Vaccine-Preventable Disease Surveillance Report

November 2018

Pertussis

- **Pertussis activity was similar to last month.** Overall, the total number of cases was slightly above the previous 5-year average.
- 31 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.

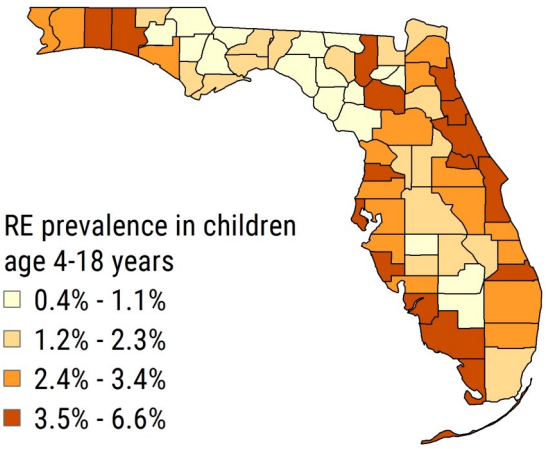
Varicella

- **Varicella activity increased from last month** and was above the previous 5-year average.
- 94 cases and one outbreak were reported.
- Incidence was highest among infants <1 year old.
- 29% 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.
- 100 cases were reported in November.
- Incidence was highest among adults 30-39 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 to18 years old is 3.0% with **individual counties ranging from 0.4% to 6.6%**. In November 2017, the statewide prevalence was 2.6%, 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 November 30, 2018.

Posted June 11, 2019 on the Bureau of Epidemiology (BOE) website: FloridaHealth.gov/VPD
Produced by the BOE, Florida Department of Health
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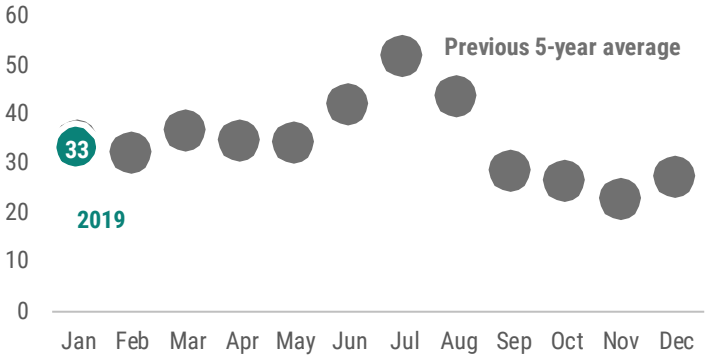
Pertussis Surveillance
November 2018

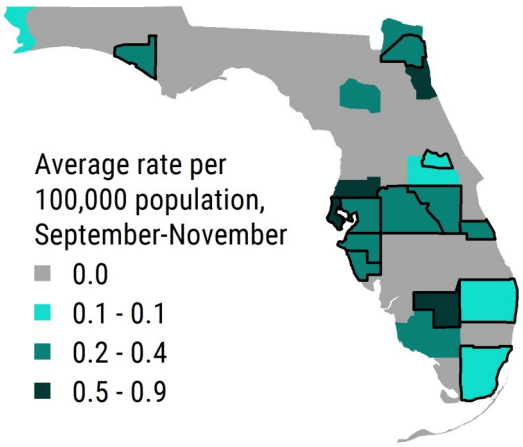
Key Points

- 31 cases
- 0 outbreaks
- Average of 3 contacts per case
- <1 year olds had highest incidence
- 71% cases not up-to-date or unknown immunizations

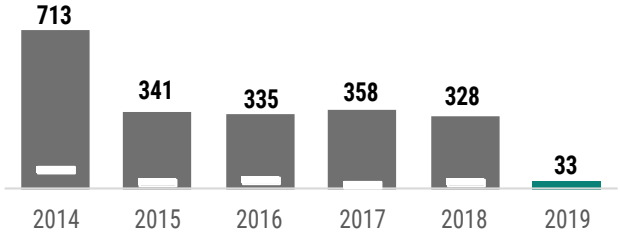
The number of pertussis cases reported in November was similar to the previous month and was slightly above the previous 5-year average. In general, more pertussis cases are reported during the summer months.



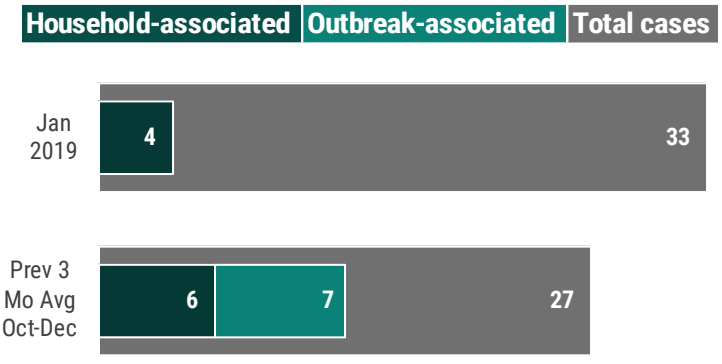
The 31 pertussis cases in November were reported among the **13 counties outlined in black**. During the previous 3 months (September through November), the average county rate has varied throughout the state.



From January 1, 2018 through November 30, 2018, 311 pertussis cases were reported in 35 counties.
The number of cases as of November 30 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 November, 11 (35%) of 31 total pertussis cases were associated with transmission within households and 4 (13%) 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 new pertussis outbreaks were reported in November. This month, 4 additional cases were added to an outbreak in a school in Pinellas County which, to date, consists of 10 reported cases.

Eight pertussis outbreaks have been reported in 2018. Outbreak settings include schools (4 outbreaks), daycares (2 outbreaks), workplace (1 outbreak), and extended family (1 outbreak).

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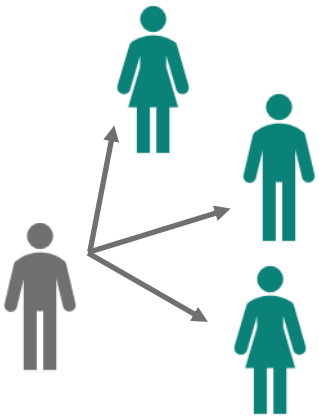
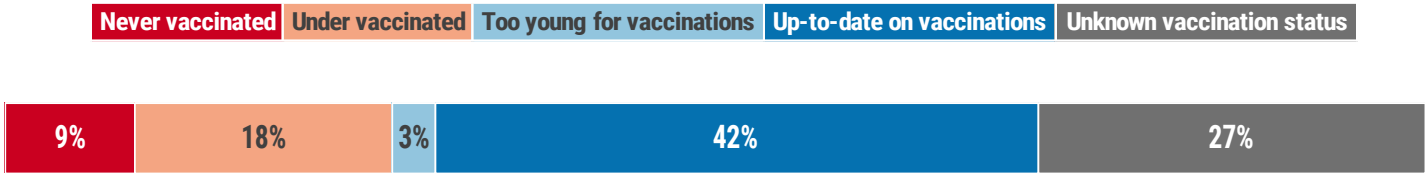
For each pertussis case reported in November, there was an average of 3 contacts for whom antibiotics were recommended to prevent illness. For those diagnosed with pertussis, antibiotics can shorten the amount of time they are contagious to others. Antibiotics can also be used to prevent illness in those who have been exposed to someone with pertussis while they are contagious.

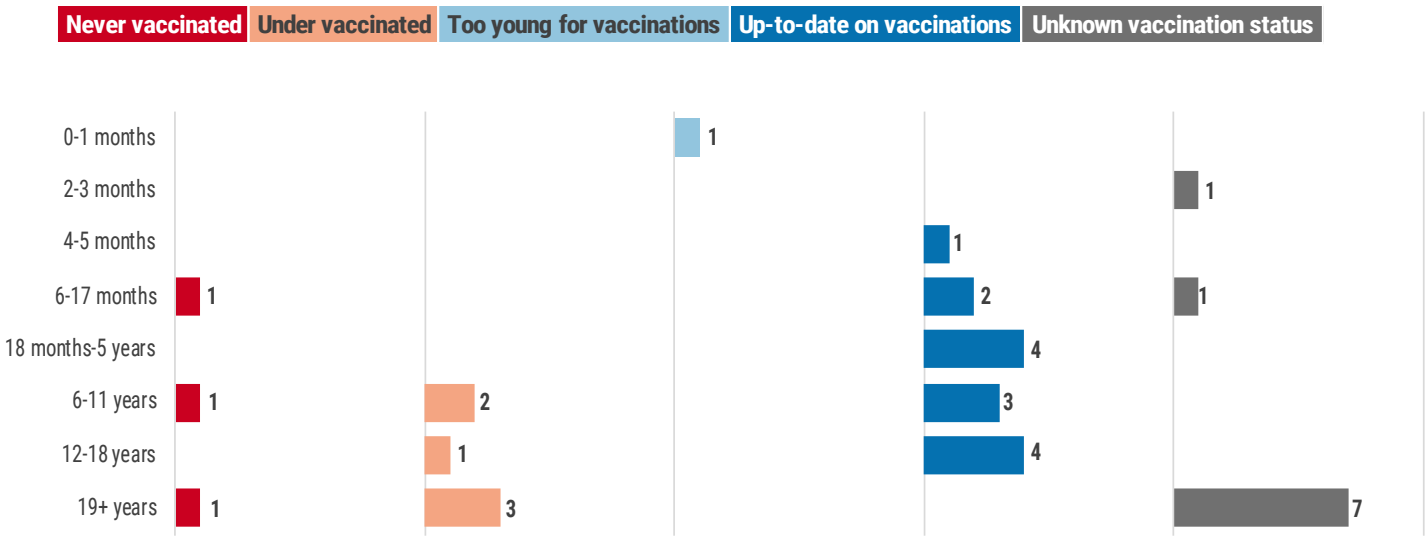


In November, the rate of pertussis was highest among infants <1 year old at 1.3 cases per 100,000 population, which is consistent with previous months. Infants experience the greatest burden of pertussis infections, not only in number of cases but also in severity. Infants <2 months old are too young 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 November, 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 infants and children aged 6 months to 5 years with pertussis 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

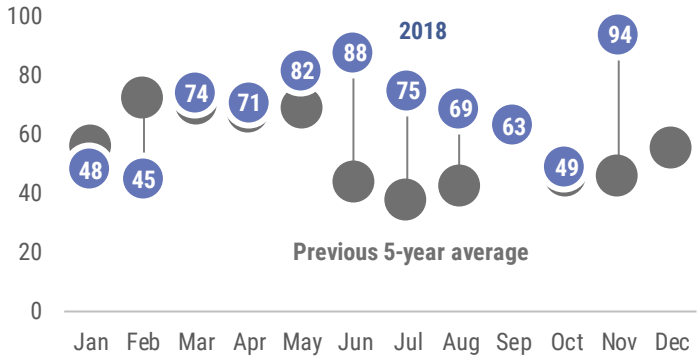
To learn more about pertussis, please visit FloridaHealth.gov/Pertussis. For more information on the data sources used in Florida for pertussis surveillance, see the last page of this report.

Varicella Surveillance
November 2018

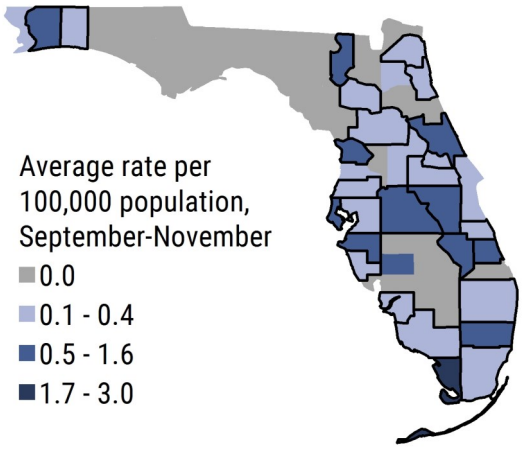
Key Points

- 94 cases
- 1 outbreak
- <1 year olds had highest incidence
- 55% cases not up-to-date or unknown immunizations

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

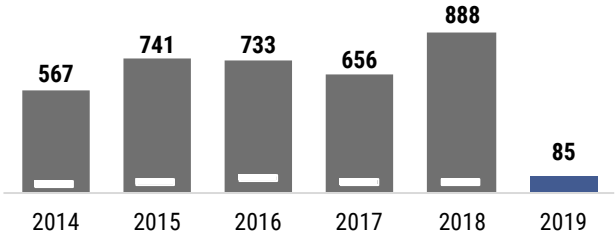


The 94 varicella cases in November were reported among the **27 counties outlined in black**. During the previous 3 months (September through November), the average county rate varied throughout the state.

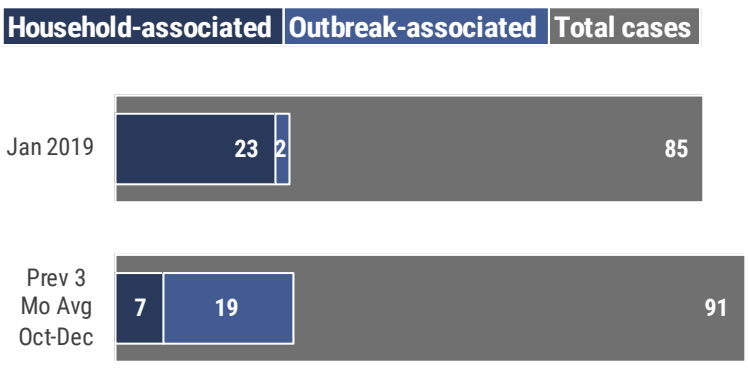


From January 1, 2018 through November 30, 2018, 758 varicella cases were reported in 51 counties.

The number of cases as of November 30 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 above the total number of cases in previous years.



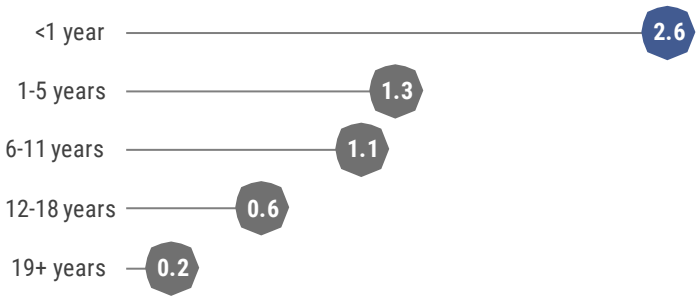
In November, 15 (15%) of 94 total cases were associated with transmission within households and 5 (5%) cases were outbreak-associated. For most varicella cases, exposure to other known cases is never identified, and they are not able to be linked to outbreaks.



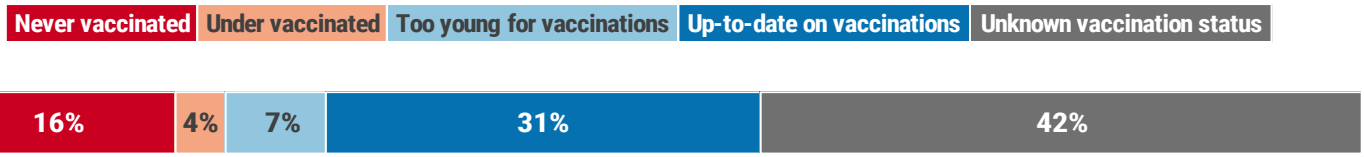
One varicella outbreak was reported in November. This outbreak was reported in a school in Polk County and to date, consists of 6 cases.

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

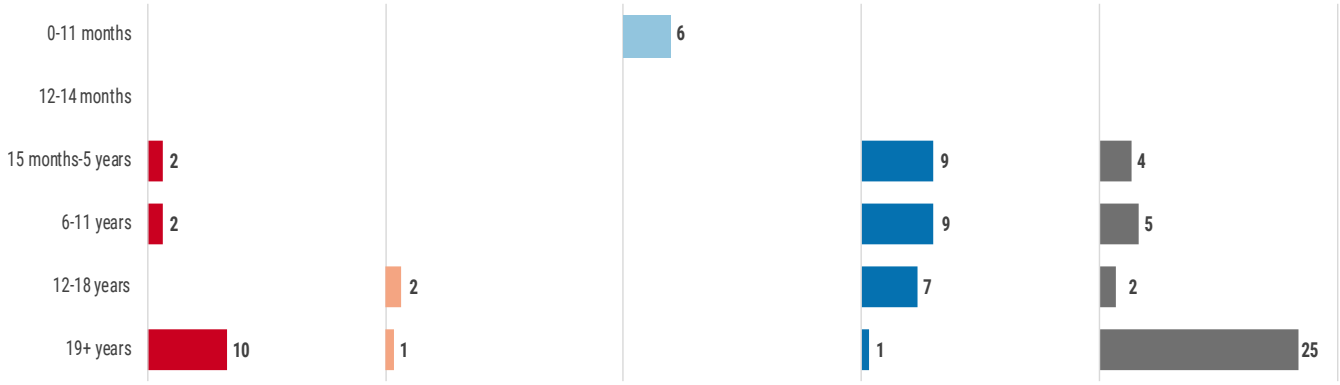
In November, the varicella rate was highest among infants <1 year old at **3.9 cases** per 100,000 population, which is consistent with previous months. Infants <1 year old are too young to receive varicella vaccination, which is why vaccination of siblings, parents, grandparents, and other age groups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



Vaccination is the best way to prevent varicella infections. In November, 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. 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, 42% 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

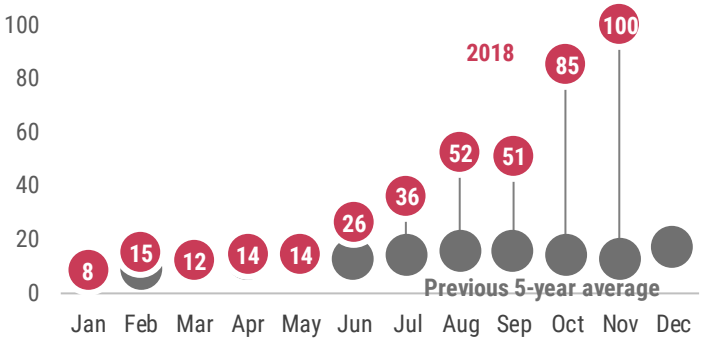
To learn more about varicella, please visit FloridaHealth.gov/Varicella. For more information on the data sources used in Florida for varicella surveillance, see the last page of this report.

Hepatitis A Surveillance
November 2018

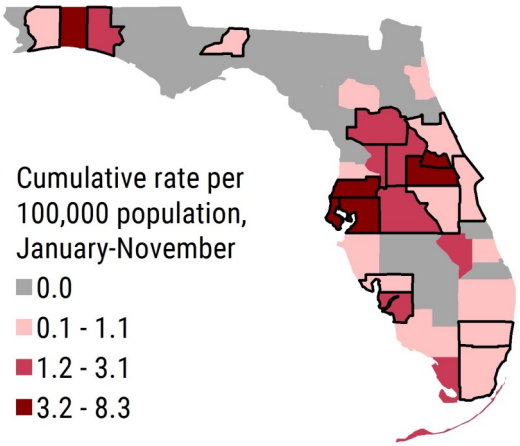
Year to Date Key Points

- 413 cases
- 15% cases linked to other cases
- 30-39 year olds had highest incidence
- 23% co-infected with hepatitis B or C

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 November increased from the previous month and was the highest reported to date in 2018.

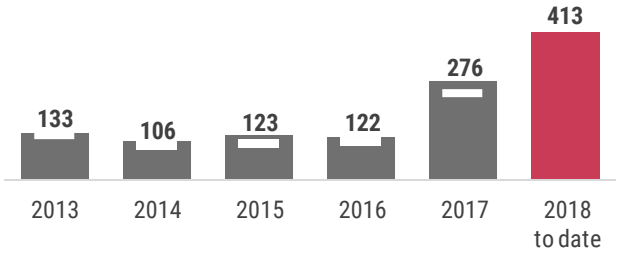


The 100 hepatitis A cases in November were reported in the **18 counties outlined in black**. The central Florida region has the highest hepatitis A activity levels so far this year. In 2018, 95% of cases have likely been acquired locally in Florida.



From January 1, 2018 through November 30, 2018, 413 hepatitis A cases were reported in 30 counties.

The number of cases as of November 30 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.



98%

never vaccinated

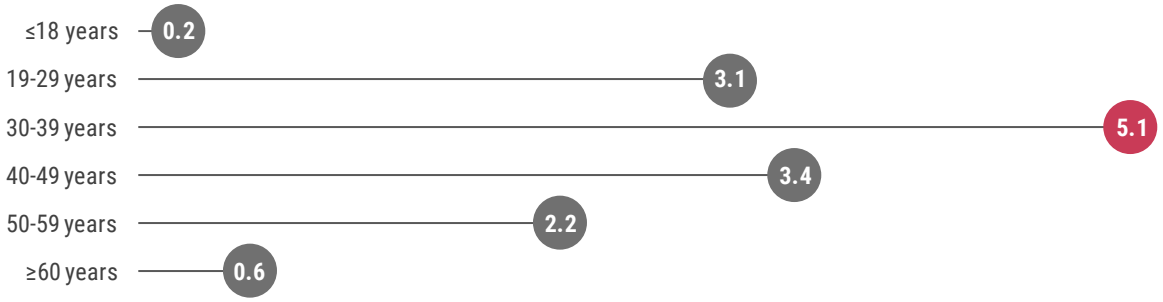
The best way to prevent hepatitis A infection is through vaccination. So far in 2018, 98% of people with hepatitis A had never received a documented dose of hepatitis A vaccine. In November, 95% of infected people had not received the vaccine. Hepatitis A vaccine is recommended for all children at age 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.

Florida HEALTH

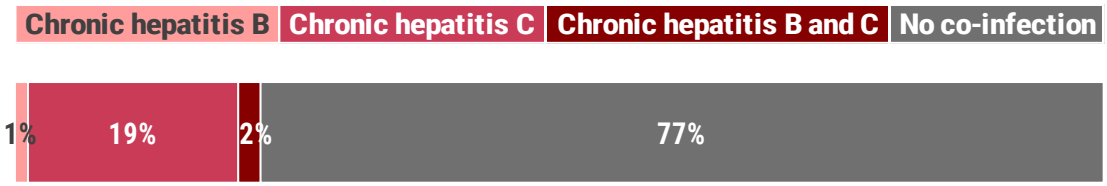
So far in 2018, **60 (15%)** of **413 total cases** of hepatitis A were **epidemiologically (epi) linked to other cases**. In November, 10% of cases were linked to other cases.

In November, 50% of relationships were **household contact**, 13% **sexual contact**, 31% **non-sexual personal contact**, and 6% unknown.

So far in 2018, the incidence rate was highest among **adults aged 30-39 years old** at **5.1 cases** per 100,000 population. In November, the incidence rate was highest among adults aged 30-39 years old at 1.2 cases per 100,000 population. In 2018, cases were reported primarily among **men** (68%) and persons who identify as **non-Hispanic white** (75%).



Thus far in 2018, 5 (1%) cases were co-infected with chronic hepatitis B, 80 (19%) cases were co-infected with chronic hepatitis C, and 8 (2%) cases were co-infected with both chronic hepatitis B and C. In November, 28% 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 here: 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

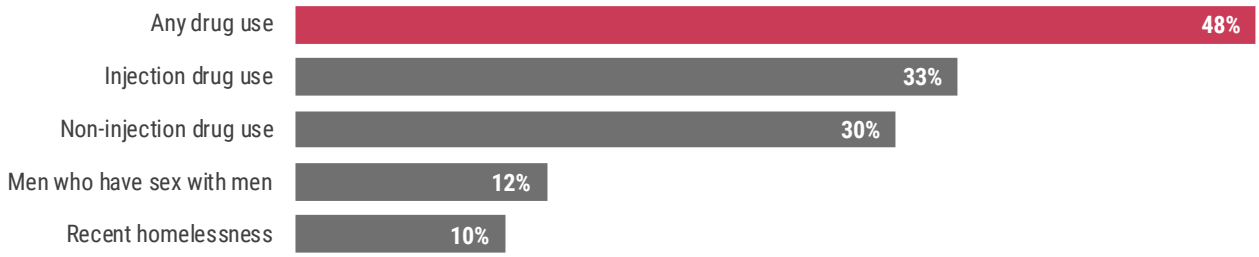
To learn more about hepatitis A, please visit FloridaHealth.gov/HepA. For more information on the data sources used in Florida for hepatitis A surveillance, see the last page of this report.

Statewide Response to the Increase in Hepatitis A Cases

Several Florida counties have experienced ongoing local transmission of hepatitis A since 2017. Since January 2018, most of Florida's cases (n=393) have likely been acquired in Florida. Cases likely acquired in Florida share several common risk factors including drug use (both injection and non-injection drugs), identifying as men who have sex with men, and experiencing homelessness. **Individuals with any of these risk factors should receive the hepatitis A vaccine, and providers are encouraged to actively offer the hepatitis A vaccine to individuals at risk. Vaccination is the best way to prevent hepatitis A infection.**

For additional information, please see the health advisory issued by the Florida Department of Health in November 2018, available at: FloridaHealth.gov/about-the-department-of-health/about-us/sunshine-info/advisories/_documents/112818-fl-hav-advisory-11-26-lws-edits-all-accepted-eo-format-final.pdf.

Over half (56%) of the 393 cases likely acquired in Florida reported at least one of the risk factors below, while 44% reported no or unknown risk factors. The most commonly identified risk factor was **drug use**, reported by 187 (48%) cases. Injection drug use was slightly more common than non-injection drug use. Although low overall, homelessness was reported by 20% of cases in November. Homelessness was not routinely recorded prior to October 2018.

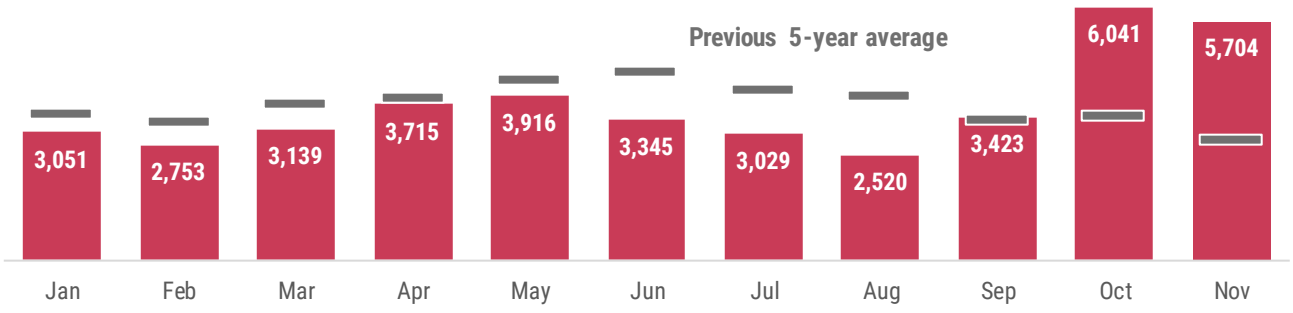


Hepatitis A infections can be severe, leading to inpatient hospitalization and sometimes death. So far in 2018, 281 (72%) cases likely acquired in Florida have been hospitalized because of their hepatitis A infection, and there were 2 hepatitis A associated deaths identified.

72% **hospitalized**

2 **deaths**

The Florida Department of Health is actively working to vaccinate those most at risk for hepatitis A infection. In recent months, **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**, has increased in recent months.



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 ≥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 FloridaHealth.gov/DiseaseReporting.
- For more information about Florida's guides to surveillance and investigation, including disease-specific surveillance case definitions, please visit 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 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.
- 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.