Flu Watch

South Carolina Department of Health and Environmental Control
Division of Acute Disease Epidemiology

Week Ending December 3, 2011 (MMWR Week 48)

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

In this issue:

ILINet	*2*
Virologic surveillance	4
Rapid antigen tests	6
Hospitalizations and deaths	9
SC-DARTS	10
Activity level definitions	14
SC influenza surveillance components	15
National influenza surveillance	16

MMWR Week 48 at a Glance:

Influenza Activity Level: Sporadic
Note: Activity level definitions are found on page 15

ILI Activity Status (South Carolina baseline is 2.05%*): Below baseline in the Upstate (.10%), the Midlands (.55%) and along the Coast (1.55%). The state ILI percentage is .49%. These data reflect reports from 12(37.5%) providers.
Note: See map of counties on page 3 for regional descriptions

SC Viral Isolate and RT-PCR Activity: No positive specimens were reported. One positive specimen has been reported this season.

Positive Rapid Flu Test Activity: Fourteen positive rapid tests were reported. So far this season 123 have been reported.

Hospitalizations: No lab confirmed hospitalizations were reported. Nine lab confirmed hospitalizations have been reported this season.
Lab confirmation includes positive rapid tests, culture, PCR, DFA, or IFA.

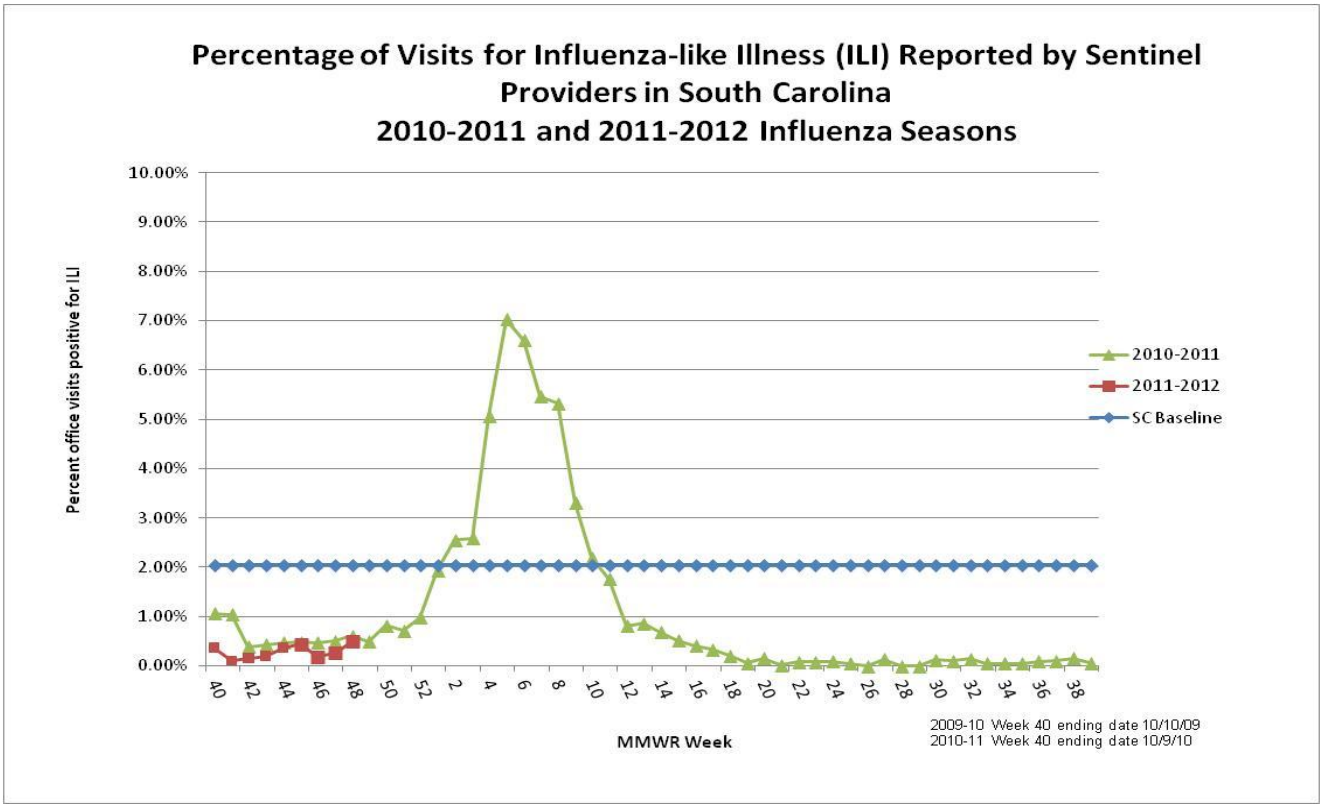
Deaths: No lab confirmed deaths were reported.
Lab confirmation includes positive rapid tests, culture, PCR, DFA, or IFA.

Summary of ILI Activity, Positive Confirmatory Tests, and Influenza Associated Hospitalizations and Deaths

	Current week	*Previous week*	*Change From previous week*
Percent of visits to ILINet providers for ILI	**.49**	**.26%**	**▲.23**
Number of positive confirmatory tests	**0**	**0**	**0**
Number of lab confirmed flu hospitalizations	**0**	**0**	**0**
Number of lab confirmed flu deaths	**0**	**0**	**0**

I. ILINet Influenza-Like Illness Surveillance

During MMWR week 48, .49% of patient visits to SC ILINet providers were due to ILI. This is below the state baseline **(2.05%)**. This ILI percentage compares to .61% this time last year. Reports were received from providers in 11 counties, representing 6 of the 8 regions.

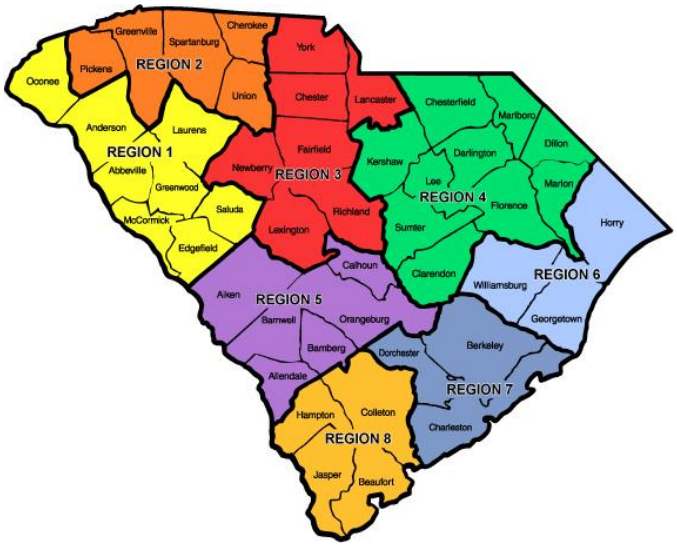


*The SC baseline is the mean percentage of patient visits for ILI during non-influenza weeks (weeks when percent of positive lab tests was below 20%) for the previous three seasons plus two standard deviations.

Reported Influenza-Like Illness by Sentinel Providers
November 27, 2011 – December 3, 2011

County	ILI %	County	ILI %
Abbeville	---	Greenwood	NR
Aiken	0%	Hampton	NR
Allendale	---	Horry	NR
Anderson	3.13%	Jasper	NR
Bamberg	---	Kershaw	NR
Barnwell	---	Lancaster	---
Beaufort	NR	Laurens	NR
Berkeley	NR	Lee	---
Calhoun	---	Lexington	NR
Charleston	NR	Marion	---
Cherokee	---	Marlboro	---
Chester	---	McCormick	NR
Chesterfield	---	Newberry	---
Clarendon	---	Oconee	---
Colleton	---	Orangeburg	---
Darlington	---	Pickens	5.88%
Dillon	NR	Richland	.24%
Dorchester	NR	Saluda	0%
Edgefield	---	Spartanburg	0%
Fairfield	4.02%	Sumter	NR
Florence	.23%	Union	---
Georgetown	1.55%	Williamsburg	---
Greenville	0	York	0%

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



Geographic Region	ILI %	# of Reporters
Upstate-Regions 1 -2	.10	6
Midlands-Regions 3-5	.55	5
Coastal-Regions 6-8	1.55	1

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

II. Virologic Surveillance

Positive confirmatory influenza test results* Current MMWR Week (11/27/11 – 12/3/11)		
	BOL	Other clinical labs
Number of specimens tested	4	NA
Number of positive specimens	0	0
Influenza A unsubtyped		
Influenza A H1N1		
Influenza A H3N2		
Influenza B		
Other		

Includes culture, RT-PCR, DFA, and IFA

During MMWR week 48, one positive specimen was reported.

Positive confirmatory influenza test results* Cumulative (10/2/11 – 12/3/11)		
	BOL	Other clinical labs
Number of specimens tested	21	NA
Number of positive specimens	1	0
Influenza A unsubtyped		
Influenza A H1N1		
Influenza A H3N2		
Influenza B	1	
Other		

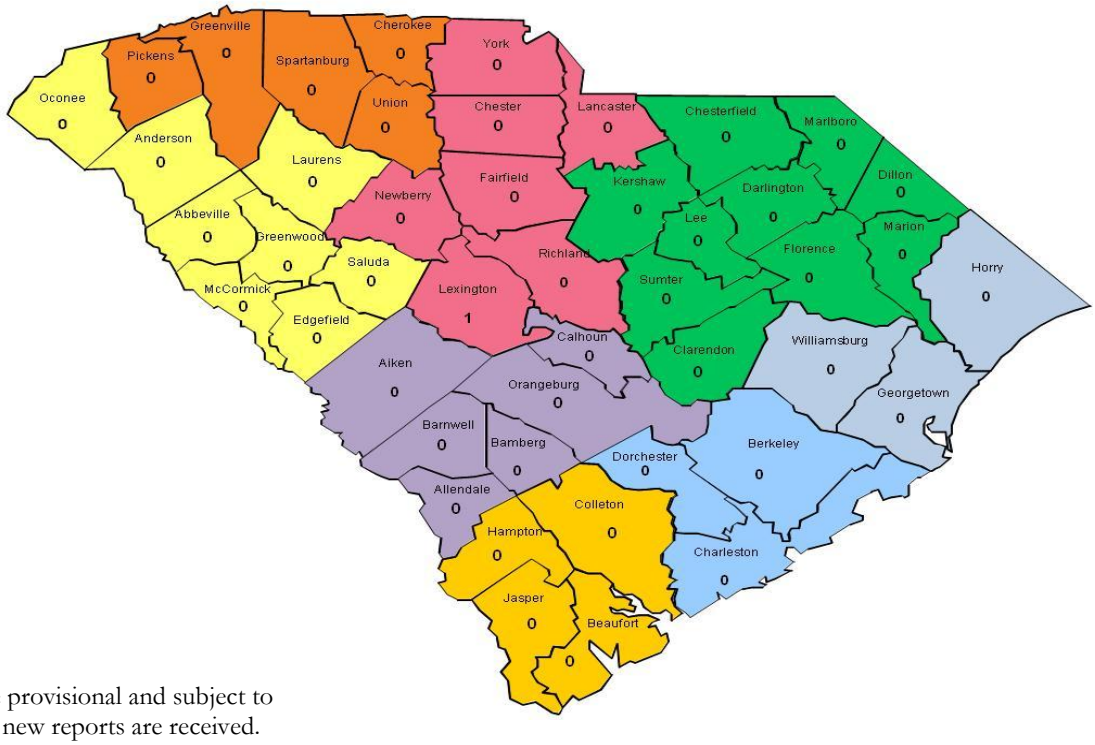
Includes culture, RT-PCR, DFA, and IFA

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

Positive Confirmatory Tests by County
Current Week 11/27/11 – 12/3/11

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

Map of Positive Confirmatory Tests by County
Cumulative 10/2/11 – 12/3/11



All data are provisional and subject to change as new reports are received.

Positive Confirmatory Tests by County and Type
Cumulative 10/2/11 – 12/3/11

	A H1N1	A H3N2	B	A Unsub	Unk		A H1N1	A H3N2	B	A Unsub	Unk
Region 1						**Region 2**					
Abbeville						Cherokee					
Anderson						Greenville					
Edgefield						Pickens					
Greenwood						Spartanburg					
Laurens						Union					
McCormick						**Region 4**					
Oconee						Chesterfield					
Saluda						Clarendon					
Region 3						Darlington					
Chester						Dillon					
Fairfield						Florence					
Lancaster						Kershaw					
Lexington			1			Lee					
Newberry						Marion					
Richland						Marlboro					
York						Sumter					
Region 5						**Region 6**					
Aiken						Georgetown					
Allendale						Horry					
Bamberg						Williamsburg					
Barnwell						**Region 8**					
Calhoun						Beaufort					
Orangeburg						Colleton					
Region 7						Hampton					
Berkeley						Jasper					
Charleston											
Dorchester											

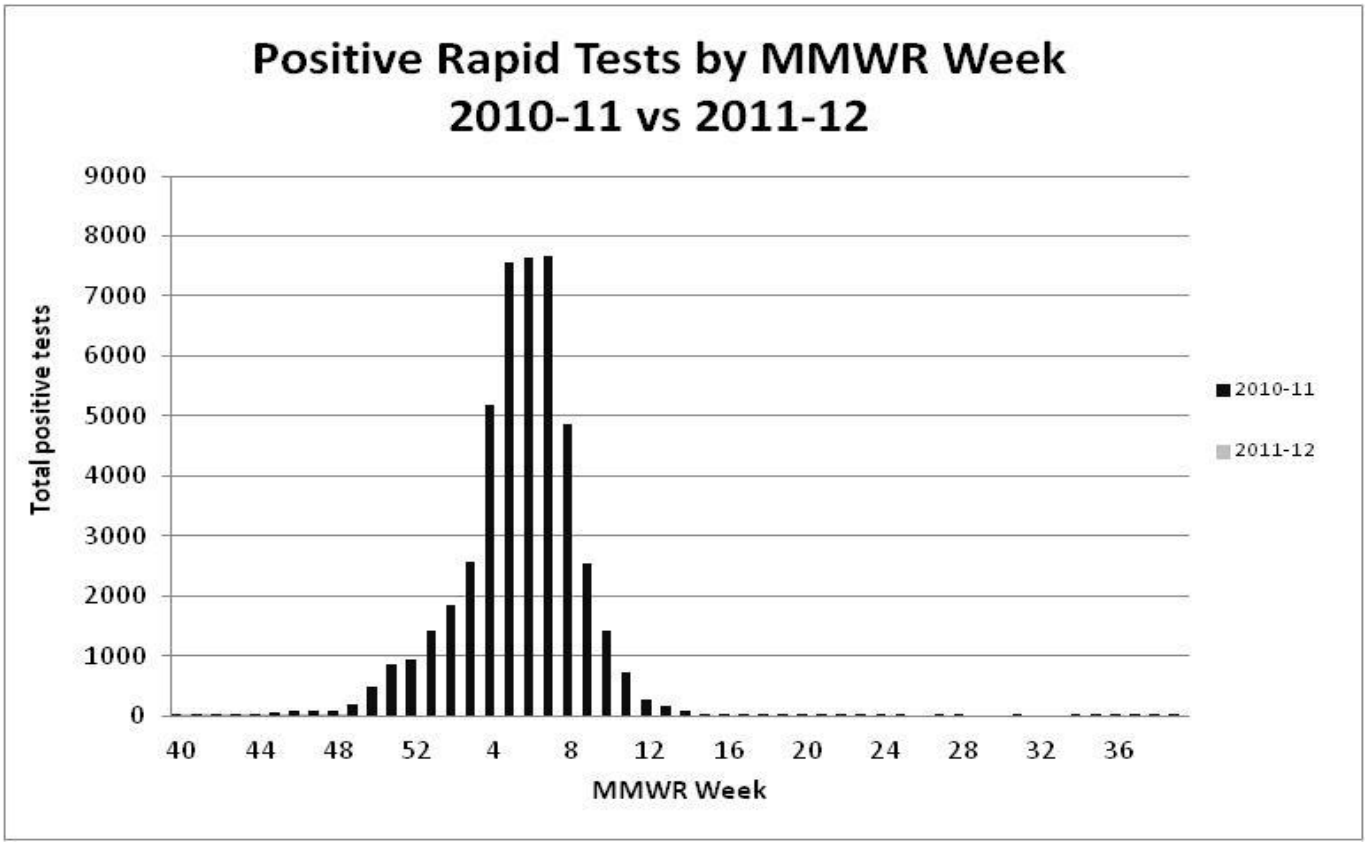
III. Positive Rapid Antigen Tests

During MMWR week 48, 14 positive rapid antigen tests were reported. Of these, there were 7 influenza A, 3 influenza B, 2 influenza A/B, and 2 unk/other. During this MMWR week last year, 94 positive rapid tests were reported.

	Total Positive Rapid Antigen Tests				
	Influenza A	***Influenza B***	***Influenza A/B***	***Unk/Other***	***Total***
Current MMWR ***(11/27- 12/3/11)***	7	3	2	2	14
Cumulative ***(since 10/2/10)***	70	33	17	3	123

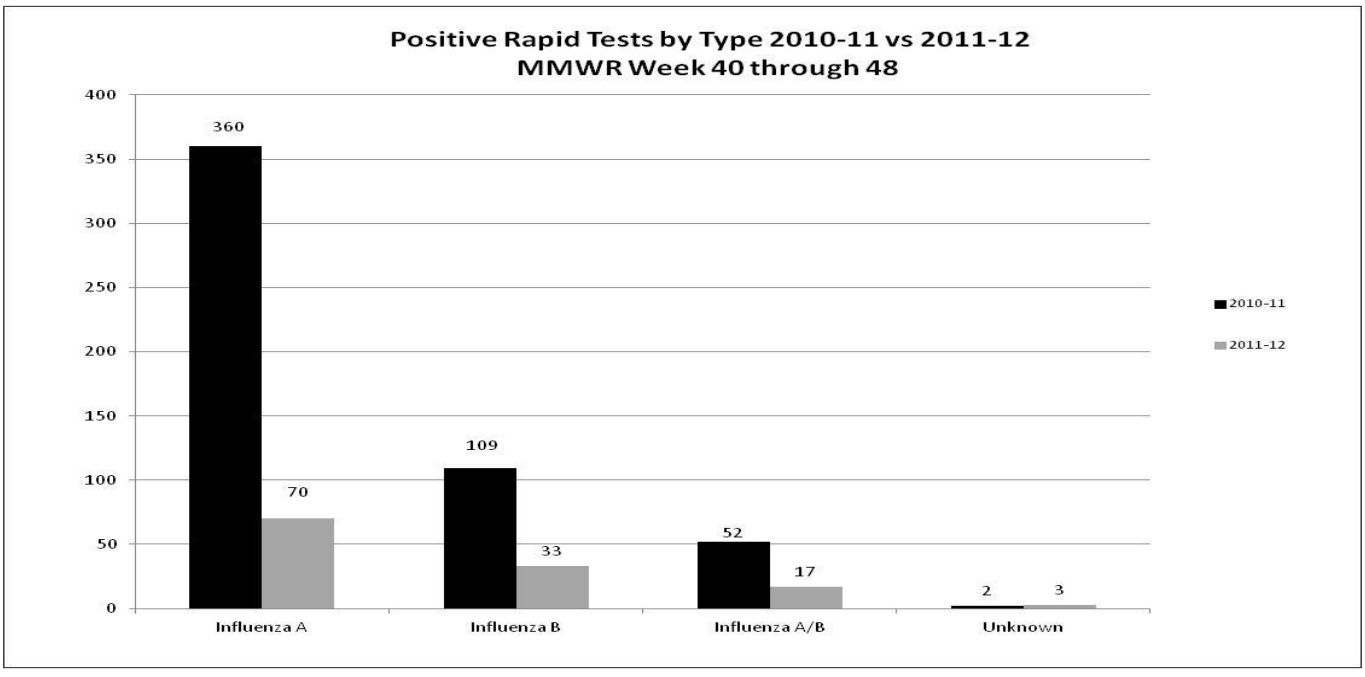
Positive Rapid Flu Tests by County
Current Week 11/27/11 – 12/3/11

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



Positive Rapid Tests by County and Type
Cumulative 10/2/11 – 12/3/11

	A	B	A/B	Unk		A	B	A /B	Unk
Region 1					**Region 2**				
Abbeville	1				Cherokee	1			
Anderson	2	2			Greenville	7	5	2	
Edgefield					Pickens	7	4	1	
Greenwood	1				Spartanburg	1			
Laurens	2				Union				
McCormick					**Region 4**				
Oconee	1				Chesterfield				
Saluda					Clarendon		1		
Region 3					Darlington				3
Chester					Dillon				
Fairfield					Florence	1	1	2	
Lancaster	1				Kershaw	1			
Lexington	2	1			Lee				
Newberry	1				Marion				
Richland	8	1			Marlboro				
York	1	1			Sumter	4			
Region 5					**Region 6**				
Aiken					Georgetown	4			
Allendale					Horry	2	14	3	
Bamberg					Williamsburg				
Barnwell					**Region 8**				
Calhoun					Beaufort				
Orangeburg					Colleton	2			
Region 7					Hampton				
Berkeley	2		2		Jasper				
Charleston	15	1							
Dorchester	9	3							

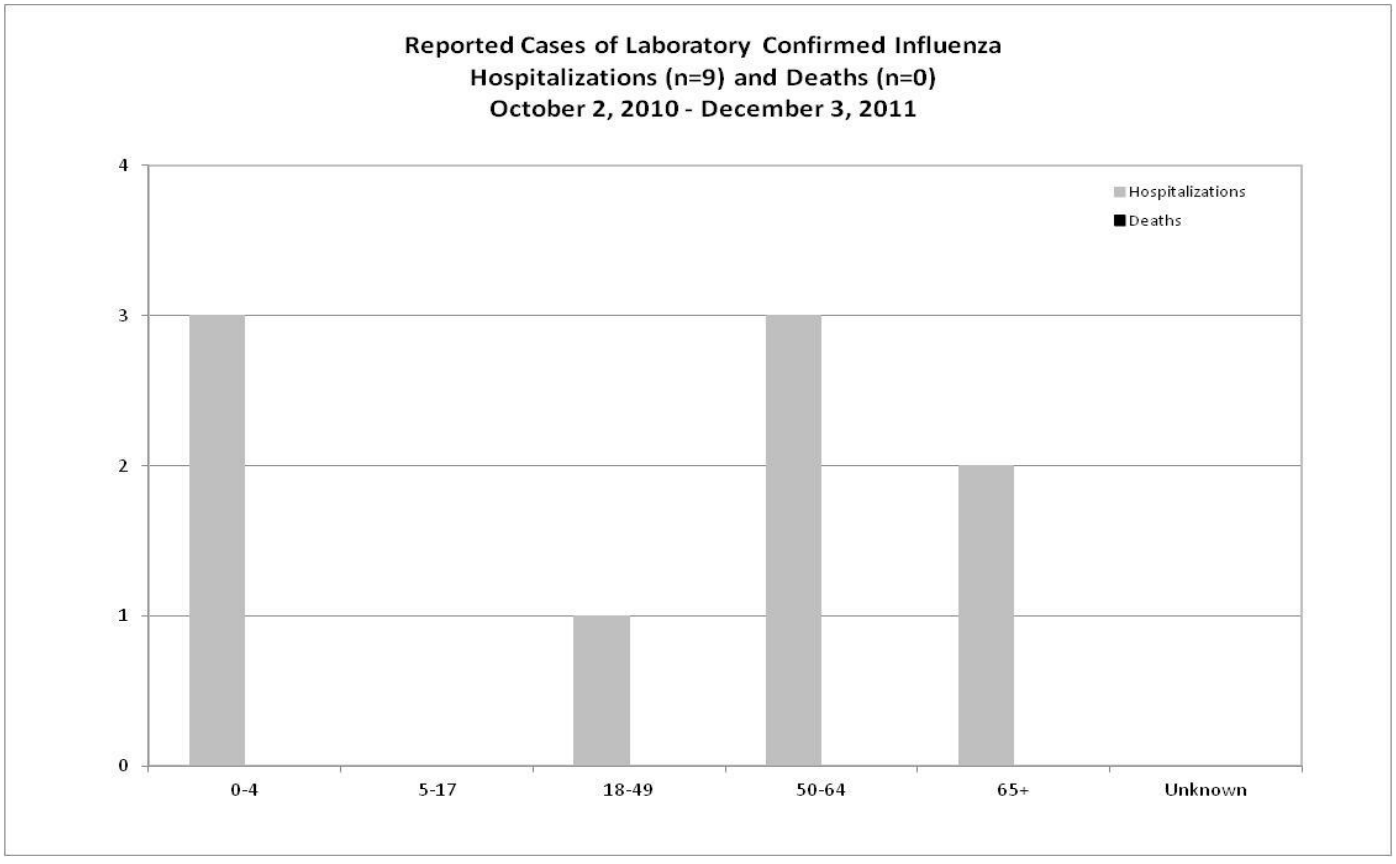


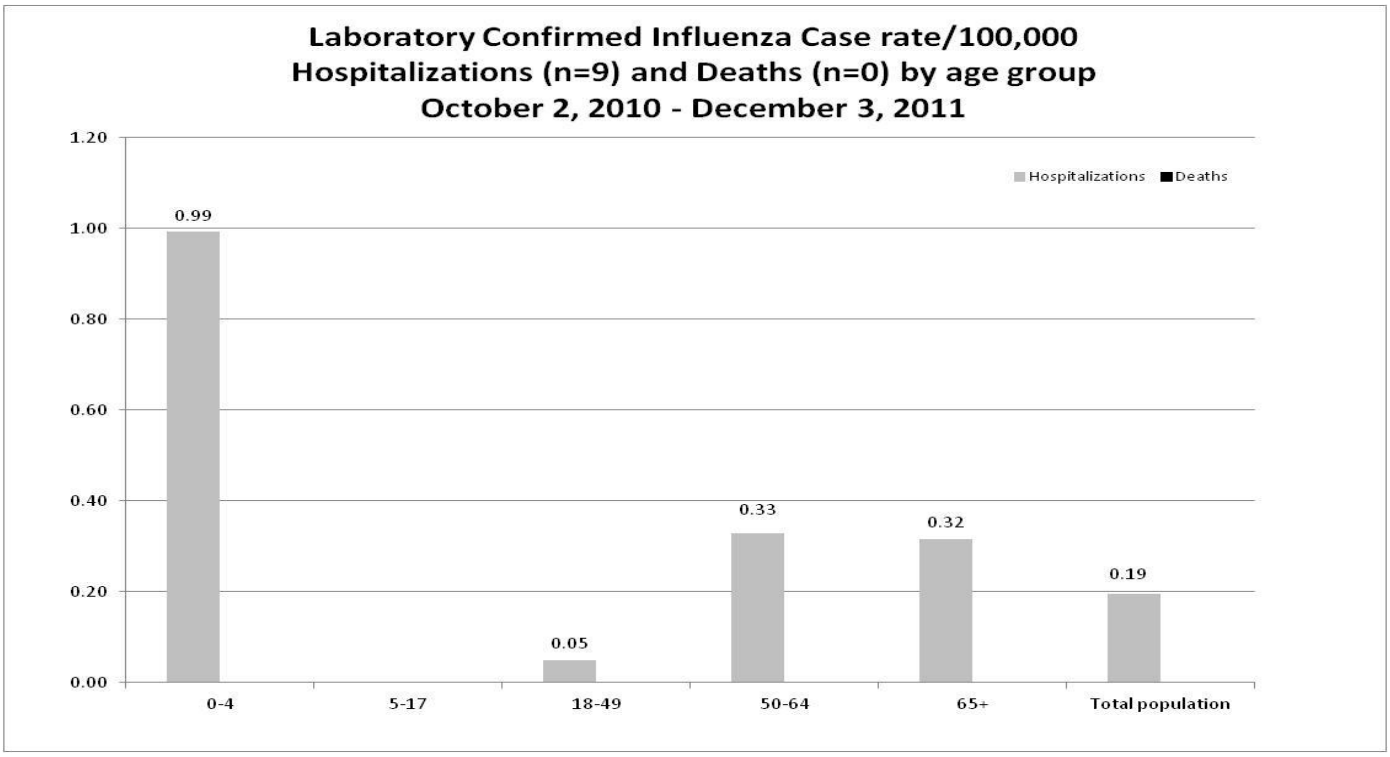
IV. Influenza hospitalizations and deaths

During MMWR week 48 no lab confirmed* influenza hospitalizations were reported. No lab confirmed deaths were reported.

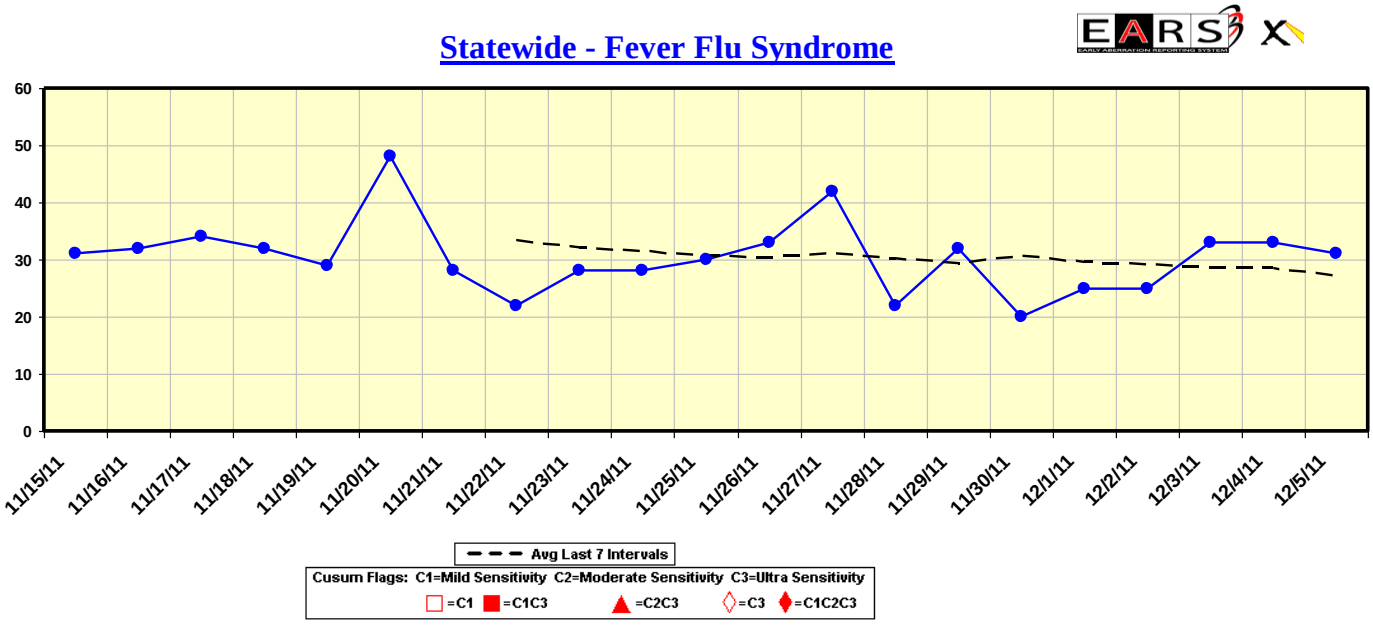
	Total number*	
Number of Hospitals Reporting (current week)	38	
	Current MMWR (11/27- 12/3/11)	***Cumulative (since 10/2/10)***
Hospitalizations	0	9
Deaths	0	0

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





V. South Carolina Disease Alerting, Reporting & Tracking System (SC-DARTS)



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

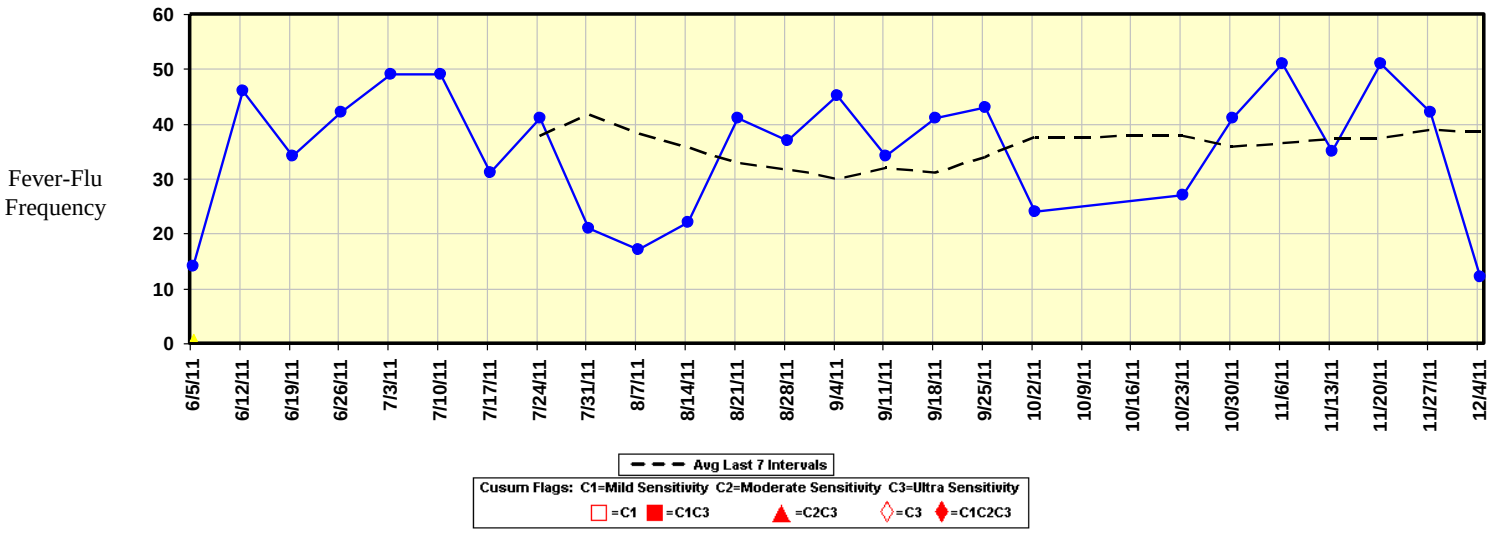
The SC Statewide Fever-Flu Syndrome graph above illustrates the daily counts of hospital emergency department (ED) visits with an Influenza-like Illness (ILI) for the past 21 days. A total of 18 hospital facilities are reporting to the SC-DARTS system. These 18 include: AnMed Health (Region 1); Self 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 the past week.

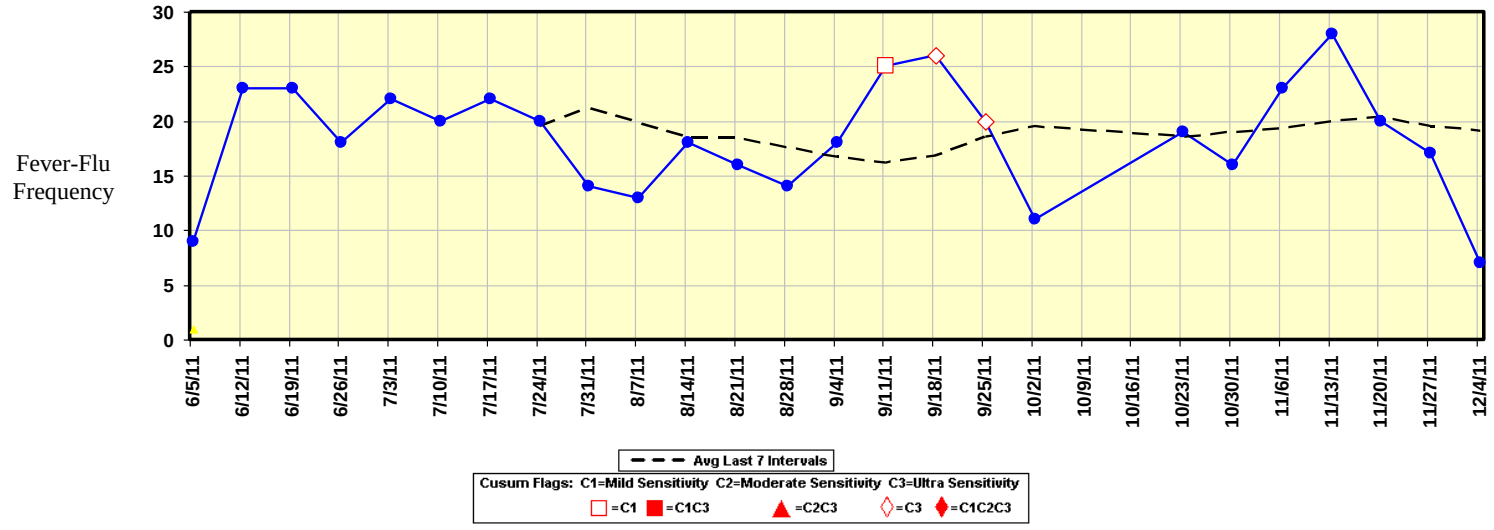
Below are the fever-flu syndrome graphs by Region for the past 180 days (weekly interval).

Region 1 - Fever Flu Syndrome



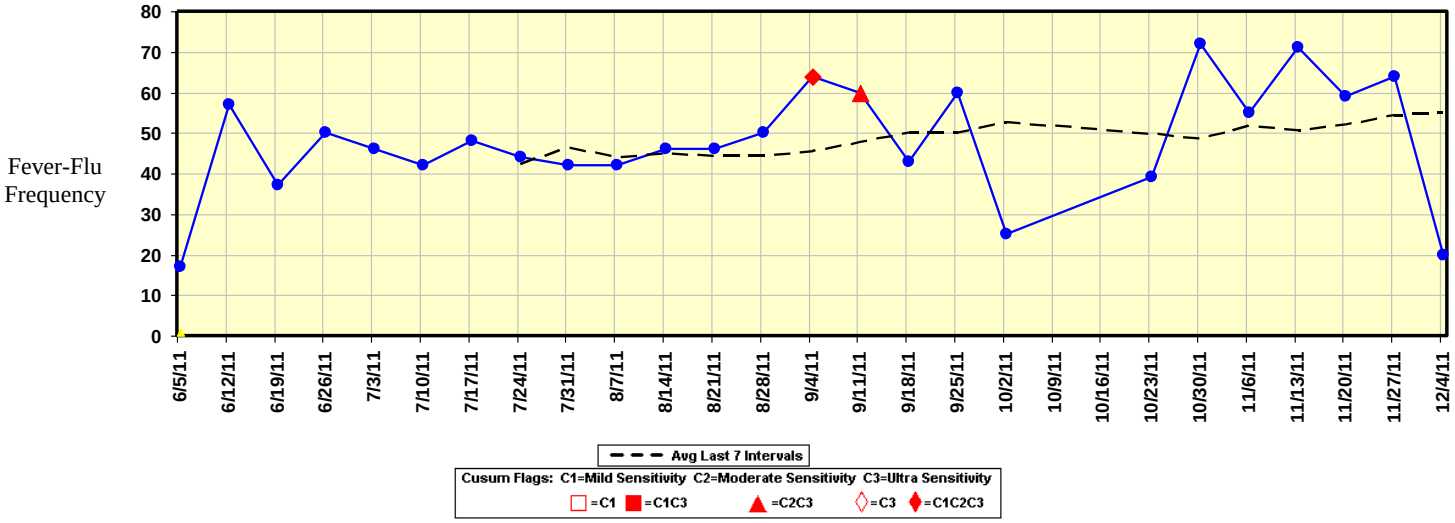
Region1 Hospitals (# of Facilities): AnMed Health (3); Self-Regional (1); Oconee Medical Center (1);

Region 2 - Fever Flu Syndrome



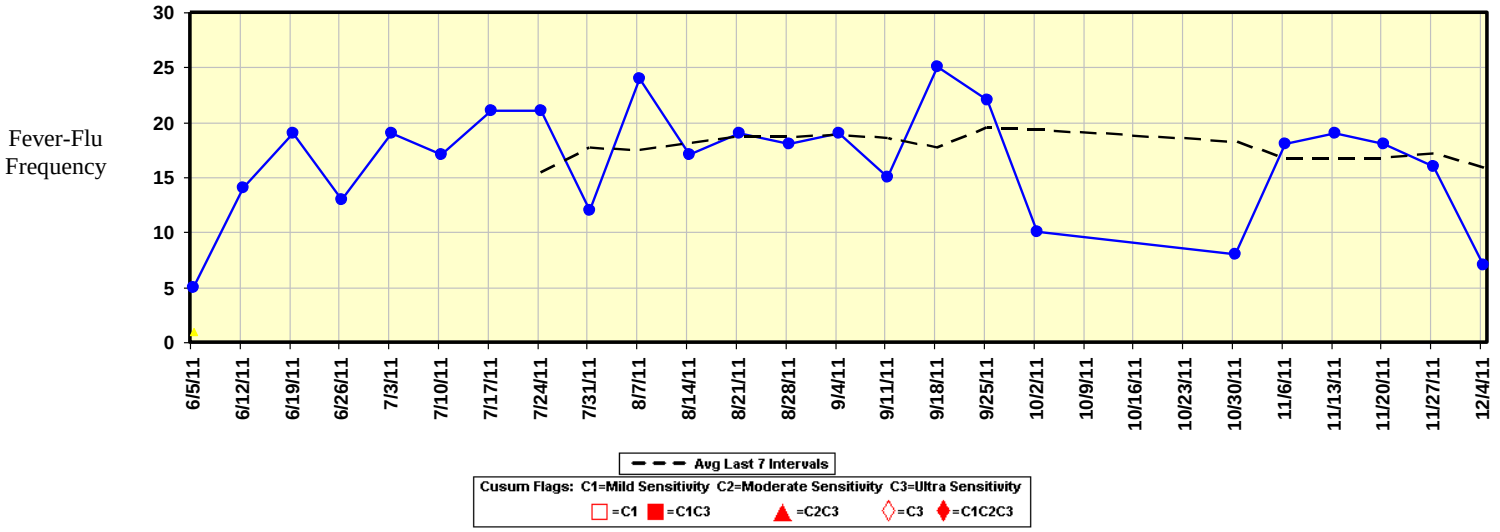
Region 2 Hospitals (# of Facilities): Greenville Hospital System (4); Palmetto Health Easley (1)

Region 3 - Fever Flu Syndrome



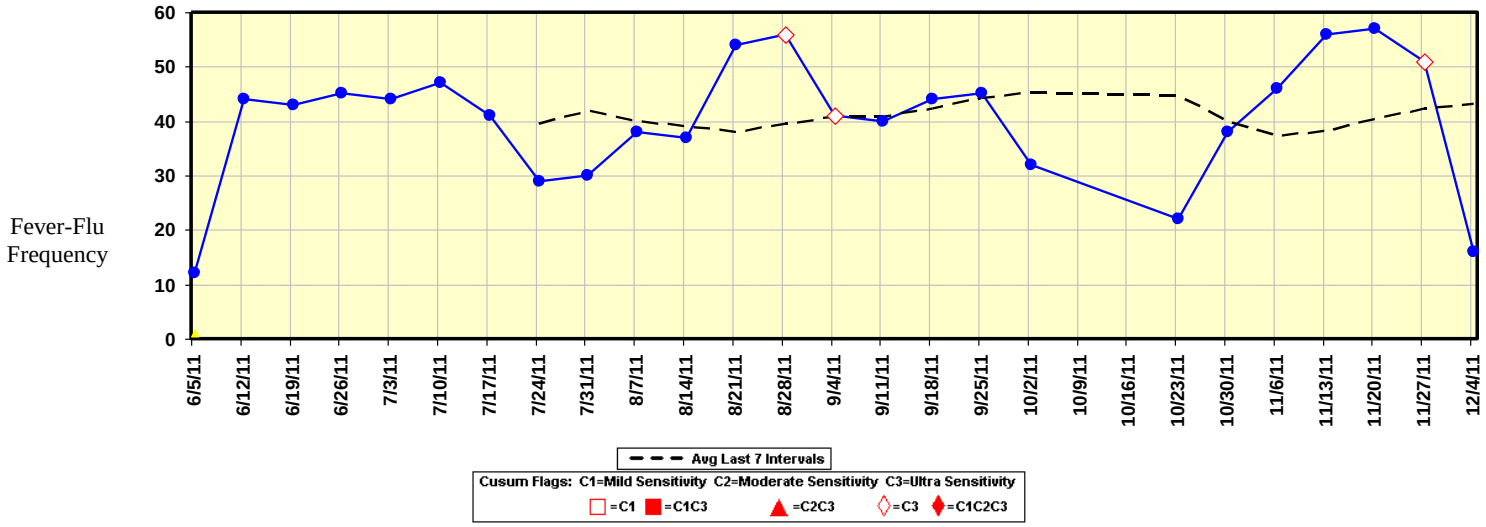
Region 3 Hospitals (# of Facilities): Palmetto Health Baptist (1), Palmetto Health Richland (1)

Region 4 - Fever Flu Syndrome



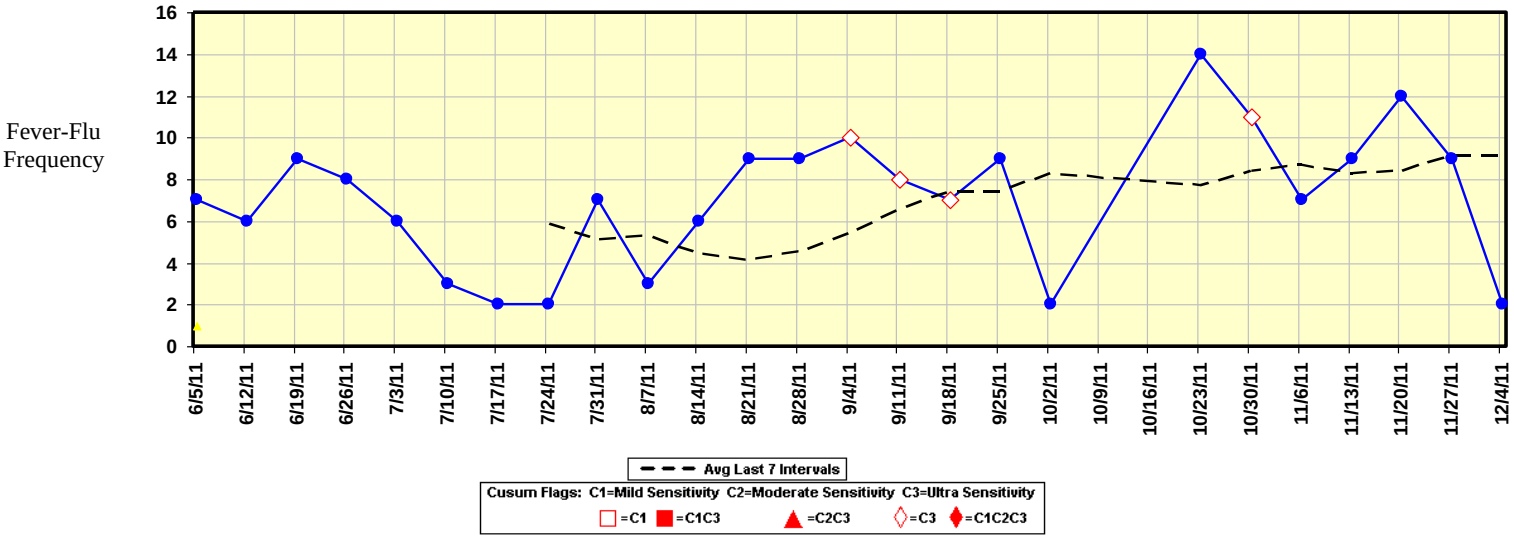
Region 4 Hospitals (# of Facilities): Kershaw Health (1); McLeod Health (1)

Region 7 - Fever Flu Syndrome



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

Region 8 - Fever Flu Syndrome



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

VI. 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		
	Not increased	**And**	Lab confirmed outbreak in one institution
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		
	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		
	Institutional outbreaks (ILI or lab confirmed) in 2-3 regions	**And**	Recent (within the past 3 weeks) lab confirmed influenza in the affected regions
Widespread	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.

VII. South Carolina Influenza Surveillance Components

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
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 should be sent to the regional health department by fax or email before noon on Monday for the preceding week.

Influenza death reporting
Lab confirmed influenza deaths in adults should be reported to DHEC within 7 days. Lab confirmed influenza deaths in children under age 18 should be reported within 24 hours. 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.

For additional information about ILINet or to become an ILINet provider, contact the Acute Disease Epidemiology influenza surveillance coordinator at **springcb@dhec.sc.gov**.

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 U≥U100°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.

South Carolina Disease Alerting, Reporting & Tracking System (SC-DARTS)

SC-DARTS 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 SC-DARTS system or for more information, please contact: **Alecia Alianell at 803-898-0269 or alianeat@dhec.sc.gov.**

VIII. National Surveillance MMWR Week 46 (11/20-11/26)

During week 47 (November 20-26, 2011), influenza activity remained low in the United States.

o **U.S. Virologic Surveillance**: Of the 2,130 specimens tested by U.S. World Health Organization (WHO) and National Respiratory and Enteric Virus Surveillance System (NREVSS) collaborating laboratories and reported to CDC/Influenza Division, 40 (1.9%) were positive for influenza.

o **Pneumonia and Influenza (P&I) Mortality Surveillance**: The proportion of deaths attributed to P&I was below the epidemic threshold.

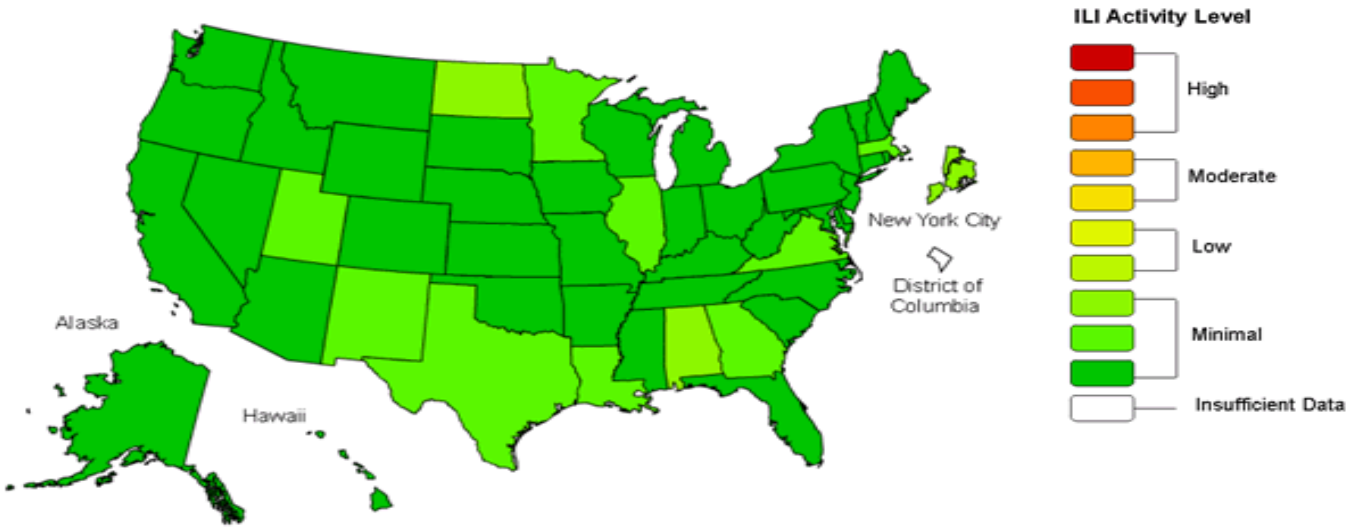
o **Influenza-associated Pediatric Mortality**: Two influenza-associated pediatric deaths were reported. These deaths occurred during the 2010-11 influenza season.

o **Outpatient Illness Surveillance**: The proportion of outpatient visits for influenza-like illness (ILI) was 1.4%, which is below the national baseline of 2.4%. All 10 regions reported ILI below region-specific baseline levels. All 50 states and New York City experienced minimal ILI activity and the District of Columbia had insufficient data.

o **Geographic Spread of Influenza**: The geographic spread of influenza in one state was reported as local; the District of Columbia, Guam, and 29 states reported sporadic activity; the U.S. Virgin Islands and 21 states reported no influenza activity, and Puerto Rico did not report.

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

Influenza-Like Illness (ILI) Activity Level Indicator Determined by Data Reported to ILINet
2011-12 Influenza Season Week 47 ending Nov 26, 2011



*This map uses the proportion of outpatient visits to health care providers for influenza-like illness to measure the ILI activity level within a state. It does not, however, measure the extent of geographic spread of flu within a state. Therefore, outbreaks occurring in a single city could cause the state to display high activity levels.
*Data collected in ILINet may disproportionately represent certain populations within a state, and therefore, may not accurately depict the full picture of influenza activity for the whole state.

*Differences in the data presented here by CDC and independently by some state health departments likely represent differing levels of data completeness with data presented by the state likely being the more complete.