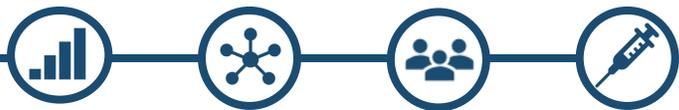
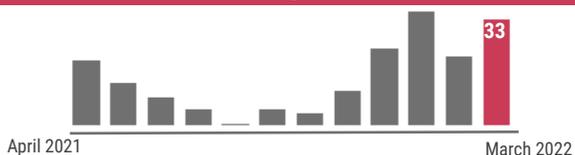


Vaccine-Preventable Disease Surveillance Report

March 2022



Hepatitis A



- **Hepatitis A activity increased from last month** and was below the previous 5-year average.
- **33 cases** were reported in March.

Pertussis



- **Pertussis activity increased from last month** and was below the previous 5-year average.
- **4 cases** were reported in March.

Meningococcal Disease



- **Meningococcal disease activity increased from last month** and was above the previous 5-year average.
- **8 cases** were reported in March.

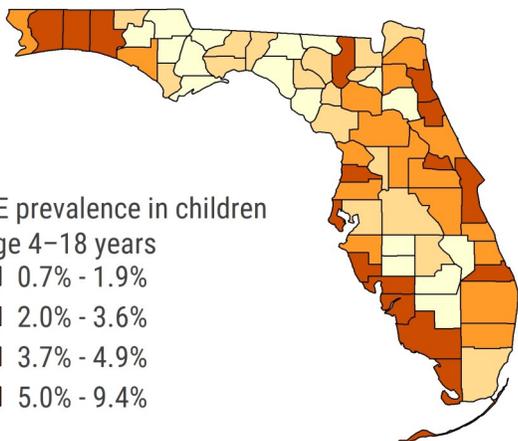
Varicella



- **Varicella activity decreased from last month** and was below the previous 5-year average.
- **38 cases** were reported in March.



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 0.7–9.4%**. In March 2021, the statewide prevalence was 3.8% and the prevalence has gradually increased each month since.

To learn more about REs at the local level, please visit 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 March 31, 2022.



Hepatitis A Surveillance

March Key Points



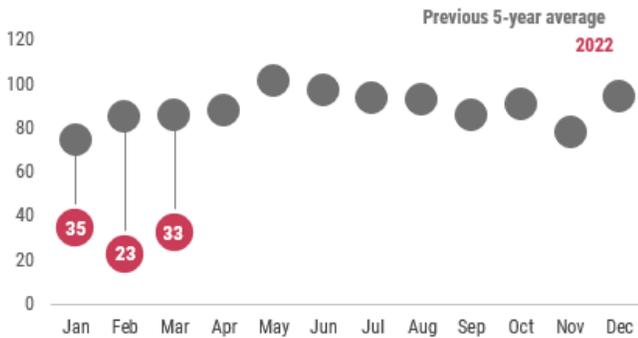
2 cases linked to other cases

30-39 year olds had the highest incidence rate

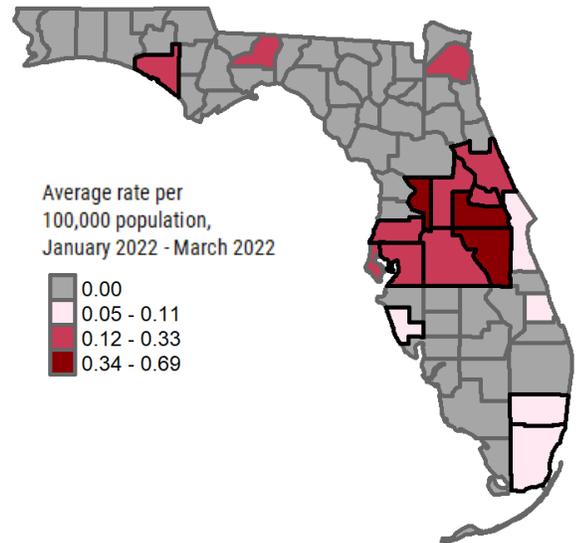
86% of cases not up-to-date or unknown vaccination status



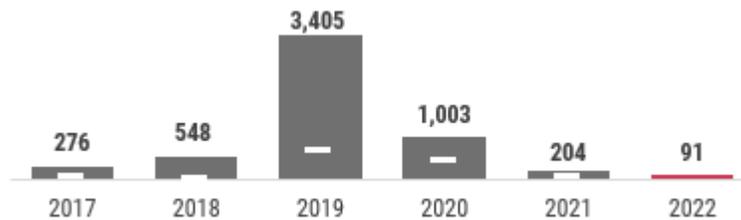
The number of reported hepatitis A cases in March increased from the previous month and was below the previous 5-year average.



In March 2022, 33 hepatitis A cases were reported in 13 counties, outlined in black in the map below. Since January 2022, the average county rates were highest in Central Florida.



In 2022, 91 hepatitis A cases* were reported.



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



86%
not vaccinated

The best way to prevent hepatitis A infection is through vaccination. In March 2022, 86% 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.

* Of the 35 cases reported in January 2022, 8 cases had illness prior to 2021, but were not reported prior to January 2022.

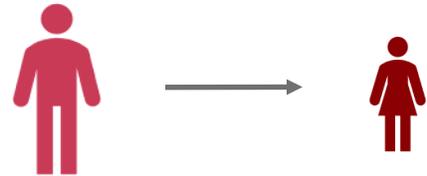
Hepatitis A Surveillance



In March 2022, **2 cases** were **epidemiologically (epi) linked to another case**.



In March 2022, there was an average of **1 contact to reported cases**. Contacts are those who were exposed to the virus and recommended prophylaxis for illness prevention.



In March 2022, **30-39 year olds have the highest incidence rate at 1.11 cases per 100,000 population**. Similarly in 2021, 30-39 year olds also had the highest incidence rate at 1.48 cases per 100,000 population.



In March 2022, **no cases were co-infected with chronic hepatitis C** and **1 case was co-infected with chronic hepatitis 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 March 2022, 15 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

Hepatitis A surveillance goals

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

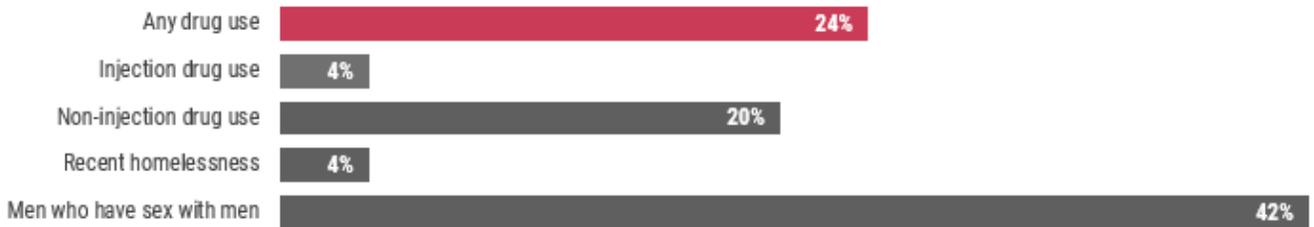
To learn more about hepatitis A, please visit FloridaHealth.gov/HepA. For more information on the data sources used in Florida for hepatitis A surveillance, see the last page of this report.

Hepatitis A Surveillance

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.



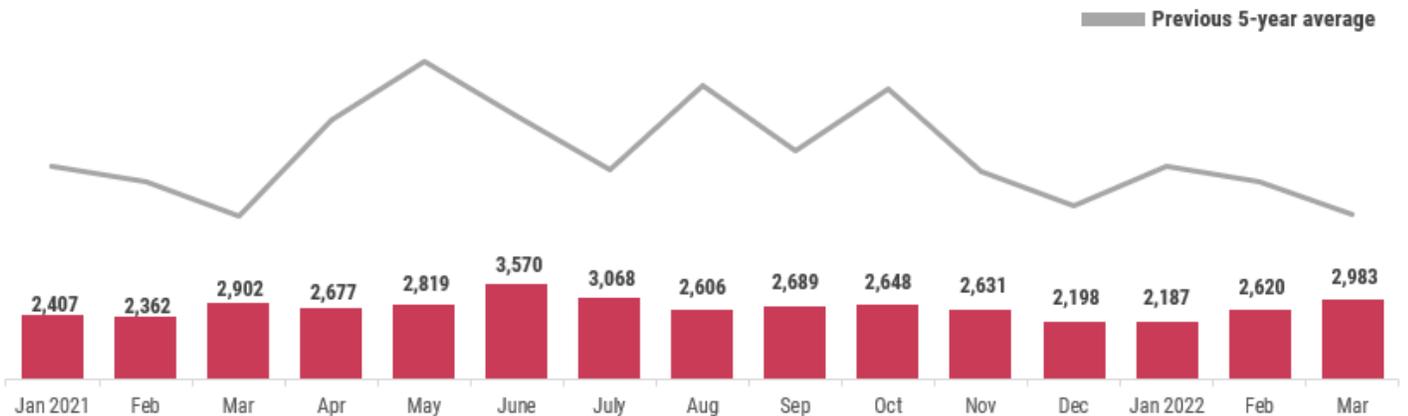
In 2022, 53% of the 83 reported cases* in Florida reported at least one of the risk factors below, while 47% reported no or unknown risk factors. The most commonly identified risk factor was **men who have sex with men**, reported by 35 cases (42%). The next most common risk factor was **any drug use (24%)** reported in 20 cases. Of the 20 cases, the most common form of drug use was **non-injection drug use (20%)** reported in 17 cases. **Injection drug use (4%)** was reported in 3 cases. **Recent homelessness** was reported in (4%) of reported cases. In 2022, there has been an increase in reported cases among men who have sex with men when compared to 2021.



Hepatitis A infections can be severe, leading to inpatient hospitalization and sometimes death. In 2022, 48 cases (58%) reported in Florida* have been hospitalized due to hepatitis A infection. No deaths have been identified as hepatitis A associated in 2022.



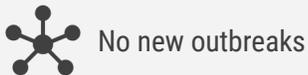
The Florida Department of Health is actively working to vaccinate those most at risk for hepatitis A infection. In March 2022, 2,983 doses were administered. The number of first doses of hepatitis A vaccine administered by both private providers and county health departments to adults age 18 years and older, as recorded in Florida SHOTS, increased and was below the previous 5-year-average. Vaccination is the best way to prevent hepatitis A infection.



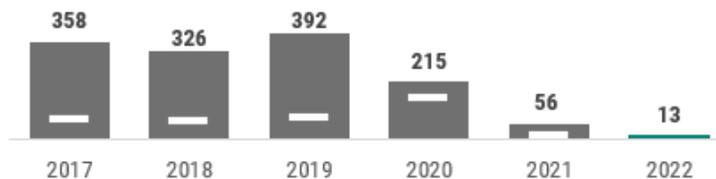
* The 8 cases with illness prior to 2021 are excluded from this analysis.

Pertussis Surveillance

March Key Points



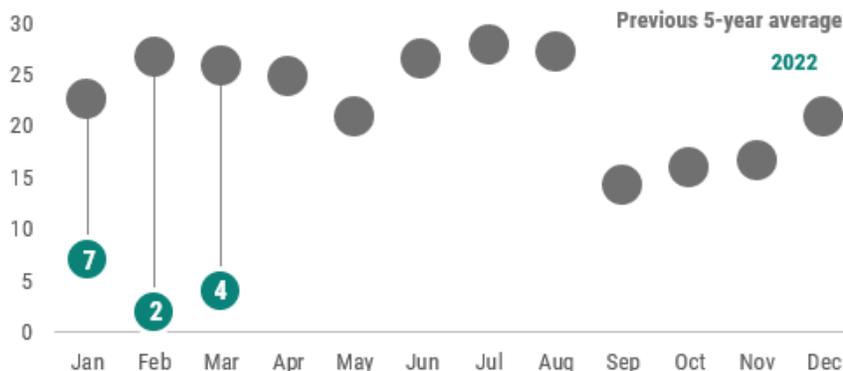
In 2022, 13 pertussis cases were reported in 8 counties. There was a 86% decrease in the number of pertussis cases reported between October 2021–March 2022 compared to October 2019–March 2020 (n=238 cases).



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



The number of pertussis cases reported in March increased from the previous month and was below the previous 5-year average.



No outbreak-associated cases and 2 household-associated cases 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.

Household-associated | Outbreak-associated | Total cases

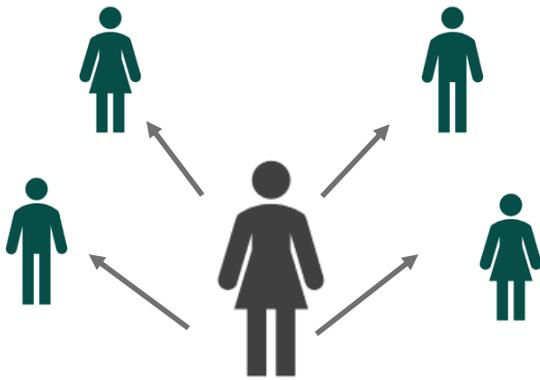


Pertussis Surveillance

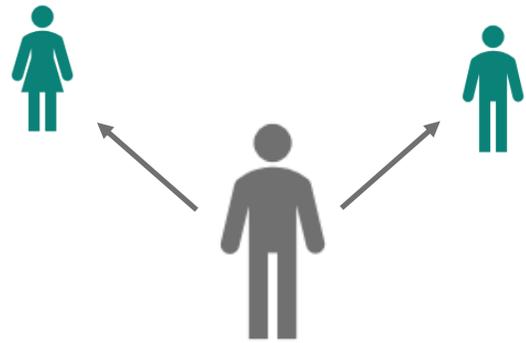


An average of **4 contacts** per case between October 2019 and March 2020 were reported compared to an average of **2 contacts** per case between October 2021 and March 2022. Contacts are classified as people whom antibiotics were recommended to prevent illness. Antibiotics can shorten the amount of 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 **88%** of cases reporting unknown setting in the past six months.

October 2019 to March 2020



October 2021 to March 2022



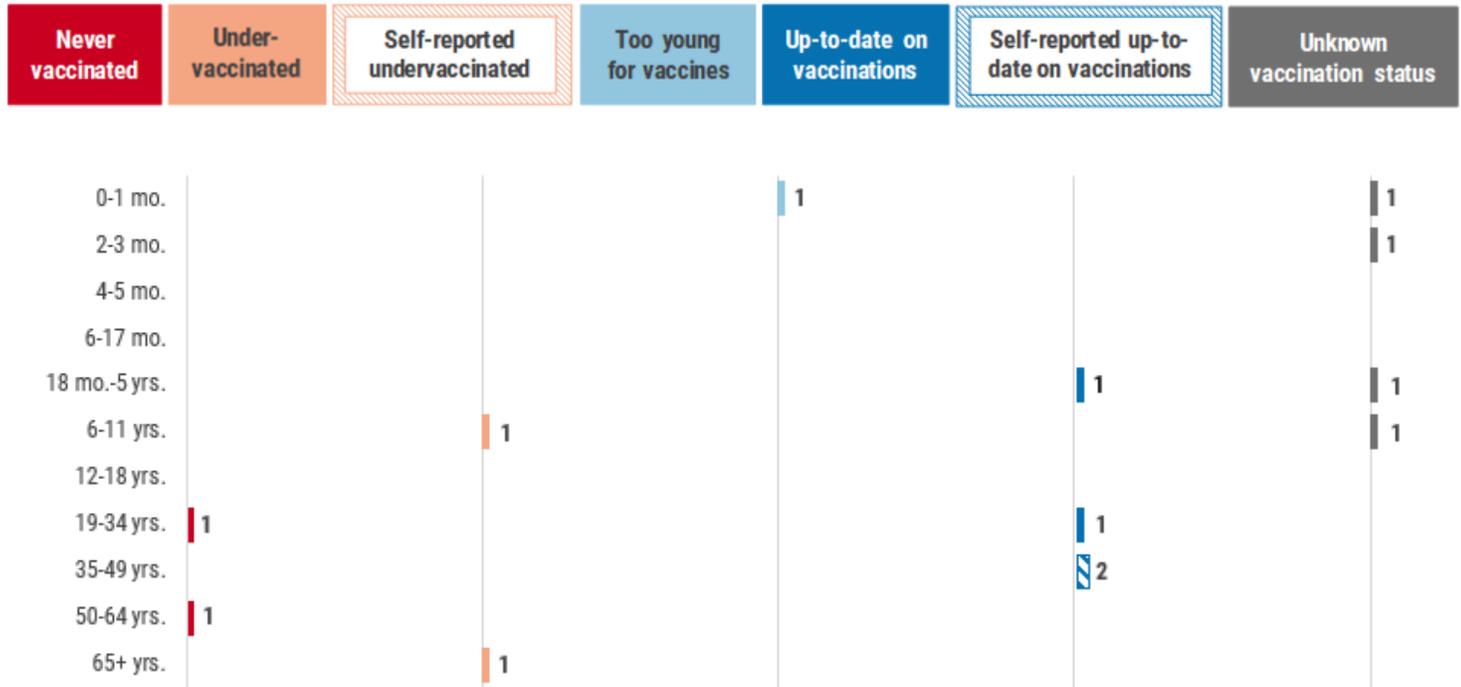
The average incidence rate was highest among **<1 year olds** at **0.3 cases per 100,000 population** between October 2021 and March 2022, which is **15 times lower** than the average incidence rate for <1 year olds between October 2019 and March 2020. Infants experience the greatest burden of pertussis 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 2022, 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, **5 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

Meningococcal Disease Surveillance

March Key Points

 8 cases

 31 cases in the past 6 months

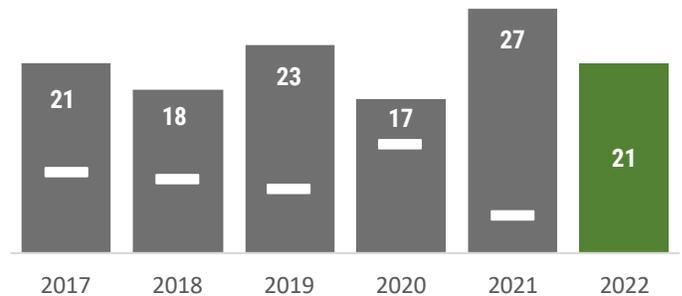
 19-34 year olds had the highest incidence rate

 75% of cases not up-to-date or unknown vaccination status



Meningococcal disease rates have been declining in Florida with more than 150 cases reported annually 25 years ago to 27 cases reported in 2021, as vaccination rates have increased. Rates of disease have been stable over the last 5 years with an average of about 21 cases occurring annually.

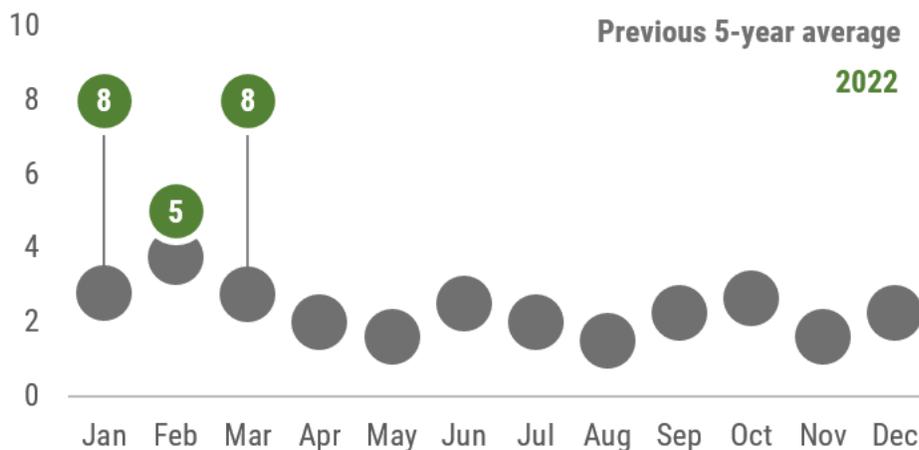
In 2022, 21 meningococcal disease cases were reported in 10 counties. The number of reported meningococcal cases was higher in 2021 than previous years. The number of cases reported in March 2022 is higher than the number of cases observed at this time in previous years.



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



The number of meningococcal disease cases reported in March 2022 increased from the previous month and was above the previous 5 year average.



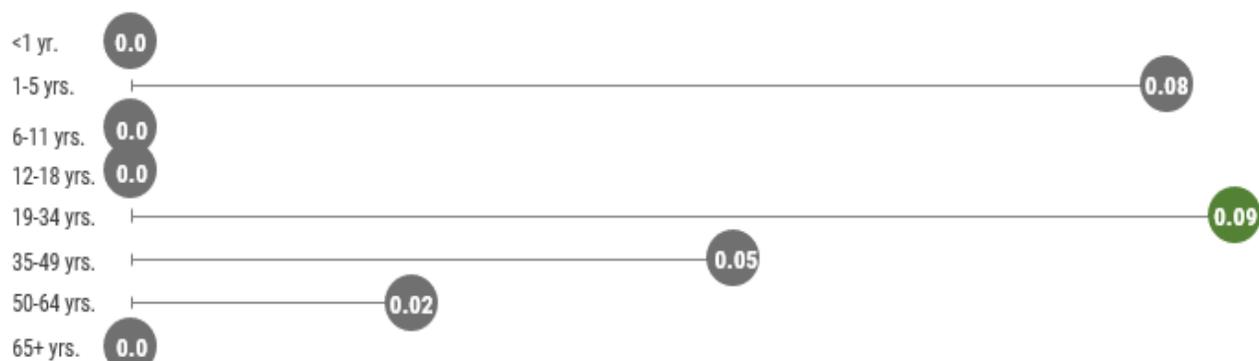
75%
not vaccinated

Vaccines can help prevent meningococcal disease. In March 2022, 75% of reported cases are not up-to-date or had unknown vaccination status. There are currently two types of meningococcal vaccines available in the United States: Meningococcal conjugate or MenACWY vaccines and Serogroup B meningococcal or MenB vaccines. To learn more about the meningococcal vaccine, talk to your doctor or visit: <https://www.cdc.gov/vaccines/vpd/mening/public/index.html>

Meningococcal Disease Surveillance



In March 2022, the meningococcal disease rate was highest among age 19-34 years at 0.09 cases per 100,000 population.



In 2022, among reported cases, 100% of reported cases were seen in the emergency department and 86% of reported cases were hospitalized. Additionally, 7 deaths were identified as being associated to meningococcal disease. The best protection against meningococcal disease is keeping up-to-date with recommended vaccines.

Meningococcal disease can often be severe leading to inpatient hospitalization and sometimes death. According to the CDC, about 10 to 15 in 100 people with meningococcal disease will die. Up to 1 in 5 survivors will have long-term disabilities which may include: loss of limb/s, deafness, nervous system problems, brain damage. More information can be found at <https://www.cdc.gov/meningococcal/clinical-info.html>



National and International activity

Meningococcal disease rates are at a historic low in the United States. Rates have been declining since the 1990s and currently remain low. In 2019, there were about 375 cases reported (incidence rate of 0.11 cases per 100,000 persons). Meningococcal outbreaks are rare in the United States and only about 1 in 20 cases is related to outbreaks.

Meningococcal disease occurs worldwide. The highest incidence of disease is found in the 'meningitis belt' located in sub-Saharan Africa. This region experiences large-scale epidemics every 5 to 12 years. Epidemics during the dry season (December-June) reach up to 1,000 cases per 100,000 population. More information can be found at <https://www.cdc.gov/meningococcal/global.html>

Meningococcal disease surveillance goals

- Identify cases to limit transmission and prevent outbreaks by implementing control measures
- Collect data on key variables for monitoring meningococcal disease
- Monitor effectiveness of immunization programs and vaccines

Varicella Surveillance

March Key Points



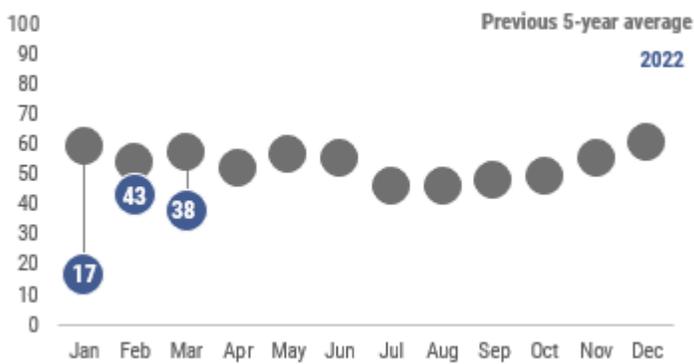
No new outbreaks

<1 year olds had highest incidence rate

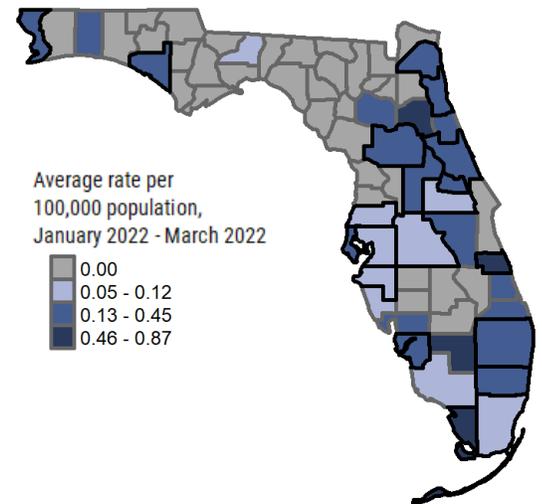
53% cases not up-to-date or unknown vaccination status



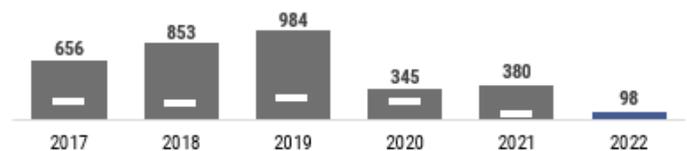
The number of varicella cases reported in March 2022 decreased from the previous month and was below the previous 5-year average. Due to robust vaccination programs, there is no longer discernable seasonality for varicella cases in the United States.



In March 2022, 38 varicella cases were reported in 19 counties, outlined in black in the map below. From January 2022 through March 2022 the average county rates varied throughout the state.



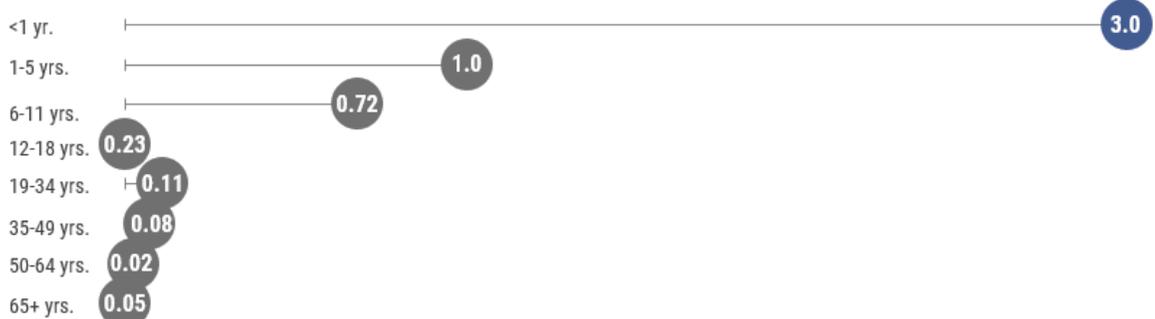
In 2022, 98 varicella cases were reported. The annual number of reported varicella cases increased from 2017 to 2019 and decreased significantly in 2020 and 2021.



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



In March, the varicella rate was highest among infants <1 year old at 3.0 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.



Varicella Surveillance



In March, **7 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 **67%** of cases reporting unknown setting in March.

People with shingles infection can transmit the virus that causes varicella to people without immunity. In March, **5 cases** reported contact with someone diagnosed with shingles during their exposure period.

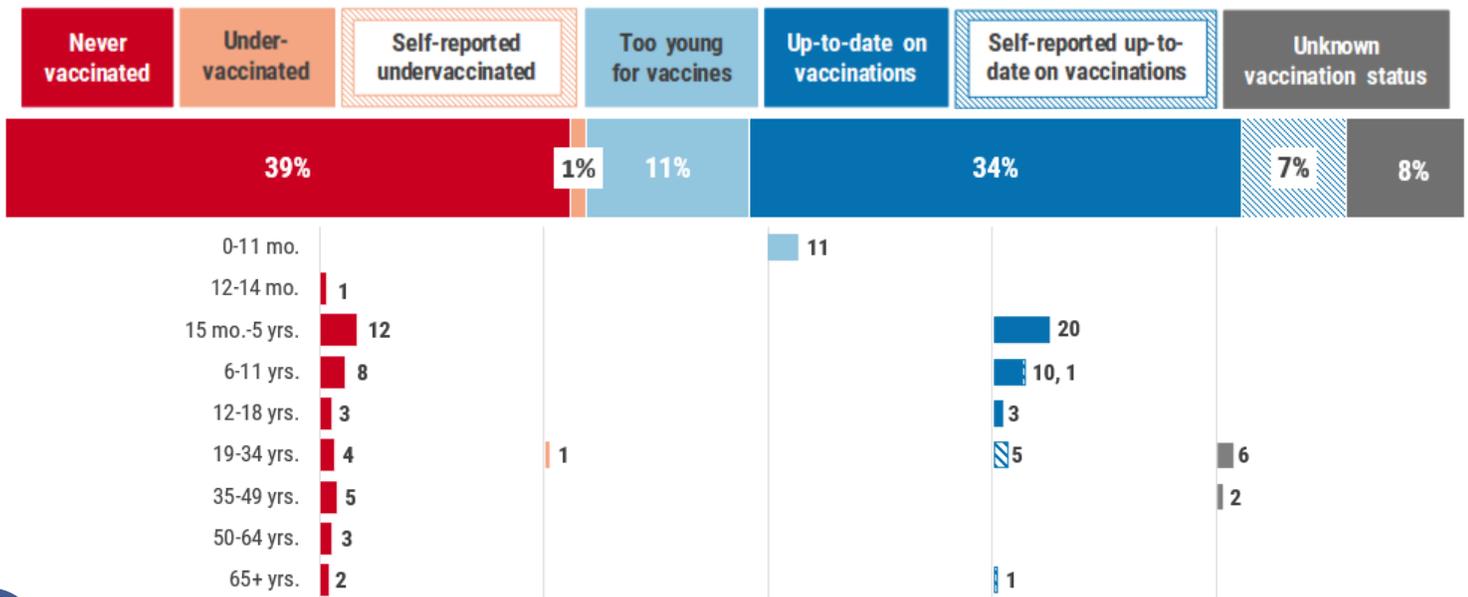
Household-associated | Outbreak-associated | Total cases

Period	Household-associated	Outbreak-associated	Total cases
Mar 2022	7	0	29
Prev 3 Mon Avg Jan 2022 - Mar 2022	4	0	30



In March 2022, **53% 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, **22 cases** in 2022 would not have been vaccinated under the current childhood immunization recommendations.

In 2022, 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 timely vaccination remains the best way to prevent varicella and severe complications**.



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. 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, hepatitis A and meningococcal disease 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, hepatitis A, and meningococcal disease 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, hepatitis A, and meningococcal disease into Merlin.
 - Household-associated cases are defined as ≥ 2 cases exposed within the same household.
 - Pertussis outbreaks are defined as ≥ 2 cases associated with a specific setting outside of a household.
 - Varicella outbreaks are defined as ≥ 5 cases associated with a specific setting outside of a household.
 - An outbreak for meningococcal disease occurs when there are multiple cases of the same serogroup in a community or institution over a short period of time. For more information, please see CDC meningococcal outbreak guidance: <https://www.cdc.gov/meningoccal/outbreaks/index.html>
- 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.