

One dose for many, or two doses for fewer? Experts explain U.S. vaccine rollout

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Dr. Arnold Monto
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Dr. Ran Balicer
CIO, Clalit Health Services



Hosted by Mabel Jong

COVID-19 vaccine shortages are leading some to question whether the

United States would be better off simply trying to give a single dose to as many people as possible.

This view has been bolstered by early data from Israel indicating that a single dose of [vaccine](#) is extremely effective and can drive down [infection rates](#).

But [public health experts](#) remain adamant that the approved two-dose vaccine regimen needs to be maintained, in the face of new COVID-19 variants that could potentially undermine vaccine effectiveness and cause the infection rate to surge.

"If we have only one dose in our high-risk population, the ones that are going to impact the health care system, and we get lower efficacy there, then we're going to be in trouble," Dr. Arnold Monto, acting chair of the U.S. Food and Drug Administration's Vaccines and Related Biological Products Advisory Committee, said during an [HD Live! interview](#).

"We do emphasize that the two-dose approach should be the one that we follow, and that we use the vaccine with the mitigation strategies to cut down on the transmission," Monto continued.

Israel recently conducted a study in which they compared infections among 200,000 people vaccinated with their first dose against a group of unvaccinated folks, Dr. Ran Balicer, chair of Israel's COVID-19 National Experts Team, said in the same [HD Live! interview](#).

Both groups continued to have similar infection rates for about two weeks, but on day 14 the group that had received one dose had a sudden decline in infection rates, Balicer said. By day 17, the vaccinated group had a 33% decline in infections compared to the unvaccinated group.

"That shows the vaccine, even the first dose, has an impact on

infections," said Balicer, director of the Clalit Research Institute at Clalit Health Services, one of the four HMOs that provide health care to the entire Israeli population.

Reliance on data

Another report based on Israel's vaccination experience found that a single dose of the Pfizer vaccine can provide up to 90% protection against COVID-19 infection by day 21.

The study, performed by British researchers, tracked Israelis who had received their first dose of vaccine.

"We found that the [vaccine effectiveness](#) was still pretty much zero until about 14 days after people were vaccinated," lead researcher Dr. Paul Hunter, a professor with the University of East Anglia's Norwich Medical School, said in a university news release. "But then after day 14, immunity rose gradually day by day to about 90% at day 21 and then didn't improve any further. All the observed improvement was before any second injection."

These results support a policy adopted by the United Kingdom to extend the gap between doses out to 12 weeks, to try and get first doses into as many arms as possible, Hunter said.

Balicer agreed that "the benefits of having one dose are clear because then you can have vaccinated many more people with limited vaccine supply and have some partial immunity to a larger part of the population."

However, Balicer continued that "it's worth us noting that it is important, in our opinion, to follow the two-dose full protocol, because that's where you have the data from the [clinical trials](#) to tell you that you have a long-

lasting immunity and that you have a strong enough protection of all of the age groups."

Dr. Anthony Fauci, director of the U.S. National Institute of Allergy and Infectious Diseases, said in a news briefing Wednesday that the United States is not following in Britain's footsteps, based on data from large clinical trials.

"As you all are aware, the Moderna trial, with 30,000 people, and the Pfizer trial, with 44,000 people, indicate to us that maximum responses are given with a prime followed by a boost—21 days with Pfizer and 28 days with Moderna," Fauci said.

"We feel strongly that we will go by the science, which has dictated for us the optimal way to get the 94% to 95% response, which is, in fact, durable for the period of time that we've been following it," Fauci added.

New COVID variants

The emergence of highly infectious variants from the United Kingdom, South Africa and Brazil have increased the need to be cautious regarding the vaccine protocol, since high infection rates will promote continued mutation of the [coronavirus](#), said Monto, a professor of epidemiology and global public health with the University of Michigan School of Public Health.

"If we don't get viral replication, we don't get mutations," Monto said. "So what we have to do is beat down the virus and virus transmission as our major goal."

Admittedly, the vaccine supply shortage is the greatest problem with the U.S. rollout, Monto said.

"We wouldn't have any problems in prioritizing if we had all the vaccine we needed for everybody," Monto said. "Most of our problem now has dealt with who is to get the vaccine, whether people are jumping the queue, and none of this would be a problem if we had enough vaccine."

Because of this, the United States needs to move past trying to convince vaccine-hesitant people to take the shot, and instead get two doses of the vaccine into the folks who really want it, Monto said.

"We have a majority of high-risk individuals who are eager to get the vaccine," Monto said. "Given the shortages of vaccine, we really don't have vaccine sitting on shelves, waiting to be given. Let's vaccinate [those people], and then pick up and try to convince those who haven't gotten vaccinated for one reason or another that this vaccine is safe and effective."

By the time millions of eager people have been vaccinated, there will be tons of data available to provide an unassailable record regarding the vaccine's safety and effectiveness, Monto said.

"At time of vaccine approval, there was concern we only had data for two or three months from the rollout of the vaccines," Monto said. "Now it's going up and up, and we've got millions of people who've received the vaccine."

More information: The U.S. Centers for Disease Control and Prevention has more about [COVID-19 vaccination](#).

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