

Non-Reportable Diseases and Conditions

Section 5



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Acute Flaccid Myelitis



Since 2014, cases have only been observed in even-numbered years.



92% of cases were <19 years old.



There is currently no known cause of acute flaccid myelitis.

Background

Acute flaccid myelitis (AFM) is a syndrome characterized by rapid onset of flaccid weakness in one or more limbs and distinct abnormalities of the spinal cord gray matter on magnetic resonance imaging. AFM is a subtype of acute flaccid paralysis, which includes paralytic poliomyelitis, acute transverse myelitis, Guillain-Barré syndrome and muscle disorders. Among the AFM cases classified at the national level by the Centers for Disease Control and Prevention (CDC) between 2014–2018, the majority (>90%) had a mild respiratory illness or fever before the onset of limb weakness.

Surveillance

Florida has conducted enhanced surveillance for AFM since 2014 when an increase in cases was noted. Surveillance was established in 2015 to monitor this syndrome after the Council of State and Territorial Epidemiologists adopted a standardized case definition.

Hospitals report potential AFM persons under investigation (PUIs) to their county health departments, who in turn notify the state health department. Medical records are reviewed at the state health department by a physician and forwarded to the CDC for classification if there is no alternate diagnosis and if disease presentation is consistent with AFM. Due to the complexity of the syndrome, AFM PUIs are reviewed and classified by an expert panel of neurologists at the CDC.

Laboratory Testing

When specimens are available, enterovirus testing is performed for AFM PUIs at the Department of Health’s Bureau of Public Health Laboratories and the CDC. Of the 13 AFM cases from 2014–2018, enterovirus testing was completed on 11. Of the 11 cases, 3 were positive for enteroviruses. Two were positive for enterovirus D68 in 2016, and one for enterovirus A71 in 2018. Although AFM PUI specimens are tested for enteroviruses, to date there are no confirmed causal links between enteroviruses and AFM.

Person under investigation (PUI): an individual whose case has been submitted to the CDC for classification.

Case: CDC classifies cases as confirmed or probable.

Summary	2014–2018
Number of cases	13
5-year trend	— ■ ■
Case Classification	
Confirmed	11
Probable*	2
Sex	
Male	7
Female	5
Unknown	1
Race	
White	7
Black	3
Unknown	3
Ethnicity	
Non-Hispanic	7
Hispanic	1
Unknown	5

*Probable case classification first implemented in 2017

For more information on AFM, visit the CDC’s AFM webpage at cdc.gov/acute-flaccid-myelitis/index.html. For national case data, visit cdc.gov/acute-flaccid-myelitis/cases-in-us.html.

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Influenza and Influenza-Like Illness

Background





Influenza causes an estimated 9.3–49 million illnesses annually in the U.S., with 140,000–960,000 of those resulting in hospitalization and 12,000–79,000 resulting in death. The best way to prevent influenza infection, and its potentially severe complications, is to get vaccinated each year.

Influenza A and B viruses routinely spread among the human population and are responsible for seasonal influenza epidemics each year. Influenza A viruses are more commonly associated with the ability to cause epidemics or pandemics than influenza B viruses. Over the course of an influenza season, several different influenza A and B viruses will circulate and cause illness, but there is typically a predominant strain, which varies by season.

Influenza activity in Florida and nationally can vary widely from season to season, underscoring the importance of robust influenza surveillance. The Department conducts regular surveillance of influenza and influenza-like illness (ILI) using a variety of surveillance systems, including laboratory-based surveillance and syndromic surveillance. Florida's syndromic surveillance system, ESSENCE-FL, collects chief complaint data from emergency departments and urgent care centers. During the 2018–19 influenza season, 354 facilities submitted data to ESSENCE-FL, accounting for 99% of all emergency department visits in Florida. Individual cases of influenza are not reportable in Florida, except for novel influenza (new subtypes of influenza) and influenza-associated pediatric deaths. All outbreaks, including those due to influenza or ILI, are reportable in Florida. The Department produces a weekly report during influenza season (October through May) and a biweekly report during the other months. These reports summarize influenza and ILI surveillance information and are available at FloridaHealth.gov/FloridaFlu.




In recent seasons, influenza A (H3) or influenza A 2009 (H1N1) has predominated in Florida. The 2018–19 season is the first in recent years with nearly equal circulation of influenza A (H3) and influenza A 2009 (H1N1). Seasons where influenza A (H3) predominates are typically associated with increased morbidity and mortality, particularly in adults ≥ 65 years old and children ≤ 4 years old. Seasons where influenza A 2009 (H1N1) predominates have been associated with increased morbidity and mortality in young adults.

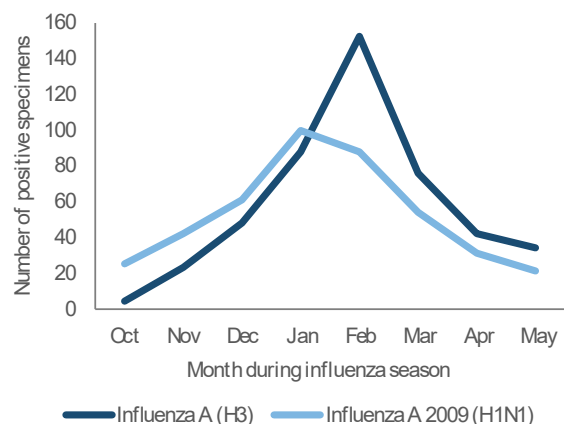
Disease Facts

-  **Caused** by influenza viruses
-  **Illness** is respiratory, including fever, cough, sore throat, runny or stuffy nose, muscle/body aches, headache, fatigue
-  **Transmitted** person-to-person by direct contact with respiratory droplets from nose or throat of infected person
-  **Under surveillance** to detect changes in influenza virus to inform vaccine composition, identify unusually severe presentations of influenza, detect outbreaks and determine the onset, peak and wane of the influenza season to assist with influenza prevention

Two notable waves in influenza activity were observed in Florida during the 2018–19 season: influenza A 2009 (H1N1) circulated from October to late January and influenza A (H3) circulated from February through May. Limited circulation of influenza B viruses was observed at the beginning and end of the season, with influenza B Yamagata lineage viruses circulating in October and influenza B Victoria lineage viruses in May. Overall, there was less influenza B activity observed during the 2018–19 season compared to recent seasons.

2010–11 Season	2011–12 Season	2012–13 Season
2013–14 Season	2014–15 Season	2015–16 Season
2016–17 Season	2017–18 Season	2018–19 Season

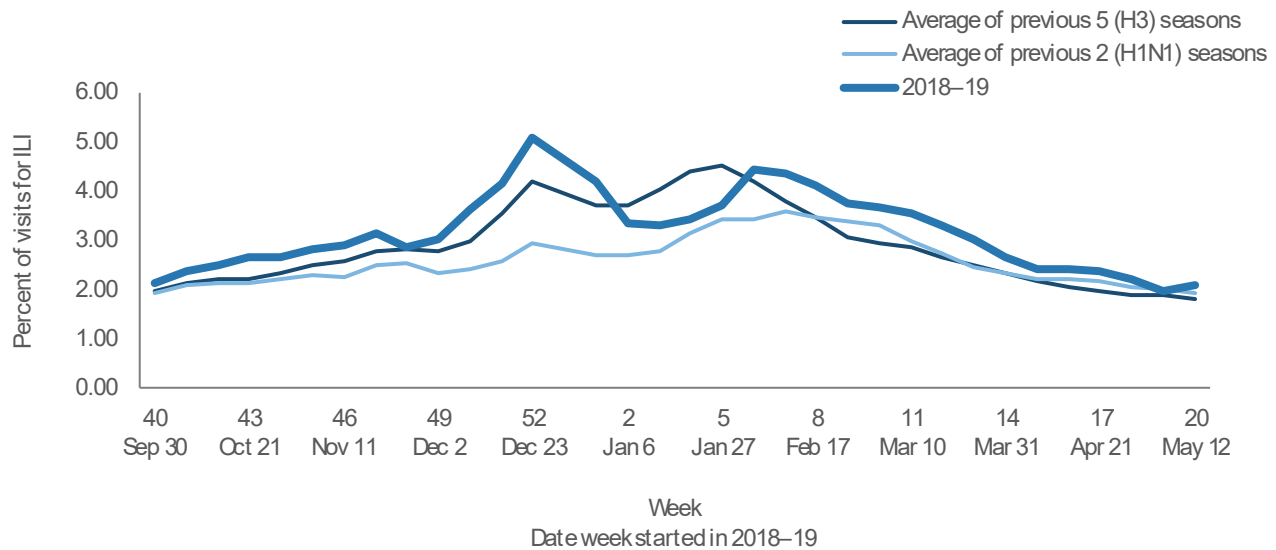
-  Influenza A (H3)
-  Influenza A 2009 (H1N1)
-  Influenza A (H3) & Influenza A 2009



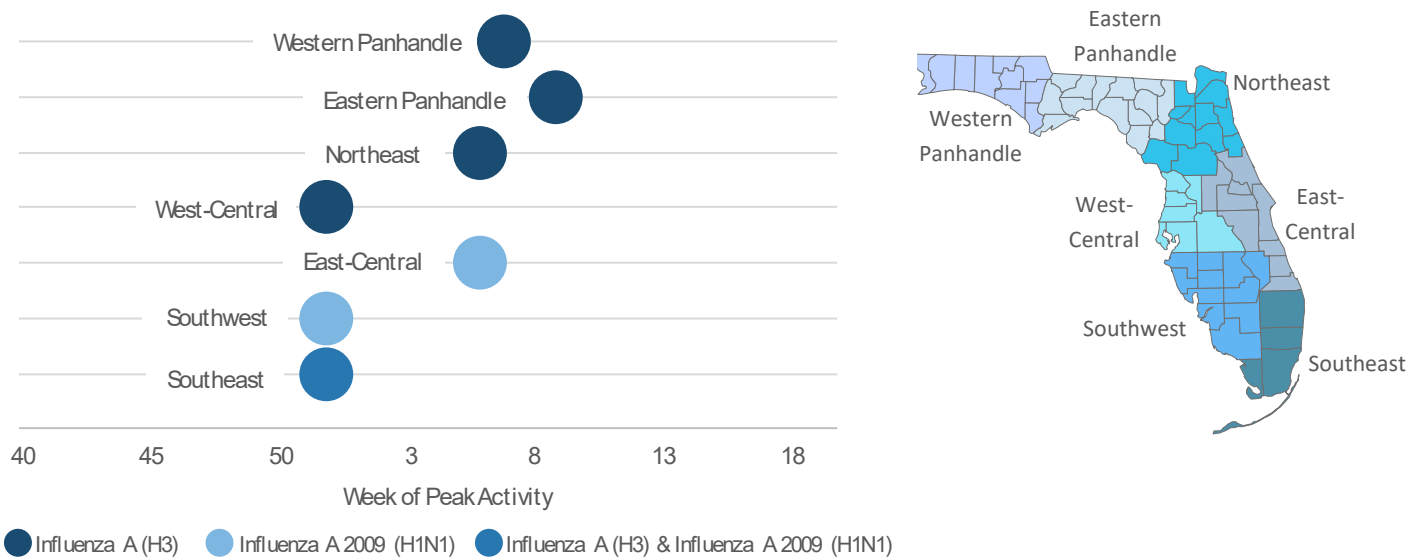
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While a predominant strain is typically identified during most influenza seasons, nearly equal circulation of influenza A (H3) viruses and influenza A 2009 (H1N1) viruses was observed both nationally and in Florida. In Florida, a slightly higher proportion of influenza A viruses were subtyped as influenza A (H3) (52.3% compared to 47.7% subtyped as influenza A 2009 [H1N1]). At the national level, a slightly higher proportion of influenza A viruses were subtyped as influenza A 2009 (H1N1) (56.6% compared to 43.6% influenza A [H3]).

Peak activity occurred as early as week 52 (beginning December 23, 2018) in Florida’s west-central and southeast regions and as late as week 9 (beginning February 24, 2019) in the eastern Panhandle region. Varying regional activity patterns heavily impacted the statewide trend.



Differences within Florida’s seven surveillance regions were observed. Influenza A (H3) viruses predominated in four regions, influenza A 2009 (H1N1) viruses predominated in two regions, and an even split in influenza A (H3) and influenza A 2009 (H1N1) circulation was observed in the remaining region. In general, mixed circulation was observed statewide, with slightly more influenza A (H3) observed in Florida’s northern regions. The regional differences in predominantly circulating strain may also be reflective of the timing of peak activity in each of these regions.

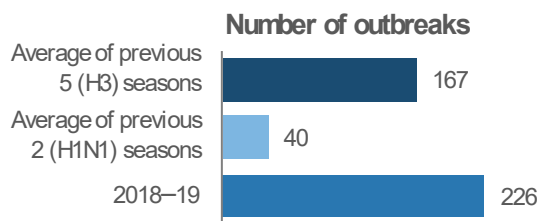


The influenza reporting year is defined by standard weeks outlined by the CDC, where every year has 52 or 53 weeks; there were 52 weeks in the 2018-19 season.

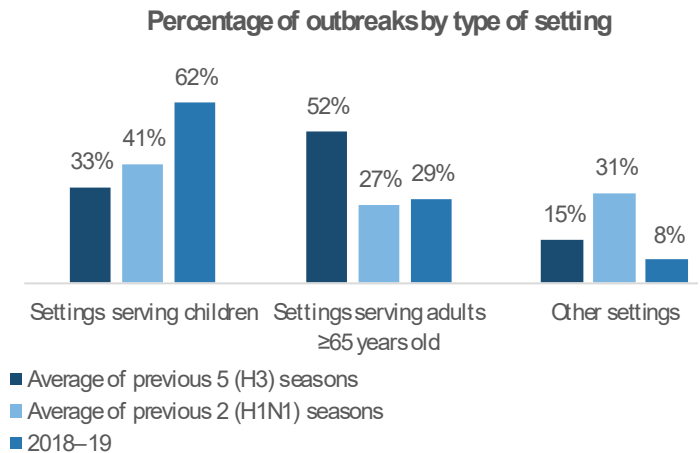
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Outbreaks

More outbreaks were reported during the 2018–19 season (226) compared to the average number reported in previous H1N1 or H3 seasons. The previous two H1N1 seasons averaged 40 outbreaks, and the previous five H3 seasons averaged 167 outbreaks. The number of outbreaks reported and the types of outbreak settings vary each season and often serve as indicators of disease severity and population affected. During the 2018–19 season, the majority of outbreaks (92%) were reported in facilities serving people at higher risk for complications from influenza infection (children and adults ≥65 years old), which is consistent with past seasons (both those dominated by influenza A 2009 [H1N1] and those dominated by influenza A [H3]). Settings that serve these groups include child daycares, school/camps, assisted living facilities, nursing facilities and other long-term care facilities.



The largest proportion of the 226 influenza or ILI outbreaks reported during the 2018–19 season occurred in facilities serving children (62%). This is consistent with previous seasons that were dominated by influenza A 2009 (H1N1), where most outbreaks were also reported in facilities serving children. In contrast, a higher proportion of outbreaks were reported in facilities serving adults ≥65 years old in past influenza A (H3)-dominant seasons. A total of 17 other non-influenza respiratory disease outbreaks were also reported during the 2018–19 season.



Influenza-Associated Intensive Care Unit Admissions

In response to sharp increases in influenza activity in February 2018 during the 2017–18 influenza season, the Department requested that hospitals report all influenza-associated intensive care unit (ICU) admissions in Florida residents aged <65 years to identify unusually severe presentations of influenza. This enhanced surveillance was continued during the 2018–19 influenza season on an optional basis for county health departments. A total of 34 (51%) counties reported influenza-associated ICU admissions during the 2018–19 season.

- 297 influenza-associated ICU admissions were reported.
- Almost half (41%) of people admitted were ≤45 years old.
- Most (86%) people admitted had underlying medical conditions.
- Most (73%) people admitted had not received current influenza vaccine (of the 135 people with known vaccination status).

Deaths

Influenza-associated deaths in children <18 years old are reportable in Florida. In past seasons, the number of deaths reported ranged from 2 to 11. Influenza-positive specimens collected from children who die frequently go untyped, and given the small number deaths each year, it is difficult to interpret how pediatric mortality might be affected by strain.

- Six deaths were reported in children during the 2018–19 season.
- Five had not received seasonal influenza vaccination and one was partially vaccinated.*
- Three of the six children had known underlying health conditions.

*The Advisory Committee on Immunization Practices (ACIP) recommends children aged 6 months to 8 years receive two doses of influenza vaccine administered a minimum of four weeks apart during their first season of vaccination for optimal protection. The Department refers to children in this age group who did not receive a second influenza vaccine as “partially vaccinated.” To learn more about the ACIP’s 2018–19 recommendations, please visit: cdc.gov/mmwr/volumes/67/rr/rr6703a1.htm.

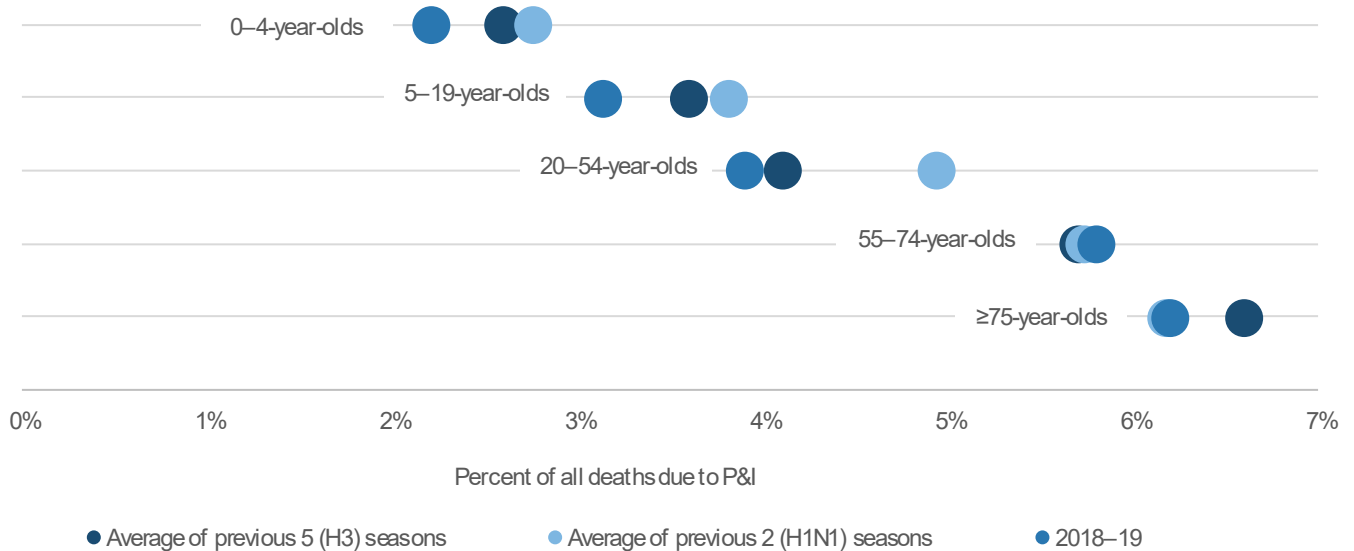
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Although not individually reportable, pneumonia and influenza (P&I) deaths in people of all ages are monitored by reviewing death certificate data. Estimating the number of deaths due to influenza is challenging because:

- Influenza is not frequently listed on the death certificates of persons who die from influenza-related complications.
- Many influenza-related deaths occur one to two weeks after a person's initial infection, often due to development of secondary bacterial infection (e.g., pneumonia) or because infection aggravated an existing chronic illness (e.g., congestive heart failure, chronic obstructive pulmonary disease).
- Many people who die from influenza are never tested.

For these reasons, influenza deaths are estimated using P&I deaths.

During the 2018–19 influenza season, deaths due to P&I were lower than previous seasons in children and young adults (≤19 years old). Compared to influenza (H1N1) seasons, (H3) seasons tend to have lower mortality in young and middle-aged adults (20–54 years old) and higher mortality in elderly adults (≥75 years old).



References:

Centers for Disease Control and Prevention. Disease Burden of Influenza. www.cdc.gov/flu/about/disease/burden.htm. Accessed September 3, 2019.

Xiyan X, Blanton L, Abd Elal AI, Alabi N, Barnes J, Biggerstaff M, et al. Update: Influenza activity in the United States during the 2018–19 season and composition of the 2019–20 influenza vaccine. *Morbidity and Mortality Weekly Report*. 2019; 68 (24):544-551. doi: 10.15585/mmwr.mm6824a3. Available at cdc.gov/mmwr/volumes/68/wr/mm6824a3.htm.

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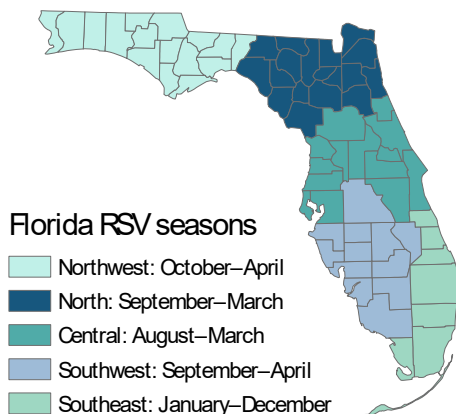
Respiratory Syncytial Virus

Background





Respiratory syncytial virus (RSV) is a common respiratory virus that primarily infects young children. Children <5 years old and older adults are at increased risk of hospitalization for complications due to RSV infection. An estimated 57,000 children in the U.S. will be hospitalized within their first five years of life due to RSV infection. RSV infection is the most common cause of bronchiolitis (inflammation of small airways in the lungs) and pneumonia in infants <1 year old.

In the U.S., RSV activity is most common during the fall, winter and spring months, though activity varies in timing and duration regionally. RSV activity in Florida typically peaks between November and January, with an overall decrease in activity during the summer months. Although summer months typically have less RSV activity overall, RSV season in southeast Florida is considered year-round based on laboratory data.

The Department established regular RSV seasons based on the first two consecutive weeks during which the average percentage of specimens that test positive for RSV at hospital laboratories is 10% or higher. Southeast Florida's season is year-round.



Disease Facts

-  **Caused** by respiratory syncytial virus
-  **Illness** is respiratory, including fever, cough and runny nose; can cause severe symptoms like wheezing or difficulty breathing, especially in children with underlying health conditions
-  **Transmitted** person-to-person by direct contact with respiratory droplets from nose or throat of infected person
-  **Under surveillance** to support clinical decision-making for prophylaxis of at-risk children

The determination of unique seasonal and geographic trends of RSV activity has important implications for prescribing patterns for initiating prophylaxis in children considered at high risk for complications due to RSV infection. The 2018 American Academy of Pediatrics Red Book recommends that preapproval for prophylactic treatment for these children be made based on state surveillance data. This recommendation, in conjunction with Florida's unique RSV seasons, led to the implementation of statewide surveillance for RSV to support clinical decision-making for prophylaxis of at-risk children. Palivizumab is an antibody used as prophylaxis to reduce the risk of RSV infection, but it is not a treatment for current infection. Palivizumab is administered in five monthly doses and provides protection for six months, beginning at the time of the first administered dose. The timing of RSV season in Florida influences the timing of palivizumab administration and the pre-approval of prophylactic treatment, underscoring the importance of RSV surveillance in Florida.

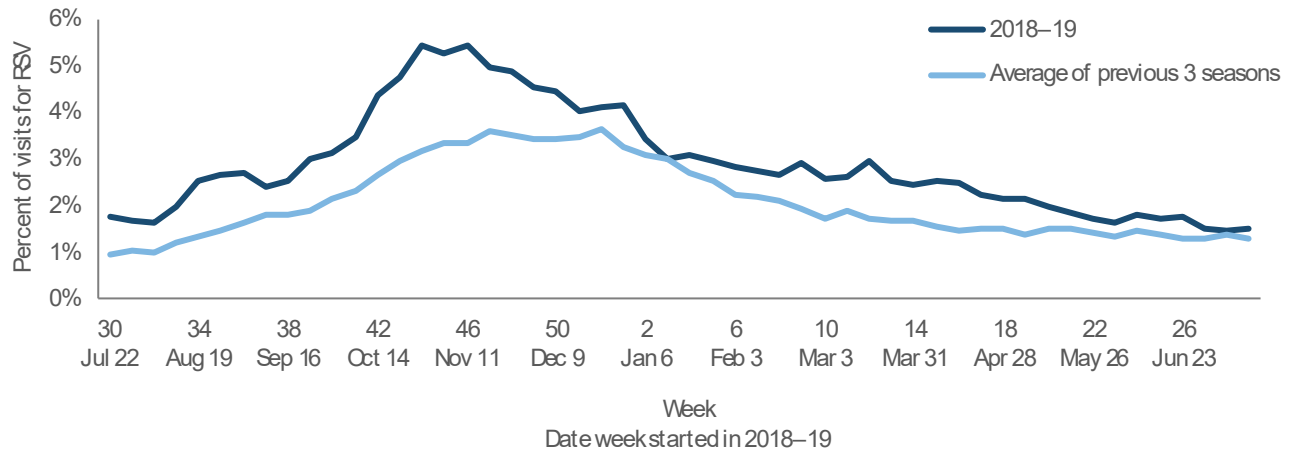
Florida's syndromic surveillance system, ESSENCE-FL, collects chief complaint and discharge diagnosis data from nearly all of Florida's emergency departments (EDs) and some urgent care centers (UCCs). These data are used to monitor trends in visits to EDs and UCCs where RSV or RSV-associated illness are included in the discharge diagnosis. The National Respiratory and Enteric Virus Surveillance System (NREVSS) is a voluntary, laboratory-based surveillance system through which participating laboratories report RSV test results. Data from NREVSS and validated electronic laboratory reporting data are also used to monitor temporal patterns of RSV.

Florida produces a weekly RSV report as part of a larger respiratory disease surveillance report during the influenza season (October through May) and a biweekly report during the other months that summarizes RSV surveillance data. These reports are available at FloridaHealth.gov/RSV.

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General Trends

During the 2018–19 RSV season in Florida, the percentage of children <5 years old diagnosed with RSV at EDs and UCCs in ESSENCE-FL increased steadily starting in September, peaked in November, and remained elevated through March. Activity was higher during the 2018–19 season compared to an average of the previous three seasons for each week during the entire surveillance period.



Laboratory surveillance data for RSV (percentage of specimens testing positive for RSV) peaked in mid-October. Laboratory data include results for people of all ages, whereas the ED and UCC RSV diagnosis data are limited to children <5 years old. This likely accounts for the difference in patterns observed between these two data sources.



References:

American Academy of Pediatrics. Respiratory Syncytial Virus. In: Kimberlin DW, Brady MT, Jackson MA, Long SS, eds. Red Book: 2018 Report of the Committee on Infectious Diseases. 31st ed. Itasca, IL: American Academy of Pediatrics; 2018:682-692

Centers for Disease Control and Prevention. RSV in Infants and Young Children. www.cdc.gov/rsv/high-risk/infants-young-children.html. Accessed September 4, 2019.

The RSV year is defined by standard reporting weeks as outlined by the Centers for Disease Control and Prevention, where every season has either 52 or 53 weeks; there were 52 weeks in 2018. In Florida, surveillance for RSV is conducted year-round, beginning in week 30 (July 22, 2018) and ending in week 29 of the following year (July 20, 2019).