Outbreak risk on college campuses

How likely is a measles or mumps outbreak to occur at Eastern Washington University (EWU)?

The answer is, it depends. Measles and mumps are still relatively rare in this country due to robust vaccination of our population; however, mumps outbreaks can still occur in U.S. communities of people who previously had one or two doses of MMR vaccine. This is particularly common in close-contact settings. High vaccination coverage helps limit the size, duration, and spread of mumps outbreaks. Mumps outbreaks on college campuses have been occurring in increased frequency since 2006. Because college students often live in congregate settings, it’s easy for viruses like the mumps to spread in this population. This coupled with academic opportunities for students to study abroad as well as a growing international student population allows global exposure to illnesses in countries whose immunization rates are below the community immunity threshold for protection. High two-dose MMR vaccination rates (known as coverage) among the EWU student and staff population make a large-scale epidemic of mumps or measles unlikely, but if rates were to fall below 93-95%, EWU could experience an outbreak if either virus were introduced on campus. Measles is an airborne virus which makes it one of the most contagious vaccine preventable viruses, impacting staff/faculty and students equally. Mumps is spread by droplet, so staff/faculty are somewhat less likely to be exposed than students living in a dormitory or congregate living situation. However, since the mumps component of the MMR vaccine does not convey as high a level of immunity as for measles, the likelihood of an outbreak on a campus like EWU from this virus is higher.

Proof of immunity

I’m pretty sure I had the MMR vaccine before. What type of documentation do I need to show proof of immunity?

You will need a copy of your MMR immunization record. For students, staff, and faculty acceptable presumptive evidence of immunity to mumps and measles includes documented administration of two doses of the MMR vaccine at least 28 days apart, on or after the first birthday; military service record; birth before 1957; or laboratory evidence of immunity.

There are three options for demonstrating immunity:

1. Laboratory evidence of immunity: You can have your healthcare provider draw blood and run a test (a titer) to see if you have antibodies to the measles and mumps. These are separate titer tests.

2. Documentation of physician-diagnosed mumps and measles: You can provide a letter from your healthcare provider showing that you have had both the mumps and the measles illnesses in the past.

3. If You were born before 1957, you don’t need to show documentation of previous illness or MMR vaccination.

Some staff may have had the measles and/or the mumps as children. How do they prove that they have immunity to the disease?

If you do not have documentation that you are immune, either through vaccination or illness, please call your healthcare provider or visit your local pharmacy to get this vaccine. In the US, vaccine to prevent the individual viruses of measles, mumps, and rubella are not available. This means that vaccination with MMR would be necessary even if a person has proof of immunity for one or two of the diseases but not all three.

What should staff do if they don’t have proof of immunity to the measles and/or mumps?

If you do not have documentation that you are immune, either through vaccination or illness, please call your healthcare provider or visit your local pharmacy to get this vaccine. In the US, vaccine to prevent the individual viruses of measles, mumps, and rubella are not available. This means that vaccination with MMR would be necessary even if a person has proof of immunity for one or two of the diseases but not all three.
What happens if there is an outbreak of measles or mumps on campus and I don’t have proof of immunity?

Mitigation steps will be taken to reduce exposure to the illness for anyone who does not have demonstrated immunity. This typically happens in the form of identifying all those who are ill and contagious and isolating them away from others; and requiring others who may have been exposed and are not immune to remain quarantined and away from others until the risk of developing illness has passed. Because measles is an airborne disease (and persons are infectious before the rash shows up), individuals who shared airspace maybe at risk for exposure to the virus. While the mumps is far less contagious than measles because it is spread through droplets, it is still possible that faculty or staff could be exposed through exposure to virus from contaminated, shared, public surfaces.

What happens if there is an outbreak of measles or mumps on campus and my students don’t have proof of immunity?

Students without documented immunity to the measles and mumps may be excluded from campus until the outbreak is over. The main strategy for controlling a vaccine-preventable communicable disease outbreak is to define the population(s) at risk and transmission setting(s), and to rapidly identify and vaccinate persons without presumptive evidence of immunity; or, if a contraindication exists, to exclude persons without presumptive evidence of immunity from the setting to prevent exposure and transmission. Exclusion is first and foremost for the protection of those without immunity to the measles and mumps, as both diseases can cause serious complications. Secondly, it is a means to stem further transmission and control the outbreak. Unfortunately, exclusion from campus can last several weeks (dependent on the disease), impacting academic learning and teaching.

Where can I get the vaccine?

Please contact your local healthcare provider or pharmacy to get the MMR vaccine.

Vaccine efficacy

How effective is the MMR vaccine against the measles, mumps and rubella?

The Measles-Mumps-Rubella (MMR) vaccine is a combination vaccine that has been available and used widely in the United States since 1971. The MMR vaccine is a mixture of live weakened viruses of the three diseases. One dose of MMR vaccine is 93% effective against measles, 78% effective against mumps, and 97% effective against rubella. Two doses of MMR vaccine are 97% effective against measles and 88% effective against mumps. Ten days to two weeks is the time it takes for the body’s immune system to develop an immune response if exposed to the virus(s).

Vaccine Safety

How safe is the MMR vaccine?

Most individuals who get the vaccine do not have any problems. As with all medicine, some side effects – usually very minor – can happen. The MMR vaccine sometimes causes pain where the shot is given, fever, a mild rash, or swelling of the neck or cheek.