

# 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 24, 2009 (MMWR Week 42)

## Highlights:

### Influenza Activity Level: Regional

Note: Activity level definitions are found on page 14

**ILI Activity Status (South Atlantic ILI baseline is 2.2%):** BELOW baseline in the Upstate (1.00%) and ABOVE baseline in the Midlands (4.47%) and along the Coast (7.14%). State ILI is 4.95%, a decrease from the previous two weeks. The South Atlantic baseline is 2.2%\*. These data reflect reports from 20 (23%) providers. Note: See county map on page 3 for regional descriptions

**SC Viral Isolate and RT-PCR Activity:** For the current MMWR week, 55 positive specimens were reported. Since October 4, 2009, 146 specimens tested by our Bureau of Labs (BOL) have been positive for influenza. A total of 123 positive specimens have been reported by other labs.

**Positive Rapid Flu Test Activity:** There were 2965 positive tests reported.

**Hospitalizations:** 95 hospitalizations were reported. Since September 1, 2009, 558 hospitalizations have been reported.

**Deaths:** 4 deaths were reported. Since September 1, 2009, 20 deaths have been reported.

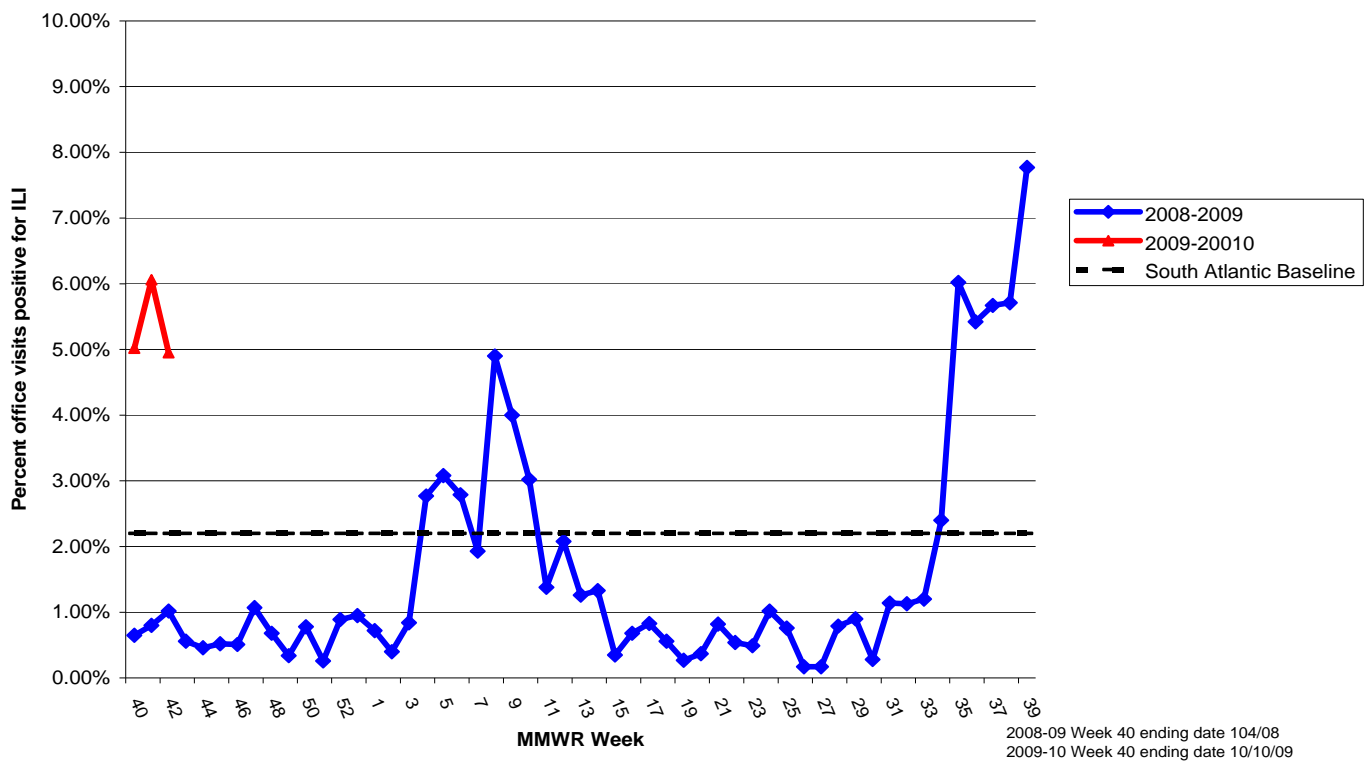
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\*The South Atlantic region consists of Delaware, Florida, Georgia, Maryland, North Carolina, South Carolina, Virginia, Washington, D.C., West Virginia. The baseline is the mean percentage of patient visits for ILI during non-influenza weeks for the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

## I. ILINet Influenza-Like Illness Surveillance

During MMWR week 42, ending October 24, 2009, 4.95% 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 .56% this time last year. Reports were received from providers in 17 counties, representing all 8 regions. The percentage of visits ranged from 0% to 23.94%.

**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 18, 2009-October 24, 2009

County	ILI %	County	ILI %
Abbeville	NS	Greenwood	NS
Aiken	0.28%	Hampton	NS
Allendale	NS	Horry	2.46%
Anderson	0%	Jasper	5.30%
Bamberg	NS	Kershaw	NS
Barnwell	NS	Lancaster	NE
Beaufort	NS	Laurens	NS
Berkeley	NS	Lee	NE
Calhoun	NS	Lexington	9.63%
Charleston	9.05%	Marion	NS
Cherokee	NS	Marlboro	NS
Chester	NE	McCormick	0.75%
Chesterfield	NE	Newberry	NS
Clarendon	NS	Oconee	NS
Colleton	NS	Orangeburg	NS
Darlington	NS	Pickens	0%
Dillon	1.67%	Richland	6.32%
Dorchester	NS	Saluda	1.33%
Edgefield	NE	Spartanburg	0.40%
Fairfield	1.33%	Sumter	NS
Florence	2.48%	Union	NE
Georgetown	10.78%	Williamsburg	NS
Greenville	3.21%	York	NS
			10.83%

NS: No reports received  
NE: No enrolled providers



Geographic Region	ILI %	# of Reporters
Upstate-Regions 1 -2	1.00	5
Midlands-Regions 3-5	4.47	9
Coastal-Regions 6-8	7.14	6

## II. Virologic Surveillance

55 positive specimens were reported by clinical labs. Since October 4, 2009, 269 specimens tested have been positive for influenza.

<b>Positive confirmatory influenza test results Current MMWR Week (10/18/09-10/24/09)</b>		
	<b>BOL*</b>	<b>Other clinical labs</b>
<b>Number of specimens tested</b>	-	-
<b>Number of positive specimens</b>	-	55
<b>Positive specimens by type/subtype</b>		
<b>A (H1)</b>		
<b>A (H3)</b>		
<b>A (unsubtyped)</b>		11
<b>A (2009 H1N1)</b>		44
<b>Influenza B</b>		
<b>*Culture and/or RT-PCR (SC residents)</b>		

\*BOL results unavailable at publication time

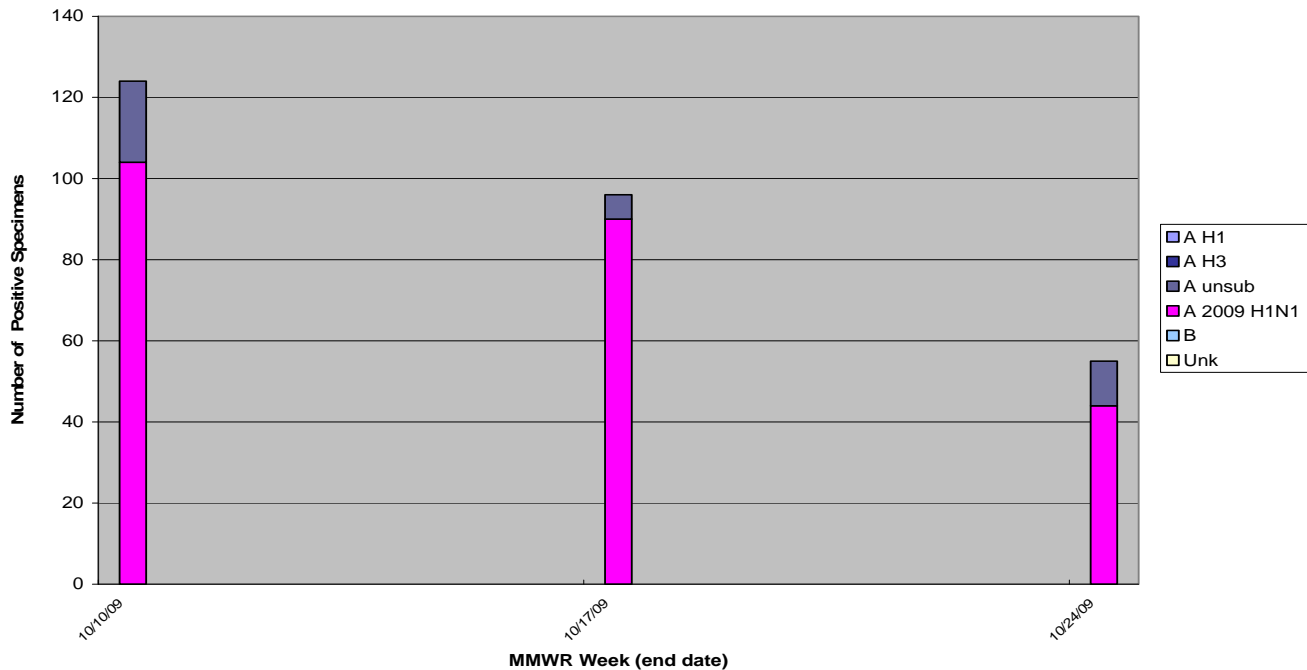
<b>Positive confirmatory influenza test results Cumulative (10/04/09-10/24/09)</b>		
	<b>BOL*</b>	<b>Other clinical labs</b>
<b>Number of specimens tested</b>	346	-
<b>Number of positive specimens</b>	146	123
<b>Positive specimens by type/subtype</b>		
<b>Influenza A</b>		
<b>A (H3)</b>		
<b>A (unsubtyped)</b>		37
<b>A (2009 H1N1)</b>	146	86
<b>Influenza B</b>		
<b>Unk</b>		
<b>Other</b>		
<b>*Culture and/or RT-PCR (SC residents)</b>		

\*BOL results from 10/4/09-10/17/09

Positive Confirmatory tests by County  
October 4, 2009-October 24, 2009

County	Total	County	Total
Abbeville	1	Hampton	1
Aiken	6	Horry	3
Allendale		Jasper	2
Anderson	6	Kershaw	3
Bamberg	5	Lancaster	1
Barnwell	2	Laurens	2
Beaufort	47	Lee	5
Berkeley	4	Lexington	4
Calhoun		Marion	2
Charleston	8	Marlboro	
Cherokee		McCormick	
Chester	2	Newberry	2
Chesterfield	2	Oconee	3
Clarendon		Orangeburg	3
Colleton	15	Pickens	2
Darlington	15	Richland	8
Dillon	1	Saluda	
Dorchester	4	Spartanburg	26
Edgefield		Sumter	2
Fairfield	1	Union	
Florence	18	Williamsburg	1
Georgetown	4	York	
Greenville	11	Unknown	46
Greenwood	1		

Influenza Culture and RT-PCR Results by MMWR Week  
2009-2010



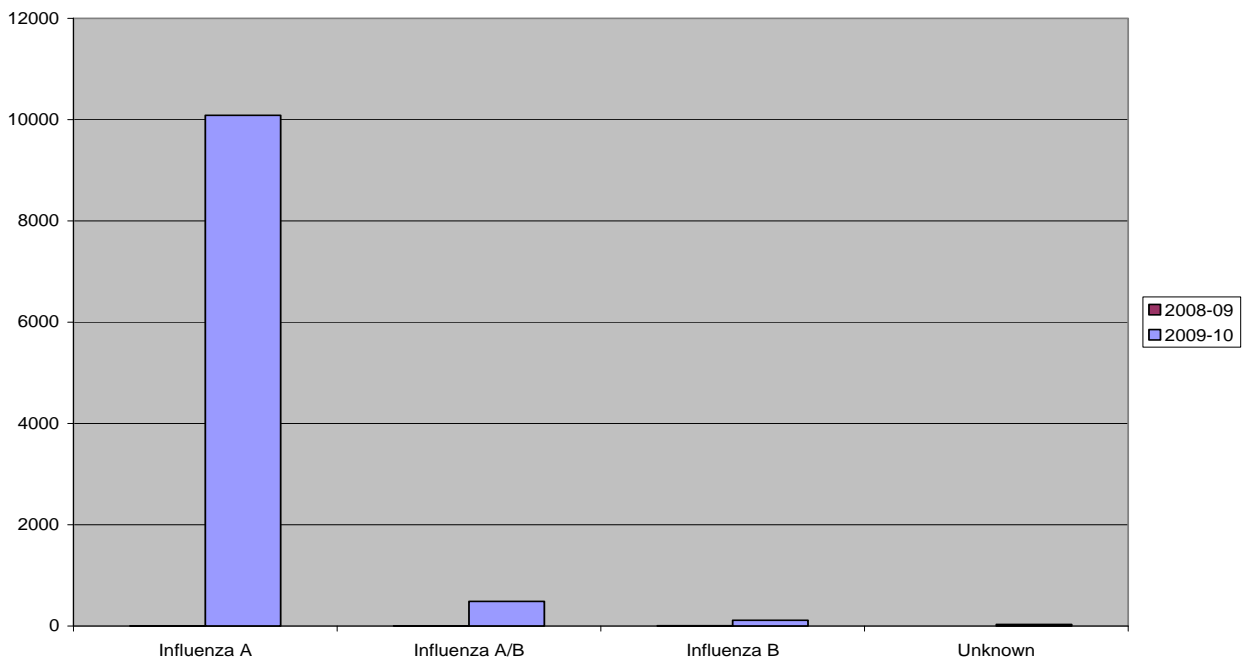
### III. Positive Rapid Flu

There were 2965 positive rapid antigen tests reported for the week ending October 24, 2009. Of these, 2804 were influenza A, 128 influenza A/B, 26 influenza B, and 7 unknown. Since October 4, 2009, 10,716 positive rapid antigen tests have been reported.

Positive Rapid Flu Tests by County  
October 18, 2009-October 24, 2009

County	Positive Tests	County	Positive Tests
Abbeville	8	Hampton	11
Aiken	57	Horry	285
Allendale	1	Jasper	14
Anderson	126	Kershaw	101
Bamberg	2	Lancaster	62
Beaufort	62	Laurens	10
Berkeley	18	Lee	6
Charleston	217	Lexington	114
Cherokee	13	Marion	5
Chester	15	Marlboro	5
Chesterfield	32	Newberry	21
Clarendon	2	Oconee	3
Colleton	10	Orangeburg	42
Darlington	36	Pickens	138
Dillon	1	Richland	354
Dorchester	76	Saluda	4
Edgefield	3	Spartanburg	149
Fairfield	5	Sumter	51
Florence	192	Union	4
Georgetown	89	Williamsburg	5
Greenville	414	York	164
Greenwood	38		

Reported Positive Rapid Tests 2008-09 vs 2009-10  
MMWR Weeks 40-42



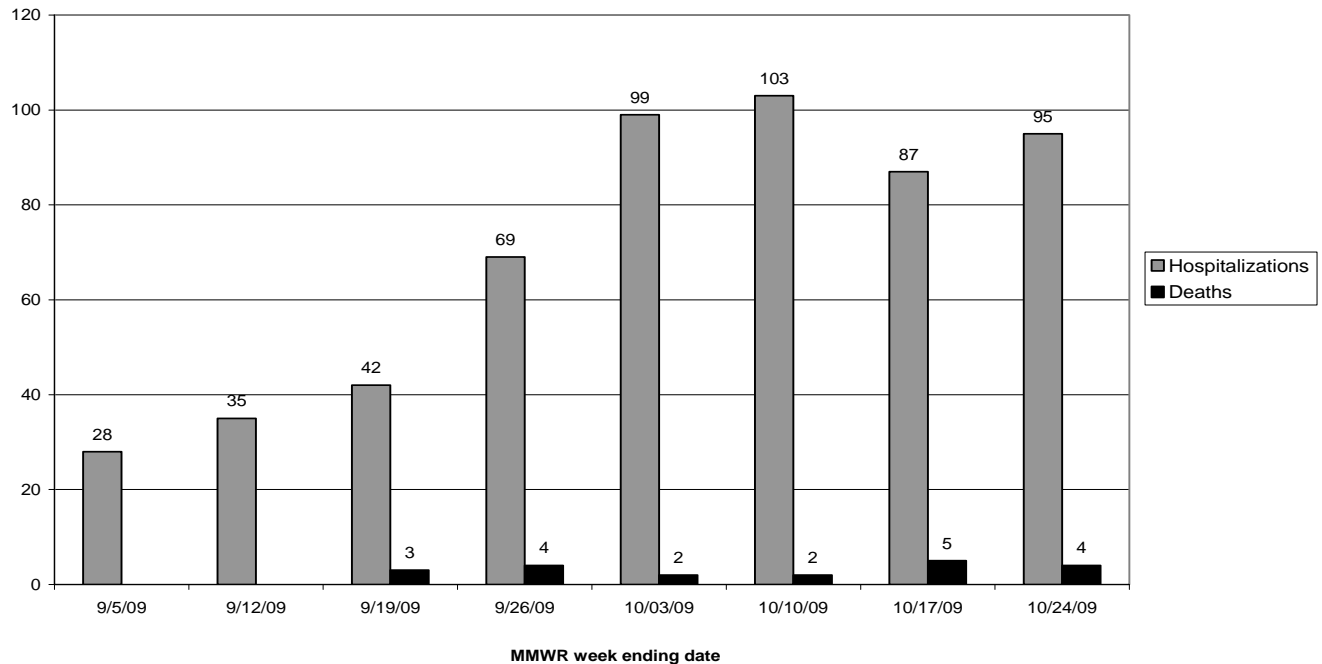
## IV. Influenza hospitalizations and deaths

A total of 95 lab confirmed influenza hospitalizations were reported by 44 hospitals during the past week. 4 lab confirmed influenza deaths were reported. Since September 1, 2009, 558 lab confirmed hospitalizations and 20 lab confirmed deaths have been reported.

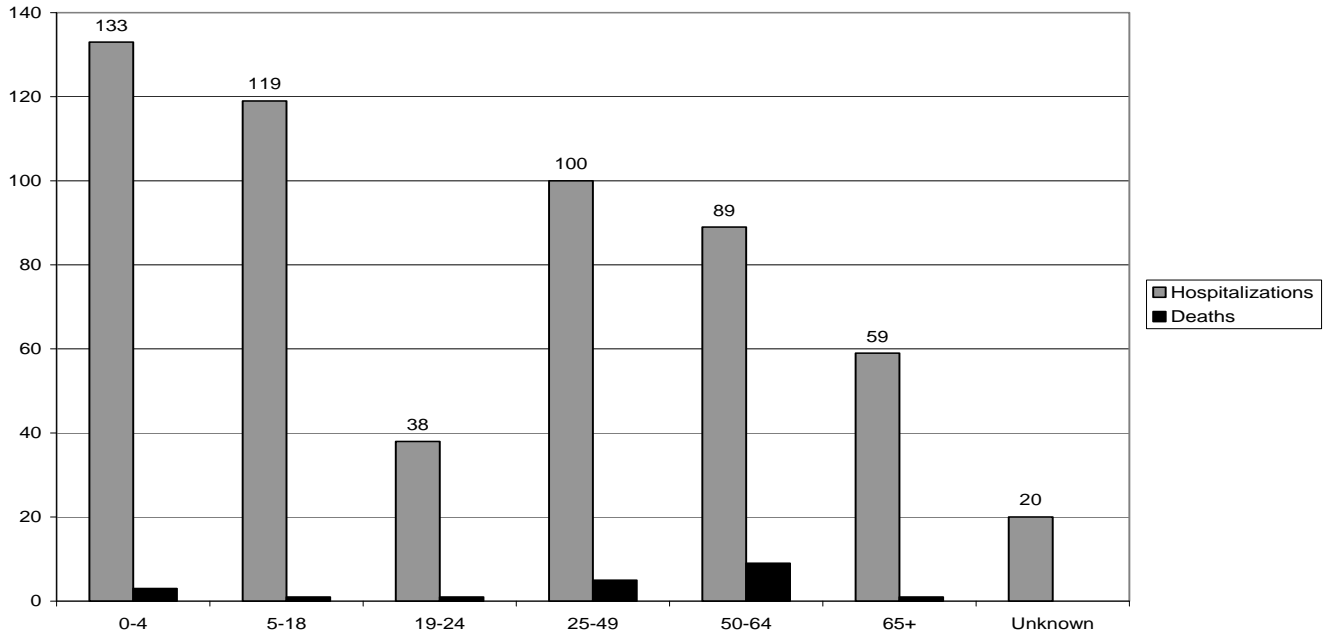
	Total number	
<b>Number of Hospitals Reporting (current week)</b>	44	
	<i>Current MMWR (10/18-10/24)</i>	<i>Cumulative (since 9/1/09)</i>
<b>Hospitalizations</b>	95	558
<b>Deaths</b>	4	20

\*These data are provisional

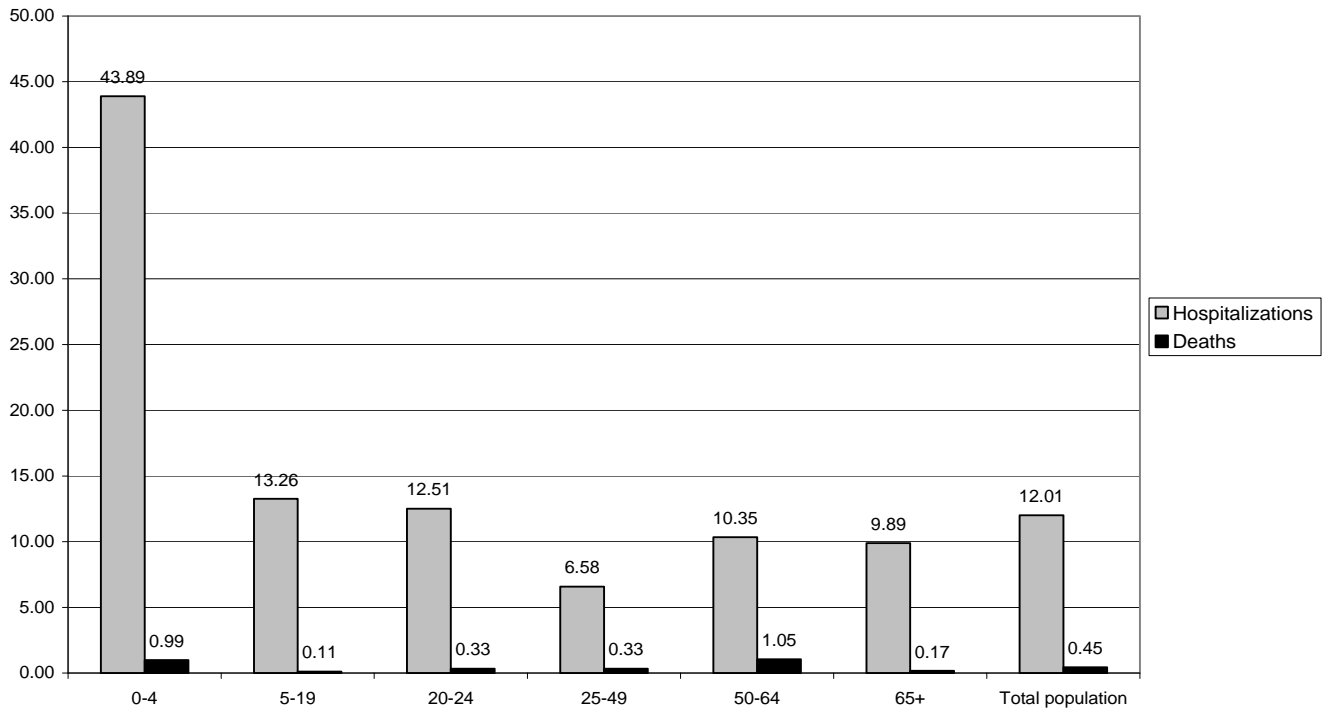
**Reported Cases of Laboratory Confirmed Influenza Hospitalizations and Deaths  
by MMWR week  
September 1, 2009 - October 24, 2009**



**Reported Cases of Laboratory Confirmed Influenza  
Hospitalizations (n=558) and Deaths (n=20) by agegroup  
September 1, 2009 - October 24, 2009**



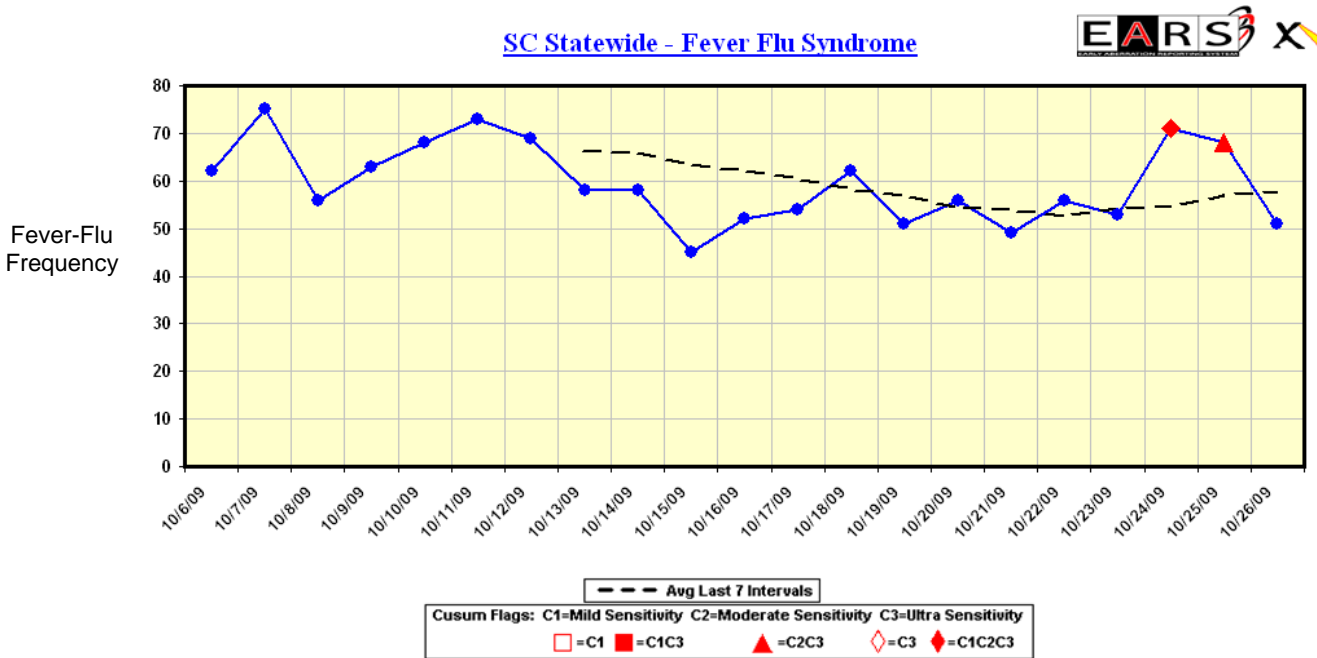
**Age-specific Case Rates (per 100,000) for Reported Cases of Laboratory Confirmed Influenza  
Hospitalizations (n=558) and Deaths (n=20)  
September 1, 2009 - October 24, 2009**



\*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

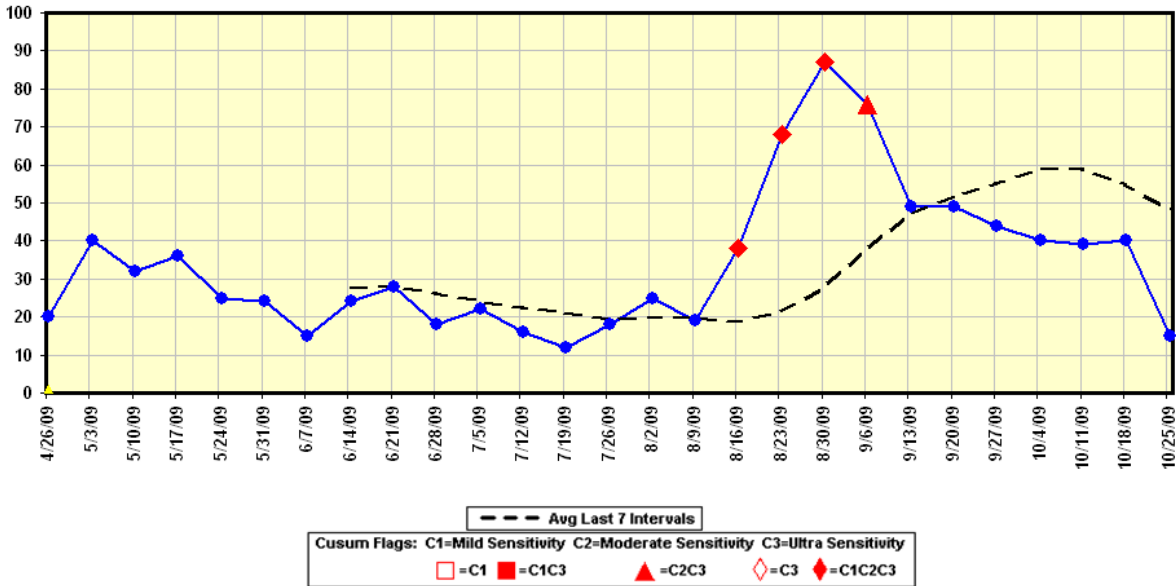
The SC Statewide Fever Flu Syndrome graph above illustrates the daily counts of hospital emergency department visits with an Influenza-like Illness (ILI) for the past 21 days. A total of 9 hospital facilities are reporting to the SCAAN system. These nine include: Self Regional (Region 1); Palmetto Health 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. The number of fever flu syndromes counts for 10/26/09 returned below the mean line (black dash line). There were no fever-flu alerts found during the analysis by region for this week.

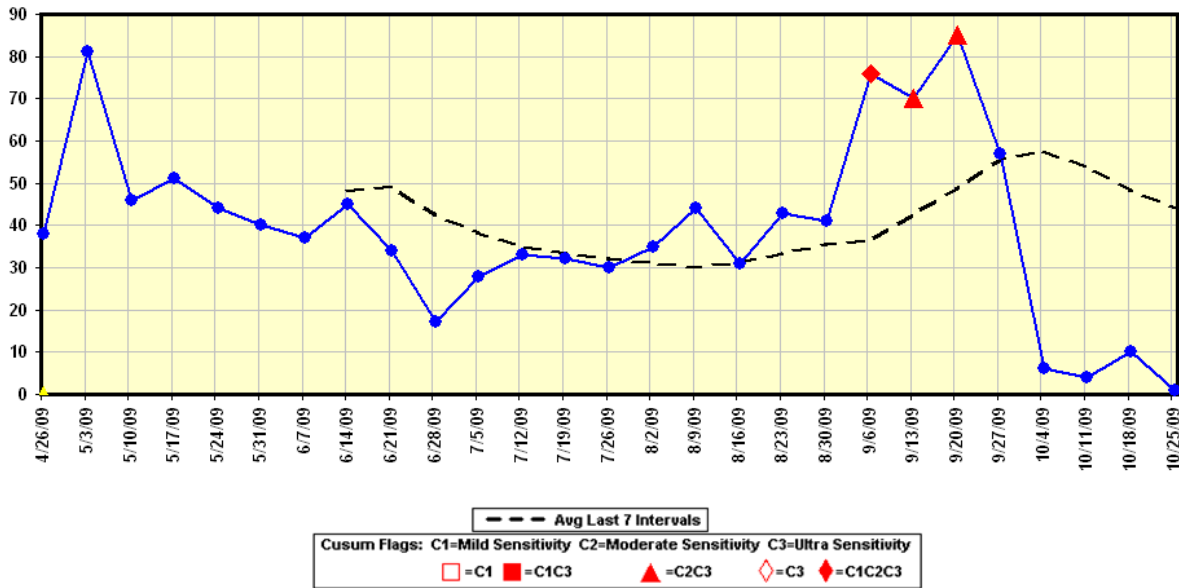
Below are the fever flu syndrome graphs by Region for the past 180 days (weekly interval).

Region 1 - Fever Flu Syndrome



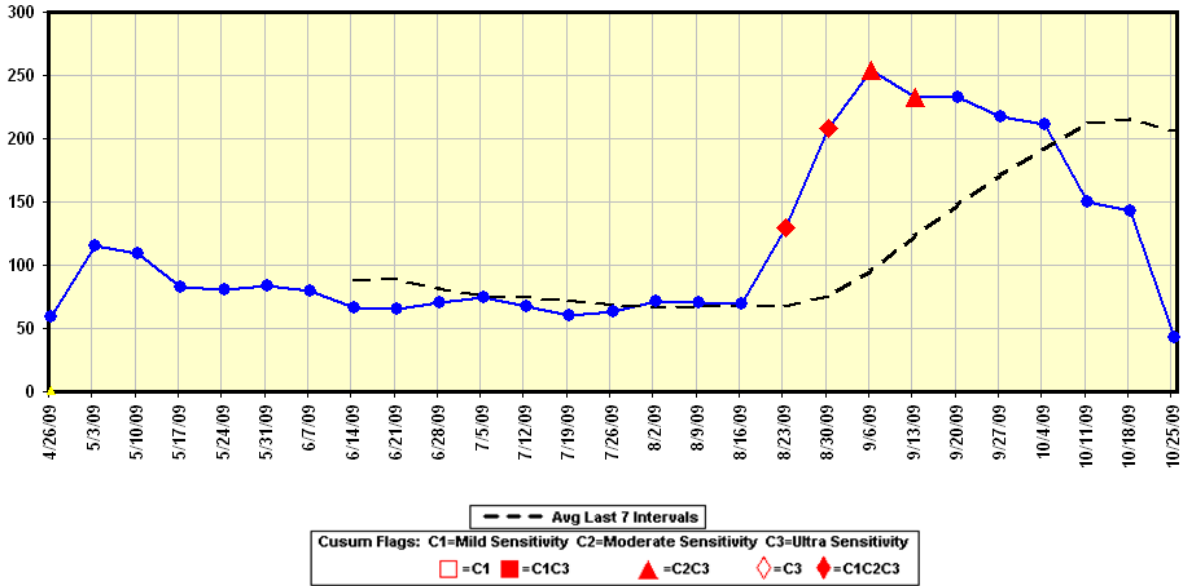
Region1 Hospitals (# of Facilities): Self-Regional (1)

Region 2 - Fever Flu Syndrome



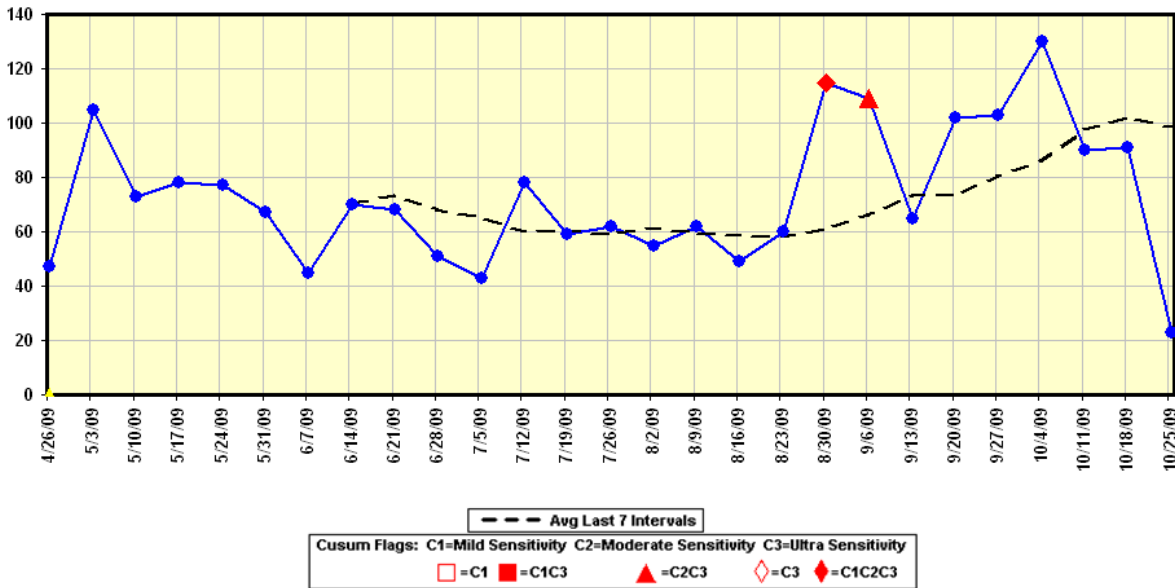
Region 2 Hospitals (# of Facilities): Greenville Hospital System (4); Palmetto Health Easley (1)

**Region 3 - Fever Flu Syndrome**



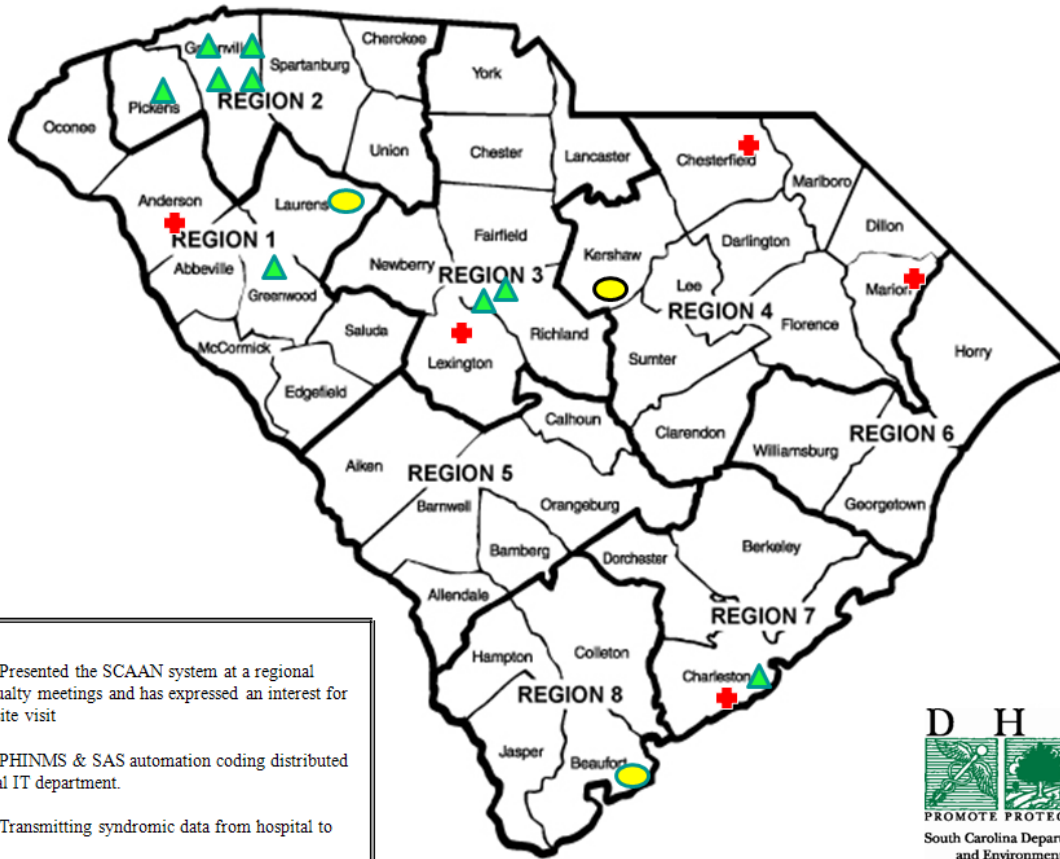
Region 3 Hospitals (# of Facilities): Palmetto Health Baptist (1), Palmetto Health Richland (1)

**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.