

Lingering questions about Moderna's vaccine efficacy in kids five and under

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Moderna announced Wednesday it would seek emergency authorization of its COVID-19 vaccine in children five years old and younger, citing its vaccine was approximately 44% effective at preventing milder



infections in babies up to age 2, and nearly 38% effective in the preschoolers.

Northwestern University pediatric infectious disease specialist Dr. Bill Muller, who heads up the clinical trial of Moderna's COVID-19 <u>vaccine</u> in children under age 12 at the Ann & Robert H. Lurie Children's Hospital of Chicago, answered some questions about the news.

Muller is an associate professor of pediatrics at Northwestern University Feinberg School of Medicine and the scientific director of clinical and community trials at Stanley Manne Children's Research Institute, which is part of Lurie Children's.

These efficacy rates seem low compared to the adult efficacy rates we saw in the original adult COVID-19 vaccines. Are they?

Muller: The efficacy in preventing infections may sound modest, but it is actually in the range of what was seen in adults for the omicron variant. I think it is worth reminding people that the intent of the vaccines is prevention of severe disease—we are trying to keep people from getting so sick that they need to be in the hospital or progress to needing ICU-level care. Prevention of symptomatic illness is a very high bar to satisfy, and the ability to demonstrate this in these <u>young children</u> is an important finding.

We should remember that the benefits of the vaccine likely go beyond what we are studying: In addition to decreasing the risk of severe disease substantially and of symptomatic disease modestly, there are likely benefits in decreasing spread of the virus within the community and within families, and any prevention of spread will also result in children being able to stay in school and daycare—which correspondingly means



their parents arent scrambling for child care or missing work themselves.

How does the antibody response in kids compare to adults? And what does that mean for the likelihood of them needing a booster?

Muller: Regarding the response of the children to the vaccine, the antibody response was comparable to that seen in adults, which suggests as good of a response to the vaccine as we have observed in adults. That said, I think most people in the field are expecting there to eventually be a third dose in all age groups.

How did the emergence of the omicron variant affect the results of this Moderna under-6 trial?

Muller: It is very possibly the case that a vaccine that uses the mRNA sequence matched to omicron would provide improved protection than the one that is being used. There would need to be more trials to investigate this, but two things to keep in mind are that the current vaccine is very good already, and that any omicron-specific vaccine would not be guaranteed to provide better protection than the current vaccine against any future variants.

What about safety?

Muller: One point I have been trying to remember to emphasize in discussing these trials is the excellent safety profile we have seen with the vaccine. I think when parents ask themselves the question of whether or not they should get the vaccine for their <u>younger children</u>, they are appropriately assessing their own comfort with the risk of the infection versus any risk that could be associated with the vaccine. These vaccines



are very safe, with side effects in children that are comparable to other childhood vaccines. Even in <u>children</u>, the infection is worse than any side effects from the vaccine.

Provided by Northwestern University

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