



# Flu Watch

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

Week Ending March 17, 2012 (MMWR Week 11)

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

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### MMWR Week 10 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 (.19%), the Midlands (.68%), and along the Coast (.73%). The state ILI percentage is .41%. These data reflect reports from 15 (50%) providers.

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

**SC Viral Isolate and RT-PCR Activity:** Five positive specimens were reported. Fifty-seven positive specimens have been reported this season.

**Positive Rapid Flu Test Activity:** Two hundred seventy-three positive rapid tests were reported. So far this, season 1462 have been reported.

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

**Deaths:** One lab confirmed death was reported. This is the first of the season.

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

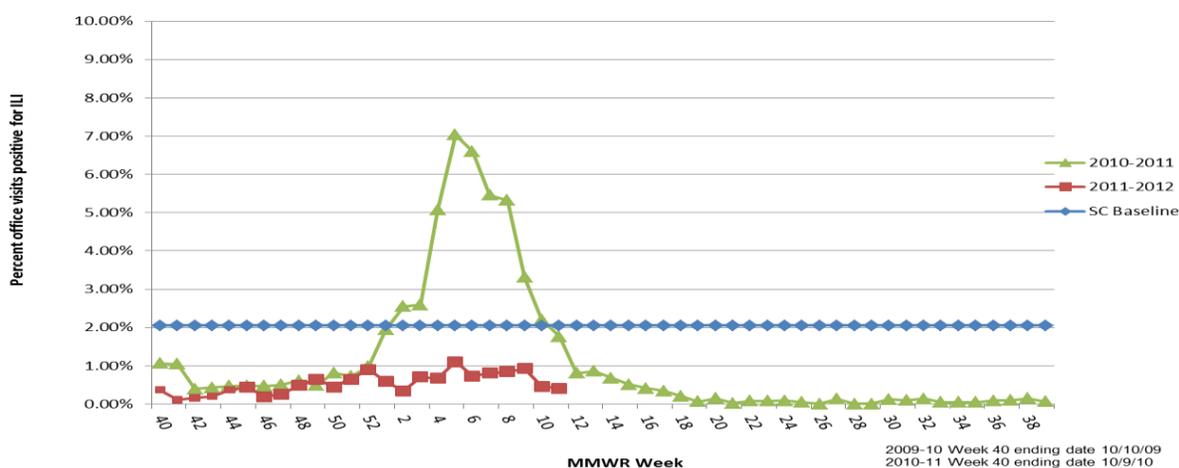
### Summary of ILI Activity, Positive Confirmatory Tests, and Influenza Associated Hospitalizations and Deaths

	<i>Current week</i>	<i>Previous week</i>	<i>Change From previous week</i>
Percent of visits to ILINet providers for ILI	.41	.46	▼ .05
Number of positive confirmatory tests	5	9	▼ 4
Number of lab confirmed flu hospitalizations	8	7	▲ 1
Number of lab confirmed flu deaths	1	0	▲ 1

## I. ILINet Influenza-Like Illness Surveillance

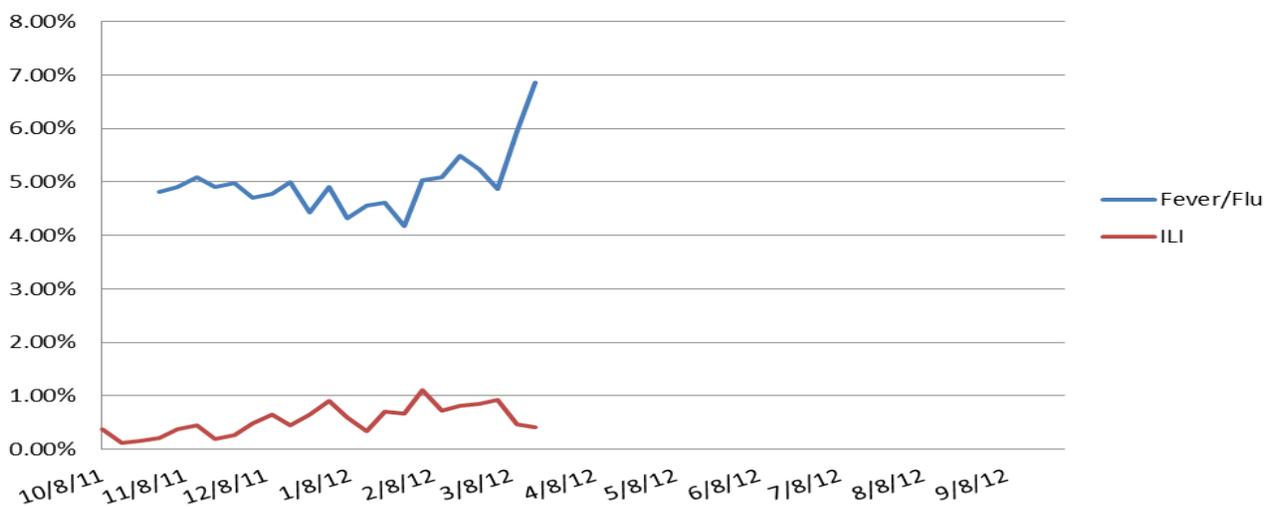
During MMWR week 11, .41% of patient visits to SC ILINet providers were due to ILI. This is below the state baseline (2.05%). This ILI percentage compares to 1.76% this time last year. Reports were received from providers in 12 counties, representing 6 of the 8 regions. The statewide percentage of ER visits with fever-flu syndrome (only includes hospitals participating in SC syndromic surveillance) was 6.87%.

**Percentage of Visits for Influenza-like Illness (ILI) Reported by Sentinel Providers in South Carolina  
2010-2011 and 2011-2012 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 Syndrome Category compared to SC ILI Surveillance  
Statewide (10/8/11-3/17/12)**



## Reported Influenza-Like Illness by Sentinel Providers March 11, 2012 – March 17, 2012

County	ILI %	County	ILI %
Abbeville	---	Greenwood	NR
Aiken	0%	Hampton	NR
Allendale	---	Horry	NR
Anderson	NR	Jasper	NR
Bamberg	---	Kershaw	NR
Barnwell	---	Lancaster	---
Beaufort	NR	Laurens	NR
Berkeley	NR	Lee	---
Calhoun	---	Lexington	3.81%
Charleston	NR	Marion	---
Cherokee	---	Marlboro	---
Chester	---	McCormick	.40%
Chesterfield	---	Newberry	---
Clarendon	---	Oconee	---
Colleton	---	Orangeburg	---
Darlington	---	Pickens	0%
Dillon	NR	Richland	.88%
Dorchester	NR	Saluda	0%
Edgefield	---	Spartanburg	.67%
Fairfield	0%	Sumter	NR
Florence	.37%	Union	---
Georgetown	.73%	Williamsburg	---
Greenville	.04%	York	0%

NR: No reports received

---: No enrolled providers



Geographic Region	ILI %	# of Reporters
Upstate-Regions 1 -2	.19	9
Midlands-Regions 3-5	.68	6
Coastal-Regions 6-8	.73	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 (3/11/12 – 3/17/12)

	BOL	Other clinical labs
Number of specimens tested	12	NA
Number of positive specimens	3	2
Influenza A unsubtype		
Influenza A H1N1	3	1
Influenza A H3N2		1
Influenza B		
Other		

Includes culture, RT-PCR, DFA, and IFA

**During MMWR week 11, five positive specimens were reported.**

### Positive confirmatory influenza test results\* Cumulative (10/2/11 – 3/17/12)

	BOL	Other clinical labs
Number of specimens tested	110	NA
Number of positive specimens	48	9
Influenza A unsubtype		4
Influenza A H1N1	24	2
Influenza A H3N2	20	2
Influenza B	4	1
Other		

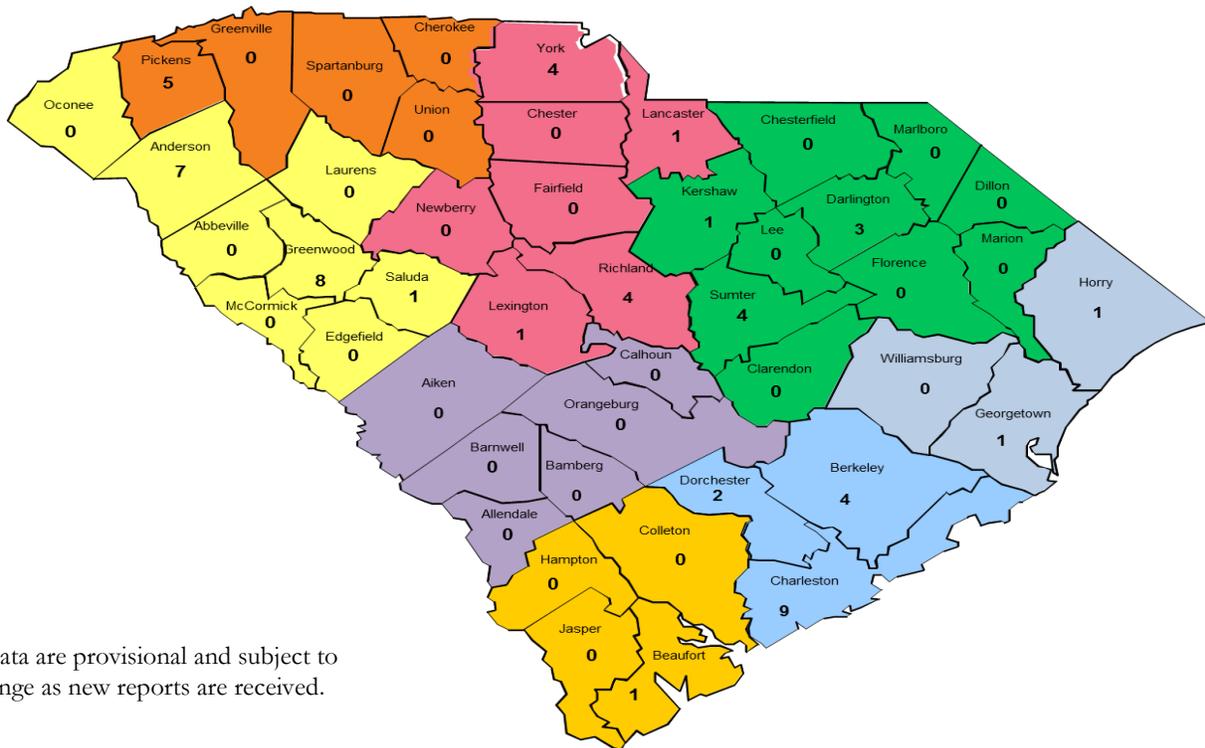
Includes culture, RT-PCR, DFA, and IFA

**Positive Confirmatory Tests by County  
Current Week 3/11/12 – 3/17/12**

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	1	Greenwood	3	Pickens	
Calhoun		Hampton		Richland	
Charleston	1	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 – 3/17/12**



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

**Positive Confirmatory Tests by County and Type  
Cumulative 10/2/11 - 3/17/12**

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

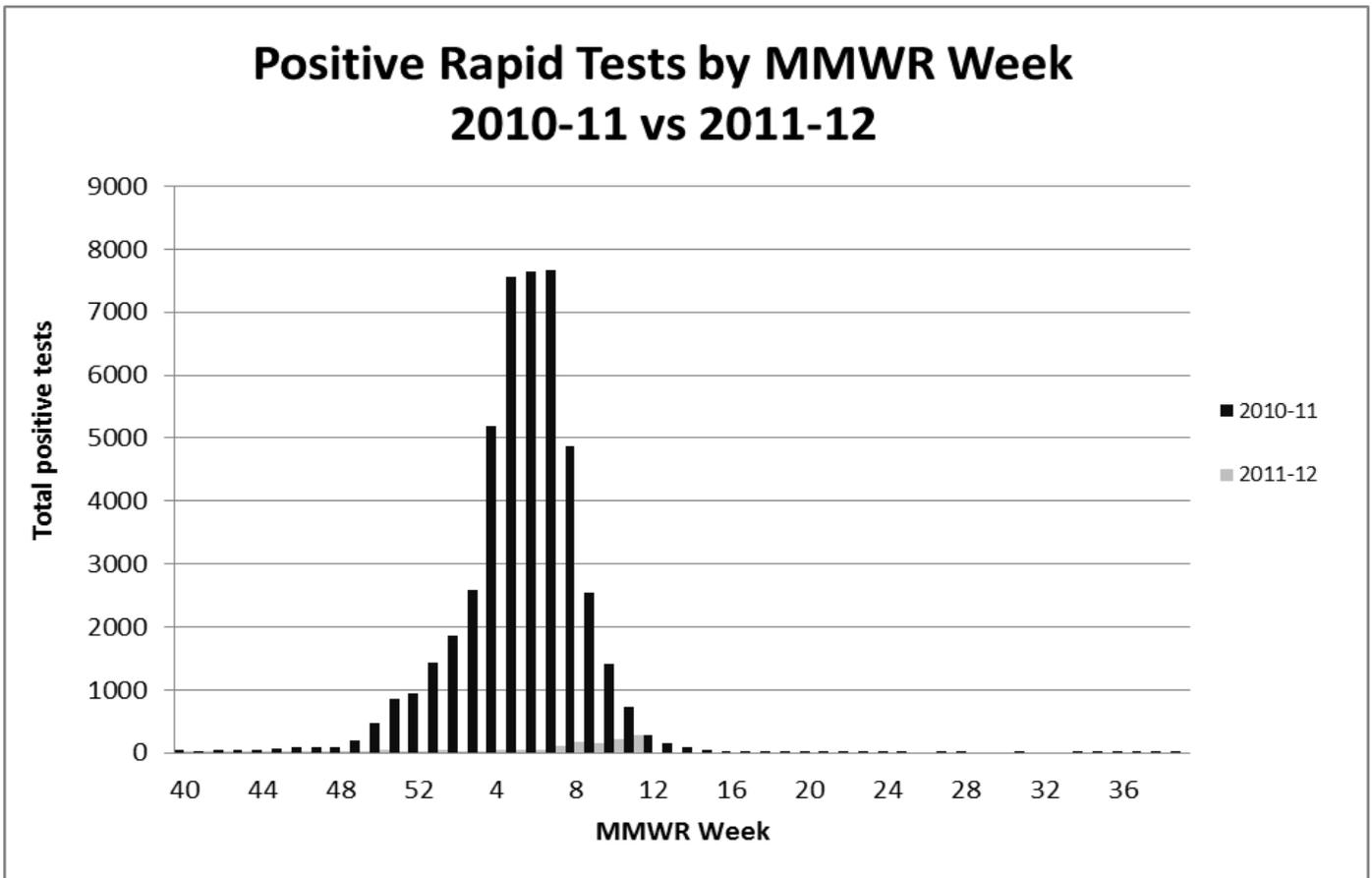
**III. Positive Rapid Antigen Tests**

During MMWR week 11, 273 positive rapid antigen tests were reported. Of these, there were 246 influenza A, 16 influenza B, 10 influenza A/B, and 1 unknown. During this MMWR week last year, 735 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>
<b>Current MMWR (3/11- 3/17/12)</b>	246	16	10	1	273
<b>Cumulative (since 10/2/11)</b>	1138	228	83	13	1462

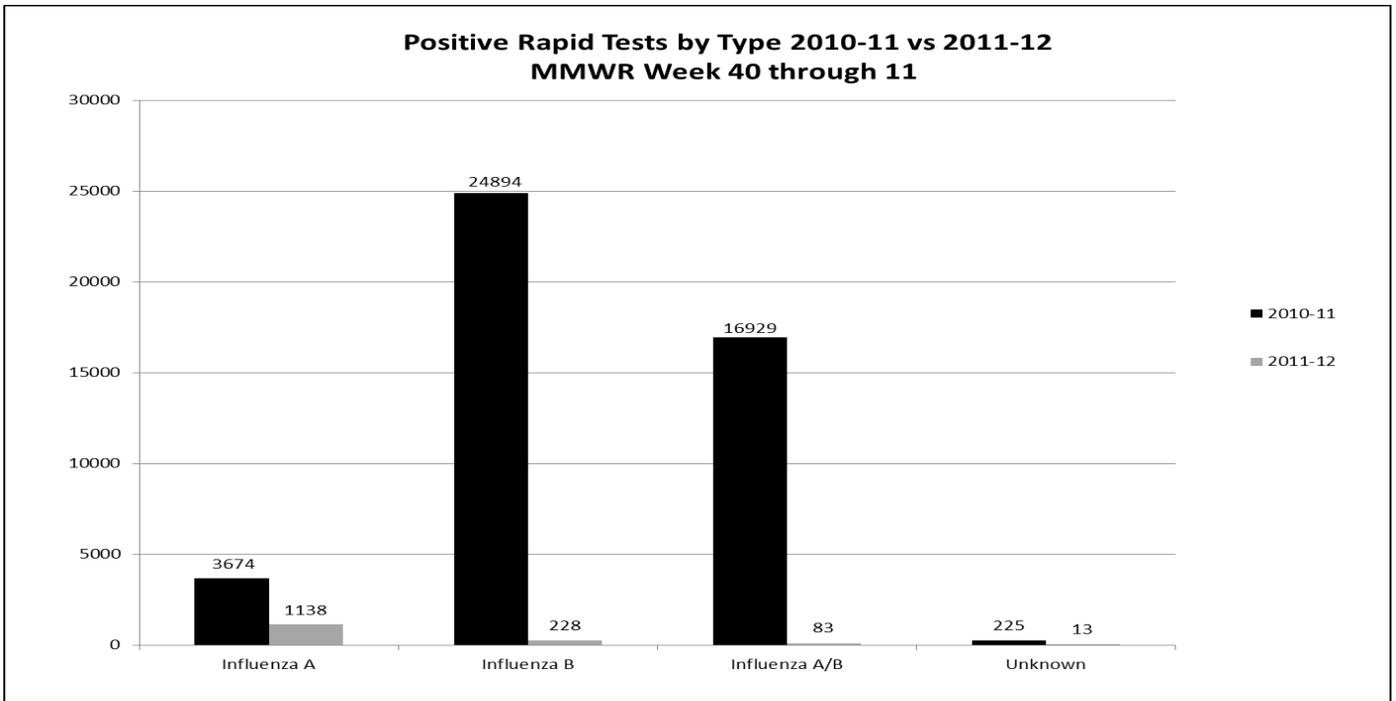
**Positive Rapid Flu Tests by County**  
**Current Week 3/11/12 – 3/17/12**

County	Positive Tests	County	Positive Tests	County	Positive Tests
Abbeville	3	Dillon		Lexington	8
Aiken		Dorchester	8	Marion	
Allendale		Edgefield		Marlboro	
Anderson	23	Fairfield		McCormick	3
Bamberg		Florence	5	Newberry	1
Barnwell		Georgetown	10	Oconee	9
Beaufort	6	Greenville	17	Orangeburg	
Berkeley	6	Greenwood	16	Pickens	6
Calhoun		Hampton		Richland	18
Charleston	22	Horry	10	Saluda	
Cherokee	1	Jasper	1	Spartanburg	17
Chester	14	Kershaw		Sumter	2
Chesterfield		Lancaster	4	Union	7
Clarendon	1	Laurens	7	Williamsburg	
Colleton	7	Lee		York	33
Darlington	8				



**Positive Rapid Tests by County and Type  
Cumulative 10/2/11 – 3/17/12**

	A	B	A/B	Unk		A	B	A /B	Unk
<b>Region 1</b>					<b>Region 2</b>				
Abbeville	21	2			Cherokee	2			
Anderson	80	10	5		Greenville	100	26	3	1
Edgefield					Pickens	34	5	1	
Greenwood	35	1	5		Spartanburg	105	1	2	
Laurens	16	3			Union	12		9	
McCormick	3				<b>Region 4</b>				
Oconee	26	7	1	1	Chesterfield	1			
Saluda	1	1			Clarendon	3	1		
<b>Region 3</b>					Darlington	22	2		5
Chester	47				Dillon				
Fairfield	1				Florence	36	8	5	
Lancaster	18	1			Kershaw	10		1	
Lexington	32	4	7		Lee				
Newberry	6				Marion	1			
Richland	71	26	3	5	Marlboro	1	1		
York	134	9	7	1	Sumter	28			
<b>Region 5</b>					<b>Region 6</b>				
Aiken	6	1			Georgetown	58	6		
Allendale					Horry	53	78	11	
Bamberg			1		Williamsburg		2	5	
Barnwell					<b>Region 8</b>				
Calhoun					Beaufort	14			
Orangeburg	2				Colleton	9	3		
<b>Region 7</b>					Hampton				
Berkeley	12	4	3		Jasper	2	1	1	
Charleston	114	14	9						
Dorchester	67	14							

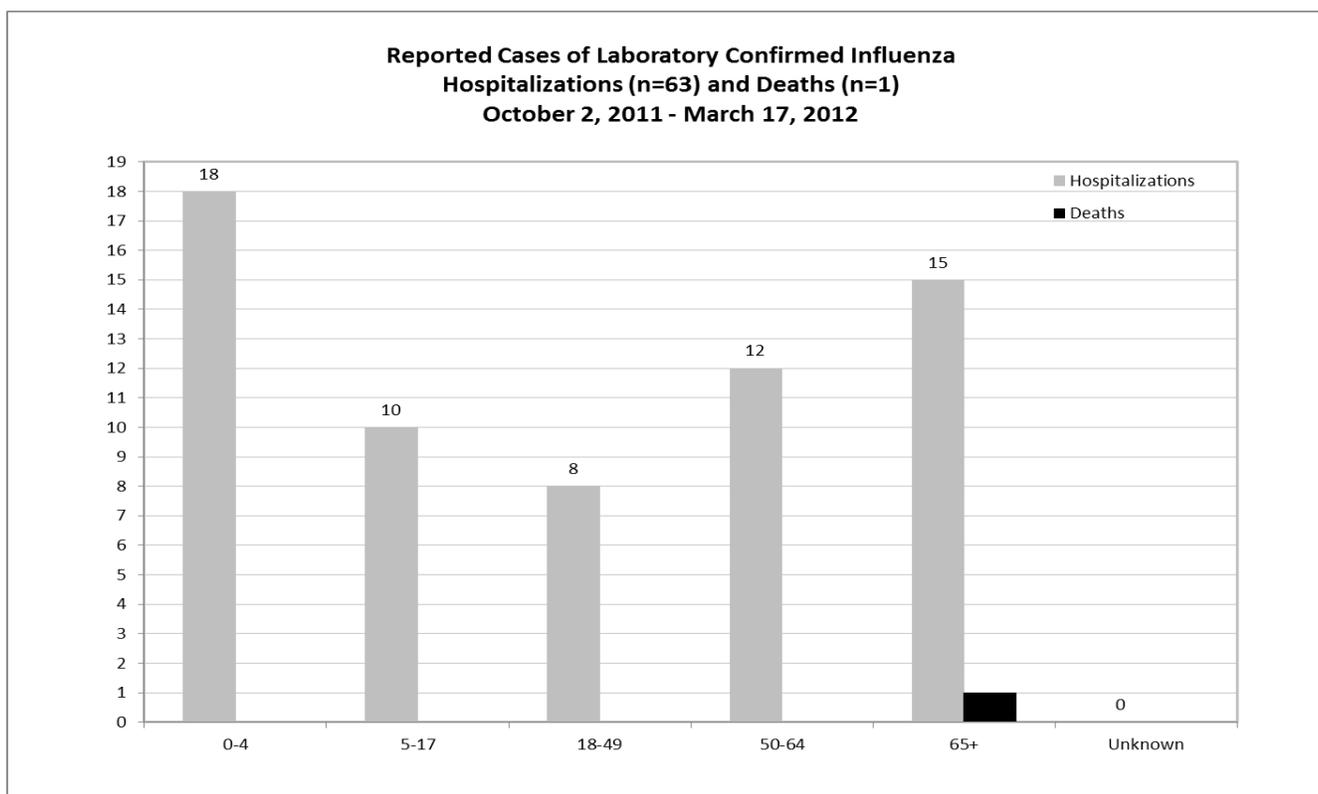


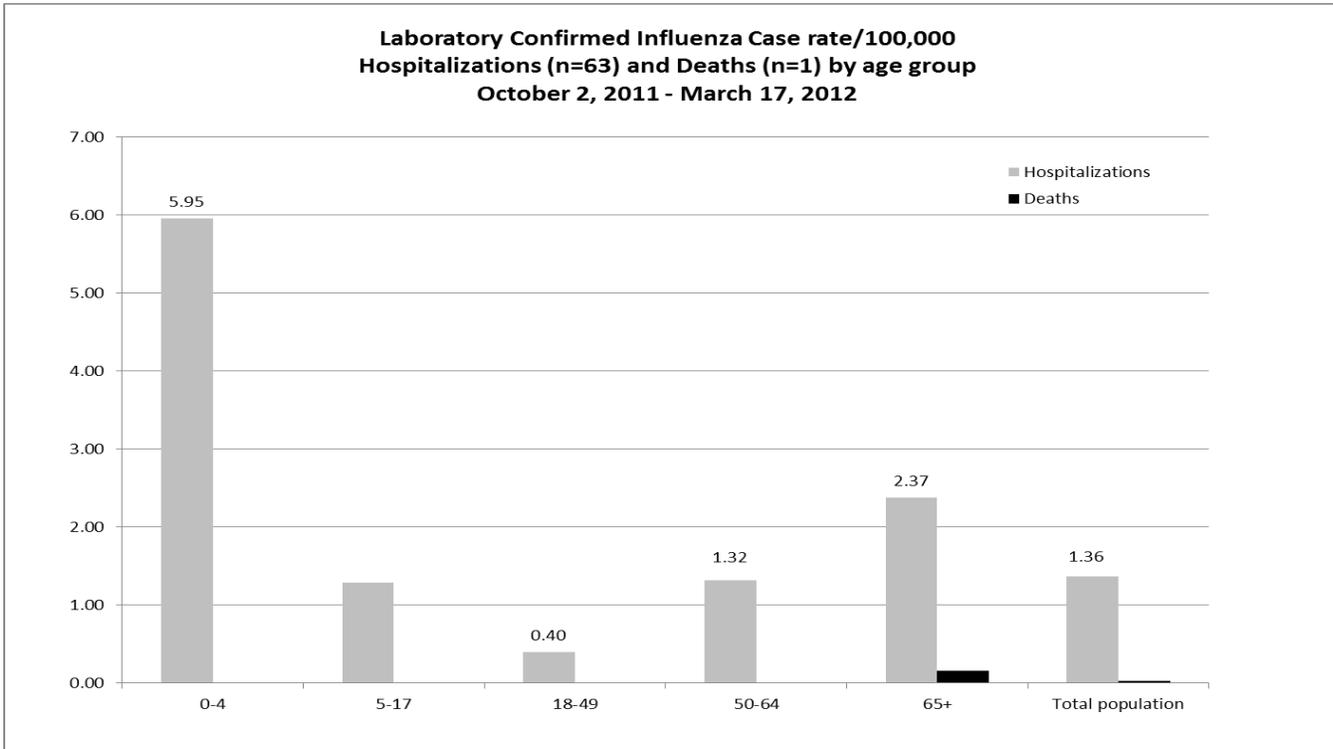
## IV. Influenza hospitalizations and deaths

During MMWR week 11 eight lab confirmed\* influenza hospitalizations were reported. One lab confirmed death was reported.

	Total number*	
	<i>Current MMWR (3/11- 3/17/12)</i>	<i>Cumulative (since 10/2/11)</i>
Number of Hospitals Reporting (current week)	47	
Hospitalizations	8	63
Deaths	1	1

\*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)***

**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

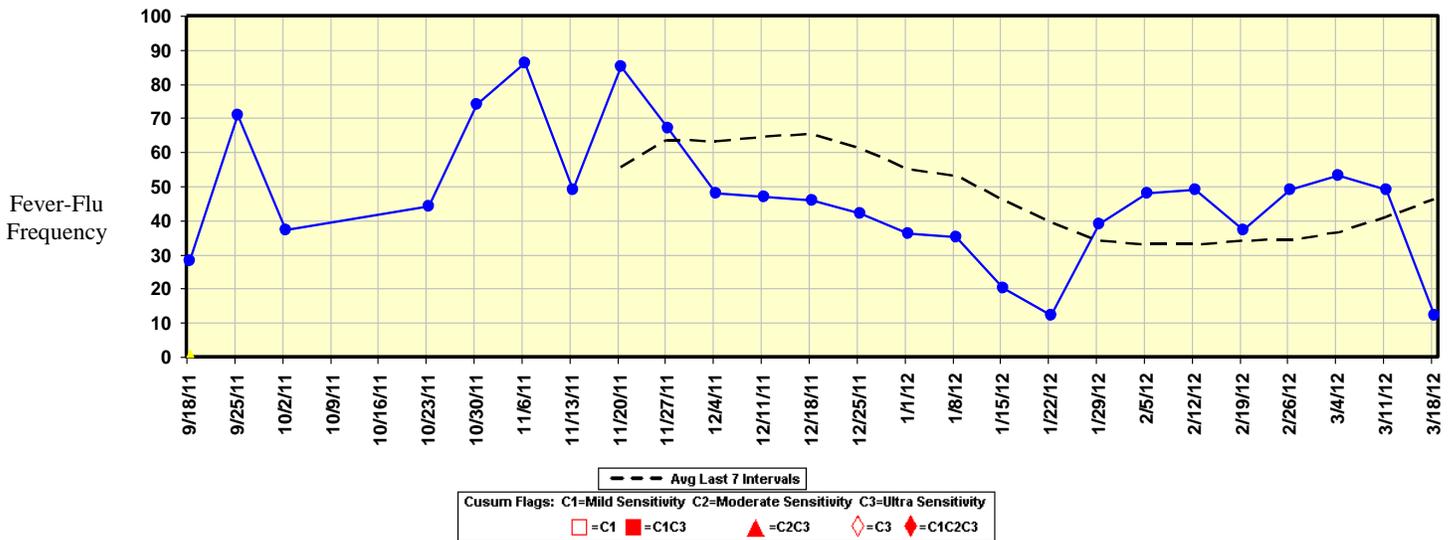
The SC Statewide Fever-Flu Syndrome graph above illustrates the daily counts of hospital emergency department (ED) visits with an Influenza-like Illness (ILI) for the past 21 days. A total of **21 hospital** facilities are reporting to the SC-DARTS system. These 21 include: AnMed Health (Region 1); Self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

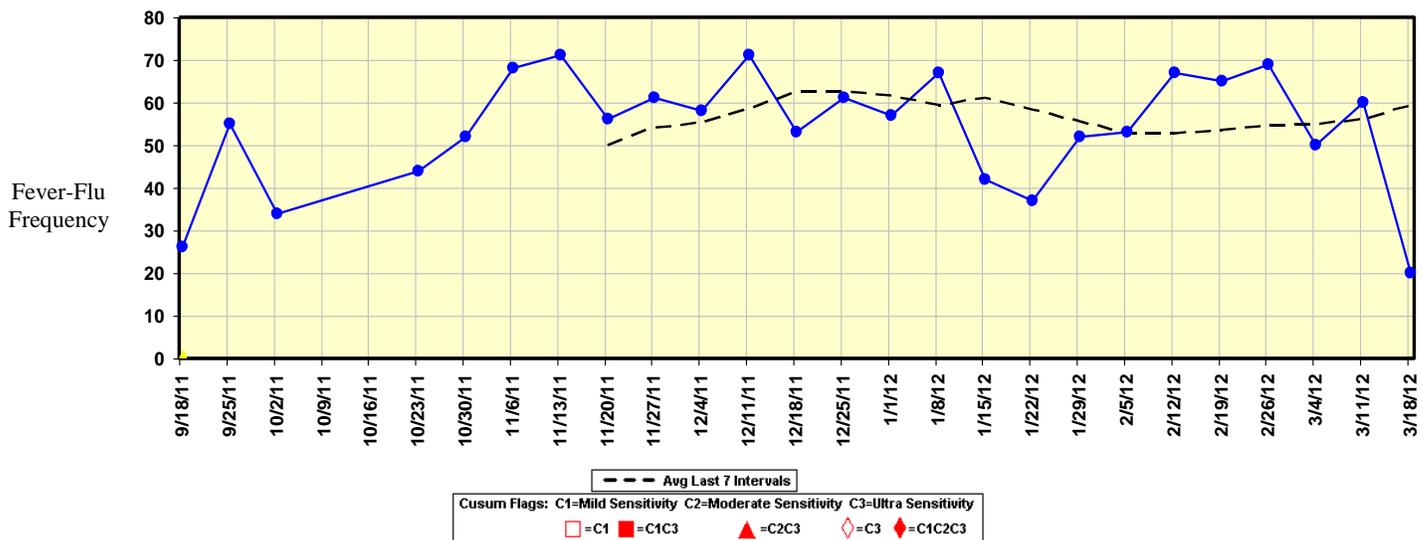
Below are the fever-flu syndrome graphs by Region for the past 180 days (weekly interval).

**Region 1 - Fever Flu Syndrome**



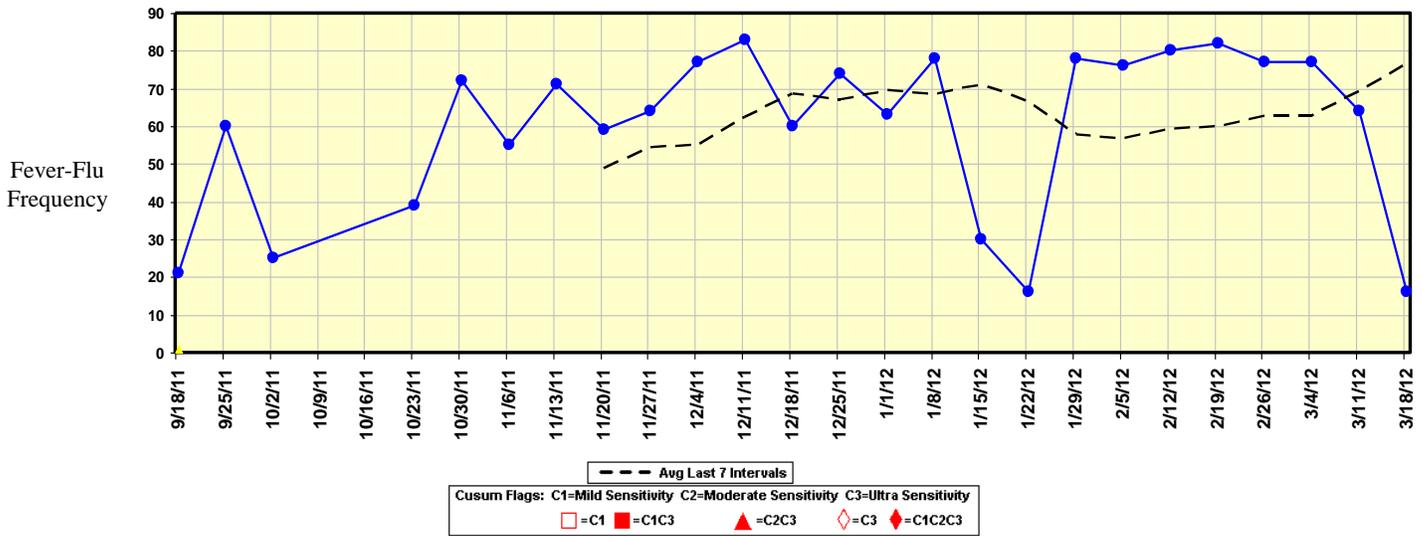
Region1 Hospitals (# of Facilities): AnMed Health (3); Self-Regional (1); Oconee Medical Center (1);

**Region 2 - Fever Flu Syndrome**



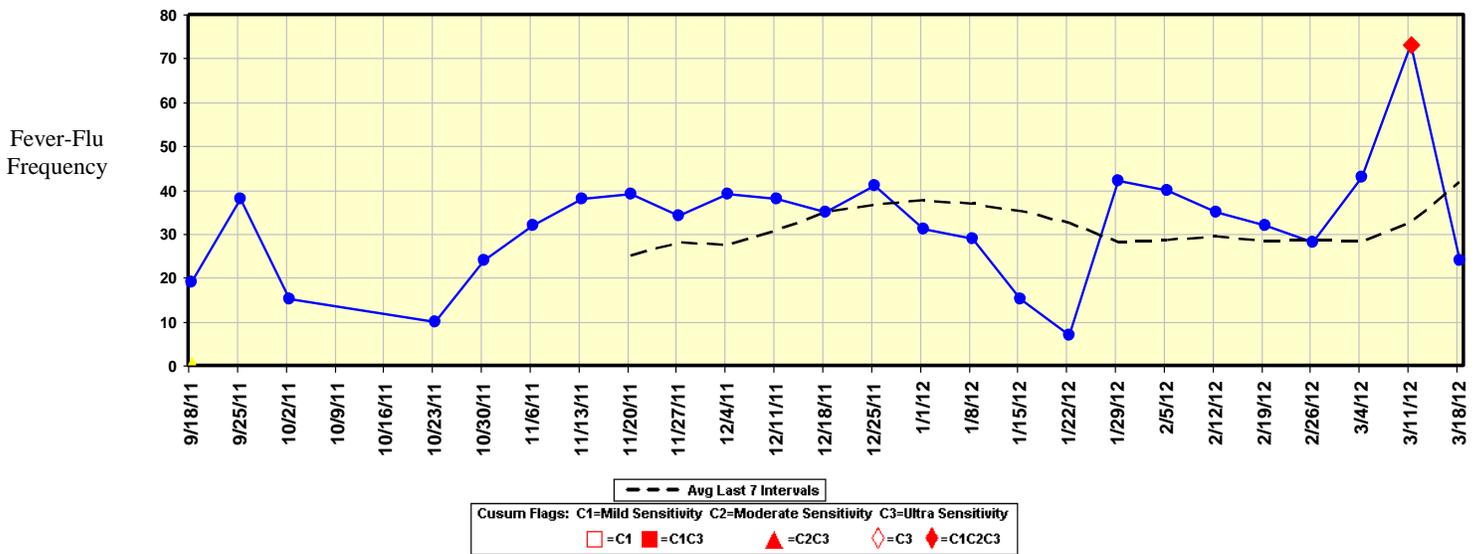
Region 2 Hospitals (# of Facilities): Greenville Hospital System (4); Palmetto Health Easley (1)

### Region 3 - Fever Flu Syndrome



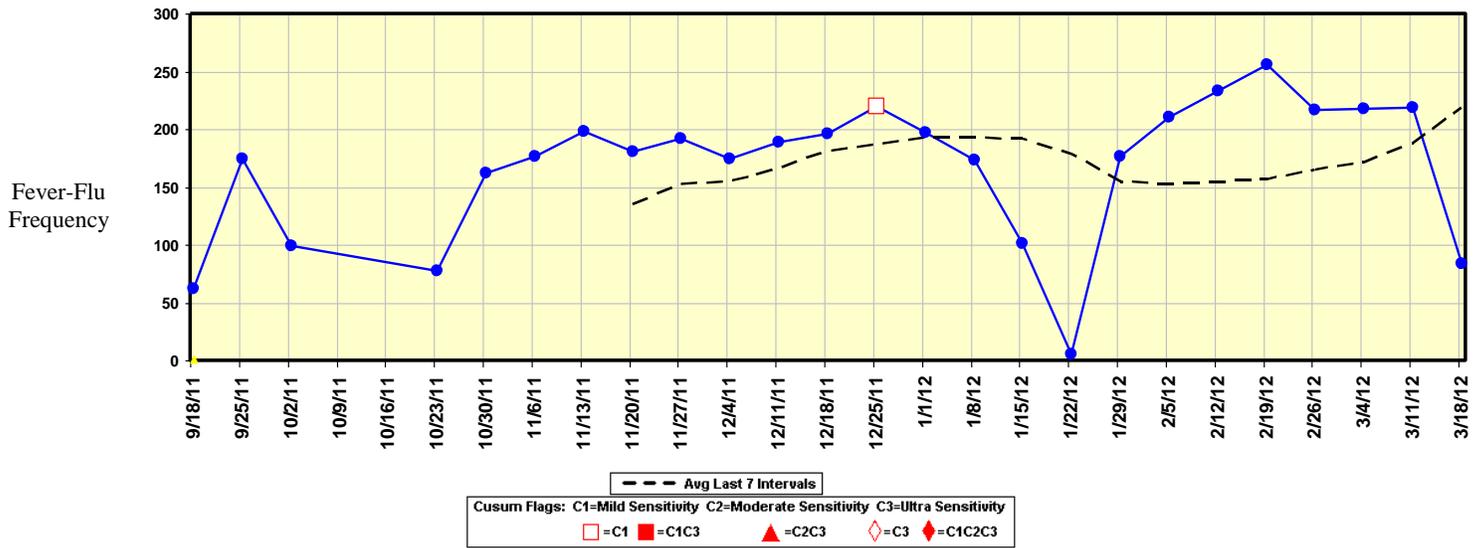
Region 3 Hospitals (# of Facilities): Palmetto Health Baptist (1), Palmetto Health Richland (1)

### Region 4 - Fever Flu Syndrome



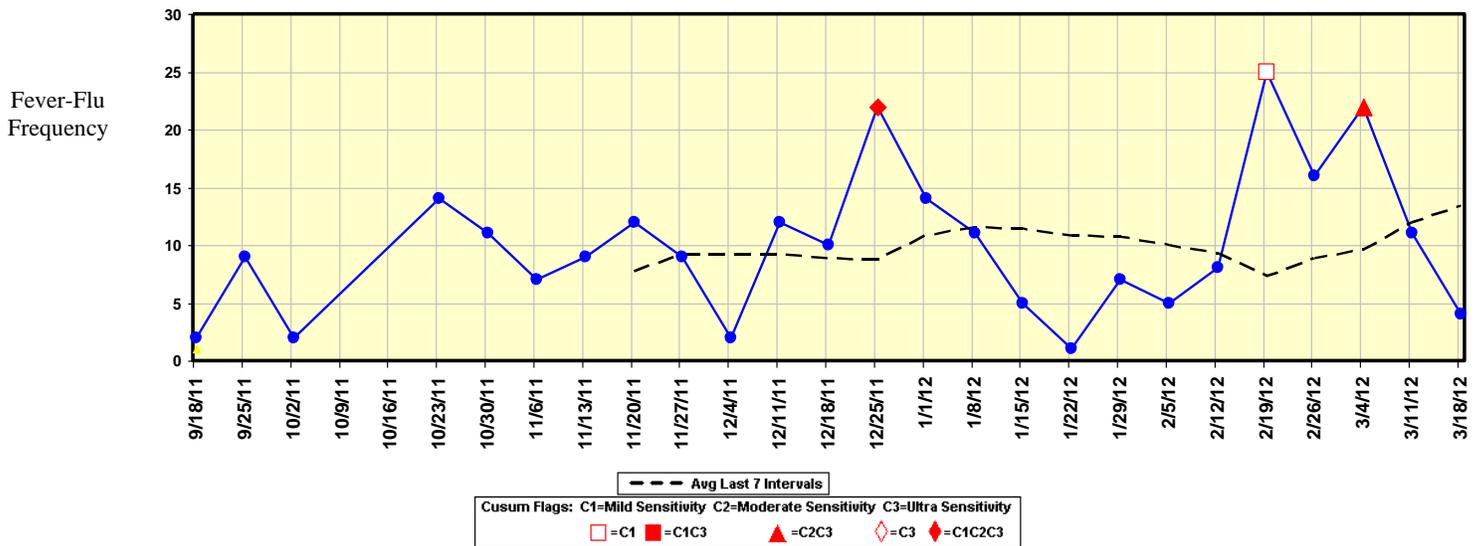
Region 4 Hospitals (# of Facilities): Kershaw Health (1); McLeod Health (1); Elgin Urgent Care (1)

### 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>	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>OR</b>		
<b>Regional</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>OR</b>		
<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>Regional</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
	<b>OR</b>		
<b>Widespread</b>	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

#### 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](mailto:alianeat@dhec.sc.gov)**.

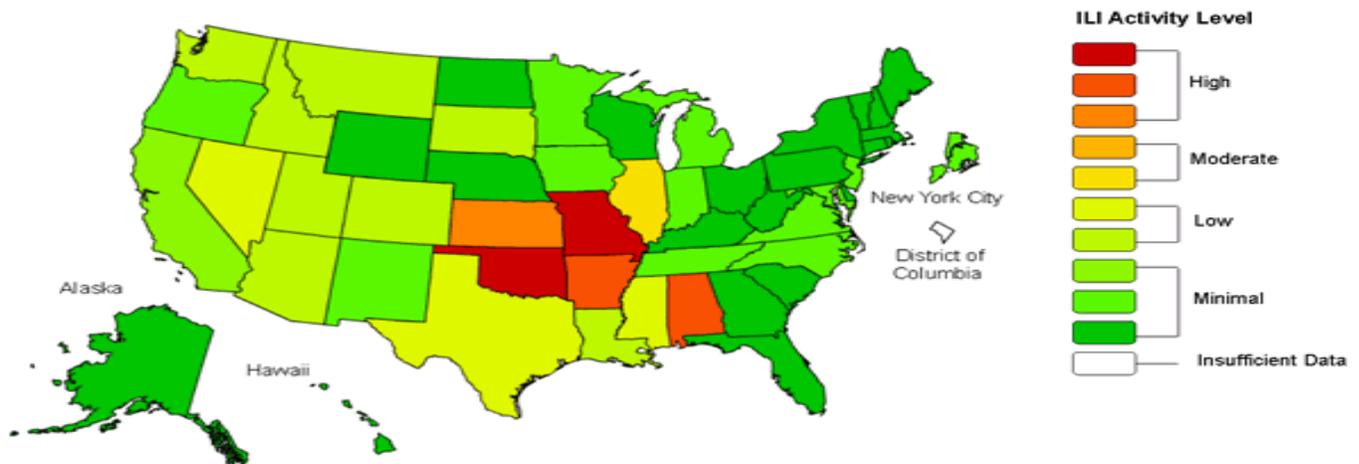
## VIII. National Surveillance MMWR Week 10 (3/4-3/10)

During week 10 (March 4-10, 2012), influenza activity remained elevated in some areas of the United States, but influenza-like-illness continued to be relatively low nationally.

- U.S. Virologic Surveillance: Of the 4,742 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, 1,099 (23.2%) were positive for influenza.
- 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 2.2%, which is below the national baseline of 2.4%. Regions 5, 7, and 10 reported ILI above region-specific baseline levels. Five states experienced high ILI activity; 1 state experienced moderate ILI activity; 11 states experienced low ILI activity; New York City and 33 states experienced minimal ILI activity, and the District of Columbia had insufficient data to calculate ILI activity.
- Geographic Spread of Influenza: Fifteen states reported widespread geographic activity; 22 states reported regional influenza activity; 3 states reported local activity; the District of Columbia, Puerto Rico, and 10 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 10 ending Mar 10, 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.