



# Disease Control and Epidemiology

## ***Mumps Cases Identified in Chapman University Students***

**February 24, 2017**

One confirmed and three probable cases of mumps have been reported in students of Chapman University in the city of Orange. All four are law school students who belong to a common social group. Symptoms onset dates range from January 28 to February 17. The Orange County Health Care Agency is working with the University to identify any additional cases. Multiple mumps outbreaks have been seen in campuses around the country in the last few years. **Providers should consider the diagnosis of mumps in patients with an appropriate clinical presentation, particularly in college students, those with a history of international travel, or exposure to a known mumps case. Notify the Orange County Health Care Agency Epidemiology Program immediately at 714-834-8180 with any suspect cases.**

### Symptoms

- Mumps' most characteristic symptom is parotid swelling. Parotitis is unilateral at first but eventually becomes bilateral in 70% of cases. Parotitis can initially manifest as earache and tenderness on palpation of the angle of the jaw. Symptoms generally resolve over 7-10 days.
- A nonspecific prodrome often occurs 1-2 days before the onset of parotid swelling, and can include muscle aches, loss of appetite, malaise, headache, or fever.
- Complications include orchitis (testicular swelling), which occurs in 14-35% of postpubertal males, and aseptic meningitis, which is found in 1-10% of cases.
- The incubation period ranges from 12 to 25 days.
- Treatment is supportive.

### Laboratory Testing

- The preferred method of diagnosis is mumps PCR testing of a buccal swab specimen. Collection of a buccal specimen within 1 to 3 days of parotitis onset is optimal, but virus may be detected for up to 9 days after parotitis onset. The Orange County Health Care Agency Laboratory can perform mumps PCR testing.
- Testing can also include serum mumps IgM and IgG. However, the mumps IgM response may be absent in immunized patients, and patients with detectable mumps IgG can still develop infection.
- Detailed descriptions of specimen collection procedures can be found at:  
[http://www.cdph.ca.gov/programs/vrdl/Documents/Mumps\\_Testing\\_VRDL\\_2016.pdf](http://www.cdph.ca.gov/programs/vrdl/Documents/Mumps_Testing_VRDL_2016.pdf)

### Infection Control

- Mumps virus is transmitted by direct exposure to respiratory secretions of infected persons.
- Infectiousness is highest from 2 days before until 5 days after onset of parotitis.

- **All college students who have had fewer than two doses of MMR vaccine should receive catch up vaccination.**
- Mumps vaccine is given as part of the Measles, Mumps and Rubella (MMR) vaccine.
- All children are recommended to receive a first MMR at 12-15 months and a second MMR at 4-6 years.
- The CDC estimates an effectiveness of two doses of MMR for preventing mumps of 88%.
- Vaccination does not provide post-exposure prophylaxis for mumps, but should prevent illness after future exposures.
- Breakthrough infection can occur despite vaccination, and most cases seen in college outbreaks have occurred in fully vaccinated patients.

## Additional Information

If you have questions please contact the Orange County Health Care Agency Epidemiology & Assessment Program at 714-834-8180.