

# Sporadic (no epidemiologic-link, not outbreak-related) mumps testing flowchart:

*For persons presenting with symptoms of mumps without known epidemiologic-linkage, multiplex testing for other infectious etiologies\* is recommended concurrent with mumps testing to better interpret the clinical picture alongside laboratory results.*

Patient has parotitis or other salivary gland swelling

Has it been  $\leq 3$  days<sup>+</sup> since symptom onset?

YES

NO

Collect buccal specimen for PCR at first contact with patient

Collect buccal specimen for PCR and serology for IgM at first contact with patient

Collect buccal specimen for PCR and serology for IgM at first contact with patient

PCR -

PCR +

PCR +

PCR - /  
IgM +

PCR - /  
IgM -

PCR - /  
IgM -

PCR - /  
IgM +

PCR +

If vaccinated (MMR) within 6-45 days: genotype to determine if vaccine reaction (genotype A) or wild type

Patient does **not** have parotitis but has an acute potential mumps complication of uncertain etiology:

- Orchitis/Oophoritis
- Mastitis
- Pancreatitis
- Hearing loss
- Meningitis/Encephalitis

## Additional Considerations

1. A negative laboratory result in a person with clinically compatible mumps symptoms does not rule out mumps.
2. Persons tested for immunologic screening without symptoms would not be considered a case if IgM+ unless there is documentation that mumps was suspected.

SUSPECT CASE

PROBABLE CASE

CONFIRMED CASE

\*Consider testing for other infectious etiologies such as influenza, parainfluenza, EBV, & adenovirus that can cause parotitis. If mumps testing is negative and there is a more likely alternative diagnosis with a positive laboratory result, individuals can be classified as *not a mumps case*.

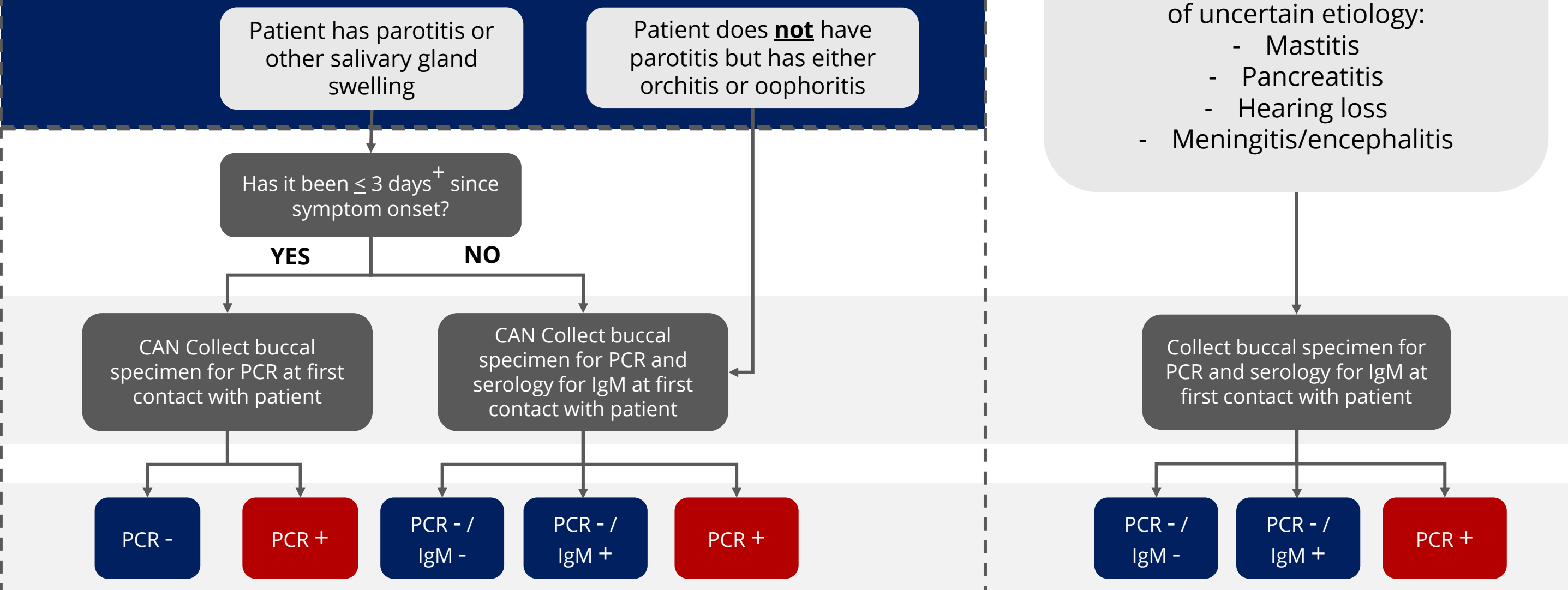
+For mumps PCR, specimen should be ideally collected 0-3 days after parotitis onset but can be collected up to 10 days. If >10 days since symptom onset, PCR testing no longer recommended. For mumps IgM, collecting specimens >3 days after parotitis onset improves the ability to detect IgM. Additional information: <https://www.cdc.gov/mumps/lab/index.html>



# Epidemiologic-link or outbreak-related mumps testing flowchart:

*Persons being tested have exposure to a confirmed case or linkage to a group/community defined by public health officials during an outbreak of mumps*

At the start of a mumps outbreak, persons suspected to have mumps should be tested by RT-PCR to confirm mumps. Once the outbreak is confirmed, testing of subsequent persons is optional depending on volume/resources. Epidemiologically-linked persons with parotitis, orchitis, or oophoritis can be classified as probable cases *without testing*.



Patient does **not** have parotitis, orchitis, or oophoritis, but has an acute potential mumps complication of uncertain etiology:

- Mastitis
- Pancreatitis
- Hearing loss
- Meningitis/encephalitis

## Additional Considerations

1. A negative laboratory result in a person with clinically compatible mumps symptoms does not rule out mumps.
2. Persons tested for immunologic screening without symptoms would not be considered a case if IgM+ unless there is documentation that mumps was suspected.
3. In an outbreak setting, occasionally asymptomatic or persons with atypical presentation may test PCR +, culture +, or show seroconversion, and would be classified as confirmed cases.
4. Parotitis after vaccination has been reported in <1% of vaccinees. If epidemiologically-linked/outbreak-associated cases recently received dose of MMR, genotyping can be done to confirm if vaccine strain

**SUSPECT CASE**

**PROBABLE CASE**

**CONFIRMED CASE**

+For mumps PCR, specimen should be ideally collected 0-3 days after parotitis onset but can be collected up to 10 days. If >10 days since symptom onset, PCR testing no longer recommended. For mumps IgM, collecting specimens >3 days after parotitis onset improves the ability to detect IgM. Additional information: <https://www.cdc.gov/mumps/lab/index.html>

