

Flu Watch

Week Ending December 29, 2012 (MMWR Week 52)

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

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MMWR Week 52 at a Glance:

Influenza Activity Level: WIDESPREAD
 Note: Activity level definitions are found on page 10

ILI Activity Status (South Carolina baseline is 2.05%*): Below baseline in the Upstate (1.43%), and above baseline in the Midlands (5.95%), and along the Coast (6.19%). The state ILI percentage was 5.82%. These data reflect reports from 8 (25%) providers.

SC Viral Isolate and RT-PCR Activity: 70 positive specimens were reported. Since 9/30/12, 534 positive specimens have been reported.

Positive Rapid Flu Test Activity: 3206 positive rapid tests were reported. Since 9/30/12, 32,821 positive rapid tests have been reported.

Hospitalizations: 221 lab confirmed hospitalizations were reported. Since 9/30/12, 862 hospitalizations have been reported.

Deaths: Two lab confirmed deaths were reported. Since 9/30/12, 15 deaths have been reported.

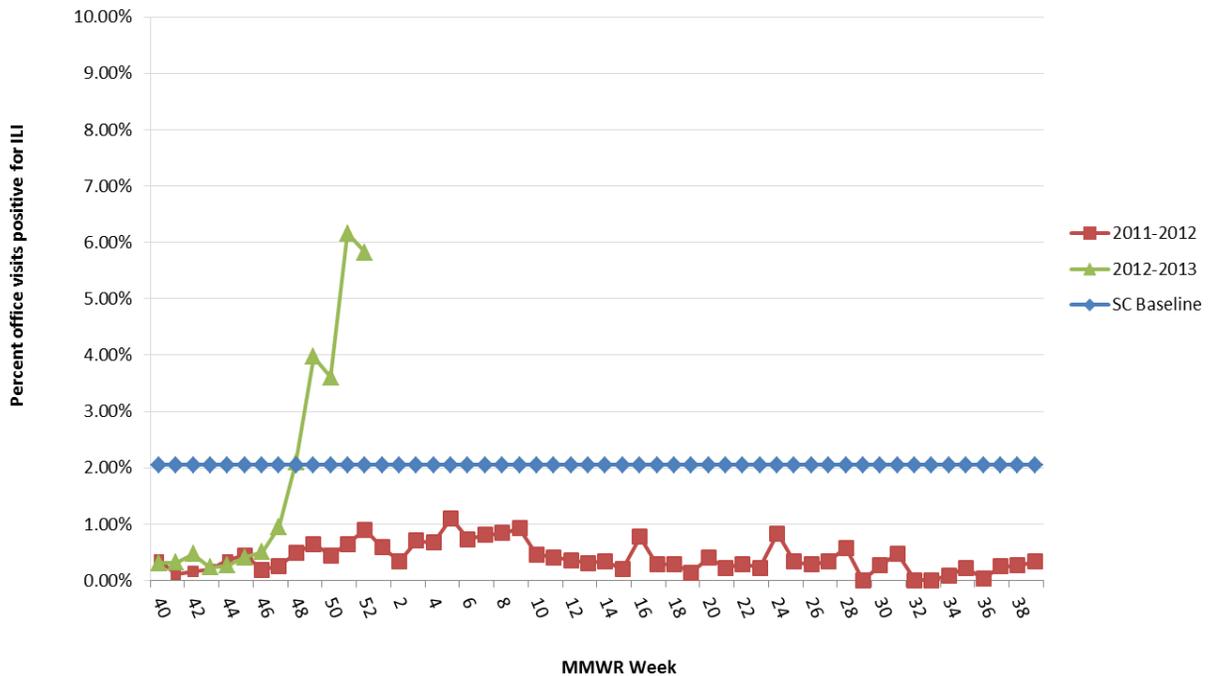
Summary of ILI Activity, Positive Confirmatory Tests, and Influenza Associated Hospitalizations and Deaths

	<i>Current week</i>	<i>Previous week</i>	<i>Change from previous week</i>
Percent of ILI visits reported by ILINet providers	5.82%	6.16%	▼ .34
Number of positive confirmatory tests	70	100	▼ 30
Number of lab confirmed flu hospitalizations	221	110	▲ 111
Number of lab confirmed flu deaths	2	3	▼ 1

I. ILINet Influenza-Like Illness Surveillance

During the most recent MMWR week, 5.82% of patient visits to SC ILINet providers were due to ILI. This is above the state baseline (2.05%). This ILI percentage compares to .90 % this time last year. Reports were received from providers in 7 counties, representing 5 of the 8 regions.

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

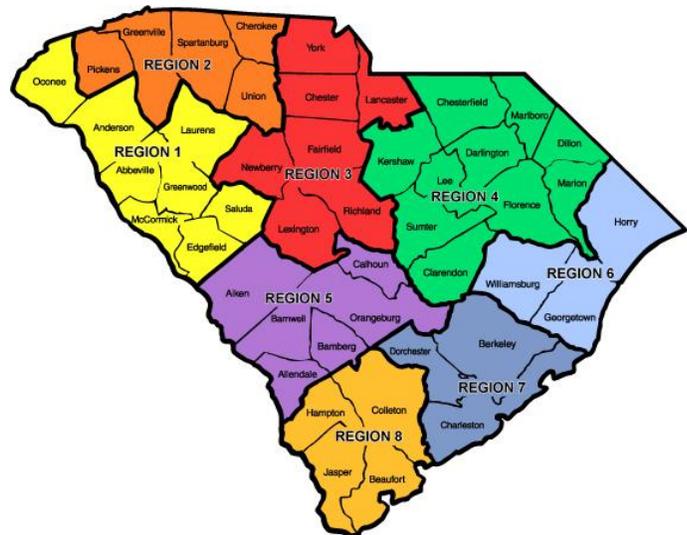


*The SC baseline is the mean percentage of patient visits for ILI during non-influenza weeks (weeks when percent of positive lab tests was below 20%) for the previous three seasons plus two standard deviations.

Influenza-Like Illness Reported by Sentinel Providers December 23, 2012 – December 29, 2012

County	ILI %	County	ILI %
Abbeville	---	Greenwood	NR
Aiken	NR	Hampton	2.35%
Allendale	---	Horry	NR
Anderson	NR	Jasper	NR
Bamberg	---	Kershaw	3.00%
Barnwell	---	Lancaster	---
Beaufort	NR	Laurens	NR
Berkeley	NR	Lee	---
Calhoun	---	Lexington	21.74%
Charleston	NR	Marion	---
Cherokee	---	Marlboro	---
Chester	---	McCormick	NR
Chesterfield	---	Newberry	---
Clarendon	---	Oconee	---
Colleton	---	Orangeburg	---
Darlington	---	Pickens	NR
Dillon	NR	Richland	NR
Dorchester	NR	Saluda	NR
Edgefield	---	Spartanburg	1.43%
Fairfield	---	Sumter	NR
Florence	4.04%	Union	---
Georgetown	8.16%	Williamsburg	---
Greenville	NR	York	0%

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



Geographic Region	ILI %	# of Reporters
Upstate-Regions 1 -2	1.43	1
Midlands-Regions 3-5	5.95	5
Coastal-Regions 6-8	6.19	2

*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 (12/23/12 – 12/29/12)</i>		
	BOL	Other clinical labs
Number of specimens tested	20	NA
Number of positive specimens	9	61
Influenza A unsubtype		4
Influenza A H1N1		
Influenza A H3N2	6	55
Influenza B	3	2
Other		

Includes culture, RT-PCR, DFA, and IFA

During the previous MMWR week, 70 positive specimens were reported.

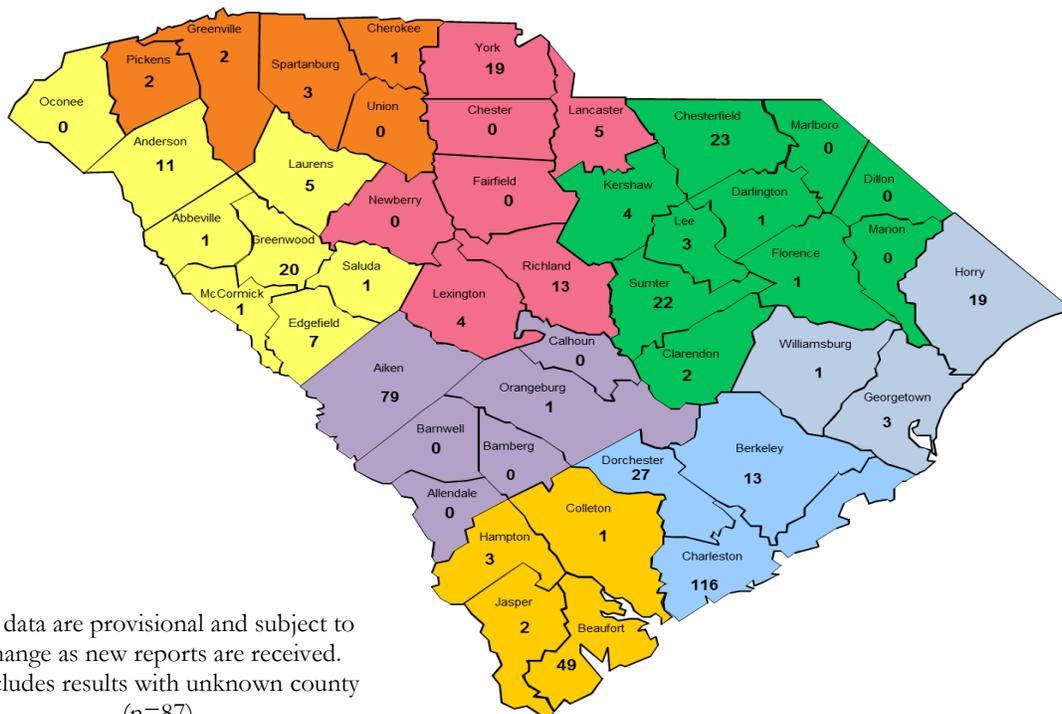
<i>Positive confirmatory influenza test results*</i> <i>Cumulative (09/30/12 – 12/29/12)</i>		
	BOL	Other clinical labs
Number of specimens tested	245	NA
Number of positive specimens	166 (67.8%)	352
Influenza A unsubtype		182 (51.7%)
Influenza A H1N1	13 (7.8%)	5 (1.4%)
Influenza A H3N2	143 (86.1%)	156 (44.3%)
Influenza B	10 (6.0%)	9 (2.6%)
Other		

Includes culture, RT-PCR, DFA, and IFA

**Positive Confirmatory Tests by County
Current Week 12/23/12 – 12/29/12**

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

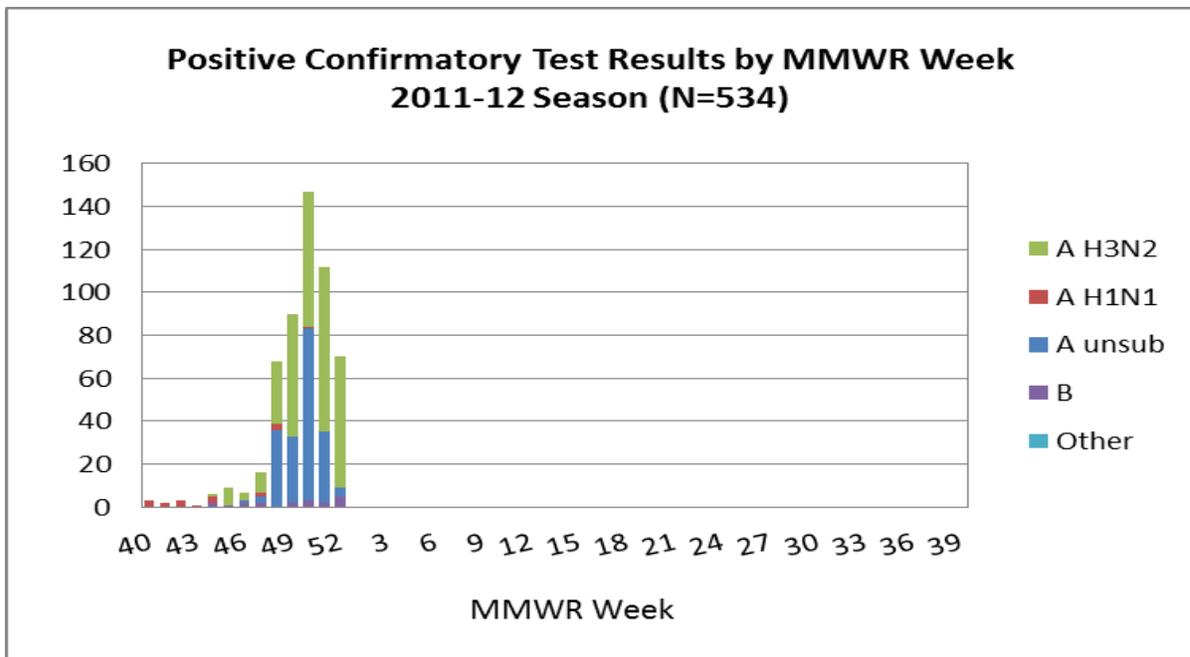
**Map of Positive Confirmatory Tests by County
Cumulative 09/30/12 – 12/29/12**



All data are provisional and subject to change as new reports are received. Excludes results with unknown county (n=87).

**Positive Confirmatory Tests by County and Type
Cumulative 9/30/12 – 12/29/12**

	A H1N1	A H3N2	B	A Unsub	Unk		A H1N1	A H3N2	B	A Unsub	Unk
Region 1						Region 2					1
Abbeville		1				Cherokee					
Anderson		8		3		Greenville		1			2
Edgefield		1		6		Pickens		2			
Greenwood		18		2		Spartanburg		1			2
Laurens		2		3		Union					
McCormick		1				Region 4					
Oconee						Chesterfield		1	1		1
Saluda		1				Clarendon		1			1
Region 3						Darlington		1			
Chester						Dillon					
Fairfield						Florence		1			
Lancaster		3		2		Kershaw		2			2
Lexington		4				Lee		2			1
Newberry						Marion					
Richland		9	2	2		Marlboro					
York		9	2	8		Sumter		21	1		
Region 5						Region 6					
Aiken	1	3	1	74		Georgetown		3			
Allendale						Horry		15			4
Bamberg						Williamsburg					1
Barnwell						Region 8					
Calhoun						Beaufort	15	32	2		
Orangeburg		1				Colleton					
Region 7						Hampton		1			3
Berkeley		13				Jasper		2			
Charleston		107	5	3		Unknown	2	15	2		68
Dorchester		26	1								

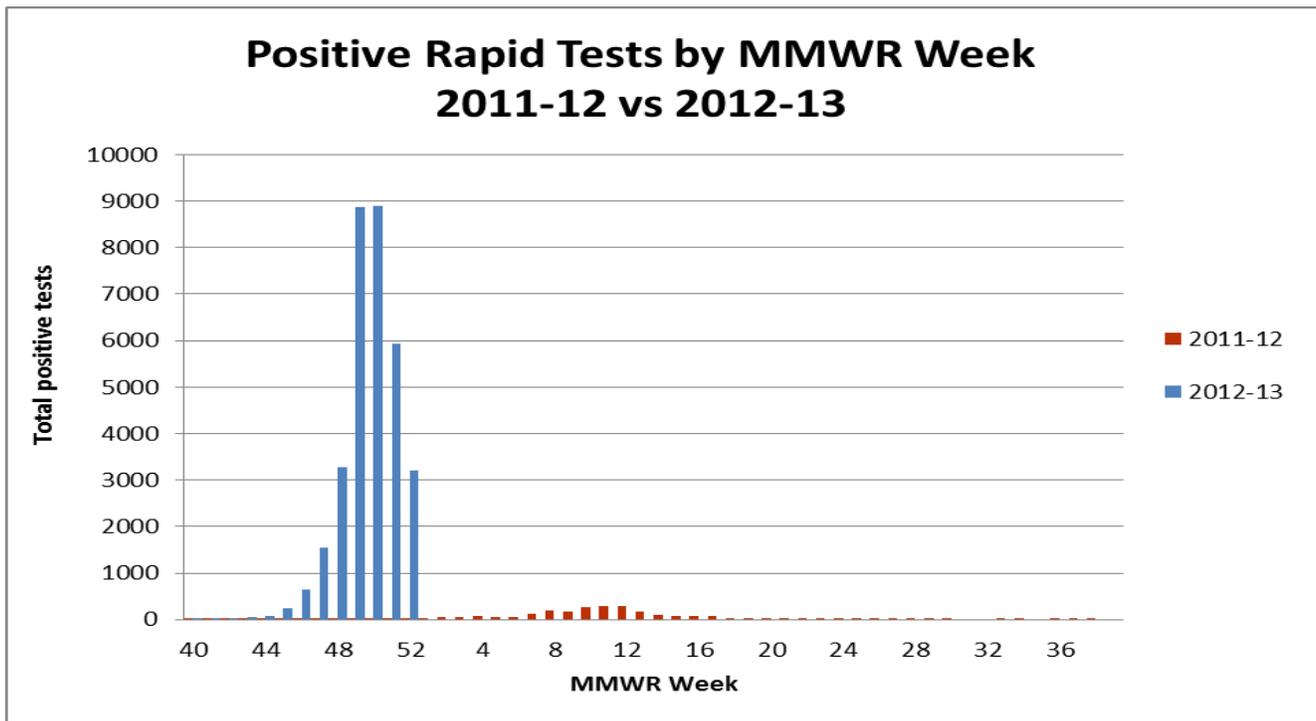


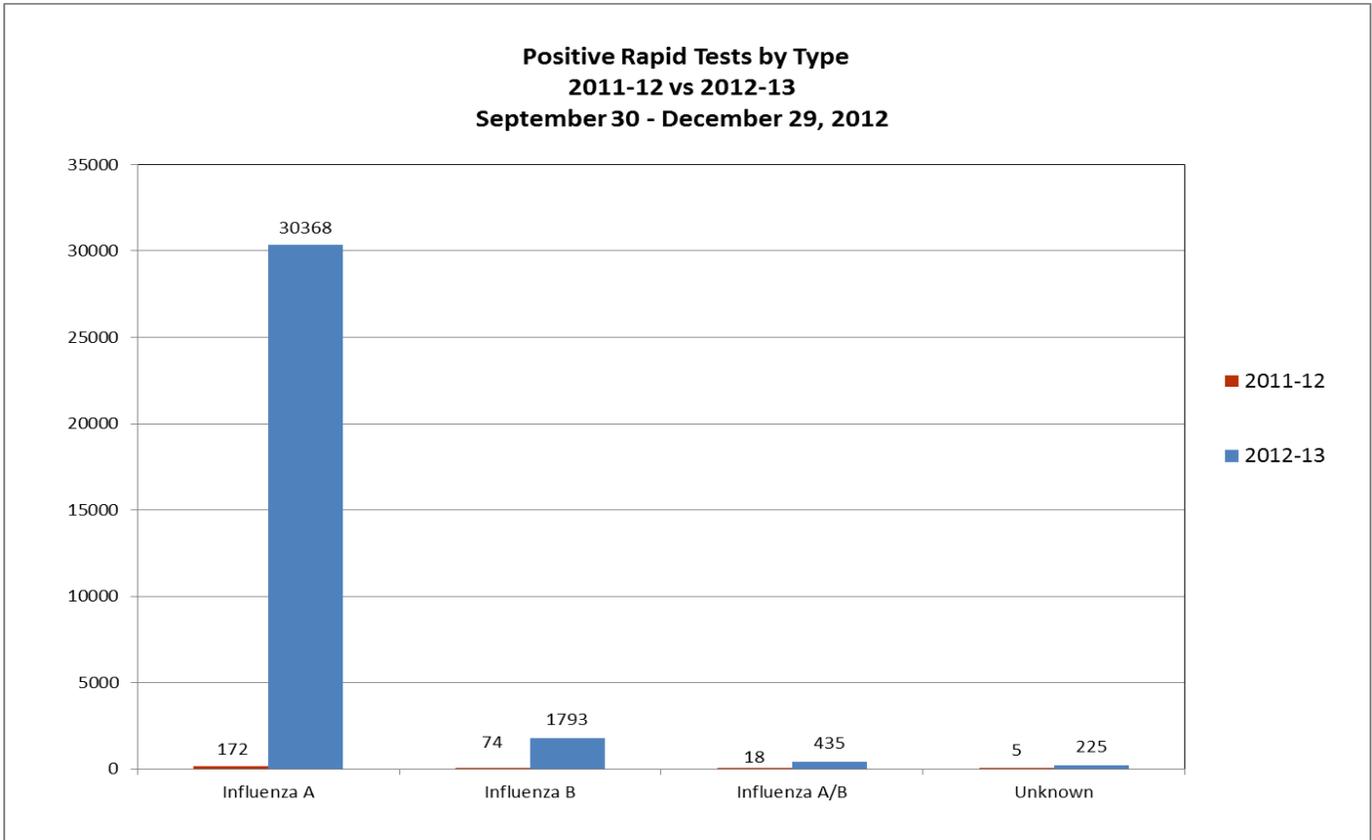
III. Positive Rapid Antigen Tests

During the past MMWR week, 3206 positive rapid antigen tests were reported. Of these, 2997 were influenza A, 189 were influenza B, 16 were influenza A/B, and 4 were unknown. This compares to 16 this time last year. 32,681 positive rapid tests have been reported this year.

Positive Rapid Flu Tests by County December 23, 2012 – December 29, 2012

County	Positive Tests	County	Positive Tests	County	Positive Tests
Abbeville		Dillon	10	Lexington	170
Aiken		Dorchester	228	Marion	
Allendale		Edgefield		Marlboro	
Anderson	89	Fairfield	13	McCormick	
Bamberg		Florence	143	Newberry	83
Barnwell		Georgetown	52	Oconee	31
Beaufort		Greenville	233	Orangeburg	2
Berkeley	82	Greenwood	4	Pickens	95
Calhoun		Hampton		Richland	328
Charleston	767	Horry	224	Saluda	
Cherokee	23	Jasper		Spartanburg	
Chester	8	Kershaw	68	Sumter	39
Chesterfield		Lancaster	21	Union	4
Clarendon		Laurens		Williamsburg	4
Colleton		Lee		York	210
Darlington	104				





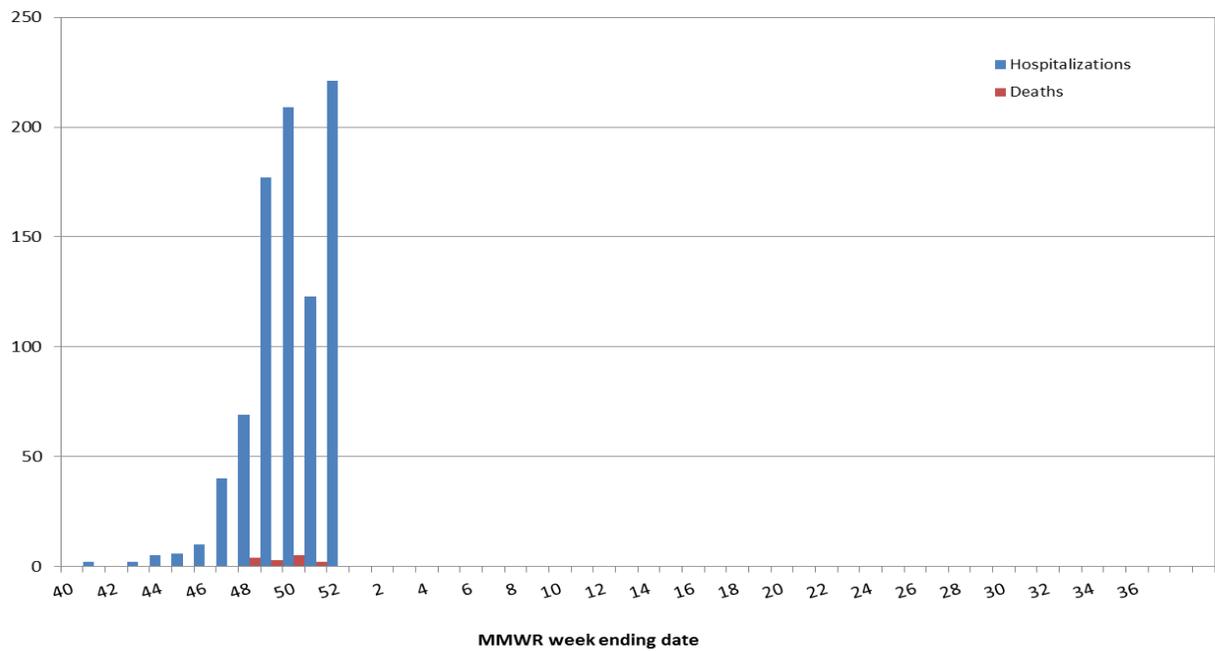
IV. Influenza hospitalizations and deaths

During the past MMWR week, 172 lab confirmed* influenza hospitalizations were reported. Three lab confirmed deaths were reported.

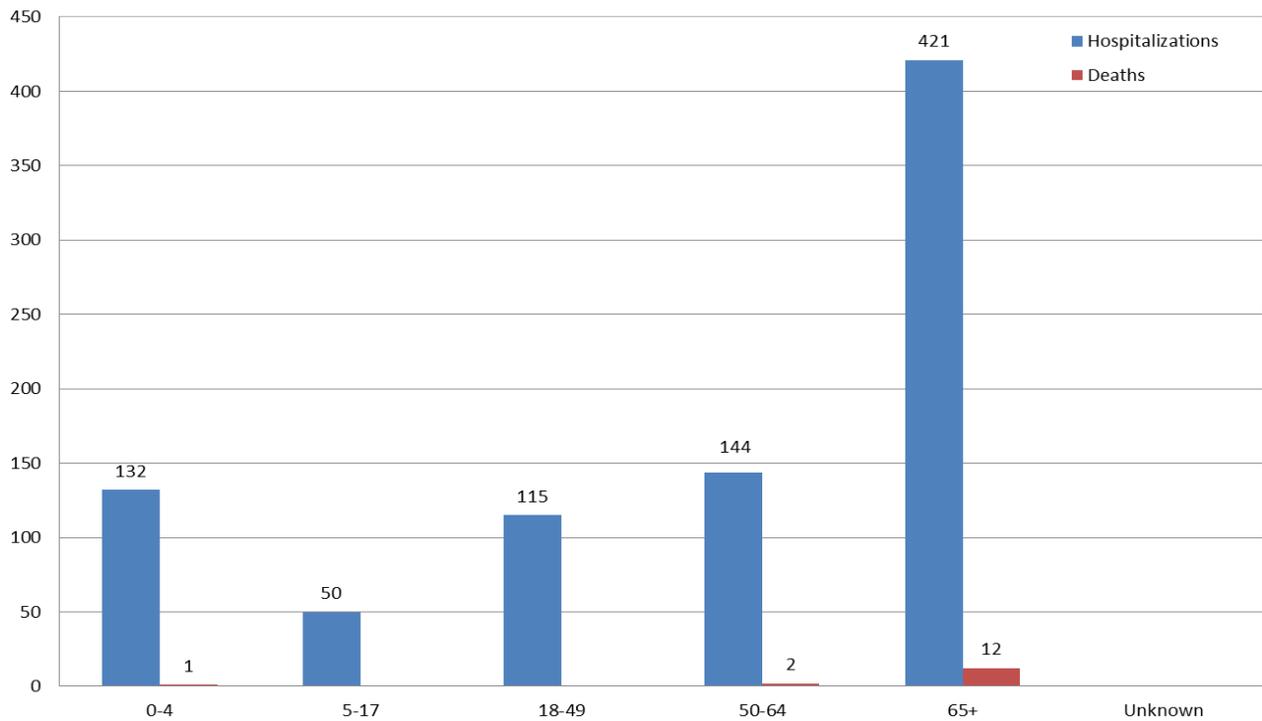
	Total number*	
Number of Reporting Hospitals (Current week)	50	
	<i>Current MMWR Week (12/23-12/29/12)</i>	<i>Cumulative (since 09/30/12)</i>
Hospitalizations	221	862
Deaths	2	15

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

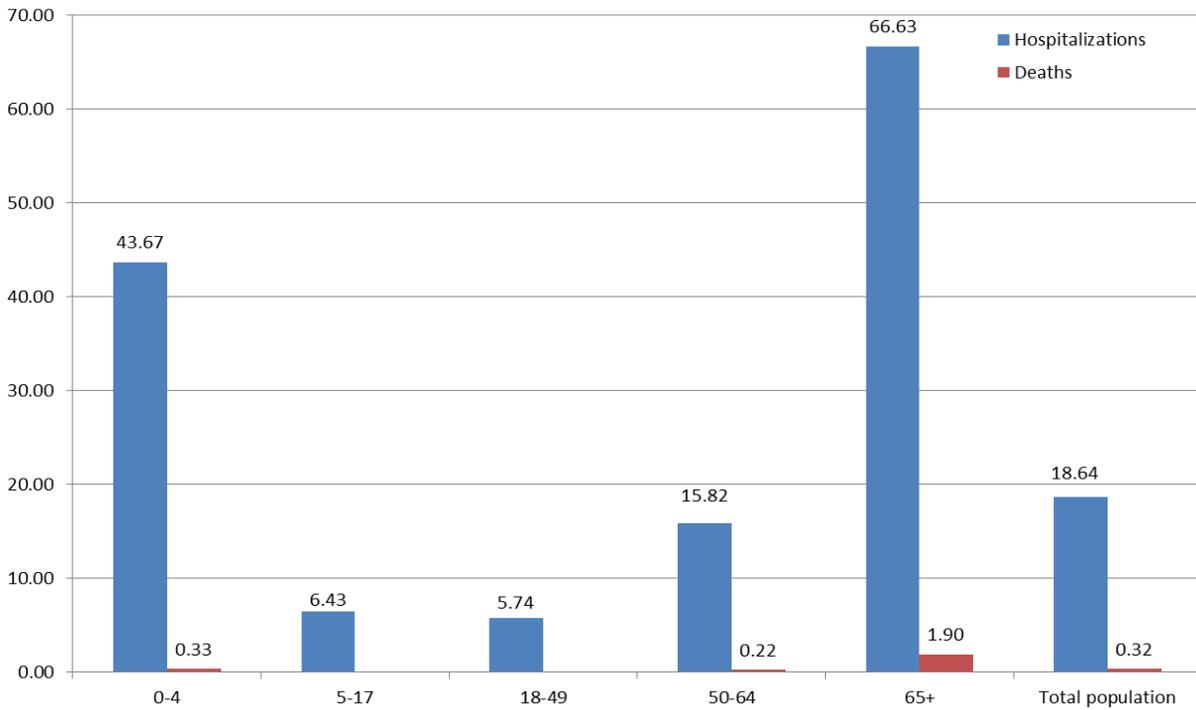
**Reported Cases of Laboratory Confirmed Influenza Hospitalizations and Deaths
by MMWR week
September 30, 2012 - December 29, 2012**



**Reported Cases of Laboratory Confirmed Influenza
Hospitalizations (n=862) and Deaths (n=15)
September 30 - December 29, 2012**



**Laboratory Confirmed Influenza Case rate/100,000
Hospitalizations (n=862) and Deaths (n=15) by age group
September 30, 2012 - December 29, 2012**



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 CHESSE 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**.

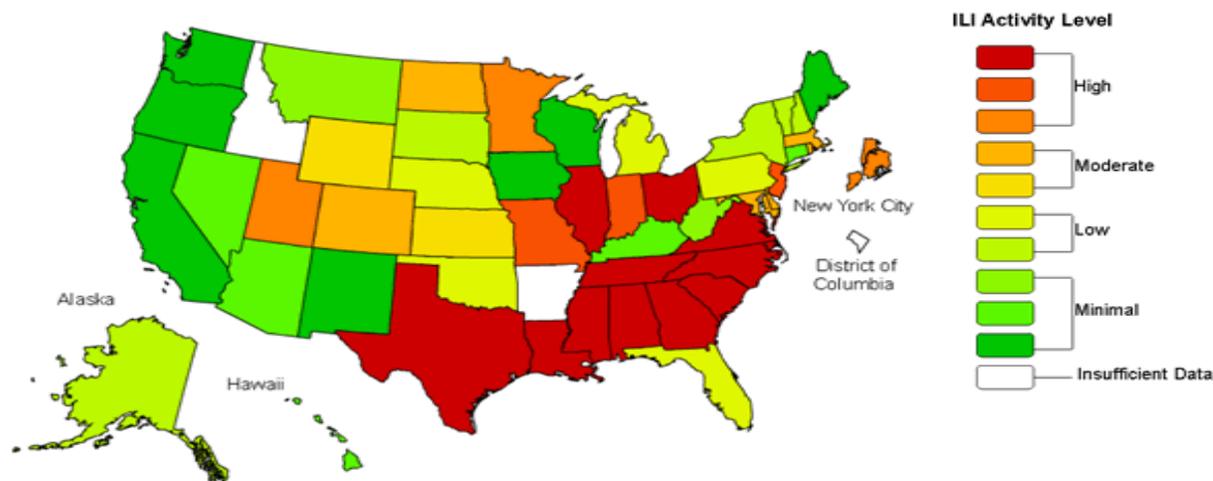
VII. National Surveillance MMWR Week 51 (12/16-12/22)

During week 51 (December 16-22), influenza activity increased in the U.S.

- o **Viral Surveillance:** Of 6,234 specimens tested and reported by U.S. World Health Organization (WHO) and National Respiratory and Enteric Virus Surveillance System (NREVSS) collaborating laboratories in week 51, 1,846 (29.6%) were positive for influenza.
- o **Pneumonia and Influenza Mortality:** The proportion of deaths attributed to pneumonia and influenza (P&I) was below the epidemic threshold.
- o **Influenza-Associated Pediatric Deaths:** Eight influenza-associated pediatric deaths were reported. Three were associated with influenza B viruses, 3 were associated with influenza A (H3) viruses, and 2 were associated with influenza A viruses for which the subtype was not determined.
- o **Outpatient Illness Surveillance:** The proportion of outpatient visits for influenza-like illness (ILI) was 4.2%; above the national baseline of 2.2%. Nine of 10 regions reported ILI above region-specific baseline levels. New York City and 16 states experienced high ILI activity; 8 states experienced moderate ILI activity; 10 states experienced low ILI activity; 14 states experienced minimal ILI activity, and the District of Columbia and 2 states had insufficient data.
- o **Geographic Spread of Influenza:** Thirty-one states reported widespread geographic influenza activity; 14 states reported regional activity; the District of Columbia and 3 states reported local activity; 2 states reported sporadic activity; Guam reported no influenza activity, and Puerto Rico 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>

**Influenza-Like Illness (ILI) Activity Level Indicator Determined by Data Reported to ILINet
2012-13 Influenza Season Week 51 ending Dec 22, 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.