Effectiveness of COVID-19 vaccination for babies and young children confirmed in multi-state study

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COVID-19 mRNA vaccination protects babies and young children against COVID-19-associated emergency department/urgent care visits, according to a multistate study from the Centers for Disease Control and

Prevention's VISION Network. The study found that children, age five and younger, who received the original COVID-19 vaccine and the updated vaccine were protected against the need for medical care for COVID in an emergency department or urgent care facility.

Emergency department/urgent care visits are considered indicators of moderate disease. The small number of hospitalizations for children ages six months to five years old limited the assessment of vaccine effectiveness against more severe outcomes.

The VISION Network study, one of the first to analyze vaccine effectiveness in babies and young children, was conducted both to determine how well the vaccines work and to help inform and guide development of future vaccine policy for this age group.

Data was collected in eight states—New York, Wisconsin, Minnesota, Colorado, Utah, Oregon, Washington and California.

"In most cases, we have seen throughout the pandemic that the prevalence of COVID among children has been lower than among adults. But there has been limited analysis of vaccine effectiveness in young children due to limited availability of data. A large research network like the VISION Network provides sufficient data," said study co-author Shaun Grannis, M.D., M.S., vice president for data and analytics at Regenstrief Institute and a professor at Indiana University School of Medicine.

"Based on our analysis we found that, for this age group—children five and younger, even one dose of the two-dose vaccine series provided some protection. Based on this data, parents should consider vaccinating their children for COVID and I further encourage parents to discuss vaccination with their child's physician."

As of June 2023, SARS-CoV-2 had resulted in more than two million COVID-19 cases and more than 400 deaths among U.S. children aged six months to four years.

The original monovalent mRNA vaccines were authorized in June of 2022 for children aged six months to four years (Pfizer-BioNTech) and six months to five years (Moderna) with recommendations expanded to include bivalent vaccines in December of 2022.

According to the CDC, for best protection the COVID-19 vaccine series should be started as soon as children are eligible (age six months) and completed within the recommended time. The study found that protection provided to babies and young children waned in patterns similar to those seen in older children and adults.

A previous VISION Network multi-state study confirmed that the Pfizer-BioNTech mRNA COVID-19 vaccine provided older children and adolescents, ages 5-17, with protection against both moderate and severe COVID-19 outcomes.

"Effectiveness of Monovalent and Bivalent mRNA Vaccines in Preventing COVID-19–Associated Emergency Department and Urgent Care Encounters Among Children Aged 6 Months–5 Years—VISION Network, United States, July 2022–June 2023" is published in the CDC's *Morbidity and Mortality Weekly Report (MMWR).*

More information: Ruth Link-Gelles et al, Effectiveness of Monovalent and Bivalent mRNA Vaccines in Preventing COVID-19–Associated Emergency Department and Urgent Care Encounters Among Children Aged 6 Months–5 Years—VISION Network, United States, July 2022–June 2023, *MMWR. Morbidity and Mortality Weekly Report* (2023). DOI: 10.15585/mmwr.mm7233a2

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