



Flu Watch

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

Week Ending March 3, 2012 (MMWR Week 9)

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

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MMWR Week 9 at a Glance:

Influenza Activity Level: Regional

Note: Activity level definitions are found on page 14

ILI Activity Status (South Carolina baseline is 2.05%*): Below baseline in the Upstate (.57%) and the Midlands (.44%). Above baseline along the Coast (3.43%). The state ILI percentage is .93%. These data reflect reports from 10 (31.3%) providers.

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

SC Viral Isolate and RT-PCR Activity: Eleven positive specimens were reported. Forty-two positive specimens have been reported this season.

Positive Rapid Flu Test Activity: One hundred sixty positive rapid tests were reported. So far this season 965 have been reported.

Hospitalizations: Eight lab confirmed hospitalizations were reported. Forty-seven lab confirmed hospitalizations have been reported this season. *Lab confirmation includes positive rapid tests, culture, PCR, DFA, or IFA.*

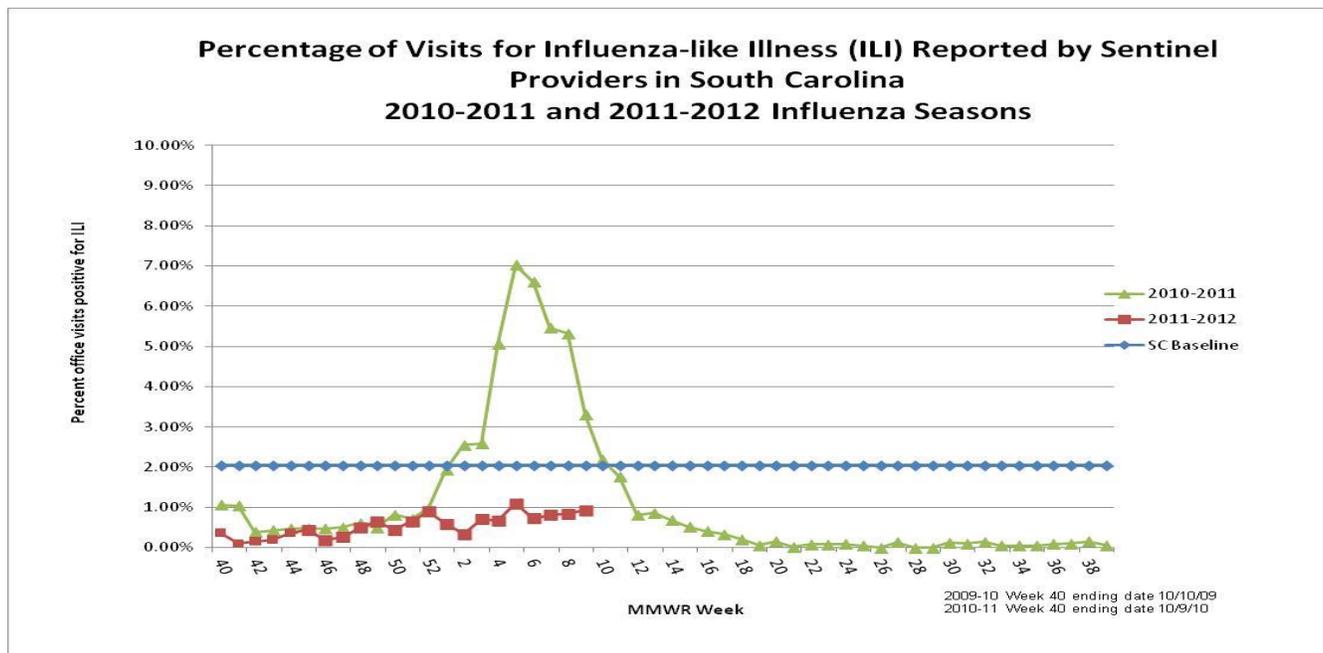
Deaths: No lab confirmed deaths were reported. *Lab confirmation includes positive rapid tests, culture, PCR, DFA, or IFA.*

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

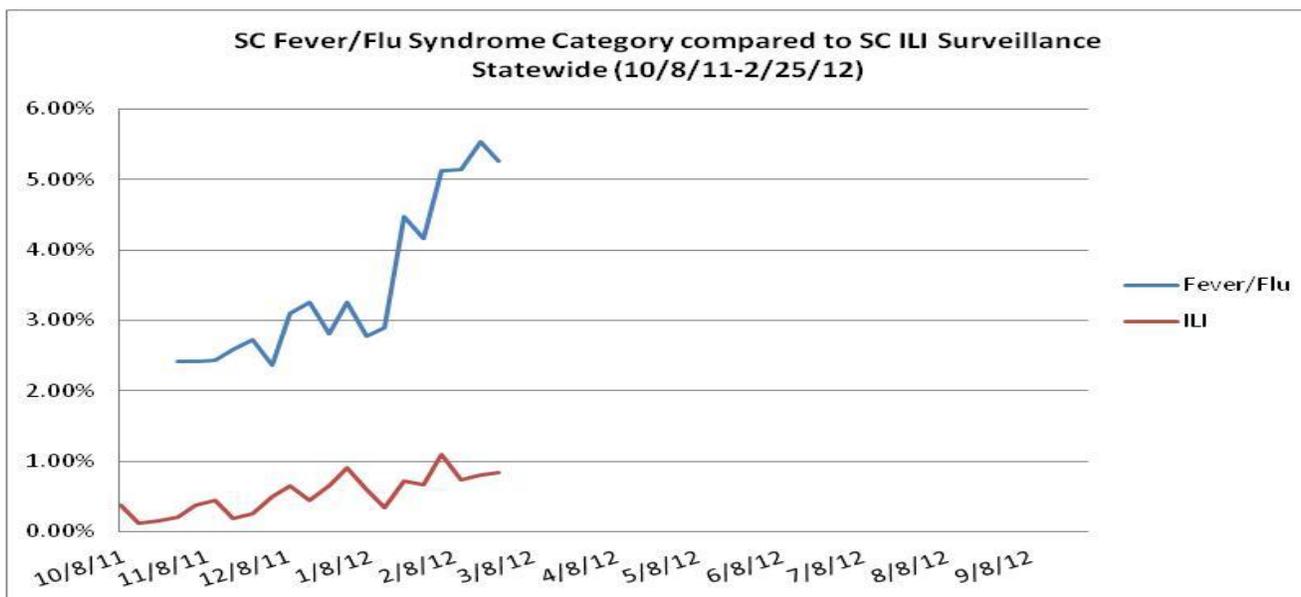
	<i>Current week</i>	<i>Previous week</i>	<i>Change From previous week</i>
Percent of visits to ILINet providers for ILI	.93	.84	▲.09
Number of positive confirmatory tests	11	5	▲ 6
Number of lab confirmed flu hospitalizations	8	8	0
Number of lab confirmed flu deaths	0	0	0

I. ILINet Influenza-Like Illness Surveillance

During MMWR week 9, .93% of patient visits to SC ILINet providers were due to ILI. This is below the state baseline (2.05%). This ILI percentage compares to 3.31% this time last year. Reports were received from providers in 9 counties, representing 6 of the 8 regions. The statewide percentage of ER visits with fever-flu syndrome (only includes hospitals participating in SC syndromic surveillance) was 5.27%.



*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
February 19, 2012 – February 25, 2012**

County	ILI %	County	ILI %
Abbeville	---	Greenwood	NR
Aiken	0%	Hampton	NR
Allendale	---	Horry	NR
Anderson	0%	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	0%
Dillon	NR	Richland	.32%
Dorchester	NR	Saluda	NR
Edgefield	---	Spartanburg	.62%
Fairfield	1.69%	Sumter	NR
Florence	0%	Union	---
Georgetown	3.43%	Williamsburg	---
Greenville	NR	York	1.89%

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



Geographic Region	ILI %	# of Reporters
Upstate-Regions 1 -2	.57	4
Midlands-Regions 3-5	.44	5
Coastal-Regions 6-8	3.43	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 (2/26/12 – 3/3/12)*

	BOL	Other clinical labs
Number of specimens tested	12	NA
Number of positive specimens	9	2
Influenza A unsubtype		1
Influenza A H1N1	2	1
Influenza A H3N2	7	
Influenza B		
Other		

Includes culture, RT-PCR, DFA, and IFA

During MMWR week 9, eleven positive specimens were reported.

Positive confirmatory influenza test results Cumulative (10/2/11 – 3/3/12)*

	BOL	Other clinical labs
Number of specimens tested	84	NA
Number of positive specimens	36	6
Influenza A unsubtype		4
Influenza A H1N1	15	
Influenza A H3N2	18	1
Influenza B	3	1
Other		

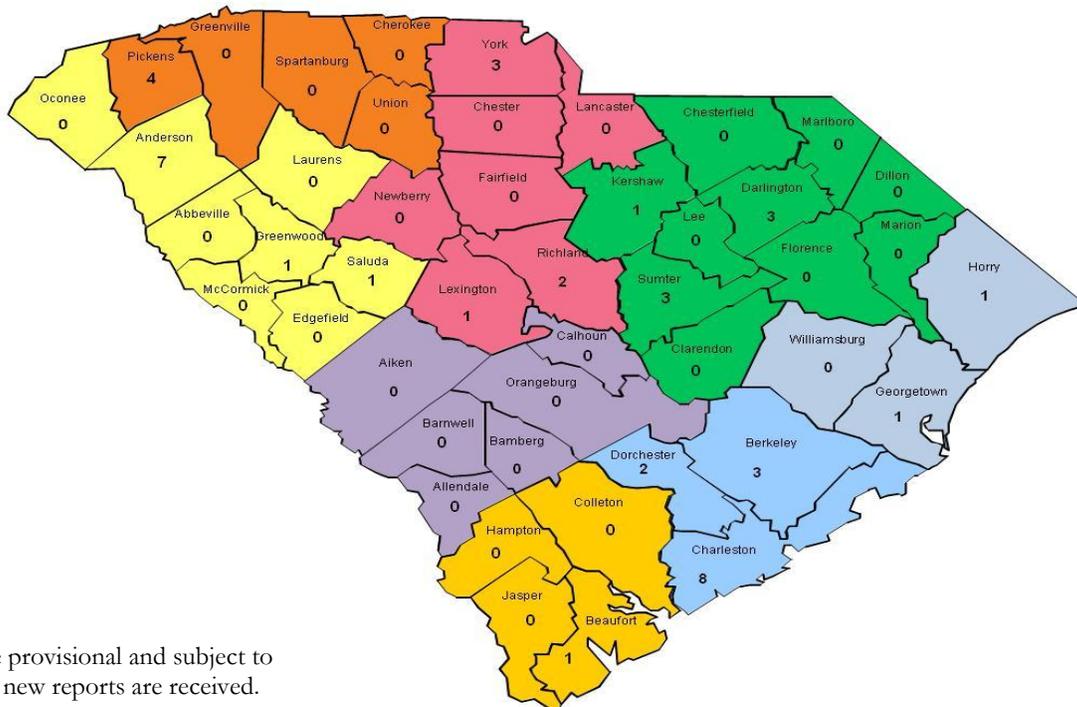
Includes culture, RT-PCR, DFA, and IFA

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

Positive Confirmatory Tests by County
Current Week 2/26/12 – 3/3/12

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

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



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

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

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

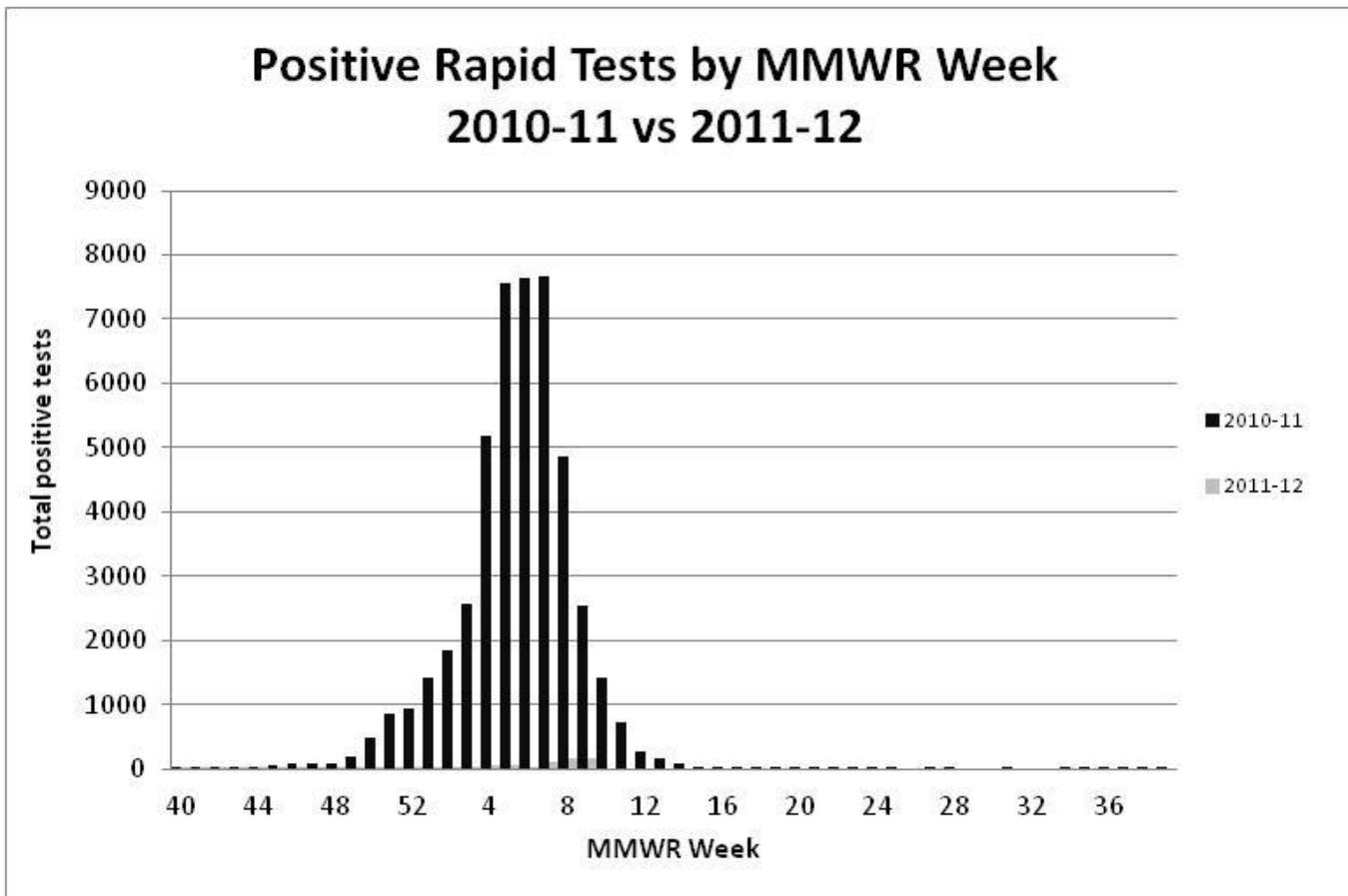
III. Positive Rapid Antigen Tests

During MMWR week 9, 160 positive rapid antigen tests were reported. Of these, there were 128 influenza A, 21 influenza B, and 11 influenza A/B. During this MMWR week last year, 2533 positive rapid tests were reported.

	Total Positive Rapid Antigen Tests				
	<i>Influenza A</i>	<i>Influenza B</i>	<i>Influenza A/B</i>	<i>Unk/Other</i>	<i>Total</i>
Current MMWR (2/26- 3/3/12)	128	21	11		160
Cumulative (since 10/2/11)	696	199	58	12	965

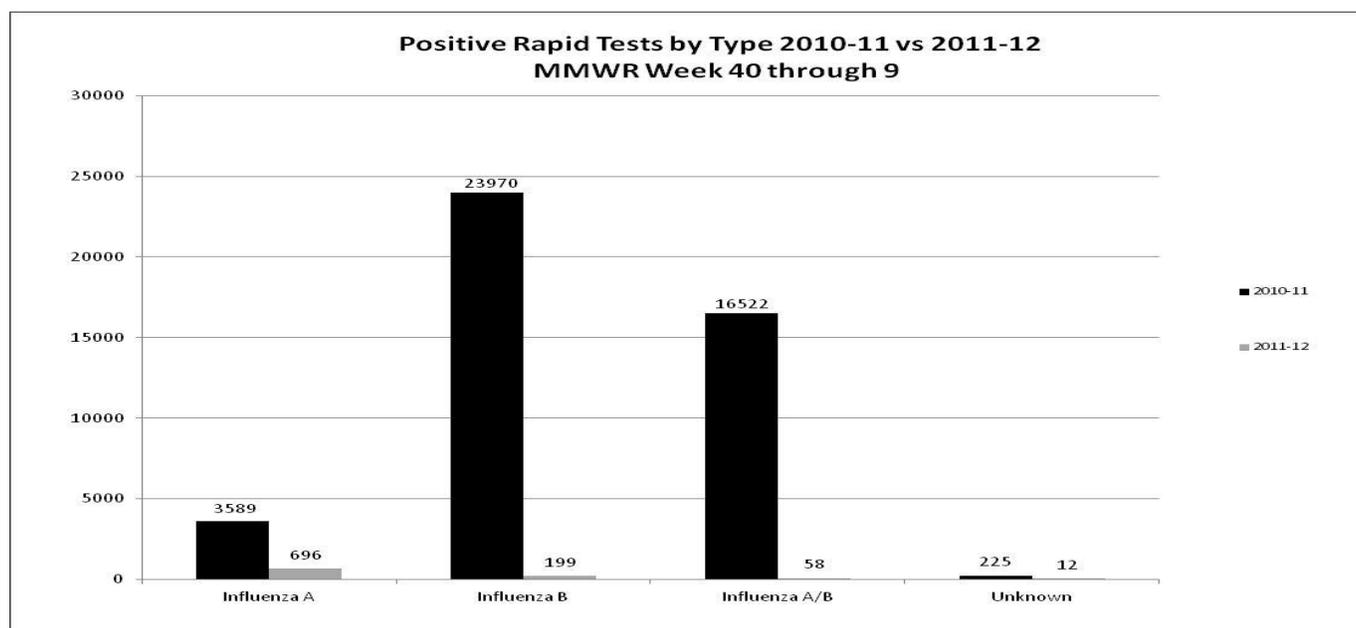
Positive Rapid Flu Tests by County
Current Week 2/26/12 – 3/3/12

County	Positive Tests	County	Positive Tests	County	Positive Tests
Abbeville	2	Dillon		Lexington	8
Aiken	5	Dorchester	5	Marion	
Allendale		Edgefield		Marlboro	
Anderson	9	Fairfield		McCormick	
Bamberg		Florence	2	Newberry	1
Barnwell		Georgetown	9	Oconee	4
Beaufort	1	Greenville	11	Orangeburg	
Berkeley	2	Greenwood	3	Pickens	4
Calhoun		Hampton		Richland	7
Charleston	5	Horry	11	Saluda	
Cherokee		Jasper		Spartanburg	15
Chester	9	Kershaw		Sumter	1
Chesterfield		Lancaster	1	Union	
Clarendon		Laurens	3	Williamsburg	
Colleton		Lee		York	40
Darlington	2				



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

	A	B	A/B	Unk		A	B	A /B	Unk
Region 1					Region 2				
Abbeville	7	2			Cherokee	1			
Anderson	62	10			Greenville	68	24	2	1
Edgefield					Pickens	25	4	1	
Greenwood	7	1	1		Spartanburg	66	1	2	
Laurens	6	3			Union	5		6	
McCormick					Region 4				
Oconee	14	6	1	1	Chesterfield	1			
Saluda	1	1			Clarendon	2	1		
Region 3					Darlington	13	1		4
Chester	28				Dillon				
Fairfield	1				Florence	30	7	4	
Lancaster	2	1			Kershaw	10		1	
Lexington	13	3	5		Lee				
Newberry	3				Marion	1			
Richland	33	21	3	5	Marlboro	1	1		
York	78	8	5	1	Sumter	25			
Region 5					Region 6				
Aiken	4	1			Georgetown	47	5		
Allendale					Horry	47	71	11	
Bamberg			1		Williamsburg		2	5	
Barnwell					Region 8				
Calhoun					Beaufort	6			
Orangeburg					Colleton	3	1		
Region 7					Hampton				
Berkeley	7	4	2		Jasper	1	1	1	
Charleston	69	9	4						
Dorchester	54	12							

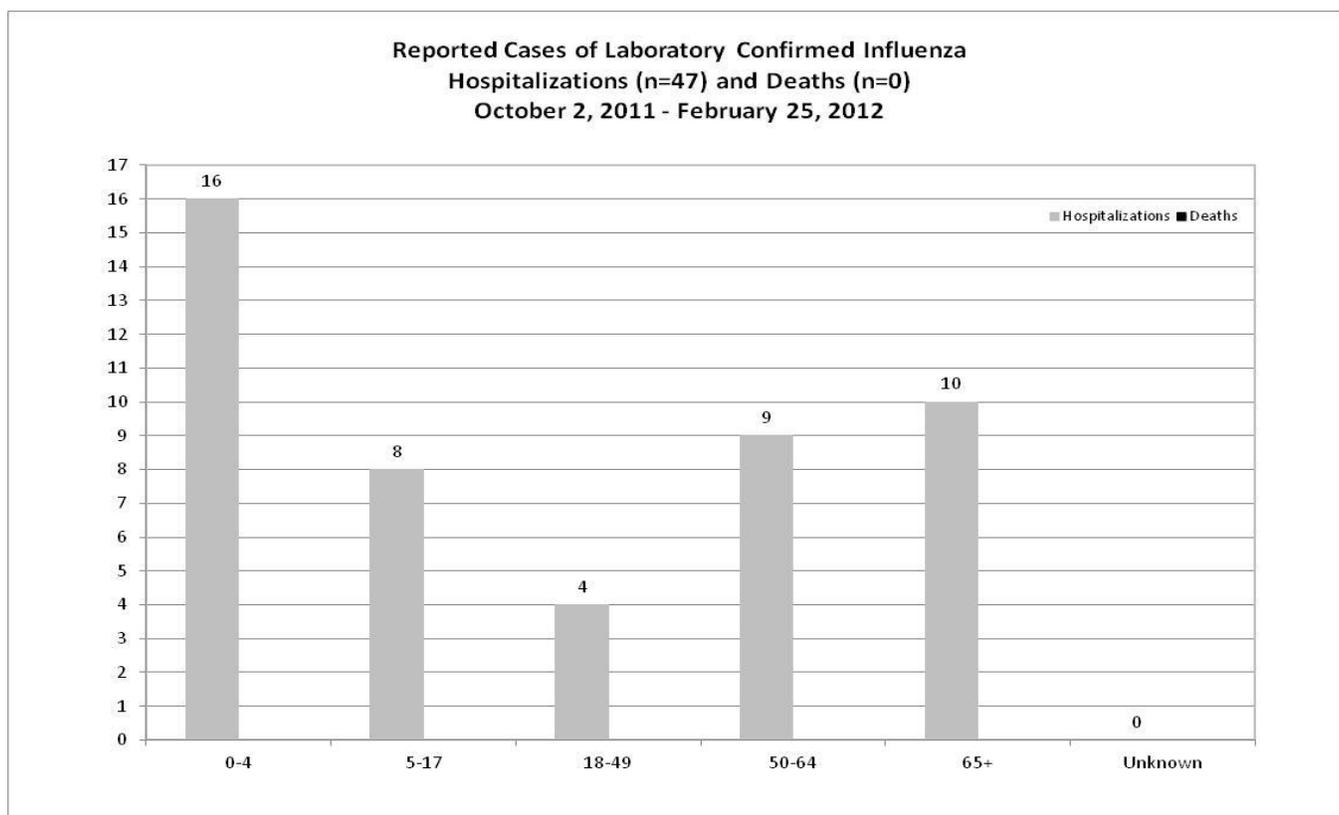


IV. Influenza hospitalizations and deaths

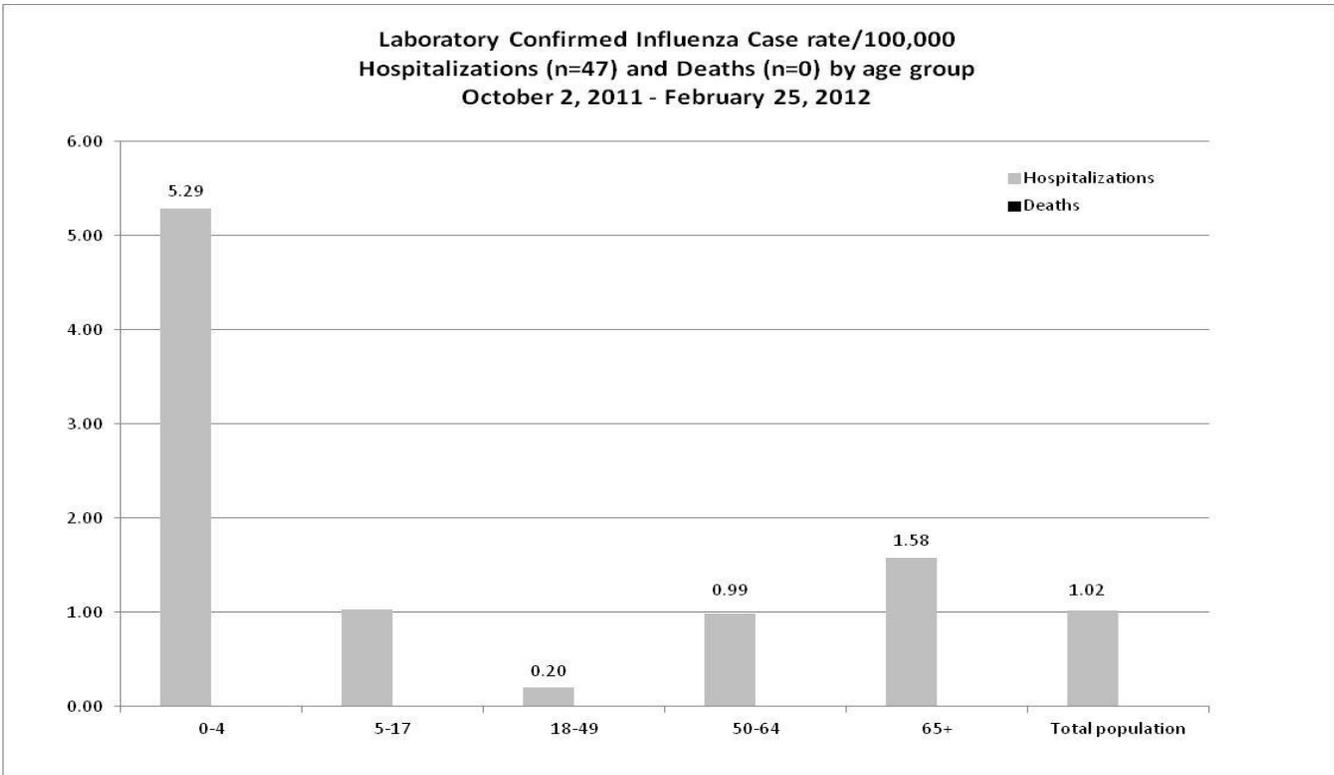
During MMWR week 9 eight lab confirmed* influenza hospitalizations were reported. No lab confirmed deaths were reported.

	Total number*	
	<i>Current MMWR (2/26- 3/3/12)</i>	<i>Cumulative (since 10/2/11)</i>
Number of Hospitals Reporting (current week)	35	
Hospitalizations	8	47
Deaths	0	0

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

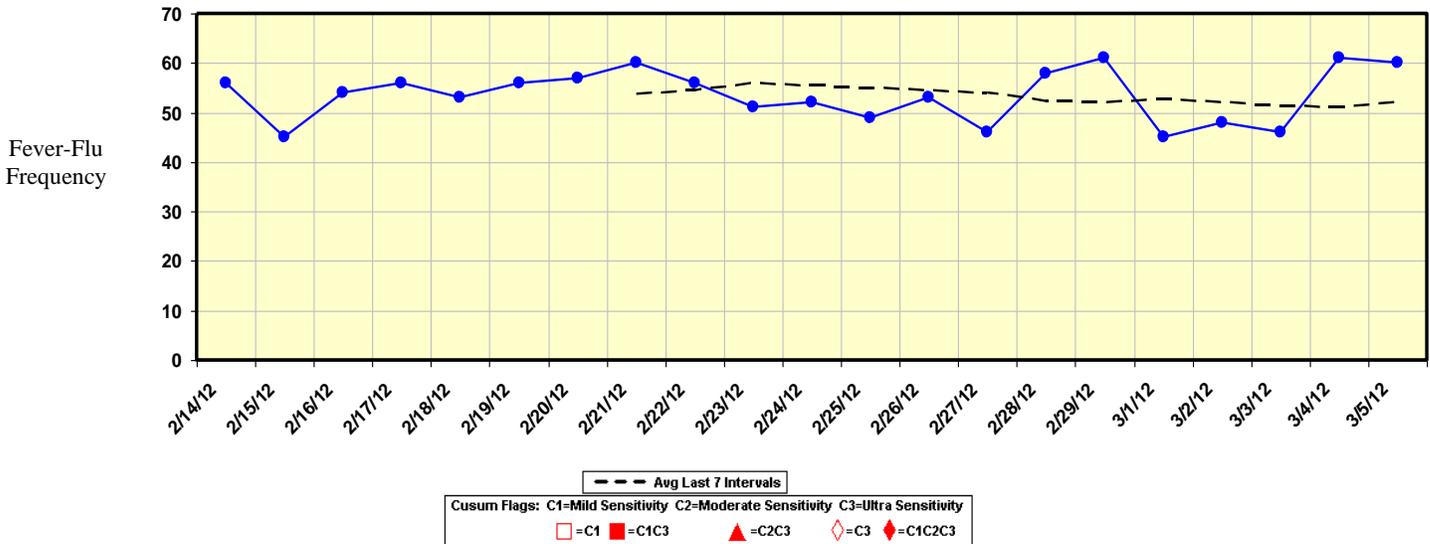


Laboratory Confirmed Influenza Case rate/100,000
Hospitalizations (n=47) and Deaths (n=0) by age group
October 2, 2011 - February 25, 2012



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

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

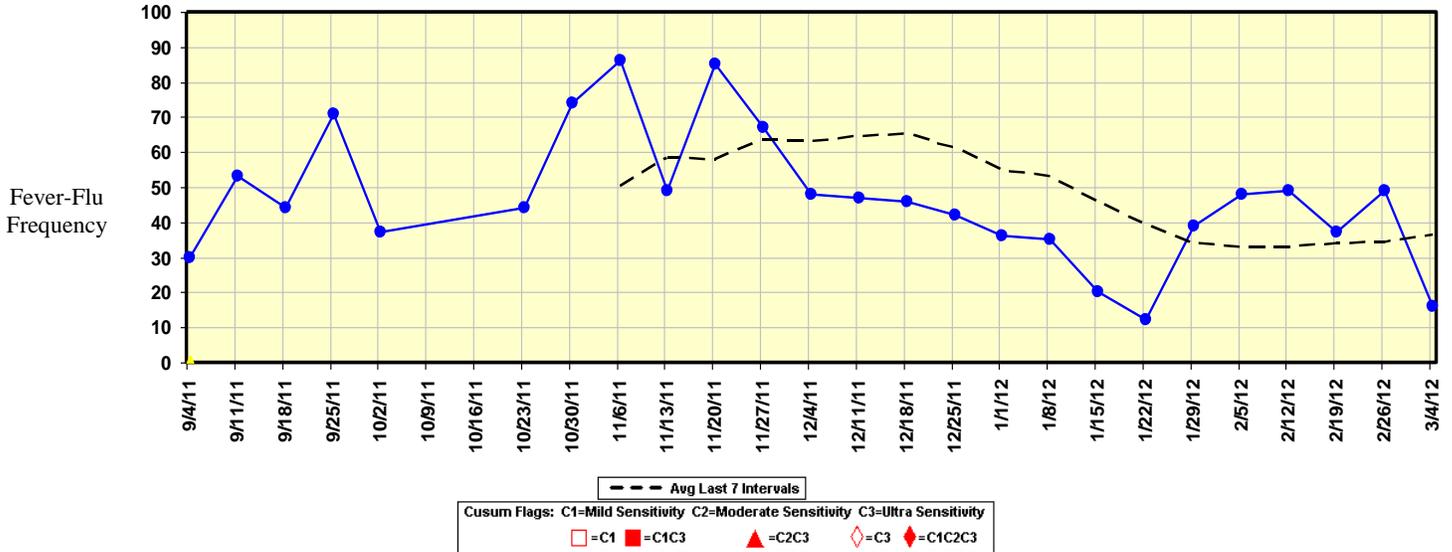
The SC Statewide Fever-Flu Syndrome graph above illustrates the daily counts of hospital emergency department (ED) visits with an Influenza-like Illness (ILI) for the past 21 days. A total of 20 hospital facilities are reporting to the SC-DARTS system. These 18 include: AnMed Health (Region 1); Self 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); Trident (Region 7); Colleton (Region 8); and Hampton Regional (Region 8).

Statewide CUSUM Flag Alerts Description:

No flags for the past week.

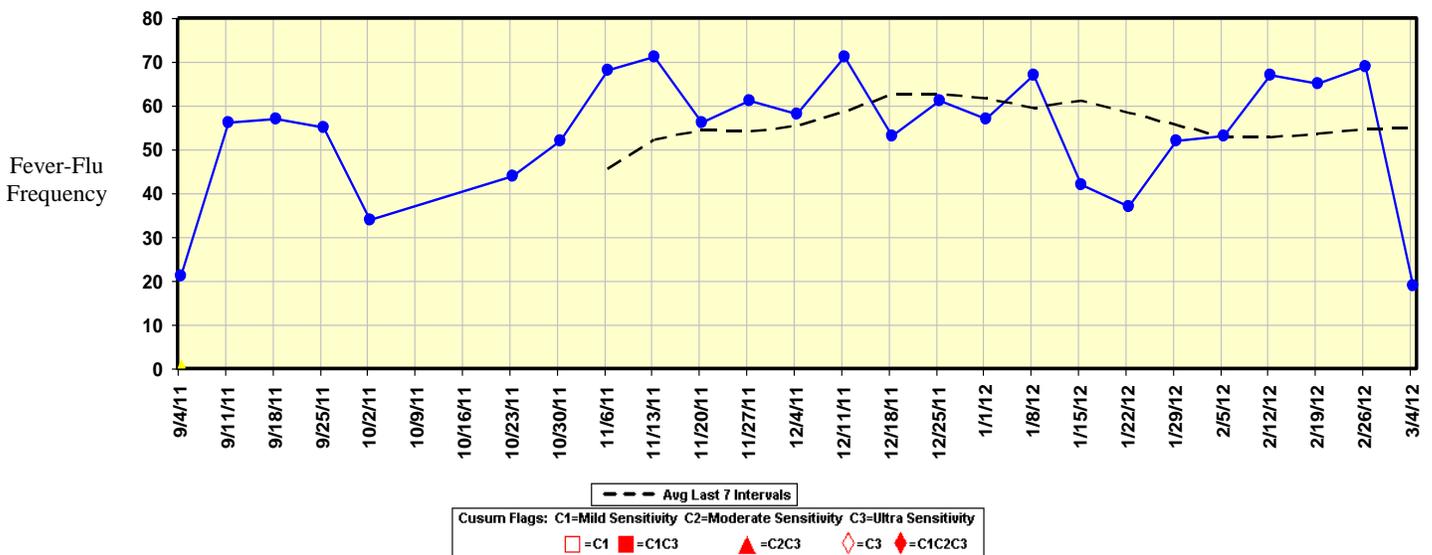
Below are the fever-flu syndrome graphs by Region for the past 180 days (weekly interval).

Region 1 - Fever Flu Syndrome



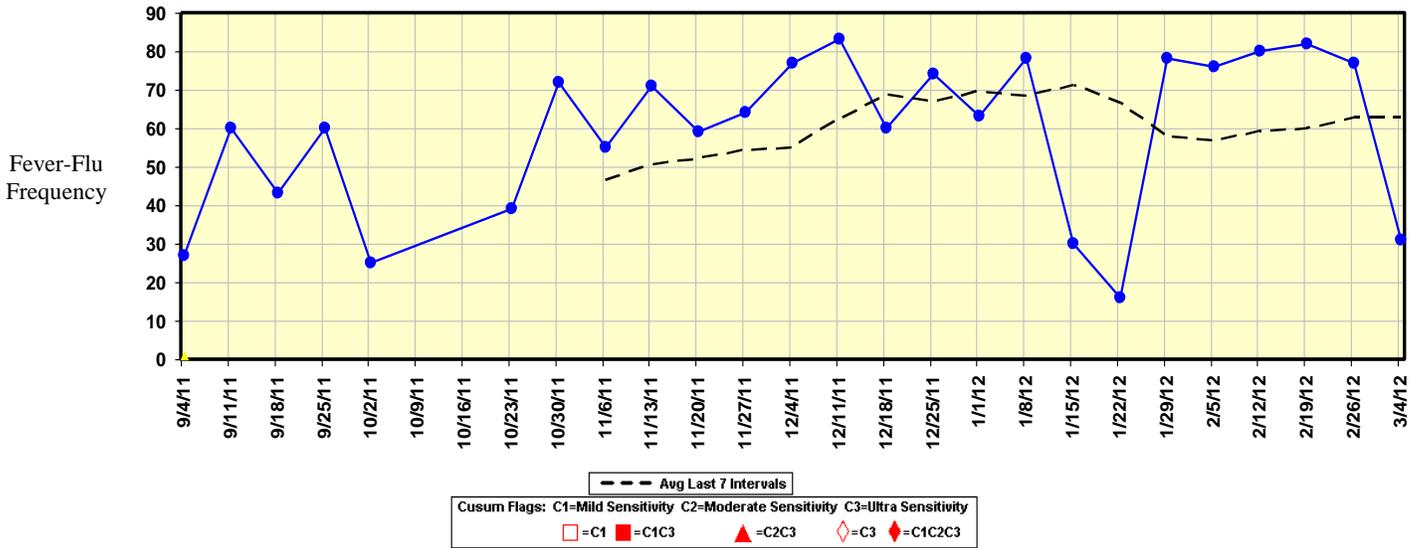
Region1 Hospitals (# of Facilities): AnMed Health (3); Self-Regional (1); Oconee Medical Center (1);

Region 2 - Fever Flu Syndrome



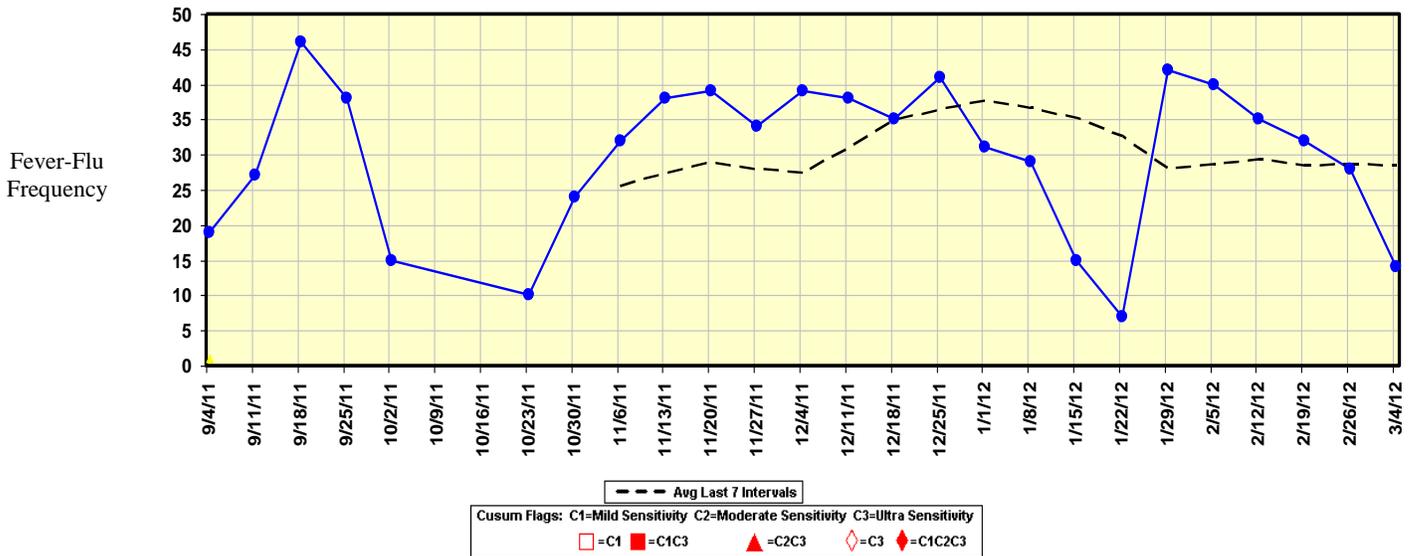
Region 2 Hospitals (# of Facilities): Greenville Hospital System (4); Palmetto Health Easley (1)

Region 3 - Fever Flu Syndrome



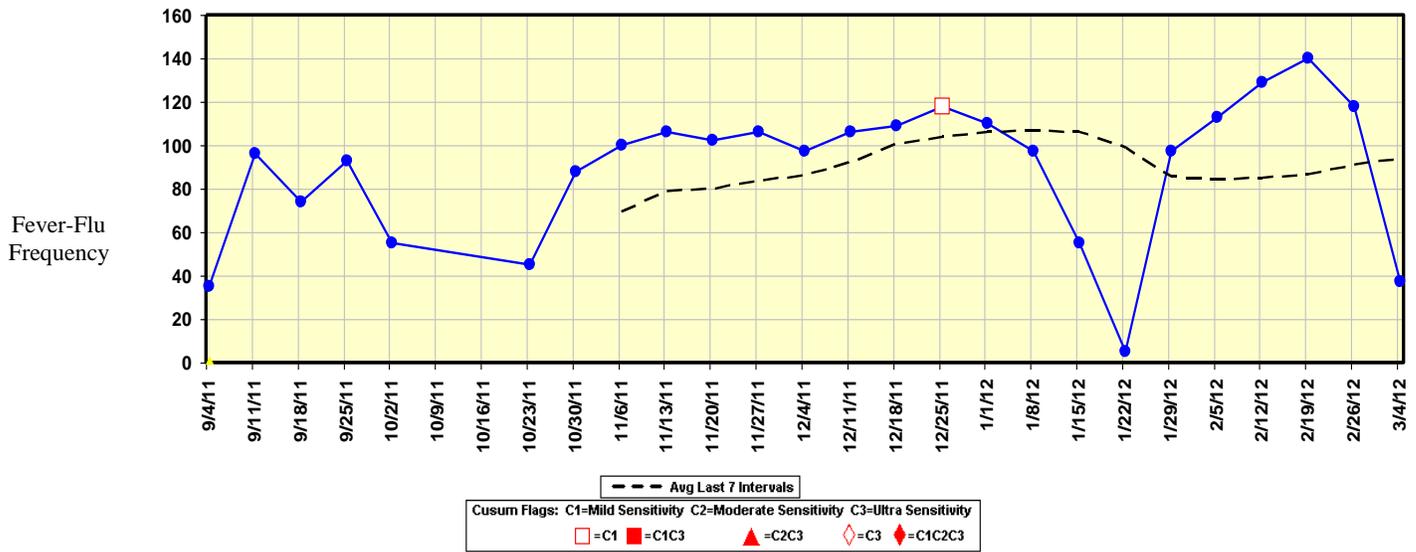
Region 3 Hospitals (# of Facilities): Palmetto Health Baptist (1), Palmetto Health Richland (1)

Region 4 - Fever Flu Syndrome



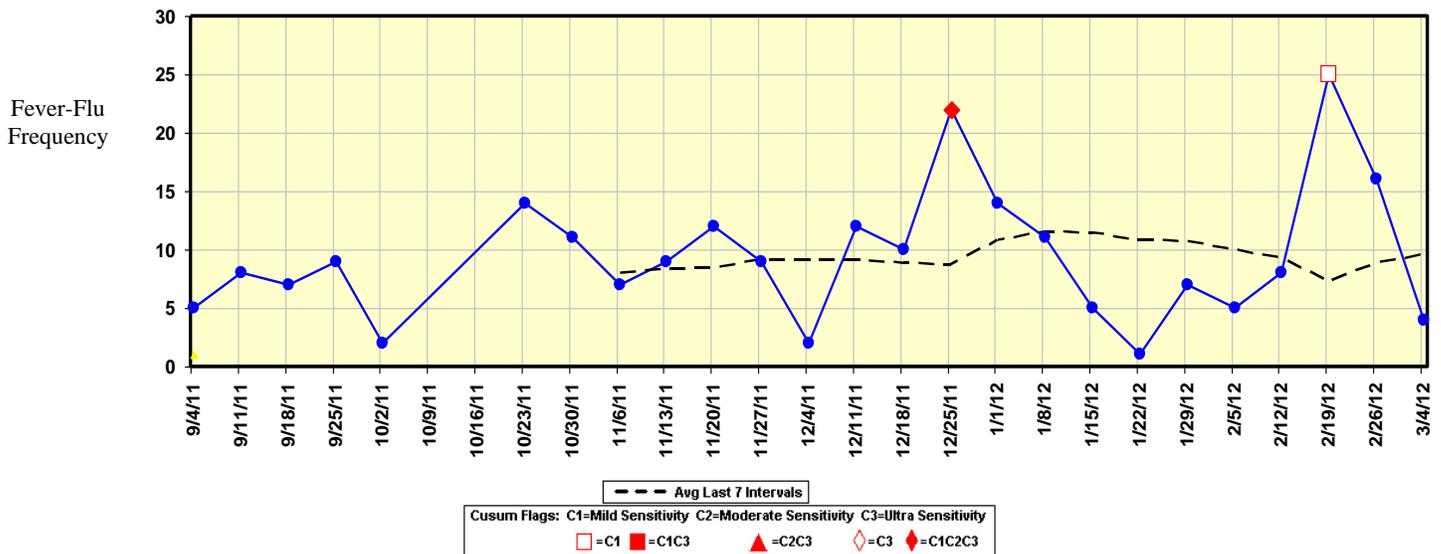
Region 4 Hospitals (# of Facilities): Kershaw Health (1); McLeod Health (1)

Region 7 - Fever Flu Syndrome



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

Region 8 - Fever Flu Syndrome



Region 8 Hospitals (# of Facilities): Hampton Regional (1), Colleton (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		
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
	OR		
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 CHES 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 $U \geq 100^{\circ}\text{F}$) 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.

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**.

