



Flu Watch

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

Week Ending May 12, 2012 (MMWR Week 19)

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

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MMWR Week 19 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%), the Midlands (.06%) and along the Coast (1.36%). The state ILI percentage was .14%. These data reflect reports from 13(40.6%) providers.

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

SC Viral Isolate and RT-PCR Activity: Two positive specimens were reported. One hundred and sixteen positive specimens have been reported this season.

Positive Rapid Flu Test Activity: Twenty-three positive rapid tests were reported. So far this season, 2211 have been reported.

Hospitalizations*: Two lab confirmed hospitalizations were reported. One hundred and three lab confirmed hospitalizations have been reported this season.

Deaths*: No lab confirmed deaths were reported. One lab confirmed death has been reported this season.

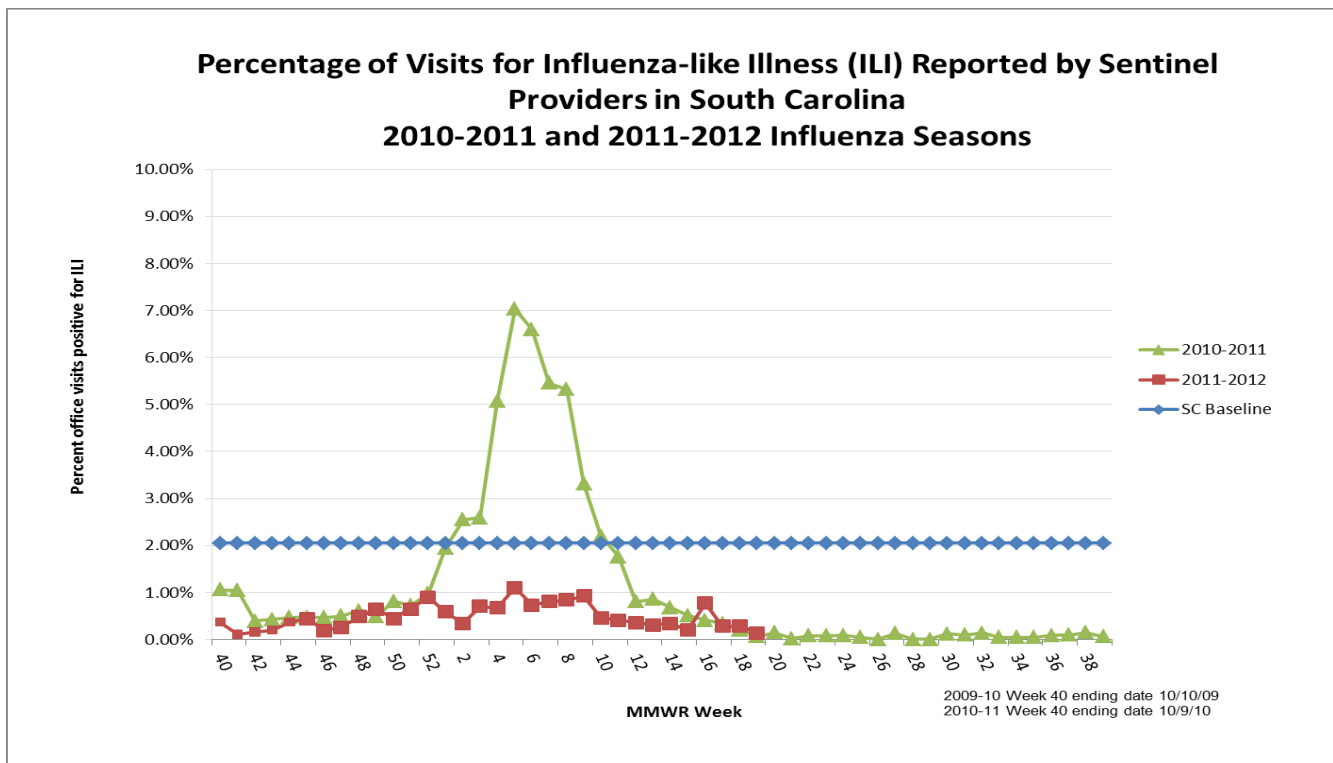
**Lab confirmation includes positive rapid tests, culture, PCR, DFA, or IFA.*

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 | .14 | .29 | ▼.15 |
| Number of positive confirmatory tests | 2 | 2 | 0 |
| Number of lab confirmed flu hospitalizations | 2 | 2 | 0 |
| Number of lab confirmed flu deaths | 0 | 0 | 0 |

I. ILINet Influenza-Like Illness Surveillance

During MMWR week 19, .14% of patient visits to SC ILINet providers were due to ILI. This is below the state baseline (2.05%). This ILI percentage compares to .06% this time last year. Reports were received from providers in 11 counties, representing 6 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
May 6, 2012 – May 12, 2012**

| County | ILI % | County | ILI % |
|--------------|-------|--------------|-------|
| Abbeville | --- | Greenwood | NR |
| Aiken | 0% | Hampton | NR |
| Allendale | --- | Horry | NR |
| Anderson | 0% | Jasper | NR |
| Bamberg | --- | Kershaw | NR |
| Barnwell | --- | Lancaster | --- |
| Beaufort | NR | Laurens | NR |
| Berkeley | NR | Lee | --- |
| Calhoun | --- | Lexington | NR |
| Charleston | NR | Marion | --- |
| Cherokee | --- | Marlboro | --- |
| Chester | --- | McCormick | NR |
| Chesterfield | --- | Newberry | --- |
| Clarendon | --- | Oconee | --- |
| Colleton | --- | Orangeburg | --- |
| Darlington | --- | Pickens | 0% |
| Dillon | NR | Richland | 0% |
| Dorchester | NR | Saluda | 0% |
| Edgefield | --- | Spartanburg | 0% |
| Fairfield | 0% | Sumter | NR |
| Florence | .12% | Union | --- |
| Georgetown | 1.36% | Williamsburg | --- |
| Greenville | 0% | York | 0% |

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



| Geographic Region | ILI % | # of Reporters |
|----------------------|-------|----------------|
| Upstate-Regions 1 -2 | 0 | 6 |
| Midlands-Regions 3-5 | .06 | 6 |
| Coastal-Regions 6-8 | 1.36 | 1 |

*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 (5/6/12 – 5/12/12)

| | BOL | Other clinical labs |
|------------------------------|-----|---------------------|
| Number of specimens tested | 6 | NA |
| Number of positive specimens | | |
| Influenza A unsubtype | | |
| Influenza A H1N1 | | |
| Influenza A H3N2 | 2 | |
| Influenza B | | |
| Other | | |

*Includes culture, RT-PCR, DFA, and IFA

During MMWR week 19, 2 positive specimens were reported.

Positive confirmatory influenza test results* Cumulative (10/2/11 – 5/12/12)

| | BOL | Other clinical labs |
|------------------------------|-----|---------------------|
| Number of specimens tested | 165 | NA |
| Number of positive specimens | 81 | 35 |
| Influenza A unsubtype | | 15 |
| Influenza A H1N1 | 38 | 11 |
| Influenza A H3N2 | 35 | 5 |
| Influenza B | 8 | 2 |
| Other [†] | | 2 |

*Includes culture, RT-PCR, DFA, and IFA

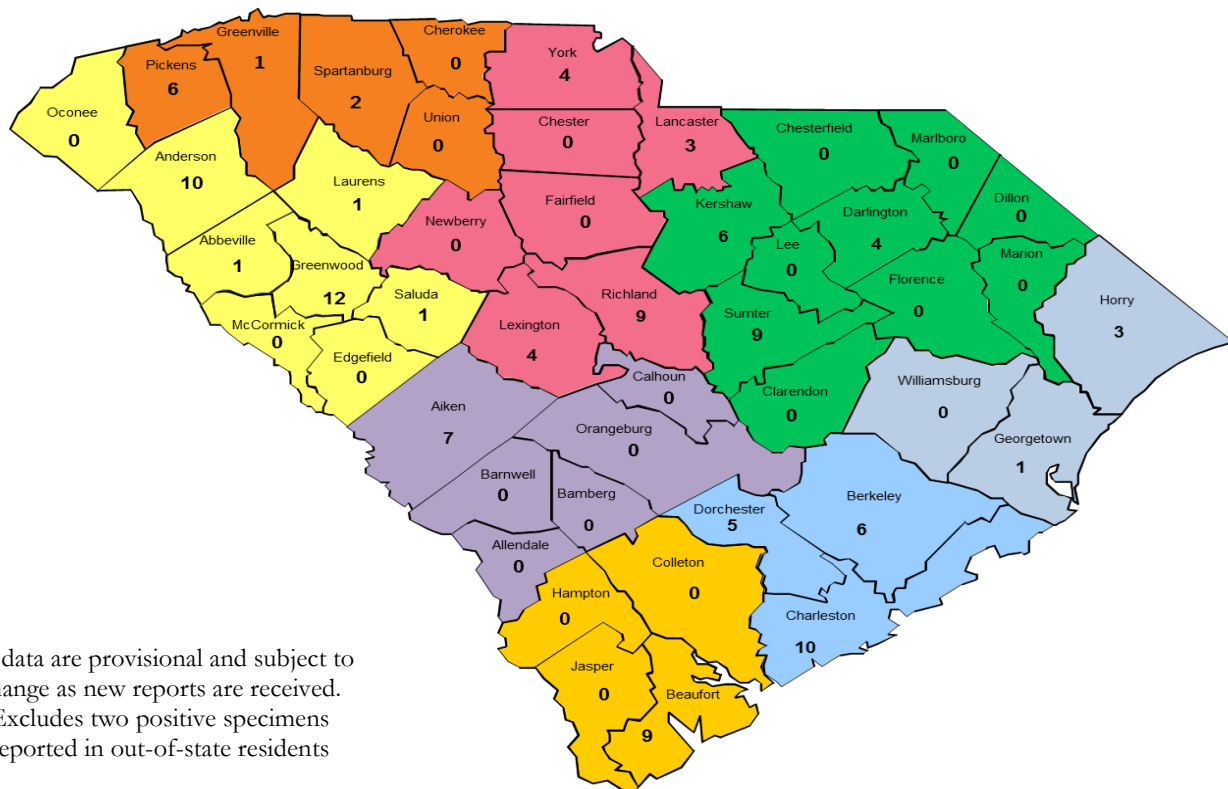
[†]Includes one unknown type and one influenza A and B coinfection

**Positive Confirmatory Tests by County
Current Week 5/6/12 – 5/12/12**

| 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 | 1 | Greenville | | Orangeburg | |
| Berkeley | | Greenwood | 1 | Pickens | |
| Calhoun | | Hampton | | Richland | |
| Charleston | | Horry | | Saluda | |
| Cherokee | | Jasper | | Spartanburg | |
| Chester | | Kershaw | | Sumter | |
| Chesterfield | | Lancaster | | Union | |
| Clarendon | | Laurens | | Williamsburg | |
| Colleton | | Lee | | York | |
| Darlington | | | | | |

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

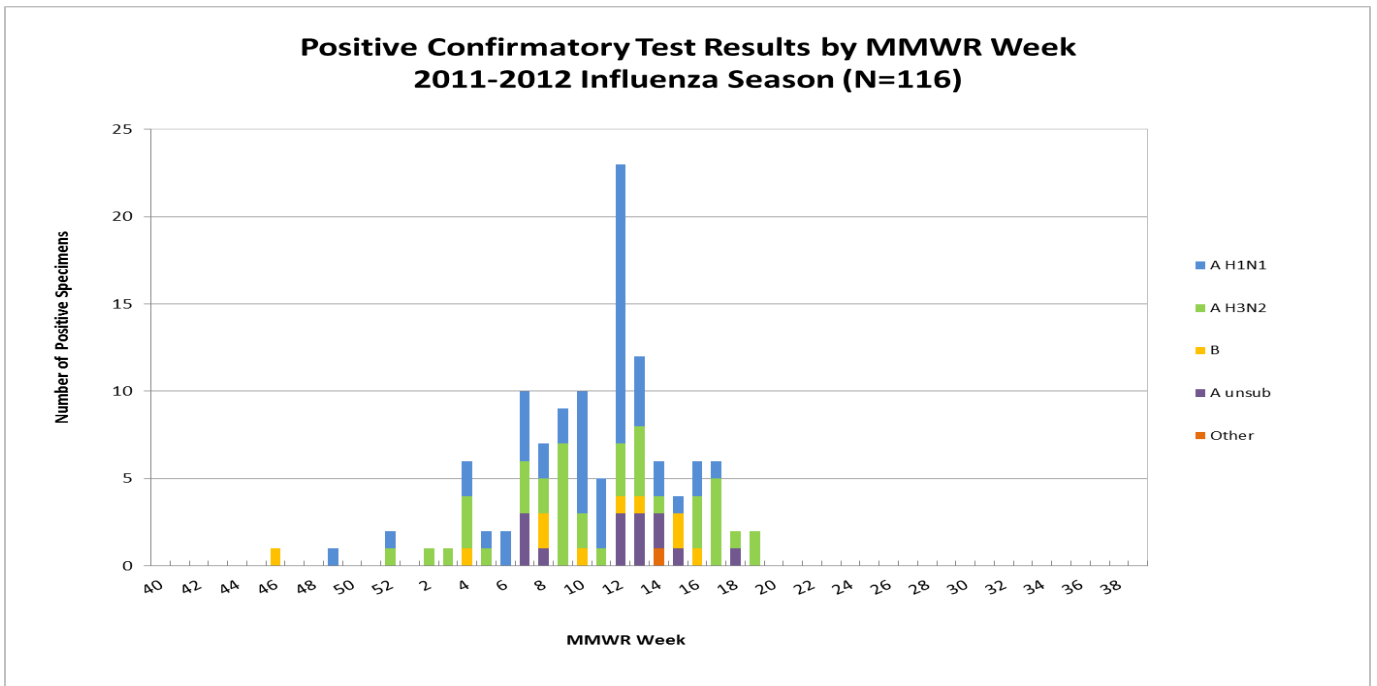
**Map of Positive Confirmatory Tests by County*
Cumulative 10/2/11 -5/12/12**



All data are provisional and subject to change as new reports are received.
Excludes two positive specimens reported in out-of-state residents

**Positive Confirmatory Tests by County and Type
Cumulative 10/2/11 – 5/12/12**

| | A H1N1 | A H3N2 | B | A Unsub | Unk/Other | | A H1N1 | A H3N2 | B | A Unsub | Unk/Other |
|-----------------|-----------|-----------|---|------------|-----------|---------------------|-----------|-----------|---|------------|-----------|
| Region 1 | | | | | | Region 2 | | | | | |
| Abbeville | 1 | | | | | Cherokee | | | | | |
| Anderson | 1 | 7 | | 2 | | Greenville | 1 | | | | |
| Edgefield | | | | | | Pickens | 6 | | | | |
| Greenwood | 10 | 2 | | | | Spartanburg | | | | 2 | |
| Laurens | | 1 | | | | Union | | | | | |
| McCormick | | | | | | Region 4 | | | | | |
| Oconee | | | | | | Chesterfield | | | | | |
| Saluda | 1 | | | | | Clarendon | | | | | |
| Region 3 | | | | | | Darlington | | 1 | | 3 | |
| Chester | | | | | | Dillon | | | | | |
| Fairfield | | | | | | Florence | | | | | |
| Lancaster | 1 | | | 2 | | Kershaw | | 6 | | | |
| Lexington | 2 | 1 | 1 | | | Lee | | | | | |
| Newberry | | | | | | Marion | | | | | |
| Richland | 5 | 3 | 1 | | | Marlboro | | | | | |
| York | 3 | 1 | | | | Sumter | 5 | 1 | 2 | | 1 |
| Region 5 | | | | 2 | | Region 6 | | | | | |
| Aiken | | | | 6 | 1 | Georgetown | 1 | | | | |
| Allendale | | | | | | Horry | 2 | | 1 | | |
| Bamberg | | | | | | Williamsburg | | | | | |
| Barnwell | | | | | | Region 8 | | | | | |
| Calhoun | | | | | | Beaufort | 2 | 5 | 2 | | |
| Orangeburg | | | | | | Colleton | | | | | |
| Region 7 | | | | | | Hampton | | | | | |
| Berkeley | 2 | 4 | | | | Jasper | | | | | |
| Charleston | 2 | 7 | | 1 | | Non-resident | | | | | 2 |
| Dorchester | 3 | | 2 | | | | | | | | |



III. Positive Rapid Antigen Tests

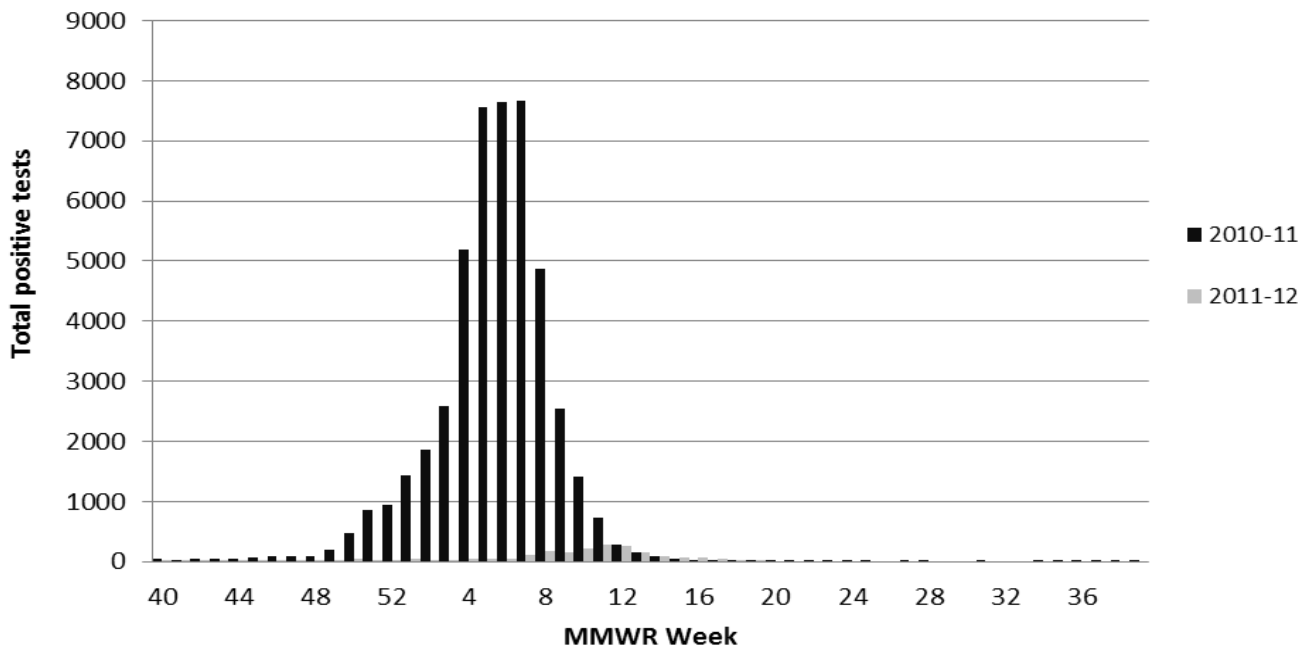
During MMWR week 19, 23 positive rapid antigen tests were reported. Of these, there were 17 influenza A, 4 influenza B, and 2 influenza A/B. During this MMWR week last year, 3 positive rapid tests were reported.

| | 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 (5/6- 5/12/12) | 17 | 4 | 2 | | 23 |
| Cumulative (since 10/2/11) | 1765 | 314 | 119 | 13 | 2211 |

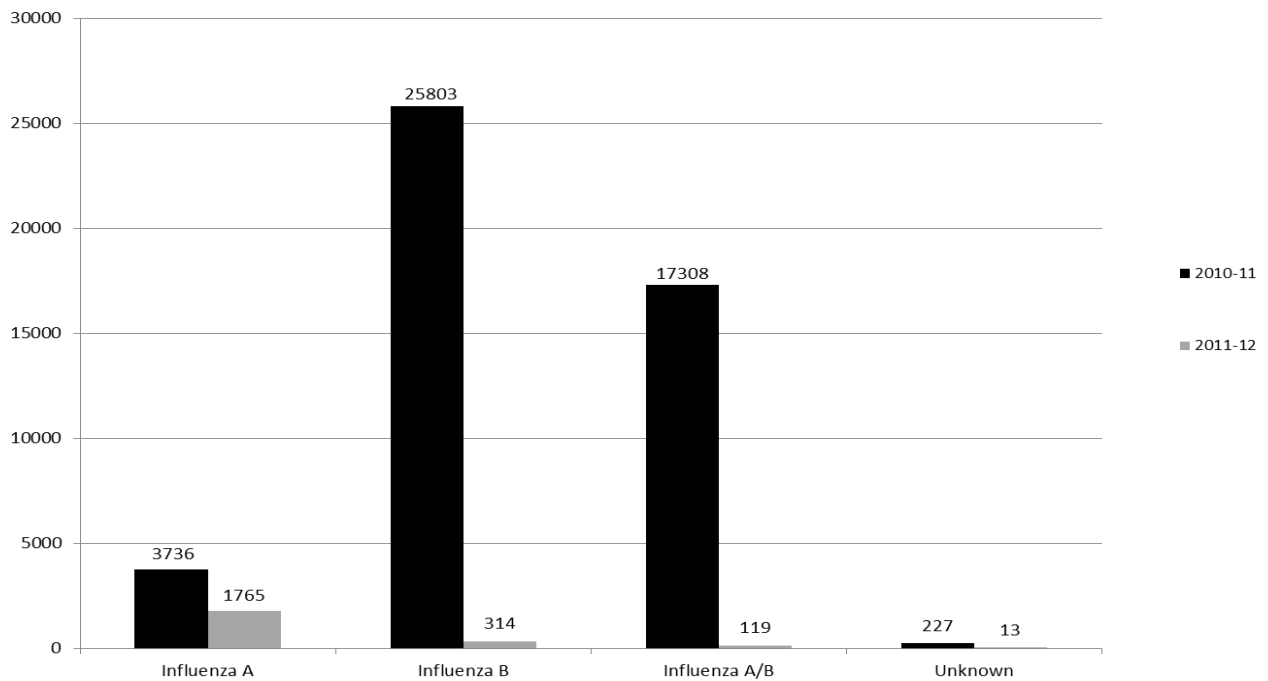
Positive Rapid Flu Tests by County Current Week 5/6/12 – 5/12/12

| County | Positive Tests | County | Positive Tests | County | Positive Tests |
|--------------|----------------|------------|----------------|--------------|----------------|
| Abbeville | | Dillon | | Lexington | |
| Aiken | | Dorchester | 2 | Marion | |
| Allendale | | Edgefield | | Marlboro | |
| Anderson | | Fairfield | | McCormick | |
| Bamberg | | Florence | 2 | Newberry | |
| Barnwell | | Georgetown | | Oconee | |
| Beaufort | 3 | Greenville | 5 | Orangeburg | |
| Berkeley | | Greenwood | | Pickens | |
| Calhoun | | Hampton | | Richland | |
| Charleston | 5 | Horry | 4 | Saluda | |
| Cherokee | | Jasper | | Spartanburg | |
| Chester | | Kershaw | | Sumter | |
| Chesterfield | | Lancaster | | Union | |
| Clarendon | 1 | Laurens | | Williamsburg | |
| Colleton | | Lee | | York | 1 |
| Darlington | | | | | |

Positive Rapid Tests by MMWR Week 2010-11 vs 2011-12



Positive Rapid Tests by Type 2011-12 MMWR Weeks 40-19



**Positive Rapid Tests by County and Type
Cumulative 10/2/11 – 5/12/12**

| | A | B | A/B | Unk | | A | B | A /B | Unk |
|-----------------|-----|----|-----|-----|-----------------|-----|-----|------|-----|
| Region 1 | | | | | Region 2 | | | | |
| Abbeville | 28 | 6 | | | Cherokee | 2 | | | |
| Anderson | 113 | 13 | 5 | | Greenville | 163 | 31 | 4 | 1 |
| Edgefield | | | | | Pickens | 46 | 6 | 1 | |
| Greenwood | 39 | 3 | 6 | | Spartanburg | 142 | 3 | 3 | |
| Laurens | 18 | 3 | 2 | | Union | 16 | | 9 | |
| McCormick | 3 | | | | Region 4 | | | | |
| Oconee | 38 | 7 | 1 | 1 | Chesterfield | 2 | | | |
| Saluda | 1 | 1 | | | Clarendon | 4 | 4 | | |
| Region 3 | | | | | Darlington | 46 | 4 | 1 | 5 |
| Chester | 55 | | | | Dillon | | | | |
| Fairfield | 1 | | | | Florence | 58 | 9 | 14 | |
| Lancaster | 25 | 2 | | | Kershaw | 27 | 1 | 1 | |
| Lexington | 41 | 6 | 7 | | Lee | | | | |
| Newberry | 87 | | | | Marion | 1 | | | |
| Richland | 109 | 31 | 3 | 5 | Marlboro | 1 | 1 | | |
| York | 227 | 18 | 21 | 1 | Sumter | 37 | 2 | | |
| Region 5 | | | | | Region 6 | | | | |
| Aiken | 10 | 1 | | | Georgetown | 73 | 7 | | |
| Allendale | | | | | Horry | 81 | 102 | 15 | |
| Bamberg | | | 1 | | Williamsburg | | 2 | 5 | |
| Barnwell | | | | | Region 8 | | | | |
| Calhoun | | | | | Beaufort | 61 | 10 | 1 | |
| Orangeburg | 5 | | | | Colleton | 18 | 4 | | |
| Region 7 | | | | | Hampton | | | | |
| Berkeley | 14 | 5 | 3 | | Jasper | 5 | 1 | 1 | |
| Charleston | 191 | 20 | 14 | | | | | | |
| Dorchester | 80 | 15 | | | | | | | |

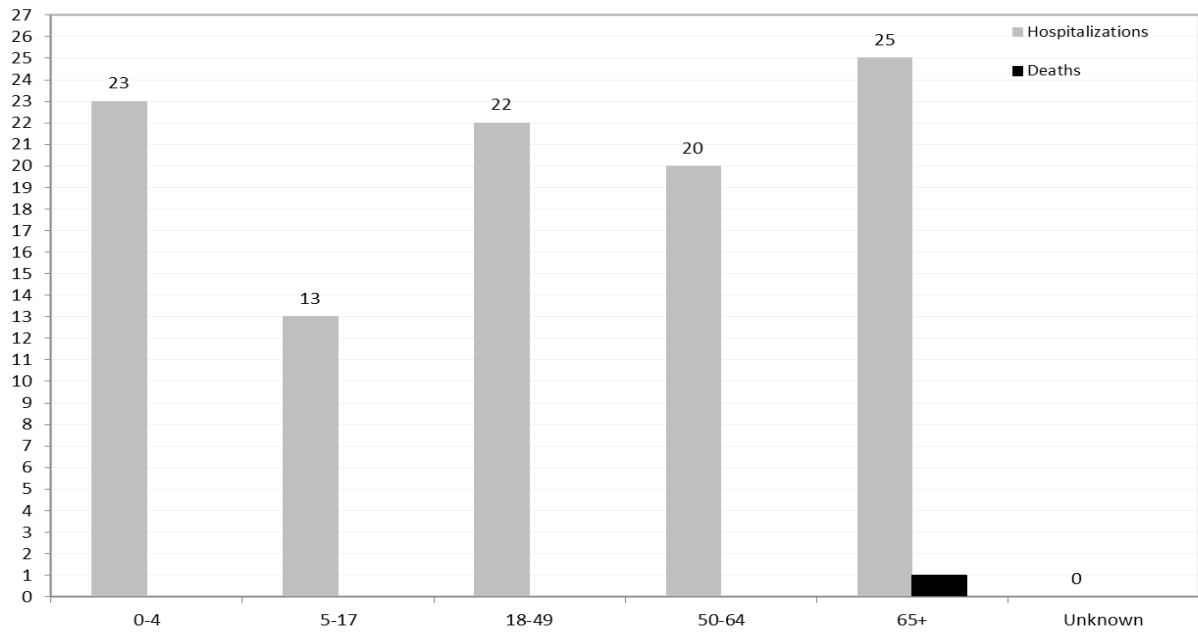
IV. Influenza hospitalizations and deaths

During MMWR week 19 two lab confirmed* influenza hospitalizations were reported. No lab confirmed deaths were reported.

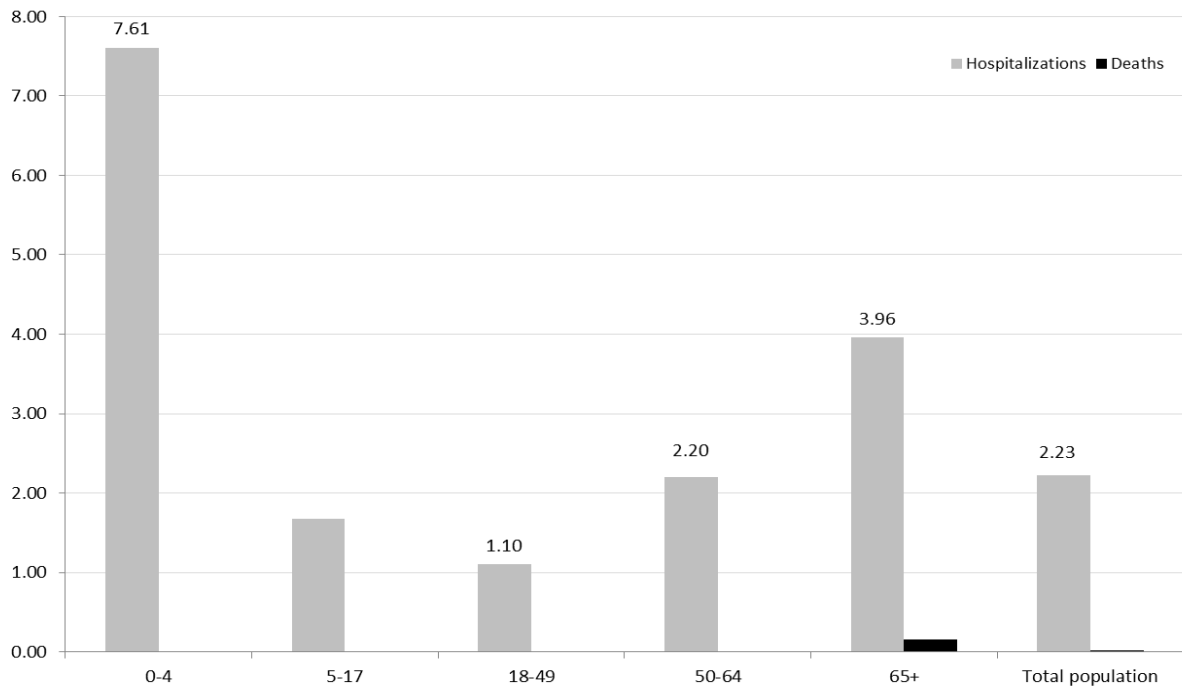
| | Total number* | |
|----------------------------------------------|-------------------------------------|-----------------------------------|
| Number of Hospitals Reporting (current week) | 26 | |
| | <i>Current MMWR (5/6- 5/512/12)</i> | <i>Cumulative (since 10/2/11)</i> |
| Hospitalizations | 2 | 103 |
| Deaths | 0 | 1 |

*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=103) and Deaths (n=1)
October 2, 2011 - May 12, 2012**



**Laboratory Confirmed Influenza Case rate/100,000
Hospitalizations (n=103) and Deaths (n=1) by age group
October 2, 2011 - May 12, 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 | 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 |
| | OR | | |
| 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 |
| | OR | | |
| 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. |

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

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**.

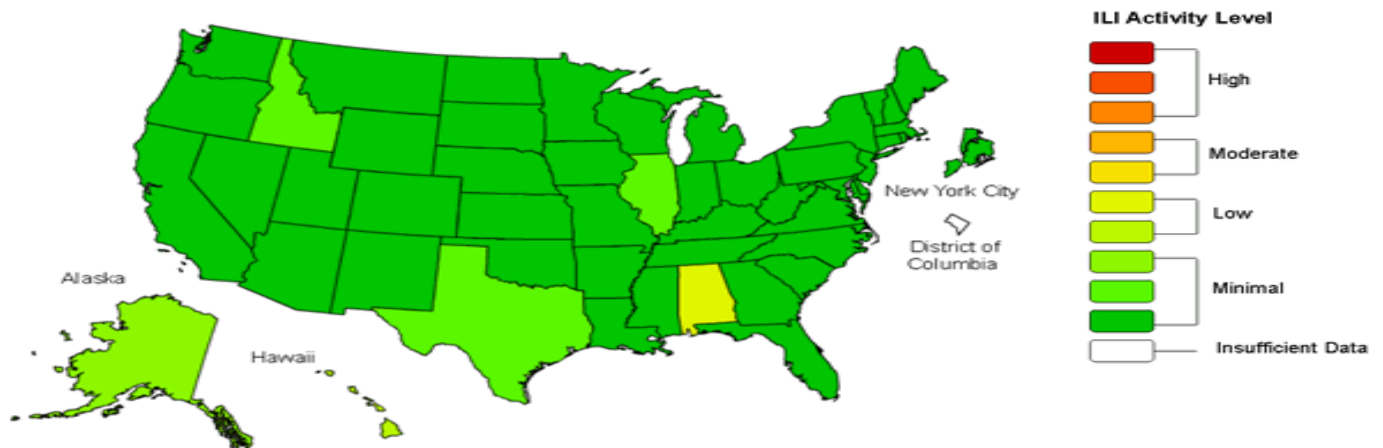
VII. National Surveillance MMWR Week 18 (4/29-5/5)

During week 18 (April 29-May 5, 2012), influenza activity declined nationally and in most regions, but remained elevated in some areas of the United States.

- **U.S. Virologic Surveillance:** Of the 2,118 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, 291 (13.7%) 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:** Two influenza-associated pediatric deaths were reported. One was associated with an influenza B virus and 1 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 1.4%, which is below the national baseline of 2.4%. All regions reported ILI below region-specific baseline levels. Two states experienced low ILI activity; New York City and 48 states experienced minimal ILI activity, and the District of Columbia had insufficient data to calculate ILI activity.
- **Geographic Spread of Influenza:** Two states reported widespread geographic activity; 8 states reported regional influenza activity; 12 states reported local activity; the District of Columbia, Puerto Rico, and 28 states reported sporadic activity, and Guam and the U.S. Virgin Islands 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 18 ending May 05, 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.