

## Summary

### November 2017

#### State mumps activity:

- **One confirmed and three probable mumps cases were reported among three counties in November.**
  - Mumps cases have remained elevated since April with a peak of 20 cases reported in August.
  - Since January 1, 2017, 17 confirmed and 37 probable cases of mumps were reported among 15 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.
- **No outbreaks of mumps were reported in November.** In October, a multi-county outbreak of mumps was reported that involved three cases in a close-contact sports profession.
  - 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 November, all cases were adults age 19 and older.** All cases in October were also in adults, largely driven by the previously mentioned outbreak.
- **Vaccination is the best way to prevent mumps infections.** In November, all four cases had unknown vaccination history.
- In November, three (75%) cases visited the emergency department and one (25%) 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 8

Average Mumps Incidence Rates per 100,000 Population, August through November 2017

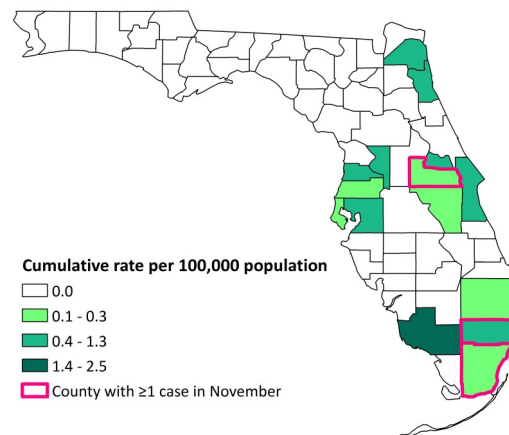
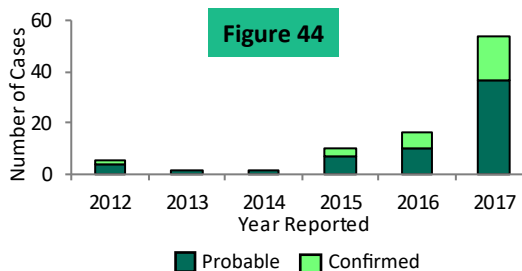


Figure 44 shows the number of confirmed and probable cases of mumps reported into Merlin, January 2012 through November 2017.



#### 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 24 ▶

### Mumps Cases by Month Reported

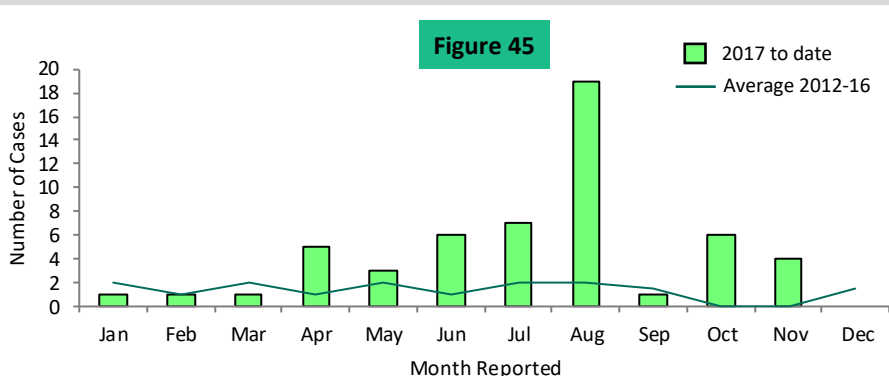


Figure 45 shows the number of confirmed and probable cases of mumps reported into Merlin, January 2017 through November 2017 and the previous five-year average.

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

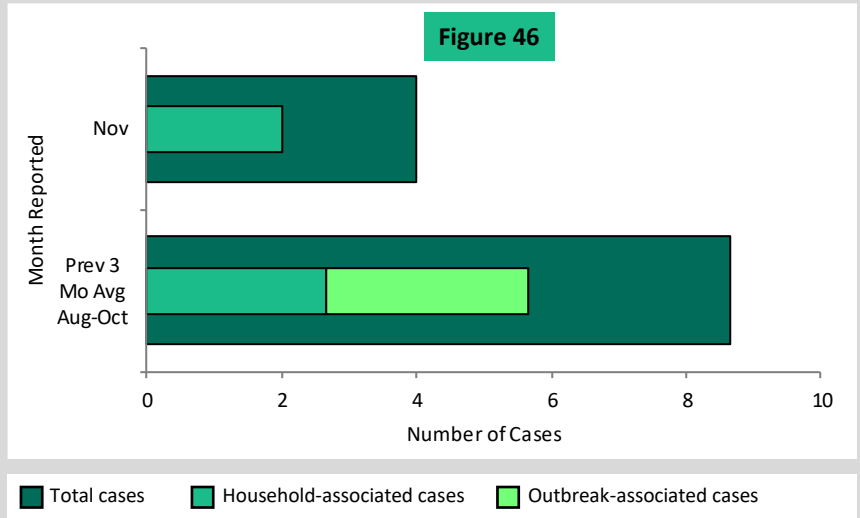
## Mumps Outbreaks

**Figure 46** 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, November 2017 and the previous three-month average. Cases associated with at least one other case are shown by type of association.

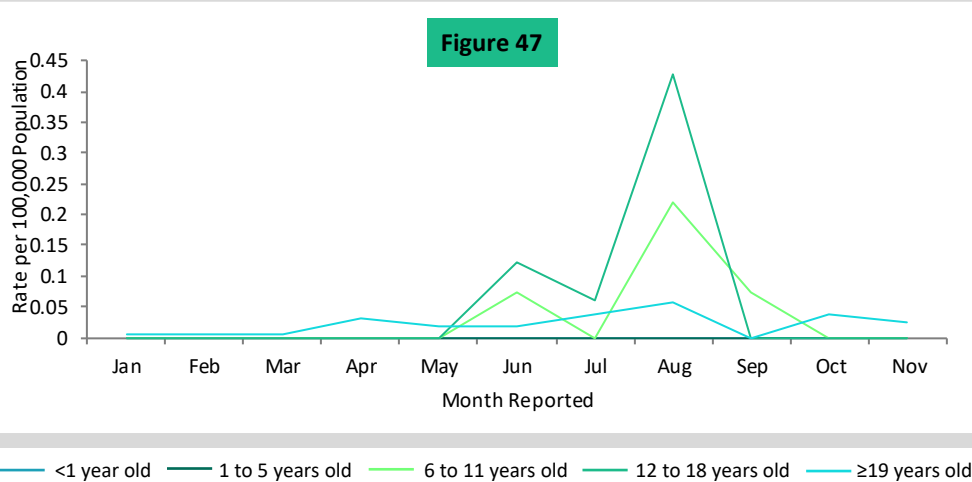
**In November, half of cases were associated with a household cluster.**

**Outbreak Summary:**

**No mumps outbreaks were reported in November.** Earlier in 2017, an outbreak involving transmission in both the community and a summer camp was reported in St. Johns, Duval, Hillsborough, and Miami-Dade Counties, an outbreak in a close-knit religious community was reported in Collier County, and an outbreak among professional athletes was reported in Hernando, Hillsborough, and Pinellas Counties.



## Mumps Age-Specific Incidence Rates



**Figure 47** shows the age-specific incidence rates of confirmed and probable cases of mumps, as reported into Merlin, January 2017 through November 2017.

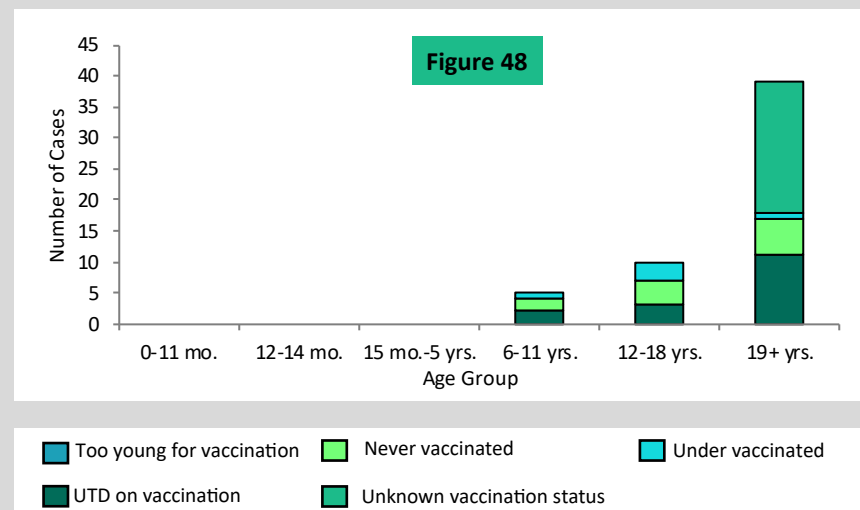
**In November, the incidence rate was highest among adults age 19 and older.** Thus far in 2017, the majority of cases have been in children age 12 to 18 and adults age 19 and older.

## Vaccination History for Mumps Cases

UTD = up-to-date

**Figure 48** shows the vaccination status of mumps cases by age group for confirmed and probable cases of mumps, as reported into Merlin, January 2017 through November 2017 (n=51).

**Mumps vaccinations are recommended at 12-15 months of age and 4-6 years of age. The majority of cases 6 to 11 years old (60%) and 12 to 18 years old (70%) were not up to date on their mumps vaccinations, while 7 (18%) of cases 19 and older were not up to date.**

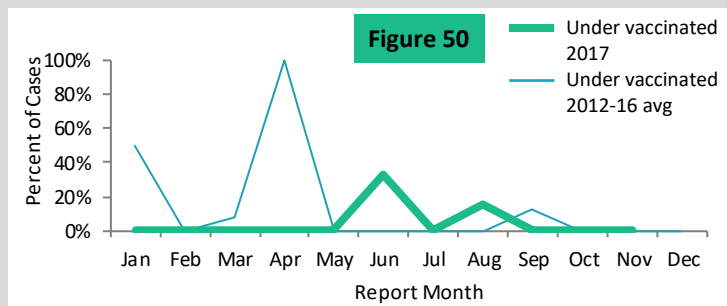
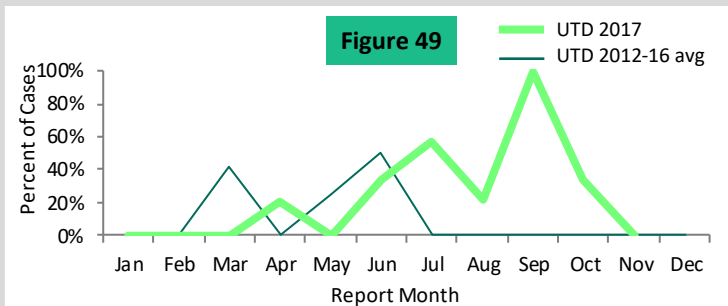


## Mumps Cases in Vaccinated Individuals

UTD = up-to-date

**Figure 49** 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 November 2017 and the previous five-year average. **Figure 50** 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.**



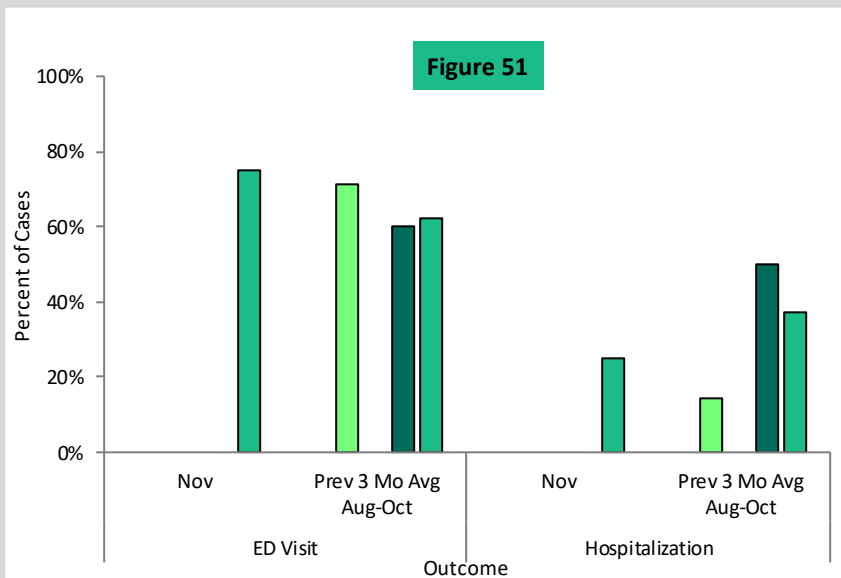
## Mumps Outcomes

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

**Figure 51** shows the percent of confirmed and probable cases of mumps with select outcomes by vaccination status, as reported into Merlin, November 2017 and the previous three-month average.

**In November, all cases had unknown vaccination status. In recent months, cases who were never vaccinated against mumps were more likely to visit the ED than those who were up to date on their vaccinations.**

Orchitis (testicular inflammation) is the most common complication from mumps in males. From January 2017 through November 2017, ten (19%) cases reported orchitis; two were never vaccinated, three were up to date on their vaccinations, and five had unknown vaccination status.



■ Too young for vaccination   
 ■ Never vaccinated   
 ■ Under vaccinated  
■ UTD on vaccination   
 ■ 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](http://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](http://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>.