2014 Community Mumps Outbreak in Central Ohio

The Ohio Department of Health, Columbus Public Health, Franklin County Public Health, and the Delaware County General Health District are investigating a community outbreak of mumps in Central Ohio. The boundaries of the community outbreak currently include Franklin and Delaware counties. The table below lists the number of cases by county of residence. Although there have been cases in residents of counties outside of Franklin and Delaware counties, these cases are linked to the community outbreak. Most of the linked cases work or attend school within Franklin and Delaware counties.

<table>
<thead>
<tr>
<th>County of Residence</th>
<th>Number of Probable and Confirmed Mumps Cases</th>
</tr>
</thead>
<tbody>
<tr>
<td>Allen</td>
<td>1</td>
</tr>
<tr>
<td>Athens</td>
<td>1</td>
</tr>
<tr>
<td>Belmont</td>
<td>1</td>
</tr>
<tr>
<td>Delaware</td>
<td>17</td>
</tr>
<tr>
<td>Fairfield</td>
<td>2</td>
</tr>
<tr>
<td>Franklin</td>
<td>152</td>
</tr>
<tr>
<td>Hamilton</td>
<td>1</td>
</tr>
<tr>
<td>Licking</td>
<td>2</td>
</tr>
<tr>
<td>Marion</td>
<td>1</td>
</tr>
<tr>
<td>Pickaway</td>
<td>1</td>
</tr>
<tr>
<td>Union</td>
<td>1</td>
</tr>
<tr>
<td><strong>Total</strong></td>
<td><strong>179</strong></td>
</tr>
</tbody>
</table>

The case with the earliest onset of symptoms began on 01/07/2014. The case with the most recent onset of symptoms began on 04/07/2014.

The confirmed and probable cases were between the ages of 9 months and 70 years. Sixty-three percent are female (112 cases) and thirty-seven percent are male (67 cases). There were few hospitalizations, with most people recovering on their own.

For more information about mumps, please visit the [Centers for Disease Control and Prevention](https://www.cdc.gov/mumps/index.htm).
Collection and Submission of Suspected Mumps Specimens
Ohio Department of Health

When to collect mumps specimens
- Within three days of symptom onset, preferably as soon as possible after onset. Specimens collected up to five days after onset of symptoms may be submitted if necessary.
- Specimens may be submitted at the discretion of the local health department and with approval from ODH Vaccine Preventable Disease Epidemiology (614-466-4643) to assist in describing their local Mumps outbreak.

How to collect buccal specimens

Buccal Swab - Collect one buccal specimen with viral transport media from each patient, using the following method
- Massage the parotid gland area for 30 seconds prior to swabbing the area around Stensen’s duct. A commercial product designed for the collection of throat specimens or a flocked polyester fiber swab can be used. Synthetic swabs are preferred over cotton swabs.
- Place swab in 2 ml of standard viral transport medium (VTM)*. Ream the swab around the rim of the tube to retain cells and fluid in the tube. The swab can be broken off and left in the tube or discarded.
- Label the container with patient name, date of collection, and type of specimen.
- Storage and shipment: Following collection, samples should be maintained at 4°C and shipped on cold packs (4°C) within 24 hours. If there is a delay in shipment, the sample is best preserved by freezing at −70°C. Frozen samples should be shipped on dry ice.
- Processing the swabs within 24 hours will enhance the sensitivity of both the RT-PCR and virus isolation techniques.
*Cell culture medium (minimal essential medium or Hanks’ balanced salt solution) or other sterile isotonic solution (e.g. phosphate buffered saline) can be used. The presence of protein, for example 1% bovine albumin, 0.5% gelatin, or 2% serum, stabilizes the virus. Samples without a source of protein in the medium will lose 90%–99% infectivity within 2 hours at 4°C.

Samples for serologic testing

Serology (serum) samples - Collect 7–10 ml of blood in a red-top or serum-separator tube (SST).
- The first (acute-phase) serum sample should be collected as soon as possible upon suspicion of mumps disease.
- Convalescent-phase serum samples should be collected about 2–3 weeks after the acute-phase sample. Store specimens at 4°C and ship on wet ice packs.

How to submit specimens to the Ohio Department of Health Laboratory
- Call the ODH Bureau of Infectious Diseases at 614-466-4643 between 8:00 am and 5:00 pm on weekdays for approval of specimen submission.

- For each specimen (fill out a separate form for each specimen) complete the following forms as completely as possible.
  - Ohio Department of Health Laboratory Microbiology Specimen Submission Form
    - Indicate “Mumps Outbreak 2014” in the Comments section
  - CDC Specimen Submission Form: Specimens of Human Origin (CDC 50.34 HUMAN)
    - Test order name: Mumps Detection and Genotyping OR Mumps Serology
    - Suspected agent: Mumps
  - Forms with pre-filled fields are available at The Ohio Public Health Communication System (OPHCS)/Quick Links/Epidemiology Issues/Mumps):

- Place collected specimen and one frozen cold pack in a sealed plastic bag (or other watertight secondary packaging).
- Place sealed plastic bag and submission forms in a rigid third container, such as a fiberboard box.
- Overnight shipment is preferred for receipt within 24 hours. Specimens collected on a Friday should be frozen and shipped the following Monday (on dry ice). Follow protocols for standard interstate shipment of etiologic agents. All shipments must comply with current DOT/IATA regulations for Category B Biological Substances, as listed above.

- Mail package to the following address:
  - Ohio Department of Health Laboratory
  - Attn: Virology - MUMPS
  - 8995 Main St., Building # 22
  - Reynoldsburg, OH 43068

If you have any questions please call the ODH Bureau of Infectious Diseases at 614-466-4643.