

Summary

December 2017

State mumps activity:

- **Six confirmed and nine probable mumps cases were reported among six counties in December.**
 - Mumps cases have remained elevated since April with a peak of 20 cases reported in August.
 - From January 1, 2017 through December 31, 2017, 23 confirmed and 47 probable cases of mumps were reported among 17 of Florida's 67 counties.
- In Florida, the number of reported mumps cases has remained relatively low over the past five years but started to increase in 2015 with ten cases and in 2016 with 16 cases. The last time the number of reported cases reached 2017 levels was in the 1990s.
- **Two outbreaks of mumps were reported in December. Broward County reported a mumps outbreak in a middle school and Hillsborough County reported a mumps outbreak in a university.**
 - In 2017, the majority of cases have been 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 December, the highest incidence of mumps was in children age 12-18 years.** This was largely driven by the previously mentioned outbreaks.
- **Vaccination is the best way to prevent mumps infections.** In December, four (27%) cases had unknown vaccination history.
- In December, ten (67%) cases visited the emergency department and one (7%) was hospitalized. In general, those who have received at least one mumps vaccination even if they later develop disease have 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 have been about 5,000 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.

Map 4 Cumulative Mumps Incidence Rates per 100,000 Population, January through December 2017

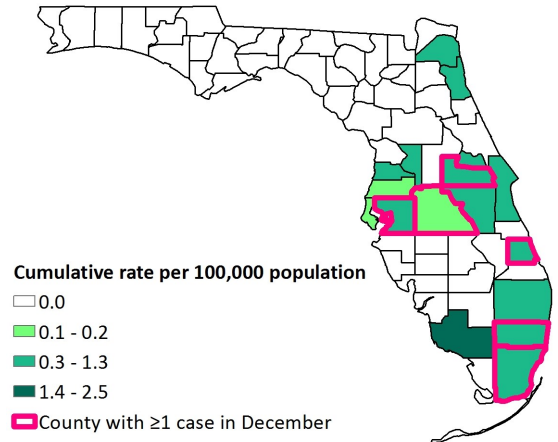
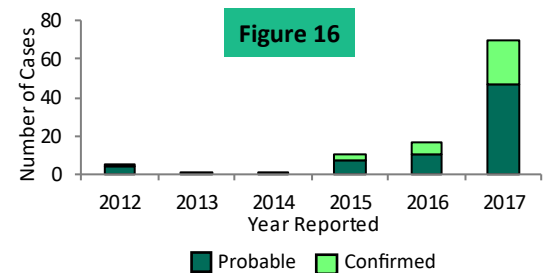


Figure 16 shows the number of confirmed and probable cases of mumps reported into Merlin, 2012 through 2017.



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 ►

Mumps Cases by Month Reported

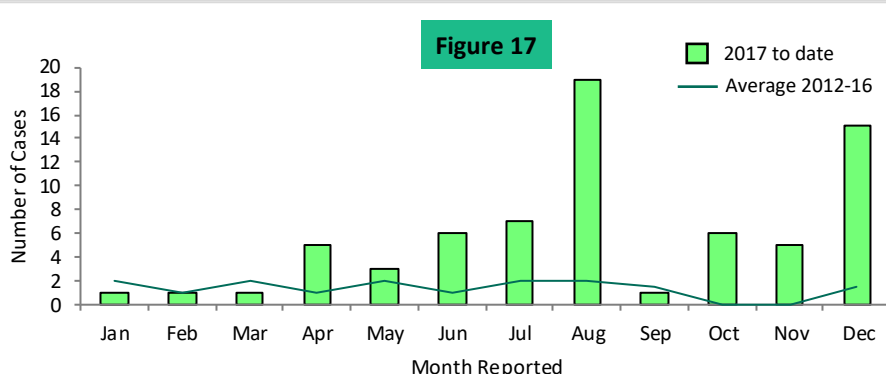


Figure 17 shows the number of confirmed and probable cases of mumps reported into Merlin, January 2017 through December 2017 and the previous five-year average.

In 2017, the number of reported mumps cases has been far above average. Cases have been elevated since the summer months, peaking in August and December when several cases associated with outbreaks and household clusters were reported.

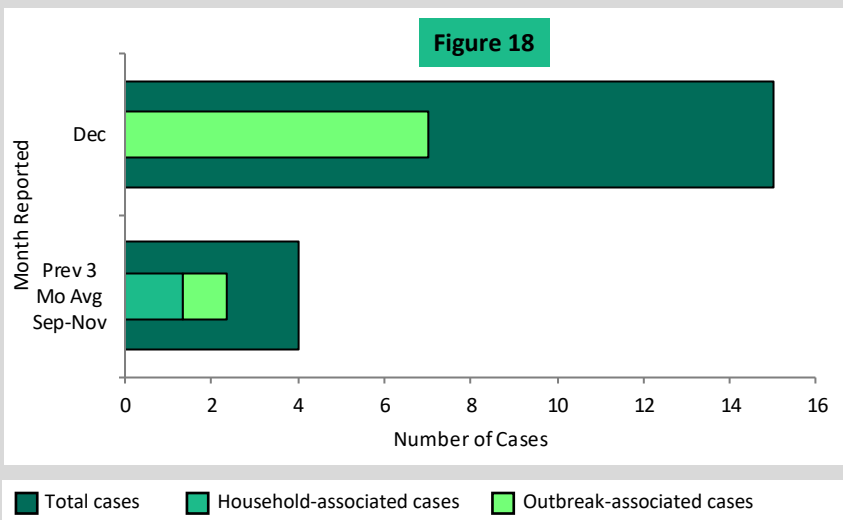
Mumps Outbreaks

Figure 18 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, December 2017 and the previous three-month average. Cases associated with at least one other case are shown by type of association.

In December, about half of cases were associated with two outbreaks.

Outbreak Summary:

Two mumps outbreaks were reported in December. Broward County reported an outbreak in a middle school and Hillsborough County reported an outbreak in a university. Earlier in 2017, an outbreak involving transmission in both the community and a summer camp was reported in multiple counties, an outbreak in a close-knit religious community was reported in Collier County, and an outbreak among professional athletes was reported in multiple counties.



Mumps Age-Specific Incidence Rates

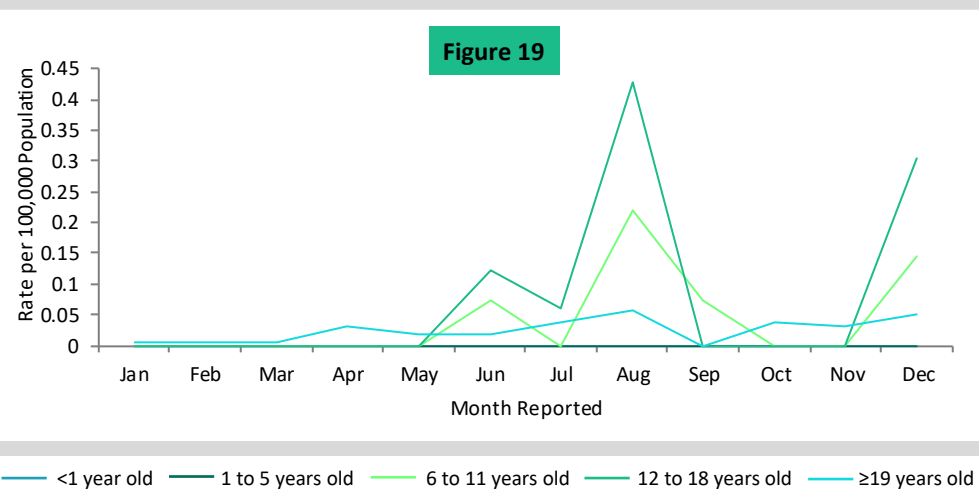


Figure 19 shows the age-specific incidence rates of confirmed and probable cases of mumps, as reported into Merlin, January 2017 through December 2017.

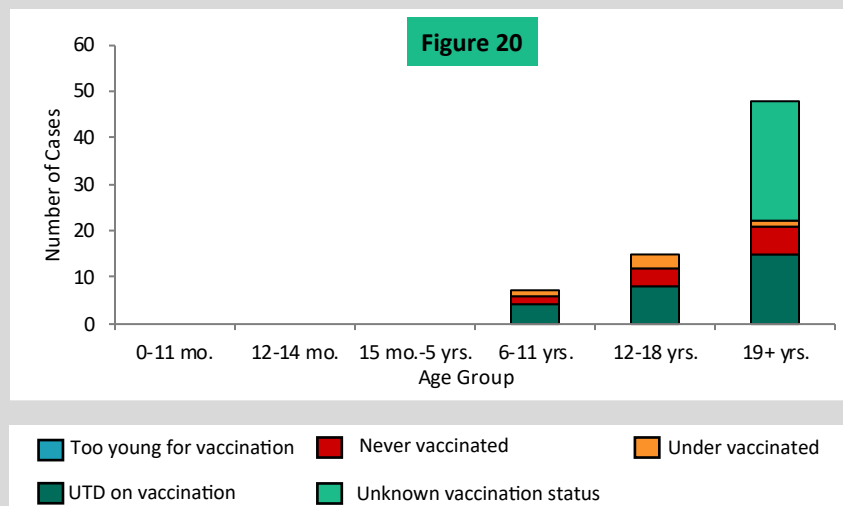
In December, the incidence rate was highest among children age 12 to 18, largely driven by an outbreak at a middle school. In 2017, the majority of cases have been in children age 12 to 18 and adults age 19 and older.

Vaccination History for Mumps Cases

UTD = up-to-date

Figure 20 shows the vaccination status of mumps cases by age group for confirmed and probable cases of mumps, as reported into Merlin, January 2017 through December 2017 (n=70).

Mumps vaccinations are recommended at 12-15 months of age and 4-6 years of age. More than half of cases 6 to 11 years old (57%) and 12 to 18 years old (53%) were up-to-date on their mumps vaccinations, while 15 (31%) cases 19 and older were up-to-date.

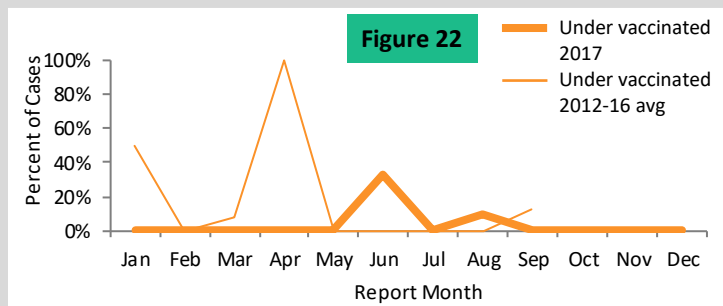
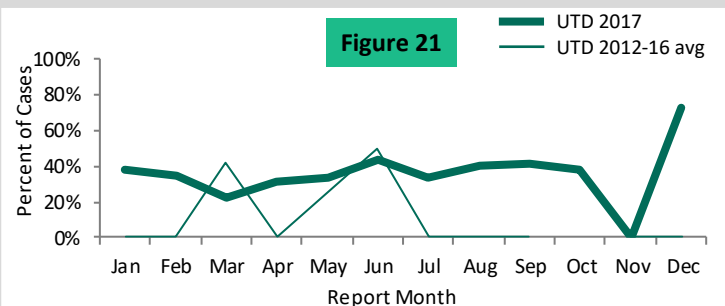


Mumps Cases in Vaccinated Individuals

UTD = up-to-date

Figure 21 shows the percent of confirmed and probable mumps cases who were up to date on their mumps vaccinations, as reported into Merlin, January 2017 through December 2017 and the previous five-year average. **Figure 22** shows the percent of these cases who were under vaccinated during the same time periods.

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



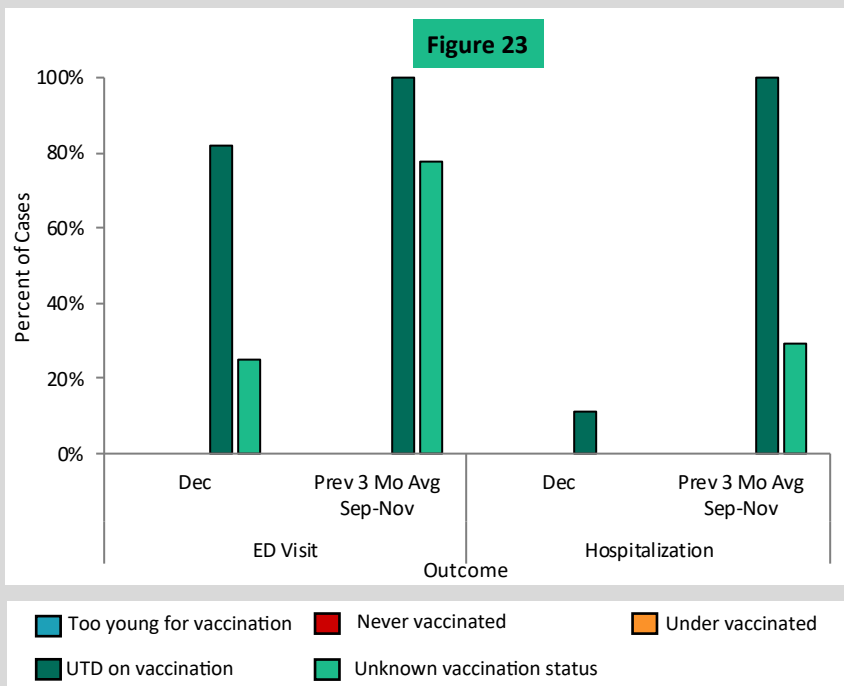
Mumps Outcomes

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

Figure 23 shows the percent of confirmed and probable cases of mumps with select outcomes by vaccination status, as reported into Merlin, December 2017 and the previous three-month average.

In December, ten (67%) cases visited the emergency department and one (7%) was hospitalized.

Orchitis (testicular inflammation) is the most common complication from mumps in males. From January 2017 through December 2017, 11 (16%) cases reported orchitis; two were never vaccinated, four were up to date on their vaccinations, and five had unknown vaccination status.



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. Outbreaks are defined as two or more cases associated with a specific setting outside of the home. Two or more cases among members of the same household are considered household-associated cases.
- 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.

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, 2017.
- 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>.