Summary

National influenza activity:
- Influenza activity continues to increase nationally.
  - The Centers for Disease Control and Prevention (CDC) has identified an antigenically drifted influenza A (H3N2) strain circulating nationally and in Florida that is different from the strain of influenza A (H3N2) contained in the current 2014-15 influenza vaccine formulations.
  - Vaccination is still recommended as it provides some protection against drifted viruses and it can also protect against other circulating strains. People who have not yet been vaccinated should get vaccinated now.
  - The CDC recommends the use of neuraminidase inhibitor antiviral medications when indicated for treatment and prevention of influenza, as an adjunct to vaccination. More information can be found here: http://www.floridahealth.gov/diseases-and-conditions/influenza/_documents/Other/influenza-letter-for-health-care-providers.pdf

State influenza and influenza-like illness (ILI) activity:
- The 2014-15 flu season is off to an early start this year in Florida.
  - While it is not uncommon for influenza and ILI activity levels to increase during this time of year, current activity levels are above levels seen during previous years at this time. Influenza activity is highest in children but overall is widely spread throughout Florida.
  - Due to increased influenza activity in all regions of the state, Florida reported widespread influenza activity to CDC in week 49. This is the second week reporting widespread activity; this represents the geographic spread of influenza in Florida.
  - Most Florida counties report increasing influenza activity. In week 49, 42 counties reported increasing influenza activity; 20 counties indicated activity is at a plateau.
  - Emergency department (ED) and urgent care center (UCC) ILI visits are increasing in all regions.
    - The proportion of visits to EDs and UCCs with a chief complaint of ILI and the proportion of visits resulting in a discharge diagnosis of influenza for those 19 years and under are at or near what we typically see at the peak of flu season. Increased influenza activity in children typically comes ahead of increases in activity in adults and the elderly.
    - Recently there has been an increase in pregnant women presenting to EDs for care that is above expected levels for this time of year. Pregnant women are among those at high risk for severe complications due to influenza infection. More information can be found here: http://www.floridahealth.gov/diseases-and-conditions/influenza/_documents/Other/influenza-letter-for-pregnant-women.pdf

In Florida, the most common influenza subtype detected at the Bureau of Public Health Laboratories (BPHL) in recent weeks has been influenza A (H3): In week 49, 67 of 93 (72.0%) specimens submitted for influenza testing at BPHL were PCR positive for seasonal strains of influenza: 61 were positive for influenza A (H3), one was positive for influenza A not yet subtyped, three were positive for influenza B Yamagata lineage, and two were positive for influenza B Victoria lineage. While it is too early to tell if this flu season will be worse than other years, seasons when influenza A (H3) predominantly circulates are often associated with higher morbidity and mortality, particularly in the elderly and very young.
- Four outbreaks of influenza (epidemiologically-linked cases of influenza in a single setting) were reported to EpiCom in week 49.
- No pediatric influenza-associated deaths were reported in week 49.
- The preliminary estimated number of Florida deaths due to pneumonia or influenza in week 48 was below the excess threshold.

Weekly state influenza activity:

- Predominantly circulating influenza strain this season: A (H3)

Map 1: County Influenza Activity
Week 49, 2014

 Thirty-five counties reported mild influenza activity. For more information, see page 6.

Map 2: Influenza and ILI Outbreaks
Week 49, 2014

Twenty outbreaks of ILI or influenza have been reported since Week 40, 2014. For more information, see page 10.

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December 10, 2014
Posted on the Bureau of Epidemiology website:
http://www.floridahealth.gov/floridaflu
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Florida
FLU REVIEW
2014 - 2015 season
Description of Florida influenza and ILI surveillance systems can be found on page 11.

<table>
<thead>
<tr>
<th>Measure</th>
<th>Difference from Previous Week</th>
<th>Current Week 49</th>
<th>Previous Week 48</th>
<th>Page of Report</th>
</tr>
</thead>
<tbody>
<tr>
<td>Overall statewide activity code reported to CDC</td>
<td>No Change</td>
<td>Widespread</td>
<td>Widespread</td>
<td>1</td>
</tr>
<tr>
<td>Percent of visits to ILINet providers for ILI</td>
<td>▼ 0.6</td>
<td>2.9%</td>
<td>3.5%</td>
<td>2</td>
</tr>
<tr>
<td>Percent of ED and UCC visits (from ESSENCE-FL) due to ILI</td>
<td>▼ 0.2</td>
<td>4.1%</td>
<td>4.3%</td>
<td>3</td>
</tr>
<tr>
<td>Percent of laboratory specimens that were positive for influenza</td>
<td>▲ 4.3</td>
<td>72.0%</td>
<td>67.7%</td>
<td>5</td>
</tr>
<tr>
<td>Number of counties reporting moderate influenza activity</td>
<td>▼ 3</td>
<td>16</td>
<td>19</td>
<td>6</td>
</tr>
<tr>
<td>Number of counties reporting widespread influenza activity</td>
<td>No Change</td>
<td>0</td>
<td>0</td>
<td>6</td>
</tr>
<tr>
<td>Number of counties reporting increasing influenza activity</td>
<td>No Change</td>
<td>42</td>
<td>42</td>
<td>6</td>
</tr>
<tr>
<td>Number of counties reporting decreasing influenza activity</td>
<td>▼ 1</td>
<td>3</td>
<td>2</td>
<td>6</td>
</tr>
<tr>
<td>Number of ILI outbreaks reported in EpiCom</td>
<td>▲ 1</td>
<td>4</td>
<td>3</td>
<td>10</td>
</tr>
</tbody>
</table>

**TABLE 1: Summary of Florida Influenza-Like Illness (ILI) Activity for Week 49**

**ILINet Influenza-Like Illness-Statewide**

ILINet is a nationwide surveillance system composed of sentinel providers. Florida has 107 providers enrolled in ILINet who submit weekly ILI and total visit counts, as well as submit ILI specimens to the BPHL for confirmatory testing. For this season, the Bureau of Epidemiology (BOE) has designated 13 of these ILINet physicians’ offices as Super-Sentinels. These Super-Sentinels receive more active follow-up from BOE and participating county health departments (CHDs), with the goal of increasing data quality and surveillance specimen submission.

**FIGURE 1** shows the percentage of visits for ILI* reported by ILINet sentinel providers statewide.

The percent of visits to ILINet sentinel outpatient physicians for ILI is above levels seen at this time in previous years.

- Fifty-four of 107 ILINet providers reported visit counts as of 5:00 p.m., December 9, 2014.
- Eight of 13 ILINet Super-Sentinels reported visit counts as of 5:00 p.m., December 9, 2014.

**FIGURE 2** shows ILI visit counts reported by ILINet sentinel providers statewide by age group.

In week 49, the number of visits to ILINet sentinels for ILI increased in all age groups.

*ILI = Influenza-like illness, fever >100°F AND sore throat and/or cough in the absence of another known cause.

†Data presented here are counts, not proportions as included in Figure 1. This is because age group denominator data is not available through ILINet.
ESSENCE-FL Syndromic Surveillance-Statewide

ESSENCE-FL collects data daily from 216 EDs and UCCs. These data are processed into 11 different syndrome categories based on the patient’s chief complaint. One of the categories is ILI, which is composed of chief complaints that include the words “influenza” or “flu,” or complaints that contain fever plus cough or sore throat.

**FIGURE 3** shows ESSENCE-FL data on ILI visits to EDs and UCCs as a percentage of all visits.

The percent of visits to EDs and UCCs for ILI is above levels seen in previous years at this time.

**FIGURE 4** shows percentage of ILI among all ED and UCC visits by age.

The percent of ED and UCC visits for ILI is above levels seen in previous years at this time for all age groups.

ESSENCE-FL Syndromic Surveillance-Regional

Map 3: Emergency Departments and Urgent Care Centers Reporting Data to ESSENCE-FL by Regional Domestic Security Task Force (RDSTF), December 9 (N=216)
FIGURE 5 - FIGURE 11 describe Emergency Department (ED) and Urgent Care Center (UCC) chief complaint data from ESSENCE-FL by Regional Domestic Security Task Force (RDSTF) regions.

- ED and UCC visits for ILI in RDSTF Regions 1, 2, 6 and 7 are above levels seen during previous years at this time.
- ED and UCC visits for ILI in RDSTF Regions 3, 4 and 5 are at or near levels seen during previous years at this time.

*There is no week 53 for the 2010-2011, 2011-2012, and 2013-2014 seasons; the week 53 data point for those seasons is an average of weeks 52 and 1.
**FIGURE 12 - FIGURE 13** use BPHL viral surveillance data to track the progress of influenza infection over time. They include weekly information on how many specimens are tested by the BPHL, what proportion of those test positive for influenza and what subtypes are identified.

- Influenza A (H3) and influenza B have been identified by BPHL this season.
- In recent weeks, influenza specimens submitted to BPHL tested positive for influenza A (H3) and influenza B Yamagata lineage.
- Influenza A (H3) has been the most common strain of influenza detected by BPHL so far in the 2014-2015 influenza season.

**TABLE 2** shows the number of specimens tested by BPHL, how many are influenza positive and their subtypes.

### Table 2: Bureau of Public Health Laboratories (BPHL) Viral Surveillance for Week 49 by Lab Event Date* as reported by 4:00 p.m. December 10, 2014

<table>
<thead>
<tr>
<th></th>
<th>Current Week 49</th>
<th>Previous Week 48</th>
</tr>
</thead>
<tbody>
<tr>
<td>Total Specimens Tested</td>
<td>93</td>
<td>93</td>
</tr>
<tr>
<td>Influenza positive specimens (% of total)</td>
<td>67 (72.0%)</td>
<td>55 (67.7%)</td>
</tr>
<tr>
<td>Influenza A (2009 H1N1) (% of influenza positives)</td>
<td>-</td>
<td>-</td>
</tr>
<tr>
<td>Influenza A (H3) (% of influenza positives)</td>
<td>61 (91.0%)</td>
<td>55 (87.3%)</td>
</tr>
<tr>
<td>Influenza A not yet subtyped (% of influenza positives)</td>
<td>1 (1.5%)</td>
<td>-</td>
</tr>
<tr>
<td>Influenza B Yamagata (% of influenza positives)</td>
<td>3 (4.5%)</td>
<td>7 (11.1%)</td>
</tr>
<tr>
<td>Influenza B Victoria (% of influenza positives)</td>
<td>2 (3.0%)</td>
<td>1 (1.6%)</td>
</tr>
<tr>
<td>Influenza B not yet subtyped (% of influenza positives)</td>
<td>-</td>
<td>-</td>
</tr>
</tbody>
</table>

*Please note that lab event date is defined as the earliest of the following dates associated with the lab: date specimen collected, date received by the laboratory, date reported or date inserted.

For county-specific laboratory data, please refer to the Flu Lab Report in Merlin.

For instructions on how to use the Flu Lab Report, please see the Guide to Flu Lab Report on the Bureau of Epidemiology website:

As of 11:30 a.m. December 10, 2014, a total of 67 (100%) counties reported their weekly level of influenza activity. Please note that data reported by counties after the deadline Tuesday at 5 p.m. are recorded but may not be included in the activity map for previous weeks.

### TABLE 3: Weekly County Influenza Activity for Week 49 (ending December 6, 2014) as Reported by 11:30 a.m. December 10, 2014

<table>
<thead>
<tr>
<th>Activity Level</th>
<th>Week 49 Number of Counties</th>
<th>Week 48 Number of Counties</th>
<th>Week 49 Counties</th>
</tr>
</thead>
<tbody>
<tr>
<td>No Report</td>
<td>0</td>
<td>0</td>
<td>-</td>
</tr>
<tr>
<td>No Activity</td>
<td>8</td>
<td>8</td>
<td>Bay, Desoto, Dixie, Gilchrist, Hamilton, Jefferson, Madison, Washington</td>
</tr>
<tr>
<td>Mild</td>
<td>35</td>
<td>43</td>
<td>Bradford, Broward, Calhoun, Charlotte, Citrus, Clay, Columbia, Dade, Duval, Gadsden, Glades, Hernando, Highlands, Holmes, Indian River, Jackson, Lafayette, Lake, Liberty, Martin, Monroe, Nassau, Okaloosa, Osceola, Polk, Santa Rosa, Sarasota, Seminole, St. Johns, St. Lucie, Sumter, Taylor, Union, Volusia, Wakulla</td>
</tr>
<tr>
<td>Moderate</td>
<td>24</td>
<td>16</td>
<td>Alachua, Baker, Brevard, Collier, Escambia, Flagler, Franklin, Gulf, Hardee, Hendry, Hillsborough, Lee, Leon, Levy, Manatee, Marion, Okeechobee, Orange, Palm Beach, Pasco, Pinellas, Putnam, Suwannee, Walton</td>
</tr>
<tr>
<td>Widespread</td>
<td>0</td>
<td>0</td>
<td>-</td>
</tr>
</tbody>
</table>

Map 4: Weekly County Influenza Activity Level for Week 49 Reported by 11:30 a.m. December 10, 2014

Map 5: Weekly County Influenza Activity Trend for Week 49 Reported by 11:30 a.m. December 10, 2014

County influenza activity data are reported to BOE through EpiGateway on a weekly basis by each county influenza coordinator. Specific information is requested about laboratory results, outbreak reports and surveillance system activity. Figures 14-23, displayed below, reflect a county's assessment of influenza activity within their county as a whole as well as influenza activity within specific settings. For week 49, three counties indicated that activity was decreasing, 20 indicated activity was about the same as previous weeks and 42 indicated that activity was increasing.

**FIGURE 14** shows the assessment of the overall influenza activity trend in each county as reported by CHD influenza coordinators for week 49 as of 11:30 a.m. December 10, 2014.
Counties are asked to evaluate influenza activity in certain settings within their county. Each setting has a scale for activity that ranges from none or minimal activity to very high activity. What defines each of the values varies by facility type, but the example of the assessment in elementary, middle and high schools is included below. More detailed information on the meanings of the levels for each setting can be found on the webpage also included below.

No or very minimal activity -- Scattered cases of ILI with no increase in absenteeism or disruption of school activities.

Moderate activity -- Absenteeism elevated above baseline (in range of 10 to 25%) in some but fewer than half of schools where it is known; occasional children sent home because of ILI.

High activity -- Absenteeism elevated above baseline (in range of 10 to 25%) in more than half of schools; most schools sending several or many children home each day because of ILI.

Very high activity -- Absenteeism high enough to force curtailment of some or all school activities.

**FIGURE 15 - FIGURE 18** show the activity levels in various facilities by county as reported by CHD influenza coordinators for week 49 as of 11:30 a.m., December 10, 2014.
FIGURE 19 - FIGURE 23 show the activity levels in various facilities by county as reported by CHD influenza coordinators for week 49 as of 11:30 a.m., December 10, 2014.

No influenza-associated pediatric deaths were reported in week 49.

Two influenza-associated pediatric deaths have been reported so far in the 2014-15 influenza season.

Pediatric Influenza-Associated Mortality
FDOH Bureau of Vital Statistics and county health departments (CHDs) collect death record data electronically in all 67 Florida counties, which can be accessed using ESSENCE-FL. For pneumonia and influenza surveillance, death record literals are queried in ESSENCE-FL using a free-text query that searches for references to pneumonia and influenza on death certificates. Any mention of pneumonia or influenza in the death certificate literals, with certain exceptions, is counted as a pneumonia and influenza death. Current season pneumonia and influenza death numbers are preliminary estimates, and may change as more data are received. The most recent data available are displayed here. ESSENCE-FL vital statistics death records data are currently considered to be complete through week 48, 2014.

**FIGURE 24** shows the count of preliminary estimated pneumonia and influenza deaths for all Florida counties, the number of deaths predicted using a multi-year regression model and the upper bound of the 95% confidence interval for this prediction.

For week 48 (ending Nov 29, 2014):
- 169 preliminary estimated pneumonia and influenza deaths were reported.
- Upper bound of 95% confidence interval for prediction: 225 deaths.
- No excess deaths.

**FIGURE 25** shows pneumonia and influenza deaths for all Florida counties, week 40, 2010 - week 49 2014, as reported into ESSENCE-FL. Deaths due to pneumonia and influenza are at or near levels seen during previous years at this time.

**FIGURE 26** shows pneumonia and influenza deaths for all Florida counties by age group, week 40, 2012 - week 49, 2014, as reported into ESSENCE-FL.

*Death records data reported into ESSENCE-FL are currently considered to be complete through week 48, 2014.*
NREVSS Respiratory Virus Surveillance

The National Respiratory and Enteric Virus Surveillance System (NREVSS) collects data from laboratories around the country on a weekly basis. NREVSS monitors temporal and geographic patterns of six common respiratory viruses. Eight Florida facilities reported in week 49.

FIGURE 27 shows the percentage of positive tests for multiple respiratory viruses reported by NREVSS-participating laboratories in Florida.

The 6 respiratory viruses summarized in Figure 27 are:
- Respiratory Syncytial Virus (RSV)
- Parainfluenza 1-3
- Adenovirus
- Human Metapneumovirus (HMPV)
- Rhinovirus
- Influenza

Influenza and ILI Outbreaks Reported in EpiCom

In week 49, 2014, four outbreaks of influenza or ILI were reported in to EpiCom.

Seminole County
- A nursing home reported five of 76 residents with ILI. Two of these five were hospitalized and tested positive for influenza A (H3) by PCR at the hospital laboratory. Only 46% of residents and 16.4% of staff were vaccinated against influenza this year. Infection control measures were discussed with facility leadership. This investigation is ongoing.

Hillsborough County
- An assisted living facility reported twenty-eight residents with ILI. Thirteen of the 28 ill were vaccinated against influenza this season. Four specimens were collected and tested positive by PCR at BPHL for influenza A (H3). Infection control measures were discussed with facility leadership.
- A daycare reported five students with ILI. Four of the ill tested positive for influenza A by rapid antigen test at their local healthcare providers. Infection control measures were discussed with facility leadership.

Pinellas County
- An assisted living facility reported ten of 43 residents with ILI. All residents were vaccinated against influenza this season. One resident was transferred to the emergency department and tested positive for influenza A. Infection control measures were discussed with facility leadership. This investigation is ongoing.

Twenty influenza outbreaks have been reported into EpiCom so far in the 2014-2015 season.
Influenza and ILI Outbreaks (Continued)

TABLE 4: Summary of Florida Influenza and ILI Outbreaks by Facility Status, Week 40-49, 2014

<table>
<thead>
<tr>
<th>Setting</th>
<th>Number of Outbreaks</th>
<th>Implicated Viruses</th>
</tr>
</thead>
<tbody>
<tr>
<td>Schools</td>
<td>6</td>
<td>• One outbreak, due to influenza A unspecified and influenza B unspecified</td>
</tr>
<tr>
<td></td>
<td></td>
<td>• Three outbreaks, virus information not yet available</td>
</tr>
<tr>
<td></td>
<td></td>
<td>• Two outbreaks, due to influenza A unspecified</td>
</tr>
<tr>
<td>Colleges and universities</td>
<td>0</td>
<td>• No outbreaks</td>
</tr>
<tr>
<td>Daycares</td>
<td>4</td>
<td>• One outbreak, due to parainfluenza III</td>
</tr>
<tr>
<td></td>
<td></td>
<td>• One outbreak, due to RSV</td>
</tr>
<tr>
<td></td>
<td></td>
<td>• One outbreak, due to influenza A unspecified and influenza B unspecified</td>
</tr>
<tr>
<td></td>
<td></td>
<td>• One outbreak, due to influenza A unspecified</td>
</tr>
<tr>
<td>Private businesses</td>
<td>0</td>
<td>• No outbreaks</td>
</tr>
<tr>
<td>Local and state government offices</td>
<td>0</td>
<td>• No outbreaks</td>
</tr>
<tr>
<td>Jails and prisons</td>
<td>0</td>
<td>• No outbreaks</td>
</tr>
<tr>
<td>Retirement homes</td>
<td>0</td>
<td>• No outbreaks</td>
</tr>
<tr>
<td>Nursing homes and long term care facilities</td>
<td>10</td>
<td>• Four outbreaks, due to influenza A (H3)</td>
</tr>
<tr>
<td></td>
<td></td>
<td>• Four outbreaks, due to influenza A unspecified</td>
</tr>
<tr>
<td></td>
<td></td>
<td>• One outbreak, due to influenza A unspecified and influenza B unspecified</td>
</tr>
<tr>
<td></td>
<td></td>
<td>• One outbreak, virus information not yet available</td>
</tr>
<tr>
<td>Healthcare facilities</td>
<td>0</td>
<td>• No outbreaks</td>
</tr>
<tr>
<td>Other</td>
<td>0</td>
<td>• No outbreaks</td>
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<tr>
<td>Total</td>
<td>20</td>
<td>• Three outbreaks, due to influenza A unspecified and influenza B unspecified</td>
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<tr>
<td></td>
<td></td>
<td>• Four outbreaks, virus information not yet available</td>
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<tr>
<td></td>
<td></td>
<td>• Seven outbreaks, due to influenza A unspecified</td>
</tr>
<tr>
<td></td>
<td></td>
<td>• One outbreak, due to parainfluenza III</td>
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<tr>
<td></td>
<td></td>
<td>• One outbreak, due to RSV</td>
</tr>
<tr>
<td></td>
<td></td>
<td>• Four outbreaks, due to influenza A (H3)</td>
</tr>
</tbody>
</table>

Information on locating influenza vaccination can be found using the flu vaccine locator at: [http://flushot.healthmap.org/](http://flushot.healthmap.org/)