**Background**

- Mumps is an acute, viral illness whose classic presentation includes parotitis (swelling of the parotid salivary glands).
- Other causes of parotitis exist, both infectious and non-infectious.
- Mumps is the only known cause of epidemic parotitis.
- Approximately 33% of parotitis cases can be asymptomatic.
- In the United States, mumps is well controlled, with approximately 100 cases reported annually.
- Mumps vaccination coverage rates in the U.S. are approximately 92% for one dose, and 90% for two doses.
- Of 48,804 doses of mumps vaccine reported to the Vaccine Safety Datalink Project in 2017, 14 (0.03%) were associated with hospitalization, and 20 (0.04%) were associated with encephalitis.

**Methods**

**Background**

Patient inclusion criteria included:

- Detection of anti-mumps IgM antibody
- Four-fold increase in anti-mumps IgG antibody titre measured by quantitative assays or seroconversion from negative to positive using a standard serologic assay of paired serum and a convalescent serum samples
- Detection of mumps RNA using RT-PCR
- Isolation of mumps virus in culture

Among previously vaccinated or previously infected people:

- Mumps IgM results may be negative.
- Mumps IgG test results may be positive or of a high titre on initial blood draw

**Results**

A virus was detected in 45% of patients vaccinated for mumps, and in 50% of patients not vaccinated for mumps.

- A non-mumps virus was detected in 38% of specimens.
- EBV (-), HBoV (+), HPIV-2 (+), HHV-6B (+)
- No virus detected

**Conclusions**

- Non-mumps viruses may be associated with parotitis.
- EBV is a potential cause of mumps, but further studies are needed to confirm this association.
- The surveillance of mumps in the U.S. is ongoing, and any new cases should be reported to the CDC.