Vaccine-Preventable Disease Surveillance Report

August 2018

Pertussis

- **Pertussis activity was similar to last month.** Overall, the total number of cases remained below the previous 5-year average.
- 39 cases and 1 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.

For more information, see pages 2-4.

Varicella

- **Varicella activity decreased from last month** but remained above the previous 5-year average for the sixth month in a row.
- 69 cases and 1 outbreak were reported.
- Incidence was highest among infants <1 year old.
- This month, 44% of cases were not up-to-date on their varicella vaccinations or had unknown vaccination status.

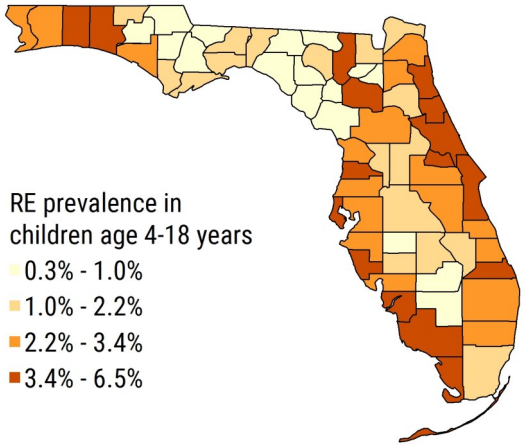
For more information, see pages 5-7.

Measles

- **Measles activity increased from last month.** An outbreak of 7 confirmed cases was identified in August.
- All cases were unvaccinated.
- A total of 1,476 contacts who had potential exposure to measles were identified in 5 main settings; most contacts were in health care settings.

For more information, see pages 8-9.

For all vaccine-preventable diseases, timely and complete vaccination is the best way to prevent infection. 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 August 2017, the statewide prevalence was 2.5%, and the prevalence has gradually increased each month since.

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 August 31, 2018.

Posted November 27, 2018 on the Bureau of Epidemiology (BOE) website: www.floridahealth.gov/VPD
Produced by the BOE, Florida Department of Health
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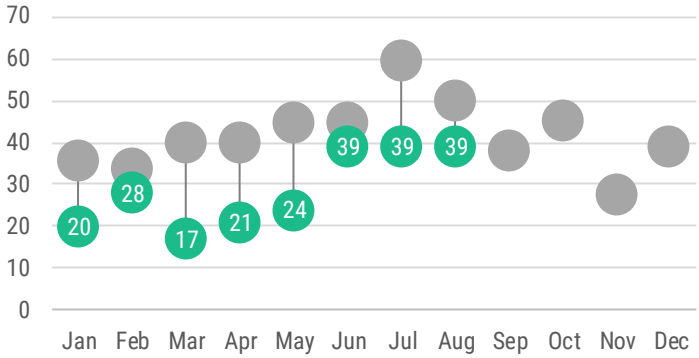
Pertussis Surveillance
August 2018

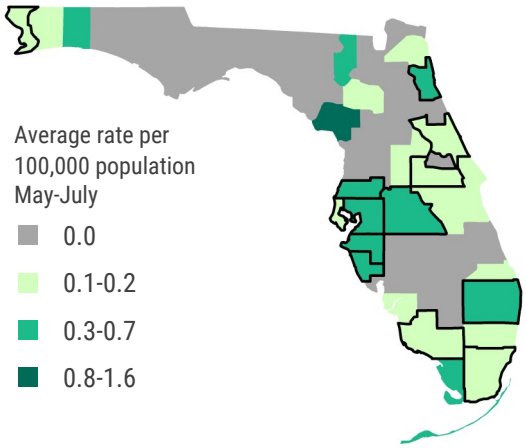
August Key Points

- 39 cases
- 1 outbreak
- Average of 2 contacts per case
- <1 year olds have highest incidence
- 44% cases never/ under vaccinated

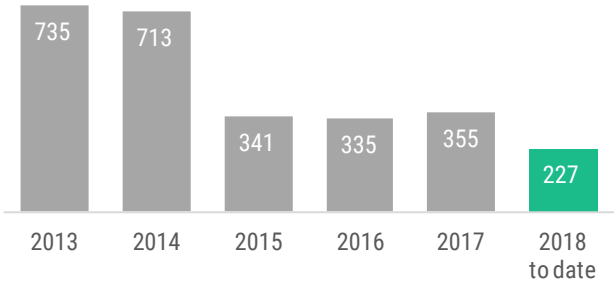
The number of pertussis cases reported in August was the same as the previous 2 months and remained below the previous 5-year-average. In general, more pertussis cases are reported during the summer months.



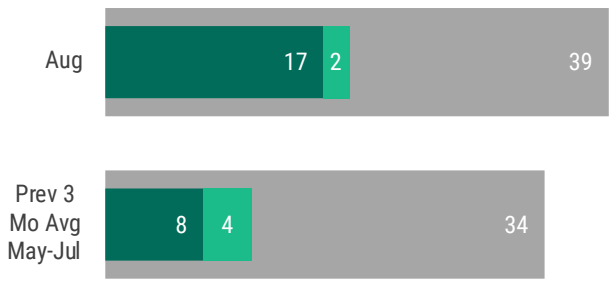
The 39 pertussis cases in August were reported among the **14 counties outlined in black**. During the previous 3 months (May through July), the average county rate has varied throughout the state.



From January 1, 2018 through August 31, 2018, 227 pertussis cases were reported in 32 counties. Since 2014, the annual number of reported pertussis cases has 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 August, 17 (44%) of 39 total cases were associated with transmission within households and 2 (5%) 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.



One pertussis outbreak was reported in August. The outbreak consisted of 2 cases in a child daycare.

Including the August outbreak, there have been 7 pertussis outbreaks reported in 2018. Outbreak settings include school (3 outbreaks), daycare (2 outbreaks), work place (1 outbreak), and extended family (1 outbreak).

For each case reported in August, there was an average of 2 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.

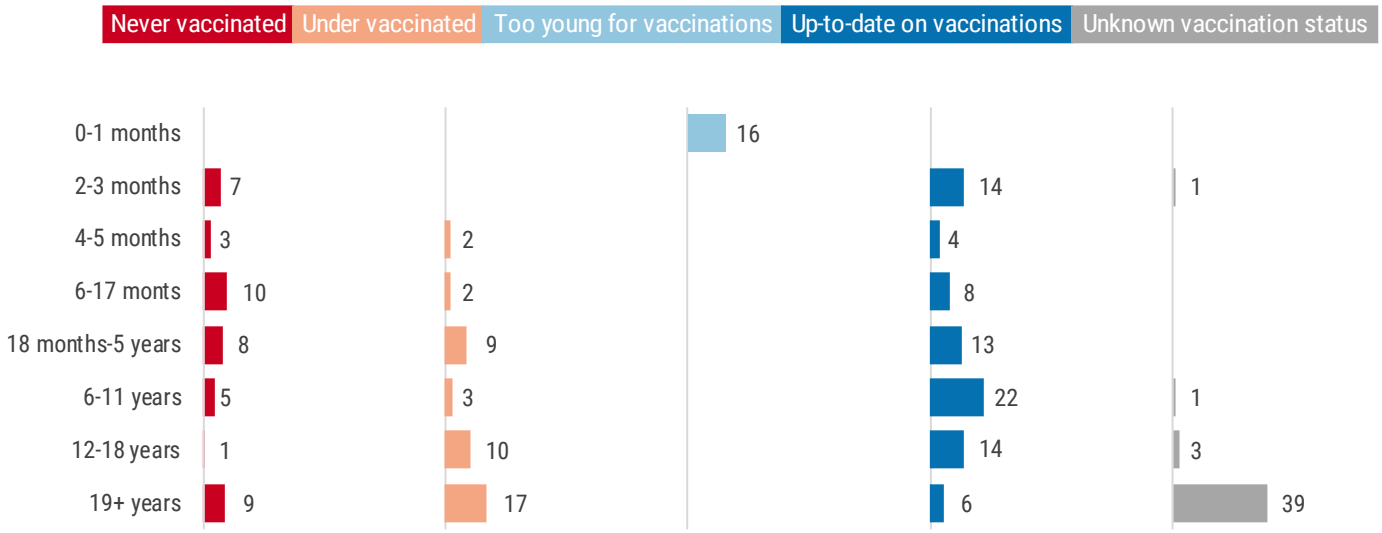
In August, the incidence rate was highest among infants <1 year old at 4 cases per 100,000 population, which is consistent with previous months. Infants experience the greatest burden of pertussis infections, not only in number of cases but also in severity. Infants <2 months old are too young to receive 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 August, 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. Although individuals who have been vaccinated can still get pertussis, **complete and timely vaccination remains the best way to prevent pertussis and severe complications**.

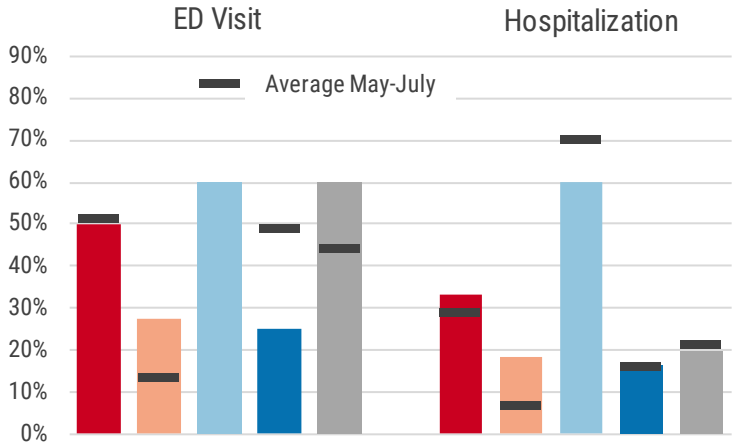
Too young for vaccination | Never vaccinated | Under vaccinated | Up-to-date on vaccinations | Unknown vaccination status

In August, 13% of cases were too young for vaccination. 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.

Over half of 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 10 for links to vaccination schedules recommended by the Centers for Disease Control and Prevention (CDC).



In August and the **previous 3 months**, cases who were **too young for vaccination** were more likely to visit the emergency department (ED) and require inpatient hospitalization. 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.



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

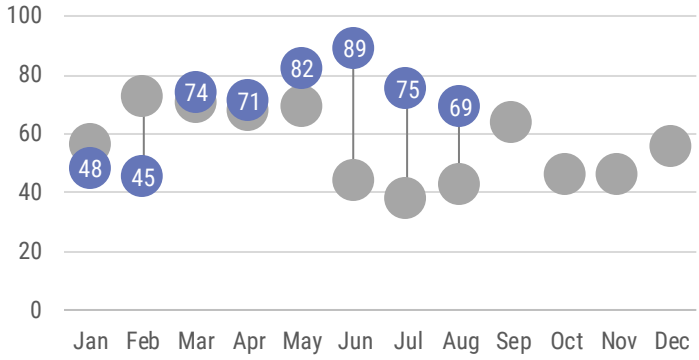
To learn more about pertussis, please visit www.floridahealth.gov/pertussis.For more information on the data sources used in Florida for pertussis surveillance, see page 10.

Varicella Surveillance
August 2018

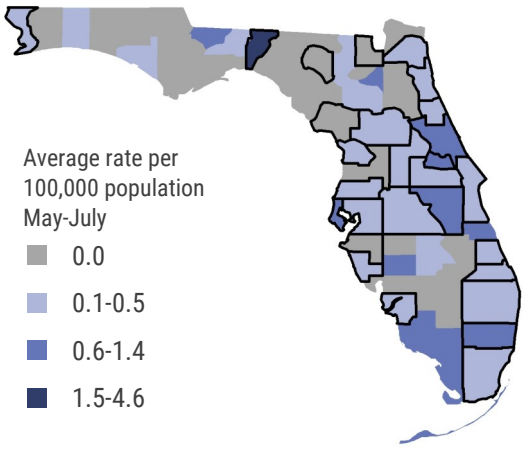
August Key Points

- 69 cases
- 1 outbreak
- <1 year olds have highest incidence
- 44% cases no/ unknown vaccination

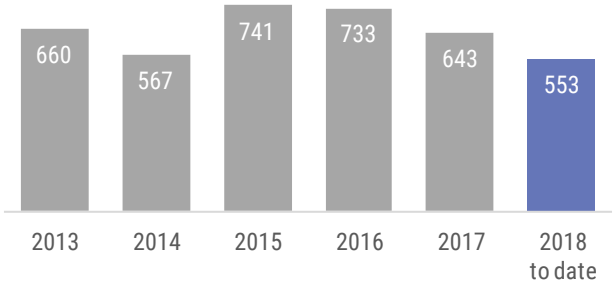
The number of reported varicella cases in August decreased from last month but remained above the previous 5-year-average. In general, more varicella cases are reported during the late winter and summer months.



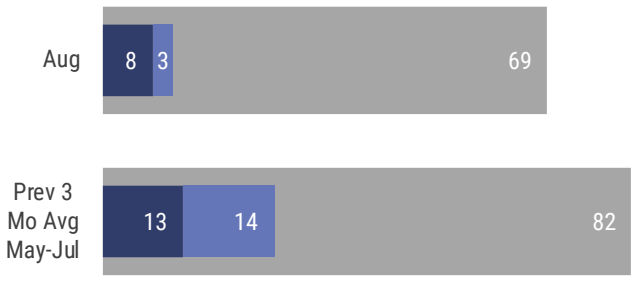
The 69 varicella cases in August were reported among the **28 counties outlined in black**. During the previous 3 months (May through July), the average county rate has varied throughout the state.



From January 1, 2018 through August 31, 2018, 553 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 August, 8 (12%) of 69 total cases were associated with transmission within households and 3 (4%) 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 August that included cases previously reported in July. The outbreak consisted of 5 cases, and transmission occurred within a correctional facility.

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

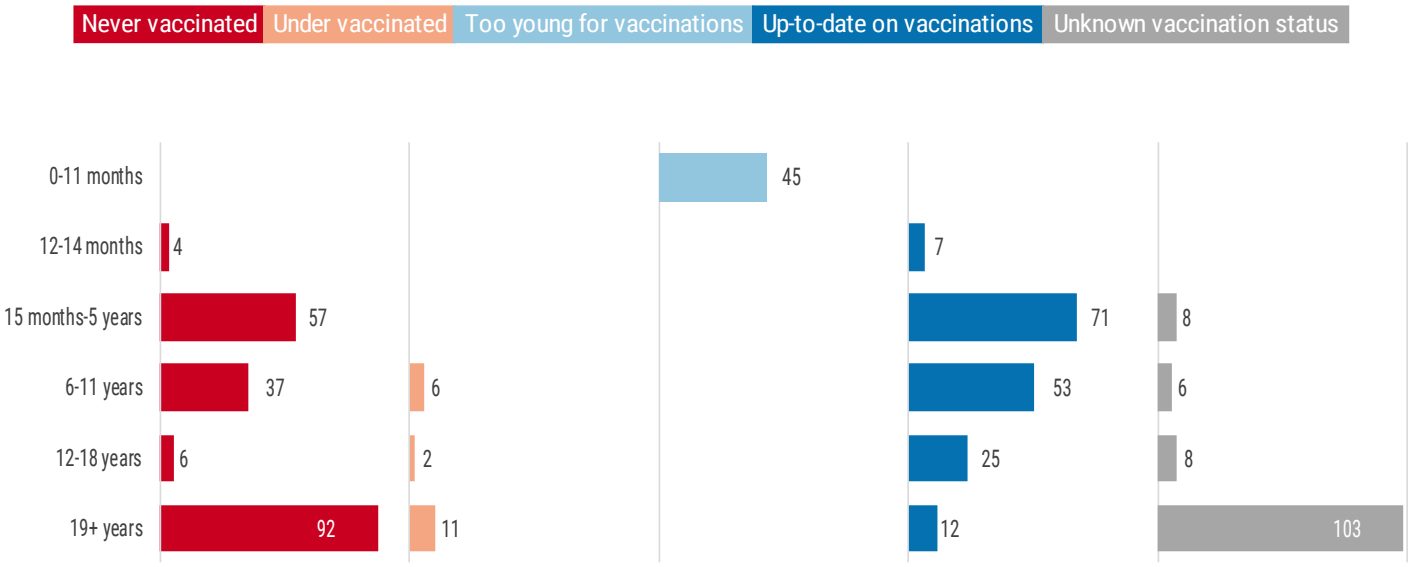
In August, the incidence rate was highest among infants <1 year old at 4 cases per 100,000 population, which is consistent with previous months. Infants <1 year old are too young to receive varicella vaccination, which is why vaccination of grandparents, parents, siblings, and other age groups is so important to help prevent infection in infants.

Vaccination is the best way to prevent varicella infections. In August, almost half of individuals reported with varicella had not received the recommended number of varicella vaccinations for their age or had unknown vaccination status. In general, those who have received at least 1 varicella vaccination have less severe outcomes than those who have never been vaccinated.

Although individuals who have been vaccinated can still get varicella, **complete and timely vaccination remains the best way to prevent varicella and severe complications**. In August, **13% of cases were too young for vaccination**. Vaccination against varicella is important for infants, children, teenagers, and adults.

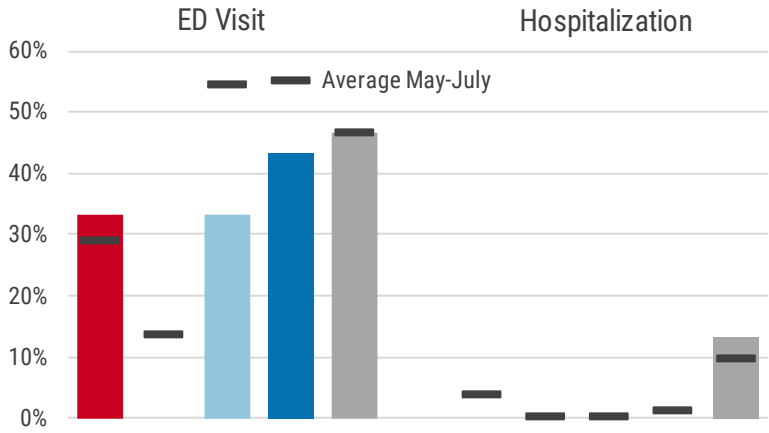
Never vaccinated | **Under-vaccinated** | **Too young for vaccination** | **Up-to-date on vaccinations** | **Unknown vaccination status**

42% of children aged 15 months to 5 years were not up-to-date on their varicella vaccinations. **In general, those who have received at least 1 varicella vaccination have less severe outcomes than those who have never been vaccinated.** Almost half of adults ≥19 years old had unknown vaccination status for varicella. See page 10 for links to CDC recommended vaccination schedules.



In August, cases with **unknown vaccination status** were more likely to visit the emergency department (ED) or require inpatient hospitalization.

In general, those who received at least 1 dose of varicella vaccination, even if they later develop disease, have less severe outcomes than those who have never been vaccinated.



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 10.

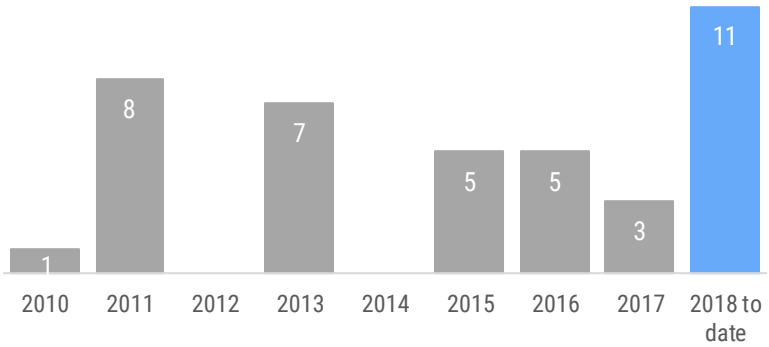
Measles Surveillance
August 2018

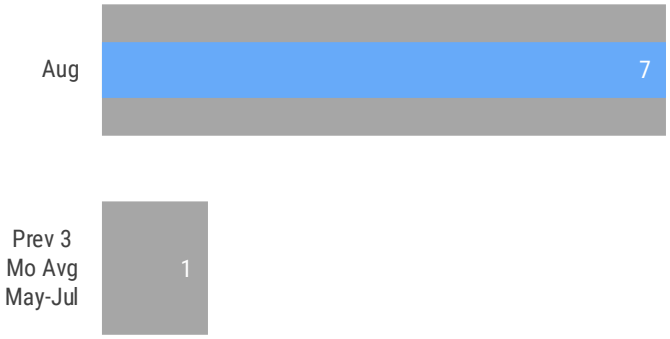
August Key Points

- 7 cases
- 1 outbreak
- 1, 476 contacts identified
- 0% cases vaccinated for measles

From January 1, 2018 through August 31, 2018, 11 measles cases were reported in 3 counties. Fewer than 10 cases were reported each year from 2010 to 2017.

To date in 2018, a total of 11 Florida residents and 3 visitors with measles have spent time in Florida while infectious.





In August, all 7 reported cases were associated with an outbreak in Pinellas County. Heightened response during measles investigations helps to connect cases.

The outbreak reported in August is the only outbreak in 2018. Transmission occurred across multiple settings.

A total of 1,476 people who had possible exposure to the 7 measles cases in Pinellas County have been identified so far. There were 5 main exposure settings, with the most contacts identified in health care settings.

Contact investigations are conducted to determine the vaccination status of those potentially exposed to measles, identify new cases, and prevent further transmission.

- 35 Home
- 100 Religious gathering
- 686 Health care facility
- 606 Work
- 49 Summer camp

Vaccination is the best way possible to prevent measles infections. In August, all 7 cases were unvaccinated for measles.

Due to generally high vaccination rates, measles in Florida is rare but occurs every year and is most often associated with international travel. One case of the 7 reported this month had international travel.

0%
vaccinated

National activity

Even though measles has been eliminated in the United States, cases occur every year, mostly among unvaccinated individuals. As of August 11, 124 confirmed cases of measles have been reported by 22 states and the District of Columbia in 2018. In 2017, 118 cases were reported to CDC. In 2017, Minnesota experienced a large outbreak of measles in a community with low measles vaccination coverage that consisted of 65 cases. The 2-dose measles vaccination schedule has been successful at decreasing cases, and measles was eliminated from the United States in 2000.

International activity

Recently, increased measles activity has been reported all over the world. In May 2018, multiple measles outbreaks were reported in the Americas, Asia, Africa, Europe, and the Pacific.

The CDC has issued a Level 1 Travel Alert for several countries with measles outbreaks, including Greece, England, Serbia, Indonesia, Democratic Republic of the Congo, Italy, Ukraine, the Philippines, Romania, and France. Travelers to these countries should make sure they are vaccinated against measles with the MMR (measles, mumps, and rubella) vaccine. For more information, please visit wwwnc.cdc.gov/travel/notices.

Measles surveillance goals

- Prevent transmission and severe disease, and initiate control measures
- Monitor effectiveness of immunization programs and vaccines

To learn more about measles, please visit www.floridahealth.gov/measles. For more information on the data sources used in Florida for measles surveillance, see page 10.

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, mumps, and measles 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 and varicella case counts include both confirmed and probable cases, while measles case counts include only confirmed cases.
- CHD epidemiologists also report outbreaks of pertussis, varicella, measles, and mumps 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.
- For the full article on a Minnesota outbreak of measles, please visit www.cdc.gov/mmwr/volumes/66/wr/mm6627a1.htm.

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.