



Flu Watch 2010-11 Season

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

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

Week Ending January 1, 2011 (MMWR Week 52)

All data are preliminary and may change as more reports are received.

Highlights:

Influenza Activity Level: Regional

Note: Activity level definitions are found on page 16

ILI Activity Status (South Carolina baseline is 2.05%*): Below baseline in the Upstate (.51%) and Midlands (.83%) and above baseline along the Coast (2.71%). The state ILI percentage was .98%. These data reflect reports from 13 (29.5%) providers.

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

SC Viral Isolate and RT-PCR Activity: Five specimens tested by our Bureau of Labs were positive for influenza. Four positive specimens were reported by the BOL for the previous MMWR week (51). Four positive specimens were reported by an outside lab. Since October 3, 2010, 32 positive specimens have been reported.

Positive Rapid Flu Test Activity: There were 900 positive rapid tests reported.

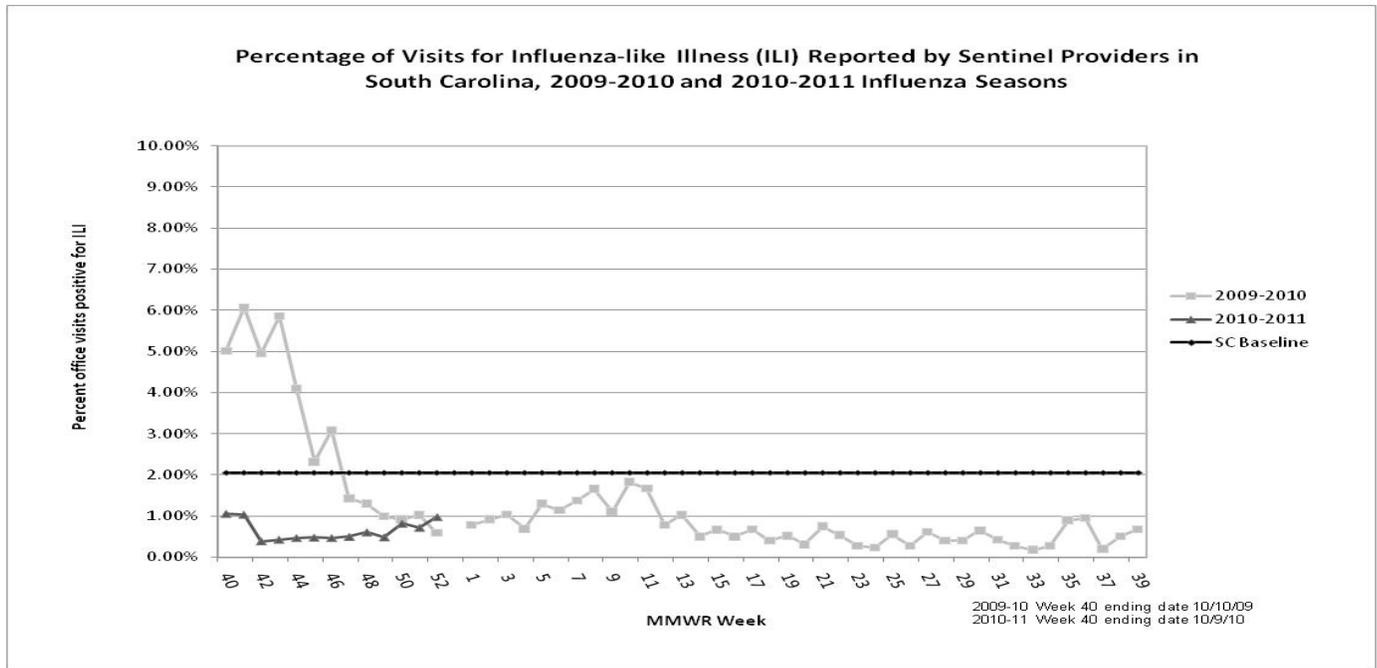
Hospitalizations: Thirty three lab confirmed hospitalizations were reported. Lab confirmation includes culture, PCR, DFA, IFA, and rapid tests.

Deaths: One lab confirmed death was reported. Lab confirmation includes culture, PCR, DFA, IFA, rapid tests, and autopsy results consistent with influenza.

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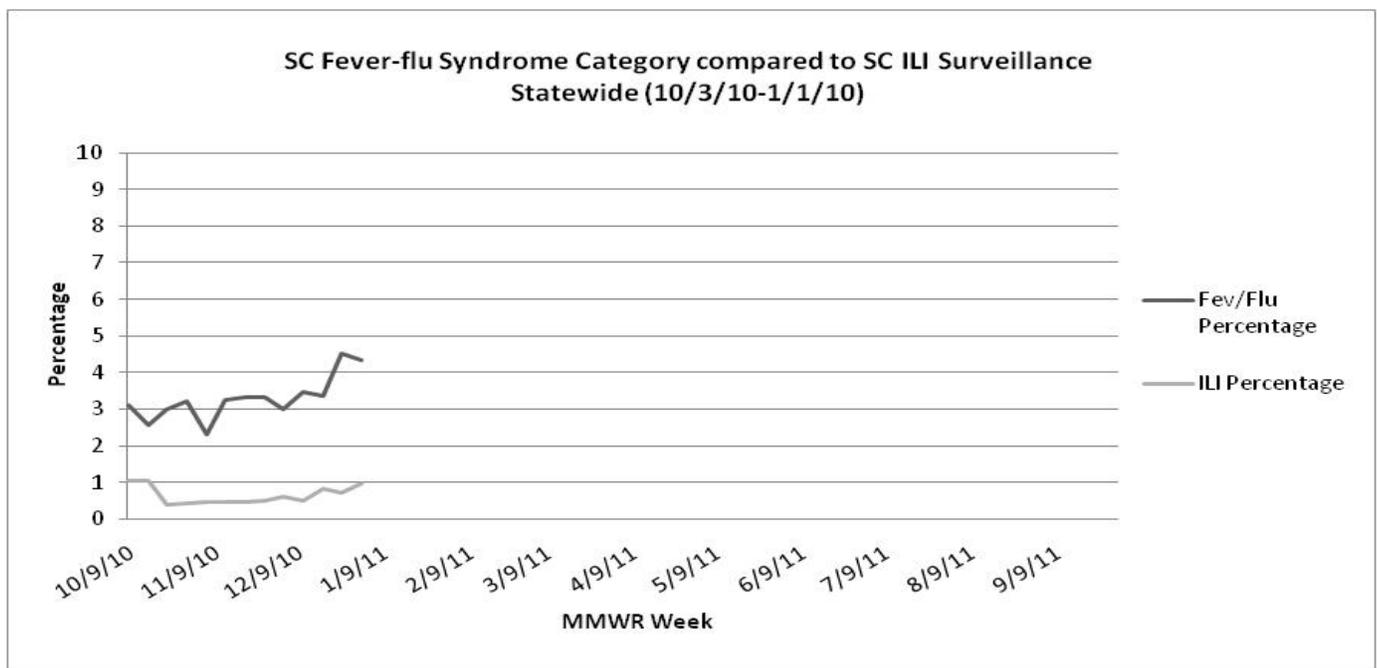
I. ILINet Influenza-Like Illness Surveillance

During MMWR week 52 ending January 1, 2011, .98% of patient visits to SC ILINet providers were due to ILI. This is below the state baseline (2.05%). This ILI percentage compares to .59% this time last year. Reports were received from providers in 12 counties, representing 7 of the 8 regions.



*The SC baseline is the mean percentage of patient visits for ILI during non-influenza weeks (weeks when percent of positive lab tests was below 20%) for the previous three seasons plus two standard deviations.

The statewide percentage of ER visits with fever-flu syndrome (only includes hospitals participating in SC syndromic surveillance) was 4.35%.



Reported Influenza-Like Illness by Sentinel Providers
December 26, 2010-January 1, 2011

County	ILI %	County	ILI %
Abbeville	---	Greenwood	NR
Aiken	0%	Hampton	NR
Allendale	---	Horry	NR
Anderson	NR	Jasper	NR
Bamberg	---	Kershaw	NR
Barnwell	---	Lancaster	---
Beaufort	NR	Laurens	NR
Berkeley	NR	Lee	---
Calhoun	---	Lexington	0%
Charleston	3.16%	Marion	---
Cherokee	---	Marlboro	---
Chester	---	McCormick	1.37%
Chesterfield	---	Newberry	---
Clarendon	---	Oconee	---
Colleton	---	Orangeburg	---
Darlington	---	Pickens	NR
Dillon	NR	Richland	0%
Dorchester	NR	Saluda	0%
Edgefield	---	Spartanburg	1.25 %
Fairfield	2.73%	Sumter	NR
Florence	.40%	Union	---
Georgetown	2.55%	Williamsburg	---
Greenville	.35%	York	0%

NR: No reports received
---: No enrolled providers



Geographic Region	ILI %	# of Reporters
Upstate-Regions 1 -2	.51	5
Midlands-Regions 3-5	.83	6
Coastal-Regions 6-8	2.71	2

*County ILI percentages may be affected by the number of reporting providers within that county.

II. Virologic Surveillance

During the past MMWR week (12/26-01/01), five positive specimens were reported by the BOL. Four positive specimens were reported by the BOL for the previous MMWR week. Four positive specimens were reported by an outside lab. Thirty-two positive specimens have been reported this season.

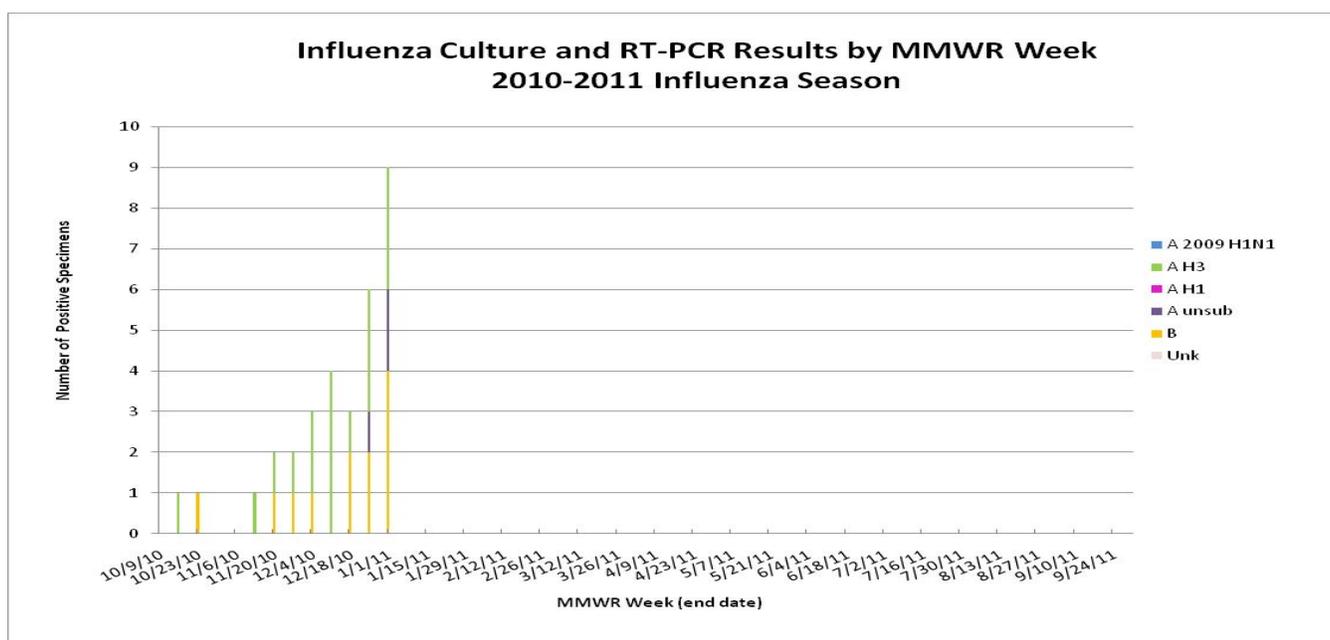
Positive confirmatory influenza test results* Current MMWR Week (12/26/10-01/01/11)		
	BOL	Other clinical labs
Number of specimens tested	8	-
Number of positive specimens	5 (62.5%)	4
Positive specimens by type/subtype		
A (H1)		
A (H3)	2	1
A (unsubtyped)		2
A (2009 H1N1)		
Influenza B	3	1
*Culture and/or RT-PCR		

Positive confirmatory influenza test results* Cumulative (10/3/10-01/01/11)		
	BOL	Other clinical labs
Number of specimens tested	97	-
Number of positive specimens	24 (24.7%)	8
Positive specimens by type/subtype		
Influenza A		
A (H3)	14	3
A (unsubtyped)		3
A (2009 H1N1)		
Influenza B	10	2
Unk		
Other		
*Culture and/or RT-PCR		

Positive Cultures and PCRs by County (2010-11)*
 October 3, 2010-January 1, 2011

County	Total	County	Total
Abbeville		Hampton	1
Aiken		Horry	1
Allendale		Jasper	
Anderson	1	Kershaw	1
Bamberg		Lancaster	
Barnwell		Laurens	1
Beaufort	1	Lee	
Berkeley		Lexington	1
Calhoun		Marion	
Charleston	8	Marlboro	
Cherokee		McCormick	
Chester		Newberry	
Chesterfield		Oconee	1
Clarendon		Orangeburg	
Colleton		Pickens	
Darlington		Richland	1
Dillon		Saluda	
Dorchester	2	Spartanburg	
Edgefield		Sumter	1
Fairfield		Union	
Florence		Williamsburg	
Georgetown		York	1
Greenville	1	Unknown	7
Greenwood	3	Other	

*These data are provisional.



III. Positive Rapid Antigen Tests

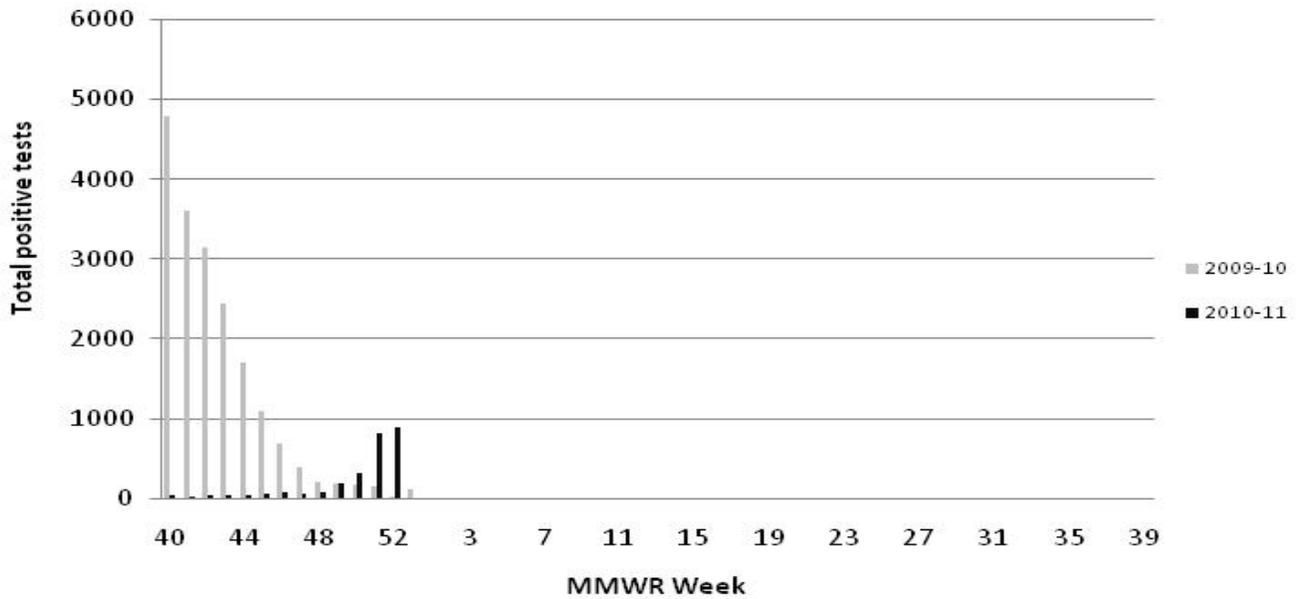
There were 900 positive rapid antigen tests reported for the week ending January 1, 2011. Of these, 459 were influenza A, 48 were influenza A/B and 389 were influenza B. There were 4 with unknown type. Since the beginning of the season, 2,697 positive rapid tests have been reported. This compares to 19,248 this time last year.

Positive Rapid Flu Tests by County
December 26, 2010 – January 1, 2011

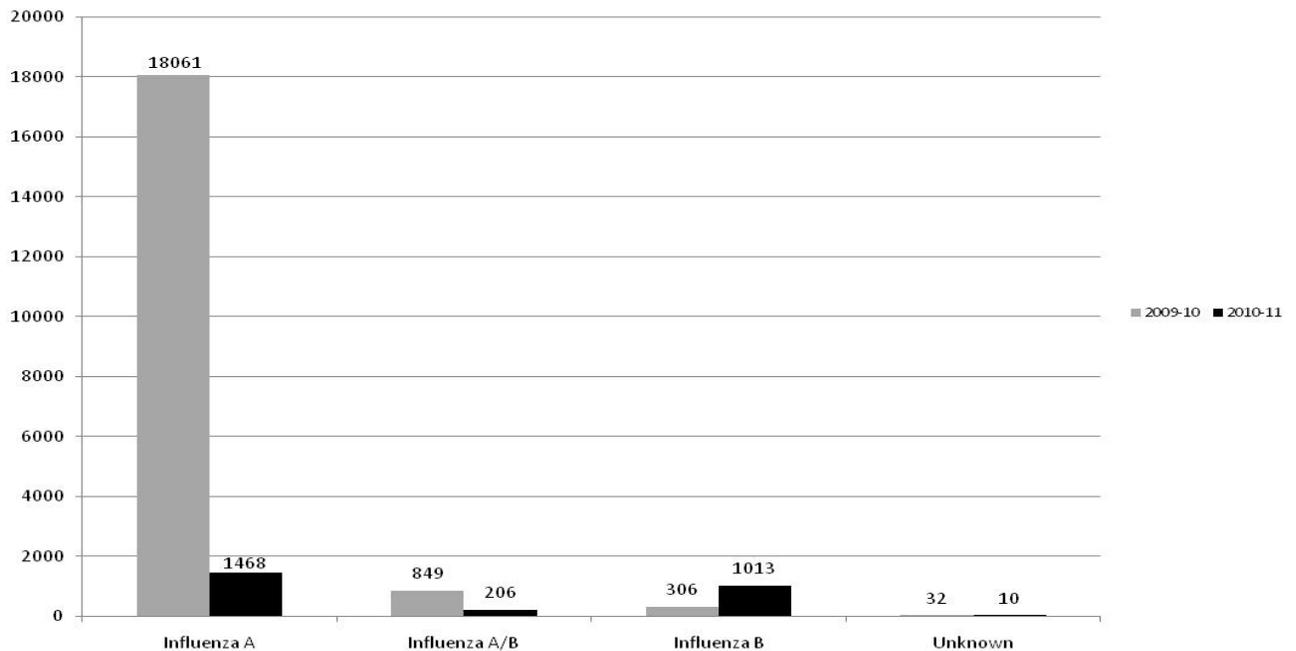
County	Positive Tests	County	Positive Tests
Abbeville	2	Greenwood	14
Aiken	7	Hampton	
Allendale	1	Horry	138
Anderson	66	Jasper	1
Bamberg		Kershaw	4
Barnwell		Lancaster	9
Beaufort	29	Laurens	5
Berkeley	1	Lee	
Calhoun		Lexington	19
Charleston	55	Marion	
Cherokee	4	Marlboro	
Chester	2	McCormick	
Chesterfield		Newberry	
Clarendon	8	Oconee	38
Colleton	5	Orangeburg	
Darlington	25	Pickens	10
Dillon		Richland*	44
Dorchester	23	Saluda	
Edgefield		Spartanburg	87
Fairfield	1	Sumter	21
Florence	41	Union	
Georgetown	22	Williamsburg	1
Greenville	132	York	76
		Unknown	

* Richland County had 38 positive rapid tests in MMWR week 51, not 438 as previously reported.

Positive Rapid Tests by MMWR Week 2009-10 vs 2010-11



Positive Rapid Tests by Type 2009-10 vs 2010-11 MMWR Week 40 through 52

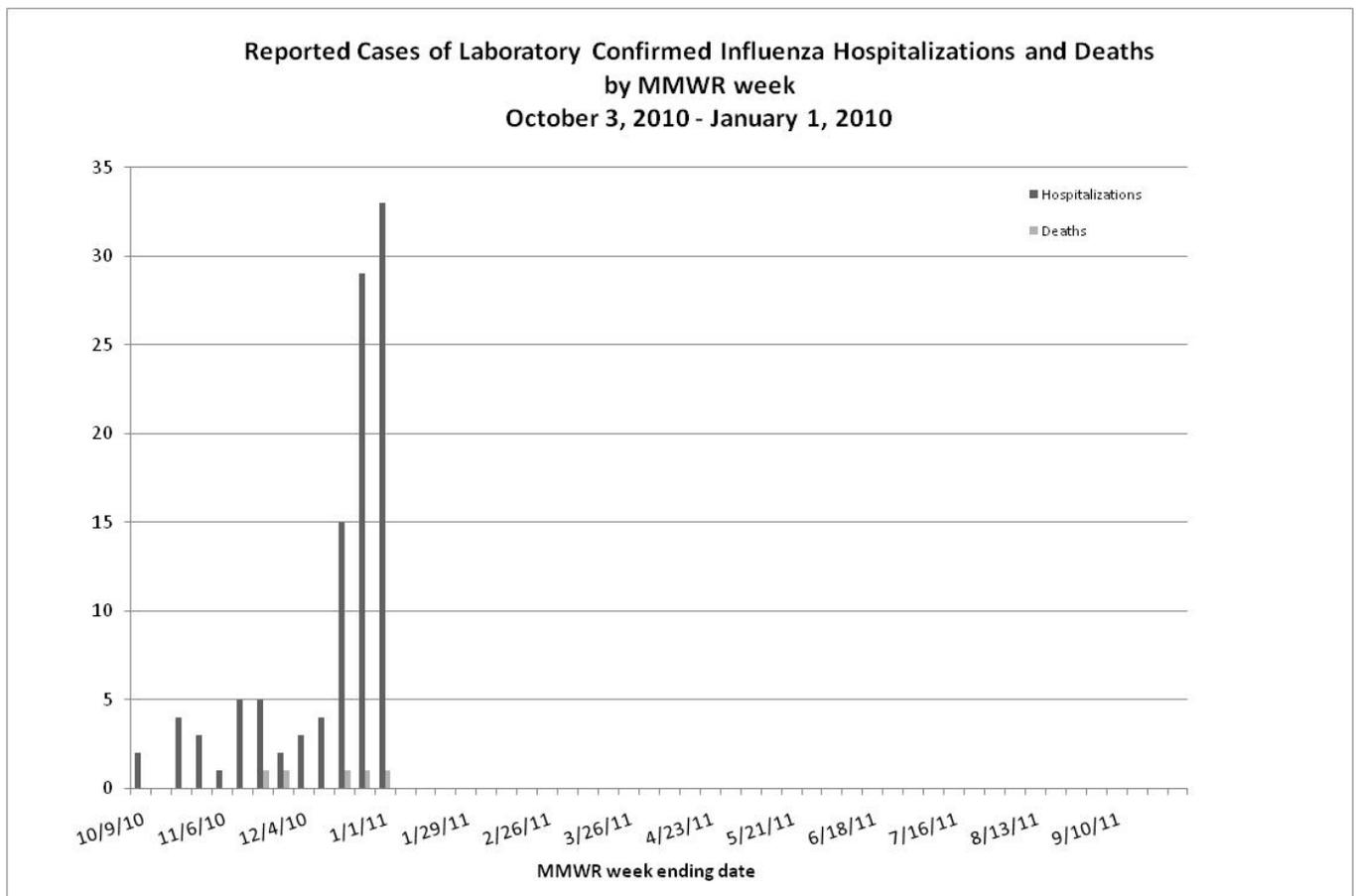


IV. Influenza hospitalizations and deaths

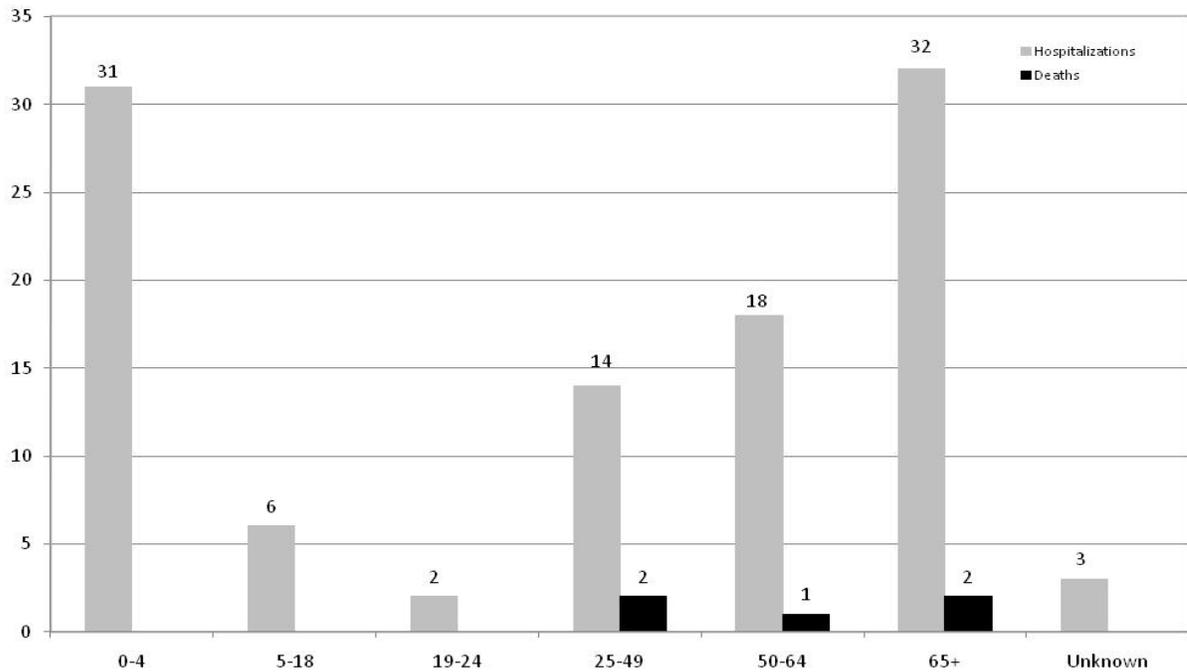
Thirty three* lab confirmed influenza hospitalizations were reported for the past week. One death was reported.

	Total number*	
Number of Hospitals Reporting (current week)	43	
	<i>Previous MMWR (12/26-01/01)</i>	<i>Cumulative (since 10/3/10)</i>
Hospitalizations	33	99
Deaths	1	5

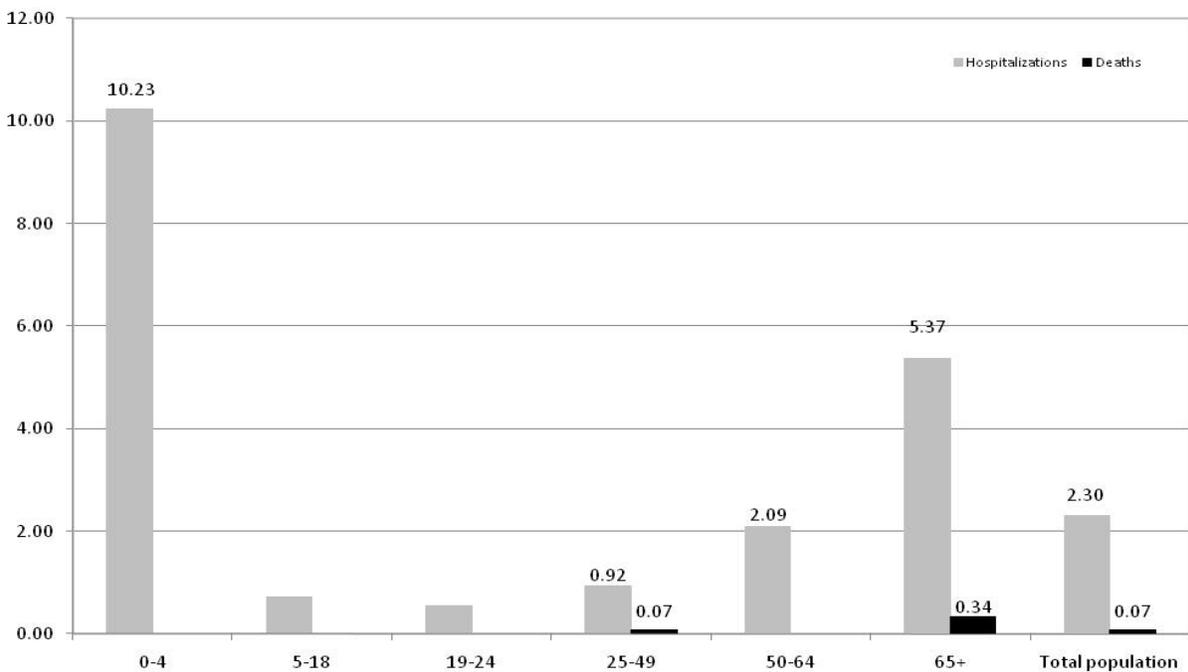
*These data are provisional. Lab confirmation for hospitalizations and deaths includes culture, PCR, DFA, IFA, and rapid test.



**Reported Cases of Laboratory Confirmed Influenza
Hospitalizations (n=106) and Deaths (n=5)
October 3, 2010 - January 1, 2010**

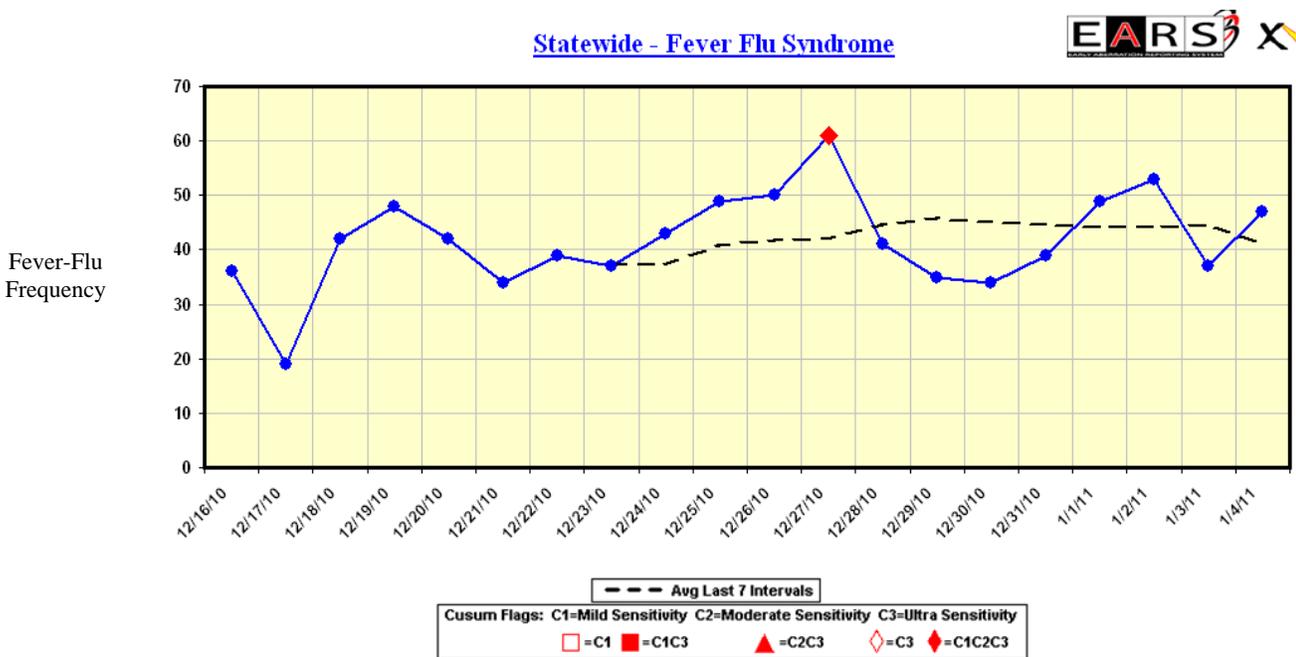


**Laboratory Confirmed Influenza Case rate/100,000
Hospitalizations (n=106) and Deaths (n=5) by age group
October 3, 2010 - January 1, 2010**



*Case rates exclude 3 cases with unknown age

V. South Carolina Aberration Alerting Network (SCAAN): Hospital ED Syndromic Surveillance



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

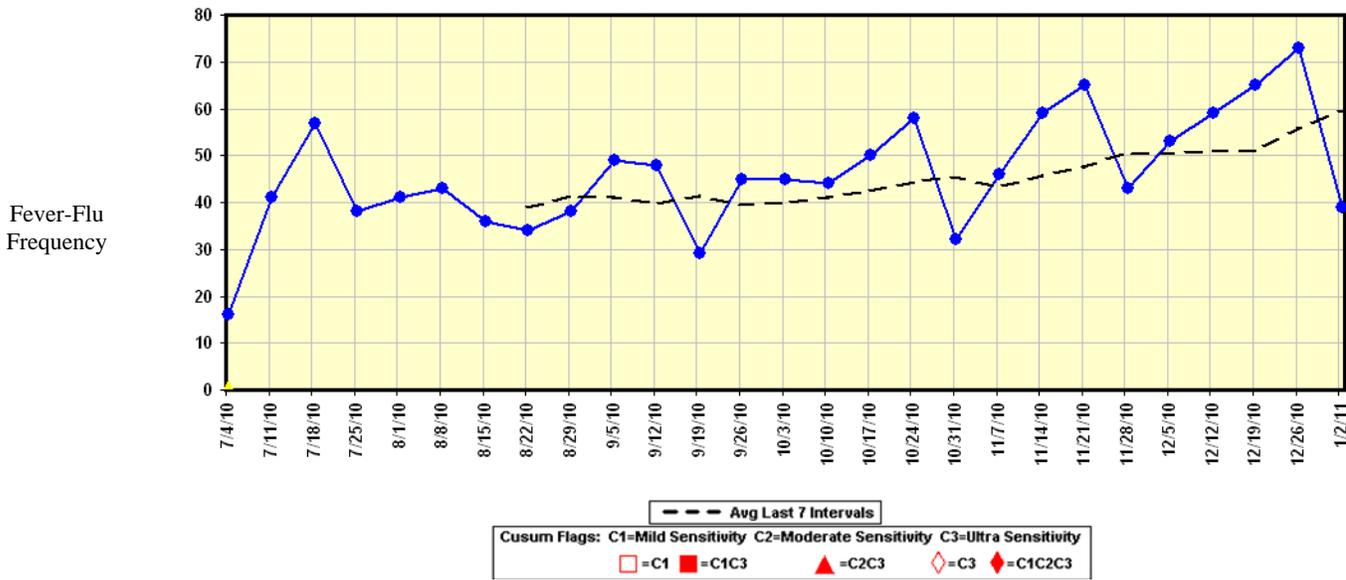
The SC Statewide Fever-Flu Syndrome graph above illustrates the daily counts of hospital emergency department (ED) visits with an Influenza-like Illness (ILI) for the past 21 days. A total of 16 hospital facilities are reporting to the SCAAN system. These 16 include: AnMed Health (Region 1); Self Regional (Region 1); Oconee Medical Center (Region 1); Palmetto Health Alliance (Region 2 & 3); Greenville Hospital System (Region 2); Kershaw Health (Region 4); McLeod Health (Region 4); Medical University of South Carolina (Region 7); Roper (Region 7); St. Francis (Region 7), and Hampton Regional (Region 8).

Statewide CUSUM Flag Alerts Description:

No flags for this past week.

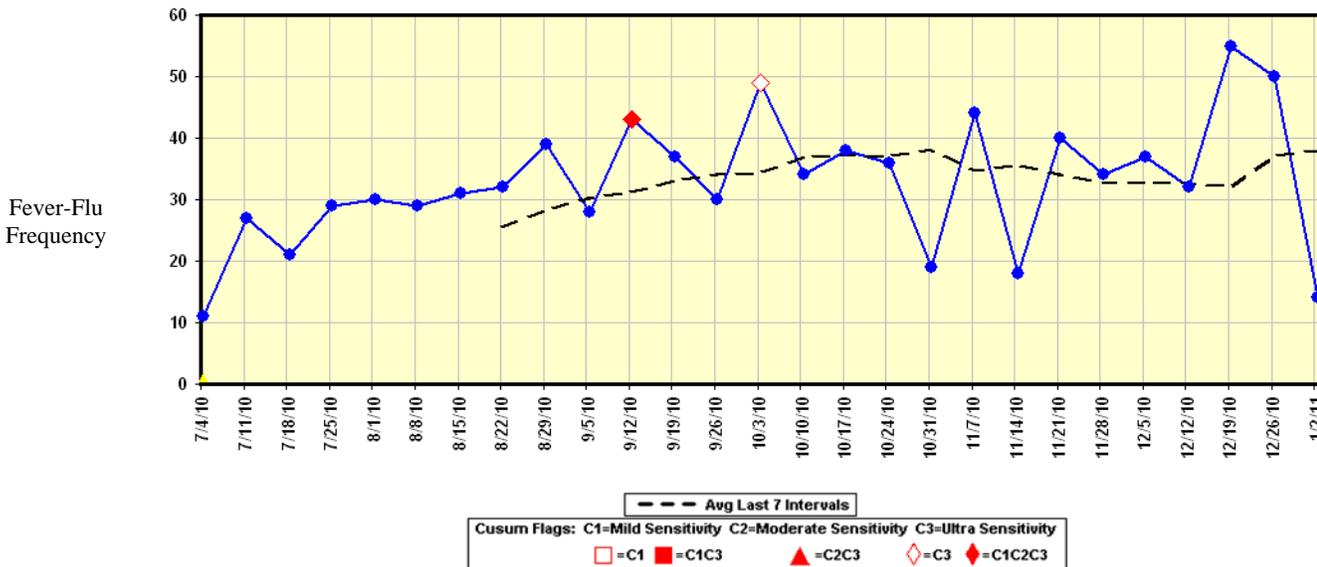
Below are the fever-flu syndrome graphs by Region for the past 180 days (weekly interval).

Region 1 - Fever Flu Syndrome



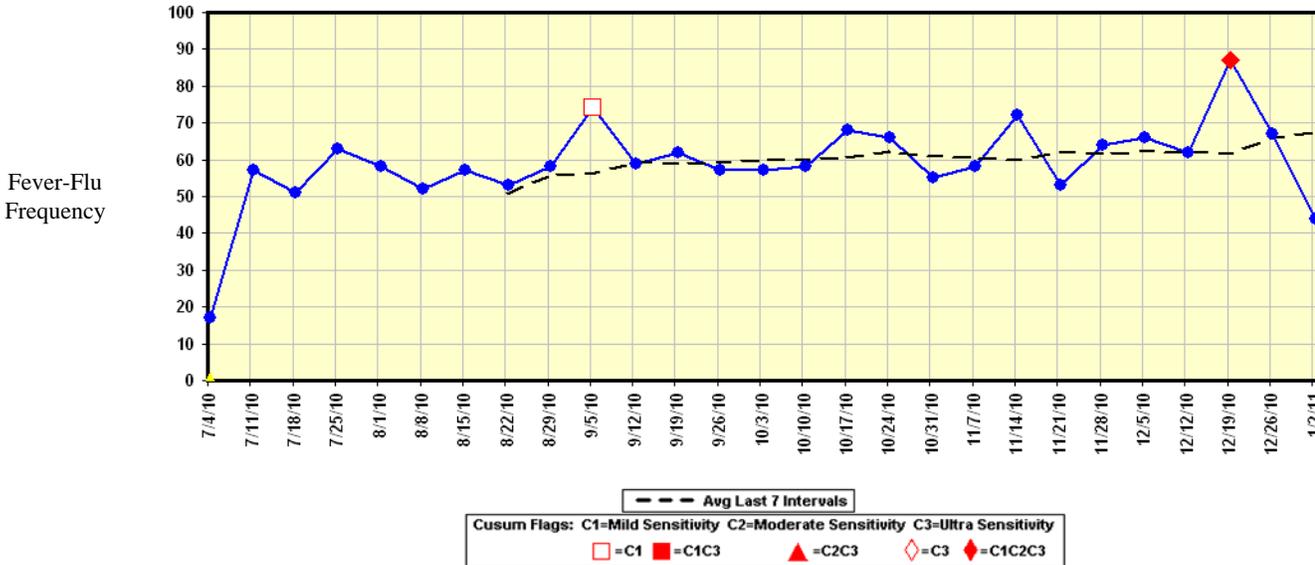
Region1 Hospitals (# of Facilities): AnMed Health (1); Self-Regional (1); Oconee Medical Center (1);

Region 2 - Fever Flu Syndrome



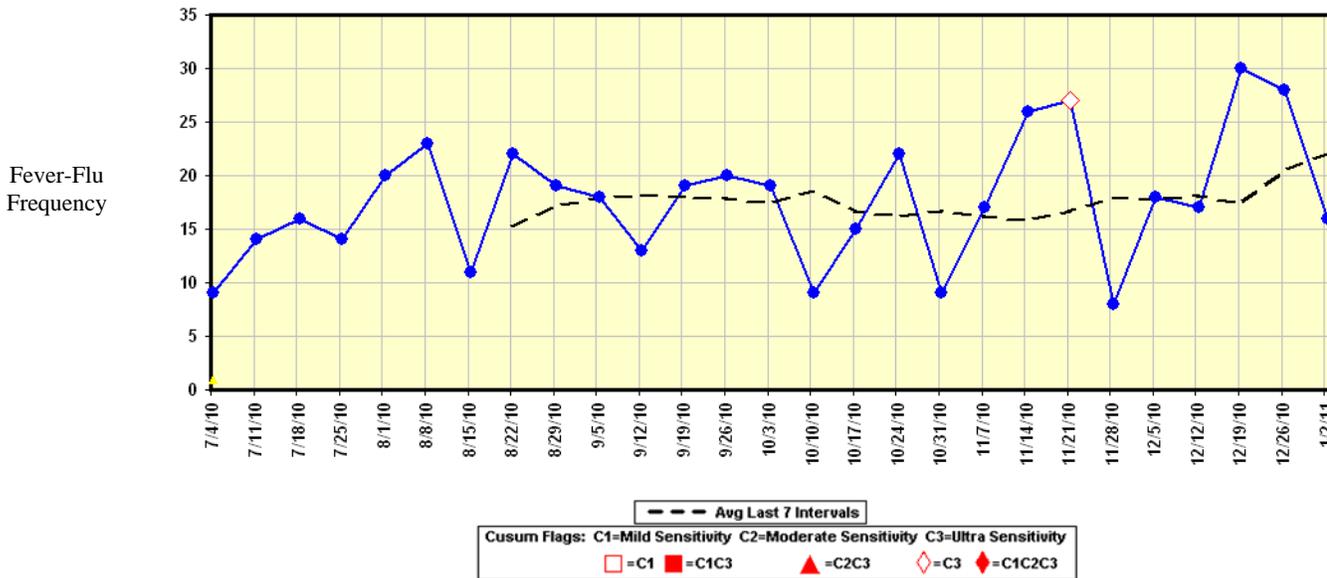
Region 2 Hospitals (# of Facilities): Greenville Hospital System (4); Palmetto Health Easley (1)

Region 3 - Fever Flu Syndrome



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

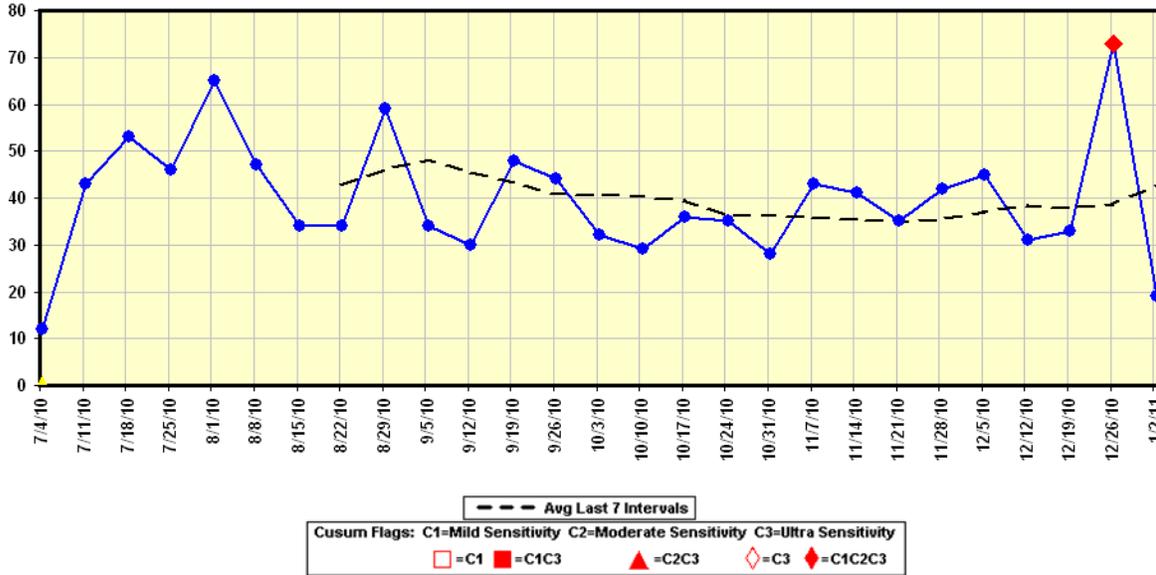
Region 4 - Fever Flu Syndrome



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

Fever-Flu Frequency

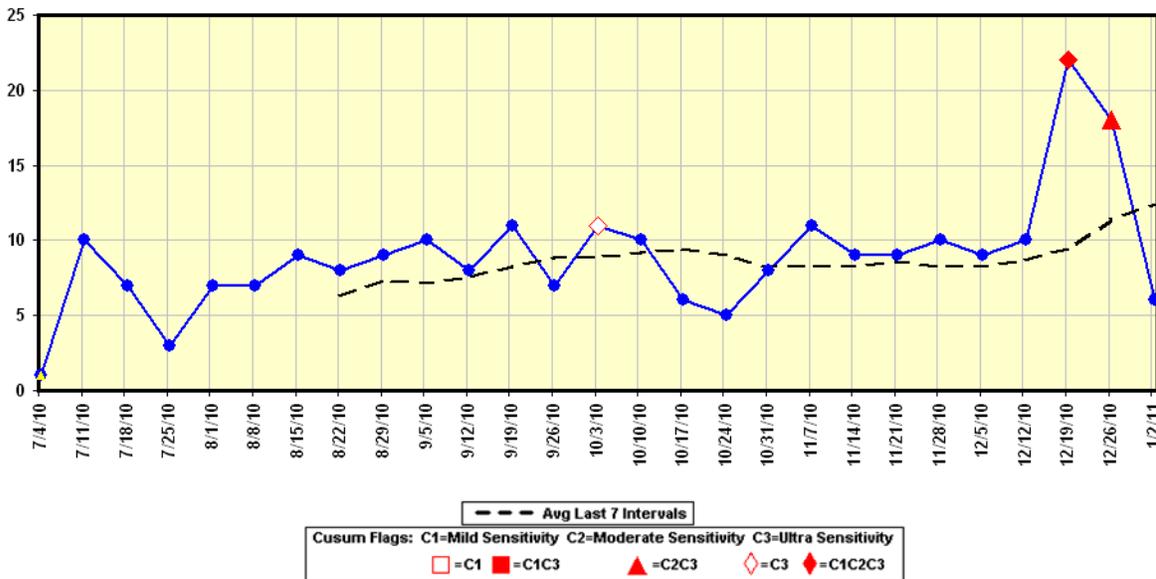
Region 7 - Fever Flu Syndrome



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

Fever-Flu Frequency

Region 8 - Fever Flu Syndrome



Region 8 Hospitals (# of Facilities): Hampton Regional (1)

VI. National influenza update (MMWR Week 52: 12/26-1/1)

During the week of **December 26-January 1**, 995 (20.3%) specimens tested by WHO and NREVSS labs were positive for influenza. The proportion of deaths attributed to pneumonia and influenza (P&I) was below the epidemic threshold. One influenza-associated pediatric death was reported and was associated with Influenza B virus infection. The proportion of outpatient visits for influenza-like illness (ILI) was 2.6%, which is above the national baseline of 2.5%. Four of the 10 regions (Regions 2, 3, 4, and 5) reported ILI above region-specific baseline levels; six states and New York City experienced high ILI activity, two states experienced moderate ILI activity, six states experienced low ILI activity, 35 states experienced minimal ILI activity, and data were insufficient from the District of Columbia and one state. The geographic spread of influenza in eight states was reported as widespread; Puerto Rico and 16 states reported regional influenza activity; the District of Columbia and 11 states reported local influenza activity, and Guam, the U.S. Virgin Islands, and 15 states reported sporadic influenza activity.

For more information, please visit <http://www.cdc.gov/flu/weekly/>.

VII. 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.

Mandatory reporting:

Positive confirmatory test reporting

2B Positive influenza culture, PCR, DFA, and IFA results from commercial laboratories should be reported to DHEC within 7 days electronically via CHESS or using a DHEC 1129 card.

Positive rapid antigen test reporting

Summary numbers of positive rapid influenza tests and influenza type identified to the regional health department of. 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 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. Syndromic reports are distributed back to the hospital on a daily basis.

To join the SCAAN system or for more information, please contact: Himel Dhotre at 803-898-1588 or **dhotrehc@dhec.sc.gov**.

VIII. 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
Local	OR		
	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
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
	Increased ILI and/or institutional outbreaks (ILI or lab confirmed) in at least 4 of the regions	And	Recent (within the past 3 weeks) lab confirmed influenza in the state.