

Summary

April 2018

State mumps activity:

- **Two confirmed and one probable mumps cases were reported among two counties in April.**
 - Mumps cases were elevated from April 2017 through March 2018 with a peak of 20 cases reported in August 2017; trends for 2018 will continue to be monitored closely.
 - From January 1, 2018 through April 30, 2018, 12 confirmed and 11 probable cases of mumps were reported among seven of Florida's 67 counties.
- In Florida, the number of reported mumps cases has remained relatively low over the past five years but has steadily increased since 2015 (10 cases), with a large spike in 2017 (70 cases). The last time the number of reported cases reached 2017 levels was in the 1990s.
- **No outbreaks of mumps were reported in April.**
 - In 2017, the majority of mumps cases were associated with outbreaks or household clusters.
 - While mumps outbreaks can occur in highly-vaccinated communities, high vaccination coverage limits the size, duration, and spread of outbreaks.
- **In April, the highest incidence of mumps was in children age 6-11 years old.**
- **Vaccination is the best way to prevent mumps infections.** In April, 66% of cases were not up-to-date on their mumps vaccinations or had an unknown vaccination status.
- In recent months, individuals not up to date on mumps vaccinations were more likely to visit the emergency department and require inpatient hospitalization. In general, those who have received at least one mumps vaccination even if they later develop disease suffer less severe outcomes than those who have never been vaccinated.
- To learn more about mumps, please visit <http://www.floridahealth.gov/mumps>.

National mumps activity:

- Since 1989 when the two dose vaccination program was introduced, the number of mumps cases has fluctuated from a few hundred to a few thousand per year. Some years had higher numbers of cases than others mainly because of several large outbreaks in close-contact settings.
- In 2016, there were over 6,000 cases of mumps reported, and in 2017 there were over 5,600 cases reported. Since 2013, the 18-22 year age group has had the highest incidence of mumps, largely driven by outbreaks. About half of the outbreaks reported since 2016 have been associated with colleges and universities, primarily affecting young adults.
- The Advisory Committee on Immunization Practices recently recommended a third mumps virus-containing vaccine for certain populations identified by public health authorities as being at increased risk of mumps because of an outbreak. To learn more please visit <https://www.cdc.gov/mmwr/volumes/67/wr/mm6701a7.htm>.

Surveillance goals:

- Mumps surveillance is conducted to identify and control outbreaks and monitor trends and severe outcomes.
- Surveillance is also conducted to monitor effectiveness of immunization programs and vaccines. For more information on the data sources used in Florida for mumps surveillance, see page 11 ►

Map 4

Map 4 shows the cumulative mumps incidence rates per 100,000 population, January through April 2018 (green shading). Counties with one or more cases reported in April 2018 are highlighted in pink.

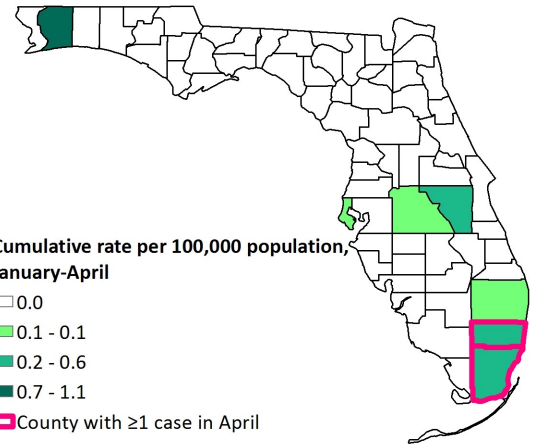
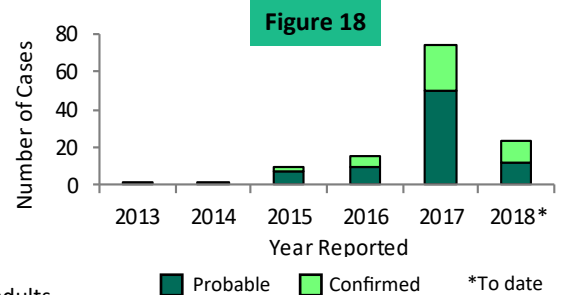


Figure 18 shows the number of confirmed and probable cases of mumps reported into Merlin, 2013 through April 2018.



Mumps Cases by Month Reported

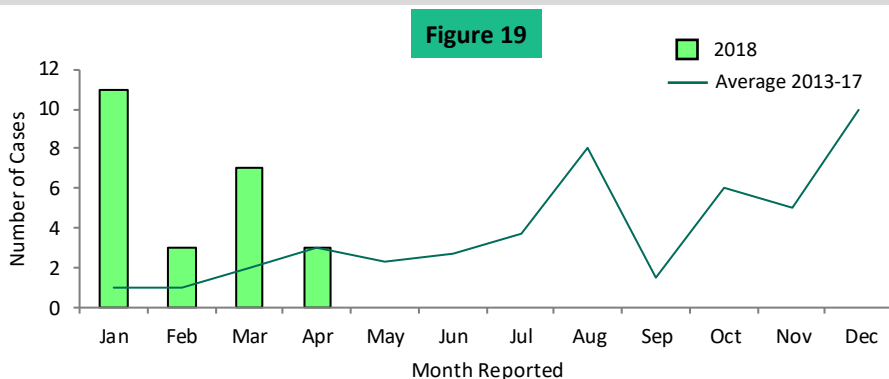


Figure 19 shows the number of confirmed and probable cases of mumps reported into Merlin, January through April 2018 and the previous five-year average.

In April, the number of reported mumps cases decreased from that in March, and was consistent with the previous five-year average. Cases were elevated from April 2017-March 2018, but returned to normal levels in April 2018. This trend will be closely monitored.

Mumps Outbreaks

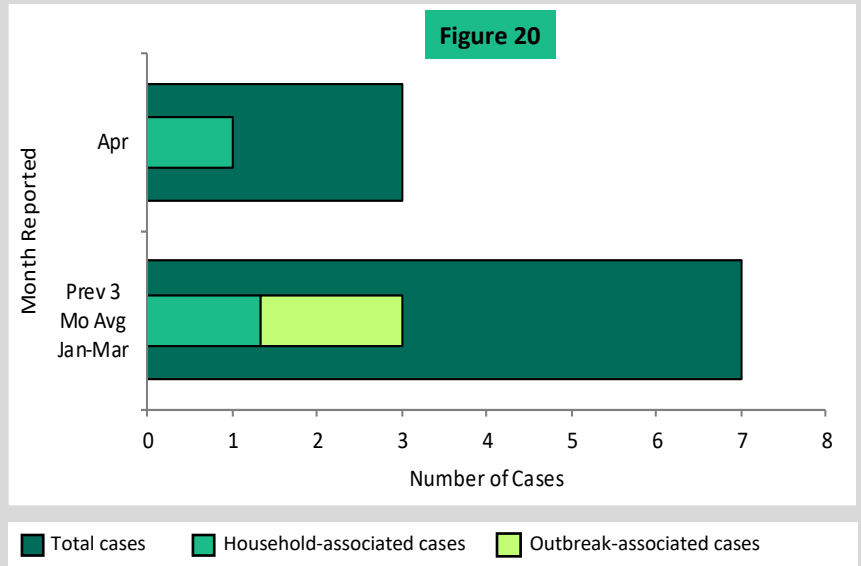
Figure 20 shows the number of confirmed and probable cases that were associated with at least one other case and the total number of confirmed and probable cases as reported into Merlin, April 2018 and the previous three-month average. Cases associated with at least one other case are shown by type of association.

In April, one (33%) case was associated with transmission within a household.

Outbreak Summary:

As of April, no outbreaks of mumps have been reported in 2018. All outbreak-associated cases reported in 2018 were identified during outbreak investigations that began in December 2017 and closed in January 2018.

See [page 11](#) for outbreak definitions.



Mumps Age-Specific Incidence Rates

Figure 21

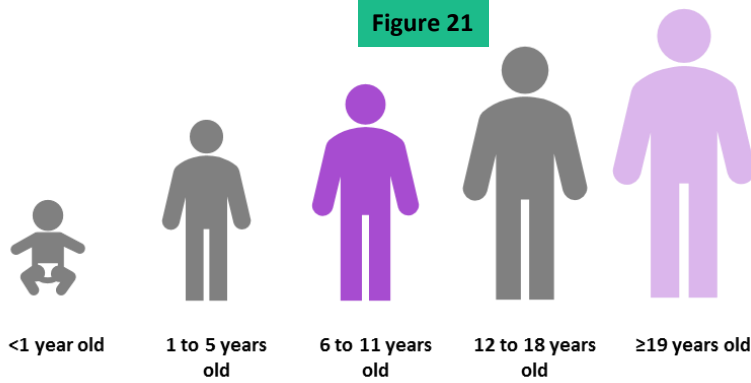
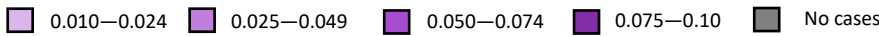


Figure 21 shows the age-specific incidence rates of confirmed and probable cases of mumps, as reported into Merlin, April 2018.

In April, the mumps incidence rate was highest among children age 6-11 years old at 0.07 cases per 100,000 population. There were no cases of mumps reported for three of the age groups in April 2018. Although the incidence rate was low among adults age 19 and older, 58% of cases reported so far in 2018 were in this age group.

Age-specific incidence rate per 100,000 population

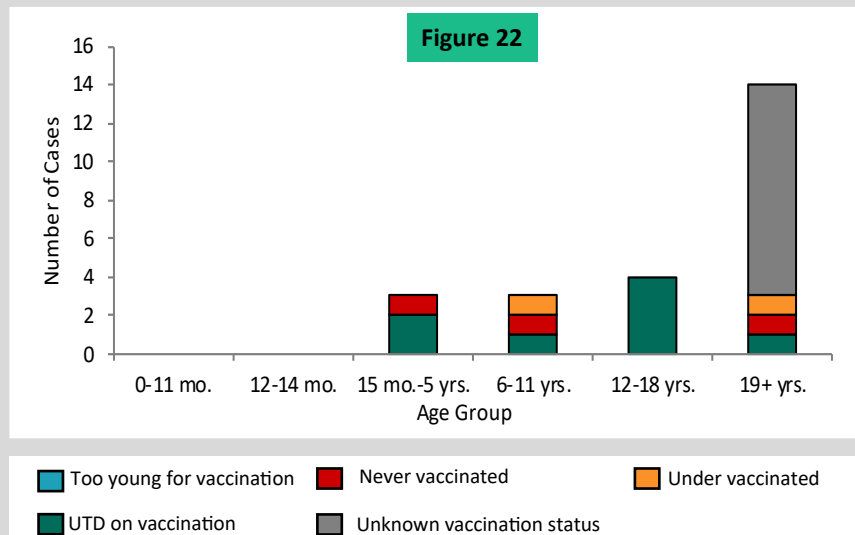


Vaccination History for Mumps Cases

UTD = up-to-date

Figure 22 shows the vaccination status of mumps cases by age group for confirmed and probable cases of mumps, as reported into Merlin, January through April 2018 (n=24).

Mumps vaccinations are recommended at 12-15 months of age and again at 4-6 years of age. Eleven (79%) individuals aged 19 years and older had unknown mumps vaccinations, and two (66%) individuals aged 6-11 years were not UTD on vaccination. The majority of individuals aged 15 months-18 years old were UTD on their vaccinations.



See [page 11](#) for links to CDC recommended vaccination schedules.

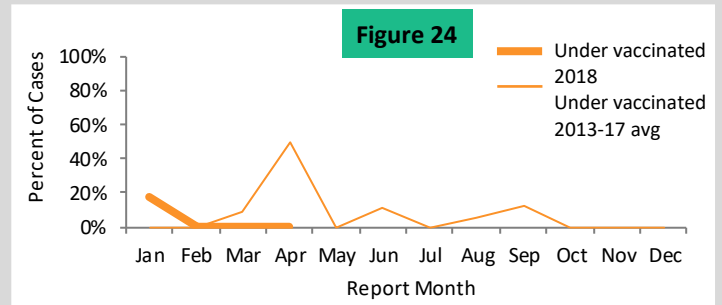
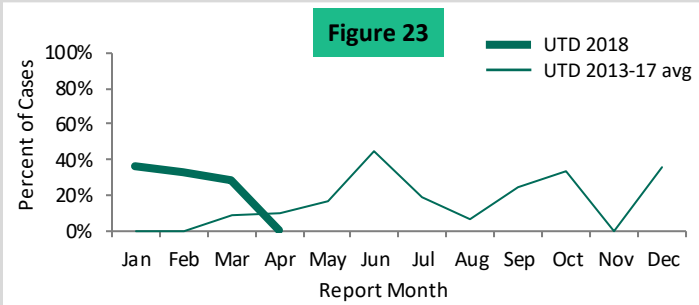
Mumps Cases in Vaccinated Individuals

UTD = up-to-date

Figure 23 shows the percent of confirmed and probable mumps cases who were up to date on their mumps vaccinations, as reported into Merlin, January through April 2018 and the previous five-year average.

Figure 24 shows the percent of these cases who were under vaccinated during the same time periods. All cases in April 2018 were unvaccinated or had unknown vaccination status.

Although individuals who have been vaccinated can still contract mumps, complete and timely vaccination remains the best way to prevent mumps and severe complications.



Mumps Outcomes

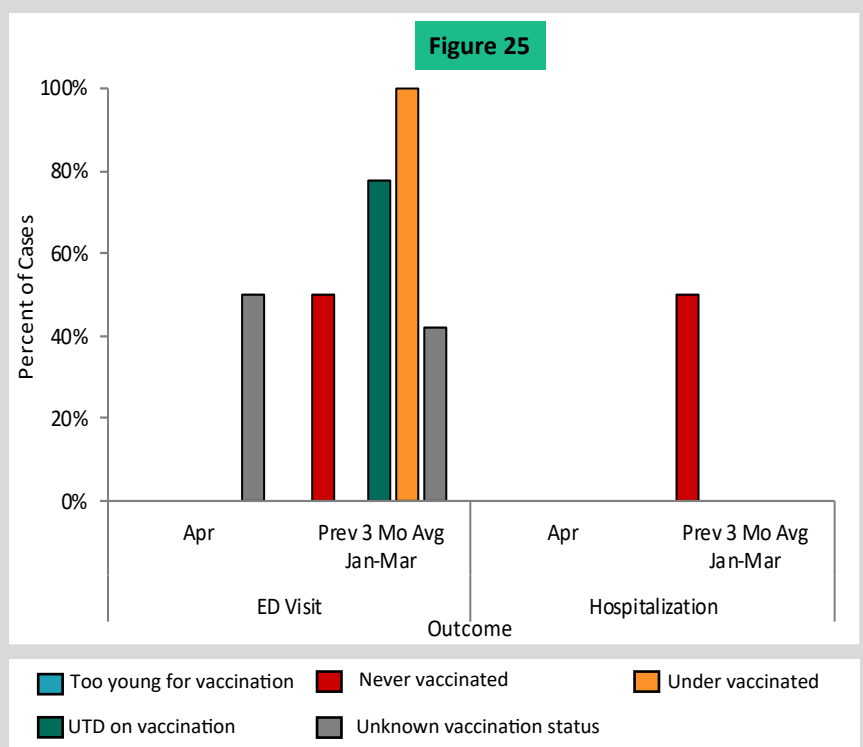
UTD = up-to-date, ED = emergency department

Figure 25 shows the percent of confirmed and probable cases of mumps with select outcomes by vaccination status, as reported into Merlin, April 2018 and the previous three-month average.

In recent months, individuals not up to date on their vaccinations were most likely to visit the emergency department and require inpatient hospitalization.

Orchitis (testicular inflammation) is the most common complication from mumps in males. From January through April 2018, three (13%) cases reported orchitis; one was never vaccinated and two had an unknown vaccination status.

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



Case Data

- Current case information is preliminary and will change as new data are gathered. The most recent data available are displayed in this report.
- 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.
- 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>.
- For a full text version of a new study on pertussis vaccination, please visit <http://www.cidid.org/publications-1/2018/3/29/the-impact-of-past-vaccination-coverage-and-immunity-on-pertussis-resurgence>