



Summary

Weeks 33-34: August 13-26, 2017

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

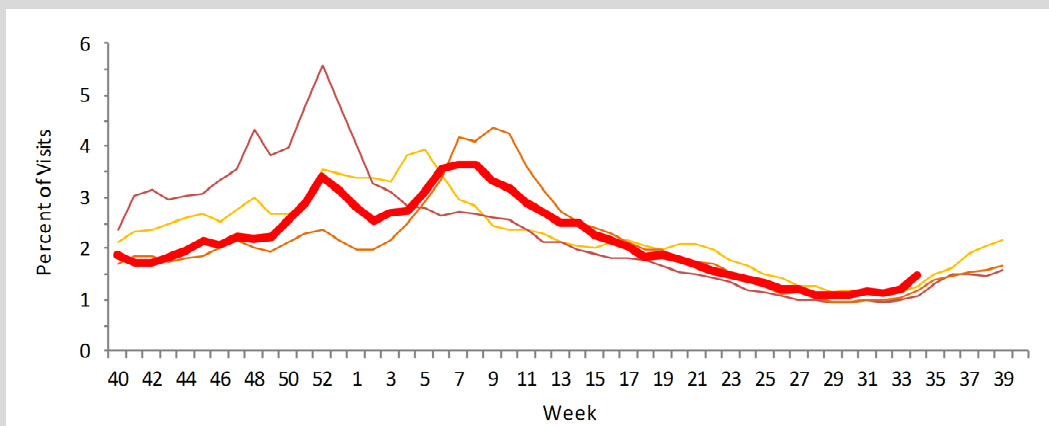
- Influenza and ILI activity in Florida remained low overall, which is typical for this time of year. While there has been a slight increase in patient chief complaint for ILI, there has not been a corresponding increase in the discharge diagnosis for influenza, indicating ILI visits are likely due to respiratory illness other than influenza. Influenza activity is expected to increase over the coming weeks as we head into the fall months.
- In weeks 33-34, two outbreaks were reported: one outbreak of ILI and one outbreak of rhinovirus/enterovirus; 168 outbreaks have been reported since the start of the 2016-17 influenza season.
- In week 33, the preliminary estimated number of deaths due to pneumonia and influenza decreased and was slightly below levels observed in previous seasons at this time.
- **In weeks 33-34, no influenza-associated pediatric deaths were reported.** Ten influenza-associated pediatric deaths have been reported since the start of the 2016-17 influenza season. **Annual vaccination remains the best way to protect children against influenza.**
- In weeks 33-34, seven (13.0%) of the 54 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: four influenza A (H3) and three influenza A (not yet subtyped).

National influenza activity:

- Influenza viruses continue to circulate at low levels nationally.
- The Centers for Disease Control and Prevention’s (CDC) Advisory Committee on Immunization Practices (ACIP) voted in favor of a recommendation that **the live attenuated influenza vaccine (LAIV) should not be used during the 2017-18 influenza season.** This recommendation follows concerns about lower effectiveness of the LAIV during the 2013-14 and 2015-16 influenza seasons against influenza A 2009 (H1N1) viruses. **ACIP continues to recommend annual influenza vaccination with either the inactivated influenza vaccine (IIV) or recombinant influenza vaccine (RIV) for everyone aged six months and older.**
- **CDC has identified an antigenically drifted influenza B Victoria lineage strain circulating nationally and in Florida that is different from the strain of influenza B Victoria lineage contained in the 2017-18 influenza vaccination formulations.** This drifted strain is also different from the strain of influenza B Victoria lineage included in the 2016-17 influenza vaccination formulations.
- In recent weeks, three human infections with novel influenza A viruses were reported in North Dakota (one case), Ohio (one case), and Pennsylvania (one case). Specimens collected from two individuals were positive for influenza A (H3N2v) viruses. A specimen collected from the third individual was positive for influenza A (H3v) virus. All three individuals reported exposure to swine in fair settings in the week before symptom onset. **No person-to-person transmission was identified.**
- In the spring of 2017, avian influenza A (H7N9) was identified in **chickens** in Tennessee, Alabama, and Kentucky; avian influenza A (H7) was identified in **chickens** in Georgia; and avian influenza A (H5N2) was identified in **turkeys** in Wisconsin. **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/novellflu.

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=303) from week 40, 2013 through week 34, 2017.

The percent of ILI visits to ESSENCE-FL participating facilities increased slightly in recent weeks and was slightly above levels observed in previous seasons at this time. Based on further analysis this increase is likely due to respiratory viruses other than influenza.

— 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 August 30, 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

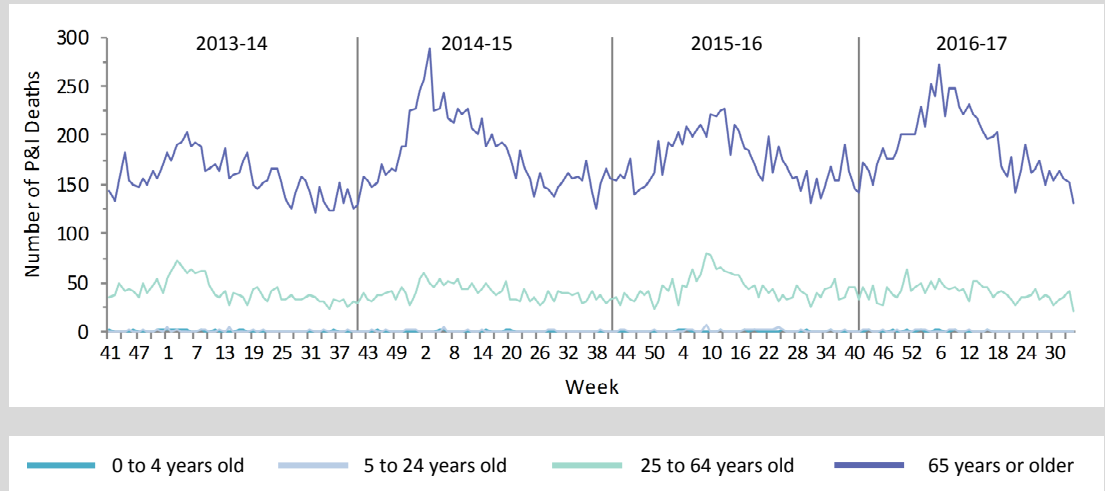
P&I = pneumonia and influenza

The figure below shows the number of preliminary P&I deaths by age group from week 40, 2013 through week 33, 2017, as reported into ESSENCE-FL. *Vital statistics death records data are currently considered to be complete through week 33, 2017.*

The number of P&I deaths reported in week 33 was similar to or below levels seen in previous seasons at this time in all age groups.

159 preliminary estimated P&I deaths were reported for week 33, 2017.

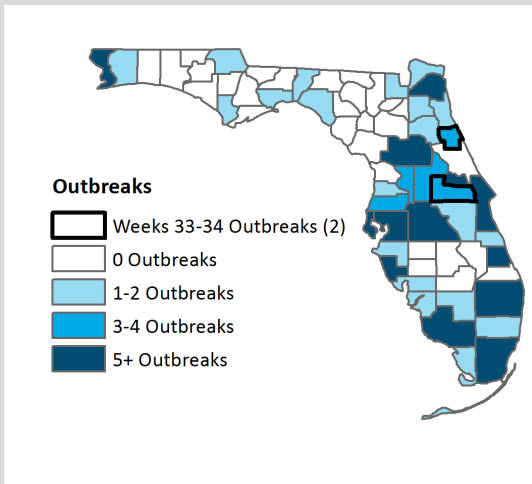
Based on a multi-year regression model to predict P&I death counts in the Florida population, no excess deaths were reported for week 33, 2017. The upper bound of the 95% confidence interval for prediction is 210 deaths.



Influenza and ILI Outbreaks

ILI = influenza-like illness

Influenza and ILI Outbreaks by County Week 40, 2016 through Week 34, 2017



The map to the left shows influenza and ILI outbreaks by county from week 40, 2016 (beginning on October 4, 2016) through week 34, 2017 (ending on August 26, 2017). Two outbreaks were reported in weeks 33-34: **one outbreak of rhinovirus/enterovirus and one outbreak of ILI**. As of week 34, 168 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.

Orange County:

- **A long-term care facility** reported 23 individuals with ILI. Seven specimens were collected for testing at BPHL. Of those, two specimens tested positive for rhinovirus/enterovirus by PCR. Infection control measures were reviewed with facility leadership. This investigation is ongoing.

Flagler County:

- **A group of individuals attending a birthday party reported** eight individuals with ILI. One specimen was collected for testing at BPHL. Results are pending. At least one individual was vaccinated for the 2016-17 influenza season. Infection control measures were reviewed with the individuals involved. This investigation is ongoing.

RSV and Other Respiratory Virus Surveillance

RSV = respiratory syncytial virus

RSV activity:

- In weeks 33-34, the percent of children <5 years old diagnosed with RSV at EDs and UCCs increased and was above levels observed in previous seasons at this time.
- The percent of specimens testing positive for RSV increased and was above levels observed in previous seasons at this time.
- To learn more about RSV in Florida, please visit: <http://www.floridahealth.gov/rsv>.

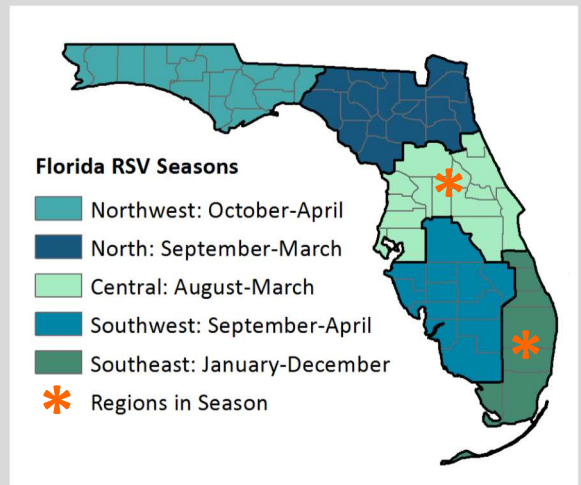
RSV seasonality:

- RSV activity in Florida typically peaks between November and 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. **As of August 1, the southeast and central regions are considered to be in RSV 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:

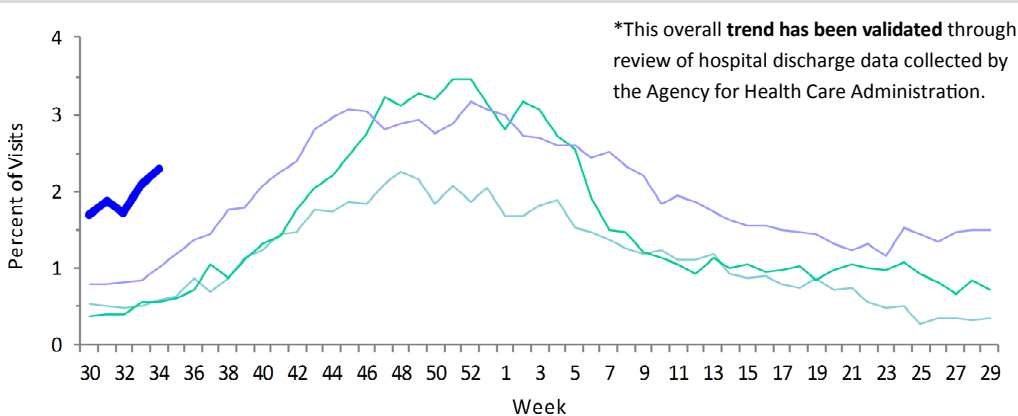
- The percent of specimens testing positive for parainfluenza 1-3 increased slightly and was similar to levels observed in previous seasons at this time.
- The percent of specimens testing positive for adenovirus increased slightly, but was below levels observed in previous seasons at this time.

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=303), week 30, 2014 to week 34, 2017.

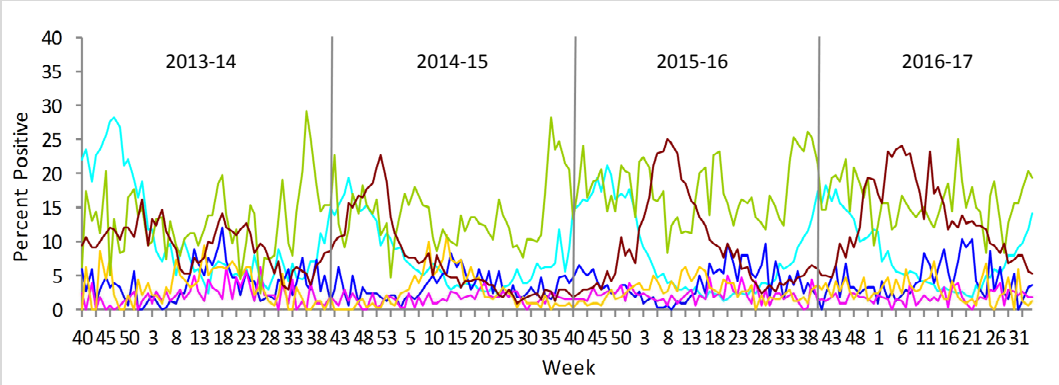
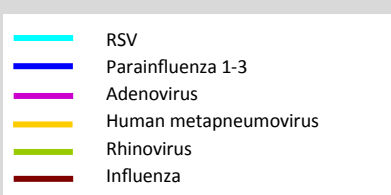
In week 34, the percent of children diagnosed with RSV at participating EDs and UCCs increased. Levels remained above those observed in previous seasons at this time.

— 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=15), week 40, 2013 to week 34, 2017.

In week 34, the percent of specimens testing positive for rhinovirus decreased, but remained higher than other respiratory viruses under surveillance.



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=303) 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.

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

- 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.