Vaccine-Preventable Disease Surveillance Report

September 2018

Pertussis

- **Pertussis activity decreased from last month.** Overall, the total number of cases remained below the previous 5-year average.
- 23 cases and no outbreaks 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.

For more information, see pages 2-4.

Varicella

- **Varicella activity decreased from last month** and was similar to the previous 5-year average for the first time in 6 months.
- 63 cases and no outbreaks were reported.
- Incidence was highest among infants <1 year old.
- 24% of cases were never vaccinated for varicella.

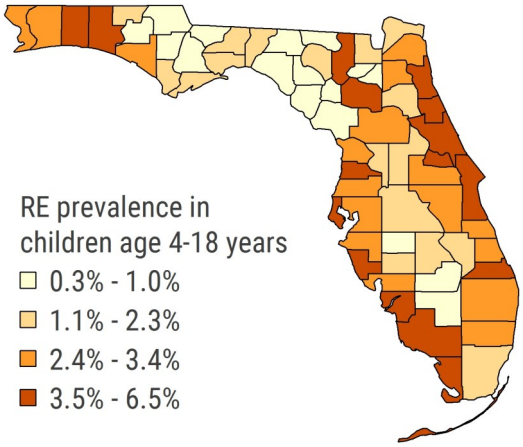
For more information, see pages 5-6.

Hepatitis A

- **Hepatitis A activity increased from last month** and has been above the previous 5-year average since April 2018.
- 56 cases were reported in September.
- Incidence was highest among adults 40-49 years old. Cases were primarily among men and persons who identify as non-Hispanic white.
- Injection drug use was the most commonly reported risk factor.

For more information, see pages 7-8.

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, varicella, and measles. Communities with a higher proportion of religious exemptions (REs) to vaccination are at increased risk of vaccine-preventable disease transmission.

The number of new REs is increasing each month. Statewide, the estimated prevalence of REs among children age 4 to18 years old is 2.9% with **individual counties ranging from 0.3% to 6.5%**. In September 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.

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 September 30, 2018.

Posted October 4, 2018 on the Bureau of Epidemiology (BOE) website: www.floridahealth.gov/VPD
Produced by the BOE, Florida Department of Health
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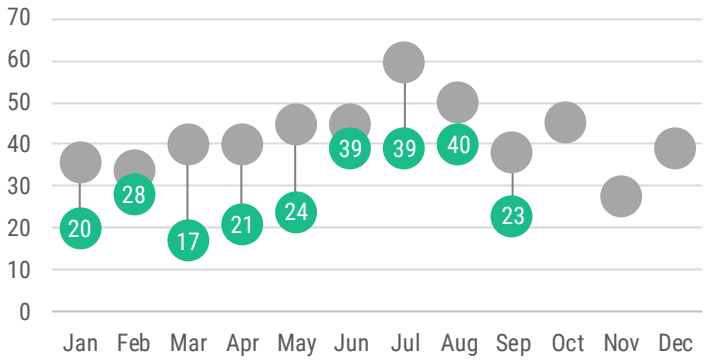
Pertussis Surveillance
September 2018

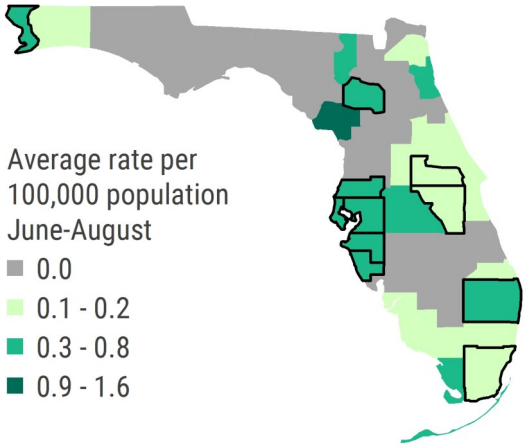
August Key Points

- 23 cases
- No outbreaks
- Average of 3 contacts per case
- <1 year olds had highest incidence
- 61% cases not up-to-date/unknown immunizations

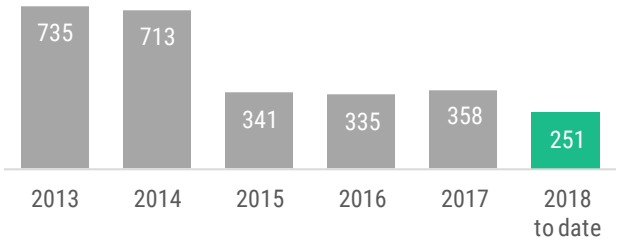
The number of pertussis cases reported in September decreased from previous months and remained below the previous 5-year average. In general, more pertussis cases are reported during the summer months.



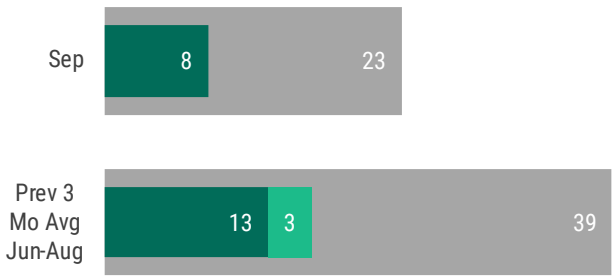
The 23 pertussis cases in September were reported among the **11 counties outlined in black**. During the previous 3 months (June through August), the average county rate has varied throughout the state.



From January 1, 2018 through September 30, 2018, 251 pertussis cases were reported in 32 counties. 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.



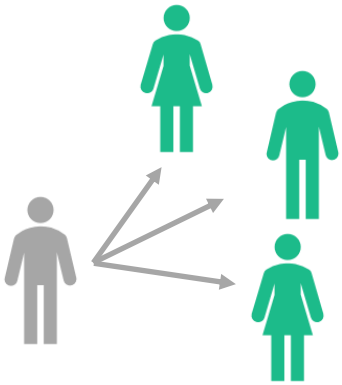
In September, 8 (35%) of 23 total cases were associated with transmission within households and no cases were outbreak-associated. For most pertussis cases, exposure to other known cases is never identified, and they are not able to be linked to outbreaks.



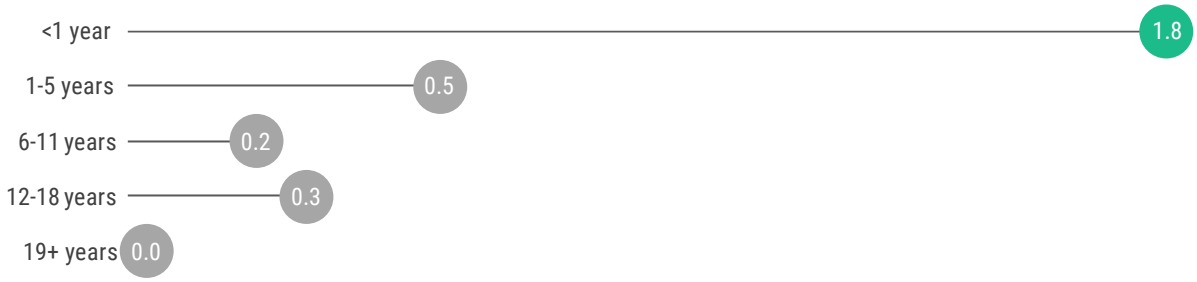
No pertussis outbreaks were reported in September.

In 2018, a total of 7 pertussis outbreaks have been reported. Outbreak settings include school (3 outbreaks), daycare (2 outbreaks), work place (1 outbreak), and extended family (1 outbreak).

For each case reported in September, there was an average of 3 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.



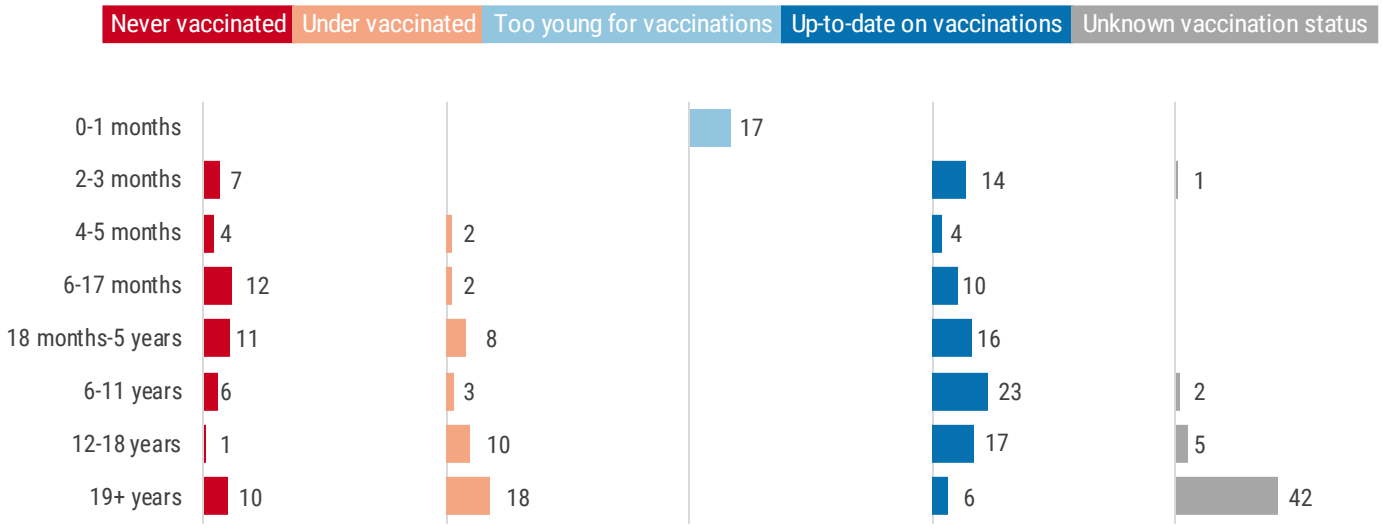
**In September, the rate was highest among infants <1 year old at 1.8 cases per 100,000 population, which is consistent with previous months. Infants experience the greatest burden of pertussis infections, not only in number of cases but also in severity. Infants <2 months old are too young to receive vaccinations against pertussis, which is why vaccination of grandparents, parents, siblings, and other age groups is so important to help prevent infection in infants.



Vaccination is the best way to prevent pertussis infections. In September, 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 infants, children, teenagers, and adults. Pregnant women should get vaccinated during the third trimester of each pregnancy to protect their babies.

Never vaccinated | **Under-vaccinated** | **Too young for vaccination** | **Up-to-date on vaccinations** | **Unknown vaccination status**

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.** Over half of adults ≥19 years old had unknown vaccination status. See page 9 for links to vaccination schedules recommended by the Centers for Disease Control and Prevention.



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, and to monitor the effectiveness of immunization programs and vaccines

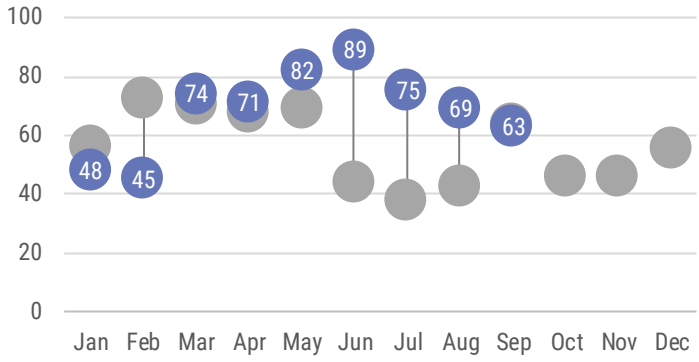
To learn more about pertussis, please visit www.floridahealth.gov/pertussis.For more information on the data sources used in Florida for pertussis surveillance, see page 9.

Varicella Surveillance
September 2018

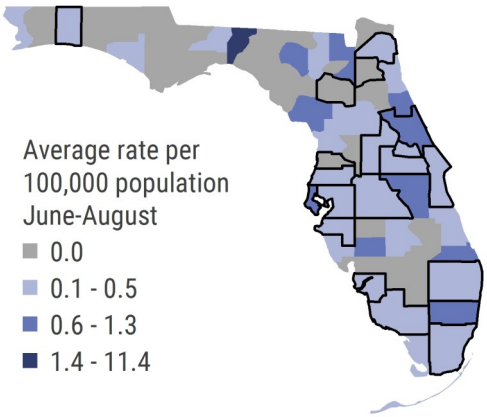
August Key Points

- 63 cases
- No outbreaks
- <1 year olds have highest incidence
- 49% cases not up-to-date/unknown immunizations

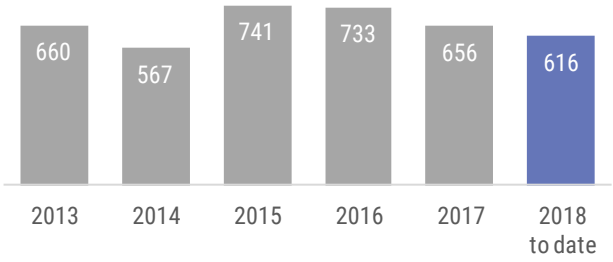
The number of reported varicella cases in September decreased from last month and was the same as the previous 5-year average. In general, more varicella cases are reported during the late winter and summer months.



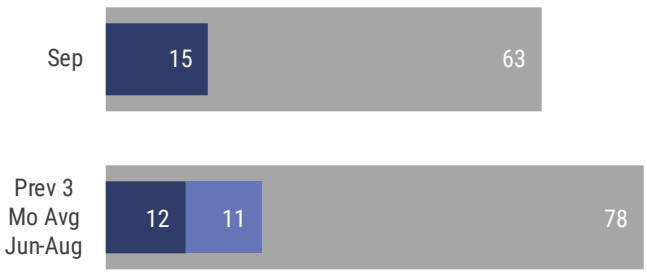
The 63 varicella cases in September were reported among the **20 counties outlined in black**. During the previous 3 months (June through August), the average county rate varied throughout the state.



From January 1, 2018 through September 30, 2018, 616 varicella cases were reported in 50 counties. Since 2015, the annual number of reported varicella cases decreased. Thus far in 2018, it appears case counts will remain consistent with those seen during previous years.



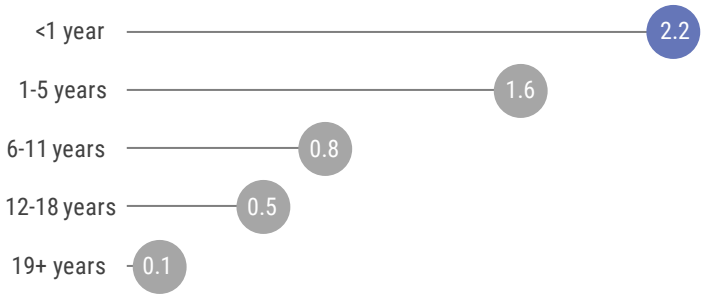
In September, 15 (24%) of 63 total cases were associated with transmission within households and no cases were outbreak-associated. For most varicella cases, exposure to other known cases is never identified, and they are not able to be linked to outbreaks.



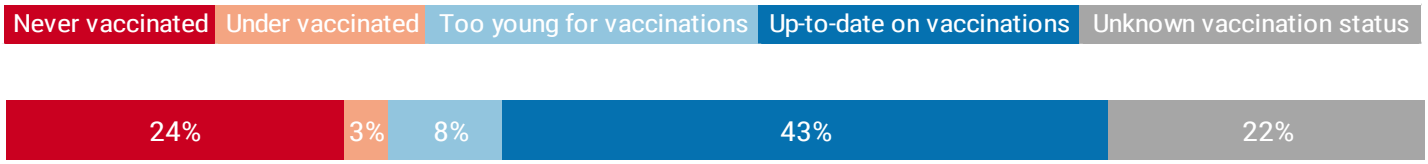
No varicella outbreaks were reported in September.

There have been 6 total varicella outbreaks reported in 2018, all of which occurred in schools (2 outbreaks) or correctional facility (4 outbreaks) settings.

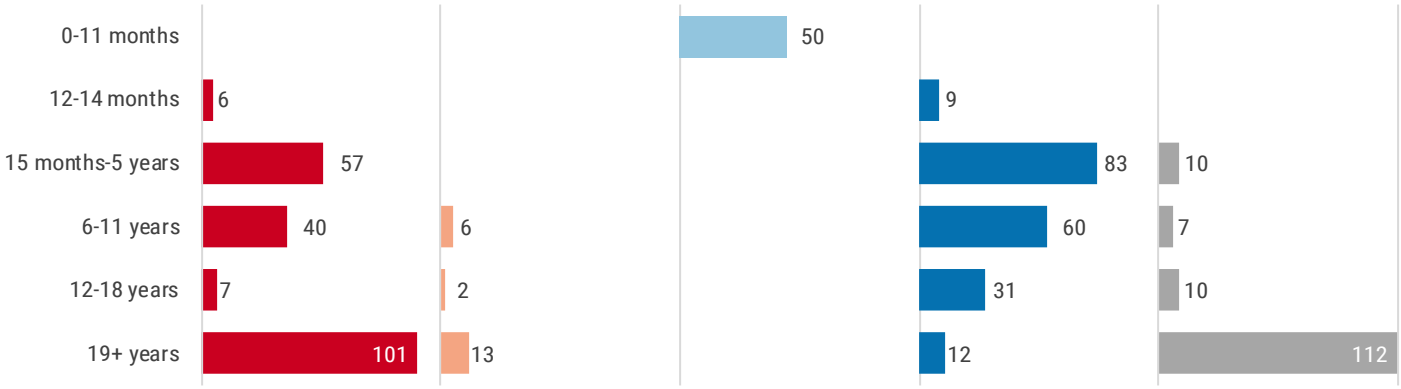
In September, the rate was highest among infants <1 year old at **2.2 cases** per 100,000 population, which is consistent with previous months. Infants <1 year old are too young to receive varicella vaccination, which is why vaccination of siblings, parents, grandparents, and other age groups is so important to help prevent infection in infants.



Vaccination is the best way to prevent varicella infections. In September, almost 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.



Thus far in 2018, 38% of cases in children aged 15 months to 5 years 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**. Almost half of adults ≥19 years old had unknown vaccination status for varicella. See page 9 for links to the Center for Disease Control and Prevention recommended vaccination schedules.



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 9 years and aged 10 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

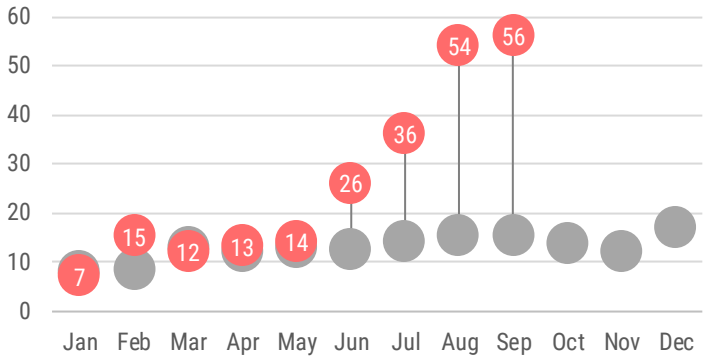
To learn more about varicella, please visit www.floridahealth.gov/varicella. For more information on the data sources used in Florida for varicella surveillance, see page 9.

Hepatitis A Surveillance
September 2018

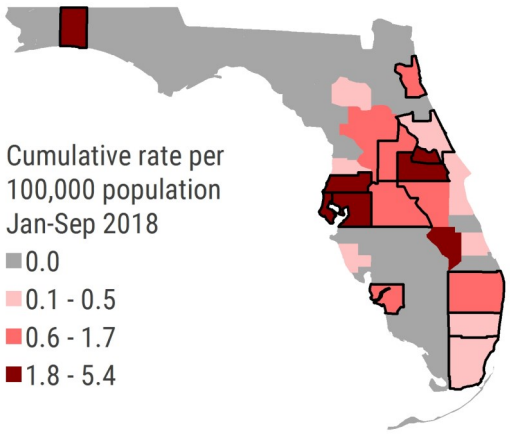
September Key Points

- 56 cases
- 11% cases linked to other cases
- 40-49 year olds had highest incidence
- 39% cases reported injection drug use
- 31% co-infected with hepatitis B and/or C

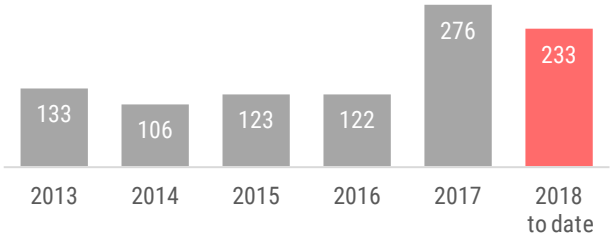
The number of reported hepatitis A cases has steadily increased each month since April 2018 and has remained at or above the previous 5-year-average all year.



The 56 hepatitis A cases in September were reported among the **14 counties outlined in black**. The central Florida region has seen the highest hepatitis A activity levels so far this year. In 2018, 81% of cases have been acquired locally in Florida.



From January 1, 2018 through September 30, 2018, 233 hepatitis A cases were reported among 23 counties. The number of reported hepatitis A cases more than doubled from 2016 to 2017 after remaining relatively constant in previous years. Thus far in 2018, it appears case counts will exceed those seen in 2017.



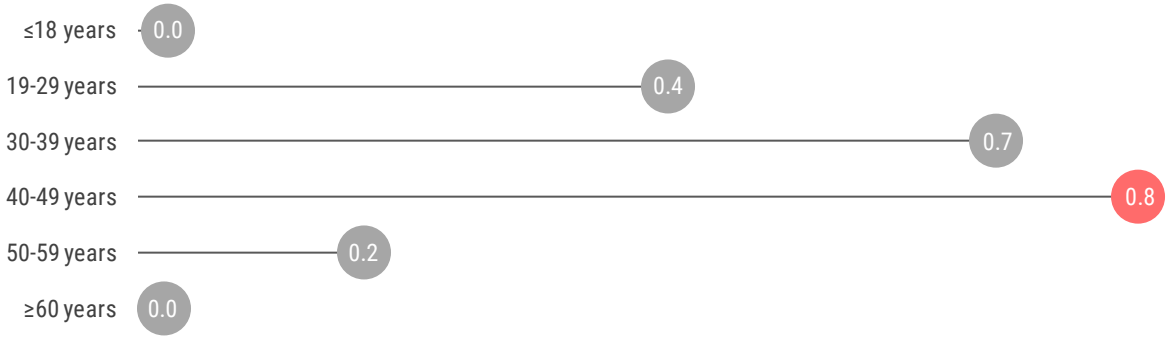
99%

never vaccinated

The best way to prevent hepatitis A infection is through vaccination. In 2018, 99% of hepatitis A cases had never received a documented dose of hepatitis A 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.

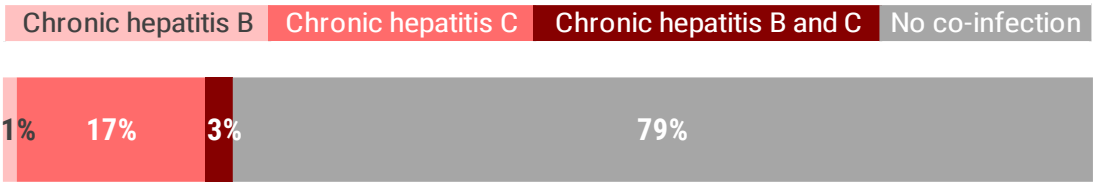
In September, 6 (11%) of 56 total cases of hepatitis A were linked to other cases. Three cases were linked to other cases by **household contact**, two cases by **sexual contact**, and 1 case by **non-sexual personal contact**.

In September, the incidence rate was highest among **adults age 40-49 years old** at **0.8 cases** per 100,000 population. Cases were reported primarily among **men** (63%) and persons who identify as **non-Hispanic white** (71%).



The most common risk factor among cases reported in September was **injection drug use** in 23 cases, followed by non-injection drug use in 21 cases. In September, 1 case was reported among MSM, but 24 cases among MSM have been reported for all of 2018.

In 2018, 3 (1%) of 233 total cases were co-infected with chronic hepatitis B, 40 (17%) cases were co-infected with chronic hepatitis C, and 6 (3%) were co-infected with both chronic hepatitis B and C. In September, 31% of cases were co-infected with chronic hepatitis B and/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 (CDC) has been monitoring outbreaks in ten states among persons who use drugs and/or 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 here: www.cdc.gov/hepatitis/outbreaks/2017March-HepatitisA.htm.

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/vpd. For more information on the data sources used in Florida for hepatitis A surveillance, see page 9.

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 ≥2 cases exposed within the same household.
  - Pertussis and mumps 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.
  - Measles outbreaks are defined as any person acquiring measles while in Florida.
- For more information about reportable diseases, please visit 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.

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.

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.
- 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.