

# Vaccine-Preventable Disease Surveillance Report

October 2018



## Pertussis



- **Pertussis activity increased from last month.** Overall, the total number of cases remained below the previous 5-year average.
- 30 cases and one outbreak were reported.
- Incidence remained highest among infants <1 year old. Infants <2 months old are too young to receive vaccinations against pertussis, which is why vaccination of other age groups is so important to help prevent infection in this highly vulnerable group.

## Varicella



- **Varicella activity decreased from last month** and was slightly above the previous 5-year average.
- 50 cases and one outbreak were reported.
- Incidence was highest among infants <1 year old.
- 40% of cases were never vaccinated for varicella.

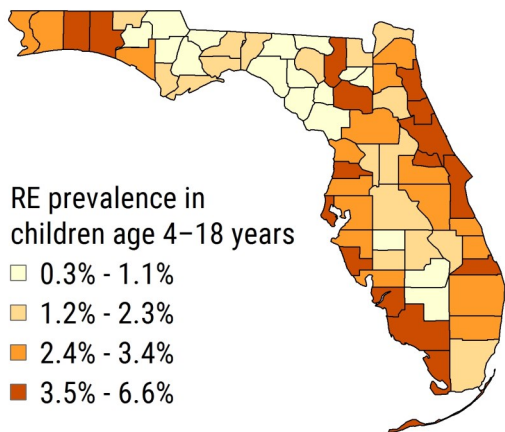
## Hepatitis A



- **Hepatitis A activity increased from last month** and has been above the previous 5-year average since April 2018.
- 86 cases were reported in October.
- Incidence was highest among adults 30-49 years old. Cases were primarily among men and persons who identify as non-Hispanic white.
- Non-injection and injection drug use were the most commonly reported risk factors.



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 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 ages 4-18 years with new REs is increasing each month. Statewide, the estimated prevalence of REs among children age 4 to 18 years old is 2.9% with individual counties ranging from 0.3% to 6.6%. In October 2017, the statewide prevalence was 2.5%, and the prevalence has gradually increased each month since.

To learn more about REs at the local level, please visit [www.flhealth.gov/REmap](http://www.flhealth.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 October 31, 2018.

Posted February 18, 2019 on the Bureau of Epidemiology (BOE) website: [www.floridahealth.gov/VPD](http://www.floridahealth.gov/VPD)

Produced by the BOE, Florida Department of Health

Contributors: Katie Kendrick, MPH; Amy Bogucki, MPH; Andrea Leapley, MPH; Heather Rubino, PhD; Scott Pritchard, MPH; Julia Munroe, MS; Mwedu Mtenga, MPH; Lea Heberlein-Larson, MPH; Valerie Mock, BS; Marshall Cone, MPH; Pam Colarusso, MSH; Leah Eisenstein, MPH.





# Pertussis Surveillance


## October 2018


### Key Points

 30 cases

 1 outbreak

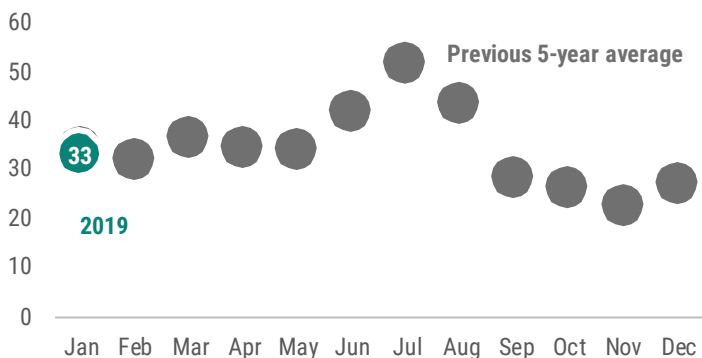
 Average of 5 contacts per case

 <1 year olds had highest incidence

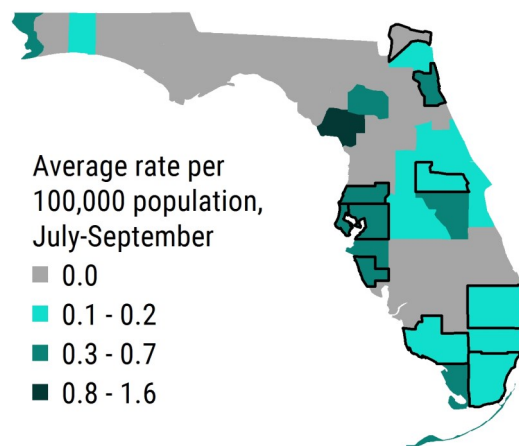
 73% cases not up-to-date or unknown immunizations



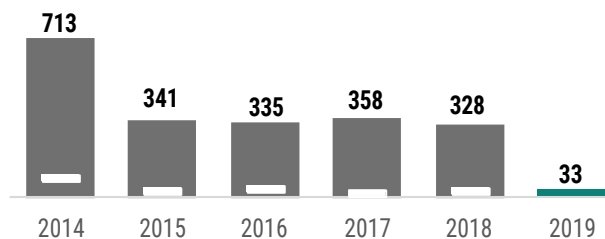
The number of pertussis cases reported in October increased from the previous month but remained below the previous 5-year average. In general, more pertussis cases are reported during the summer months.



The 30 pertussis cases in October were reported among the 10 counties outlined in black. During the previous 3 months (July through September), the average county rate has varied throughout the state.



From January 1, 2018 through October 31, 2018, 279 pertussis cases were reported in 33 counties. The number of cases as of October 31 in previous years are marked by the white bars for 2013-2017. Since 2014, the number of pertussis cases reported annually decreased. Pertussis is cyclic in nature with peaks in disease every 3-5 years. Pertussis cases last peaked between 2013 and 2014. Thus far in 2018, it appears case counts will remain consistent with those seen during non-peak years.



In October, 7 (23%) of 30 total pertussis cases were associated with transmission within households and 13 (43%) cases were outbreak-associated. For most pertussis cases, exposure to other known cases is never identified, and they are not able to be linked to outbreaks.

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



One pertussis outbreak was reported in October. This outbreak was in a school in Pinellas County and to date, consists of 5 reported cases.

Eight pertussis outbreaks have been reported. Outbreak settings include schools (4 outbreaks), daycare (2 outbreaks), work place (1 outbreak), and extended family (1 outbreak).

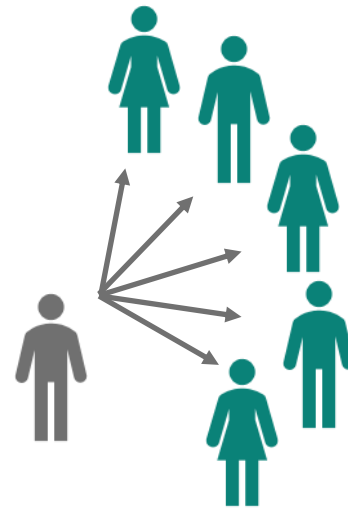
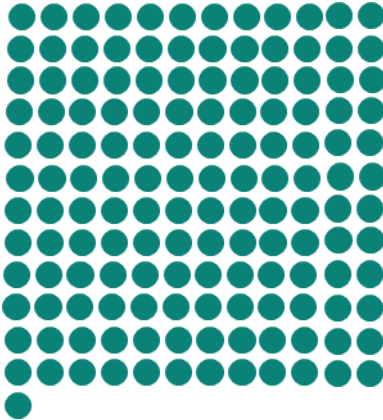


**For each pertussis case reported in October, there was an average of 5 contacts for whom antibiotics were recommended to prevent illness.** For those diagnosed with pertussis, antibiotics can shorten the amount of time they are contagious to others. Antibiotics can also be used to prevent illness in those who have been exposed to someone with pertussis while they are contagious.

30 cases



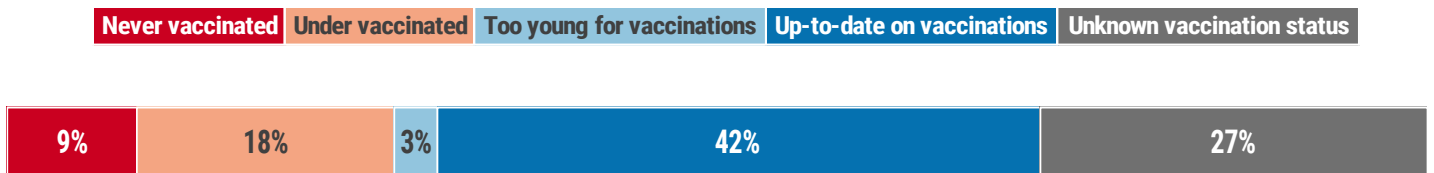
145 contacts



**In October, the rate of pertussis was highest among infants <1 year old at 0.9 cases per 100,000 population,** which is consistent with previous months. 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 so important to help prevent infection in infants.

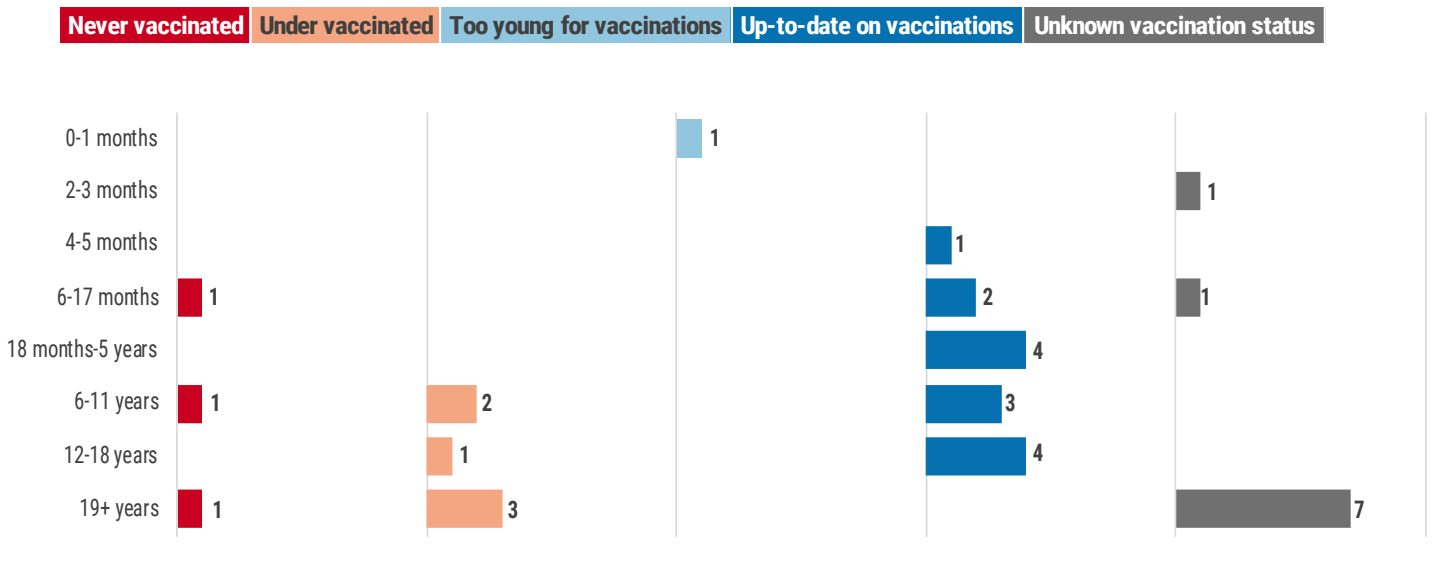


**Vaccination is the best way to prevent pertussis infections.** In October, more than half of individuals reported with pertussis had not received the recommended number of pertussis vaccinations for their age or had unknown vaccination status. Vaccination against pertussis is important for everyone including infants, children, teenagers, and adults. Pregnant women should get vaccinated during the third trimester of each pregnancy to protect their babies. See the last page of this report for links to vaccination schedules recommended by the Centers for Disease Control and Prevention.





Thus far in 2018, over half of cases in infants and children aged 6 months to 5 years were not up-to-date on their pertussis vaccinations. **In general, those who have received at least 1 pertussis vaccination have less severe outcomes than those who have never been vaccinated.**



**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**

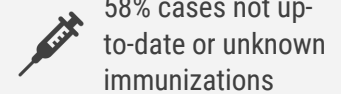
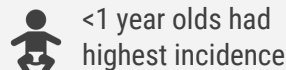
- Identify cases to limit transmission in settings with infants or others who may transmit pertussis to infants
- Identify and prevent outbreaks
- Identify contacts of cases and recommend appropriate prevention measures, including exclusion, antibiotic prophylaxis, and immunization,
- Monitor the effectiveness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

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

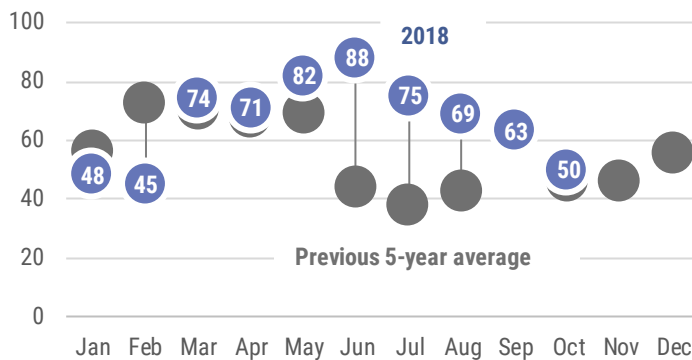
# Varicella Surveillance

## October 2018

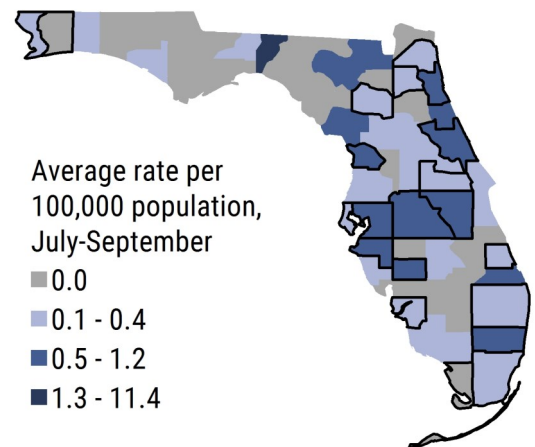
### Key Points



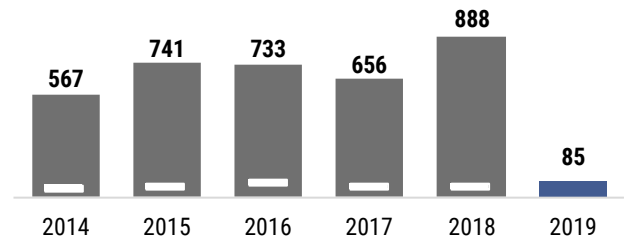
The number of varicella cases reported in October decreased from last month and was similar to the previous 5-year average. In general, more varicella cases are reported during the late winter and summer months.



The 50 varicella cases in October were reported among the 21 counties outlined in black. During the previous 3 months (July through September), the average county rate varied throughout the state.



From January 1, 2018 through October 31, 2018, 665 varicella cases were reported in 51 counties. The number of cases as of October 31st in previous years are marked by the white bars for 2013-2017. The annual number of reported varicella cases decreased from 2015 to 2017. Thus far in 2018, case counts are slightly above the total number of cases last year.



In October, 8 (16%) of 50 total cases were associated with transmission within households and 4 (8%) cases were outbreak-associated. For most varicella cases, exposure to other known cases is never identified, and they are not able to be linked to outbreaks.

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

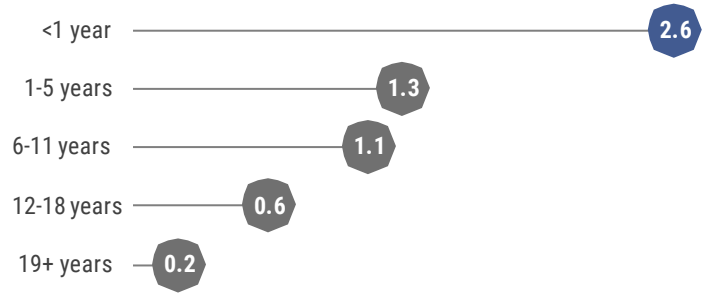


One varicella outbreak was reported in October. This outbreak was reported in a school in Manatee county and to date, consists of 4 cases.

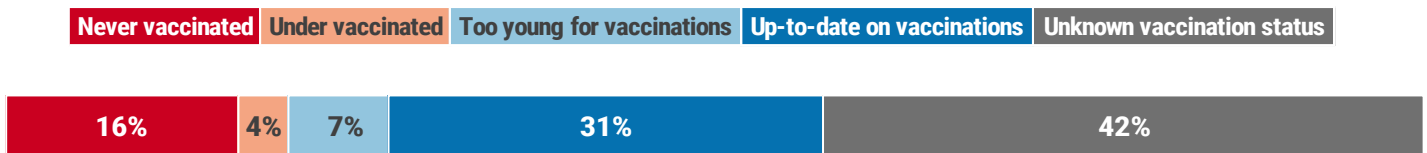
Seven total varicella outbreaks reported in 2018, all of which occurred in schools (3 outbreaks) or correctional facilities (4 outbreaks).



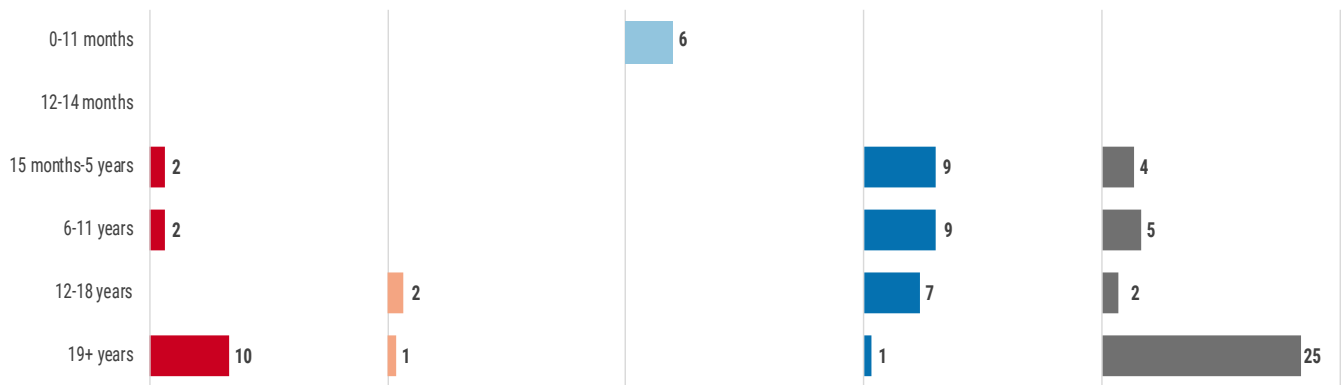
**In October, the varicella rate was highest among infants <1 year old** at **3.9 cases** per 100,000 population, which is consistent with previous months. Infants <1 year old are too young to receive varicella vaccination, which is why vaccination of siblings, parents, grandparents, and other age groups is so important to help prevent infection in infants.



**Vaccination is the best way to prevent varicella infections.** In October, over half 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. See the last page of this report for links to the Center for Disease Control and Prevention (CDC) recommended vaccination schedules.



Thus far in 2018, 45% of children aged 15 months to 5 years with varicella were not up-to-date on their varicella vaccinations. Although individuals who have been vaccinated can still get 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**

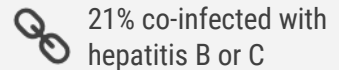
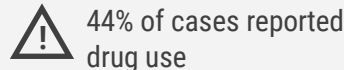
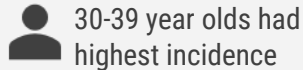
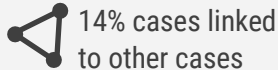
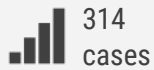
- Identify and control outbreaks and monitor trends and severe outcomes
- Monitor effectiveness of immunization programs and vaccines

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

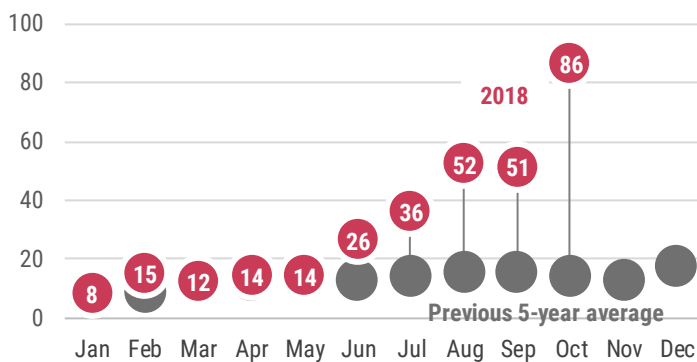
# Hepatitis A Surveillance

## October 2018

### Year to Date Key Points

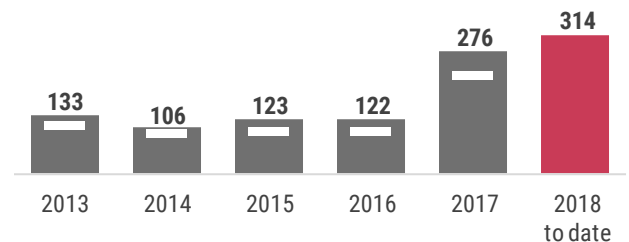
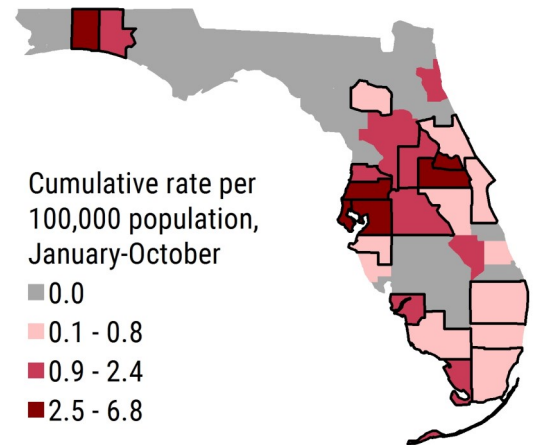


The number of reported hepatitis A cases steadily increased each month since April 2018 and has remained at or above the previous 5-year-average all year. The number of cases reported in October increased from the previous month, and was the highest reported to date in 2018.



From January 1, 2018 through October 31, 2018, 314 hepatitis A cases were reported in 23 counties. The number of cases as of October 31 in previous years are marked by the white bars for 2013-2017. The number of reported hepatitis A cases more than doubled from 2016 to 2017 after remaining relatively constant in previous years. Case counts in 2018 have exceeded those seen in previous years.

The 86 hepatitis A cases in October were reported in the 19 counties outlined in black. The central Florida region has the highest hepatitis A activity levels so far this year. In 2018, 84% of cases have been acquired locally in Florida.



# 98%

never vaccinated

The best way to prevent hepatitis A infection is through vaccination. So far in 2018, 98% of people with hepatitis A had never received a documented dose of hepatitis A vaccine. In October, 100% of cases had not received the vaccine. Hepatitis A vaccine is recommended for all children at age 1 year and for certain high-risk groups of adults including illegal drug users and men who have sex with men (MSM). 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).

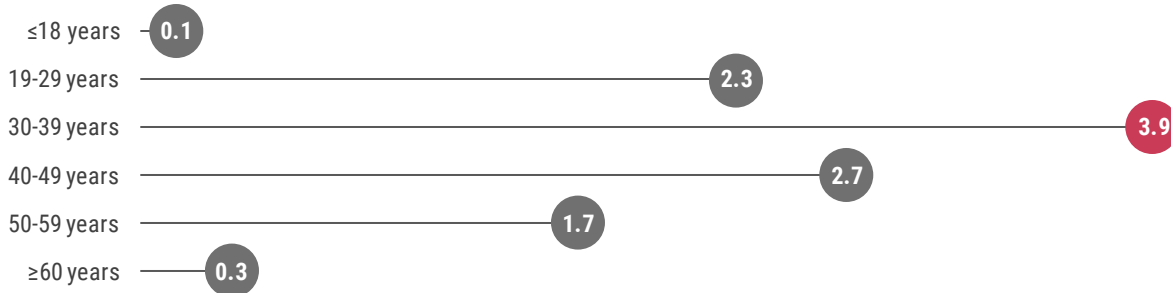


So far in 2018, 44 (14%) of 314 total cases of hepatitis A were linked to other cases. In October, only 3% of cases were linked to other cases. In October, 33% of relationships were household contact, 33% sexual contact, and 33% non-sexual personal contact.

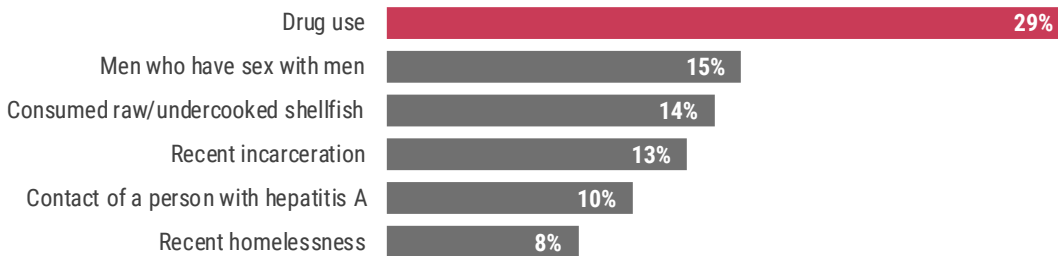




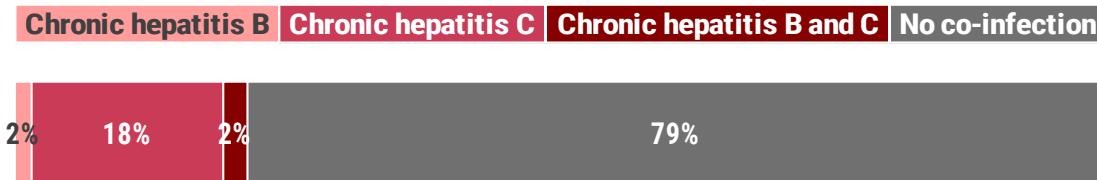
So far in 2018, the incidence rate was highest among **adults aged 30-39 years old** at **3.9 cases** per 100,000 population. In October, the incidence rate was highest among adults aged 30-49 years old at 0.9 cases per 100,000 population. In 2018, cases were reported primarily among **men** (68%) and persons who identify as **non-Hispanic white** (76%).



The most common risk factor among cases reported in October was **drug use**, reported by 25 (29%) cases. Men who have sex with men represented 15% of cases this month.



**Thus far in 2018, 5 (2%) cases were co-infected with chronic hepatitis B, 55 (18%) cases were co-infected with chronic hepatitis C, and 7 (2%) cases were co-infected with both chronic hepatitis B and C.** In October, 26% of cases were co-infected with chronic hepatitis B or C. Co-infection with more than 1 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 March of 2017, the Centers for Disease Control and Prevention has been monitoring outbreaks in ten states among persons who use drugs and persons who are homeless. Kentucky and West Virginia have been the most heavily impacted, and response efforts are ongoing. More information about these outbreaks can be found at [www.cdc.gov/mmwr/volumes/67/wr/mm6743a3.htm?s\\_cid=mm6743a3\\_w](http://www.cdc.gov/mmwr/volumes/67/wr/mm6743a3.htm?s_cid=mm6743a3_w)

**Hepatitis A surveillance goals**

- Identify and control outbreaks and monitor trends
- Identify and mitigate common sources
- Monitor effectiveness of immunization programs and vaccines

To learn more about hepatitis A, please visit [www.floridahealth.gov/hepA](http://www.floridahealth.gov/hepA). For more information on the data sources used in Florida for hepatitis A 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, while measles case counts include only confirmed cases.
- 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 and mumps 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.
  - Measles outbreaks are defined as any person acquiring measles while in Florida.
- For more information about reportable diseases, please visit [www.Floridahealth.gov/diseasereporting](http://www.Floridahealth.gov/diseasereporting).
- For more information about Florida's guides to surveillance and investigation, including disease-specific surveillance case definitions, please visit [www.floridahealth.gov/gsi](http://www.floridahealth.gov/gsi).

## Population Data

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

## Vaccination Data

- Vaccination data for identified cases are from Merlin, as documented by CHD epidemiologists.
- 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](http://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 under-vaccinated 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.
- For a full text version of a new study on pertussis vaccination, please visit [www.cidid.org/publications-1/2018/3/29/the-impact-of-past-vaccination-coverage-and-immunity-on-pertussis-resurgence](http://www.cidid.org/publications-1/2018/3/29/the-impact-of-past-vaccination-coverage-and-immunity-on-pertussis-resurgence).