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Perspective

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Choices in a Crisis — Individual Preferences among SARS-CoV-2 Vaccines

Daniel B. Kramer, M.D., M.P.H., Douglas J. Opel, M.D., M.P.H., Efthimios Parasidis, J.D., M.B.E., and Michelle M. Mello, J.D., Ph.D.

The extraordinarily swift development of effective vaccines against SARS-CoV-2 offers new optimism about combating the Covid-19 pandemic. So far, vaccine demand far exceeds supply, and people generally cannot choose which vaccine they receive. In the United States, this lack of choice has generated little debate given the similar mechanism of action, number of required doses, safety profile, and efficacy of the two vaccines approved in December 2020, both based on mRNA technology. However, the Food and Drug Administration (FDA) has now granted emergency use authorization (EUA) for a third vaccine and may consider additional vaccines for EUA. As real-world experience with vaccination accumulates, meaningful differences in effectiveness against new SARS-CoV-2 variants and adverse reaction rates may emerge, along with new information about relative effectiveness in preventing transmission. Thus, the question of whether individual vaccinees should be able to choose which vaccine they receive will become increasingly salient.

Three key arguments may support incorporating individual preferences into the growing infrastructure for vaccine deployment. First, the principle of patient autonomy anchors medical interventions in respect for personhood and self-determination. The arrival of multiple vaccine options presents an opportunity to allow people to make informed choices based on their preferences, including the relative weight they attach to efficacy, avoiding adverse effects, waiting times, and convenience. This opportunity is particularly relevant for vaccines authorized under EUAs, without full FDA licensure and its associated assurance. Some people may, for example, favor a newly authorized single-dose vaccine over an existing multidose vaccine that comes with more real-world safety experience. Notwithstanding the imperative to promote the public's health by reducing illnesses and deaths due to severe Covid-19, people may reasonably expect to exercise their own discretion and align their decisions with their values. Circumstances in which individual choices are overridden or liberty is restricted — vaccination mandates, for example — are controversial precisely because of the central place of autonomy in medical decision making.

Second, affording people some choice might increase overall vaccination acceptance. Multiple reports have documented that the

U.S. public's level of willingness to be vaccinated falls short of recommended targets for achieving herd immunity and reducing community spread; and willingness to receive a SARS-CoV-2 vaccine may vary with particular vaccine attributes.[1] Vaccine nationalism is also relevant: surveys reveal that some Americans are more accepting of vaccines developed in the United States, while some United Kingdom residents are more willing to receive "the English jab."[2] Allowing choice may help overcome reluctance tied to particular vaccine characteristics and facilitate the critical public health aim of high uptake.

Third, allowing choice acknowledges that the genuine differences among available vaccines, regardless of how they are viewed by public health officials, may be meaningful to the public. From this perspective, restricting choice fails to take seriously patients' concerns about new platforms or available safety data. Acknowledgment of these preferences and vaccine variations could complement accurate, transparent, and truthful messaging and promote public trust.

We believe that public health officials should anticipate these good-faith concerns and provide clear recommendations regarding accommodation of individual preferences. Nevertheless, at this point in the pandemic, we find countervailing considerations more compelling, and we recommend restricting patient choice. The key guideposts for this position are expediency, equity, and equanimity.

First, to achieve the primary goal of protecting the public's health, it is essential to vaccinate as many people as possible as quickly as possible. Indeed, current policies that aim to reduce direct patient costs for SARS-CoV-2 vaccines illustrate the uniquely compelling need to streamline administration. The formidable logistic burdens of facilitating vaccine choice could substantially reduce efficiency in vaccine administration. Organizations administering vaccines already face challenges in estimating dose supply and demand on a given day or week in order to calculate utilization and avoid waste. Adding another variable into "the last mile" would introduce more scheduling chaos if choosier patients made and canceled multiple appointments in attempts to secure their preferred vaccine. If allowing choice of vaccines means that some currently eligible Americans will wait longer, there could be a consequential delay in protecting the most vulnerable and achieving herd immunity. With new variants on the march, time is of the essence.

Relatedly, many aspects of patient autonomy have been justifiably restricted during the pandemic — elective surgeries have been delayed, for instance, and visitation practices curtailed. Situations of emergency, shortage, and overwhelmed hospitals are not compatible with receiving access to care completely on a patient's own terms. Allocating vaccines expediently during a public health crisis is similarly ethically defensible and operationally essential.

In addition, accommodating individual vaccine preferences would most likely exacerbate current inequities in vaccine administration and the pandemic burden. Covid-19 has exposed and extended preexisting inequalities in access to health care, economic fragility, and social conditions arising from structural racism and other factors.[3] Members of vulnerable communities already face considerable hurdles in obtaining any vaccination appointment. Reports abound of interstate and intrastate "vaccine tourism," tracking predictably along economic and racial/ethnic lines.[4] If these dynamics continue and choice of vaccines is facilitated, better-resourced patients can be expected to claim vaccination slots for the "better" vaccines, notwithstanding their lower risk for severe disease. The United States has not explicitly allowed wealthy citizens to simply buy their way to the front of the queue, but incorporating individual preference may have a similar effect. Policymakers therefore have a clear opportunity to draw a bright line affirming the importance of equity in vaccine allocation.

Finally, all SARS-CoV-2 vaccines with authorized use based on phase 3 trial data appear to have high efficacy in preventing severe disease. Though they may not have identical efficacy profiles, the public should nonetheless be reassured that, within the context of a historic crisis, each authorized vaccine works. A forceful statement from public health officials affirming this efficacy may help to promote equanimity, offering a calming antidote to the inevitable misinformation maelstrom about vaccines.

Efficacy reports from studies performed in varied locations, at different times, and in different populations must be interpreted with humility. The news reports that may drive individual preferences do not always convey the information necessary for meaningfully evaluating products' respective benefits and risks. For example, people may recall a headline announcing that the rate of

anaphylaxis from the Pfizer-BioNTech vaccine is higher than that of the Moderna vaccine, without recognizing that both rates are extremely low (a few cases per million doses).[5] In promoting equanimity, health officials can also help the public avoid taking an overly narrow view of risks and benefits: otherwise, some people may focus only on the vaccines, overlooking the harms of delaying vaccination until their preferred product is available.

Absent such communications, individual choices could become targets for misinformation campaigns, inflamed by social media, leading to increased confusion and mistrust and inefficient vaccine allocation. It is critical to prevent a shadow pandemic of false or misleading information with many of the same characteristics of SARS-CoV-2 itself: rapid, self-amplifying spread across borders, nimble mutation, tangible harm, and few effective treatments. In addition, although to date manufacturers have not advertised their SARS-CoV-2 vaccines directly to consumers, individual preference could be a powerful incentive for launching ads that could influence behavior without improving the quality of decisions.

We believe that policymakers, health systems, and other implementing organizations should communicate to patients that they will receive, and only really need, one choice of vaccine. At the same time, restrictions on choice (except those driven by genuine allergies or similar contraindications) should be paired with a commitment to tracking real-world outcomes, being transparent about those data, and using them to inform future policy. Though individual choice should not be effectuated by organizations administering vaccines, vaccine allocation schemes could reasonably consider features of particular vaccines that make them better or worse for delivery in certain settings, such as cold storage capacity or ease of use in communities disproportionately affected by the pandemic.

In most aspects of U.S. health care, patient preferences are paramount, and currently Americans remain free to decline vaccination against SARS-CoV-2. But among the willing, a policy limiting choice among vaccines will bring efficiencies to the fair distribution of a critically scarce resource.

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From the Richard A. and Susan F. Smith Center for Outcomes Research in Cardiology, Beth Israel Deaconess Medical Center and Harvard Medical School, Boston (D.B.K.); the University of Washington School of Medicine and the Treuman Katz Center for Pediatric Bioethics, Seattle Children's Research Institute — both in Seattle (D.J.O.); the Moritz College of Law and College of Public Health, Ohio State University, Columbus (E.P.); and Stanford Health Policy and the Department of Medicine, Stanford University School of Medicine, Stanford Law School; and the Freeman Spogli Institute for International Studies — all in Stanford, CA (M.M.M.).

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