

Flu Watch

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



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

Week Ending January 23, 2010 (MMWR Week 3)

Highlights:

Influenza Activity Level: Regional

Note: Activity level definitions are found on page 13

ILI Activity Status (HHS Region 4 ILI baseline is 2.0%*): Below baseline in the Upstate (0.61%), and Midlands (.97%). Above baseline along the Coast (2.35%). ILI activity continued to increase. The state ILI is 1.04%. These data reflect reports from 21 (29.2%) providers.

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

SC Viral Isolate and RT-PCR Activity: During the past MMWR (3) week, 12 positive specimens were reported. Since October 4, 2009, 387 specimens tested by our Bureau of Labs (BOL) have been positive for influenza. A total of 320 positive specimens have been reported by other labs. So far this season, all subtyped influenza A viruses have been 2009 H1N1.

Positive Rapid Flu Test Activity: There were 172 positive tests reported.

Hospitalizations: 7 hospitalizations were reported. Since September 1, 2009, 959 hospitalizations have been reported.

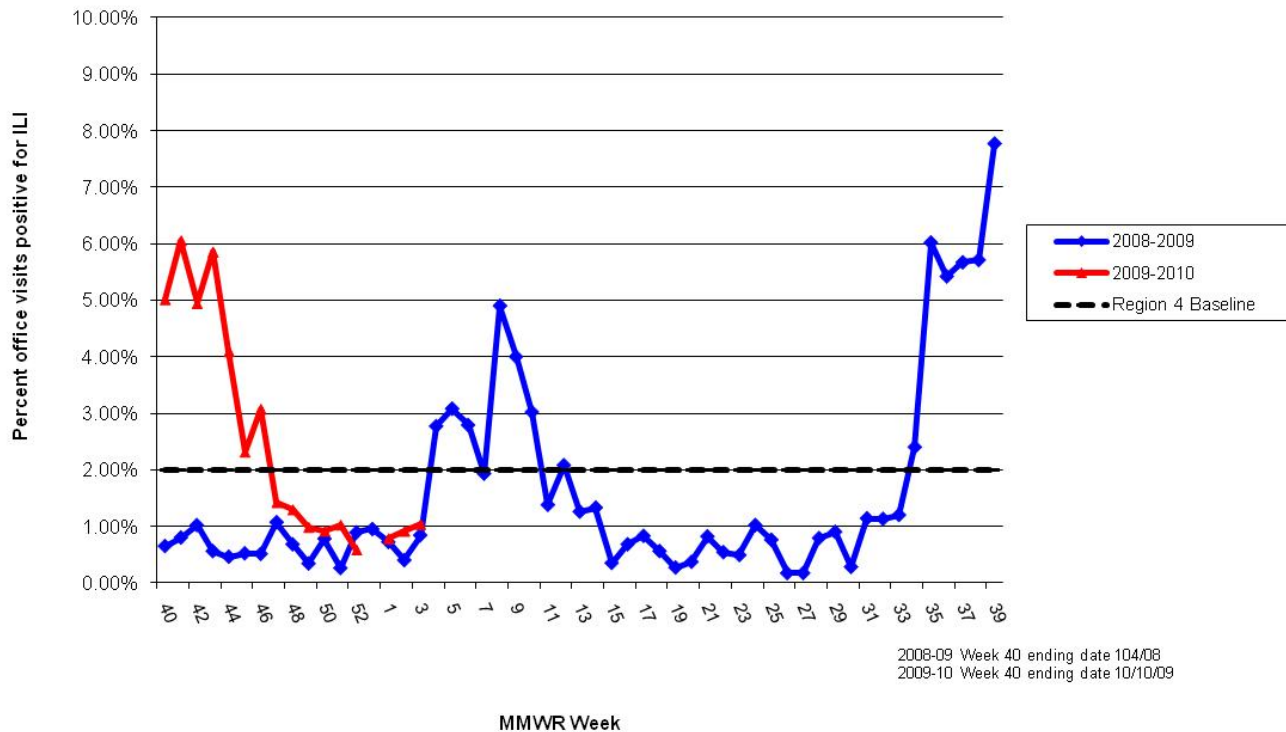
Deaths: No deaths were reported during MMWR week 3. Since September 1, 2009, 42 deaths have been reported.

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I. ILINet Influenza-Like Illness Surveillance

During MMWR week 3 ending January 23, 2010, 1.04% of patient visits to SC ILNet providers were due to ILI. The state ILI percentage increased, but remains below the regional (2.0%) and national (2.3%) baselines. This ILI percentage compares to .84% this time last year. Reports were received from providers in 16 counties, representing 7 of the 8 regions. The percentage of visits ranged from 0% to 7.41%

Percentage of Visits for Influenza-like Illness (ILI) Reported by Sentinel Providers in South Carolina, 2009-2009 and 2009-2010 Influenza Seasons



*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.

Reported Influenza-Like Illness by Sentinel Providers
January 17, 2010-January 23, 2010

County	ILI %	County	ILI %
Abbeville	NS	Greenwood	0%
Aiken	0%	Hampton	NS
Allendale	NS	Horry	NS
Anderson	3.05%	Jasper	NS
Bamberg	NS	Kershaw	2.58%
Barnwell	NS	Lancaster	NE
Beaufort	NS	Laurens	NS
Berkeley	.68%	Lee	NE
Calhoun	NS	Lexington	NS
Charleston	2.63%	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	1.14%
Dillon	0%	Richland	0.64%
Dorchester	NS	Saluda	0%
Edgefield	NE	Spartanburg	1.02%
Fairfield	0%	Sumter	NS
Florence	.84 %	Union	NE
Georgetown	2.08%	Williamsburg	NS
Greenville	.25%	York	3.05%

NS: No reports received
NE: No enrolled providers



Geographic Region	ILI %	# of Reporters
Upstate-Regions 1 -2	.61	10
Midlands-Regions 3-5	.97	7
Coastal-Regions 6-8	2.35	4

During the past MMWR week (1/17-1/23), twelve positive specimens were reported by clinical labs. Since October 4, 2009, 707 specimens tested have been positive for influenza.

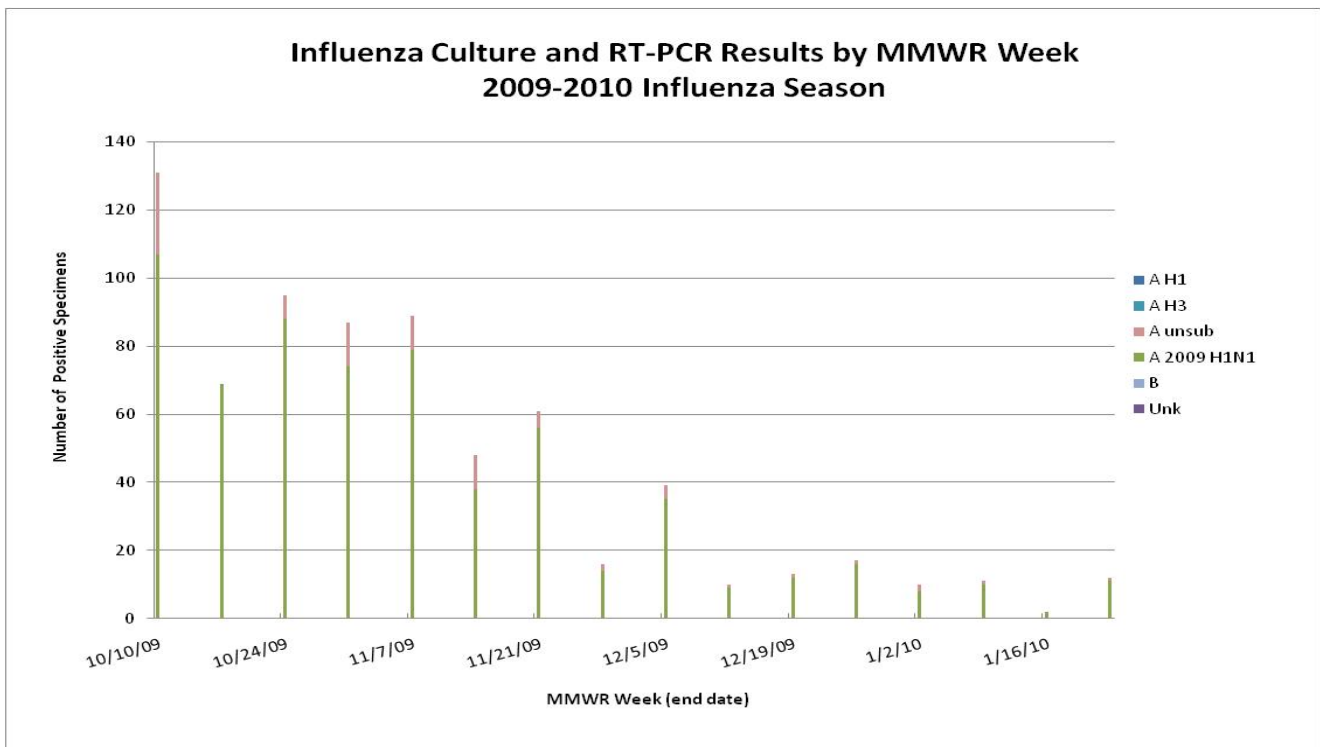
Positive confirmatory influenza test results Current MMWR Week (1/17/10-1/23/10)		
	BOL*	Other clinical labs
Number of specimens tested		-
Number of positive specimens		12
Positive specimens by type/subtype		
A (H1)		
A (H3)		
A (unsubtyped)		1
A (2009 H1N1)		11
Influenza B		
*Culture and/or RT-PCR		

Positive confirmatory influenza test results Cumulative (10/04/09-1/23/10)		
	BOL*	Other clinical labs
Number of specimens tested	1629	-
Number of positive specimens	387 (23.8%)	320
Positive specimens by type/subtype		
Influenza A		
A (H3)		
A (unsubtyped)		81 (25.3%)
A (2009 H1N1)	387 (100%)	239 (74.7%)
Influenza B		
Unk		
Other		
*Culture and/or RT-PCR		

Positive Confirmatory tests by County
 October 4, 2009-January 23, 2010

County	Total	County	Total
Abbeville	2	Hampton	4
Aiken	14	Horry	28
Allendale		Jasper	2
Anderson	17	Kershaw	9
Bamberg	7	Lancaster	7
Barnwell	1	Laurens	3
Beaufort	74	Lee	8
Berkeley	15	Lexington	10
Calhoun	1	Marion	1
Charleston	40	Marlboro	2
Cherokee	8	McCormick	
Chester	11	Newberry	4
Chesterfield	5	Oconee	10
Clarendon		Orangeburg	12
Colleton	26	Pickens	9
Darlington	21	Richland	56
Dillon	3	Saluda	1
Dorchester	16	Spartanburg	63
Edgefield	1	Sumter	5
Fairfield	1	Union	
Florence	33	Williamsburg	5
Georgetown	7	York	8
Greenville	49	Unknown	101
Greenwood	3	Other	3

*These data are provisional.



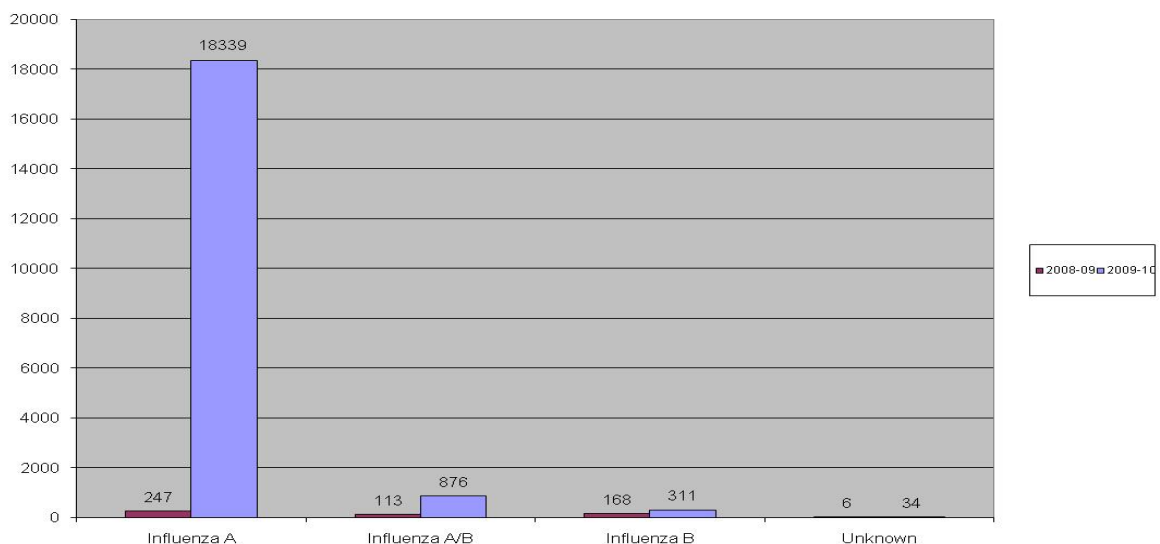
III. Positive Rapid Antigen Tests

There were 172 positive rapid antigen tests reported for the week ending January 23, 2010. Of these, 143 were influenza A, 24 were influenza A/B, and 4 were influenza B. Since October 4, 2009, 19,560 positive rapid antigen tests have been reported.

Positive Rapid Flu Tests by County
January 17, 2010-January 23, 2010

County	Positive Tests	County	Positive Tests
Abbeville	2	Greenwood	1
Aiken		Hampton	
Allendale		Horry	5
Anderson	15	Jasper	
Bamberg		Kershaw	
Barnwell		Lancaster	1
Beaufort	1	Laurens	
Berkeley	1	Lee	
Calhoun		Lexington	21
Charleston	2	Marion	
Cherokee		Marlboro	
Chester		McCormick	
Chesterfield		Newberry	
Clarendon		Oconee	
Colleton		Orangeburg	9
Darlington		Pickens	8
Dillon		Richland	26
Dorchester		Saluda	
Edgefield		Spartanburg	4
Fairfield		Sumter	4
Florence		Union	
Georgetown	4	Williamsburg	1
Greenville	50	York	17
		Unk	

Reported Positive Rapid Tests 2008-09 vs 2009-10
MMWR Weeks 2009(40)-2010(03)



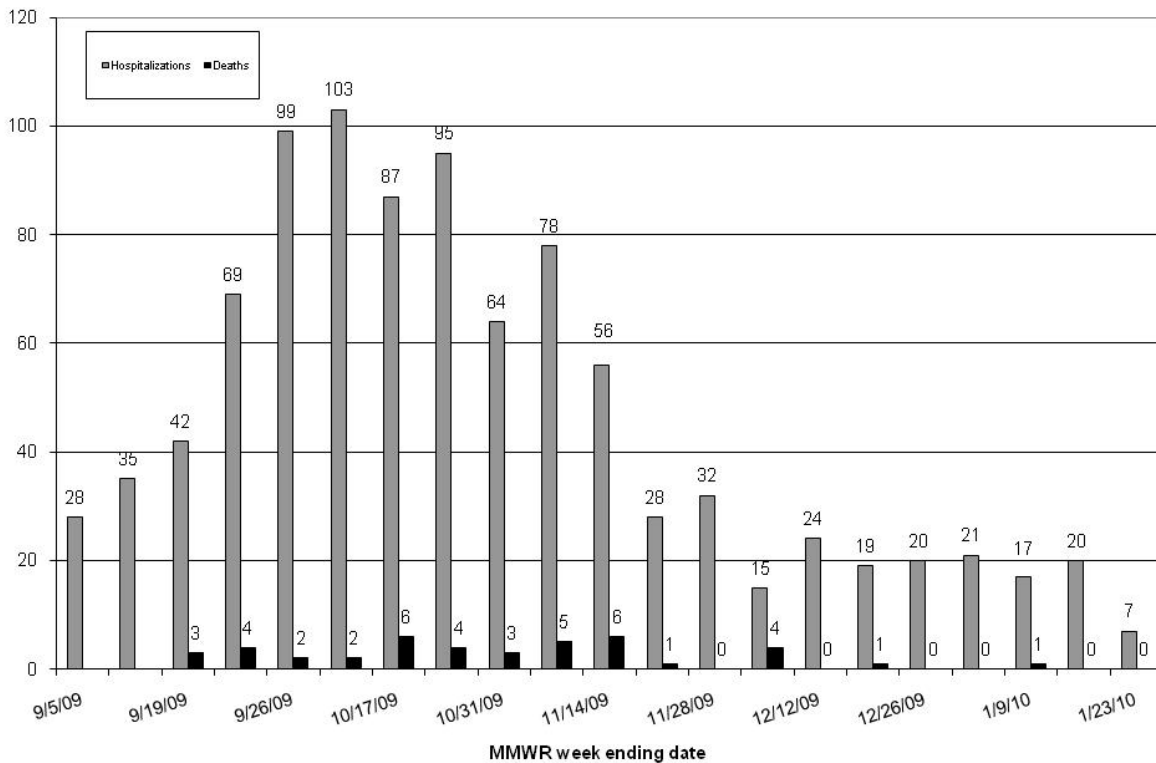
IV. Influenza hospitalizations and deaths

A total of 3 lab confirmed influenza hospitalizations were reported by 35 hospitals during the past week. No lab confirmed influenza deaths were reported. Since September 1, 2009, 959 laboratory confirmed hospitalizations and 42 laboratory confirmed deaths have been reported.

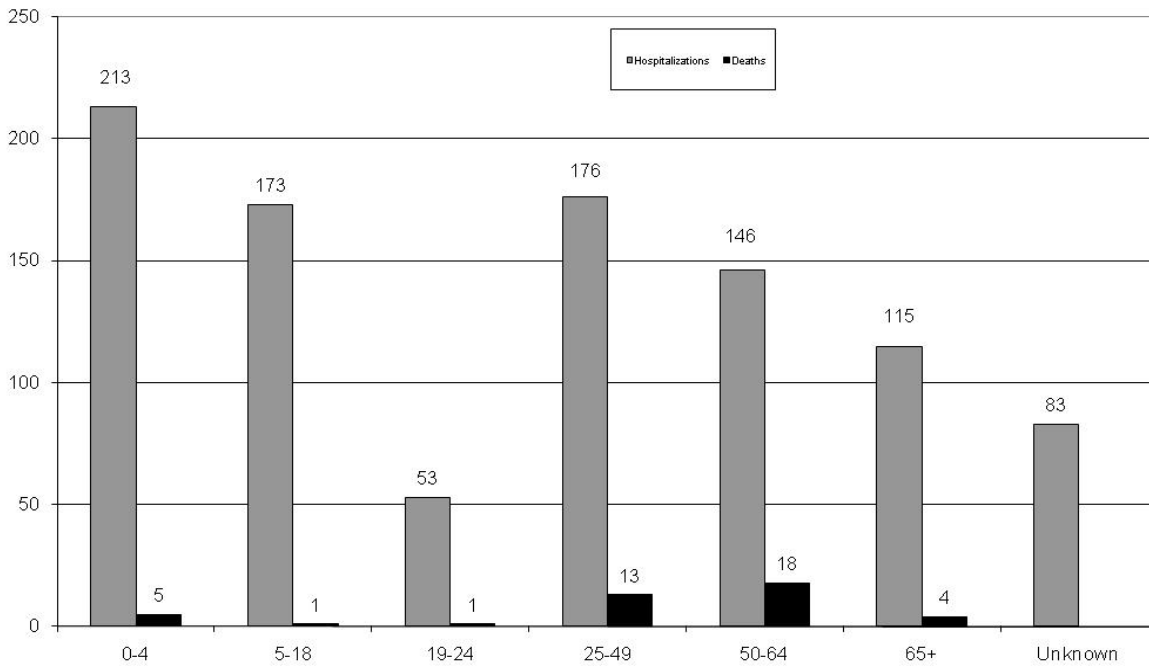
	Total number	
Number of Hospitals Reporting (current week)	35	
	<i>Previous MMWR (1/17-1/23)</i>	<i>Cumulative (since 9/1/09)</i>
Hospitalizations	7	959
Deaths	0	42

*These data are provisional

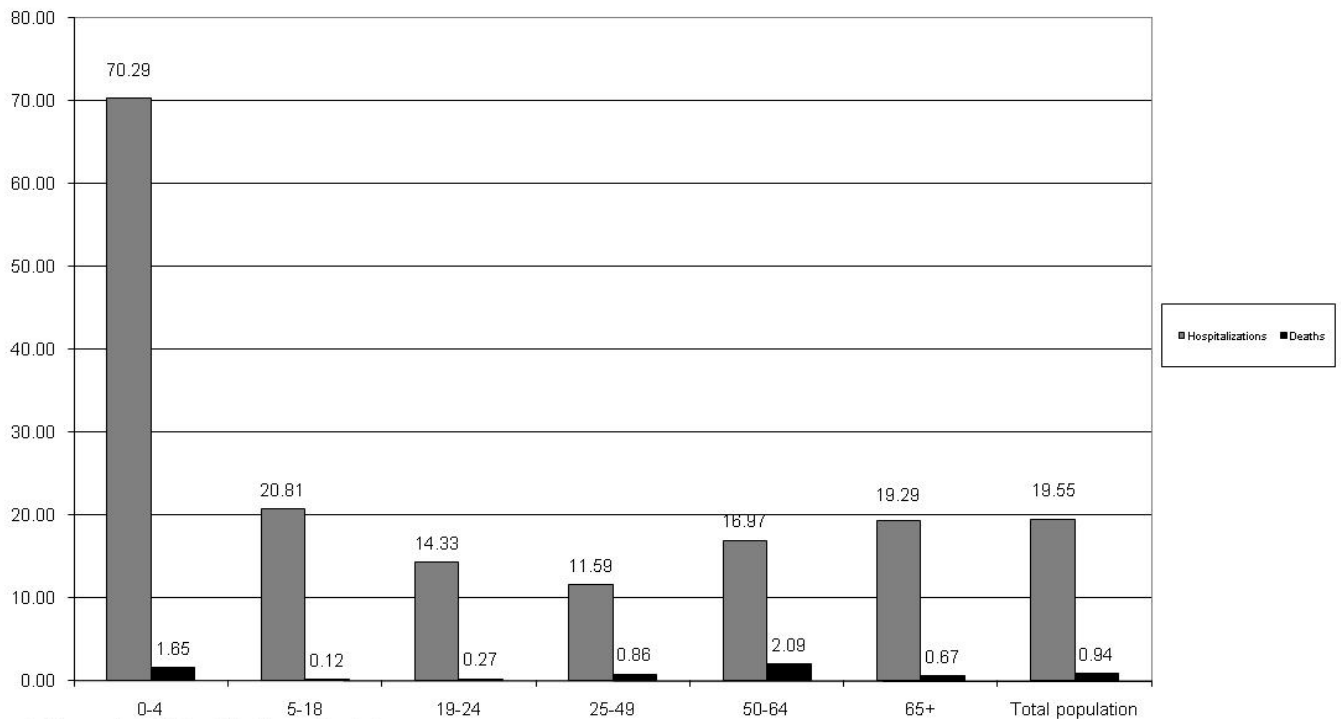
**Reported Cases of Laboratory Confirmed Influenza Hospitalizations and Deaths
by MMWR week
September 1, 2009 - January 23, 2010**



**Reported Cases of Laboratory Confirmed Influenza
Hospitalizations (n=959) and Deaths (n=42) by agegroup
September 1, 2009 - January 23, 2010**

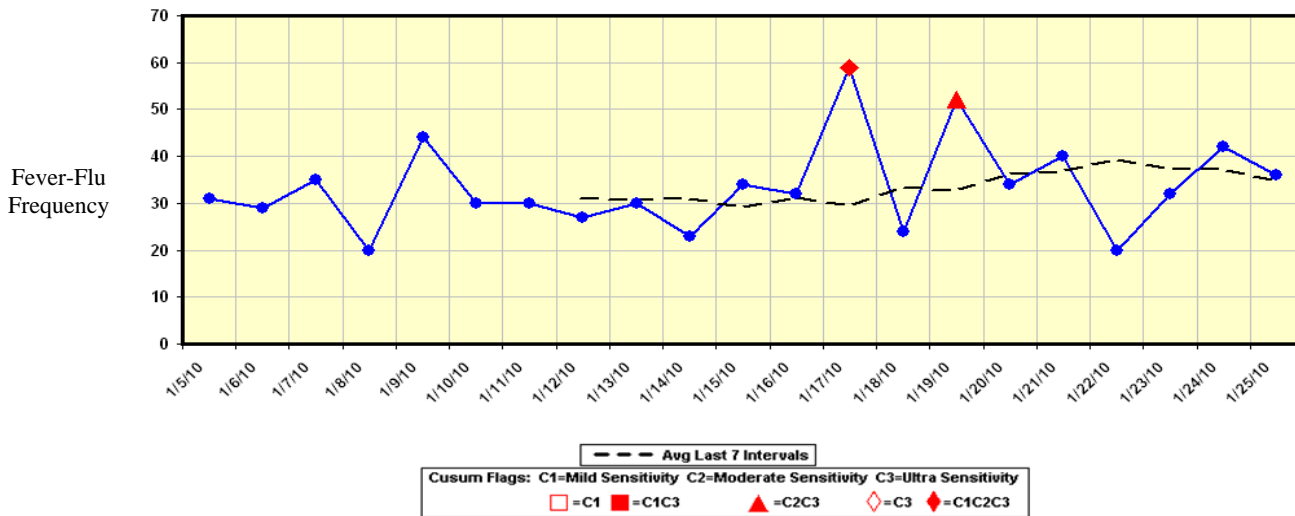


**Laboratory Confirmed Influenza Case rate/100,000
Hospitalizations (n=959) and Deaths (n=42) by age group
September 1, 2009 - January 23, 2010**



*Rate calculation excludes 83 hospitalizations with missing age

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

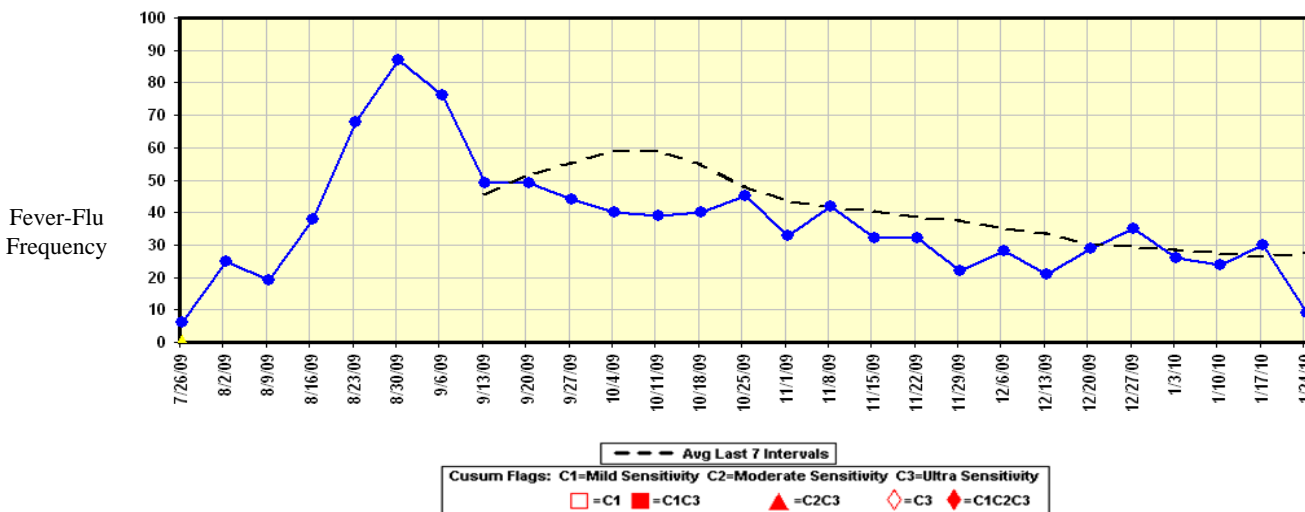
The SC Statewide Fever-Flu Syndrome graph above illustrates the daily counts of hospital emergency department visits with an Influenza-like Illness (ILI) for the past 21 days. A total of 12 hospital facilities are reporting to the SCAAN system. These twelve include: Self Regional (Region 1); Palmetto Health Alliance (Region 2 & 3); Greenville Hospital System (Region 2); Kershaw Health (Region 4); Medical University of South Carolina (Region 7); Roper (Region 7) and St. Francis (Region 7).

Statewide CUSUM Flag Alerts Description:

There were no flags for the past week.

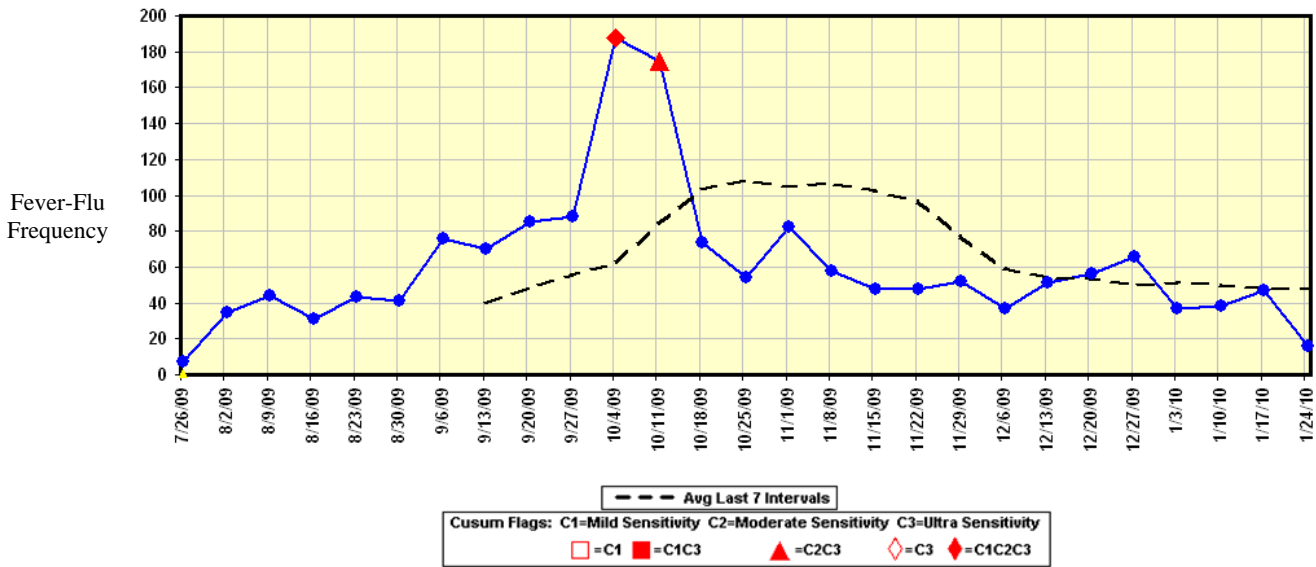
Below are the fever-flu syndrome graphs by Region for the past 180 days (weekly interval).

Region 1 - Fever Flu Syndrome



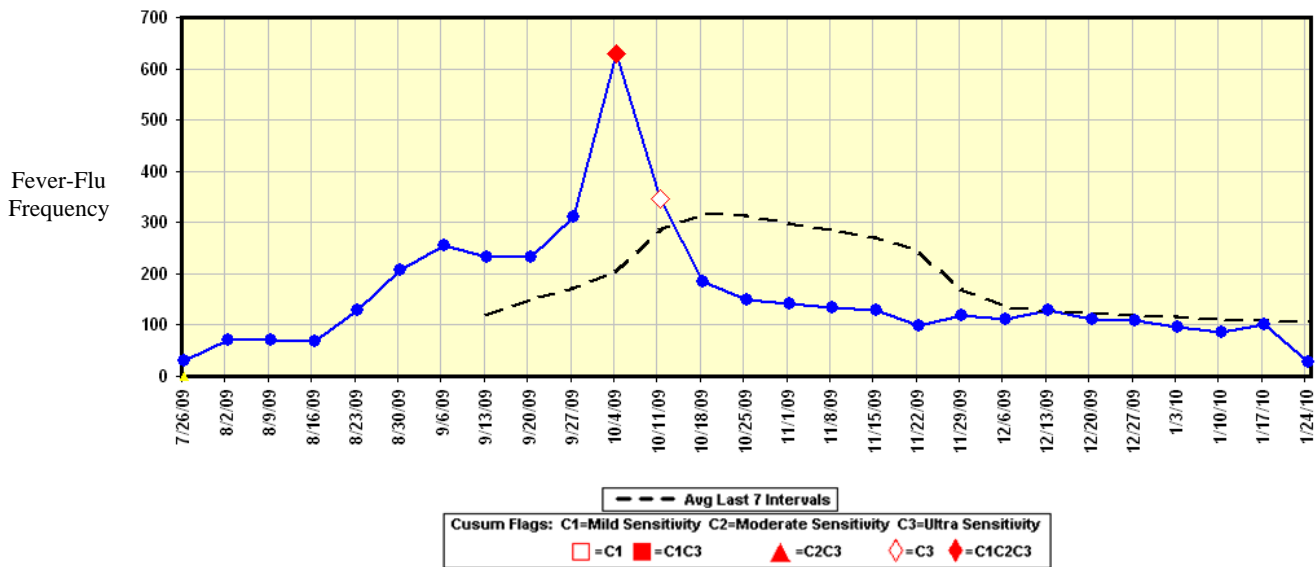
Region1 Hospitals (# of Facilities): Self-Regional (1)

Region 2 - Fever Flu Syndrome



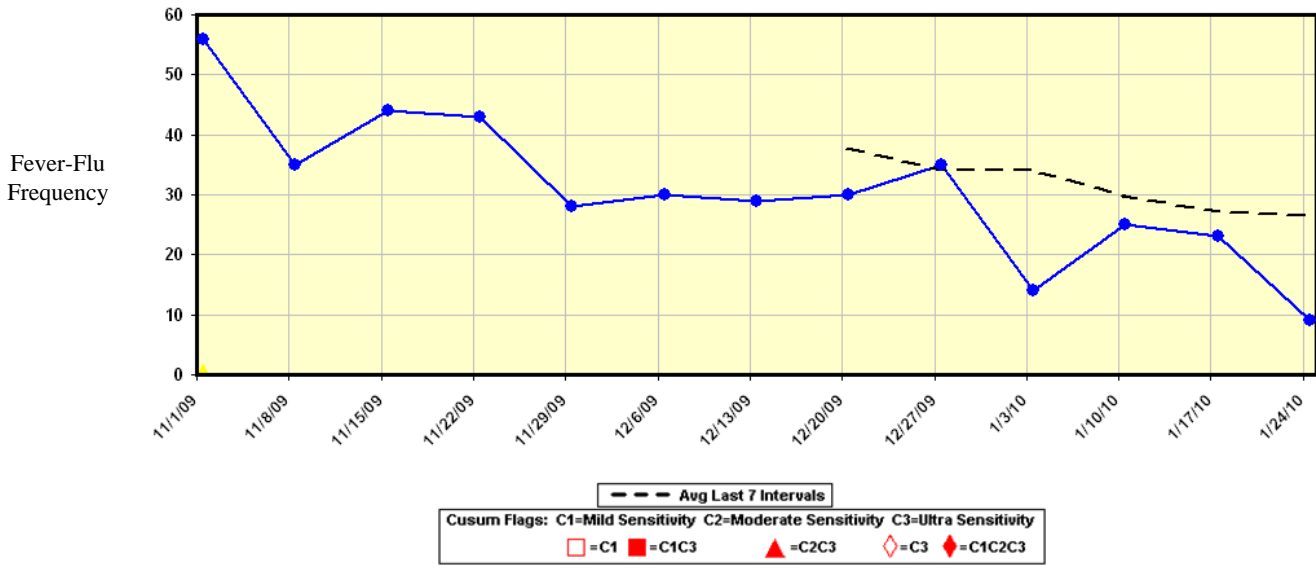
Region 2 Hospitals (# of Facilities): Greenville Hospital System (4); Palmetto Health Easley (1)

Region 3 - Fever Flu Syndrome



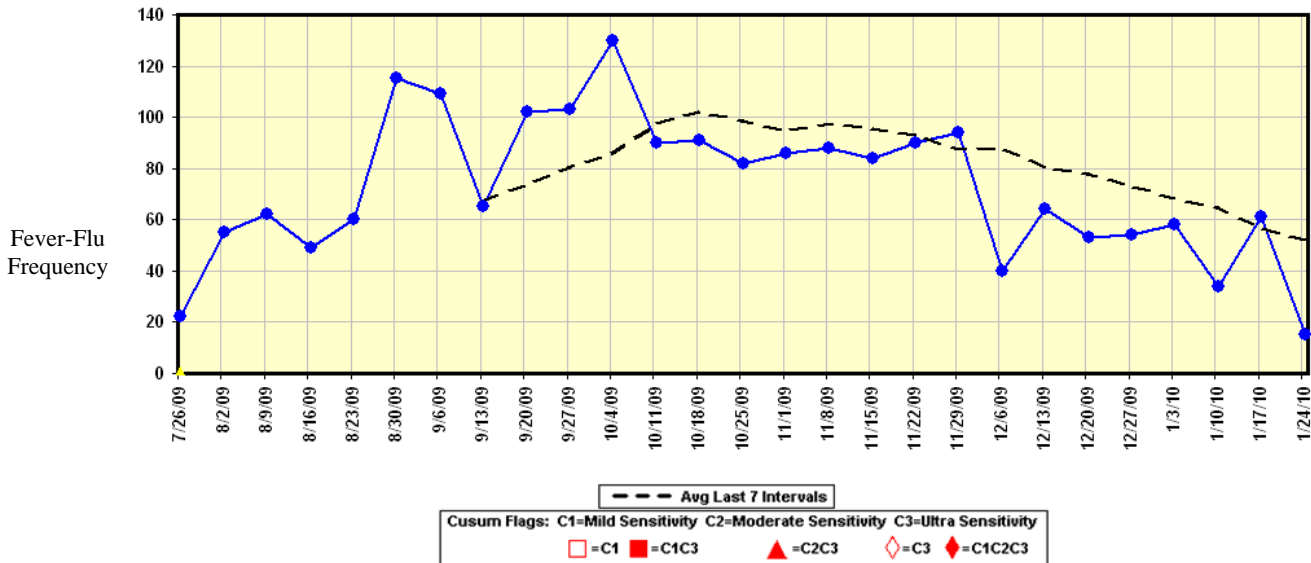
Region 3 Hospitals (# of Facilities): Palmetto Health Baptist (1), Palmetto Health Richland (1)

Region 4 - Fever Flu Syndrome



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

Region 7 - Fever Flu Syndrome



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

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. The syndromic reports are distributed back to the hospital on a daily basis.

To join the SCAAN system or for more information, please contact: Himal Dhotre at 803-898-1588 or dhotrehc@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
	OR		
Local	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		
Local	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
	OR		
Regional	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
	OR		
Widespread	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.