



Summary

Weeks 21-22: May 21-June 3, 2017

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

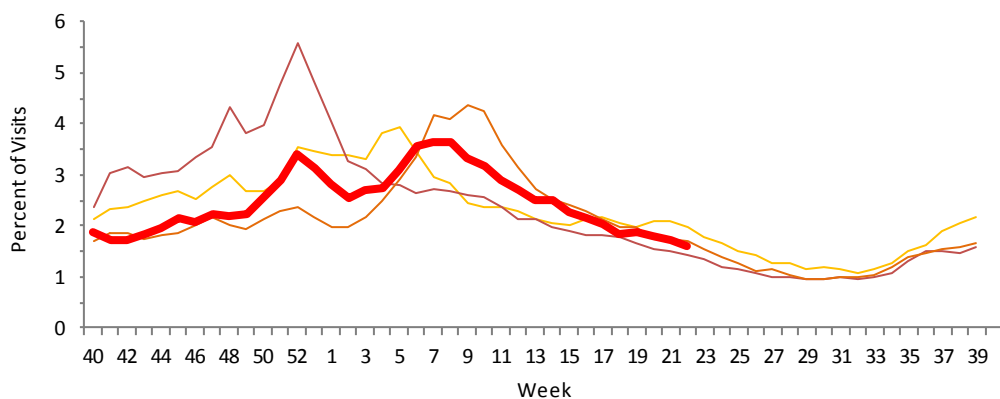
- Influenza and ILI activity in Florida remained low, which is typical for this time of year.
- In week 21, the preliminary estimated number of deaths due to pneumonia and influenza decreased notably and was below levels observed in previous seasons at this time.
- In weeks 21-22, two outbreaks of ILI were reported. A total of 154 outbreaks have been reported since the start of the 2016-17 influenza season.
- **No influenza-associated pediatric deaths were reported in weeks 21-22.**
 - Ten influenza-associated pediatric deaths have been reported since the start of the 2016-17 influenza season. This is the largest number of deaths to be reported in Florida since the 2012-13 influenza season. **Annual vaccination remains the best way to protect children against influenza.**
- In weeks 21 and 22, seven of the 37 (18.9%) specimens submitted to the Bureau of Public Health Laboratories (BPHL) for influenza testing were positive by real-time Reverse Transcription Polymerase Chain Reaction (RT-PCR) for influenza: two influenza A (H3), three influenza B Victoria lineage, and two influenza B Yamagata lineage.

National influenza activity:

- Influenza viruses continue to circulate at low levels nationally.
- **The Centers for Disease Control and Prevention has identified an antigenically drifted influenza B Victoria lineage strain circulating nationally that is different from the strain of influenza B Victoria lineage contained in the current 2016-17 influenza vaccination formulations.** This drifted strain is also different from the strain of influenza B Victoria lineage recommended for inclusion in the 2017-18 influenza vaccination formulations.
- In the spring of 2017, avian influenza A (H7N9) was identified in **chickens** in Tennessee, Alabama, and Kentucky. Avian influenza A (H7) was also recently identified in **chickens** in Georgia.
 - These strains of influenza A (H7N9) are **not** the same as the strains circulating in China.
 - These are the first identifications of influenza A (H7N9) in domestic poultry in the United States in 2017.
- In the spring of 2017, avian influenza A (H5N2) was also identified in **turkeys** in Wisconsin.
 - This is the first identification of influenza A (H5N2) in domestic poultry in the United States in 2017.
 - To learn more about HPAI, please visit: www.floridahealth.gov/novelflu.

ED and UCC Visits for ILI³ by Flu Season

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



The figure to the left shows the percent of visits for ILI from ED and UCC chief complaint data for ESSENCE-FL participating facilities (n=297) from week 40, 2013 through week 22, 2017.

The percent of ILI visits to ESSENCE-FL participating facilities decreased in recent weeks and was similar to levels observed in previous seasons at this time.

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

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 (DOH) 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 7, 2017 on the Bureau of Epidemiology (BOE) website: www.floridahealth.gov/floridaflu

Produced by BOE, DOH

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P&I Deaths from Vital Statistics by Age Group

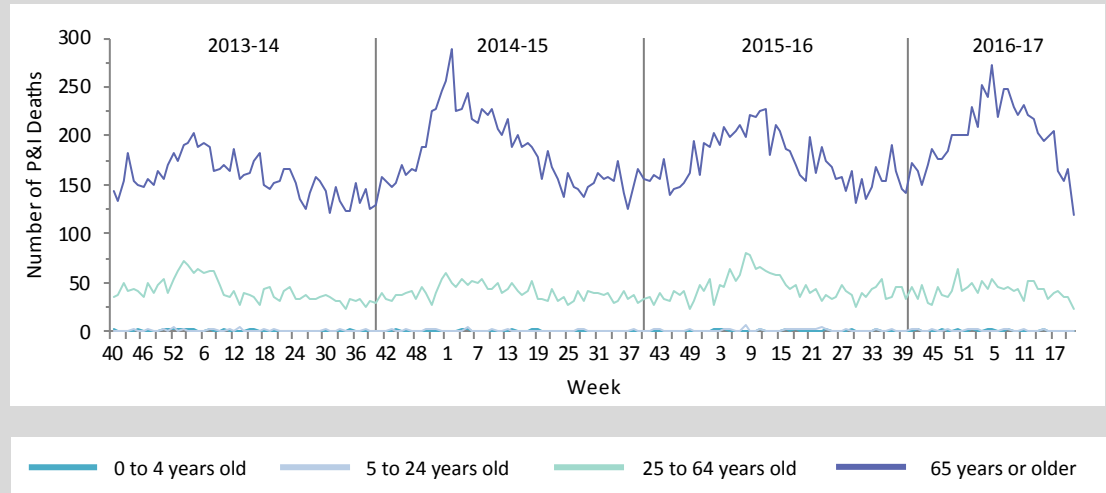
P&I = pneumonia and influenza

The figure below shows the number of preliminary P&I deaths by age group from week 40, 2013 through week 21, 2017, as reported into ESSENCE-FL. *Vital statistics death records data are currently considered to be complete through week 21, 2017.*

The number of P&I deaths reported in week 21 was similar to or below levels seen in previous seasons at this time in all age groups.

149 preliminary estimated P&I deaths were reported for week 21, 2016.

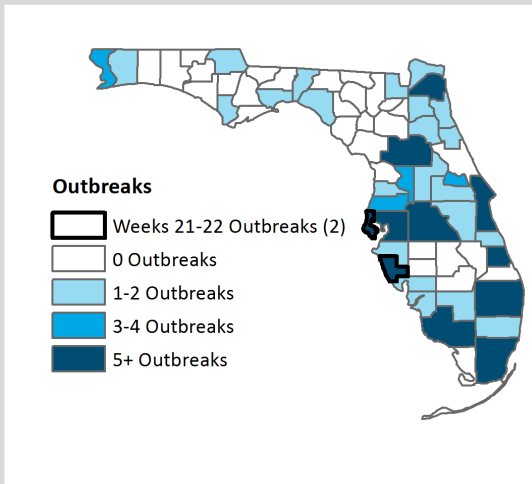
Based on a multi-year regression model to predict P&I death counts in the Florida population, no excess deaths were reported for week 21, 2016. The upper bound of the 95% confidence interval for prediction is 219 deaths.



Influenza and ILI Outbreaks

ILI = influenza-like illness

Influenza and ILI Outbreaks by County Week 40, 2016 through Week 22, 2017



The map to the left shows influenza and ILI outbreaks by county from week 40, 2016 (beginning on October 4, 2016) through week 22, 2017 (ending on June 3, 2017). **Two outbreaks of ILI were reported in weeks 21 and 22.** As of week 22, 154 outbreaks of influenza and ILI have been reported into Merlin since the start of the 2016-17 season. This is the largest number of outbreaks reported in the past seven influenza seasons.

Pinellas County:

A skilled nursing facility reported one resident and one staff member with ILI. No specimens were available for testing. The etiology of this outbreak is unknown. Vaccination status for the 2016-17 influenza season for all residents and staff members is unknown. Infection control measures were reviewed with facility leadership. This investigation is closed.

Sarasota County:

An elementary school reported nine individuals with ILI. No specimens have been available for testing thus far. 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.

RSV and Other Respiratory Virus Surveillance

RSV = respiratory syncytial virus

RSV activity:

- In week 22, the percent of children <5 years old diagnosed with RSV at EDs and UCCs decreased and was slightly above levels observed in previous seasons at this time.
- The percent of specimens testing positive for RSV increased but remained similar to levels observed in previous seasons at this time.
- To learn more about RSV in Florida, please visit: <http://www.floridahealth.gov/rsv>.

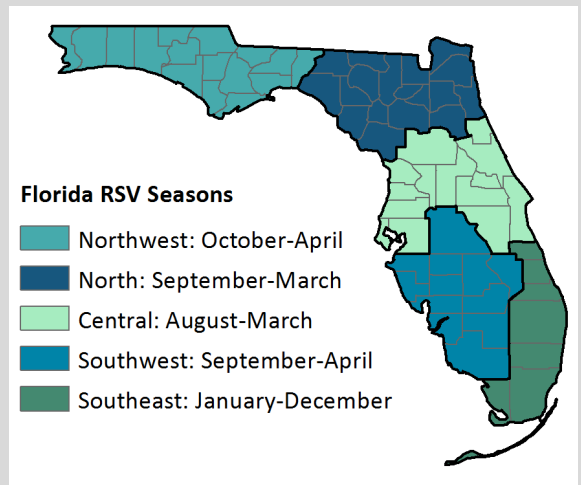
RSV seasonality:

- 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.

Enterovirus D68 (EV-D68) activity:

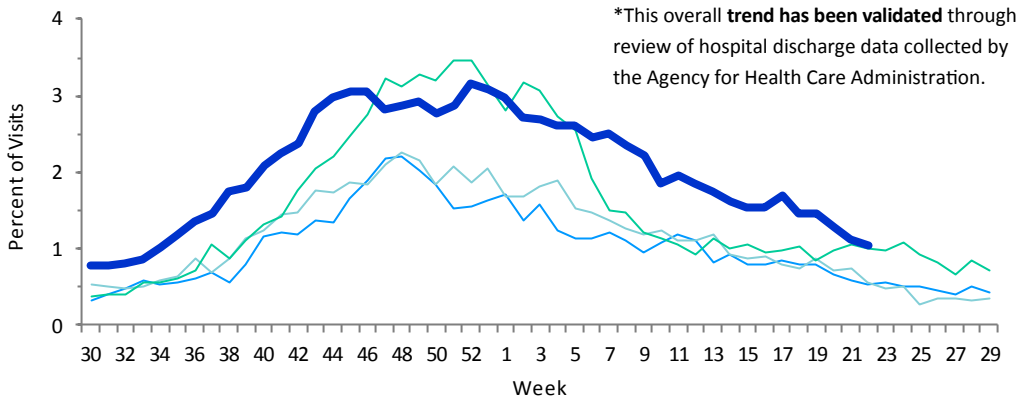
- In weeks 21-22, no new cases of EV-D68 were identified in Florida. No cases have been identified in Florida since May 2016.
 - Eight cases of EV-D68 were identified in Florida in 2016. These eight cases were identified in different regions of the state and represent the full spectrum of disease.
- 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>.

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 to the left 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 22, 2017.

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

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

- 2016-17 (Dark Blue)
- 2015-16 (Light Green)
- 2014-15 (Light Blue)
- 2013-14 (Medium Blue)

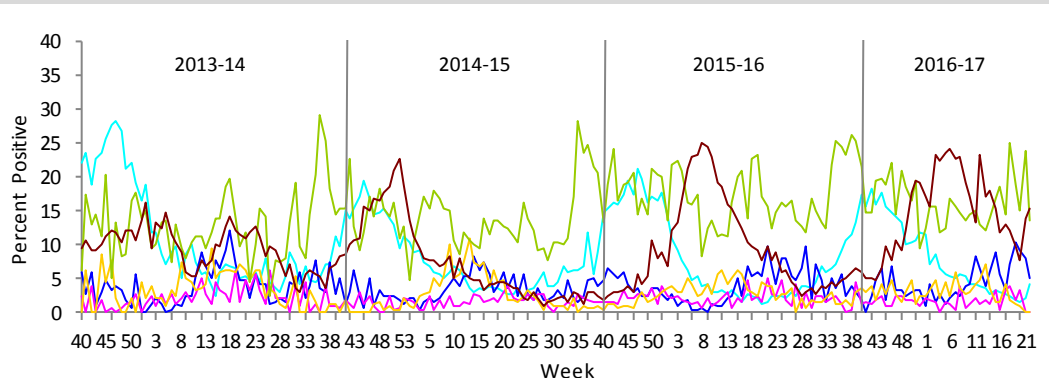
Laboratory Viral Respiratory Surveillance

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=9), week 40, 2013 to week 22, 2017.

In week 22, the percent of specimens testing positive for influenza increased notably and was above levels observed in previous seasons at this time. The percent of specimens testing positive for rhinovirus decreased but was above levels observed in previous seasons at this time.

Legend for Laboratory Viral Respiratory Surveillance:

- RSV (Cyan)
- Parainfluenza 1-3 (Blue)
- Adenovirus (Purple)
- Human metapneumovirus (Yellow)
- Rhinovirus (Green)
- Influenza (Red)



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=297) 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.

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-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, DOH’s reportable disease surveillance system, is used to track influenza and ILI outbreak investigations by county health departments (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 and ILI into Merlin.
- Outbreaks are defined as two or more cases of influenza or ILI in a specific setting.

Laboratory Viral Respiratory Surveillance

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

Acute Respiratory Infection Epidemiology and Surveillance (ARIES) Program

- The Acute Respiratory Infection Epidemiology and Surveillance (ARIES) Program is a nationwide surveillance system composed of nine participating jurisdictions. Florida has seven sentinel providers enrolled in ARIES who submit weekly ILI and acute respiratory infection (ARI) patient 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 infected with novel or pandemic influenza strains are reportable in Florida. Influenza-associated pediatric deaths and novel or pandemic strain influenza cases are reportable by CHDs into Merlin.
- For more information about reportable diseases, please visit www.Floridahealth.gov/diseasereporting.