



Flu Watch 2010-11 Season

South Carolina Department of Health and Environmental Control
 Division of Acute Disease Epidemiology
 Influenza Surveillance Weekly Report

<http://www.scdhec.gov/health/disease/acute/flu.htm>

Week Ending April 2, 2011 (MMWR Week 13)

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

Highlights:

Influenza Activity Level: Local

Note: Activity level definitions are found on page 12

ILI Activity Status (South Carolina baseline is 2.05%*): Below baseline in the Upstate (.15%) and Midlands (.33%) and above baseline along the Coast (2.35%). The state ILI percentage was .86%. These data reflect reports from 13 (35.1%) providers.

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

SC Viral Isolate and RT-PCR Activity: One positive specimen was reported by the Bureau of Labs (BOL). Three positive specimens were reported by outside labs. Since October 3, 2010, 615 positive specimens have been reported.

Positive Rapid Flu Test Activity: There were 142 positive rapid tests reported.

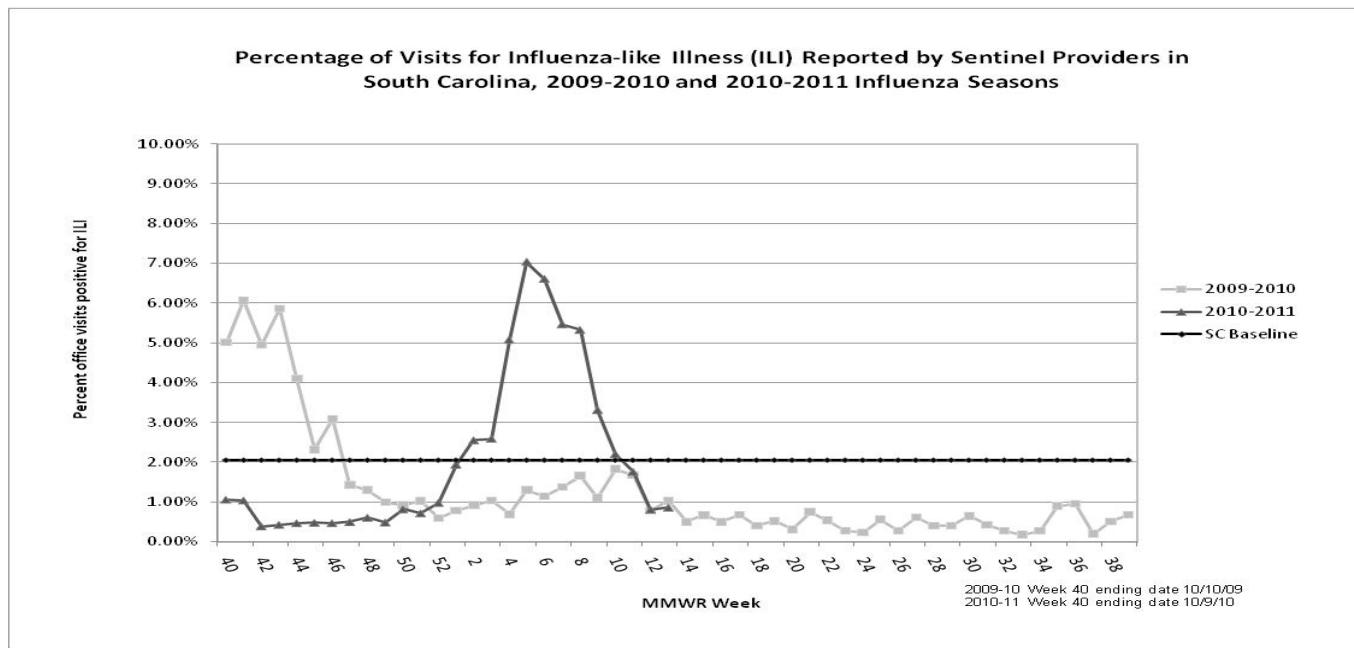
Hospitalizations: Seven lab confirmed hospitalizations were reported. Lab confirmation includes culture, PCR, DFA, IFA, and rapid tests. There have been 985 reported this season.

Deaths: No lab confirmed deaths were reported. Lab confirmation includes culture, PCR, DFA, IFA, rapid tests, and autopsy results consistent with influenza. Twenty have been reported this season.

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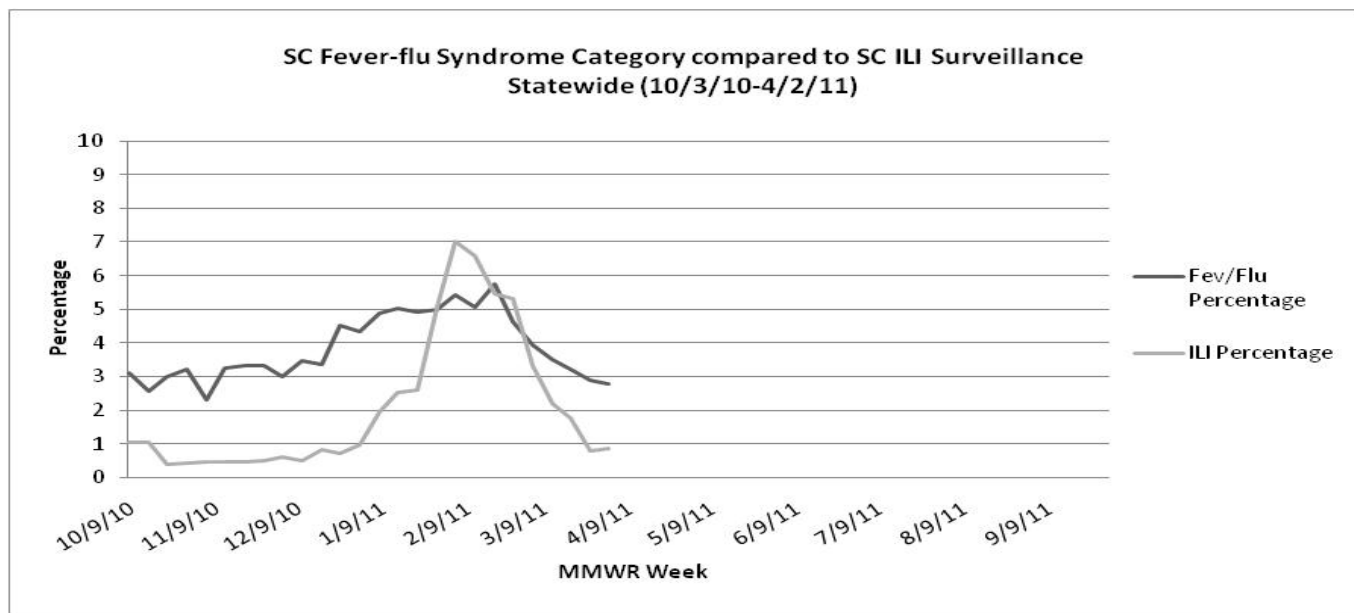
I. ILINet Influenza-Like Illness Surveillance

During MMWR week 13 (3/27-4/2), .86% of patient visits to SC ILINet providers were due to ILI. This is below the state baseline (2.05%). This ILI percentage compares to 1.03% this time last year. Reports were received from providers in 12 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.

The statewide percentage of ER visits with fever-flu syndrome (only includes hospitals participating in SC syndromic surveillance) was 2.77%.



Reported Influenza-Like Illness by Sentinel Providers
March 27, 2011-April 2, 2011

County	ILI %	County	ILI %
Abbeville	---	Greenwood	NR
Aiken	1.12%	Hampton	NR
Allendale	---	Horry	NR
Anderson	NR	Jasper	NR
Bamberg	---	Kershaw	NR
Barnwell	---	Lancaster	---
Beaufort	NR	Laurens	NR
Berkeley	NR	Lee	---
Calhoun	---	Lexington	NR
Charleston	1.87%	Marion	---
Cherokee	---	Marlboro	---
Chester	---	McCormick	0%
Chesterfield	---	Newberry	---
Clarendon	---	Oconee	---
Colleton	---	Orangeburg	---
Darlington	---	Pickens	NR
Dillon	NR	Richland	.15%
Dorchester	3.24%	Saluda	0%
Edgefield	---	Spartanburg	0%
Fairfield	.48%	Sumter	NR
Florence	0%	Union	---
Georgetown	2.47%	Williamsburg	---
Greenville	.22%	York	.99%

NR: No reports received

---: No enrolled providers



Geographic Region	ILI %	# of Reporters
Upstate-Regions 1 -2	.15	4
Midlands-Regions 3-5	.33	6
Coastal-Regions 6-8	2.35	3

*County ILI percentages may be affected by the number of reporting providers within that county.

II. Virologic Surveillance

During MMWR week 13 (3/26-4/2), one positive specimen was reported by the BOL. Three positive specimens were reported by outside labs. So far this season, 615 positive specimens have been reported.

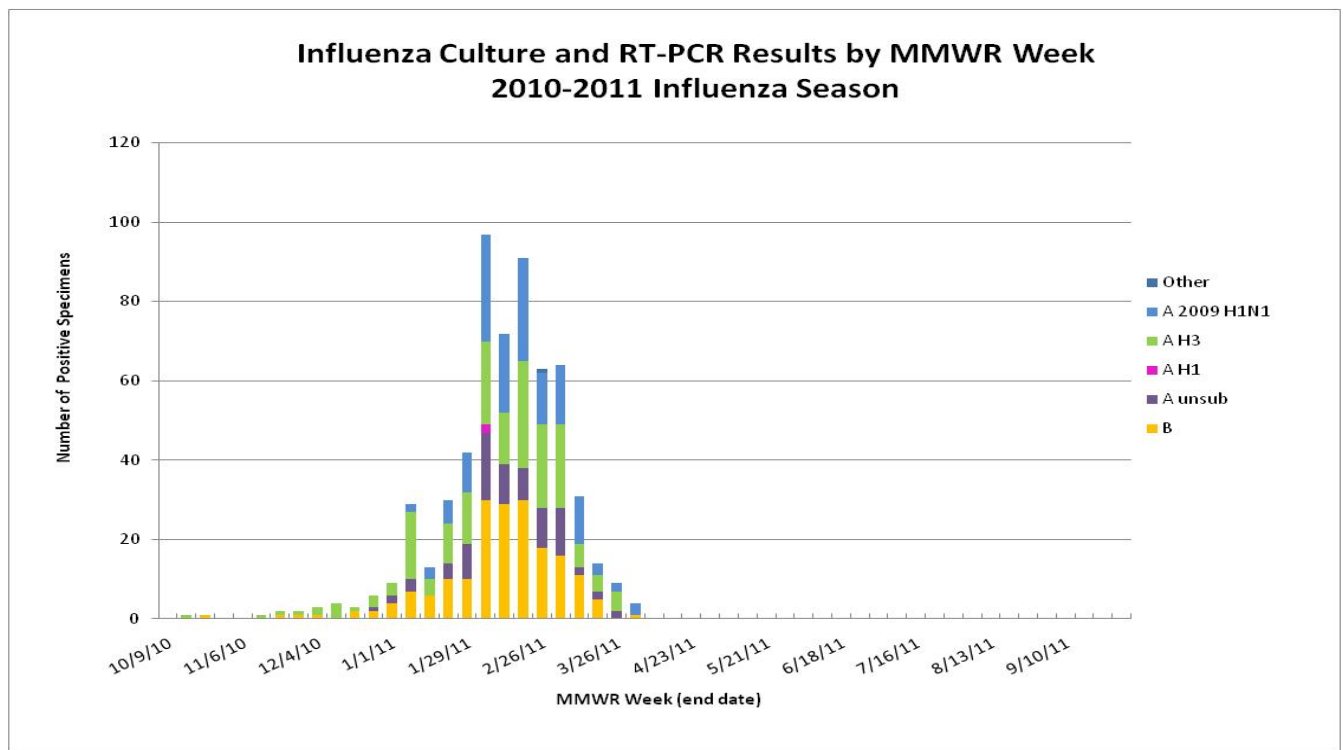
Positive confirmatory influenza test results* Current MMWR Week (3/26-4/2/11)		
	BOL	Other clinical labs
Number of specimens tested	13	-
Number of positive specimens	1	3
Positive specimens by type/subtype		
A (H1)		
A (H3)		
A (unsubtyped)		
A (2009 H1N1)		3
Influenza B	1	
Other		
*Culture and/or RT-PCR		

Positive confirmatory influenza test results* Cumulative (10/3/10-4/2/11)		
	BOL	Other clinical labs
Number of specimens tested	780	-
Number of positive specimens	354 (45.4%)	261
Positive specimens by type/subtype		
Influenza A		
A (H1)	1	1
A (H3)	136	44
A (unsubtyped)	2	79
A (2009 H1N1)	98	48
Influenza B	116	71
Unk		
Other	1	
*Culture and/or RT-PCR		

Positive Cultures and PCRs by County (2010-11)*
October 3, 2010-April 2, 2011

County	Total	County	Total
Abbeville	1	Hampton	3
Aiken	12	Horry	14
Allendale	2	Jasper	
Anderson	7	Kershaw	6
Bamberg	10	Lancaster	7
Barnwell	4	Laurens	13
Beaufort	42	Lee	4
Berkeley	16	Lexington	5
Calhoun		Marion	1
Charleston	76	Marlboro	3
Cherokee	1	McCormick	4
Chester	5	Newberry	1
Chesterfield	6	Oconee	5
Clarendon	7	Orangeburg	3
Colleton	4	Pickens	2
Darlington	19	Richland	43
Dillon	10	Saluda	1
Dorchester	20	Spartanburg	23
Edgefield	1	Sumter	63
Fairfield		Union	
Florence	10	Williamsburg	2
Georgetown	3	York	47
Greenville	12	Unknown	74
Greenwood	17	Other	4

*These data are provisional.



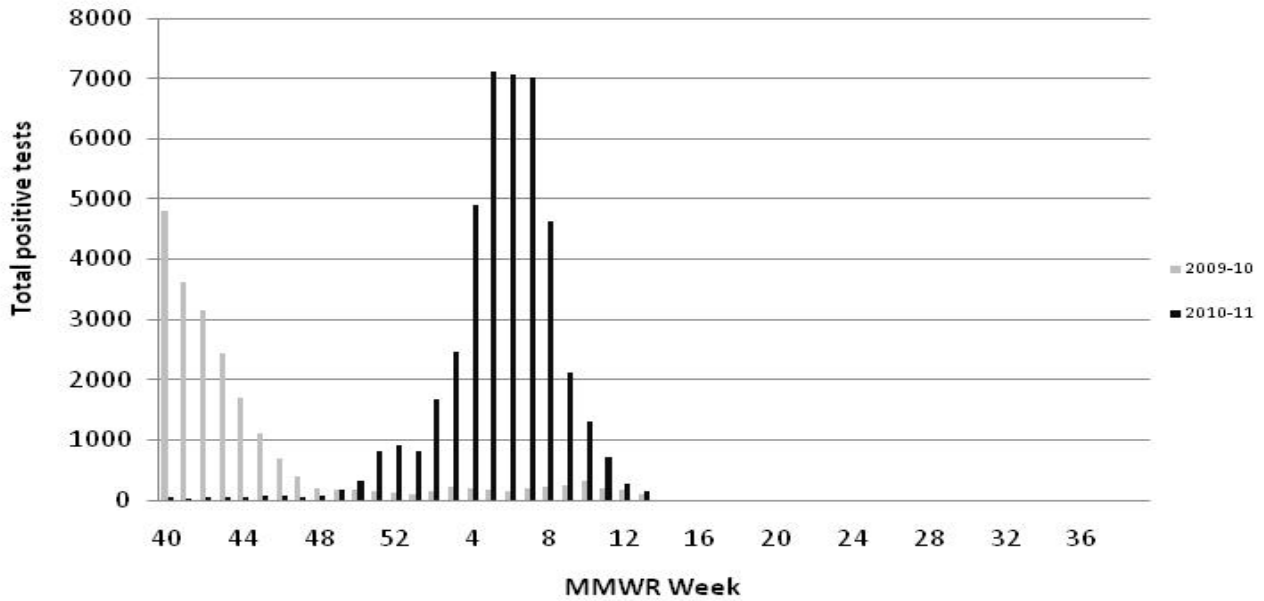
III. Positive Rapid Antigen Tests

During MMWR week 13 (3/27-4/2), 142 positive rapid antigen tests were reported. Of these, 68 were influenza A, 3 were influenza A/B and 60 were influenza B. There were 11 with unknown type. Since the beginning of the season, 42,918 positive rapid tests have been reported. This compares to 21,675 this time last year.

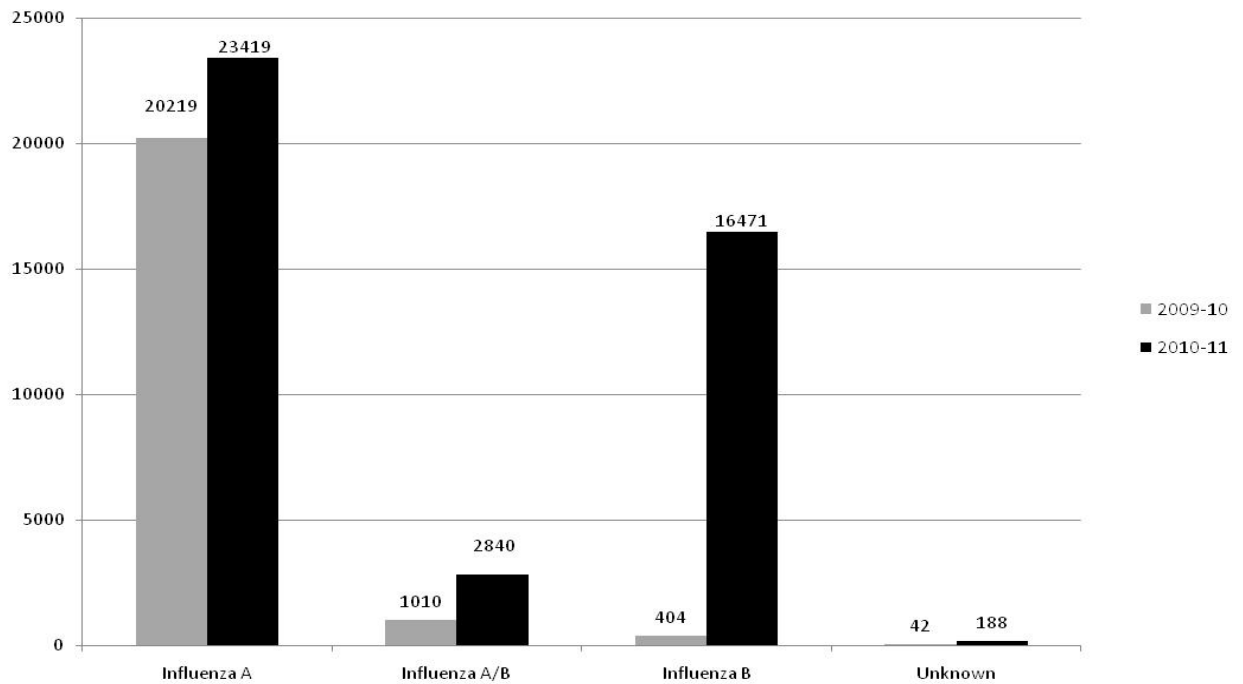
Positive Rapid Flu Tests by County
March 27, 2011 – April 2, 2011

County	Positive Tests	County	Positive Tests
Abbeville	2	Greenwood	1
Aiken	5	Hampton	
Allendale		Horry	14
Anderson		Jasper	
Bamberg		Kershaw	
Barnwell		Lancaster	
Beaufort	2	Laurens	5
Berkeley		Lee	
Calhoun		Lexington	5
Charleston		Marion	
Cherokee		Marlboro	
Chester		McCormick	
Chesterfield		Newberry	
Clarendon		Oconee	
Colleton		Orangeburg	2
Darlington	1	Pickens	2
Dillon		Richland	46
Dorchester		Saluda	
Edgefield		Spartanburg	1
Fairfield		Sumter	29
Florence	7	Union	9
Georgetown	1	Williamsburg	
Greenville	10	York	

Positive Rapid Tests by MMWR Week 2009-10 vs 2010-11



Positive Rapid Tests by Type 2009-10 vs 2010-11 MMWR Week 40 through 13

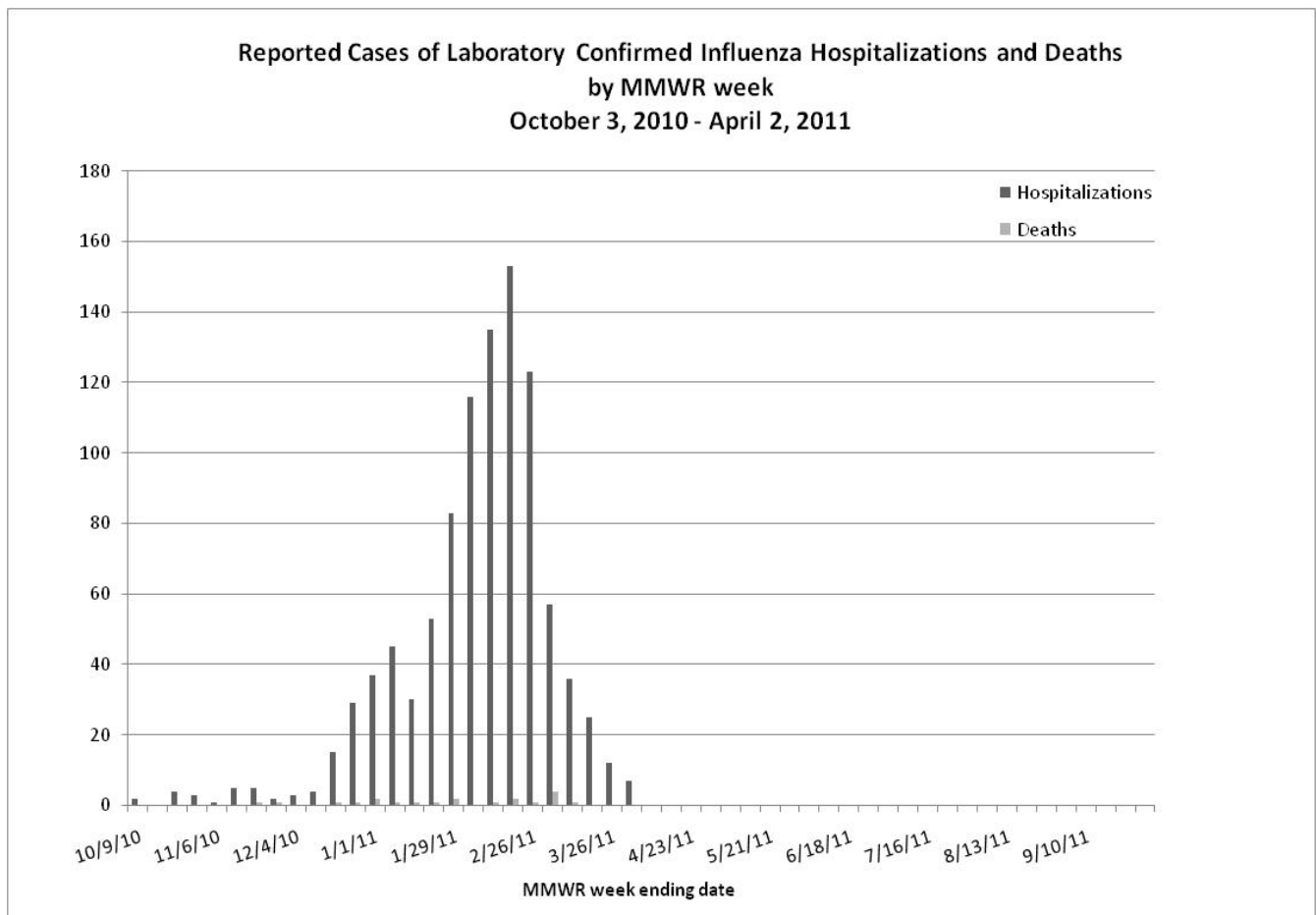


IV. Influenza hospitalizations and deaths

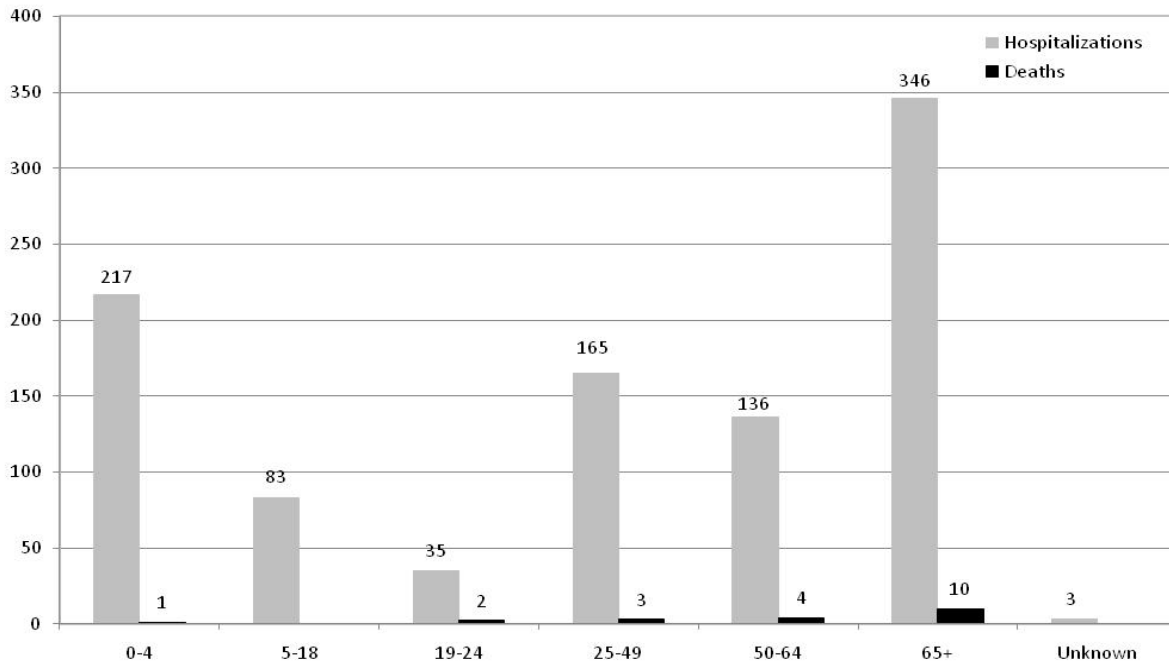
During MMWR week 13 (3/27-4/2), 7 lab confirmed* influenza hospitalizations were reported. No lab confirmed deaths were reported.

	Total number*	
Number of Hospitals Reporting (current week)	38	
	<i>Previous MMWR (3/27-4/2/11)</i>	<i>Cumulative (since 10/3/10)</i>
Hospitalizations	7	985
Deaths	0	20

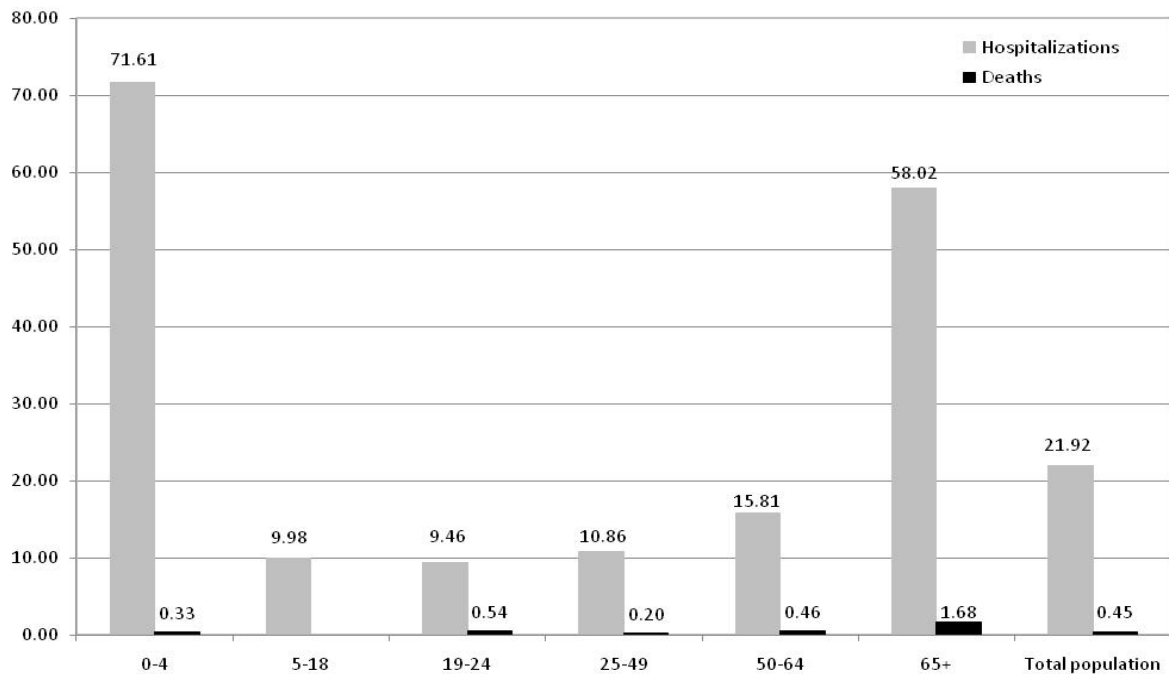
*These data are provisional. Lab confirmation for hospitalizations and deaths includes culture, PCR, DFA, IFA, and rapid test.



**Reported Cases of Laboratory Confirmed Influenza
Hospitalizations (n=985) and Deaths (n=20)
October 3, 2010 - April 2, 2011**

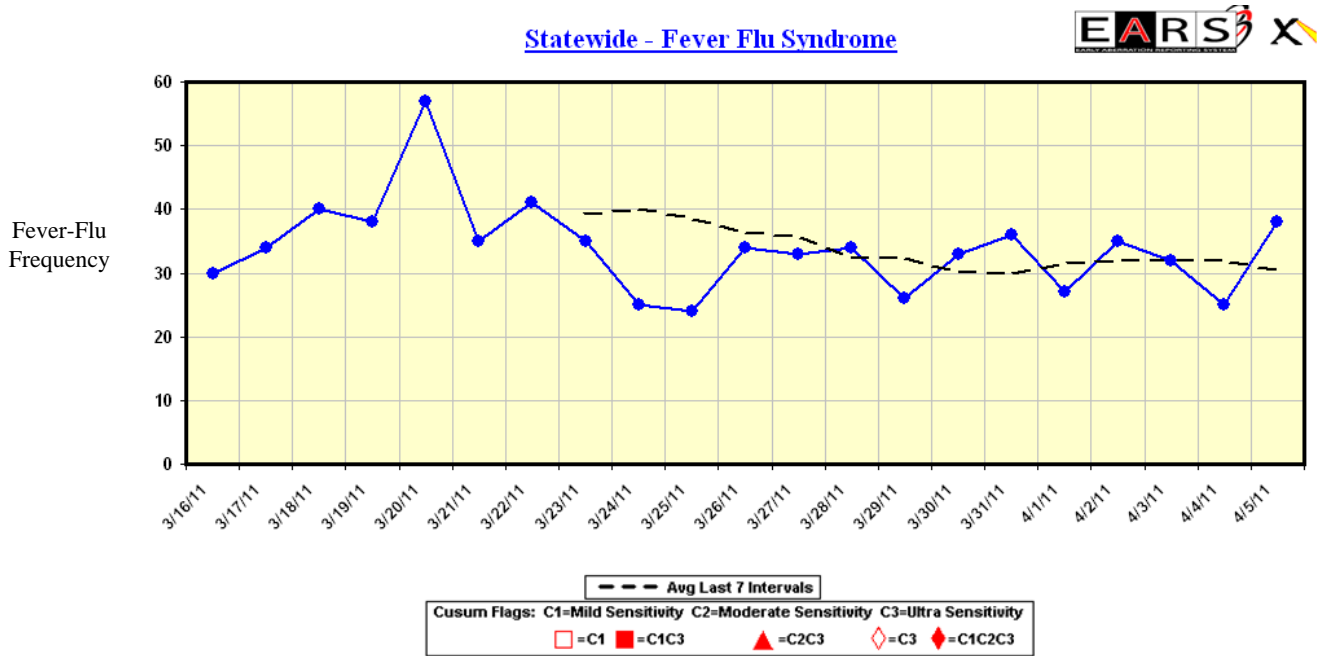


**Laboratory Confirmed Influenza Case rate/100,000
Hospitalizations (n=985) and Deaths (n=20) by age group
October 3, 2010 - April 2, 2011**



*Case rates exclude 3 hospitalizations with unknown age

V. South Carolina Disease Alerting, Reporting & Tracking System (SC-DARTS): Hospital ED Syndromic Surveillance Report



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

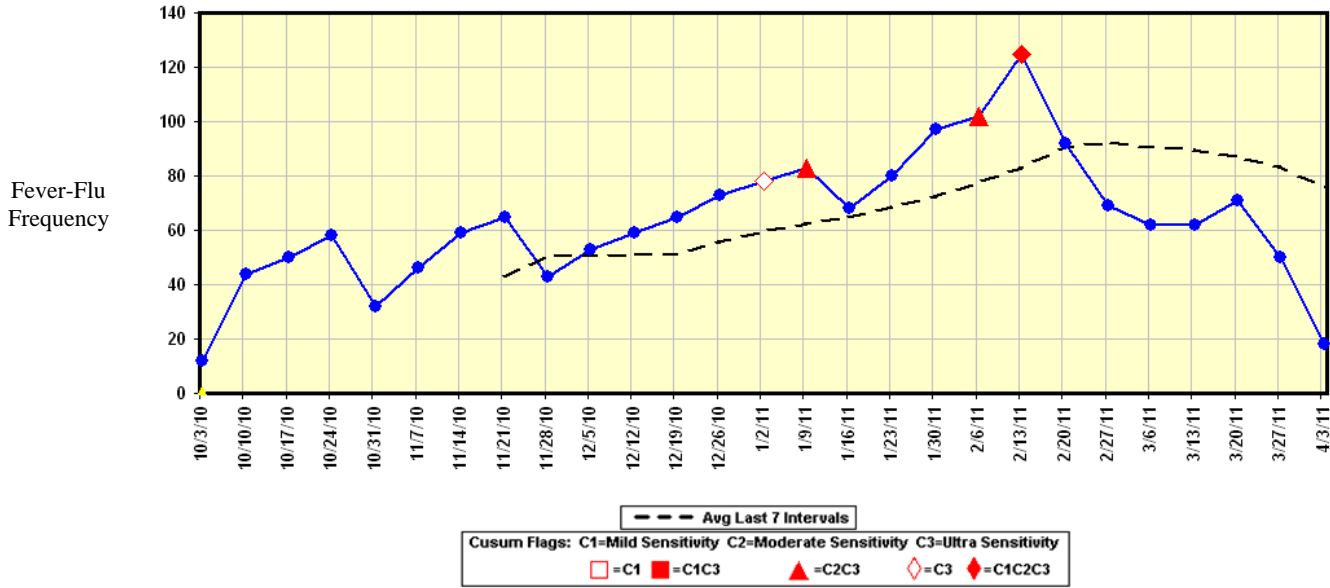
The SC Statewide Fever-Flu Syndrome graph above illustrates the daily counts of hospital emergency department (ED) visits with an Influenza-like Illness (ILI) for the past 21 days. A total of 18 hospital facilities are reporting to the SC-DARTS system. These 16 include: AnMed Health (Region 1); Self Regional (Region 1); Oconee Medical Center (Region 1); Palmetto Health Alliance (Region 2 & 3); Greenville Hospital System (Region 2); Kershaw Health (Region 4); McLeod Health (Region 4); Medical University of South Carolina (Region 7); Roper (Region 7); St. Francis (Region 7), and Hampton Regional (Region 8).

Statewide CUSUM Flag Alerts Description:

No flags for this past week.

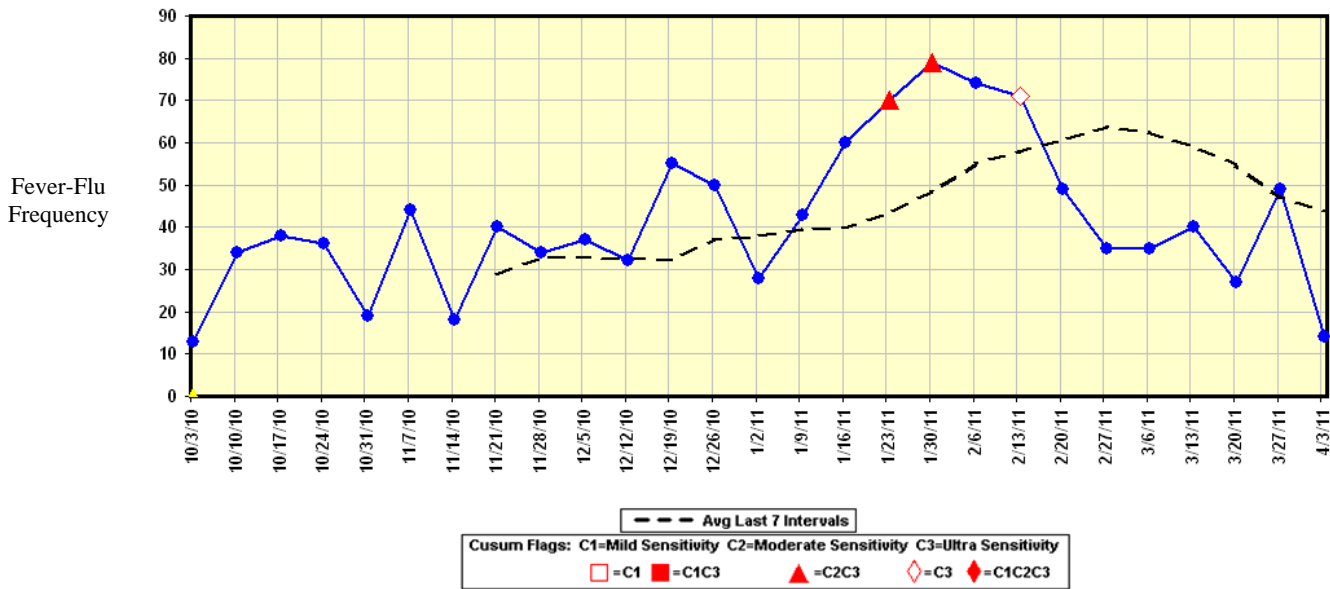
Below are the fever-flu syndrome graphs by Region for the past 180 days (weekly interval).

Region 1 - Fever Flu Syndrome



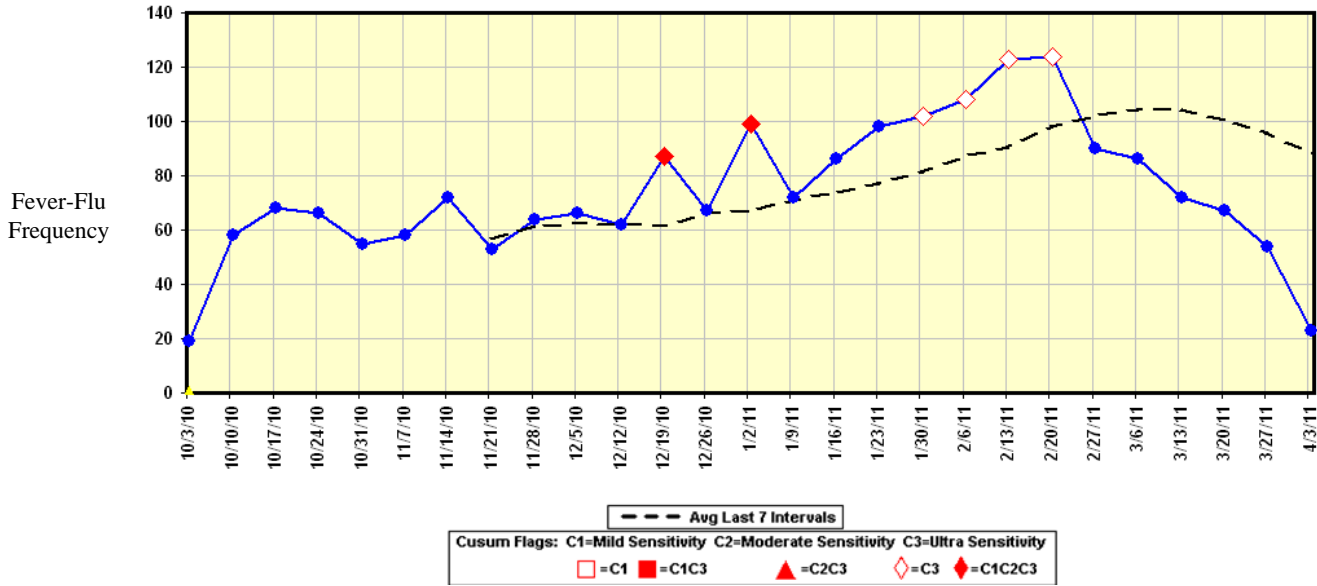
Region 1 Hospitals (# of Facilities): AnMed Health (1); Self-Regional (1); Oconee Medical Center (1);

Region 2 - Fever Flu Syndrome



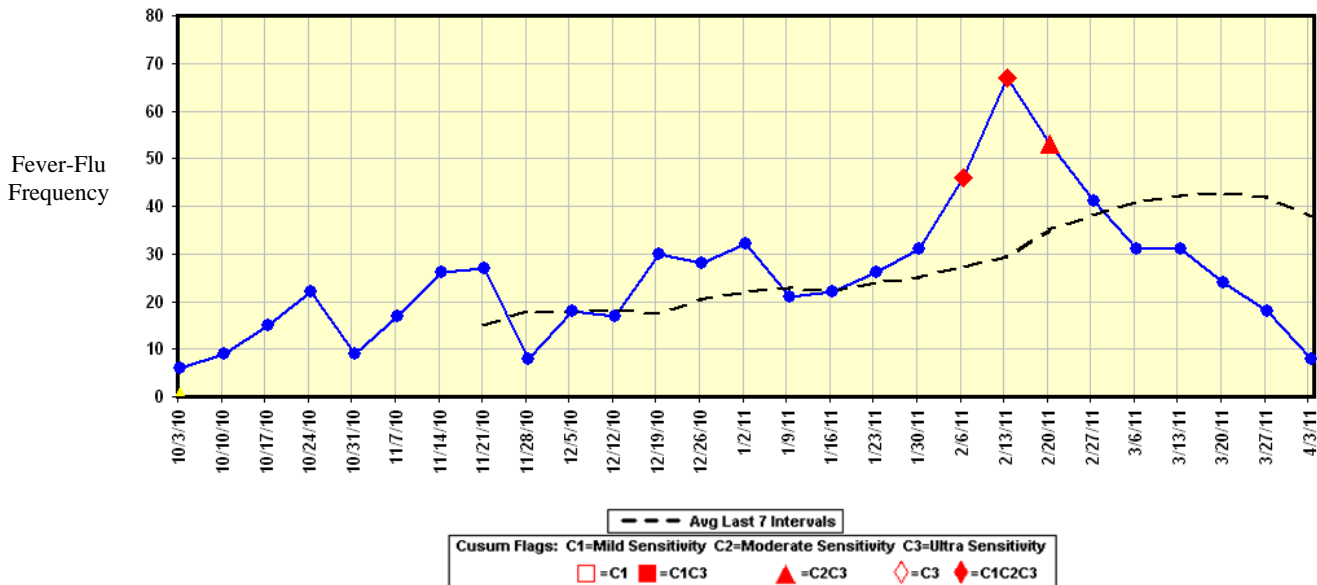
Region 2 Hospitals (# of Facilities): Greenville Hospital System (4); Palmetto Health Easley (1)

Region 3 - Fever Flu Syndrome



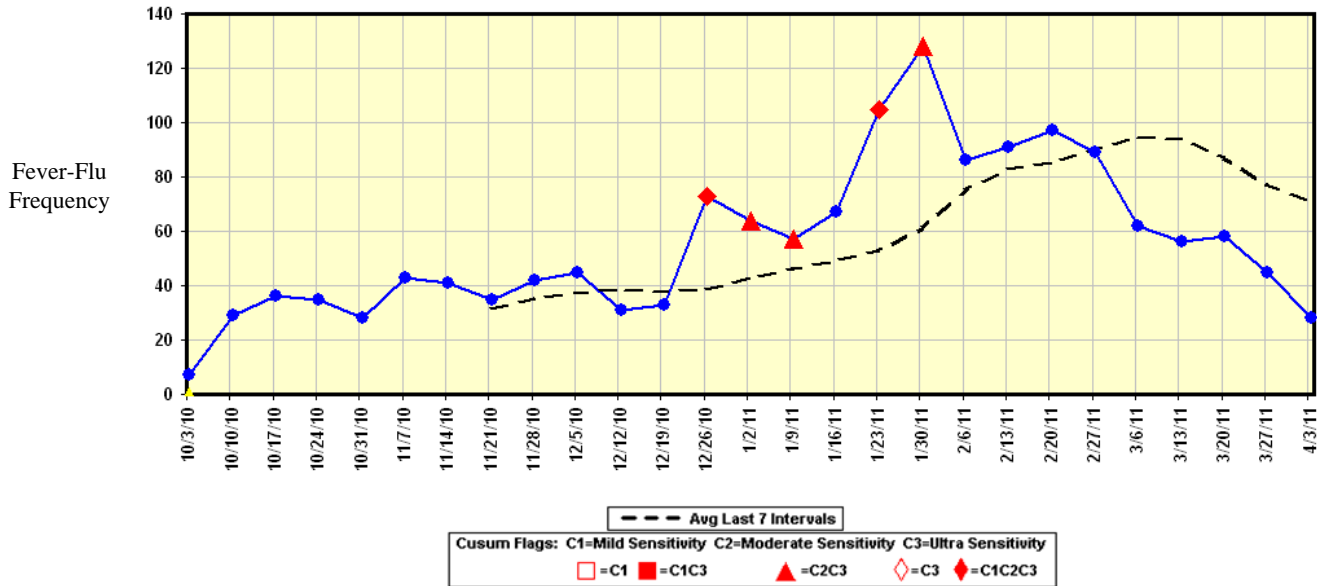
Region 3 Hospitals (# of Facilities): Palmetto Health Baptist (1), Palmetto Health Richland (1)

Region 4 - Fever Flu Syndrome



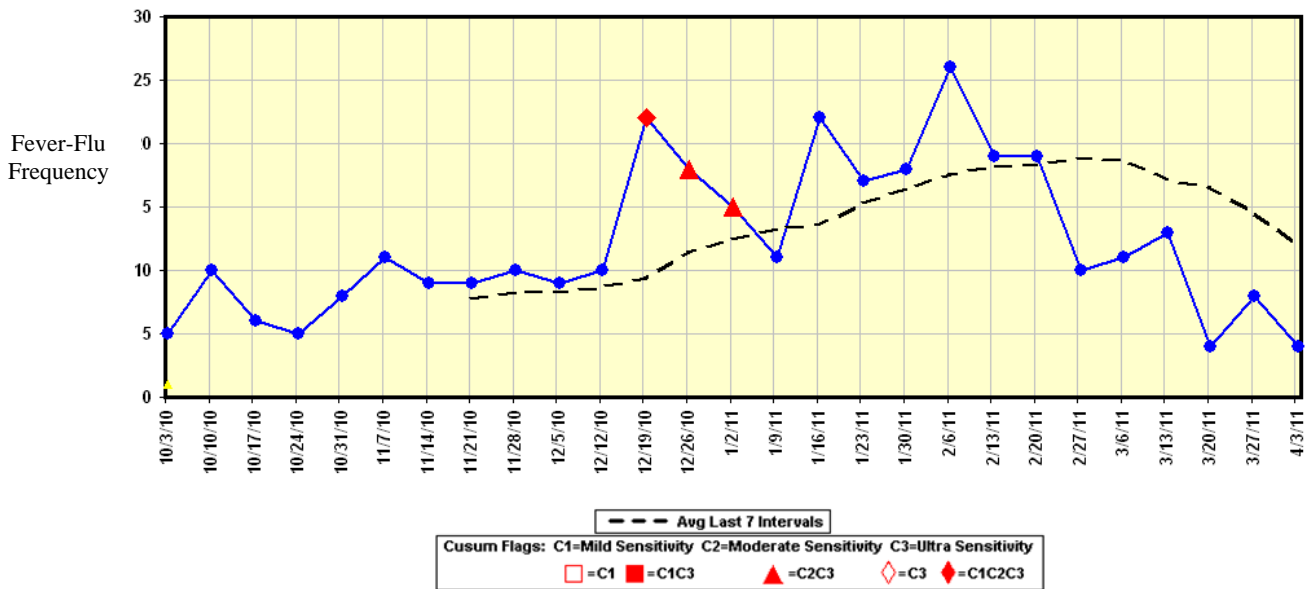
Region 4 Hospitals (# of Facilities): Kershaw Health (1); McLeod Health (1)

Region 7 - Fever Flu Syndrome



Region 7 Hospitals (# of Facilities): Medical University of South Carolina (1), Roper (1), St. Francis (1)

Region 8 - Fever Flu Syndrome



Region 8 Hospitals (# of Facilities): Hampton Regional (1)

VI. National influenza update (MMWR Week 12: 3/20-3/26)

During week 12 **March 20-26, 2011**, influenza activity in the United States decreased.

- o 737 (13.9%) specimens tested by WHO and NREVSS labs were positive for influenza.
- o The proportion of deaths attributed to pneumonia and influenza (P&I) has been at or above the epidemic threshold for the ninth consecutive week.
- o Twelve influenza-associated pediatric deaths were reported, bringing the season total to 89. Four of these deaths were associated with influenza B viruses; four were associated with 2009 influenza A (H1N1) viruses; one was associated with influenza A (H3N2) virus, and three were associated with an influenza A virus for which the subtype was not determined.
- o The proportion of outpatient visits for influenza-like illness (ILI) was 2.0%, below the national baseline of 2.5%. Two of the 10 regions (Regions 2 and 10) reported ILI at or above region-specific baseline levels. One state experienced high ILI activity; three states experienced low ILI activity; 46 states and New York City experienced minimal ILI activity, and the District of Columbia had insufficient data.
- o The geographic spread of influenza in 10 states was reported as widespread; 21 states reported regional influenza activity; the District of Columbia and 12 states reported local influenza activity, and Guam, Puerto Rico, the U.S. Virgin Islands and six states reported sporadic influenza activity.

For more information, please visit <http://www.cdc.gov/flu/weekly/>.

VII. South Carolina Influenza Surveillance Components

What does influenza surveillance in South Carolina consist of?

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.

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 $\geq 100^{\circ}\text{F}$) 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.

For additional information about ILINet or to become an ILINet provider, contact the Acute Disease Epidemiology influenza surveillance coordinator at **springcb@dhec.sc.gov**.

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: Himel Dhotre at 803-898-1588 or **dhotre@dhec.sc.gov**.

VIII. 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.