

MEDPAGE TODAY'S  
**KevinMD.com**  
Social media's leading physician voice

## Be an Upstander, Not a Bystander

By Aasna Shaukat, MD, MPH

I am a female immigrant gastroenterologist from Pakistan, practicing in Minneapolis. Having lived in this country for 22 years and married to a white man, I generally feel that I fit in pretty well. A couple weeks ago at work, I walked into a procedure room and introduced myself to a 66-year-old white male on whom I was about to perform a procedure. There were three other people in the room—a nurse and two techs. I explained the procedure in my usual cheerful voice and asked, “Do you have any questions?” like I always do at the consent process.

The patient said, “Yes, I do. Where’s your burqa?” I was quite taken aback and wondered if I misheard.

Me: “I’m sorry. What did you say?”

Patient: “I said, where’s your burqa?”

Me, confused: “Sir, why would I have a burqa?”

Patient: “Don’t women like you wear one to cover themselves?”

Me (more confused): “What do you mean women like me?”

Patient: “Well, aren’t you from Pakistan or Afghanistan? Aren’t you Muslim?” I was at a loss for words and desperately wanted to end the conversation.”

Me: “Let’s not talk about me but about your procedure. Any questions about the procedure?”

The patient replied, “no,” and we went ahead with the procedure and the rest of the day.

The incident bothered me all day and the following many days. I couldn’t quite put a finger on what it was and brushed it aside and stopped thinking about it. In the wake of recent events, it dawned upon me that it wasn’t the patient’s comments that bothered me. It was the fact that no one standing in the room witnessing the conversation stepped in. Not during the conversation, and not after. Considering I’ve worked with my colleagues every day and in the same place for the last 12 years, I felt strangely betrayed.

Stories like this happen every day and are sadly more common than we realize. There will always be racist, insensitive, inappropriate comments by people across life. It’s how we react to them that will shape our lives. Most individuals have asked how they can help. Well, start by being an upstander and not a bystander. That will mean the world to us people of color and immigrants.

And let’s start teaching and training students in medical school, nursing, and technical schools how to identify and stand up to inappropriate comments. It may take us a few generations to make seismic changes, but we must start now.

Aasna Shaukat, MD, MPH is a gastroenterologist and can be reached on Twitter at @aasmashaukatmd.

## COVID-19: Single-Dose Vaccine May Benefit More People

Delaying second doses could also free up scarce supply.

A modeling study suggests a greater population-level benefit for a single-dose COVID-19 vaccination strategy compared with the current two-dose strategy, even if that single dose is less effective than multiple doses. The study is one of three articles published in *Annals of Internal Medicine* that explored different immunization strategies with the goal of vaccinating as many people as possible, as quickly as possible. The analyses make the case that offering single-dose COVID-19 vaccinations or delaying second vaccination may have a greater impact at the population level than current vaccination strategies. The reports were published the same day federal health officials warned that changes to the current two-dose vaccination strategy “run a significant risk of placing public health at risk.”

The first and second doses of the Pfizer-BioNTech vaccine are approved to be administered within a 21-day window, and the second dose of the Moderna vaccine is recommended for 28 days after first dose. Both vaccines were found to have roughly a 95% efficacy in clinical trials after two doses.

As previously reported, health officials noted that while it is reasonable to explore changes to the current schedule—such as giving single doses or two half doses of the vaccine or delaying the second vaccination—changes to the current FDA-authorized dosing or schedules are “premature and not rooted solidly in the available evidence.”

“Without appropriate data supporting such changes in vaccine administration, we run a significant risk of placing public health at risk, undermining the historic vaccination efforts to protect the population from COVID-19,” noted FDA director Stephen M. Hahn, MD, and Peter Marks, MD, PhD, who directs the Center for Biologics Evaluation and Research (CBER).

### Quantifying Speed Versus Efficacy of COVID-19 Vaccination

The trio of reports published in *Annals* included a modeling study designed to quantify the speed-versus-efficacy of COVID-19 vaccination strategies, with the findings highlighting “the steep clinical and epidemiologic costs imposed by a two-dose vaccination series in the context of ongoing pandemic response,” wrote lead researcher David Paltiel, PhD, of Yale School of Medicine, and colleagues.

Dr. Paltiel and colleagues used a previously published model of COVID-19 vaccine deployment to compare the currently approved vaccine strategies to two hypothetical single-dose alternatives—one achieving lifetime protection and the other achieving stable efficacy of uncertain duration. Both of these single-dose vaccines were assumed to achieve more rapid daily uptake (0.75%) and to take effect 14 days after administration, with assumed efficacies ranging from 0% to 100%.

In the lifetime-protection model, a single-dose vaccine with an efficacy of 55% was found to prevent

as many infections as a two-dose vaccine with 95% efficacy. In the uncertain duration of protection model, the efficacy threshold was 75%.

### Accelerating Pandemic Control

In a separate analysis, researchers from the University of Washington and Fred Hutchinson Cancer Research Center, Seattle, concluded that, based on a reported single-dose efficacy of 52% (95% CI, 30% to 68%) for the Pfizer-BioNTech mRNA vaccine, “doubling the vaccine coverage with a single dose compared with a two-dose regimen will accelerate pandemic control” due to the fact that even lack of complete protection at the individual level will lower transmission rates enough to stop epidemic growth.

In addition, Ruanne Barnabas, MBChB, MSc, DPhil, and colleagues argued that providing effective protection for as many as possible is more ethical, and a single-dose vaccine approach could mitigate the higher incidence of vaccine-associated adverse events reported with a second dose.

They further argued that a dosing schedule, which is only partly protective, may reduce behaviors associated with COVID-19 transmission, and they suggested that adopting a delayed second-dose strategy in high-incidence settings “would contribute data on the effectiveness of single-dose vaccination.”

### Alternative Strategies for COVID-19 Vaccine Dose Allocation

Finally, researchers from Stanford University reported on a decision analytic cohort model used to estimate the benefits of alternative strategies for COVID-19 vaccine dose allocation.

Researcher Ashleigh Tuite, PhD, and colleagues compared the current “fixed strategy” approach modeled after current US policy, which reserves half of each allocated vaccine installment for second doses, with a hypothetical “flexible strategy” model in which just 10% of available supply for second doses was reserved during the first 3 weeks, with 90% reserved during each of the next 3 weeks and 50% thereafter.

The researchers estimated that assuming a steady vaccine supply of 6 million doses per week, the flexible strategy approach would prevent an additional 23% to 29% of COVID-19 cases. “In both scenarios, 24 million people received at least 1 dose by the eighth week, whereas 2.4 million additional people received two doses of vaccine in the flexible strategy because millions more received an initial dose during the first 3 weeks; all second doses were administered on schedule (within 3 weeks of first dose) in both strategies,” Dr. Tuite and colleagues wrote.

They concluded that current policies that “place a premium on eliminating any possible delays to delivering second doses” by maintaining large reserves of vaccine may unintentionally delay the administration of the first vaccine dose in a large number of people. “We find that under most plausible

scenarios, a more balanced approach that withholds fewer doses during early distribution in order to vaccinate more people as soon as possible could substantially increase the benefits of vaccines, while enabling most recipients to receive second doses on schedule,” they wrote.

### Growing the Evidence Base for Alternative COVID-19 Vaccination Approaches

In an editorial published with the reports, Thomas J. Bollyky, JD, director of the Council on Foreign Relations global health program, wrote that in a public health emergency such as the COVID-19 pandemic, “a powerful argument exists for doing something with less-than-perfect results if it can help more persons quickly.” But Dr. Bollyky added that “whether alternative approaches with current vaccines would accomplish this goal is far from clear” given the supply, administration, and demand constraints surrounding COVID-19 vaccine distribution.

“In the United States, COVID-19 vaccine administration will depend on the same overworked and under-resourced US state, local, and tribal public health systems that have delivered H1N1 and seasonal flu vaccines,” he wrote. “Despite months of pleas for at least \$6 billion to prepare state and local governments for what will be the largest vaccination campaign in US history, Congress only recently appropriated the necessary funds, and it will be weeks more before those federal resources are distributed and put to good use.” Dr. Bollyky concluded that while strategies for stretching vaccine supplies “may yet have utility, they will have greater application when and where supply constraints are the rate-limiting steps.”

“A moment may soon arrive when the COVID-19 vaccine supplies are a greater limitation on US vaccinating than at present; therefore, considering various alternative approaches is worthwhile,” Dr. Bollyky wrote, adding that, “for now, the priority should be to grow the evidence base by pursuing clinical testing and observational studies to determine whether a single dose or a delayed second dose of the current vaccines will generate immunity similar to that of the FDA-authorized two-dose regimen.” ■

©2020 BreakingMed, All Rights Reserved.



#### KEY POINTS

- 1 | Single-dose COVID-19 vaccination may have a greater benefit at a population level compared with the current two-dose regimen, even if that single dose is less effective than multiple doses.
- 2 | Federal health officials warned that changes to the current two-dose vaccination strategy “run a significant risk of placing public health at risk.”

## 33 ||| CHARTS

### COVID Vaccine – Four Lessons from Speedy Development

The development of a COVID vaccine is one of the most closely watched human experiments in modern medical history. I’ve been thinking how this has played out. What were the broader forces that allowed this kind of high speed COVID vaccine development?

**1 | URGENCY:** As we watch the undulating behavior of SARS-CoV-2 across the globe, we can see that a delay of a matter of months can come with the cost of thousands of lives. It was a race against time. When working against a hard deadline, focused endpoints can force us to ship the most remarkable things. This defining medical moment should serve as a form of inspiration in what we do as individuals, start-ups, systems, and nations. Most importantly, how might we apply this level of urgency going forward to solve some of healthcare’s most pressing challenges?

**2 | COLLABORATION:** The successful development of these vaccines was a collaborative effort between public and private stakeholders. Individually, this success would have been considerably more difficult, if not impossible. As an example of that cooperation, the NIH invoked a sweeping public-private partnership between Pharma and federal researchers (ACTIV) that objectively aligned stakeholders toward a standardized, measurable end-point.

**3 | PROCESS:** How we got to today from early 2020 is less about the novelty of vaccines as much as it is our capacity to put things together in such an accelerated way. The process of getting the vaccine somehow seems more remarkable than the vaccine itself. I suspect that these 21st century processes of biological engineering will eclipse the small minded widgets that impress us now.

**4 | OPEN SCIENCE:** In a world more interconnected than ever, today’s medical challenges don’t obey political or geographic boundaries. And so, the hive mind of scientists across the globe will be critical to future challenges like the COVID-19 pandemic. Developed nations should be motivated to see the health of the global community as central to the health of their own citizens. While open science certainly wasn’t central to what happened this year, the COVID-19 pandemic showed some hint of public health globalization. Labs and data repositories crossed silos to make information more readily available to those doing critical research—Digitalization made this kind of data sharing easier. Early on, Chinese scientists shared the genome of the virus, which was a critical first step toward vaccine development. More than 115,000 publications have been published related to COVID-19, and more than 80% can be viewed by the general public. While competition and IP incentives remain critical for innovation, open dialog and open science can and should be shaped to be mutually beneficial for all.

The combined human-tech intelligence that helped develop the COVID-19 vaccines will serve as an example of what’s possible when technology meets human will. The distribution and adoption of the COVID vaccine, assessment of vaccine durability, and nimble response to SARS-CoV-2’s creeping evolution will bring new challenges in 2021. How we mobilize communities and social technology to combat vaccine hesitancy will be our next great challenge. But for now, we should celebrate this historic feat. ■

Visit [33charts.com](http://33charts.com) to read the full article.

## In Case You Missed It

### One-Third of U.S. Adults Likely to Refuse a COVID-19 Vaccine

Roughly one-third of Americans say they will decline a COVID-19 vaccine, according to research published in *Social Science & Medicine*. Researchers assessed vaccine intention among 5,009 US adults (May 28 to June 8, 2020) participating in an online survey administered through the Lucid Marketplace survey platform. The researchers found that 31.13% of respondents did not intend to pursue vaccination. The odds of COVID-19 vaccine refusal were significantly higher for blacks, women, conservatives, individuals who intended to vote for President Trump in 2020, and individuals with high levels of religiosity. The strongest associations were seen among women, who were 71% more likely not to pursue vaccination than, and Blacks, who were 41% more likely not to pursue vaccination than other races/ethnicities. Each one-unit increase in worry about COVID-19 was associated with a 23% decrease in intention to refuse a vaccine, and individuals who reported being tested for COVID-19 were 68% less likely to refuse vaccination. The two most common reasons individuals gave for not pursuing a vaccination were because they do not think the vaccine will be safe (17.83%) or effective (15.55%). “By identifying those most likely to refuse vaccination, public health experts can develop health messages targeted at encouraging vaccination among these groups,” the authors write. “This approach could prove vital to improving uptake of a COVID-19 vaccine.”

### Two Billion COVID-19 Vaccine Doses From BioNTech Expected This Year

A boost in manufacturing should enable Germany’s BioNTech to produce 2 billion doses of its COVID-19 vaccine this year, the company says. With three manufacturing sites in the United States and three in Europe operating or starting up soon, BioNTech expects to about double the number of doses available for this fiscal year, according to company CEO and co-founder Ugur Sahin, the *Associated Press* reported. The company is also looking to widen eligibility for the vaccine—which was 95% effective in trials—to include pregnant women, children, and others. As of January 10, 32.9 million doses of its vaccine had been shipped, according to BioNTech, the AP reported. The vaccine has to be stored at extremely cold temperatures, but the company said it is working on a more stable version for easier use in remote regions. ■

PHYSICIAN'S WEEKLY  
**PW**  
PODCAST  
LISTEN NOW  
[www.spreaker.com/show/physicians-weekly](http://www.spreaker.com/show/physicians-weekly)