Pertussis Cases by Month Reported

Map 2 shows the previous three-month average of pertussis incidence rates per 100,000 population, December 2017 through February 2018 (green shading). Counties that have had a recent case in March 2018 are highlighted in pink.

Pertussis surveillance goals:
- Pertussis surveillance is conducted to identify cases to limit transmission in settings with infants or others who may transmit pertussis to infants, and identify and prevent outbreaks.
- Surveillance is also conducted to 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. For more information on the data sources used in Florida for pertussis surveillance, see page 11.

Pertussis Case by Month Reported

Figure 2 shows the number of confirmed and probable cases of pertussis reported into Merlin, January 2018 through March 2018 and the previous five-year average.

In March, the number of reported pertussis cases decreased from February and remained below the five-year average. In general, the number of reported pertussis cases tends to be highest during the summer months.
Figure 3 shows the number of confirmed and probable cases that were associated with at least one other case and the total number of confirmed and probable cases as reported into Merlin, March 2018 and the previous three-month average.

In March, five (28%) cases were associated with transmission within households.

Outbreak Summary:

In March, no outbreaks of pertussis were reported. No pertussis outbreaks have been reported thus far in 2018. See page 11 for outbreak definitions.

Figure 4 shows the number of confirmed and probable cases of pertussis, as reported into Merlin, and the number of contacts who were recommended antibiotics to prevent illness, March 2018 and 2018 to date.

On average, for each case reported in March there were two people exposed to the case who were recommended antibiotics to prevent illness.

Figure 5 shows the age-specific incidence rates of confirmed and probable cases of pertussis, as reported into Merlin, January through March 2018.

In March, the incidence rate was highest among infants less than one year old, 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 less than two 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.
Pertussis Surveillance

Vaccination History for Pertussis Cases
UTD = up-to-date

**Figure 6** shows the vaccination status of pertussis cases by age group for confirmed and probable cases of pertussis, as reported into Merlin, January through March 2018 (n=66).

**Half or more of individuals in the 4-5 months and 6-17 months age groups were not 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.

See page 11 for links to the CDC recommended vaccination schedules.

Pertussis Cases in Vaccinated Individuals
UTD = up-to-date

**Figure 7** shows the percent of confirmed and probable pertussis cases who were up-to-date on their pertussis vaccinations, as reported into Merlin, January through March 2018 and the previous five-year average. **Figure 8** shows the percent of these cases who were under vaccinated during the same time periods.

**Although individuals who have been vaccinated can still get pertussis, vaccination remains the best way to prevent pertussis and severe complications.**

**Pertussis Outcomes**
UTD = up-to-date, ED = emergency department

**Figure 9** shows the percent of confirmed and probable cases of pertussis with select outcomes by vaccination status, as reported into Merlin, March 2018 and the previous three-month average.

**In March, cases who were under-vaccinated were more likely to visit the emergency department. Those who were never vaccinated and too young for vaccination were more likely to require inpatient hospitalization.**

In general, older individuals are more likely to experience paroxysmal cough while younger individuals are more likely to experience posttussive vomiting and whoop. Primarily infants less than one year old experience apnea.
Case Data

- Pertussis, varicella, and mumps are reportable diseases in Florida. Case information is documented by county health department (CHD) epidemiologists in Merlin, Florida’s reportable disease surveillance system.
- CHD epidemiologists also report outbreaks of pertussis, varicella, and mumps into Merlin.
  - Household-associated cases are defined as two or more cases exposed within the same household.
  - Pertussis and mumps outbreaks are defined as two or more cases associated with a specific setting outside of a household.
  - Varicella outbreaks are defined as five or more cases associated with a specific setting outside of a household.
- Current case information is preliminary and may change as more data are received. The most recent data available are displayed in this report.
- 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 probable and confirmed 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 from cases are from Merlin, as identified 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.
- Cases are considered up-to-date 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. Cases 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 more information about immunization schedules, please visit https://www.cdc.gov/vaccines/schedules/index.html.