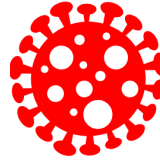


Geographic Spread:
Local



Predominant Strain:
A (H3)



ILI Activity Trend:
Decreasing



Influenza & influenza-like illness (ILI) activity summary:

In week 18, ILI activity decreased and was similar to levels observed at this time in previous seasons. **Activity has peaked for the season; however, influenza continues to circulate at low levels in Florida.**

The timing of peak activity this season varied across regions, ranging from as early as week 52 (ending December 29, 2018) to as late as week 9 (ending March 2, 2019). For more information on regional trends, see page 8.

Nearly all of Florida's counties reported no influenza activity or mild influenza activity in week 18.

In week 18, two respiratory outbreaks were reported. A total of 229 respiratory outbreaks have been reported since the season began on September 30, 2018.

No new influenza-associated pediatric deaths were reported in week 18. As of week 18, four influenza-associated pediatric deaths have been reported so far this season, all in unvaccinated children. For more information, see page 10.

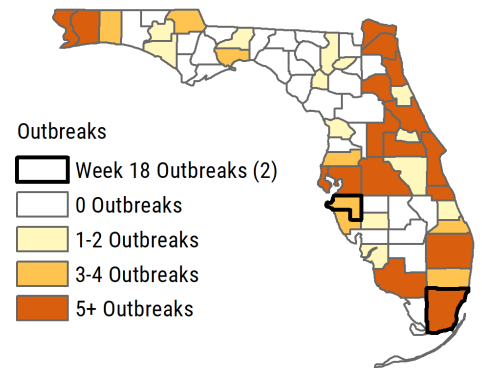
In addition to getting vaccinated each influenza season, the Florida Department of Health recommends you take everyday precautions to prevent the spread of influenza and other respiratory viruses:

- Wash your hands often with soap and water (if soap is not available, use an alcohol-based sanitizer).
- Avoid touching your eyes, nose, and mouth.
- If you do get sick, stay home until fever-free for at least 24 hours (without the use of fever-reducing medication).

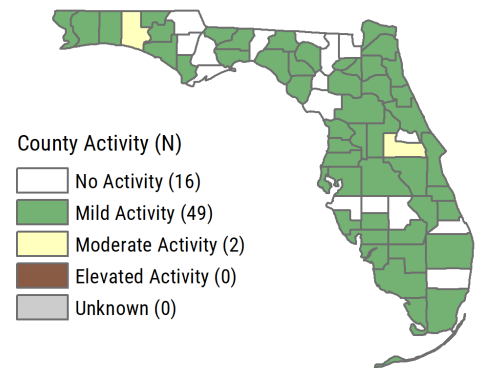
On March 28, 2019, the Centers for Disease Control and Prevention (CDC) released an official health advisory reminding clinicians to have high suspicion for influenza and to prescribe antiviral treatment to high-risk patients with suspected influenza. Antiviral treatment should be started as soon as possible after illness onset and should not wait for laboratory confirmation. Early treatment should not be delayed for hospitalized and high-risk patients, especially those aged 65 years and older. For more information, please visit: emergency.cdc.gov/han/han00419.asp.

Respiratory Outbreaks

Reported as of 5/4/19



County Influenza Activity



Flu Shot Locator



Your flu shot is the first and most important step to fight the flu.

To locate a vaccine near you, visit:
FloridaHealth.gov/FindAFluShot

Table of Contents:

In This Issue	2
Statewide ILI Visits.....	2
Geographic Spread of Influenza in Florida	3
Statewide ILI Outpatient Visits and P&I Deaths.....	3
County influenza and ILI Activity Maps	4
ILI Activity and Outbreaks by Setting	5
Influenza Laboratory Surveillance	6
Antigenic Characterization Data Summary	7
Regional ILI Visits	8
At-Risk Populations: Children.....	9
Influenza-Associated Pediatric Deaths	10
At-Risk Populations: Pregnant Women	10
At-Risk Populations: Adults ≥ 65 Years Old.....	11
Respiratory Syncytial Virus (RSV) Surveillance	12
RSV and Other Respiratory Virus Surveillance	13
Outbreak Summaries	14
Florida ILI Surveillance System Summary	16

Background

Influenza, or flu, is a respiratory infection caused by a variety of influenza viruses. Most experts believe influenza viruses spread primarily by droplets made when infected people cough, sneeze, or talk. Less often, a person might become infected with influenza by touching a surface or object contaminated with influenza virus and then touching their own mouth, eyes, or nose.

The best way to prevent influenza infection is to get vaccinated each year. Influenza vaccines protect against the three or four influenza viruses research suggests will be most common.

Influenza Surveillance

Individual cases of influenza are not reportable in Florida with the exception of novel influenza A (a new subtype of influenza A) and influenza-associated pediatric deaths. All outbreaks, including those due to influenza or influenza-like illness (ILI), are reportable in Florida.

Influenza surveillance is conducted to detect changes in the influenza virus. These data are used to help determine the annual northern hemisphere vaccine composition and to prepare for potential pandemics.

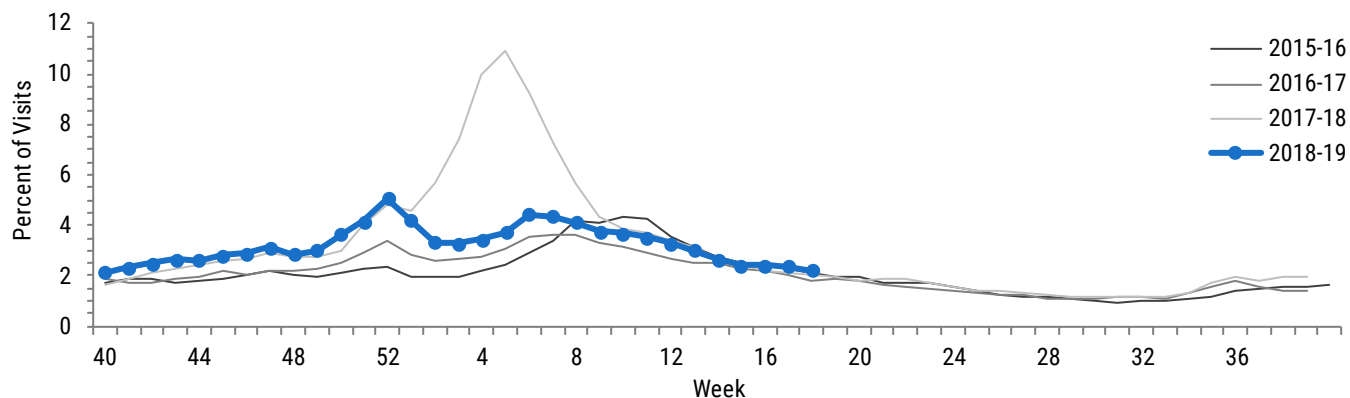
Surveillance is also conducted to identify any unusually severe presentations of influenza, detect outbreaks, and determine the onset, peak, and wane of the influenza season to assist with influenza prevention, particularly in high-risk populations like the very young, adults aged ≥65 years, and pregnant women.

The influenza reporting year is defined by standard reporting weeks outlined by the Centers for Disease Control and Prevention, where every year has 52 or 53 reporting weeks. Increased surveillance for influenza in Florida for the 2018-19 season began in week 40 (starting on September 30, 2018) and will extend through week 20 (ending May 21, 2019). This report is produced by the Florida Department of Health on a weekly basis during the regular influenza season and an abbreviated report is published on a biweekly basis during the summer months.

Surveillance case definitions for ILI vary slightly across surveillance systems. **For more information on Florida’s influenza surveillance systems and associated case definitions, see page 16.**

Statewide Activity

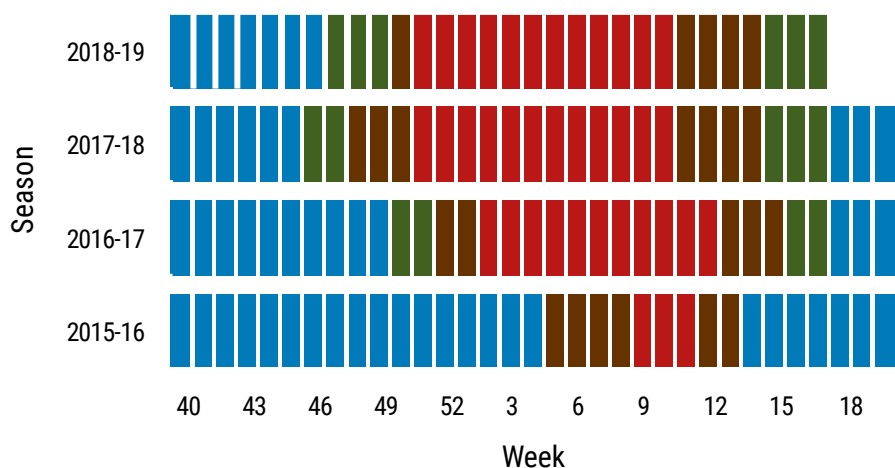
Figure 1: In week 18, **the percent of emergency department and urgent care center visits for ILI statewide decreased.** Levels were similar to those observed at this time in previous seasons.



▲ **Figure 1** shows **the percent of visits for influenza-like illness (ILI)** for facilities participating in ESSENCE-FL (n=346) statewide for the current season (week 40, 2018 to week 18, 2019) and the last three seasons (2017-18, 2016-17, and 2015-16). The ESSENCE-FL ILI syndrome captures visits with 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 the use of ESSENCE-FL for influenza and ILI surveillance, see page 16.

Statewide Activity

Figure 2: In week 18, Florida reported **local geographic spread of influenza** to the Centers for Disease Control and Prevention.



◀ **Figure 2** shows Florida’s self-reported **geographic spread of influenza** as reported to the Centers for Disease Control and Prevention, week 40, 2015 to week 18, 2019.

Defining geographic spread of influenza:

Sporadic: small numbers of laboratory-confirmed influenza or a single laboratory-confirmed influenza outbreak has been reported, but there is no increase in cases of ILI.

Local: outbreaks of influenza or increases in ILI and recent laboratory confirmed influenza in at least two but less than half the regions of the state.

Regional: outbreaks of influenza or increases in ILI and recent laboratory-confirmed influenza in at least two but less than half the regions of the state with recent laboratory evidence of influenza in those regions.

Widespread: Outbreaks of influenza or increases in ILI cases and recent laboratory-confirmed influenza in at least half the regions of the state with recent laboratory evidence of influenza in the state.

Figure 3: In week 18, **the percent of patients with ILI reported by ILINet outpatient providers statewide decreased** and was below levels observed at this time in previous seasons. Of note, data for this week are likely reflective of the low number of providers who have submitted reports thus far for week 18.

Figure 3 shows the **percent of patients with influenza-like illness (ILI)** reported by ILINet outpatient providers statewide (n=12), week 40, 2015 to week 18, 2019. ▶

For ILINet, ILI is defined as a fever $\geq 100^{\circ}\text{F}$ in conjunction with sore throat or cough in the absence of another known cause.

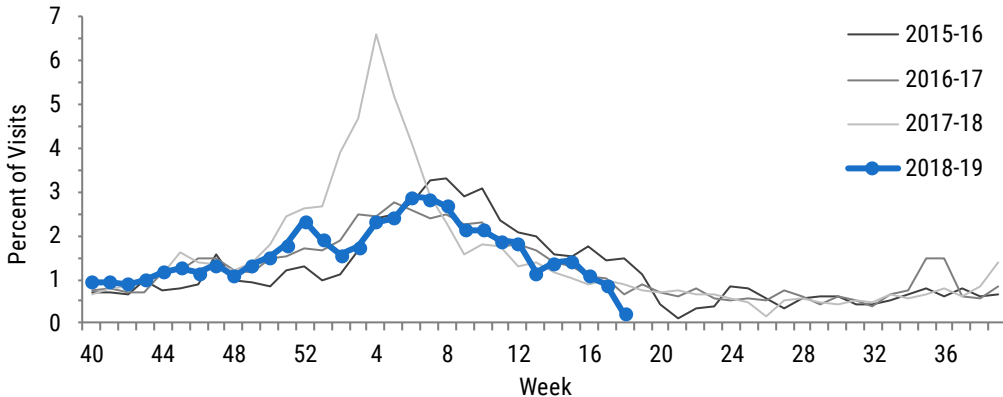
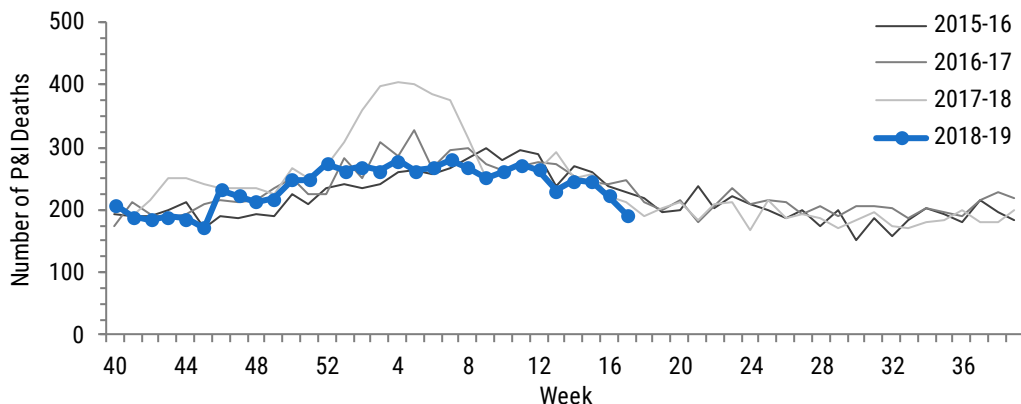


Figure 4: In week 17 (ending 4/27/19), **the number of pneumonia and influenza deaths identified statewide decreased** and remained slightly below levels observed at this time in previous seasons.



◀ **Figure 4** shows **pneumonia and influenza (P&I) deaths*** for all Florida counties from the Bureau of Vital Statistics, as reported into ESSENCE-FL, week 40, 2015 to week 17, 2019.

*Current season P&I death counts are preliminary numbers that may change as more data are received. The most recent data available are displayed here.

County Influenza Activity

Figure 5: Nearly all of Florida's counties reported no activity or **mild activity** for week 18.

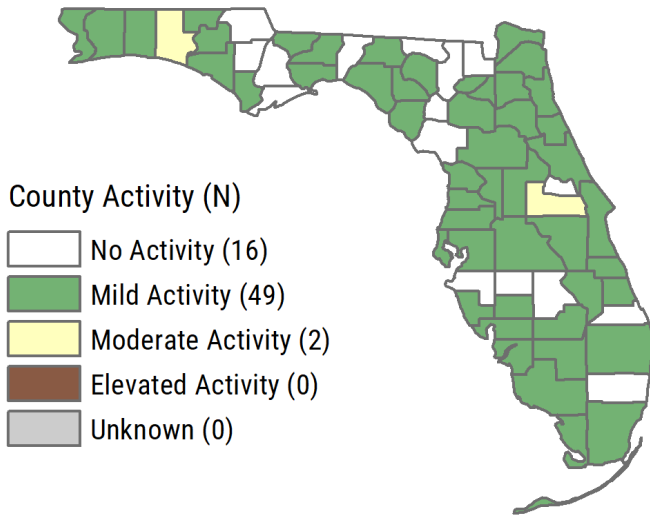
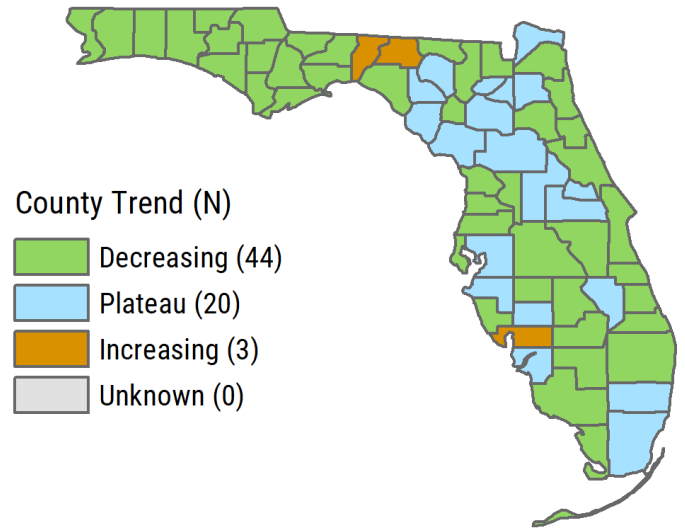
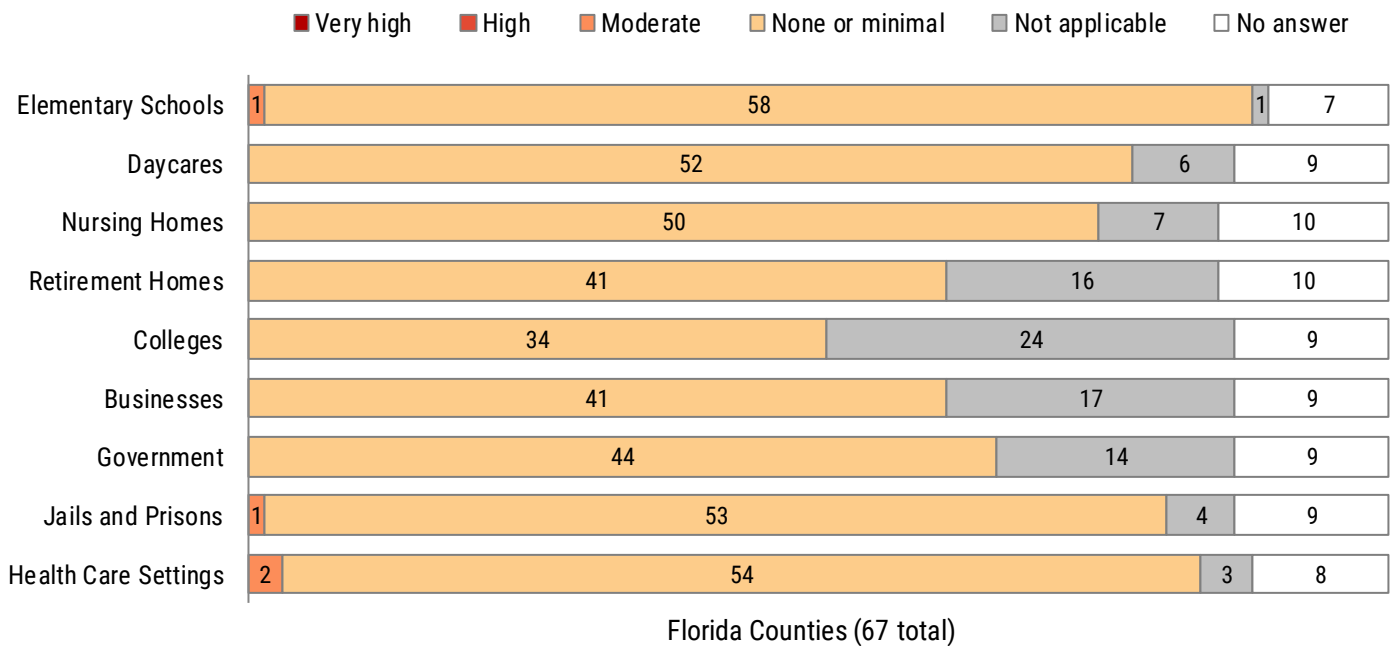


Figure 6: Most counties reported **decreasing activity** for week 18.



▲ **Figures 5-6** show **county influenza activity data** as reported by county health departments in EpiGateway. These data are collected on a weekly basis and are used to determine influenza activity levels for each county (Figure 5). County health departments also report their weekly influenza activity trend (Figure 6).

Figure 7: In week 18, most counties reported **no or minimal influenza activity** across all settings.



▲ **Figure 7** shows the results of the influenza activity assessment completed by county health departments for week 18, 2019. As part of the assessment, 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.

Respiratory Disease Outbreaks

Statewide Outbreaks

In week 18, two respiratory outbreaks were reported (there were also two outbreaks in week 17). So far, only one of these outbreaks has laboratory evidence of influenza.

As of week 18, a total of 229 respiratory outbreaks have been reported for the 2018-19 season. A complete list of the outbreaks reported so far this season by etiology and setting type is available on page 14.

Laboratory testing:

Thus far, no specimens have been available for testing at the Bureau of Public Health Laboratories for these two outbreaks.

Hospitalizations and deaths:

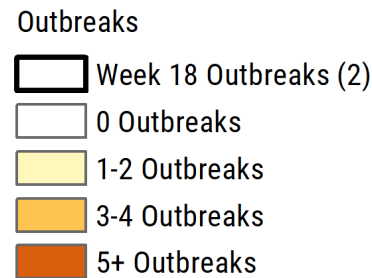
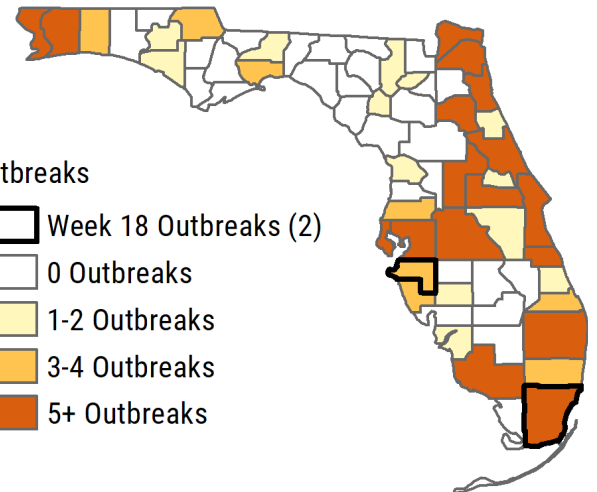
One or more hospitalizations were reported in both of these outbreaks. No deaths were reported in either outbreak.

So far this season, one or more hospitalizations have been reported in 48 out of 229 total outbreaks (21%). One or more deaths were reported in 10 of the 229 total outbreaks this season (4%).

For detailed information on notable outbreaks reported in week 18, see page 15.

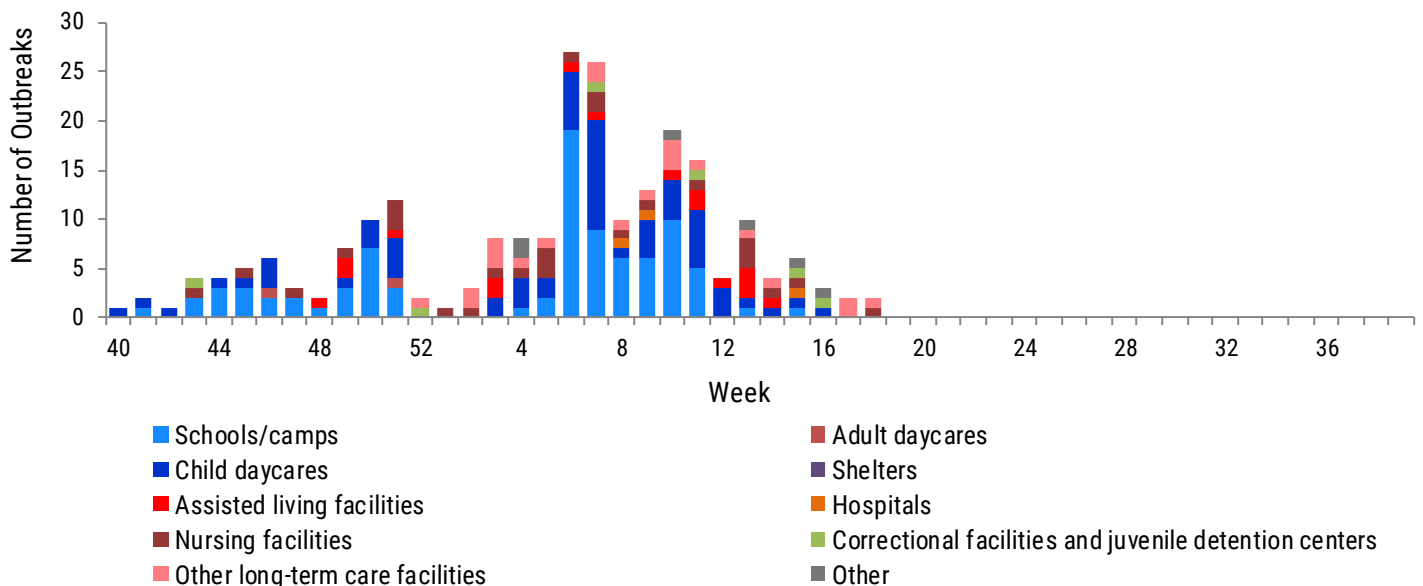
For information on outbreaks in facilities serving children, see page 9.

For information on outbreaks in facilities serving adults aged ≥65 years, see page 11.



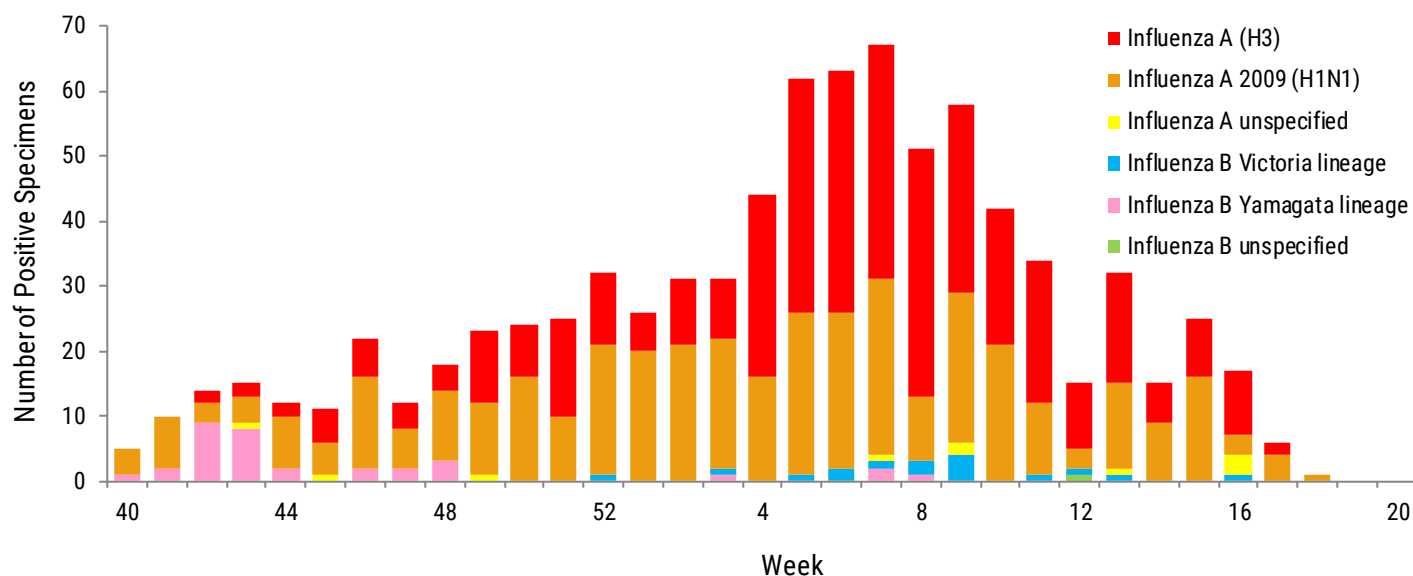
▲ Figure 8 shows reported respiratory outbreaks by county. Counties with outbreaks reported in week 18 are **outlined in bold**.

Figure 9: In week 18, the number of respiratory outbreaks was stable. Two outbreaks were reported: **one outbreak in a long-term care facility** and **one outbreak in a nursing facility**.



Laboratory Surveillance

Figure 10: Since February, **influenza A (H3)** has been the **most common influenza subtype detected at BPHL**. **Influenza A (H3)** viruses make up the largest percent of influenza viruses tested at BPHL so far this season; however, **influenza A 2009 (H1N1)** viruses continue to be consistently identified at BPHL as well.



▲ **Figure 10** shows the number of **influenza-positive specimens at the Bureau of Public Health Laboratories (BPHL)** by lab-event date,* week 40, 2018 through week 18, 2019.

Nationally, the Centers for Disease Control and Prevention reports influenza A (H3) is the predominant strain nationwide. Earlier in the season, influenza A 2009 (H1N1) was reported as the predominant strain both in Florida and in the United States. Mid-season changes in predominantly circulating strain have been observed in past seasons. The Florida Department of Health will continue to monitor virologic data closely.

**Table 1: Bureau of Public Health Laboratories Viral Surveillance by Lab Event Date*
Reported by 10:00 a.m. May 8, 2019**

Influenza Type	Current Week 18	Previous Week 17	Current 2018-19 Season
Total Specimens Tested	2	15	1,463
Influenza positive specimens (% of total specimens tested)	1 (50.0%)	6 (40.0%)	843 (57.6%)
Influenza A 2009 (H1N1) (% of influenza positives)	1 (100.0%)	2 (33.3%)	387 (45.9%)
Influenza A (H3) (% of influenza positives)	-	4 (66.7%)	396 (47.0%)
Influenza A unspecified (% of influenza positives)	-	-	10** (1.2%)
Influenza B Yamagata (% of influenza positives)	-	-	33 (3.9%)
Influenza B Victoria (% of influenza positives)	-	-	16 (1.9%)
Influenza B unspecified (% of influenza positives)	-	-	1 (0.1%)

*“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.

**This number includes both influenza A specimens for which subtyping has not yet been performed as well as specimens that tested positive for influenza A but were unable to be subtyped due to low viral load.

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:

FloridaHealth.gov/diseases-and-conditions/influenza/_documents/flulabreportguide.pdf

Laboratory Surveillance: Antigenic Characterization

Background

The Bureau of Public Health Laboratories (BPHL) routinely submits influenza-positive original clinical specimens to the Centers for Disease Control and Prevention (CDC) for antigenic characterization. **The purpose of this testing is to monitor changes in circulating influenza viruses and compare how similar currently circulating influenza viruses are to the reference viruses used for developing influenza vaccines.** While antigenic characterization can provide an indication of the influenza vaccine's ability to produce an immune response against circulating influenza viruses, **annual vaccine effectiveness estimates remain necessary to determine how much protection has been provided to the population by vaccination.**

BPHL submits two influenza A (H3)-positive specimens, two influenza A 2009 (H1N1)-positive specimens, and four influenza B-positive specimens (two Victoria lineage and two Yamagata lineage) every two weeks to CDC (as available). CDC's most recent FluView (www.cdc.gov/flu/weekly/index.htm) offers national context for data displayed in Table 2 and Figure 11 (below).

The official recommendation is quadrivalent vaccines administered for the 2018-19 northern hemisphere influenza season contain the following: (1) an A/Michigan/45/2018 (H1N1)pdm09-like virus, (2) an A/Singapore/INFIMH-16-0019/2016 (H3N2)-like virus, (3) a B/Colorado/06/2017-like virus (B/Victoria/2/87 lineage), and (4) a B/Phuket/3073/2013-like virus (B/Yamagata/16/88 lineage). It is recommended that the influenza B component of trivalent vaccines administered for the 2018-19 northern hemisphere influenza season be a B/Colorado/06/2017-like virus. For more information, visit: www.who.int/influenza/vaccines/virus/recommendations/2018_19_north/en/.

Table 2: Antigenic Characterization Results for Influenza Isolates Submitted to CDC, Cumulative Totals for Week 30, 2018-Week 18, 2019

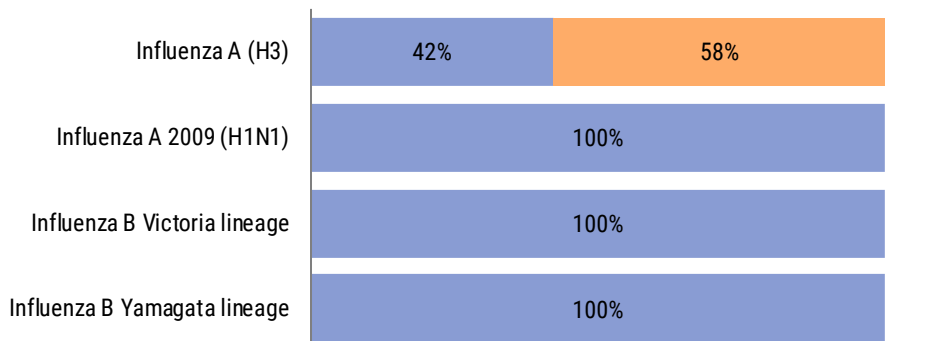
Antigenic Characterization	Number of Specimens
A/MICHIGAN/45/2015-LIKE (H1N1)pdm09	25
A/SINGAPORE/INFIMH-16-0019/2016-LIKE (H3N2) BY FRA	11
A/SINGAPORE/INFIMH-16-0019/2016-LIKE (H3N2) LOW BY FRA	15
B/COLORADO/06/2018-LIKE	3
B/PHUKET/3073/2013-LIKE	14

◀ **Table 2** summarizes **antigenic characterization results** received for specimens collected from week 30, 2018 (beginning July 22, 2018) through week 18, 2019, as reported by CDC. Results for submitted specimens that have not yet been tested will be included in future reports as those results are received.

According to CDC, a specimen is considered "reference-virus-like" if its hemagglutination inhibition (HI) or neutralization focus reduction assay (FRA) titer is within fourfold of the homologous HI/FRA titer of the reference strain; a specimen is considered as "low" to the reference virus if there is an eightfold or more

reduction in the HI or FRA titer when compared with the homologous HI or FRA titer of the reference strain.

Figure 11: As of week 18, **all influenza A 2009 (H1N1), influenza B Yamagata lineage specimens, and influenza B Victoria lineage specimens** submitted to CDC were **antigenically similar** to their respective vaccine reference strain. Phylogenetic analysis of the hemagglutinin genes from **influenza A (H3) specimens** submitted to CDC so far this season has shown extensive genetic diversity, with multiple clades and subclades co-circulating in Florida.



◀ **Figure 11** shows the **percentage of specimens** submitted to CDC that are **antigenically similar to reference strains** representing the recommended vaccine components of the 2018-19 northern hemisphere vaccine, week 30, 2018 to week 18, 2019 by virus type.

As of week 18, 2019, antigenic characterizations results are still pending for 17 influenza A (H3N2) specimens, 27 influenza A 2009 (H1N1) specimens, and six influenza B Victoria lineage specimens submitted to CDC by BPHL during this timeframe.

■ **Antigenically similar:** within fourfold of the homologous HI/FRA titer of the reference strain
■ **Antigenically different:** eightfold or more reduction in the HI/FRA titer when compared to the homologous HI/FRA titer of the reference strain

Regional Activity

Figures 12-18 show the percent of emergency department and urgent care center visits for influenza-like illness (ILI) at ESSENCE-FL participating facilities (n=346) from week 40, 2015 to week 18, 2019. Data are organized by region (see Figure 19).



Figure 12: In **region 1**, ILI activity decreased during week 18 and was similar to levels observed at this time in past seasons.

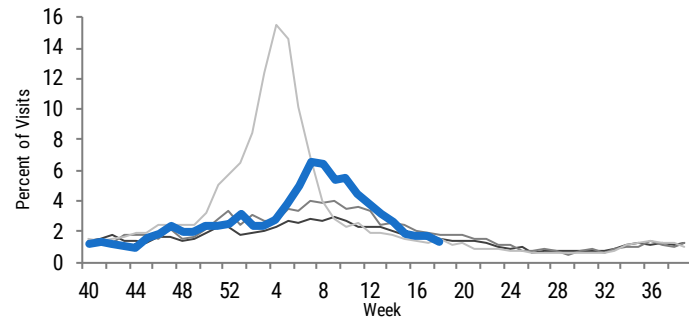


Figure 14: In **region 3**, ILI activity decreased during week 18 and was similar to levels observed at this time in past seasons.

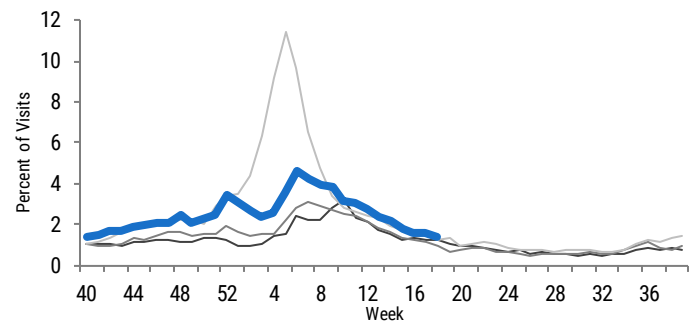


Figure 16: In **region 5**, ILI activity decreased during week 18 and was similar to levels observed at this time in past seasons.

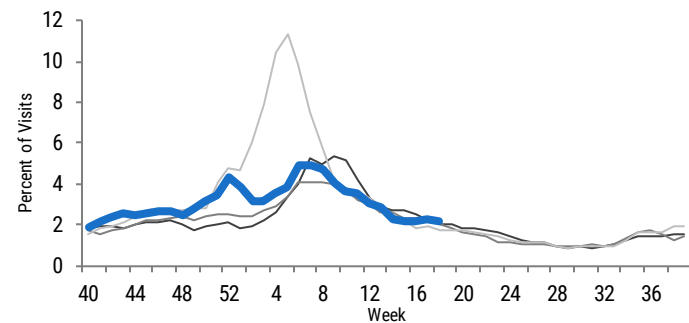


Figure 18: In **region 7**, ILI activity decreased during week 18 and was similar to levels observed at this time in past seasons.

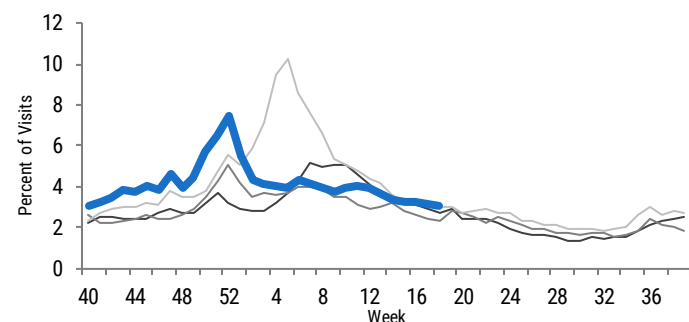


Figure 13: In **region 2**, ILI activity decreased during week 18 and was similar to levels observed at this time in past seasons.

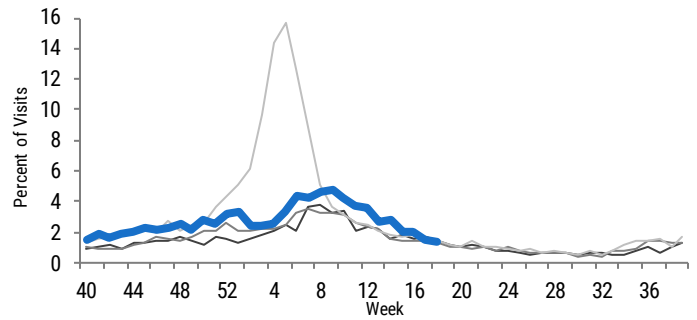


Figure 15: In **region 4**, ILI activity decreased during week 18 and was similar to levels observed at this time in past seasons.

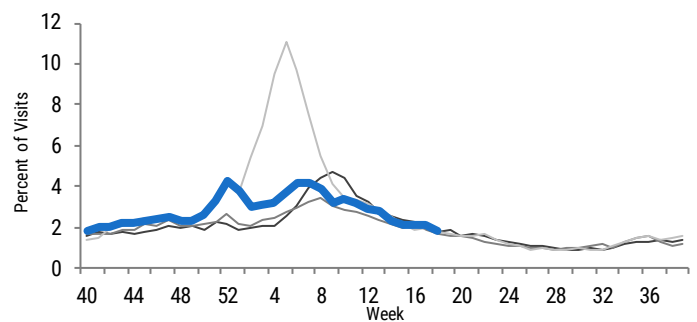
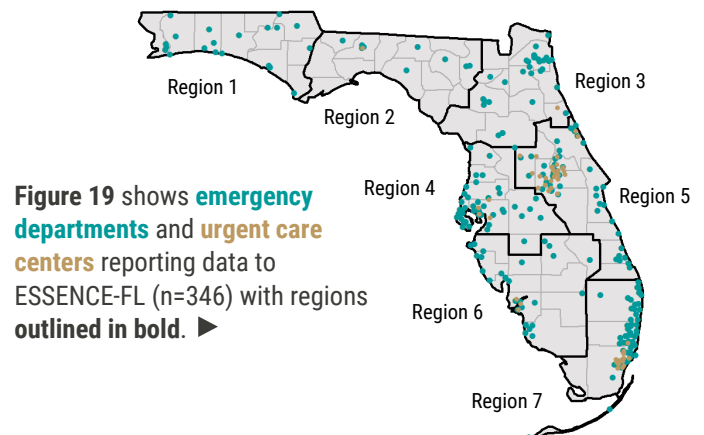
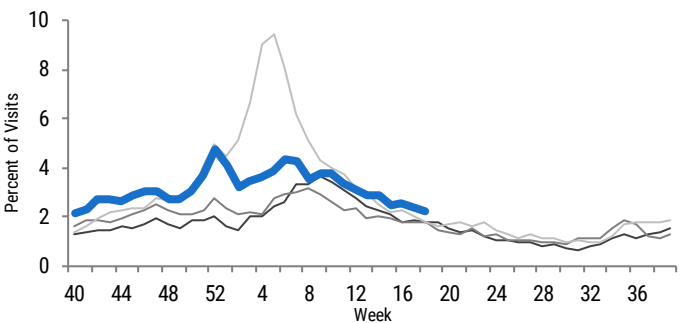


Figure 17: In **region 6**, ILI activity decreased during week 18 but remained above levels observed at this time in previous seasons.

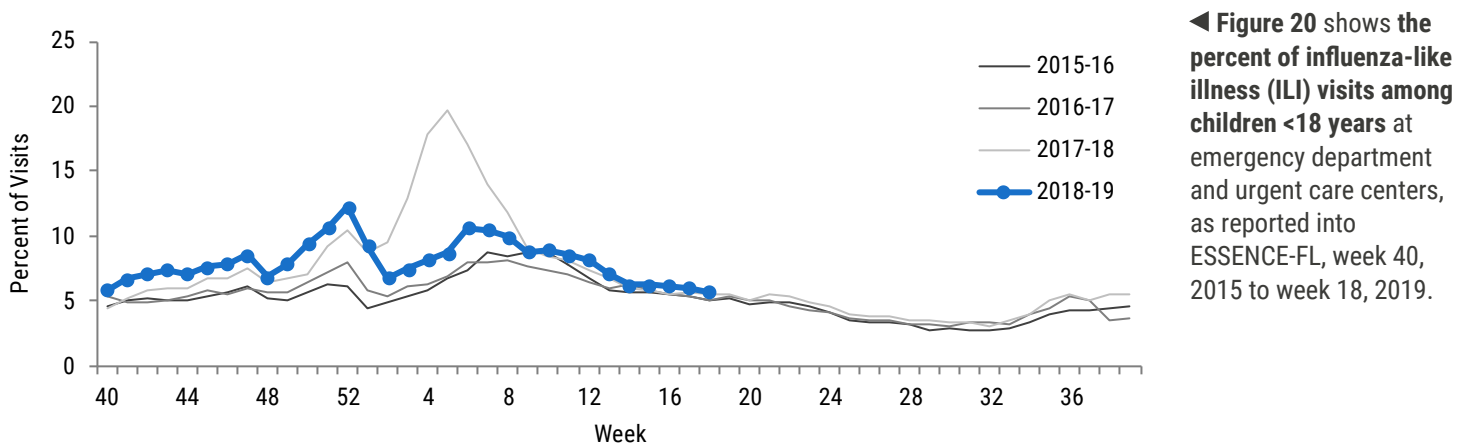


At-Risk Populations: Children

Background

Children, especially those with underlying health conditions (like asthma or diabetes), 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 continues to recommend influenza vaccination as long as flu viruses are circulating. To find a flu shot near you, please visit: FloridaHealth.gov/FindAFluShot.

Figure 20: In week 18, **the percent of emergency department and urgent care center visits for ILI in children <18 years decreased** and was similar to levels observed at this time in past seasons.



Outbreaks in Facilities Serving Children

In week 18, no new respiratory outbreaks were reported in facilities serving children (schools/camps or child daycares).

So far this season, **150 outbreaks** have been reported in facilities serving children. Sporadic outbreaks are expected in the coming weeks as the season comes to an end and schools close for the summer.

In addition to getting vaccinated each season, the Florida Department of Health recommends you and your family take everyday actions to prevent the spread of influenza (and other viruses) such as **keeping sick children home until they are fever-free for 24 hours (without the use of fever reducing medication)**, covering your nose and mouth with your arm when you cough or sneeze, washing your hands often with soap and water, and avoiding touching your eyes, nose, and mouth.

Hospitalizations and deaths:

So far this season, one or more hospitalizations have been reported in nine out of 150 total outbreaks in facilities serving children (6%). No deaths have been reported for any of the outbreaks in facilities serving children so far this season.

At-Risk Populations: Children

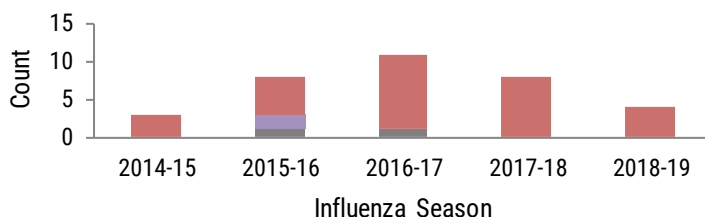
Figures 21-22: In week 18, no new influenza-associated pediatric deaths were reported.

In week 18, no new influenza-associated pediatric deaths were reported. Four influenza-associated pediatric deaths have been reported so far this season. All four deaths occurred in **unvaccinated children** (two with **underlying medical conditions** and two with **no known underlying medical conditions**).

The Florida Department of Health receives reports of influenza-associated pediatric deaths each season. **These deaths are most often reported in unvaccinated children and children with underlying medical conditions.**

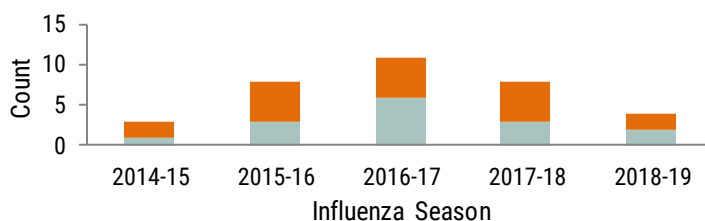
Children, especially those with certain health conditions are at increased risk of severe complications from influenza infection. **Influenza vaccination has been shown to reduce a child's likelihood of dying from influenza by up to 60%.** For more information, please visit: www.cdc.gov/media/releases/2017/p0403-flu-vaccine.html.

■ Unvaccinated
■ Vaccinated
■ Vaccination status unknown



▲ **Figure 21** shows the number of **influenza-associated pediatric deaths** as reported in Merlin **by vaccination status**, week 40, 2014 to week 18, 2019.

■ Underlying health conditions
■ No known underlying conditions



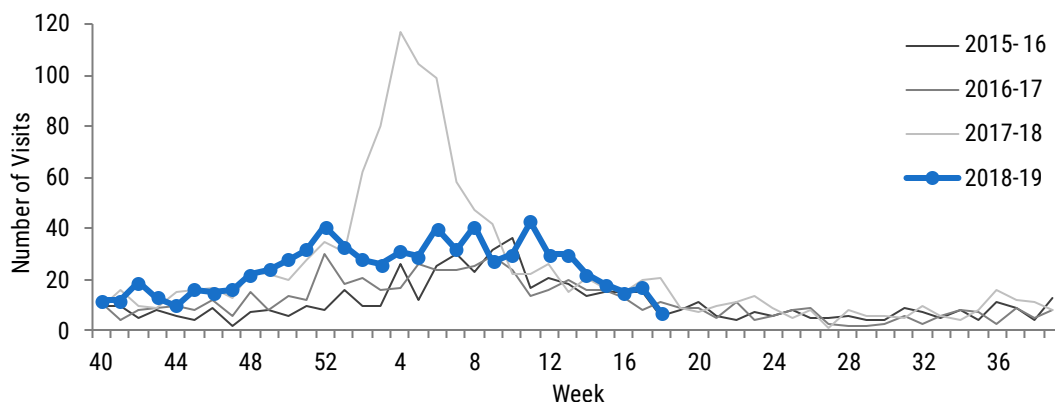
▲ **Figure 22** shows the number of **influenza-associated pediatric deaths** as reported in Merlin **by medical history**, week 40, 2014 to week 18, 2019.

At-Risk Populations: Pregnant Women

Background

Influenza is five times more likely to cause severe illness in pregnant women (even those who are generally healthy) compared to women who are not pregnant. Pregnant women with certain underlying medical conditions (such as asthma or heart disease) are at even greater risk for severe complications from influenza. **Inactivated influenza vaccines are safe, provide the best protection for pregnant women and their babies, and are recommended at any time during pregnancy.** Vaccination during pregnancy provides maternal antibody protection to infants too young to be vaccinated for influenza and has been shown to protect pregnant women from influenza-associated hospitalization and preterm birth. For more information, talk to your health care provider.

Figure 23: In week 18, the **number of emergency department and urgent care center visits for influenza among pregnant women decreased** and was below levels observed at this time in previous seasons.



◀ **Figure 23** shows the **number of visits* to emergency departments and urgent care centers with chief complaints of influenza and pregnancy**, as reported in ESSENCE-FL, week 40, 2015 to week 18, 2019.

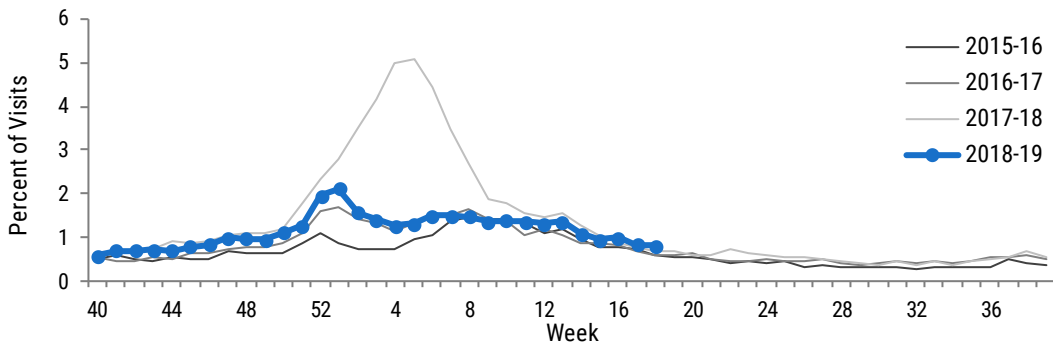
*This count **underrepresents** the true number of pregnant women presenting for care to emergency departments and urgent care centers with influenza, however, **the overall trend** has been validated through review of discharge data collected by the Agency of Health Care Administration.

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. In Florida, an average of 80% of seasonal pneumonia and influenza deaths occurred in adults aged ≥65 years over the last five influenza seasons. **Annual vaccination is the best way to prevent influenza infection.**

Figure 24: In week 18, the **percent of emergency department and urgent care center visits for ILI in adults ≥65 years was stable** and was similar to levels observed at this time in previous seasons.



◀ Figure 24 shows the percent of influenza-like illness (ILI) visits among adults ≥65 years old at emergency departments and urgent care centers, as reported into ESSENCE-FL, week 40, 2015 to week 18, 2019.

Outbreaks in Facilities Serving Adults ≥65 Years

In week 18, two new outbreaks were reported in facilities serving adults aged ≥65 years (assisted living facilities, nursing facilities, and long-term care facilities):

- One outbreak of influenza A unspecified in a nursing facility
- One outbreak of unknown etiology in a long-term care facility

So far this season, **63 outbreaks** have been reported in facilities serving adults ≥65 years.

Laboratory testing:

No specimens have been available for testing at the Bureau of Public Health Laboratories for these two outbreaks thus far.

Hospitalizations and deaths:

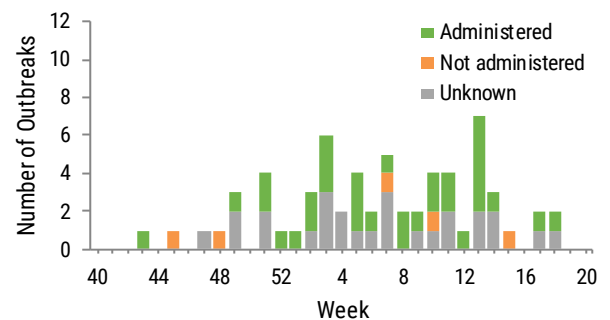
One or more hospitalizations were reported in both of these outbreaks. No deaths have been reported in either outbreak.

So far this season, one or more hospitalizations have been reported in 33 outbreaks (52.4%) in facilities serving adults aged ≥65 years. One or more deaths were reported in 10 outbreaks (15.9%) in these settings so far this season.

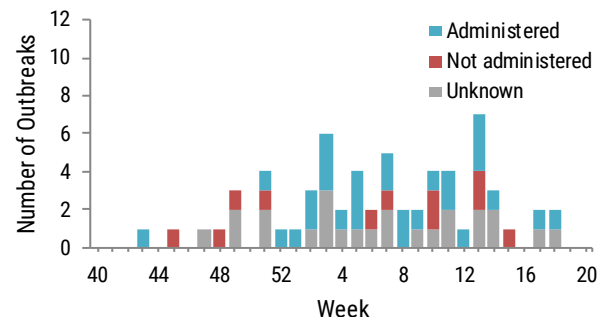
Control measures:

Control measures were reviewed with facility leadership for both of the outbreaks reported in week 18.

Antiviral treatment was administered to ill individuals and antiviral chemoprophylaxis was administered to at-risk individuals in one of these outbreaks. It is unknown if antivirals were recommended or administered to ill or at-risk individuals in the remaining outbreak.



▲ Figure 25 shows the number of outbreaks where antiviral treatment was administered to ill individuals by week in facilities serving adults ≥65 years old, as reported in Merlin. Antiviral treatment is recommended for residents of these settings with influenza or ILI.



▲ Figure 26 shows the number of outbreaks where antiviral chemoprophylaxis was administered to at-risk individuals by week in facilities serving adults ≥65 years old, as reported in Merlin. Antiviral chemoprophylaxis is recommended for at-risk residents of these settings when one or more case of influenza is identified.

Respiratory Syncytial Virus Surveillance

Background

Respiratory syncytial virus (RSV) is a common respiratory virus that usually causes mild, cold-like symptoms. Young children and older adults, especially those with certain underlying health conditions, are at higher risk for severe illness from RSV. Prophylaxis is available for children who qualify. For more information, contact your health care provider.

RSV Surveillance

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 in Florida has important implications for prescribing patterns for initiating prophylaxis to children at high risk for complications from RSV infection. The American Academy of Pediatrics currently recommends preapproval for prophylactic treatment be made based on state surveillance data. For more information on RSV surveillance systems used in Florida, see the last page of this report.

Florida's RSV season is longer than the rest of the nation and has distinct regional patterns. The Florida Department of Health established regional RSV seasons based on activity thresholds provided by the Centers for Disease Control and Prevention (see Figure 27). **Currently, one of Florida's regions is in RSV season.**

To learn more about RSV in Florida, please visit: FloridaHealth.gov/RSV.

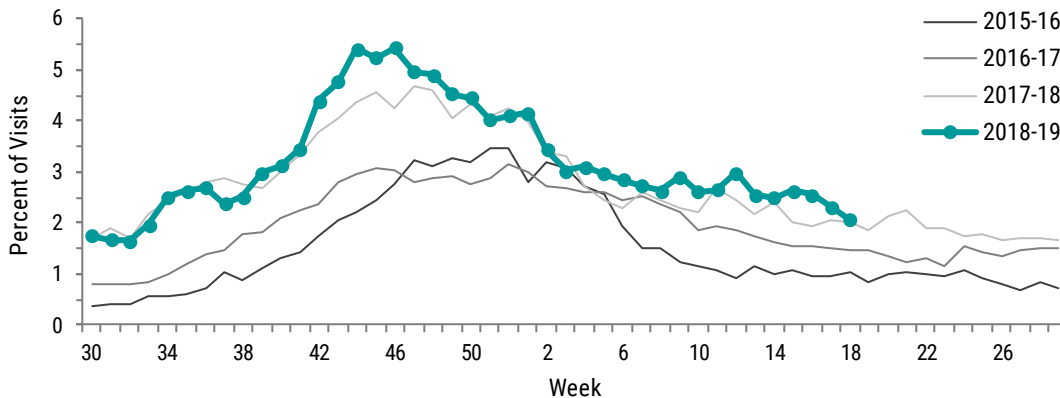
Week 18 (April 28-May 4, 2019) Activity Summary

In week 18, RSV activity in children <5 years old decreased. Levels were similar to those observed at this time in 2018.

No new possible RSV-associated pediatric deaths were identified in week 18. One possible RSV-associated pediatric death has been identified so far in 2019.

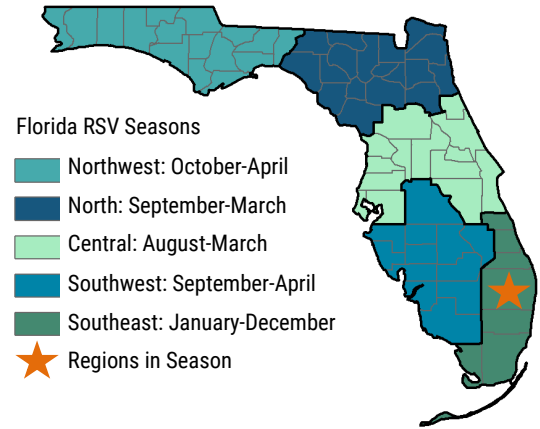
No new outbreaks of RSV were reported in week 18. A total of 11 outbreaks of RSV have been reported since October 2018.

Figure 28: In week 18, **the percent of emergency department and urgent care center visits for RSV among children <5 years decreased.** Levels were similar to those observed at this time in 2018.



◀ **Figure 28 shows the percent of emergency department and urgent care center visits with discharge diagnoses that include respiratory syncytial virus (RSV) or RSV-associated illness among children <5 years***, as reported in ESSENCE-FL, week 30, 2015 to week 18, 2019.

*The overall trend displayed in Figure 28 has been validated through review of hospital discharge data collected by the Agency for Health Care Administration.



▲ **Figure 27 shows Florida's RSV regional season breakdown.** Regions that are currently in RSV season are marked with **orange stars**.

RSV & Other Respiratory Virus Surveillance

Figure 29: In week 18, **the percent of specimens testing positive for RSV was stable**. Levels were similar to those observed at this time in previous years.

Figure 29 shows the percent of specimens testing positive for respiratory syncytial virus (RSV), as reported by hospital laboratories (n=6), week 30, 2015 to week 18, 2019. ►

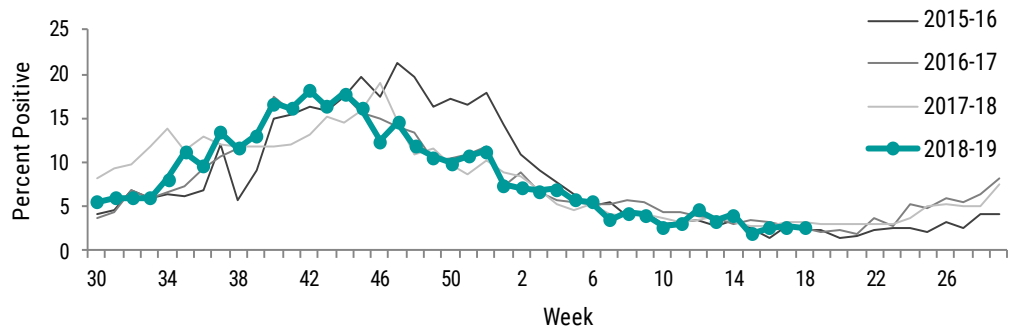
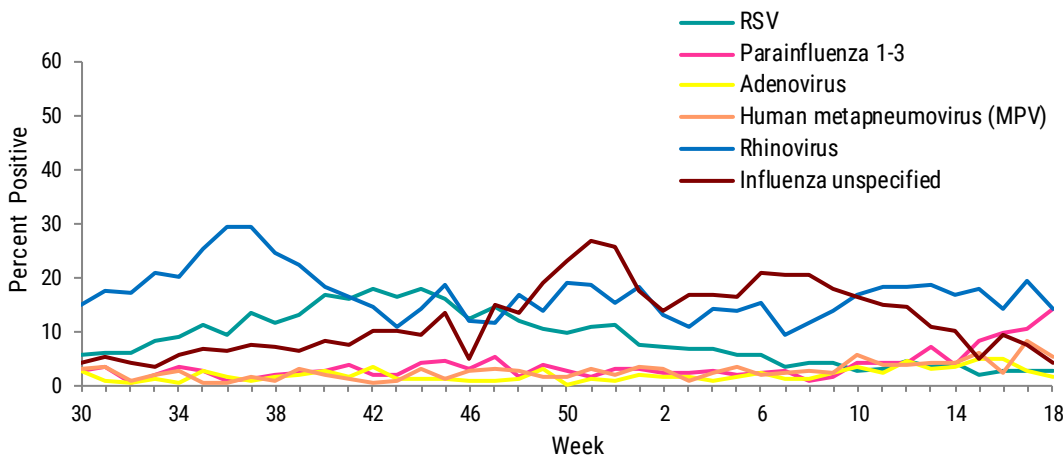


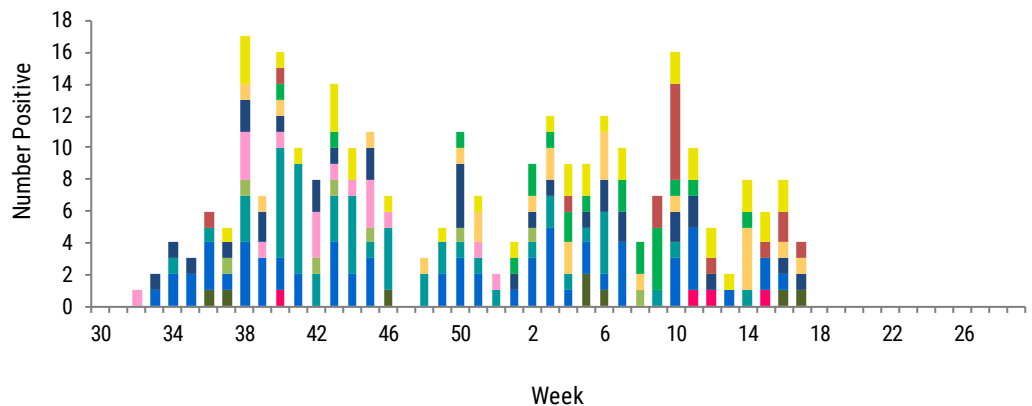
Figure 30: In week 18, the **percent of specimens testing positive for parainfluenza 1-3 increased notably**. The percent of specimens testing positive for parainfluenza 1-3 or rhinovirus was higher in week 18 compared to other respiratory viruses under surveillance.



◀ Figure 30 shows the percent of laboratory results testing positive for eight common respiratory viruses, as reported by laboratories participating in the National Respiratory and Enteric Virus Surveillance System (NRVESS) and laboratories reporting validated respiratory virus data to the Florida Department of Health via electronic laboratory reporting (n=6), week 30, 2018 to week 18, 2019.

Figure 31: Thus far, **parainfluenza 3, MPV, enterovirus, and coronavirus 229E** were detected by PCR among specimens collected by ARIES providers in week 17 at BPHL.

Figure 31 shows the number of specimens submitted by Acute Respiratory Infection Epidemiology and Surveillance Program (ARIES) providers (n=4) testing positive for 12 common respiratory viruses as reported by the Bureau of Public Health Laboratories (BPHL), week 30, 2018 to week 17, 2019 (ending April 27, 2019). ►



Note: The most recent data available are displayed here. Laboratory results for submitted specimens that have not yet been tested in full will be included in future reports.

- Coronavirus 229E
- Parainfluenza 1
- Rhinovirus
- RSV
- Coronavirus NL63
- Parainfluenza 2
- Enterovirus
- MPV
- Coronavirus OC43
- Parainfluenza 3
- Enterovirus D68
- Adenovirus
- Coronavirus HKU1

Summary of Outbreaks

Table 3: Summary of Respiratory Outbreaks Reported in Week 18, 2019 by Setting

Setting	Number of Outbreaks (Percent of Outbreaks)	Implicated Viruses and Bacteria
Schools/camps	0 (0.0%)	No outbreaks
Child daycares	0 (0.0%)	No outbreaks
Adult daycares	0 (0.0%)	No outbreaks
Correctional facilities and juvenile detention centers	0 (0.0%)	No outbreaks
Nursing facilities	1 (50.0%)	1 outbreak of influenza A unspecified
Assisted living facilities	0 (0.0%)	No outbreaks
Other long-term care facilities	1 (50.0%)	1 outbreak of unknown etiology
Hospitals	0 (0.0%)	No outbreaks
Shelters	0 (0.0%)	No outbreaks
Other settings	0 (0.0%)	No outbreaks
Total	2 (100.0%)	1 outbreak of influenza A unspecified 1 outbreak of unknown etiology

Table 4: Summary of Respiratory Outbreaks Reported for the 2018-19 Season by Setting

Setting	Number of Outbreaks (Percent of Outbreaks)	Implicated Viruses and Bacteria
Schools/camps	87* (38.0%)	1 outbreak of influenza A (H3) 1 outbreak of influenza A (H3) and influenza B unspecified 1 outbreak of influenza A (H3), group A <i>Streptococcus</i> , coxsackievirus, human herpesvirus 4, and norovirus 1 outbreak of influenza A 2009 (H1N1) 36 outbreaks of influenza A unspecified 5 outbreaks of influenza A unspecified and influenza B unspecified 2 outbreaks of influenza A unspecified and group A <i>Streptococcus</i> 8 outbreaks of influenza unspecified 1 outbreak of respiratory syncytial virus (RSV) 31 outbreaks of unknown etiology
Child daycares	62* (27.1%)	3 outbreaks of influenza A (H3) 12 outbreaks of influenza A unspecified 1 outbreak of influenza A unspecified and RSV 1 outbreak of influenza A unspecified, group A <i>Streptococcus</i> , and rotavirus 11 outbreaks of influenza unspecified 1 outbreak of influenza unspecified and RSV 1 outbreak of influenza unspecified and group A <i>Streptococcus</i> 5 outbreaks of RSV 1 outbreak of human metapneumovirus (MPV) 1 outbreak of group A <i>Streptococcus</i> 25 outbreaks of unknown etiology
Adult daycares	2 (0.9%)	2 outbreaks of influenza A unspecified and influenza B unspecified
Correctional facilities and juvenile detention centers	6 (2.6%)	1 outbreak of influenza A 2009 (H1N1) 3 outbreaks of influenza A unspecified 1 outbreak of influenza B Yamagata lineage 1 outbreak of unknown etiology
Nursing facilities	28 (12.2%)	3 outbreaks of influenza A (H3) 1 outbreak of influenza A (H3) and coronavirus 229E 1 outbreak of influenza A (H3), coronavirus 229E, and coronavirus OC43 4 outbreaks of influenza A 2009 (H1N1) 10 outbreaks of influenza A unspecified 1 outbreak of influenza B unspecified 1 outbreak of RSV 1 outbreak of coronavirus 229E and coronavirus OC43 1 outbreak of parainfluenza 3 5 outbreaks of unknown etiology
Assisted living facilities	16 (7.0%)	1 outbreak of influenza A (H3) 6 outbreaks of influenza A unspecified 1 outbreak of influenza unspecified 1 outbreak of rhinovirus 7 outbreaks of unknown etiology

Summary of Outbreaks

Table 4: Summary of Respiratory Outbreaks Reported for the 2018-19 Season by Setting, Continued

Setting	Number of Outbreaks (Percent of Outbreaks)	Implicated Viruses and Bacteria
Other long-term care facilities	19 (8.3%)	3 outbreaks of influenza A (H3) 1 outbreak of influenza A (H3) and RSV 7 outbreaks of influenza A unspecified 1 outbreak of influenza B unspecified and coronavirus 229E 1 outbreak of influenza unspecified 1 outbreak of RSV 5 outbreaks of unknown etiology
Hospitals	3 (1.3%)	1 outbreak of influenza A (H3) and coronavirus OC43 1 outbreak of influenza A 2009 (H1N1) 1 outbreak of influenza A unspecified
Shelters	0 (0.0%)	No outbreaks
Other settings	6 (2.6%)	2 outbreaks of influenza A 2009 (H1N1) 1 outbreak of influenza A unspecified 1 outbreak of influenza A unspecified and influenza B unspecified 1 outbreak of adenovirus 4 and adenovirus 7 1 outbreak of unknown etiology
Total	229 (100.0%)	11 outbreaks of influenza A (H3) 1 outbreak of influenza A (H3) and influenza B unspecified 1 outbreak of influenza A (H3) and RSV 1 outbreak of influenza A (H3) and coronavirus 229E 1 outbreak of influenza A (H3) and coronavirus OC43 1 outbreak of influenza A (H3), coronavirus 229E, and coronavirus OC43 1 outbreak of influenza A (H3), group A <i>Streptococcus</i> , coxsackievirus, human herpesvirus 4, and norovirus 9 outbreaks of influenza A 2009 (H1N1) 76 outbreaks of influenza A unspecified 8 outbreaks of influenza A unspecified and influenza B unspecified 1 outbreak of influenza A unspecified and RSV 2 outbreaks of influenza A unspecified and group A <i>Streptococcus</i> 1 outbreak of influenza A unspecified, group A <i>Streptococcus</i> , and rotavirus 1 outbreak of influenza B Yamagata lineage 1 outbreak of influenza B unspecified 1 outbreak of influenza B unspecified and coronavirus 229E 21 outbreaks of influenza unspecified 1 outbreak of influenza unspecified and RSV 1 outbreak of influenza unspecified and group A <i>Streptococcus</i> 8 outbreaks of RSV 1 outbreak of rhinovirus 1 outbreak of parainfluenza 3 1 outbreak of MPV 1 outbreak of adenovirus 4 and adenovirus 7 1 outbreak of coronavirus 229E and coronavirus OC43 1 outbreak of group A <i>Streptococcus</i> 75 outbreaks of unknown etiology

*After further investigation, it was determined that one or more of the events included with this total in previous report(s) did not meet the definition of an outbreak. For more information on how respiratory outbreaks are defined by the Florida Department of Health in this report, see page 16.

Summary of Notable Respiratory Outbreaks Reported in Week 18, 2019

In week 18, 2019, there were two notable respiratory outbreaks reported.

Miami-Dade County:

A nursing facility reported 16 residents and three staff with ILI. One ill individual was hospitalized. None of the ill individuals died. Specimens collected from 12 ill individuals tested positive for influenza A unspecified by rapid antigen testing at local health care providers. No specimens were available for testing at the Bureau of Public Health Laboratories (BPHL). Outbreak control measures were reviewed with facility leadership. This investigation is closed.

Manatee County

A long-term care facility reported 18 residents with respiratory symptoms. Five ill residents were hospitalized. None of the ill residents have died. No specimens have been available for testing at BPHL thus far. Outbreak control measures were reviewed with facility leadership. This investigation is ongoing.

Florida ILI Surveillance System Summary

ESSENCE-FL Syndromic Surveillance and Vital Statistics Portal Data source for figures 1, 4, 12-20, 23, 24, and 28

Electronic Surveillance System for the Early Notification of Community-based Epidemics (ESSENCE-FL) measures trends in influenza-like illness (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=346) 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.

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. These deaths are also investigated to ensure they meet case definition.

Florida ILINet Data source for figures 2 and 3

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 ILI and total visit counts, as well as submit ILI specimens to the Bureau of Public Health Laboratories for virologic surveillance. For healthcare providers interested in enrolling in ILINet, contact your local county health department.

ILINet is also used as a portal in which the Florida Department of Health reports Florida’s geographic spread of influenza each week to the Centers for Disease Control and Prevention (CDC).

County Influenza Activity in EpiGateway Data source for figure 5-7

County health department (CHD) epidemiologists report their county’s influenza and ILI surveillance data weekly into The Florida Department of Health’s EpiGateway website. Data from these reports is used to classify influenza activity as: no activity, mild, moderate, or elevated. Setting-specific influenza activity and influenza trend information is also reported by CHDs as available. 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 8, 9, 25, and 26; tables 3 and 4

Merlin tracks respiratory outbreak investigations by CHDs. Reports by CHDs include the type of respiratory disease causing the outbreak, settings where outbreaks are occurring, and recommendations made to mitigate the spread of disease. CHD epidemiologists report outbreaks of respiratory disease into Merlin, Florida’s reportable disease surveillance system.

For this report, outbreaks in assisted living facilities, nursing facilities, and long-term care facilities are defined as two or more cases of influenza, ILI, or acute respiratory illness (ARI). In schools/camps and child daycares, outbreaks are defined as three or more epidemiologically linked cases of influenza or ILI. The Florida Department of Health does not count household clusters as outbreaks.

Bureau of Public Health Laboratories (BPHL) Data source for figure 10 and table 1

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

United States World Health Organization Collaborating Laboratories Influenza Virus Surveillance Data source for figure 11; table 2

The United States World Health Organization Collaborating Laboratories Influenza Virus Surveillance is a system that captures antigenic characterizations results for specimens submitted by BPHL to CDC for testing.

Case-Based Influenza Surveillance Data source for figures 21 and 22

Death in a child whose laboratory-confirmed influenza infection has been identified as a contributing to the child’s death are 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 [FloridaHealth.gov/DiseaseReporting](https://www.floridahealth.gov/disease-reporting).

Laboratory Viral Respiratory Surveillance Data source for figures 29 and 30

The National Respiratory and Enteric Virus Surveillance System (NREVSS) is a CDC surveillance system that captures on eight commonly circulating respiratory viruses as reported by participating laboratories in Florida. NREVSS data are combined with validated electronic laboratory data from Florida laboratories that submit RSV laboratory results via electronic laboratory reporting. Together, this information is used to monitor the temporal and geographic patterns of these viruses.

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 17 participating jurisdictions. Florida has four sentinel providers enrolled in ARIES who submit weekly ILI counts, as well as submit ILI specimens to BPHL for testing.