

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 10, 2009 (MMWR Week 40)

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 (0.76%) and ABOVE baseline in the Midlands (4.83%) and along the Coast (9.28%). State ILI is 5.02%. The South Atlantic baseline is 2.2%*. These data reflect reports from 12 (13%) providers.

Note: See county map on page 3 for regional descriptions

SC Viral Isolate and RT-PCR Activity: During the reporting week, 124 specimens tested positive for influenza. Since October 4, 2009, 80 specimens tested by our Bureau of Labs (BOL) have been positive for influenza. A total of 44 positive specimens have been reported by other labs.

Positive Rapid Flu Test Activity: There were 4401 positive tests reported.

Hospitalizations: 102 hospitalizations were reported. Since September 1, 2009, 374 hospitalizations have been reported.

Deaths: 2 deaths were reported. Since September 1, 2009, 11 deaths have been reported.

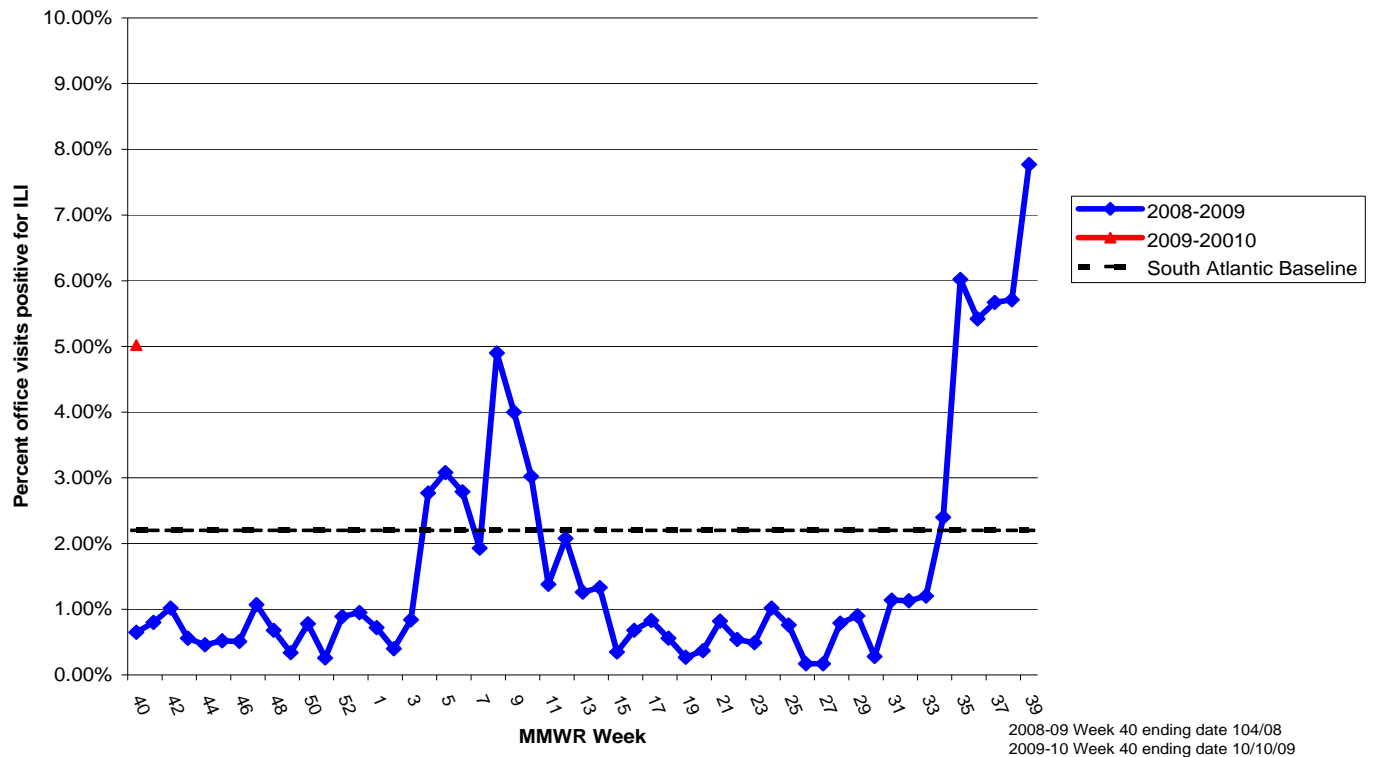
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*The South Atlantic region consists of Delaware, Florida, Georgia, Maryland, North Carolina, South Carolina, Virginia, Washington, D.C., West Virginia. The baseline is the mean percentage of patient visits for ILI during non-influenza weeks for the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

I. ILINet Influenza-Like Illness Surveillance

During MMWR week 40, ending October 10, 2009, 5.02% 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 .65% this time last year. Reports were received from providers in 12 counties, representing 6 regions. The percentage of visits ranged from 0% to 17.4%.

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 4, 2009-October 10, 2009

County	ILI %	County	ILI %
Abbeville	NS	Greenwood	NS
Aiken	.29%	Hampton	NS
Allendale	NS	Horry	1.86%
Anderson	4.08%	Jasper	NS
Bamberg	NS	Kershaw	NS
Barnwell	NS	Lancaster	NE
Beaufort	NS	Laurens	NS
Berkeley	NS	Lee	NE
Calhoun	NS	Lexington	4.59%
Charleston	NS	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	6.67%	Richland	NS
Dorchester	NS	Saluda	NS
Edgefield	NE	Spartanburg	NS
Fairfield	8.80%	Sumter	NS
Florence	3.70%	Union	NE
Georgetown	17.44%	Williamsburg	NS
Greenville	0.66%	York	NS
			10.83%

NS: No reports received
NE: No enrolled providers



Geographic Region	ILI %	# of Reporters
Upstate-Regions 1 -2	0.76	3
Midlands-Regions 3-5	4.83	7
Coastal-Regions 6-8	9.28	2

II. Virologic Surveillance

177 specimens were tested by BOL. Of these, 80 (45.2%) were positive. Another 44 positive specimens were reported by other clinical labs.

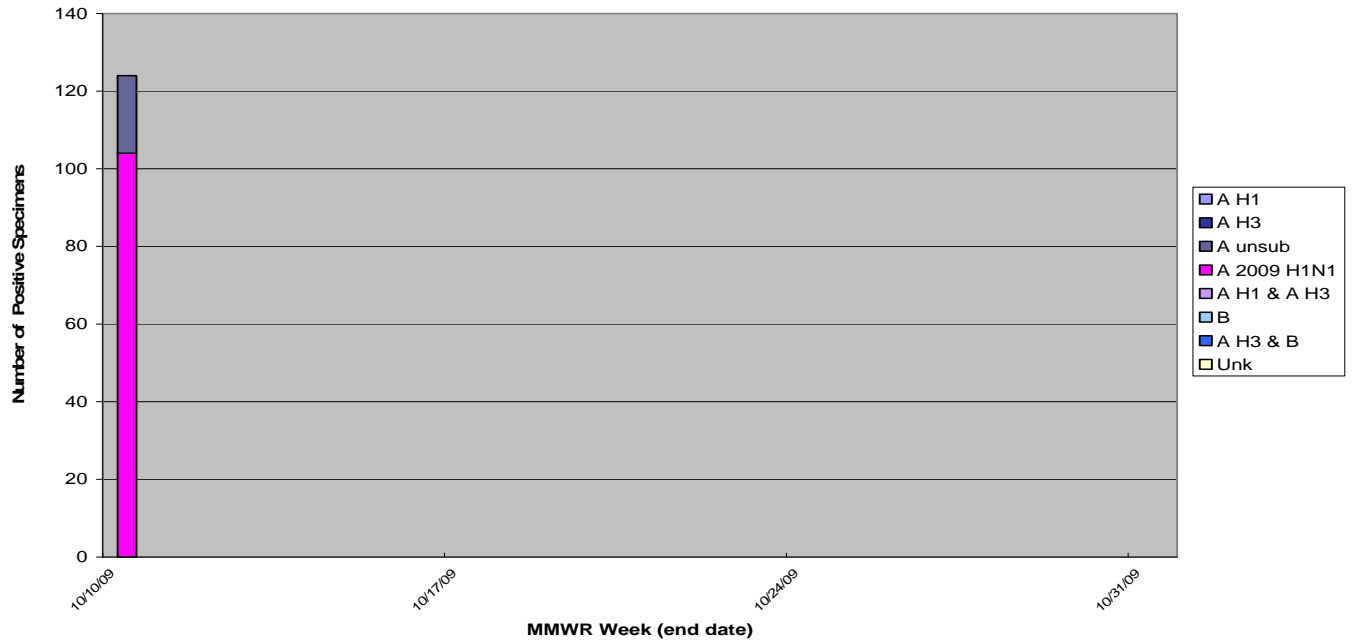
Positive confirmatory influenza test results Current MMWR Week (10/4/09-10/10/09)		
	BOL	Other clinical labs
Number of specimens tested	177	
Number of positive specimens	80	44
Positive specimens by type/subtype		
Influenza A		20
A (H1)		
A (H3)		
A (2009 H1N1)	80	24
Influenza B		
*Culture and/or RT-PCR (SC residents)		

Positive confirmatory influenza test results Cumulative (10/04/09-10/10/09)		
	BOL	Other clinical labs
Number of specimens tested	177	
Number of positive specimens	80	44
Positive specimens by type/subtype		
Influenza A		
A (H1)		
A (H3)		
A (unsubtyped)		20
A (2009 H1N1)	80	24
Influenza B		
Unk		
Other		
*Culture and/or RT-PCR (SC residents)		

Positive Confirmatory tests by County
October 4, 2009-October 10, 2009

County	Total	County	Total
Abbeville	1	Hampton	
Aiken	4	Horry	
Allendale		Jasper	
Anderson	5	Kershaw	
Bamberg	2	Lancaster	
Barnwell	1	Laurens	1
Beaufort	16	Lee	1
Berkeley	2	Lexington	3
Calhoun		Marion	
Charleston	1	Marlboro	
Cherokee		McCormick	
Chester	1	Newberry	2
Chesterfield	2	Oconee	2
Clarendon		Orangeburg	3
Colleton	14	Pickens	2
Darlington	5	Richland	4
Dillon	1	Saluda	
Dorchester	2	Spartanburg	11
Edgefield		Sumter	
Fairfield	1	Union	
Florence	7	Williamsburg	1
Georgetown	3	York	
Greenville	2	Unknown	24
Greenwood			

Influenza Culture and RT-PCR Results by MMWR Week



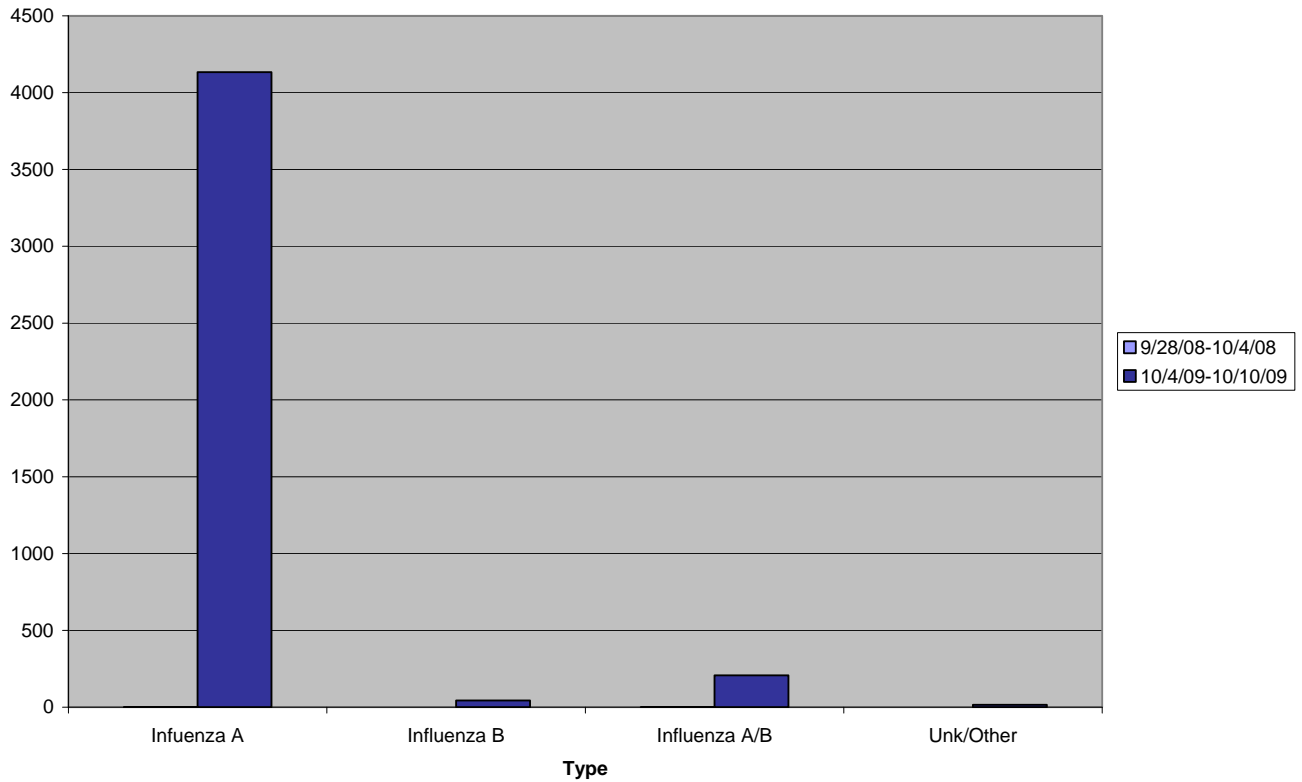
III. Positive Rapid Flu

There were 4401 positive rapid antigen tests reported for the week ending October 10, 2009. Of these, 4134 were influenza A, 208 influenza A/B, 44 influenza B, and 15 unk/other.

Positive Rapid Flu Tests by County October 4, 2009-October 10, 2009

County	Positive Tests	County	Positive Tests
Abbeville	3	Hampton	1
Aiken	6	Horry	518
Allendale	5	Jasper	8
Anderson	228	Kershaw	234
Bamberg	4	Lancaster	89
Barnwell	11	Laurens	55
Beaufort	110	Lee	17
Berkeley	22	Lexington	318
Charleston	283	Marion	11
Chesterfield	34	Marlboro	5
Clarendon	34	Newberry	25
Colleton	18	Oconee	28
Darlington	119	Orangeburg	66
Dillon	5	Pickens	116
Dorchester	99	Richland	371
Edgefield	7	Saluda	3
Fairfield	10	Spartanburg	1
Florence	301	Sumter	260
Georgetown	111	Williamsburg	17
Greenville	568	York	262
Greenwood	18		

Positive Rapid Antigen Tests 2008-09 vs 2009-10



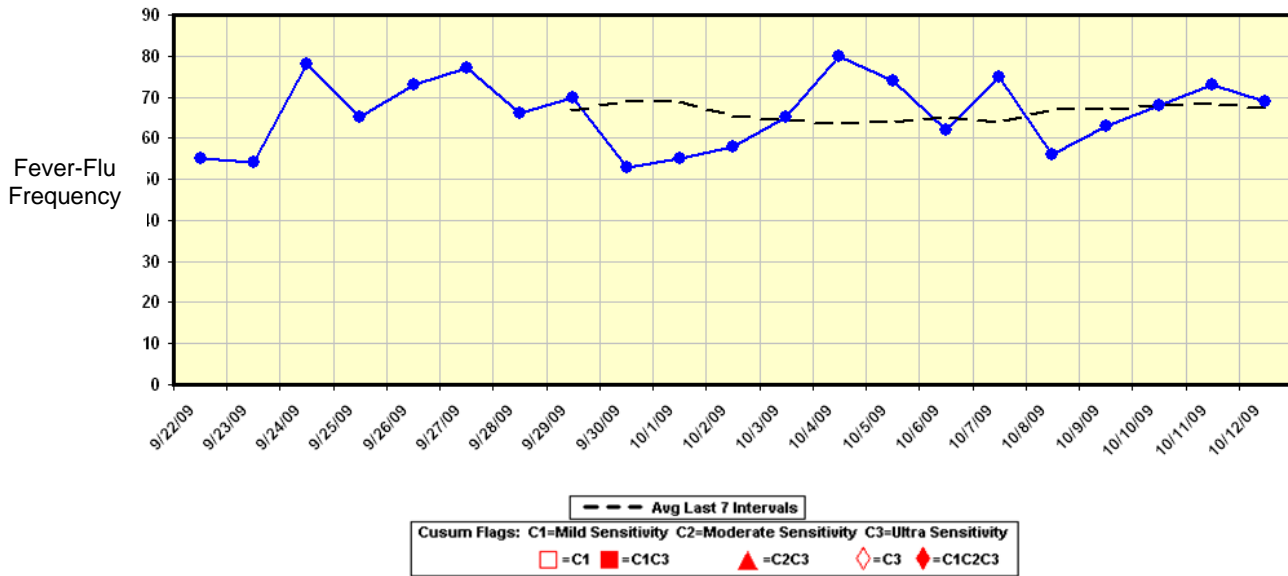
IV. Influenza hospitalizations and deaths

A total of 102 influenza hospitalizations were reported by 40 hospitals during the past week. 2 deaths were reported. Since September 1, 2009, 374 hospitalizations and 11 deaths have been reported.

	Total number	
Number of Hospitals Reporting (current week)	40	
	<i>Previous week (10/4-10/10)</i>	<i>Cumulative (since 9/1/09)</i>
Hospitalizations	102	374
Deaths	2	11



SC Statewide - Fever Flu Syndrome



Cumulative Sums Analysis (CUSUM):

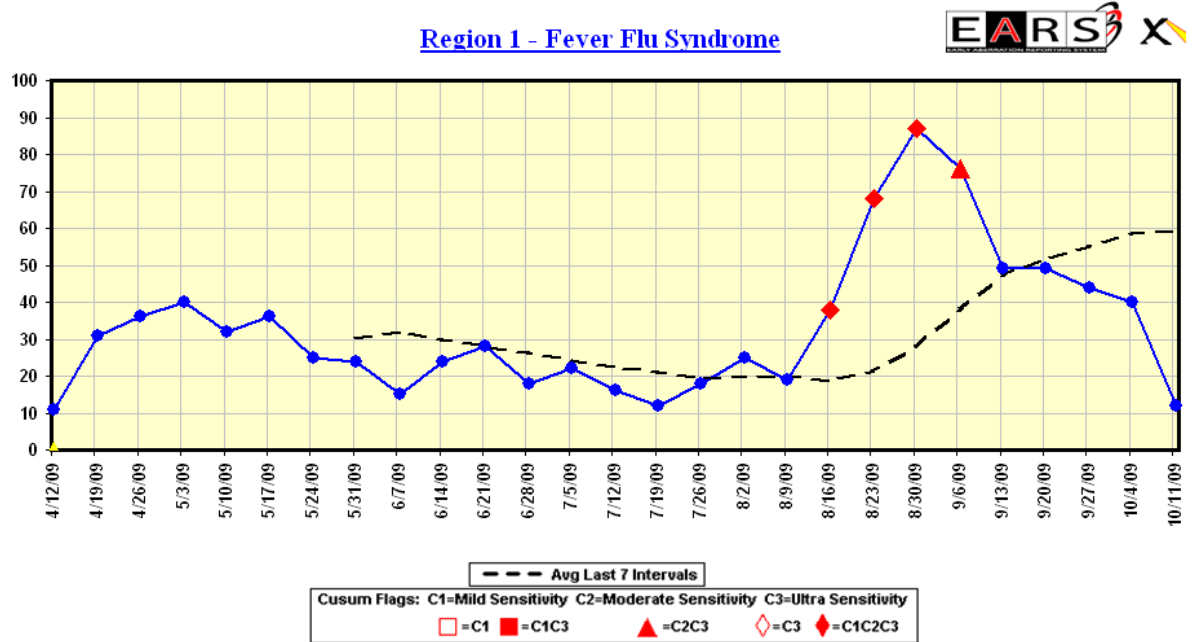
- C1 = Flags because of sharp rise in counts from 1 day to the next
- C2 = Flags because of aberrant, initial, rapid rise in counts and peak in counts
- C3 = Flags because of a gradual rise in counts over a short time

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).

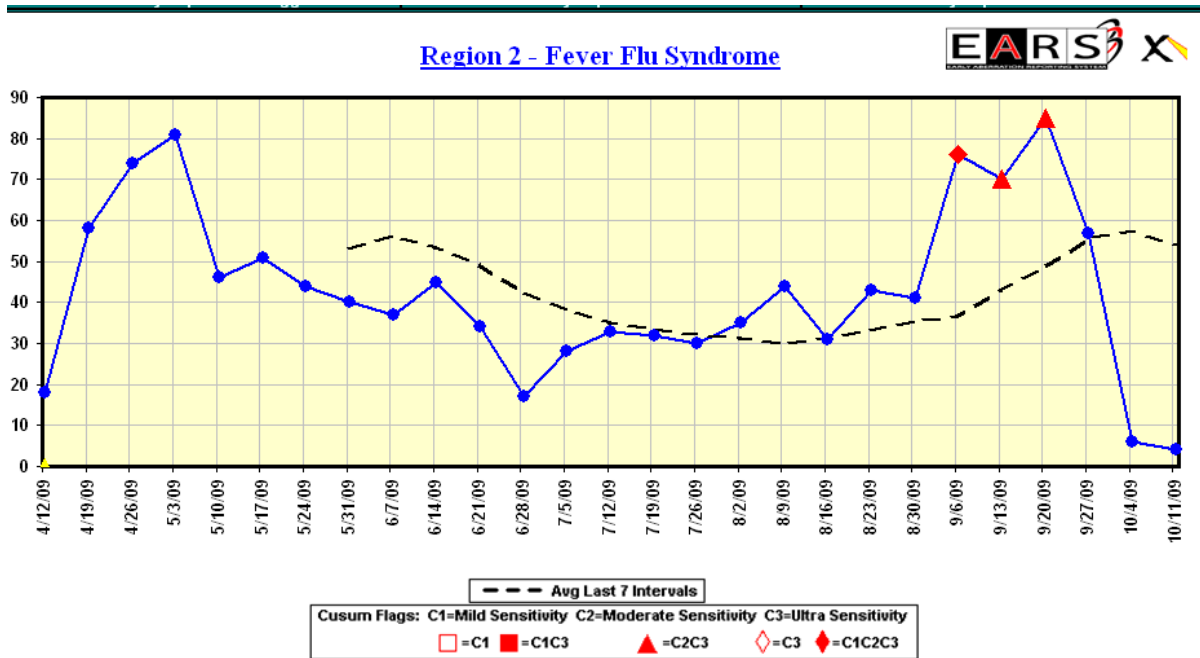
Statewide CUSUM Flag Alerts Description:

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.

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

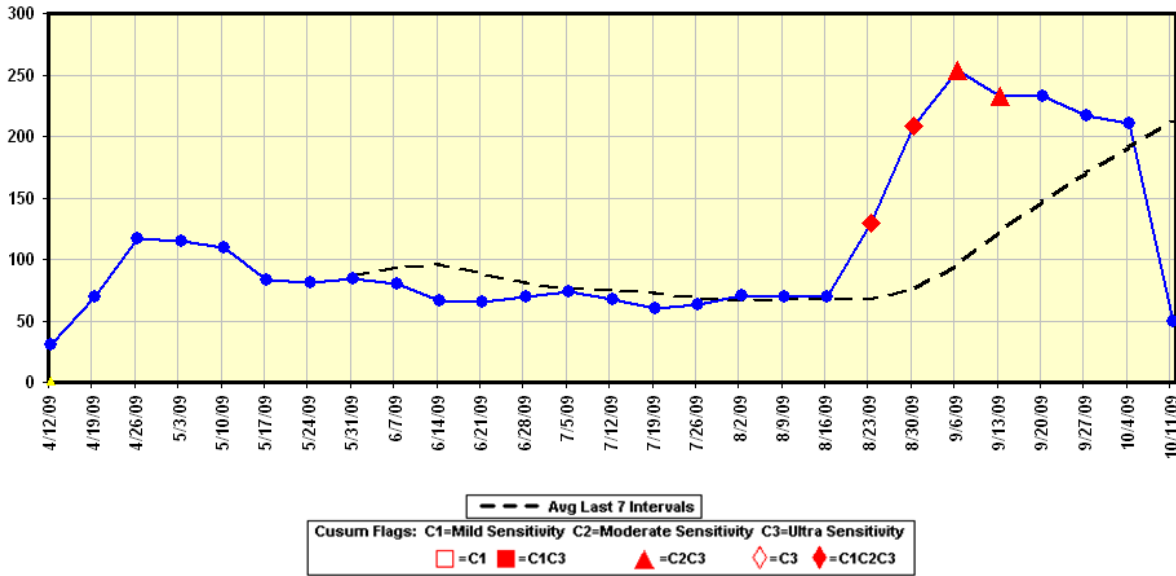


Region1 Hospitals (# of Facilities): Self-Regional (1)



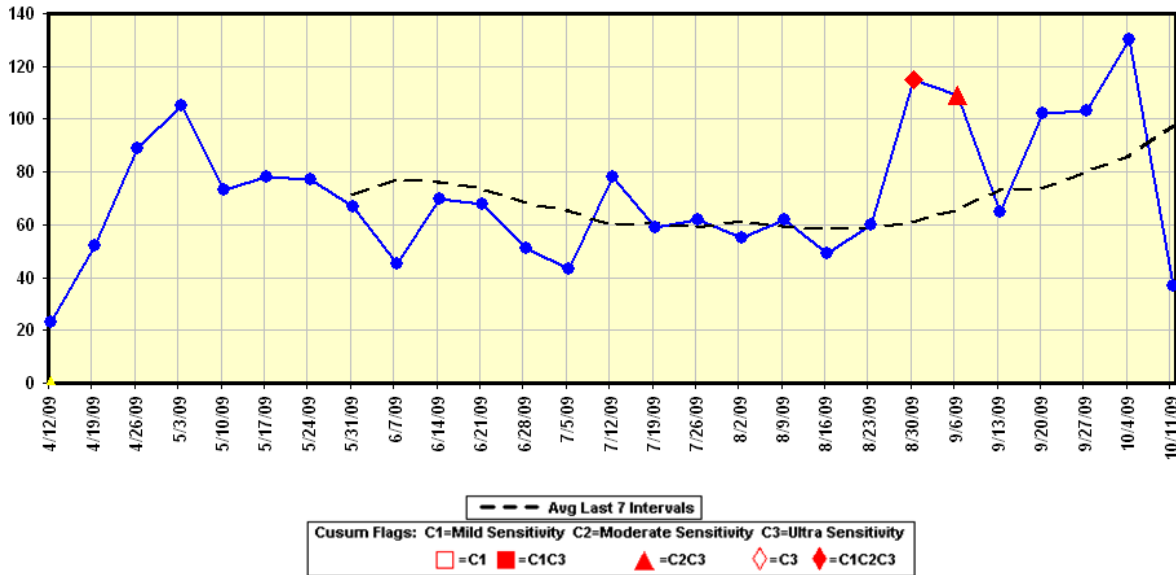
Region 2 Hospitals (# of Facilities): Greenville Hospital System (4); Palmetto Health Easley (1)

Region 3 - Fever Flu Syndrome



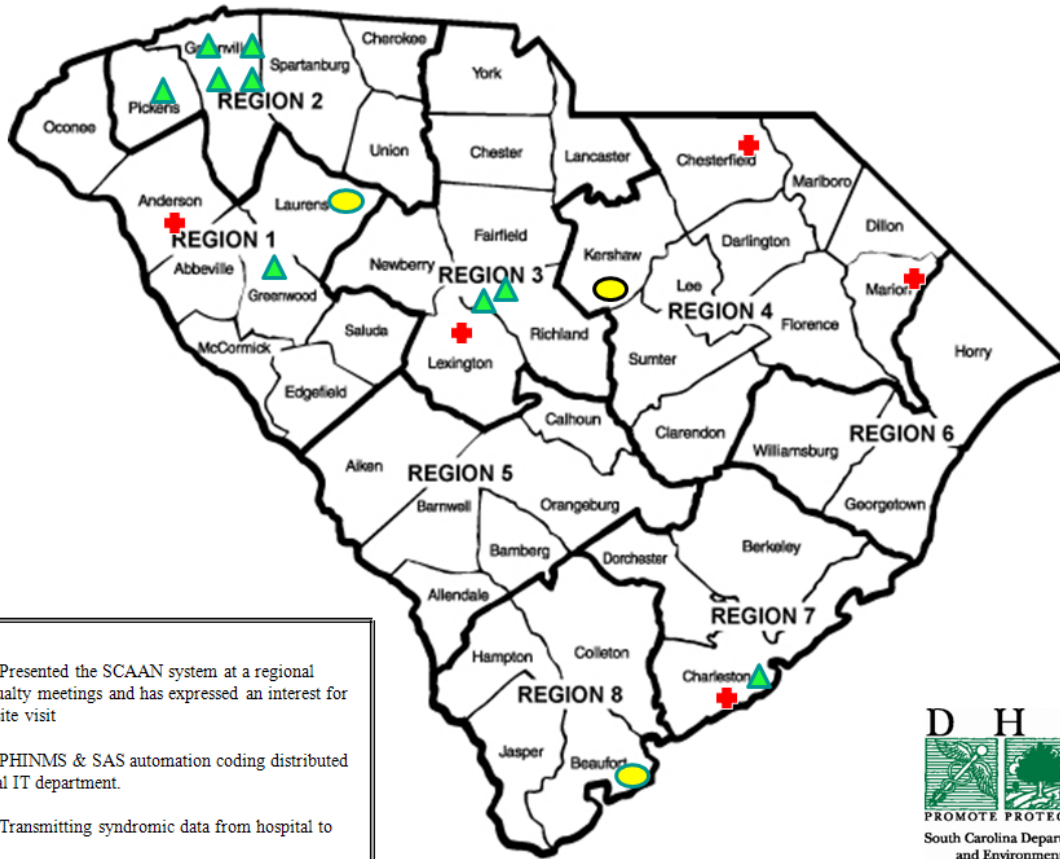
Region 3 Hospitals (# of Facilities): Palmetto Health Baptist (1), Palmetto Health Richland (1)

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.

VII. Influenza Activity Levels

Activity Level	ILI activity/Outbreaks		Laboratory data
No activity	Low	And	No lab confirmed cases
Sporadic	Not increased	And	Isolated lab-confirmed cases
	OR		
Local	Not increased	And	Lab confirmed outbreak in one institution
	Increased ILI in 1 region; ILI activity in other regions is not increased	And	Recent (within the past 3 weeks) lab evidence of influenza in region with increased ILI
OR			
Regional	2 or more institutional outbreaks (ILI or lab confirmed) in 1 region; ILI activity in other regions is not increased	And	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	And	Recent (within the past 3 weeks) lab confirmed influenza in the affected regions
OR			
Regional	Institutional outbreaks (ILI or lab confirmed) in 2-3 regions	And	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	And	Recent (within the past 3 weeks) lab confirmed influenza in the state.