



# Suspect MUMPS

## CLINICAL SIGNS & SYMPTOMS

- Parotitis: pain, tenderness, and swelling in one or both parotid salivary glands
- Non-specific prodromal symptoms (low grade fever, myalgia, anorexia, malaise, headache)

## TRANSMISSION & PERIOD OF COMMUNICABILITY

- Direct contact with respiratory secretions or saliva, or through fomites
- Several days before through nine days after parotitis onset



Photo courtesy of AAP Red Book

## BEFORE A SUSPECT CASE PRESENTS IN YOUR OFFICE:

- Ensure appropriate documentation of presumptive evidence of immunity (see attached) for all patients and staff

Note: Exposed healthcare workers without evidence of immunity must be excluded from work from day 12 after first unprotected exposure through day 25 after last exposure, ***regardless of receipt of MMR vaccine after exposure***

## WHEN A SUSPECT CASE PRESENTS IN YOUR OFFICE:

Step 1: Promptly **ISOLATE** patient to avoid disease transmission

Step 2: While the patient is still in your office, **IMMEDIATELY REPORT** suspected mumps case to DOH

Oahu (Disease Reporting Line) ..... (808) 586-4586  
Maui District Health Office ..... (808) 984-8213  
Kauai District Health Office..... (808) 241-3563  
Big Island District Health Office (Hilo) ..... (808) 933-0912  
Big Island District Health Office (Kona)..... (808) 322-4877  
After hours on Oahu ..... (808) 566-5049  
After hours on neighbor islands ..... (800) 360-2575 (toll free)

Step 3: Collect **LABORATORY SPECIMENS**

- **Buccal swab** for PCR testing (ideally within 3 days & not more than 8 days after parotitis onset)
  - See attached illustration and instructions for collection of buccal fluid
  - Place *synthetic* swab in 2 mL of viral transport medium (Keep cold)
  - Send to State Lab for testing (contact HDOH)
- **Urine** for PCR testing (may not be positive until **>4 days** after symptom onset)
  - Collect in sterile container [minimum volume 50 mL] (Keep cold)
  - Send to State Lab for testing (contact HDOH)

**Note:** People with a history of mumps vaccination may not have detectable IgM antibody, ***regardless of timing of specimen collection***. Absence of mumps IgM in a vaccinated person with clinically compatible mumps does **not** rule out mumps.

Step 4: Identify **POTENTIALLY EXPOSED CONTACTS** for presumptive evidence of immunity to mumps:

- All Staff (physician, nurse, medical assistant, receptionist)
- Patients/parent/siblings/caregivers with close exposure (e.g., within 3 feet) to case in waiting room/office

Step 5: Provide patient with **POSITIVE TEST RESULTS** and **ISOLATION/EXCLUSION REQUIREMENTS**

- Confirmed cases must be restricted from school, work, travel, public places for 9 days after parotitis onset
- See attached isolation/exclusion requirements for contacts of cases, including exposed healthcare personnel



## Illustration of Parotid Gland and Instructions for Collection of Buccal Fluid

Massage the parotid gland area for 30 seconds prior to swabbing the area around Stensen's duct (photo on right), which is the space near the upper rear molars between the cheek and the teeth. Swab the area between the cheek and gum by sweeping the **synthetic swab** near the upper molar to the lower molar area.

**Swabs should be placed in 2 ml of standard viral transport medium (VTM).**

Following collection, samples should be maintained at 4°C and shipped on cold packs within 24 hours.

Adapted from the Illinois Dept. of Public Health – Div. of Laboratories (Chicago Virology Section)

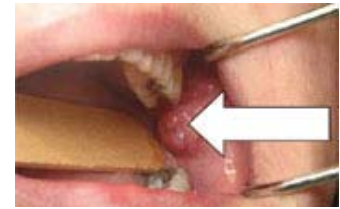


Photo courtesy of the Illinois Dept. of Public Health – Div. of Laboratories (Chicago Virology Section)

## Urine Specimen

A minimum volume of 50 mL of urine should be collected in a sterile container. Note: urine samples may not be positive for mumps virus until >4 days after symptom onset.

## MUMPS – Contacts

	GENERAL	HEALTHCARE PERSONNEL
<b>IDENTIFICATION</b>	<ul style="list-style-type: none"> <li>Persons exposed to case 2 days prior through 9 days (per Hawaii State Law) after onset of parotitis</li> </ul>	<ul style="list-style-type: none"> <li>Personnel with unprotected exposure to mumps case (e.g., within 3 feet of patient without use of proper personal protective equipment)</li> </ul>
<b>PRESUMPTIVE EVIDENCE OF IMMUNITY</b>	<ul style="list-style-type: none"> <li>Written documentation of receipt of age-appropriate, valid live mumps virus-containing vaccine; or</li> <li>Laboratory evidence of immunity; or</li> <li>Laboratory confirmation of disease; or</li> <li>Birth before 1957</li> </ul>	<ul style="list-style-type: none"> <li>Written documentation of vaccination with two valid doses of live mumps virus-containing vaccine; or</li> <li>Laboratory evidence of immunity; or</li> <li>Laboratory confirmation of disease</li> </ul>
<b>POST-EXPOSURE PROPHYLAXIS AVAILABLE</b>	<ul style="list-style-type: none"> <li>No</li> </ul>	<ul style="list-style-type: none"> <li>No</li> </ul>
<b>ISOLATION/EXCLUSION</b>	<ul style="list-style-type: none"> <li><b>No evidence of immunity:</b> <ul style="list-style-type: none"> <li>Exclude from school, work, travel, public places from day 12 after first unprotected exposure through day 25 after last exposure</li> <li>May resume activities immediately after immunization, if no symptoms of mumps</li> <li>Educate re: symptoms of mumps</li> </ul> </li> <li><b>Presumptive evidence of immunity:</b> <ul style="list-style-type: none"> <li>Do not need to be excluded from school, work, travel, public places</li> <li>Educate re: symptoms of mumps</li> </ul> </li> </ul>	<ul style="list-style-type: none"> <li><b>No evidence of immunity:</b> <ul style="list-style-type: none"> <li>Exclude from work from day 12 after first unprotected exposure through day 25 after last exposure, regardless of receipt of MMR vaccine after exposure</li> <li>Educate re: symptoms of mumps, including non-specific presentations</li> </ul> </li> <li><b>Partial vaccination:</b> <ul style="list-style-type: none"> <li>Personnel with written documentation of only one dose of mumps vaccine may continue working following an unprotected exposure to mumps.</li> <li>Should receive a second dose as soon as possible, but no sooner than 28 days after first dose</li> <li>Educate re: symptoms of mumps, including non-specific presentations</li> </ul> </li> <li><b>Presumptive evidence of immunity:</b> <ul style="list-style-type: none"> <li>Do not need to be excluded from work</li> <li>Educate re: symptoms of mumps, including non-specific presentations</li> </ul> </li> </ul>



## Information for Contacts of Mumps Cases

Mumps is spread through contact with saliva or mucus from the mouth, nose, or throat of an infected person. Hawaii Administrative Rules Chapter 11-156, requires the reporting and isolation (exclusion from school and workplace) of persons with mumps and their contacts to help prevent the spread of disease.

If you had contact with a person diagnosed with Mumps:

1) Check to see if you may be protected.

- **Evidence of Immunity\*** to mumps (at least one of the following):
  - Record of mumps vaccination (e.g. MMR):
    - ✓ Children 1 – 4 years: At least one dose
    - ✓ Children 4 – 17 years: Two doses
    - ✓ Adults born in or after 1957: At least one dose
    - ✓ Healthcare personnel: Two doses
  - Blood test showing immunity to mumps
  - Born before 1957 (non-health care workers only)

2) Protect others.

- According to State law, if you do NOT have Evidence of Immunity, you may NOT attend school/work from the 12<sup>th</sup> day after you first had contact with the person with mumps until the 25<sup>th</sup> day after exposure, even if you do not have symptoms of mumps.
  - If you receive a MMR vaccine after exposure and do not have symptoms of mumps, you may return to school/work.
    - **Exception: Healthcare personnel** without laboratory evidence of immunity or two valid doses of mumps vaccine must be excluded from work, even if they receive MMR vaccine after exposure. Healthcare personnel with documentation of one dose of mumps vaccine prior to exposure may continue working, but should receive a second dose as soon as possible, no sooner than 28 days after the first dose.
- If you have Evidence of Immunity and do not have symptoms of mumps, you may attend school/work.

3) Watch for symptoms of mumps.

- Mumps can occur in people who have Evidence of Immunity or were vaccinated after exposure. If you develop symptoms, STAY HOME. Do NOT go to school or work. Contact your healthcare provider.
- Symptoms of Mumps:
  - Swollen and tender salivary glands under the ears or jaw on one or both sides
  - Fever
  - Tiredness
  - Headache
  - Muscle aches

For more information about mumps, visit [http://health.hawaii.gov/docd/disease\\_listing/mumps/](http://health.hawaii.gov/docd/disease_listing/mumps/).

\*Evidence of Immunity/Exclusion for Healthcare Personnel: <https://www.cdc.gov/vaccines/pubs/surv-manual/chpt09-mumps.html#hcp-settings>

Hawaii Administrative Rules Chapter 11-156: [https://health.hawaii.gov/docd/files/2017/01/HAR-Title-11\\_Chapter-156.pdf](https://health.hawaii.gov/docd/files/2017/01/HAR-Title-11_Chapter-156.pdf)

# FIGHT MUMPS

## It starts with you



Mumps is spread through contact with saliva or mucus from the mouth, nose or throat of an infected person. Protect yourself and help stop the spread of mumps by using these healthy habits.



### Stay home if you are sick

**Mumps is easy to spread.**

Stay home and do not travel or go to school or work for 9 days after the start of swollen glands.



### Wash your hands

Wash your hands thoroughly and often with soap and warm water.



### Get Vaccinated

The measles-mumps-rubella (MMR) vaccine provides the best protection against this disease.

### Symptoms of MUMPS infection

- Swollen glands in front of ears or jaw on one or both sides
- Fever
- Muscle aches
- Headache
- Loss of appetite
- Tiredness



### Cover your cough or sneeze

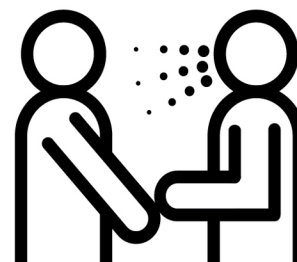
Cover your mouth and nose with your sleeve or a tissue when you cough or sneeze. Toss your used tissues in the waste basket and wash your hands.



### Use your own cups, forks, and spoons

Sharing cups or eating utensils with someone who has mumps can make you sick.

### Disease Transmission by COUGH/SNEEZE-TOUCH



For more information,  
call 2-1-1 or visit [health.hawaii.gov](http://health.hawaii.gov)  
Language assistance services available through 2-1-1.

State Laboratories Division  
HAWAII STATE DEPARTMENT OF HEALTH  
2725 Waimano Home Rd  
Pearl City, HI 96782

STATE LABORATORY NUMBER

DATE RECEIVED

(PLEASE PRINT LEGIBLY)

ORDERING/PRIMARY PHYSICIAN:

ADDRESS:  
(Street,  
City, Zip code)

PHONE NO:

SUBMITTING LABORATORY:

ADDRESS:  
(Street,  
City, Zip code)

PHONE NO:

CLINICAL DIAGNOSIS

I. PATIENT IDENTIFICATION

LAST NAME

FIRST NAME AND MIDDLE INITIAL

ADDRESS (Street, City, Zip code)

PHONE NO:

OCCUPATION

RACE

DATE OF BIRTH

SEX

DATE OF ONSET

LABORATORY EXAMINATION REQUESTED

MUMPS PCR

CATEGORY OF AGENT SUSPECTED

SPECIFIC AGENT SUSPECTED

II. SPECIMEN INFORMATION

1. SOURCE OF SPECIMEN

☐ HUMAN

☐ OTHER (Specify): \_\_\_\_\_

2. ORIGINAL MATERIAL SUBMITTED

\* TYPE OF SPECIMEN: \_\_\_\_\_

DATE OF COLLECTION: \_\_\_\_\_

TRANSPORT MEDIUM: \_\_\_\_\_

\* SPECIFY SITE OF COLLECTION

3. SEROLOGY SPECIMEN

COLLECTION DATE

☐ ACUTE (S1): \_\_\_\_\_

☐ CONVALESCENT (S2): \_\_\_\_\_

☐ S3: \_\_\_\_\_

☐ S4: \_\_\_\_\_

☐ Other (Specify): \_\_\_\_\_

4. REFERRED SPECIMEN

☐ PURE ISOLATE

☐ MIXED CULTURE

☐ OTHER (Specify): \_\_\_\_\_

DATE OF ORIGINAL CULTURE: \_\_\_\_\_

PRIMARY ISOLATION MEDIA: \_\_\_\_\_

COLLECTION SITE OF ORIGINAL SPECIMEN: \_\_\_\_\_

DATE OF CULTURE SUBMITTED AND TRANSPORT

MEDIUM USED: \_\_\_\_\_

SUSPECTED IDENTIFICATION: \_\_\_\_\_

OTHER ORGANISMS FOUND: \_\_\_\_\_

OTHER INFORMATION: \_\_\_\_\_

III. CLINICAL HISTORY

1. CLINICAL SIGNS AND SYMPTOMS

☐ FEVER

☐ EXANTHEMA (Specify Type): \_\_\_\_\_

☐ RESPIRATORY SIGNS: \_\_\_\_\_

☐ CENTRAL NERVOUS SYSTEM  
INVOLVEMENT: \_\_\_\_\_

☐ GASTROINTESTINAL INVOLVEMENT: \_\_\_\_\_

2. ADDITIONAL INFORMATION

TRAVEL HISTORY: \_\_\_\_\_

IMMUNIZATIONS: \_\_\_\_\_

ANTIBIOTIC THERAPY: \_\_\_\_\_

DEPARTMENT OF HEALTH USE ONLY

3. PREVIOUS LABORATORY RESULTS / OTHER  
INFORMATION:

DATE OF REPORT: \_\_\_\_\_



## COMMUNICABLE DISEASE REPORT

Use this form to report all diseases except Tuberculosis, Hansen's Disease, Sexually Transmitted Diseases, or AIDS, to the DOH office in your County.

P A T I E N T  I N F O R M A T I O N	DATE OF REPORT		PARENT OR GUARDIAN (IF A MINOR)				
	LAST NAME		FIRST		MIDDLE	AGE	
	DATE OF BIRTH		SEX <input type="checkbox"/> MALE <input type="checkbox"/> FEMALE				
	ADDRESS (STREET)			CITY		ZIP CODE	ISLAND
M O R B I D I T Y  D A T A	RACE		HISPANIC <input type="checkbox"/> YES <input type="checkbox"/> NO		STATUS <input type="checkbox"/> RESIDENT <input type="checkbox"/> TOURIST <input type="checkbox"/> MILITARY <input type="checkbox"/> MILITARY DEPENDENT		
	PATIENT'S PHONE NO. (RES.)		PATIENT'S PHONE NO. (BUS.)		OCCUPATION	SCHOOL / DAY CARE / WORKPLACE	
	DISEASE:		DATE OF ONSET:		LABORATORY TEST RESULTS: INDICATE LABORATORY PERFORMING TESTS(S)		
	CHECK APPROPRIATE BOX:						
R E P O R T I N G  S O U R C E	1) S A FOODHANDLER? <input type="checkbox"/> YES <input type="checkbox"/> NO		PATIENT <input type="checkbox"/> YES <input type="checkbox"/> NO		HOUSEHOLD MEMBER <input type="checkbox"/> YES <input type="checkbox"/> NO		
	2) ATTENDS OR WORKS AT A DAY CARE? <input type="checkbox"/> YES <input type="checkbox"/> NO		<input type="checkbox"/> YES <input type="checkbox"/> NO		<input type="checkbox"/> YES <input type="checkbox"/> NO		
	3) IS A HEALTHCARE WORKER? <input type="checkbox"/> YES <input type="checkbox"/> NO		<input type="checkbox"/> YES <input type="checkbox"/> NO		<input type="checkbox"/> YES <input type="checkbox"/> NO		
	HOSPITALIZED? <input type="checkbox"/> YES <input type="checkbox"/> NO		HOSPITAL NAME		POSSIBLE SOURCE		
ADMISSION DATE		DAYS HOSPITALIZED		IMPORT STATUS <input type="checkbox"/> IMPORTED <input type="checkbox"/> INDIGENOUS		DATE OF EXPOSURE	
ATTENDING PHYSICIAN AND ADDRESS / PHONE NO.:		PERSON OR AGENCY REPORTING AND ADDRESS / PHONE NO.:		DIAGNOSIS <input type="checkbox"/> CLINICAL <input type="checkbox"/> LAB CONFIRMED			
						<b>FOR DOH USE ONLY</b>	
						DATE RECEIVED BY DOH:	
						EPILOG NO.	MMWR WEEK NO.
						INVESTIGATOR INITIALS	NETSS RECORD NO.



**O'ahu**  
P.O.Box 3378  
Honolulu, HI 96801  
Phone: (808) 586-4586  
Fax: (808) 586-4595

**Maui**  
54 High Street  
Wailuku, HI 96793  
Phone: (808) 984-8213  
Fax: (808) 984-8222

**Hawai'i**  
P.O. Box 916  
Hilo, HI 96720  
Phone (808) 933-0912  
Fax: (808) 933-0400

**Kaua'i**  
3040 Umi Street  
Lihue, HI 96766  
Phone (808) 241-3563  
Fax: (808) 241-3480

PLEASE SEND THIS REPORT IN DOH-ADDRESSED ENVELOPE OR FAX REPORT TO THE APPROPRIATE OFFICES ABOVE.



# PHYSICIAN REPORTABLE DISEASES

**URGENT:** Diseases labeled "URGENT" shall be reported by telephone as soon as a provisional diagnosis is established and shall be followed by a written report submitted by mail or fax within three (3) days to the program office as indicated below.

**ROUTINE:** Report by mail, telephone, or fax to the Disease Investigation Branch on O'ahu, or to the appropriate District Health Offices noted below.

**ROUTINE/ENTERIC:** Report by telephone as soon as a working diagnosis is established if the individual case is a FOODHANDLER, DIRECT CARE PROVIDER, OR PRE-SCHOOL AGED CHILD.

**CONFIDENTIAL:** Diseases labeled "CONFIDENTIAL" shall be reported by mail or telephone to the appropriate program noted below.

## DISEASE INVESTIGATION BRANCH

### URGENT

Anthrax  
Botulism, Foodborne  
Brucellosis  
Cholera  
Congenital Rubella Syndrome  
Dengue Fever  
Diphtheria  
Encephalitis, Meningitis, Arboviral (Alpha viruses [e.g., California Serogroup, Eastern equine, Western equine, Venezuelan equine, Chikungunya virus disease], Flavivirus [Powassan, West Nile, Japanese encephalitis]).  
Fish Poisoning (ciguatera, scombroid, or hallucinogenic).  
Foodborne illness: 2 or more ill persons having eaten: (a) a common food, or (b) at a place in common.  
Glanders  
*Haemophilus influenzae* Serotype b (meningitis, bacteremia, epiglottitis, pneumonia, or isolation from a normally sterile site).  
Hantavirus Disease  
Hepatitis A - Also report liver function tests (AST, ALT) conducted at the same time for all patients who are HAV IgM positive.  
Influenza (Laboratory confirmed cases and outbreaks).  
Legionellosis  
Measles (rubeola)  
Meliodosis  
Meningococcal Disease (meningitis, meningococcemia, or isolation from a normally sterile site).  
Pertussis  
Plague

Poliomyelitis  
Psittacosis  
Q Fever  
Rabies  
Rubella (German Measles)  
SARS (Severe Acute Respiratory Syndrome)  
Smallpox  
Tularemia  
Typhoid Fever  
Viral hemorrhagic fevers (Filoviruses [e.g., Ebola, Marburg], and Arenaviruses [e.g., Lassa, Machupo]).  
West Nile Virus Fever  
Yellow Fever

### ROUTINE

Botulism, wound or infant  
Chickenpox - varicella (report individual cases).  
Cyclosporiasis  
Enterococcus, Vancomycin-resistant  
Filariasis  
Hepatitis B (acute and chronic) - Also report liver function tests (AST, ALT) conducted at the same time for all patients who are HBsAG positive.  
Hepatitis C (acute) - Also report liver function tests (AST, ALT) conducted at the same time for all patients who are anti-HCV positive.  
Hepatitis E - Also report liver function tests (AST, ALT) conducted at the same time for all patients who are anti-HCV positive.  
Leptospirosis  
Malaria  
Mumps  
Pneumococcal disease (meningitis, bacteremia, or isolation from a normally sterile site).

Streptococcal disease, Group A (beta hemolytic, invasive disease including Streptococcal Toxic Shock Syndrome, necrotizing fasciitis, or isolation from a normally sterile site, but not including pharyngitis).  
Tetanus  
Toxoplasmosis  
Trichinosis  
Typhus (louse, flea, mite-borne)

### ROUTINE/ENTERIC

Amebiasis  
Campylobacteriosis  
Cryptosporidiosis  
*Escherichia coli* 0157  
Giardiasis  
Hemolytic uremic syndrome (HUS)  
Hemorrhagic colitis due to *E. coli*, any strain or serotype.  
Listeriosis  
Norovirus (NoV) (Report laboratory confirmed cases and outbreaks)  
Salmonellosis (other than typhoid)  
Shigellosis  
Vibriosis (other than cholera)  
Yersiniosis

### UPON REQUEST

Angiostrongyliasis  
Hepatitis C (Chronic) - Also report liver function tests (AST, ALT) conducted at the same time for all patients who are anti-HCV positive.  
Influenza-like illness  
MRSA (Methicillin-Resistant *Staphylococcus aureus*)  
Vancomycin Resistant *Staphylococcus aureus* VRSA

**Report to: Disease Investigation Branch/District Health Office**

**O'ahu:** Phone: (808) 586-4586; Fax: (808) 586-4595; and the District Health Office on **Hawai'i:** (808) 933-0912; Fax: (808) 933-0400; on **Kaua'i:** Phone: (808) 241-3563; Fax: (808) 241-3480; on **Mau'i:** Phone: (808) 984-8213; Fax: (808) 243-5141. After hours, weekends, and holidays report to 1-800-360-2575.

## TUBERCULOSIS

### URGENT

**Report to: Tuberculosis Control Program, 1700 Lanakila Avenue, Honolulu, HI 96817, Attn: Registry - Confidential;**  
Phone: (808) 832-5731 x 26; Fax: (808) 832-5846

## SEXUALLY TRANSMITTED DISEASES

### CONFIDENTIAL

Chlamydia (*Chlamydia trachomatis*)  
Gonococcal Disease (*Neisseria gonorrhoeae*)  
Pelvic Inflammatory Disease (PID)  
Syphilis

**Report to: STD Prevention Program, 3627 Kilauea Avenue, Room 304, Honolulu, HI 96816; Phone: (808) 733-9281; Fax: (808) 733-9291**

## AIDS SURVEILLANCE

### CONFIDENTIAL

Acquired Immunodeficiency Syndrome (CDC Case Definition)  
HIV (Human Immunodeficiency Virus)

**Report to: AIDS Surveillance Program (Confidential), 3627 Kilauea Avenue, Room 306, Honolulu, HI 96816; Phone: (808) 733-9010**

## HANSEN'S DISEASE

### ROUTINE

**Report to: Hansen's Disease Community Program, 3650 Maunalei Avenue, Honolulu, HI 96816; Phone: (808) 733-9831; Fax: (808) 733-9836**

Refer to **Exhibit A**, Disease Reporting Requirements for Health Care Providers in Hawai'i. Chapter 11-156, Hawai'i Administrative Rules. Effective March 13, 2008.

Refer to **Exhibit C**, Hawai'i Isolation and Control Requirements for the handling of Cases / Suspected Cases, and Contacts. Chapter 11-156, Hawai'i Administrative Rules. Effective March 13, 2008.