

# Needs and challenges for COVID-19 boosters and other vaccines in the US

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Of the 10 richest countries in the world, the U.S. ranks last in vaccination rates and first in both numbers and rates of COVID-19 deaths,. Credit: Alex Dolce, Florida Atlantic University

The United States Food and Drug Administration (FDA) issued an

Emergency Use Authorization (EUA), which was immediately endorsed by the U.S. Centers for Disease Control and Prevention (CDC), for new booster shots created to combat the most recent and highly prevalent omicron variants of COVID-19, specifically BA.4 and BA.5.

Fortunately, these most recent and very highly prevalent variants, while more communicable, are less lethal.

In a commentary published in *The American Journal of Medicine*, researchers from Florida Atlantic University's Schmidt College of Medicine and collaborators, provide the most updated guidance to [health care providers](#) and urge how widespread vaccination with these boosters can now avoid the specter of future and more lethal variants becoming a reality.

"Of the 10 richest countries in the world, the U.S. ranks last in vaccination rates and first in both numbers and rates of COVID-19 deaths," said Charles H. Hennekens, M.D., Dr.PH, senior author, first Sir Richard Doll Professor of Medicine and senior academic advisor, FAU Schmidt College of Medicine.

"The dedicated health care professionals in communities and hospitals across the nation continue to try to address existing and new challenges of COVID-19. We must redouble our efforts to promote evidence-based clinical and public health practices, which should include vaccination of all U.S. adults and eligible children based on the most recent FDA and CDC guidance."

The authors point out that, compared with influenza, the mortality rate from COVID-19 is about 30 times higher. Further, a positive COVID-19 patient is likely to transmit to about six people compared with one or two for influenza. Finally, the boosters will reduce the risk of dying and hospitalization by more than 90 percent.

"The most simple and straightforward newest guidance we can now offer to health care providers is that all individuals ages 5 and older should receive a booster shot," said Alexandra Rubenstein, first author, clinical research coordinator, Department of Neurology, Boston Medical Center, and an aspiring physician.

"Specifically, based on the recent EUAs issued by the FDA and CDC, those 5 and older may receive Pfizer bivalent boosters, and those ages 6 and older may receive bivalent boosters from Moderna. While the absolute risks of severe COVID-19 are low in youths, the benefit-to-risk ratio was deemed to be favorable in a 13-to-1 vote of independent external advisers to the FDA."

According to the authors, vaccines to prevent common and serious infectious diseases have had a greater impact on improving human health than any other medical advance of the 20th century. Nonetheless, since 2019, the percentages of children in the U.S. vaccinated against common and serious childhood diseases has decreased.

"In the U.S., diphtheria-pertussis-tetanus or DPT immunizations have decreased from 85 percent in 2019 to 67 percent in 2021," said co-author Sarah K. Wood, M.D., professor of pediatrics and interim chair, Department of Women's and Children's Health and vice dean for [medical education](#), FAU Schmidt College of Medicine.

Recently, a young adult unvaccinated against polio in a neighborhood in Rockland County, New York, contracted a paralytic disease raising concerns that the loss of herd immunity may portend new epidemics of avoidable serious morbidity and mortality in the U.S. and worldwide.

Ironically, the authors note, virtually all Americans would seek effective and safe therapies for any communicable diseases. Most individuals routinely accept major surgery, toxic chemotherapy and/or radiation

therapy for cancer, which result in a far greater number of side effects than are caused by vaccinations. The authors encourage health care providers to recommend a COVID-19 booster vaccine to all eligible patients to protect individuals and communities.

**More information:** Alexandra Rubenstein et al, Newest guidance and evidence for health care providers: COVID-19 and other vaccines, *The American Journal of Medicine* (2022). [DOI: 10.1016/j.amjmed.2022.09.018](https://doi.org/10.1016/j.amjmed.2022.09.018)

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