

COVID-19 vaccine dosing is top challenge for kids under 5

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Expect new authorization for at least one COVID-19 vaccine for children under 5 this month—just a few weeks after the FDA granted emergency use authorization (EUA) for vaccine boosters for children 5–11 years old.

AMA member Paul Offit, MD, directs the Vaccine Education Center at the Children’s Hospital of Philadelphia and discussed the status of COVID-19 vaccines for kids under 5 on a recent episode of the “AMA COVID-19 Update.”

Dr. Offit, a pediatrician who helped invent the rotavirus vaccine RotaTeq, is also a member of the FDA’s Vaccines and Related Biological Products Advisory Committee that will review study data of the under-5 vaccine programs and make a recommendation to the Centers for Disease Control and Prevention (CDC).

The two pharmaceutical companies seeking emergency use authorization for their pediatric COVID-19 vaccines, Pfizer-BioNTech and Moderna, are taking somewhat different approaches to child-dosing strategies, Dr. Offit explained.

“The hardest for young children is the phase-one stage, which is to say dose and dose-ranging. You have to figure out what dose to give, what interval of dose between doses, and how many doses to give,” he said. “You want to make sure you’re getting a consistent, high level of neutralizing antibodies that you think is going to be associated with protection against illness.”

Learn about this striking CDC data to share with your COVID-19 vaccine-hesitant parents.

Keeping pace with the virus

One of the biggest challenges researchers face in developing new vaccines and dosing for children is the rapid mutation and evolution of the COVID-19 virus, Dr. Offit said. Since the development of the original vaccines, the virus has mutated several times and vaccine effectiveness has changed.

Testing the earlier versions of the vaccines against current versions of the virus has revealed that neither the Moderna nor Pfizer vaccines are as effective against mild illness as they were against previous versions. Dr. Offit said he thinks the results will be similar for the under-5 vaccines when the data is revealed.

“The efficacy definitely dropped off against mild disease, but was still good against serious illness,” he said. “You would have to assume that what you’re seeing then with these less than 6-year-old data—where protective efficacy is likely not to be as good against mild illness—that it would also be highly protective against serious illness.”

Dr. Offit also noted that cases are on the rise again, but the nation’s immunity has also increased which may limit the cases of serious illness.

“We probably right now are at about 95% population immunity from either a vaccination or natural infection or both,” he said. “And you’re seeing evidence of that [with the increase in cases]. That usually is followed weeks later by an increase in hospitalizations, an increase in ICU admissions and an increase in deaths,” he said.

However, that didn’t happen. “And the reason it didn’t happen is that for the most part, we’re protected against serious illness now.”

Get the latest news on the COVID-19 pandemic, vaccines and variants, and more reliable information directly from experts and physician leaders with the “AMA COVID-19 Update.”

You can catch every episode by subscribing to the AMA’s YouTube channel or the audio-only podcast version.