



Flu Watch



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

Week Ending December 17, 2011 (MMWR Week 50)
All data are provisional and may change as more reports are received.

In this issue:

ILINet	2
Virologic surveillance	4
Rapid antigen tests	6
Hospitalizations and deaths	9
Activity level definitions	11
SC influenza surveillance components	12
National influenza surveillance	13

MMWR Week 50 at a Glance:

Influenza Activity Level: Sporadic

Note: Activity level definitions are found on page 11

ILI Activity Status (South Carolina baseline is 2.05%*): Below baseline in the Upstate (0%), Midlands (.20%) and along the Coast (1.98%). The state ILI percentage is .44%. These data reflect reports from 12(37.5%) providers.

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

SC Viral Isolate and RT-PCR Activity: No positive specimen were reported. Two positive specimens have been reported this season.

Positive Rapid Flu Test Activity: Twenty-two positive rapid tests were reported. So far this season 157 have been reported.

Hospitalizations: One lab confirmed hospitalization was reported. Ten lab confirmed hospitalizations have been reported this season.

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

Deaths: No lab confirmed deaths were reported.

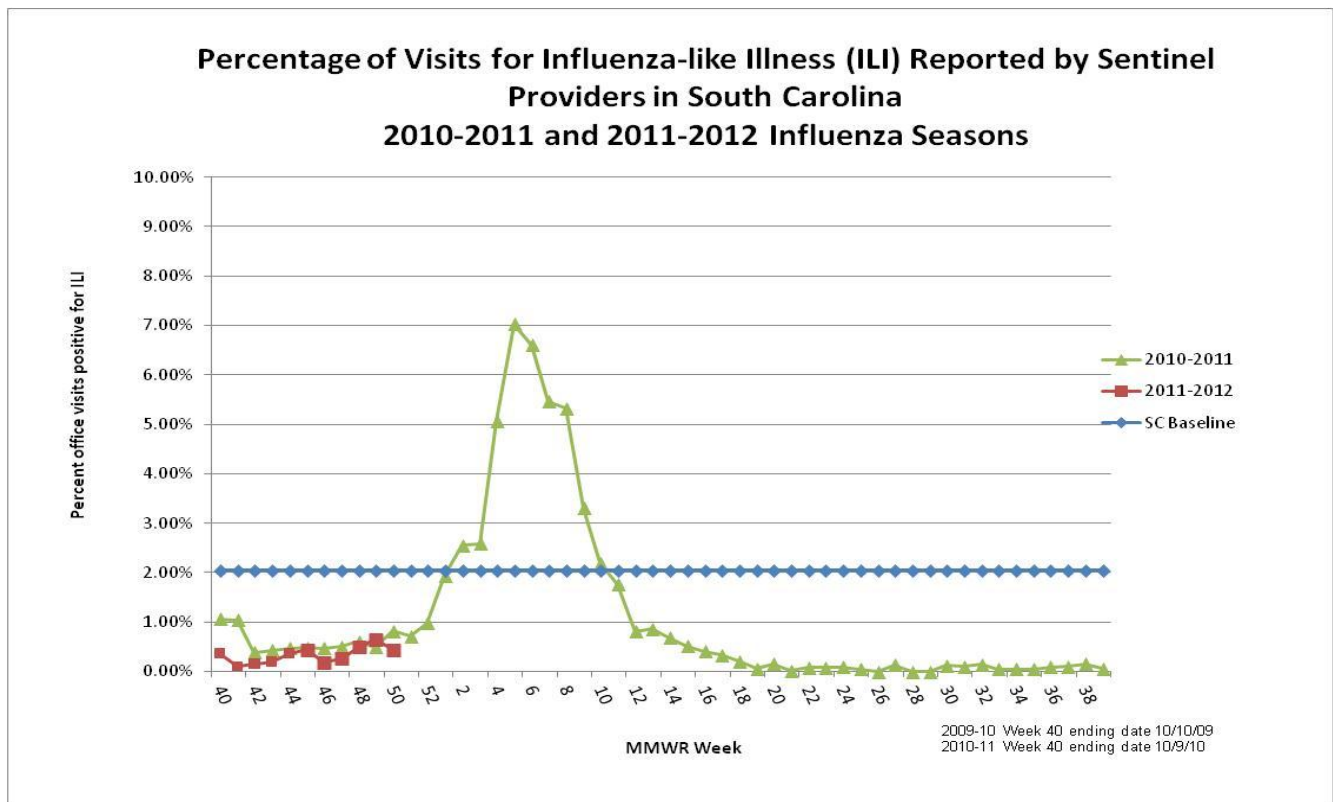
Lab confirmation includes positive rapid tests, culture, PCR, DFA, or IFA.

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	.44%	.65%	▼.21
Number of positive confirmatory tests	0	1	▼ 1
Number of lab confirmed flu hospitalizations	1	0	▲ 1
Number of lab confirmed flu deaths	0	0	0

I. ILINet Influenza-Like Illness Surveillance

During MMWR week 50, .44% of patient visits to SC ILINet providers were due to ILI. This is below the state baseline (2.05%). This ILI percentage compares to .82% this time last year. Reports were received from providers in 11 counties, representing 7 of the 8 regions.



*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.

**Reported Influenza-Like Illness by Sentinel Providers
December 11, 2011 – December 17, 2011**

County	ILI %	County	ILI %
Abbeville	---	Greenwood	NR
Aiken	0%	Hampton	NR
Allendale	---	Horry	NR
Anderson	NR	Jasper	NR
Bamberg	---	Kershaw	.60%
Barnwell	---	Lancaster	---
Beaufort	NR	Laurens	NR
Berkeley	1.56%	Lee	---
Calhoun	---	Lexington	NR
Charleston	NR	Marion	---
Cherokee	---	Marlboro	---
Chester	---	McCormick	0%
Chesterfield	---	Newberry	---
Clarendon	---	Oconee	---
Colleton	---	Orangeburg	---
Darlington	---	Pickens	NR
Dillon	NR	Richland	0%
Dorchester	NR	Saluda	NR
Edgefield	---	Spartanburg	0%
Fairfield	.42%	Sumter	NR
Florence	0%	Union	---
Georgetown	2.18%	Williamsburg	---
Greenville	0%	York	0%

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



Geographic Region	ILI %	# of Reporters
Upstate-Regions 1 -2	0	4
Midlands-Regions 3-5	.20	6
Coastal-Regions 6-8	1.98	2

*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 (12/11/11 – 12/17/11)*

	BOL	Other clinical labs
Number of specimens tested	2	NA
Number of positive specimens	0	0
Influenza A unsubtype		
Influenza A H1N1		
Influenza A H3N2		
Influenza B		
Other		

Includes culture, RT-PCR, DFA, and IFA

During MMWR week 50, no positive specimens were reported.

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

	BOL	Other clinical labs
Number of specimens tested	26	NA
Number of positive specimens	2	0
Influenza A unsubtype		
Influenza A H1N1	1	
Influenza A H3N2		
Influenza B	1	
Other		

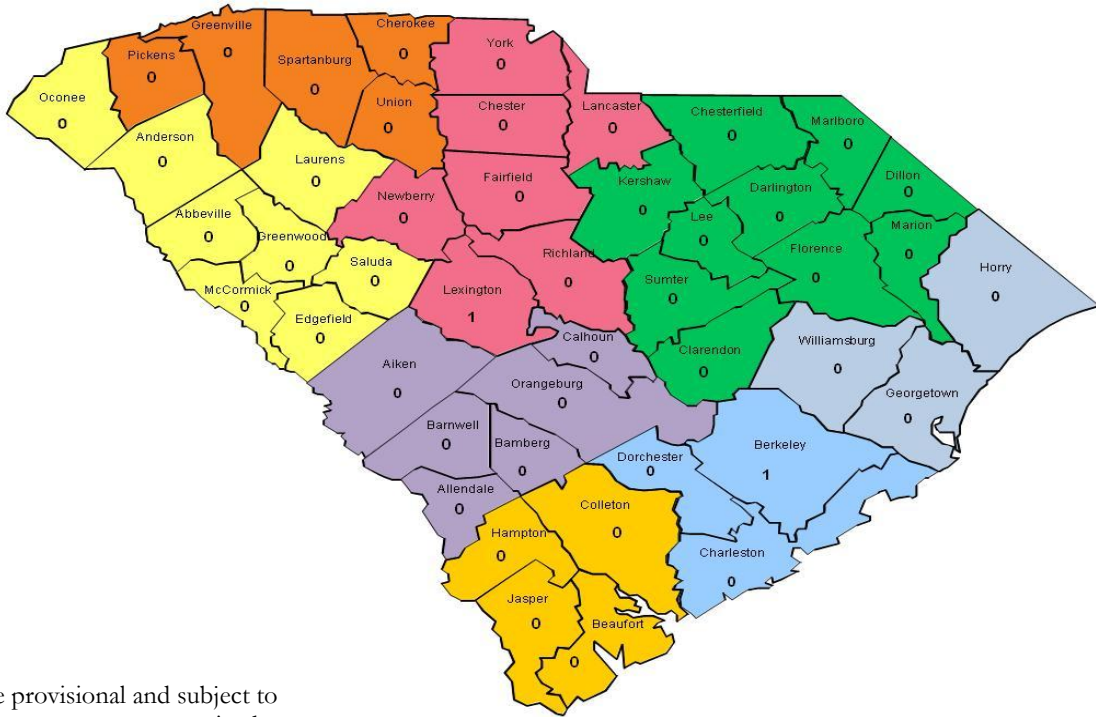
Includes culture, RT-PCR, DFA, and IFA

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

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

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		Greenwood		Pickens	
Calhoun		Hampton		Richland	
Charleston		Horry		Saluda	
Cherokee		Jasper		Spartanburg	
Chester		Kershaw		Sumter	
Chesterfield		Lancaster		Union	
Clarendon		Laurens		Williamsburg	
Colleton		Lee		York	
Darlington					

**Map of Positive Confirmatory Tests by County
Cumulative 10/2/11 – 12/17/11**



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

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

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

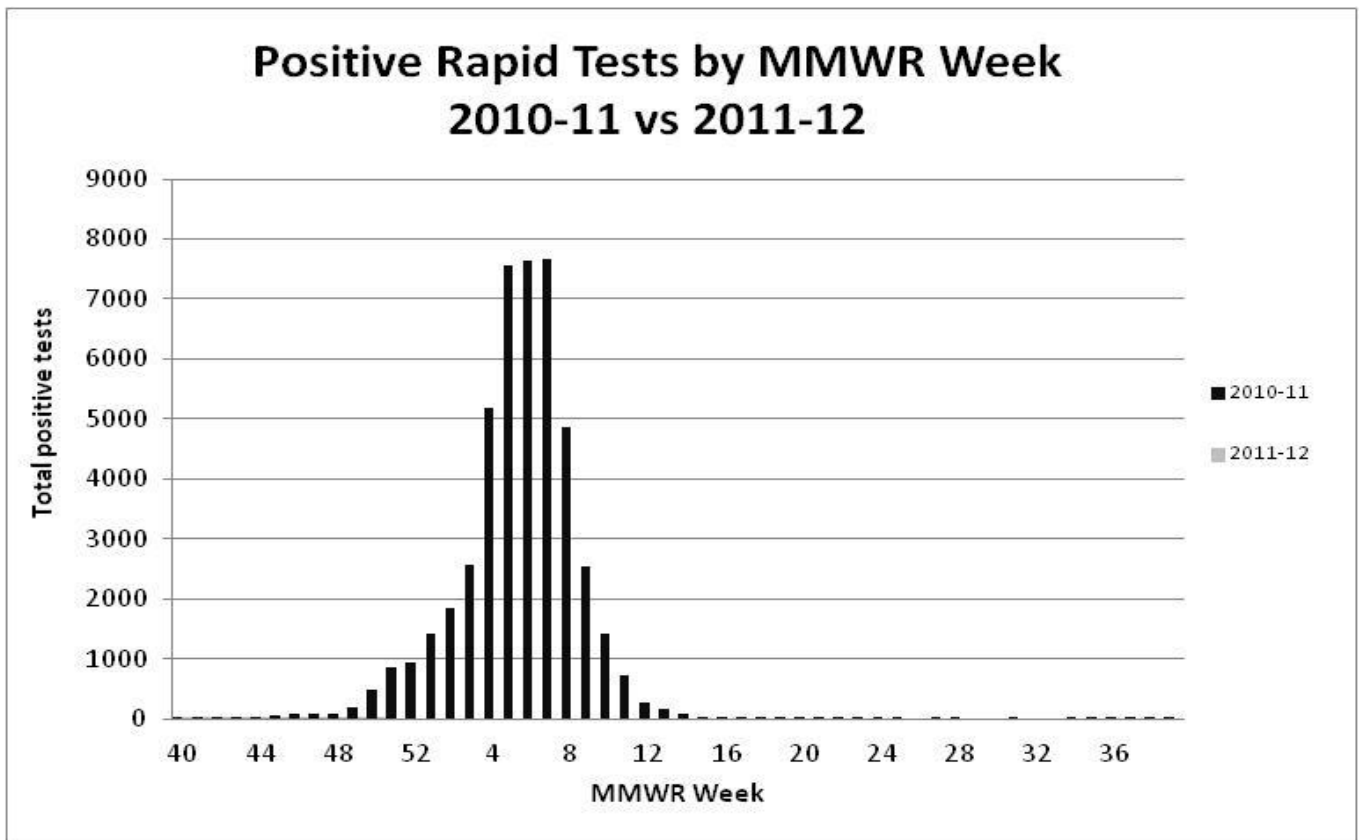
III. Positive Rapid Antigen Tests

During MMWR week 50, 22 positive rapid antigen tests were reported. Of these, there were 19 influenza A, 2 influenza B, and 1 influenza A/B. During this MMWR week last year, 206 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>
Current MMWR (12/11- 12/17/11)	19	1	2		22
Cumulative (since 10/2/10)	98	36	19	4	157

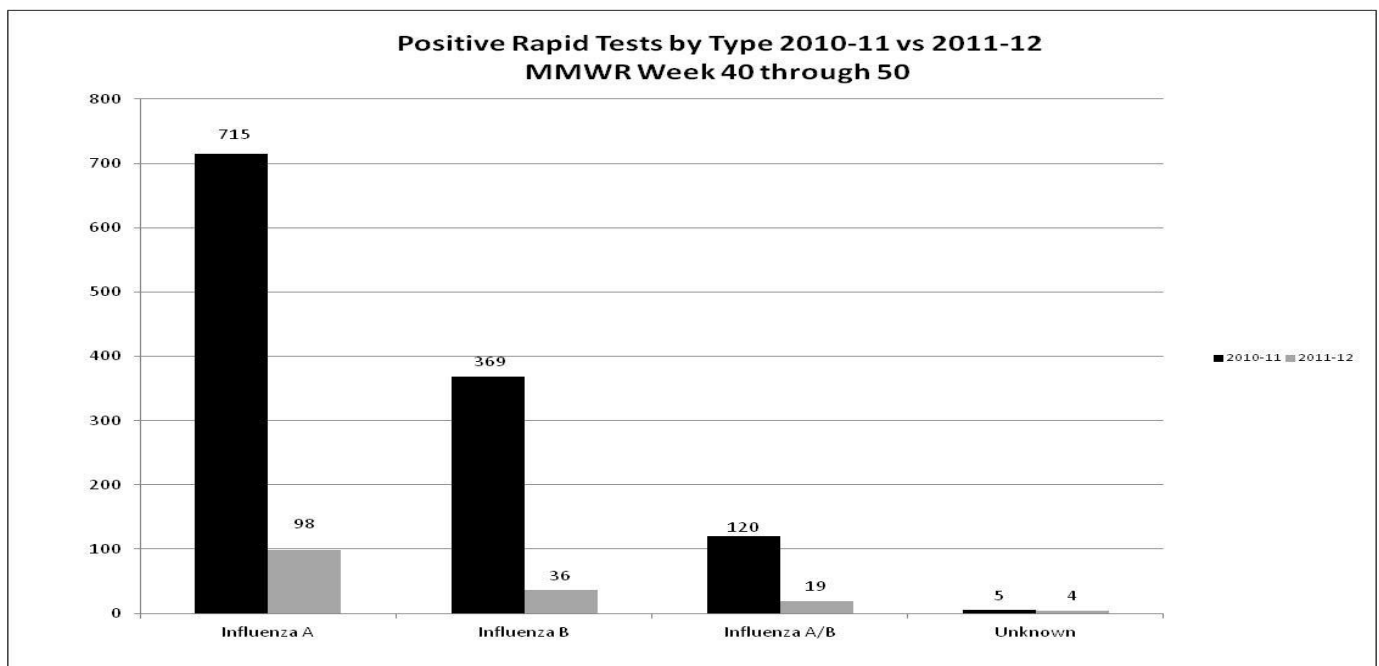
**Positive Rapid Flu Tests by County
Current Week 12/11/11 – 12/17/11**

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



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

	A	B	A/B	Unk		A	B	A/B	Unk
Region 1					Region 2				
Abbeville	1				Cherokee	1			
Anderson	6	2			Greenville	9	5	2	
Edgefield					Pickens	10	4	1	
Greenwood	1				Spartanburg	1			
Laurens	3				Union				
McCormick					Region 4				
Oconee	3		1	1	Chesterfield		1		
Saluda					Clarendon				
Region 3					Darlington	1			3
Chester					Dillon				
Fairfield					Florence	6	2	2	
Lancaster	1				Kershaw	2			
Lexington	3	2			Lee				
Newberry	1				Marion				
Richland	11	1			Marlboro				
York	1	1			Sumter	5			
Region 5					Region 6				
Aiken					Georgetown	7			
Allendale					Horry	3	15	3	
Bamberg					Williamsburg				1
Barnwell					Region 8				
Calhoun					Beaufort				
Orangeburg					Colleton	2			
Region 7					Hampton				
Berkeley	2		2		Jasper				
Charleston	17	1							
Dorchester	9	3							

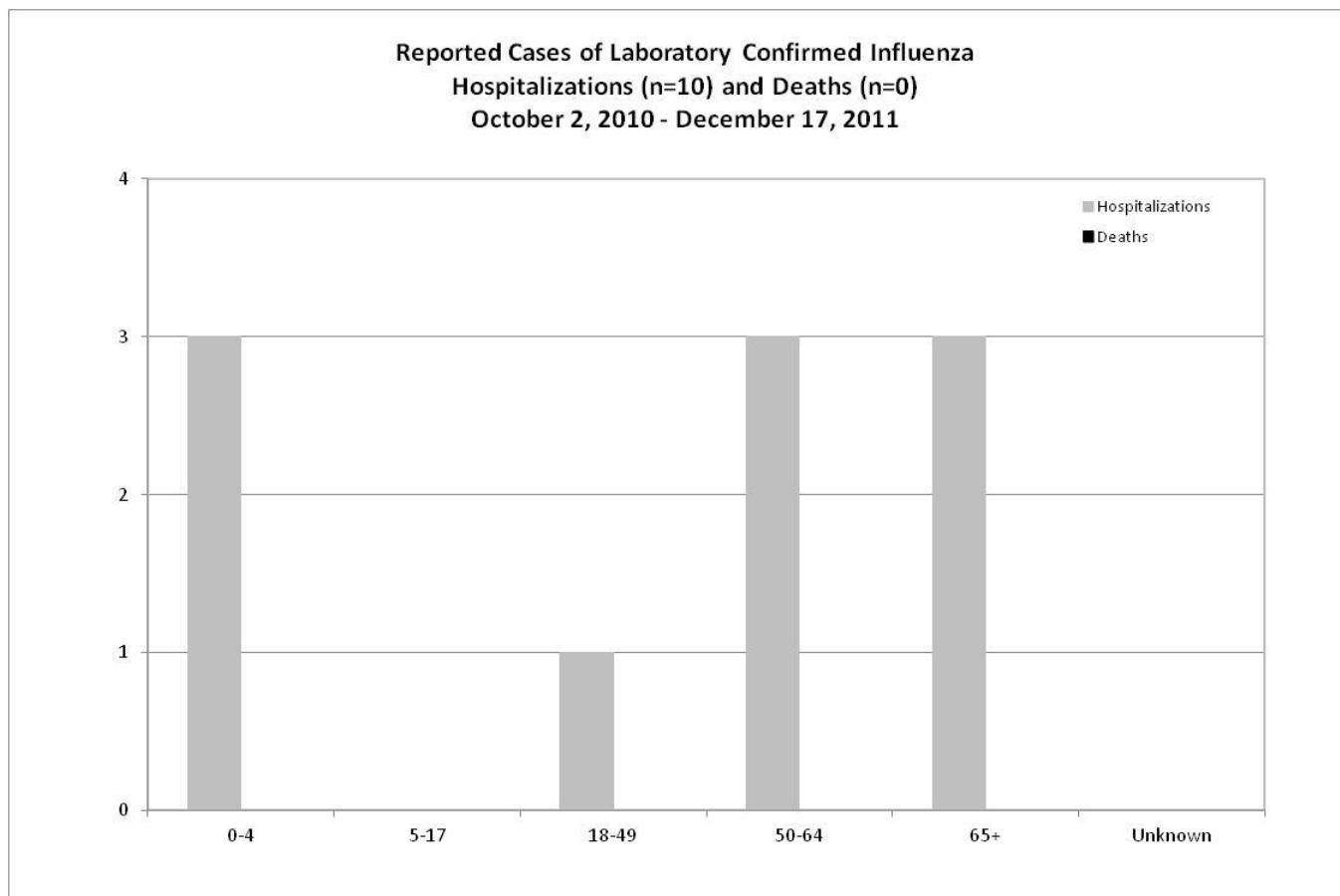


IV. Influenza hospitalizations and deaths

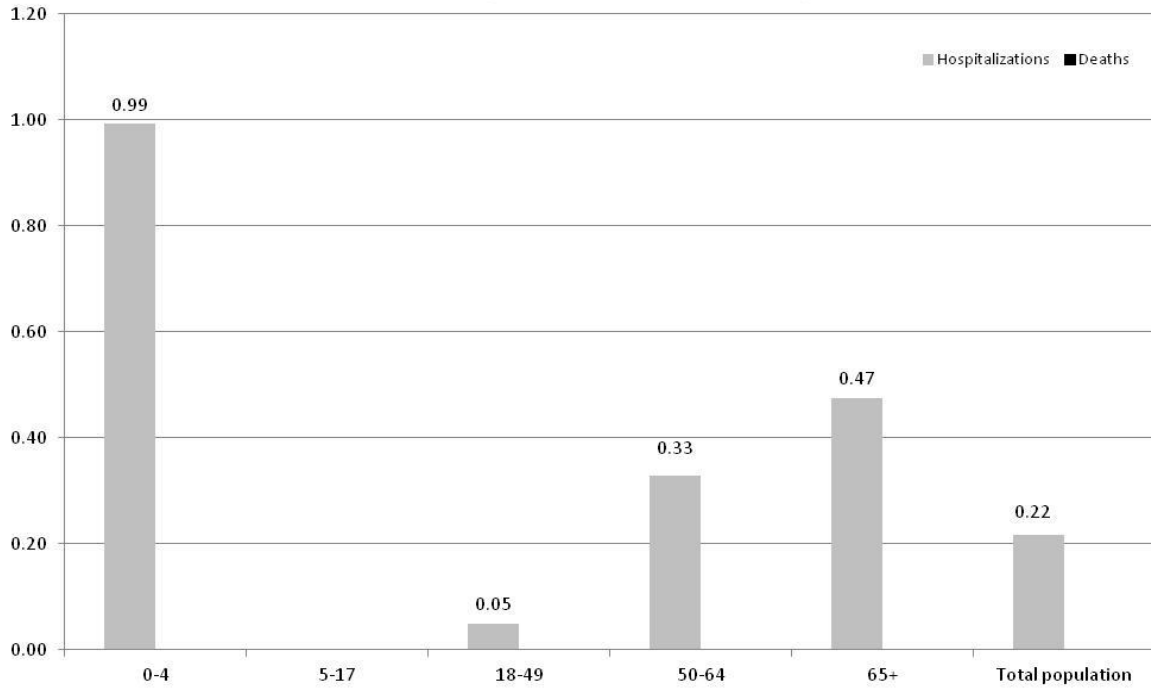
During MMWR week 50 one lab confirmed* influenza hospitalization was reported. No lab confirmed deaths were reported.

	Total number*	
Number of Hospitals Reporting (current week)	33	
	<i>Current MMWR (12/4- 12/10/11)</i>	<i>Cumulative (since 10/2/10)</i>
Hospitalizations	1	10
Deaths	0	0

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



**Laboratory Confirmed Influenza Case rate/100,000
Hospitalizations (n=10) and Deaths (n=0) by age group
October 2, 2010 - December 17, 2011**



V. 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
Regional	OR		
	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
Regional	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.

VI. 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 CHES 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

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**.

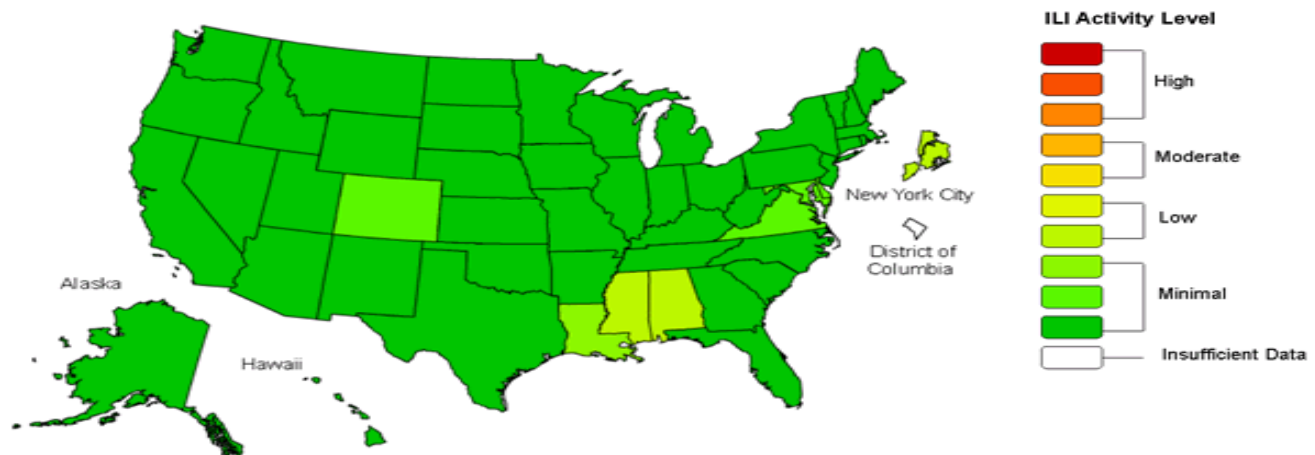
VII. National Surveillance MMWR Week 49 (12/4-12/10)

During week 49 (December 4-10, 2011), influenza activity remained low in the United States.

- **U.S. Virologic Surveillance:** Of the 2,480 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, 48 (1.9%) 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 below region-specific baseline levels. Two states and New York City experienced low ILI activity, forty-eight states experienced minimal ILI activity, and the District of Columbia had insufficient data.
- **Geographic Spread of Influenza:** The geographic spread of influenza in three states was reported as local; Guam, Puerto Rico, and 32 states reported sporadic activity, and the District of Columbia, the U.S. Virgin Islands, and 15 states 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 49 ending Dec 10, 2011**



*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.

*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.