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BRIEF19

A daily review of covid-19 research and policy

RESEARCH BRIEFING

Emerging from the pandemic “well” with vaccines and risk reduction.

Vaccines have been [billed](#) as the key toward ending the covid-19 pandemic. Indeed, they can be compared to a ladder, leading us out of a very deep well. With the development of two highly efficacious vaccines—and more on the horizon—we will continue our climb out of the well and eventually emerge in the sun. But the more cases there are, and the less vaccine acceptance there is, the more weighted down we will be in our climb.

Much remains unknown about the vaccines. Perhaps the most crucial piece of information we still need is whether the vaccines prevent infection or reduce transmission of SARS-CoV-2, the virus that causes covid-19. Results from research on these topics will be crucially important in the coming weeks and months because the degree to which they do prevent both symptomatic disease *and* transmission will determine whether vaccination alone can get us out of this crisis.

[Pre-clinical data](#) in nonhuman primates show that most of the vaccines under development, as well as those already authorized for use, at least *partially* protect against infection and reduce replication. This leads us to believe that vaccines will have a substantial impact on protecting against infection altogether—which will likely reduce transmission. However, we cannot assume that vaccination alone will completely prevent transmission in humans in the real world, as the data were obtained from non-human primates and only partial protection was provided in the laboratory environment.

As more of the population is vaccinated, it remains critical to continue taking precautions such as avoiding gatherings, masking, distancing and ensuring adequate ventilation until we know more about post-vaccination transmission. Many areas around the United States are currently experiencing high levels of transmission, which will lead to more cases, hospitalizations and deaths. Additionally, we must invest in public health policies that serve the goal of suppressing transmission, including testing and tracing, genomic surveillance and economic support for those unable to work because of the pandemic.

This leg of the race has particularly new importance in light of several new viral variants that have appeared recently, some of which may be more contagious (and possibly even respond somewhat less well to vaccines, though whether there is any noticeable clinical effect stemming from such observations remains unknown). If transmission is reduced while more vaccines are administered, the virus will have fewer opportunities to spread and find susceptible hosts, which in turn leads to the possibility of more and more variants.

Being honest about vaccine efficacy and providing accurate information will be key to creating vaccine demand and in keeping everyone safe while system-wide rollouts take place over the coming months.

With these risk reduction approaches, “stepping into the light” could start to occur in May or June, with vaccination rates top 40 percent. If all goes well, by the fall, travel and in-person celebrations that resemble life as we once knew it could be quite feasible.

—Angela Rasmussen, PhD

POLICY BRIEFING

Executive orders a-plenty to support new national pandemic strategy.

Immediately after his inauguration, President Biden [launched](#) his National Strategy to address the ongoing pandemic. While he had previously [announced](#) a new stimulus package, Biden's first actions focused on the national coordination and executive actions required to get the program running. The plan itself is broken into seven components. To accompany each of these priorities, we have added our own commentary.

1. "Restore trust with the American people." *Commentary: Today, Dr. Anthony Fauci spoke at a press conference for the first time in months. He spoke openly about the new administration's willingness to say "we don't know" when a question is asked to which an answer is unknown. Last week, incoming Director of the US Centers for Disease Control and Prevention Dr. Rochelle Walensky published an opinion in the [New York Times](#) in which she vowed to tell the truth, even if the news was bleak.*
2. "Mount a safe, effective, comprehensive vaccination campaign." *Commentary: this was underway under President Trump, but expanding supply lines may accelerate it.*
3. "Mitigate spread through expanding masking, testing, treatment, data, workforce, and clear public health standards." *Commentary: Biden's proposed relief package would provide \$50 billion in funding for tests. But the plan will have to go through Congress. But with the stroke of a pen, he can enact a mask mandate in all Federal buildings.*
4. "Immediately expand the emergency relief and exercise the Defense Production Act." *Commentary: This act was used by Trump to increase mask production, but very little else. Biden has announced a plan to use the DPA to boost vaccine supply lines and other needed items.*
5. "Safely reopen schools, businesses, and travel, while protecting workers." *Commentary: reopening schools will depend more on local case controls than anything schools can do themselves. Testing regimens can help but the best way to keep students and teachers safe is to reduce transmission everywhere. The biggest battle in many areas will be with teachers' unions, who in some areas have refused to go back to work unless specific demands are met. Some of this may be out of the President's hands.*
6. "Protect those most at risk and advance equity, including across racial, ethnic, and rural/urban areas." *Commentary: one way to achieve this would be to change the vaccine rollout strategy. Another would be to provide further paycheck support during the pandemic so that people can stay at home without risking their safety or financial security of their families.*
7. "Restore US leadership globally and build better preparedness for future threats." *Commentary: Yesterday, Dr. Anthony Fauci announced that the United States would indeed not withdraw from the WHO, which President Trump had announced would occur. This is a major step towards addressing this priority.*

Details on how each of these core components will be further addressed can be found in Biden's National Strategy [document](#). These measures add to and complement the 12 [executive actions](#) Biden put forth on the first two days of his presidency, outlining how seriously this new administration is taking the global health crisis. *Various.*

—Brief19 Policy Team

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