Florida FLU REVIEW

2017-18 Season

Week 2: January 7-13, 2018

Summary

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

- **Flu activity is high and continues to increase. In week 2, 2018:**
  - **Increases were observed in all regions of the state (see page 7). Review of historical data indicate current activity is now above previous seasonal flu peaks.** Region 1 is experiencing the largest increases with approximately 8.45% of emergency department and urgent care visits related to influenza.
  - Visits to emergency departments among pregnant women, and adults aged ≥65 years continued to increase sharply and remained well above peak activity observed during the previous seasons. These groups are at high risk for severe complications from influenza infection.
  - Thirty-four outbreaks were reported: 20 influenza and 14 ILI; 107 outbreaks of influenza and ILI have been reported since the start of the 2017-18 season.
    - **More outbreaks have been reported than in previous seasons at this time.**
  - Nearly all of the outbreaks (94%) reported so far this season have been in facilities serving people at higher risk for complications due to influenza infection (children and adults aged ≥65 years).
- **Although illnesses due to influenza have been steadily climbing, deaths due to influenza have not increased at this time. These data will continue to be monitored closely.**

Immunizations and prevention:

- **The Florida Department of Health recommends that sick people stay home until fever-free for at least 24 hours (without the use of fever-reducing medication) and that all people use good handwashing practices.**
- **Those who have not been vaccinated should get vaccinated as soon as possible.** Though flu vaccines can vary in effectiveness from season to season, **flu vaccines are safe and are the best way to prevent influenza infection and serious influenza complications.** To locate a flu shot near you, please visit www.floridahealth.gov/findaflushot.

Treatment:

- **The CDC recommends the use of antiviral treatment as soon as possible for all hospitalized, severely ill, and people who are at higher risk for complications with suspect influenza**: children <2 years old, adults ≥65 years old, pregnant women, and those with underlying medical conditions. Treatment should be administered within 48 hours of illness onset (but treatment administered after this period can still be beneficial). **A recent CDC health advisory stresses the importance of rapid and early antiviral treatment this season.** For more information, visit: http://www.floridahealth.gov/diseases-and-conditions/influenza/_documents/cdc-han-influenza-12-27-2017.pdf.
  - **In these instances, clinicians should not wait for laboratory confirmation to administer antivirals to people with suspect influenza.**

National influenza activity:

- **Influenza activity continued to increase and was well above the national baseline.** Most states are experiencing high levels of ILI activity.
- **As in Florida, influenza A (H3) has been the most common strain of influenza reported to the Centers for Disease Control and Prevention (CDC).**

Weekly State Influenza Activity

Widespread

For more information see page 2 ▶

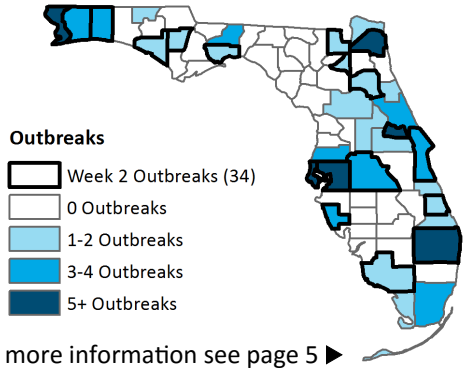
Predominately Circulating Strain

A (H3)

For more information see page 10 ▶

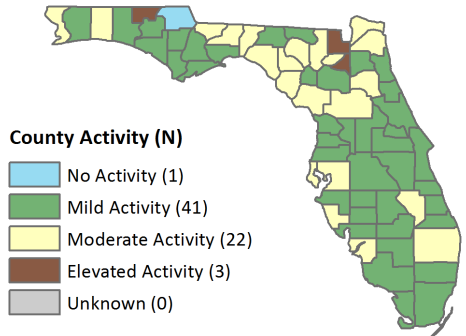
Influenza and ILI Outbreaks

Reported as of 1/13/2018



For more information see page 5 ▶

County Influenza Activity



For more information see page 4 ▶

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Posted January 18, 2018 on the Bureau of Epidemiology (BOE) website: www.floridahealth.gov/floridaflu
Produced by the BOE, Florida Department of Health
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Florida HEALTH

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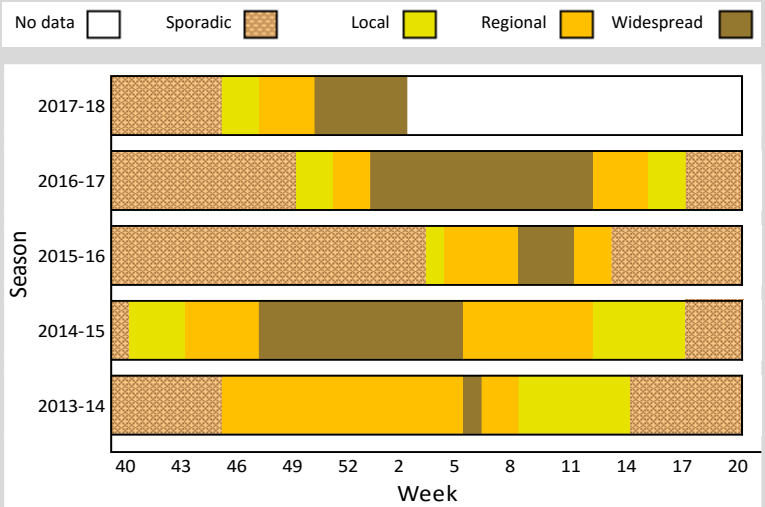
Weekly State Influenza Activity Reporting

Below is the state influenza activity level reported to the Centers for Disease Control and Prevention each week since the 2013-14 influenza season. **Florida reported widespread influenza activity for week 2.**



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

Influenza surveillance goals:

- Influenza surveillance is conducted to detect changes in the influenza virus. These data are used to help determine the annual national vaccine composition and to prepare for potential epidemics or pandemics.
- Surveillance is also conducted to identify unusually severe presentations of influenza infection, detect outbreaks, and determine seasonal influenza trends in order to guide influenza prevention, particularly in high-risk populations like children, adults ≥65 years old, and pregnant women. These activities are particularly important at the start of flu season in order to identify potential changes in circulating influenza strains.

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

Statewide ILI Visits

ED and UCC Visits for ILI by Flu Season

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

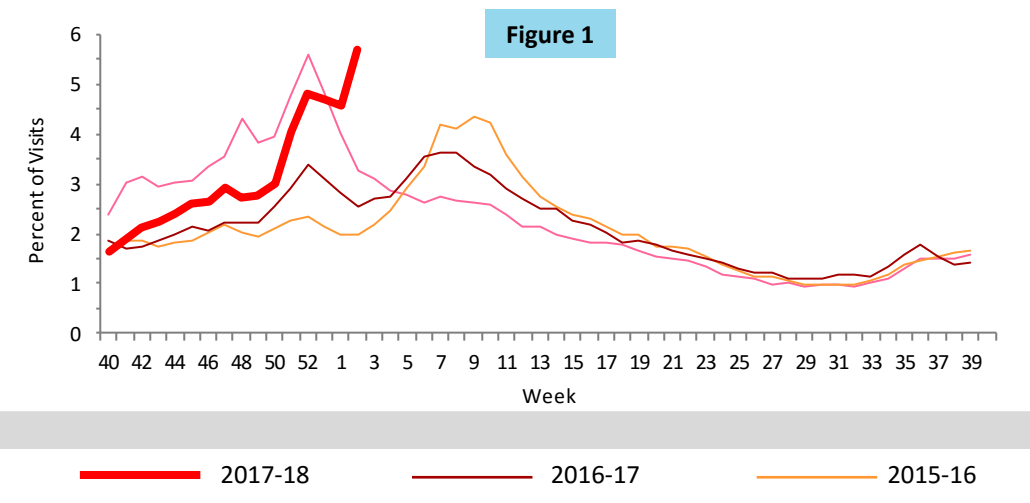


Figure 1 shows the percent of visits for ILI from ED and UCC chief complaint data for ESSENCE-FL participating facilities (n=309), week 40, 2014 to week 2, 2018.

In week 2, the percent of visits to EDs and UCCs increased and was well above peak levels observed during previous seasons at this time.

All regions experienced sharp increases in the percent of visits to EDs and UCCs for ILI during week 2 (see page 7).

The ESSENCE-FL ILI syndrome is composed of chief complaints that include the words “influenza” or “flu,” or chief complaints that include the words “fever” and “cough,” or “fever” and “sore throat.” For more information on ESSENCE-FL , see page 17.

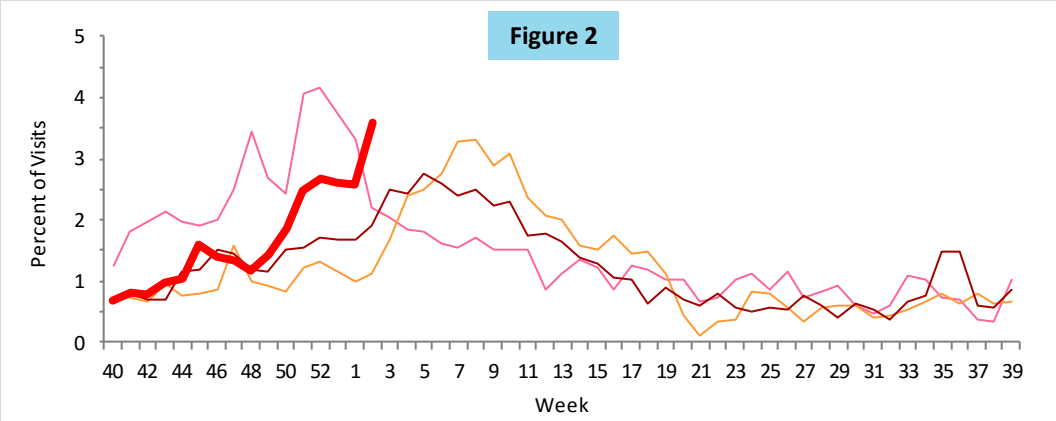
2017-18 2016-17 2015-16 2014-15

Visits for ILI to Outpatient Providers by Flu Season

ILI = influenza-like illness

Figure 2 shows the percent of visits for ILI reported by ILINet outpatient providers statewide (n=12), week 40, 2014 to week 2, 2018. For ILINet, ILI is defined as a fever ≥100°F AND sore throat and/or cough in the absence of another known cause.

In week 2, the percent of visits for ILI reported by ILINet outpatient providers increased sharply and was above levels observed during the previous three seasons at this time.



P&I Deaths* from Vital Statistics by Flu Season

P&I = pneumonia and influenza

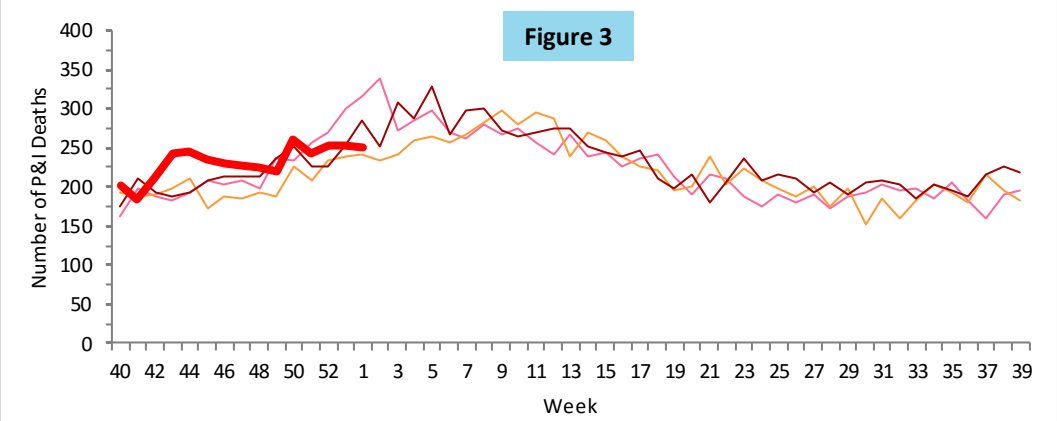


Figure 3 shows P&I deaths* for all Florida counties from the Bureau of Vital Statistics, as reported into ESSENCE-FL, week 40, 2014 to week 1, 2018.

In week 1 (ending January 6, 2018), 250 P&I deaths were reported.

The preliminary number of P&I deaths decreased slightly and was within levels observed in previous season at this time.

P&I Deaths* Multi-Year Regression Model

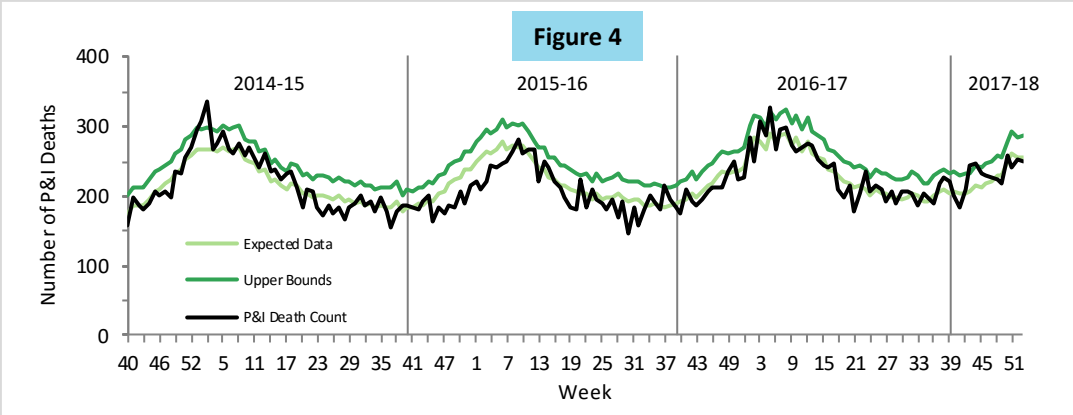
P&I = pneumonia and influenza

Figure 4 shows the number of preliminary estimated P&I deaths* for all Florida counties, the number of deaths predicted using a multi-year regression model, and the upper bound of the 95% confidence interval for this prediction.

For week 1 (ending January 6, 2018), 250 preliminary estimated P&I deaths were reported.

The upper bound of the 95% confidence interval for prediction is 287 deaths, with no excess deaths.

Increases in P&I deaths have historically lagged increases in influenza activity. Due to the steep increases in influenza activity in recent weeks, subsequent increases in P&I deaths are expected in the coming weeks.



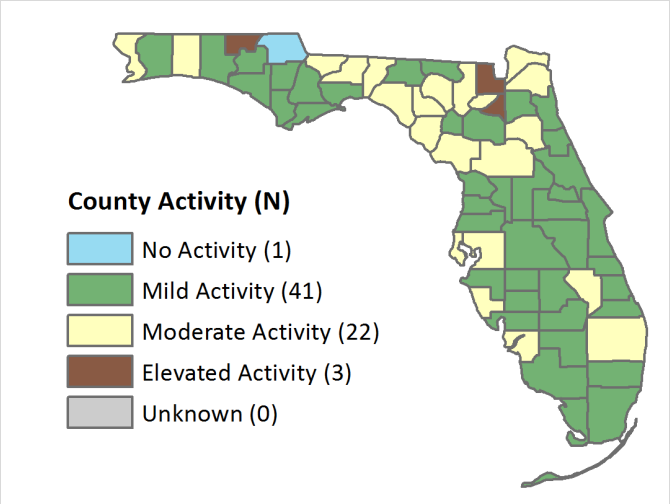
* Current season P&I death counts are preliminary estimates and may change as more data are received. *The most recent data available are displayed here. Vital statistics death records received in ESSENCE-FL are considered to be complete through week 1, 2018.*

County Influenza and ILI Activity Maps

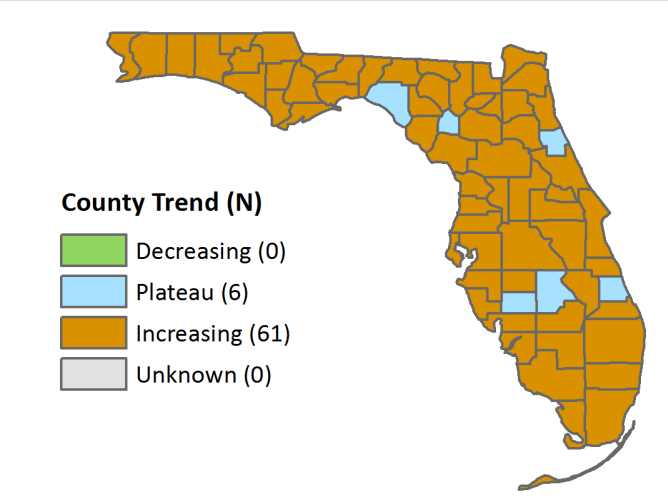
County influenza activity data are reported by county health departments through EpiGateway on a weekly basis. Information is used to determine county activity and includes laboratory results, outbreak reports, and ILI activity. **The figures below reflect a county health department's assessment of influenza activity within their county. For week 2, 61 counties reported increasing activity and six counties reported activity at a plateau.**

County Influenza Activity

Map 1 **County Influenza Activity Level for Week 2 Reported by 9:30 a.m. January 18, 2018**



Map 2 **County Influenza Activity Trend for Week 2 Reported by 9:30 a.m. January 18, 2018**



As of 9:30 a.m. January 18, 2018, a total of 67 (100%) counties reported their weekly level of influenza activity. Please note that data reported after the deadline (Tuesday at 5 p.m.) are recorded but may not be included in the activity maps for this week.

Influenza-Associated Pediatric Deaths

Influenza-Associated Pediatric Deaths

Figures 5-7

Figures 5-7 show the number of pediatric deaths associated with influenza infection, week 40, 2013 to week 2, 2018.

In week 2, no influenza-associated pediatric deaths were reported. Two influenza-associated pediatric deaths in unvaccinated children have been reported so far this season.

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

Annual vaccination remains the best way to protect children against influenza. Now is the perfect time to get vaccinated. CDC recommends vaccination as long as influenza viruses are circulating. To learn more, please visit: www.cdc.gov/flu/protect/whoshouldvax.htm#annual-vaccination.

Figure 5: Influenza-Associated Pediatric Deaths by Vaccination Status

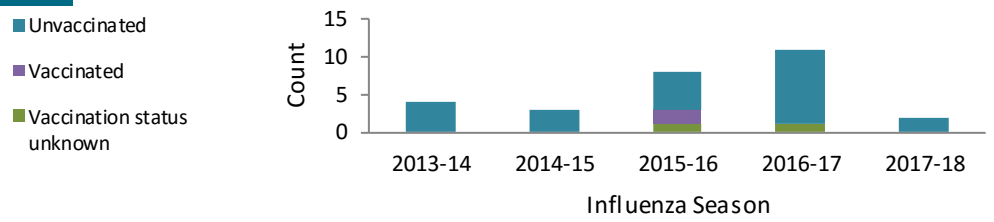


Figure 6: Influenza-Associated Pediatric Deaths by Medical History

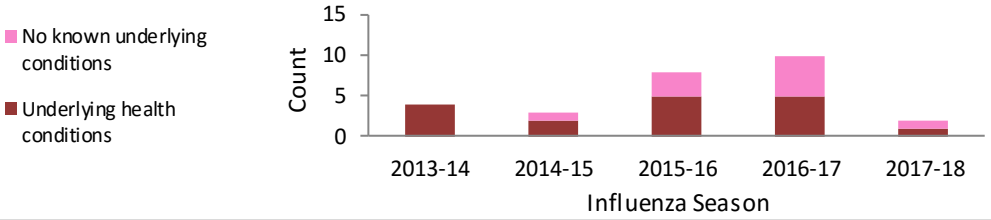
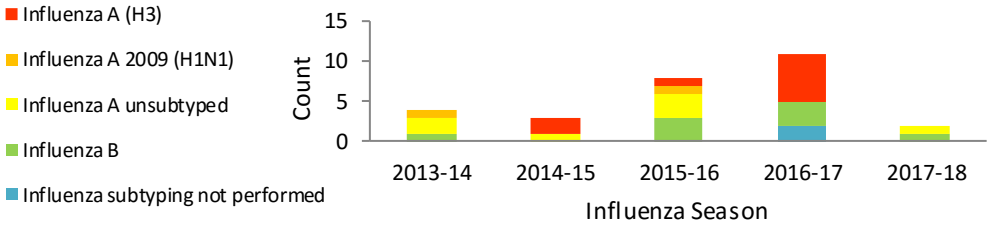


Figure 7: Influenza-Associated Pediatric Deaths by Strain Type



Reported Influenza and ILI Outbreaks

ILI = influenza-like illness

Map 3 shows influenza and ILI outbreaks by county for week 40, 2017 through week 2, 2018, as reported into Merlin.

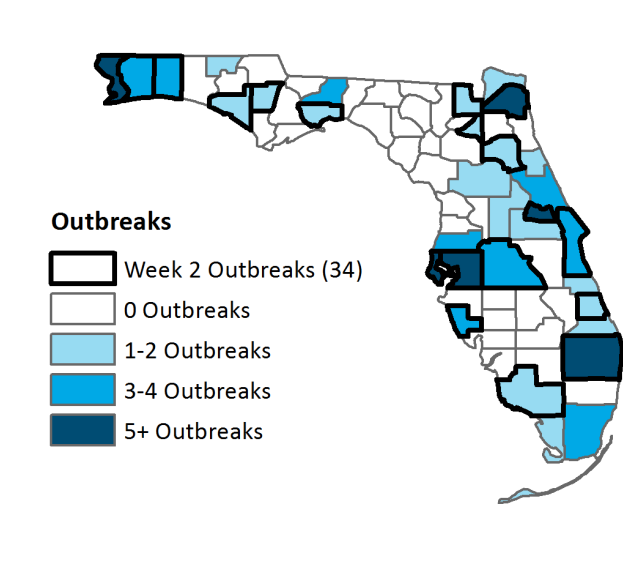
In week 2, 34 outbreaks were reported: 20 influenza and 14 ILI. As of week 2, 107 outbreaks of influenza and ILI have been reported since the start of the 2017-18 influenza season. More outbreaks have been reported this season than at this time in previous seasons.

A total of 101 (94.4%) of the outbreaks reported so far this season have been in facilities serving people at higher risk for complications due to influenza infection (children and adults aged ≥65 years).

Though there has been a sharp increase in the number of outbreaks reported since week 1, 2018, most outbreaks continue to be due to influenza A and occurred in facilities serving adults aged ≥65 years (such as nursing homes and long-term care facilities).

For more detailed information on influenza and ILI outbreaks reported in week 2, see page 13. **Data presented on outbreaks are preliminary and subject to change as outbreak investigations progress.**

Map 3 **Influenza and ILI Outbreaks by County Week 40, 2017 through Week 2, 2018**



Nineteen counties reported influenza or ILI outbreaks in week 2. Of the 34 outbreaks reported, 32 have ongoing investigations.

- These outbreaks occurred in the following settings: 29 (85.3%) in facilities serving adults aged ≥65 years, two (5.9%) in day-cares, one (2.9%) in schools, one (2.9%) in healthcare facilities, and one (2.9%) in businesses.
- Seven (20.6%) outbreaks have specimens submitted to Bureau of Public Health Laboratories for testing so far.
- Infection control measures were reviewed with facility leadership in all outbreaks.
- So far, three (8.8%) outbreaks have estimated vaccination status for the 2017-18 influenza season.
- Individuals were hospitalized as a result of their illness in three outbreaks. No deaths have been reported in association with any outbreak in week 2.

Please see page 13 for detailed out break summaries.

Reported Influenza and ILI Outbreaks by Facility Type

ILI = influenza-like illness

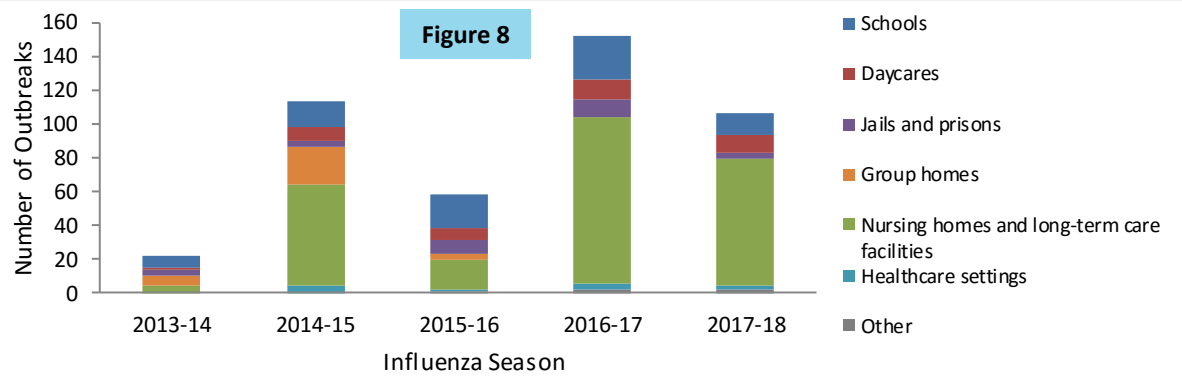
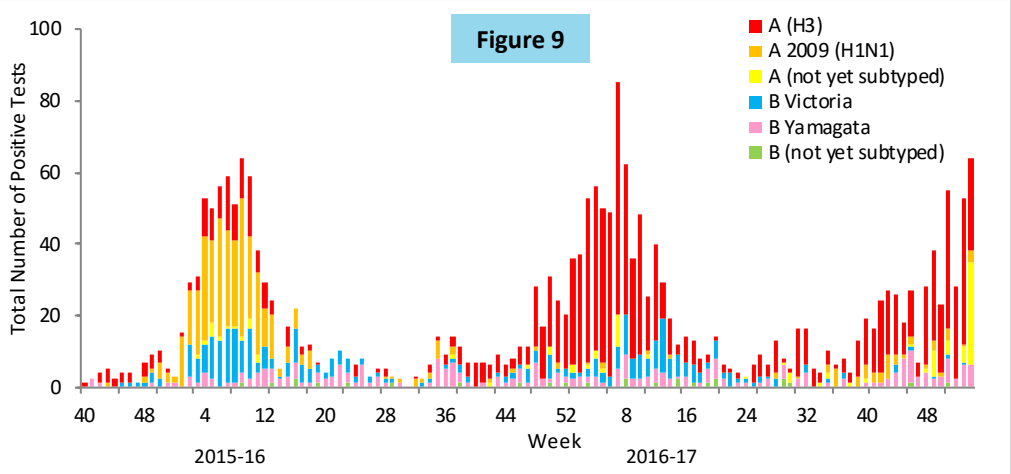


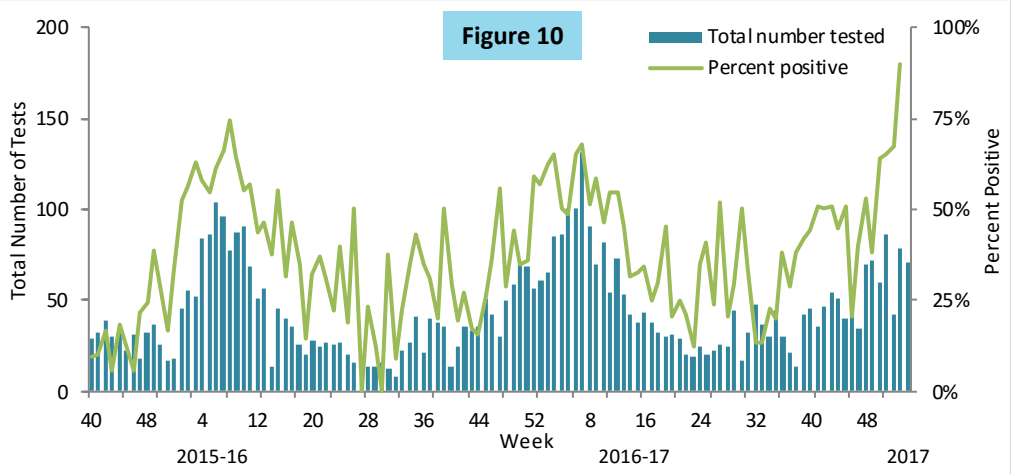
Figure 8 shows the distribution of outbreaks by facility type and season.

In week 2, 34 outbreaks were reported. Nearly all of the outbreaks reported so far this season have occurred in facilities serving at-risk subpopulations (adults aged ≥65 years and children).

BPHL Viral Influenza Specimen Testing

BPHL = Bureau of Public Health Laboratories





Figures 9 and 10 use BPHL viral surveillance data.

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

The most common influenza subtype detected at BPHL statewide for the 2017-18 influenza season has been influenza A (H3). The Centers for Disease Control and Prevention (CDC) has continued to report extensive genetic diversity in the HA genes of influenza A (H3) viruses submitted to CDC for phylogenetic analysis. No significant antigenic drift has been reported. **Seasons in which A (H3) viruses predominate are associated with more severe illness in young children and adults ≥65 years old.** While statewide data indicate influenza A (H3) is the predominantly circulating strain, these data also indicate a substantial amount of influenza B viruses present and co-circulating.

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

In week 2, the percent of specimens testing positive for influenza increased sharply and was above levels observed during the previous three influenza seasons at this time.

Table 2: Bureau of Public Health Laboratories (BPHL) Viral Surveillance by Lab Event Date*
Reported by 10:00 a.m. January 18, 2018

Influenza Type	Current Week 2	Previous Week 1	Current 2017-18 Season
Total Specimens Tested	**70**	**79**	**839**
Influenza positive specimens (% of total specimen tested)	**64 (90.1%)**	**53 (67.1%)**	**452 (53.9%)**
Influenza A 2009 (H1N1) (% of influenza positives)	3 (4.7%)	1 (1.9%)	32 (7.1%)
Influenza A (H3) (% of influenza positives)	26 (40.6%)	41 (77.4%)	291 (64.4%)
Influenza A not yet subtyped (% of influenza positives)	29 (45.3%)	4 (7.5%)	62 (13.7%)
Influenza B Yamagata (% of influenza positives)	6 (9.4%)	6 (11.3%)	57 (12.6%)
Influenza B Victoria (% of influenza positives)	-	1 (1.9%)	6 (1.3%)
Influenza B not yet subtyped (% of influenza positives)	-	-	4 (0.9%)

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

For county health departments seeking county-specific laboratory data, please refer to the Flu Lab Report in Merlin. For instructions on how to use the Flu Lab Report, please see the Guide to Flu Lab Report on the Bureau of Epidemiology website: www.floridahealth.gov/diseases-and-conditions/influenza/_documents/flulabreportguide.pdf

ED and UCC Visits for ILI by Region

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

Figures 11-17 show the percent of visits for ILI from ED and UCC chief complaints for ESSENCE-FL participating facilities (n=309), by ESSENCE-FL Regional Domestic Security Task Force regions (see map 4) from week 40, 2014 to week 2, 2018.* **In week 2, the percent of ED and UCC visits for ILI dramatically increased in all regions. In most regions, activity levels were well above peak levels observed during the past three flu seasons. Activity levels remained highest in regions 1.**

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

Figure 11: Region 1 (19 facilities)

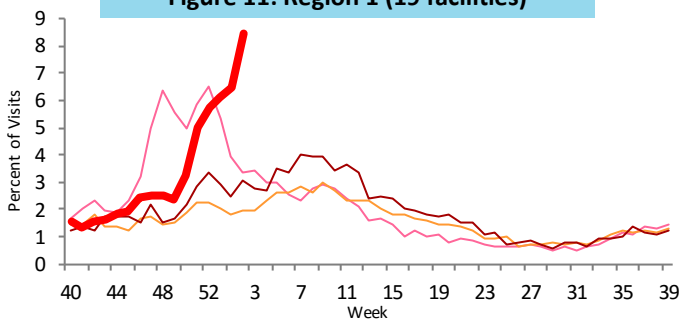


Figure 12: Region 2 (10 facilities)

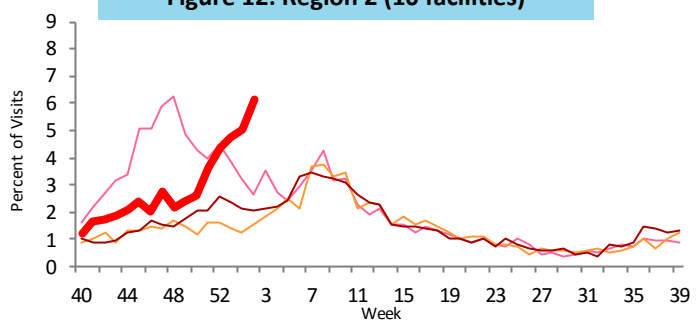


Figure 13: Region 3 (35 facilities)

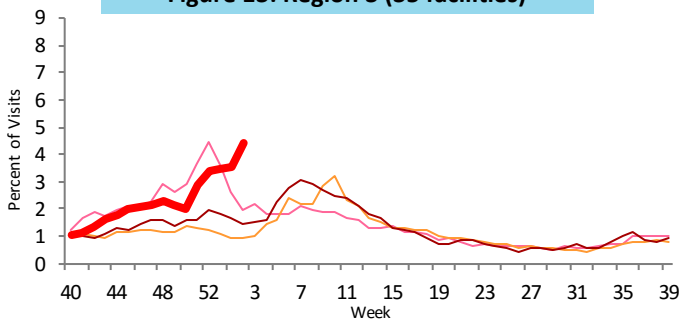


Figure 14: Region 4 (53 facilities)

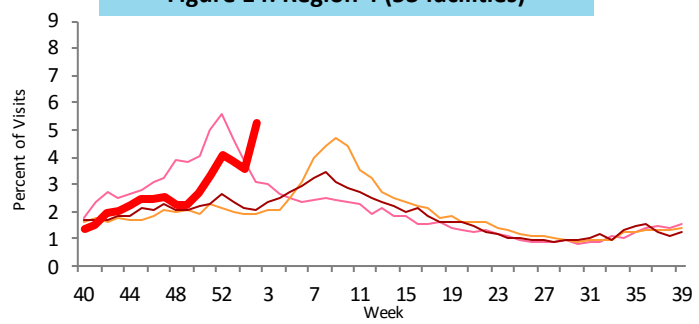


Figure 15: Region 5 (74 facilities)

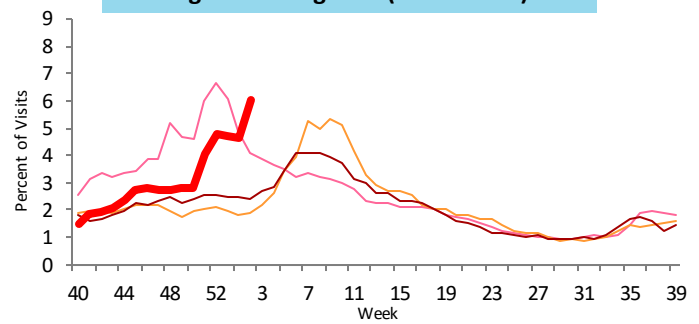


Figure 16: Region 6 (32 facilities)

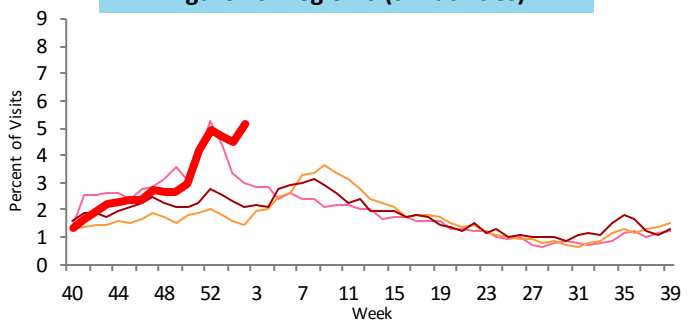
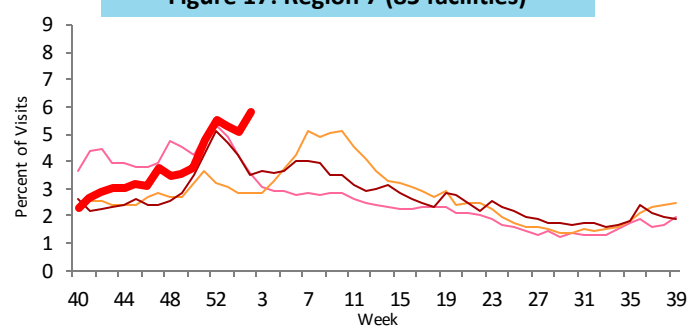


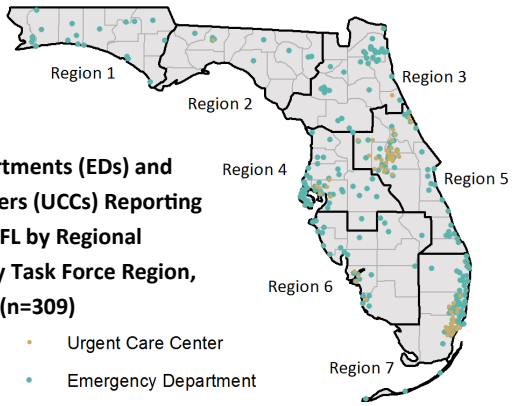
Figure 17: Region 7 (85 facilities)



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

Map 4

Emergency Departments (EDs) and Urgent Care Centers (UCCs) Reporting Data to ESSENCE-FL by Regional Domestic Security Task Force Region, January 18, 2018 (n=309)



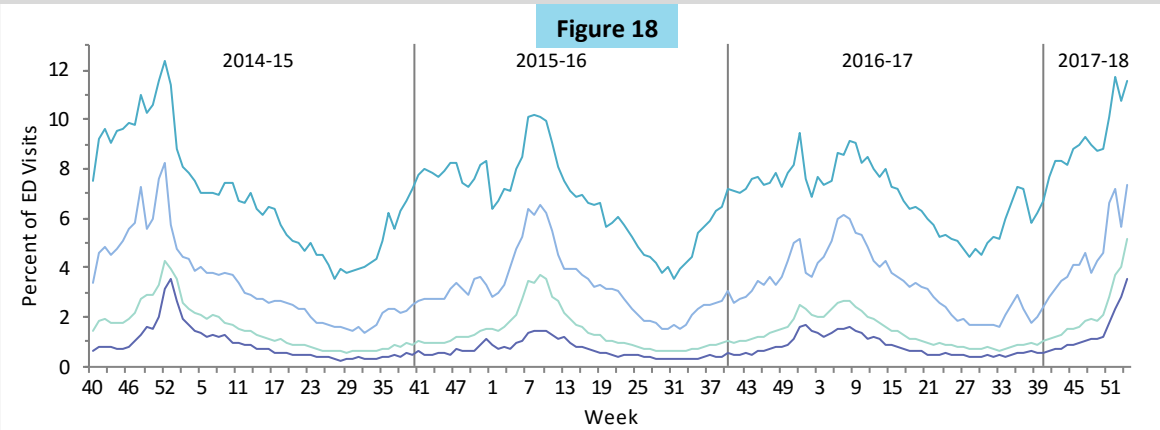
0 to 4 years old | 5 to 24 years old | 25 to 64 years old | ≥65 years old

ED and UCC Visits for ILI by Age Group

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

Figure 18 shows the percent of visits for ILI from ED and UCC chief complaints by age group for ESSENCE-FL participating facilities (n=309), week 40, 2014 to week 2, 2018.

In week 2, ED and UCC visits for ILI increased sharply in all age groups. Levels were well above those observed in previous seasons at this time in all age groups.



Visits to Outpatient Providers for ILI by Age Group*

ILI = influenza-like illness

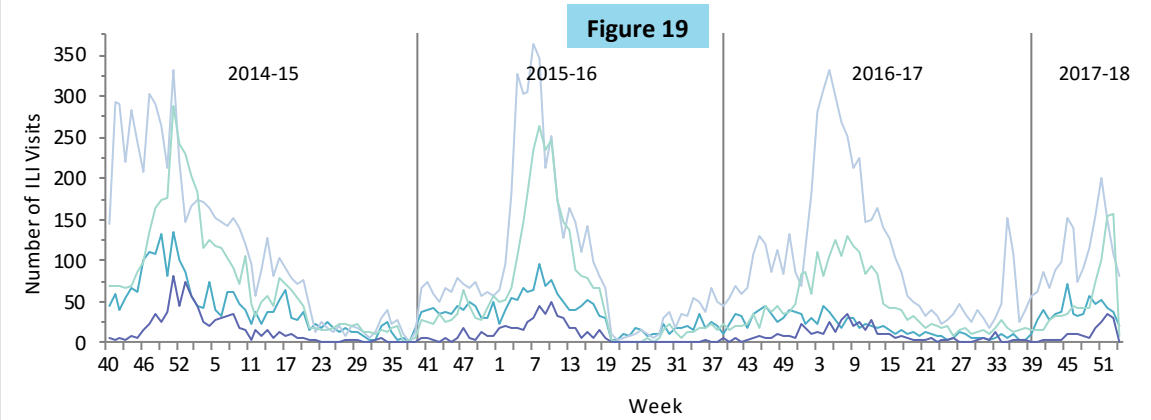


Figure 19 shows the number of visits for ILI reported by ILINet outpatient providers statewide (n=12) by age group, week 40, 2014 to week 2, 2018.

In week 1, the number of visits for ILI increased in the 25-64 age group and decreased in all other age groups.

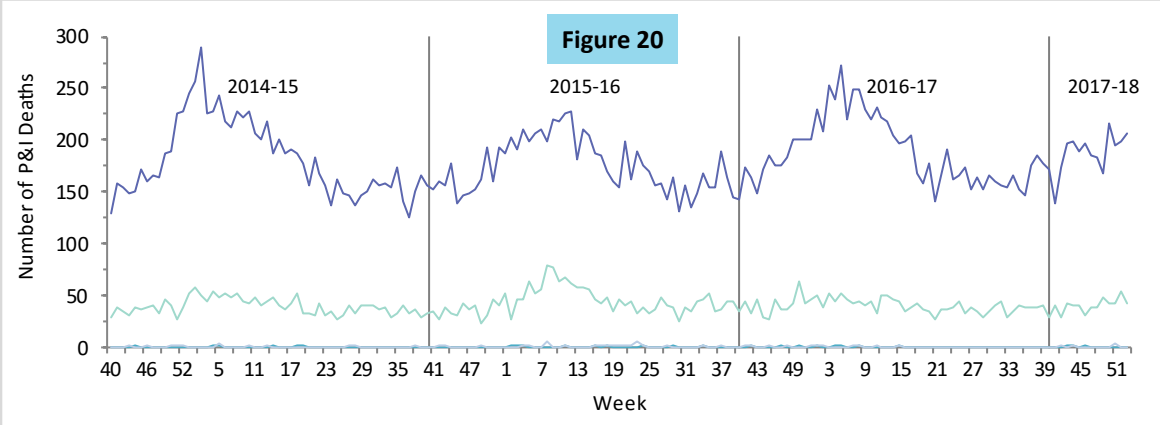
*Data presented here are counts, not proportions. This is because age group denominator data is not available through ILINet.

P&I Deaths* from Vital Statistics by Age Group

P&I = pneumonia and influenza

Figure 20 shows P&I deaths* for all Florida counties by age group, as reported into ESSENCE-FL, week 40, 2014 to week 1, 2018.

After an early season increase, in week 1 (ending January 6, 2018), the number of P&I deaths increased in the 5-24 and ≥65 age groups and decreased in all other age groups. Levels were below levels observed in previous seasons in the 5-24 age group. Levels were similar to levels observed in previous seasons at this time in all other age groups. Given the recent flu activity, increases in deaths due to flu are expected to increase.



*Current season P&I death numbers are preliminary estimates and may change as more data are received. *The most recent data available are displayed here. Vital statistics death records received in ESSENCE-FL are currently considered to be complete through week 1, 2018.*

At-Risk Populations: ILI Visits

ESSENCE-FL collects data daily from 309 EDs and UCCs. Data are processed into 11 different syndrome categories based on the patient's chief complaint. One of the categories is ILI, which is composed of chief complaints that include the words "influenza" or "flu," or complaints that contain “fever” and “cough,” or “fever” and “sore throat.” The Florida Department of Health uses ED and UCC chief complaint data to monitor influenza and ILI activity in a timely manner in groups at higher risk of severe health outcomes (such as hospitalization and death) from influenza infection. These at-risk groups include pregnant women, children ≤18 years old, and adults ≥65 years old.

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

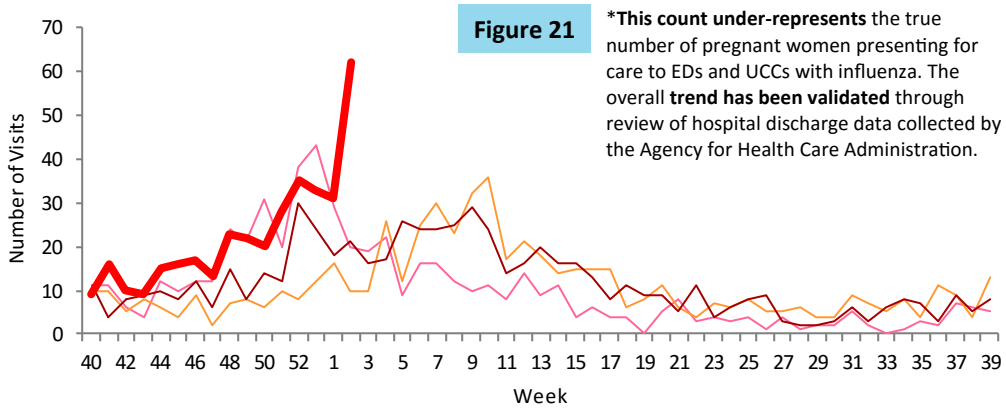
ED and UCC Visits for ILI by Pregnant Women

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

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

Figure 21 shows the number of visits* to EDs and UCCs with chief complaints of influenza infection and pregnancy, as reported into ESSSENCE-FL, week 40, 2014 to week 2, 2018.

In week 2, the number of visits to EDs and UCCs by pregnant women with mention of influenza was well above peak levels observed during previous seasons at this time. Pregnant women should get vaccinated as soon as possible.



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

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

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

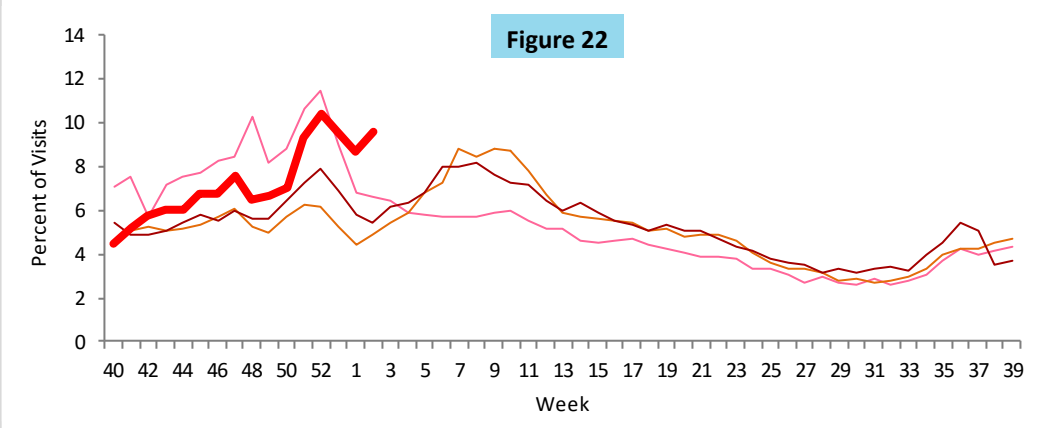


Figure 22 shows the percent of ILI visits among all ED and UCC visits for children ≤18 years old, as reported into ESSSENCE-FL, week 40, 2014 to week 2, 2018.

In week 2, the percent of ILI visits among all ED and UCC visits for children ≤18 years old increased and remained well above activity levels observed during previous seasons at this time.

Children are at higher risk for complications from influenza. Children who have not been vaccinated yet should get vaccinated as soon as possible. Influenza spreads easily among children. Sick children should be kept home.

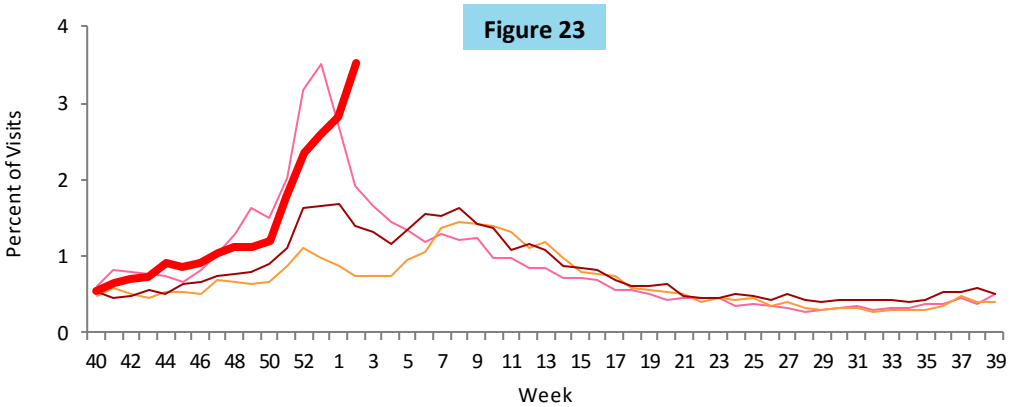
ED and UCC Visits for ILI by Adults ≥65 Years Old

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

Figure 23 shows the percent of ILI visits among all ED and UCC visits for adults ≥65 years old, as reported into ESSSENCE-FL, week 40, 2014 to week 2, 2018.

In week 2, the percent of ILI visits among all ED and UCC visits for adults ≥65 years continued to increase and was above peak activity levels observed during previous seasons.

Adults aged ≥65 years are at high-risk for complications due to influenza infection. People in this age group who have not yet been vaccinated for the 2017-18 season should get vaccinated as soon as possible.



ILI Activity by Setting Type

ILI = influenza-like illness

County health departments are asked to evaluate influenza activity in certain settings within their county. The assessment scale for activity ranges from no or minimal activity to very high activity.

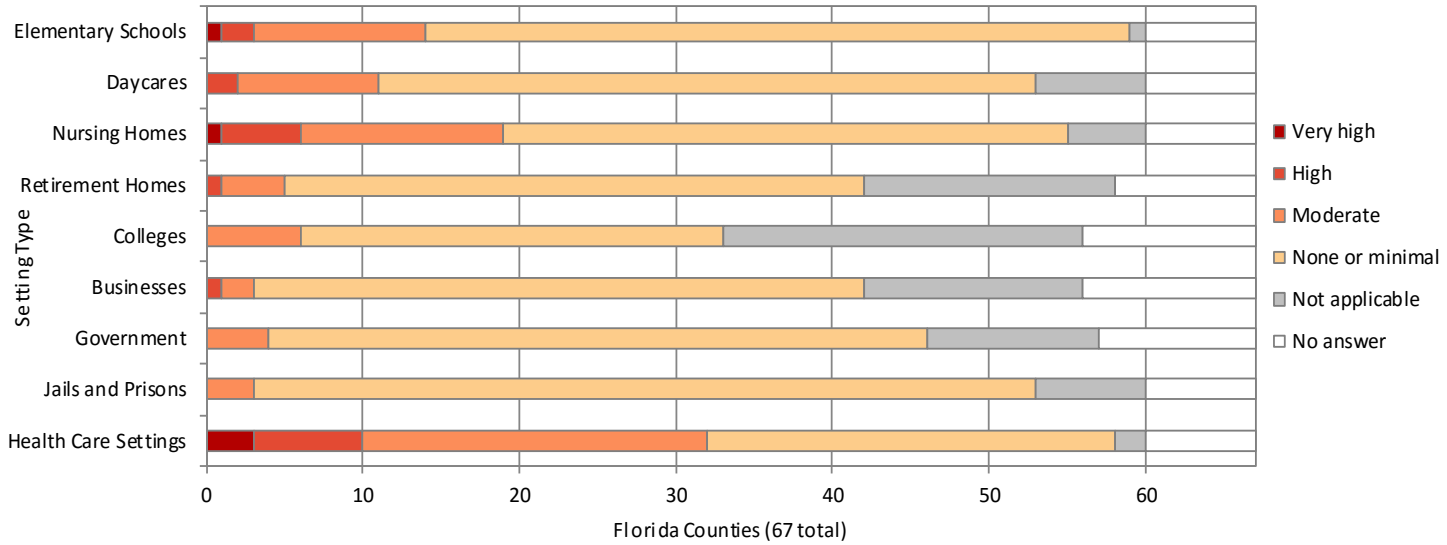
Figure 24 shows the results of the influenza activity assessment for week 2, 2018.

Counties that reported "not applicable" for the listed settings are excluded from the denominator in the calculations below.

ILI Activity Levels:

- No or very minimal activity
- Moderate activity
- High activity
- Very high activity

Figure 24



Settings for Children <18 Years Old

In elementary schools, 45 counties (68.2%) reported no or minimal influenza or ILI activity. Eleven counties (16.7%) reported moderate influenza or ILI activity. Two counties (3.0%) reported high influenza or ILI activity.

In daycare settings, 42 counties (70.0%) reported no or minimal influenza or ILI activity. Nine counties (15.0%) reported moderate influenza or ILI activity. Two counties (3.3%) reported high influenza or ILI activity.

Settings for Adults >65 Years Old

In nursing homes, 36 counties (58.1%) reported no or minimal influenza or ILI activity. Thirteen counties (21.0%) reported moderate influenza or ILI activity. Five counties (8.1%) reported high influenza or ILI activity. One county (1.6%) reported very high influenza or ILI activity.

In retirement homes, 37 counties (72.5%) reported no or minimal influenza or ILI activity. Four counties (7.8%) reported moderate influenza or ILI activity. One county (2.0%) reported high influenza or ILI activity.

Settings for Adults 18 to 65 Years Old

In colleges, 27 of 44 counties (61.4%) reported no or minimal influenza or ILI activity. Six counties (13.6%) reported moderate influenza or ILI activity.

In businesses, 39 counties (73.6%) reported no or minimal influenza or ILI activity. Two counties (3.8%) reported moderate influenza or ILI activity. One county (1.9%) reported high influenza or ILI activity.

In government offices, 42 counties (75.0%) reported no or minimal influenza or ILI activity. Four counties (7.1%) reported moderate influenza or ILI activity.

Other Unique Settings

In jails and prisons, 50 counties (83.3%) reported no or minimal influenza or ILI activity. Three counties (5.0%) reported moderate influenza or ILI activity.

In health care settings, 26 counties (40.0%) reported no or minimal influenza or ILI activity. Twenty-two counties (33.8%) reported moderate influenza or ILI activity. Seven counties (10.8%) reported high influenza or ILI activity. Three counties (4.6%) reported very high influenza or ILI activity.

Summary

Week 2: January 7-13, 2018

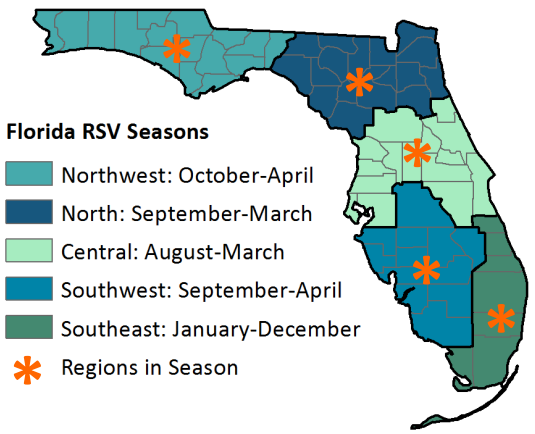
Respiratory syncytial virus (RSV) activity:

- **In week 2, the percent of children <5 years old diagnosed with RSV at EDs and UCCs decreased and was similar to levels observed in previous seasons at this time.**
- **RSV activity has remained higher than levels observed in previous seasons for several months in a row. All regions are currently in RSV season.**
- **No RSV-associated pediatric deaths were identified in week 2.** One RSV-associated pediatric death has been identified so far this season. Premature infants and children <2 years with underlying medical conditions are at higher risk for severe complications from RSV infection. Prophylaxis is available for children who qualify. For more information, contact your physician.
- To learn more about RSV in Florida, please visit: www.floridahealth.gov/rsv.

RSV seasonality:

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

Map 5 Florida Respiratory Syncytial Virus (RSV) Regional Season Breakdown



RSV surveillance goals:

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

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

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

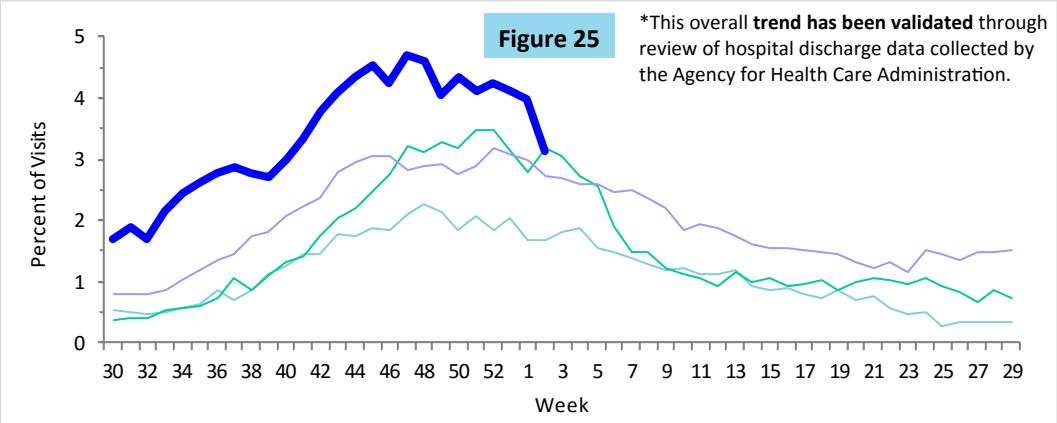


Figure 25 shows the percent of visits to EDs and UCCs with discharge diagnoses that include RSV or RSV-associated illness, as reported by participating ESSSENCE-FL facilities (n=309), week 30, 2014 to week 2, 2018.

In week 2, the percent of children presenting to participating EDs and UCCs for care with RSV decreased and was similar to levels observed in previous seasons at this time.

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

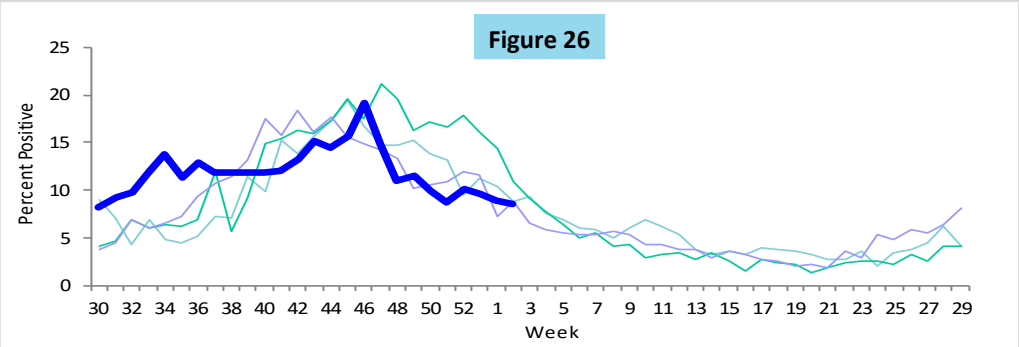
Laboratory RSV Surveillance

RSV = respiratory syncytial virus

Figure 26 shows the percent of specimens testing positive for RSV, as reported by hospital laboratories (n=10), week 30, 2014 to week 2, 2018.

In week 2, the percent of specimens RSV positive decreased and was similar to levels observed in previous seasons at this time.

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



Other Respiratory Virus Surveillance

Statewide activity:

- **The percent of specimens testing positive for influenza increased and remained higher than other respiratory viruses under surveillance.**

Enterovirus D68 (EV-D68) activity:

- **In week 2, no new people tested positive for EV-D68 in Florida.**
  - **No people have tested positive for EV-D68 by PCR so far in 2018. In 2017, three people tested positive for EV-D68 by PCR in Florida.** One person was identified in August 2017 during the investigation of an ILI outbreak. Two people were identified in October 2017 as part of routine outpatient surveillance as a result of Florida participating in the Acute Respiratory Infection Epidemiology and Surveillance (ARIES) Program.
- To learn more about EV-D68, please visit: http://www.floridahealth.gov/diseases-and-conditions/d68.

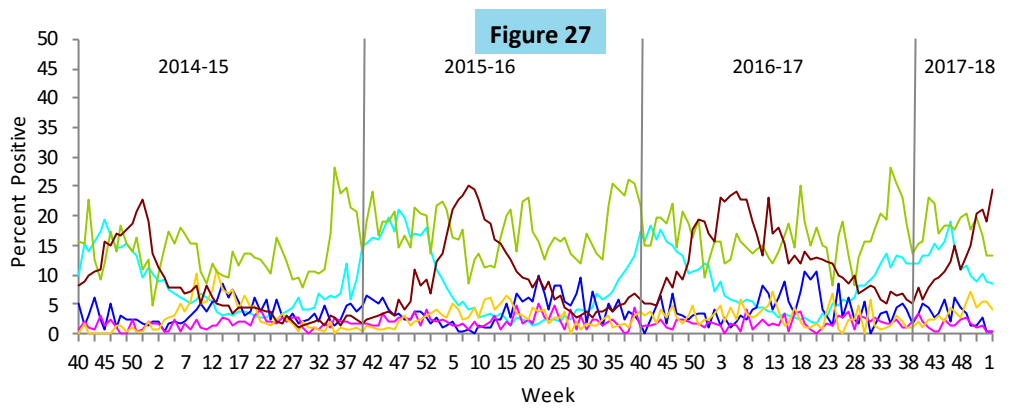
Outbreaks:

- In week 2, no outbreaks of respiratory syncytial virus (RSV) parainfluenza 1-3, adenovirus, human metapneumovirus (MPV), rhinovirus, enterovirus, or coronavirus were reported.

Laboratory Viral Respiratory Surveillance

Figure 27 shows the percent of laboratory results testing positive for eight common respiratory viruses, as reported by hospital laboratories (n=10), week 40, 2014 to week 2, 2018.

In recent weeks, the percent of specimens testing positive for influenza was higher than other respiratory viruses under surveillance.



Non-Influenza ARIES Laboratory Outpatient Surveillance*

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

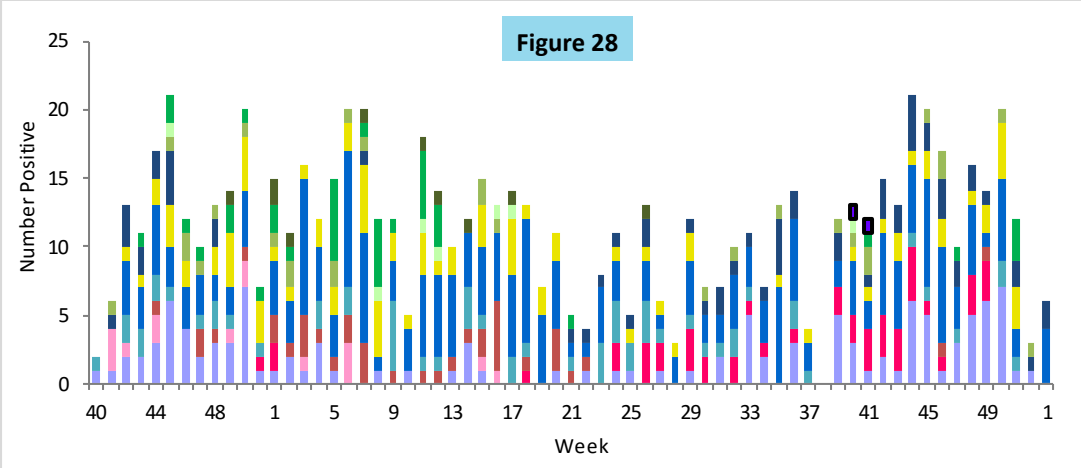


Figure 28 shows the number of specimens testing positive for 12 common respiratory viruses, as reported by BPHL and ARIES outpatient providers statewide (n=7), week 40, 2016 to week 1, 2018.

In week 1 (ending January 6, 2018), specimens submitted by ARIES provider tested positive for rhinovirus and enterovirus by PCR.

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

*Data presented here are counts, not proportions. *The most recent data available are displayed here. ARIES laboratory data are currently considered to be complete through week 1, 2018. Laboratory results for specimens that have not yet been tested in full will be included in future reports.*

Table 1: Summary of Florida Influenza and ILI Outbreaks by Setting, Week 40, 2017 through Week 2, 2018*

Setting	Total	A (H3)	A 2009 (H1N1)	A Unsubtyped	A & B Unsubtyped	B Yamagata	B Victoria	B Unsubtyped	Influenza Unspecified	Other respiratory viruses	Currently unknown pathogen
Schools	13	2	-	3	1	-	-	1	-	1 RSV	5
Daycares	10	-	-	2	-	-	-	-	-	7 RSV	1
Jails & prisons	3	1	-	2	-	-	-	-	-	-	-
Mental health facilities	-	-	-	-	-	-	-	-	-	-	-
Nursing homes & long-term care facilities	77	10	-	29	1	1	-	5	3	1 RSV/rhinovirus 1 rhinovirus	26
Health care facilities	2	-	-	-	-	-	-	-	-	1 RSV	1
Other	2	1	-	-	-	-	-	-	-	-	1
Total	107	14	0	36	2	1	0	6	3	11	34

*Outbreak etiology is updated for two weeks after initial report.

Reported Influenza and ILI Outbreaks

ILI = influenza-like illness

In week 2, 34 outbreaks were reported in Merlin: 20 outbreaks of influenza and 14 outbreaks of ILI.

Escambia County

- **A childcare facility** reported six children with ILI. At least one individual tested positive for influenza A (test type unknown) at local health care providers. No specimens have been available for testing at the Bureau of Public Health Laboratories (BPHL) thus far. Influenza vaccination status for the 2017-18 season for children and staff is not yet known. Infection control measures were reviewed with facility leadership. This investigation is ongoing.
- **A long-term care facility** reported 19 residents with ILI. Two residents tested positive for influenza A by rapid antigen testing at local health care providers. Two specimens were collected for testing at BPHL. Those results are pending. Influenza vaccination status for the 2017-18 season for residents and staff is not yet known. Infection control measures were reviewed with facility leadership. This investigation is ongoing.
- **A school** reported five individuals with ILI. Two specimens were collected for testing at BPHL. One specimen tested positive for influenza A (H3) and one specimen tested positive for influenza B Yamagata lineage by PCR. Influenza vaccination status for the 2017-18 season for students and staff is not yet known. Infection control measures were reviewed with facility leadership. This investigation is ongoing.
- **A childcare facility** reported four individuals with ILI. At least one individual tested positive for influenza A (test type unknown) at local health care providers. No specimens have been available for testing at BPHL thus far. Influenza vaccination status for the 2017-18 season for children and staff is not yet known. Infection control measures were reviewed with facility leadership. This investigation is ongoing.
- **A long-term care facility** reported two individuals with ILI. At least one individual tested positive for influenza A (test type unknown) at local health care providers. No specimens have been available for testing at BPHL thus far. Influenza vaccination status for the 2017-18 season for residents and staff is not yet known. Infection control measures were reviewed with facility leadership. This investigation is ongoing.

Continued on page 14.

Reported Influenza and ILI Outbreaks

ILI = influenza-like illness

Santa Rosa County

- **A long-term care facility** reported three residents with ILI. All three residents tested positive for influenza A by PCR at local health care providers. No specimens have been available for testing at the Bureau of Public Health Laboratories (BPHL) thus far. The facility reported 100 residents were vaccinated for the 2017-18 influenza season. Influenza vaccination status for the 2017-18 season for staff is not yet known. Infection control measures were reviewed with facility leadership. This investigation is ongoing.

Sarasota County

- **A long-term care facility** reported three individuals with ILI. No specimens have been available for testing at BPHL thus far. The etiology of this outbreak is not yet known. Influenza vaccination status for the 2017-18 season for residents and staff is not yet known. Infection control measures were reviewed with facility leadership. This investigation is ongoing.

Wakulla County

- **A local business** reported four staff members with ILI. No specimens were available for testing at BPHL. The etiology of this outbreak is unknown. Influenza vaccination status for staff is unknown. Infection control measures were reviewed with facility leadership. This investigation is closed.

Palm Beach County

- **A skilled nursing facility** reported seven individuals with ILI. At least one individual tested positive for influenza B by rapid antigen testing at local health care providers. No specimens have been available for testing at BPHL thus far. Influenza vaccination status for the 2017-18 influenza season for residents and staff is not yet known. Infection control measures were reviewed with facility leadership. This investigation is ongoing.
- **A long-term care facility** reported two residents with ILI. At least one resident tested positive for influenza A by rapid antigen testing at local health care providers. No specimens have been available for testing at BPHL thus far. Influenza vaccination status for the 2017-18 season for residents and staff is not yet known. Infection control measures were reviewed with facility leadership. This investigation is ongoing.
- **A long-term care facility** reported two individuals with ILI. At least one individual tested positive for influenza A by rapid antigen testing at local health care providers. No specimens have been available for testing at BPHL thus far. Infection vaccination status for the 2017-18 season for residents and staff is not yet known. Infection control measures were reviewed with facility leadership. This investigation is ongoing.

Duval County

- **A nursing and rehabilitation center** reported four residents with ILI. Two residents sought treatment at local emergency departments and two residents were hospitalized as a result of their illness. All four residents tested positive for influenza A (test type unknown) at local health care providers. No specimens have been available for testing at BPHL thus far. Influenza vaccination status for the 2017-18 season for residents and staff is not yet known. Infection control measures were reviewed with facility leadership. This investigation is ongoing.
- **A long-term care facility** reported eight individuals with ILI. No specimens have been available for testing at BPHL thus far. The etiology of this outbreak is not yet known. Influenza vaccination status for the 2017-18 season for all residents and staff is not yet known. Infection control measures were reviewed with facility leadership. This investigation is ongoing.
- **A long-term care facility** reported seven residents with ILI. Five residents sought treatment at local emergency departments and five residents were hospitalized as a result of their illness. One specimen tested positive for influenza B by rapid antigen testing at the hospital. One specimen was collected for testing at BPHL. Those results are pending. Influenza vaccination status for the 2017-18 season for residents and staff is not yet known. Infection control measures were reviewed with facility leadership. This investigation is ongoing.

Bradford County

- **A long-term care facility** reported five residents and four staff members with ILI. Two individuals tested positive for influenza A and one individual tested positive for influenza B by rapid antigen testing at local health care providers. No specimens have been available for testing at BPHL thus far. Influenza vaccination status for the 2017-18 season for residents and staff is not yet known. Infection control measures were reviewed with facility leadership. This investigation is ongoing.

Continued on page 15.

Reported Influenza and ILI Outbreaks

ILI = influenza-like illness

Pinellas County

- **A long-term care facility** reported two 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. Influenza vaccination status for the 2017-18 season for residents and staff is not yet known. Infection control measures were reviewed with facility leadership. This investigation is ongoing.
- **A long-term care facility** reported five individuals with ILI. No specimens have been available for testing at BPHL thus far. The etiology of this outbreak is not yet known. Influenza vaccination status for the 2017-18 season for residents and staff is not yet known. Infection control measures were reviewed with facility leadership. This investigation is ongoing.
- **A long-term care facility** reported five individuals with ILI. No specimens have been available for testing at BPHL thus far. The etiology of this outbreak is not yet known. Influenza vaccination status for the 2017-18 season for residents and staff is not yet known. Infection control measures were reviewed with facility leadership. This investigation is ongoing.
- **A long-term care facility** reported nine individuals with ILI. No specimens have been available for testing at BPHL thus far. The etiology of this outbreak is not yet known. Influenza vaccination status for the 2017-18 season for residents and staff is not yet known. Infection control measures were reviewed with facility leadership. This investigation is ongoing.
- **A long-term care facility** reported five individuals with ILI. No specimens have been available for testing at BPHL thus far. The etiology of this outbreak is not yet known. Influenza vaccination status for the 2017-18 season for residents and staff is not yet known. Infection control measures were reviewed with facility leadership. This investigation is ongoing.
- **A long-term care facility** reported four individuals with ILI. No specimens have been available for testing at BPHL thus far. The etiology of this outbreak is not yet known. Influenza vaccination status for the 2017-18 season for residents and staff is not yet known. Infection control measures were reviewed with facility leadership. This investigation is ongoing.

Calhoun County

- **A long-term care facility** reported two residents with ILI. Two specimens collected from ill residents tested positive for influenza A (test type unknown) at a local hospital laboratory. No specimens have been available for testing at BPHL thus far. Influenza vaccination status for the 2017-18 season for residents and staff is not yet known. Infection control measures were reviewed with facility leadership. This investigation is ongoing.

Seminole County

- **A long-term care facility** reported three residents with ILI. Two specimens collected from ill residents tested positive for influenza A (H3) (test type unknown) at local health care providers. No specimens have been available for testing at BPHL thus far. Influenza vaccination status for the 2017-18 season for residents and staff is not yet known. Infection control measures were reviewed with facility leadership. This investigation is ongoing.

Hillsborough County

- **A long-term care facility** reported 25 residents and two staff members with ILI. Five specimens were collected for testing at BPHL. Of those, four tested positive for influenza A by PCR thus far. Subtyping results are still pending. Influenza vaccination status for the 2017-18 season for residents and staff is not yet known. Infection control measures were reviewed with facility leadership. This investigation is ongoing.

Bay County

- **A long-term care facility** reported 25 residents and two staff members with ILI. Five specimens were collected for testing at BPHL. Of those, four tested positive for influenza A by PCR thus far. Subtyping results are still pending. Influenza vaccination status for the 2017-18 season for residents and staff is not yet known. Infection control measures were reviewed with facility leadership. This investigation is ongoing.

Putnam County

- **A long-term care facility** reported five residents and two staff with ILI. No specimens have been available for testing at BPHL thus far. The etiology of this outbreak is not yet known. Influenza vaccination status for the 2017-18 season for residents and staff is not yet known. Infection control measures were reviewed with facility leadership. This investigation is ongoing.

Continued on page 16.

Reported Influenza and ILI Outbreaks

ILI = influenza-like illness

St. Lucie County

- **A long-term care facility** reported 17 residents and five staff members with ILI. Two individuals sought treatment at local emergency departments and two individuals were hospitalized as a result of their illness. Five specimens were collected for testing at BPHL. Three specimens tested positive for influenza B Yamagata lineage by PCR thus far. The facility estimated 11 residents and 69 staff members were vaccinated for the 2017-18 influenza season. Infection control measures were reviewed with facility leadership. This investigation is closed.

Polk County

- **A long-term care facility** reported 17 residents and five staff members with ILI. One individual sought treatment at a local emergency department. One individual tested positive for influenza A by rapid antigen testing at a local health care provider. No specimens have been available for testing at BPHL thus far. Influenza vaccination status for the 2017-18 season for residents and staff is not yet known. Infection control measures were reviewed with facility leadership. This investigation is ongoing.
- **A long-term care facility** reported five individuals with ILI. Two individuals tested positive for influenza A (test type unknown) at a local hospital laboratory. No specimens have been available for testing at BPHL thus far. Influenza vaccination status for the 2017 -18 season for residents and staff is not yet known. Infection control measures were reviewed with facility leadership. This investigation is ongoing.

Brevard County

- **A long-term care facility** reported seven residents with ILI. At least one resident tested positive for influenza A by rapid antigen testing at local health care providers. At least one specimen was collected for testing at BPHL. Those results are pending. The facility estimated 90 residents and 75 staff members were vaccinated for the 2017-18 influenza season. Infection control measures were reviewed with facility leadership. This investigation is ongoing.

Collier County

- **A long-term care facility** reported six residents 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. Influenza vaccination status for the 2017-18 season for residents and staff is not yet known. Infection control measures were reviewed with facility leadership. This investigation is ongoing.

Okaloosa

- **A long-term care facility** reported 15 individuals with ILI. No specimens have been available for testing at BPHL this far. The etiology of this outbreak is not yet known. Influenza vaccination status for the 2017-18 season for residents and staff is not yet known. Infection control measures were reviewed with facility leadership. This investigation is ongoing.

Baker County

- **A health care facility** reported four individuals with ILI. No specimens have been available for testing at BPHL thus far. The etiology of this outbreak is not yet known. Influenza vaccination status for the 2017-18 season for patients and staff is not yet known. Infection control measures were reviewed with facility leadership. This investigation is ongoing.
- **A long-term care facility** reported 11 individuals with ILI. No specimens have been available for testing at BPHL thus far. The etiology of this outbreak is not yet known. Influenza vaccination status for the 2017-18 season for residents and staff is not yet known. Infection control measures were reviewed with facility leadership. This investigation is ongoing.

In week 1 (ending January 6, 2018), nine outbreaks were reported into Merlin. Updates were made to one of these outbreaks in week 2.

Holmes County:

- **A long-term care facility** reported 17 residents and 13 staff members with ILI. Two individuals sought treatment at local emergency departments and one individual was hospitalized as a result of their illness. Ten individuals tested positive for influenza A by rapid antigen testing at local health care providers. Three specimens were collected for testing at BPHL. Those results are pending. Influenza vaccination status for the 2017-18 season for residents and staff is not yet known. Infection control measures were reviewed with facility leadership. This investigation is ongoing. **Update: Influenza and extended respiratory panel testing was completed for the three specimens that were submitted to BPHL: one specimen tested positive for influenza A (H3) by PCR, one specimen tested positive for parainfluenza 1 by PCR, and one specimen tested positive for human metapneumovirus by PCR. The facility estimated 12 residents were vaccinated for the 2017-18 season. Influenza vaccination status for the 2017-18 season for staff remains unknown. This investigation is still ongoing.**

Florida ILINet · Data source for figures 2 and 19

- ILINet is a nationwide surveillance system composed of sentinel providers, predominately outpatient health care providers. Florida has 88 sentinel providers enrolled in ILINet who submit weekly influenza-like illness (ILI) and total visit counts, as well as submit ILI specimens to the Bureau of Public Health Laboratories (BPHL) for confirmatory testing.

ESSENCE-FL Syndromic Surveillance and Vital Statistics Portal · Data source for figures 1, 3-7, 11-18, 20-23, 25; map 4

- Electronic Surveillance System for the Early Notification of Community-based Epidemics (ESSENCE-FL) measures trends in ILI visits from emergency departments (ED) and urgent care clinics (UCC) and influenza mortality by using death certificates from the Bureau of Vital Statistics. Participating EDs and UCCs (n=309) 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.
- For respiratory syncytial virus (RSV) surveillance, visits are counted as ED or UCC visits to participating facilities for which RSV or RSV-associated illness is included in the discharge diagnosis. Death record literals are also queried using a free-text query that searches for references to RSV on death certificates for children <18 years old. Any mention of RSV in the death certificate literals, with certain exceptions, is counted as an RSV-associated pediatric death.

County Influenza Activity in EpiGateway · Data source for figures 19, 24, and maps 1 and 2

- County health department (CHD) epidemiologists report their county's influenza and ILI surveillance data weekly into the EpiGateway website. Influenza activity is classified as: no activity, mild, moderate, or elevated. Setting-specific influenza activity and influenza trend information is also reported. EpiGateway data provided by CHDs creates a county-by-county breakdown of influenza and ILI activity around the state.

Outbreak Reporting in Merlin · Data source for figure 8, map 3, and table 1

- Merlin tracks influenza and ILI outbreak investigations by CHDs. Reports by CHDs include the type of respiratory disease causing the outbreak and settings where outbreaks are occurring. CHD epidemiologists report outbreaks of influenza or ILI into Merlin, Florida's reportable disease surveillance system.
- Outbreaks are defined as two or more cases of influenza or ILI in a specific setting.

Bureau of Public Health Laboratories (BPHL) · Data source for figures 9, 10 and table 2

- BPHL performs confirmatory testing and subtyping on surveillance specimens from sentinel providers, outbreak investigations, patients with severe or unusual influenza presentations, and medical examiners.
- For county-specific laboratory data, please refer to the Flu Lab Report in Merlin. For instructions on how to use the Flu Lab Report, please see the Guide to Flu Lab Report on the Bureau of Epidemiology website at www.floridahealth.gov/diseases-and-conditions/influenza/_documents/flulabreportguide.pdf.

Laboratory Viral Respiratory Surveillance · Data sources for figures 26-27

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

Acute Respiratory Infection Epidemiology and Surveillance (ARIES) Program · Data source for figure 28

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

Case-Based Influenza Surveillance

- Death in a child whose laboratory-confirmed influenza infection has been identified as a contributing to the child's death is reportable in Florida. Influenza-associated pediatric deaths are documented by CHDs in Merlin.
- In addition, an individual of any age infected with novel or pandemic influenza strain(s) is reportable in Florida. Pandemic strain influenza cases are documented by CHDs in Merlin.
- For more information about reportable diseases, please visit www.Floridahealth.gov/diseasereporting.
- 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.