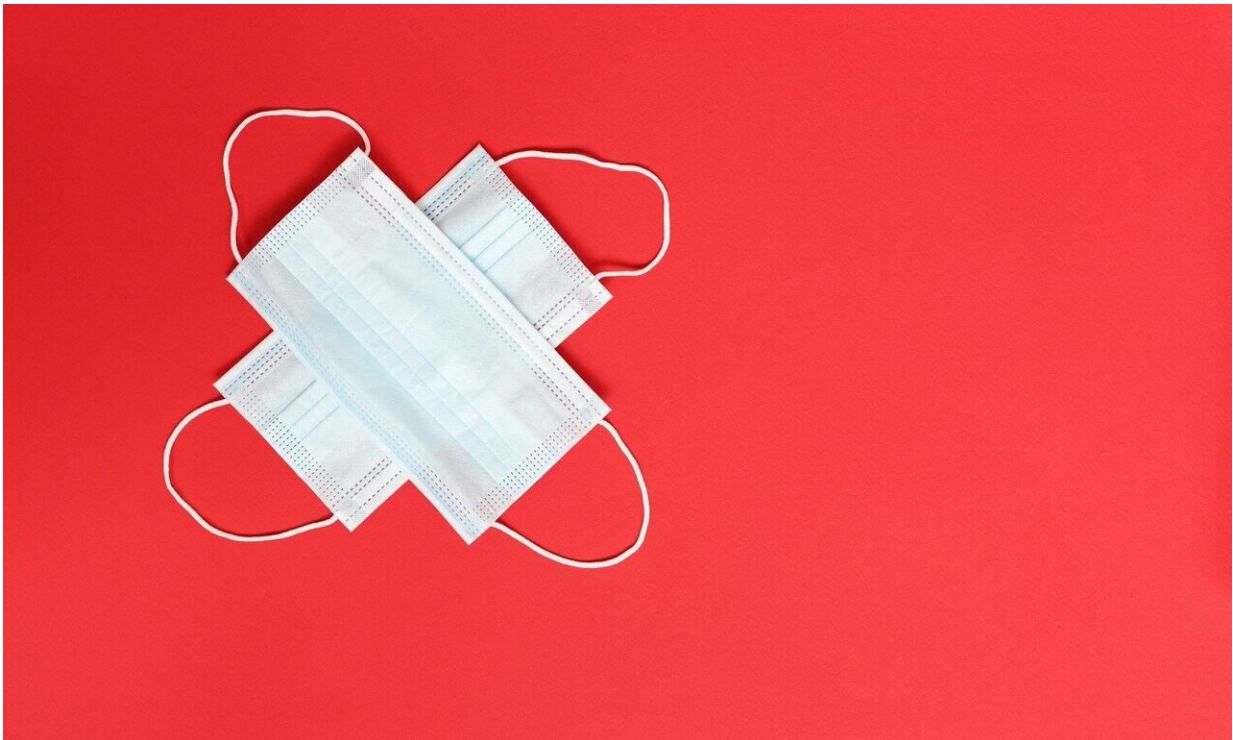


# Could common vaccine given to kids help prevent COVID-19 in adults?

September 14 2020, by Michele Munz

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Washington University School of Medicine is helping lead an ambitious, worldwide study to see if giving adults the measles, mumps and rubella vaccine - a common vaccine administered to young children - could help protect against infection from the coronavirus.

The study aims to enroll up to 30,000 [health care workers](#) globally, including 500 to 1,000 in the St. Louis area.

Washington University is leading the trial along with the University College London and the University of the Witwatersrand in Johannesburg.

The MMR [vaccine](#) was approved nearly 50 years ago and has since been given safely to hundreds of millions of people, greatly reducing the incidence of the diseases. The vaccine is typically given in two doses to a child before he or she turns 6.

While the vaccine provides lifelong protection against the three diseases, growing evidence suggests a booster shot as an adult may elicit a broad immune system response that could prevent infection from the coronavirus for several months.

That's because the MMR vaccine carries small amounts of live, weakened viruses; and there are similarities between those viruses and the new coronavirus. They have the similar proteins on their surfaces that are involved in infecting cells in the body.

Researchers think that young antibodies made in response to the MMR vaccine may recognize and fight the coronavirus.

"This type of vaccine appears to strengthen the body's immune response to infections in general, not just to the viruses in that particular vaccine," said one of the collaborative's principal investigators, Dr. Michael Avidan, the anesthesiology department chair at Washington U.

The MMR vaccine would not be used to treat illness. Instead, the researchers want to learn if a booster shot can slow the spread of the coronavirus and protect health care workers who work in high-risk

settings from developing COVID-19. The vaccine also will be examined to see if it reduces the severity of illness for those who do become infected.

Dr. Laurence Lovat, the study leader in the United Kingdom, said if the MMR vaccine can boost the body's general immune response, it may help the effectiveness of the first COVID-19 vaccines, which could be approved by the end of the year or earlier.

"If we discover that the MMR vaccine can help train the body's immune response to SARS-CoV-2 (the novel [coronavirus](#)) infection, then we will have something to administer very quickly, while waiting for more specific vaccines and preventive therapies to be developed," Lovat said in a statement.

The countries involved in the study include Canada, Ghana, Ireland, South Africa, Uganda, United Kingdom, United States, Zambia and Zimbabwe. In many of those nations, there are relatively few health care workers per capita. Some will be getting the MMR vaccine for the first time.

Protecting the workers from severe COVID-19 infection could help ensure that the public is cared for and help reduce community spread of the virus.

"We designed the study to focus on health care workers to maintain availability of this critical workforce worldwide," said Mary Politi, health psychology researcher and surgery professor at Washington University. "There are many other vulnerable groups in settings like congregate living facilities or schools, and we hope to find rapid results so we can share that knowledge with other high-risk groups."

The study leaders are using the COVID-19 Research Outcomes

Worldwide Network (CROWN) to conduct the study. The network launched at the beginning of the global pandemic involves research institutions from African, European and North American countries.

The network was designed to be able to quickly adapt to studying different interventions. CROWN was involved in a plan to study the anti-malaria drug chloroquine to treat COVID19 before data showed the drug was not as promising as originally thought.

"The CROWN collaborative research platform was designed to rapidly evaluate preventive and therapeutic interventions to learn which ones work and which ones do not," Avidan said. "Our goal from the start has been to identify interventions that work and make them available to the people around the world who will benefit most."

Studies conducted through CROWN are funded by a \$9 million grant from the COVID-19 Therapeutics Accelerator - an initiative launched by the Bill and Melinda Gates Foundation, Wellcome, and Mastercard, as well as other donors.

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