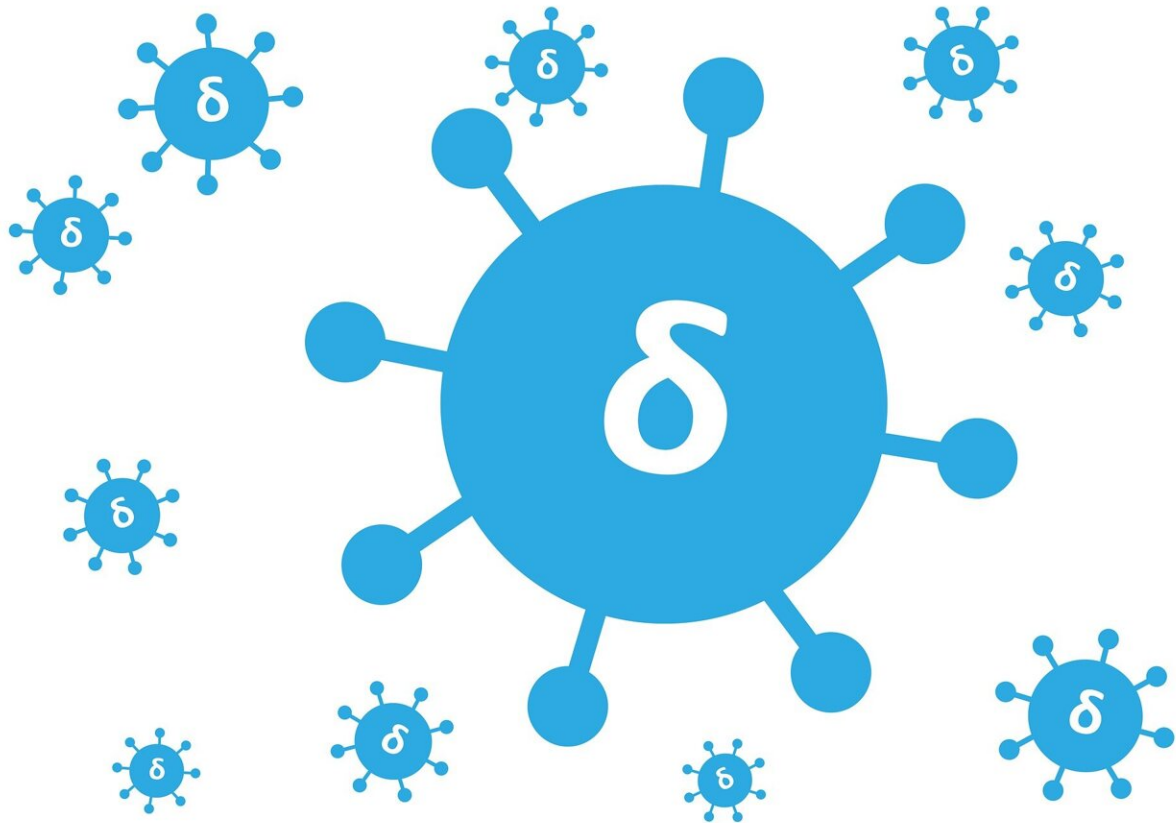


COVID-19 vaccination strongly protected 12- to 18-year-olds during Delta

October 21 2021



Credit: Pixabay/CC0 Public Domain

Two new studies report that COVID-19 vaccination strongly protects against both infection and serious illness, respectively among adolescents

age 12 to 18. Both studies covered periods when the highly contagious Delta variant was the predominant circulating strain.

A CDC-supported study, led by Boston Children's Hospital and published in the *Morbidity & Mortality Weekly Report (MMWR)* on October 19, focused on severe COVID-19 disease requiring hospitalization. It found that two doses of the Pfizer-BioNTech COVID-19 vaccine were 93 percent effective at preventing COVID-19 hospitalization.

The investigation used a case-control design. The cases were 179 vaccine-eligible patients hospitalized for COVID-19, ages 12-18 years; the 285 controls, matched for age, tested negative for COVID-19 or had asymptomatic infections and were hospitalized for other reasons. All patients were hospitalized in 16 U.S. states from June 1, 2021 to September 30, 2021, a period when pediatric hospitalizations were surging, especially in the southern U.S. where 61 percent of the cases were enrolled.

Of the 179 patients hospitalized for COVID-19, only 3 percent were vaccinated, versus 33 percent of controls. Of the adolescents hospitalized for COVID-19, 43 percent were admitted to an intensive care unit, 16 percent required life support, and two died.

All patients requiring ICU care or life support, including the two who died, were unvaccinated. Of the 3 percent of vaccinated adolescents hospitalized for COVID-19, none developed critical illness.

"These findings show that COVID-19 is not a benign disease in 12- to 18-year-olds, and reinforce the importance of vaccinating adolescents to protect them," says Adrienne Randolph, MD, MSc of Boston Children's, senior author on the report and principal investigator on the larger Overcoming COVID-19 study. "We hope these new data will encourage

more teens to get vaccinated."

Reduced COVID-19 infections

Boston Children's also collaborated on a large study of 12- to 18-year-olds in Israel, led by the Clalit Research Institute. This study focused on COVID-19 infection in general. Using health record databases, the investigators compared 94,354 Pfizer-vaccinated adolescents with 94,354 matched unvaccinated controls from June 8, 2021 through September 14, 2021.

Fully vaccinated adolescents had a 93 percent decreased risk for symptomatic COVID-19 and a 90 percent decreased risk for documented infection. The findings are published as a letter in *The New England Journal of Medicine*.

"This careful epidemiological study provides reliable information on vaccine effectiveness, which we hope will be helpful to those who have not yet decided about vaccination," says co-first author Ben Reis, Ph.D., director of the Predictive Medicine Group of the Boston Children's Computational Health Informatics Program.

Both teams of researchers hope the new data will help ease vaccine hesitancy. To date, COVID-19 vaccination rates have been relatively low in U.S. adolescents. As of October 12, only 45 percent of U.S. 12- to 15-year-olds and 53 percent of 16- to 17-year-olds were fully vaccinated against COVID-19, according to the CDC's COVID Data Tracker.

More information: Samantha M. Olson et al, Effectiveness of Pfizer-BioNTech mRNA Vaccination Against COVID-19 Hospitalization Among Persons Aged 12–18 Years—United States, June–September 2021, *MMWR. Morbidity and Mortality Weekly Report* (2021). [DOI: 10.15585/mmwr.mm7042e1](https://doi.org/10.15585/mmwr.mm7042e1)

Ben Y. Reis et al, Effectiveness of BNT162b2 Vaccine against Delta Variant in Adolescents, *New England Journal of Medicine* (2021). [DOI: 10.1056/NEJMc2114290](https://doi.org/10.1056/NEJMc2114290)

Provided by Children's Hospital Boston

Citation: COVID-19 vaccination strongly protected 12- to 18-year-olds during Delta (2021, October 21) retrieved 26 April 2024 from <https://medicalxpress.com/news/2021-10-covid-vaccination-strongly-year-olds.html>

This document is subject to copyright. Apart from any fair dealing for the purpose of private study or research, no part may be reproduced without the written permission. The content is provided for information purposes only.