

# Science & Digital Briefs

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Image: [science.org.au](https://www.science.org.au)

## Measles Outbreak Spreading

A measles outbreak in Ohio has swiftly expanded, spreading to seven childcare facilities and one school, all with unvaccinated children, according to local health officials. The outbreak highlights the risk of the highly contagious and potentially fatal but vaccine-preventable disease mushrooming amid slipping vaccination rates.

On November 9, the health departments of the city of Columbus and Franklin County, which encompasses Columbus, [announced an outbreak](#) at one childcare facility, which had sickened four unvaccinated children. Officials reportedly expected that more cases would follow.

As of Wednesday morning, there have been 18 confirmed cases from seven childcare facilities and one school. All of the cases are in unvaccinated children, and at least 15 cases are in children under the age of 4. At least six have required hospitalization, Kelli Newman, spokesperson for Columbus Public Health, told Ars.

Health officials are now working to curb the outbreak, including conducting contact tracing at affected facilities, coordinating with local health care providers on measles awareness efforts, and reaching out to families to educate them about and encourage vaccination with the measles-mumps-rubella (MMR) vaccine.

"MMR vaccines are very safe and highly effective at preventing measles," Newman told Ars in an email. "We offer walk-in MMR vaccines at Columbus Public Health Monday through Friday every week. We have not seen an uptick here on MMR vaccinations yet from what we usually do, but that is not indicative of uptake overall since we do not know what is being given by providers in the community."

## Risky situation

Statewide, however, vaccination rates have fallen amid the pandemic as well as dangerous anti-vaccine misinformation. In the 2019–2020 school year, 92.4 percent of kindergartners in Ohio had received MMR vaccination. But in the 2020–2021 school year, coverage fell to 89.6 percent. Public health experts at the Centers for Disease Control and Prevention say a rate of 95 percent is ideal for preventing spread. Moreover, statewide numbers can obscure pockets of extremely low vaccination rates, where vaccine-preventable diseases can readily spread.

Measles, a virus that spreads via coughing, talking, or simply being in the same room with someone, **will infect an estimated 90 percent of unvaccinated people who are exposed**. Once infected, symptoms generally show up seven to 14 days later, starting with a high fever that can spike above 104° F, cough, runny nose, and watery eyes. A few days after that, a telltale rash develops.

Measles is a highly contagious virus that lives in the nose and throat mucus of an infected person. It can spread to others through coughing and sneezing.

If other people **breathe the contaminated air or touch the infected surface**, then touch their eyes, noses, or mouths, they can become infected.

Animals do not get or spread measles.

**Measles is one of the most contagious diseases!**

Measles is so contagious that if one person has it, up to 90% of the people close to that person who are not immune will also become infected.

Infected people can **spread measles to others from four days before through four days after the rash appears**.

Measles virus can **live for up to two hours in an airspace after an infected person leaves an area**.

Two doses of [MMR vaccine](#) are about 97% effective at preventing measles; one dose is about 93% effective.

**There is no link between vaccines and autism!**

Scientists in the United States and other countries have carefully studied the MMR shot. No studies have found a link between autism and the MMR shot. [Learn more](#)

In the decade before a measles vaccine became available, the CDC estimates that the virus infected 3 to 4 million people in the US each year, killing 400 to 500, hospitalizing 48,000, and causing encephalitis (swelling of the brain) in 1,000.

Measles was declared eliminated from the US in 2000, meaning that—thanks to vaccination—it no longer spreads continuously in the country. But it has not been eradicated worldwide and thus is still brought into the country from time to time by travelers, posing a [constant threat of outbreaks](#) in any areas with low vaccination rates. If measles is brought in and continues to spread for more than 12 months, the US will lose its [measles elimination status](#), which [it nearly lost in 2019](#).

Excerpted from [ARS Technica](#), Nov 16, 2022, by Beth Mole