



Flu Watch

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

Week Ending April 14, 2012 (MMWR Week 15)

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

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MMWR Week 15 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 (.09%), the Midlands (.15%), and along the Coast (1.63%). The state ILI percentage is .20%. These data reflect reports from 17 (53.1%) providers.

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

SC Viral Isolate and RT-PCR Activity: Four positive specimens were reported. One hundred and three positive specimens have been reported this season.

Positive Rapid Flu Test Activity: Sixty-nine positive rapid tests were reported. So far this season, 2037 have been reported.

Hospitalizations*: Two lab confirmed hospitalizations were reported. Eighty-eight lab confirmed hospitalizations have been reported this season.

Deaths*: No lab confirmed deaths were reported. One lab confirmed death has been reported this season.

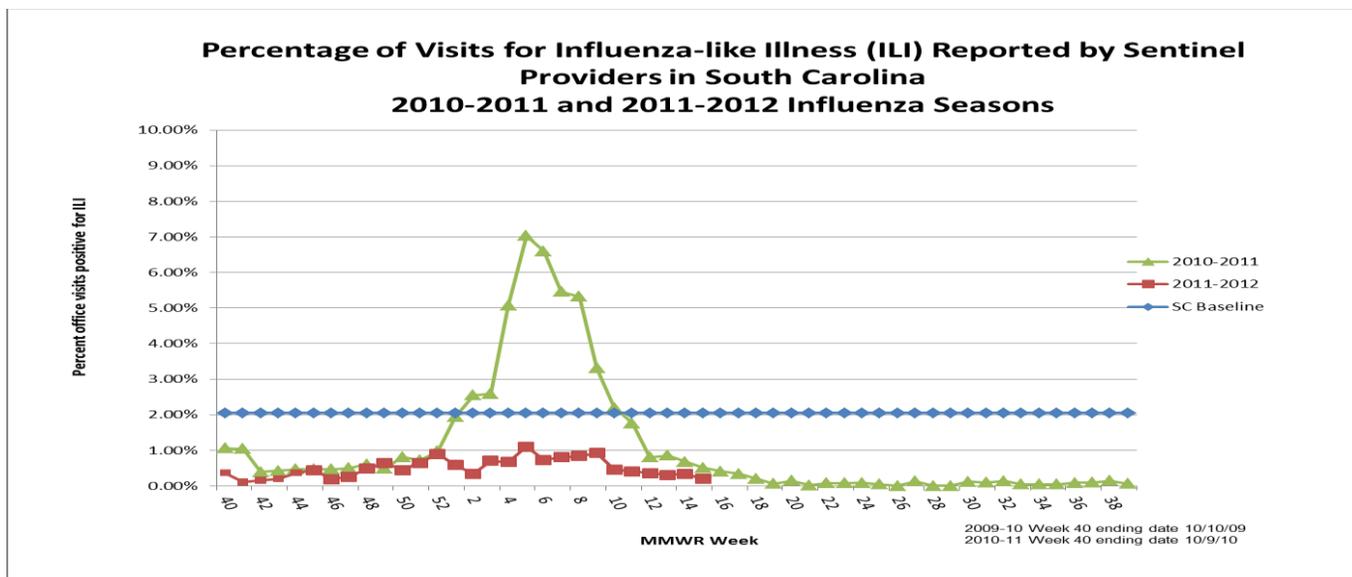
**Lab confirmation includes positive rapid tests, culture, PCR, DFA, or IFA.*

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

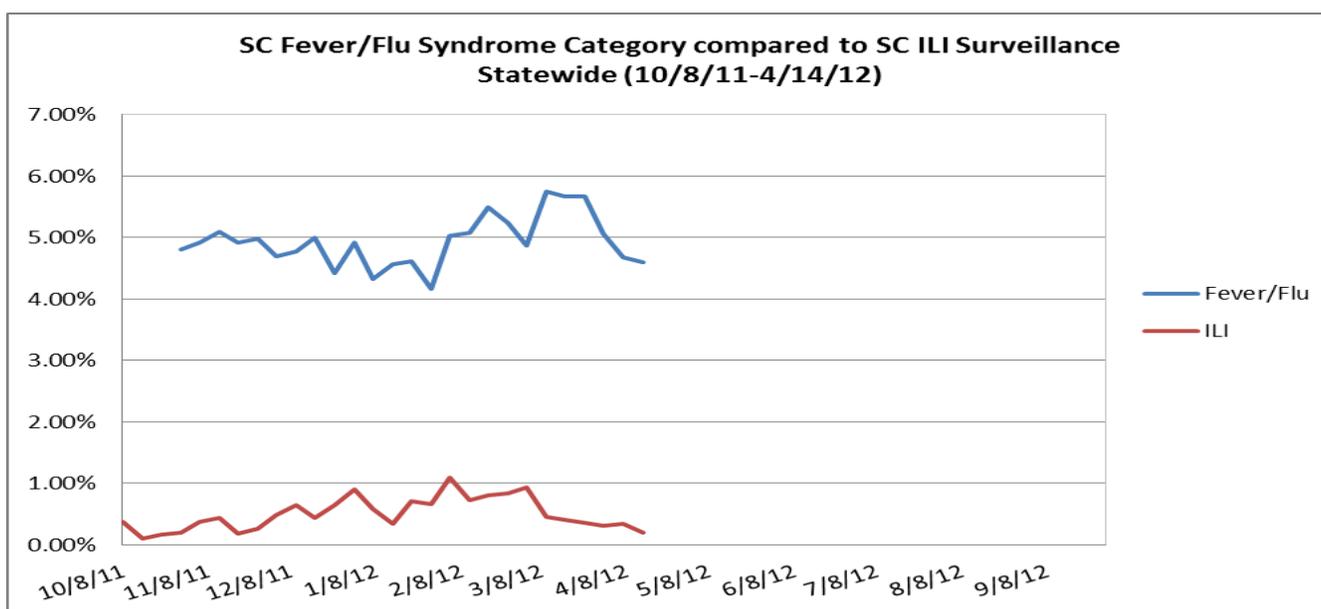
	<i>Current week</i>	<i>Previous week</i>	<i>Change From previous week</i>
Percent of visits to ILINet providers for ILI	.20	.34	▼ .14
Number of positive confirmatory tests	4	7	▼ 3
Number of lab confirmed flu hospitalizations	2	10	▼ 8
Number of lab confirmed flu deaths	0	0	0

I. ILINet Influenza-Like Illness Surveillance

During MMWR week 15, .20% of patient visits to SC ILINet providers were due to ILI. This is below the state baseline (2.05%). This ILI percentage compares to .51% this time last year. Reports were received from providers in 13 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 4.60%.



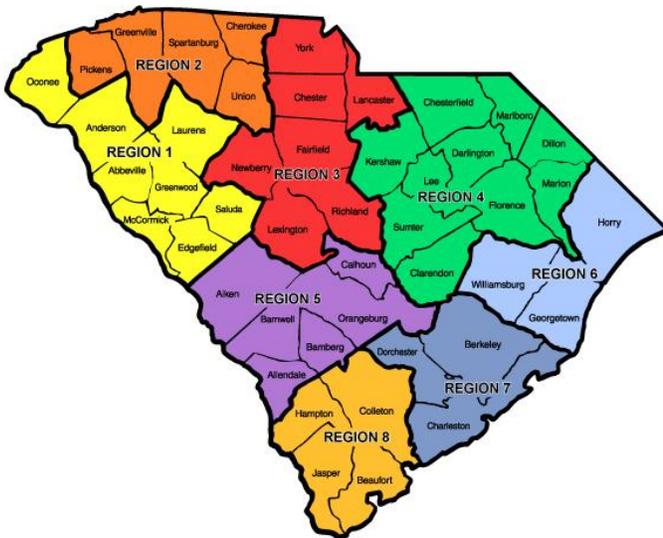
*The SC baseline is the mean percentage of patient visits for ILI during non-influenza weeks (weeks when percent of positive lab tests was below 20%) for the previous three seasons plus two standard deviations.



**Reported Influenza-Like Illness by Sentinel Providers
April 8, 2012 – April 14, 2012**

County	ILI %	County	ILI %
Abbeville	---	Greenwood	NR
Aiken	0%	Hampton	NR
Allendale	---	Horry	NR
Anderson	3.17%	Jasper	NR
Bamberg	---	Kershaw	.27%
Barnwell	---	Lancaster	---
Beaufort	NR	Laurens	NR
Berkeley	NR	Lee	---
Calhoun	---	Lexington	NR
Charleston	NR	Marion	---
Cherokee	---	Marlboro	---
Chester	---	McCormick	0%
Chesterfield	---	Newberry	---
Clarendon	---	Oconee	---
Colleton	---	Orangeburg	---
Darlington	---	Pickens	0%
Dillon	NR	Richland	0%
Dorchester	NR	Saluda	0%
Edgefield	---	Spartanburg	.12%
Fairfield	0%	Sumter	NR
Florence	.36%	Union	---
Georgetown	1.96%	Williamsburg	---
Greenville	0%	York	.76%

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



Geographic Region	ILI %	# of Reporters
Upstate-Regions 1 -2	.09	9
Midlands-Regions 3-5	.15	7
Coastal-Regions 6-8	1.63	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 (4/8/12 – 4/14/12)

	BOL	Other clinical labs
Number of specimens tested	3	NA
Number of positive specimens	1	3
Influenza A unsubtype		1
Influenza A H1N1		1
Influenza A H3N2		
Influenza B	1	1
Other		

*Includes culture, RT-PCR, DFA, and IFA

During MMWR week 15, 4 positive specimens were reported.

Positive confirmatory influenza test results* Cumulative (10/2/11 – 4/14/12)

	BOL	Other clinical labs
Number of specimens tested	144	NA
Number of positive specimens	69	34
Influenza A unsubtype		16
Influenza A H1N1	37	9
Influenza A H3N2	25	5
Influenza B	7	2
Other [†]		2

*Includes culture, RT-PCR, DFA, and IFA

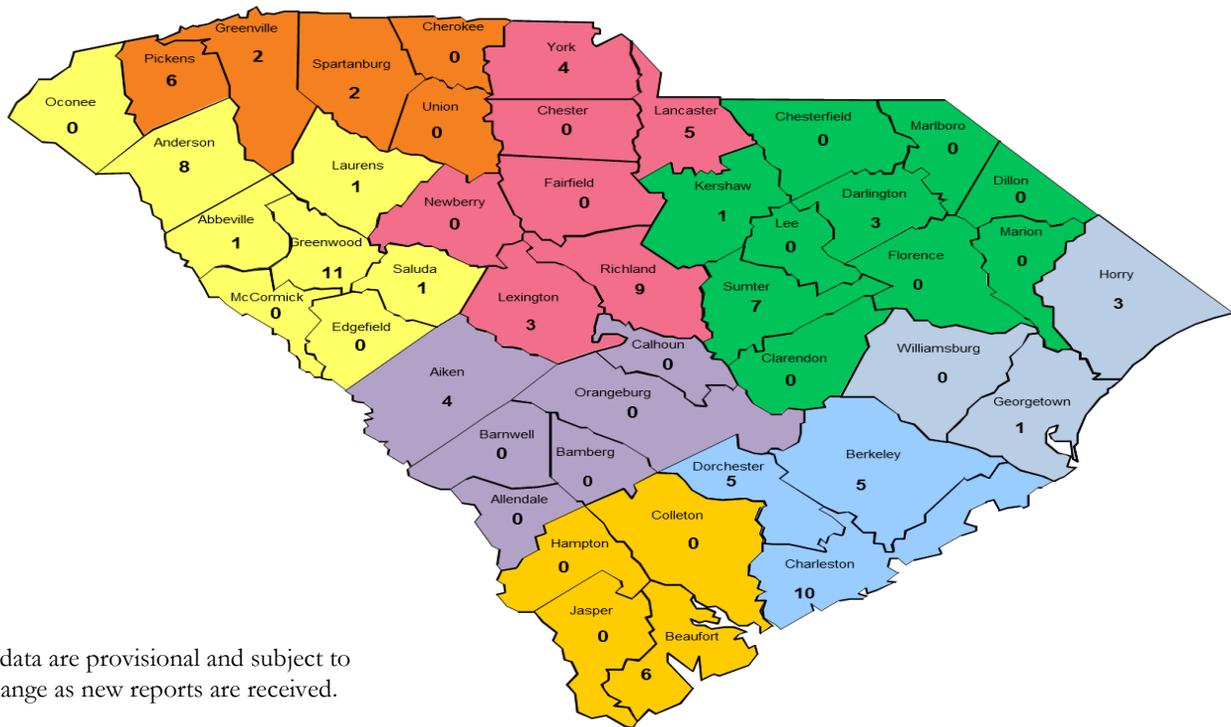
[†]Includes one unknown type and one influenza A and B coinfection

**Positive Confirmatory Tests by County
Current Week 4/8/12 – 4/14/12**

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

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

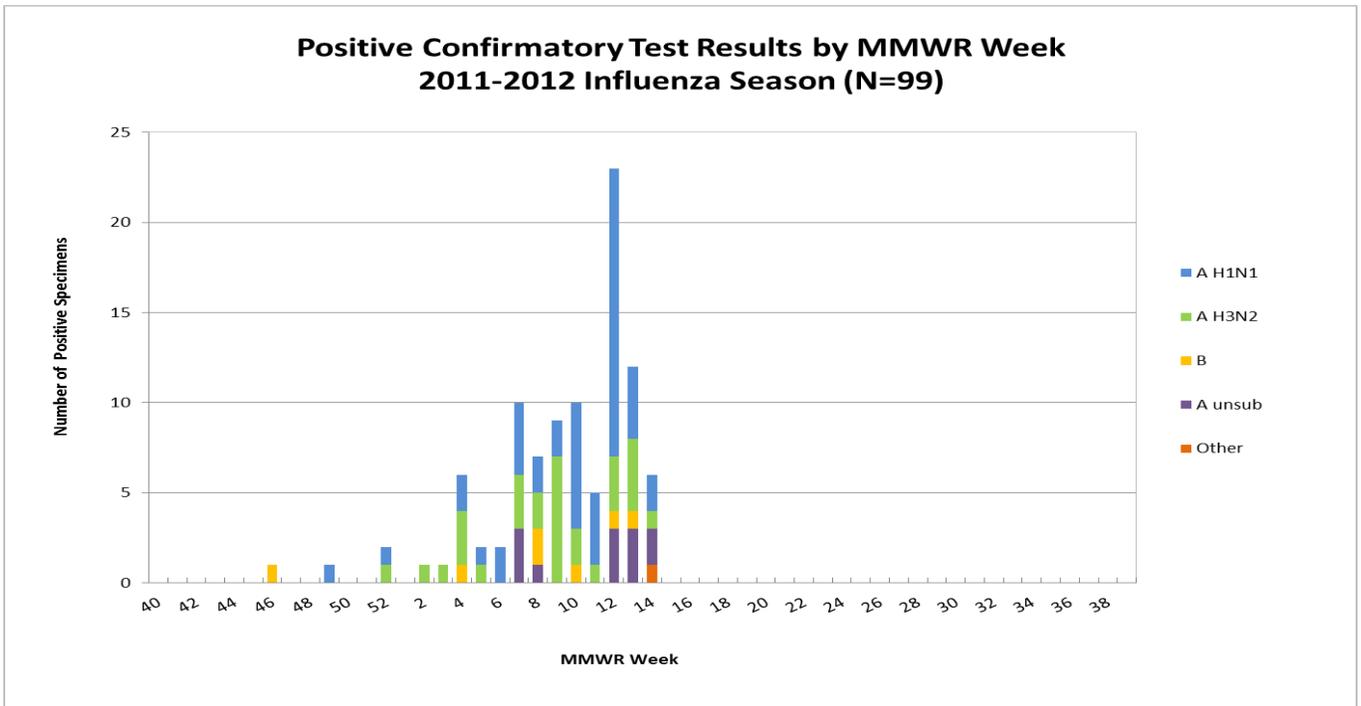
**Map of Positive Confirmatory Tests by County
Cumulative 10/2/11 -4/14/12**



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

**Positive Confirmatory Tests by County and Type
Cumulative 10/2/11 – 4/14/12**

	A H1N1	A H3N2	B	A Unsub	Unk/Other	A H1N1	A H3N2	B	A Unsub	Unk/Other
Region 1										
Abbeville	1									
Anderson		8		1						
Edgefield										
Greenwood	10	1								
Laurens		1								
McCormick										
Oconee										
Saluda	1									
Region 3										
Chester										
Fairfield										
Lancaster	3			2						
Lexington	2		1							
Newberry										
Richland	4	2	1	1						
York	3	1								
Region 5				2						
Aiken	2				1					
Allendale										
Bamberg										
Barnwell										
Calhoun										
Orangeburg										
Region 7										
Berkeley	3	3		1						
Charleston	2	7		1						
Dorchester	3		2							
Region 2										
Cherokee										
Greenville	2									
Pickens	6									
Spartanburg									2	
Union										
Region 4										
Chesterfield										
Clarendon										
Darlington									3	
Dillon										
Florence										
Kershaw							1			
Lee										
Marion										
Marlboro										
Sumter	4	1	1							1
Region 6										
Georgetown	1									
Horry	2							1		
Williamsburg										
Region 8										
Beaufort	2	3	2							
Colleton										
Hampton										
Jasper										



III. Positive Rapid Antigen Tests

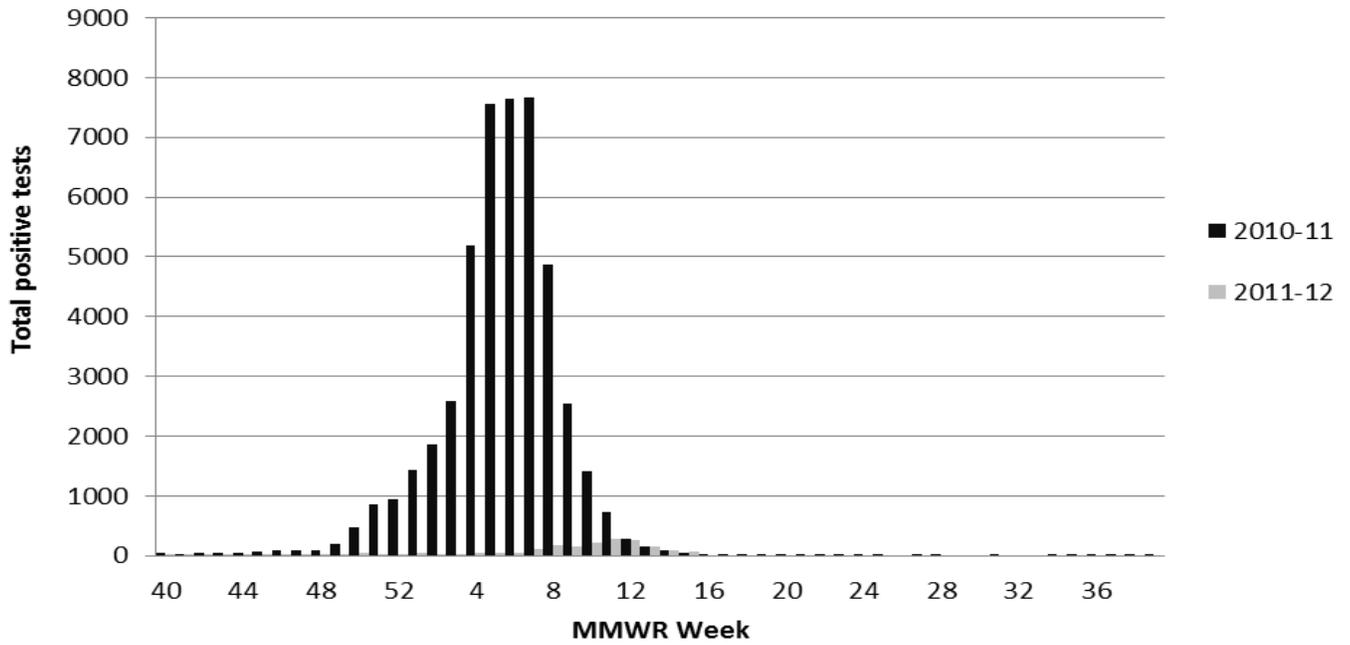
During MMWR week 15, 69 positive rapid antigen tests were reported. Of these, there were 56 influenza A, 10 influenza B, and 3 influenza A/B. During this MMWR week last year, 40 positive rapid tests were reported.

	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 (4/8- 4/14/12)	56	10	3		69
Cumulative (since 10/2/11)	1627	283	114	13	2037

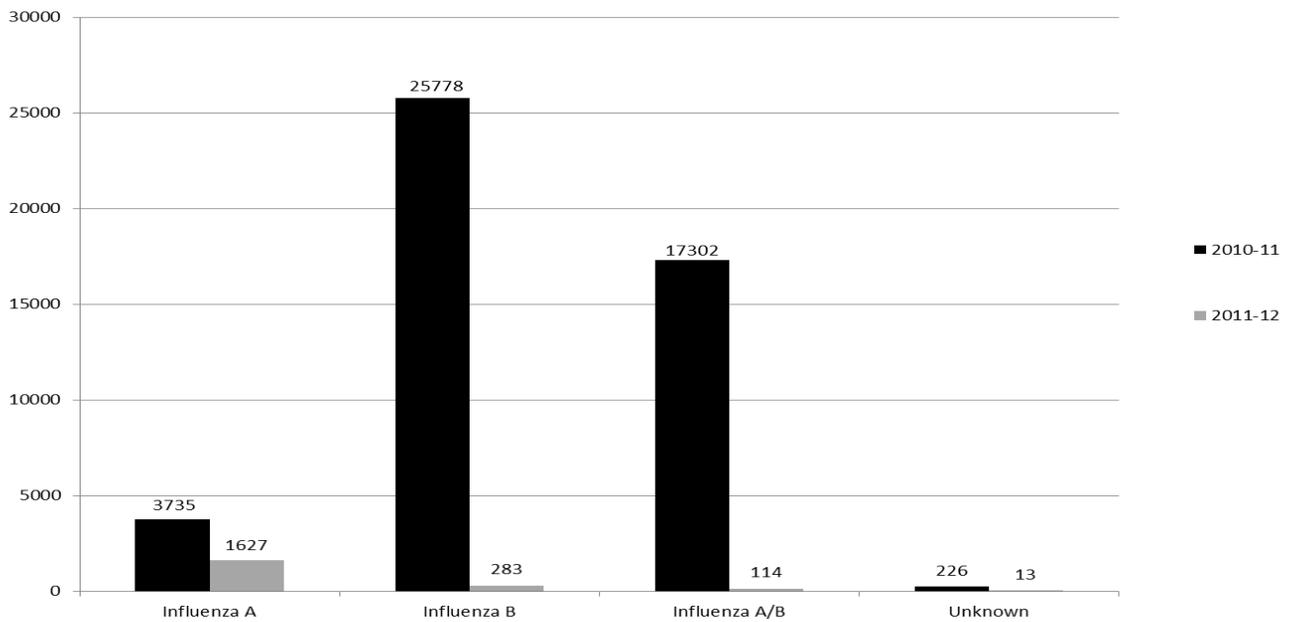
Positive Rapid Flu Tests by County Current Week 4/8/12 – 4/14/12

County	Positive Tests	County	Positive Tests	County	Positive Tests
Abbeville	2	Dillon		Lexington	1
Aiken	1	Dorchester	4	Marion	
Allendale		Edgefield		Marlboro	
Anderson	1	Fairfield		McCormick	
Bamberg		Florence	10	Newberry	
Barnwell		Georgetown	1	Oconee	1
Beaufort	4	Greenville	11	Orangeburg	
Berkeley	1	Greenwood		Pickens	2
Calhoun		Hampton		Richland	1
Charleston	7	Horry	7	Saluda	
Cherokee		Jasper		Spartanburg	3
Chester		Kershaw		Sumter	3
Chesterfield	1	Lancaster		Union	
Clarendon		Laurens		Williamsburg	
Colleton	3	Lee		York	2
Darlington	3				

Positive Rapid Tests by MMWR Week 2010-11 vs 2011-12



Positive Rapid Tests by Type 2011-12 MMWR Weeks 40-15



**Positive Rapid Tests by County and Type
Cumulative 10/2/11 – 4/14/12**

	A	B	A/B	Unk		A	B	A /B	Unk
Region 1					Region 2				
Abbeville	27	5			Cherokee	2			
Anderson	106	12	5		Greenville	142	26	4	1
Edgefield					Pickens	46	6	1	
Greenwood	38	3	6		Spartanburg	135	2	3	
Laurens	18	3	2		Union	16		9	
McCormick	3				Region 4				
Oconee	35	7	1	1	Chesterfield	2			
Saluda	1	1			Clarendon	4	1		
Region 3					Darlington	43	3	1	5
Chester	55				Dillon				
Fairfield	1				Florence	56	9	12	
Lancaster	24	2			Kershaw	18	1	1	
Lexington	39	6	7		Lee				
Newberry	86				Marion	1			
Richland	97	29	3	5	Marlboro	1	1		
York	209	18	20	1	Sumter	36	1		
Region 5					Region 6				
Aiken	9	1			Georgetown	72	7		
Allendale					Horry	75	93	15	
Bamberg			1		Williamsburg		2	5	
Barnwell					Region 8				
Calhoun					Beaufort	52	7	1	
Orangeburg	5				Colleton	18	4		
Region 7					Hampton				
Berkeley	14	4	3		Jasper	5	1	1	
Charleston	165	19	12						
Dorchester	74	15							

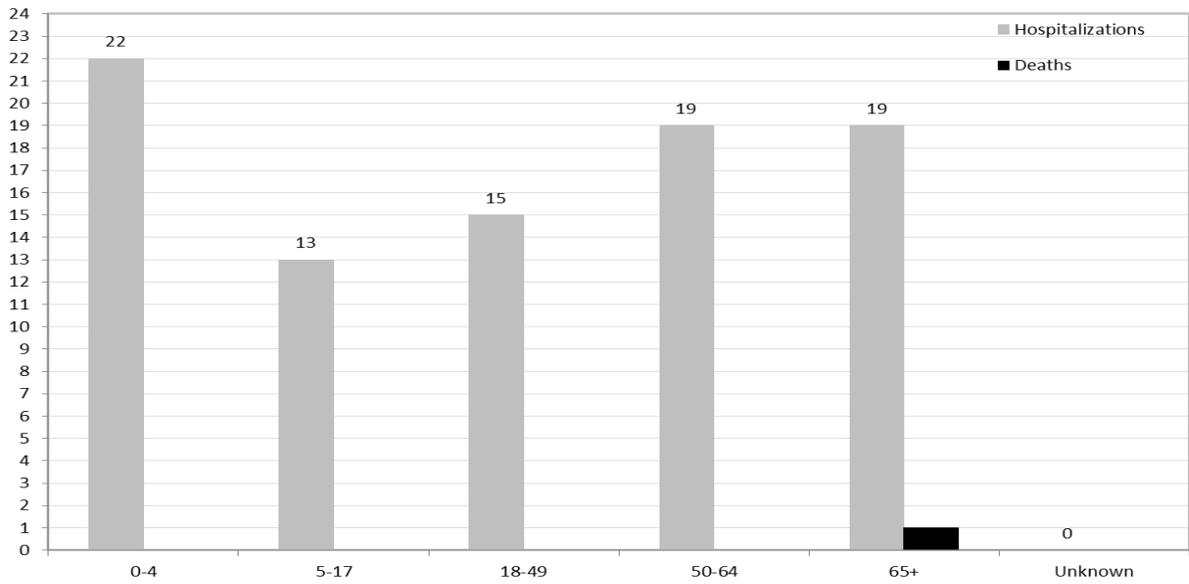
IV. Influenza hospitalizations and deaths

During MMWR week 15 two lab confirmed* influenza hospitalizations were reported. No lab confirmed deaths were reported.

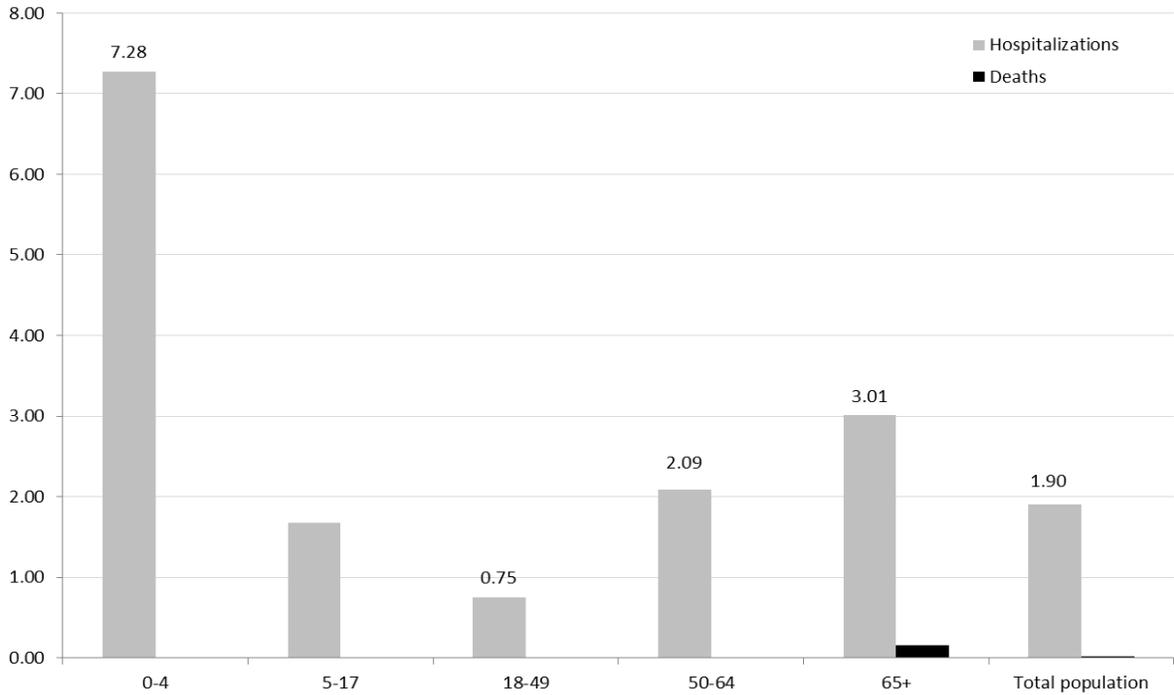
	Total number*	
Number of Hospitals Reporting (current week)	29	
	<i>Current MMWR (4/8/- 4/14/12)</i>	<i>Cumulative (since 10/2/11)</i>
Hospitalizations	2	88
Deaths	0	1

*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=88) and Deaths (n=1)
October 2, 2011 - April 14, 2012**



**Laboratory Confirmed Influenza Case rate/100,000
Hospitalizations (n=88) and Deaths (n=1) by age group
October 2, 2011 - April 14, 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 21 hospital facilities are reporting to the SC-DARTS system. These 21 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); Elgin Urgent Care (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.

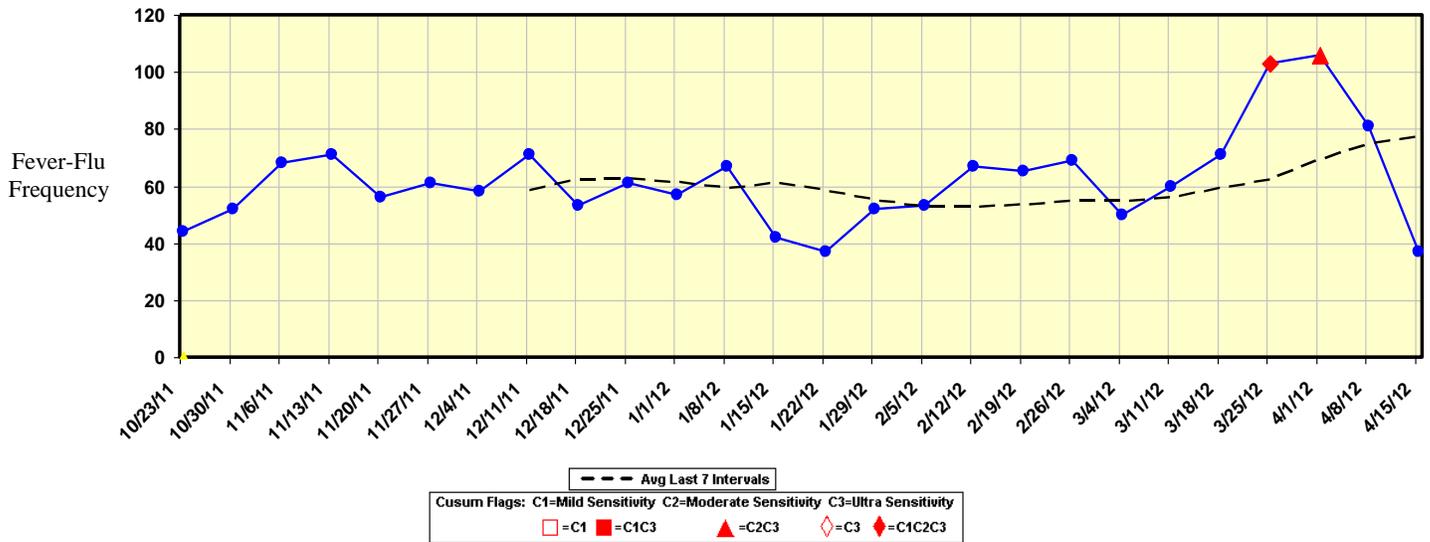
Below are the fever-flu syndrome graphs by Region for the past 180 days (weekly interval).

Region 1 - Fever Flu Syndrome



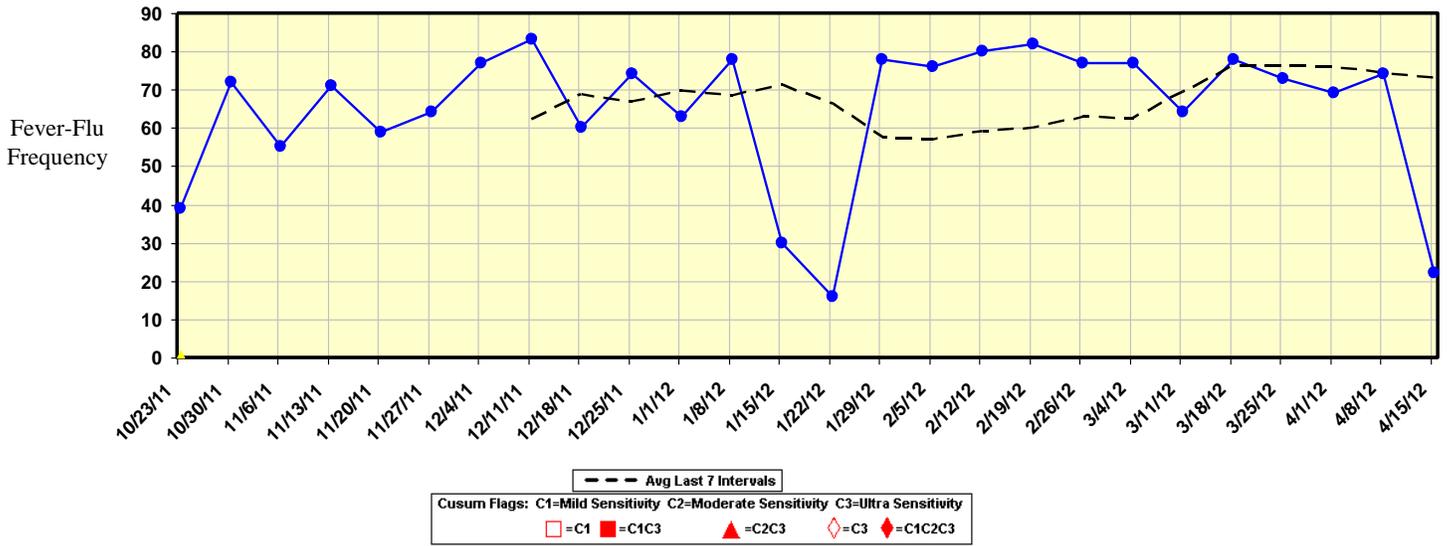
Region1 Hospitals (# of Facilities): AnMed Health (3); Self-Regional (1); Oconee Medical Center (1);

Region 2 - Fever Flu Syndrome



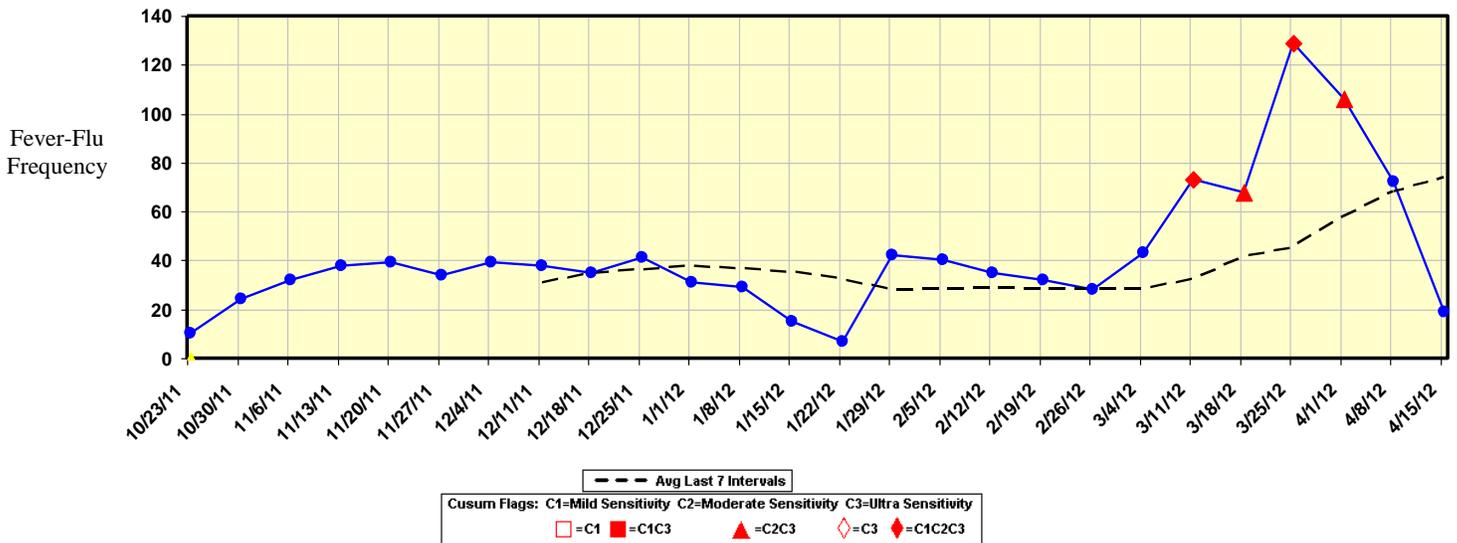
Region 2 Hospitals (# of Facilities): Greenville Hospital System (4); Palmetto Health Easley (1)

Region 3 - Fever Flu Syndrome



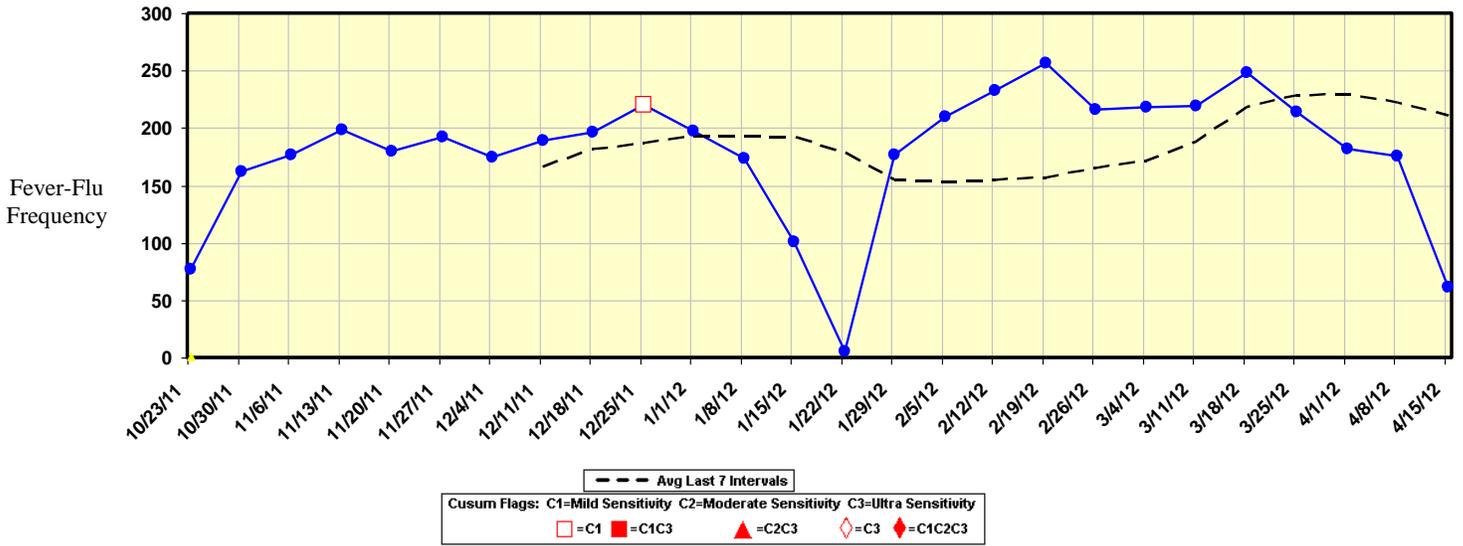
Region 3 Hospitals (# of Facilities): Palmetto Health Baptist (1), Palmetto Health Richland (1)

Region 4 - Fever Flu Syndrome



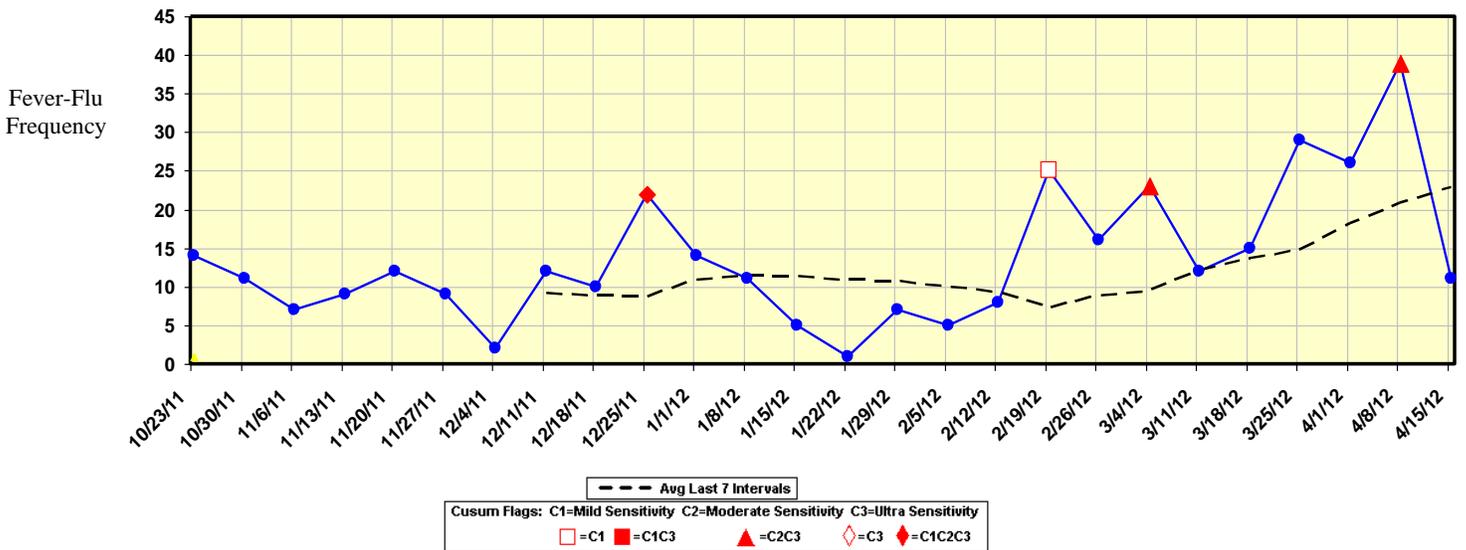
Region 4 Hospitals (# of Facilities): Kershaw Health (1); McLeod Health (1); Elgin Urgent Care (1)

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	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
	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 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 $U \geq 100^{\circ}\text{F}$) 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**.

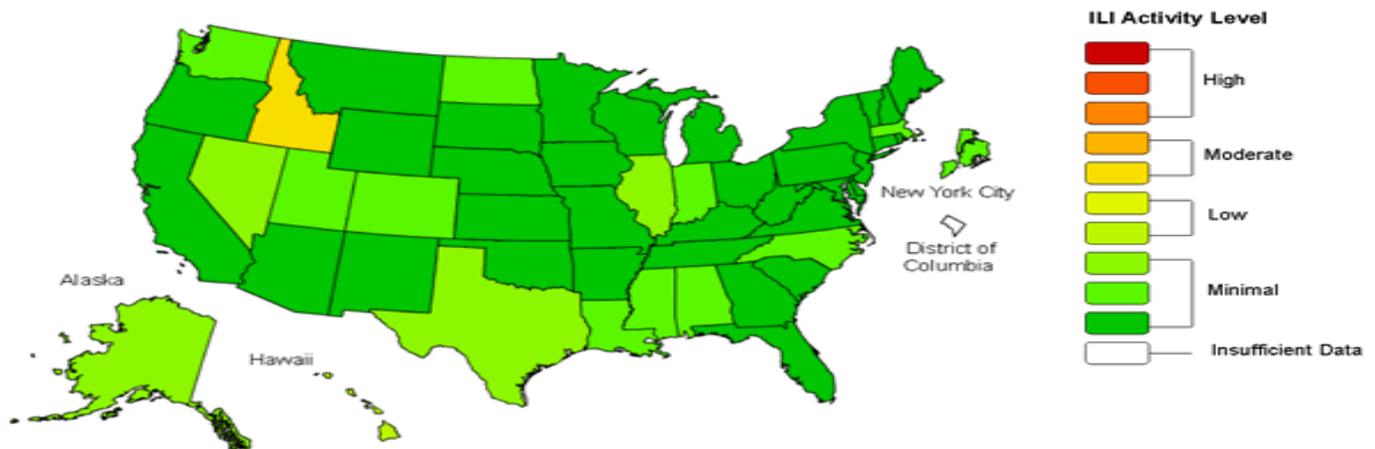
VIII. National Surveillance MMWR Week 14 (4/1-4/7)

During week 14 (April 1-7, 2012), influenza activity was elevated in some areas of the United States, but declined nationally and in most regions.

- **U.S. Virologic Surveillance:** Of the 3,607 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, 756 (21.0%) were positive for influenza.
- **Novel influenza A Virus:** One human infection with a novel influenza A virus was identified.
- **Pneumonia and Influenza (P&I) Mortality Surveillance:** The proportion of deaths attributed to P&I was below the epidemic threshold.
- **Influenza-associated Pediatric Mortality:** No influenza-associated pediatric deaths were reported.
- **Outpatient Illness Surveillance:** The proportion of outpatient visits for influenza-like illness (ILI) was 1.5%, which is below the national baseline of 2.4%. Region 10 reported ILI above its region-specific baseline level. One state experienced moderate ILI activity, 1 state experienced low ILI activity; New York City and 48 states experienced minimal ILI activity, and the District of Columbia had insufficient data to calculate ILI activity.
- **Geographic Spread of Influenza:** Ten states reported widespread geographic activity; 9 states reported regional influenza activity; 20 states reported local activity; the District of Columbia, Puerto Rico, and 11 states reported sporadic activity, and Guam and the U.S. Virgin Islands reported no influenza activity.

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 14 ending Apr 07, 2012**



*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.

Data displayed in this map are based on data collected in ILINet, whereas the State and Territorial flu activity map are based on reports from state and territorial epidemiologists. The data presented in this map is preliminary and may change as more data is received.

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.