

South Carolina Department of Health and Environmental Control

Division of Acute Disease Epidemiology

Week Ending October 26, 2013 (MMWR Week 43)

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

MMWR Week 43 at a Glance:

Influenza Activity Level: LOCAL

Note: Activity level definitions are found on page 13

ILI Activity Status (South Carolina baseline is 2.05%*): The state ILI percentage was .61%. These data reflect reports from 12 (38.7%) providers.

SC Viral Isolate and RT-PCR Activity: Five positive specimens were reported. Since 9/29/13, 12 positive specimens have been reported.

Positive Rapid Flu Test Activity: One hundred forty six positive rapid tests were reported. Since 9/29/13, 278 positive rapid tests have been reported.

Hospitalizations: Seven lab confirmed hospitalizations were reported. Since 9/29/13, 16 lab confirmed hospitalizations have been reported.

Deaths: No lab confirmed deaths were reported.

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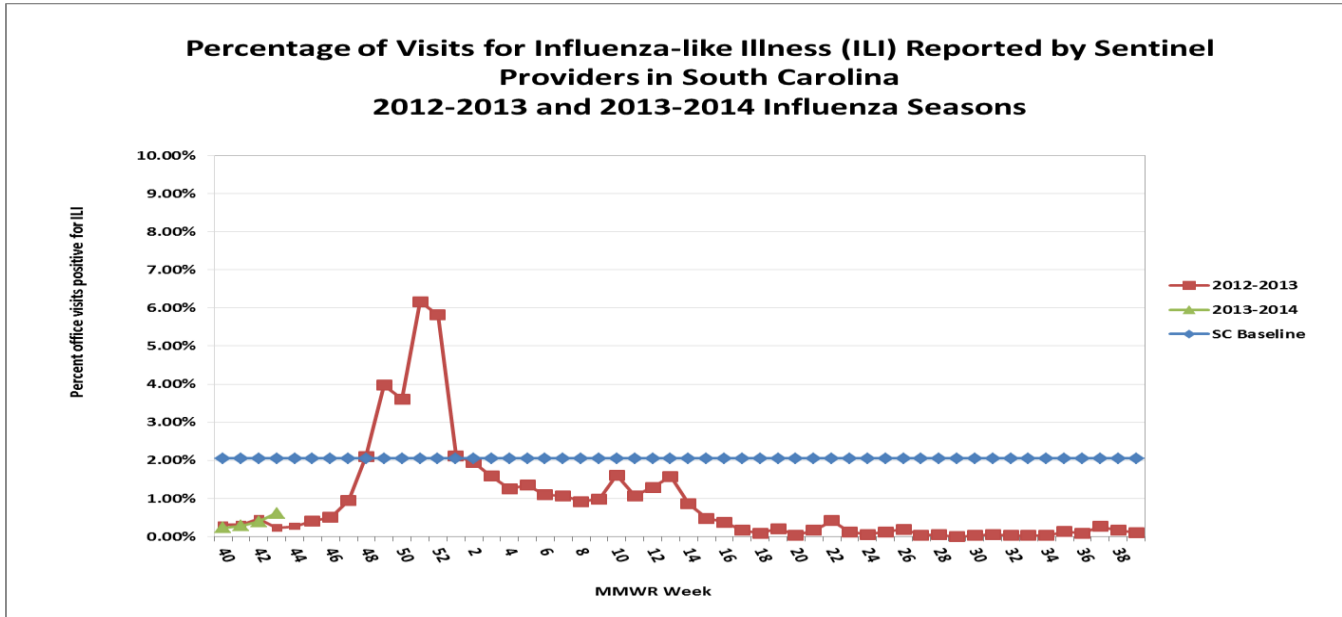
Flu Watch

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

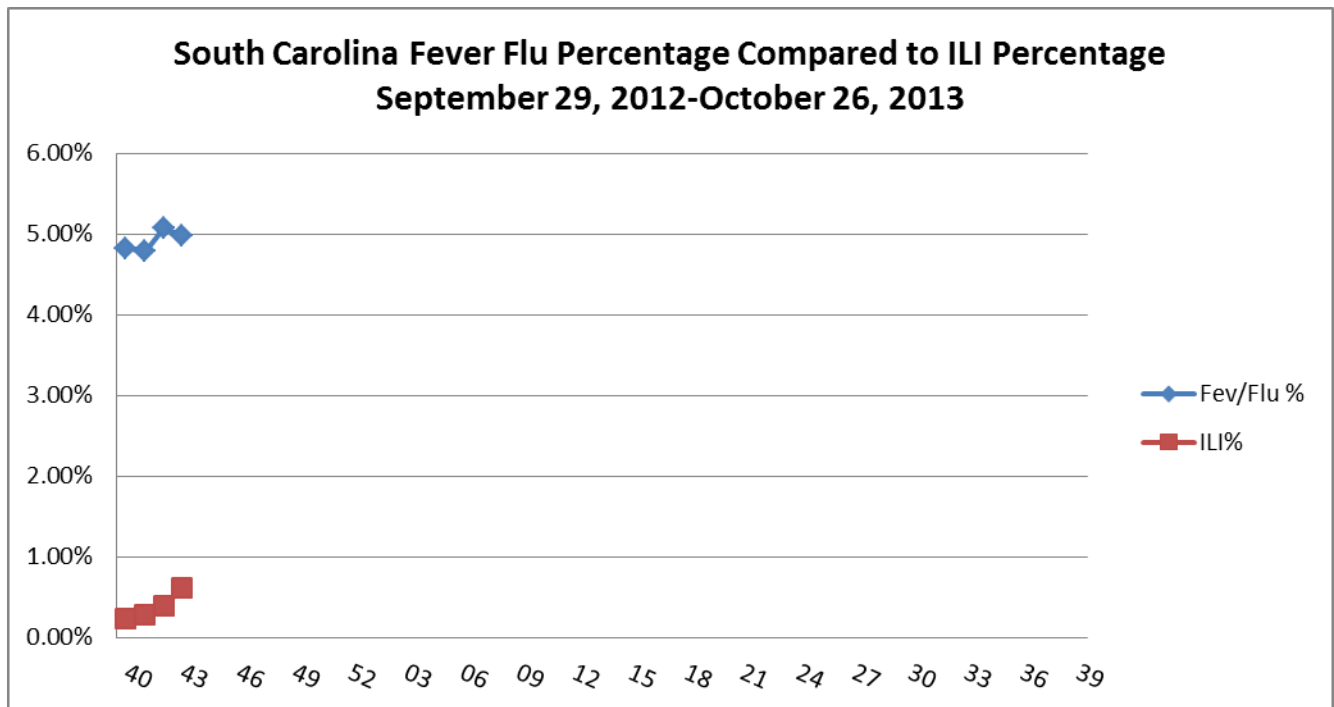
	<i>Current week</i>	<i>Previous week</i>	<i>Change from previous week</i>
Percent of ILI visits reported by ILINet providers	.61%	.39%	▲ .22%
Percent of fever-flu ER visits reported by hospitals	4.98%	5.07%	▼ .09%
Number of positive confirmatory tests	5	1	▲ 4
Number of lab confirmed flu hospitalizations	7	2	▲ 5
Number of lab confirmed flu deaths	0	0	0

I. ILINet Influenza-Like Illness Surveillance

During the most recent MMWR week, .61% of patient visits to SC ILINet providers were due to ILI. This is below the state baseline (2.05%). This ILI percentage compares to .23 % this time last year. Reports were received from providers in 9 counties, representing all 4 regions. The statewide percentage of ER visits with fever-flu syndrome was 4.98%.



*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.

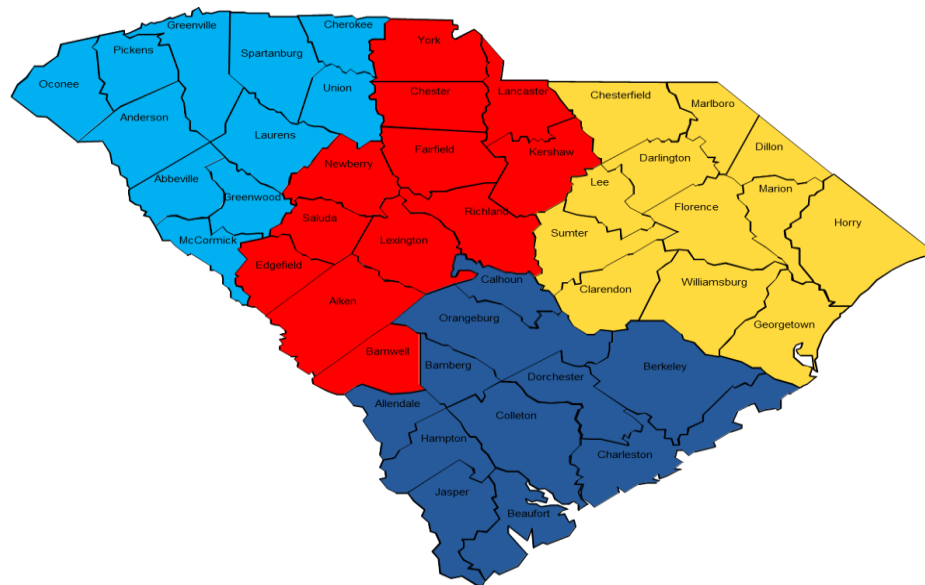


*Only includes hospitals participating in SC syndromic surveillance

Influenza-Like Illness Reported by Sentinel Providers October 20, 2013 – October 26, 2013

County	ILI %	County	ILI %
Abbeville	---	Greenwood	NR
Aiken	1.08%	Hampton	NR
Allendale	---	Horry	NR
Anderson	0%	Jasper	NR
Bamberg	---	Kershaw	NR
Barnwell	---	Lancaster	---
Beaufort	NR	Laurens	NR
Berkeley	10.70%	Lee	---
Calhoun	---	Lexington	NR
Charleston	NR	Marion	---
Cherokee	---	Marlboro	---
Chester	---	McCormick	NR
Chesterfield	---	Newberry	---
Clarendon	---	Oconee	---
Colleton	---	Orangeburg	---
Darlington	---	Pickens	0%
Dillon	NR	Richland	.07%
Dorchester	NR	Saluda	0%
Edgefield	---	Spartanburg	NR
Fairfield	---	Sumter	NR
Florence	.51%	Union	---
Georgetown	NR	Williamsburg	---
Greenville	0%	York	0%

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



*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 (10/20/13 – 10/26/13)</i>		
	BOL	Other clinical labs
Number of specimens tested	14	-
Number of positive specimens	1	4
Influenza A unsubtype		
Influenza A H1N1	1	4
Influenza A H3N2		
Influenza B		
Other		
Includes culture, RT-PCR, DFA, and IFA		

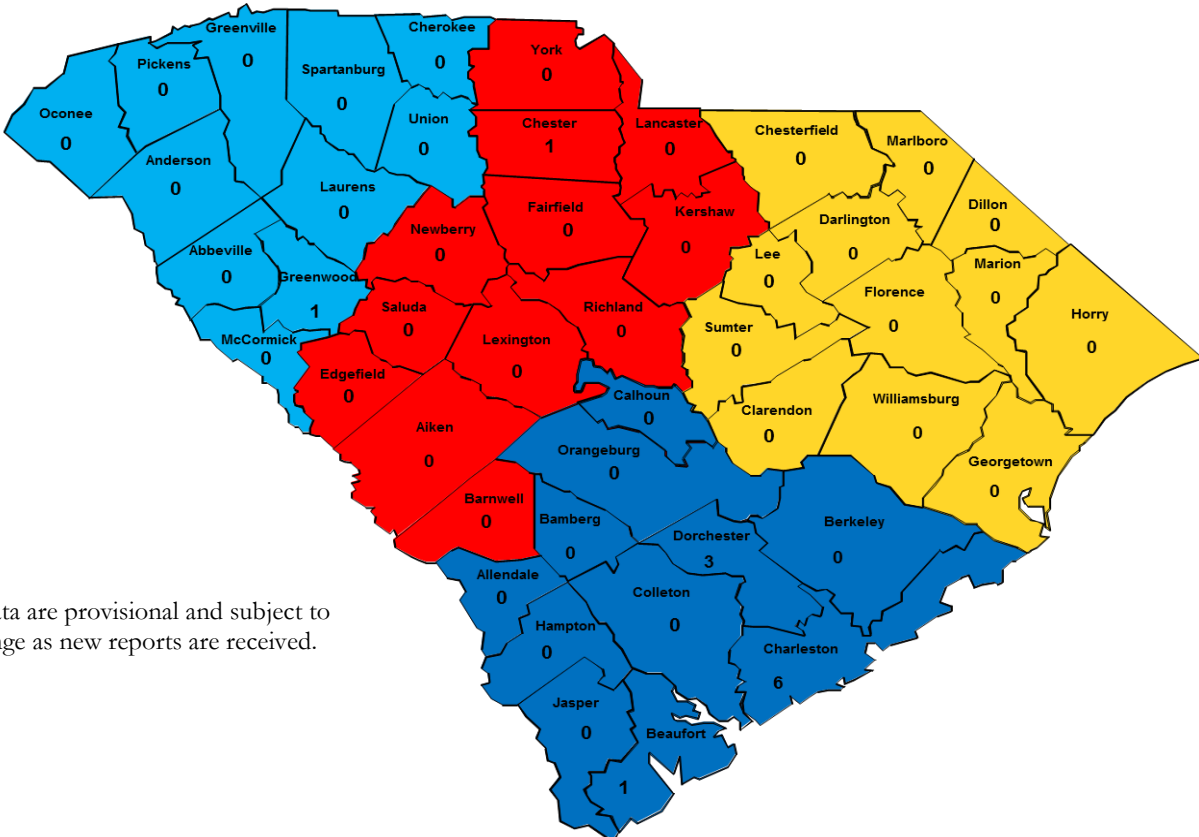
For the current MMWR reporting week, one positive specimen was reported.

<i>Positive confirmatory influenza test results*</i> <i>Cumulative (09/29/13 – 10/26/13)</i>		
	BOL	Other clinical labs
Number of specimens tested	23	NA
Number of positive specimens	3 (13%)	9
Influenza A unsubtype		
Influenza A H1N1	3 (100%)	8 (88.9%)
Influenza A H3N2		
Influenza B		1 (11.1%)
Other		
Includes culture, RT-PCR, DFA, and IFA		

**Positive Confirmatory Tests by County
Current Week 10/20/13 – 10/26/13**

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		Greenville		Pickens	
Berkeley		Greenwood	1	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			

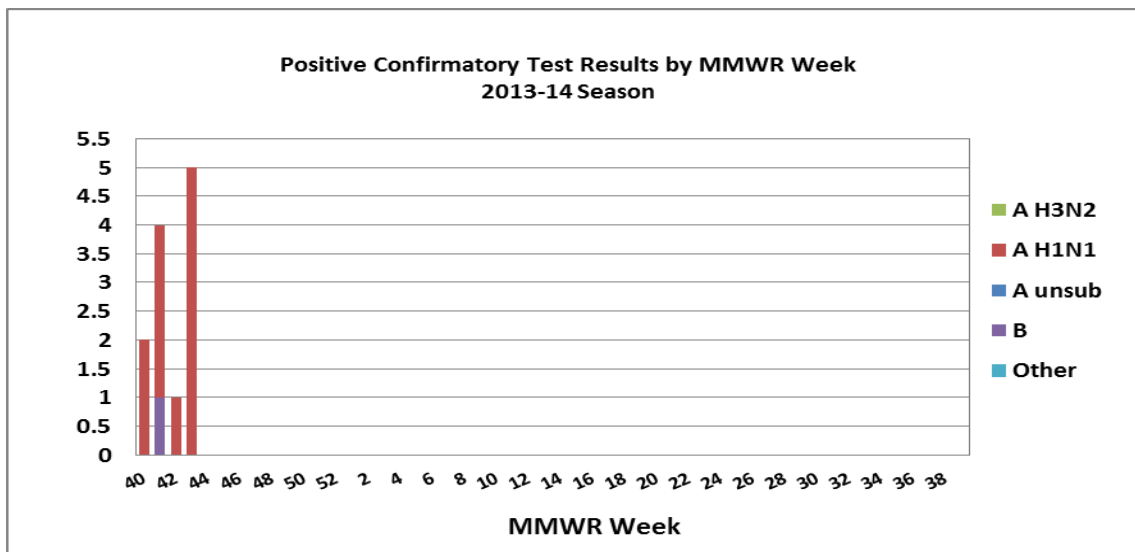
**Map of Positive Confirmatory Tests by County
Cumulative 09/29/13 – 10/26/13**



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

**Positive Confirmatory Tests by County and Type
Cumulative 10/20/13-10/26/13**

	A H1N1	A H3N2	B	A Unsub	Unk		A H1N1	A H3N2	B	A Unsub	Unk
Upstate											
Abbeville						McCormick					
Anderson						Oconee					
Cherokee						Pickens					
Greenwood	1					Spartanburg					
Greenville						Union					
Laurens											
Midlands											
Aiken						Lancaster					
Barnwell						Lexington					
Chester	1					Newberry					
Edgefield						Richland					
Fairfield						Saluda					
Kershaw						York					
Pee Dee											
Chesterfield						Horry					
Clarendon						Lee					
Darlington						Marion					
Dillon						Marlboro					
Florence						Sumter					
Georgetown						Williamsburg					
Low Country											
Allendale						Colleton					
Bamberg						Dorchester	3				
Beaufort	1					Hampton					
Berkeley						Jasper					
Calhoun						Orangeburg					
Charleston	5		1								
Unknown County											



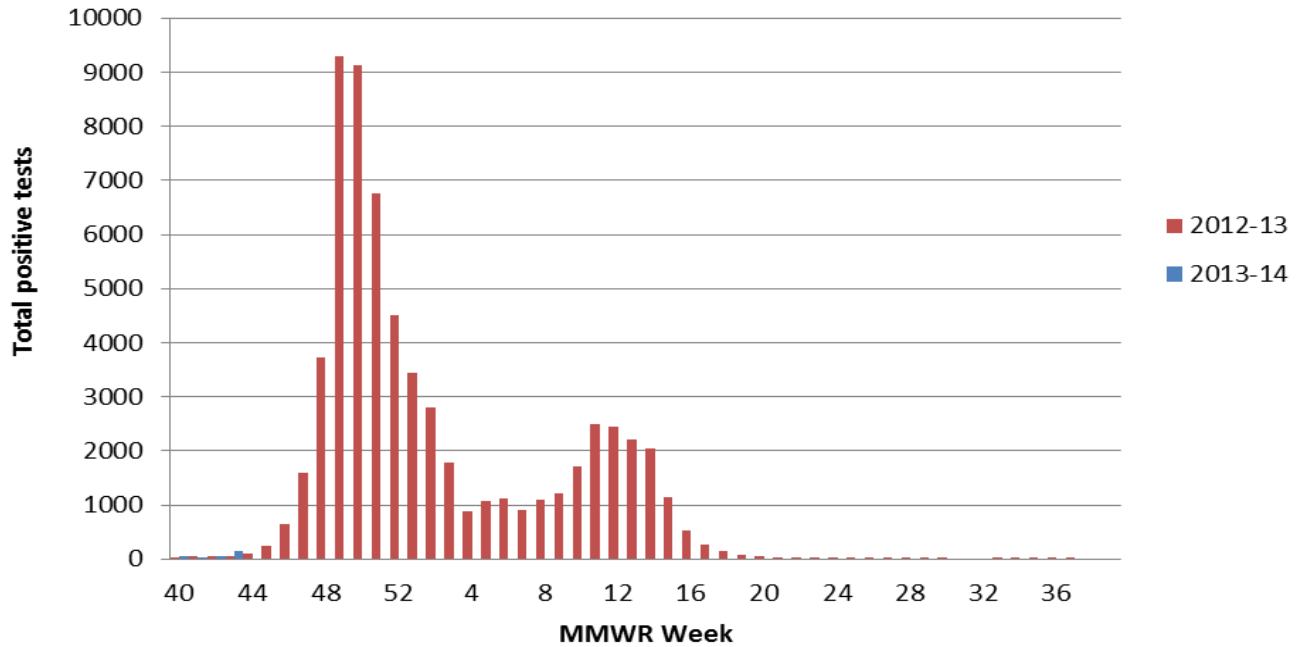
III. Positive Rapid Antigen Tests

For the current MMWR reporting week, 146 positive rapid antigen tests were reported. Of these, 111 were influenza A, 4 were influenza A/B, 22 were influenza B and 9 were unknown. This compares to 55 this time last year.

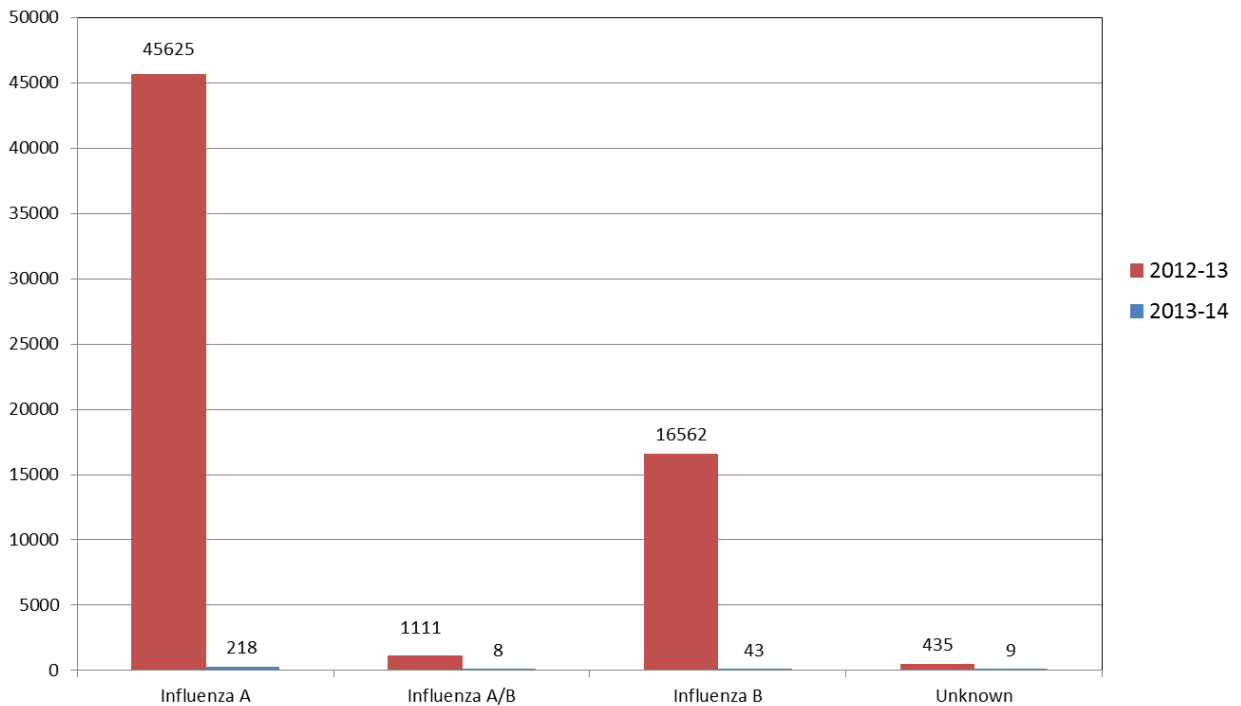
Positive Rapid Flu Tests by County Current Week 10/20/13 – 10/26/13)					
County	Positive Tests	County	Positive Tests	County	Positive Tests
Abbeville		Dillon		Lexington	2
Aiken		Dorchester	1	Marion	
Allendale		Edgefield		Marlboro	
Anderson	7	Fairfield		McCormick	
Bamberg		Florence	10	Newberry	1
Barnwell		Georgetown	1	Oconee	1
Beaufort	4	Greenville	16	Orangeburg	9
Berkeley	3	Greenwood		Pickens	2
Calhoun		Hampton		Richland	9
Charleston	30	Horry	8	Saluda	
Cherokee		Jasper		Spartanburg	1
Chester		Kershaw	5	Sumter	1
Chesterfield		Lancaster		Union	4
Clarendon	7	Laurens		Williamsburg	
Colleton		Lee		York	9
Darlington					

Positive Rapid Flu Tests by County and Type Cumulative (9/29/13 – 10/26/13)															
County	A	A/B	B	Unk/ Other	County	A	A/B	B	Unk/ Other	County	A	A/B	B	Unk/ Other	
Abbeville					Dillon					Lexington	2		2		
Aiken	2				Dorchester	28	1			Marion					
Allendale					Edgefield					Marlboro					
Anderson	5		2		Fairfield					McCormick					
Bamberg					Florence	9		8		Newberry	2		2		
Barnwell					Georgetown			1		Oconee	2		2		
Beaufort	7		1		Greenville	18	1	2		Orangeburg				9	
Berkeley	3				Greenwood					Pickens	2		1		
Calhoun					Hampton					Richland	14	1	8		
Charleston	66	1	5		Horry	11	1	4		Saluda					
Cherokee					Jasper					Spartanburg	4				
Chester	1				Kershaw	8		2		Sumter	2				
Chesterfield	1				Lancaster	1				Union	3	1			
Clarendon	6	2			Laurens					Williamsburg					
Colleton	1				Lee					York	18		2		
Darlington	3														

Positive Rapid Tests by MMWR Week 2012-13 vs 2013-14



Positive Rapid Tests by Type 2012-13 vs 2013-14 September 29, 2013 - October 26, 2013

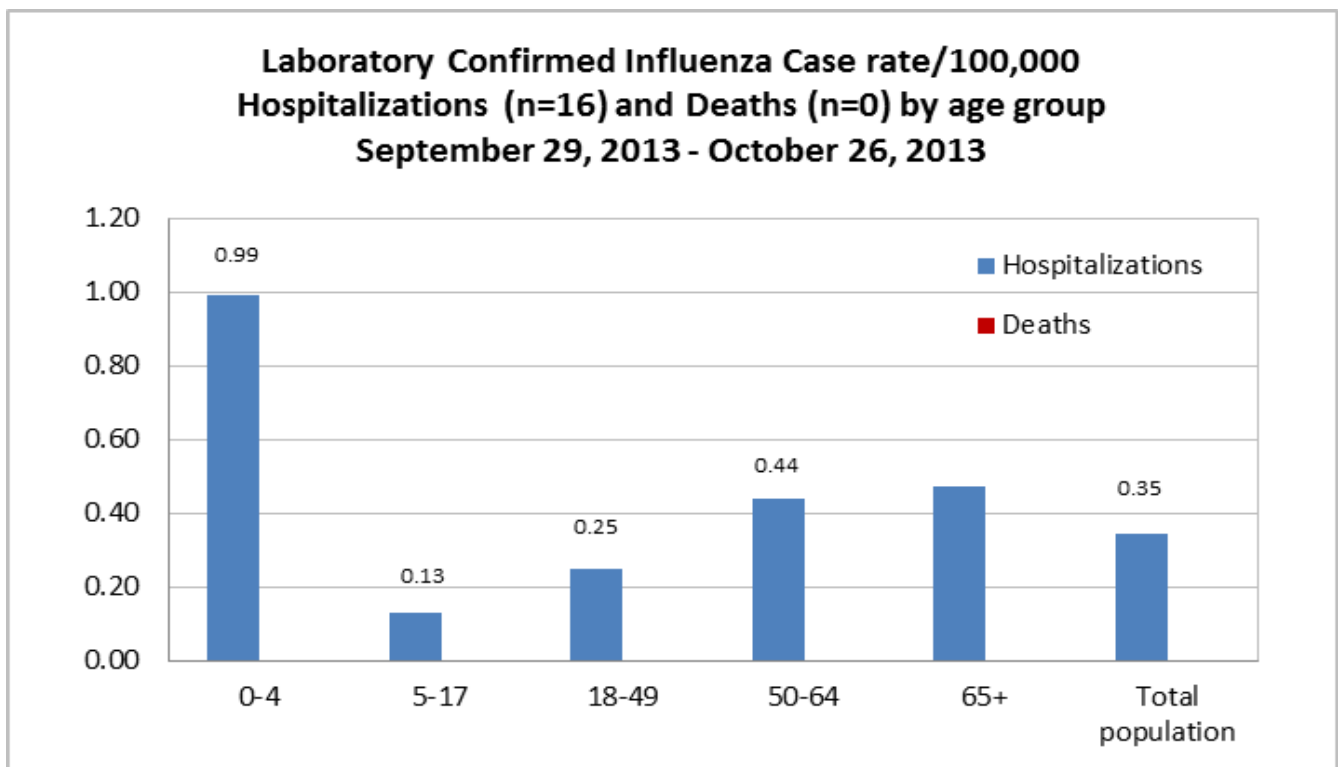


IV. Influenza hospitalizations and deaths

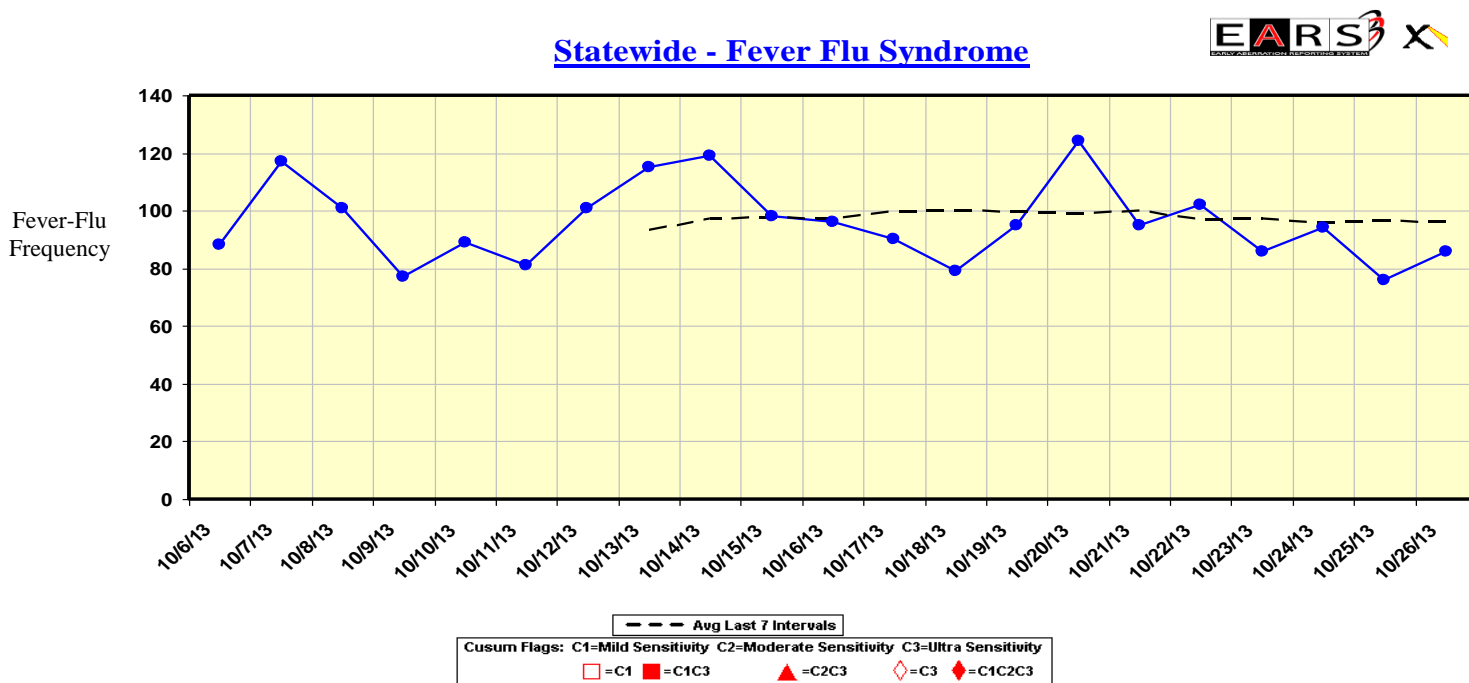
For the current MMWR reporting week, 7 lab confirmed influenza hospitalizations were reported. No lab confirmed influenza deaths were reported.*

	Total number*	
Number of Reporting Hospitals (Current week)	36	
	<i>Current MMWR Week (10/20/13-10/26/13)</i>	<i>Cumulative (since 09/29/13)</i>
Hospitalizations	7	16
Deaths	0	0

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



V. South Carolina Disease Alerting, Reporting & Tracking System (SC-DARTS)



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

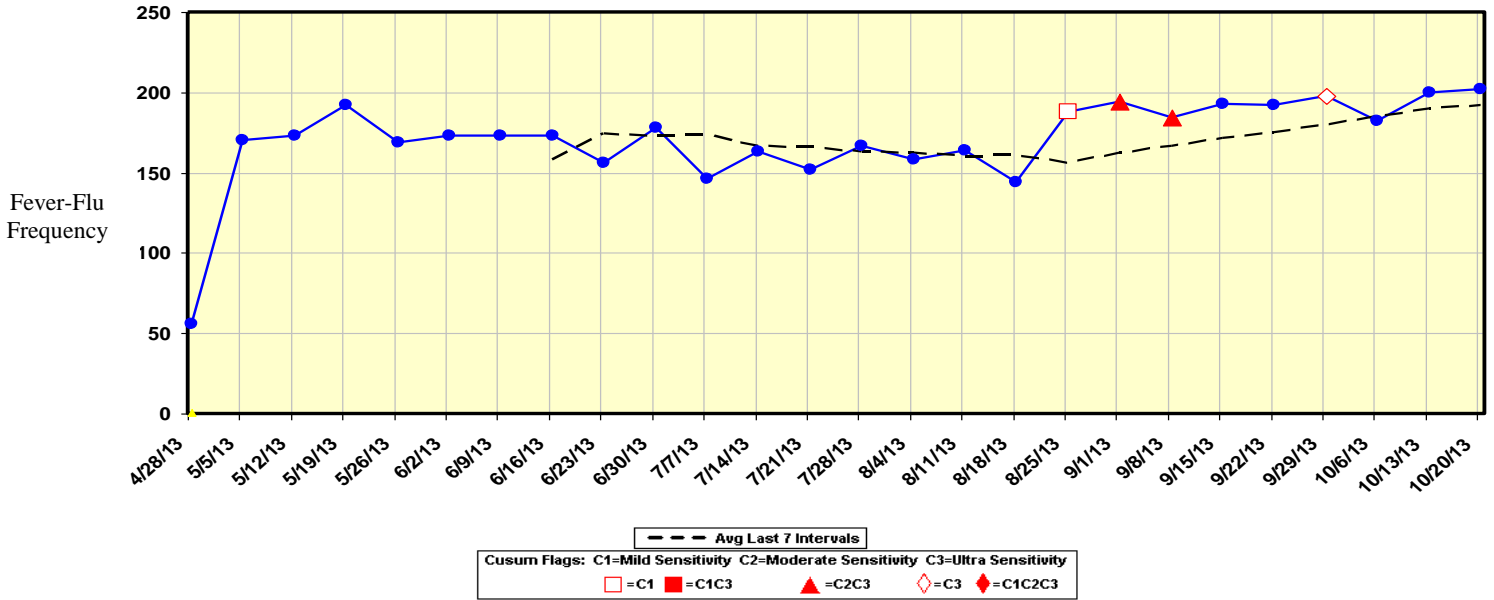
The SC Statewide Fever-Flu Syndrome graph above illustrates the daily counts of hospital emergency department (ED) visits with an Influenza-like Illness (ILI) for the past 21 days. A total of 22 hospital facilities are reporting to the SC-DARTS system. These 22 include: AnMed Health (Upstate Region); 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); Hampton Regional (Low Country Region); and Mount Pleasant (Low Country Region).

Statewide CUSUM Flag Alerts Description:

No flags for the past week.

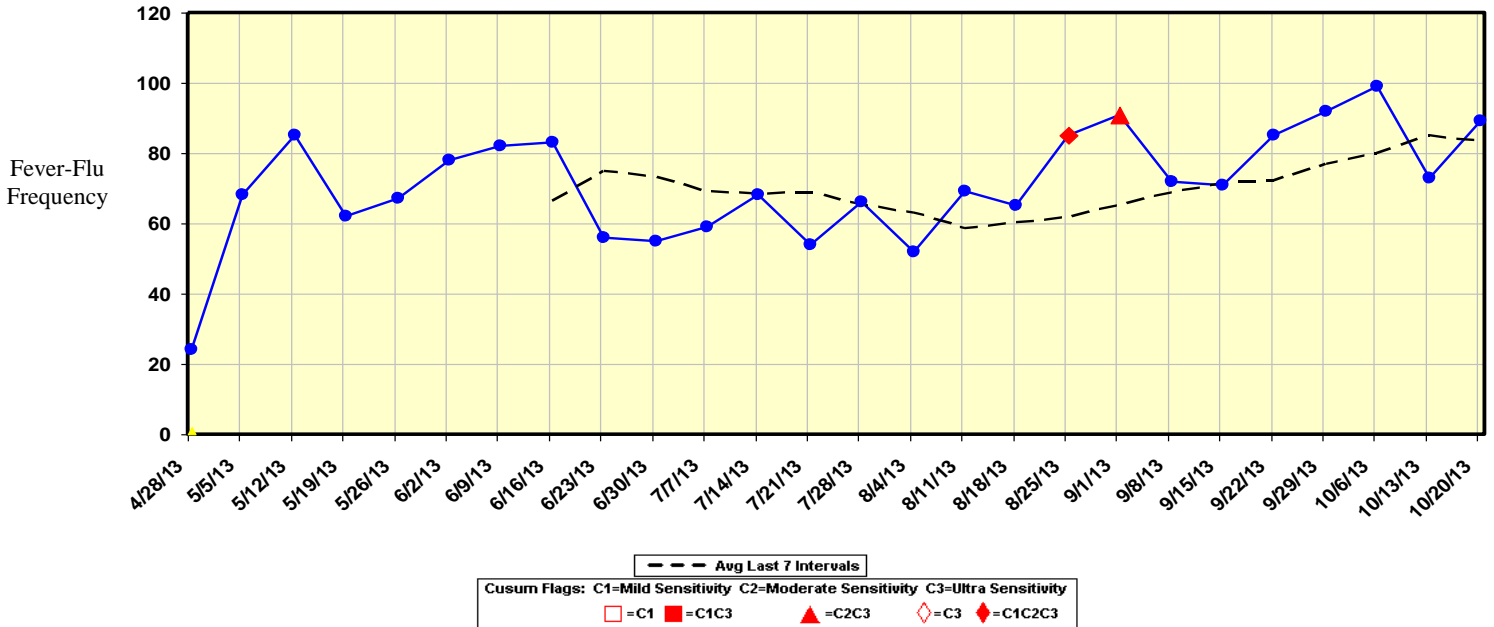
Below are the fever-flu syndrome graphs by Region for the past 180 days (weekly interval).

Upstate Region - Fever Flu Syndrome



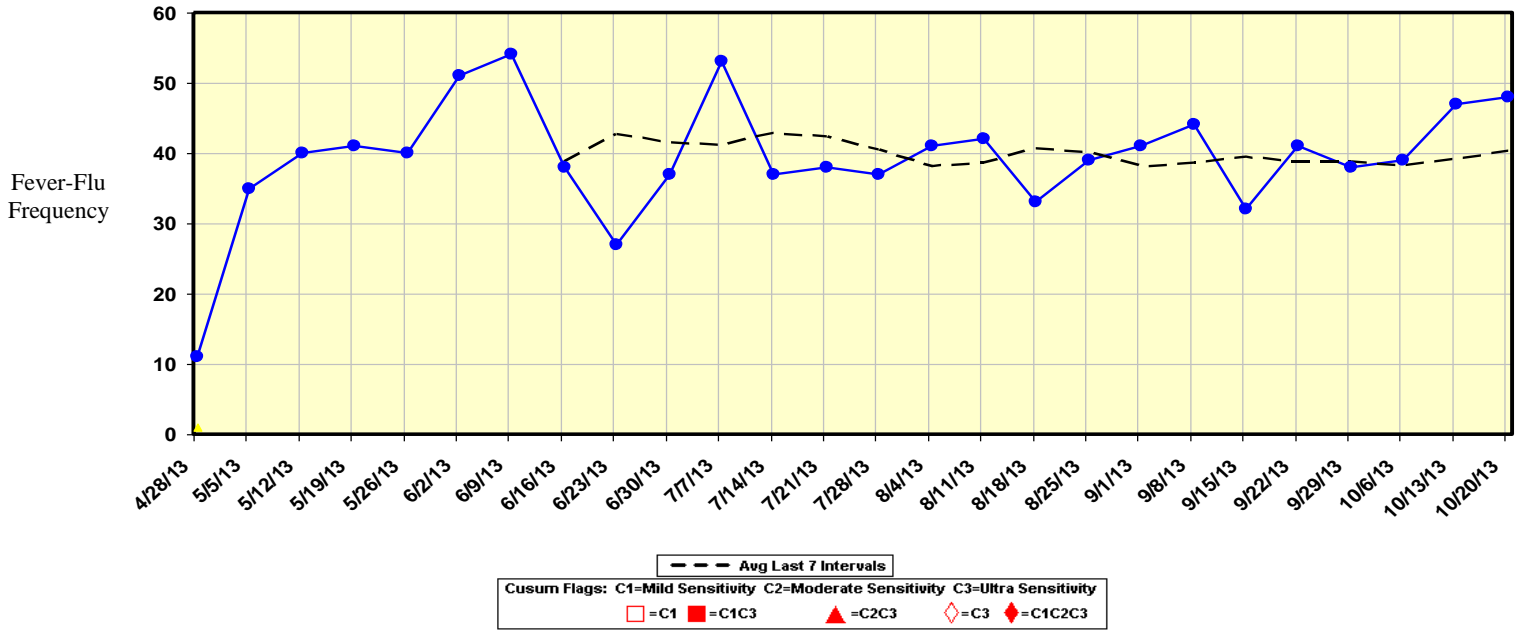
Upstate Region Hospitals (# of Facilities): AnMed Health (3); Self-Regional (1); Oconee Medical Center (1); Greenville Hospital System (4); Palmetto Health Easley (1)

Midlands Region - Fever Flu Syndrome



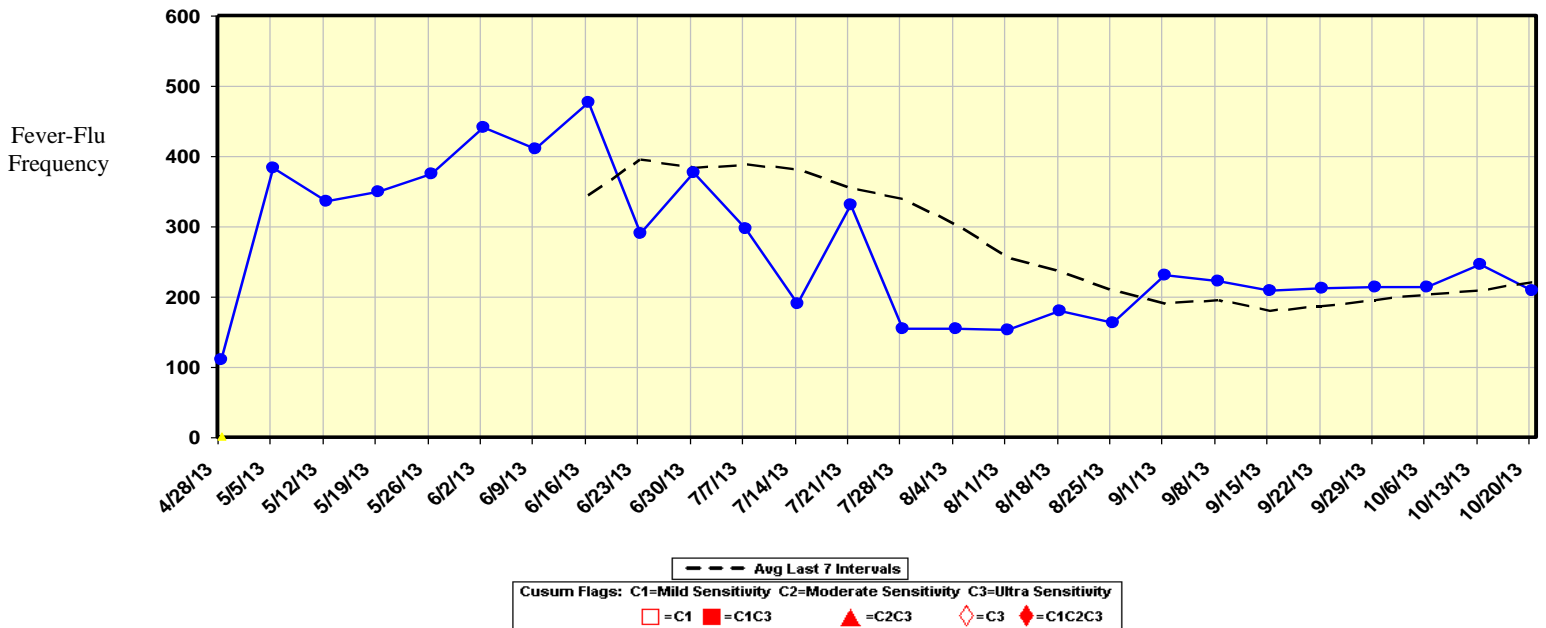
Midlands Region Hospitals (# of Facilities): Palmetto Health Baptist (1); Palmetto Health Richland (1); Kershaw Health (1); Elgin Urgent Care (1)

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); Mount Pleasant (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
Regional	OR		
	Institutional outbreaks (ILI or lab confirmed) in 2-3 regions	And	Recent (within the past 3 weeks) lab confirmed influenza in the affected regions
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

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 $U \geq U100^{\circ}\text{F}$) 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: **Kelly Johnson at 803-898-1588 or johnsok@dhec.sc.gov**.

VIII. National Surveillance MMWR Week 42 (10/13-10/19)

During week 42 (October 13-19, 2013), influenza activity remained low in the United States.

- **Viral Surveillance:** Of 3,513 specimens tested and reported by U.S. World Health Organization (WHO) and National Respiratory and Enteric Virus Surveillance System (NREVSS) collaborating laboratories during week 42, 135 (3.8%) 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:** Two influenza-associated pediatric deaths that occurred during the 2012-2013 season were reported.
- **Outpatient Illness Surveillance:** The proportion of outpatient visits for influenza-like illness (ILI) was 1.2%, below the national baseline of 2.0%. All 10 regions reported ILI below region-specific baseline levels. Two states experienced low ILI activity, 48 states and New York City experienced minimal ILI activity and the District of Columbia had insufficient data.
- **Geographic Spread of Influenza:** The geographic spread of influenza in Puerto Rico was reported as regional; 3 states reported local influenza activity; Guam, the District of Columbia, and 28 states reported sporadic influenza activity, and the U.S. Virgin Islands and 19 states reported no influenza activity.

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

