



## Summary

Week 12: March 18-24, 2018

### State influenza and influenza-like illness (ILI) activity:

- In week 12, activity levels continued to decrease. Despite this decrease, levels were above levels observed during previous seasons at this time, indicating this season is not over yet. Data indicate influenza activity peaked during week 5 (ending February 3, 2018).
- No new influenza-associated pediatric deaths were confirmed. Six 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: all six had laboratory confirmation of influenza. As of week 12 (ending March 24, 2018), 478 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 with laboratory-confirmed influenza. In week 12, 11 cases were reported, bringing the total number of cases reported up to 317 since February 1, 2018. Of the 203 cases with known vaccination status, the majority (69%) were unvaccinated individuals. Of the 314 cases with medical histories available, the majority (89%) had underlying medical conditions.

### 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.
- The Centers for Disease Control and Prevention (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.

### Treatment:

- In severe seasons like this one, the use of antivirals is especially important.
- CDC recommends the use of antiviral treatment as soon as possible for all hospitalized, severely ill, and people who are at higher risk for complications with suspect influenza: children <2 years old, adults ≥65 years old, pregnant women, and those with underlying medical conditions. Administer treatment within 48 hours of illness onset (but treatment administered after this period can still be beneficial). A recent CDC health advisory stresses the importance of rapid and early antiviral treatment this season. Visit: [http://www.floridahealth.gov/diseases-and-conditions/influenza/\\_documents/cdc-han-influenza-12-27-2017.pdf](http://www.floridahealth.gov/diseases-and-conditions/influenza/_documents/cdc-han-influenza-12-27-2017.pdf).
  - Clinicians should not wait for laboratory confirmation to administer antivirals to people with suspect influenza.

### National influenza activity:

- Influenza activity decreased, but remained well above the national baseline.
- As in Florida, influenza A (H3) has been the most common strain of influenza identified, however, influenza B activity has continued to increase in recent weeks.
  - This late-season circulation of influenza B is expected.

## Weekly State Influenza Activity

### Regional

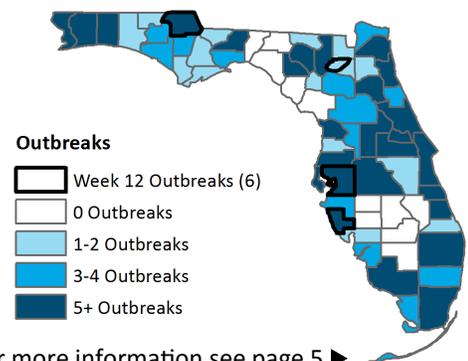
For more information see page 2 ▶

## Predominately Circulating Strain

### A (H3)

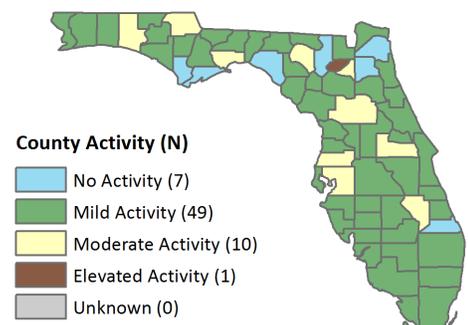
For more information see page 6 ▶

## Influenza and ILI Outbreaks Reported as of 3/24/2018



For more information see page 5 ▶

## County Influenza Activity



For more information see page 4 ▶

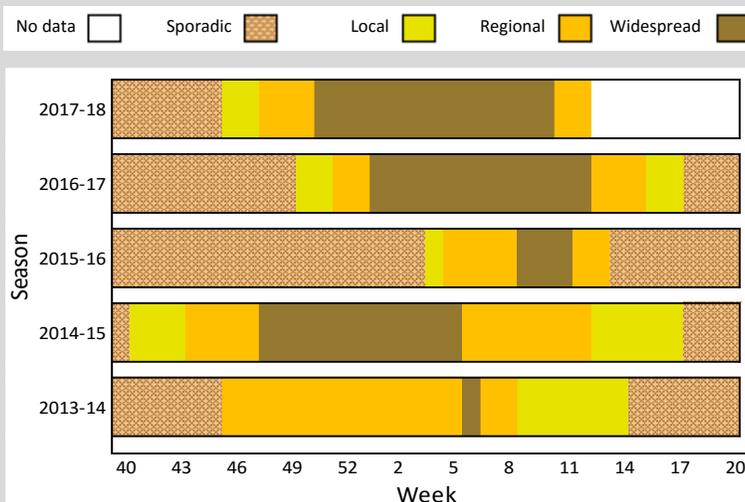
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Weekly State Influenza Activity Reporting

Below is the state influenza activity level reported to the Centers for Disease Control and Prevention each week since the 2013-14 influenza season. **Florida reported regional influenza activity for week 12.**



Influenza activity in Florida can vary widely from season to season. This unpredictability underscores the importance of influenza surveillance in Florida.

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

ED and UCC Visits for ILI by Flu Season

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

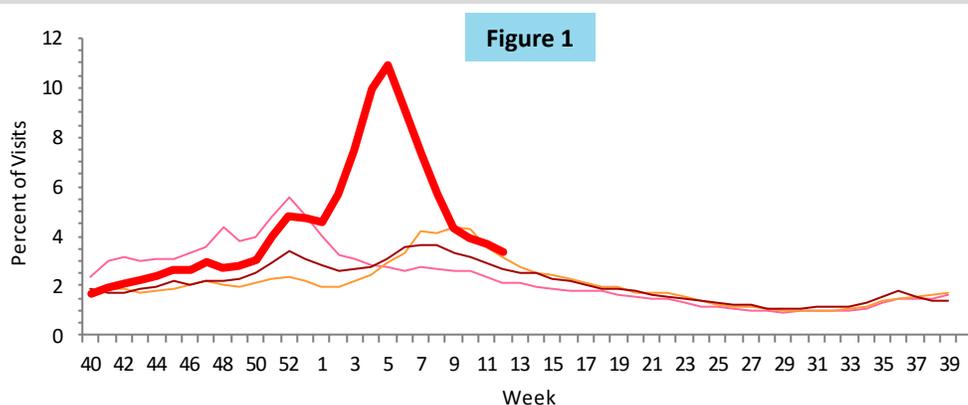


Figure 1 shows the percent of visits for ILI from ED and UCC chief complaint data for ESSENCE-FL participating facilities (n=320), week 40, 2014 to week 12, 2018.

In week 12, the percent of visits to EDs and UCCs decreased statewide. Levels were slightly above those observed during previous seasons at this time.

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

2017-18 2016-17 2015-16 2014-15

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.

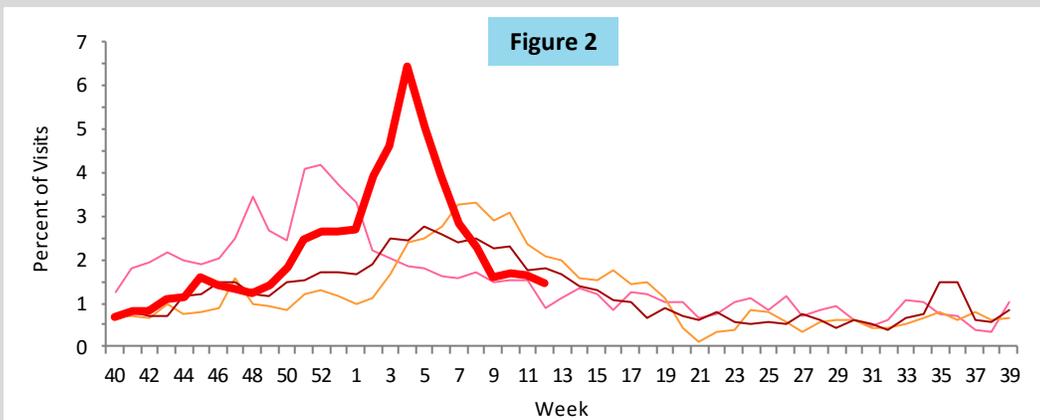
2017-18      2016-17      2015-16      2014-15

## Visits for ILI to Outpatient Providers by Flu Season

ILI = influenza-like illness

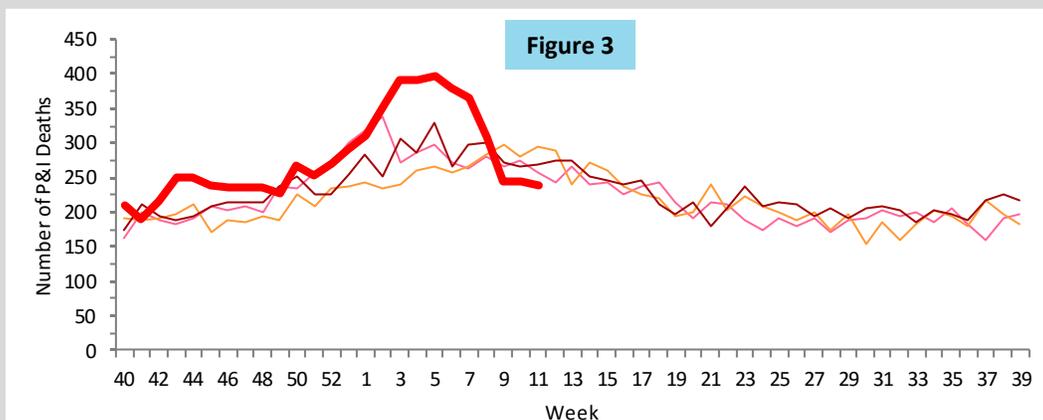
**Figure 2** shows the percent of visits for ILI reported by ILINet outpatient providers statewide (n=44), week 40, 2014 to week 12, 2018. For ILINet, ILI is defined as a fever  $\geq 100^{\circ}\text{F}$  AND sore throat and/or cough in the absence of another known cause.

**In week 12, the percent of visits for ILI reported by ILINet outpatient providers decreased and was similar to levels observed in previous seasons 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, 2014 to week 11, 2018.

**In week 11 (ending March 17, 2018), 239 P&I deaths were reported.**

**The preliminary number of P&I deaths decreased and remained below levels observed during previous seasons at this time.**

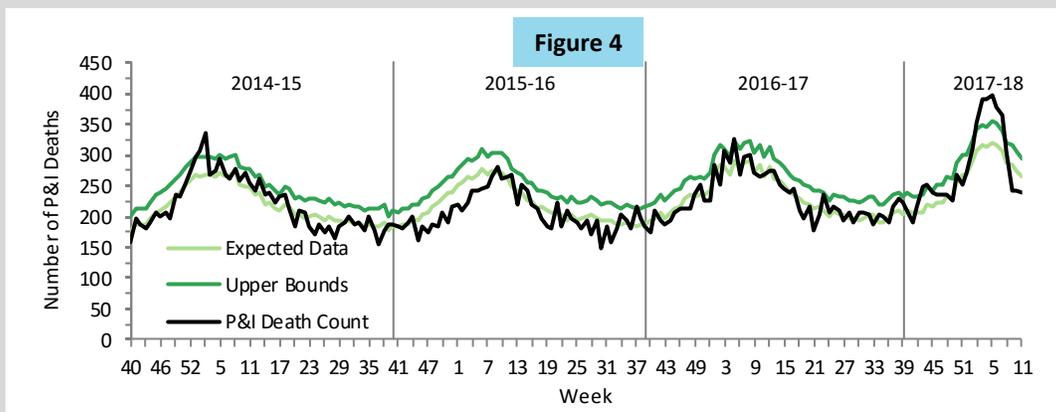
## P&I Deaths\* Multi-Year Regression Model

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 11 (ending March 17, 2018), 239 preliminary estimated P&I deaths were reported.**

**The upper bound of the 95% confidence interval for prediction is 296 deaths, with no excess deaths.**

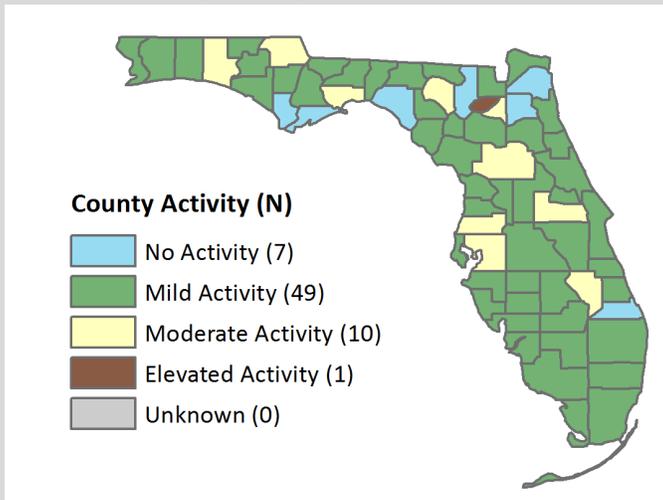


\* Current season P&I death counts are preliminary estimates and may change as more data are received. The most recent data available are displayed here. Vital statistics death records received in ESSENCE-FL are considered to be complete through week 11, 2018.

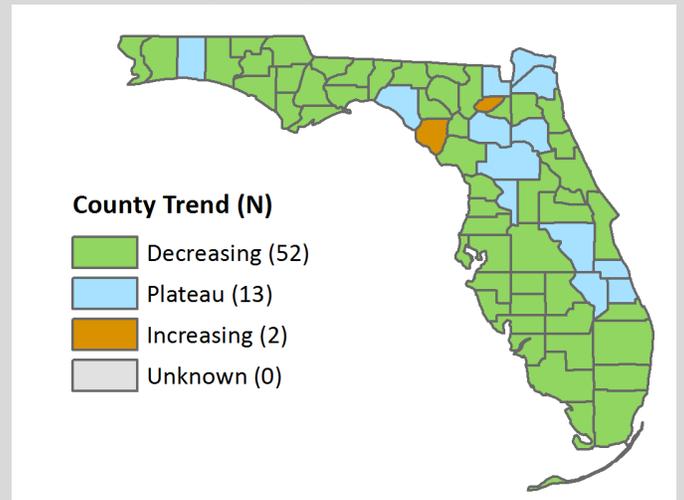
County influenza activity data are reported by county health departments through EpiGateway on a weekly basis. Information is used to determine county activity and includes laboratory results, outbreak reports, and ILI activity. **The figures below reflect a county health department's assessment of influenza activity within their county. For week 12, two counties reported increasing activity, 13 counties reported activity at a plateau and 52 counties reported decreasing activity.**

## County Influenza Activity

**Map 1** County Influenza Activity Level for Week 12 Reported by 9:30 a.m. March 28, 2018



**Map 2** County Influenza Activity Trend for Week 12 Reported by 9:30 a.m. March 28, 2018



As of 9:30 a.m. March 28, 2018, a total of 67 (100%) counties 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.

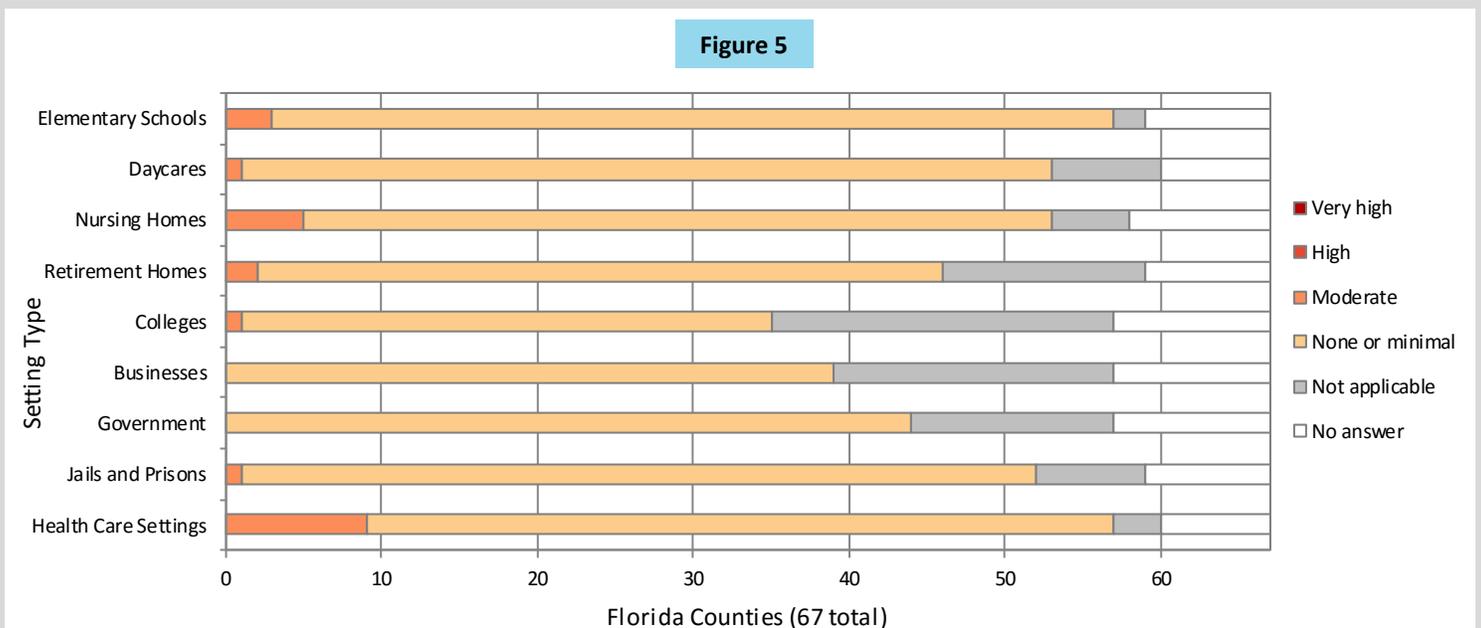
## County ILI Activity by Setting Type

ILI = influenza-like illness

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 12, 2018.

**Figure 5**



## Reported Influenza and ILI Outbreaks

ILI = influenza-like illness

Map 3 shows influenza and ILI outbreaks by county for week 40, 2017 through week 12, 2018, as reported into Merlin.

### Total Outbreaks:

- In week 12, six outbreaks were reported: all six had laboratory evidence of influenza infection.
  - Influenza and ILI outbreaks were reported in four counties located in the central and northern regions of the state (see map 3). Of the six outbreaks reported, two have ongoing investigations.
- The number of outbreaks reported increased in week 12 (see figure 6).
  - An increase in influenza B activity has been observed in recent weeks. As such, outbreaks of influenza B are expected in the coming weeks. In week 12, an equal number of influenza A and influenza B outbreaks were reported.
- A total of 478 outbreaks have been reported so far this season. Of the 478 outbreaks reported, 439 (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 12, outbreaks occurred in the following settings: two in nursing facilities, three in other long-term care facilities, and one in a correctional facility/juvenile detention center.
- In the 2017-18 season, outbreaks occurred in the following settings: 55 (12%) in assisted living facilities, 79 (17%) in nursing facilities, 98 (21%) in other long-term care facilities, two (0.4%) in adult daycares, 83 (17%) in child daycares, 124 (26%) in schools/camps, 17 (4%) in correctional facilities/juvenile detention centers, six (1%) in hospitals, two (0.4%) in shelters, and 12 (3%) in other settings (figure 6).

### Laboratory Testing:

- Two of the six outbreaks reported in week 12 have had specimens collected and submitted to the Bureau of Public Health Laboratories for testing thus far.

### Control Measures:

- Outbreak control measures were reviewed with facility leadership for five of the six reported outbreaks by county health departments (CHDs).
  - Facilities administered antiviral treatment to ill individuals in four of five outbreaks where CHDs recommended antiviral treatment.
  - Facilities administered antiviral chemoprophylaxis to at-risk individuals in four of six outbreaks where CHDs recommended antiviral chemoprophylaxis.

### Hospitalizations and Deaths:

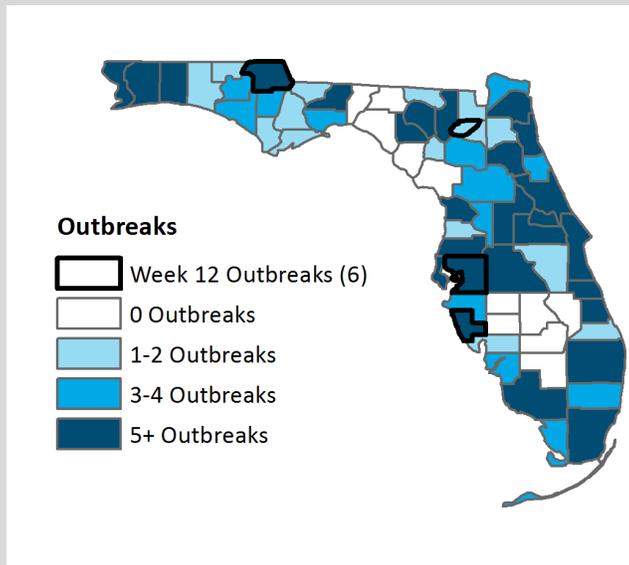
- Of the six outbreaks reported in week 12, three outbreaks had hospitalizations. One death was reported in one of the six outbreaks reported in week 12.
- Of the 478 outbreaks reported so far this season, people were hospitalized in 118 outbreaks (25%) and deaths were reported in 23 outbreaks (5%).

For detailed information on select outbreaks reported during week 12, see page 16. For updates on select outbreaks reported in week 11 (ending March 17, 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.

Map 3

Influenza and ILI Outbreaks by County  
Week 40, 2017 through Week 12, 2018



## Reported Influenza and ILI Outbreaks by Facility Type

ILI = influenza-like illness

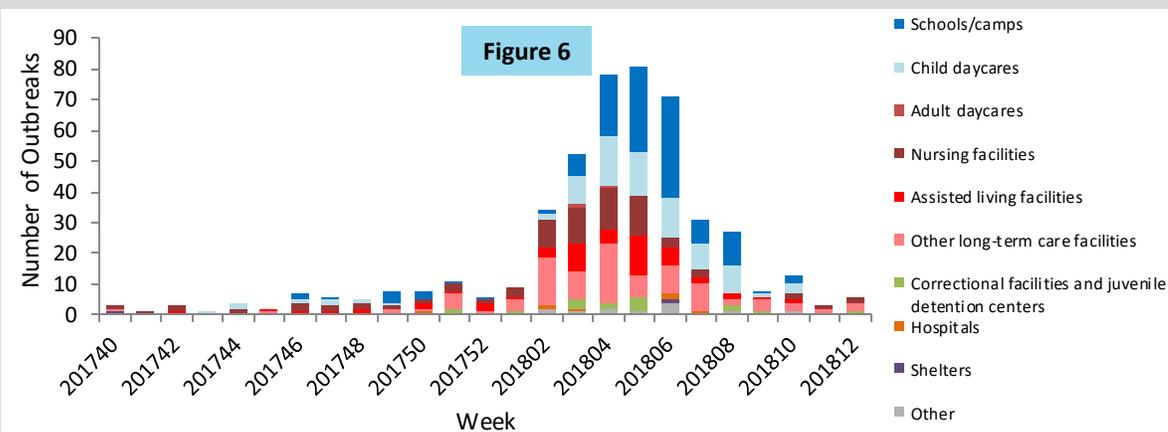
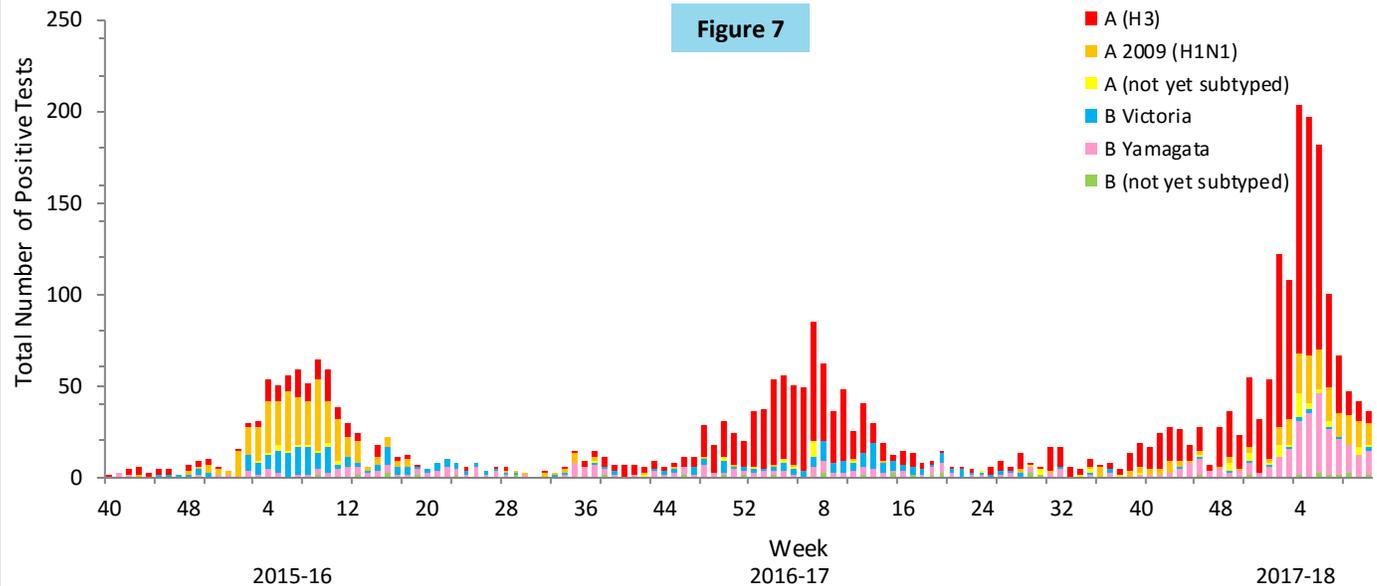


Figure 6 shows the distribution of outbreaks by facility as reported in Merlin, week 40, 2017-week 12, 2018 by facility type.

In week 12, six outbreaks were reported. The number of influenza and ILI outbreaks increased in week 12 but an overall decline in the number of outbreaks has been observed over the last few weeks.

**BPHL Viral Influenza Specimen Testing**

BPHL = Bureau of Public Health Laboratories



**Figure 7**

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

The most common influenza subtype detected at BPHL statewide for the 2017-18 influenza season has been influenza A (H3) for the season, however, in recent weeks, the percentage of specimens testing positive for influenza A viruses declined. The majority of influenza B viruses submitted for testing at BPHL thus far this season tested positive for influenza B 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. March 28, 2018

Influenza Type	Current Week 12	Previous Week 11	Current 2017-18 Season
<b>Total Specimens Tested</b>	<b>35</b>	<b>62</b>	<b>2365</b>
Influenza positive specimens (% of total specimen tested)	<b>26 (74.3%)</b>	<b>36 (58.1%)</b>	<b>1519 (64.2%)</b>
Influenza A 2009 (H1N1) (% of influenza positives)	2 (7.7%)	12 (33.3%)	205 (13.5%)
Influenza A (H3) (% of influenza positives)	8 (30.8%)	7 (19.4%)	953 (62.7%)
Influenza A not yet subtyped (% of influenza positives)	6 (23.1%)	1 (2.8%)	52 (3.4%)
Influenza B Yamagata (% of influenza positives)	9 (34.6%)	13 (36.1%)	283 (18.6%)
Influenza B Victoria (% of influenza positives)	-	2 (5.6%)	15 (1.0%)
Influenza B not yet subtyped (% of influenza positives)	1 (3.9%)	1 (2.8%)	11 (0.7%)

\*“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:

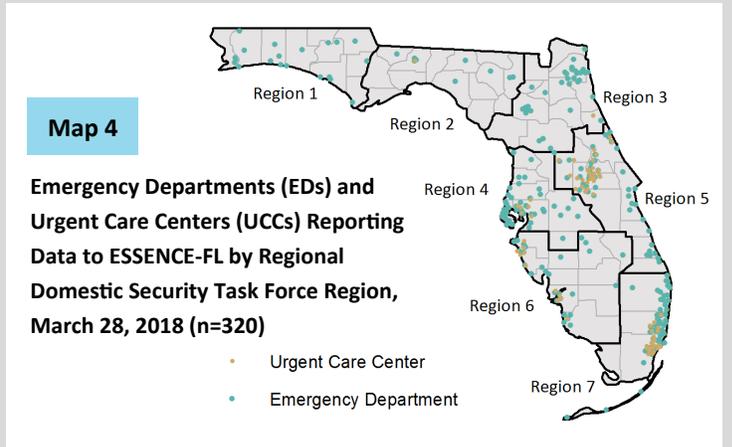
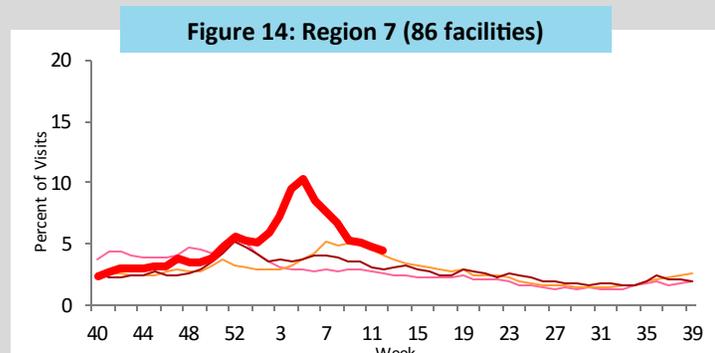
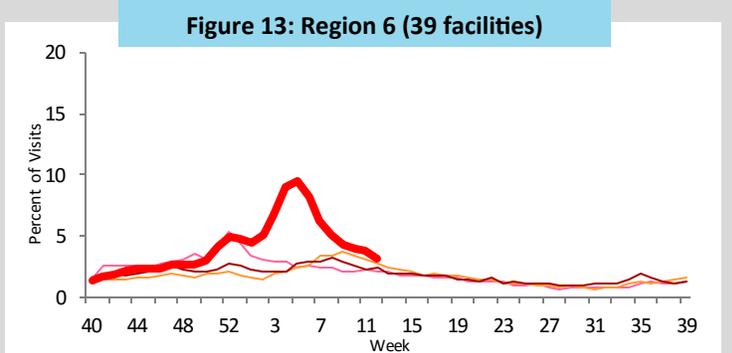
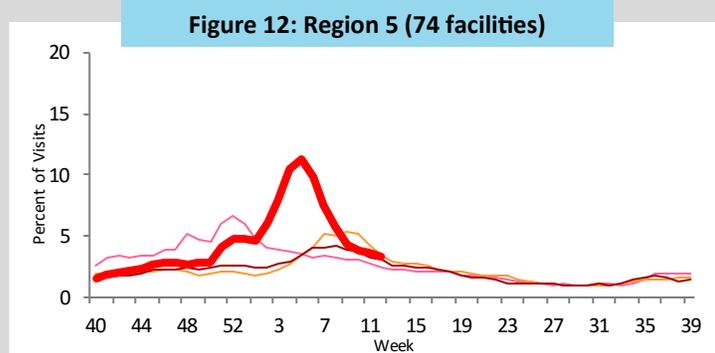
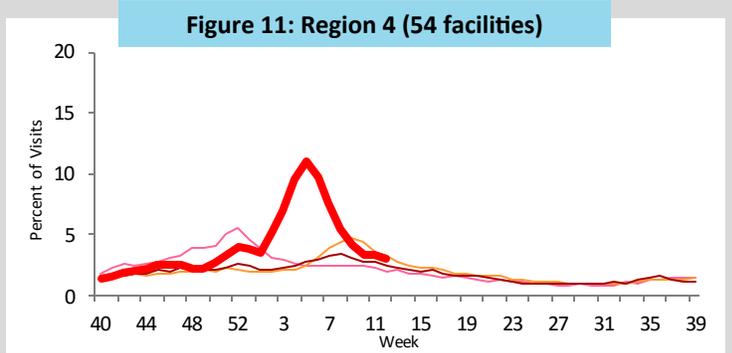
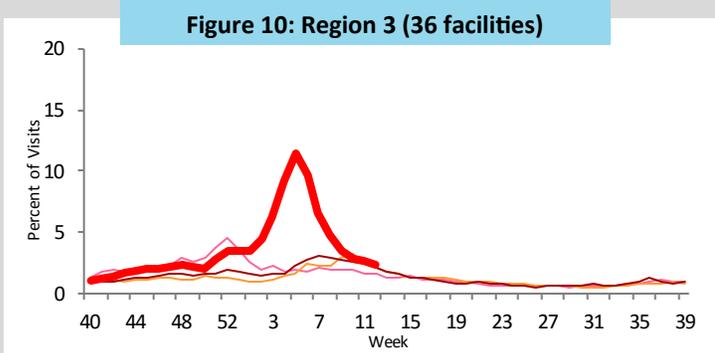
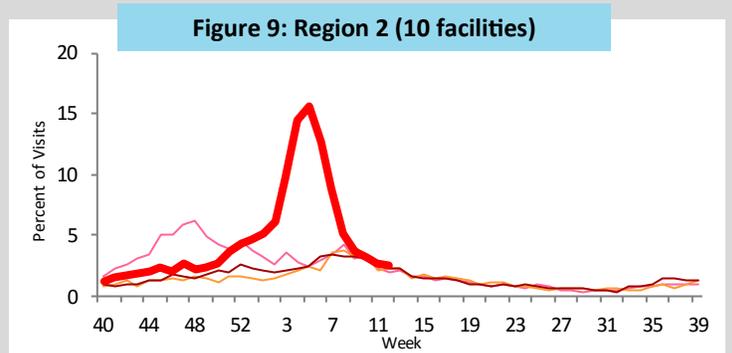
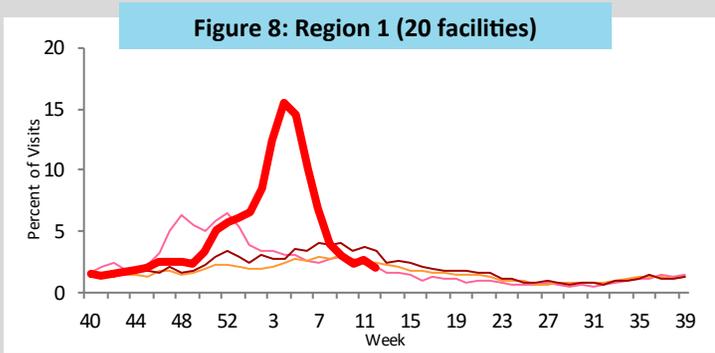
[www.floridahealth.gov/diseases-and-conditions/influenza/\\_documents/flulabreportguide.pdf](http://www.floridahealth.gov/diseases-and-conditions/influenza/_documents/flulabreportguide.pdf)

## ED and UCC Visits for ILI by Region

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

Figures 8-14 show the percent of visits for ILI from ED and UCC chief complaints for ESSENCE-FL participating facilities (n=320), by ESSENCE-FL Regional Domestic Security Task Force regions (see map 4) from week 40, 2014 to week 12, 2018.\* In week 12, the percent

of ED and UCC visits for ILI decreased in all regions. Levels were slightly above those observed in previous seasons at this time in regions 6 and 7. In all other regions, levels were within those observed during previous seasons at this time.



\*There is no week 53 for the 2015-16, 2016-17, and 2017-18 seasons; the week 53 data point for those seasons is an average of weeks 52 and 1.

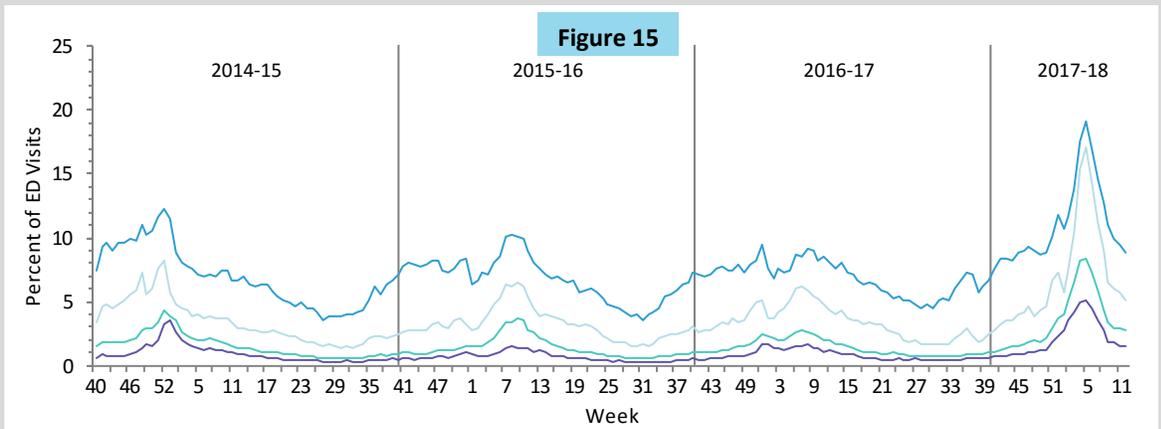
0 to 4 years old    5 to 24 years old    25 to 64 years old    ≥65 years old

## ED and UCC Visits for ILI by Age Group

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

Figure 15 shows the percent of visits for ILI from ED and UCC chief complaints by age group for ESSENCE-FL participating facilities (n=320), week 40, 2014 to week 12, 2018.

In week 12, ED and UCC visits for ILI decreased in all age groups. Levels were similar to those observed in previous seasons at this time in the 25-64 year age group. Levels were above those observed in previous seasons in all other age groups.



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

ILI = influenza-like illness

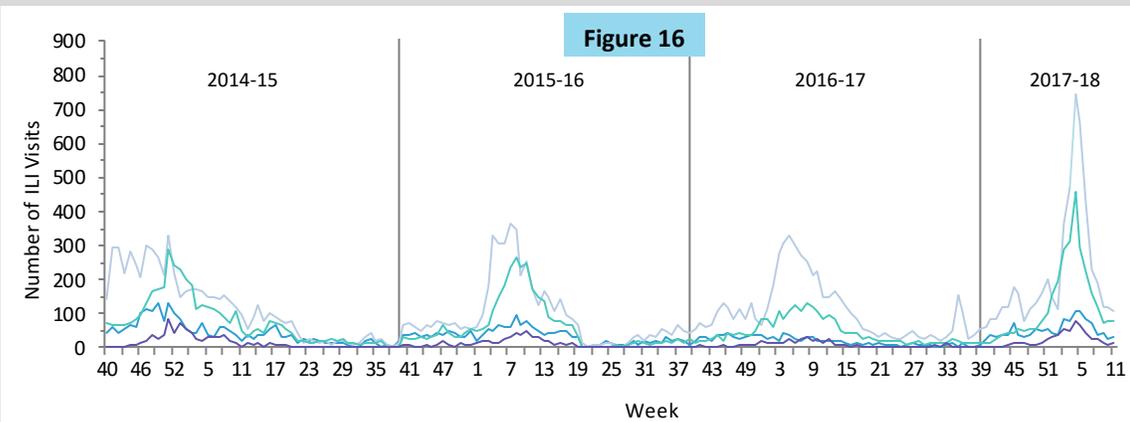


Figure 16 shows the number of visits for ILI reported by ILINet outpatient providers statewide (n=44) by age group, week 40, 2014 to week 12, 2018.

In week 12, the number of visits for ILI decreased in all age groups. Levels were similar to those observed in previous seasons at this time in all age groups.

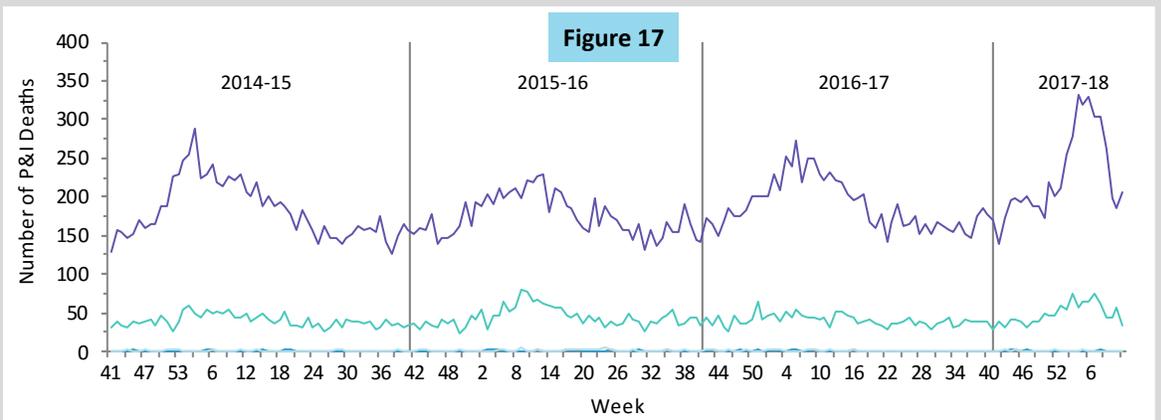
\*Data presented here are counts, not proportions. This is because age group denominator data is not available through ILINet.

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

P&I = pneumonia and influenza

Figure 17 shows P&I deaths\* for all Florida counties by age group, as reported into ESSENCE-FL, week 40, 2014 to week 11, 2018.

In week 11 (ending March 17, 2018), the preliminary number of P&I deaths increased in the ≥65 year age group, remained the same in the 0-4 and 5-24 year age groups, and decreased in the 25-64 year age group. In all age groups, levels were similar to those observed in previous seasons at this time.

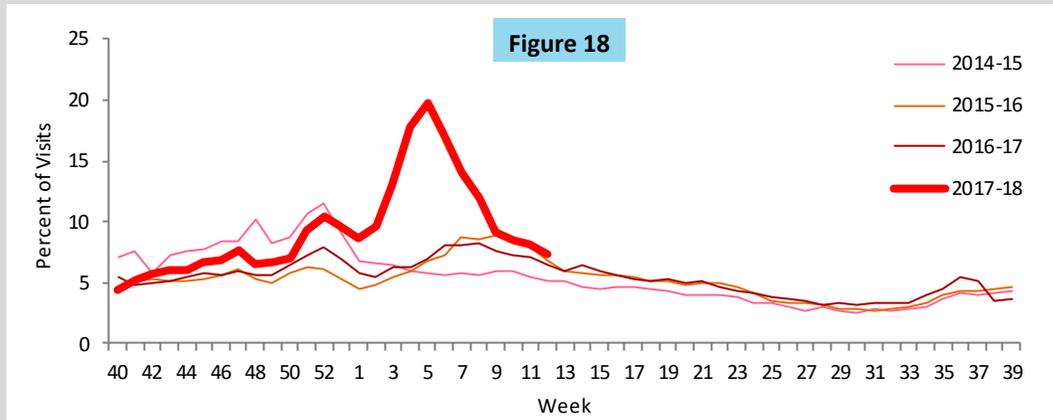


\*Current season P&I death numbers are preliminary estimates and may change as more data are received. The most recent data available are displayed here. Vital statistics death records received in ESSENCE-FL are currently considered to be complete through week 11, 2018.

**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](http://www.floridahealth.gov/findaflushot).

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

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



**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 12, 2018.

**In week 12, the percent of ILI visits among all ED and UCC visits for children ≤18 years old decreased and was slightly above levels observed during previous seasons at this time.**

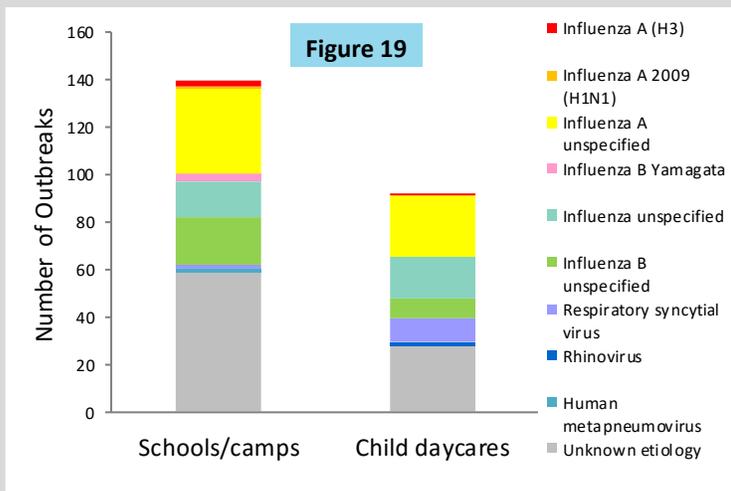
**Children are at higher risk for complications from influenza. CDC recommends vaccination now and as long as influenza viruses are circulating.**

## Outbreaks in Facilities Serving Children

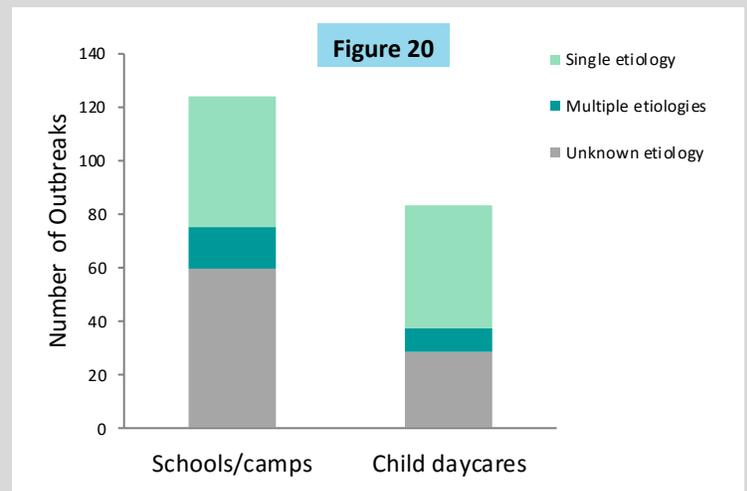
ILI = influenza-like illness

### Total outbreaks in facilities serving children:

- In week 12, six total outbreaks were reported. None of the six outbreaks were reported in facilities serving children (schools/camps and child daycares).



**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 12, 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 12, 2018.

## Influenza-Associated Pediatric Deaths

### Figures 21-23

Figures 21-23 show the number of pediatric deaths associated with influenza infection, week 40, 2013 to week 12, 2018.

In week 12, no new influenza-associated pediatric deaths were confirmed. A total of six 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>.

Figure 21: Influenza-Associated Pediatric Deaths by Vaccination Status

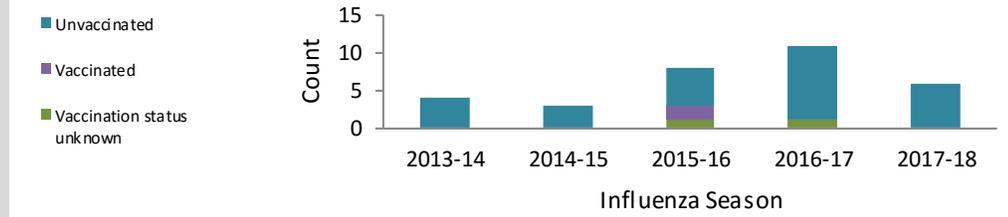


Figure 22: Influenza-Associated Pediatric Deaths by Medical History

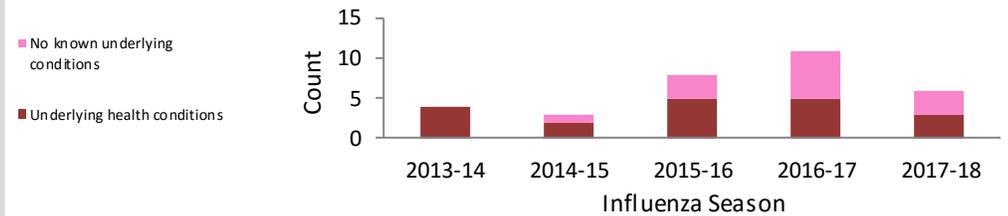
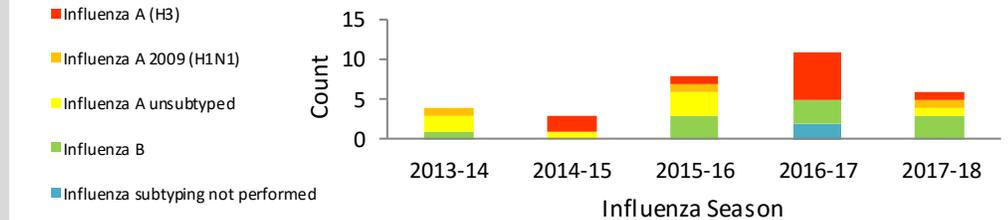


Figure 23: Influenza-Associated Pediatric Deaths by Strain Type



# At-Risk Populations: Pregnant Women

ESSENCE-FL collects data daily from 320 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

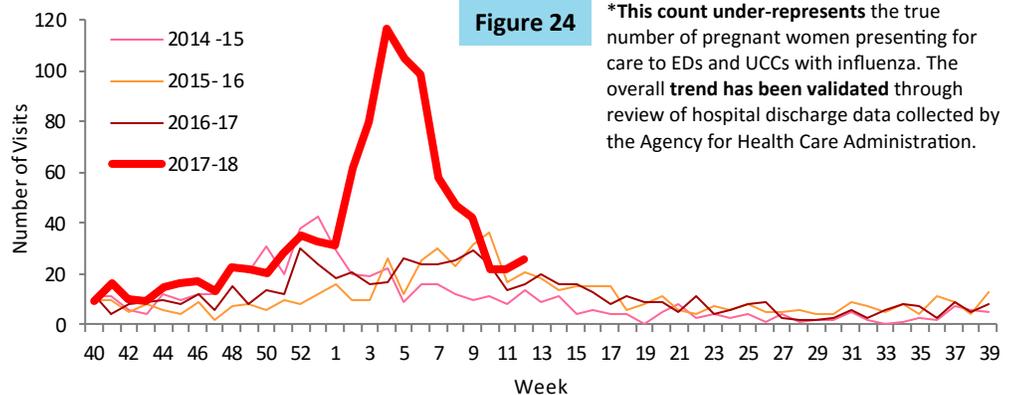
ED = emergency department, UCC = urgent care center, ILI = influenza-like illness

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 12, 2018.

In week 12, the number of visits to EDs and UCCs by pregnant women with mention of influenza increased slightly and was slightly above levels observed during previous seasons at this time.

CDC recommends vaccination now and as long as influenza viruses are circulating. Pregnant women who have not been vaccinated yet should get vaccinated as soon as possible.



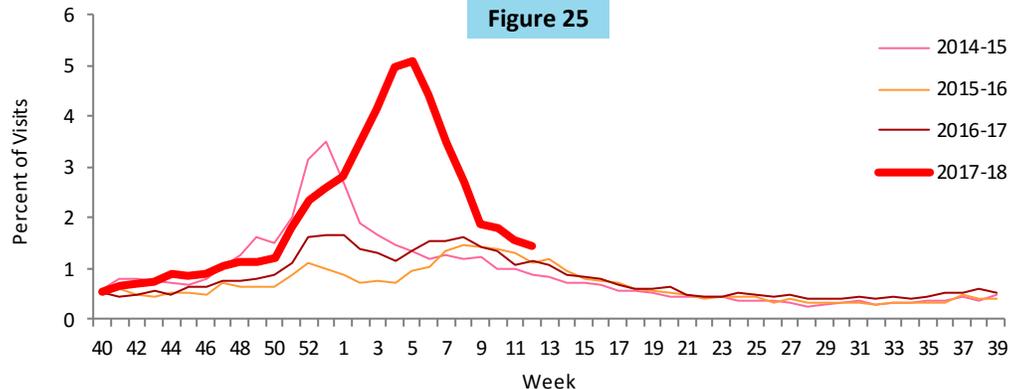
**Background:** Adults ≥65 years old are at higher risk for severe complications from influenza infection, including hospitalization and death. While influenza seasons vary in intensity, adults in this age group bear the greatest burden of severe influenza disease. Annual vaccination is the best way 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](http://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 ESSENCE-FL, week 40, 2014 to week 12, 2018.

In week 12, the percent of ILI visits among all ED and UCC visits for adults ≥65 years old decreased but remained above levels observed in previous seasons at this time.

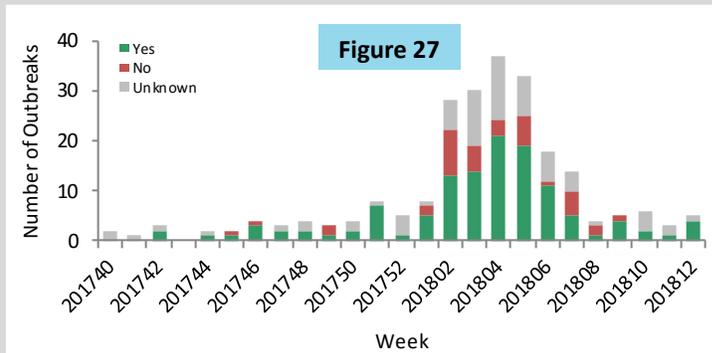
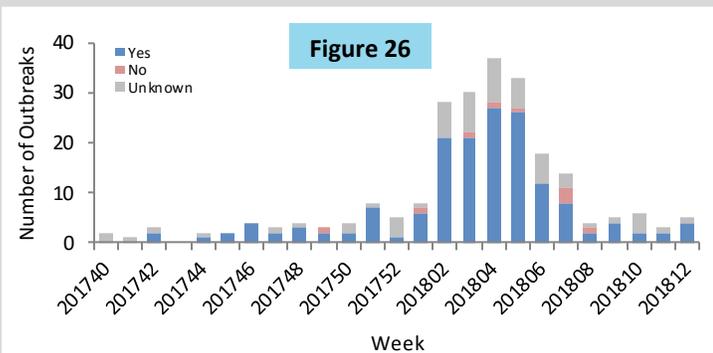
CDC recommends vaccination now and as long as influenza viruses are circulating. People in this age group who have not yet been vaccinated for the 2017-18 season should get vaccinated as soon as possible.



## 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 12, a total of six outbreaks were reported. Five of these six outbreaks were reported in facilities serving adults ≥65 years old. All five outbreaks had laboratory evidence of influenza.
  - Influenza and ILI outbreaks in facilities serving adults ≥65 years old were reported in three counties located in the central and northwestern regions of the state. Of the five outbreaks reported in facilities serving adults ≥65 years old, two have ongoing investigations.

### Settings:

- In week 12, outbreaks occurred in the following settings: two in a nursing facilities and three in other long-term care facilities.

### Laboratory testing:

- Of the five outbreaks reported in facilities serving adults ≥65 years old during week 12, one had specimens collected and submitted to the Bureau of Public Health Laboratories for testing so far.

### Control measures:

- Outbreak control measures were reviewed with facility leadership for four of the five outbreaks reported by county health departments (CHDs).
  - Facilities administered antiviral treatment for ill individuals in three of the four outbreaks where CHDs recommended antiviral treatment.
  - Facilities administered antiviral chemoprophylaxis of at-risk individuals in three of the four outbreaks where CHDs recommended antiviral chemoprophylaxis.

### Hospitalizations and deaths:

- Of the five outbreaks reported in facilities serving adults ≥65 years old during week 12, three had a hospitalizations. One death was reported in the one outbreak reported during week 12.

## Summary

Week 12: March 18-24, 2018

### Respiratory syncytial virus (RSV) activity:

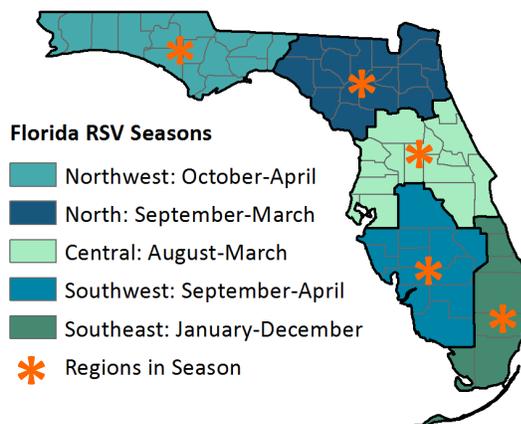
- In week 12, the percent of children <5 years old diagnosed with RSV at emergency departments and urgent care centers decreased but remained above levels observed during previous seasons at this time. It is unclear how the influenza season is impacting RSV activity.
- All regions are currently in RSV season.
- No new RSV-associated pediatric deaths were identified in week 12. Two RSV-associated pediatric deaths have been identified so far this season. 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](http://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  $\geq 10\%$ .
- Florida has established regular RSV seasons based on these thresholds.
- 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.

Map 5

Florida Respiratory Syncytial Virus (RSV) Regional Season Breakdown



### 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

ED = emergency department, UCC = urgent care center, RSV = respiratory syncytial virus

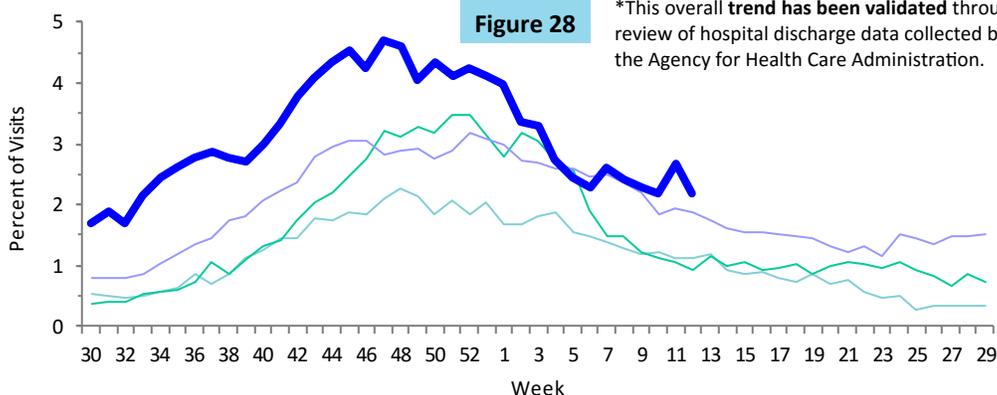


Figure 28

\*This overall trend has been validated through review of hospital discharge data collected by the Agency for Health Care Administration.

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 ESSENCE-FL facilities (n=320), week 30, 2014 to week 12, 2018.

In week 12, 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.

Legend for Figure 28:  
 2017-18 (thick blue line)  
 2016-17 (purple line)  
 2015-16 (green line)  
 2014-15 (light blue line)

## Laboratory RSV Surveillance

RSV = respiratory syncytial virus

Figure 29 shows the percent of specimens testing positive for RSV, as reported by hospital laboratories (n=11), week 30, 2014 to week 12, 2018.

In week 12, the percent of specimens RSV positive increased slightly. It is unclear how the widespread circulation of influenza is impacting detection of RSV.

Legend for Figure 29:  
 2017-18 (thick blue line)  
 2016-17 (purple line)  
 2015-16 (green line)  
 2014-15 (light blue line)

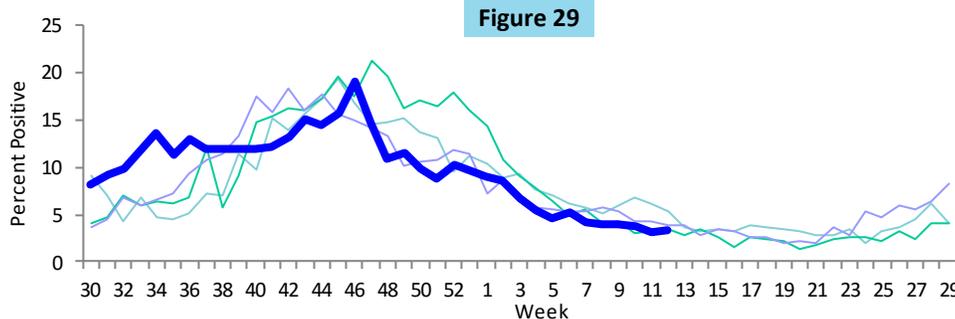


Figure 29

## Other Respiratory Virus Surveillance

### Statewide activity:

- The percent of specimens testing positive for rhinovirus decreased but remained higher than other respiratory viruses under surveillance.

### Enterovirus D68 (EV-D68) activity:

- In week 12, 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.
- To learn more about EV-D68, please visit: <http://www.floridahealth.gov/diseases-and-conditions/d68>.

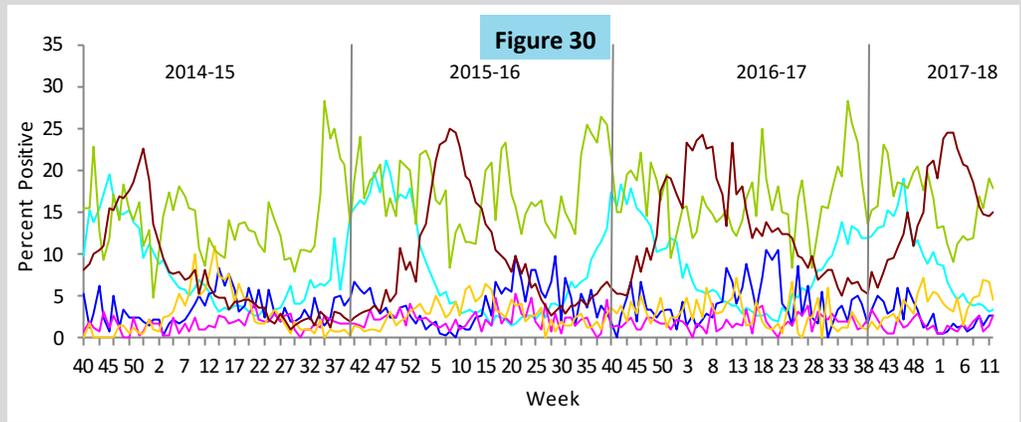
### Outbreaks:

- In week 12, no outbreaks of respiratory syncytial virus (RSV), parainfluenza 1-3, adenovirus, human metapneumovirus (MPV), rhinovirus, enterovirus, or coronavirus were reported.

## 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=11), week 40, 2014 to week 12, 2018.

The percent testing positive for rhinovirus decreased but remained higher than all other respiratory viruses under surveillance.



## Non-Influenza ARIES Laboratory Outpatient Surveillance\*

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

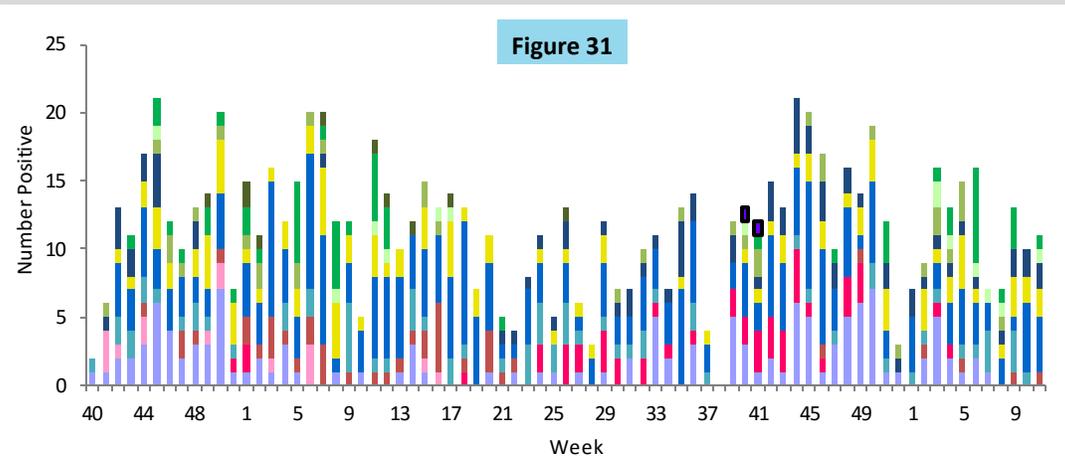
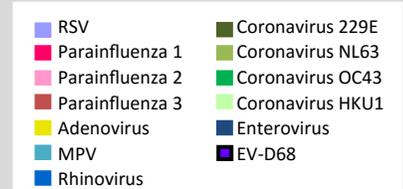


Figure 31 shows the number of specimens testing positive for 12 common respiratory viruses, as reported by BPHL and ARIES outpatient providers statewide (n=6), week 40, 2016 to week 11, 2018.

In week 11 (ending March 17, 2018), specimens submitted by ARIES providers tested positive for parainfluenza 3, rhinovirus, adenovirus, enterovirus, and coronaviruses HKU1 and OC43 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 11, 2018. Laboratory results for specimens that have not yet been tested in full will be included in future reports.

**Table 2: Week 12 Outbreaks: Summary of Florida Influenza and ILI Outbreaks by Setting**

Setting	Number of outbreaks (percent of outbreaks)	Implicated viruses
Schools and camps	0 (0%)	• No outbreaks
Child daycares	0 (0%)	• No outbreaks
Adult daycares	0 (0%)	• No outbreaks
Correctional facilities and juvenile detention centers	1 (17%)	• 1 outbreak of influenza B Yamagata lineage
Nursing facilities	2 (33%)	• 2 outbreaks of influenza A unspecified
Assisted living facilities	0 (0%)	• No outbreaks
Other long-term care facilities	3 (50%)	• 1 outbreak of influenza A unspecified • 2 outbreaks of influenza B unspecified
Hospitals	0 (0%)	• No outbreaks
Shelters	0 (0%)	• No outbreaks
Other	0 (0%)	• No outbreaks
<b>Total</b>	<b>6 (100%)</b>	• 3 outbreaks of influenza A unspecified • 1 outbreak of influenza B Yamagata lineage • 2 outbreaks of influenza B unspecified

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

Setting	Number of outbreaks (percent of outbreaks)	Implicated viruses
Schools and camps	124 (26%)	<ul style="list-style-type: none"> <li>• 1 outbreak of influenza A (H3)</li> <li>• 1 outbreak of influenza A (H3) and influenza B Yamagata lineage</li> <li>• 1 outbreak of influenza A (H3) and influenza B unspecified</li> <li>• 1 outbreak of influenza A 2009 (H1N1)</li> <li>• 23 outbreaks of influenza A unspecified</li> <li>• 12 outbreaks of influenza A unspecified and influenza B unspecified</li> <li>• 1 outbreak of influenza A unspecified, influenza B unspecified, and human metapneumovirus (MPV)</li> <li>• 2 outbreaks of influenza B Yamagata lineage</li> <li>• 7 outbreaks of influenza B unspecified</li> <li>• 14 outbreaks of influenza unspecified</li> <li>• 1 outbreak of influenza unspecified and respiratory syncytial virus (RSV)</li> <li>• 1 outbreak of RSV</li> <li>• 59 outbreaks of unknown etiology</li> </ul>
Child daycares	83 (17%)	<ul style="list-style-type: none"> <li>• 1 outbreak of influenza A (H3)</li> <li>• 18 outbreaks of influenza A unspecified</li> <li>• 7 outbreaks of influenza A unspecified and influenza B unspecified</li> <li>• 1 outbreak of influenza A unspecified and RSV</li> <li>• 2 outbreaks of influenza B unspecified</li> <li>• 16 outbreaks of influenza unspecified</li> <li>• 1 outbreak of influenza unspecified and RSV</li> <li>• 8 outbreaks of RSV</li> <li>• 1 outbreak of rhinovirus</li> <li>• 28 outbreaks of unknown etiology</li> </ul>
Adult daycares	2 (0.4%)	<ul style="list-style-type: none"> <li>• 1 outbreak of influenza A (H3) and influenza B unspecified</li> <li>• 1 outbreak of influenza B unspecified</li> </ul>
Correctional facilities and juvenile detention centers	17 (4%)	<ul style="list-style-type: none"> <li>• 8 outbreaks of influenza A (H3)</li> <li>• 2 outbreaks of influenza A (H3) and influenza A 2009 (H1N1)</li> <li>• 2 outbreaks of influenza A (H3) and influenza B Yamagata lineage</li> <li>• 1 outbreak of influenza A unspecified</li> <li>• 3 outbreaks of influenza B Yamagata lineage</li> <li>• 1 outbreak of adenovirus</li> </ul>
Nursing facilities	79 (17%)	<ul style="list-style-type: none"> <li>• 19 outbreaks of influenza A (H3)</li> <li>• 1 outbreak of influenza A (H3) and influenza A 2009 (H1N1)</li> <li>• 1 outbreak of influenza A (H3) and parainfluenza 1</li> <li>• 1 outbreak of influenza A (H3), influenza B unspecified, and RSV</li> <li>• 1 outbreak of influenza A 2009 (H1N1)</li> <li>• 20 outbreaks of influenza A unspecified</li> <li>• 6 outbreaks of influenza A unspecified and influenza B unspecified</li> <li>• 2 outbreaks of influenza B Yamagata lineage</li> <li>• 1 outbreak of influenza B Yamagata lineage and MPV</li> <li>• 1 outbreak of influenza B Yamagata lineage and RSV</li> <li>• 7 outbreaks of influenza B unspecified</li> <li>• 1 outbreak of influenza B unspecified and coronavirus HKU1</li> <li>• 4 outbreaks of influenza unspecified</li> <li>• 1 outbreak of RSV and rhinovirus</li> <li>• 13 outbreaks of unknown etiology</li> </ul>

Table 3 continued on page 15.

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

Setting	Number of outbreaks (percent of outbreaks)	Implicated viruses
Assisted living facilities	55 (12%)	<ul style="list-style-type: none"> <li>• 7 outbreaks of influenza A (H3)</li> <li>• 2 outbreaks of influenza A (H3) and influenza A 2009 (H1N1)</li> <li>• 1 outbreak of influenza A (H3), influenza B unspecified, parainfluenza 1, and human metapneumovirus (MPV)</li> <li>• 1 outbreak of influenza A 2009 (H1N1)</li> <li>• 23 outbreaks of influenza A unspecified</li> <li>• 4 outbreaks of influenza A unspecified and influenza B unspecified</li> <li>• 2 outbreaks of influenza B unspecified</li> <li>• 4 outbreaks of influenza unspecified</li> <li>• 2 outbreaks of respiratory syncytial virus (RSV)</li> <li>• 9 outbreaks of unknown etiology</li> </ul>
Other long-term care facilities	98 (21%)	<ul style="list-style-type: none"> <li>• 14 outbreaks of influenza A (H3)</li> <li>• 1 outbreak of influenza A (H3), influenza A 2009 (H1N1), and influenza B Yamagata lineage</li> <li>• 2 outbreaks of influenza A (H3) and influenza B unspecified</li> <li>• 1 outbreak of influenza A (H3) and adenovirus</li> <li>• 1 outbreak of influenza A (H3) and coronavirus HKU1</li> <li>• 1 outbreak of influenza A (H3) and coronavirus NL63</li> <li>• 1 outbreak of influenza A (H3) and rhinovirus</li> <li>• 1 outbreak of influenza A (H3), rhinovirus, and enterovirus</li> <li>• 1 outbreak of influenza A 2009 (H1N1)</li> <li>• 27 outbreaks of influenza A unspecified</li> <li>• 16 outbreaks of influenza A unspecified and influenza B unspecified</li> <li>• 2 outbreaks of influenza B Yamagata lineage</li> <li>• 1 outbreak of influenza B Yamagata lineage, influenza A unspecified, and RSV</li> <li>• 1 outbreak of influenza B Yamagata lineage and MPV</li> <li>• 5 outbreaks of influenza B unspecified</li> <li>• 4 outbreaks of influenza unspecified</li> <li>• 1 outbreak of rhinovirus</li> <li>• 18 outbreaks of unknown etiology</li> </ul>
Hospitals	6 (1%)	<ul style="list-style-type: none"> <li>• 1 outbreak of influenza A 2009 (H1N1)</li> <li>• 1 outbreak of influenza A unspecified</li> <li>• 2 outbreaks of influenza B unspecified</li> <li>• 1 outbreak of RSV</li> <li>• 1 outbreak of unknown etiology</li> </ul>
Shelters	2 (0.4%)	<ul style="list-style-type: none"> <li>• 1 outbreak of influenza A (H3)</li> <li>• 1 outbreak of influenza A (H3) and rhinovirus</li> </ul>
Other	12 (3%)	<ul style="list-style-type: none"> <li>• 1 outbreak of influenza A (H3)</li> <li>• 4 outbreaks of influenza A unspecified</li> <li>• 1 outbreak of influenza unspecified</li> <li>• 6 outbreaks of unknown etiology</li> </ul>
Total	478 (100%)	<ul style="list-style-type: none"> <li>• 52 outbreaks of influenza A (H3)</li> <li>• 5 outbreaks of influenza A (H3) and influenza A 2009 (H1N1)</li> <li>• 1 outbreak of influenza A (H3), influenza A 2009 (H1N1), and influenza B Yamagata lineage</li> <li>• 3 outbreaks of influenza A (H3) and influenza B Yamagata lineage</li> <li>• 4 outbreaks of influenza A (H3) and influenza B unspecified</li> <li>• 1 outbreak of influenza A (H3), influenza B unspecified, parainfluenza 1, and MPV</li> <li>• 1 outbreak of influenza A (H3), influenza B unspecified, and RSV</li> <li>• 1 outbreak of influenza A (H3) and adenovirus</li> <li>• 1 outbreak of influenza A (H3) and coronavirus HKU1</li> <li>• 1 outbreak of influenza A (H3) and coronavirus NL63</li> <li>• 1 outbreak of influenza A (H3) and parainfluenza 1</li> <li>• 2 outbreaks of influenza A (H3) and rhinovirus</li> <li>• 1 outbreak of influenza A (H3), rhinovirus, and enterovirus</li> <li>• 5 outbreaks of influenza A 2009 (H1N1)</li> <li>• 117 outbreaks of influenza A unspecified</li> <li>• 45 outbreaks of influenza A unspecified and influenza B unspecified</li> <li>• 1 outbreak of influenza A unspecified, influenza B unspecified, and MPV</li> <li>• 1 outbreak of influenza A unspecified and RSV</li> <li>• 9 outbreaks of influenza B Yamagata lineage</li> <li>• 1 outbreak of influenza B Yamagata lineage, influenza A unspecified, and RSV</li> <li>• 2 outbreaks of influenza B Yamagata lineage and MPV</li> <li>• 1 outbreak of influenza B Yamagata lineage and RSV</li> <li>• 26 outbreaks of influenza B unspecified</li> <li>• 1 outbreak of influenza B unspecified and coronavirus HKU1</li> <li>• 43 outbreaks of influenza unspecified</li> <li>• 2 outbreaks of influenza unspecified and RSV</li> <li>• 12 outbreaks of RSV</li> <li>• 1 outbreak of RSV and rhinovirus</li> <li>• 2 outbreaks of rhinovirus</li> <li>• 1 outbreak of adenovirus</li> <li>• 134 outbreaks of unknown etiology</li> </ul>

## Reported Influenza and ILI Outbreaks

ILI = influenza-like illness

BPHL = Bureau of Public Health Laboratories

**In week 12, six outbreaks were reported in Merlin: all with laboratory evidence of influenza. Of the six outbreaks reported during week 12 (ending March 24, 2018), four select outbreaks are summarized below.**

### Union County

- **A correctional facility** reported 11 inmates with ILI. Two specimens were collected for testing at BPHL. Both specimens tested positive for influenza B Yamagata lineage by PCR at BPHL. Influenza vaccination status for inmates and staff for the 2017-18 season is unknown. Control measures were discussed with facility leadership. This investigation is closed.

### Sarasota County

- **A long-term care facility** reported two residents and two staff members with ILI. One individual was hospitalized as a result of their illness. Two specimens collected from ill individuals tested positive for influenza A by PCR at local health care providers. No specimens were available for testing at BPHL. Influenza vaccination status for the 2017-18 season for residents and staff is unknown. Information regarding control measures is not yet available. This investigation is closed.

### Hillsborough County

- **A long-term care facility** reported two residents with ILI. One resident was hospitalized as a result of their illness. Specimens collected from both residents tested positive for influenza B by PCR at local health care providers. No specimens have been available for testing at BPHL thus far. Influenza vaccination status for the 2017-18 season for residents and staff is not yet known. Control measures were discussed with facility leadership. This investigation is ongoing.

### Jackson County

- **A nursing facility** reported 26 residents with ILI. Two residents sought treatment at local emergency departments. Both residents were hospitalized and one resident died as a result of their illness. At least one resident tested positive for influenza A (test type unknown) at a local health care provider. No specimens were available for testing at BPHL. The facility estimated 83% of residents and 90% of staff were vaccinated for the 2017-18 influenza season. Control measures were discussed with facility leadership. This investigation is closed.

**In week 11 (ending March 17, 2018), four outbreaks were reported into Merlin. No updates were made to select outbreaks during week 12.**

**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 88 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=320) 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.
- 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 at [www.floridahealth.gov/diseases-and-conditions/influenza/\\_documents/flulabreportguide.pdf](http://www.floridahealth.gov/diseases-and-conditions/influenza/_documents/flulabreportguide.pdf).

**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](http://www.Floridahealth.gov/diseasereporting).