



Summary

Weeks 31-32: July 30-August 12, 2017

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

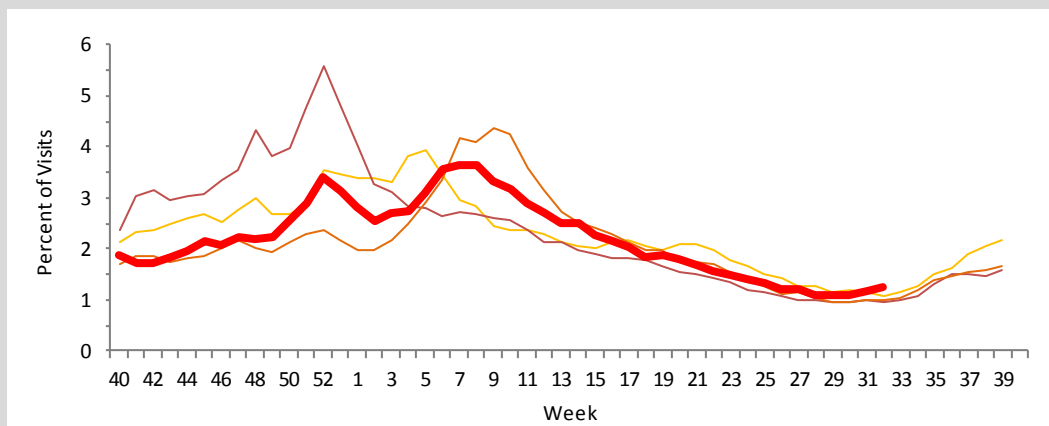
- Influenza and ILI activity in Florida remained low, which is typical for this time of year. Influenza activity is expected to increase over the coming weeks as we head into the fall months.
- In weeks 31-32, three outbreaks were reported, two outbreaks of influenza B and one outbreak of influenza A; 166 outbreaks have been reported since the start of the 2016-17 influenza season.
- In week 31, the preliminary estimated number of deaths due to pneumonia and influenza decreased and was similar to levels observed in previous seasons at this time.
- **In weeks 31-32, 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 31-32, 25 (39.1%) of the 64 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: 21 influenza A (H3), two influenza B Yamagata lineage, one influenza A 2009 (H1N1), and one influenza B Victoria lineage.

National influenza activity:

- Influenza viruses continue to circulate at low levels nationally.
- **The Centers for Disease Control and Prevention (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 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 identified in **chickens** in Georgia; and avian influenza A (H5N2) was identified in **turkeys** in Wisconsin.

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 32, 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.

— 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 16, 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

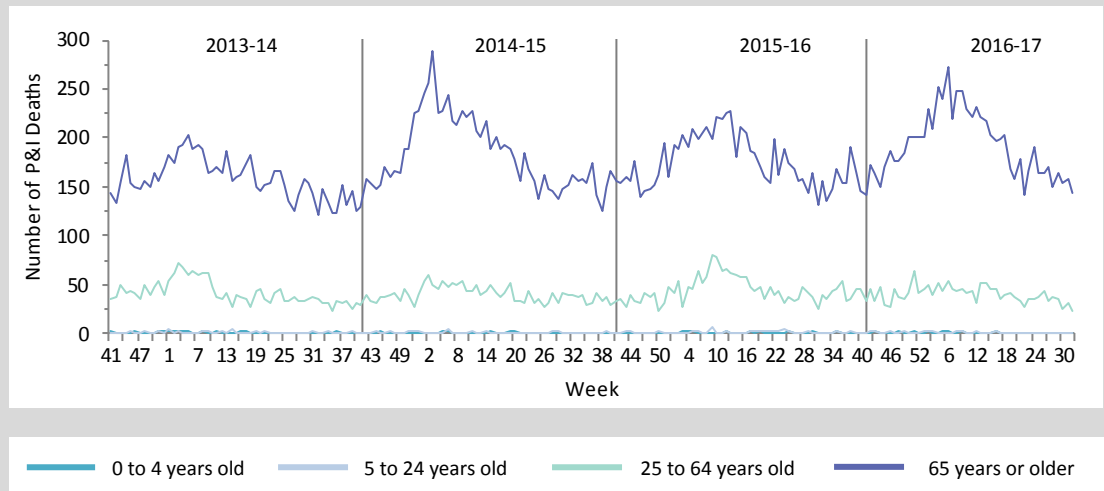
P&I = pneumonia and influenza

The figure below shows the number of preliminary P&I deaths by age group from week 40, 2013 through week 31, 2017, as reported into ESSENCE-FL. *Vital statistics death records data are currently considered to be complete through week 31, 2017.*

The number of P&I deaths reported in week 31 was similar to or below levels seen in previous seasons at this time in all age groups.

173 preliminary estimated P&I deaths were reported for week 31, 2017.

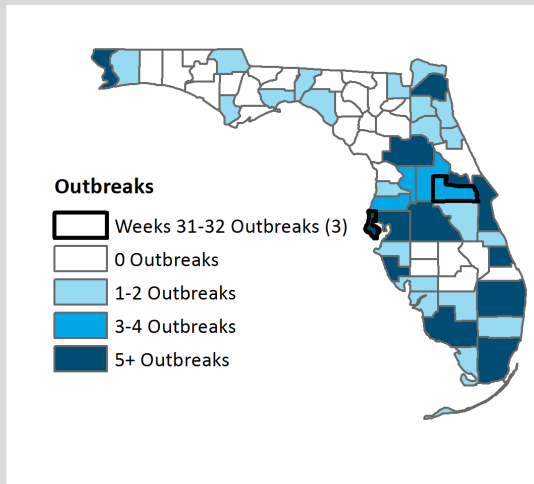
Based on a multi-year regression model to predict P&I death counts in the Florida population, no excess deaths were reported for week 31, 2017. The upper bound of the 95% confidence interval for prediction is 203 deaths.



Influenza and ILI Outbreaks

ILI = influenza-like illness

Influenza and ILI Outbreaks by County Week 40, 2016 through Week 32, 2017



The map to the left shows influenza and ILI outbreaks by county from week 40, 2016 (beginning on October 4, 2016) through week 32, 2017 (ending on August 12, 2017). Three outbreaks were reported in weeks 31-32: **two outbreaks of influenza B and one outbreak of influenza A.** As of week 32, 166 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:

- **An assisted living facility** reported two residents with ILI. At least one resident 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. 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.

- **A skilled nursing facility** reported 12 residents and one staff member with ILI. At least one individual was hospitalized. Specimens collected from 12 individuals tested positive for influenza B (test type unknown) at a commercial laboratory. No specimens have been available for testing at BPHL thus far. 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.

Orange County:

- **A correctional facility** reported 10 individuals with ILI. One individual tested positive for influenza B by rapid antigen testing at a local health care provider. That specimen was forward to BPHL for additional PCR testing. Vaccination status for the 2016-17 influenza season for all inmates 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 weeks 31-32, 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 increased and was above levels observed in the 2014-15 season at this time.
- To learn more about RSV in Florida, please visit: <http://www.floridahealth.gov/rsv>.

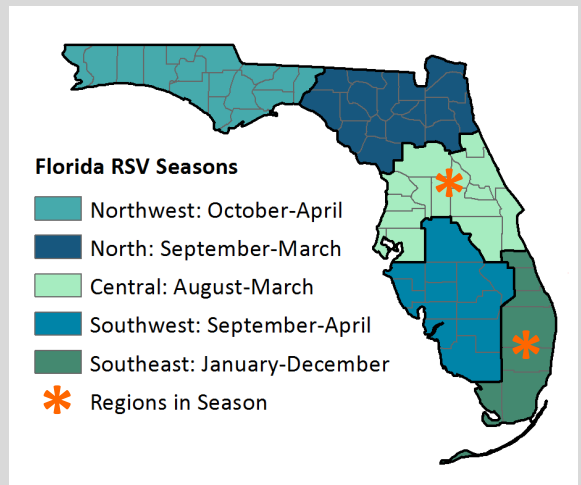
RSV seasonality:

- 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:

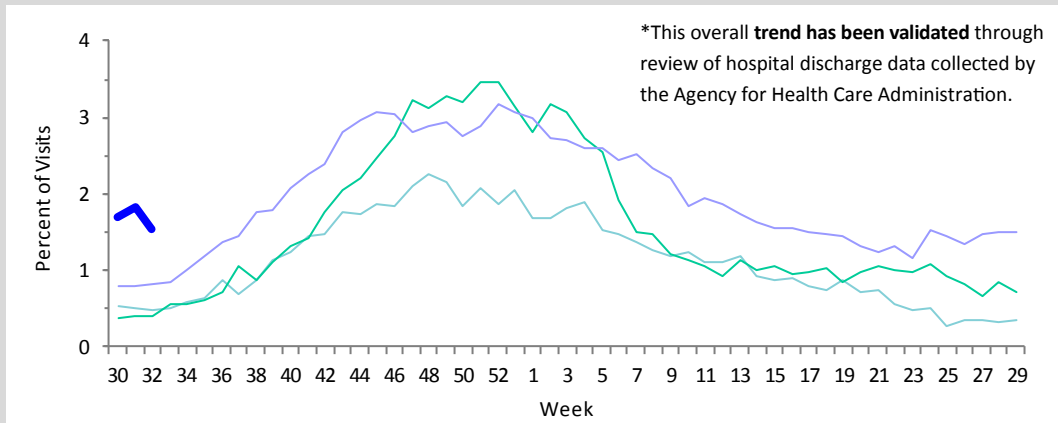
- The percent of specimens testing positive for parainfluenza 1-3 increased and but was below levels observed in previous seasons at this time.
- The percent of specimens testing positive for adenovirus increased and was above levels observed in previous seasons at this time.

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 32, 2017.

In week 32, the percent of children diagnosed with RSV at participating EDs and UCCs decreased. Levels remained above those observed in previous seasons at this time.

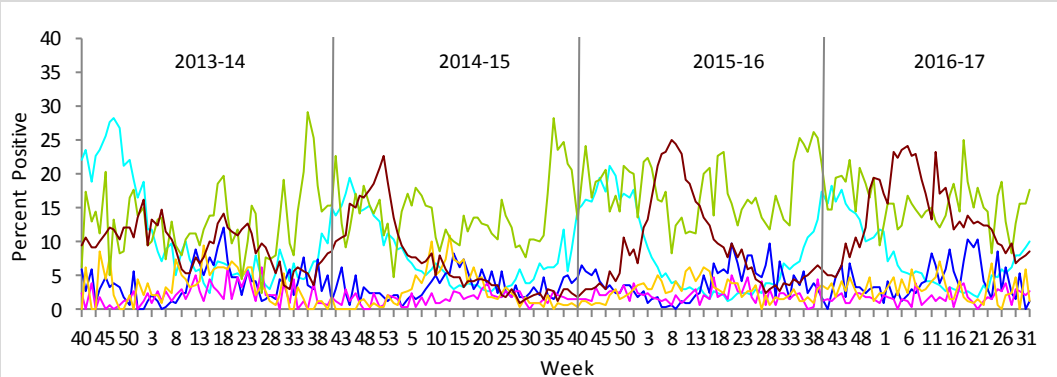
■ 2017-18 ■ 2015-16
■ 2016-17 ■ 2014-15

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=15), week 40, 2013 to week 32, 2017.

In week 32, the percent of specimens testing positive for rhinovirus increased and 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=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.