

Flu Watch

Week Ending April 27, 2013 (MMWR Week 17)

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

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MMWR Week 17 at a Glance:
<p>Influenza Activity Level: SPORADIC Note: Activity level definitions are found on page 14</p> <p>ILI Activity Status (South Carolina baseline is 2.05%*): Below baseline in the Upstate Region (0%), the Midlands Region (.32%), and the Pee Dee Region (.23%). No reports were received from the Low Country Region. The state ILI percentage was .17%. These data reflect reports from 11 (34.4%) providers.</p> <p>SC Viral Isolate and RT-PCR Activity: 7 positive specimens were reported. Since 9/30/12, 1172 positive specimens have been reported.</p> <p>Positive Rapid Flu Test Activity: 241 positive rapid tests were reported. Since 9/30/12, 58,270 positive rapid tests have been reported.</p> <p>Hospitalizations: 7 lab confirmed hospitalizations were reported. Since 9/30/12, 1707 hospitalizations have been reported.</p> <p>Deaths: Two lab confirmed deaths were reported. Since 9/30/12, 46 deaths have been reported.</p>

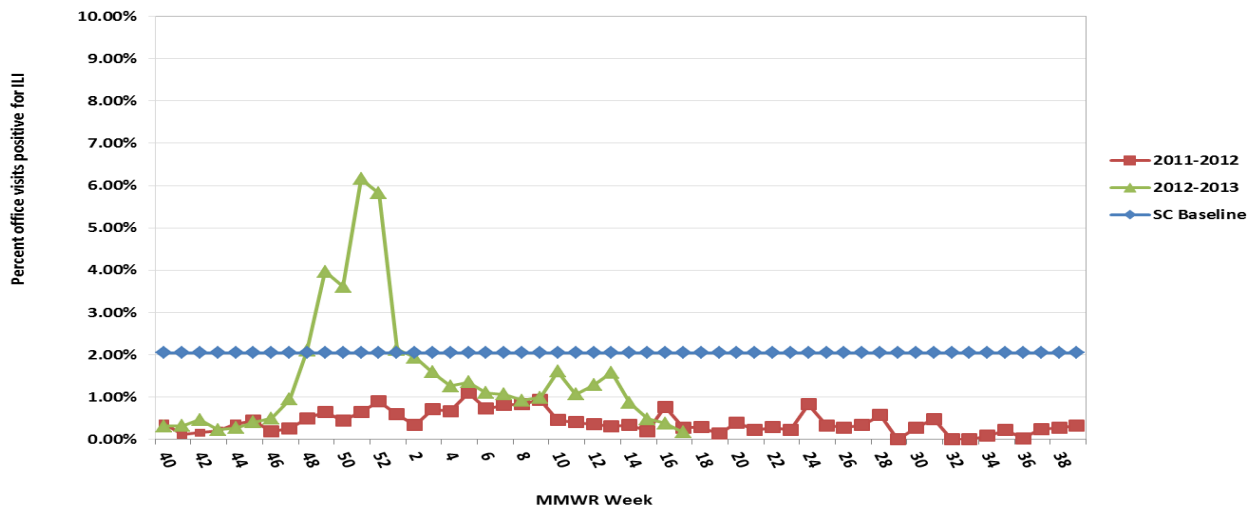
Summary of ILI Activity, Positive Confirmatory Tests, and Influenza Associated Hospitalizations and Deaths

	<i>Current week</i>	<i>Previous week</i>	<i>Change from previous week</i>
Percent of ILI visits reported by ILINet providers	.17%	.38%	▼ .21
Number of positive confirmatory tests	7	11	▼ 4
Number of lab confirmed flu hospitalizations	7	11	▼ 4
Number of lab confirmed flu deaths	2	0	▲ 2

I. ILINet Influenza-Like Illness Surveillance

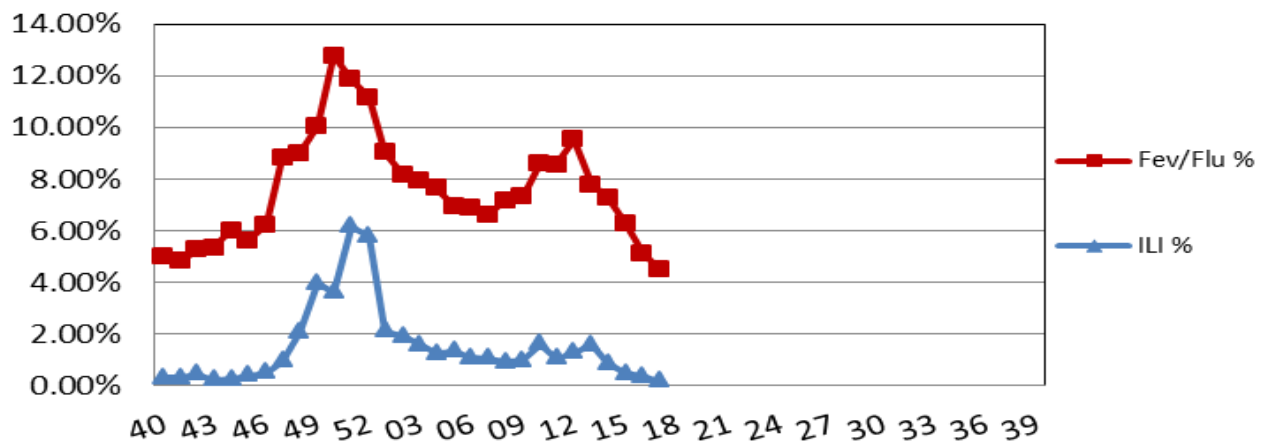
During the most recent MMWR week, .17% of patient visits to SC ILINet providers were due to ILI. This is below the state baseline (2.05%). This ILI percentage compares to .28 % this time last year. Reports were received from providers in 10 counties, representing 3 of the 4 regions. The statewide percentage of ER visits with fever-flu syndrome was 4.54%.

**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 - April 27, 2013**



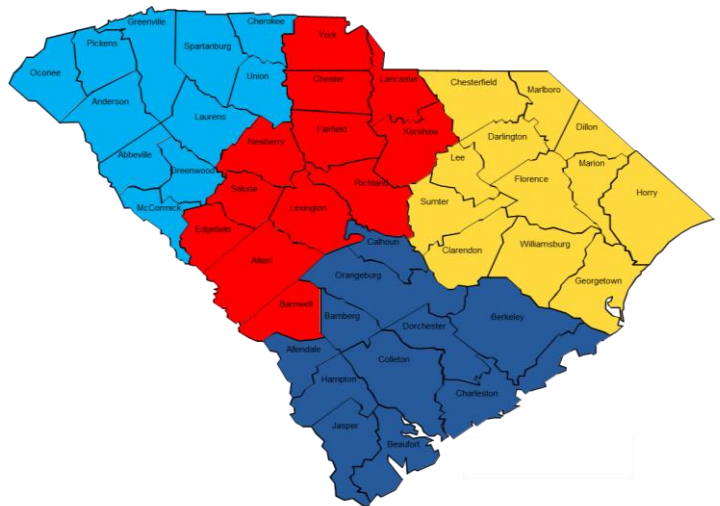
*Only includes hospitals participating in SC syndromic surveillance

Influenza-Like Illness Reported by Sentinel Providers April 21, 2013 – April 27, 2013

County	ILI %	County	ILI %
Abbeville	---	Greenwood	NR
Aiken	0%	Hampton	NR
Allendale	---	Horry	NR
Anderson	0%	Jasper	NR
Bamberg	---	Kershaw	.36%
Barnwell	---	Lancaster	---
Beaufort	NR	Laurens	NR
Berkeley	NR	Lee	---
Calhoun	---	Lexington	1.68%
Charleston	NR	Marion	---
Cherokee	---	Marlboro	---
Chester	---	McCormick	NR
Chesterfield	---	Newberry	---
Clarendon	---	Oconee	---
Colleton	---	Orangeburg	---
Darlington	---	Pickens	0%
Dillon	NR	Richland	.29%
Dorchester	NR	Saluda	NR
Edgefield	---	Spartanburg	0%
Fairfield	---	Sumter	NR
Florence	.23%	Union	---
Georgetown	NR	Williamsburg	---
Greenville	0%	York	0%

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

Region	ILI %	# of Reporters
Upstate (Light blue)	0	5
Midlands (Red)	.32	5
Pee Dee (Yellow)	.23	1
Low Country (Dark blue)	-	0



*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 (4/21/13 – 4/27/13)</i>		
	BOL	Other clinical labs
Number of specimens tested	10	-
Number of positive specimens	2	5
Influenza A unsubtype		
Influenza A H1N1		
Influenza A H3N2		
Influenza B	2	5
Other		

Includes culture, RT-PCR, DFA, and IFA

During the previous MMWR week, 7 positive specimens were reported.

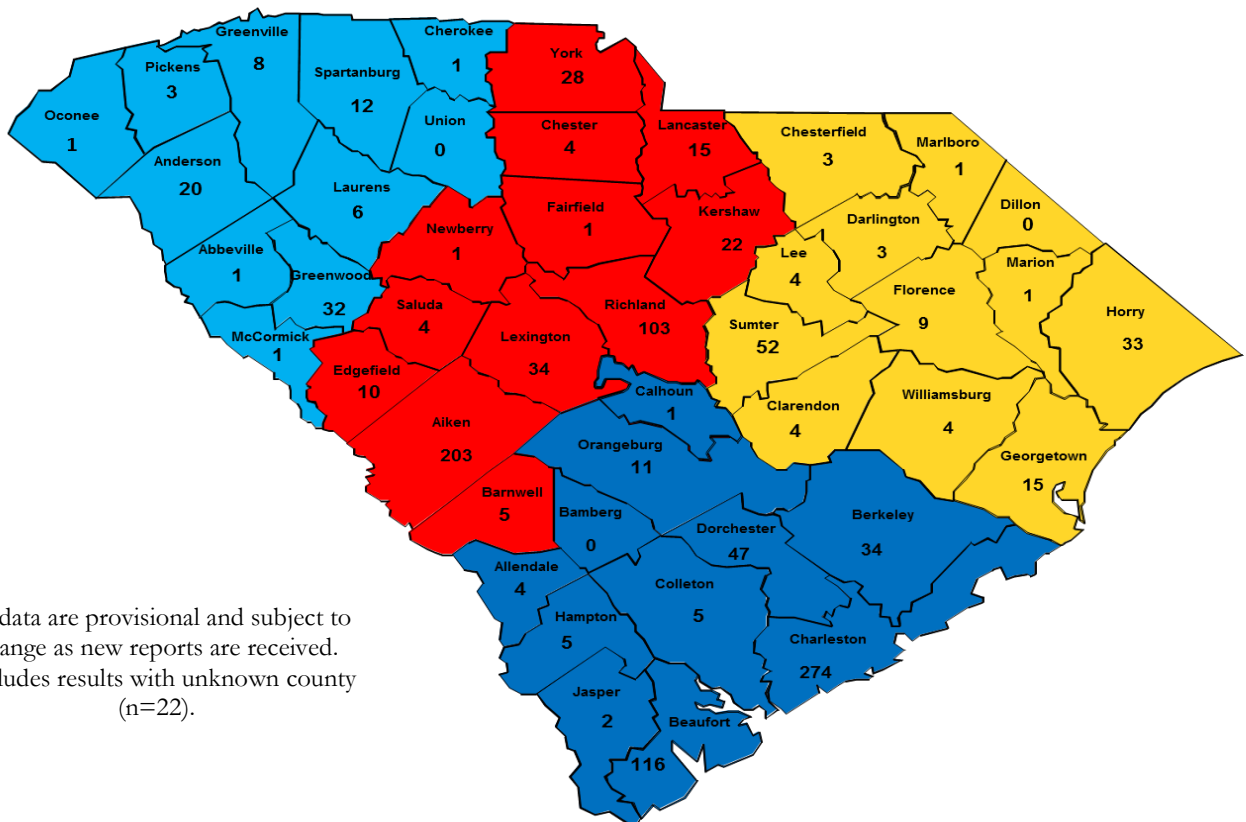
<i>Positive confirmatory influenza test results*</i> <i>Cumulative (09/30/12 – 4/27/13)</i>		
	BOL	Other clinical labs
Number of specimens tested	502	NA
Number of positive specimens	318 (63.3%)	854
Influenza A unsubtype		324 (37.9%)
Influenza A H1N1	24 (7.5%)	19 (2.2)
Influenza A H3N2	245 (77%)	311 (36.4%)
Influenza B	49 (15.4%)	197 (23.1%)
Other		3 (.35%)

Includes culture, RT-PCR, DFA, and IFA

Positive Confirmatory Tests by County
Current Week 4/21/13 – 4/27/13

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

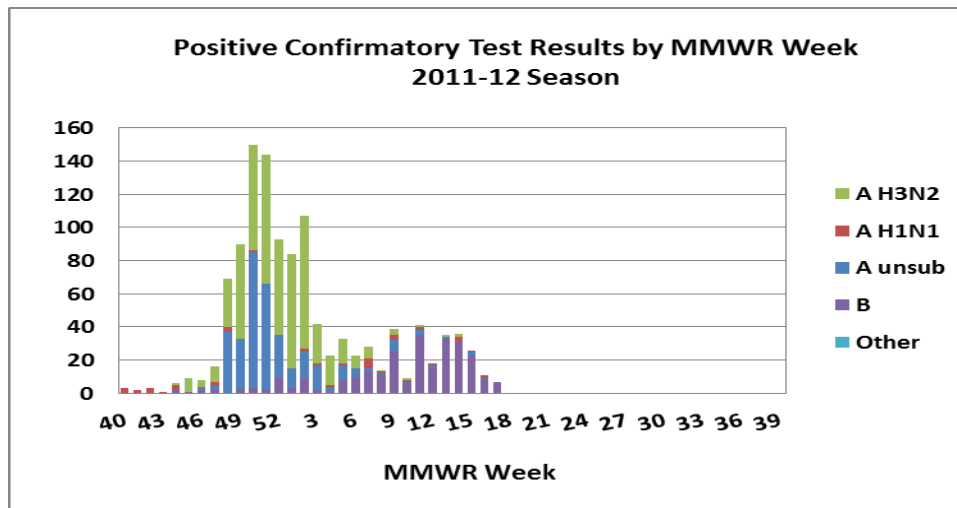
Map of Positive Confirmatory Tests by County
Cumulative 09/30/12 – 4/27/13



All data are provisional and subject to change as new reports are received. Excludes results with unknown county (n=22).

**Positive Confirmatory Tests by County and Type
Cumulative 9/30/12 – 4/27/13**

	A H1N1	A H3N2	B	A Unsub	Unk		A H1N1	A H3N2	B	A Unsub	Unk
Upstate											
Abbeville		1				McCormick		1			
Anderson		8	6	5	1	Oconee		1			
Cherokee				1		Pickens		3			
Greenwood		22	8	3		Spartanburg	2		5	5	
Greenville		2	1	5		Union					
Laurens		2		4							
Midlands											
Aiken	6	3	50	144	1	Lancaster		3	5	7	
Barnwell			2	3		Lexington		5	5	24	
Chester			2	2		Newberry				1	
Edgefield		1	3	6		Richland	3	16	24	60	
Fairfield			1			Saluda			3		
Kershaw	2	8	7	4		York	1	13	4	13	
Pee Dee											
Chesterfield		1	1	1		Horry	2	19	5	7	
Clarendon	1	2	1			Lee		2		2	
Darlington		1	1	1		Marion			1		
Dillon						Marlboro		1			
Florence		1	3	5		Sumter		32	16	4	
Georgetown		5	10			Williamsburg			1	3	
Low Country											
Allendale	4					Colleton			5		
Bamberg						Dorchester		38	9		
Beaufort	17	80	10	8	1	Hampton		2	1	2	
Berkeley		17	17			Jasper		2			
Calhoun				1		Orangeburg		4	3	3	
Charleston	4	214	47	8							
Unknown		16	4	2							

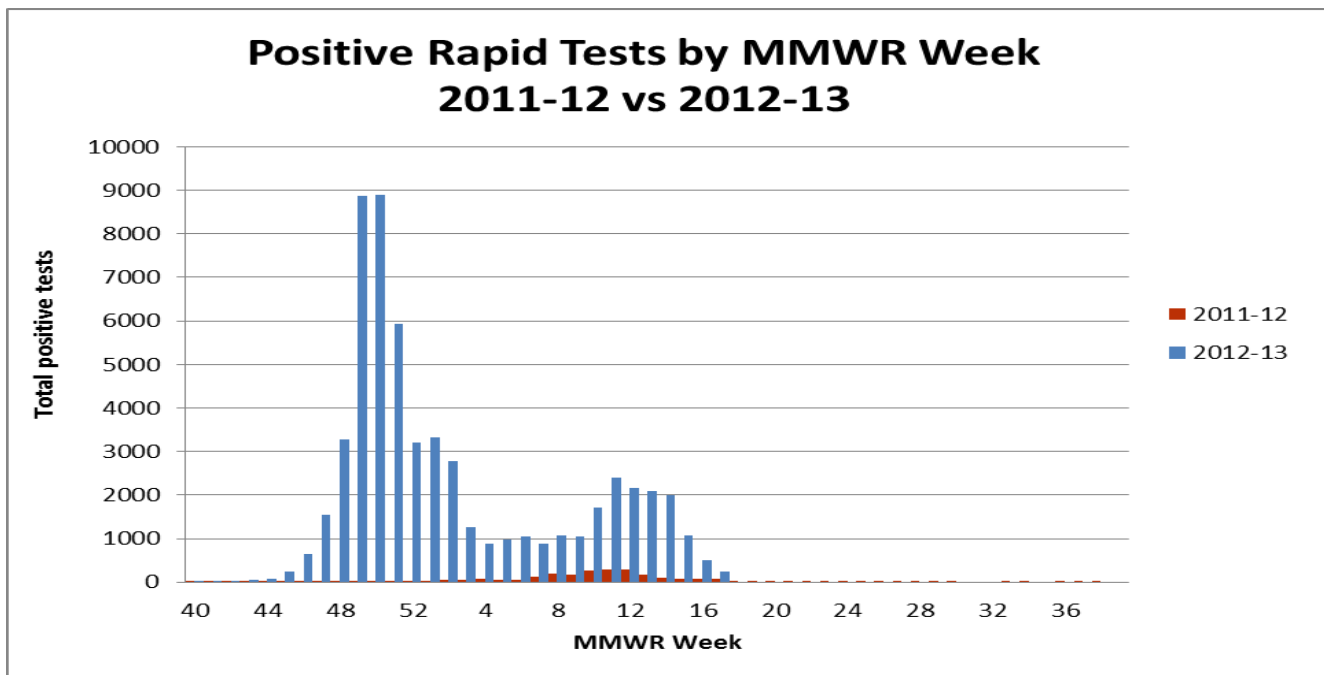


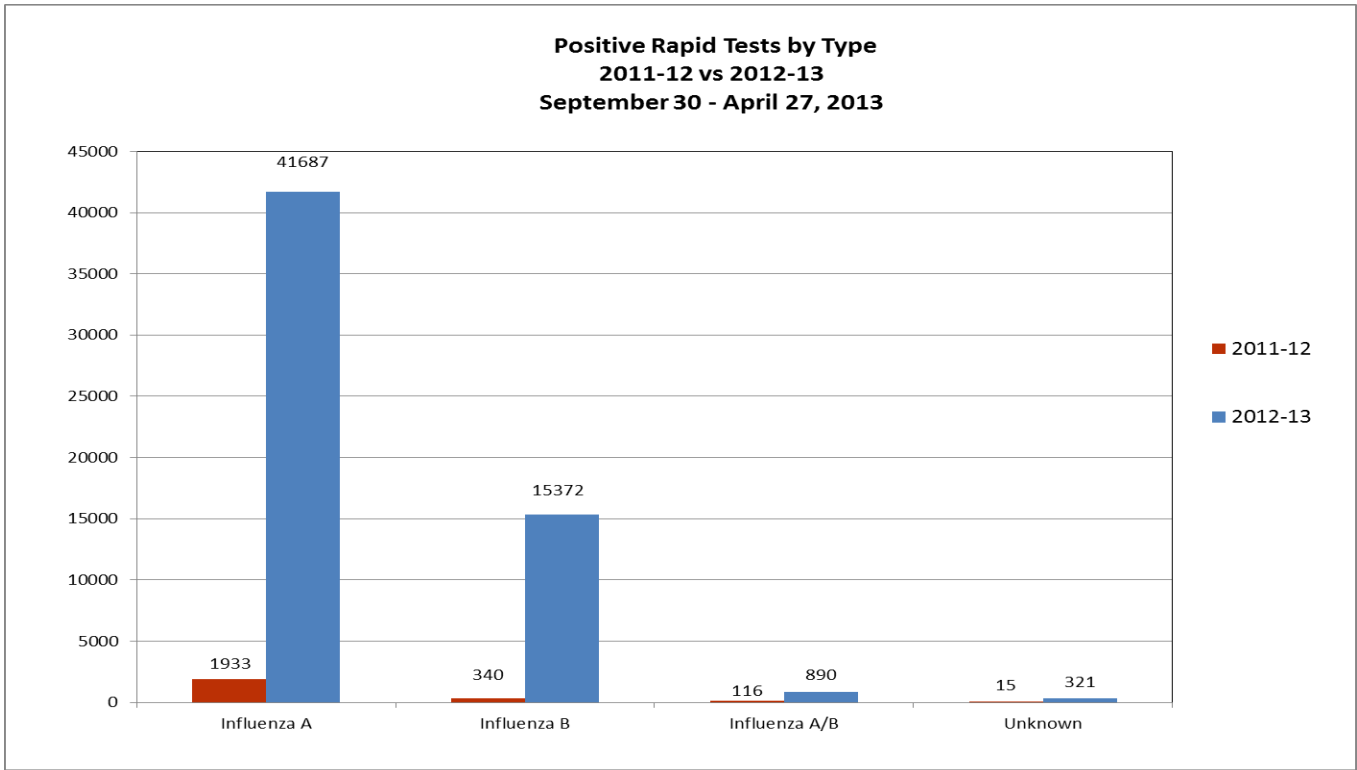
III. Positive Rapid Antigen Tests

During the past MMWR week, 241 positive rapid antigen tests were reported. Of these, 56 were influenza A, 180 were influenza B, and 5 were influenza A/B. This compares to 65 this time last year. 58,270 positive rapid tests have been reported this year.

Positive Rapid Flu Tests by County April 21, 2013 – April 27, 2013

County	Positive Tests	County	Positive Tests	County	Positive Tests
Abbeville		Dillon		Lexington	8
Aiken		Dorchester	45	Marion	
Allendale		Edgefield		Marlboro	
Anderson	1	Fairfield		McCormick	
Bamberg		Florence		Newberry	2
Barnwell		Georgetown	19	Oconee	3
Beaufort		Greenville	29	Orangeburg	1
Berkeley	3	Greenwood	5	Pickens	1
Calhoun		Hampton		Richland	31
Charleston	35	Horry	9	Saluda	
Cherokee	4	Jasper		Spartanburg	12
Chester	1	Kershaw	3	Sumter	4
Chesterfield		Lancaster	1	Union	
Clarendon	1	Laurens		Williamsburg	
Colleton		Lee	1	York	22
Darlington					





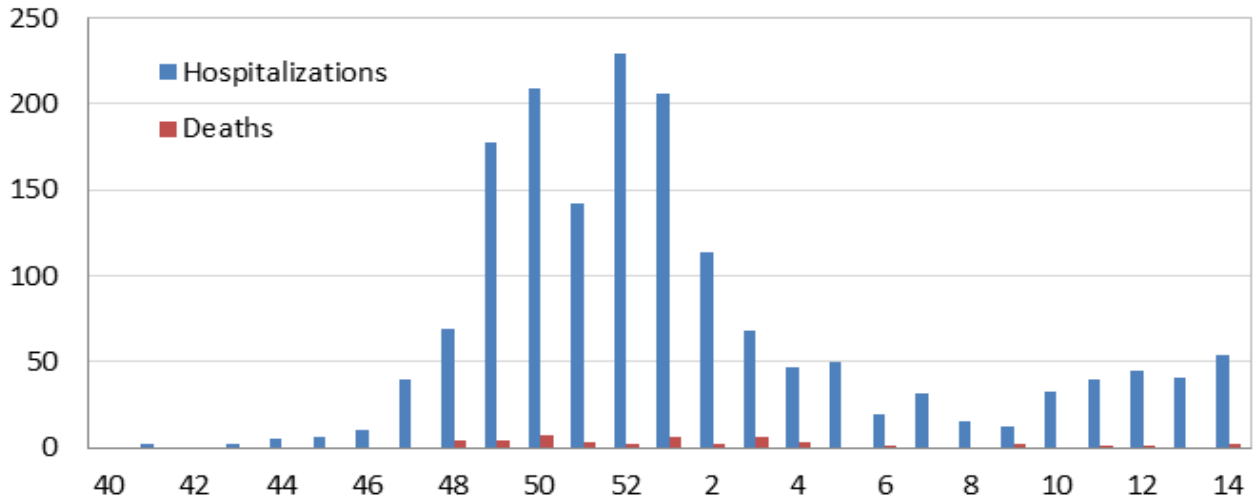
IV. Influenza hospitalizations and deaths

During the past MMWR week, 7 lab confirmed* influenza hospitalizations were reported. One lab confirmed influenza death was reported.

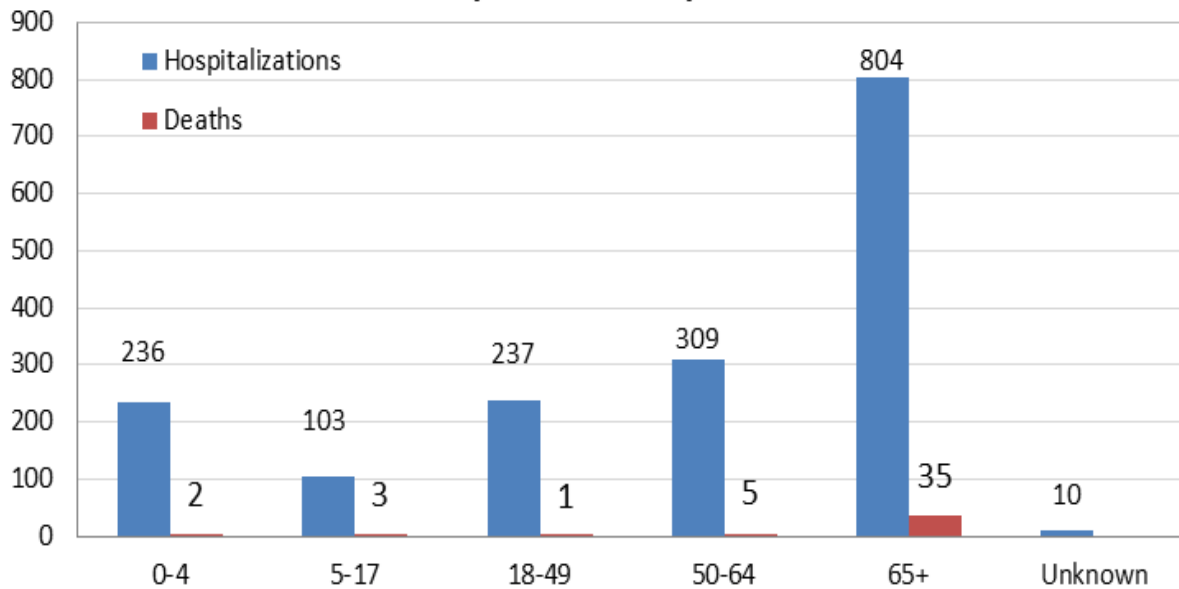
	Total number*	
Number of Reporting Hospitals (Current week)	49	
	<i>Current MMWR Week (4/21/13-4/27/13)</i>	<i>Cumulative (since 09/30/12)</i>
Hospitalizations	7	1707
Deaths	2	46

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

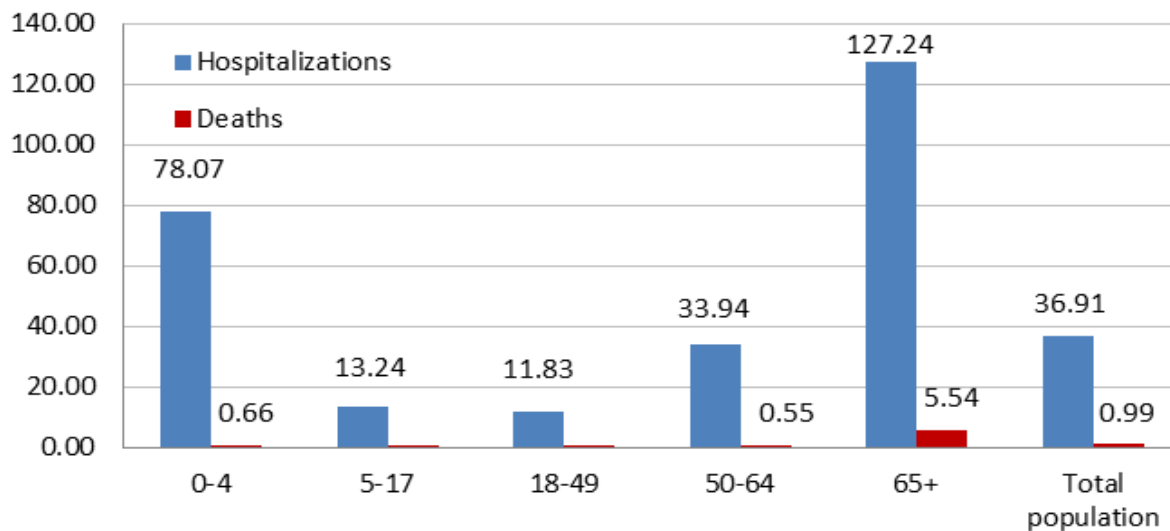
**Reported Cases of Laboratory Confirmed Influenza
Hospitalizations and Deaths
by MMWR week
September 30, 2012 April 27, 2013**



**Reported Cases of Laboratory Confirmed Influenza
Hospitalizations (n=1707) and Deaths (n=46)
September 30 - April 27, 2013**



**Laboratory Confirmed Influenza Case rate/100,000
Hospitalizations (n=1707) and Deaths (n=46) by age group
September 30, 2012 - April 27, 2013**

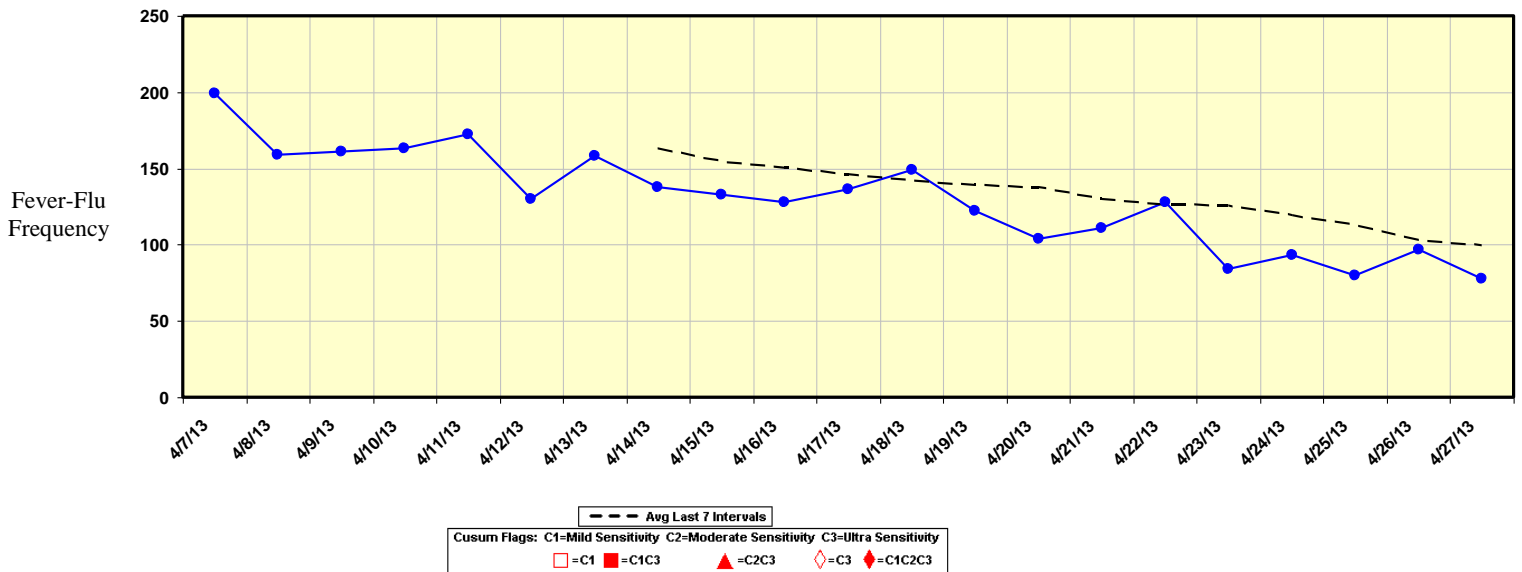


**Lab Confirmed Influenza Deaths by County
September 30, 2012 – April 27, 2013**

County	Deaths	County	Deaths
Aiken	4	Lexington	4
Barnwell	1	Marion	1
Beaufort	2	McCormick	2
Charleston	1	Newberry	1
Cherokee	1	Oconee	4
Chesterfield	1	Pickens	3
Clarendon	1	Richland	4
Georgetown	1	Spartanburg	2
Greenville	6	Sumter	2
Horry	1	Williamsburg	1
Jasper	1	York	2
Total Deaths		46	

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

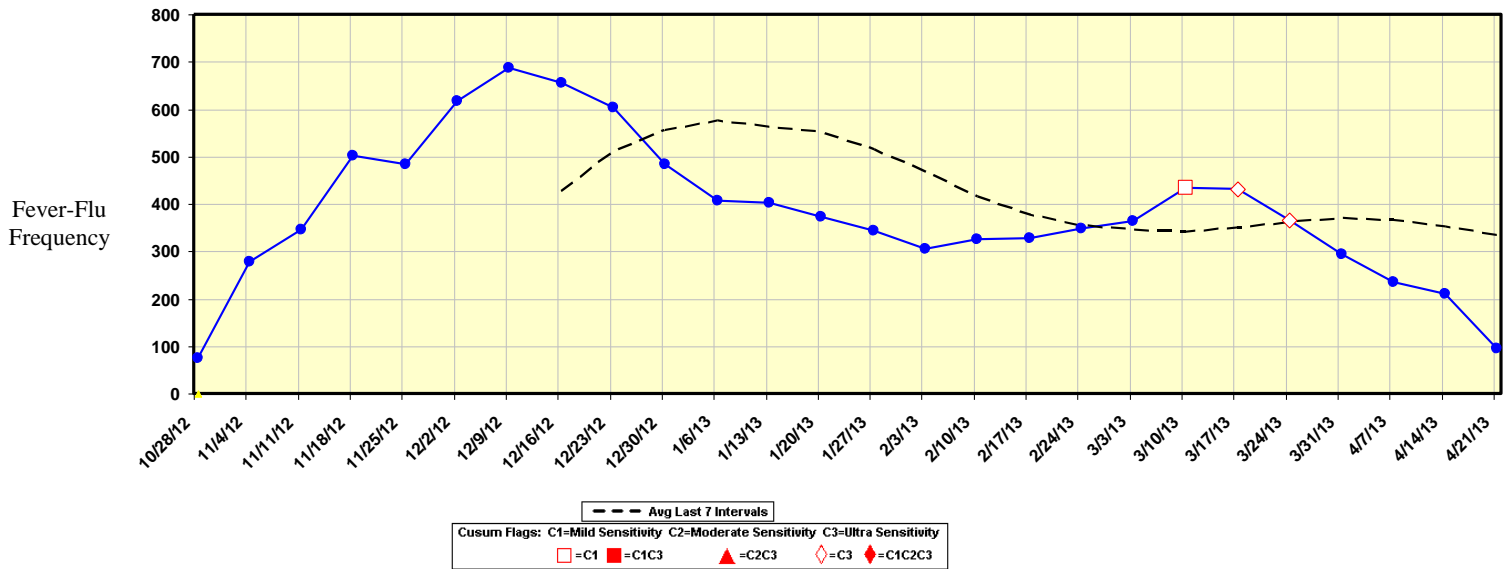
The SC Statewide Fever-Flu Syndrome graph above illustrates the daily counts of hospital emergency department (ED) visits with an Influenza-like Illness (ILI) for the past 21 days. A total of 21 hospital facilities are reporting to the SC-DARTS system. These 21 include: AnMed Health (Upstate Region); Self Regional (Upstate Region); Oconee Medical Center (Upstate Region); Palmetto Health Alliance (Upstate and Midlands Regions); Greenville Hospital System (Upstate Region); Kershaw Health (Midlands Region); McLeod Health (Pee Dee Region); Elgin Urgent Care (Midlands Region); Medical University of South Carolina (Low Country Region); Roper (Low Country Region); St. Francis (Low Country Region); Trident (Low Country Region); Colleton (Low Country Region); and Hampton Regional (Low Country Region).

Statewide CUSUM Flag Alerts Description:

No flags for the past week.

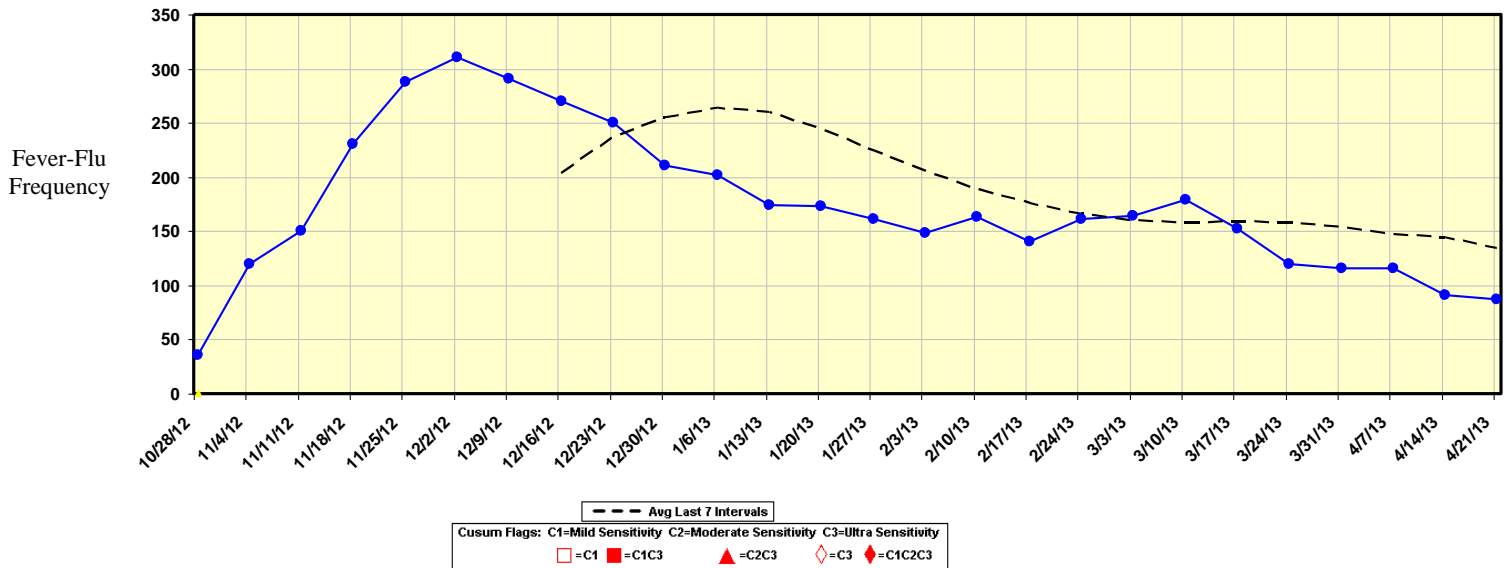
Below are the fever-flu syndrome graphs by Region for the past 180 days (weekly interval).

Upstate Region - Fever Flu Syndrome



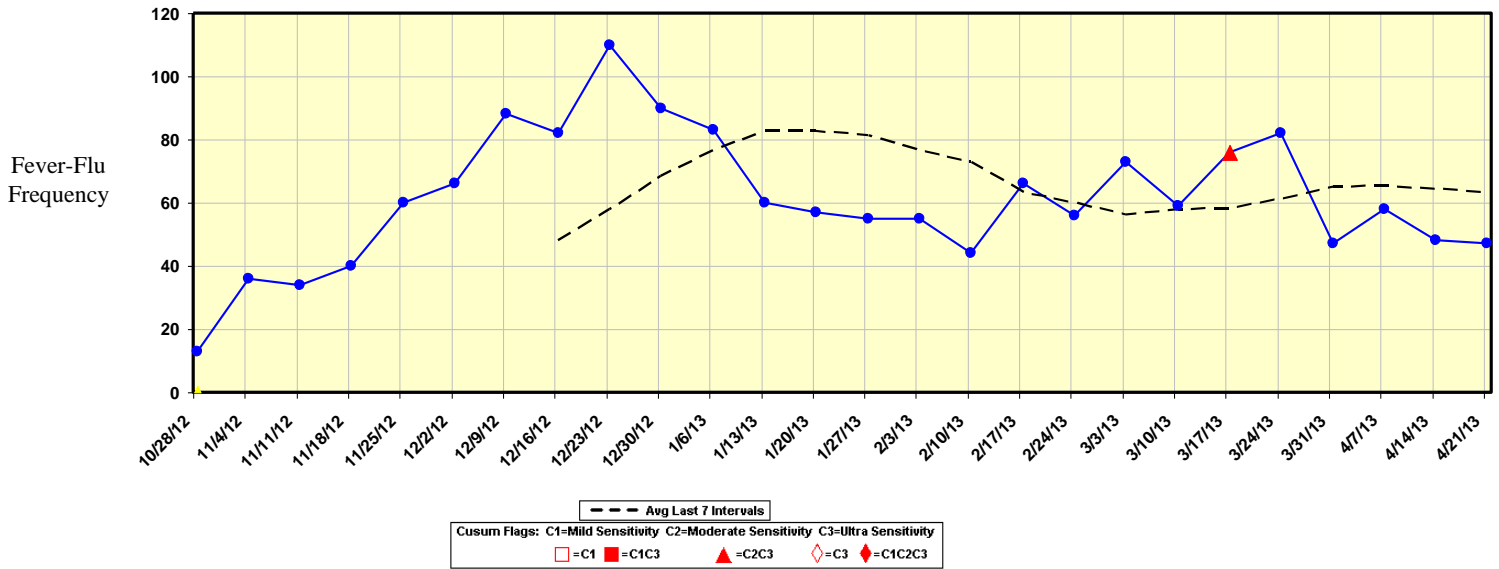
Upstate Region Hospitals (# of Facilities): AnMed Health (3); Self-Regional (1); Oconee Medical Center (1); Greenville Hospital System (4); Palmetto Health Easley (1)

Midlands Region - Fever Flu Syndrome



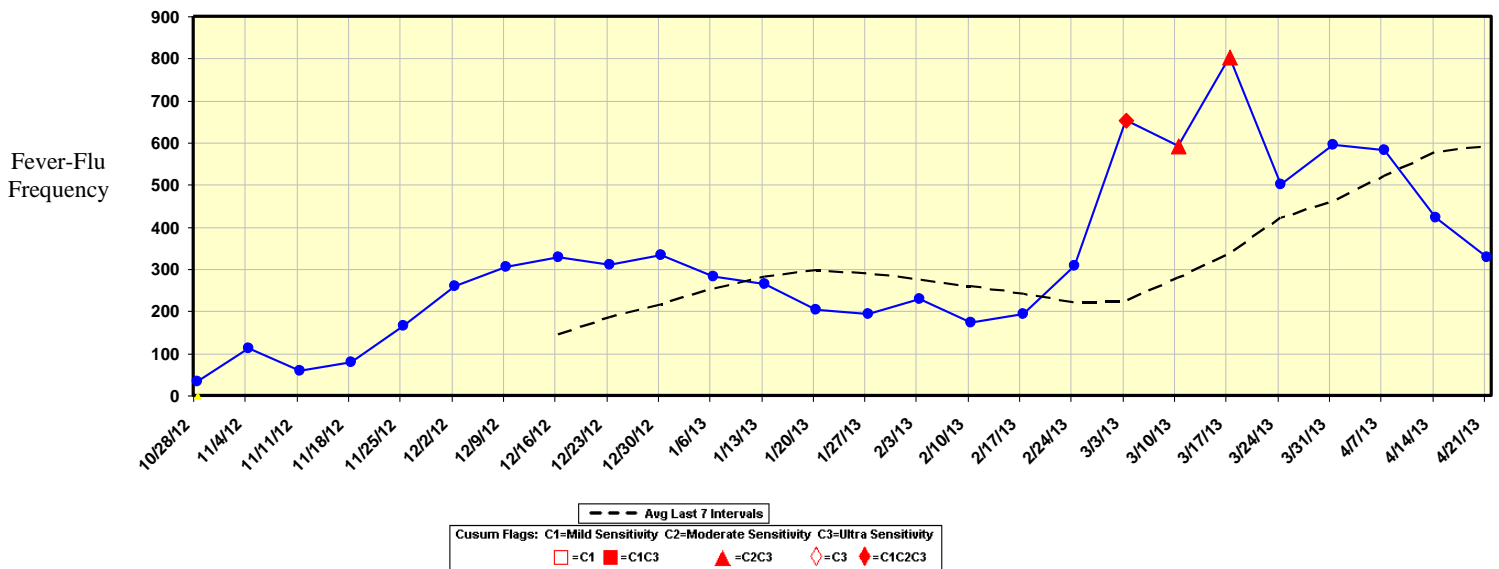
Midlands Region Hospitals (# of Facilities): Palmetto Health Baptist (1); Palmetto Health Richland (1); Kershaw Health (1); Elgin Urgent Care (1)

Pee Dee Region - Fever Flu Syndrome



Pee Dee Region Hospitals (# of Facilities): McLeod Health (1)

Low Country Region - Fever Flu Syndrome



Low Country Region Hospitals (# of Facilities): Medical University of South Carolina (1); Roper (1); St. Francis (1); Trident (1); 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
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
	Increased ILI in 2-3 regions	And	Recent (within the past 3 weeks) lab confirmed influenza in the affected regions
OR			
Widespread	Institutional outbreaks (ILI or lab confirmed) in 2-3 regions	And	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	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

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 16(4/12-4/20)

During week 16 (April 14-20, 2013), influenza activity decreased in the United States.

- **Viral Surveillance:** Of 3,384 specimens tested and reported by collaborating laboratories, 250 (7.4%) were positive for influenza.
- **Pneumonia and Influenza Mortality:** The proportion of deaths attributed to pneumonia and influenza (P&I) was below the epidemic threshold.
- **Influenza-Associated Pediatric Deaths:** Five pediatric deaths were reported.
- **Influenza-Associated Hospitalizations:** A cumulative rate for the season of 43.9 laboratory-confirmed influenza-associated hospitalizations per 100,000 population was reported. Of reported hospitalizations, 50% were among adults 65 years and older.
- **Outpatient Illness Surveillance:** The proportion of outpatient visits for influenza-like illness (ILI) was 1.1%. This is below the national baseline of 2.2%. All 10 regions reported ILI below region-specific baseline levels. One state experienced low activity; 49 states and New York City experienced minimal activity, and the District of Columbia had insufficient data.
- **Geographic Spread of Influenza:** Three states reported widespread influenza activity; 3 states reported regional influenza activity; 8 states reported local influenza activity; the District of Columbia, Guam, Puerto Rico, and 35 states reported sporadic influenza activity; 1 state reported no influenza activity, 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>

