

Durability of bivalent boosters against omicron subvariants

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New research led by the UNC Gillings School of Global Public Health shows that bivalent COVID-19 boosters are still providing effective protection from hospitalization and death, even against the most recent

omicron subvariants.

Published this week in the *New England Journal of Medicine (NEJM)*, researchers found that the bivalent boosters were 67% effective in preventing hospitalization and death in those who had been previously vaccinated or boosted. Effectiveness waned to 48% after four weeks, 44% after 10 weeks and 38% after 20 weeks.

Though the Pfizer and Moderna bivalent vaccines were initially designed to target the BA.4 and BA.5 strains of omicron, they also reduced the risk of infection, hospitalization and death against the currently circulating BQ.1/BQ.1.1 and XBB/XBB.1.5 strains.

"The effectiveness reported in our article pertains to the benefit of one additional dose, i.e., first booster compared to primary vaccination only, second booster compared to first booster or third booster compared to second [booster](#). The effectiveness of bivalent boosters compared to being unvaccinated would be much higher," says lead author Danyu Lin, Ph.D., Dennis Gillings Distinguished Professor of Biostatistics. "The findings from our study were encouraging, because the bivalent vaccines to be developed this year will likely be deployed against variants that emerge later."

The research team for this study also included Yangjianchen Xu and Yu Gu, doctoral students in biostatistics; and Donglin Zeng, Ph.D., professor of biostatistics at the Gillings School; as well as Shadia Khan Sunny, Ph.D., MPH, MBBS, senior epidemiologist; and Zack Moore, MD, MPH, state epidemiologist at the North Carolina Department of Health and Human Services.

More information: Dan-Yu Lin et al, Durability of Bivalent Boosters against Omicron Subvariants, *New England Journal of Medicine* (2023). [DOI: 10.1056/NEJMc2302462](https://doi.org/10.1056/NEJMc2302462)

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