Medical Xpress

Child vaccination rates declined during COVID-19 pandemic

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The numbers of recommended vaccine doses, including measles vaccine, administered to children decreased dramatically after the declaration of a national state of emergency on March 13, 2020, due to the COVID-19 pandemic, according to a Kaiser Permanente study published in *Pediatrics*. While the decrease was lower and recovered in children under

2 years of age, it was more severe and persistent in older children.

"When vaccination rates decline, we worry about an increase in vaccine -preventable diseases that can be harmful to children," said the study's lead author, Bradley Ackerson, MD, a Kaiser Permanente South Bay Medical Center pediatric infectious disease specialist and an investigator with the Kaiser Permanente Southern California Department of Research & Evaluation's vaccine team. "Also, we know there has been a reduction in childhood vaccinations worldwide, and as COVID-19 restrictions are relaxed, there will be an increased risk of outbreaks due to vaccine-preventable diseases among children returning from outside the United States, unless children here are vaccinated."

To determine the trends in vaccination, researchers assessed the uptake and coverage for recommended vaccines including measles among nearly 1 million children from birth to18 years at Kaiser Permanente in Southern California. Vaccination coverage is a measure of the proportion of children vaccinated at specific ages, while vaccine uptake is the number of children getting vaccinated. The study showed that vaccination coverage continued to decline even after vaccine uptake recovered because vaccinations did not return to pre-pandemic levels in most age groups, causing the number of unvaccinated children continued to grow. Researchers also looked at measles vaccination rates separately because measles is particularly contagious and causes severe disease in all age groups.

The researchers compared January through August 2020 with the same period in 2019. The patient group was 49% female, 24% non-Hispanic white, and nearly 50% Hispanic.

- While overall vaccinations declined in all children during the pandemic period in 2020 compared with 2019, they recovered completely in children under 2 by May. They partially recovered

in older children.

- After an initial decline in measles vaccinations of up to 93% among children aged 2 to 18 years during the pandemic, measles vaccinations partially recovered, but remained lower in 2020 than in 2019.
- While measles vaccination coverage was unchanged in the 7-year-old patients, there was a significant decrease in measles vaccination coverage among 16-month-old patients that worsened over time.

"While the severe decrease in measles vaccine uptake among children improved, measles vaccine uptake remained substantially reduced, so the population of unvaccinated children is continuing to grow," Dr. Ackerson said. "The decrease in measles vaccine uptake is very concerning as even a 2% to 5% reduction in measles vaccination coverage is projected to result in exponential increases in measles outbreaks."

At Kaiser Permanente in Southern California, clinicians are addressing childhood vaccination concerns by contacting members whose children are due for vaccination and providing reassurance about safety measures being taken for vaccination visits. Besides implementing masking, distancing, and hygiene measures, sick visits are separated from well visits by location and time. Drive-through vaccinations were also provided at certain facilities

Study co-author Robert Riewerts, MD, a pediatrician with the Southern California Permanente Medical Group, said he understands that parents may feel uneasy about taking their children to medical offices for vaccinations. However, "This is a case where the benefit of vaccination far outweighs the risk of visiting a medical office. Our medical offices are taking every precaution to keep kids and their families safe."

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More information: Bradley K. Ackerson et al, Pediatric Vaccination During the COVID-19 Pandemic, *Pediatrics* (2021). DOI: 10.1542/peds.2020-047092

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