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This toolkit supplies information to help tribal health organizations and governments prepare for and respond to the mumps outbreak in Washington in winter 2016-2017. If you need additional information or would like help creating materials, please contact the Washington State Department of Health.

Contents (click to go directly to that page):

- [Vaccine Effectiveness Flyer](#) (for healthcare staff, tribal staff/leaders, and patients)
- [MMR Coverage Maps by State, County, and ZIP Code](#)
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- [Information Highlights for Health Officials and Health Educators](#) (quotable/reprintable source material to help you develop your own materials)
- [Disease Investigator/Epidemiology FAQ](#)
- [Exclusion Guidance Regarding Mumps in Schools, Preschools, and Child Cares](#)
- [Mumps Mailer: Mumps News for the Tribal Community](#)
- [Postable Flyer: Protect Your Family and Tribe](#)

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Some additional resources that may help you:

- **Washington mumps outbreak news and resources:** [www.doh.wa.gov/mumps](http://www.doh.wa.gov/mumps)
- [Nationwide mumps outbreak news](#)
- [American Indian Health Commission's immunization information and resources](#)
- [Indian Health Service vaccine-preventable disease information](#)
- [Mumps information from the Immunization Action Coalition](#)

# Mumps Vaccine: Our Best Protection

Mumps is a contagious disease that causes fever, aches, and swelling in the cheek or jaw area. It also can lead to other problems like hearing loss and brain damage. There is no treatment for mumps, but there is a way to prevent it: the combination measles, mumps, and rubella (MMR) vaccine. It protects you and helps stop the spread of the mumps virus to others.

## Sometimes people who have MMR vaccine still get mumps. Why is that?

The vaccine is effective at preventing mumps, but it is not perfect. There is still a small chance of getting mumps if you're vaccinated. Nearly **9 out of 10 people get lasting protection** from the vaccine.

### Number at Risk of Getting Mumps



“Because some people do not get lasting protection from the vaccine and mumps spreads easily from person to person, outbreaks can still occur in vaccinated populations. But, if unvaccinated, many, many, more people would become ill.”

~ Dr. Jeff Duchin, Public Health—Seattle King County

**MMR vaccine is 88% effective against mumps** in people who have had two doses. That means of every 100 vaccinated people exposed, only 12 of them are at risk for getting infected with mumps. In contrast, **all unvaccinated people are at risk. The number of people who get mumps in an outbreak would be much larger if fewer people were vaccinated.** In addition, complications happen more often and are more serious among unvaccinated people who get mumps. Luckily, more than 9 out of 10 Washington kindergartners have both of their MMR vaccine doses.

Even though vaccinated people might get sick in an outbreak, the risk of getting sick is much greater for people who haven't been vaccinated. For example, in one recent summer camp outbreak, 43% of the unvaccinated people got mumps when they were exposed, but less than 4% of vaccinated people got it. But because there were so many more vaccinated campers than campers who didn't have the vaccine, the number of cases in vaccinated people was higher.

### Did You Know?

Before the vaccine program started, the U.S. saw more cases of mumps in a week than we see now in an entire year.

### How does mumps vaccine help?

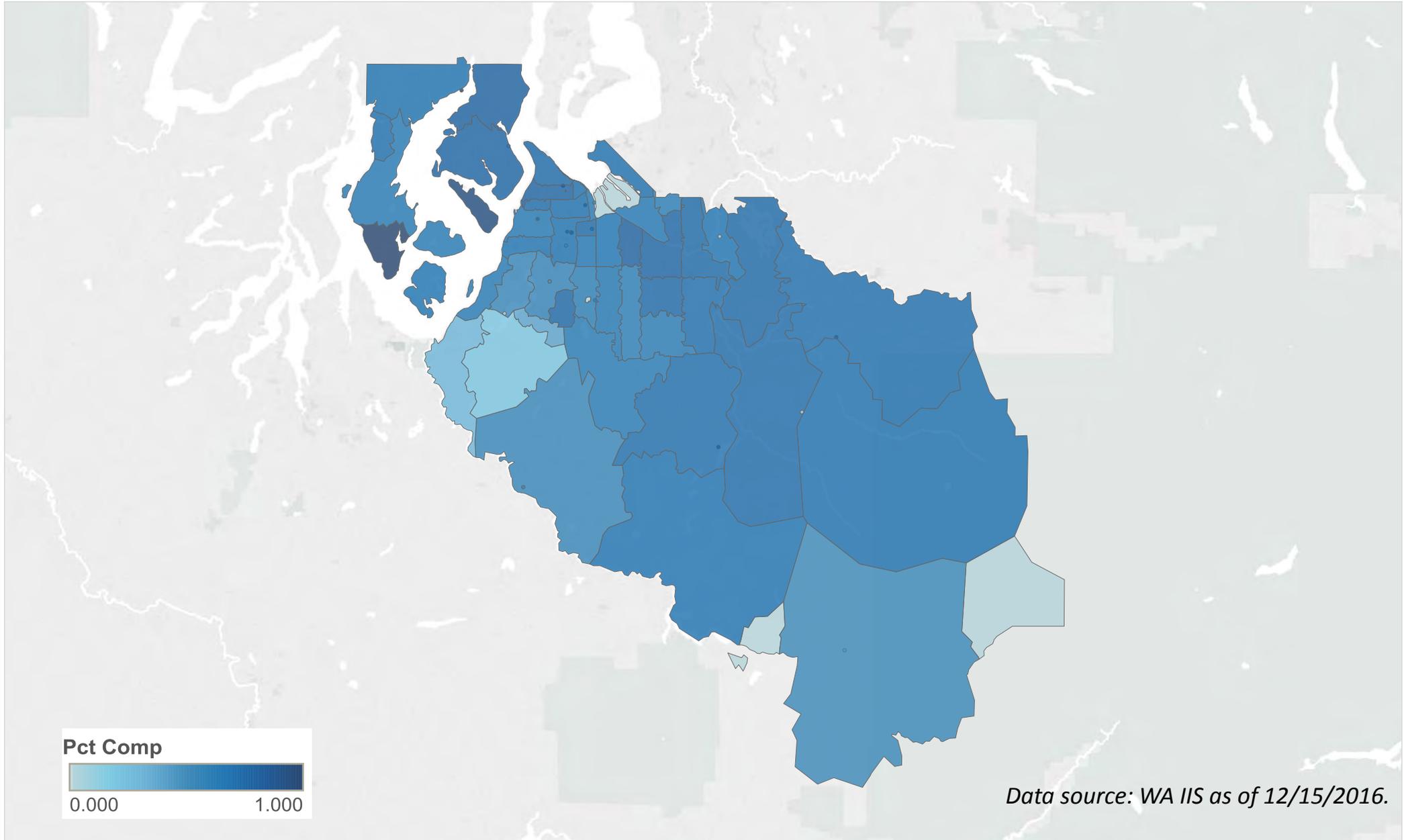
- MMR vaccine provides **significant protection** from mumps, and greatly reduces the risk of complications.
- Since the widespread use of MMR vaccine in the U.S., there has been a **99% decrease** in the number of people with mumps.
- MMR vaccine doesn't just protect against mumps—**it also protects against measles and rubella**, which are even deadlier diseases.

### What you can do

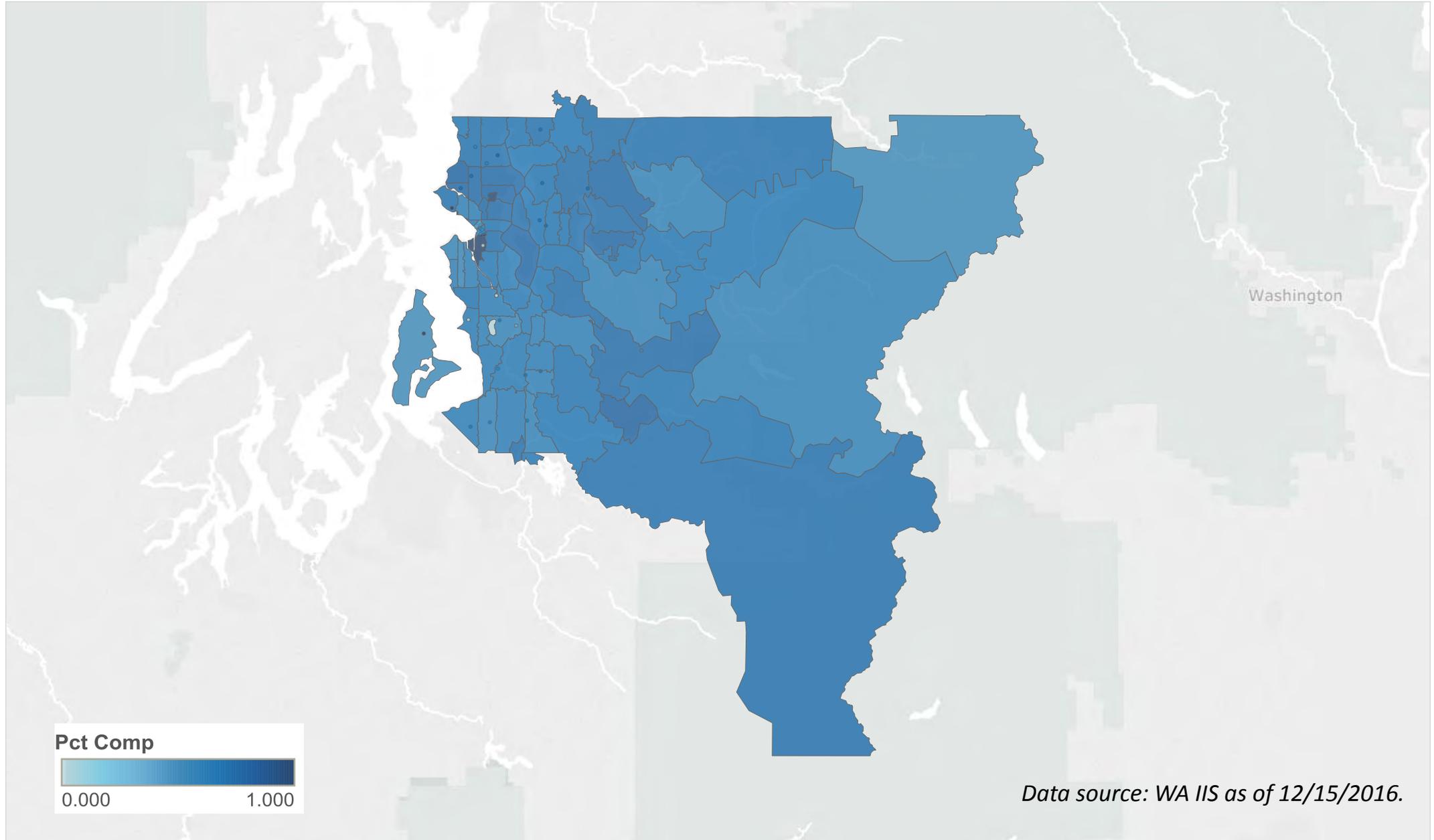
- **Get vaccinated.** Make sure you and your kids are up to date on MMR vaccine. Check with your healthcare provider. MMR vaccine is available to all Washington kids at no cost.
- **Find the vaccination rate of your school** at [www.schooldigger.com](http://www.schooldigger.com).
- **Sign up for MyIR**, which lets you see your family's vaccinations at home and get reminders. Go to [doh.wa.gov/immsrecords](http://doh.wa.gov/immsrecords).



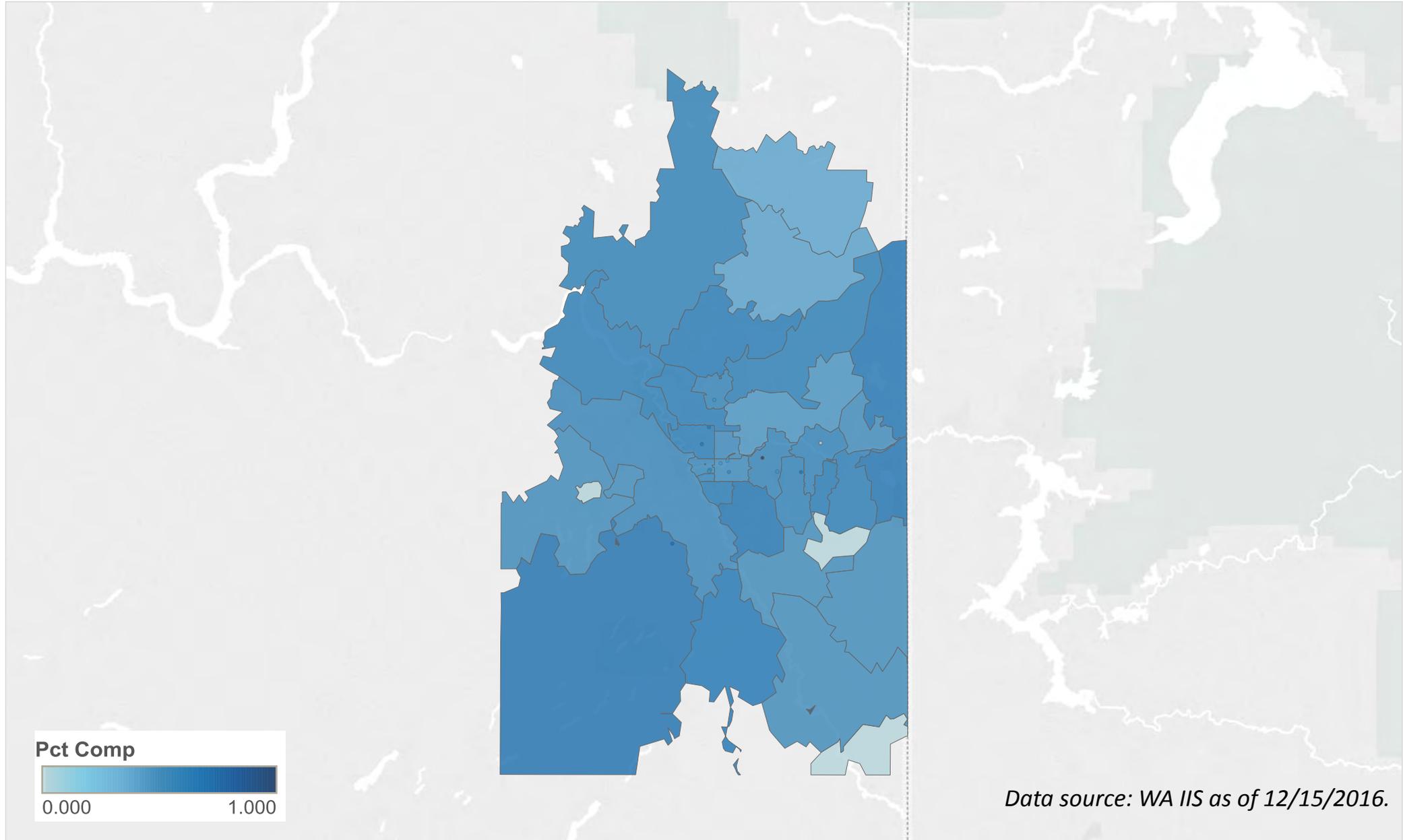
# One dose MMR Completion among 12-18 month-olds, Pierce County by ZIP code



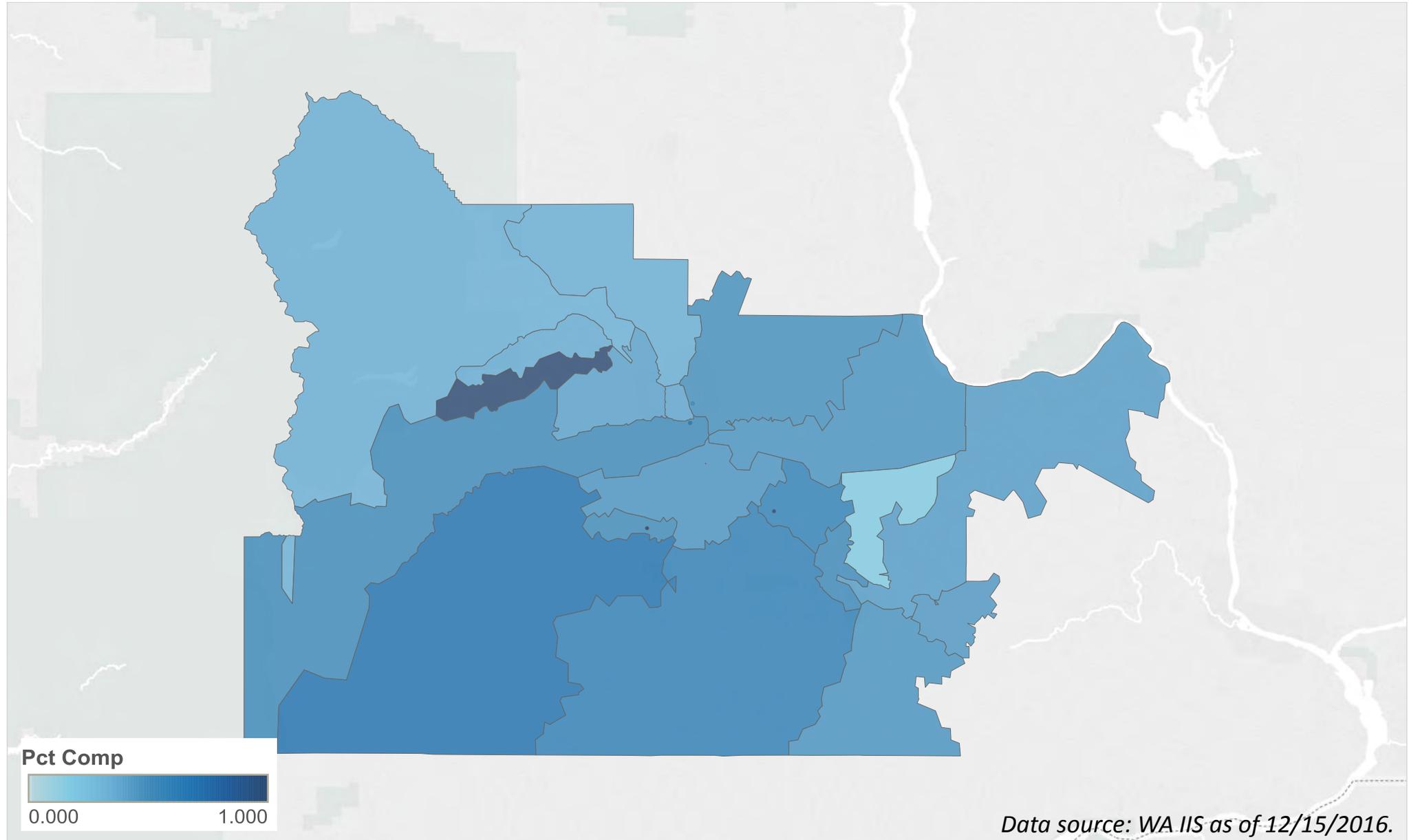
# One dose MMR Completion among 12-18 month-olds, King County by ZIP code



# One dose MMR Completion among 12-18 month-olds, Spokane County by ZIP code



# One dose MMR Completion among 12-18 month-olds, Yakima County by ZIP code



This guide walks providers through the process of collecting and transporting potential Mumps specimens to the Washington Public Health Lab.

### **Serologic Testing for Mumps**

In most cases if serologic testing is desired, send serum commercially and request both IgM and IgG results.

### **Collection of Specimens for PCR Testing**

- On days 0-3 after onset of parotitis, collect a buccal swab only.
- On days 4-10 after onset of parotitis, collect both a buccal swab and urine.
- Please consult with your Local Health Jurisdiction about what testing can be considered if more than 10 days has elapsed since onset of parotitis.

#### **1. Collect the Mumps Specimen, following Mumps RT-PCR collection guidelines:**

<http://www.doh.wa.gov/Portals/1/Documents/5240/SCSI-Mumps-RTPCR-V2.pdf>

#### **2. Complete the WAPHL Virology Specimen Submission form:**

<http://www.doh.wa.gov/Portals/1/Documents/5230/302-017-SerVirHIV.pdf>

Make sure all of the following information is filled out:

- Patient name, second identifier (e.g. date of birth), and county of residence
- Specimen type, date of collection, onset date and test requested (Mumps RT-PCR)
- Submitter name, address, and telephone/FAX numbers

#### **3. Once the Mumps specimen has been collected, prepare the specimen securely:**

- Make sure the cap of the transport tube is securely closed.
- Make sure the patient's name and second identifier are listed on the specimen tube and match the specimen submission form.
- Prepare a Biohazard Ziploc (plastic) bag containing a piece of super absorbent paper.
- Place the taped or para-film tube in the bag prevent potential leaking.
- Place the WAPHL submission form in the outer pouch of the Biohazard bag. **DO NOT** place any paperwork inside the pouch with the specimen tube.

#### **4. Prepare the Mumps specimen for shipment:**

- Place the Mumps Specimen contained in the Biohazard bag into a Saf-T-Pak plastic bag. Place the Saf-T-Pak plastic bag into a white Tyvek bag.
- Place the white Tyvek bag into a large plastic bag with frozen ice packs or dry ice, and place everything into the Saf-T-Pak cardboard box.
- Add packing material as needed to prevent contents from shifting during shipment.

- Place specimen into a special shipping container labeled as “Biological Substance, Category B.”

**5. Ship the Mumps specimen:**

- Choose a delivery service with package delivery within 24 hours.
- Lab receiving hours are 8am to 5pm Monday through Friday, and 10am to 12pm on Saturday. Saturday delivery is discouraged.
- Reusable shippers should be covered in clear packing tape and indicate a ‘Please return to’ address on the outer box so WAPHL can ship it back.

## **Mumps Information for Tribal Health Officials and Health Educators**

Below is background on the current mumps outbreak in Washington (and more broadly across the U.S.), along with general mumps and MMR vaccine information. We are encouraging all local health departments and clinics to be proactive in identifying and addressing mumps cases, and sharing information with patients, parents, and schools as needed. Please use the information enclosed here to inform and create materials for your tribe, community, or clinic. If you need help creating any materials or need further information, contact the Washington State Department of Health, Office of Immunization and Child Profile, at 360-236-3595.

### **Background:**

Washington currently has an outbreak of mumps disease. So far, it has spread to three counties. The most cases are in King County, mainly in the Auburn area, but there are cases in Pierce, Yakima, and Spokane counties as well, and it could spread further. The current number of cases is higher than what has been seen in Washington in at least 10 years.

For the most up-to-date case count, see [www.doh.wa.gov/mumps](http://www.doh.wa.gov/mumps). Case counts also are being posted to the department's Facebook and Twitter pages, along with other mumps breaking news and education, such as videos on vaccine effectiveness.

At least 8 states, including Washington, currently have outbreaks of more than 100 cases; one state has had more than 2,000 cases in the past few months. In all, 46 states have reported outbreaks in 2016, with more than 4,200 cases reported to the CDC.

The Department of Health is coordinating a statewide response to the outbreak by encouraging immunization and providing laboratory testing capacity, health education information, guidance on exclusion and other outbreak issues, and other resources as needed. The department's goal is to support local health jurisdictions, tribal health authorities, and other similar public health officials in quickly identifying cases and making sure that health care providers know how to identify and test potential mumps cases and what public health recommendations to make to their patients.

Everyone can help stop this disease from spreading by making sure you and your family are up to date on measles, mumps, and rubella (MMR) vaccine and knowing the signs and symptoms of mumps. If you suspect mumps, go to the doctor or clinic right away. Tell the staff you suspect mumps as they may want to have you wait in a separate area.

### **About Mumps:**

- Mumps is a contagious disease caused by the mumps virus. It is mostly spread by coughing and sneezing, or other contact with saliva from someone who is infected. It is as contagious as flu. Those infected with mumps usually are contagious before symptoms appear and for a few days after, so those who are infected can spread it without realizing it. There is no treatment for mumps, but there is prevention in the form of a vaccine.

- Because mumps spreads easily, it's important to make sure you and your family members are up to date on all recommended doses of MMR vaccine. This protects you and prevents the spread of mumps to others. Anyone 4 years and older should have two doses of MMR.
- The vaccine is effective at preventing mumps, but it is not perfect. There is still a small chance of getting mumps if you're vaccinated. About 9 out of 10 people get lasting protection from the vaccine. That's why it is important for everyone to get the vaccine to help protect the people for whom the vaccine might not work as well as those who can't get vaccinated. This will help keep outbreaks small and easily controlled.
- More than 9 out of 10 (91.9%) of Washington kindergartners have both MMR doses.

## **Mumps Disease**

- The most distinctive sign of mumps is swelling of glands that make saliva (parotid glands) which causes the cheeks to swell in front of the ears and down to the jaw; though not everyone gets this. It also can cause swelling of other glands such as the testicles and ovaries. Potential complications of mumps include hearing loss, meningitis (swelling of the covering of the brain and spinal cord), and altered brain function. Typical mumps symptoms include fever, headache, muscle aches, tiredness, and loss of appetite. Some people with mumps infection get no symptoms, but they are still contagious and can spread the disease to others.
- Symptoms generally last about a week.
- Mumps can happen any time of year. Outbreaks are more likely to happen in close-contact settings, such as a camp, schools, close-contact families and friends, sports teams, and college dorms. When mumps is happening in your community, there is some ~~Mumps is a risk in~~ at any gathering of a lot of people, such as a holiday party, family or church event, or going to a show of being exposed to mumps. If there is ~~a risk of~~ an outbreak in your area, be cautious about attending any gatherings, especially if you are unvaccinated. You could catch and ~~or~~ spread mumps even if you don't get the swelling in your glands.
- Ways to spread mumps include close face to face contact with other people or sharing food or utensils, and travelling or attending gatherings while infected and contagious.
- High vaccination coverage can help limit the size, duration and spread of a mumps outbreak. Make sure you and your family are immunized. People born before 1957 are usually immune because they have had mumps, but adults born after 1957 should check to make sure they are up to date with mumps vaccine.

## **Treatment**

- There is no specific treatment for mumps.
- Complications of mumps often require medical treatment.

## **Mumps Vaccine Recommendations: MMR (measles, mumps, rubella) Vaccine**

- The best protection against mumps is the combination MMR vaccine, which protects against measles, mumps, and rubella viruses.
- MMR vaccine is recommended for:
  - Kids aged 12 to 15 months, with a second dose at 4 to 6 years.
  - Adults born in 1957 or later need at least one dose of MMR vaccine.
  - Two doses of MMR vaccine are recommended for people at high risk for getting mumps, such as healthcare workers, college students, and international travelers.
  - People with lab evidence of mumps immunity or who were born before 1957 do not need to be vaccinated.

- Another vaccine, MMRV, contains measles, mumps, rubella, and varicella (chickenpox) vaccines, and may be used for children aged 12 months to 12 years. MMRV should not be given to adults.
- For full mumps vaccine recommendations and vaccination schedules, see [www.doh.wa.gov/CommunityandEnvironment/Schools/Immunization/VaccineRequirements](http://www.doh.wa.gov/CommunityandEnvironment/Schools/Immunization/VaccineRequirements).
- About 88% of people who get two doses of MMR vaccine are protected against mumps. People who got the vaccine can sometimes get mumps if exposed to the virus.

### **During an Outbreak (guidance to share with the public, patients, parents, etc.)**

- If you don't think you have ever received an MMR vaccine and there is an outbreak in your community, contact your healthcare provider for immunizations or a blood test as soon as possible. If you don't have a healthcare provider, call your local health department or the Family Health Hotline at 1-800-322-2588.
- If you think you have been exposed to mumps, contact your healthcare provider for advice.
- If you become ill after a possible exposure to mumps, contact your healthcare provider and ask to be evaluated for possible mumps. Stay away from other people to avoid exposing them to mumps.
- If there's a mumps outbreak in your community, your local health department will provide outbreak control recommendations.
- If possible, avoid large gatherings in enclosed spaces, especially if you cannot be vaccinated for medical reasons.

### **Outbreaks among Vaccinated Groups**

- Mumps vaccine protects most, but not all, of those who receive it. It gives lifelong protection to about 9 out of 10 people who get both recommended doses, and to just under 8 out of 10 of those who get one dose. It is important for everyone to get the vaccine to help protect the people for whom the vaccine might not work as well. This will help keep outbreaks small and easily controlled.
- There's a small chance someone who is fully vaccinated can still get mumps, especially if they have long-term or close exposure to someone who is contagious with mumps. It is especially important for people in close-contact settings to make sure they are fully immunized against mumps. MMR vaccine is 88% effective against mumps in people who have had two doses. That means of every 100 vaccinated people exposed, only 12 of them are at risk for infection. In contrast, **all** unvaccinated people are at risk if exposed. The number of people who get sick in an outbreak would be much larger if no one was vaccinated. In addition, complications happen more often and are more serious among unvaccinated people that get mumps.
- Those infected with mumps usually are contagious for a few days before true mumps symptoms appear, so those who are infected can spread it without realizing it.

### **MMR and MMRV Vaccine Safety and Effectiveness**

- As with all vaccines, there can be minor reactions from the MMR vaccines, though most people who get the vaccine do not have any problems with it. Reactions might include pain and redness at the injection site, headache, fatigue, or a vague feeling of discomfort. Up to 15 percent of people who get MMR vaccine get a fever and about 5 percent get a mild rash. This is more common following the first dose.
  - If a severe adverse events occurs following vaccination, this is taken very seriously and will be investigated.

- The MMR vaccine has been used for nearly fifty years in the U.S. Reports of serious side effects after vaccination have been extremely rare. Find additional information about MMR vaccine in the [MMR Vaccine Information Statement](#).
- Getting vaccinated with the MMR vaccine is much safer than getting any of the three diseases these vaccines protect against.
- Most people who are vaccinated against mumps have long-term and possibly lifelong protection.

### More Information

Washington State Department of Health:

- [Mumps outbreak information](#), including daily case counts and weekly reports
- [Mumps](#) general information
- [MMR vaccine](#)
- [Mumps reporting and surveillance guidelines](#)

Centers for Disease Control and Prevention:

- [Epidemiology & Prevention of Vaccine-Preventable Diseases: The Pink Book](#). National Immunization Program, CDC. 13th Edition, 2015. (Chapter 15: Mumps).
- [MMR Vaccine Information Statement](#)
- [MMRV Vaccine Information Statement](#) (MMR and Varicella combination vaccine)
- MMR [Vaccine Questions and Answers](#) for Clinicians
- [Mumps: General Information](#)
- [Mumps Vaccination](#), including general information about the disease, vaccination information, beliefs and concerns, vaccine safety, and who should not be vaccinated. It also contains more specific information for clinicians.

Other:

- [American Indian Health Commission's immunization information and resources](#)
- [Indian Health Service vaccine-preventable disease information](#)
- [Mumps information from the Immunization Action Coalition](#)

## **I. Clinical presentation of mumps**

The most common symptoms include:

- Swollen and tender salivary glands under the ears on one or both sides (parotitis)
- Non-specific prodromal symptoms can include:
  - Low-grade fever
  - Malaise
  - Headache
  - Myalgia
  - Anorexia
- Orchitis or oophritis (*clinically diagnosed as opposed to subjective testicular or pelvic pain*)

The classic symptom of mumps is parotitis (i.e., acute onset of unilateral or bilateral tender, self-limited swelling of the parotid or other salivary glands), lasting at least two days, but may persist up to ten days or longer. Nonspecific prodromal symptoms may precede parotitis by several days, including low-grade fever which may last three to four days, myalgia, anorexia, malaise, and headache. However, mumps infection may present only with nonspecific or symptoms or may be a subclinical infection. Rates of classic parotitis among all age groups typically range from 31% to 65%, but in specific age groups can be as low as 9% or as high as 94% depending on the ages and immunization histories of the individuals in the group. Parotitis may be unilateral or bilateral, and any combination of single or multiple salivary glands may be affected. Parotitis tends to occur within the first 2 days and may first be noted as earache and tenderness on palpation of the angle of the jaw. Symptoms tend to decrease after one week and usually resolve after 10 days.

Persons with history of potential exposure to mumps who have pain in their testes (males) or pelvic area (females) should be evaluated by their health care provider for potential orchitis (testicular inflammation) or oophoritis (ovarian inflammation not related to bacterial infection).

Before the introduction of the mumps vaccine in the United States in 1967, 15% to 27% of infections were asymptomatic. The proportion of infections that are asymptomatic since the introduction of the vaccine has not been clearly determined. Persons with asymptomatic infection can transmit the virus.

### Mumps complications

- **Orchitis** (testicular inflammation) is the most common complication of mumps in post-pubertal males. In the pre-vaccine era, orchitis was reported in 12 – 66% of males who get mumps after puberty. Orchitis usually occurs 1-2 weeks (average 4-8 days) after onset of parotitis. In mumps-associated orchitis, the onset is usually abrupt and includes swelling, tenderness, nausea, vomiting, and fever. Only one testicle is affected in 60-83% of male mumps cases with orchitis. Mumps orchitis rarely leads to sterility but it may contribute to subfertility. An estimated 1 in 10 men experience a decrease in their sperm count. However, this drop is very rarely large enough to cause infertility.

- **Oophritis.** Historically, about one in 20 females who got mumps after puberty experienced swelling of the ovaries or oophritis (ovarian inflammation). In the 2006 and 2009–2010 U.S. mumps outbreaks, oophoritis rates were 1% or lower among post-pubertal females. The symptoms of oophoritis (lower abdominal pain, high temperature, feeling sick) usually pass once the underlying mumps infection is cleared. It may mimic appendicitis. There is no known relationship to impaired fertility.
- **Aseptic meningitis.** In the pre-vaccine era, mumps accounted for approximately 10% of cases of symptomatic aseptic meningitis (inflammatory cells in cerebrospinal fluid resulting in headache or stiff neck). Men were afflicted three times as often as women. Aseptic meningitis resolves without sequelae in 3 to 10 days.
- **Mumps encephalitis** accounted for 36% of all reported encephalitis cases in the United States in 1967. The incidence of mumps encephalitis is reported to range from 1 in 6,000 mumps cases (0.02%) to 1 in 300 mumps cases (0.3%).
- **Pancreatitis** was reported in 3.5% of persons infected with mumps in one community during a two year period prior to the availability of vaccine, and was also described in case reports. Pancreatitis is infrequent, but occasionally occurs without parotitis. It causes hyperglycemia that is transient and reversible. Although single instances of diabetes mellitus have been reported, a causal relationship with mumps virus infection has yet to be conclusively demonstrated.
- **Deafness.** In the pre-vaccine era, mumps caused transient deafness in 4.1% of infected adult males (in a military population). Permanent unilateral deafness caused by mumps occurred in 1 of 20,000 infected persons. Bilateral, severe hearing loss was very rare.

In the post-vaccine era, among all persons infected with mumps, reported rates of meningitis, encephalitis, pancreatitis, and deafness have all been less than 1%. Permanent sequelae such as paralysis, seizures, cranial nerve palsies, and hydrocephalus occurred very rarely, even in the pre-vaccine era. Although, in the United States during 1966–1971 there were two deaths per 10,000 reported mumps cases, there were no mumps-related deaths in recent U.S. outbreaks.

## **II. Epidemiology of mumps**

### Case-defining symptoms

Persons with 2 or more days of clinically diagnosed parotitis.

Persons suspected to have mumps that have *clinically diagnosed* orchitis or oophoritis.

### Incubation period

Symptoms typically appear 16-18 days after exposure, but this period can range from 12-25 days.

### Period of communicability

Mumps virus has been isolated from 7 days before and up to 14 days after parotitis onset, but is most infectious in the several days before and after parotitis onset. If 2008 the period of

isolation was changed from the 9 days following onset to the 5 days following the date of onset. The recommended period for contact tracing is 2 days before and 5 days after parotitis onset. Mumps is spread through droplet transmission or by direct contact with infected droplet nuclei or saliva.

### **III. Laboratory diagnosis of mumps**

The period of communicability also informs the recommended times for collection of specimens for laboratory testing. Mumps virus is most reliably present in oral secretions in the few days before and up to 5 days after onset of parotitis. It persists somewhat longer in the urine (10 days to 2 weeks following onset). In general collection of specimens for culture or polymerase chain reaction (PCR) is not recommended more than 10 days following onset.

#### Specimen collection guidance

- On days 0-3 from onset of parotitis (or *clinically diagnosed* orchitis/oophoritis) with date of onset being day 0 → collect a buccal swab only.
- On days 4-10 from onset → collect both a buccal swab and urine.
- Please consult with the DOH Office of Communicable Disease Epidemiology about what testing can still be considered if more than 10 days has elapsed since onset of parotitis (or *clinically diagnosed* orchitis/oophoritis).

#### Testing schedule at the Washington Public Health Laboratories (WAPHL)

Due to the high volume of specimens received for PCR testing by WAPHL in December 2016, WAPHL recommends that serologic testing be done at a commercial laboratory, if desired. Both IgG and IgM results should be requested.

The mumps PCR testing schedule at WAPHL for the outbreak that began in November 2016 and continues through December 2016 is as follows:

- Specimens received in virology **by 1pm** Monday – Thursday will be processed for an overnight run with results available by 10am the following morning.
- Specimens received in virology **by 11am** on Fridays will be processed, run, and reported by close of business the same day.
- Specimens received in virology **after 11am on Fridays** will be processed the following Monday and run overnight with results available by 10am on Tuesday.

#### Serologic testing and interpretation of results

In general serum specimens should be sent to a commercial laboratory for testing. Both an IgM and an IgG should be ordered.

Follow up to determine IgG results will be important for patients with unknown vaccination status, since **a negative PCR cannot rule out mumps on a person previously exposed to mumps antigen, either by vaccination or previous infection.**

Please note: False negative mumps IgM results (i.e., a negative serologic test for mumps-specific IgM antibody) in a vaccinated person with true mumps is common.

Mumps testing at PHL in the absence of an outbreak

Under non-outbreak circumstances, mumps PCR testing is performed Mondays, Wednesdays, and Fridays with results available the same day. Mumps serology testing is performed on Tuesdays and Thursdays with results available the same day.

**IV. Evidence of immunity, exclusion, and return**

Evidence of immunity through documentation of vaccination is currently defined as:

- 1 dose of live mumps vaccine for preschool-aged children and for adults not at high risk for exposure and infection, and
- 2 doses of live mumps vaccine for school-aged children (i.e., grades K–12) and for adults at high risk for exposure and infection (i.e., health-care workers, international travelers, and students at post-high-school education institutions)

Exclusion:

All children or staff with symptoms consistent with mumps should be excluded from school, preschool, child care, or job site until they have been evaluated for possible mumps. A person deemed to have mumps can return to the environment on the 6<sup>th</sup> day after onset of symptoms with the date of onset being day 0.

**Susceptible** asymptomatic children or staff of schools, preschools, or child cares should be excluded through the 26th day after the onset of parotitis (swelling of salivary glands in one or both cheeks that starts front of the ear and can spread down to the neck or jaw), in the last person with mumps in your facility. The local health jurisdiction should assist the facility in determining this date.

- Susceptible children or staff include those who lack:
  - Documentation of two doses of MMR vaccine for school-aged children one dose of MMR vaccine for children in preschool or child care, OR
  - Laboratory evidence of immunity for mumps or laboratory confirmation of mumps disease, OR Children with an exemption on file for mumps vaccine.
  - Staff who are born before 1957 are presumed to be immune to mumps, so they are NOT required to get MMR vaccine or be tested

Return to school, preschool, or child care:

For districts or buildings with ongoing cases – the 26-day count down until the date that **susceptible** children or staff may return is pushed forward with each new case that occurs.

Allow under or unvaccinated children and staff to return to school, preschool, or child care immediately after receiving a dose of MMR or MMRV vaccine (i.e., persons with no doses can return after receiving a first dose; persons with one prior dose should receive a second dose.)

**Q: Can an unimmunized child return to school early if they have a positive titer?**

**A: Yes.** However, if a child had an exemption on file prior to the occurrence of an outbreak and then has a positive IgG serology result on a specimen collected after mumps cases have occurred in the school or in the child’s family or social group, it may indicate that the child has recently had mumps. The ordering health care provider should be encouraged to add a mumps-specific IgM antibody test on the specimen. Mumps IgM antibody is reliably present by

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5 days after onset of symptoms (if present), and persists for at least 30 days in an infected person (with or without symptoms) that had not previously been exposed to mumps antigen.

**References:**

CDC Manual for the Surveillance of Vaccine-Preventable Diseases  
Mumps – Chapter 9

<http://www.nhs.uk/Conditions/Mumps/Pages/Introduction.aspx>

Epidemiology and Prevention of Vaccine-Preventable Diseases  
The Pink Book Course Textbook – 13<sup>th</sup> Edition

Mumps – Chapter 15

<https://www.cdc.gov/vaccines/pubs/pinkbook/mumps.html>

National Health Service – U.K.:

Mumps – General Information

<http://www.nhs.uk/Conditions/Mumps/Pages/Introduction.aspx>

Mumps – Complications

<http://www.nhs.uk/Conditions/Mumps/Pages/Complications.aspx>

The Washington Department of Health is coordinating a statewide response to the outbreak, working closely with local health jurisdictions (LHJs). The department's goal is to prevent the outbreak from spreading further. Washington rules and regulations require exclusion of children from school, preschool, or child care when certain diseases occur in these facilities if they are not fully immunized according to immunization requirements set by the State Board of Health. Although schools, preschools, and child cares are required by law to work with LHJs during a disease outbreak, the rules do not specifically address school exclusion policies and procedures during an outbreak. LHJs should work together with schools, preschools, and child cares to develop policies and procedures for exclusion of children and staff in the event of a mumps outbreak. Guidance for the development of these policies and procedures is outlined below.

### Exclusion Guidelines during a Mumps Outbreak:

- All children or staff with symptoms consistent with mumps should be excluded from school, preschool, or child care until they have been evaluated for possible mumps.
- **Susceptible** asymptomatic children or staff should be excluded through the 26th day after the onset of parotitis (swelling of salivary glands in one or both cheeks that starts front of the ear and can spread down to the neck or jaw), in the last person with mumps in your facility. The LHJ should be consulted when determining this date.
  - Susceptible children or staff include:
    - Those who lack documentation of two doses of MMR vaccine for school-aged children, OR one dose of MMR vaccine for children in preschool or child care.
    - Those who lack laboratory evidence of immunity for mumps or laboratory confirmation of mumps disease.
    - Children with an exemption on file for mumps vaccine.
    - Staff who are born before 1957 are presumed to be immune to mumps, so they are NOT required to get MMR vaccine or be tested
- For districts or buildings with ongoing cases – the 26-day countdown until the date that susceptible children or staff may return is pushed forward with each new case that occurs.
- Allow under- or unvaccinated children and staff to return to school, preschool, or child care immediately after receiving a dose of MMR or MMRV vaccine (i.e., persons with no doses can return after receiving a first dose; persons with one prior dose should receive a second dose).
- **Exclusion should not be done on a classroom-by-classroom basis.** Exposure also can occur in lunchrooms, restrooms, playgrounds, and shared learning spaces such as the library.
- Exclusion policy options that can be considered include:
  1. Exclude susceptible children and staff districtwide.
  2. Exclude susceptible children and staff on a building-by-building basis.
    - If exclusion is by building, additional considerations for applying the exclusion policy to a building are:
      - Is it a building with no cases?
      - Is it a building with outbreak cases, but none recent?
      - Is it a building with ongoing cases?
      - Is it a building with evidence of transmission in that building?

**Additional Resources:**

- [Washington Department of Health Mumps Outbreak](#)
- [Washington Department of Health Mumps Guideline](#)
- [CDC's Manual for the Surveillance of VPDs: Chapter 9 Mumps](#)
- Prevention of Measles, Rubella, Congenital Rubella Syndrome, and Mumps, 2013 -- Summary Recommendations of the Advisory Committee on Immunization Practices (ACIP)  
Source: MMWR, June 14, 2013; 62(RR04):1-34. <https://www.cdc.gov/mmwr/pdf/rr/rr6204.pdf>

# MUMPS NEWS

MUMPS OUTBREAK INFORMATION

December 2016

## Dear Tribal Community

Health officials in Washington State have confirmed an outbreak of mumps. Tribal families often travel during this time of year, so there is an increased potential for spread of the disease. We can all do our part to keep our families and communities protected. There are now over 100 cases in both Eastern and Western Washington.

### What is Mumps?

Mumps is a contagious disease spread by contact with someone who is sick, or someone who has the virus but is not yet feeling sick. It has the potential to cause serious long-term health problems, including brain damage and hearing loss.

### How Do You Get Mumps?

Mumps is spread by being in contact with someone who has the virus. People who do not yet feel sick, but have the virus, can spread the disease.



**\*Peace On Earth\***

**PROTECT  
YOUR FAMILY  
AND  
TRIBAL  
COMMUNITY**

# What You Can Do

## What are the Symptoms?

Symptoms include: fever, headache, loss of appetite, tiredness. Also, mumps can cause swelling of the neck, cheeks, jaw, testicles or ovaries.



## If You or a Family Member Has Symptoms

- CALL your tribal clinic or primary care provider—don't go to the clinic or provider's office until you talk to them first
- Follow your healthcare provider's instructions
- Stay home and avoid contact with others, until you receive guidance from your healthcare provider
- Rest and drink lots of fluids

## If You Have Contact With Someone Who is Sick or Gets Sick

- CALL your tribal clinic or primary care provider—don't go to the clinic or provider's office until you talk to them first
- Stay home and avoid contact with others, until you receive guidance from your healthcare provider

## How to Prevent Getting Mumps

- The best way to prevent getting sick with mumps is to get vaccinated—CALL your tribal clinic or primary care provider



# MUMPS OUTBREAK

# PROTECT YOUR FAMILY AND TRIBE

## WHAT IS MUMPS?

Mumps is a contagious disease spread by contact with someone who is sick or has the virus but is not yet feeling sick. It can cause serious long-term health problems (including brain damage and hearing loss.)

## SYMPTOMS

Fever, headache, swollen neck, cheeks or jaw (sometimes swollen testicles or ovaries) - you can be sick and feel only some or none of these. It can take 2-4 weeks for symptoms to show.

If you or a family member develops symptoms or have been in contact with someone who is sick or gets sick with mumps:

1. **CALL** your tribal clinic or primary care provider right away for information

**CALL:**

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2. Stay at home and avoid contact with others until you get information