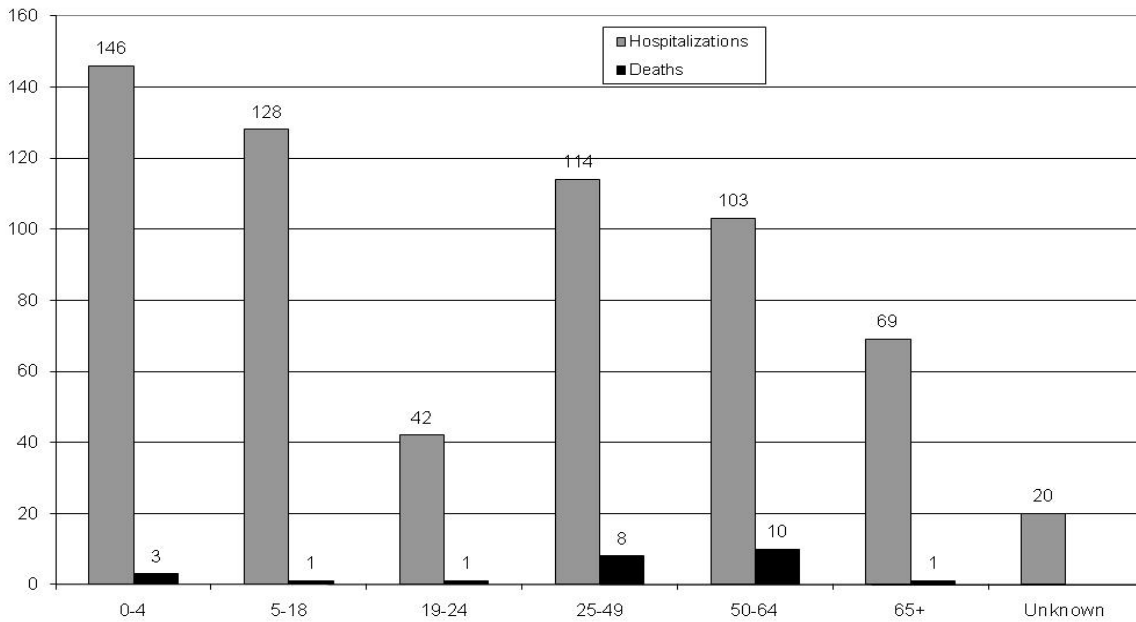
	Total number	
Number of Hospitals Reporting (current week)	50	
	<i>Previous MMWR (10/25-10/31)</i>	<i>Cumulative (since 9/1/09)</i>
Hospitalizations	64	622
Deaths	3	24

\*These data are provisional

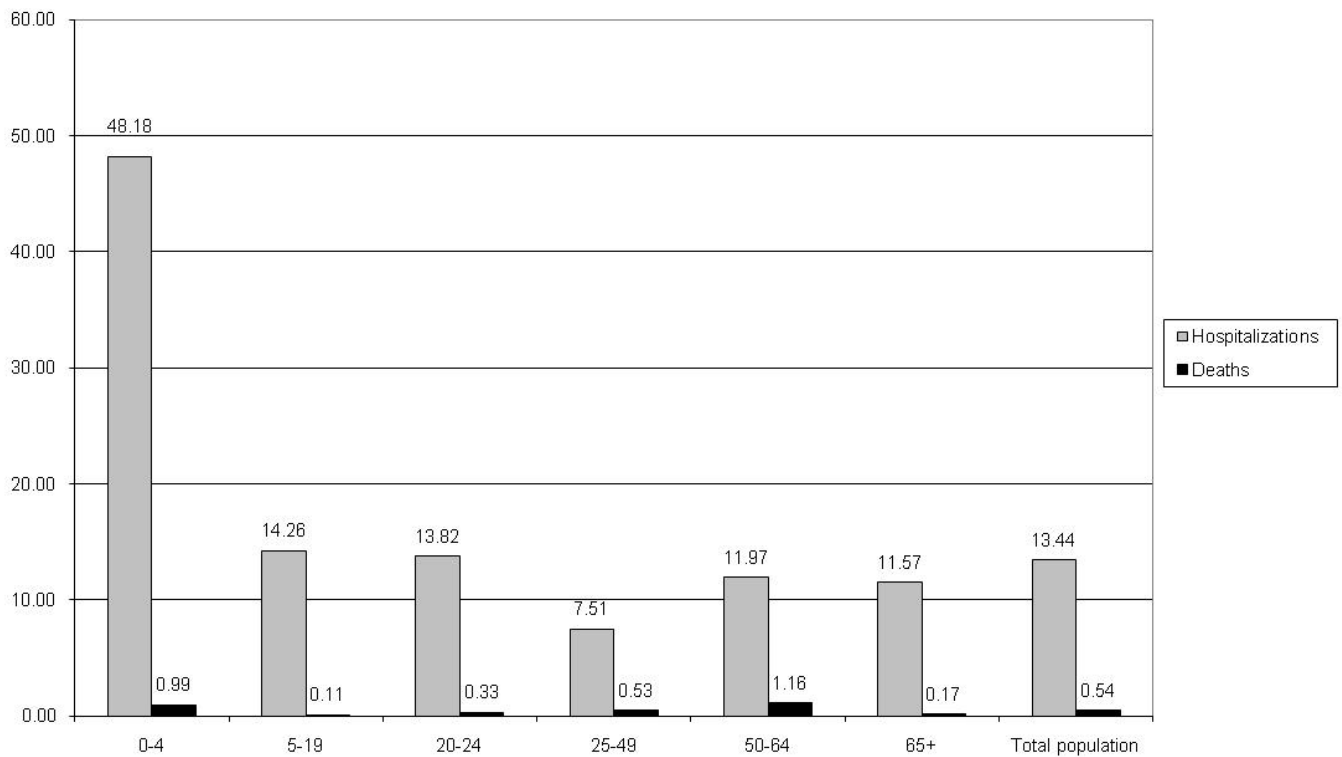
**Reported Cases of Laboratory Confirmed Influenza Hospitalizations and Deaths  
by MMWR week  
September 1, 2009 - October 31, 2009**



**Reported Cases of Laboratory Confirmed Influenza  
Hospitalizations (n=622) and Deaths (n=24) by agegroup  
September 1, 2009 - October 31, 2009**



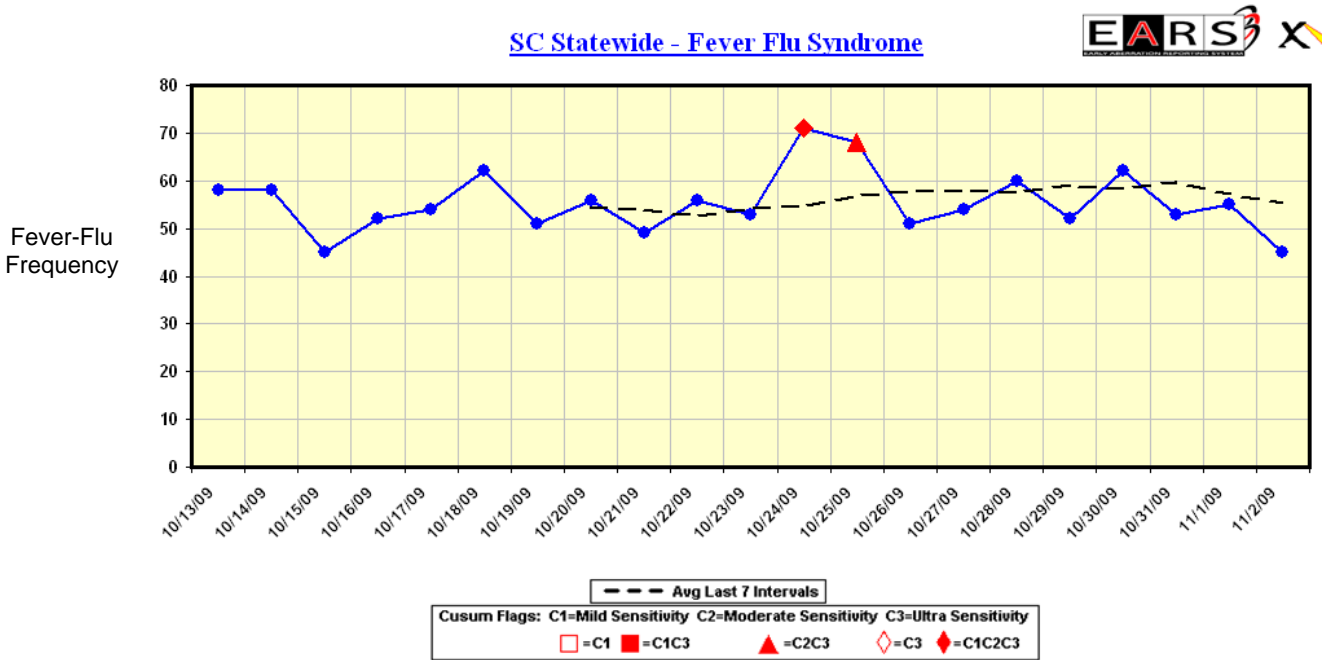
**Age-specific Case Rates (per 100,000) for Reported Cases of Laboratory Confirmed Influenza  
Hospitalizations (n=622) and Deaths (n=24)  
September 1, 2009 - October 31, 2009**



\*Rate calculation excludes 20 hospitalizations with missing age



**Syndromic Report:**



**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

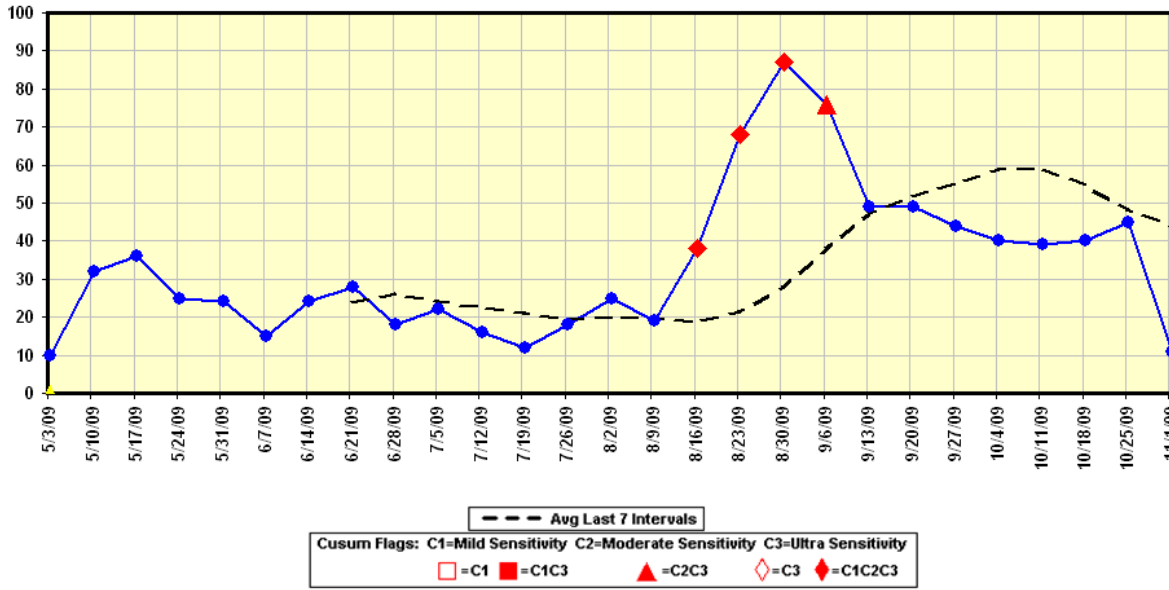
The SC Statewide Fever Flu Syndrome graph above illustrates the daily counts of hospital emergency department visits with an Influenza-like Illness (ILI) for the past 21 days. A total of 9 hospital facilities are reporting to the SCAAN system. These nine include: Self Regional (Region 1); Palmetto Health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

**Statewide CUSUM Flag Alerts Description:**

There was a C1C2C3 (diamond-shaped) ping that occurred on 10/24/09 and a C2C3 (triangle-shaped) ping that occurred on 10/25/09 at the statewide level for this week. There were no fever-flu alerts found for the past week.

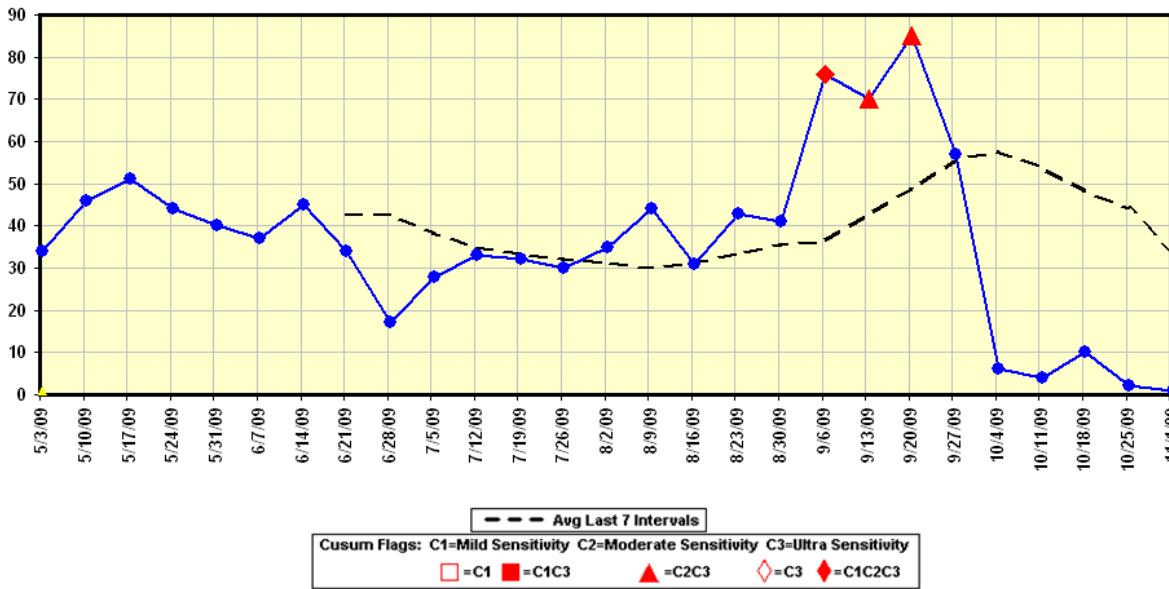
Below are the fever flu syndrome graphs by Region for the past 180 days (weekly interval).

Region 1 - Fever Flu Syndrome



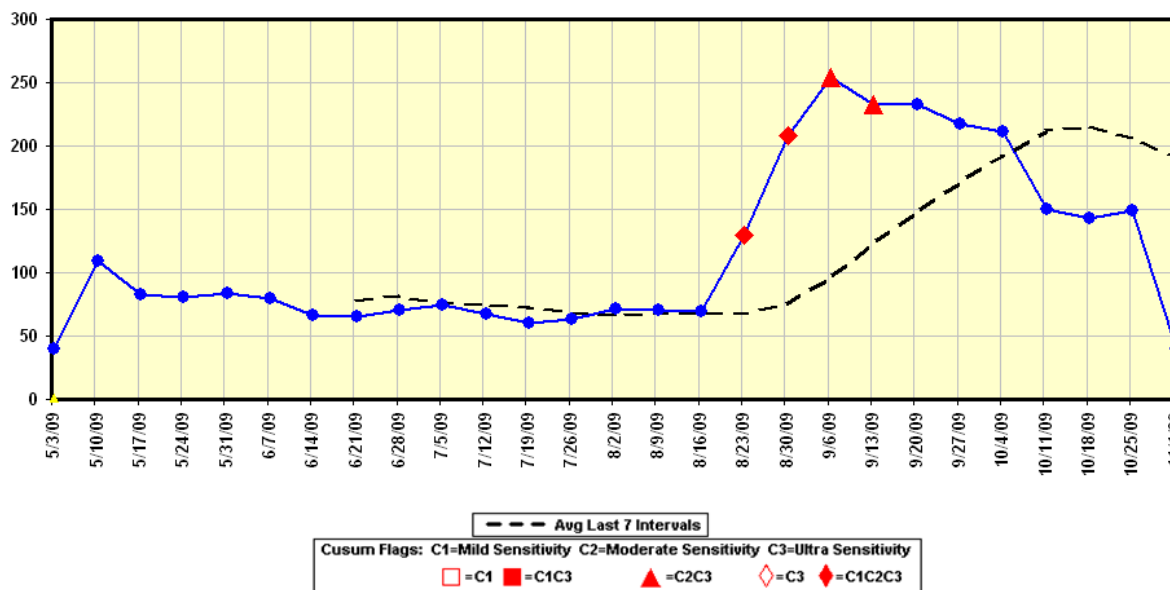
Region1 Hospitals (# of Facilities): Self-Regional (1)

Region 2 - Fever Flu Syndrome



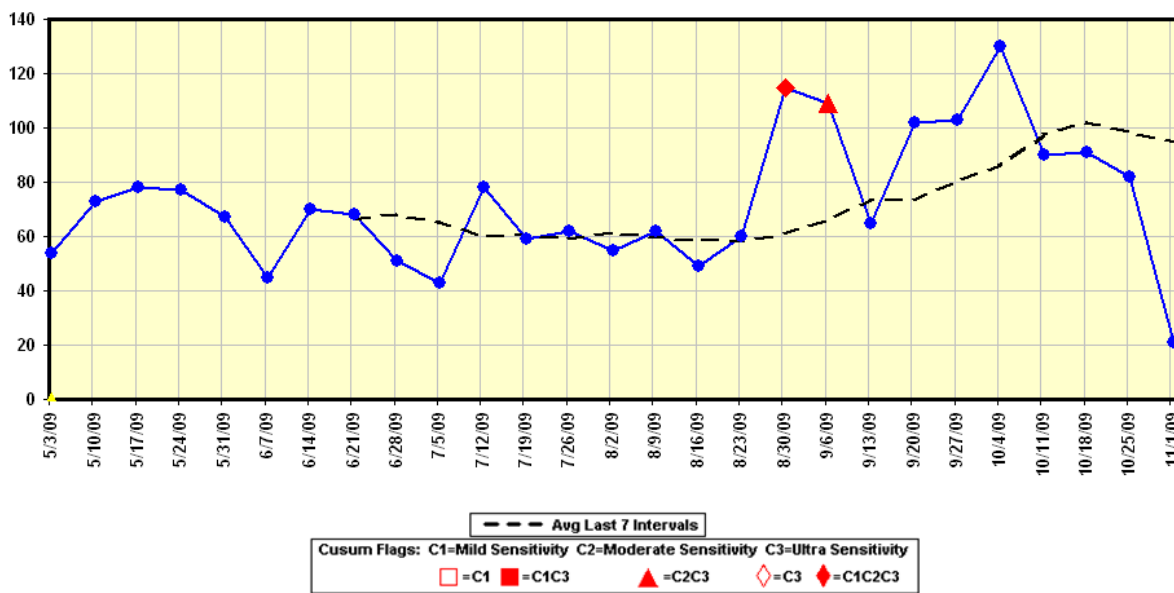
Region 2 Hospitals (# of Facilities): Greenville Hospital System (4); Palmetto Health Easley (1)

### 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)

## 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 an ILINet 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>Local</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>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
	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.