

# Flu Watch

Week Ending February 9, 2013 (MMWR Week 6)

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

<i>In this issue:</i>	
I. ILINet	2
II. Virologic surveillance	4
III. Rapid antigen tests	7
IV. Hospitalizations and deaths	8
V. Syndromic surveillance	11
VI. Activity level definitions	15
VII. SC influenza surveillance components	16
VIII. National Surveillance	17

MMWR Week 6 at a Glance:
<p><b>Influenza Activity Level: REGIONAL</b>            Note: Activity level definitions are found on page 15</p> <p><b>ILI Activity Status (South Carolina baseline is 2.05%*):</b> Below baseline in the Upstate (.23%) and in the Midlands (1.42%). Above baseline along the Coast (3.23%). The state ILI percentage was 1.10%. These data reflect reports from 17 (53.1%) providers.</p> <p><b>SC Viral Isolate and RT-PCR Activity:</b> 12 positive specimens were reported. Since 9/30/12, 905 positive specimens have been reported.</p> <p><b>Positive Rapid Flu Test Activity:</b> 1038 positive rapid tests were reported. Since 9/30/12, 43,074 positive rapid tests have been reported.</p> <p><b>Hospitalizations:</b> 19 lab confirmed hospitalizations were reported. Since 9/30/12, 1395 hospitalizations have been reported.</p> <p><b>Deaths:</b> One lab confirmed death was reported. Since 9/30/12, 38 deaths have been reported.</p>

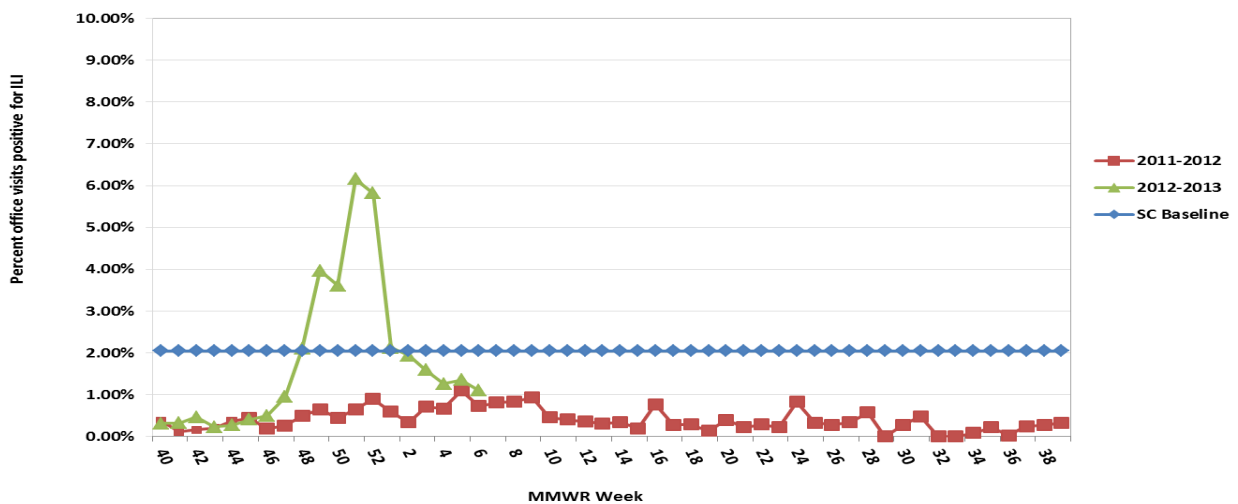
Summary of ILI Activity, Positive Confirmatory Tests, and Influenza Associated Hospitalizations and Deaths

	<i>Current week</i>	<i>Previous week</i>	<i>Change from previous week</i>
Percent of ILI visits reported by ILINet providers	1.10%	1.35%	▼ .25
Number of positive confirmatory tests	12	27	▼ 15
Number of lab confirmed flu hospitalizations	19	50	▼ 31
Number of lab confirmed flu deaths	1	0	▲ 1

## I. ILINet Influenza-Like Illness Surveillance

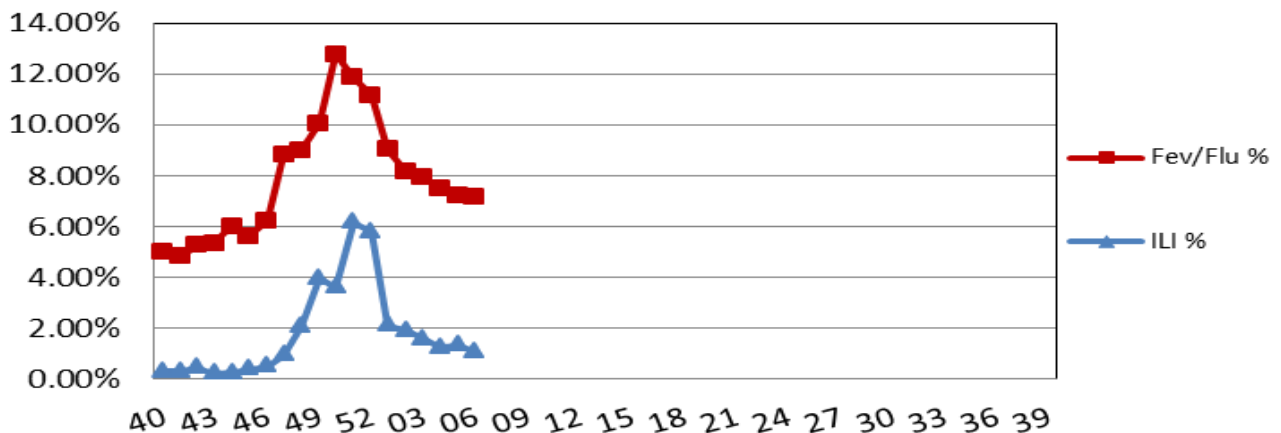
During the most recent MMWR week, 1.10% of patient visits to SC ILINet providers were due to ILI. This is below the state baseline (2.05%). This ILI percentage compares to .73 % this time last year. Reports were received from providers in 13 counties, representing 7 of the 8 regions. The statewide percentage of ER visits with fever-flu syndrome was 7.20%.

**Percentage of Visits for Influenza-like Illness (ILI) Reported by Sentinel Providers in South Carolina  
2011-2012 and 2012-2013 Influenza Seasons**



\*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.

**SC Fever Flu Percentage Compared to ILI Percentage  
September 30, 2012 - February 9, 2013**

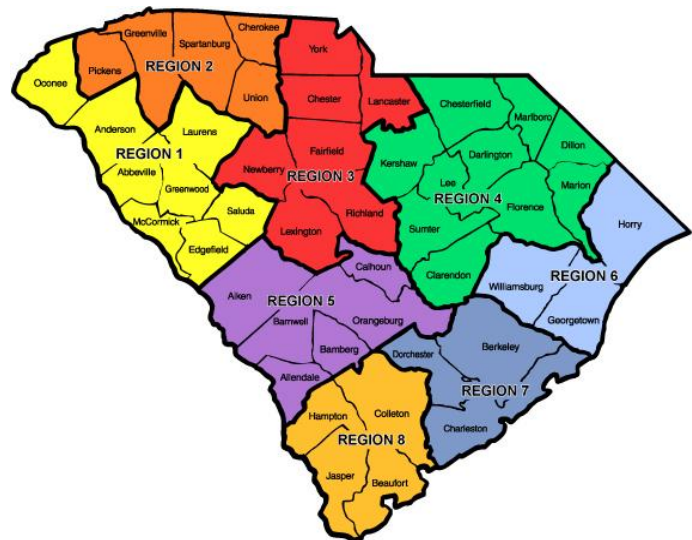


\*Only includes hospitals participating in SC syndromic surveillance

## Influenza-Like Illness Reported by Sentinel Providers February 3, 2013 – February 9, 2013

County	ILI %	County	ILI %
Abbeville	---	Greenwood	NR
Aiken	.75%	Hampton	3.02%
Allendale	---	Horry	NR
Anderson	3.45%	Jasper	NR
Bamberg	---	Kershaw	1.47%
Barnwell	---	Lancaster	---
Beaufort	NR	Laurens	NR
Berkeley	NR	Lee	---
Calhoun	---	Lexington	3.00%
Charleston	NR	Marion	---
Cherokee	---	Marlboro	---
Chester	---	McCormick	NR
Chesterfield	---	Newberry	---
Clarendon	---	Oconee	---
Colleton	---	Orangeburg	---
Darlington	---	Pickens	0%
Dillon	NR	Richland	1.97%
Dorchester	NR	Saluda	0%
Edgefield	---	Spartanburg	.60%
Fairfield	---	Sumter	NR
Florence	.25%	Union	---
Georgetown	3.31%	Williamsburg	---
Greenville	0%	York	2.09%

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



Geographic Region	ILI %	# of Reporters
Upstate-Regions 1 -2	.23	8
Midlands-Regions 3-5	1.42	7
Coastal-Regions 6-8	3.23	2

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

## II. Virologic Surveillance

<i>Positive confirmatory influenza test results* Current MMWR Week (2/3/13 – 2/9/13)</i>		
	<b>BOL</b>	<b>Other clinical labs</b>
<b>Number of specimens tested</b>	7	NA
<b>Number of positive specimens</b>	3	9
<b>Influenza A unsubtype</b>		2
<b>Influenza A H1N1</b>		
<b>Influenza A H3N2</b>	3	4
<b>Influenza B</b>		3
<b>Other</b>		

Includes culture, RT-PCR, DFA, and IFA

During the previous MMWR week, 12 positive specimens were reported.

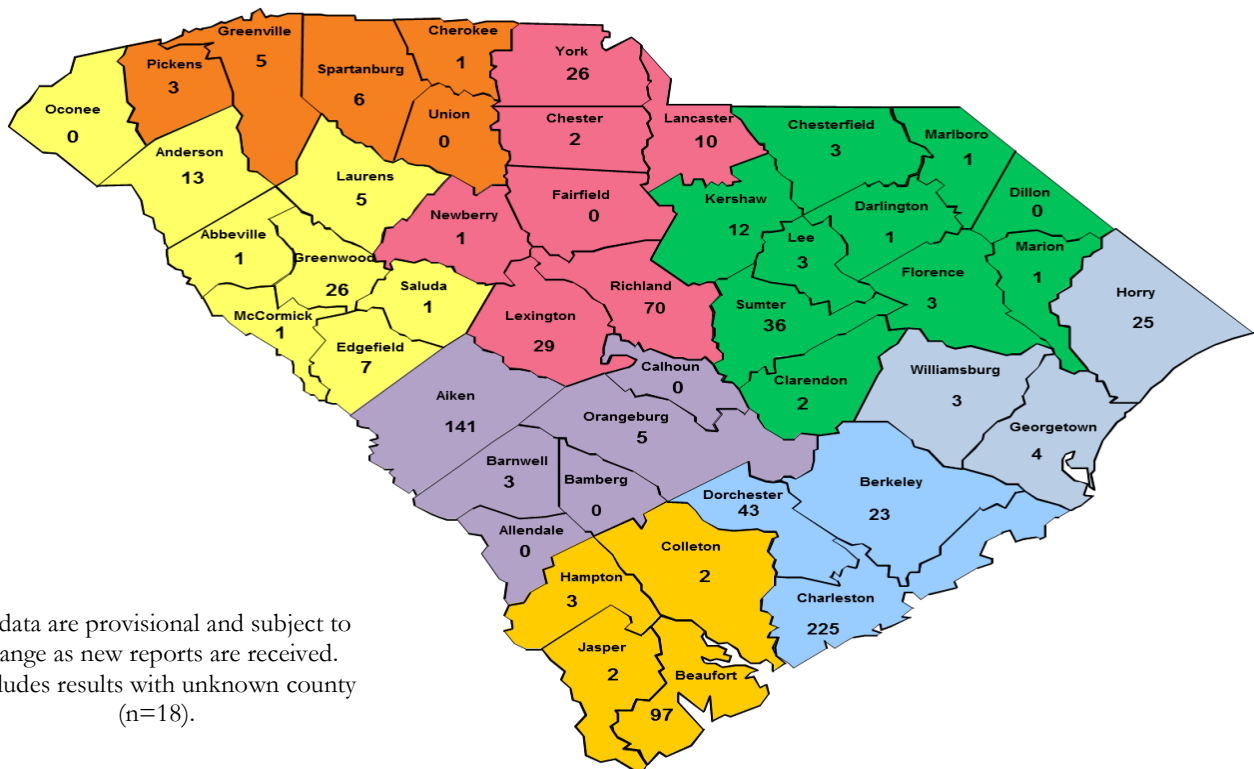
<i>Positive confirmatory influenza test results* Cumulative (09/30/12 – 2/9/13)</i>		
	<b>BOL</b>	<b>Other clinical labs</b>
<b>Number of specimens tested</b>	377	NA
<b>Number of positive specimens</b>	261 (69.7%)	644
<b>Influenza A unsubtype</b>		302 (46.9%)
<b>Influenza A H1N1</b>	14 (5.4%)	8 (1.2)
<b>Influenza A H3N2</b>	234 (89.7%)	302 (46.9%)
<b>Influenza B</b>	13 (5%)	31 (4.8%)
<b>Other</b>		1 (.16%)

Includes culture, RT-PCR, DFA, and IFA

**Positive Confirmatory Tests by County**  
**Current Week 2/3/13 – 2/9/13**

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

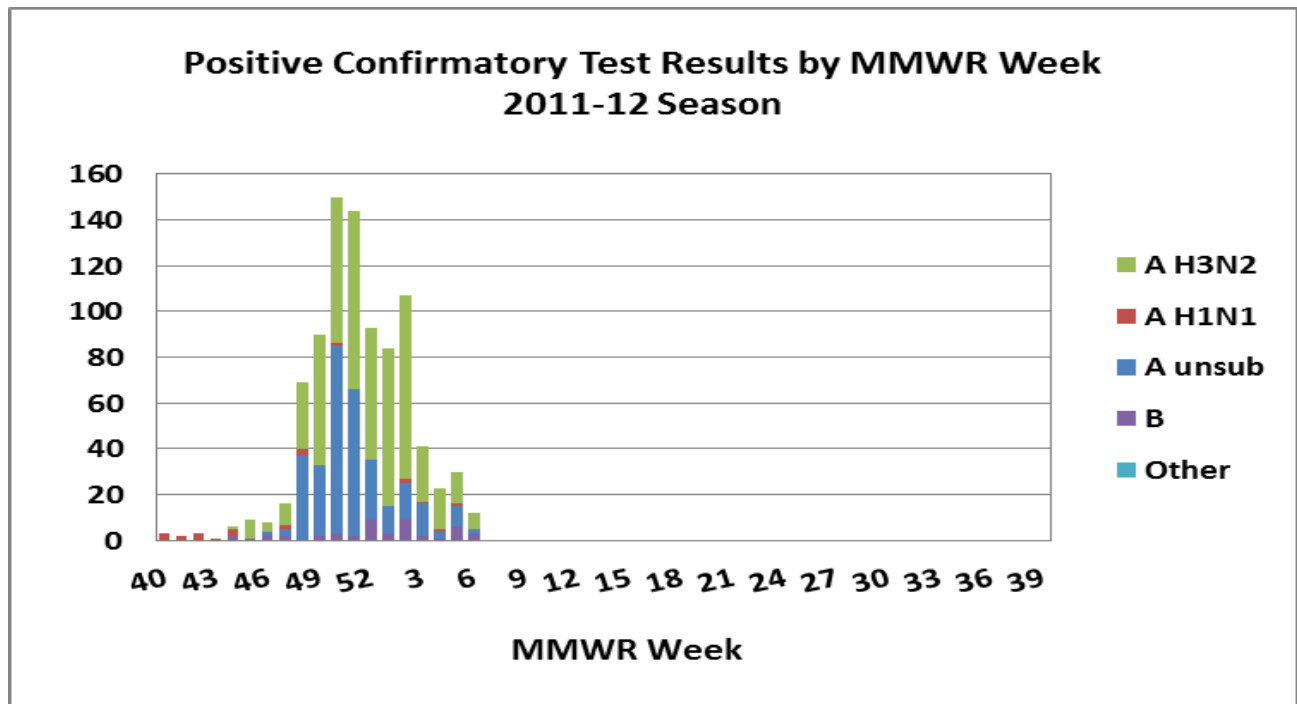
**Map of Positive Confirmatory Tests by County**  
**Cumulative 09/30/12 – 2/9/13**



All data are provisional and subject to change as new reports are received. Excludes results with unknown county (n=18).

**Positive Confirmatory Tests by County and Type  
Cumulative 9/30/12 – 2/9/13**

	A H1N1	A H3N2	B	A Unsub	Unk		A H1N1	A H3N2	B	A Unsub	Unk
<b>Region 1</b>						<b>Region 2</b>					
Abbeville		1				Cherokee					1
Anderson		8	1	5		Greenville		2			5
Edgefield		1		6		Pickens		3			
Greenwood		22	1	3		Spartanburg			2		4
Laurens		2		4		Union					
McCormick		1				<b>Region 4</b>					
Oconee						Chesterfield		1	1		1
Saluda		1				Clarendon	1	1			3
<b>Region 3</b>						Darlington		1			1
Chester				2		Dillon					
Fairfield						Florence		1	1		5
Lancaster		3		7		Kershaw		8			4
Lexington		5		24		Lee		2			1
Newberry				1		Marion			1		
Richland		14	2	54		Marlboro		1			
York		10	3	13		Sumter		32	3		3
<b>Region 5</b>						<b>Region 6</b>					
Aiken	1	3	2	134	1	Georgetown		4			
Allendale						Horry		19	1		5
Bamberg						Williamsburg					3
Barnwell			1	2		<b>Region 8</b>					
Calhoun				1		Beaufort	16	71	2		8
Orangeburg		4		3		Colleton			2		
<b>Region 7</b>						Hampton		1			2
Berkeley		17	6			Jasper		2			
Charleston	3	208	8	6		Unknown		16	1		1
Dorchester		38	5								

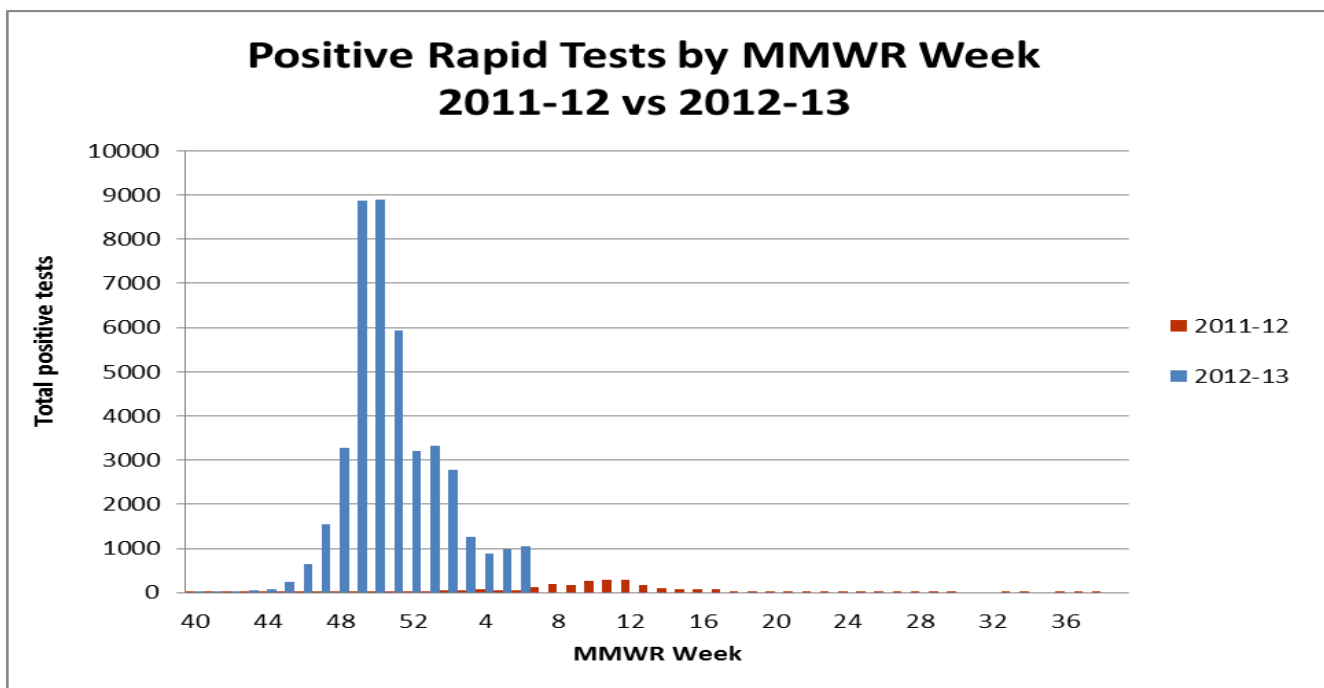


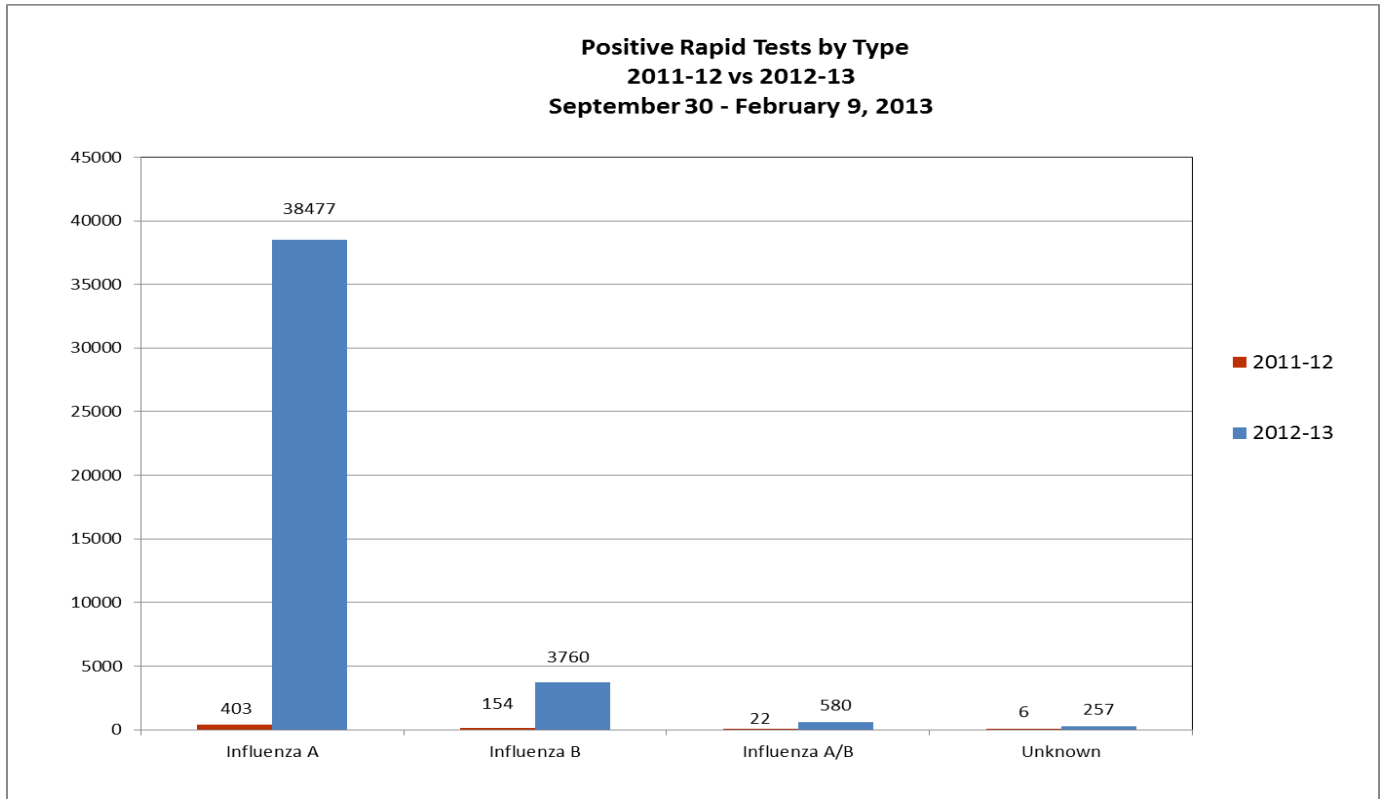
### III. Positive Rapid Antigen Tests

During the past MMWR week, 1038 positive rapid antigen tests were reported. Of these, 518 were influenza A, 507 were influenza B, 12 were influenza A/B, and 1 was unknown. This compares to 55 this time last year. 42,036 positive rapid tests have been reported this year.

#### Positive Rapid Flu Tests by County February 3, 2013 – February 9, 2013

County	Positive Tests	County	Positive Tests	County	Positive Tests
Abbeville	1	Dillon	17	Lexington	83
Aiken	19	Dorchester	78	Marion	20
Allendale	9	Edgefield	5	Marlboro	2
Anderson	28	Fairfield	5	McCormick	15
Bamberg	54	Florence	94	Newberry	1
Barnwell	58	Georgetown	62	Oconee	10
Beaufort	26	Greenville	4	Orangeburg	2
Berkeley	109	Greenwood	17	Pickens	47
Calhoun	2	Hampton	106	Richland	50
Charleston	2	Horry	3	Saluda	9
Cherokee	3	Jasper	5	Spartanburg	6
Chester	8	Kershaw	1	Sumter	30
Chesterfield	6	Lancaster	1	Union	
Clarendon	6	Laurens		Williamsburg	
Colleton	6	Lee		York	
Darlington	6				





#### IV. Influenza hospitalizations and deaths

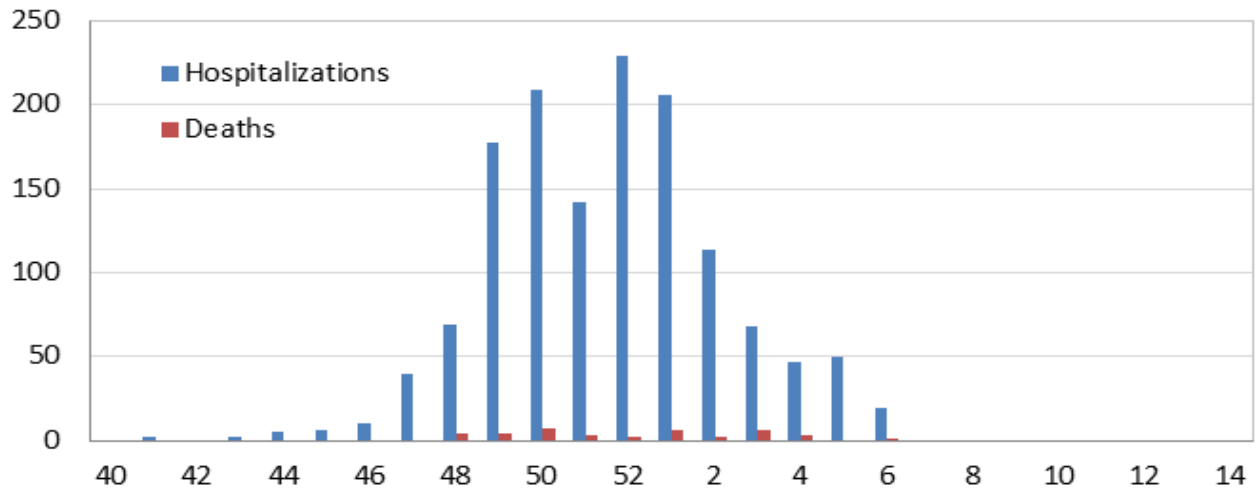
During the past MMWR week, 19 lab confirmed\* influenza hospitalizations were reported. One lab confirmed death was reported.

	Total number*	
<b>Number of Reporting Hospitals (Current week)</b>	45	
	<i>Current MMWR Week (2/3/13-2/9/13)</i>	<i>Cumulative (since 09/30/12)</i>
<b>Hospitalizations</b>	19	1395
<b>Deaths</b>	1	38

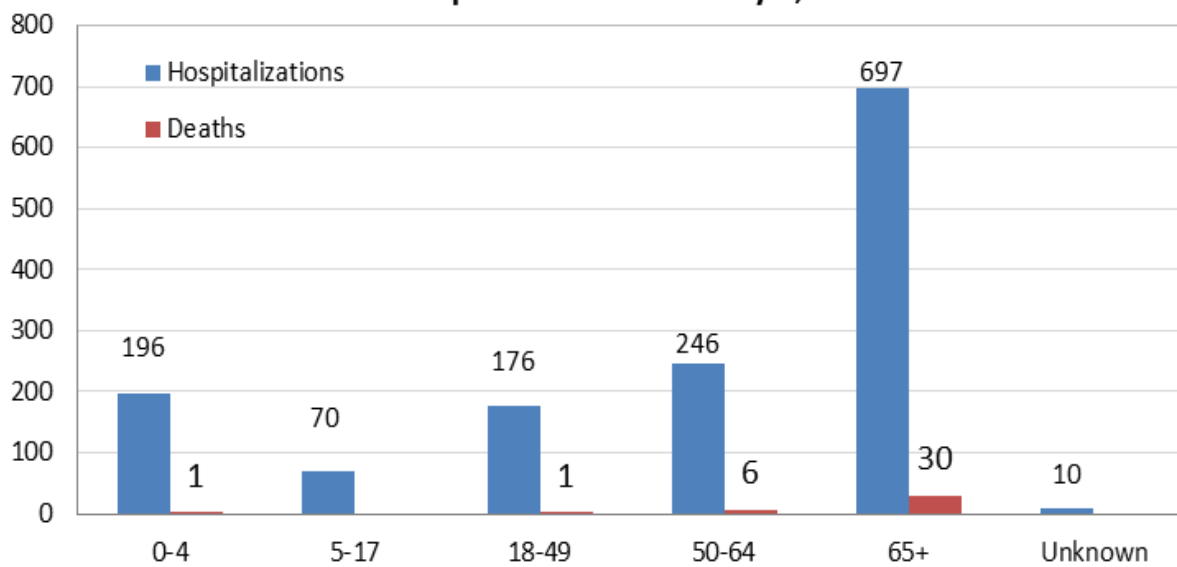
\*These data are provisional. Lab confirmation for hospitalizations and deaths includes culture, PCR, DFA, IFA, and rapid test.



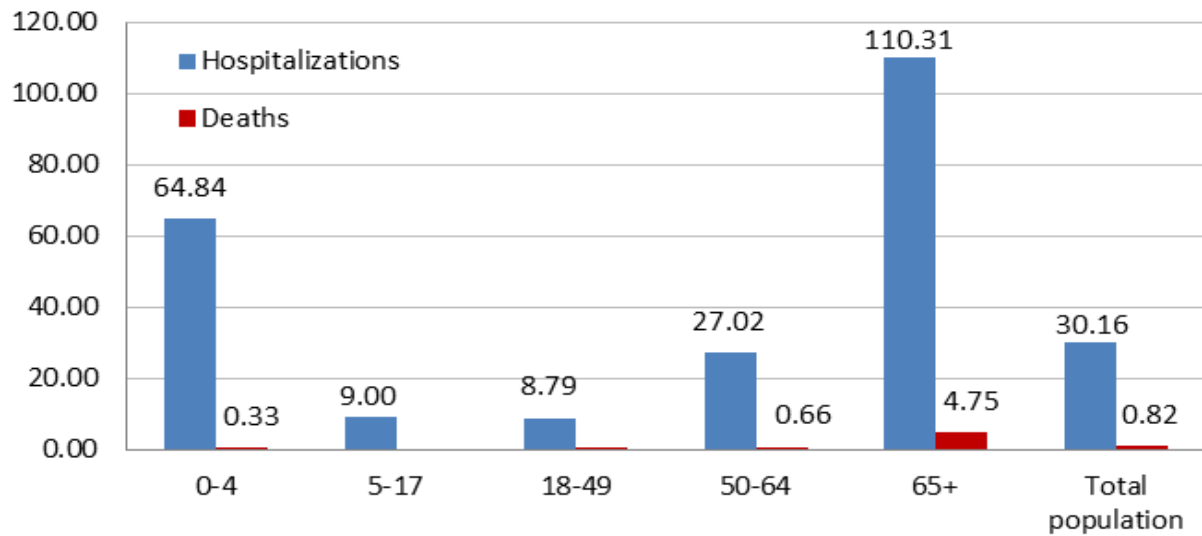
**Reported Cases of Laboratory Confirmed Influenza  
Hospitalizations and Deaths  
by MMWR week  
September 30, 2012 - February 9, 2013**



**Reported Cases of Laboratory Confirmed Influenza  
Hospitalizations (n=1395) and Deaths (n=38)  
September 30 - February 9, 2013**



**Laboratory Confirmed Influenza Case rate/100,000  
Hospitalizations (n=1395) and Deaths (n=38) by age group  
September 30, 2012 - February 9, 2013**

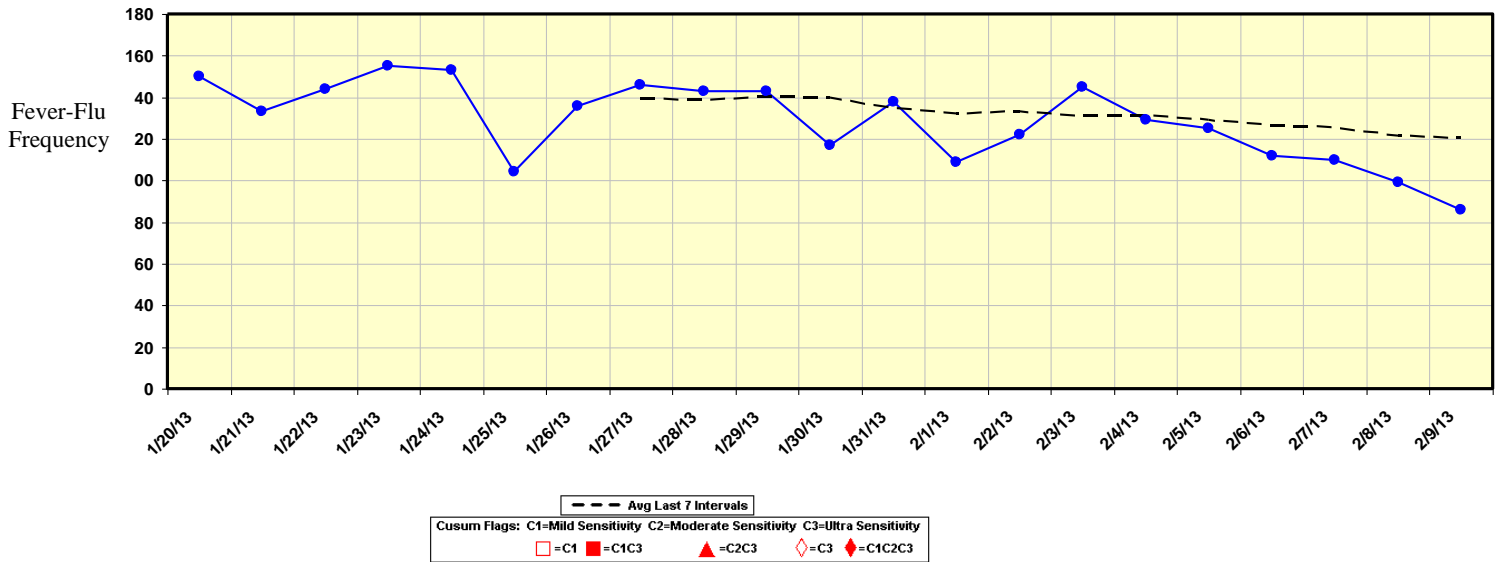


**Lab Confirmed Influenza Deaths by County  
September 30, 2012 – February 9, 2013**

County	Deaths	County	Deaths
Aiken	2	Lexington	4
Barnwell	1	McCormick	1
Beaufort	2	Newberry	1
Charleston	1	Oconee	3
Cherokee	1	Pickens	3
Clarendon	1	Richland	3
Georgetown	1	Spartanburg	2
Greenville	5	Sumter	1
Horry	2	Williamsburg	1
Jasper	1	York	2
<b>Total Deaths</b>		<b>38</b>	

## 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

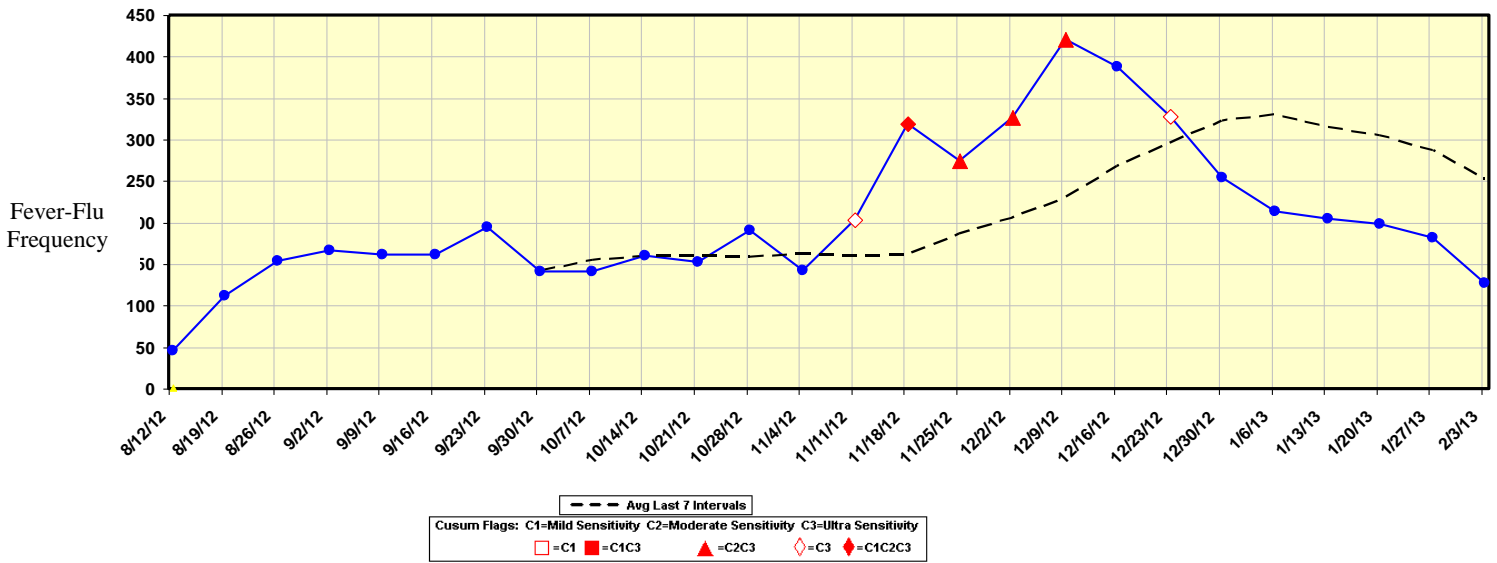
The SC Statewide Fever-Flu Syndrome graph above illustrates the daily counts of hospital emergency department (ED) visits with an Influenza-like Illness (ILI) for the past 21 days. A total of 21 hospital facilities are reporting to the SC-DARTS system. These 21 include: AnMed Health (Region 1); Self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

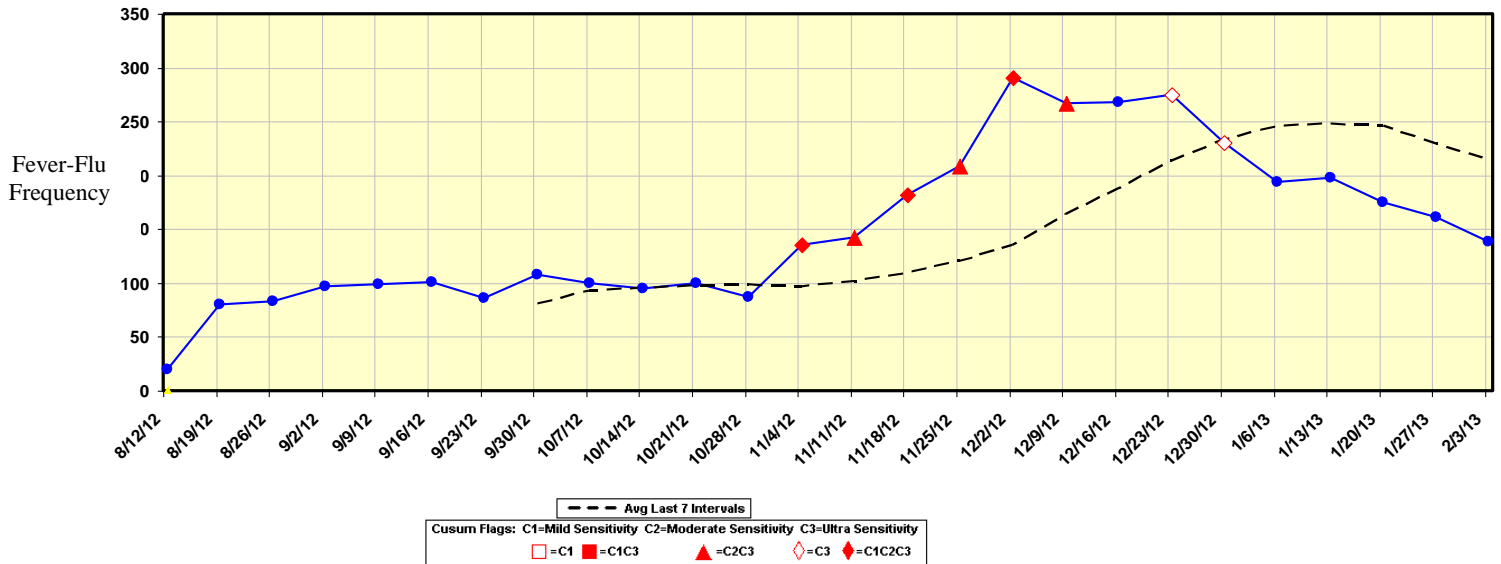
Below are the fever-flu syndrome graphs by Region for the past 180 days (weekly interval).

### Region 1 - Fever Flu Syndrome



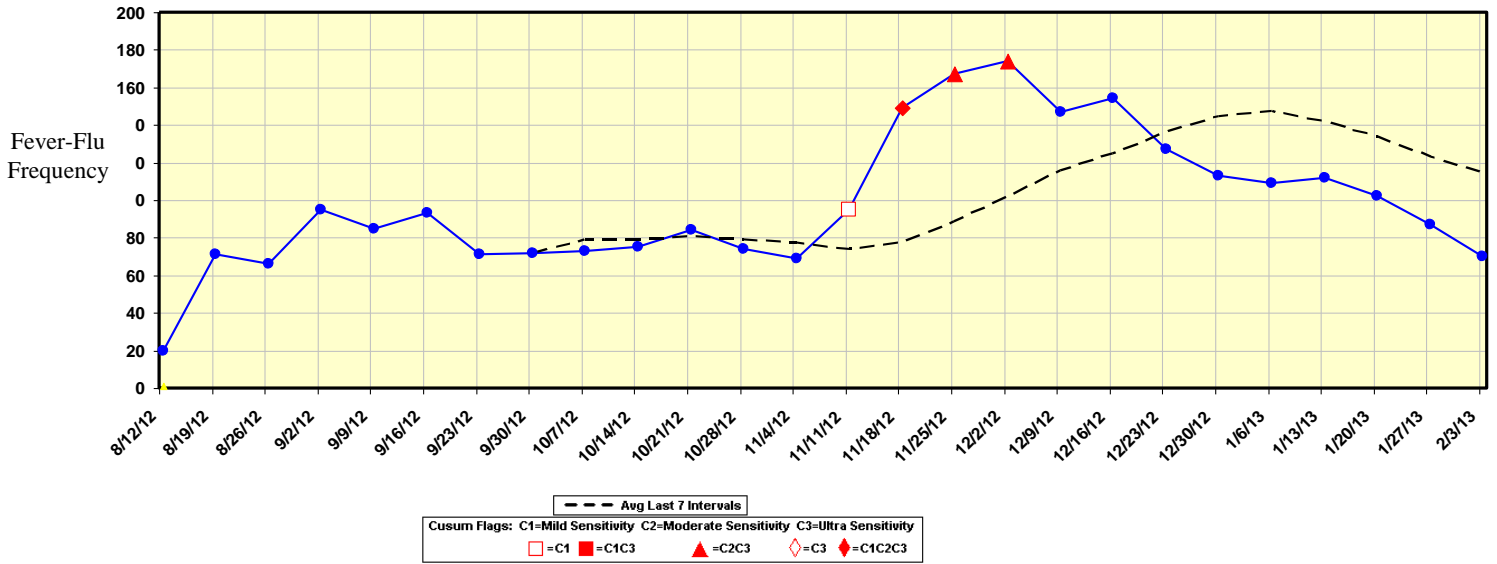
Region1 Hospitals (# of Facilities): AnMed Health (3); Self-Regional (1); Oconee Medical Center (1);

### Region 2 - Fever Flu Syndrome



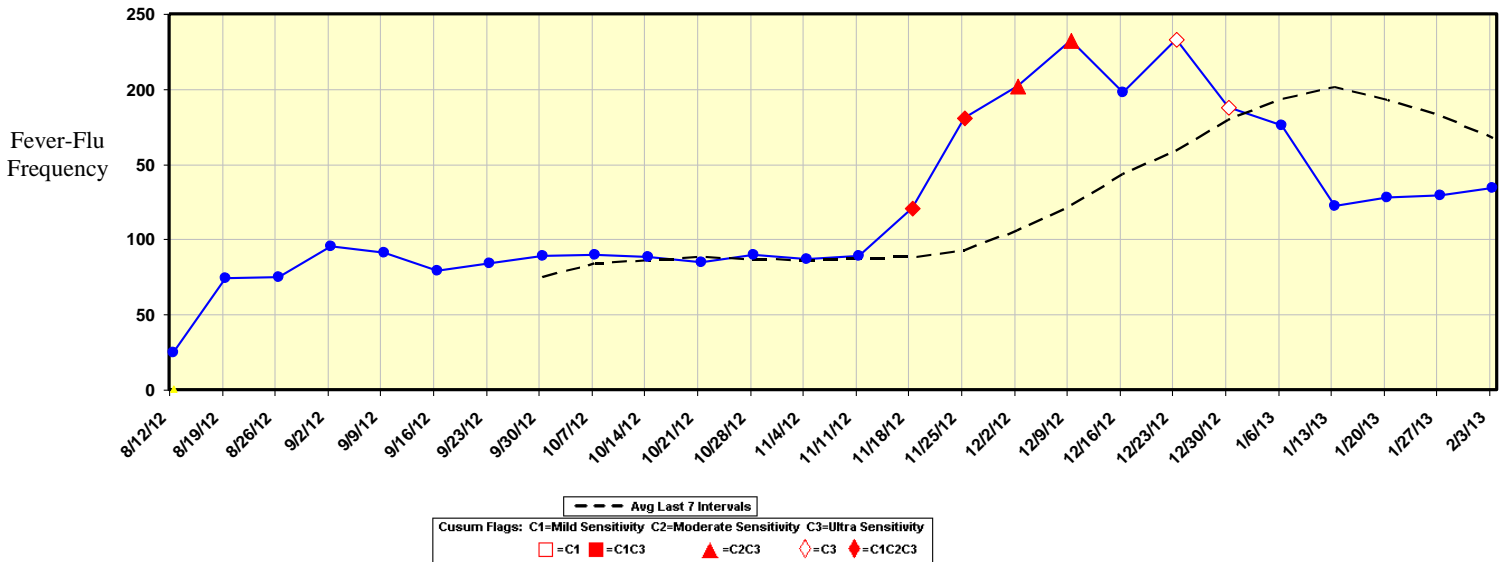
Region 2 Hospitals (# of Facilities): Greenville Hospital System (4); Palmetto Health Easley (1)

### Region 3 - Fever Flu Syndrome



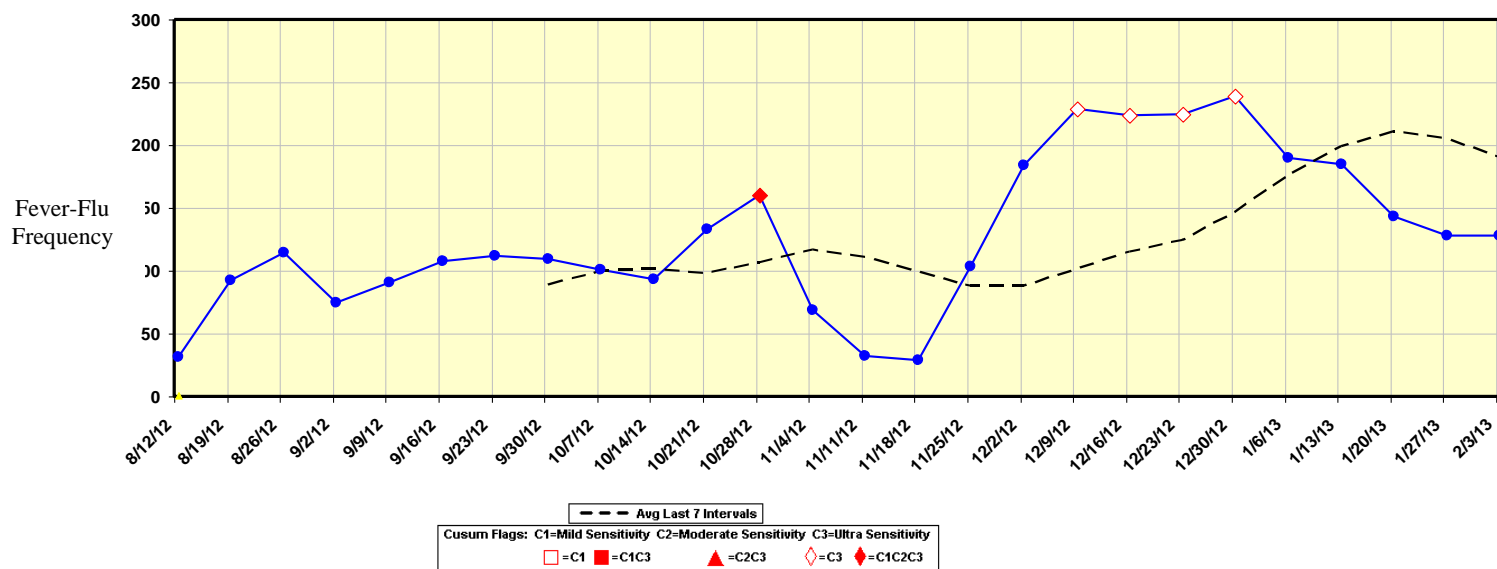
Region 3 Hospitals (# of Facilities): Palmetto Health Baptist (1), Palmetto Health Richland (1)

### Region 4 - Fever Flu Syndrome



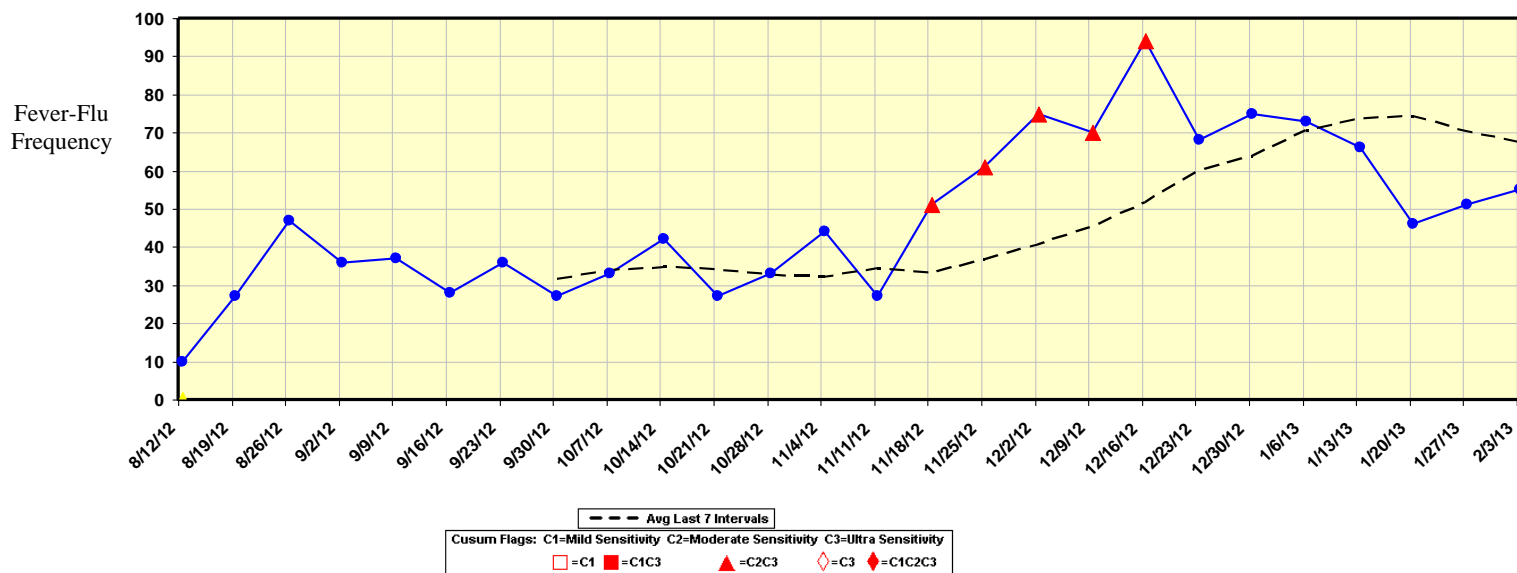
Region 4 Hospitals (# of Facilities): Kershaw Health (1); McLeod Health (1); Elgin Urgent Care (1)

### 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
<b>No activity</b>	Low	<b>And</b>	No lab confirmed cases
<b>Sporadic</b>	Not increased	<b>And</b>	Isolated lab-confirmed cases
	<b>OR</b>		
<b>Local</b>	Not increased	<b>And</b>	Lab confirmed outbreak in one institution
	Increased ILI in 1 region; ILI activity in other regions is not increased	<b>And</b>	Recent (within the past 3 weeks) lab evidence of influenza in region with increased ILI
<b>Regional</b>	<b>OR</b>		
	2 or more institutional outbreaks (ILI or lab confirmed) in 1 region; ILI activity in other regions is not increased	<b>And</b>	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
<b>Regional</b>	Increased ILI in 2-3 regions	<b>And</b>	Recent (within the past 3 weeks) lab confirmed influenza in the affected regions
	<b>OR</b>		
<b>Widespread</b>	Institutional outbreaks (ILI or lab confirmed) in 2-3 regions	<b>And</b>	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	<b>And</b>	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](mailto: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](mailto:alianeat@dhec.sc.gov)**.



