



Summary

Week 20: May 14-20, 2017

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

- Week 20 marks the end of the production of the weekly influenza report. The Florida Department of Health will continue to distribute influenza reports in an abbreviated form during the summer months on a biweekly basis. Surveillance for influenza will continue during the summer months with the focus on identification of outbreaks and unusually severe presentations of influenza or ILI.
- Florida reported sporadic activity to the Centers of Disease Control and Prevention (CDC) in week 20.
- The influenza season is coming to a close. Influenza and ILI activity levels statewide have returned to summer levels.
- In week 20, influenza activity in Florida decreased. Statewide, influenza activity this season peaked in week 8 (late February). Influenza activity in South Florida peaked earlier than the rest of the state in week 52 (late December).
- Statewide, the percent of emergency department (ED) and urgent care center (UCC) visits for ILI decreased and was similar to levels observed in previous seasons at this time.
- Respiratory syncytial virus (RSV) activity in children <5 years decreased slightly but remained above levels observed in previous seasons at this time (see page 12).
- In week 19, the preliminary estimated number of deaths due to pneumonia and influenza (P&I) decreased and was below levels seen in previous seasons at this time.
- In week 20, no influenza-associated pediatric deaths were reported.
 - Ten influenza-associated pediatric deaths have been reported so far this season in Florida. This is the largest number of deaths to be reported since the 2012-13 season. Years in which influenza A (H3) viruses predominate have been associated with more severe illness, particularly in young children.
- Forty-eight counties reported mild influenza activity, three counties reported moderate influenza activity, and 16 counties reported no influenza activity.
- Two outbreaks of influenza and one outbreak of ILI were reported. A total of 152 outbreaks of influenza or ILI have been reported so far this season. This is the largest number of outbreaks reported in the last seven seasons.
- In recent weeks, the percent of specimens testing positive for influenza B increased. This trend has also been observed nationally. This late-season circulation of influenza B is expected. **Since the start of the 2016-17 influenza season, the most common influenza subtype detected at the Bureau of Public Health Laboratories (BPHL) statewide has been influenza A (H3).**

National influenza activity:

- According to the Centers for Disease Control and Prevention, ILI activity decreased and was similar to levels observed in previous seasons at this time.
- In recent weeks, influenza B viruses have been the most frequently identified virus type by public health laboratories across the nation.
- One human infection with novel influenza A virus was recently reported in Texas. The individual was infected with an influenza A (H3N2) variant (H3N2v) virus. The individual became ill in February 2017 but has since fully recovered. Swine contact in the week preceding illness onset was reported. **This is the first human influenza A (H3N2v) virus infection in the United States in 2017.**
- Avian influenza A (H7N9) was recently identified in **chickens** in Tennessee, Alabama, and Kentucky. Avian influenza A (H7) was also recently identified in **chickens** in Georgia.
 - These strains of H7N9 are **not** the same as the strain circulating in China.
 - These are the first identifications of H7N9 in domestic poultry in the U.S. in 2017.
- Avian influenza A (H5N2) was also recently identified in **turkeys** in Wisconsin.
 - This is the first identification of H5N2 in domestic poultry in the U.S. in 2017.
- **No avian influenza has been identified in Florida birds or humans so far in 2017.**
 - To learn more about HPAI, please visit: www.floridahealth.gov/novelflu.

Weekly State Influenza Activity

Sporadic

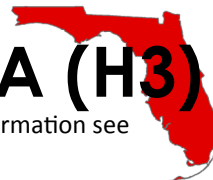
For more information see page 2 ►



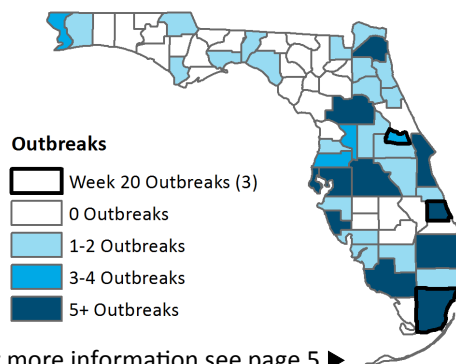
Predominately Circulating Strain

A (H3)

For more information see page 7 ►

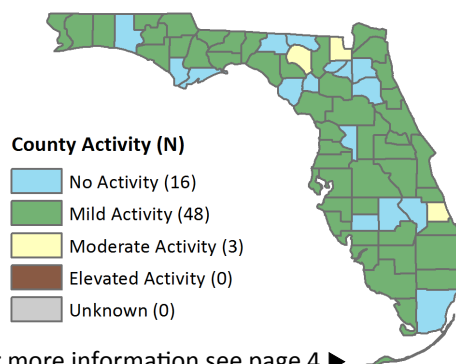


Influenza and ILI Outbreaks Reported as of 5/20/2017



For more information see page 5 ►

County Influenza Activity



For more information see page 4 ►

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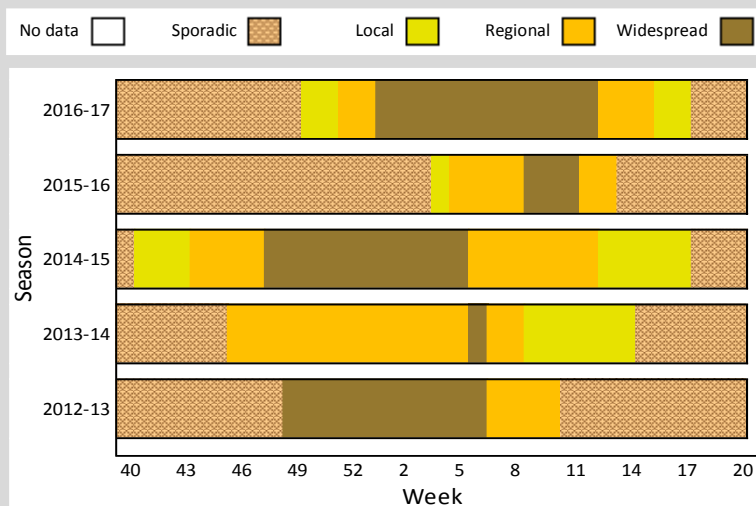
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Weekly State Influenza Activity Reporting

Below is the state influenza activity level reported to CDC each week since the 2012-13 influenza season. **Florida reported sporadic influenza activity for week 20.**



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 in the summer months when overall ILI activity is lower in order to identify potential changes in circulating influenza strains.

Note: Surveillance case definitions for influenza-like illness (ILI) vary across surveillance systems. For more information on influenza surveillance systems and associated case definitions used in Florida, see page 14 ►

Statewide ILI Visits

ED and UCC Visits for ILI by Flu Season

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

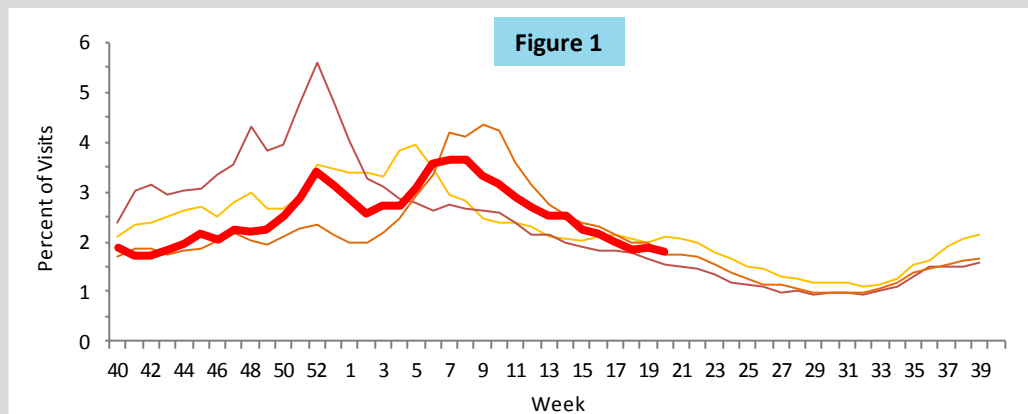


Figure 1 shows the percent of visits for ILI from ED and UCC chief complaint data for ESSENCE-FL participating facilities (n=297), week 40, 2013 to week 20, 2017.

In week 20, the percent of visits to EDs and UCCs for ILI decreased and was similar to levels seen in previous seasons at this time.

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 10.

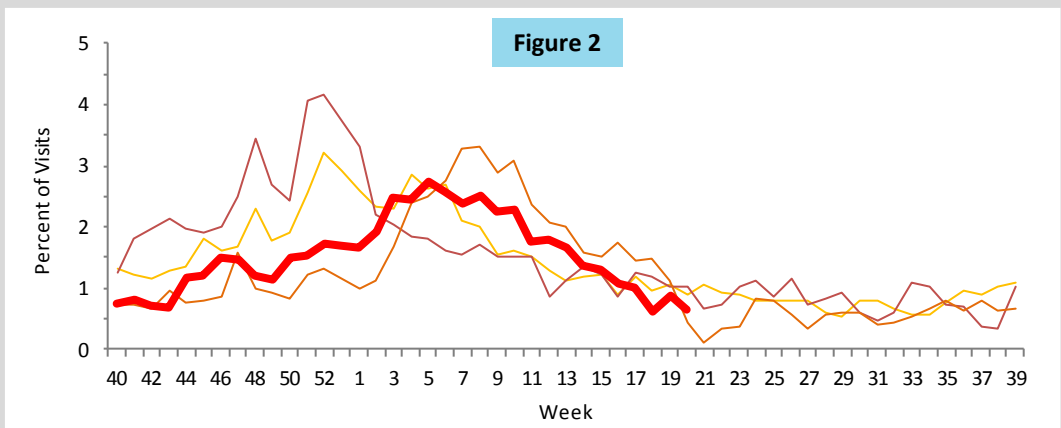


Visits for ILI to Outpatient Providers by Flu Season

ILI = influenza-like illness

Figure 2 shows the percent of visits for ILI reported by ILINet outpatient providers statewide (n=41), week 40, 2013 to week 20, 2017. For ILINet, influenza-like illness (ILI) is defined as a fever $\geq 100^{\circ}\text{F}$ AND sore throat and/or cough in the absence of another known cause.

In week 20, the percent of visits for ILI reported by ILINet outpatient providers decreased and was similar to levels seen in previous seasons at this time.



P&I Deaths* from Vital Statistics by Flu Season

P&I = pneumonia and influenza

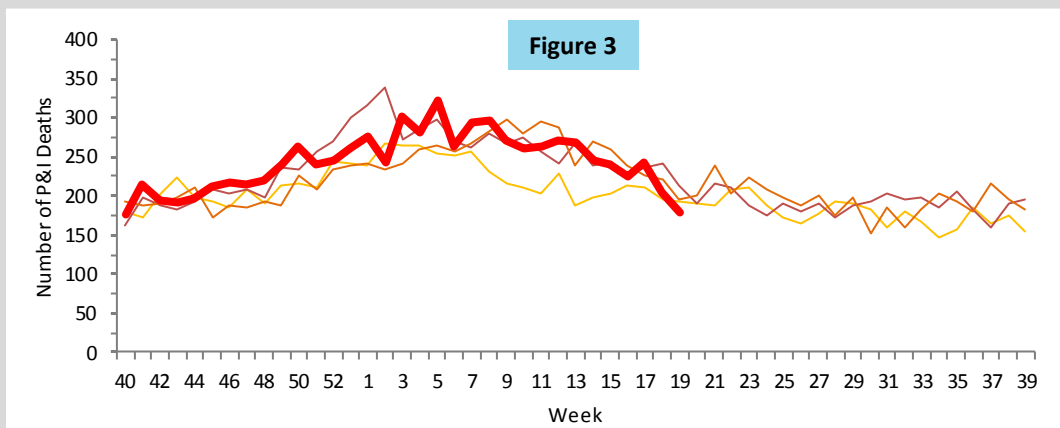


Figure 3 shows P&I deaths* for all Florida counties from the Bureau of Vital Statistics, as reported into ESSENCE-FL, week 40, 2013 to week 19, 2017.

As of week 19 (ending May 13, 2017), 7,769 P&I deaths were in the 2016-17 influenza season.

The preliminary number of P&I deaths decreased and was below levels seen in previous seasons at this time.

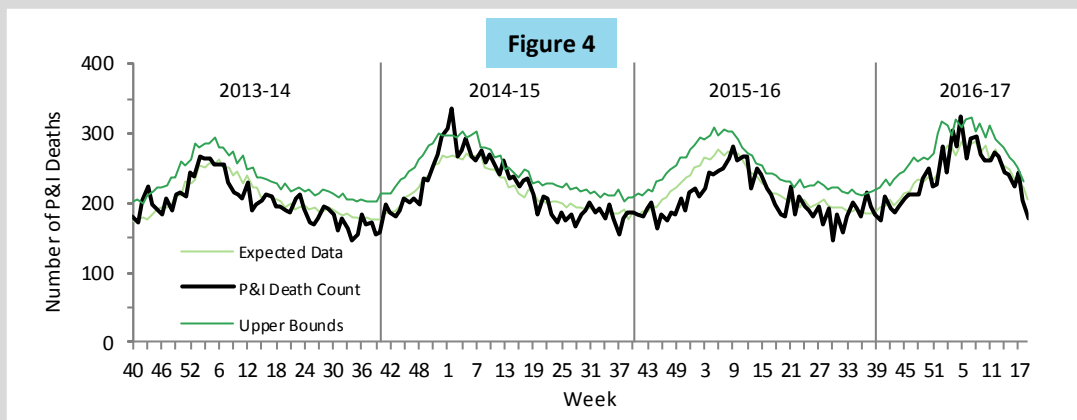
P&I Deaths*, Multi-Year Regression Model

P&I = pneumonia and influenza

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

For week 19 (ending May 6 2017), 179 preliminary estimated P&I deaths were reported.

The upper bound of the 95% confidence interval for prediction was 230 deaths, with no excess deaths.



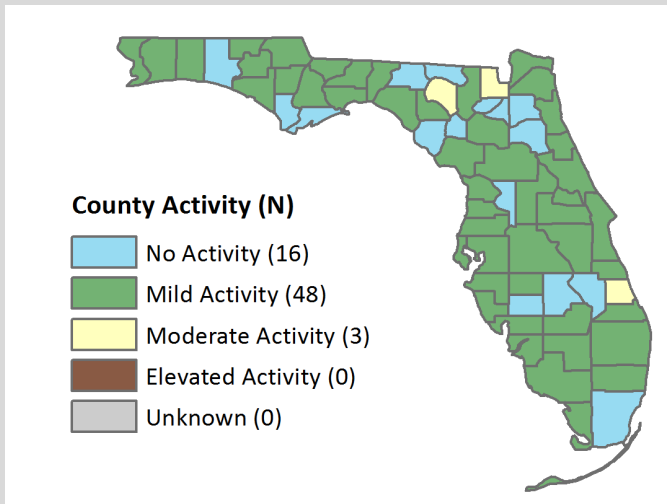
* Current season P&I death counts are preliminary estimates and may change as more data are received. The most recent data available are displayed here. Vital statistics death records received in ESSENCE-FL are considered to be complete through week 19, 2017.

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 20, four counties reported increasing activity, 20 counties reported activity at a plateau, and 43 counties reported decreasing activity.**

County Influenza Activity

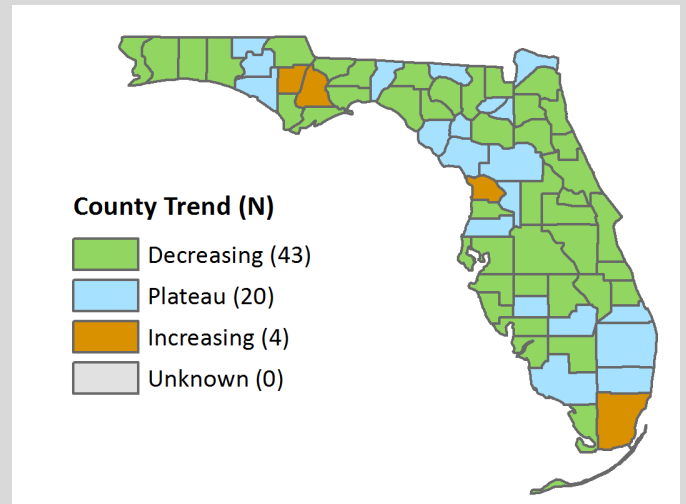
Map 1

County Influenza Activity Level for Week 20 Reported by 9:30 a.m. May 24, 2017



Map 2

County Influenza Activity Trend for Week 20 Reported by 9:30 a.m. May 24, 2017



As of 9:30 a.m. May 24, 2017, 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, 2012 to week 20, 2017.

In week 20, no influenza-associated pediatric deaths were reported.

Ten influenza-associated pediatric deaths have been reported in Florida so far this season. **This is the largest number of deaths reported since the 2012-13 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 against influenza. It is not too late to vaccinate children for the 2016-17 influenza season. 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

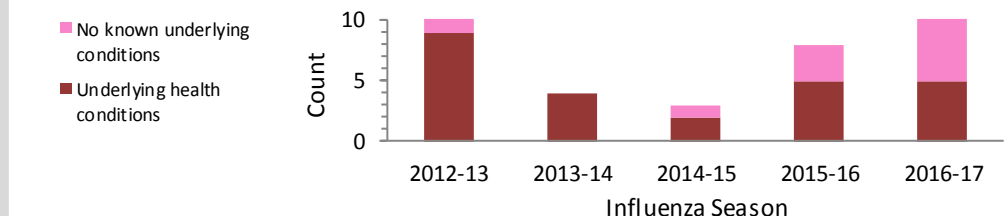
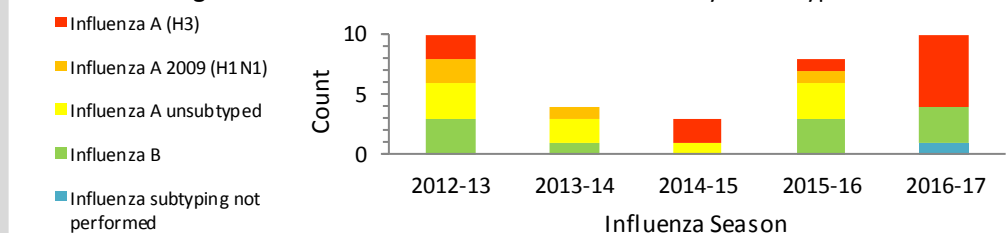


Figure 7: Influenza-Associated Pediatric Deaths by Strain Type



Reported Influenza and ILI Outbreaks

ILI = influenza-like illness

Map 3 shows influenza and ILI outbreaks by county for week 40, 2016 through week 20, 2017.

In week 20, two outbreaks of influenza and one outbreak of ILI were reported in Merlin. As of week 20, 152 outbreaks of influenza or ILI have been reported in the 2016-17 influenza season. This is the largest number of outbreaks reported in the past seven seasons.

For more information on influenza and ILI outbreaks reported in week 20 and updated information on influenza and ILI outbreaks reported in week 20, see page 6. **Data presented on outbreaks are preliminary and subject to change as outbreak investigations progress.**

Map 3 Influenza and ILI Outbreaks by County Week 40, 2016 through Week 20, 2017

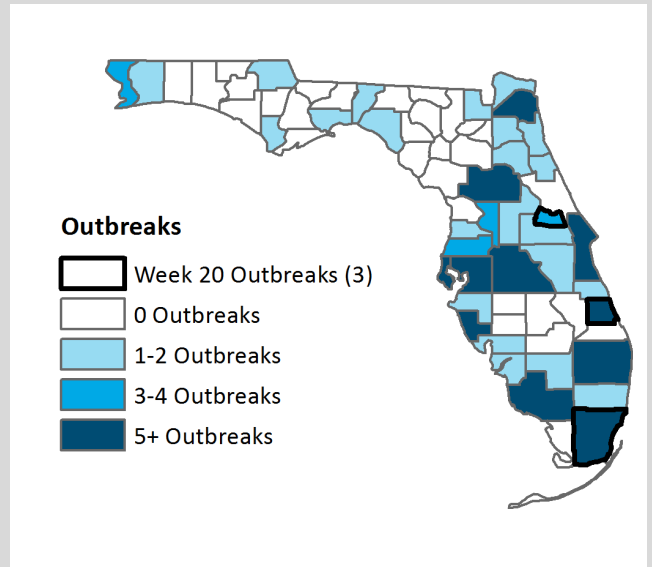


Table 1: Summary of Florida Influenza and ILI Outbreaks by Setting, Week 40, 2016 through Week 20, 2017

| 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 | 26 | 2 | - | 12 | 1 | 1 | - | 2 | 1 | - | 7 |
| Daycares | 11 | - | - | 3 | 1 | 1 | - | 1 | 1 | 1-RSV | 3 |
| Jails & prisons | 11 | 3 | - | 2 | - | - | 1 | - | 1 | - | 4 |
| Mental health facilities | 1 | - | - | - | - | - | - | - | - | - | 1 |
| Nursing homes & long-term care facilities | 98 | 14 | - | 37 | 2 | 1 | - | 4 | 3 | 2-RSV 1-A (H3)/rhinovirus | 34 |
| Health care facilities | 3 | 1 | - | 1 | - | - | - | - | - | - | 1 |
| Other | 2 | 1 | - | 1 | - | - | - | - | - | - | - |
| Total | 152 | 21 | 0 | 56 | 4 | 3 | 1 | 7 | 6 | 4 | 50 |

Reported Influenza and ILI Outbreaks by Facility Type

ILI = influenza-like illness

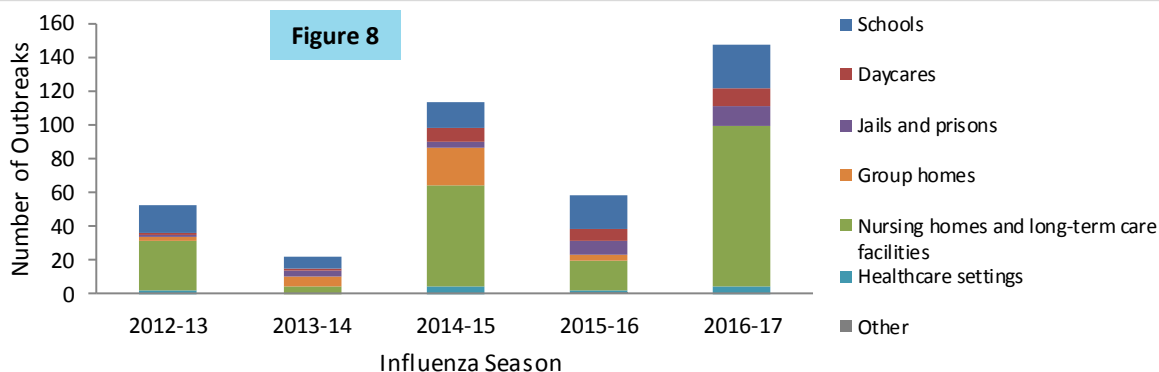


Figure 8 shows the distribution of outbreaks by facility type and season.

In week 20, two outbreaks of influenza and one outbreak of ILI were reported.

Reported Influenza and ILI Outbreaks

ILI = influenza-like illness

In week 20, three outbreaks were reported into Merlin.

Miami-Dade County:

- A school reported 17 students with ILI. Specimens collected for testing at local health care providers were positive for influenza A by rapid antigen testing. No specimens were available for testing at BPHL. The facility reported that one student was vaccinated for the 2016-17 influenza season and that no staff members were vaccinated for the 2016-17 influenza season. Infection control measures were reviewed with facility leadership. This investigation is closed.

St. Lucie County:

- A long-term care facility reported 30 residents and eight staff members with ILI. Three individuals were hospitalized. Specimens collected for testing at BPHL were positive for influenza B by PCR. Subtyping and extended respiratory panel results are pending. Vaccination status for the 2016-17 influenza season for all residents and staff members is currently unknown. Infection control measures were reviewed with facility leadership. This investigation is ongoing.

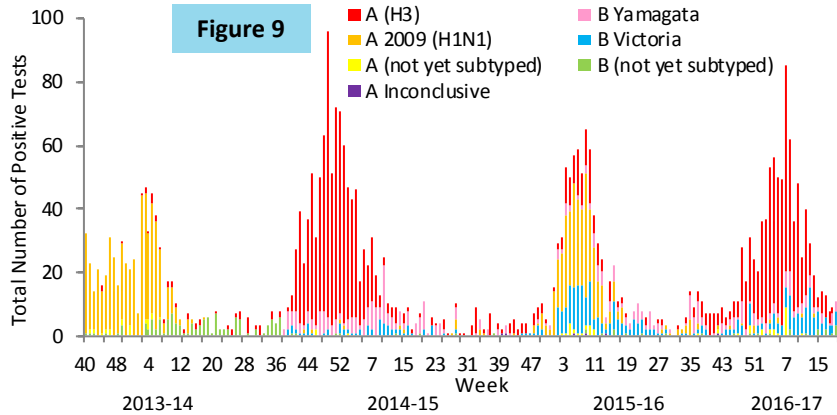
Seminole County:

- An assisted living facility reported 29 residents and seven staff members with ILI. Three individuals were hospitalized and one died. Specimens were collected for testing at BPHL. Those results are pending. The etiology of this outbreak is not yet known. Vaccination status for the 2016-17 influenza season for all residents and staff members is currently unknown. Infection control measures were reviewed with facility leadership. This investigation is ongoing.

In week 19 (ending May 13, 2017), one outbreak was reported into Merlin. No additional information for this outbreak was available in week 20.

BPHL Viral Influenza Specimen Testing

BPHL = Bureau of Public Health Laboratories



Figures 9 and 10 use BPHL viral surveillance data.

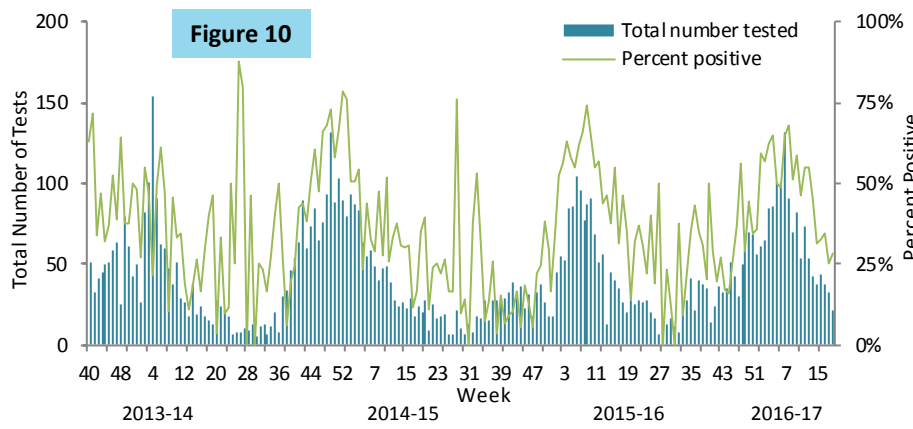
Figure 9 shows the number of influenza-positive specimens tested by subtype and lab event date.*

The most common influenza subtype detected at BPHL statewide for the 2016-17 influenza season has been influenza A (H3). Seasons in which A (H3) viruses predominate are associated with more severe illness in young children and adults ≥65 years old.

In recent weeks, the percent of specimens testing positive for influenza B viruses at BPHL increased. This change has also been observed nationally. This late season circulation of influenza B is expected.

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

In week 20, the percent of specimens testing positive for influenza increased and was above levels observed in previous seasons at this time.



**Table 2: Bureau of Public Health Laboratories (BPHL) Viral Surveillance by Lab Event Date*
Reported by 10:00 a.m. May 24, 2017**

| Influenza Type | Current Week 20 | Previous Week 19 | Current 2016-17 Season |
|---|-------------------|------------------|------------------------|
| Total Specimens Tested | 25 | 28 | 1,867 |
| Influenza positive specimens (% of total specimen tested) | 11 (44.0%) | 9 (32.1%) | 878 (47.0%) |
| Influenza A 2009 (H1N1) (% of influenza positives) | - | - | 10 (1.1%) |
| Influenza A (H3) (% of influenza positives) | - | 2 (22.2%) | 625 (72.2%) |
| Influenza A not yet subtyped (% of influenza positives) | - | - | 20 (2.3%) |
| Influenza A inconclusive** (% of influenza positives) | - | - | 1 (0.1%) |
| Influenza B Yamagata (% of influenza positives) | 3 (27.3%) | 4 (44.4%) | 80 (9.1%) |
| Influenza B Victoria (% of influenza positives) | 5 (45.5%) | 2 (22.2%) | 127 (14.5%) |
| Influenza B not yet subtyped (% of influenza positives) | 3 (27.3%) | 1 (11.1%) | 15 (1.7%) |

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

**Influenza A inconclusive test results are due to technical difficulties including an insufficient sample for testing or internal sample control failure and occur occasionally in routine laboratory testing.

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=297), by ESSENCE-FL Regional Domestic Security Task Force (RDSTF) regions (see map 4) from week 40, 2013 to week 20, 2017*. In week 20, the percent of ED

and UCC visits for ILI increased in regions 1 and 3 and decreased in all other regions. In region 1, ILI activity remained slightly above levels observed in previous seasons at this time. ILI activity in all other regions was similar to or below levels observed in previous seasons at this time.



Figure 11: Region 1 (20 facilities)

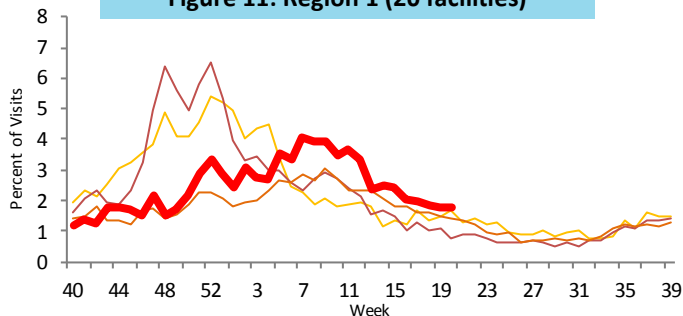


Figure 12: Region 2 (10 facilities)

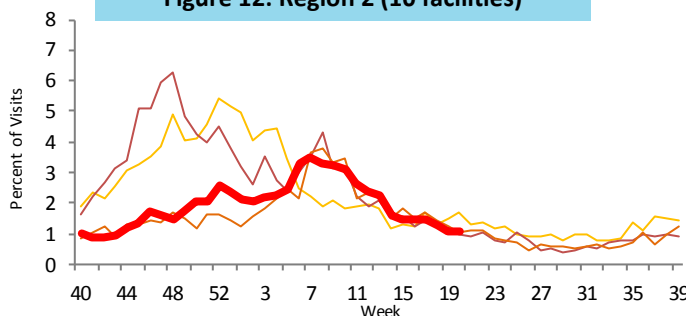


Figure 13: Region 3 (32 facilities)

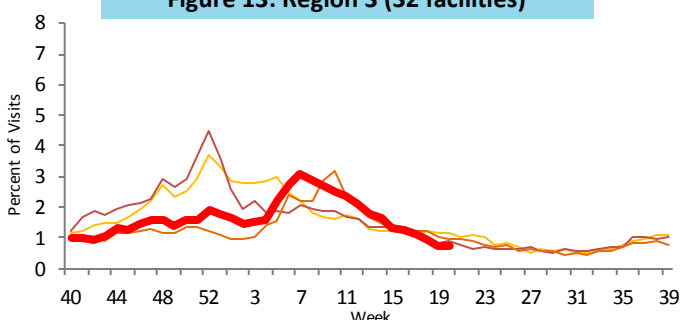


Figure 14: Region 4 (49 facilities)

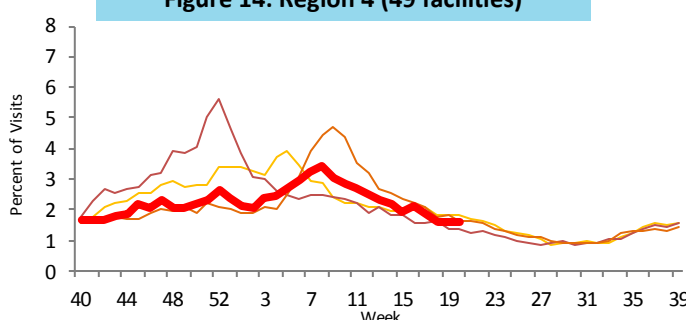


Figure 15: Region 5 (72 facilities)

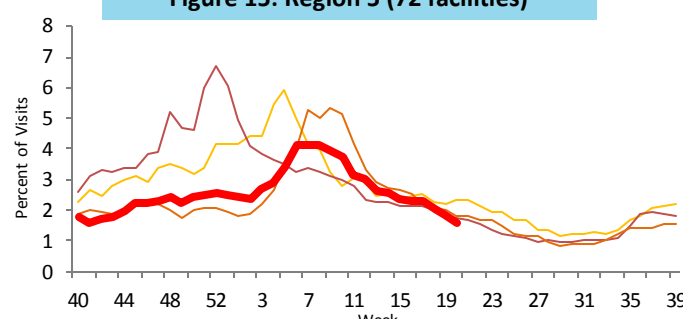


Figure 16: Region 6 (31 facilities)

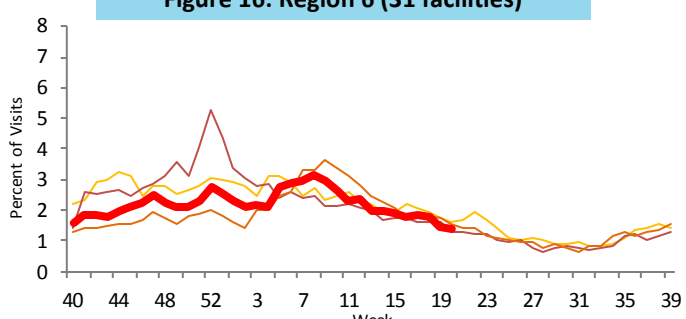
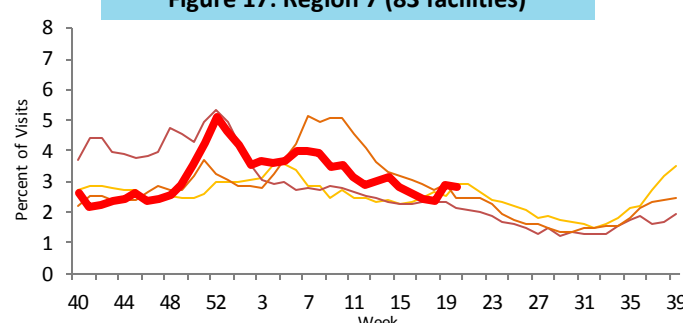
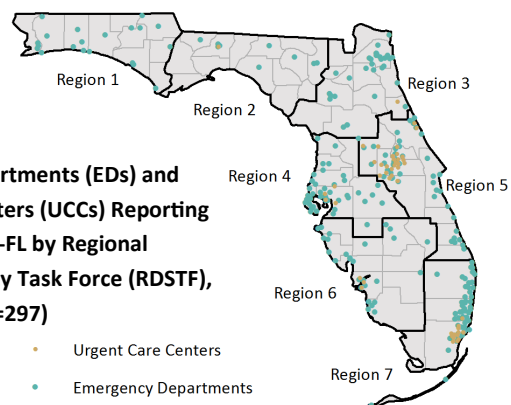


Figure 17: Region 7 (83 facilities)



Map 4

Emergency Departments (EDs) and Urgent Care Centers (UCCs) Reporting Data to ESSENCE-FL by Regional Domestic Security Task Force (RDSTF), May 24, 2017 (n=297)



*There is no week 53 for the 2013-14, 2015-16, and 2016-17 seasons; the week 53 data point for those seasons is an average of weeks 52 and 1.

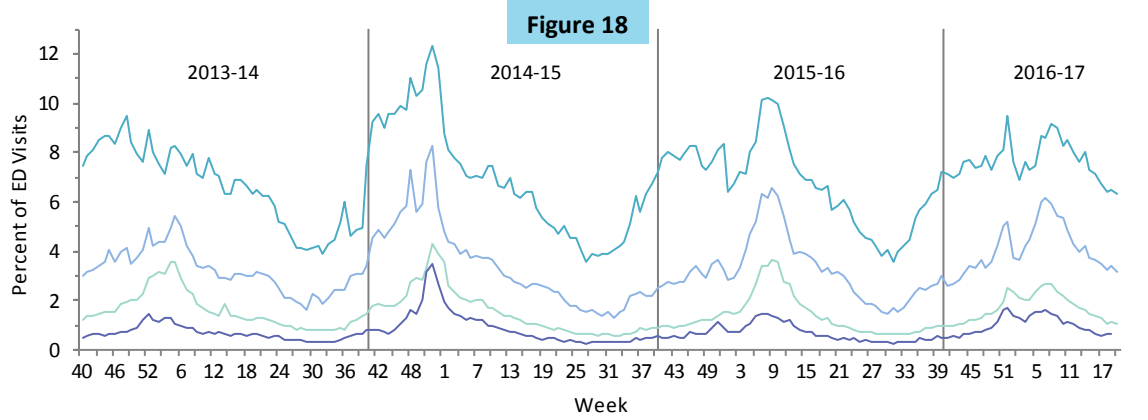
0 to 4 years old 5 to 24 years old 25 to 64 years old ≥65 years old

ED and UCC Visits for ILI by Age Group

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

Figure 18 shows the percent of visits for ILI from ED and UCC chief complaints by age group for ESSENCE-FL participating facilities (n=297), week 40, 2013 to week 20, 2017.

In week 20, ED and UCC visits for ILI increased in the ≥65 age group and decreased in all other age groups. Levels were above those observed in previous seasons at this time in the ≥65 age group. Levels were similar to those observed in previous seasons at this time in all other age groups.



Visits to Outpatient Providers for ILI by Age Group*

ILI = influenza-like illness

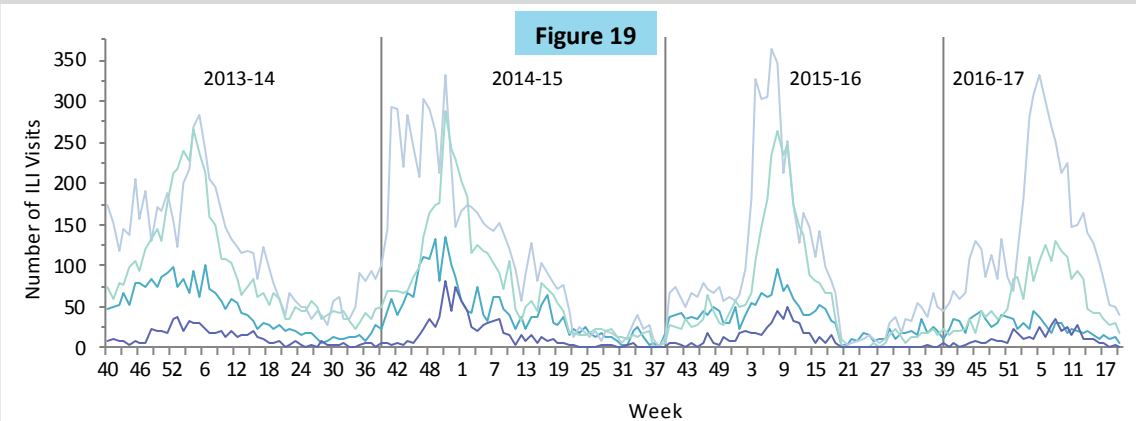


Figure 19 shows the number of visits for ILI reported by ILINet outpatient providers statewide (n=41) by age group, week 40, 2013 to week 20, 2017.

In week 20, the number of visits for ILI decreased in all age groups. Levels were similar to those observed in previous seasons at this time in all age groups.

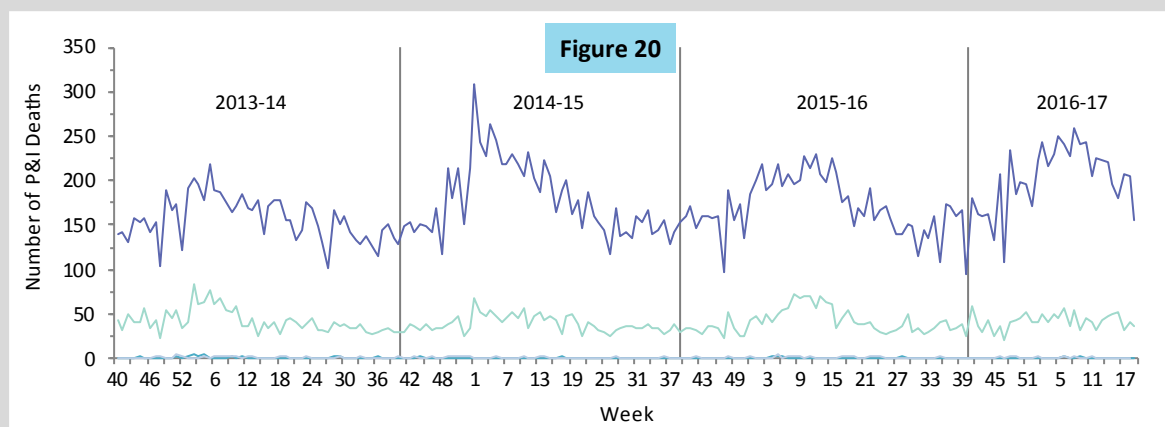
*Data presented here are counts, not proportions. This is because age group denominator data is not available through ILINet.

P&I Deaths* from Vital Statistics by Age Group

P&I = pneumonia and influenza

Figure 20 shows P&I deaths* for all Florida counties by age group, as reported into ESSENCE-FL, week 40, 2013 to week 19, 2017.

In week 19 (ending May 13, 2017), the number of P&I deaths increased in the 5-24 age group and decreased or remained the same in all other age groups. Levels were similar to or below those observed in previous seasons at this time in all age groups.



*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 19, 2017.

ESSENCE-FL collects data daily from 297 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.

— 2016-17
 — 2015-16
 — 2014-15
 — 2013-14

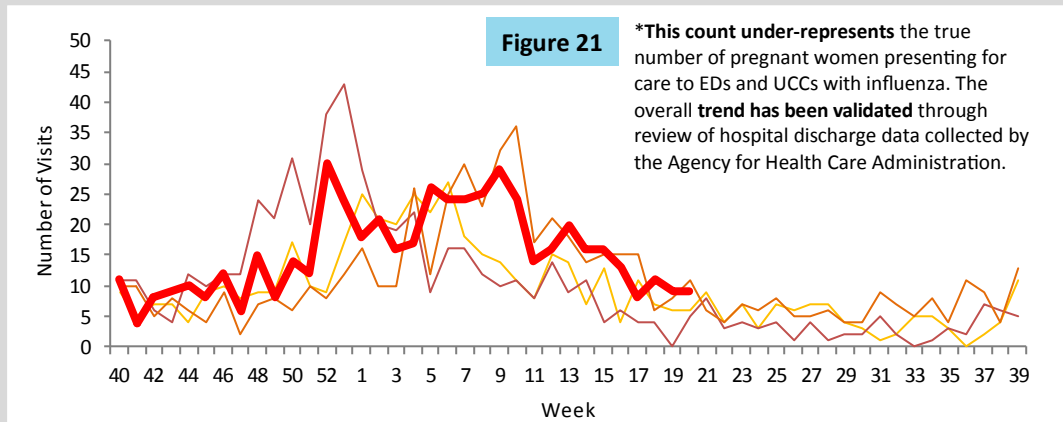
ED and UCC Visits for ILI by Pregnant Women

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

Pregnant women 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 ESSENCE-FL, week 40, 2013 to week 20, 2017.

In week 20, the number of visits to EDs and UCCs by pregnant women with mention of influenza remained the same. Levels were similar to those observed in previous seasons at this time.



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

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

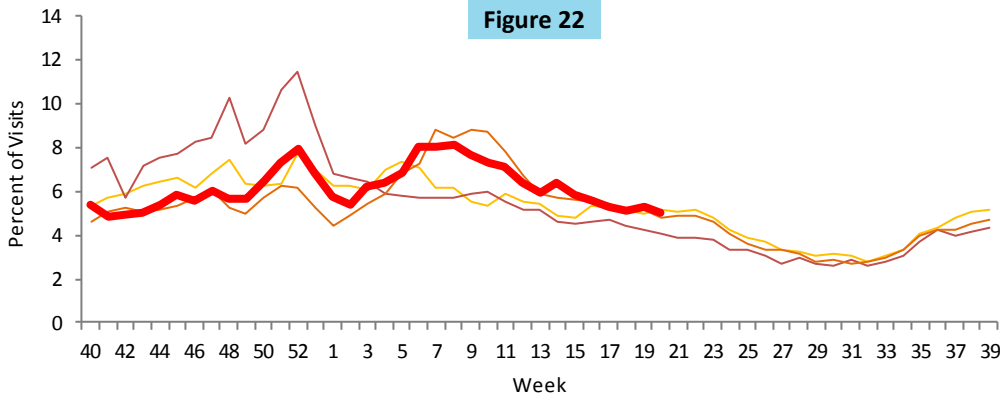


Figure 22 shows the percent of ILI visits among all ED and UCC visits for children ≤ 18 years old, as reported into ESSENCE-FL, week 40, 2013 to week 20, 2017.

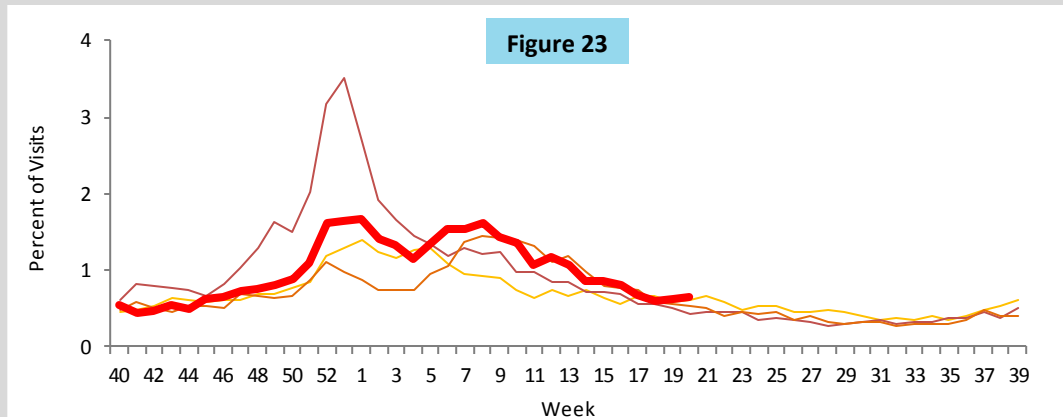
In week 20, the percent of ILI visits among all ED and UCC visits for children ≤ 18 years old decreased and was similar to levels observed in previous seasons at this time.

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 ESSENCE-FL, week 40, 2013 to week 20, 2017.

In week 20, the percent of ILI visits among all ED and UCC visits for adults ≥ 65 years old increased. Levels were slightly above those observed in previous seasons at this time.



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.

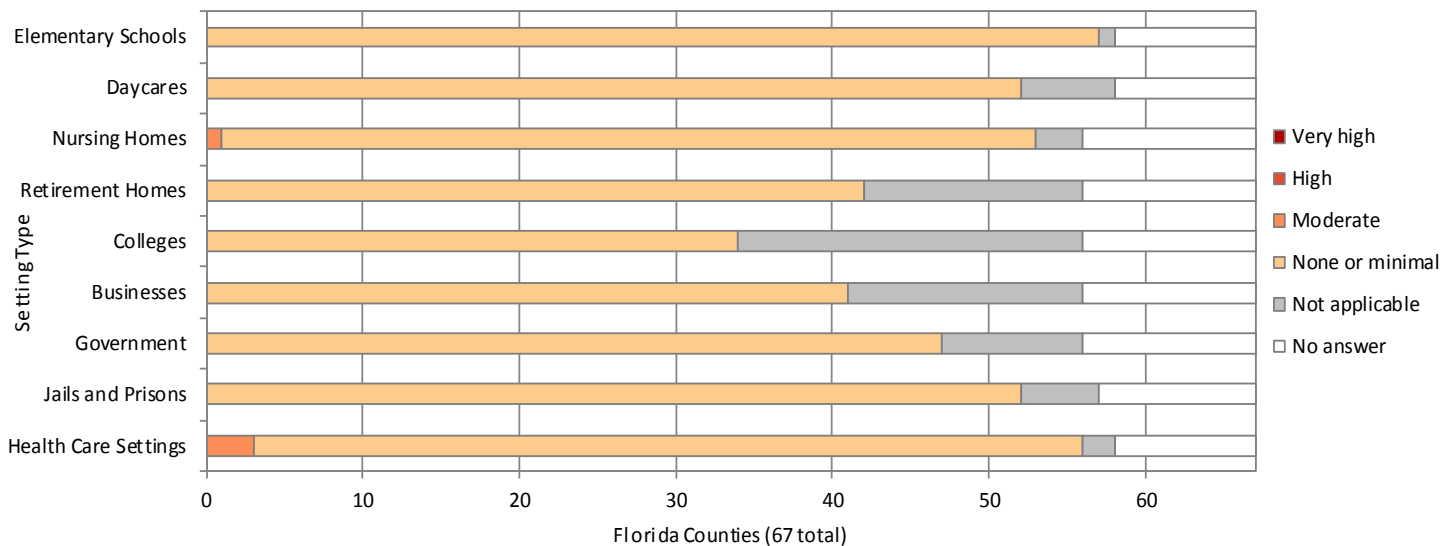
Figure 24 shows the results of the influenza activity assessment for week 20, 2017.

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, 53 counties (81.5%) reported no or minimal influenza or ILI activity. Three counties (4.6%) reported moderate influenza or ILI activity.

In daycare settings, 52 counties (83.9%) reported no or minimal influenza or ILI activity.

Settings for Adults >65 Years Old

In nursing homes, 42 counties (79.2%) reported no or minimal influenza or ILI activity.

In retirement homes, 52 counties (81.3%) reported no or minimal influenza or ILI activity. One county reported moderate influenza or ILI activity.

Settings for Adults 18 to 65 Years Old

In colleges, 47 of 58 counties (81.0%) reported no or minimal influenza or ILI activity.

In businesses, 41 counties (78.8%) reported no or minimal influenza or ILI activity.

In government offices, 34 counties (75.6%) reported no or minimal influenza or ILI activity.

Other Unique Settings

In jails and prisons, 52 counties (85.2%) reported no or minimal influenza or ILI activity.

In health care settings, including rehabilitation facilities and mental health facilities, 57 counties (86.4%) reported no or minimal influenza or ILI activity.

RSV Activity Summary and Seasonality

RSV = respiratory syncytial virus

RSV activity:

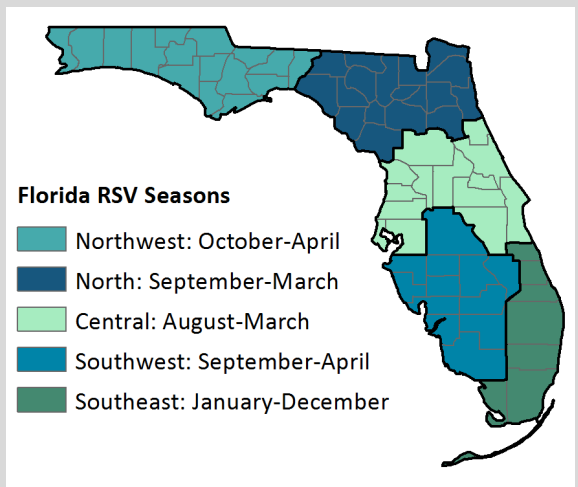
- In week 20, the percent of children <5 years old diagnosed with RSV at EDs and UCCs decreased but was above levels observed in previous seasons at this time.
- The percent of specimens testing positive for RSV decreased and was similar to levels observed in previous seasons at this time.
- To learn more about RSV in Florida, please visit: <http://www.floridahealth.gov/rsv>.

RSV Seasonality:

- RSV activity in Florida typically peaks in November through January, though activity can vary dramatically by region. According to CDC, the start of RSV season is marked by the first two consecutive weeks during which the average percentage of specimens testing positive for RSV is $\geq 10\%$.
- Florida has established regular RSV seasons based on these thresholds.
- Florida's RSV season is longer than the rest of the nation and has distinct regional seasonality. For more information on RSV seasonality in Florida, see the American Academy of Pediatrics' 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 as it relates to prescribing patterns for initiating prophylaxis to children at high risk for RSV infection.
- See the back page of this report for more information on RSV surveillance systems used in Florida: page 14 ►

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

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

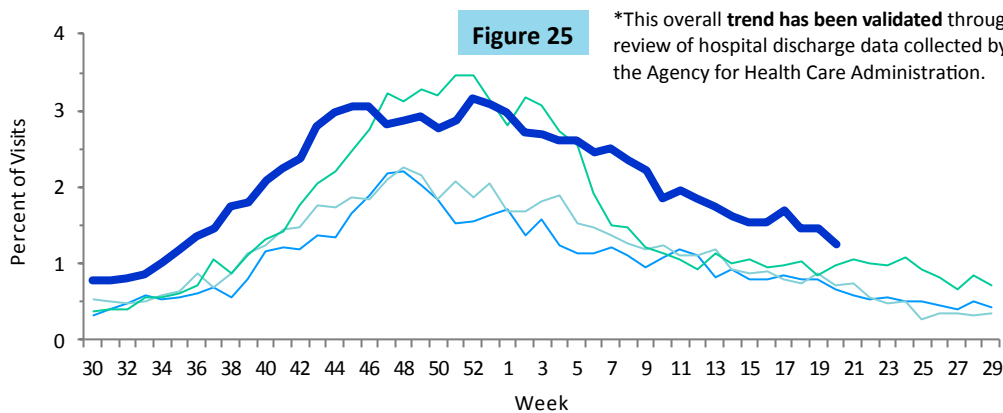


Figure 25 shows the percent of visits to EDs and UCCs with discharge diagnoses that include RSV or RSV-associated illness, as reported by participating ESSENCE-FL facilities (n=297), week 30, 2013 to week 20, 2017.

In week 20, the percent of children presenting to participating EDs and UCCs for care with RSV decreased. Levels were above those observed in previous seasons at this time.

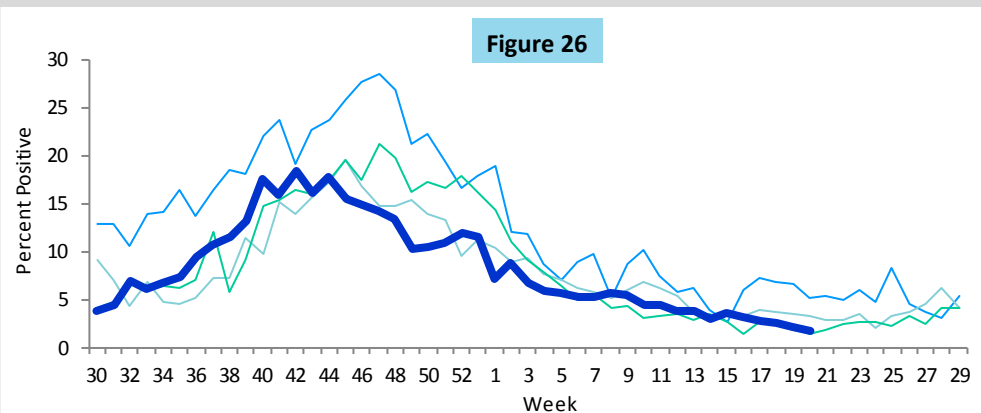
Legend for Figure 25:
 2016-17 (dark blue), 2015-16 (green), 2014-15 (light blue), 2013-14 (medium blue)

Laboratory RSV Surveillance

RSV = respiratory syncytial virus

Figure 26 shows the percent of laboratory results testing positive for RSV, as reported by hospital laboratories (n=9), week 30, 2013 to week 20, 2017.

In week 20, the percent of specimens testing positive for RSV decreased and was similar to levels observed in previous seasons at this time.



Legend for Figure 26:
 2016-17 (dark blue), 2015-16 (green), 2014-15 (light blue), 2013-14 (medium blue)

Other Respiratory Virus Surveillance

Statewide activity:

- In week 20, the percent of specimens testing positive for influenza decreased and was similar to levels observed in previous seasons at this time.
- The percent of specimens testing positive for rhinovirus decreased and was similar to levels observed in previous seasons at this time.
- The percent of specimens testing positive for parainfluenza 1-3 decreased slightly, but remained above levels observed in previous seasons at this time.
- The percent of specimens testing positive for RSV decreased and was similar to levels observed in previous seasons at this time.

Enterovirus D68 (EV-D68) activity:

- In week 20, no new cases of EV-D68 were identified in Florida. No cases have been identified in Florida since May 2016.
 - **Eight cases of EV-D68 were identified in Florida in 2016.** These eight cases were identified in different regions of the state and represent the full spectrum of disease. These were the first identifications of EV-D68 in the United States since the fall of 2014.
- Six of these cases were identified as a result of Florida’s participation in the Acute Respiratory Infection Epidemiology and Surveillance Program (ARIES).
- To learn more about EV-D68, please visit: <http://www.floridahealth.gov/diseases-and-conditions/d68>.

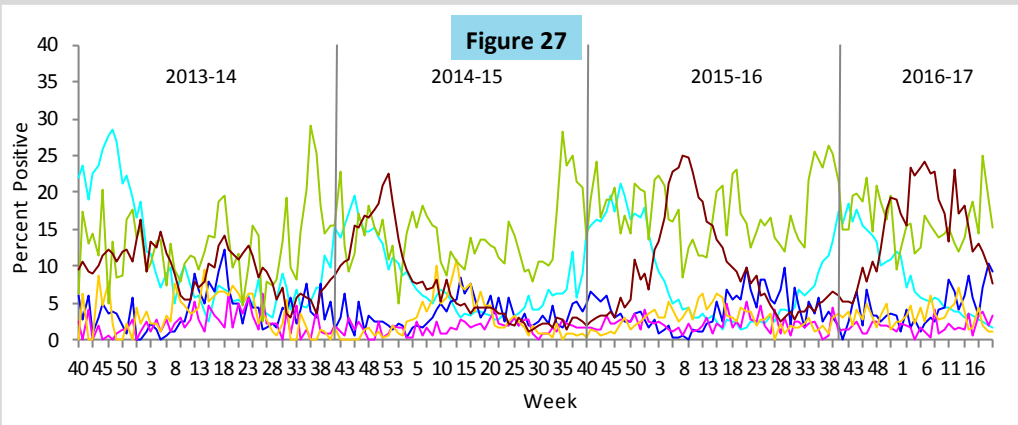
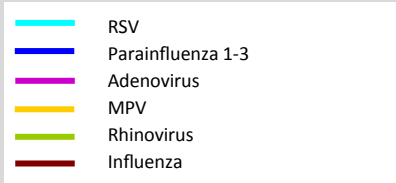
Outbreaks:

- In week 20, no outbreaks of RSV, parainfluenza, 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=9), week 40, 2013 to week 20, 2017.

In week 20, the percent of specimens testing positive for parainfluenza decreased slightly but remained above levels observed in previous seasons at this time.



Non-Influenza ARIES Laboratory Outpatient Surveillance*

ARIES = Acute Respiratory Infection Epidemiology and Surveillance Program

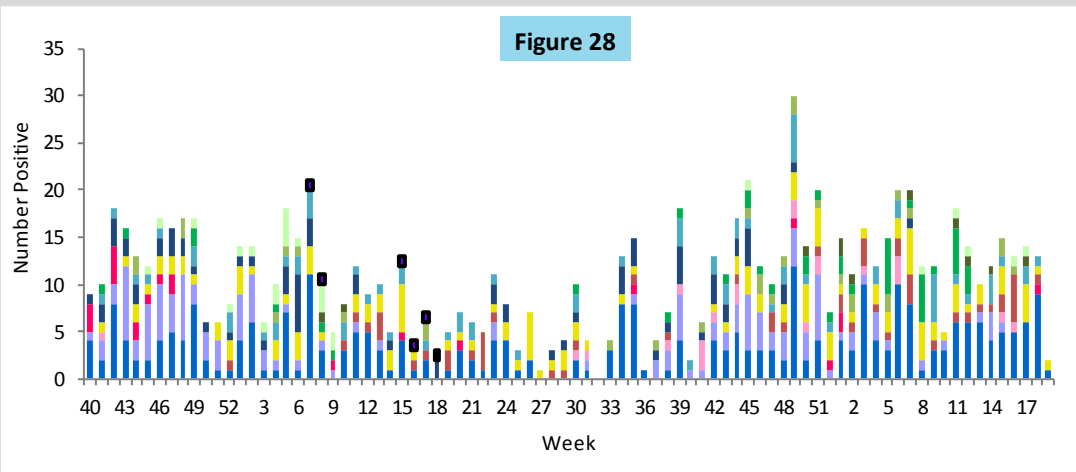
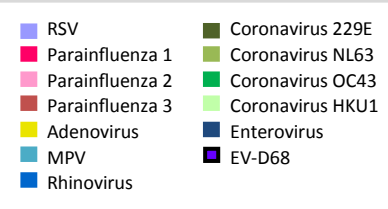


Figure 28 shows the number of specimens testing positive for 12 common respiratory viruses, as reported by BPHL and ARIES outpatient providers statewide (n=7), week 40, 2015 to week 19, 2017.

In week 19 (ending May 13, 2017), specimens submitted by ARIES providers tested positive for rhinovirus and adenovirus.



*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 19, 2017. Laboratory results for specimens that have not yet been tested in full will be included in future reports.

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=297) 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) 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 and ARI (acute respiratory infection) counts, as well as submit ARI and ILI specimens to BPHL for testing.

Case-Based Influenza Surveillance

- Deaths in children with laboratory-confirmed influenza infection and patients with influenza infection due to novel or pandemic strains are reportable in Florida. Influenza-associated pediatric deaths and cases of influenza infection due to novel or pandemic strains are reported by CHDs into Merlin, DOH’s reportable disease surveillance system.
- For more information about reportable diseases, please visit www.Floridahealth.gov/diseasereporting.