

COVID-19 Red Book town hall topics: Variants vs. vaccines, clinical data, more

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Editor's note: For the latest news on COVID-19, visit <http://bit.ly/AAPNewsCOVID19>.

The race between circulating COVID-19 virus variants and the vaccine rollout to children was threaded throughout a virtual town hall discussion with AAP *Red Book* editors.

Moderator Anne R. Edwards, M.D., FAAP, AAP chief population health officer, posed questions about vaccine safety, the impact of the variants on COVID-19 testing, quarantine recommendations for vaccinated people and other unknowns to David W. Kimberlin, M.D., FAAP, James D. Campbell, M.D., M.S., FAAP, and Ruth Lynfield, M.D., FAAP.

Five COVID-19 vaccines have pediatric studies underway. Dr. Campbell said if the Food and Drug Administration approves emergency use authorization for Pfizer-BioNTech's COVID-19 vaccine in 12- to 15-year-olds, it could be available for that age group by summer or earlier. Enough data later this year or early next year could lead to a vaccine for children younger than age 12, he said.

Pediatricians wanted to know how pediatric data are studied and why data are not available on the COVID-19 vaccines' correlate of protection (what immune response leads to protection).

The current approach uses inferiority analyses of data in children, Dr. Kimberlin said. The correlate of protection is not known is because there have been so few failures of the vaccines.

Knowing how much immunity and what types of cells and activity confer benefits, efficacy and effectiveness of the vaccines in adults would make pediatric studies easier, Dr. Kimberlin said. "Then all you would have to

do is show that you reach that threshold for that correlate of immunity and you can extrapolate that you're going to get the benefit as well in children.”

How the vaccines work against variants also is important, said Dr. Lynfield, state epidemiologist and medical director of the Minnesota Department of Health. The **Centers for Disease Control and Prevention** (CDC) has three categories: variants of interest, variants of concern and variants of high consequence.

“(Currently,) none of the variants are considered variants of high consequence,” she said. B 1.1.7. (first found in the U.K.), a variant of concern, is dominant in the U.S.

“This is a variant which is more communicable (and) more transmissible, so very contagious,” Dr. Lynfield said. The B 1.1.7. variant has a high attack rate that looks different than prior circulating strains.

In Minnesota, Dr. Lynfield said about 50% to 60% of circulating virus is B 1.427/B 1.429 variant. It was first identified in California and is a more contagious variant that may not respond as well to some monoclonal therapies.

Fortunately, the vaccines still work well against the variants currently circulating and seem to prevent moderate or severe disease. Dr. Campbell said data are mounting that the vaccines also may lower the viral load, which possibly provides some protection against infection, transmission and asymptomatic carriage.

It will be important to keep testing and tracking variants throughout communities even as more people are vaccinated, Dr. Kimberlin said. “We have to be mindful... the virus isn't gone yet, and we need to be looking for it.”

Other pressing questions the panelists answered:

- **Whether and how often booster doses will be needed.** The panelists said boosters could be likely, but vaccinating children is important. “That’s what’s always beaten viruses, not targeted risk-based vaccination. What’s worked is universal pediatric vaccines,” Dr. Campbell said.
- **Whether the vaccine might trigger multisystem-inflammatory syndrome in children (MIS-C).** MIS-A (adults), which is more common than MIS-C, has not been seen in adults after vaccination, Dr. Campbell said. He added that part of the pediatric trial design is to study whether the vaccine triggers MIS-C or if vaccinated children are at higher risk for MIS-C if exposed to COVID-19. “I think the most likely thing that’s going to happen, which happens with all other vaccines, is if you protect from the disease, you protect from the sequelae,” he said.
- **Whether the vaccine could affect fertility.** After a recent study compared a small part of the spike protein of the virus to a protein on the placenta, a rumor began circulating that the vaccines might lead to infertility. “There is no empiric evidence at all that it leads to infertility,” Dr. Campbell said.
- **Whether fully vaccinated people need to quarantine.** Fully immunized people who are exposed to someone with suspected or confirmed COVID-19 don’t need to quarantine if they don’t have symptoms, Dr. Lynfield said. “They should, though, watch for symptoms and they should be cautious around people who are at high risk for severe disease.” According to the CDC, a person is fully immunized *two weeks after* completing the vaccine series (the Pfizer and Moderna series is two shots; Johnson & Johnson is one shot). People who have not been vaccinated or are only partially vaccinated must quarantine if they were within 6 feet of someone with suspected or confirmed COVID-19 for 15 minutes or more over the course of a day. “This is not a time that I would roll back prevention measures,” Dr. Lynfield said. “The next two months are a race of the vaccines vs. the variants.”

Resources

- [Connecting with the Experts: Ask the Red Book about COVID-19 — Part 2](#)
- [Red Book: 2021 Report of the Committee on Infectious Diseases, 32nd Edition](#)