



Flu Watch

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

Week Ending October 10, 2015 (MMWR Week 40)

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

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MMWR Week 40 at a Glance:

Influenza Activity Synopsis:

For the first week of the influenza season, influenza activity in South Carolina was low; however, the first influenza-associated deaths of the season were reported. South Carolina reported SPORADIC activity for week 40.

Laboratory surveillance:

- 79 laboratory-confirmed cases of influenza were reported from 15 counties.
- 50 (63.3%) of all laboratory-confirmed cases this season are influenza A, 27 (34.2%) are influenza B, 1 (1.3%) is influenza A/B, and 1 (1.3%) is influenza unknown subtype.

ILI Activity (South Carolina baseline is 2.05%):

- Influenza-like illness activity at sentinel providers was below South Carolina's baseline (0.26%). ILI percentages represent ILI activity reported by sentinel providers; however, a small number of providers reported data for this week, so ILI percentages may not be representative of actual flu activity.

Hospitalizations:

- 11 laboratory confirmed influenza-associated hospitalizations were reported.

Deaths:

- 4 laboratory confirmed influenza-associated deaths were reported.

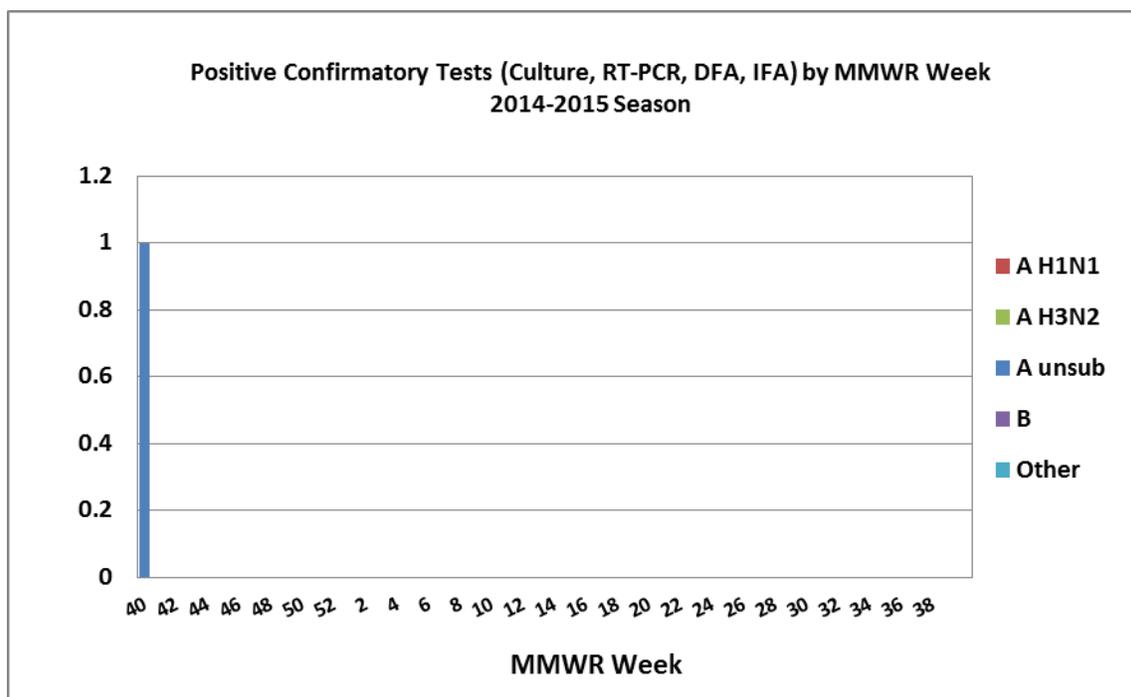
**Summary of ILI Activity, Positive Confirmatory Tests, and
Influenza Associated Hospitalizations and Deaths Compared to Previous Week and Season**

| | <i>Current week</i> | <i>Previous week</i> | <i>Change from previous week</i> | <i>Cumulative (2015-16)</i> | <i>Cumulative (2014-15)</i> | <i>Cumulative change 2015-16 compared to 2014-15</i> |
|---|---------------------|----------------------|----------------------------------|-----------------------------|-----------------------------|--|
| Number of positive confirmatory tests (culture, RT-PCR, DFA, IFA) | 1 | 0 | ▲ | 1 | 0 | ▲ |
| Positive rapid antigen tests | 78 | 41 | ▲ | 78 | 44 | ▲ |
| Percent of ILI visits reported by ILINet providers | 0.26% | 0.29% | ▼ 0.03% | -- | -- | -- |
| Number of lab confirmed flu hospitalizations | 11 | 3 | ▲ | 11 | 3 | ▲ |
| Number of lab confirmed flu deaths | 4 | 0 | ▲ | 4 | 2 | ▲ |

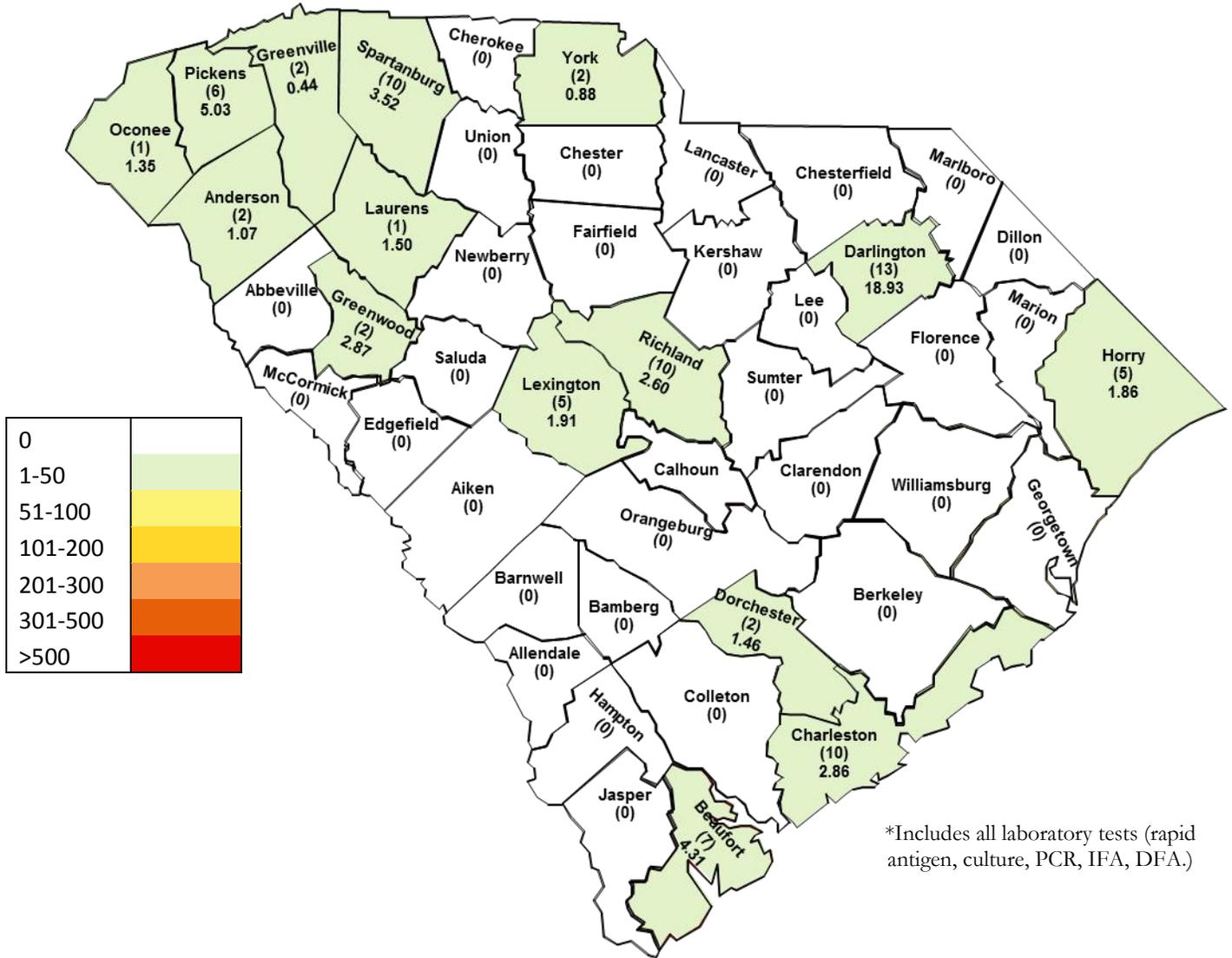
I. Confirmatory testing

For the current MMWR reporting week, 1 positive confirmatory test was reported.

| <i>Positive confirmatory influenza test results*</i> <i>Current MMWR Week (10/4/15 – 10/10/15)</i> | |
|---|------------------------|
| | BOL and reference labs |
| Number of positive confirmatory tests | 1 |
| Influenza A unsubtype | 1 |
| Influenza A H1N1 | 0 |
| Influenza A H3N2 | 0 |
| Influenza B | 0 |
| Other | 0 |
| Includes culture, RT-PCR, DFA, and IFA | |



Map of all Laboratory Confirmed Cases* by County
 Cumulative 10/4/15 – 10/10/15

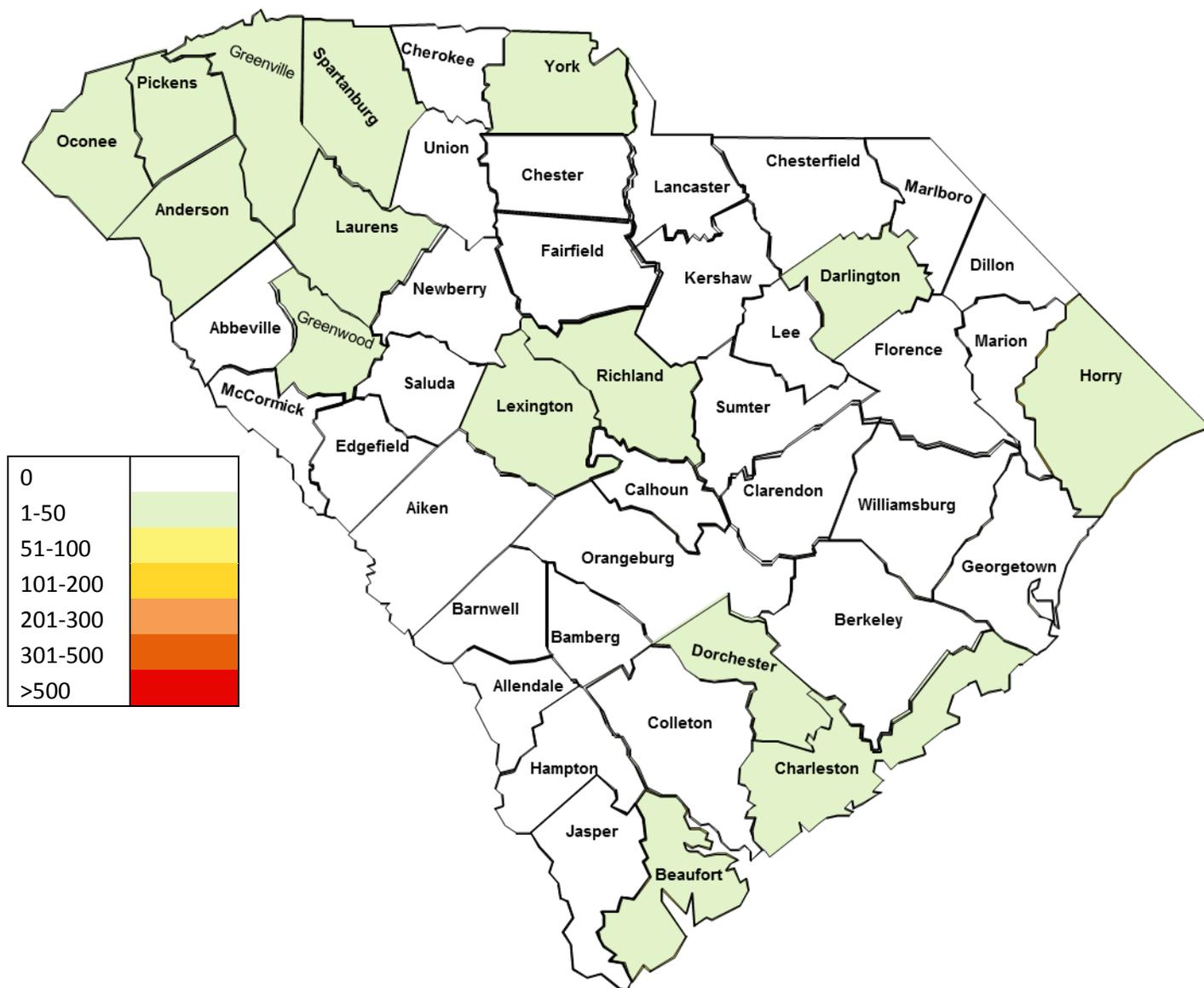


*Includes all laboratory tests (rapid antigen, culture, PCR, IFA, DFA.)

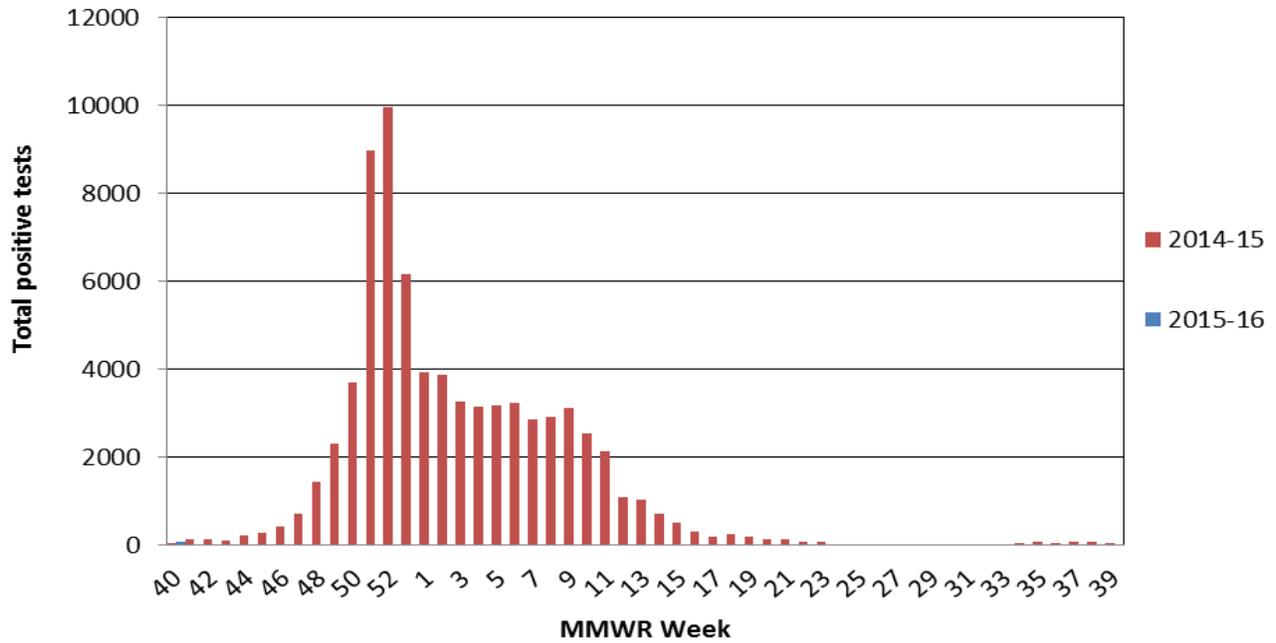
II. Positive Rapid Antigen Tests

For the current MMWR reporting week, 78 positive rapid antigen tests were reported. Of these, 50 were influenza A, 27 were influenza B, and 1 was influenza AB. This compares to 44 this time last year.

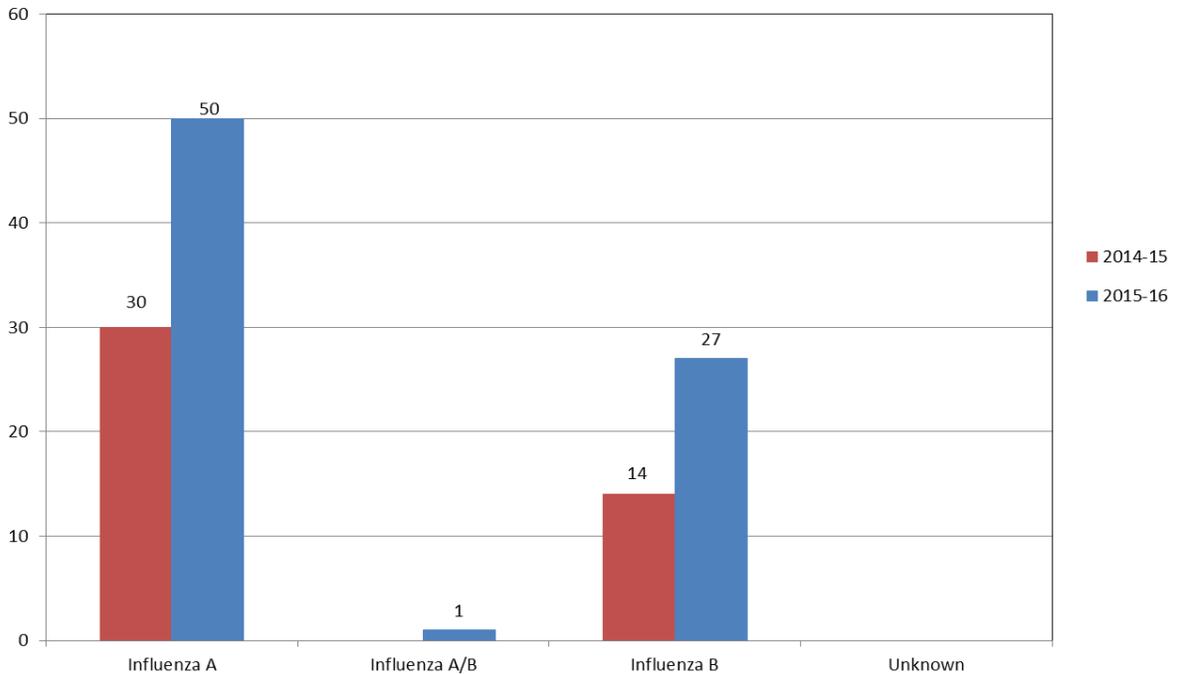
Map of Positive Rapid Influenza Tests by County
(10/4/15 - 10/10/15)



Positive Rapid Tests by MMWR Week 2014-15 vs 2015-16

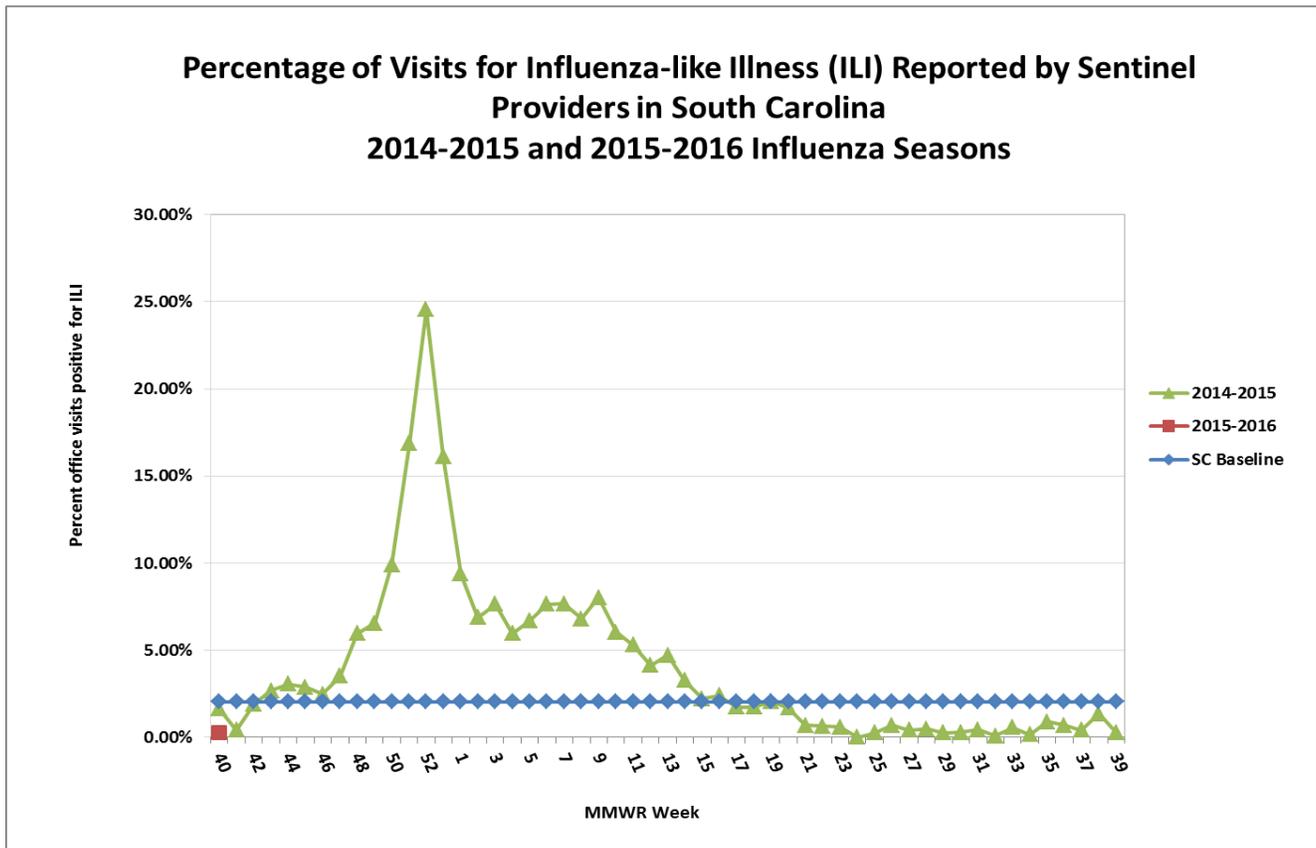


Positive Rapid Tests by Type 2014-15 vs 2015-16 October 4, 2015 - October 10, 2015



III. ILINet Influenza-Like Illness Surveillance

During the most recent MMWR week, 0.26%* of patient visits to SC ILINet providers were due to ILI. This is below the state baseline (2.05%). This ILI percentage compares to 1.63% this time last year. Reports were received from providers in 5 counties, representing 3 of the 4 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. * ILI percentage is dependent upon the number of reporting providers and can be greatly influenced by a single provider with high numbers of ILI.

**Influenza-Like Illness Reported by Sentinel Providers
October 4, 2015 – October 10, 2015**

| County | ILI % | County | ILI % |
|---------------|--------------|---------------|--------------|
| Abbeville | --- | Greenwood | NR |
| Aiken | 0% | Hampton | NR |
| Allendale | --- | Horry | -- |
| Anderson | NR | Jasper | -- |
| Bamberg | --- | Kershaw | -- |
| 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 | --- | Richland | 0% |
| Dorchester | NR | Saluda | NR |
| Edgefield | --- | Spartanburg | NR |
| Fairfield | --- | Sumter | NR |
| Florence | 0.60% | Union | --- |
| Georgetown | NR | Williamsburg | --- |
| Greenville | NR | York | 1.18% |

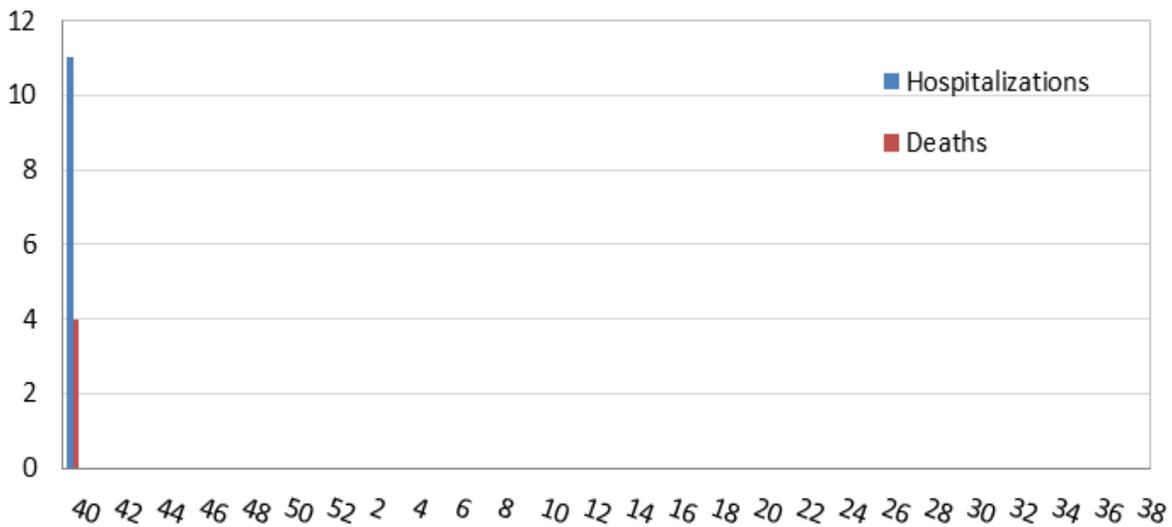
NR: No reports received
 ---: No enrolled providers

IV. Influenza-associated hospitalizations and deaths

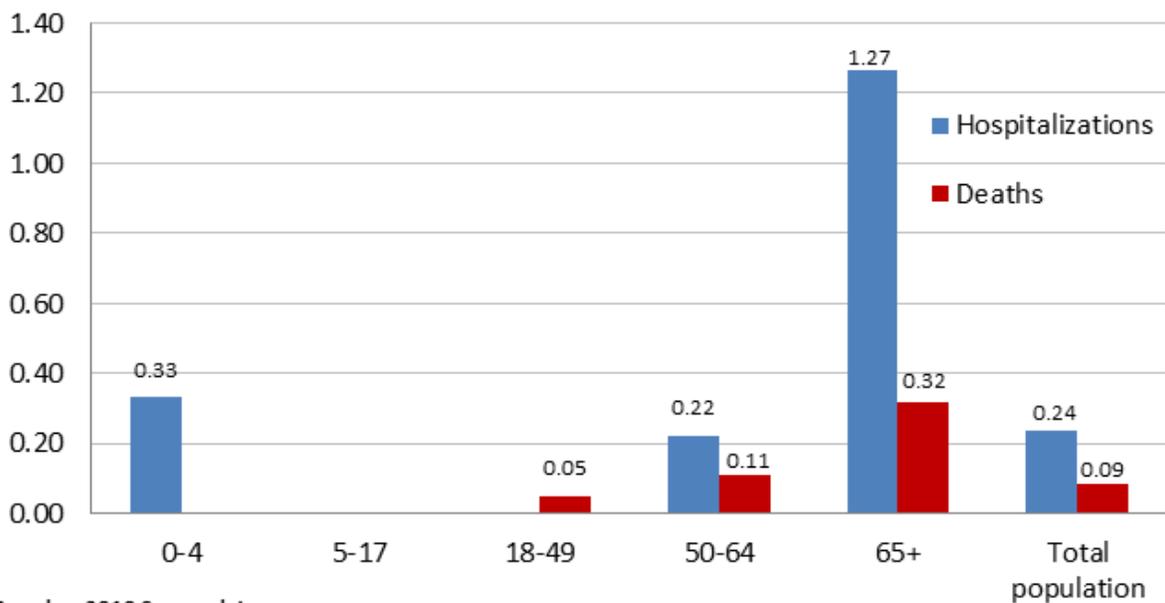
For the current MMWR reporting week, 11 laboratory confirmed influenza-associated hospitalizations were reported by 44 hospitals. Four lab confirmed influenza-associated deaths were reported. Laboratory confirmation for hospitalizations and deaths includes culture, PCR, DFA, IFA, and rapid antigen detection test.

| <i>Current MMWR Week (10/4/15 - 10/10/15)</i> | | | | | | | |
|---|------------|-------------|--------------|--------------|------------|------------|--------------|
| | 0-4 | 5-17 | 18-49 | 50-64 | 65+ | Unk | Total |
| Hospitalizations | 1 | 0 | 0 | 2 | 8 | 0 | 11 |
| Deaths | 0 | 0 | 1 | 1 | 2 | 0 | 4 |

**Influenza-associated Hospitalizations and Deaths by MMWR week
October 4, 2015 - October 10, 2015**



**Influenza-associated Hospitalizations (n=11) and Deaths (n=4)
Case Rate/100,000* by age group
October 4, 2015 - October 10, 2015**



V. 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 must be reported to DHEC within 3 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 must be sent to the regional health department by fax or email before noon on Monday for the preceding week.

Influenza deaths

All laboratory confirmed influenza deaths (adult and pediatric) must be reported to DHEC within 24 hours. These include results from viral culture, PCR, rapid flu tests, DFA, IFA or autopsy results consistent with influenza.

Influenza hospitalizations

DHEC requires weekly submission of laboratory confirmed influenza hospitalizations. Hospitals must 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 $\geq 100^{\circ}\text{F}$) 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.

VI. Definitions for Influenza Surveillance

Activity level: Indicator of the geographic spread of influenza activity which is reported to CDC each week.

- **No activity:** No increase in ILI activity and no laboratory-confirmed influenza cases.
- **Sporadic:** No increase in ILI activity and isolated laboratory-confirmed influenza cases
- **Local:** Increased ILI or 2 or more institutional outbreaks in one region and laboratory-confirmed influenza cases within the past 3 weeks in the region with increased ILI or outbreaks
- **Regional:** Increased ILI or institutional outbreaks in 2-3 regions and laboratory-confirmed influenza cases within the past 3 weeks in the regions with increased ILI or institutional outbreaks
- **Widespread:** Increased ILI and/or institutional outbreaks in at least 4 regions and laboratory confirmed influenza in the state within the past 3 weeks

Confirmatory testing: Influenza testing which is considered to be confirmatory, such as a viral culture or RT-PCR

Influenza-associated death: A death in which laboratory confirmation (see definition below) for influenza was reported, or for which an autopsy report consistent with influenza was provided, regardless of primary cause of death.

Influenza-like illness (ILI): Fever (temperature of 100°F [37.8°C] or greater) and cough and/or sore throat

MMWR week: Term for influenza surveillance week. Each week begins on Sunday and ends on Monday. The influenza season begins with MMWR week 40 and ends with MMWR week 39. The 2013-14 influenza season began on September 29, 2013 and will end on September 27, 2014.

Laboratory-confirmation: Influenza positive resulting from one of the following methods:

- DFA
- IFA
- Rapid influenza antigen test
- RT-PCR
- Viral culture