



Summary

Weeks 23-24: June 3-16, 2018

State influenza and influenza-like illness (ILI)¹ activity²:

- **Influenza continues to circulate at low levels across the state.** While activity has remained low overall, it is important to note that influenza continues to circulate throughout the summer months in Florida and may cause outbreaks.
- Two outbreaks of ILI were reported over the last two weeks (23-24); 509 outbreaks of influenza and ILI were reported since last October. Specimen collection for outbreaks reported throughout the summer is critical, as these outbreaks can serve as an early indicator for what is to come in the next influenza season.
- In the last two weeks, the percent of emergency department (ED) and urgent care center (UCC) visits for ILI decreased and was similar to levels observed at this time in previous years.
- In week 23, the preliminary estimated number of deaths due to pneumonia and influenza decreased and was similar to levels observed in previous seasons at this time.
- **No new influenza-associated pediatric deaths were confirmed in weeks 23-24.**
 - Eight influenza-associated pediatric deaths have been confirmed since the start of the 2017-18 influenza season. **Annual vaccination remains the best way to protect children against influenza.**
- In weeks 23-24, four (21%) of the 19 specimens submitted to the Bureau of Public Health Laboratories for influenza testing were positive by real-time reverse transcription polymerase chain reaction (RT-PCR) for influenza: two influenza A 2009 (H1N1), one influenza A unspecified, and one influenza B unspecified.
 - In recent weeks, the majority of influenza viruses identified at BPHL have been influenza A 2009 (H1N1) or influenza B Yamagata lineage viruses, but of note, the total number of specimens testing positive for influenza at BPHL has remained low.

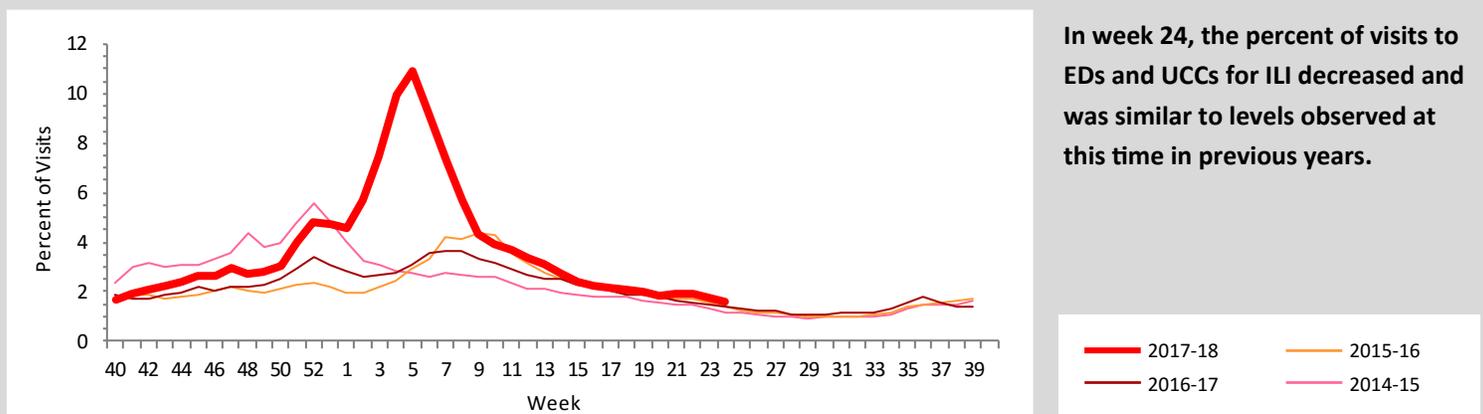
National influenza activity:

- Influenza viruses continue to circulate at low levels nationally.
- While influenza A (H3) viruses predominated overall for the 2017-18 season, influenza B viruses have been more commonly reported than influenza A since early-March. **This late-season circulation of influenza B is expected.**

ED and UCC Visits for ILI by Flu Season

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

The figure below shows the percent of visits for ILI from ED and UCC chief complaint data for ESSENCE-FL participating facilities (n=324) from week 40, 2014 to week 24, 2018.



In week 24, the percent of visits to EDs and UCCs for ILI decreased and was similar to levels observed at this time in previous years.

¹ 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.

² In Florida, only influenza-associated pediatric mortalities, cases of novel influenza infection, and outbreaks of influenza or ILI are reportable. The Florida Department of Health uses many different surveillance systems to measure influenza activity. A summary of all these systems can be found on our website: www.floridahealth.gov/floridaflu and on page 4.

Posted June 20, 2018 on the Bureau of Epidemiology website: www.floridahealth.gov/floridaflu

Produced by the Bureau of Epidemiology, Florida Department of Health

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P&I Deaths from Vital Statistics by Age Group

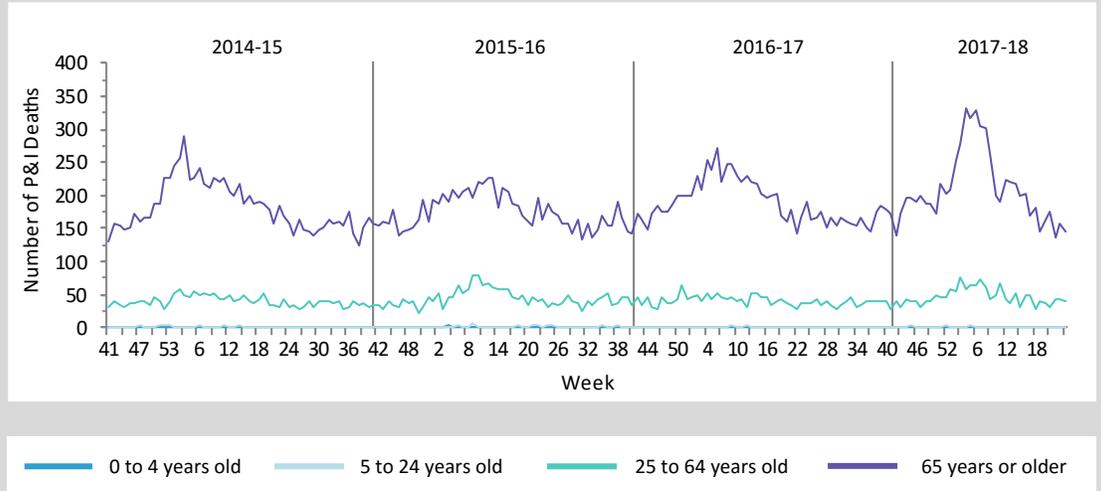
P&I = pneumonia and influenza

The figure below shows the number of preliminary P&I deaths by age group from week 40, 2014 through week 23, 2018, as reported into ESSENCE-FL. Vital statistics death records data are currently considered to be complete through week 23, 2018.

The number of P&I deaths reported in week 23 was similar to or below levels seen at this time in previous years.

186 preliminary estimated P&I deaths were reported for week 23, 2018.

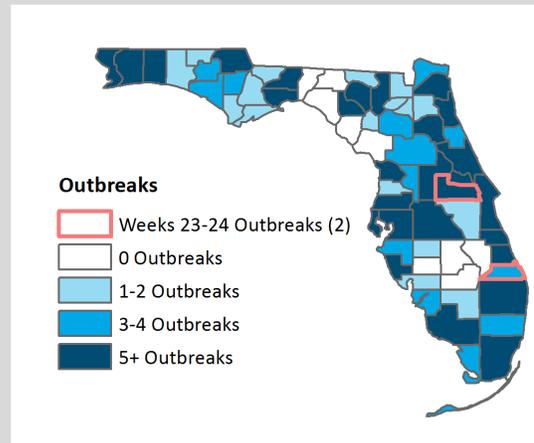
Based on a multi-year regression model to predict P&I death counts in the Florida population, no excess deaths were reported for week 23, 2018. The upper bound of the 95% confidence interval for prediction is 231 deaths.



Influenza and ILI Outbreaks

ILI = influenza-like illness

Influenza and ILI Outbreaks by County Week 40, 2017 through Week 24, 2018



The map to the left shows influenza and ILI outbreaks by county from week 40, 2017 (beginning on October 1, 2017) through week 24, 2018 (ending on June 16, 2018).

In weeks 23-24, two outbreaks of ILI were reported: one in a Martin County assisted living facility and one in an Orange County school. Of the two outbreaks reported, one investigation is still ongoing. A total of 509 outbreaks have been reported since last October. More outbreaks were reported this season than in previous seasons on record. An average of 91 total influenza or ILI outbreaks were reported during the last five influenza seasons.

Since the start of the 2017-18 season, outbreaks occurred in the following settings: 65 (13%) in assisted living facilities, 86 (17%) in nursing facilities, 98 (19%) in other long-term care facilities, 2 (0.4%) in adult daycares, 85 (17%) in child daycares, 133 (26%) in schools/camps, 18 (4%) in correctional facilities/juvenile detention centers, 6 (1%) in hospitals, 2 (0.4%) in shelters, and 14 (3%) in other settings.

Specimen collection for outbreaks reported throughout the summer is critical, as these outbreaks can serve as an early indicator for what is to come in the next influenza season.

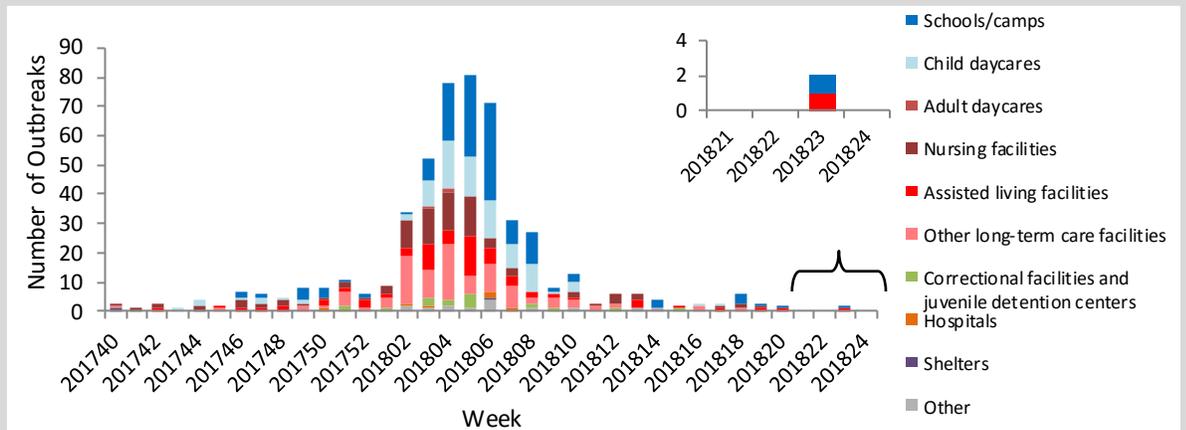
Influenza and ILI Outbreaks by Facility Type

ILI = influenza-like illness

The figure below shows the distribution of influenza and ILI outbreaks by facility type as reported in Merlin, week 40, 2017 through week 24, 2018.

In weeks 23-24, two outbreaks of ILI were reported.

Of the 509 total outbreaks reported since week 40, 2017, 467 (92%) have been in facilities serving people at higher risk for complications due to influenza infection (children and adults aged 65 years and older).



RSV and Other Respiratory Virus Surveillance

RSV = respiratory syncytial virus

RSV activity:

- In week 24, the percent of children <5 years old diagnosed with RSV at EDs and UCCs decreased but remained above levels observed in previous seasons at this time.
- Florida's southeast region is currently in RSV season.
- No new RSV-associated pediatric deaths were identified in week 24. One RSV-associated pediatric death has been identified so far this year. Premature infants and children <2 years with certain underlying medical conditions are at higher risk for 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: <http://www.floridahealth.gov/rsv>.

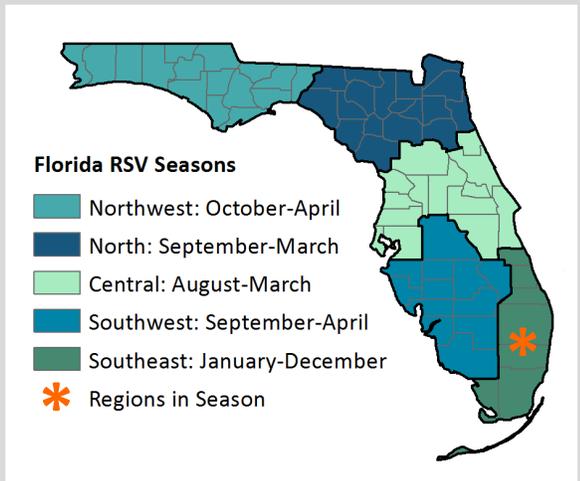
RSV seasonality:

- RSV activity in Florida typically peaks between November and January, though activity can vary dramatically by region.
- Despite some regions being out of season, RSV continues to circulate at low levels throughout the states, even in the off-season.
- 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.

Other respiratory virus surveillance:

- In weeks 23-24, the percent of specimens testing positive for rhinovirus remained higher than other respiratory viruses under surveillance.

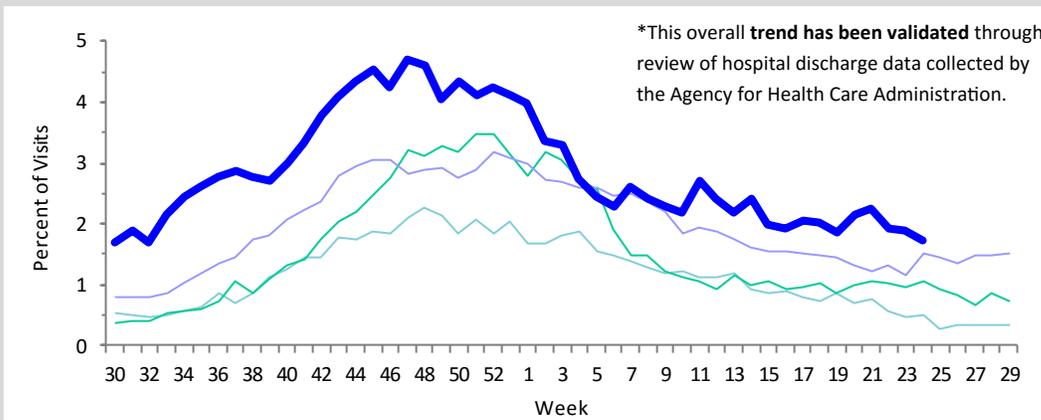
Florida Respiratory Syncytial Virus (RSV) Regional Season Breakdown



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

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

The figure below 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=324), week 30, 2014 through week 24, 2018.



In week 24, the percent of children diagnosed with RSV at participating EDs and UCCs decreased. Levels remained above those observed in previous seasons at this time.

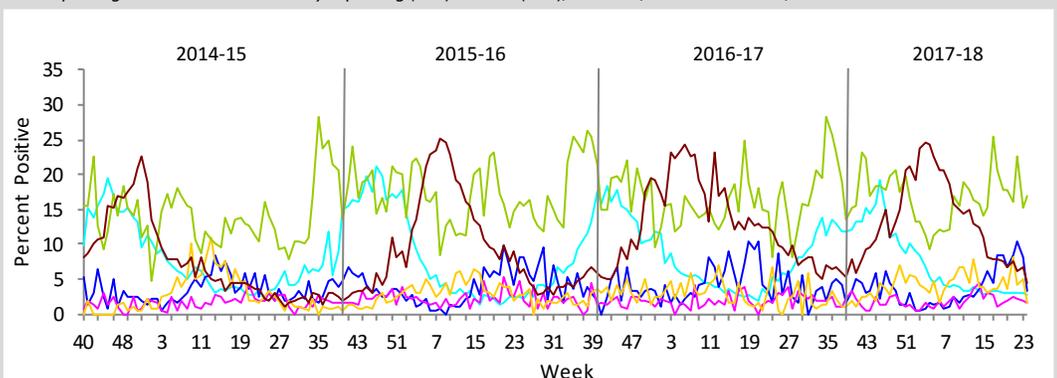
— 2017-18 — 2015-16
— 2016-17 — 2014-15

Laboratory Viral Respiratory Surveillance

The figure below shows the percent of laboratory results testing positive for eight common respiratory viruses, as reported by the National Respiratory and Enteric Virus Surveillance System (NREVSS) and participating validated laboratories reporting via electronic laboratory reporting (ELR) to DOH (n=6), week 40, 2014 to week 24, 2018.

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

— RSV
— Parainfluenza 1-3
— Adenovirus
— Human metapneumovirus
— Rhinovirus
— Influenza



Florida ILI Surveillance System Summary

ESSENCE-FL Syndromic Surveillance and Vital Statistics Portal

- Electronic Surveillance System for the Early Notification of Community-based Epidemics (ESSENCE-FL) is used to measure trends in ILI visits from emergency departments (ED) and urgent care clinics (UCC) and influenza mortality using death certificates from the Bureau of Vital Statistics. Participating EDs and UCCs (n=324) electronically transmit visit data into ESSENCE-FL daily or hourly.
- For statewide and regional data on ILI, ED and UCC visits with chief complaints that include the words “influenza” or “flu” are counted along with chief complaints that include the word “fever” and one or both of the following: “cough” or “sore throat.”
- For pneumonia and influenza (P&I) surveillance, death record literals are examined 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, ED and UCC visits with RSV or RSV-associated illness included in the discharge diagnosis are counted. 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.

Bureau of Public Health Laboratories (BPHL)

- 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 health departments (CHDs) 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 at www.floridahealth.gov/diseases-and-conditions/influenza/_documents/flulabreportguide.pdf.

Outbreak Reporting in Merlin

- Merlin, Florida Department of Health (DOH)’s reportable disease surveillance system, is used to track influenza and ILI outbreak investigations by CHDs. CHD epidemiologists document outbreaks of influenza and ILI in Merlin, including type of respiratory disease causing the outbreak and settings where outbreaks occurred.
- Outbreaks are defined as two or more cases of influenza or ILI in a specific setting.

Laboratory Viral Respiratory Surveillance

- National Respiratory and Enteric Virus Surveillance System (NREVSS) and electronic laboratory reporting (ELR) data are from Florida laboratories are used to monitor temporal and geographic patterns of six commonly circulating respiratory viruses on a weekly basis. NREVSS data are collected by the Centers for Disease Control and Prevention (CDC) and ELR data are collected by DOH.

Case-Based Influenza Surveillance

- Death in a child whose laboratory-confirmed influenza infection has been identified as 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 a 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.