

Flu Watch

Week Ending December 22, 2012 (MMWR Week 51)

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

<i>In this issue:</i>	
ILINet	2
Virologic surveillance	4
Rapid antigen tests	7
Hospitalizations and deaths	8
Activity level definitions	10
SC influenza surveillance components	11
National Surveillance	12

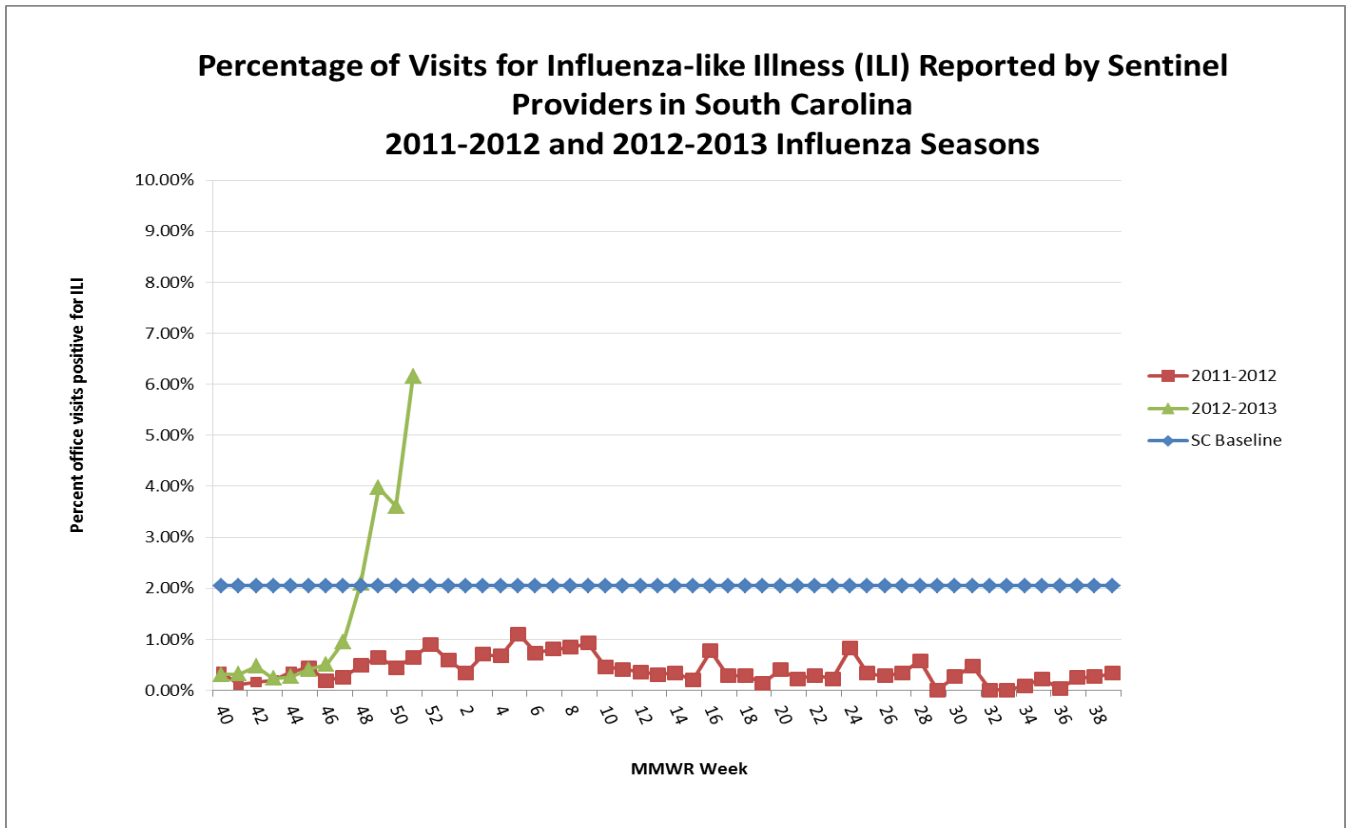
MMWR Week 51 at a Glance:
<p>Influenza Activity Level: WIDESPREAD Note: Activity level definitions are found on page 10</p> <p>ILI Activity Status (South Carolina baseline is 2.05%*): Below baseline in the Upstate (.85%), and above baseline in the Midlands (4.94%), and along the Coast (9.06%). The state ILI percentage was 6.16%. These data reflect reports from 9 (28.1%) providers.</p> <p>SC Viral Isolate and RT-PCR Activity: 100 positive specimens were reported. Since 9/30/12, 448 positive specimens have been reported.</p> <p>Positive Rapid Flu Test Activity: 644 positive rapid tests were reported. Since 9/30/12, 24,344 positive rapid tests have been reported.</p> <p>Hospitalizations: 52 lab confirmed hospitalizations were reported. Since 9/30/12, 571 hospitalizations have been reported.</p> <p>Deaths: Three lab confirmed deaths were reported. Since 9/30/12, 13 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	6.16%	3.61%	▲ 2.55
Number of positive confirmatory tests	100	118	▼ 18
Number of lab confirmed flu hospitalizations	52	308	▼ 256
Number of lab confirmed flu deaths	3	3	0

I. ILINet Influenza-Like Illness Surveillance

During the most recent MMWR week, 6.16% of patient visits to SC ILINet providers were due to ILI. This is above the state baseline (2.05%). This ILI percentage compares to .65 % this time last year. Reports were received from providers in 9 counties, representing 7 of the 8 regions.



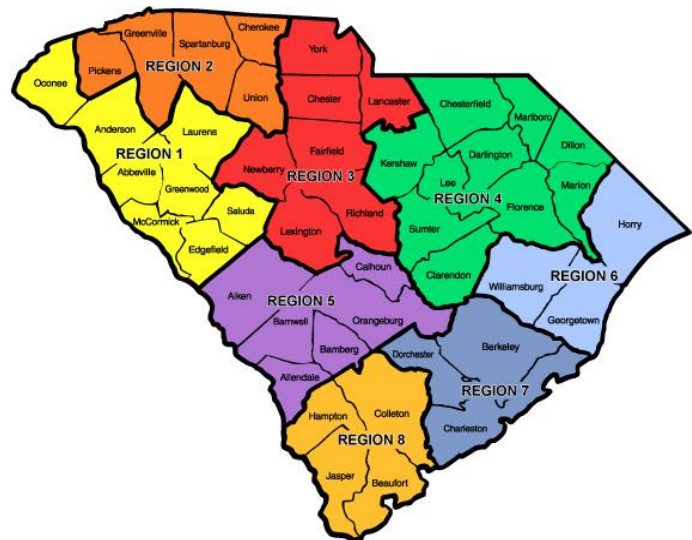
*The SC baseline is the mean percentage of patient visits for ILI during non-influenza weeks (weeks when percent of positive lab tests was below 20%) for the previous three seasons plus two standard deviations.

Influenza-Like Illness Reported by Sentinel Providers December 16, 2012 – December 22, 2012

County	ILI %	County	ILI %
Abbeville	---	Greenwood	NR
Aiken	.93%	Hampton	2.59%
Allendale	---	Horry	NR
Anderson	NR	Jasper	NR
Bamberg	---	Kershaw	3.65%
Barnwell	---	Lancaster	---
Beaufort	NR	Laurens	NR
Berkeley	NR	Lee	---
Calhoun	---	Lexington	14.88%
Charleston	NR	Marion	---
Cherokee	---	Marlboro	---
Chester	---	McCormick	NR
Chesterfield	---	Newberry	---
Clarendon	---	Oconee	---
Colleton	---	Orangeburg	---
Darlington	---	Pickens	NR
Dillon	NR	Richland	NR
Dorchester	NR	Saluda	0%
Edgefield	---	Spartanburg	1.08%
Fairfield	---	Sumter	NR
Florence	4.89%	Union	---
Georgetown	11.68%	Williamsburg	---
Greenville	NR	York	0%

NR: No reports received

---: No enrolled providers



Geographic Region	ILI %	# of Reporters
Upstate-Regions 1 -2	.85	2
Midlands-Regions 3-5	4.95	5
Coastal-Regions 6-8	9.06	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 (12/16/12 – 12/22/12)</i>		
	BOL	Other clinical labs
Number of specimens tested	46	NA
Number of positive specimens	26	74
Influenza A unsubtype		30
Influenza A H1N1		
Influenza A H3N2	26	42
Influenza B		2
Other		

Includes culture, RT-PCR, DFA, and IFA

During the previous MMWR week, 100 positive specimens were reported.

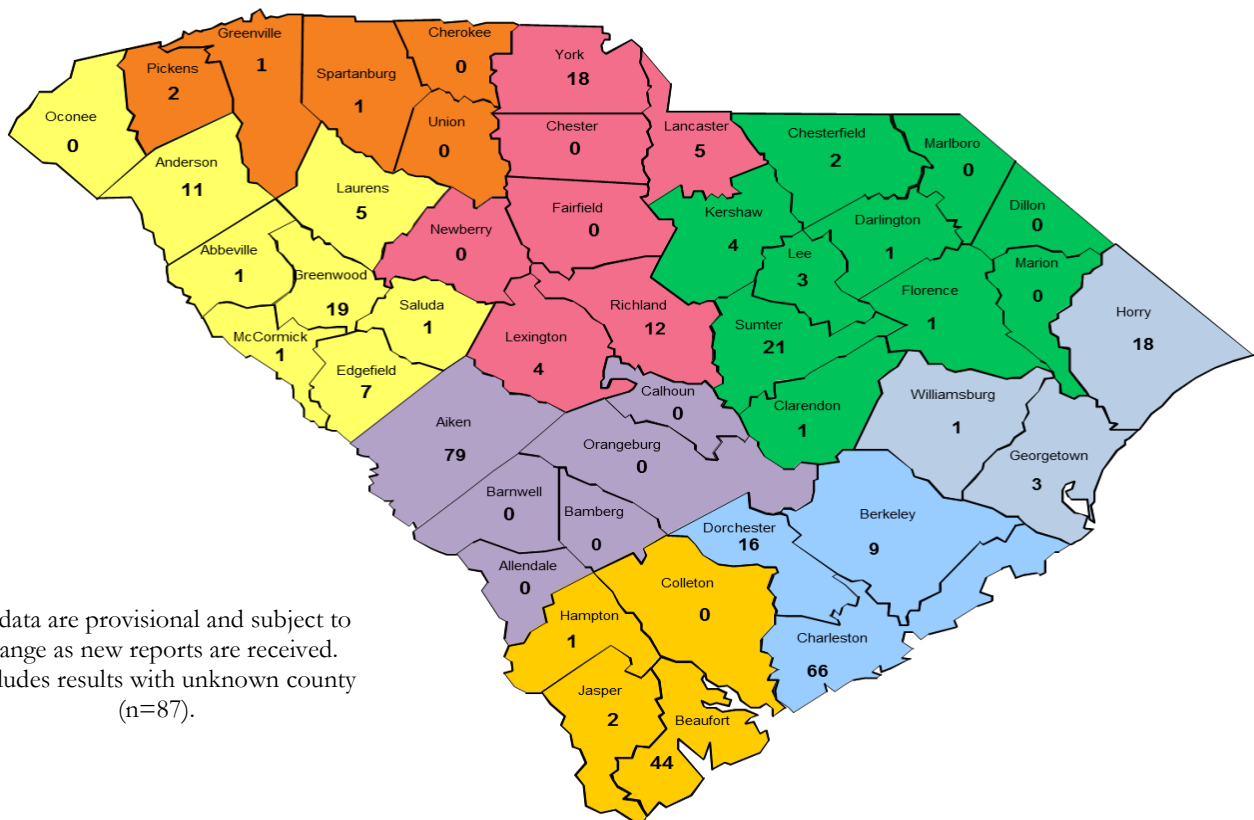
<i>Positive confirmatory influenza test results*</i> <i>Cumulative (09/30/12 – 12/22/12)</i>		
	BOL	Other clinical labs
Number of specimens tested	225	NA
Number of positive specimens	157 (69.8%)	291
Influenza A unsubtype		178 (61.2%)
Influenza A H1N1	13 (8.3%)	5 (1.7%)
Influenza A H3N2	137 (87.3%)	101 (34.7%)
Influenza B	7 (4.5%)	7 (2.4%)
Other		

Includes culture, RT-PCR, DFA, and IFA

**Positive Confirmatory Tests by County
Current Week 12/16/12 – 12/22/12**

County	Positive Tests	County	Positive Tests	County	Positive Tests
Abbeville		Dillon		Marion	
Aiken	4	Dorchester	7	Marlboro	
Allendale		Edgefield		McCormick	
Anderson	1	Fairfield		Newberry	
Bamberg		Florence		Oconee	
Barnwell		Georgetown		Orangeburg	
Beaufort	10	Greenville		Pickens	
Berkeley	4	Greenwood	2	Richland	2
Calhoun		Hampton	1	Saluda	
Charleston	36	Horry	4	Spartanburg	
Cherokee		Jasper		Sumter	2
Chester		Kershaw	4	Union	
Chesterfield		Lancaster		Williamsburg	1
Clarendon		Laurens		York	6
Colleton		Lee	2	Unknown	12
Darlington		Lexington	2		

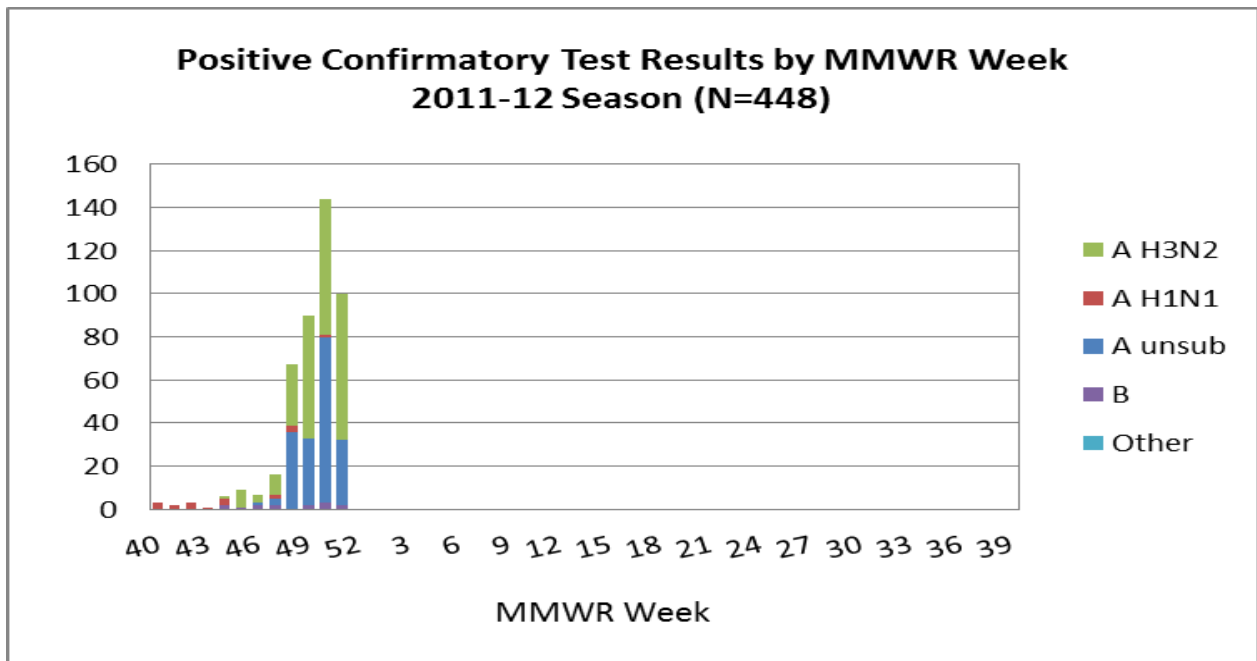
**Map of Positive Confirmatory Tests by County
Cumulative 09/30/12 – 12/22/12**



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 – 12/22/12**

	A H1N1	A H3N2	B	A Unsub	Unk		A H1N1	A H3N2	B	A Unsub	Unk
Region 1						Region 2					
Abbeville		1				Cherokee					
Anderson		8		3		Greenville		1			
Edgefield		1		6		Pickens		2			
Greenwood		17		2		Spartanburg				1	
Laurens		2		3		Union					
McCormick		1				Region 4					
Oconee						Chesterfield		1	1		
Saluda		1				Clarendon		1			
Region 3						Darlington		1			
Chester						Dillon					
Fairfield						Florence		1			
Lancaster		3		2		Kershaw		2		2	
Lexington		4				Lee		2		1	
Newberry						Marion					
Richland		8	2	2		Marlboro					
York		9	2	7		Sumter		20	1		
Region 5						Region 6					
Aiken	1	3	1	74		Georgetown		3			
Allendale						Horry		15		3	
Bamberg						Williamsburg				1	
Barnwell						Region 8					
Calhoun						Beaufort	15	27	2		
Orangeburg						Colleton					
Region 7						Hampton				1	
Berkeley		9				Jasper		2			
Charleston		63	2	1		Unknown	2	15	2	68	
Dorchester		16									

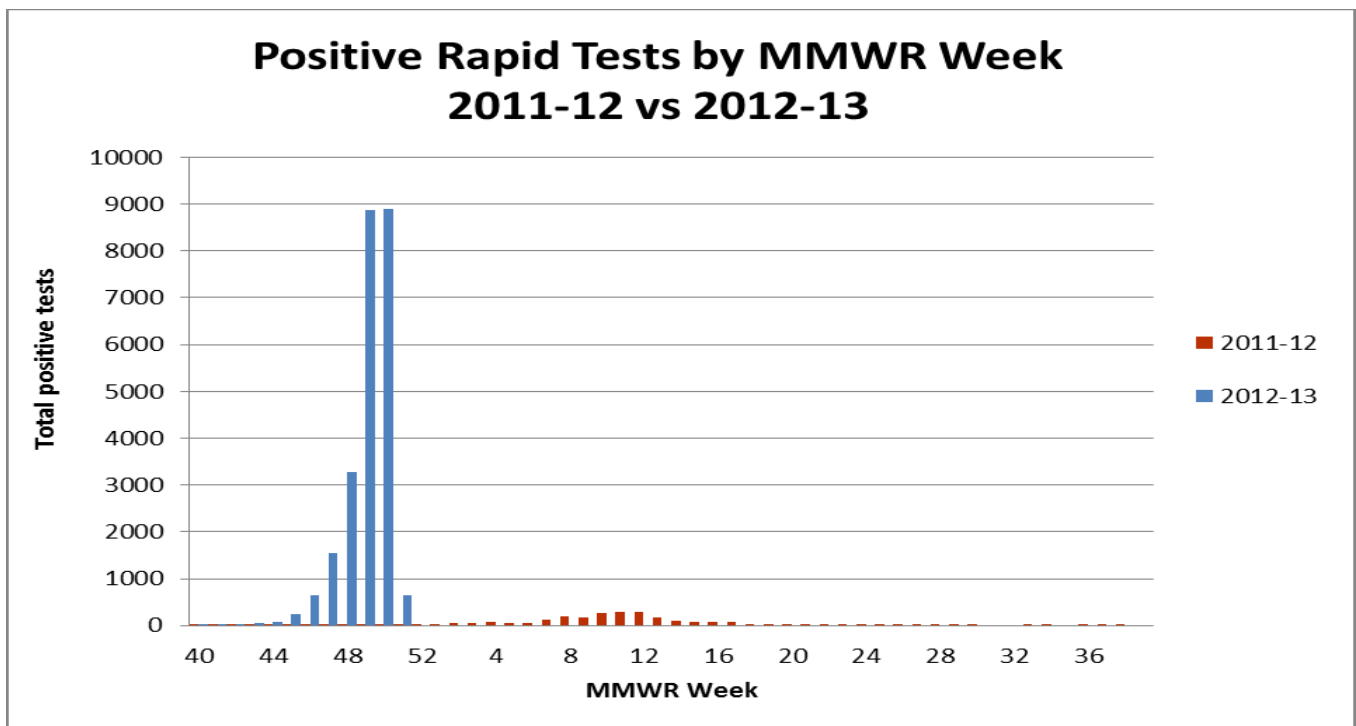


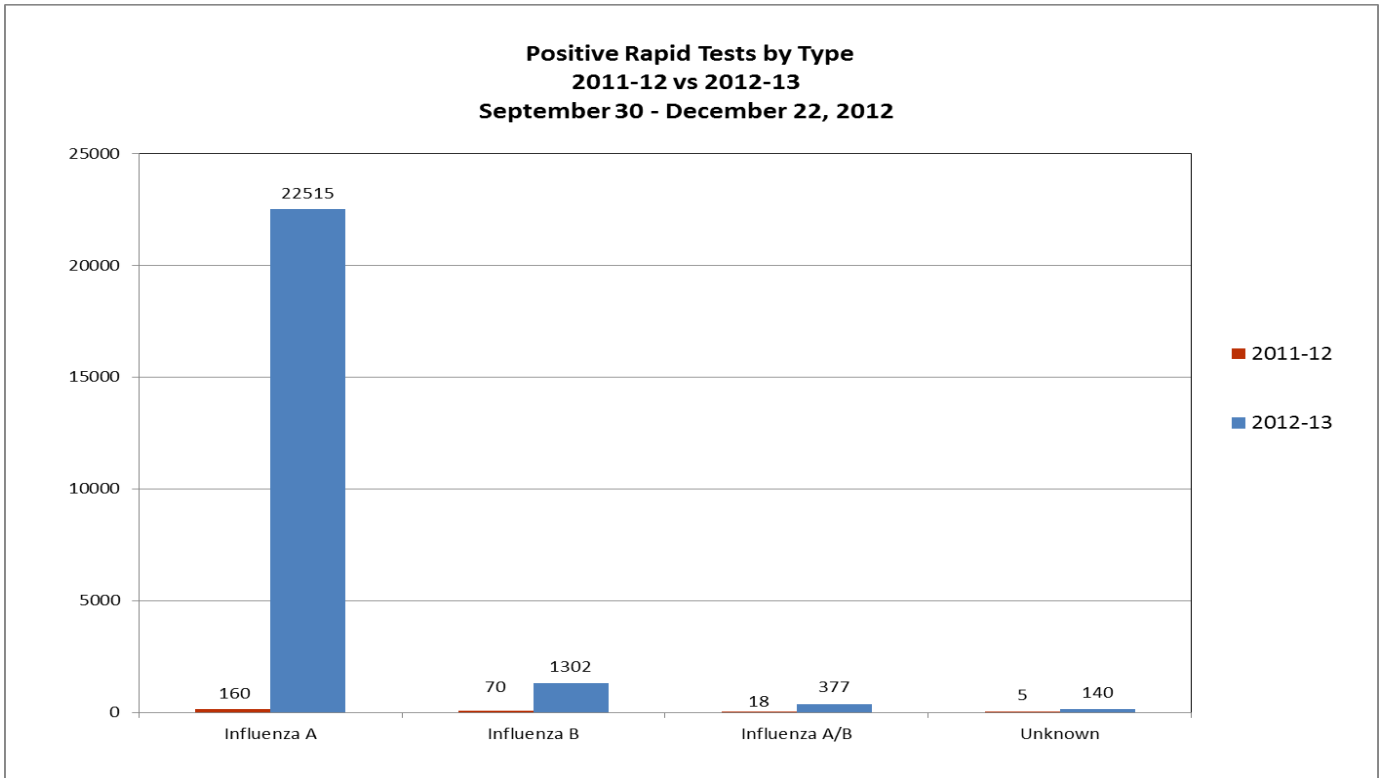
III. Positive Rapid Antigen Tests

During the past MMWR week, 644 positive rapid antigen tests were reported. Of these, 604 were influenza A, 23 were influenza B, 16 were influenza A/B, and 1 was unknown. This compares to 26 this time last year. 24,334 positive rapid tests have been reported this year.

Positive Rapid Flu Tests by County December 16, 2012 – December 22, 2012

County	Positive Tests	County	Positive Tests	County	Positive Tests
Abbeville		Dillon	1	Lexington	
Aiken		Dorchester	2	Marion	
Allendale		Edgefield		Marlboro	
Anderson		Fairfield		McCormick	
Bamberg		Florence	3	Newberry	
Barnwell		Georgetown		Oconee	
Beaufort		Greenville	371	Orangeburg	
Berkeley	10	Greenwood		Pickens	2
Calhoun		Hampton		Richland	12
Charleston	21	Horry		Saluda	
Cherokee	27	Jasper		Spartanburg	174
Chester		Kershaw	1	Sumter	3
Chesterfield		Lancaster		Union	15
Clarendon	2	Laurens		Williamsburg	
Colleton		Lee		York	
Darlington					





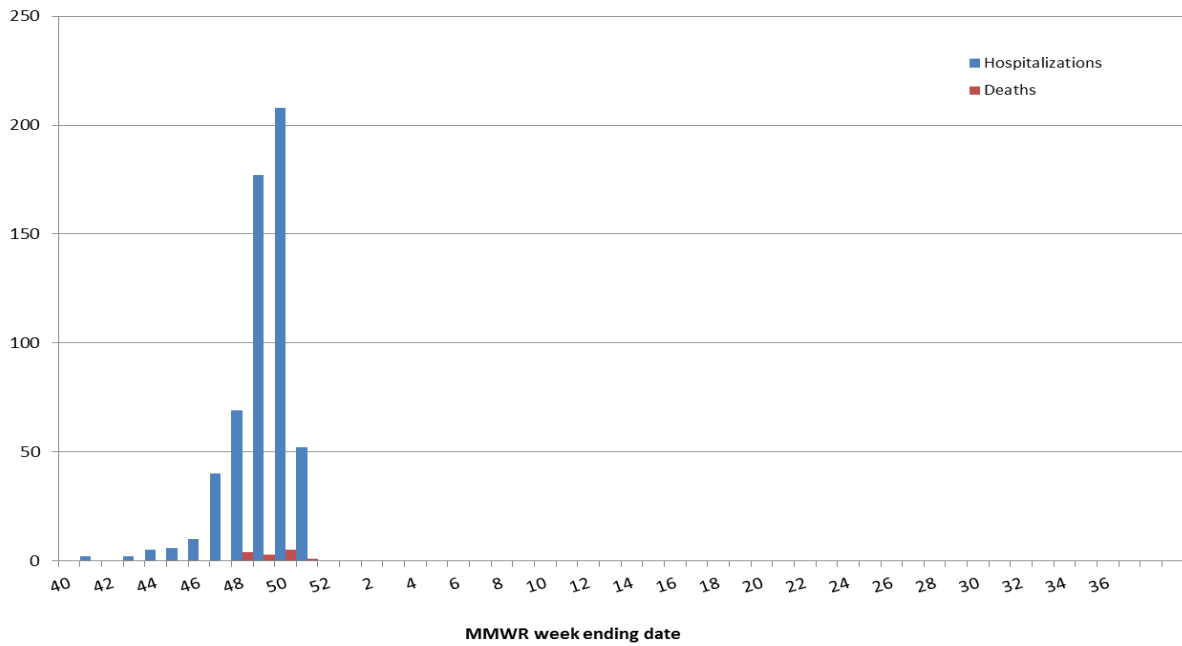
IV. Influenza hospitalizations and deaths

During the past MMWR week, 23 lab confirmed* influenza hospitalizations were reported. Three lab confirmed deaths were reported.

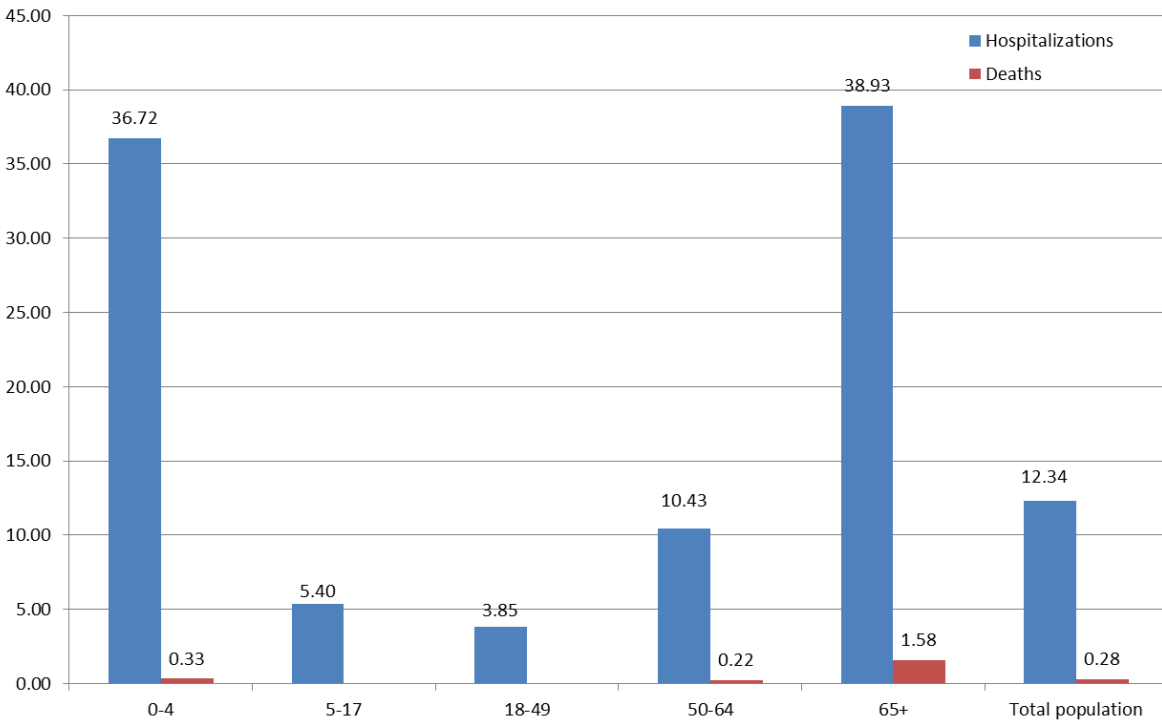
	Total number*	
Number of Reporting Hospitals (Current week)	21	
	<i>Current MMWR Week (12/16-12/22/12)</i>	<i>Cumulative (since 09/30/12)</i>
Hospitalizations	52	571
Deaths	3	13

*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 22, 2012**



**Laboratory Confirmed Influenza Case rate/100,000
Hospitalizations (n=571) and Deaths (n=13) by age group
September 30, 2012 - December 22, 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
Local	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		
Regional	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 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**.

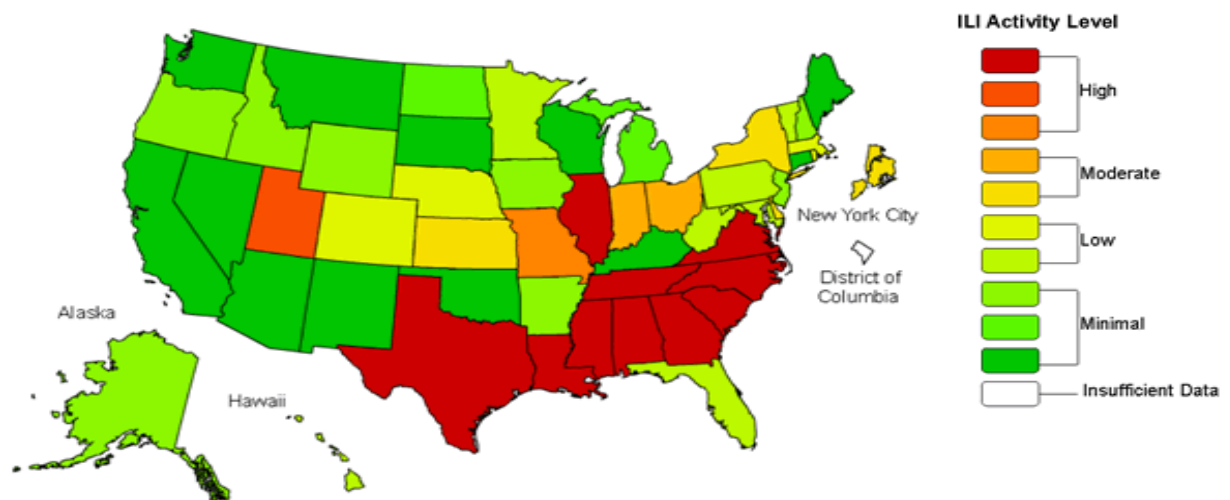
VII. National Surveillance MMWR Week 50 (12/9-12/15)

During week 50 (December 9-15), influenza activity increased in the U.S.

- **Viral Surveillance:** Of 9,562 specimens tested and reported by U.S. World Health Organization (WHO) and National Respiratory and Enteric Virus Surveillance System (NREVSS) collaborating laboratories in week 50, 2,709 (28.3%) 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 were reported. One was associated with an influenza A (H3) virus and one was associated with an influenza A virus for which the subtype was not determined.
- **Outpatient Illness Surveillance:** The proportion of outpatient visits for influenza-like illness (ILI) was 3.2%; above the national baseline of 2.2%. Nine of ten regions reported ILI above region-specific baseline levels. Twelve states experienced high ILI activity, New York City and 5 states experienced moderate ILI activity; 11 states experienced low ILI activity; 22 states experienced minimal ILI activity, and the District of Columbia had insufficient data.
- **Geographic Spread of Influenza:** Twenty-nine states reported widespread geographic influenza activity; 12 states reported regional activity; the District of Columbia and 5 states reported local activity; 3 states reported sporadic activity; Guam reported no influenza activity, and Puerto Rico, the U.S. Virgin Islands, and 1 state 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 50 ending Dec 15, 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.