

Routine Vaccines Protect Children and Communities from Life-Threatening Diseases

Immunizations are one of the most effective medical advances of our time. Childhood vaccination has been so effective that most of us have never encountered the diseases that immunizations protect against!

Vaccines have eliminated or dramatically reduced the incidence of many infectious diseases. In the U.S. giving children born in a single year all routine vaccines can prevent 42,000 early deaths and 20 million cases of disease. In Kansas, this translates to annually preventing approximately 400 early deaths and 187,500 cases of disease.¹

For each disease, see the difference between the number of people in the U.S. who became sick per year before the vaccine versus in 2021.

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Disease	Case/Year Before Vaccine	Cases/Year in 2021	Percent Difference
Diphtheria	21,053	0	100%
Measles	530,217	9	> 99%
Mumps	162,344	157	>99%
Pertussis	200,752	1,609	>99%
Polio	16,316	0	100%
Tetanus	580	19	97%

These infections cause permanent consequences such as paralysis, limb amputation, hearing loss, blindness, seizures, brain damage, and death. We have medicine to treat some vaccine-preventable diseases (e.g., pertussis), but not most (e.g., mumps, diphtheria, polio). Prevention is always better than treatment.

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Vaccines also save money. Every dollar spent on childhood vaccines saves \$10. When outbreaks of vaccine-preventable diseases happen, there is a severe economic impact on a community.³ Parents miss work, children miss school and child care, outbreaks overwhelm our health systems, and responses can cost millions of dollars.⁴

Is measles still a threat?

Unfortunately, yes. As of April 28, 2023, there have been 10 cases in 8 states following 121 cases last year. Measles is highly contagious and spreads through an infected person coughing or sneezing. It can cause a high fever, rash, and diarrhea, among other symptoms, and lead to serious complications such as pneumonia, blindness, or even death. Even children who seem to recover can die years later if the measles virus hides in their brains, a condition known as subacute sclerosing panencephalitis.

The best way to protect yourself and your family against measles is through immunization. The measles, mumps, and rubella (MMR) vaccine is about 93% effective at preventing measles, and two doses are about 97% effective.

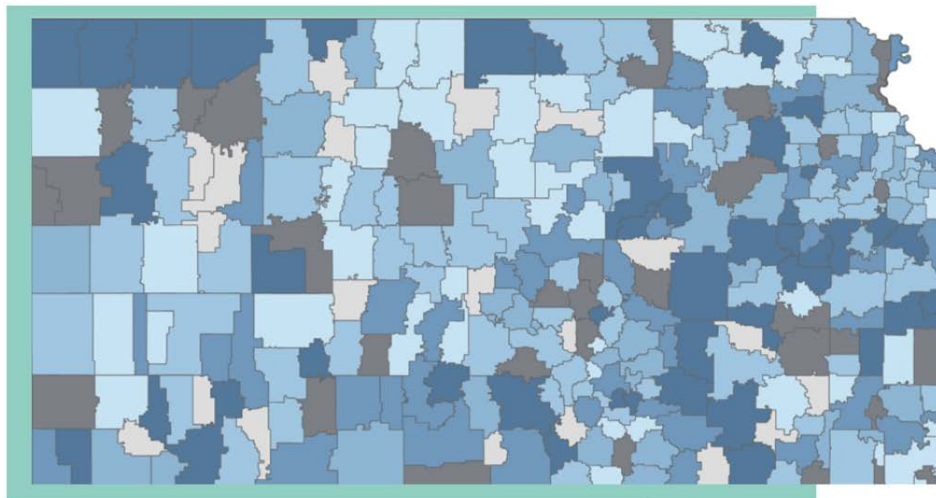
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During a 2018 and 2019 measles outbreak in Kansas, the public health response to the 72 known cases cost approximately \$2.3 million. Late last year, Ohio saw an outbreak of measles, where 80 of the 85 kids infected were not vaccinated. Measles outbreaks usually see about 20% of infected children hospitalized. In this Ohio outbreak, 42% of the kids infected were hospitalized! That should concern us all, as almost everyone in a community must be vaccinated against measles to stop an outbreak from occurring.

What is the vaccination coverage in your area?

To see estimated vaccination coverage rates for your school district, view the Kansas Department of Health and Environment's Kindergarten Dashboard: kdhe.ks.gov/2016/Kindergarten-Immunization-Data.

Required Vaccine Coverage by School District for 2021 – 2022 Academic Year



Measles, mumps, and other infections are still around the corner or just a plane ride away, as some of these diseases persist abroad. If children are not vaccinated, they could easily be infected from contact with a traveler. Tetanus spores are in the soil and will never be eradicated. Vaccines protect the health of everyone in our community.

As a Kansas public health pioneer once said, "The health of each of us depends on the health of all of us."

[1] <https://bit.ly/2YvAbN>

[2] <https://tinyurl.com/diseasesbyyear>

[3] <https://bit.ly/2BdDW1o>

[4] Pike, J., Melnick, A., Gastañaduy, P., Kay, M. Harbison, J., Leidner, A., J., Rice, S., Asato, K., Schwartz, L., and DeBolt, C. (2021). Societal Costs of a Measles Outbreak. *Pediatrics* 147(4). <https://doi.org/10.1542/peds.2020-027037>