State influenza and influenza-like illness (ILI) activity:
- Florida reported sporadic activity to the Centers for Disease Control and Prevention (CDC) in week 49.
- Overall the influenza season is off to a slow start. Influenza activity has remained relatively stable in recently weeks. While activity has remained low, early season low activity levels are not necessarily predictive of an overall mild influenza season.
  - Thus far, influenza A (H3) is the predominantly circulating strain. Seasons where influenza A (H3) is the predominately circulating strain are generally more severe, particularly in children <5 years old and adults ≥65 years old, than other seasons.
  - The preliminary estimated number of deaths due to pneumonia and influenza is near levels seen in previous years at this time.
  - In week 49, all counties reported mild or no influenza activity.
  - No influenza-associated pediatric deaths were reported in week 49, however one influenza-associated pediatric death has been reported so far in the 2015-16 influenza season.
  - While rare, sadly, Florida receives reports of influenza-associated pediatric deaths each year. Most deaths occur in unvaccinated children with underlying health conditions.
- No outbreaks of influenza or ILI were reported in week 49.
- The percent of specimens testing positive for influenza at the Bureau of Public Health Laboratories (BPHL) has increased in recent weeks and is similar to levels seen in previous years at this time.
- In the 2015-16 season, BPHL has identified influenza A (H3) as the most commonly circulating influenza virus so far in Florida: 52% of 33 influenza positive specimens were typed as influenza A (H3). Low levels of influenza B Yamagata lineage, influenza B Victoria lineage, and influenza A (2009 H1N1) have also been identified circulating at this time.

National influenza activity:
- National influenza activity levels are increasing but remain low.
- The predominantly circulating strain identified nationally so far this season is influenza A (H3). Other strains of influenza are also circulating, but at lower levels.
- The CDC recommends flu vaccination for everyone six months of age and older as long as influenza viruses are circulating.
  - To learn more, please visit: http://www.cdc.gov/flu/weekly/.
- Highly pathogenic avian influenza (HPAI) H5 viruses have been identified in U.S. backyard and commercial flocks of birds during the spring and summer of 2015. HPAI H5 has not been identified in Florida birds, but identifications are anticipated. No human HPAI infections have been identified in Florida or the rest of the nation.
  - To learn more, please visit: www.floridahealth.gov/novelflu.
Influenza surveillance goals:
- Influenza surveillance is conducted to detect changes in the influenza virus. These data are used to help determine the annual vaccine composition and to prepare for potential epidemics or pandemics.
- Surveillance is also conducted to identify unusually severe presentations of influenza infection, detect outbreaks, and determine seasonal influenza trends in order to guide influenza prevention, particularly in high-risk populations like children, the elderly, and pregnant women.
- See the back page of this report for more information on influenza surveillance systems used in Florida: Page 11

Statewide ILI Visits

Influenza-like illness (ILI) is defined as a fever ≥100°F AND sore throat and/or cough in the absence of another known cause.

**Figure 1** shows the percent of visits for ILI from ED and UCC chief complaints for ESSENCE-FL participating facilities (N=259), week 40, 2012 to week 49, 2015.

The percent of visits to EDs and UCCs for ILI is below levels seen in previous years at this time.
Statewide ILI Outpatient Visits and P&I Deaths

Visits for ILI to Outpatient Providers by Flu Season
ILI = influenza-like illness

Figure 2 shows the percent of visits for ILI reported by ILINet outpatient providers statewide (n=45), week 40, 2012 to week 49, 2015.

The percent of visits for ILI reported to ILINet outpatient providers remains below levels seen in previous years at this time.

P&I Deaths* from Vital Statistics by Flu Season
P&I = pneumonia and influenza

Figure 3 shows P&I deaths* for all Florida counties from the Bureau of Vital Statistics, as reported into ESSENCE-FL, week 40, 2012 to week 48, 2015.

As of week 48 (ending December 5, 2015), 1,650 P&I deaths have been reported in the 2015-16 influenza season.

The number of P&I deaths is near levels seen in previous years at this time.

P&I Deaths*, Multi-Year Regression Model
P&I = pneumonia and influenza

Figure 4 shows the number of preliminary estimated P&I 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 December 5, 2015):
155 preliminary estimated P&I deaths were reported.

The upper bound of the 95% confidence interval for prediction is 219 deaths with no excess deaths.

The number of P&I deaths is near levels seen in previous years at this time. P&I deaths tend to occur later in the season as at-risk populations have complications from influenza infection.

* Current season P&I death counts are preliminary estimates, and may change as more data are received. The most recent data available are displayed here. Vital statistics death records received in ESSENCE-FL are considered to be complete through week 48, 2015.
Figures 5-7 show the number of pediatric deaths associated with influenza infection reported since week 40, 2011, by influenza season. No influenza-associated pediatric deaths were reported in week 49. One influenza-associated pediatric death has been reported so far in the 2015-16 season. While rare, sadly, Florida receives reports of influenza-associated pediatric deaths each year. Most deaths occur in unvaccinated children with underlying health conditions.

Children, especially those with underlying health conditions, are at higher risk of severe outcomes (including death) from influenza infection. The best way to prevent influenza infection in children is to get them vaccinated every year. For more information please visit: http://www.cdc.gov/flu/protect/whosshouldvax.htm#annual-vaccination.

County Influenza Activity

As of 9:30 a.m. December 17, 2015, 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 maps for this week.

Influenza-Associated Pediatric Deaths

FIGURES 5 - 7

Figures 5-7 show the number of pediatric deaths associated with influenza infection reported since week 40, 2011, by influenza season.

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

One influenza-associated pediatric death has been reported so far in the 2015-16 season. While rare, sadly, Florida receives reports of influenza-associated pediatric deaths each year. Most deaths occur in unvaccinated children with underlying health conditions.

Children, especially those with underlying health conditions, are at higher risk of severe outcomes (including death) from influenza infection. The best way to prevent influenza infection in children is to get them vaccinated every year. For more information please visit: http://www.cdc.gov/flu/protect/whosshouldvax.htm#annual-vaccination.
Five outbreaks of influenza or ILI have been reported into EpiCom so far in the 2015-16 season. 

No outbreaks of influenza or ILI were reported in week 49.

**TABLE 1: Summary of Florida Influenza and ILI Outbreaks by Setting, Week 40-49, 2015**

<table>
<thead>
<tr>
<th>Setting</th>
<th>Total</th>
<th>A (H3)</th>
<th>A (2009 H1N1)</th>
<th>A Unspecified</th>
<th>A &amp; B Unspecified</th>
<th>B Yamagata</th>
<th>B Unspecified</th>
<th>Other respiratory viruses</th>
<th>Currently unknown virus</th>
</tr>
</thead>
<tbody>
<tr>
<td>Schools</td>
<td>1</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>1</td>
</tr>
<tr>
<td>Daycares</td>
<td>1</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>1– respiratory syncytial virus (RSV)</td>
<td>-</td>
</tr>
<tr>
<td>Jails &amp; prisons</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>-</td>
</tr>
<tr>
<td>Mental health facilities</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>-</td>
</tr>
<tr>
<td>Nursing homes &amp; long term care facilities</td>
<td>3</td>
<td>-</td>
<td>-</td>
<td>1</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>1– rhinovirus</td>
<td>1</td>
</tr>
<tr>
<td>Healthcare facilities</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>-</td>
</tr>
<tr>
<td>Other</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>-</td>
</tr>
<tr>
<td>Total</td>
<td>5</td>
<td>0</td>
<td>0</td>
<td>1</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>2</td>
</tr>
</tbody>
</table>

**Figure 8** shows the distribution of outbreaks by facility type and season.

In Florida, influenza and ILI activity often increases first in children and then spreads to other age groups. As such, mid-season outbreaks are expected in facilities serving older age groups.
Respiratory Virus Surveillance

These figures use Bureau of Public Health Laboratories (BPHL) viral surveillance data.

**Figure 9** shows the number of influenza-positive specimens tested by subtype and lab event date*.

Influenza A (H3) is the most commonly circulating virus identified by BPHL in recent weeks. This is consistent with the national trend.

Low levels of influenza B Yamagata lineage, influenza B Victoria lineage, and influenza A (2009 H1N1) have also been identified by BPHL circulating in Florida this season.

**Figure 10** shows the number of specimens tested by BPHL and the percent that were positive for influenza by lab event date*.

The number of specimens tested for influenza and the percent of laboratory results testing positive for influenza have increased overall in recent weeks. Both indicators are similar to or below levels seen in previous years at this

---

**TABLE 2: Bureau of Public Health Laboratories (BPHL) Viral Surveillance by Lab Event Date***

<table>
<thead>
<tr>
<th>Specimen</th>
<th>Current Week 49</th>
<th>Previous Week 48</th>
<th>Current 2015-16 Season</th>
</tr>
</thead>
<tbody>
<tr>
<td>Total Specimens Tested</td>
<td>3</td>
<td>24</td>
<td>270</td>
</tr>
<tr>
<td>Influenza positive specimens (% of total)</td>
<td>2 (67%)</td>
<td>6 (20%)</td>
<td>33 (12%)</td>
</tr>
<tr>
<td>Influenza A (2009 H1N1) (% of influenza positives)</td>
<td>-</td>
<td>2 (33%)</td>
<td>3 (9%)</td>
</tr>
<tr>
<td>Influenza A (H3) (% of influenza positives)</td>
<td>-</td>
<td>1 (17%)</td>
<td>17 (52%)</td>
</tr>
<tr>
<td>Influenza A not yet subtyped (% of influenza positives)</td>
<td>1 (50%)</td>
<td>2 (33%)</td>
<td>3 (9%)</td>
</tr>
<tr>
<td>Influenza A inconclusive** (% of influenza positives)</td>
<td>-</td>
<td>-</td>
<td>2 (6%)</td>
</tr>
<tr>
<td>Influenza B Yamagata (% of influenza positives)</td>
<td>-</td>
<td>-</td>
<td>3 (9%)</td>
</tr>
<tr>
<td>Influenza B Victoria (% of influenza positives)</td>
<td>-</td>
<td>1 (17%)</td>
<td>3 (9%)</td>
</tr>
<tr>
<td>Influenza B not yet subtyped (% of influenza positives)</td>
<td>1 (50%)</td>
<td>-</td>
<td>2 (6%)</td>
</tr>
</tbody>
</table>

*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.

**Influenza A inconclusive test results are due to technical difficulties including insufficient sample for testing or internal sample control failure and occur occasionally in routine laboratory testing.

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:

ED and UCC Visits by Region

ED = emergency department, UCC = urgent care center, ILI = influenza-like illness

ED and UCC visits for ILI decreased or remained the same in all regions except for regions 1 and 4 where visits increased. ED and UCC visits for ILI in region 7 are similar to levels seen in previous years at this time and ED and UCC visits for ILI in regions 1-6 are below levels seen in 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.

MAP 4

Emergency Departments (EDs) and Urgent Care Centers (UCCs) Reporting Data to ESSENCE-FL by Regional Domestic Security Task Force (RDSTF), December 17, 2015 (N=259)
**Age Groups: ILI Visits and P&I Deaths**

**Visits to Outpatient Providers for ILI by Age Group**

**FIGURE 19** shows the number of visits for ILI reported by ILINet outpatient providers statewide (n=45) by age group, week 40, 2012 to week 49, 2015. The number of visits for ILI reported by ILINet outpatient providers in all age groups is below levels seen in previous years.

*Data presented here are counts, not proportions. This is because age group denominator data is not available through ILINet.*

**P&I Deaths* from Vital Statistics by Age Group**

**FIGURE 20** shows P&I deaths* for all Florida counties by age group, as reported into ESSENCE-FL, week 40, 2012 to week 48, 2015.

*Current season P&I death numbers are preliminary estimates, and may change as more data are received. The most recent data available are displayed here. Vital statistics death records received in ESSENCE-FL are currently considered to be complete through week 48, 2015.*
ESSENCE-FL collects data daily from 259 EDs and UCCs. 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”, “cough”, and/or “sore throat”. The Florida Department of Health uses ED and UCC chief complaint data to monitor influenza and ILI activity in a timely manner in groups at higher risk of severe health outcomes (such as hospitalization and death) from influenza infection. These at-risk groups include pregnant women, children ≤18 years old, and adults ≥65 years old.

**At-Risk Populations: ILI Visits**

Pregnant women are at high risk for severe complications due to influenza infection. Figure 21 shows the number of visits* to EDs and UCCs with chief complaints of influenza infection and pregnancy, as reported into ESSENCE-FL, week 40, 2012 to week 49, 2015. The number of visits by pregnant women presenting to EDs and UCCs with mention of influenza has increased and is near levels seen in previous years at this time.

*This count under-represents the true number of pregnant women presenting for care to EDs and UCCs with influenza. The overall trend has been validated through review of hospital discharge data collected by the Agency for Health Care Administration.

**ED and UCC Visits for ILI by Pregnant Women**

ED = emergency department, UCC = urgent care center, ILI = influenza-like illness

Figure 22 shows the percent of ILI visits among all ED and UCC visits for children ≤18 years old, as reported into ESSENCE-FL, week 40, 2012 to week 49, 2015. The percent of ILI visits among all ED and UCC visits for children ≤18 years old has decreased in recent weeks and remains below levels seen in previous years at this time.

**ED and UCC Visits for ILI by Children ≤18 Years Old**

ED = emergency department, UCC = urgent care center, ILI = influenza-like illness

Figure 23 shows the percent of ILI visits among all ED and UCC visits for adults ≥65 years old, as reported into ESSENCE-FL, week 40, 2012 to week 49, 2015. The percent of ILI visits among all ED and UCC visits for adults ≥65 years old has remained relatively stable in recent weeks and is similar to levels seen in previous years at this time.
County health departments are asked to evaluate influenza activity in certain settings within their county. The assessment scale for activity ranges from no or minimal activity to very high activity.

**Figure 24** shows the results of the influenza activity assessment for week 49, 2015. Counties that reported “not applicable” for the listed settings are excluded from the denominator in the calculations below.

**ILI activity levels:**
- No or very minimal activity
- Moderate activity
- High activity
- Very high activity

### Settings for Children under 18

In elementary schools, one county (1.5%) reported moderate influenza and ILI activity.

In daycare settings, one county (2%) reported moderate influenza and ILI activity.

### Settings for Adults over 65

In nursing homes, 54 counties (87%) reported no or minimal influenza and ILI activity.

In retirement homes, 41 counties (82%) reported no or minimal influenza and ILI activity.

### Settings for Adults ages 18 to 65

In colleges and universities, 36 of 44 (82%) counties reported no or minimal influenza and ILI activity.

In private businesses, 42 counties (81%) reported no or minimal influenza and ILI activity.

In government offices, 49 counties (85%) reported no or minimal influenza and ILI activity.

### Other Unique settings

In jails and prisons, 55 counties (87%) reported no or minimal influenza and ILI activity.

In healthcare settings, including rehabilitation facilities and mental health facilities, two counties (3%) reported moderate influenza and ILI activity.
In recent weeks, the percent of specimens positive for RSV and rhinovirus has decreased but remains elevated.

FIGURE 25

Respiratory Virus Surveillance (Continued)

Florida ILI Surveillance System Summary

Florida ILINet  Data source for figures: 2 and 19
- ILINet is a nationwide surveillance system composed of sentinel providers, predominately outpatient healthcare providers. Florida has 88 sentinel providers enrolled in ILINet who submit weekly ILI and total visit counts, as well as submit ILI specimens to the Bureau of Public Health Labs (BPHL) for confirmatory testing.

ESSENCE-FL Syndromic Surveillance and Vital Statistics Portal  Data source for figures 1, 3-7, 11-18, 20-23; map 4
- ESSENCE-FL measures trends in ILI visits from emergency departments (ED) and urgent care clinics (UCC) and influenza mortality by using death certificates from the Bureau of Vital Statistics. EDs and UCCs electronically transmit visit data into ESSENCE-FL daily or hourly.
- For statewide and regional data on influenza-like illness, visits are counted as ED or UCC visits to participating facilities that include influenza-like illness in patient chief complaints.
- For pneumonia and influenza (P&I) surveillance, death record literals are queried using a free-text query that searches for references to P&I on death certificates. Any mention of P&I in the death certificate literals, with certain exceptions, is counted as a P&I death.

County Influenza Activity in EpiGateway  Data source for figures 19, 24, and maps 1 and 2
- County health department (CHD) epidemiologists report their county’s influenza and ILI surveillance data weekly into the EpiGateway website. Influenza activity is classified as: No Activity, Mild, Moderate or Elevated. Setting-specific influenza activity and influenza trend information is also reported. EpiGateway data provided by CHDs creates a county-by-county breakdown of influenza and ILI activity around the state.

Outbreak Reporting in EpiCom  Data source for figure 8, map 3, and table 1
- EpiCom tracks influenza and ILI outbreak investigations by county health departments. Reports by county health departments include the type of respiratory disease causing the outbreak and settings where outbreaks are occurring. CHD epidemiologists report outbreaks of influenza or ILI into EpiCom, Florida’s online disease communication system.
- Outbreaks are defined as two or more cases of influenza or ILI in a specific setting.

Bureau of Public Health Laboratories (BPHL)  Data source for figures 9, 10 and table 2
- BPHL performs confirmatory testing and subtyping on surveillance specimens from ILINet sentinel providers, outbreak investigations, patients with severe or unusual influenza presentations and medical examiners.

National Respiratory and Enteric Virus Surveillance System (NREVSS)  Data source for figure 25
- 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.

Case-Based Influenza Surveillance
Pediatric Influenza-Associated Mortality (Merlin)  Data source for figure 5-7

Influenza due to Novel or Pandemic Strains
- Deaths in children with laboratory-confirmed influenza infection and patients with influenza infection due to novel or pandemic strains are reportable in Florida. For more information about reportable diseases please visit www.Floridahealth.gov/