

# Study: COVID booster effectiveness wanes but remains strong

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An early look at the performance of COVID-19 booster shots during the recent omicron wave in the U.S. hinted at a decline in effectiveness, though the shots still offered strong protection against severe illness.

The report, published by the Centers for Disease Control and Prevention on Friday, is considered an early and limited look at the durability of booster protection during the omicron surge that exploded in December and January but has been fading in recent weeks.

"COVID-19 vaccine boosters remain safe and continue to be highly effective against severe disease over time," said Kristen Nordlund, a CDC spokesperson.

The researchers looked at patient visits to hospitals and urgent care centers in 10 states. They estimated how well Pfizer or Moderna booster shots prevented COVID-related visits to emergency departments and urgent care centers, and how well the vaccines prevented hospitalizations.

About 10% of people in the study were boosted. Vaccine effectiveness was higher in people who had received boosters than in people who had received only the original series of shots.

But researchers also found that during the time that the omicron variant has been predominant, vaccine effectiveness against outpatient visits was 87% in people who had gotten a booster two months earlier, but to 66% at four months after. Vaccine effectiveness against hospitalization fell from 91% at two months to 78% by the fourth month.

Those results, however, were based on only a small number of patients—fewer than 200—who had been boosted four months earlier at the time of the omicron wave. And it's unclear if those people had gotten boosters early for medical reasons that may have made them more vulnerable to severe illness.

Effectiveness after a booster was higher last year, when the delta variant was causing most U.S. cases, the study noted.

Health experts expect protection from the vaccines to wane. The U.S. booster campaign was based on evidence that emerged last year that vaccine protection was fading six months after people got their initial vaccinations.

And from the beginning, vaccines have offered less protection against the omicron mutant than earlier versions of the virus. The study couldn't address how protection will hold up against the next variant to come along.

Still, the new study's finding was notable, said Dr. William Schaffner, a Vanderbilt University vaccines expert.

"I'm a little surprised, according to the data, that it's starting to wane already," he said, adding that he would have anticipated higher estimates of vaccine effectiveness at the four-month post-booster mark.

But Schaffner also said he'd like to see more research about the durability of booster protection, adding "let's take this with a grain of salt."

Dr. Michael Saag, an infectious diseases physician at the University of Alabama at Birmingham, said 78% effectiveness against hospitalization "is still pretty effective."

"Anecdotally, I'm seeing very few people die who got boosted," he said, even among those with weakened immune systems. "The vaccines are still working."

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