**State influenza and influenza-like illness (ILI) activity:**
- In week 18, influenza and ILI activity continued to decrease and remained at normal levels for this time of the season. Data indicate influenza activity peaked during week 5 (ending February 3, 2018).
- While activity has declined overall, it is important to note that influenza continues to circulate at low levels throughout the summer months in Florida.
- **No new influenza-associated pediatric deaths were confirmed in week 18.** Eight influenza-associated pediatric deaths have been confirmed so far in the 2017-18 influenza season.
- Deaths due to pneumonia and influenza were below expected levels.
- Six outbreaks of influenza or ILI were reported in week 18: one with laboratory confirmation of influenza and five ILI. Thus far, 502 outbreaks of influenza and ILI have been reported since the start of the 2017-18 season.
- The Florida Department of Health is conducting enhanced surveillance of intensive-care unit (ICU) patients aged <65 years with laboratory-confirmed influenza.
  - In week 18, two cases were reported; 372 cases have been reported since February 1, 2018.
  - Of the 237 cases with known vaccination status, the majority (70%) were unvaccinated individuals. Of the 368 cases with medical histories available, the majority (89%) had underlying medical conditions.

**Treatment:**
- In severe seasons like this one, the use of antivirals is especially important.
  - Clinicians should not wait for laboratory confirmation to administer antivirals to people with suspect influenza.

**Immunizations and prevention:**
- The Florida Department of Health recommends that sick people stay home until fever-free for at least 24 hours (without the use of fever-reducing medication) and that all people use good handwashing practices.
- CDC recommends vaccination now and as long as influenza viruses are circulating. To find a flu shot near you, visit: [www.floridahealth.gov/findaflushot](http://www.floridahealth.gov/findaflushot). Flu vaccines are also available at your local county health department.

**National influenza activity:**
- Influenza activity decreased and remained below the national baseline.
- As in Florida, influenza A (H3) has been the most common strain of influenza identified for the season; however, influenza B viruses have been more frequently reported than influenza A viruses since early March.
  - This late-season circulation of influenza B is expected.
Influenza surveillance goals:

- Influenza surveillance is conducted to detect changes in the influenza virus. These data are used to help determine the annual national 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, adults 65 years old, and pregnant women. These activities are particularly important at the start of flu season in order to identify potential changes in circulating influenza strains.

Note: Surveillance case definitions for influenza-like illness vary across surveillance systems. For more information on influenza surveillance systems and associated case definitions used in Florida, see page 17.

Statewide ILI Visits

Figure 1 shows the percent of visits for ILI from ED and UCC chief complaint data for ESSENCE-FL participating facilities (n=323), week 40, 2014 to week 18, 2018.

In week 18, the percent of visits to EDs and UCCs decreased statewide. Levels were similar to those observed during previous seasons at this time.

Data indicate influenza activity this season peaked during week 5 (ending February 3, 2018).

The ESSENCE-FL ILI syndrome is composed of chief complaints that include the words “influenza” or “flu,” or chief complaints that include the words “fever” and “cough,” or “fever” and “sore throat.” For more information on ESSENCE-FL, see page 17.
Figure 2 shows the percent of visits for ILI reported by ILINet outpatient providers statewide (n=44), week 40, 2014 to week 18, 2018. For ILINet, ILI is defined as a fever ≥100°F AND sore throat and/or cough in the absence of another known cause. In week 18, the percent of visits for ILI reported by ILINet outpatient providers decreased and was similar to levels observed in previous seasons at this time.

Figure 3 shows P&I deaths* for all Florida counties from the Bureau of Vital Statistics, as reported into ESSENCE-FL, week 40, 2014 to week 17, 2018. In week 17 (ending April 28, 2018), 187 P&I deaths were reported. The preliminary number of P&I deaths decreased and was below levels observed during previous seasons at this time.

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 17 (ending April 28, 2018), 187 preliminary estimated P&I deaths were reported.

The upper bound of the 95% confidence interval for prediction is 247 deaths, with no excess deaths.

* 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 17, 2018.
County Influenza and ILI Activity Maps

As of 9:30 a.m. May 9, 2018, a total of 67 counties (100%) reported their weekly level of influenza activity. Please note that data reported after the deadline (Tuesday at 5 p.m.) are recorded but may not be included in the activity maps for this week.

County Influenza Activity

As of 9:30 a.m. May 9, 2018, a total of 67 counties (100%) reported their weekly level of influenza activity. Please note that data reported after the deadline (Tuesday at 5 p.m.) are recorded but may not be included in the activity maps for this week.

County ILI Activity by Setting Type

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 5 shows the results of the influenza activity assessment for week 18, 2018.
Map 3 shows influenza and ILI outbreaks by county for week 40, 2017 through week 18, 2018, as reported into Merlin.

**Total Outbreaks:**
- In week 18, six outbreaks were reported: one with laboratory evidence of influenza and five ILI.
  - Influenza and ILI outbreaks were reported in three counties, all located in the central region of the state (see map 3). Of the six outbreaks reported, two have ongoing investigations.
- A total of 502 outbreaks have been reported so far this season. Of those, 460 (92%) have been in facilities serving people at higher risk for complications due to influenza infection (children and adults aged ≥65 years).
  - More outbreaks have been reported this season than in previous seasons on record. An average of 91 total outbreaks were reported during the last five seasons.

**Settings:**
- In week 18, outbreaks occurred in the following settings: three in schools/camps, one in a nursing facility, and two in other long-term care facilities.
- In the 2017-18 season, outbreaks occurred in the following settings: 62 (12%) in assisted living facilities, 84 (17%) in nursing facilities, 99 (20%) in other long-term care facilities, 2 (0.4%) in adult daycares, 85 (17%) in child daycares, 130 (26%) in schools/camps, 18 (4%) in correctional facilities/juvenile detention centers, 6 (1%) in hospitals, 2 (0.4%) in shelters, and 14 (3%) in other settings (figure 6).

**Laboratory Testing:**
- One of the six outbreaks reported in week 18 had specimens collected and submitted to the Bureau of Public Health Laboratories thus far.

**Control Measures:**
- Outbreak control measures were reviewed with facility leadership for four of the six outbreaks reported by county health departments (CHDs).
  - Antiviral treatment for ill individuals was recommended by the CHD for one of the six outbreaks, but has not been administered by the facility.
  - Antiviral chemoprophylaxis for at-risk individuals was recommended by the CHD for one of the six outbreaks, but has not been administered by the facility.

**Hospitalizations and Deaths:**
- Of the six outbreaks reported in week 18, none reported hospitalizations. No deaths have been reported in these six outbreaks.
- Of the 502 outbreaks reported so far this season, people were hospitalized in 128 outbreaks (25%) and deaths were reported in 25 outbreaks (5%).

For detailed information on select outbreaks reported during week 18, see page 16. For updates on select outbreaks reported in week 17 (ending April 28, 2018), see page 16.

For information on outbreaks reported in settings serving children, see page 9. For information on outbreaks reported in settings serving adults aged ≥65 years, see page 11.
Laboratory Surveillance

Figure 7 shows the number of influenza-positive specimens tested by subtype and lab event date.

While the most common influenza subtype detected at BPHL statewide for the 2017-18 influenza season has been influenza A (H3), in recent weeks, the percentage of specimens testing positive for influenza A viruses declined. The majority of influenza B viruses identified at BPHL thus far were Yamagata lineage, which is consistent with the national trend. A recent increase in influenza B activity has also been observed nationally. This late-season circulation of influenza B is expected.

Seasons in which A (H3) viruses predominate are associated with more severe illness in young children and adults ≥65 years old. While statewide data indicate influenza A (H3) is the predominantly circulating strain this season, these data also indicate a substantial amount of influenza B Yamagata lineage and influenza A 2009 (H1N1) viruses present and co-circulating.

Table 1: Bureau of Public Health Laboratories (BPHL) Viral Surveillance by Lab Event Date*
Reported by 10:00 a.m. May 9, 2018

<table>
<thead>
<tr>
<th>Influenza Type</th>
<th>Current Week 18</th>
<th>Previous Week 17</th>
<th>Current 2017-18 Season</th>
</tr>
</thead>
<tbody>
<tr>
<td>Total Specimens Tested</td>
<td>8</td>
<td>25</td>
<td>2557</td>
</tr>
<tr>
<td>Influenza positive specimens (% of total specimen tested)</td>
<td>1 (12.5%)</td>
<td>11 (44.0%)</td>
<td>1629 (63.7%)</td>
</tr>
<tr>
<td>Influenza A 2009 (H1N1) (% of influenza positives)</td>
<td>-</td>
<td>2 (18.2%)</td>
<td>229 (14.1%)</td>
</tr>
<tr>
<td>Influenza A (H3) (% of influenza positives)</td>
<td>-</td>
<td>1 (9.1%)</td>
<td>991 (60.8%)</td>
</tr>
<tr>
<td>Influenza A not yet subtyped (% of influenza positives)</td>
<td>-</td>
<td>-</td>
<td>58 (3.6%)</td>
</tr>
<tr>
<td>Influenza B Yamagata (% of influenza positives)</td>
<td>-</td>
<td>7 (63.6%)</td>
<td>319 (19.6%)</td>
</tr>
<tr>
<td>Influenza B Victoria (% of influenza positives)</td>
<td>-</td>
<td>-</td>
<td>17 (1.0%)</td>
</tr>
<tr>
<td>Influenza B not yet subtyped (% of influenza positives)</td>
<td>1 (100%)</td>
<td>1 (9.1%)</td>
<td>15 (0.9%)</td>
</tr>
</tbody>
</table>

**“Lab event date”** is defined as the earliest of the following dates associated with influenza testing at the laboratory: date specimen collected, date received by the laboratory, date reported, or date inserted.

For county health departments seeking 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:

Figures 8-14 show the percent of visits for ILI from ED and UCC chief complaints for ESSENCE-FL participating facilities (n=323), by ESSENCE-FL Regional Domestic Security Task Force regions (see map 4) from week 40, 2014 to week 18, 2018.* In week 18, the percent of ED and UCC visits for ILI increased slightly in region 1, remained the same in region 7, and decreased in all other regions. Levels were similar to those observed in previous seasons at this time in all regions.

**Map 4**

Emergency Departments (EDs) and Urgent Care Centers (UCCs) Reporting Data to ESSENCE-FL by Regional Domestic Security Task Force Region, May 9, 2018 (n=323)
Figure 15 shows the percent of visits for ILI from ED and UCC chief complaints by age group for ESSENCE-FL participating facilities (n=323), week 40, 2014 to week 18, 2018.

In week 18, ED and UCC visits for ILI increased slightly in the 0-4 age group and decreased in all other age groups. Levels were slightly above those observed in previous seasons at this time in the 0-4 age group. Levels were similar to those observed in previous seasons at this time in all other age groups.

Figure 16 shows the number of visits for ILI reported by ILINet outpatient providers statewide (n=44) by age group, week 40, 2014 to week 18, 2018.

In week 18, the number of visits for ILI decreased in all age groups. In all age groups, levels were similar to those observed during previous seasons at this time.

P&I Deaths* from Vital Statistics by Age Group

Figure 17 shows P&I deaths* for all Florida counties by age group, as reported into ESSENCE-FL, week 40, 2014 to week 17, 2018.

In week 17 (ending April 28, 2018), the preliminary number of P&I deaths increased slightly in the ≥65 age group and decreased in all other age groups. In all age groups, levels were similar to or below those observed during previous seasons at this time.

*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 17, 2018.
At-Risk Populations: Children

Background: Children, especially those with underlying health conditions, are at higher risk for severe complications from influenza infection. The single best way to protect children from influenza is to get them vaccinated every year. The Centers for Disease Control and Prevention recommends vaccination as long as influenza viruses are circulating. To find a flu shot near you, please visit: www.floridahealth.gov/findaflushot.

Figure 18 shows the percent of ILI visits among all ED and UCC visits for children ≤18 years old, as reported into ESSENCE-FL, week 40, 2014 to week 18, 2018.

In week 18, the percent of ILI visits among all ED and UCC visits for children ≤18 years old decreased and remained similar to levels observed during previous seasons at this time.

Outbreaks in Facilities Serving Children

Total outbreaks in facilities serving children:

- In week 18, six total outbreaks were reported. Three of the six outbreaks were reported in facilities serving children (schools/camps or child daycares). None of the three outbreaks had laboratory evidence of influenza.
  - All three outbreaks were reported in the central region of the state. All three investigations are closed.

Settings:

- The three outbreaks were reported in schools/camps.

Laboratory testing:

- No specimens were available for testing at the Bureau of Public Health Laboratories for these outbreaks.

Control measures:

- Outbreak control measures were reviewed with facility leadership for all three outbreaks.

Hospitalizations and deaths:

- No hospitalizations or deaths were reported for any of these outbreaks.

Figure 19 shows the distribution of each outbreak etiology reported in facilities serving children (schools/camps and child daycares) as reported into Merlin, week 40, 2017 through week 18, 2018. Outbreaks with multiple etiologies are displayed more than once.

Figure 20 shows the number of outbreaks reported in facilities serving children (schools/camps and child daycares) by single, multiple or unknown etiology as reported into Merlin, week 40, 2017 through week 18, 2018.
At-Risk Populations: Children

Influenza-AssOCIaTED Pediatric Deaths

Figures 21-23 show the number of pediatric deaths associated with influenza infection, week 40, 2013 to week 18, 2018.

In week 18, no new influenza-associated pediatric deaths were confirmed. A total of eight influenza-associated pediatric deaths have been confirmed so far this season. All of the deaths confirmed so far this season have been in unvaccinated children.

While rare, Florida receives reports of influenza-associated pediatric deaths each season. Most deaths occur in unvaccinated children with underlying health conditions. Children, especially those with underlying health conditions, are at higher risk of severe outcomes from influenza infection.

A recent study showed that flu vaccination can reduce a child’s likelihood of dying from influenza by 50-60%. For more information, visit: https://www.cdc.gov/media/releases/2017/p0403-flu-vaccine.html.

At-Risk Populations: Pregnant Women

ESSENCE-FL collects data daily from 323 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” and “cough,” or “fever” and “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.

ED and UCC Visits for ILI by Pregnant Women

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

Pregnant women and their babies are at higher risk for severe complications due to influenza infection.

Figure 24 shows the number of visits* to EDs and UCCs with chief complaints of influenza infection and pregnancy, as reported into ESSENCE-FL, week 40, 2014 to week 18, 2018.

In week 18, the number of visits to EDs and UCCs by pregnant women with mention of influenza increased and was above levels observed during previous seasons 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.
At-Risk Populations: Adults ≥65 Years Old

Background: Adults ≥65 years old are at higher risk for severe complications from influenza infection, including hospitalization and death. While influenza seasons vary in intensity, adults in this age group bear the greatest burden of severe influenza disease. Annual vaccination is the best way to prevent influenza infection. The Centers for Disease Control and Prevention recommends vaccination as long as influenza viruses are circulating. To locate a flu shot near you, please visit: www.floridahealth.gov/findaflushot.

ED and UCC Visits for ILI by Adults ≥65 Years Old

Figure 25 shows the percent of ILI visits among all ED and UCC visits for adults ≥65 years old, as reported into ESSSENCE-FL, week 40, 2014 to week 18, 2018.

In week 18, the percent of ILI visits among all ED and UCC visits for adults ≥65 years decreased and was similar to levels observed in previous seasons at this time.

Outbreaks in Facilities Serving Adults ≥65 Years Old

ILI = influenza-like illness

Figure 26 shows the number of outbreaks with antiviral treatment administered to ill individuals by week in facilities serving adults ≥65 years old (nursing homes, assisted living facilities, and other long-term care facilities).

Figure 27 shows the number of outbreaks with antiviral chemoprophylaxis administered to at-risk individuals by week in facilities serving adults ≥65 years old.

Total outbreaks in facilities serving adults ≥65 years old:

- In week 18, a total of six outbreaks were reported. Three of these six outbreaks were reported in facilities serving adults aged ≥65 years old. One of the three outbreaks has laboratory evidence of influenza; two are ILI.
  - These outbreaks were reported in two counties located in the central region of the state. Of the three outbreaks reported, two have ongoing investigations.

Settings:

- In week 18, one outbreak was reported in a nursing facility and two outbreaks were reported in other long-term care facilities.

Laboratory testing:

- Specimens have been collected and submitted to the Bureau of Public Health Laboratories (BPHL) for testing for one these three outbreaks so far.

Control measures:

- Outbreak control measures have not yet been reviewed with facility leadership for these three outbreaks.
  - Antiviral treatment for ill individuals was recommended by the county health department (CHD) for one of the three outbreaks, but has not been administered by the facility.
  - Antiviral chemoprophylaxis for at-risk individuals was recommended by the CHD for one of the three outbreaks, but has not yet been administered by the facility.

Hospitalizations and deaths:

- No hospitalizations or deaths have been reported for these three outbreaks.
Respiratory Syncytial Virus Surveillance

Week 18: April 29-May 5, 2018

Respiratory syncytial virus (RSV) activity:
- In week 18, the percent of children <5 years old diagnosed with RSV at emergency departments and urgent care centers decreased but remained above levels observed during previous seasons at this time.
- Florida’s southeast region is currently in RSV season.
- No new RSV-associated pediatric deaths were identified in week 18. One RSV-associated pediatric death has been identified so far this year. Premature infants and children <2 years with underlying medical conditions are at higher risk for severe complications from RSV infection. Prophylaxis is available for children who qualify. For more information, contact your physician.
- To learn more about RSV in Florida, please visit: www.floridahealth.gov/rsv.

RSV seasonality:
- RSV activity in Florida typically peaks in November through January, though activity can vary dramatically by region. According to CDC, the start of RSV season is marked by the first two consecutive weeks during which the average percentage of specimens testing positive for RSV is ≥10%.
- Florida has established regular RSV seasons based on these thresholds. Despite circulation at lower levels in different regions at different times of year, RSV is detected in all regions throughout the year.
- Florida’s RSV season is longer than the rest of the nation and has distinct regional seasonality. For more information on RSV seasonality in Florida, see the American Academy of Pediatrics’ (AAP) 2015 Red Book.

RSV surveillance goals:
- A statewide RSV surveillance system was implemented in Florida to support clinical decision-making for prophylaxis of premature infants. The determination of unique seasonal and geographic trends of RSV activity has important implications for prescribing patterns for initiating prophylaxis to children at high risk for RSV infection. The AAP currently recommends that preapproval for prophylactic treatment be made based on state surveillance data.
- See the back page of this report for more information on RSV surveillance systems used in Florida: page 17.

ED and UCC Visits for RSV by Children <5 Years Old

Figure 28 shows the percent of visits to EDs and UCCs with discharge diagnoses that include RSV or RSV-associated illness, as reported by participating ESSSENCE-FL facilities (n=323), week 30, 2014 to week 18, 2018.

In week 18, the percent of children presenting to participating EDs and UCCs for care with RSV decreased but remained above levels observed during previous seasons at this time.

Laboratory RSV Surveillance

Figure 29 shows the percent of specimens testing positive for RSV, as reported by hospital laboratories (n=6), week 30, 2014 to week 18, 2018.

In week 18, the percent of specimens testing positive for RSV decreased.
Other Respiratory Virus Surveillance

Statewide activity:
- In week 18, there was a sharp decrease in the percent of specimens testing positive for parainfluenza 1-3, adenovirus, MPV, and rhinovirus (see figure 30). Preliminary analyses suggest this is a data artifact due to a reduction in the number of facilities submitting data in week 18.

Enterovirus D68 (EV-D68) activity:
- In week 18, no new people tested positive for EV-D68 in Florida.
  - No people have tested positive for EV-D68 by PCR so far in 2018. In 2017, three people tested positive for EV-D68 by PCR in Florida. One person was identified in August 2017 during the investigation of an ILI outbreak. Two people were identified in October 2017 as part of routine outpatient surveillance as a result of Florida participating in the Acute Respiratory Infection Epidemiology and Surveillance (ARIES) Program.

Outbreaks:
- In week 18, one outbreak of influenza B Yamagata lineage, rhinovirus, enterovirus, and adenovirus was reported. No outbreaks of respiratory syncytial virus (RSV), parainfluenza 1-3, or human metapneumovirus (MPV) were reported in week 18.

Laboratory Viral Respiratory Surveillance

Figure 30 shows the percent of laboratory results testing positive for eight common respiratory viruses, as reported by hospital laboratories (n=6), week 40, 2014 to week 18, 2018.

In week 18, there was a sharp decrease in the percent of specimens testing positive for parainfluenza 1-3, adenovirus, MPV, and rhinovirus. Preliminary analyses suggest this is a data artifact due to a reduction in the number of facilities submitting data in week 18.

Non-Influenza ARIES Laboratory Outpatient Surveillance*

ARIES = Acute Respiratory Infection Epidemiology and Surveillance Program
BPHL = Bureau of Public Health Laboratories

Figure 31 shows the number of specimens testing positive for 12 common respiratory viruses, as reported by BPHL and ARIES outpatient providers statewide (n=6), week 40, 2016 to week 17, 2018.

In week 17 (ending April 28, 2018), specimens submitted by ARIES providers tested positive for parainfluenza 3, MPV, rhinovirus, adenovirus, and enterovirus by PCR at BPHL.

*Data presented here are counts, not proportions. The most recent data available are displayed here. ARIES laboratory data are currently considered to be complete through week 17, 2018. Laboratory results for specimens that have not yet been tested in full will be included in future reports.
### Table 2: Week 18 Outbreaks: Summary of Florida Influenza and ILI Outbreaks by Setting

<table>
<thead>
<tr>
<th>Setting</th>
<th>Number of outbreaks (percent of outbreaks)</th>
<th>Implicated viruses</th>
</tr>
</thead>
<tbody>
<tr>
<td>Schools/camps</td>
<td>3 (50%)</td>
<td>3 outbreaks of unknown etiology</td>
</tr>
<tr>
<td>Child daycares</td>
<td>0 (0%)</td>
<td>No outbreaks</td>
</tr>
<tr>
<td>Adult daycares</td>
<td>0 (0%)</td>
<td>No outbreaks</td>
</tr>
<tr>
<td>Correctional facilities and juvenile detention centers</td>
<td>0 (0%)</td>
<td>No outbreaks</td>
</tr>
<tr>
<td>Nursing facilities</td>
<td>1 (17%)</td>
<td>1 outbreak of unknown etiology</td>
</tr>
<tr>
<td>Assisted living facilities</td>
<td>0 (0%)</td>
<td>No outbreaks</td>
</tr>
<tr>
<td>Other long-term care facilities</td>
<td>2 (33%)</td>
<td>1 outbreak of unknown etiology</td>
</tr>
<tr>
<td>Hospitals</td>
<td>0 (0%)</td>
<td>No outbreaks</td>
</tr>
<tr>
<td>Shelters</td>
<td>0 (0%)</td>
<td>No outbreaks</td>
</tr>
<tr>
<td>Other</td>
<td>0 (0%)</td>
<td>No outbreaks</td>
</tr>
<tr>
<td>Total</td>
<td>6 (100%)</td>
<td>1 outbreak of influenza B Yamagata lineage, adenovirus, rhinovirus, and enterovirus</td>
</tr>
<tr>
<td></td>
<td></td>
<td>5 outbreaks of unknown etiology</td>
</tr>
</tbody>
</table>

### Table 3: Season Total: Summary of Florida Influenza and ILI Outbreaks by Setting

<table>
<thead>
<tr>
<th>Setting</th>
<th>Number of outbreaks (percent of outbreaks)</th>
<th>Implicated viruses</th>
</tr>
</thead>
<tbody>
<tr>
<td>Schools/camps</td>
<td>130 (26%)</td>
<td>1 outbreak of influenza A (H3)</td>
</tr>
<tr>
<td></td>
<td></td>
<td>1 outbreak of influenza A (H3) and influenza B Yamagata lineage</td>
</tr>
<tr>
<td></td>
<td></td>
<td>1 outbreak of influenza A (H3) and influenza B unspecified</td>
</tr>
<tr>
<td></td>
<td></td>
<td>1 outbreak of influenza A 2009 (H1N1)</td>
</tr>
<tr>
<td></td>
<td></td>
<td>23 outbreaks of influenza A unspecified</td>
</tr>
<tr>
<td></td>
<td></td>
<td>13 outbreaks of influenza A unspecified and influenza B unspecified</td>
</tr>
<tr>
<td></td>
<td></td>
<td>1 outbreak of influenza A unspecified, influenza B unspecified, and human</td>
</tr>
<tr>
<td></td>
<td></td>
<td>metapneumovirus (MPV)</td>
</tr>
<tr>
<td></td>
<td></td>
<td>2 outbreaks of influenza B Yamagata lineage</td>
</tr>
<tr>
<td></td>
<td></td>
<td>7 outbreaks of influenza B unspecified</td>
</tr>
<tr>
<td></td>
<td></td>
<td>1 outbreak of influenza B unspecified and Streptococcal pharyngitis</td>
</tr>
<tr>
<td></td>
<td></td>
<td>16 outbreaks of influenza unspecified</td>
</tr>
<tr>
<td></td>
<td></td>
<td>1 outbreak of influenza unspecified and respiratory syncytial virus (RSV)</td>
</tr>
<tr>
<td></td>
<td></td>
<td>1 outbreak of RSV</td>
</tr>
<tr>
<td></td>
<td></td>
<td>61 outbreaks of unknown etiology</td>
</tr>
<tr>
<td>Child daycares</td>
<td>85 (17%)</td>
<td>1 outbreak of influenza A (H3)</td>
</tr>
<tr>
<td></td>
<td></td>
<td>18 outbreaks of influenza A unspecified</td>
</tr>
<tr>
<td></td>
<td></td>
<td>7 outbreaks of influenza A unspecified and influenza B unspecified</td>
</tr>
<tr>
<td></td>
<td></td>
<td>1 outbreak of influenza A unspecified, influenza B unspecified, and RSV</td>
</tr>
<tr>
<td></td>
<td></td>
<td>2 outbreaks of influenza B unspecified</td>
</tr>
<tr>
<td></td>
<td></td>
<td>18 outbreaks of influenza unspecified</td>
</tr>
<tr>
<td></td>
<td></td>
<td>8 outbreaks of RSV</td>
</tr>
<tr>
<td></td>
<td></td>
<td>1 outbreak of rhinovirus</td>
</tr>
<tr>
<td></td>
<td></td>
<td>28 outbreaks of unknown etiology</td>
</tr>
<tr>
<td>Adult daycares</td>
<td>2 (0.4%)</td>
<td>1 outbreak of influenza A (H3)</td>
</tr>
<tr>
<td></td>
<td></td>
<td>1 outbreak of influenza B unspecified</td>
</tr>
<tr>
<td>Correctional facilities and juvenile detention centers</td>
<td>18 (4%)</td>
<td>8 outbreaks of influenza A (H3)</td>
</tr>
<tr>
<td></td>
<td></td>
<td>2 outbreaks of influenza A (H3) and influenza A 2009 (H1N1)</td>
</tr>
<tr>
<td></td>
<td></td>
<td>2 outbreaks of influenza A (H3) and influenza B Yamagata lineage</td>
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<tr>
<td></td>
<td></td>
<td>1 outbreak of influenza A unspecified</td>
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<tr>
<td></td>
<td></td>
<td>4 outbreaks of influenza B Yamagata lineage</td>
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<tr>
<td></td>
<td></td>
<td>1 outbreak of adenovirus</td>
</tr>
<tr>
<td>Nursing facilities</td>
<td>84 (17%)</td>
<td>22 outbreaks of influenza A (H3)</td>
</tr>
<tr>
<td></td>
<td></td>
<td>1 outbreak of influenza A (H3) and influenza A 2009 (H1N1)</td>
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<tr>
<td></td>
<td></td>
<td>1 outbreak of influenza A (H3), influenza B unspecified, and RSV</td>
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<tr>
<td></td>
<td></td>
<td>1 outbreak of influenza A (H3) and parainfluenza 1</td>
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<tr>
<td></td>
<td></td>
<td>1 outbreak of influenza A 2009 (H1N1)</td>
</tr>
<tr>
<td></td>
<td></td>
<td>20 outbreaks of influenza A unspecified</td>
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<tr>
<td></td>
<td></td>
<td>7 outbreaks of influenza A unspecified and influenza B unspecified</td>
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<tr>
<td></td>
<td></td>
<td>3 outbreaks of influenza B Yamagata lineage</td>
</tr>
<tr>
<td></td>
<td></td>
<td>1 outbreak of influenza B Yamagata lineage and coronavirus HKU1</td>
</tr>
<tr>
<td></td>
<td></td>
<td>1 outbreak of influenza B Yamagata lineage and MPV</td>
</tr>
<tr>
<td></td>
<td></td>
<td>1 outbreak of influenza B Yamagata lineage and RSV</td>
</tr>
<tr>
<td></td>
<td></td>
<td>8 outbreaks of influenza B unspecified</td>
</tr>
<tr>
<td></td>
<td></td>
<td>3 outbreaks of influenza unspecified</td>
</tr>
<tr>
<td></td>
<td></td>
<td>1 outbreak of RSV and rhinovirus</td>
</tr>
<tr>
<td></td>
<td></td>
<td>13 outbreaks of unknown etiology</td>
</tr>
</tbody>
</table>

Table 3 continued on page 15.
<table>
<thead>
<tr>
<th>Setting</th>
<th>Number of outbreaks (percent of outbreaks)</th>
<th>Implicated viruses</th>
</tr>
</thead>
</table>
| Assisted living facilities | 62 (12%)                                  | - 8 outbreaks of influenza A (H3)  
- 2 outbreaks of influenza A (H3) and influenza A 2009 (H1N1)  
- 1 outbreak of influenza A (H3), influenza B unspecified, parainfluenza 1, and MPV  
- 1 outbreak of influenza A 2009 (H1N1)  
- 25 outbreaks of influenza A unspecified  
- 4 outbreaks of influenza A unspecified and influenza B unspecified  
- 4 outbreaks of influenza B unspecified  
- 5 outbreaks of influenza unspecified  
- 2 outbreaks of RSV  
- 10 outbreaks of unknown etiology |
| Other long-term care facilities | 99 (20%)                                  | - 16 outbreaks of influenza A (H3)  
- 1 outbreak of influenza A (H3), influenza A 2009 (H1N1), and influenza B Yamagata lineage  
- 2 outbreaks of influenza A (H3) and influenza B unspecified  
- 1 outbreak of influenza A (H3) and adenovirus  
- 1 outbreak of influenza A (H3) and coronavirus HKU1  
- 1 outbreak of influenza A (H3) and coronavirus NL63  
- 1 outbreak of influenza A (H3) and rhinovirus  
- 1 outbreak of influenza A (H3), rhinovirus, and enterovirus  
- 1 outbreak of influenza A 2009 (H1N1)  
- 25 outbreaks of influenza A unspecified  
- 16 outbreaks of influenza A unspecified and influenza B unspecified  
- 2 outbreaks of influenza B Yamagata lineage and MPV  
- 1 outbreak of influenza B Yamagata lineage, rhinovirus, adenovirus, and enterovirus  
- 1 outbreak of influenza B Yamagata lineage, influenza A unspecified, and RSV  
- 6 outbreaks of influenza B unspecified  
- 3 outbreaks of influenza unspecified  
- 1 outbreak of rhinovirus  
- 18 outbreaks of unknown etiology |
| Hospitals               | 6 (1%)                                    | - 1 outbreak of influenza A (H3) and influenza B Yamagata lineage  
- 1 outbreak of influenza A 2009 (H1N1)  
- 2 outbreaks of influenza A unspecified  
- 1 outbreak of influenza B unspecified  
- 1 outbreak of RSV |
| Shelters               | 2 (0.4%)                                  | - 1 outbreak of influenza A (H3)  
- 1 outbreak of influenza A (H3) and rhinovirus |
| Other                  | 14 (3%)                                   | - 3 outbreaks of influenza A (H3)  
- 5 outbreaks of influenza A unspecified  
- 1 outbreak of influenza A unspecified and influenza B unspecified  
- 1 outbreak of influenza unspecified  
- 4 outbreaks of unknown etiology |
| Total                  | 502 (100%)                                | - 60 outbreaks of influenza A (H3)  
- 5 outbreaks of influenza A (H3) and influenza A 2009 (H1N1)  
- 1 outbreak of influenza A (H3), influenza A 2009 (H1N1), and influenza B Yamagata lineage  
- 4 outbreaks of influenza A (H3) and influenza B Yamagata lineage  
- 4 outbreaks of influenza A (H3) and influenza B unspecified  
- 1 outbreak of influenza A (H3), influenza B unspecified, parainfluenza 1, and MPV  
- 1 outbreak of influenza A (H3) and adenovirus  
- 1 outbreak of influenza A (H3) and coronavirus HKU1  
- 1 outbreak of influenza A (H3) and coronavirus NL63  
- 1 outbreak of influenza A (H3) and parainfluenza 1  
- 2 outbreaks of influenza A (H3) and rhinovirus  
- 1 outbreak of influenza A (H3), rhinovirus, and enterovirus  
- 5 outbreaks of influenza A 2009 (H1N1)  
- 119 outbreaks of influenza A unspecified  
- 48 outbreaks of influenza A unspecified and influenza B unspecified  
- 1 outbreak of influenza A unspecified, influenza B unspecified, and MPV  
- 1 outbreak of influenza A unspecified, influenza B unspecified, and RSV  
- 1 outbreak of influenza A unspecified and RSV  
- 11 outbreaks of influenza B Yamagata lineage  
- 1 outbreak of influenza B Yamagata lineage, influenza A unspecified, and RSV  
- 1 outbreak of influenza B Yamagata lineage and coronavirus HKU1  
- 2 outbreaks of influenza B Yamagata lineage and MPV  
- 1 outbreak of influenza B Yamagata lineage and RSV  
- 1 outbreak of influenza B Yamagata lineage, rhinovirus, adenovirus, and enterovirus  
- 29 outbreaks of influenza B unspecified  
- 1 outbreak of influenza B unspecified and Streptococcal pharyngitis  
- 46 outbreaks of influenza unspecified  
- 1 outbreak of influenza unspecified and RSV  
- 12 outbreaks of RSV  
- 1 outbreak of RSV and rhinovirus  
- 2 outbreaks of rhinovirus  
- 1 outbreak of adenovirus  
- 134 outbreaks of unknown etiology |
In week 18, six outbreaks were reported in Merlin: one with laboratory confirmation of influenza and five ILI. Of the six outbreaks reported during week 18 (ending May 5, 2018), one select outbreak is summarized below.

**Pinellas County**

- **A long-term care facility** reported 14 individuals with ILI. Three specimens were collected from ill individuals for testing at BPHL. One specimen tested positive for influenza B Yamagata lineage, one specimen tested positive for influenza B Yamagata lineage, rhinovirus, and enterovirus, and one specimen tested positive for adenovirus by PCR at BPHL. Influenza vaccination status for the 2017-18 season for residents and staff is currently unknown. Information regarding control measures is not yet available. This investigation is ongoing.

In week 17 (ending April 28, 2018), three outbreaks were reported into Merlin. No updates were made to select outbreaks during week 18.
Florida ILINet - Data source for figures 2 and 16

- ILINet is a nationwide surveillance system composed of sentinel providers, predominately outpatient health care providers. Florida has 118 sentinel providers enrolled in ILINet who submit weekly influenza-like illness (ILI) and total visit counts, as well as submit ILI specimens to the Bureau of Public Health Laboratories (BPHL) for confirmatory testing.

ESSENCE-FL Syndromic Surveillance and Vital Statistics Portal - Data source for figures 1, 3-4, 8-15, 17-18, 24-25, 28; map 4

- Electronic Surveillance System for the Early Notification of Community-based Epidemics (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. Participating EDs and UCCs (n=323) electronically transmit visit data into ESSENCE-FL daily or hourly.

- For statewide and regional data on ILI, visits are counted as ED or UCC visits to participating facilities that include the words “influenza” or “flu” in patient chief complaints. Chief complaints with the words “fever” and “cough,” or “fever” and “sore throat” are also counted as ILI.

- For pneumonia and influenza (P&I) mortality 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. Deaths counts are aggregated and presented by date of death.

- For respiratory syncytial virus (RSV) surveillance, visits are counted as ED or UCC visits to participating facilities for which RSV or RSV-associated illness is included in the discharge diagnosis. Death record literals are also queried using a free-text query that searches for references to RSV on death certificates for children <18 years old. Any mention of RSV in the death certificate literals, with certain exceptions, is counted as an RSV-associated pediatric death.

- For RSV mortality surveillance, death record literals are queried using a free-text query that searches for references to RSV on death certificates. Any mention of RSV, syncytial, and bronchiolitis in the death certificate literals, with certain exceptions, is counted as a RSV death.

County Influenza Activity in EpiGateway - Data source for figure 5, 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 Merlin - Data source for figures 6, 19-20, 26-27, map 3, and tables 2 and 3

- Merlin tracks influenza and ILI outbreak investigations by CHDs. Reports by CHDs include the type of respiratory disease causing the outbreak and settings where outbreaks are occurring. CHD epidemiologists report outbreaks of influenza or ILI into Merlin, Florida’s reportable disease surveillance 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 figure 7 and table 1

- BPHL performs confirmatory testing and subtyping on surveillance specimens from sentinel providers, outbreak investigations, patients with severe or unusual influenza presentations, and medical examiners.


Laboratory Viral Respiratory Surveillance - Data sources for figures 29-30

- The National Respiratory and Enteric Virus Surveillance System (NREVSS) and Electronic Laboratory Reporting (ELR) collect data from laboratories in Florida on a weekly basis and monitor temporal and geographic patterns of eight commonly circulating respiratory viruses. NREVSS data is collected by the Centers for Disease Control and Prevention (CDC) and ELR data is collected by the Florida Department of Health (DOH).

Acute Respiratory Infection Epidemiology and Surveillance (ARIES) Program - Data source for figure 31

- Acute Respiratory Infection Epidemiology and Surveillance Program (ARIES) is a nationwide surveillance system composed of nine participating jurisdictions. Florida has seven sentinel providers enrolled in ARIES who submit weekly ILI counts, as well as submit ILI specimens to BPHL for testing.

Case-Based Influenza Surveillance

- Death in a child whose laboratory-confirmed influenza infection has been identified as a contributing to the child’s death is reportable in Florida. Influenza-associated pediatric deaths are documented by CHDs in Merlin.

- In addition, an individual of any age infected with novel or pandemic influenza strain(s) is reportable in Florida. Pandemic strain influenza cases are documented by CHDs in Merlin.

- For more information about reportable diseases, please visit www.Floridahealth.gov/diseasereporting.