

# Vaccine-Preventable Disease Surveillance Report

December 2021



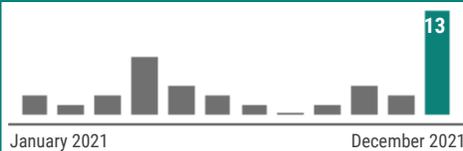
The COVID-19 pandemic is affecting health care seeking behavior, which may be impacting the diagnosis and reporting of hepatitis A, pertussis, and varicella cases that are shown in this report. For more information on the COVID-19 pandemic in Florida, please visit [FloridaHealthCOVID-19.gov](https://www.floridahealth.gov/covid-19).

## Hepatitis A



- **Hepatitis A activity increased from last month** and was below the previous 5-year average.
- 27 cases were reported in December.
- Incidence remained highest among adults 30-39 years old.
- 89% of cases were not up-to-date on hepatitis A vaccinations or had unknown vaccination status.

## Pertussis



- **Pertussis activity increased from last month** and was below the previous 5-year average.
- 13 cases were reported in December.
- Compared to July 2019 - December 2019, there was an 88% decrease in reported cases in the past 6 months.
- In the past 6 months, the average incidence rate for <1 year old was 19 times lower compared to July 2019 - December 2019.

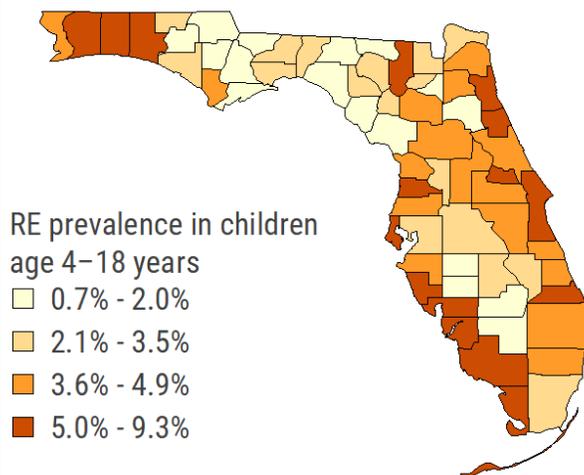
## Varicella



- **Varicella activity increased from last month** and was below the previous 5-year average.
- 51 cases were reported in December.
- Incidence was highest among infants <1 year old.
- 63% of cases were not up-to-date on varicella vaccinations or had unknown vaccination status.



For all vaccine-preventable diseases, timely and complete vaccination is the best way to prevent infection. Although vaccinated individuals can still become infected with diseases like pertussis or varicella, in general, those who have received at least 1 dose of vaccine have less severe outcomes than those who have never been vaccinated for the disease.



**Unvaccinated children are at increased risk of vaccine-preventable diseases like mumps, pertussis, and varicella. Communities with a higher proportion of religious exemptions (REs) to vaccination are at increased risk of vaccine-preventable disease transmission.**

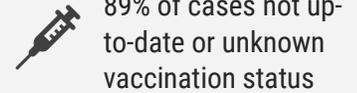
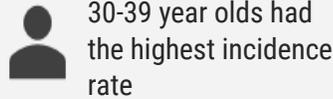
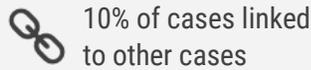
**The proportion of children age 4-18 years with new REs are increasing each month.** Statewide, the estimated prevalence of REs among children age 4-18 years old is 4.3% with **individual counties ranging from 0.7-9.3%**. In December 2020, the statewide prevalence was 3.7% and the prevalence has gradually increased each month since.

To learn more about REs at the local level, please visit [FloridaHealth.gov/REmap](https://www.floridahealth.gov/REmap)

All REs are required to be entered into Florida SHOTS (State Health Online Tracking System), Florida's statewide immunization registry. The map above includes REs registered in Florida SHOTS through December 31, 2021.

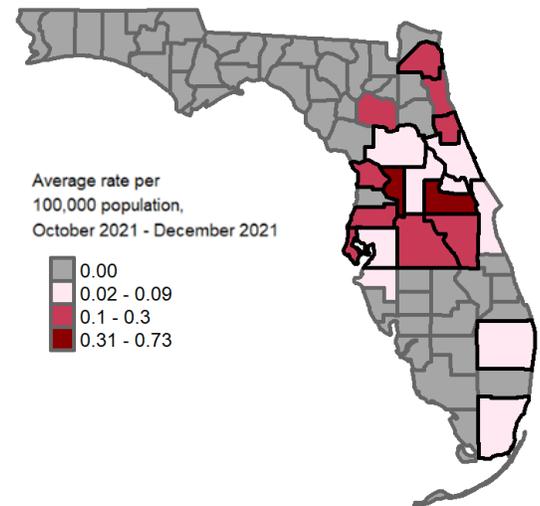
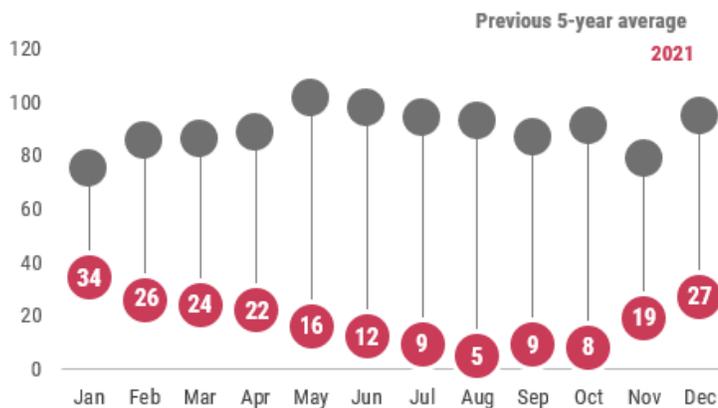
# Hepatitis A Surveillance

## December Key Points

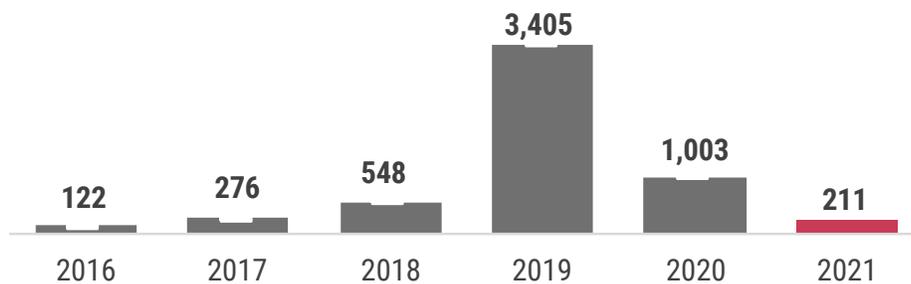


The number of reported hepatitis A cases in December increased from the previous month and was below the previous 5-year average. Since January 1, 2021, 95% of cases have likely been acquired in Florida.

In December 2021, 27 hepatitis A cases were reported in **16 counties**, outlined in black in the map below. From October 2021 through December 2021 the average county rates were highest in Central Florida.



In 2021, 211 hepatitis A cases were reported. There was a 94% decrease in overall cases when compared to cases as of December 2019 (n=3,405).



\*The white bars indicate the total number of cases as of December for each year



**89%**  
not vaccinated

**The best way to prevent hepatitis A infection is through vaccination.** In December 2021, 89% of infected people had not received the vaccine or had unknown vaccination status. Since 2006, hepatitis A vaccine has been recommended for all children at age 1 year. Hepatitis A vaccine is also recommended for certain adult high-risk groups, including persons using injection and non-injection drugs, persons experiencing homelessness, and men who have sex with men. To learn more about the hepatitis A vaccine, talk to your doctor or visit: [www.CDC.gov/Vaccines/HCP/VIS/VIS-Statements/Hep-A.html](http://www.CDC.gov/Vaccines/HCP/VIS/VIS-Statements/Hep-A.html).

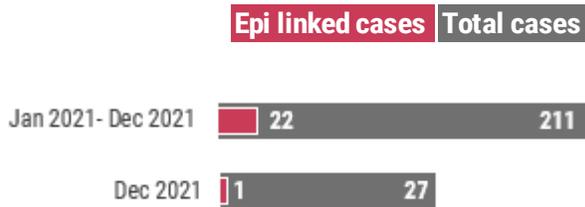
The COVID-19 pandemic is affecting health care seeking behavior, which may be impacting the diagnosis and reporting of hepatitis A cases that are shown in this report. For more information on the COVID-19 pandemic in Florida, please visit [FloridaHealthCOVID-19.gov](http://FloridaHealthCOVID-19.gov).



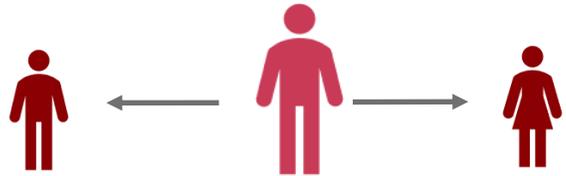
# Hepatitis A Surveillance



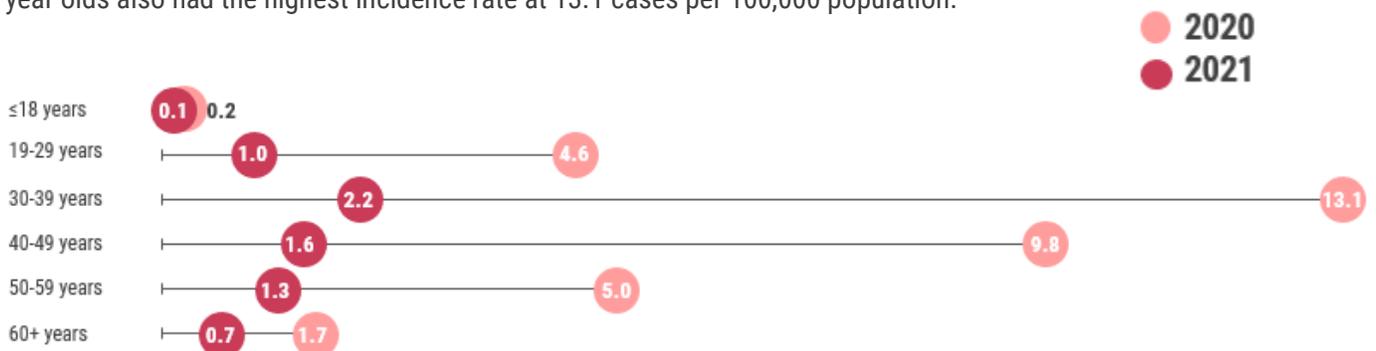
In December 2021, **1 case** was **epidemiologically (epi) linked to another case**. From January 2021 – December 2021, **22 cases** were epi-linked to other cases.



In December 2021, there was an **average of 2 contacts per case**. Contacts are those who were exposed to the virus and recommended prophylaxis for illness prevention.



In 2021, **30-39 year olds had the highest incidence rate at 2.2 cases per 100,000 population**. Similarly in 2020, 30-39 year olds also had the highest incidence rate at 13.1 cases per 100,000 population.



In December 2021, **4 cases were co-infected with chronic hepatitis C** and no cases were co-infected with chronic B. In 2021, the **most common coinfection was with chronic hepatitis C with 15%** of reported cases being coinfecting. Co-infection with more than one type of viral hepatitis can lead to more severe liver disease and increase the risk of **developing liver cancer**.



## National activity

Hepatitis A rates have decreased by more than 95% since the first vaccine became available in 1995. However, since outbreaks were first identified in 2016, the Centers for Disease Control and Prevention has been monitoring outbreaks in 37 states. As of December 2021, 14 states (including Florida) have declared an end to their outbreak. More information about these outbreaks can be found here: [www.cdc.gov/hepatitis/outbreaks/2017March-HepatitisA.htm](http://www.cdc.gov/hepatitis/outbreaks/2017March-HepatitisA.htm)

## Hepatitis A surveillance goals

- Identify cases to limit transmission
- Identify and prevent outbreaks
- Monitor effectiveness of immunization programs and vaccines

To learn more about hepatitis A, please visit [FloridaHealth.gov/HepA](http://FloridaHealth.gov/HepA). For more information on the data sources used in Florida for hepatitis A surveillance, see the last page of this report.

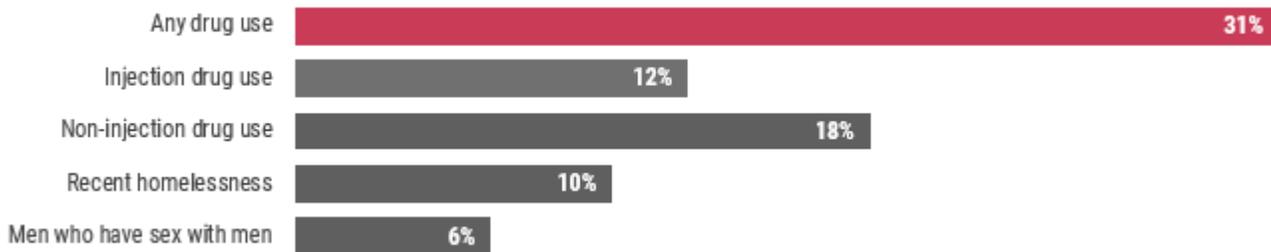
## Hepatitis A Surveillance

On August 31, 2021, Florida announced the end of the hepatitis A outbreak due to a decline in reported cases. During the previous 3 months, case numbers have returned to baseline incidence in Florida prior to the outbreak. Ongoing local transmission of hepatitis A was initially reported in 2017 and declared an outbreak on January 1, 2018 with a public health emergency issued by the State Surgeon General in August 2019. Hepatitis A activity will continue to be monitored.

**Vaccination is the best way to prevent hepatitis A infection. Health care providers are encouraged to actively offer the hepatitis A vaccine to individuals at risk.**

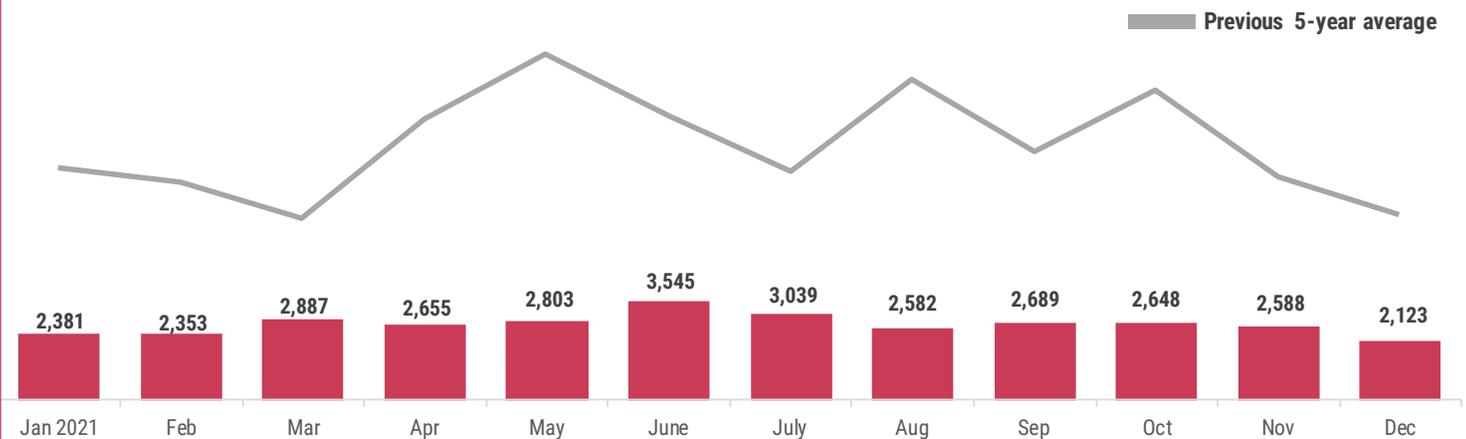
For additional information, please see: <http://www.cdc.gov/hepatitis/outbreaks/2017March-HepatitisA.htm>

 **In 2021, 42% of the 211 cases acquired in Florida reported at least one of the risk factors below, while 58% reported no or unknown risk factors.** The most commonly identified risk factor was **any drug use**, reported by **65 cases (31%)**. Both **non-injection drug use (18%)** and **injection drug use (12%)** were common forms of drug use reported, followed by **recent homelessness (10%)** and **men who have sex with men (6%)**.



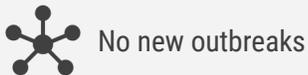
 Hepatitis A infections can be severe, leading to inpatient hospitalization and sometimes death. Since January 1, 2021, **101 (48%) cases** acquired in Florida have been hospitalized due to hepatitis A infection with **1 death** identified as hepatitis A associated.

 The Florida Department of Health is actively working to vaccinate those most at risk for hepatitis A infection. In December 2021, 2,123 doses were administered. **The number of first doses of hepatitis A vaccine administered by both private providers and county health departments to adults age 18 years and older, as recorded in Florida SHOTS, decreased and was below the previous 5-year-average.** This may be due to changes in vaccine administration during the COVID-19 pandemic. **Vaccination is the best way to prevent hepatitis A infection.**

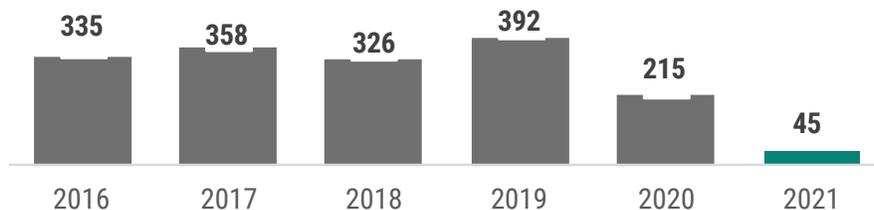


# Pertussis Surveillance

## December Key Points



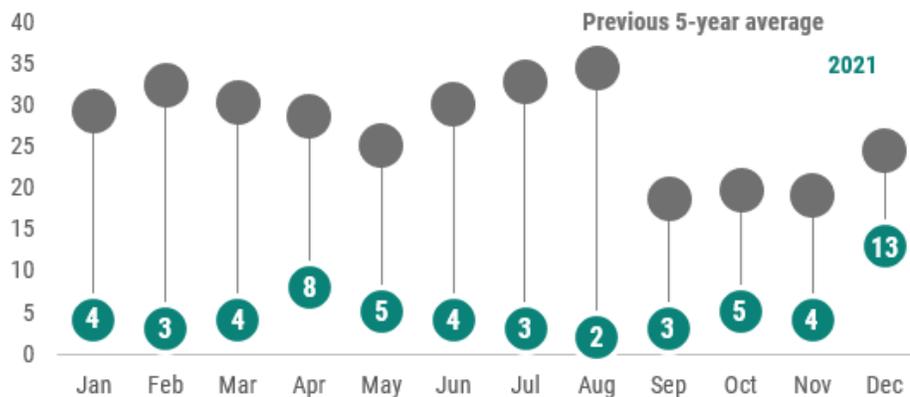
In 2021, 58 pertussis cases were reported in 23 counties. There was a 88% decrease in the number of pertussis cases reported between July 2021–December 2021 compared to July 2019–December 2019 (n=254 cases).



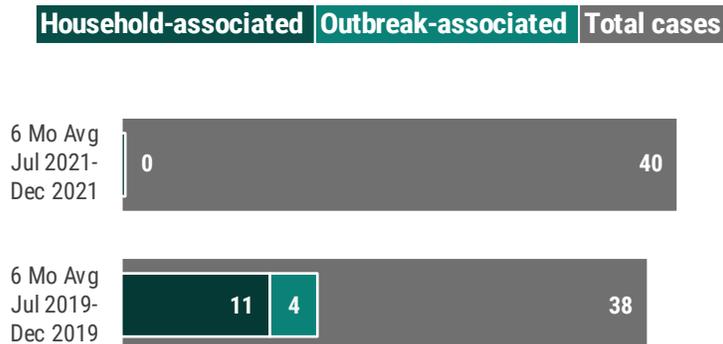
\*The white bars indicate the total number of cases as of December for each year



The number of pertussis cases reported in December increased from the previous month and was below the previous 5-year average. Elevated case counts in early 2020 may be due to a change in the case definition for pertussis; please see the last page for more information.



No outbreak-associated cases and 2 household-associated case have been identified in the past 6 months. For most pertussis cases, exposure to other known cases is not identified and are not able to be linked to outbreaks.



The COVID-19 pandemic is affecting health care seeking behavior, which may be impacting the diagnosis and reporting of pertussis cases that are shown in this report. For more information on the COVID-19 pandemic in Florida, please visit [FloridaHealthCOVID-19.gov](https://www.floridahealth.gov/covid-19).

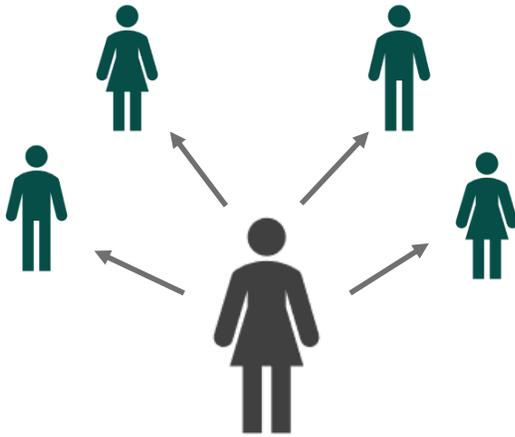


# Pertussis Surveillance

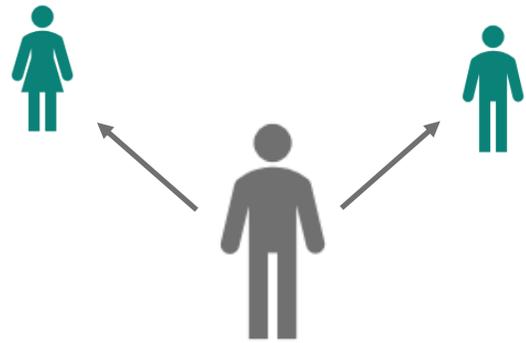


An average of **2 contacts** per case between July 2021 and December 2021 were reported compared to an average of **4 contacts** per case between July 2019 and December 2019. Contacts are classified as people whom antibiotics were recommended to prevent illness. Antibiotics can shorten the amount of time cases are contagious and can also be used to prevent illness in those exposed. Understanding pertussis transmission is a key factor in decreasing pertussis infections. In Florida, transmission setting is not routinely identified for non-outbreak cases, resulting in **76%** of cases reporting unknown setting in the past six months.

## July 2019 to December 2019



## July 2021 to December 2021



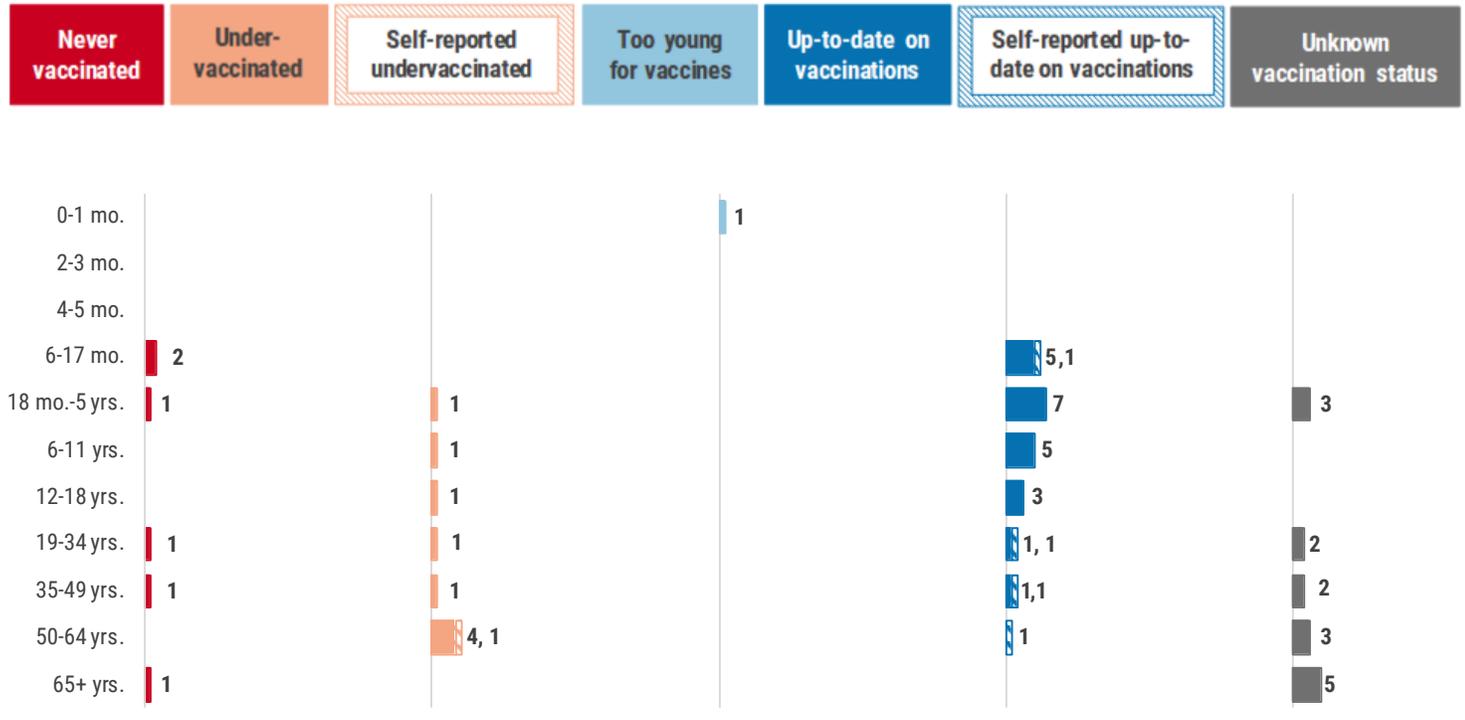
The average incidence rate was highest among **<1 year olds** at **0.2 cases** per 100,000 population between July 2021 and December 2021, which is **19 times lower** than the average incidence rate for <1 year olds between July 2019 and December 2019. Infants experience the greatest burden of pertussis infections, not only in number of cases but also in severity. Infants <2 months old are too young to receive vaccinations against pertussis, which is why vaccination of parents, siblings, grandparents, and other age groups is important in infection prevention among infants.



# Pertussis Surveillance



In 2021, over half of cases were not reported up-to-date on their pertussis vaccinations. **In general, those who have received at least one pertussis vaccination have less severe outcomes than those who have never been vaccinated.** If a person was born before December 1st, 1982, the current pertussis immunization recommendation would not have been implemented when they were receiving their childhood immunizations. Based on the case's age, **18 cases** would not have been vaccinated under the current childhood immunization recommendations.



## National activity

The number of pertussis cases gradually increased since the 1980s, peaking in 2012 at levels not seen since the 1950s. Since 2012, the number of pertussis cases started gradually decreasing. Pertussis incidence has remained highest among infants <1 year old and lowest among adults ≥20 years old since the 1990s.

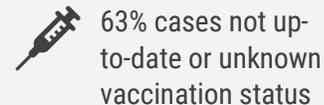
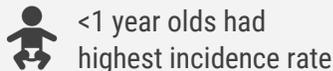
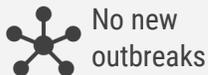
## Pertussis surveillance goals

- Identify cases to limit transmission in settings with infants or others who may transmit pertussis to infants
- Identify and prevent outbreaks
- Identify transmission settings in non-outbreak cases to prevent the spread of sporadic cases
- Identify contacts of cases and recommend appropriate prevention measures, including exclusion, antibiotic prophylaxis, and immunization
- Monitor the effectiveness of immunization programs and vaccines

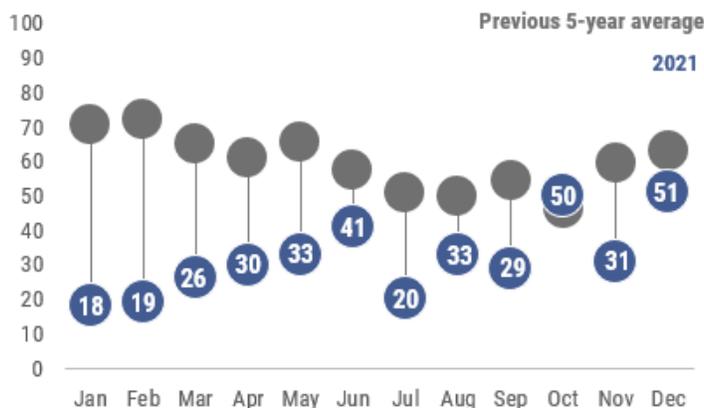
To learn more about pertussis, please visit [FloridaHealth.gov/Pertussis](https://www.floridahealth.gov/Pertussis). For more information on the data sources used in Florida

# Varicella Surveillance

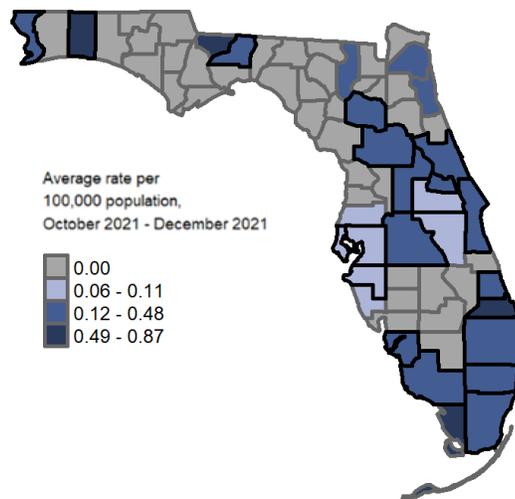
## December Key Points



The number of varicella cases reported in December 2021 increased from the previous month and was below the previous 5-year average. Due to robust vaccination programs, there is no longer discernable seasonality for varicella cases in the United States.

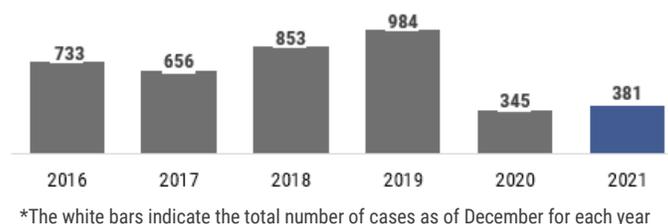


In December 2021, 51 varicella cases were reported in 21 counties, outlined in black in the map below. From October 2021 through December 2021 the average county rates varied throughout the state.



In 2021, 381 varicella cases were reported in 38 counties.

The annual number of reported varicella cases decreased from 2016 to 2017. In 2020 and 2021, case counts are mostly lower compared to previous years at this time.



In December, the varicella rate was highest among infants <1 year old at 3.4 cases per 100,000 population, which is consistent with previous months. Infants <1 year old are too young to receive varicella vaccination, which is why vaccination of siblings, parents, grandparents, and other age groups is important in infection prevention among infants.



The COVID-19 pandemic is affecting health care seeking behavior, which may be impacting the diagnosis and reporting of varicella cases that are shown in this report. For more information on the COVID-19 pandemic in Florida, please visit [FloridaHealthCOVID-19.gov](https://www.floridahealth.gov/covid-19).

# Varicella Surveillance



In December, **5 cases were transmitted within households** and **no cases were outbreak-associated.**

For most varicella cases, exposure to other known cases is not identified. In Florida, transmission setting is not routinely identified for non-outbreak cases resulting in **64%** of cases reporting unknown setting in December.

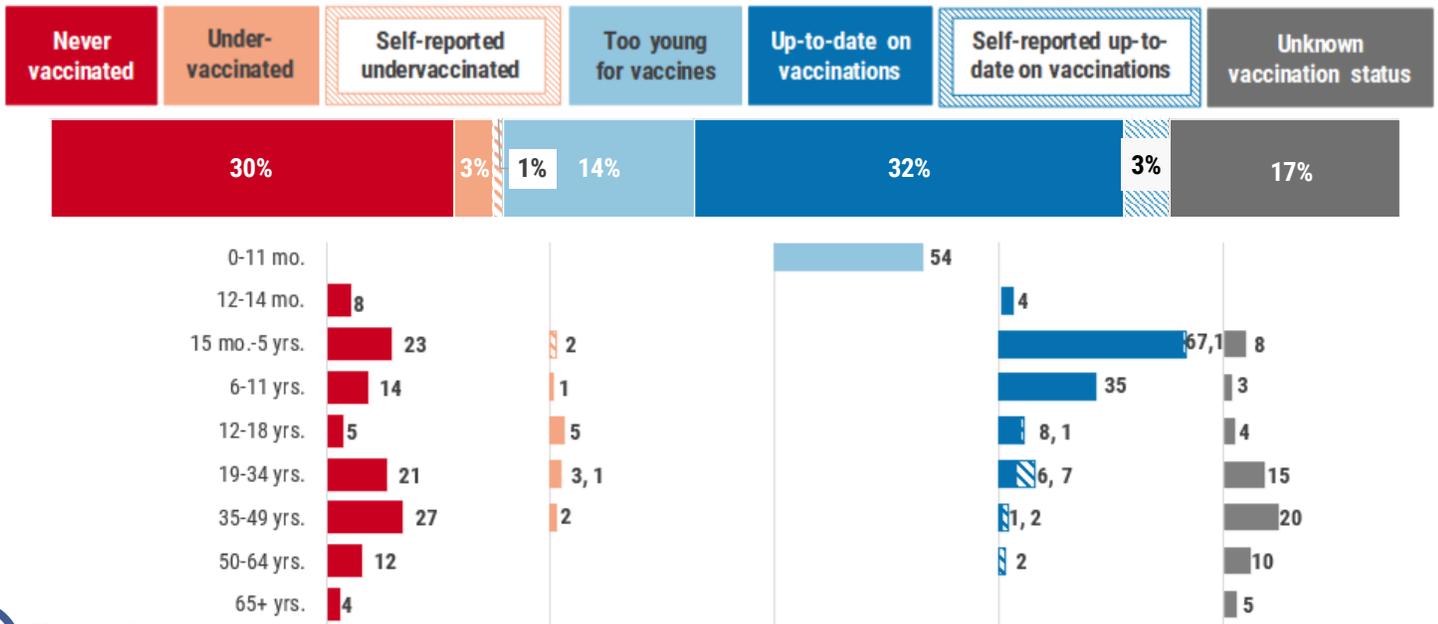
People with shingles infection can transmit the virus that causes varicella to people without immunity. In December, **6 cases** reported contact with someone diagnosed with shingles during their exposure period.

## Household-associated | Outbreak-associated | Total cases



In December 2021, **63% of individuals** reported with varicella had not received the recommended number of varicella vaccinations for their age or had unknown vaccination status. Vaccination against varicella is important for infants, children, teenagers, and adults. If a person was born before July 1, 1994, the current varicella immunization recommendation would not have been implemented when they were receiving their childhood immunizations. Based on the case's age, **107 cases** in 2021 would not have been vaccinated under the current childhood immunization

In 2021, the majority of adults aged 19 years and older with varicella were not up-to-date on their varicella vaccinations or had unknown vaccination status. Although individuals who have been vaccinated can still develop varicella, **complete and**



## National activity

Varicella incidence decreased significantly following the vaccine becoming available in 1995 and has continued to decrease since 2006 when recommendations changed from 1 to 2 doses of varicella vaccine. From 2006 to 2015, all age groups had a substantial decrease in incidence with the largest decline in children aged 5 to 14 years. Although varicella is not reported to the CDC by all states, based on available data, the number of varicella cases nationally has steadily decreased each year from 2012 to 2015.

## Varicella surveillance goals

- Identify and control outbreaks, monitor trends, and identify severe outcomes
- Identify transmission settings in non-outbreak cases to prevent the spread of sporadic cases
- Monitor effectiveness of immunization programs and vaccines

To learn more about varicella, please visit [FloridaHealth.gov/Varicella](https://www.floridahealth.gov/Varicella). For more information on the data sources used in Florida for varicella surveillance, see the last page of this report.

# Vaccine-Preventable Diseases Surveillance System Summary

## Case Data

- Current case data are preliminary and will change as new information is gathered. The most recent data available are displayed in this report.
- Pertussis, varicella, and hepatitis A are reportable diseases in Florida. Case information is documented by county health department (CHD) epidemiologists in Merlin, Florida's reportable disease surveillance system.
- Only Florida residents are included in case counts, but contact investigations are conducted for all exposed individuals.
  - Pertussis, varicella, and hepatitis A case counts include both confirmed and probable cases.
- Map counts and rates are determined by the individual's county of residence; these data do not take into account location of exposure.
- CHD epidemiologists also report outbreaks of pertussis, varicella, and hepatitis A into Merlin.
  - Household-associated cases are defined as  $\geq 2$  cases exposed within the same household.
  - Pertussis outbreaks are defined as  $\geq 2$  cases associated with a specific setting outside of a household.
  - Varicella outbreaks are defined as  $\geq 5$  cases associated with a specific setting outside of a household.
- For more information about reportable diseases, please visit [FloridaHealth.gov/DiseaseReporting](https://www.floridahealth.gov/disease-reporting).
- For more information about Florida's guides to surveillance and investigation, including disease-specific surveillance case definitions, please visit [FloridaHealth.gov/GSI](https://www.floridahealth.gov/gsi).

## Population Data

- Population data from 2020 used to calculate incidence rates are from FLHealthCHARTS (Community Health Assessment Resource Tool Set).
- For more information about FLHealthCHARTS, please visit [FLHealthCharts.com](https://www.flhealthcharts.com).

## Vaccination Data

- Vaccination data for identified cases are from Merlin, as documented by CHD staff.
- Vaccination status is determined using the Advisory Committee on Immunization Practices Recommended Immunization Schedule for Children and Adolescents Aged 18 Years or Younger, 2018.
- For more information about immunization schedules, please visit [www.CDC.gov/Vaccines/Schedules/index.html](https://www.cdc.gov/vaccines/schedules/index.html).
- Individuals are considered up-to-date on vaccinations if they have received the recommended number of doses of vaccine for a particular disease for their age at the time of their illness onset. Individuals are considered undervaccinated if they have received at least one but not all doses of vaccine recommended for a particular disease for their age at the time of their illness onset.