

Flu Watch

Week Ending December 15, 2012 (MMWR Week 50)

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

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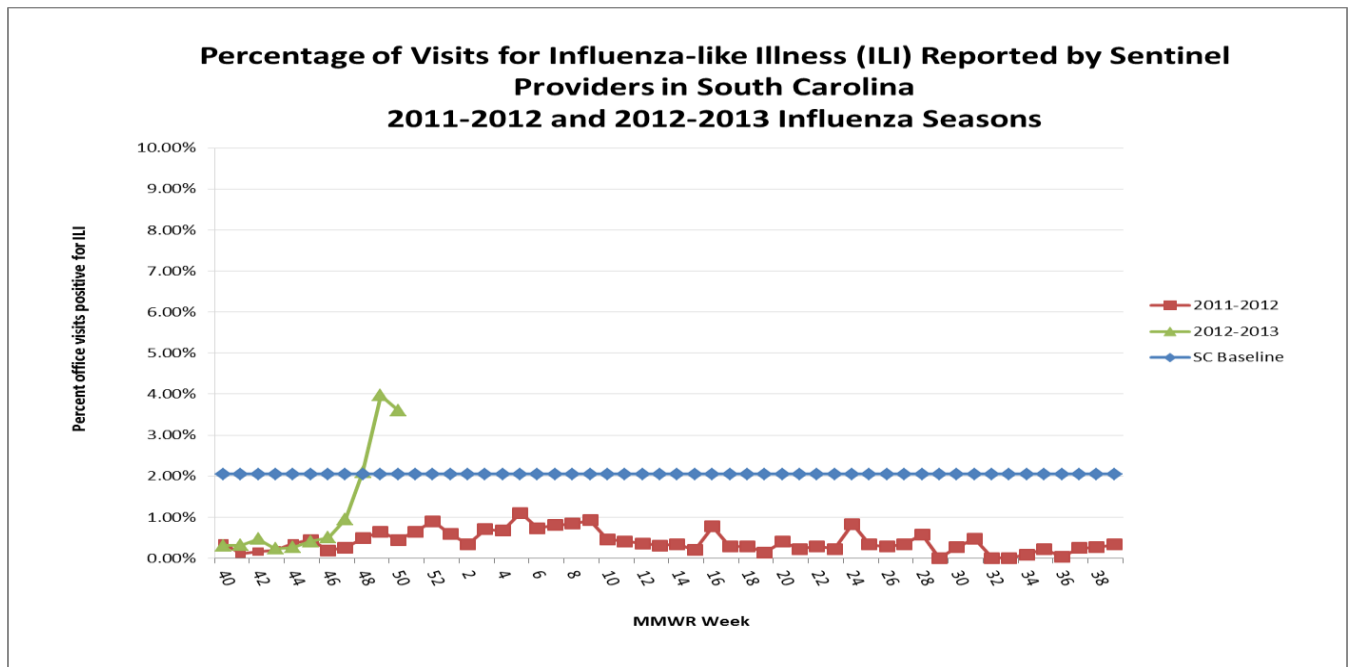
MMWR Week 50 at a Glance:
<p>Influenza Activity Level: WIDESPREAD Note: Activity level definitions are found on page 14</p> <p>ILI Activity Status (South Carolina baseline is 2.05%*): Above baseline in the Upstate (2.47%), Midlands (2.51%), and along the Coast (10.15%). The state ILI percentage was 3.61%. These data reflect reports from 15 (46.9%) providers.</p> <p>SC Viral Isolate and RT-PCR Activity: 118 positive specimens were reported. Since 9/30/12, 264 positive specimens have been reported.</p> <p>Positive Rapid Flu Test Activity: 8470 positive rapid tests were reported. Since 9/30/12, 23,272 positive rapid tests have been reported.</p> <p>Hospitalizations: 308 lab confirmed hospitalizations were reported. Since 9/30/12, 519 hospitalizations have been reported.</p> <p>Deaths: Three lab confirmed deaths were reported. Since 9/30/12, ten deaths have been reported.</p>

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

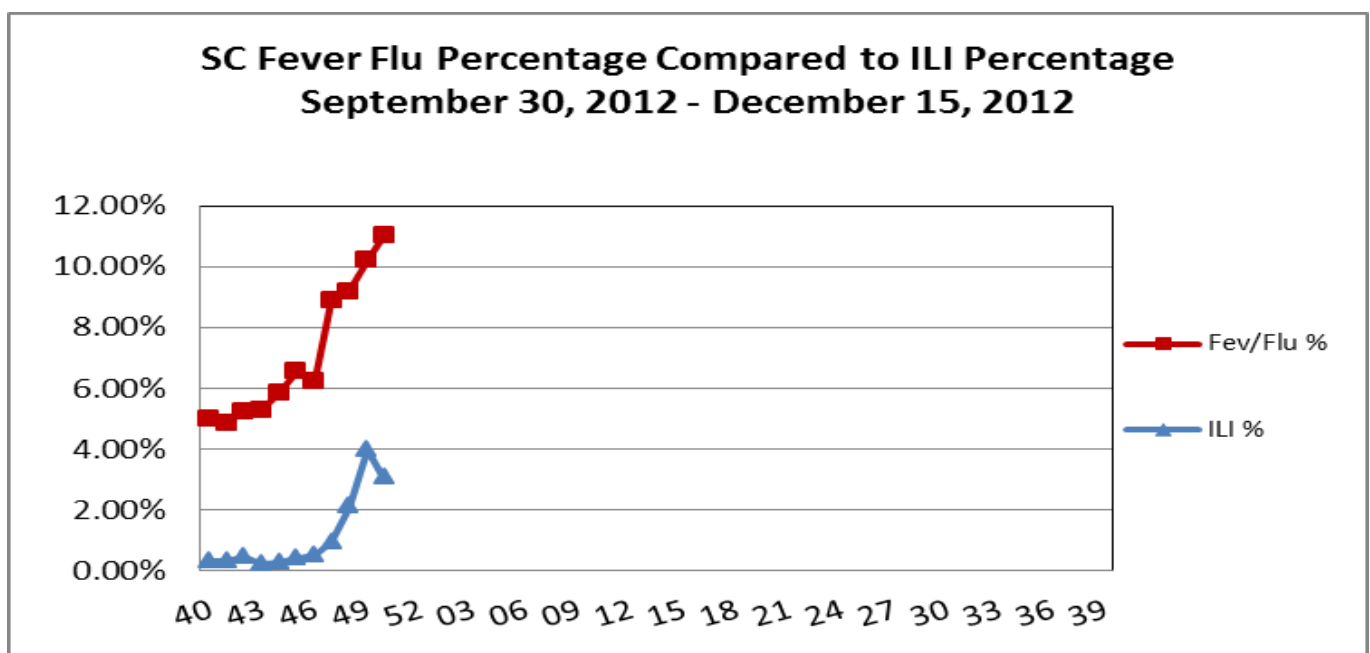
	<i>Current week</i>	<i>Previous week</i>	<i>Change from previous week</i>
Percent of ILI visits reported by ILINet providers	3.61%	3.97%	▼ .36
Number of positive confirmatory tests	118	61	▲ 57
Number of lab confirmed flu hospitalizations	308	176	▲ 132
Number of lab confirmed flu deaths	3	2	▲ 1

I. ILINet Influenza-Like Illness Surveillance

During the most recent MMWR week, 3.61% of patient visits to SC ILINet providers were due to ILI. This is above the state baseline (2.05%). This ILI percentage compares to .44% this time last year. Reports were received from providers in 12 counties, representing 7 of the 8 regions. The statewide percentage of ER visits with fever-flu syndrome was 11.04%.



*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.

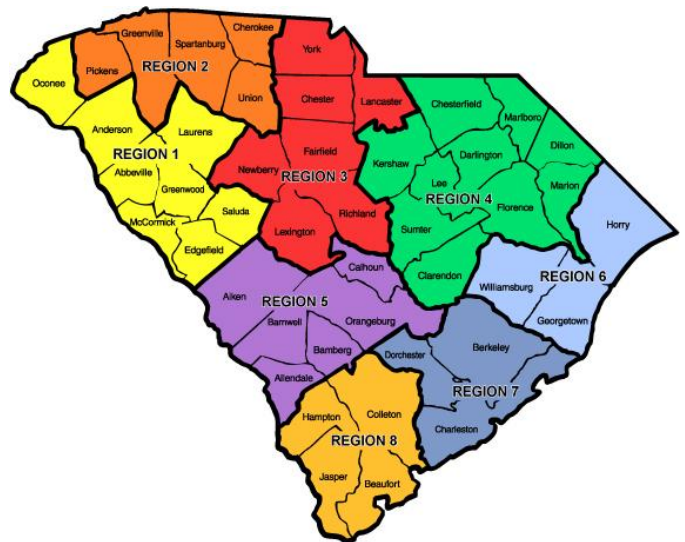


*Only includes hospitals participating in SC syndromic surveillance

Influenza-Like Illness Reported by Sentinel Providers December 9, 2012 – December 15, 2012

County	ILI %	County	ILI %
Abbeville	---	Greenwood	NR
Aiken	1.12%	Hampton	4.25%
Allendale	---	Horry	NR
Anderson	NR	Jasper	NR
Bamberg	---	Kershaw	4.44%
Barnwell	---	Lancaster	---
Beaufort	NR	Laurens	NR
Berkeley	NR	Lee	---
Calhoun	---	Lexington	NR
Charleston	NR	Marion	---
Cherokee	---	Marlboro	---
Chester	---	McCormick	1.84%
Chesterfield	---	Newberry	---
Clarendon	---	Oconee	---
Colleton	---	Orangeburg	---
Darlington	---	Pickens	0%
Dillon	NR	Richland	2.94%
Dorchester	NR	Saluda	0%
Edgefield	---	Spartanburg	1.90%
Fairfield	---	Sumter	NR
Florence	1.58%	Union	---
Georgetown	12.47%	Williamsburg	---
Greenville	2.80%	York	7.41%

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



Geographic Region	ILI %	# of Reporters
Upstate-Regions 1 -2	2.47	7
Midlands-Regions 3-5	2.51	6
Coastal-Regions 6-8	10.15	2

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

II. Virologic Surveillance

<i>Positive confirmatory influenza test results*</i> <i>Current MMWR Week (12/9/12 – 12/15/12)</i>		
	BOL	Other clinical labs
Number of specimens tested	57	NA
Number of positive specimens	34	84
Influenza A unsubtype		53
Influenza A H1N1		
Influenza A H3N2	34	28
Influenza B		3
Other		

Includes culture, RT-PCR, DFA, and IFA

During the previous MMWR week, 118 positive specimens were reported.

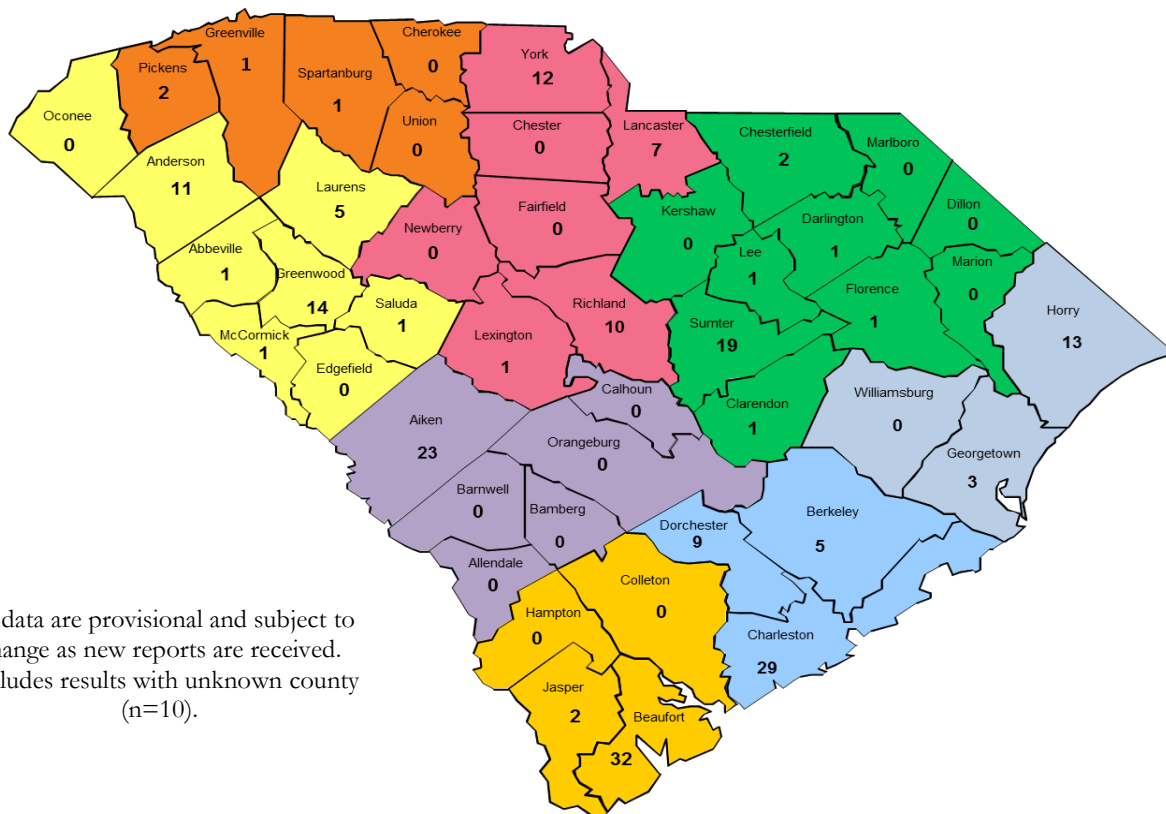
<i>Positive confirmatory influenza test results*</i> <i>Cumulative (09/30/12 – 12/15/12)</i>		
	BOL	Other clinical labs
Number of specimens tested	179	NA
Number of positive specimens	122 (68.2%)	142
Influenza A unsubtype		76 (53.5%)
Influenza A H1N1	13 (10.7%)	3 (2.1%)
Influenza A H3N2	102 (83.6%)	58 (40.8%)
Influenza B	7 (5.7%)	5 (3.5%)
Other		

Includes culture, RT-PCR, DFA, and IFA

Positive Confirmatory Tests by County
Current Week 12/9/12 – 12/15/12

County	Positive Tests	County	Positive Tests	County	Positive Tests
Abbeville		Dillon		Marion	
Aiken	37	Dorchester	5	Marlboro	
Allendale		Edgefield	8	McCormick	
Anderson	5	Fairfield		Newberry	
Bamberg		Florence		Oconee	
Barnwell		Georgetown	1	Orangeburg	
Beaufort	5	Greenville	1	Pickens	
Berkeley	4	Greenwood	8	Richland	5
Calhoun		Hampton		Saluda	1
Charleston	12	Horry	8	Spartanburg	1
Cherokee		Jasper	1	Sumter	2
Chester		Kershaw		Union	
Chesterfield		Lancaster	1	Williamsburg	
Clarendon	1	Laurens	3	York	6
Colleton		Lee	1	Unknown	1
Darlington		Lexington	1		

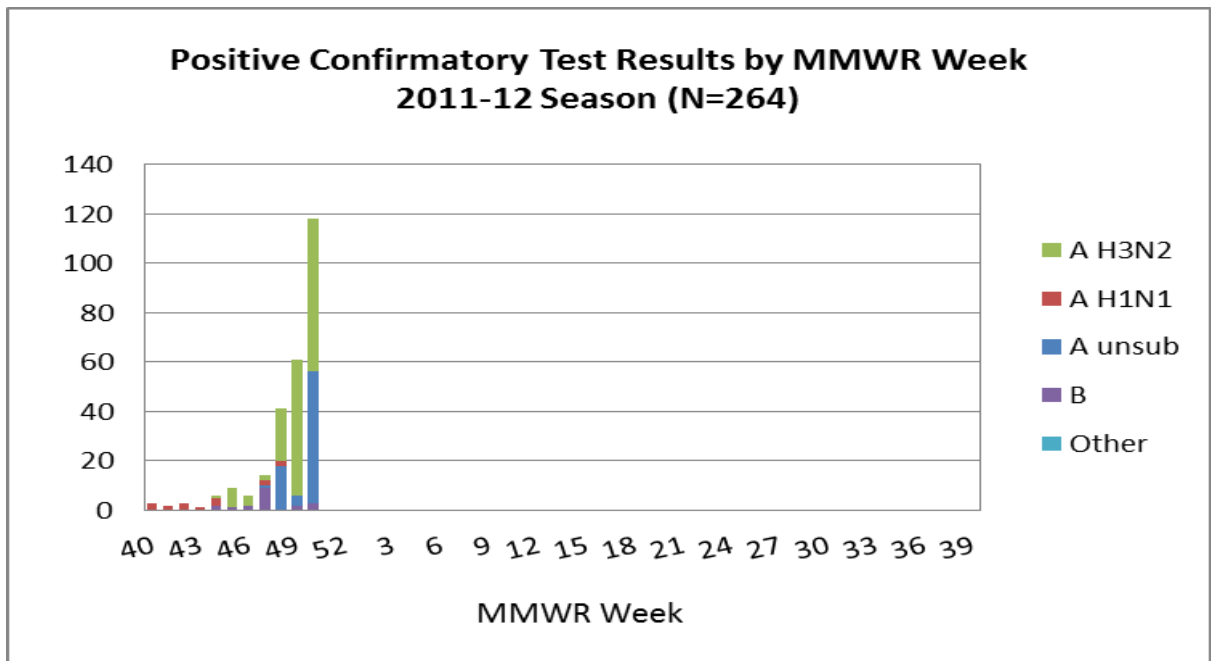
Map of Positive Confirmatory Tests by County
Cumulative 09/30/12 – 12/15/12



All data are provisional and subject to change as new reports are received. Excludes results with unknown county (n=10).

**Positive Confirmatory Tests by County and Type
Cumulative 9/30/12 – 12/15/12**

	A H1N1	A H3N2	B	A Unsub	Unk		A H1N1	A H3N2	B	A Unsub	Unk
Region 1		1				Region 2					
Abbeville						Cherokee					
Anderson		8		3		Greenville		1			
Edgefield		1		7		Pickens		2			
Greenwood		9		1		Spartanburg				1	
Laurens		6		3		Union					
McCormick		1				Region 4					
Oconee						Chesterfield		1	1		
Saluda		1				Clarendon		1			
Region 3						Darlington		1			
Chester						Dillon					
Fairfield						Florence		1			
Lancaster		5		2		Kershaw					
Lexington		2				Lee		1			
Newberry						Marion					
Richland		7	2	1		Marlboro					
York	1	9	2			Sumter		19			
Region 5						Region 6					
Aiken	1	38	1	20		Georgetown		3			
Allendale						Horry		31		1	
Bamberg						Williamsburg					
Barnwell						Region 8					
Calhoun						Beaufort	15	15	2		
Orangeburg						Colleton					
Region 7						Hampton					
Berkeley		4	1			Jasper		2			
Charleston		27	2			Unknown		9	1		
Dorchester		9									

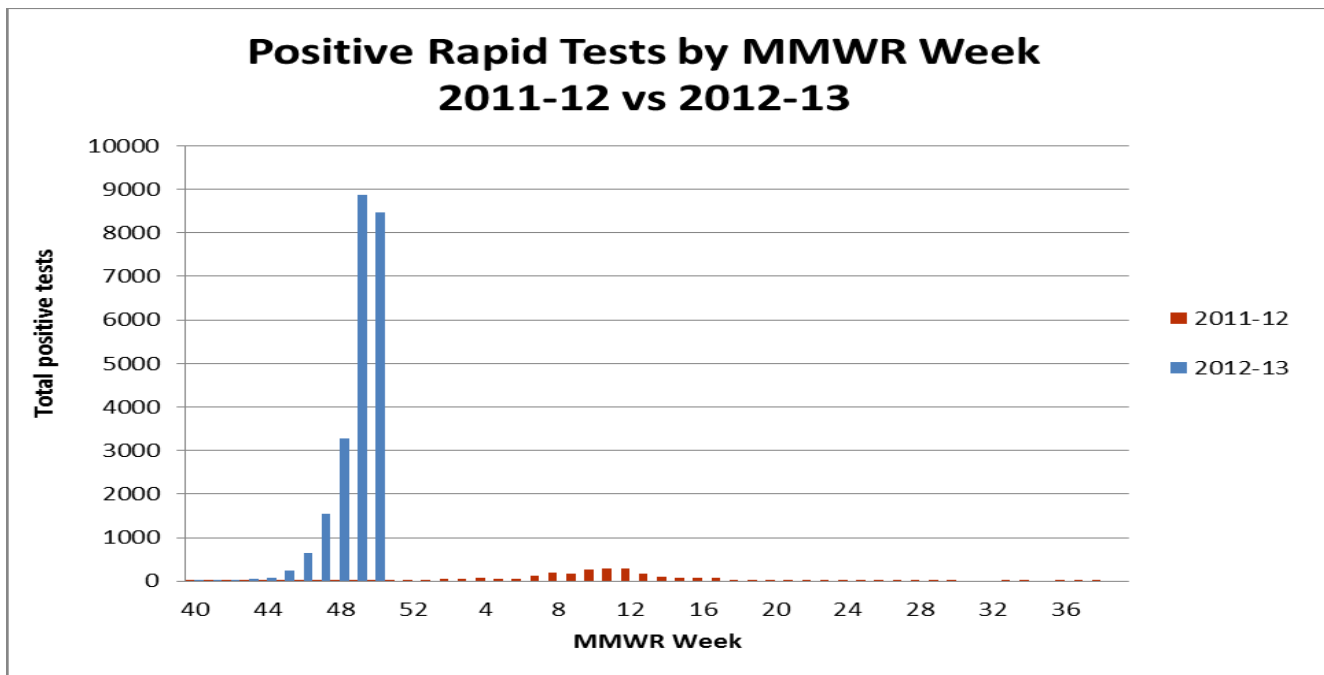


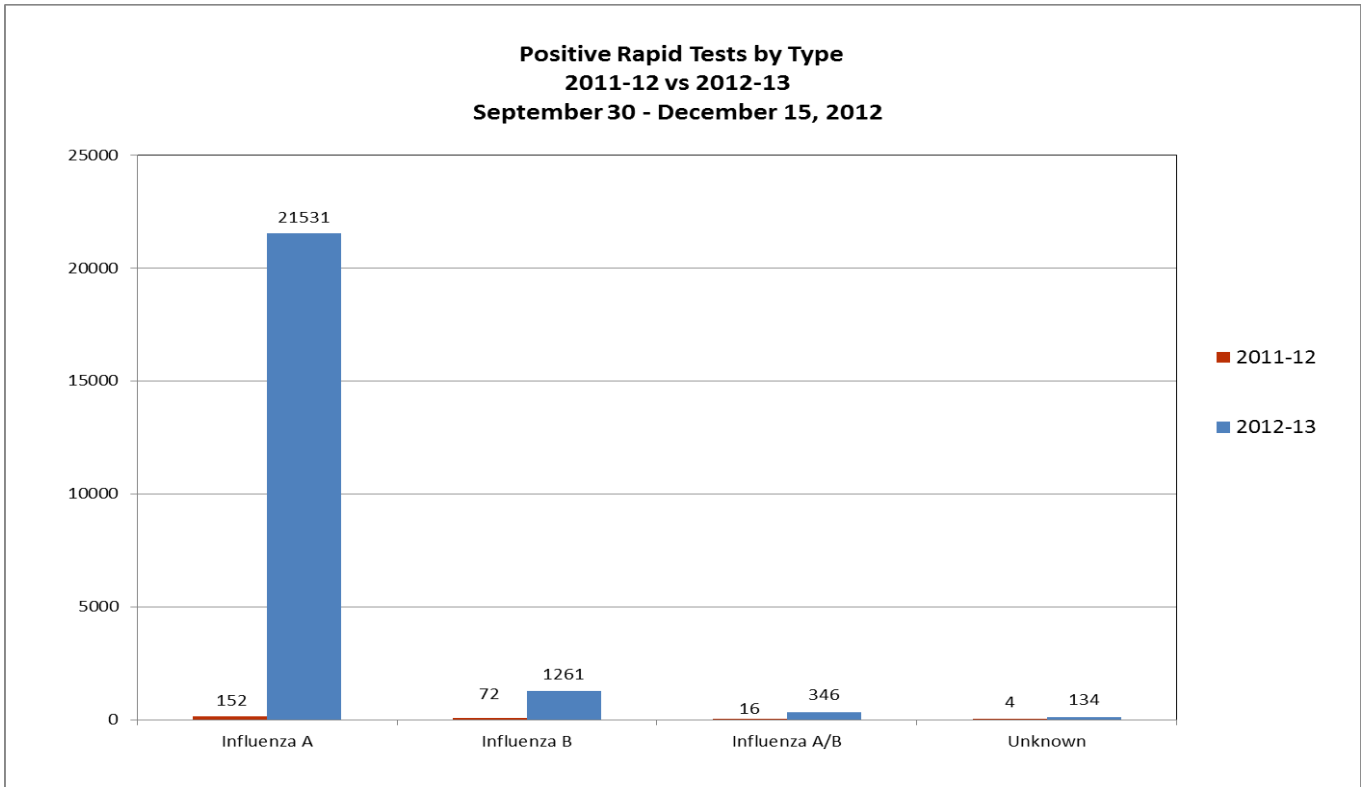
III. Positive Rapid Antigen Tests

During the past MMWR week, 8470 positive rapid antigen tests were reported. Of these, 7966 were influenza A, 413 were influenza B, 42 were influenza A/B, and 49 were unknown. This compares to 37 this time last year. 23,272 positive rapid tests have been reported this year.

Positive Rapid Flu Tests by County December 9, 2012 – December 15, 2012

County	Positive Tests	County	Positive Tests	County	Positive Tests
Abbeville	37	Dillon	3	Lexington	482
Aiken	213	Dorchester	308	Marion	27
Allendale	11	Edgefield	13	Marlboro	31
Anderson	471	Fairfield	14	McCormick	
Bamberg	11	Florence	381	Newberry	63
Barnwell	19	Georgetown	396	Oconee	98
Beaufort	189	Greenville	1125	Orangeburg	60
Berkeley	86	Greenwood	232	Pickens	319
Calhoun		Hampton	36	Richland	536
Charleston	542	Horry	448	Saluda	
Cherokee	23	Jasper	10	Spartanburg	269
Chester	77	Kershaw	216	Sumter	109
Chesterfield	28	Lancaster	165	Union	15
Clarendon	44	Laurens	31	Williamsburg	13
Colleton		Lee	5	York	981
Darlington	291				





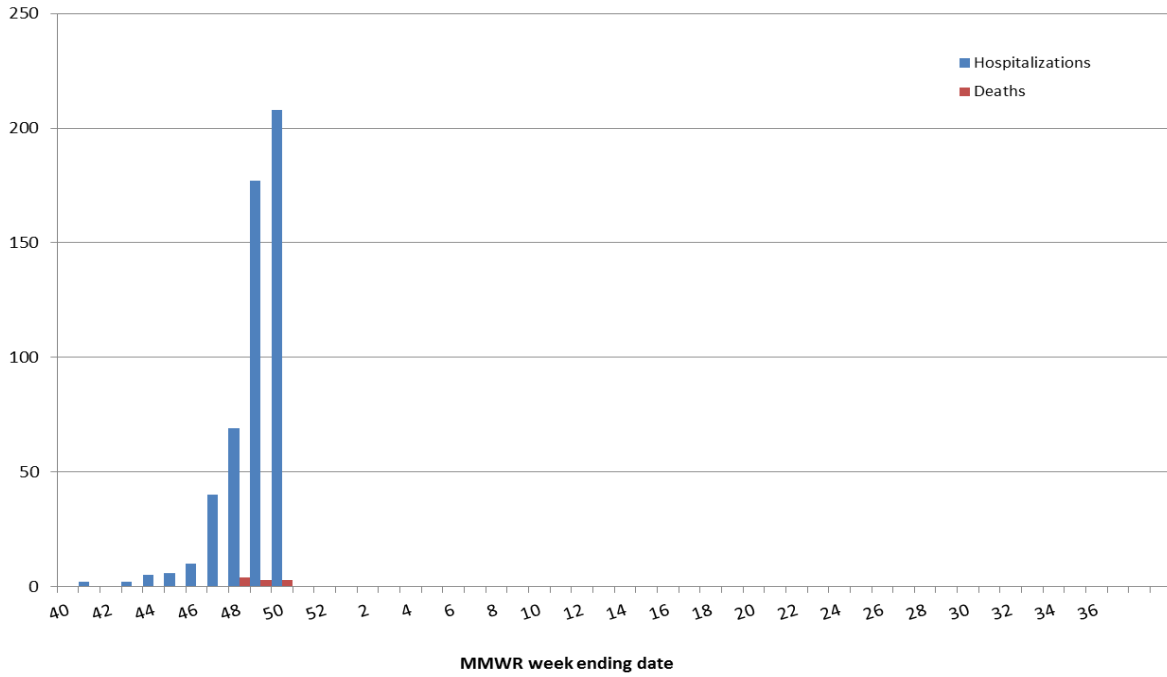
IV. Influenza hospitalizations and deaths

During the past MMWR week, 208 lab confirmed* influenza hospitalizations were reported. Three lab confirmed deaths were reported.

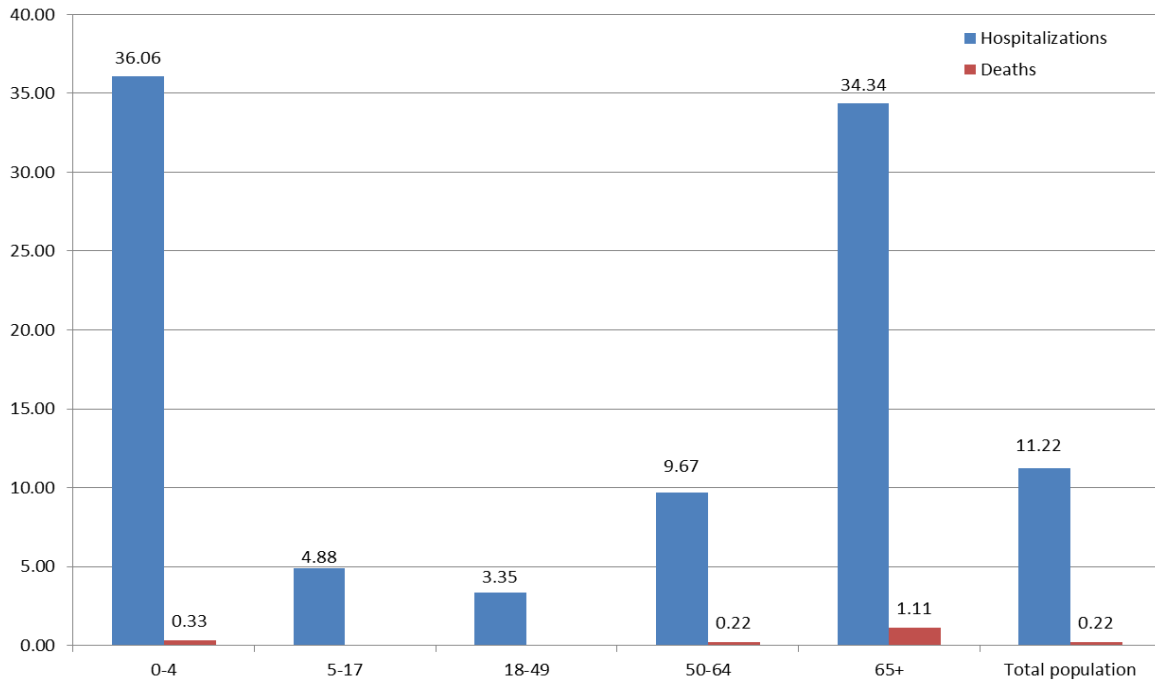
	Total number*	
Number of Reporting Hospitals (Current week)	62	
	<i>Current MMWR Week (12/9- 12/15/12)</i>	<i>Cumulative (since 09/30/12)</i>
Hospitalizations	208	519
Deaths	3	10

*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 and Deaths
by MMWR week
September 30, 2012 - December 15, 2012**

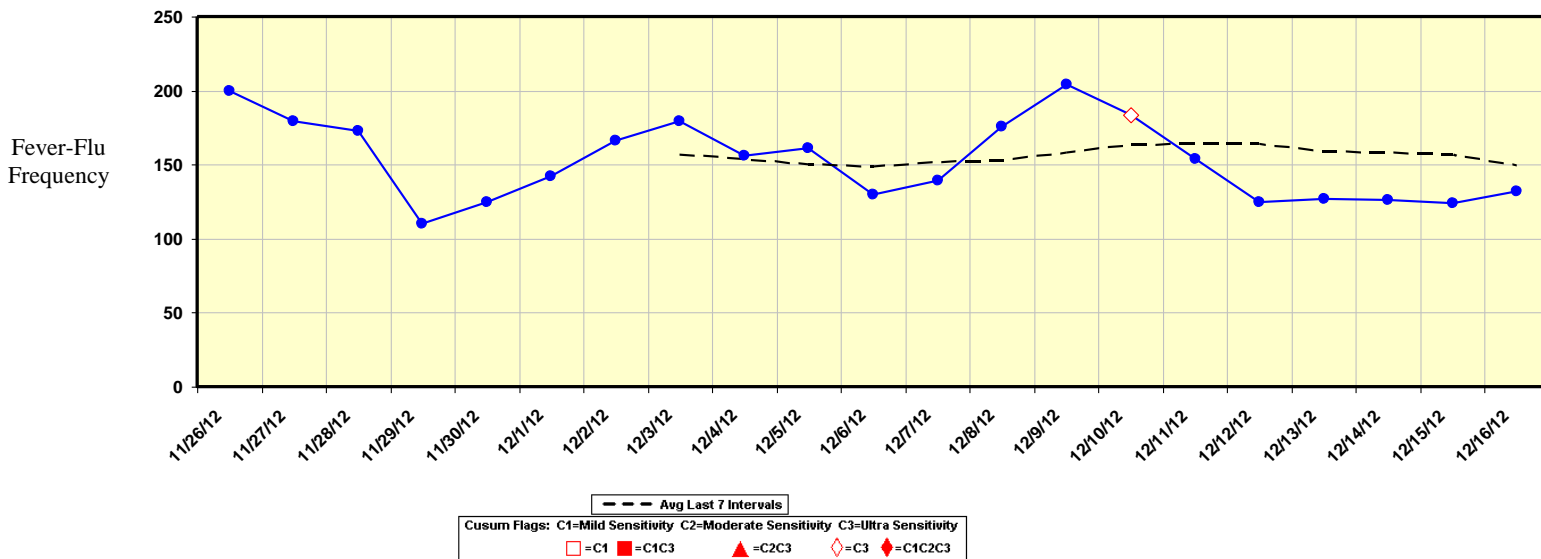


**Laboratory Confirmed Influenza Case rate/100,000
Hospitalizations (n=519) and Deaths (n=10) by age group
September 30, 2012 - December 15, 2012**



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

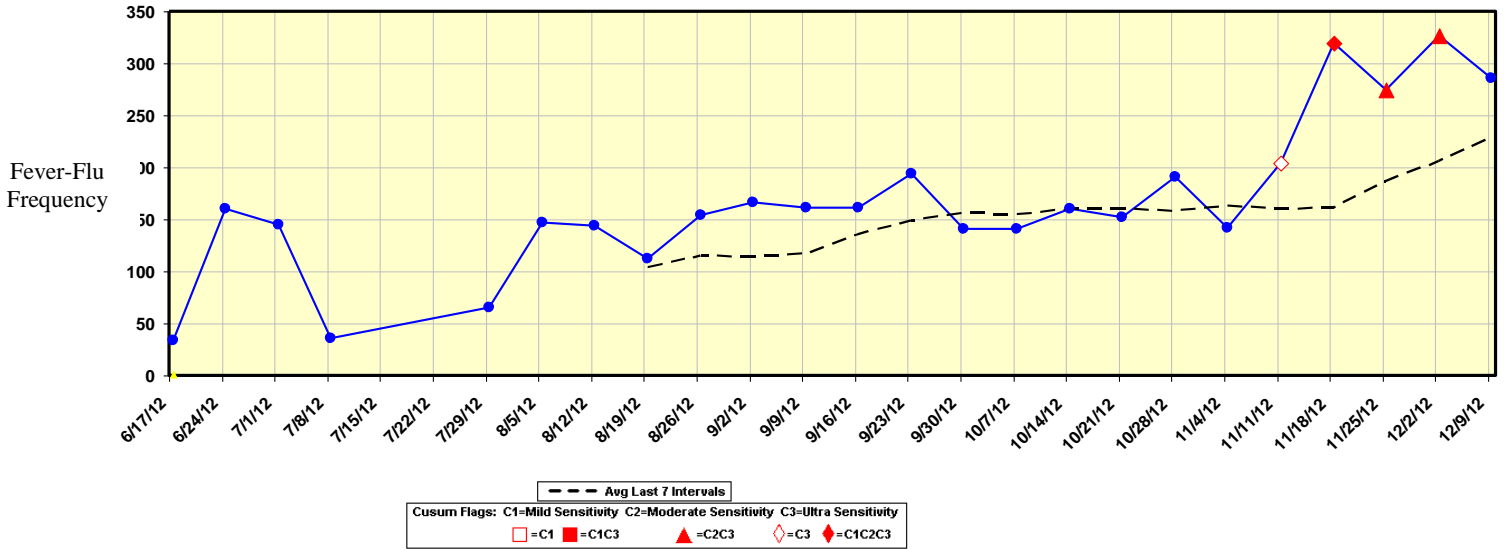
The SC Statewide Fever-Flu Syndrome graph above illustrates the daily counts of hospital emergency department (ED) visits with an Influenza-like Illness (ILI) for the past 21 days. A total of 21 hospital facilities are reporting to the SC-DARTS system. These 21 include: AnMed Health (Region 1); Self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

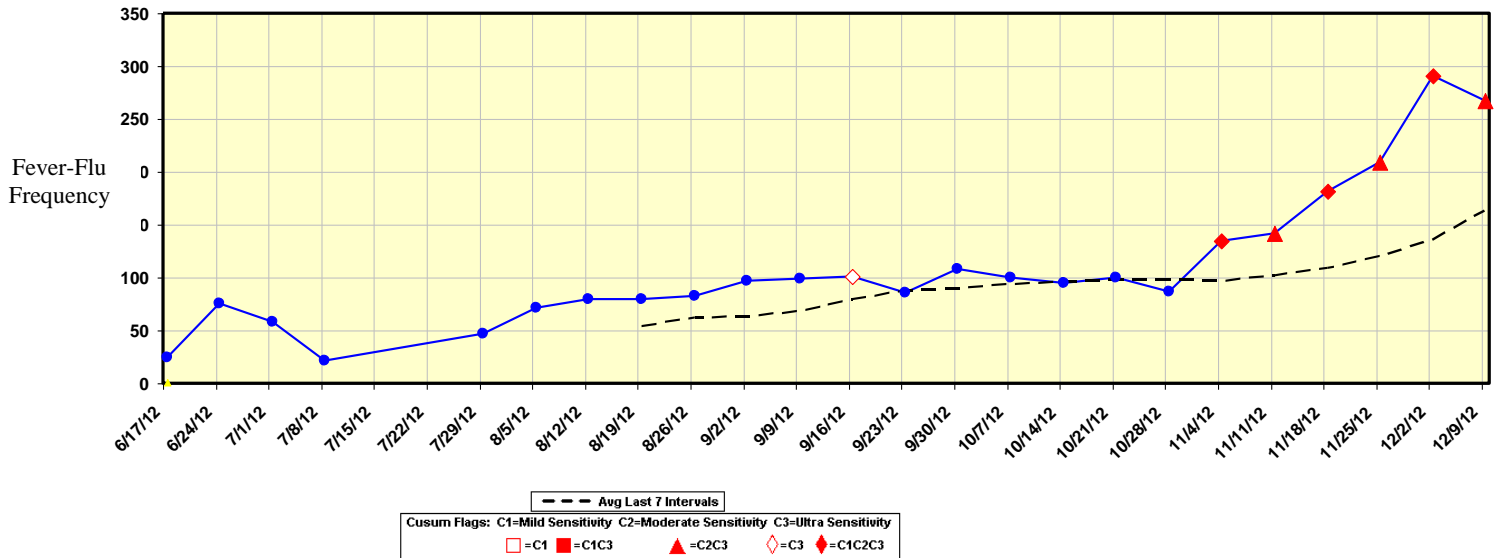
Below are the fever-flu syndrome graphs by Region for the past 180 days (weekly interval).

Region 1 - Fever Flu Syndrome



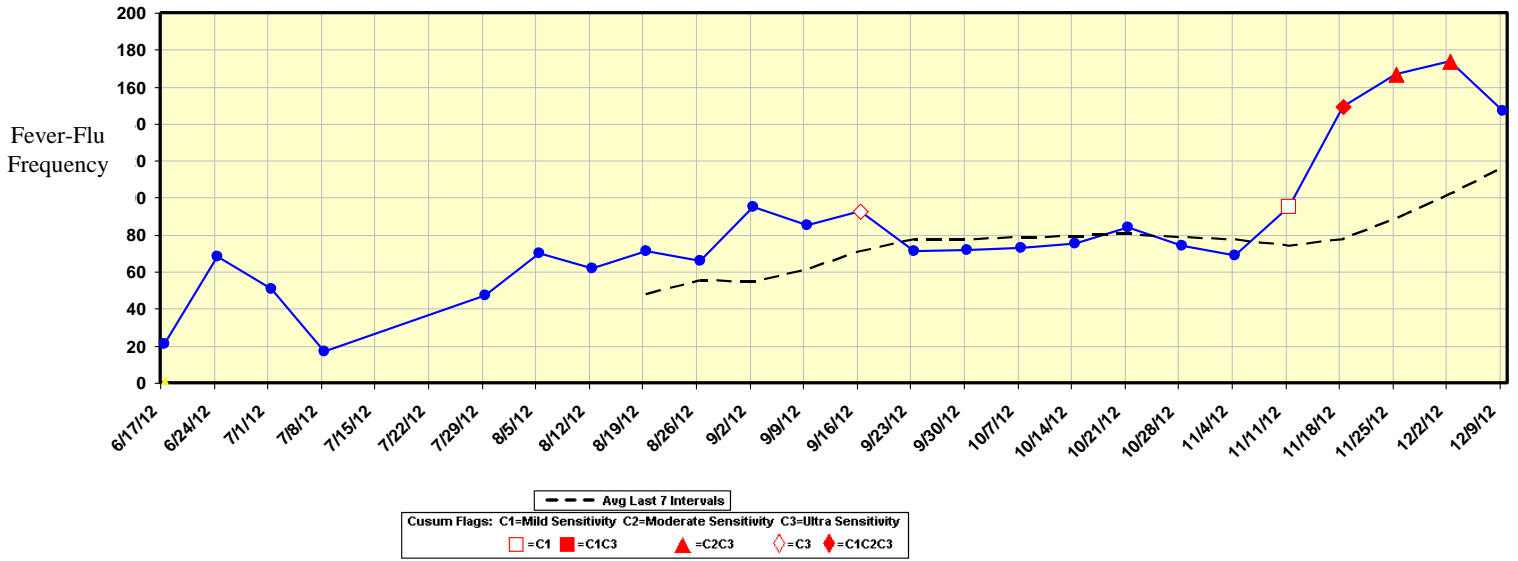
Region1 Hospitals (# of Facilities): AnMed Health (3); Self-Regional (1); Oconee Medical Center (1);

Region 2 - Fever Flu Syndrome



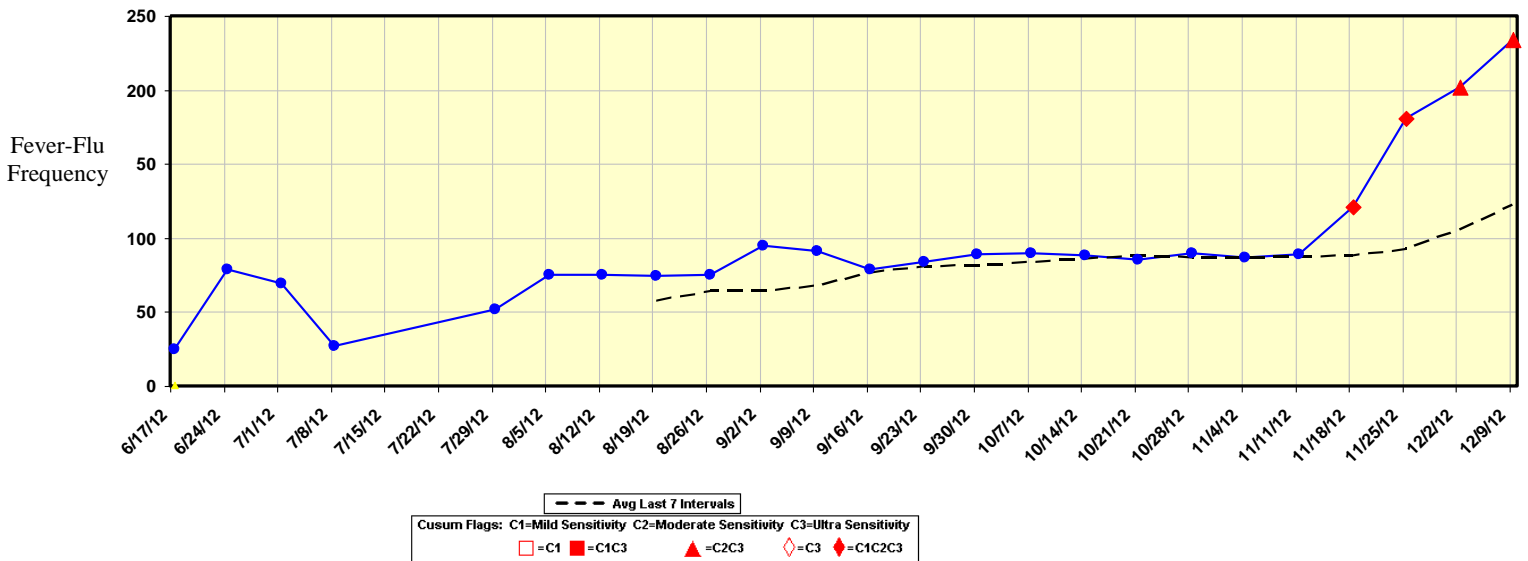
Region 2 Hospitals (# of Facilities): Greenville Hospital System (4); Palmetto Health Easley (1)

Region 3 - Fever Flu Syndrome



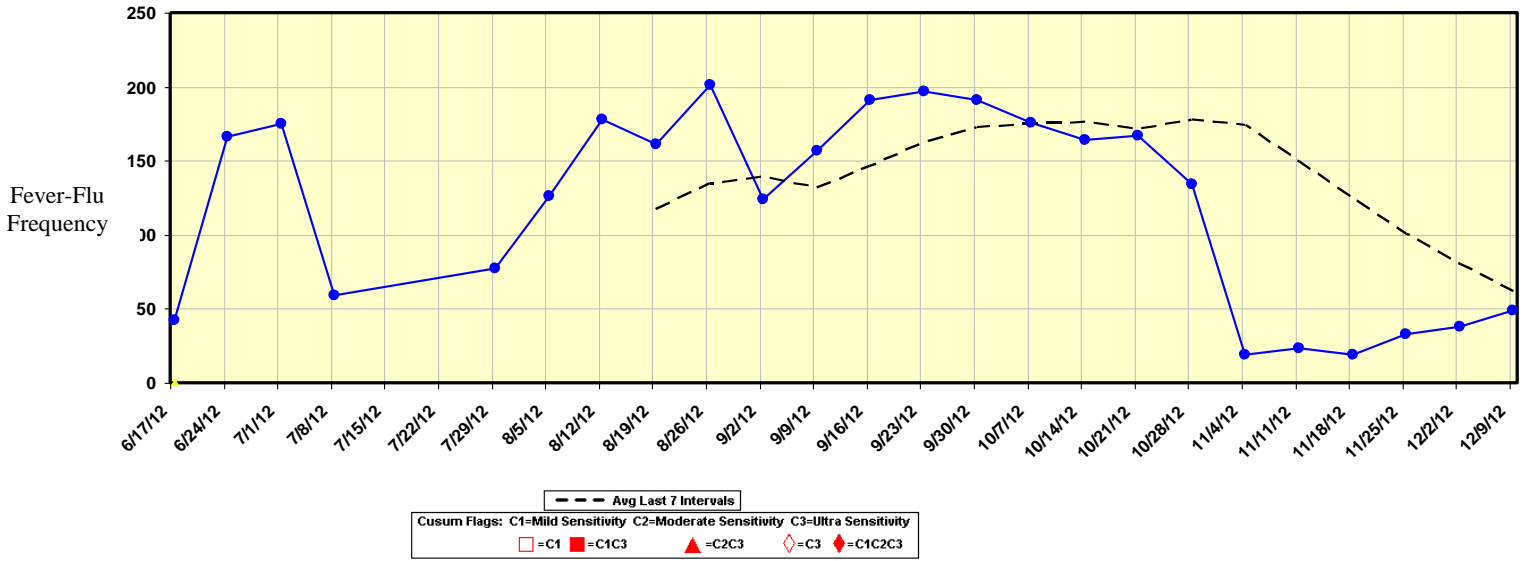
Region 3 Hospitals (# of Facilities): Palmetto Health Baptist (1), Palmetto Health Richland (1)

Region 4 - Fever Flu Syndrome



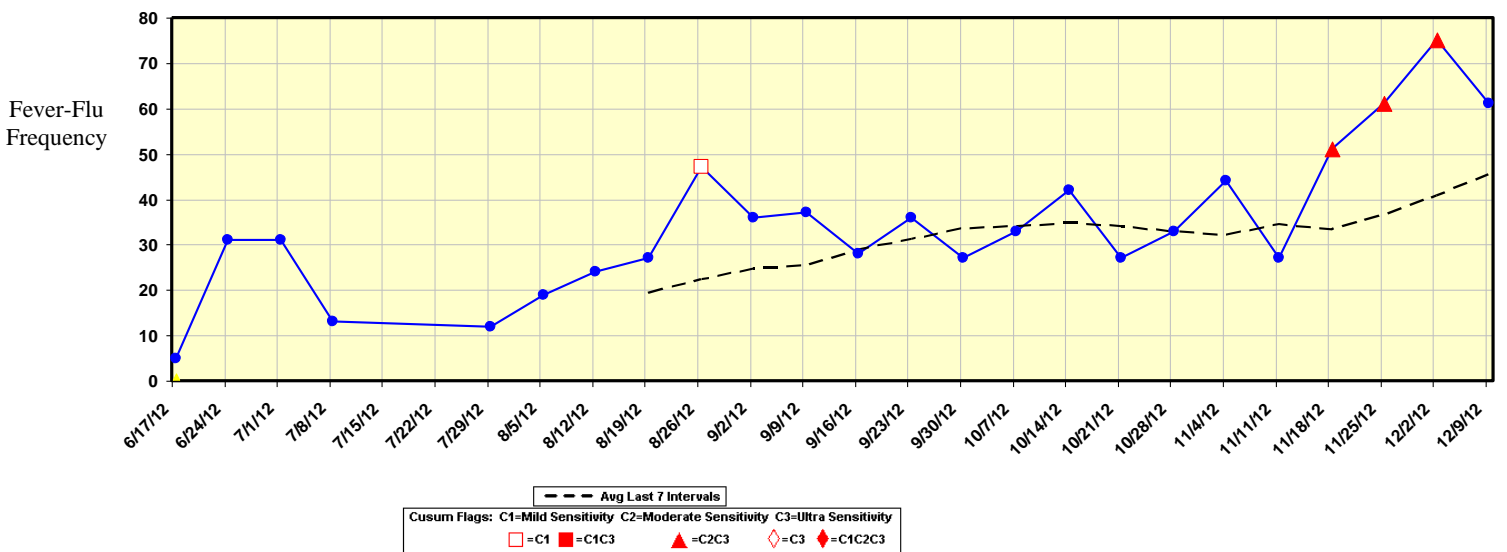
Region 4 Hospitals (# of Facilities): Kershaw Health (1); McLeod Health (1); Elgin Urgent Care (1)

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 CHESSE 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

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 $U \geq U100^{\circ}F$) 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**.

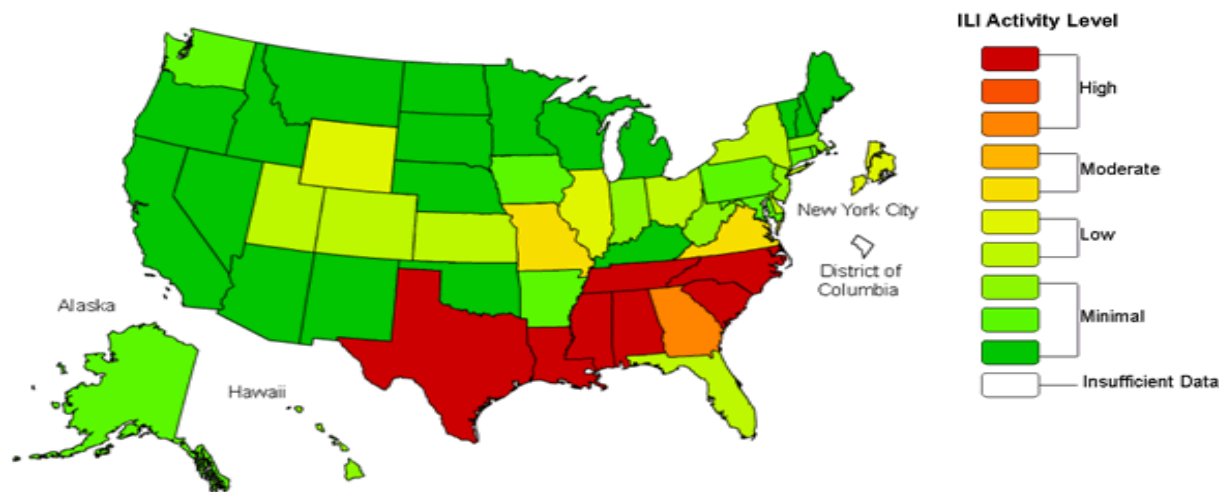
VIII. National Surveillance MMWR Week 49 (12/2-12/8)

During week 49 (December 2-8), influenza activity increased in the U.S.

- **Viral Surveillance:** Of 7,663 specimens tested and reported by U.S. World Health Organization (WHO) and National Respiratory and Enteric Virus Surveillance System (NREVSS) collaborating laboratories during week 49, 2,172 (28.3%) were positive for influenza.
- **Novel Influenza A Virus:** One human infection with a novel influenza A virus was reported.
- **Pneumonia and Influenza Mortality:** The proportion of deaths attributed to pneumonia and influenza (P&I) was below the epidemic threshold.
- **Influenza-Associated Pediatric Deaths:** One influenza-associated pediatric death was reported and was associated with an influenza B virus.
- **Outpatient Illness Surveillance:** The proportion of outpatient visits for influenza-like illness (ILI) was 2.8%, which is above the national baseline of 2.2%. Seven of ten regions reported ILI above region-specific baseline levels. Eight states experienced high ILI activity, 2 states experienced moderate ILI activity; New York City and 9 states experienced low ILI activity; 31 states experienced minimal ILI activity, and the District of Columbia had insufficient data.
- **Geographic Spread of Influenza:** The geographic spread of influenza in 18 states was reported as widespread; 17 states reported regional activity; the District of Columbia and 11 states reported local activity; Guam and 4 states reported sporadic activity, and Puerto Rico and the U.S. Virgin Islands did not report.

A description of surveillance methods is available at: <http://www.cdc.gov/flu/weekly/overview.htm>

**Influenza-Like Illness (ILI) Activity Level Indicator Determined by Data Reported to ILINet
2012-13 Influenza Season Week 49 ending Dec 08, 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.