Florida FLU REVIEW

Season: 2018-19

Week 9: 2/24/19-3/2/19

Geographic Spread: **Widespread**

Predominant Strain: **A 2009 (H1N1)**

ILI Activity Trend: **Decreasing**

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

In week 9, ILI activity decreased statewide and was similar to peak levels observed during the 2016-17 season.

Regional differences were observed, with activity remaining highest in the panhandle. For more information on regional trends, see page 8.

Most counties continued to report mild influenza activity in week 9. In week 9, 17 counties reported moderate influenza activity.

In week 9, 13 outbreaks of influenza or ILI were reported (up from 10 outbreaks in week 8). Most of these outbreaks (77%) were reported in facilities serving children. **A total of 165 influenza or ILI outbreaks have been reported so far this season.**

No new influenza-associated pediatric deaths were reported in week 9. Three influenza-associated pediatric deaths have been reported so far this season, all in unvaccinated children. Influenza vaccination can be life-saving in children. For more information, see page 10.

An increase in influenza A (H3) activity has been observed in recent weeks. Both influenza A 2009 (H1N1) and influenza A (H3) viruses have co-circulated throughout the season in Florida. Mid-season changes in predominantly circulating strain have been observed in past seasons in Florida. This trend will continue to be monitored closely.

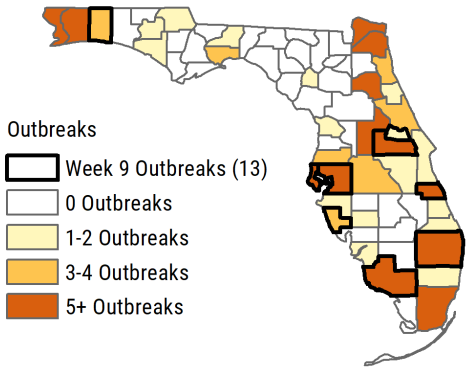
It's not too late to get your flu vaccine. People who have not yet been vaccinated for the 2018-19 season should do so as soon as possible. Influenza vaccines are safe and are the best way to protect yourself and your loved ones from influenza and its potentially severe complications. The Centers for Disease Control and Prevention continue to recommend influenza vaccination now and as long as influenza viruses are circulating.

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

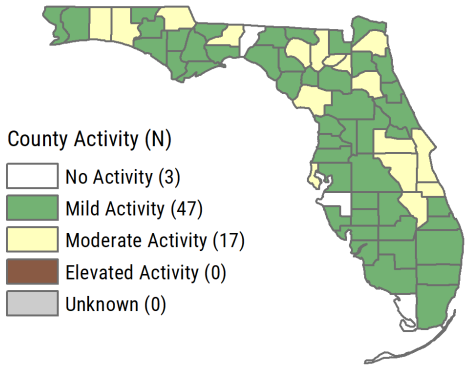
- Wash your hands often with soap and water (if soap is not available, use an alcohol-based sanitizer).
- Avoid touching your eyes, nose, and mouth.
- If you do get sick, stay home until fever-free for at least 24 hours (without the use of fever-reducing medication).

Influenza and ILI Outbreaks

Reported as of 3/2/19



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

Posted March 6, 2019 on the Bureau of Epidemiology (BOE) website: FloridaHealth.gov/FloridaFlu
Produced by the BOE, Florida Department of Health
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In This Issue

Table of Contents:

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.

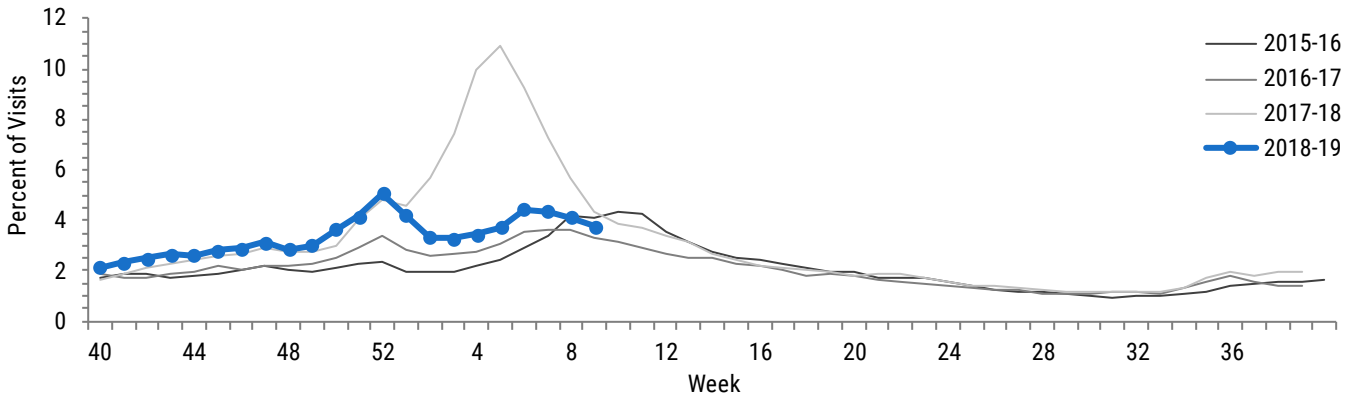
Surveillance is also conducted to identify any unusually severe presentations of influenza, detect outbreaks, and determine the onset, peak, and wane of the influenza season to assist with influenza prevention, particularly in high-risk populations like the very young, adults aged ≥65 years, and pregnant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

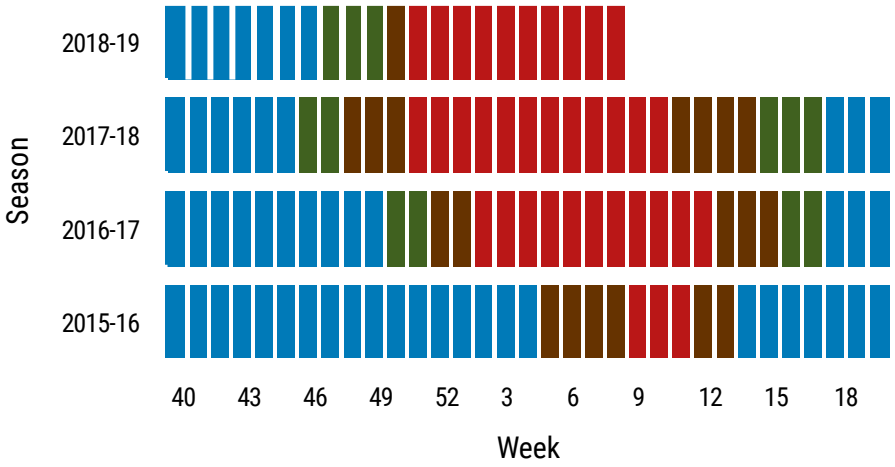
Figure 1: In week 9, **the percent of emergency department and urgent care center visits for ILI statewide decreased.** Levels were similar to those observed at the peak of the 2016-17 season.



▲ **Figure 1** shows **the percent of visits for influenza-like illness (ILI)** for facilities participating in ESSENCE-FL (n=345) statewide for the current season (week 40, 2018 to week 9, 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 9, Florida reported **widespread 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 9, 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 9, **the percent of patients with ILI reported by ILINet outpatient providers statewide decreased** and was within levels observed at this time in previous seasons.

Figure 3 shows the **percent of patients with influenza-like illness (ILI)** reported by ILINet outpatient providers statewide (n=52), week 40, 2015 to week 9, 2019. ▶

For ILINet, ILI is defined as a fever ≥100°F AND sore throat and/or cough in the absence of another known cause.

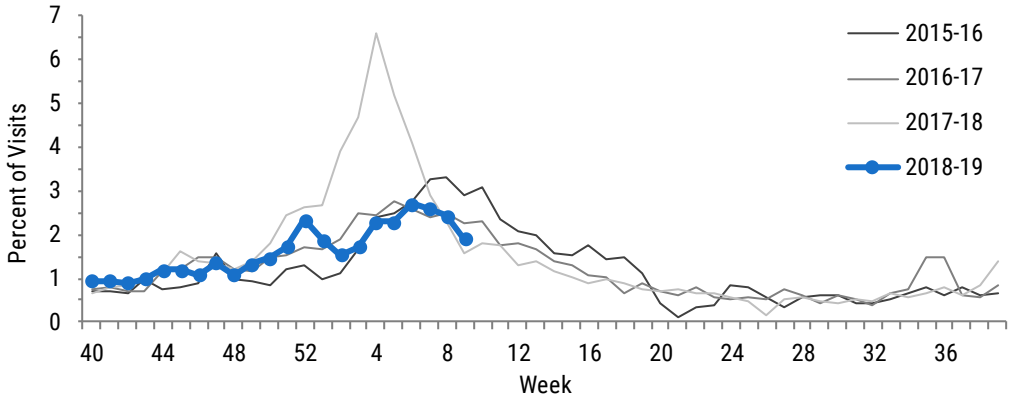
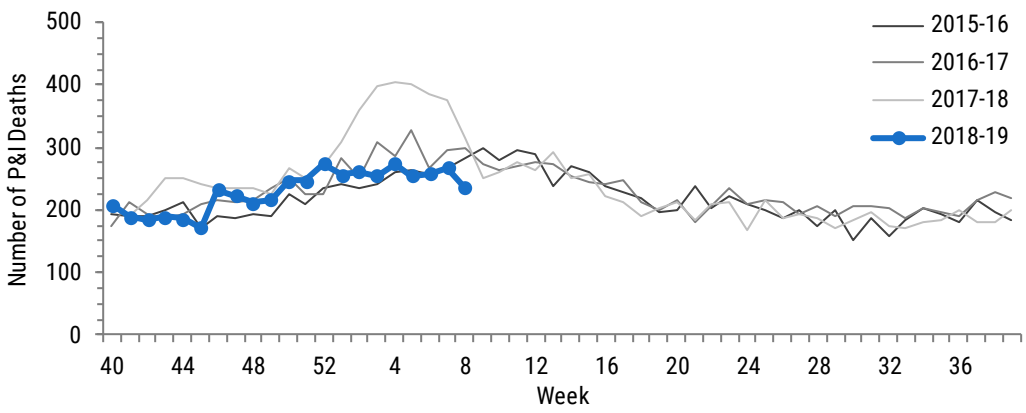


Figure 4: In week 8 (ending 2/23/19), **the number of pneumonia and influenza deaths identified statewide decreased** and remained below levels observed at this time in previous seasons.



◀ **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 8, 2019.

*Current season P&I 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: Most counties reported **mild activity** for week 9.

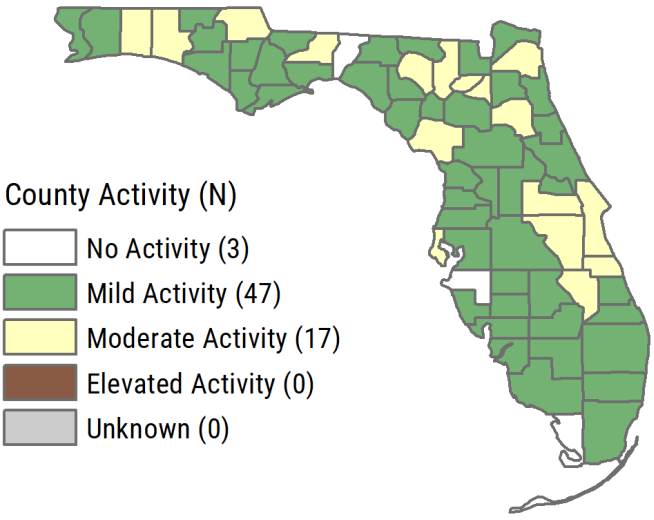
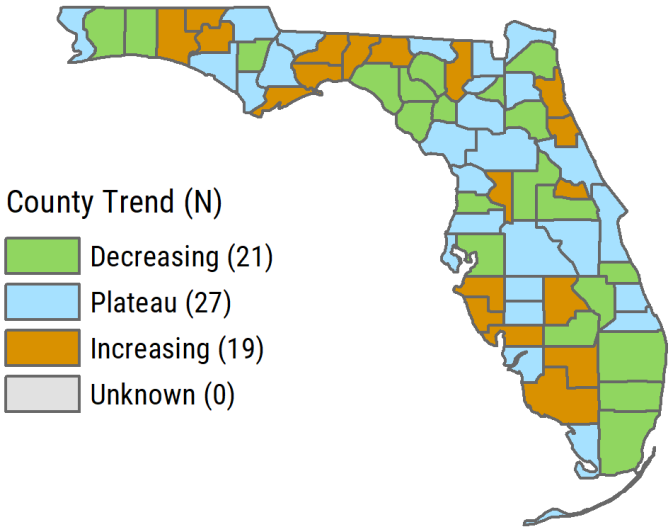
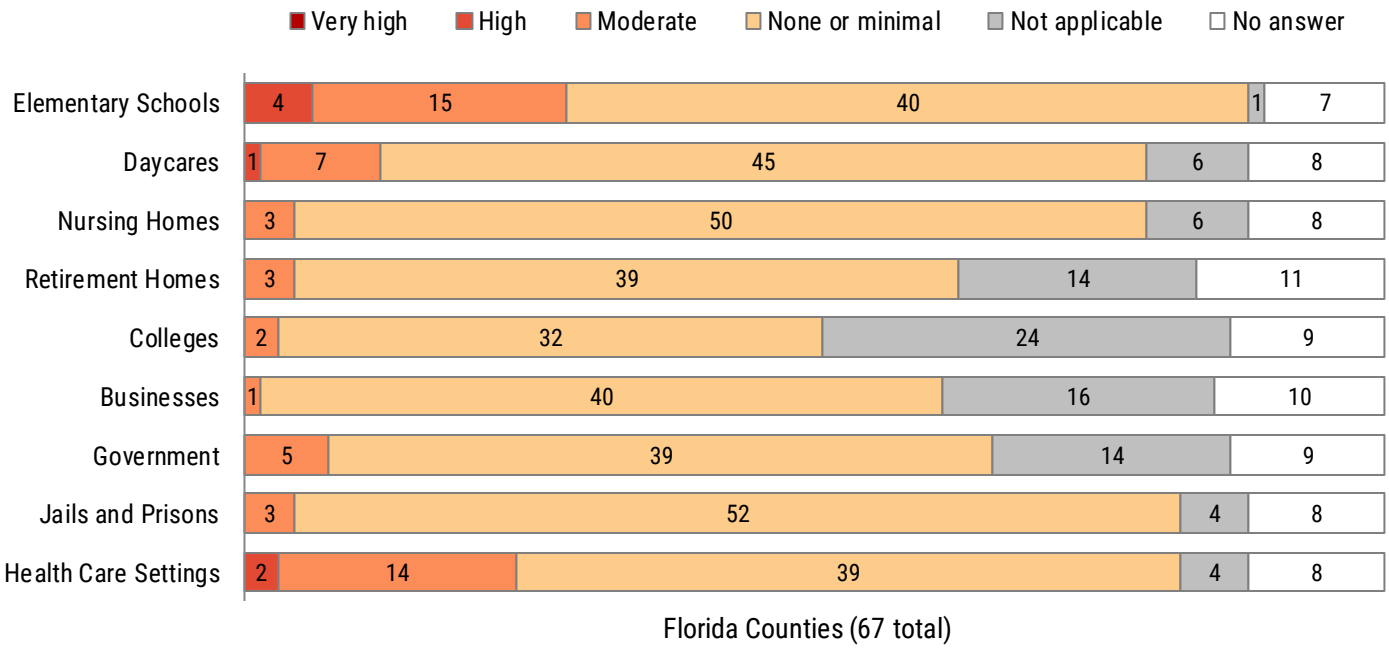


Figure 6: Most counties reported **activity at a plateau** for week 9.



▲ **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 9, most counties reported **no or minimal influenza activity** across all settings. **Moderate** to **high influenza activity** was reported by 32% of counties who provided reports for **elementary schools** and 27% of counties who provided reports for **health care settings.**



▲ **Figure 7** shows the results of the influenza activity assessment completed by county health departments for week 9, 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.

Outbreaks of Influenza and Influenza-like Illness

Statewide Outbreaks

In week 9, 13 outbreaks of influenza or ILI were reported (up from 10 outbreaks in week 8). Of the 13 outbreaks reported in week 9, seven have laboratory evidence of influenza.

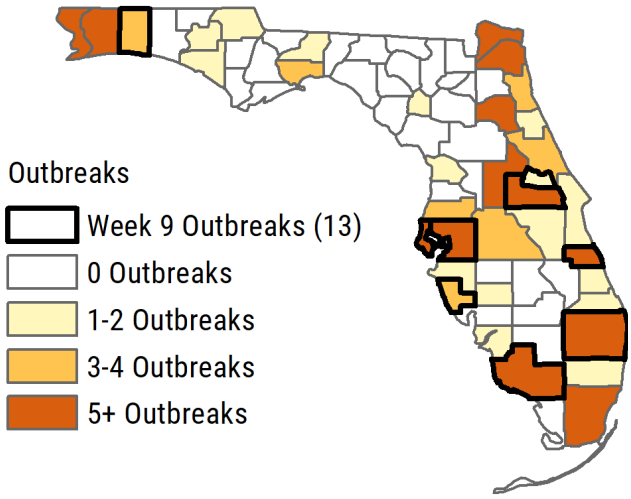
As of week 9, a total of 165 outbreaks of influenza or ILI have been reported for the 2018-19 season. A complete list of the outbreaks reported so far this season by etiology and setting type is available on page 14.

Laboratory testing:

Thus far, no specimens have been available for testing at the Bureau of Public Health Laboratories for the 13 outbreaks reported in week 9.

Hospitalizations and deaths:

Two hospitalizations were reported in one of the 13 outbreaks reported in week 9. No hospitalizations were reported in the remaining 12 outbreaks. No deaths were reported in any of the 13 outbreaks reported in week 9.



▲ **Figure 8** shows **reported influenza and influenza-like illness (ILI) outbreaks by county**. Counties with outbreaks reported in week 9 are **outlined in bold.**

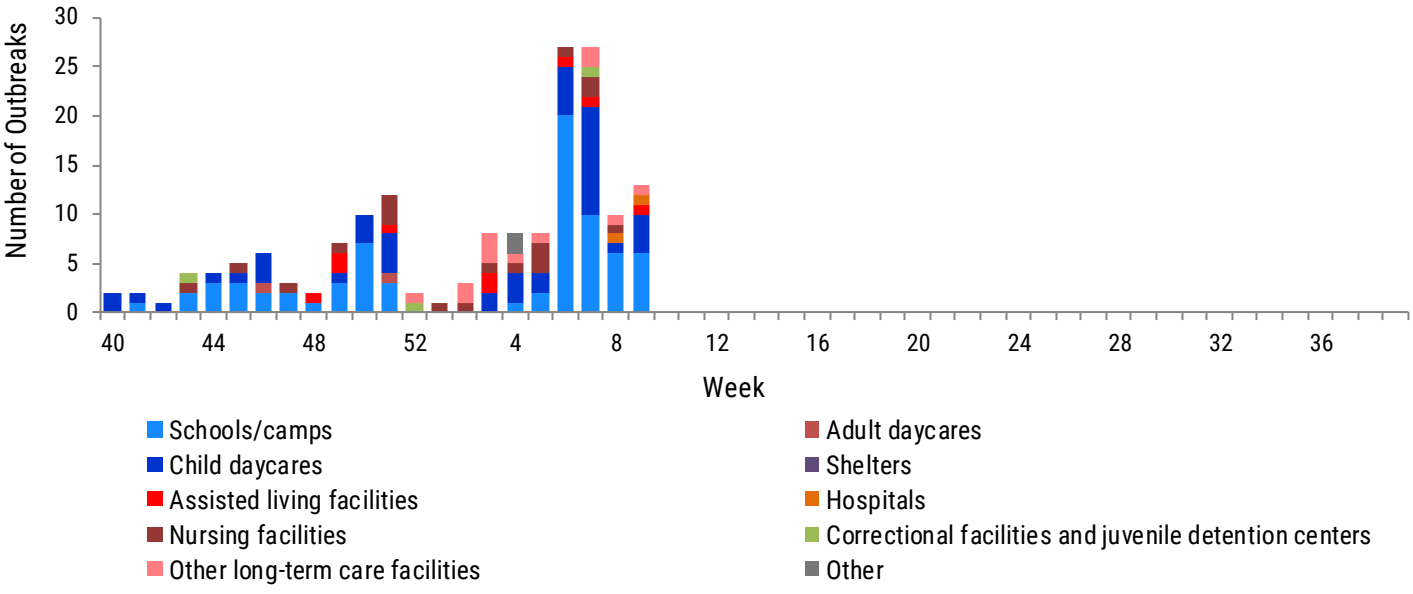
So far this season, one or more hospitalizations have been reported in 27 out of 165 total outbreaks. One or more deaths were reported in seven of the 165 total outbreaks this season.

For detailed information on notable outbreaks reported in week 9, 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.

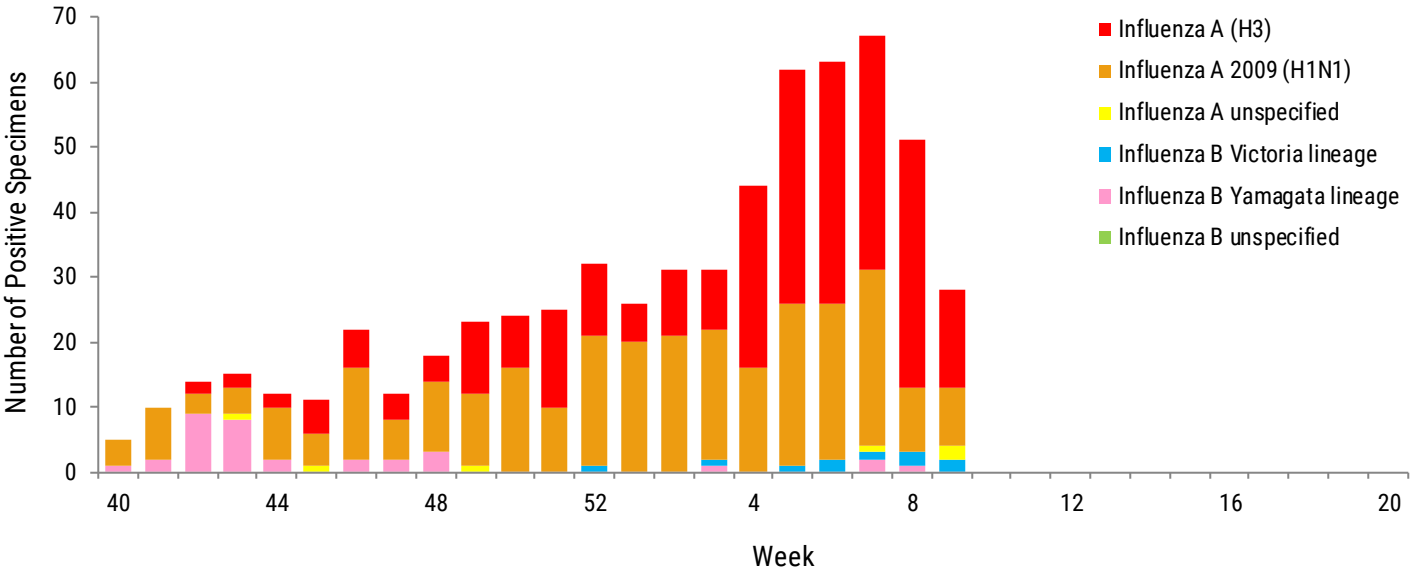
Figure 9: In week 9, the number of influenza or ILI outbreaks **increased.** Thirteen outbreaks were reported (up from 10 outbreaks in week 8). Consistent with the trend observed so far this season, the majority of the outbreaks reported in week 9 were in facilities serving children (**schools/camps** or **child daycares**).



▲ **Figure 9** shows the distribution of **influenza and influenza-like illness (ILI) outbreaks by facility type** as reported in Merlin, week 40, 2018 to week 9, 2019.

Laboratory Surveillance

Figure 10: Over the last four weeks, **influenza A (H3)** has been the **most common influenza subtype detected at BPHL.** **Influenza A 2009 (H1N1)** viruses still make up the largest proportion of positive influenza detections at BPHL so far this season.



▲ **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 9, 2019.

Nationally, the Centers for Disease Control and Prevention has reported regional differences in predominantly circulating strains of influenza. In the southeastern United States, influenza A (H3) has been observed as the predominant strain. Elsewhere, influenza A 2009 (H1N1) viruses have predominated, though some states have observed a recent untick in influenza A (H3) activity. Mid-season changes in predominantly circulating strain have been observed in Florida in past seasons. The Florida Department of Health will continue to monitor these virologic data closely.

**Table 1: Bureau of Public Health Laboratories Viral Surveillance by Lab Event Date*
Reported by 10:00 a.m. March 6, 2019**

Influenza Type	Current Week 9	Previous Week 8	Current 2018-19 Season
Total Specimens Tested	**46**	**71**	**1,121**
Influenza positive specimens (% of total specimens tested)	**28 (60.9%)**	**51 (71.8%)**	**626 (55.8%)**
Influenza A 2009 (H1N1) (% of influenza positives)	9 (32.1%)	10 (19.6%)	292 (46.6%)
Influenza A (H3) (% of influenza positives)	15 (53.6%)	38 (74.5%)	285 (45.5%)
Influenza A unspecified (% of influenza positives)	2 (7.1%)	-	6** (1.0%)
Influenza B Yamagata (% of influenza positives)	-	1 (2.0%)	33 (5.3%)
Influenza B Victoria (% of influenza positives)	2 (7.1%)	2 (3.9%)	10 (1.6%)
Influenza B unspecified (% of influenza positives)	-	-	-

*"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 isolates 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) isolates, two influenza A 2009 (H1N1) isolates, and four influenza B virus isolates (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/.

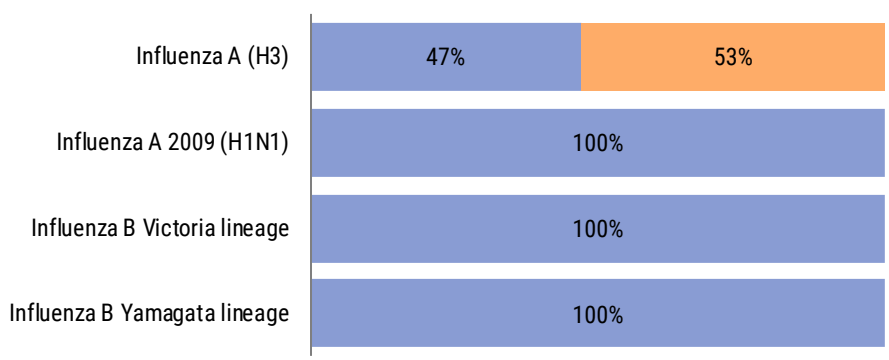
Table 2: Antigenic Characterization Results for Influenza Isolates Submitted to CDC, Cumulative Totals for Week 30, 2018-Week 9, 2019

Antigenic Characterization	Number of Specimens
A/MICHIGAN/45/2015-LIKE (H1N1)pdm09	25
A/SINGAPORE/INFIMH-16-0019/2016-LIKE (H3N2) BY FRA	8
A/SINGAPORE/INFIMH-16-0019/2016-LIKE (H3N2) LOW BY FRA	9
B/COLORADO/06/2018-LIKE	1
B/PHUKET/3073/2013-LIKE	12

◀ **Table 2** summarizes **antigenic characterization results** received for specimens collected from week 30, 2018 (beginning July 22, 2018) through week 9, 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 9, **all of the influenza A 2009 (H1N1), influenza B Yamagata lineage specimens, and influenza B Victoria lineage specimens** 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 9, 2019 by virus type.

As of week 9, 2019, antigenic characterizations results are still pending for 10 influenza A (H3N2) isolates, 13 influenza A 2009 (H1N1) isolates, and one influenza B Victoria lineage isolate submitted to CDC by BPHL during this timeframe.

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=345) from week 40, 2015 to week 9, 2019. Data are organized by region (see Figure 19).

2018-19 2017-18 2016-17 2015-16

Figure 12: In **region 1, ILI activity decreased** during week 9 but remained **well above peak levels** observed during the 2016-17 and 2015-16 seasons.

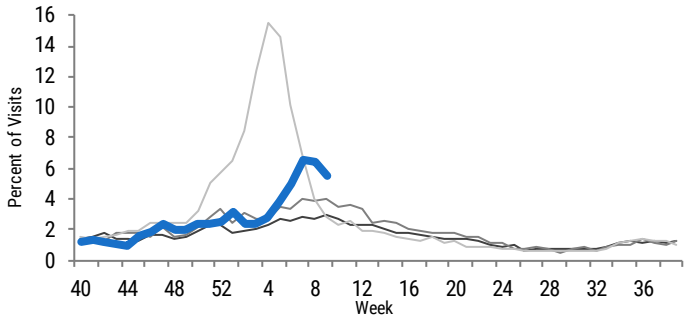


Figure 13: In **region 2, ILI activity increased** during week 9 and remained **above peak levels** observed during the 2016-17 and 2015-16 seasons.

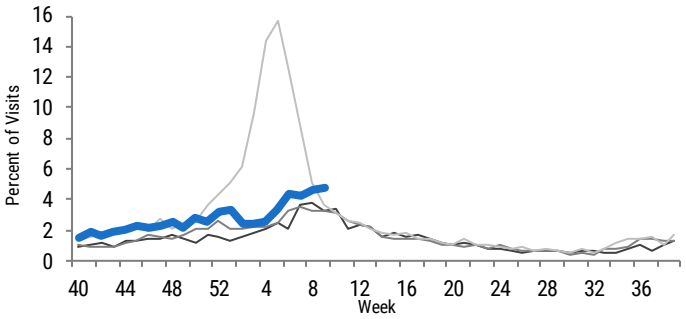


Figure 14: In **region 3, ILI activity decreased slightly** during week 9 but remained **above peak levels** observed during the 2016-17 and 2015-16 seasons.

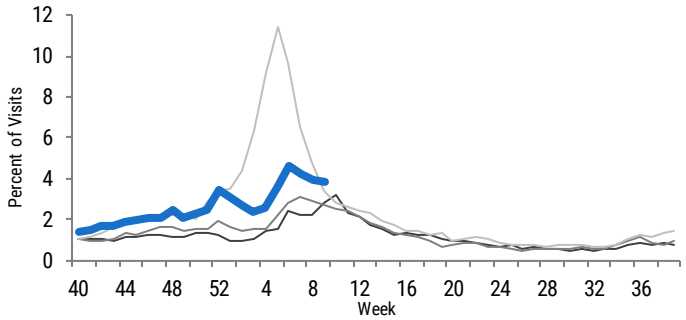


Figure 15: In **region 4, ILI activity decreased** during week 9 and was within levels observed at this time during previous seasons.

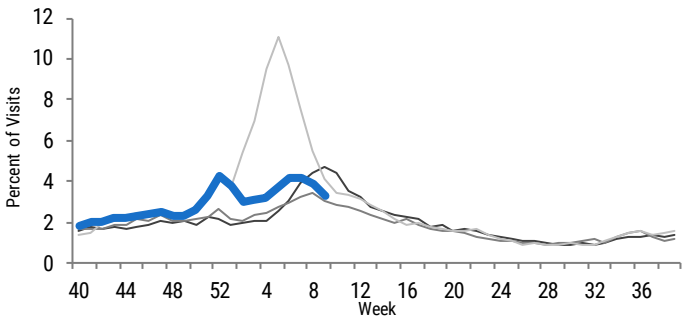


Figure 16: In **region 5, ILI activity decreased** during week 9 and was **similar to peak levels** observed during the 2016-17 season.

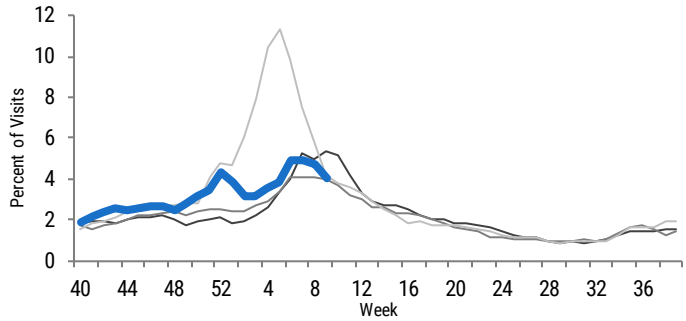


Figure 17: In **region 6, ILI activity increased** during week 9 and was **similar to peak levels** observed during the 2015-16 season.

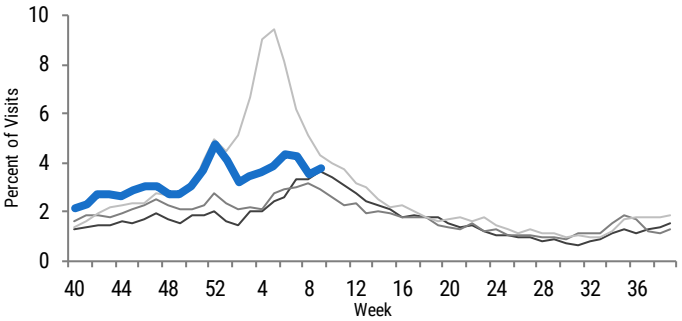
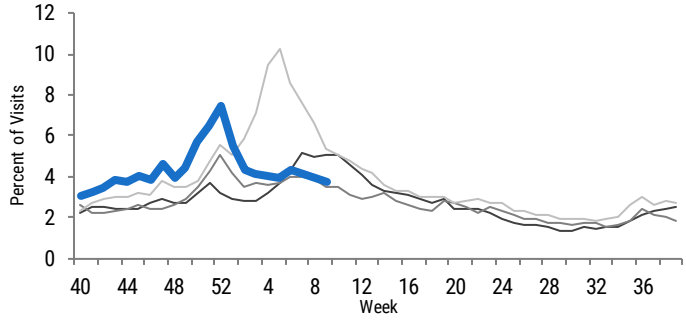


Figure 18: In **region 7, ILI activity decreased** during week 9 and was similar to levels observed at this time during the 2016-17 season.



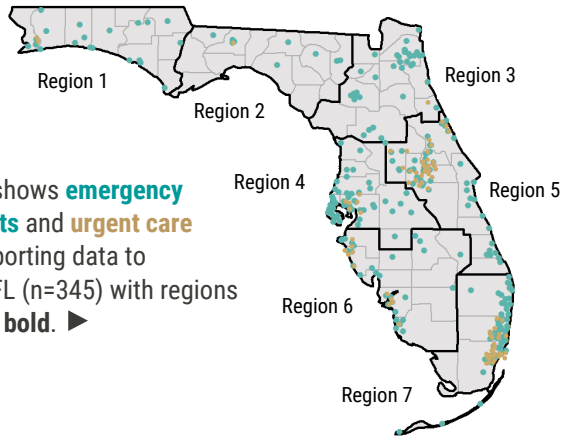


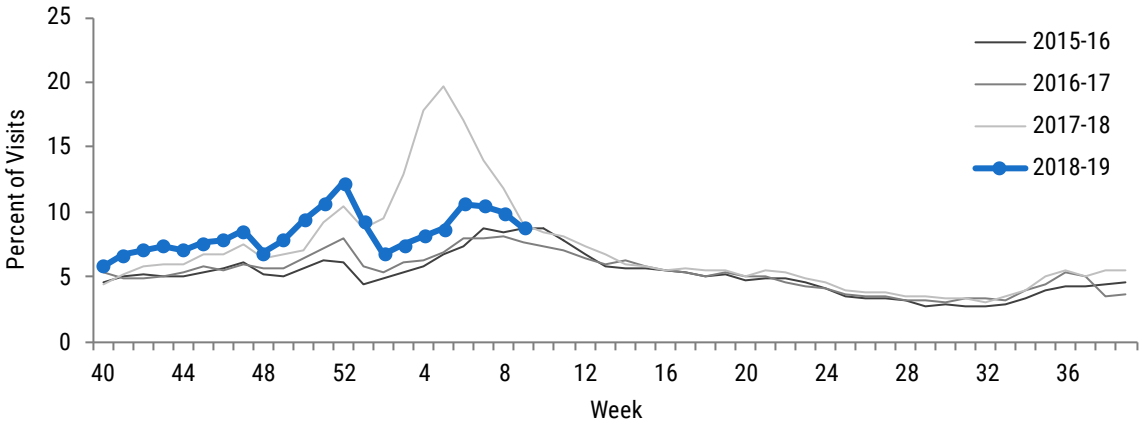
Figure 19 shows **emergency departments** and **urgent care centers** reporting data to ESSENCE-FL (n=345) with regions **outlined in bold**. ▶

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 Florida Department of Health encourages you and your family to get vaccinated as soon as possible. To find a flu shot near you, please visit: FloridaHealth.gov/FindAFluShot.

Figure 20: In week 9, **the percent of emergency department and urgent care center visits for ILI in children <18 years decreased** and was **similar to peak levels** observed during the 2016-17 and 2015-16 seasons.



◀ **Figure 20** shows **the percent of influenza-like illness (ILI) visits among children <18 years** at emergency department and urgent care centers, as reported into ESSENCE-FL, week 40, 2015 to week 9, 2019.

Outbreaks in Facilities Serving Children

In week 9, 10 new outbreaks were reported in facilities serving children (schools/camps and child daycares):

- Four outbreaks of ILI in child daycares
- Three outbreaks of influenza A unspecified in schools/camps
- One outbreak of influenza unspecified in a school/camp
- Two outbreaks of ILI in schools/camps

So far this season, **117 outbreaks** have been reported in facilities serving children. Additional outbreak reports are expected as the season progresses.

In addition to getting vaccinated each season, the Florida Department of Health also 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.

Laboratory testing:

Thus far, specimens have not been available for testing at the Bureau of Public Health Laboratories for any of these 10 outbreaks.

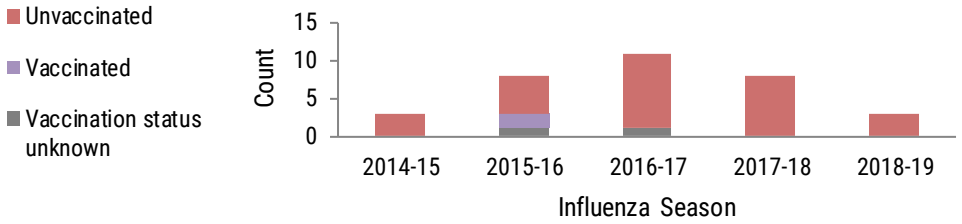
Hospitalizations and deaths:

No hospitalizations or deaths were reported in these 10 outbreaks.

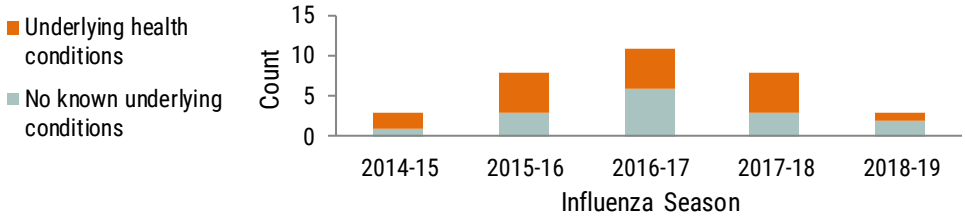
So far this season, one or more hospitalizations have been reported in 9 out of 117 total outbreaks in facilities serving children. No deaths have been reported for any of the outbreaks in facilities serving children so far this season.

At-Risk Populations: Children

Figures 21-22: In week 9, **no new influenza-associated pediatric deaths were reported.**



▲ **Figure 21** shows the number of **influenza-associated pediatric deaths** as reported in Merlin **by vaccination status**, week 40, 2014 to week 9, 2019.



▲ **Figure 22** shows the number of **influenza-associated pediatric deaths** as reported in Merlin by **medical history**, week 40, 2014 to week 9, 2019.

In week 9, **no new influenza-associated pediatric deaths were reported.** Three influenza-associated pediatric deaths have been reported so far this season: two in **unvaccinated children** with **no known underlying medical conditions** and one in an **unvaccinated child** with **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.**

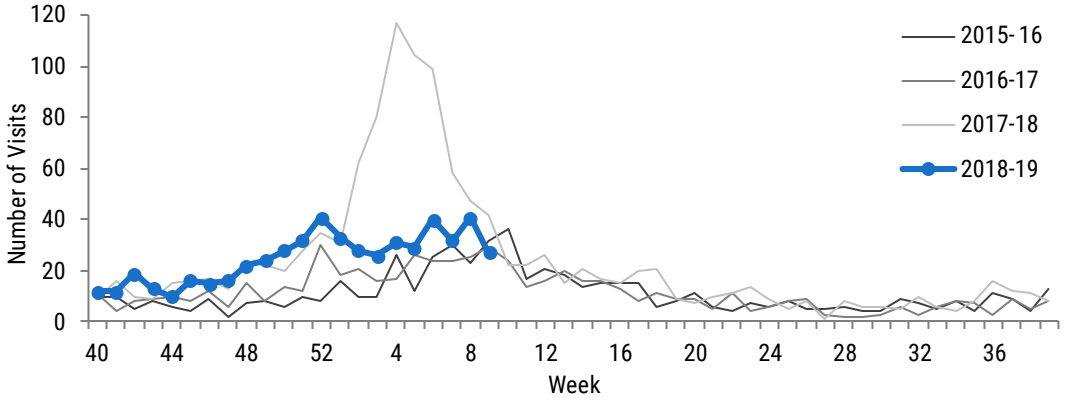
Children, especially those with certain health conditions are at increased risk of severe complications from influenza infection. **Influenza vaccination has been shown to reduce a child's likelihood of dying from influenza by up to 60%.** For more information, please visit: www.cdc.gov/media/releases/2017/p0403-flu-vaccine.html.

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 9, the **number of emergency department and urgent care center visits for influenza among pregnant women decreased** and was similar to levels observed at this time during the 2016-17 season.



◀ **Figure 23** shows the **number of visits* to emergency department and urgent care centers with chief complaints of influenza infection and pregnancy**, as reported in ESSENCE-FL, week 40, 2015 to week 9, 2019.

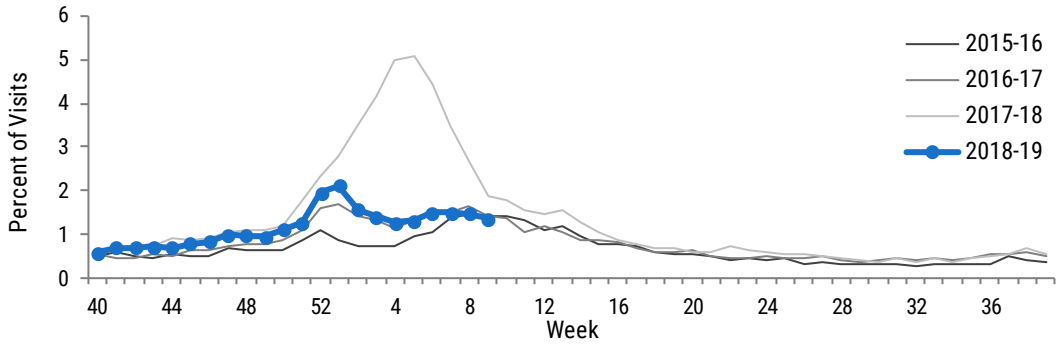
*This count **underrepresents** the true number of pregnant women presenting for care to emergency departments and urgent care centers with influenza, however, **the overall trend** has been validated through review of discharge data collected by the Agency of Health Care Administration.

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 9, the **percent of emergency department and urgent care center visits for ILI in adults ≥65 years decreased slightly.** Levels were similar to those observed at this time in the 2016-17 and 2015-16 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 ESSNECE-FL, week 40, 2015 to week 9, 2019.

Outbreaks in Facilities Serving Adults ≥65 Years

In week 9, two outbreaks of influenza or ILI 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 an assisted living facility
- One outbreak of influenza A (H3) in a long-term care facility

So far this season, **39 outbreaks** have been reported in facilities serving adults ≥65 years. Additional outbreak reports are expected as we head further into the influenza season.

Laboratory testing:

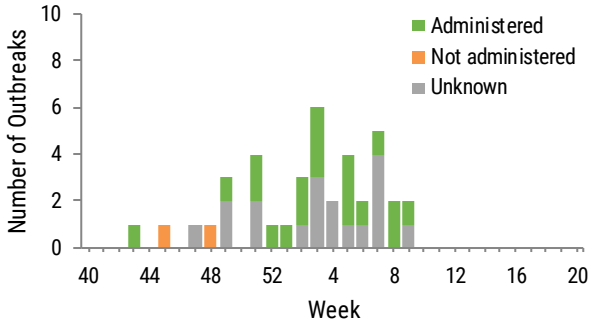
Thus far, no specimens have been available for testing at the Bureau of Public Health Laboratories for the two outbreaks reported in these settings in week 9.

Control measures:

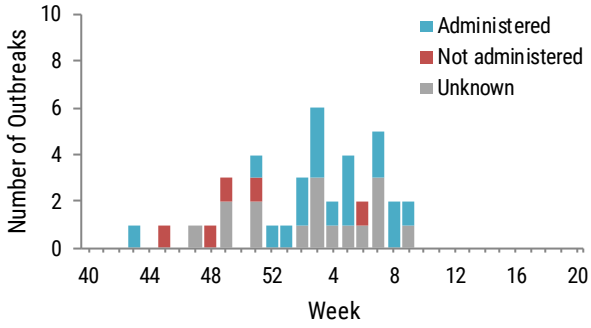
Control measures were reviewed with facility leadership in both of the outbreaks reported in week 9.

Antiviral treatment was administered to ill individuals in one of the two outbreaks reported in week 9. In the remaining outbreak, it is unknown if antiviral treatment was administered.

Antiviral chemoprophylaxis was administered to at-risk individuals in one of the two outbreaks reported in week 9. In the remaining outbreak, it is unknown if antiviral chemoprophylaxis was administered.



▲ **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.

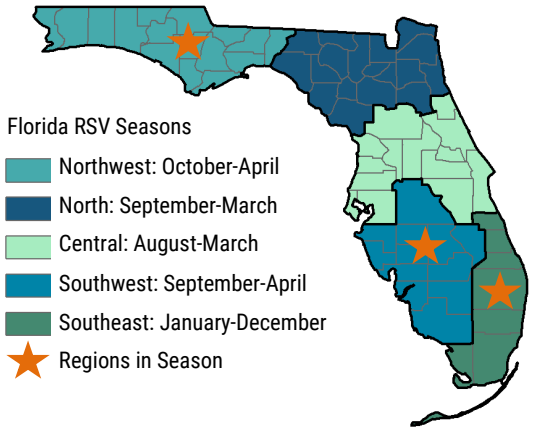


▲ **Figure 26** shows the number of outbreaks where **antiviral chemoprophylaxis was administered to at-risk individuals** by week in facilities serving adults ≥65 years old, as reported in Merlin.

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.



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

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, three of Florida's regions are in RSV season.**

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

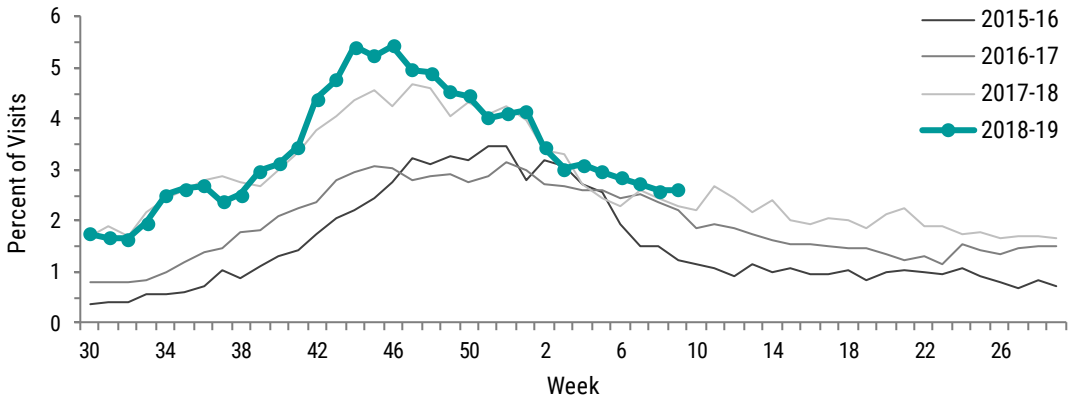
Week 9 (February 24—March 2, 2019) Activity Summary

In week 9, RSV activity in children <5 years old decreased and was similar to levels observed at this time in previous years.

No new possible RSV-associated pediatric deaths were identified in week 9. One possible RSV-associated pediatric death has been identified so far in 2019.

No new outbreaks of RSV were reported in week 9. A total of 11 outbreaks of RSV have been reported since October 2018.

Figure 28: In week 9, **the percent of emergency department and urgent care center visits for RSV among children <5 years increased** and was slightly above levels observed at this time in previous years.



◀ **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 9, 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.

RSV & Other Respiratory Virus Surveillance

Figure 29: In week 9, **the percent of specimens testing positive for RSV decreased slightly** and was similar to levels 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=5), week 30, 2015 to week 9, 2019. ▶

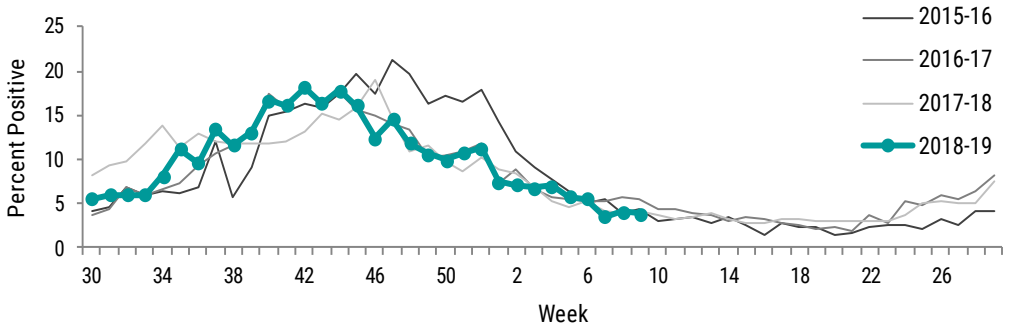
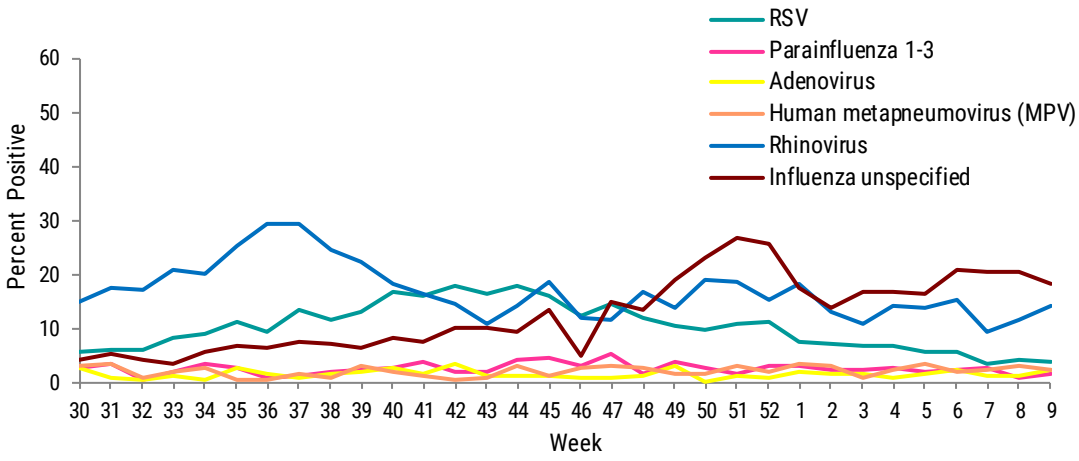


Figure 30: In recent weeks, **the percent of specimens testing positive for influenza decreased slightly** but remained higher than other respiratory viruses under surveillance. In week 9, the **percent of specimens testing positive for rhinovirus increased notably.**

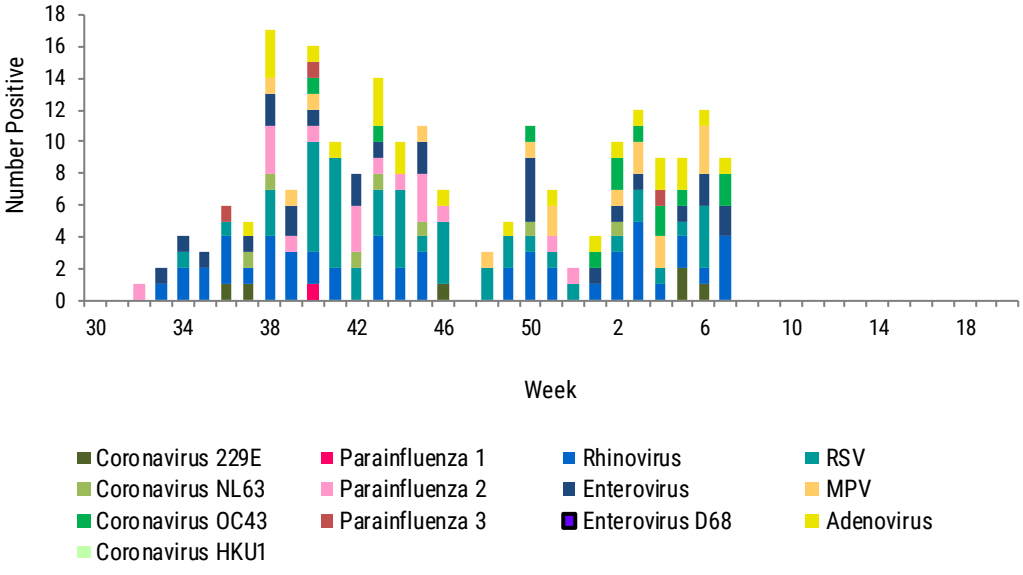


◀ **Figure 30** shows **the percent of laboratory results testing positive for eight common respiratory viruses**, as reported by laboratories participating in the National Respiratory and Enteric Virus Surveillance System (NRVESS) and laboratories reporting validated respiratory virus data to the Florida Department of Health via electronic laboratory reporting (n=5), week 30, 2018 to week 9, 2019.

Figure 31: In week 8 (ending 2/23/19), none of the specimens submitted by ARIES providers tested positive by extended respiratory panel testing 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 8, 2019 (ending February 23, 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.



Summary of Outbreaks

Table 3: Summary of Influenza and Influenza-like Illness Outbreaks Reported in Week 9, 2019 by Setting

Setting	Number of Outbreaks (Percent of Outbreaks)	Implicated Viruses and Bacteria
Schools/camps	6 (46.2%)	3 outbreaks of influenza A unspecified 1 outbreak of influenza unspecified 2 outbreaks of unknown etiology
Child daycares	4 (30.8%)	4 outbreaks of unknown etiology
Adult daycares	0 (0.0%)	No outbreaks
Correctional facilities and juvenile detention centers	0 (0.0%)	No outbreaks
Nursing facilities	0 (0.0%)	No outbreaks
Assisted living facilities	1 (7.7%)	1 outbreak of influenza A unspecified
Other long-term care facilities	1 (7.7%)	1 outbreak of influenza A (H3)
Hospitals	1 (7.7%)	1 outbreak of influenza A unspecified
Shelters	0 (0.0%)	No outbreaks
Other settings	0 (0.0%)	No outbreaks
Total	13 (100.0%)	1 outbreak of influenza A (H3) 5 outbreaks of influenza A unspecified 1 outbreak of influenza unspecified 6 outbreaks of unknown etiology

Table 4: Summary of Influenza and Influenza-like Illness Outbreaks Reported for the 2018-19 Season by Setting

Setting	Number of Outbreaks (Percent of Outbreaks)	Implicated Viruses and Bacteria
Schools/camps	72* (43.6%)	1 outbreak of influenza A 2009 (H1N1) 1 outbreak of influenza A (H3) and influenza B unspecified 1 outbreak of influenza A (H3) and group A *Streptococcus* 28 outbreaks of influenza A unspecified 3 outbreaks of influenza A unspecified and influenza B unspecified 3 outbreaks of influenza A unspecified and group A *Streptococcus* 9 outbreaks of influenza unspecified 1 outbreak of respiratory syncytial virus (RSV) 25 outbreaks of unknown etiology
Child daycares	45* (27.3%)	1 outbreak of influenza A (H3) 8 outbreaks of influenza A unspecified 1 outbreak of influenza A unspecified and RSV 1 outbreak of influenza A unspecified, group A *Streptococcus,* and rotavirus 9 outbreaks of influenza unspecified 1 outbreak of influenza unspecified and RSV 2 outbreaks of influenza unspecified and group A *Streptococcus* 5 outbreaks of RSV 1 outbreak of human metapneumovirus (MPV) 1 outbreak of group A *Streptococcus* 15 outbreaks of unknown etiology
Adult daycares	2 (1.2%)	2 influenza A unspecified and influenza B unspecified
Correctional facilities and juvenile detention centers	3 (1.8%)	1 outbreak of influenza A 2009 (H1N1) 1 outbreak of influenza B Yamagata lineage 1 outbreak of unknown etiology
Nursing facilities	20 (12.1%)	2 outbreaks of influenza A 2009 (H1N1) 2 outbreaks of influenza A (H3) 1 outbreak of influenza A (H3) and coronavirus 229E 7 outbreaks of influenza A unspecified 1 outbreak of influenza unspecified 1 outbreak of RSV 6 outbreaks of unknown etiology
Assisted living facilities	9 (4.8%)	1 outbreak of influenza A (H3) 2 outbreaks of influenza A unspecified 1 outbreak of influenza unspecified 1 outbreak of rhinovirus 4 outbreaks of unknown etiology
Other long-term care facilities	10 (6.7%)	1 outbreak of influenza A (H3) 1 outbreak of influenza A (H3) and RSV 4 outbreaks of influenza A unspecified 1 outbreak of influenza unspecified 1 outbreak of RSV 2 outbreaks of unknown etiology

Table 4 continued on page 15.

Summary of Outbreaks

Table 4: Summary of Influenza and Influenza-like Illness Outbreaks Reported for the 2018-19 Season by Setting, Continued

Setting	Number of Outbreaks (Percent of Outbreaks)	Implicated Viruses and Bacteria
Hospital	2 (1.2%)	1 outbreak of influenza A (H3) and coronavirus OC43 1 outbreak of influenza A unspecified
Shelters	0 (0.0%)	No outbreaks
Other settings	2 (1.2%)	1 outbreak of influenza A 2009 (H1N1) 1 outbreak of influenza A unspecified and influenza B unspecified
Total	165 (100.0%)	5 outbreaks of influenza A 2009 (H1N1) 5 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) and group A *Streptococcus* 50 outbreaks of influenza A unspecified 6 outbreaks of influenza A unspecified and influenza B unspecified 1 outbreak of influenza A unspecified and RSV 3 outbreaks of influenza A unspecified and group A *Streptococcus* 1 outbreak of influenza A unspecified, group A *Streptococcus,* and rotavirus 1 outbreak of influenza B Yamagata lineage 21 outbreaks of influenza unspecified 1 outbreak of influenza unspecified and RSV 2 outbreaks of influenza unspecified and group A *Streptococcus* 8 outbreaks of RSV 1 outbreak of rhinovirus 1 outbreak of human metapneumovirus 1 outbreak of group A *Streptococcus* 53 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 influenza and ILI outbreaks are defined by the Florida Department of Health, see page 16.

Summary of Notable Influenza and Influenza-like Illness (ILI) Outbreaks Reported in Week 9, 2019

In week 9, 2019, there were two notable outbreaks of influenza or ILI reported.

Hillsborough County

A school/camp reported 20 individuals with ILI. No specimens have been available for testing at the Bureau of Public Health Laboratories (BPHL) thus far. The etiology of this outbreak is not yet known. It is unknown if outbreak control measures were reviewed with facility leadership. This investigation is still ongoing.

Pinellas County

A long-term care facility reported four residents and one staff with ILI. Two individuals were hospitalized. None of the ill individuals died. At least one specimen collected from an ill individual tested positive for influenza A (H3) (test type unknown) at a local health care provider. No specimens have been available for testing at BPHL thus far. Outbreak control measures were reviewed with facility leadership. This investigation is still 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=345) 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 influenza and ILI 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 influenza or ILI into Merlin, Florida's reportable disease surveillance system.

Outbreaks in assisted living facilities, nursing facilities, and long-term care facilities are defined as two or more cases of influenza or ILI. 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.

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.