Addressing COVID-19 vaccine confidence & equitable distribution

Featured topic and speakers
In this episode of AMA Moving Medicine, experts share how to address COVID-19 vaccine concerns from equitable distribution and access to efficacy among communities that experience health disparities.

**Speakers**

- **Meg Frazer, MD**, senior medical director, vaccines, at Pfizer
- **Alethia M. Jackson, JD**, vice president, federal government relations, Walgreen Co.
- **Michael R. Crawford, MBA, MHL**, associate dean for strategy, outreach and innovation, Howard University College of Medicine

**Moderator**

- **Mia Keeys, MA, DrPH(c)**, director of health equity policy & advocacy, Center for Health Equity, American Medical Association

**Host**

- **Todd Unger**, chief experience officer, American Medical Association

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**Transcript**

**Unger:** Even as vaccination rates in the U.S. rise and COVID-19 case numbers and death rates continue to drop, concerns about vaccine efficacy, access and equity persist—especially among Black Americans.

**Dr. Frazer:** There was no variation from a vaccine efficacy perspective. The vaccine held strong in all of those different areas, whether it was a comorbid medical condition or whether it was a race or ethnicity situation or whether it was based on male, female, sex. In all cases, the vaccine efficacy held up.

**Unger:** That’s Dr. Meg Frazer, senior medical director of vaccines at Pfizer. On this episode of Moving Medicine, host Mia Keeys, AMA health equity policy director, is joined by Dr. Frazer and Michael Crawford, associate dean for strategy outreach and innovation at Howard University College of Medicine, in this discussion on COVID-19 vaccines among Black Americans. I’m your host, Todd Unger, chief experience officer at the American Medical Association. Here’s Mia Keeys.
**Keeyes:** So without further ado, we are going to go ahead and get into our conversation. I want to open it up with just some comments that each of you have for us today, with respect to our conversation topic. I'll start with you, Meg.

**Dr. Frazer:** Thank you so much for allowing me to be present. I think one of the things that I'm hoping that we're able to convey today is information that will be helpful from a vaccine confidence perspective. Not only really as it applies to COVID, but for really all vaccinations. I think the other thing that I'd like to touch on is the concept of diversity in clinical trials and it being a matter of equity. And Pfizer has recognized for some time the need to improve equity percentages within our clinical trials and that is something that we've been working very hard on. We know that historically some groups have been very underrepresented, and we have been working very hard to do so, including in our COVID trials.

**Keeyes:** Really excited for you to be here. And I just want to lay out, because we are going to be using some words that we likely all use in our daily conversation, but I want to make sure that we're on—for our audience members—on the same page. When we talk about the concept of equity, it's very different from the concept of equality, right? The concept of equality is literally the philosophy, everyone receives the same thing, right? Whereas equity is each according to their need, right? So when we're talking about equality, it's literally one-to-one, everyone gets the same thing, no consideration for needs or differences in that way. But when we're talking about equity, we are talking about recognizing that certain groups require certain needs. And for the sake of everyone's health, it's incumbent upon us to recognize what those resources are and to make sure that they're provided according to need. So Michael, why don't you tell us a little bit about what you're going to talk to us today about?

**Crawford:** And I hope today that I will be able to bring a perspective from a hospital provider, an ambulatory provider and then an academic provider. So at Howard University we obviously have a medical school and other medical science institutions—a school of pharmacy, a school of nursing and allied health, a school of dentistry. We also have an ambulatory practice that supports the broader district of Columbia metropolitan area and then we also have a hospital. Like most of the folks that are hospital providers, we've been at this COVID fight since past February. We've all had to pivot and adjust to this new reality.
So we have a fundamental understanding of the shifts of trying to ensure that you cultivate an environment that is safe and healthy for your workforce and your staff, as well as especially your patients. So we had to do some of those things previously, February of last year. And then we also had an opportunity to establish some community-oriented testing sites, that provide us with some key insights that help inform how we establish our COVID-19 vaccine clinic, which we established this past January and have been operating from 8:30 p.m. to 3:30 p.m. And today we vaccinated over 30,000 individuals in the area.

So hope to bring some best practices around how to engage communities, look at how we partner with traditional and non traditional partnerships and then thinking about how we leverage collective insight and buy in, to be able to encourage folks to receive vaccines and promote a safe and healthy environment for your workforce, as well as your staff.

**Keeyes:** And some very timely as well. We really appreciate having the clinical setting perspective here, especially as we’re talking about research and academia, and we’re also talking about what Alethia is going to bring to ... Alethia, tell us a bit about what it is that you plan on highlighting for us today.

**Jackson:** Sure, Mia. And thanks so much for really laying the groundwork on talking about the difference between equality and equity. Mia, you really lift up something that's very important and it speaks to the work that we've been doing in this space. So, Walgreens has been really at the forefront of combating COVID-19. We stood up one of the first non governmental COVID-19 testing sites last March at the height of the pandemic. And much of our work has been around, especially focusing on medically underserved communities, the Black and Hispanic communities that have been hit hardest by the virus and are at greatest risk of hospitalization and death. So, as we expanded into administering the COVID vaccine to the public, we were determined to really have equity at the core of our work from a public health perspective, in order to make sure we were targeting those populations that were hardest hit.

So as a company, we stood up a COVID vaccine equity task force, which I chair. And the goal of the task force was really to build upon our equity work, what we learned from testing in areas that were very vulnerable, to create a strategy and identify tactics to help try the equitable distribution and administration of the vaccine. So we’ve been operating under three pillars—which I'm interested in talking about today—education and information. So really working with trusted community partners to lend our voice, to speak to vaccine hesitancy and education around the efficacy of the vaccine. The second pillar has been removing barriers to care, because what we know is that even when there’s care available, there are often barriers that prevent people from accessing it.

We have partnered to help remove the transportation barrier because that's one barrier. So with our partnership with Uber, we've done that and are looking to work with other businesses to help remove some of those. And then access, ensuring that the vaccine is available in the hardest hit communities.

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So we've made a commitment to, one, make sure vaccine is available in our locations that are medically understaffed Black and Hispanic communities. But additionally, taking the vaccine further into community through some hyper localized clinics that we've been doing with trusted community voices—including churches, civic organizations, Masons' lodges, community centers.

So really looking forward to talking about, one, the intentionality around addressing equity in the vaccine, because you do have to be very intentional about it. And then just sharing some of the tools and tactics as I heard from Dean Howard and, I'm sure I'm going to hear, from Dr. Frazier. We're probably all utilizing some of those same tools. So looking forward to digging into that conversation.

**Keeyes:** Me too. I mean, between the three of you, I think you have so much to offer and I'm grateful for your presence today. I want to start with you, Meg. And one of the things that came up in our conversation earlier this year—and it comes up in the other conversations that I've either also moderated or I've been sitting in on and listening to—and it's this idea that the vaccine was developed so quickly, right? The rapid pace at which it was developed for a lot of people causes their ears to perk up and it puts them on edge. How can you help us to really understand the speed at which the vaccine was developed and what does that mean in terms of addressing concerns with respect to vaccine hesitancy?

**Dr. Frazer:** I think that's an excellent question. And let me start with the groundwork for the current clinical trial programs. The idea about the pandemic and pandemic preparedness actually began back in 2002 or so, with the first SARS-CoV-1 pandemic. Luckily, the SARS-CoV-1 virus died out to some degree, but that wasn't true this time around. But back in 2002, the Bush administration put together a pandemic preparedness task force, which has been working ever since. Recognizing that, that was not going to be the last pandemic we were going to see, nor is the one that we're currently experiencing likely to be the last one we're ever going to see.

So therefore we had in place some decision-making about how clinical trials should look. And in addition, we've had an opportunity to study coronaviruses through the MERS, so the Middle Eastern Respiratory Virus—which is still present—although it's relatively localized in the Middle East and hasn't made an impact in the United States, is still going on. And there have been many issues going on with looking at vaccine development for that. And then if you also think about some of the other pandemics that we have experienced that have not really impacted the United States, but have impacted other areas of the world, we know that there has been some backbone.

So if you take a look at the traditional paradigm for research for vaccines, which typically takes 10 to 15 years, the mumps vaccine probably being the most rapid before now, which took about four years for development, it has been fast. And that is because each phase is done sequentially. So there is a preclinical phase and then there are phases one, two and three. If you take a look at the paradigm for us today for COVID-19, you'll find that that preclinical period is the same as it was for the traditional paradigm because we've been doing a lot of research with coronaviruses for a number of years. And
the messenger RNA vaccine platform has been looked at for two decades for other things, primarily oncology, but nonetheless, it's not new to the present.

But phases one through three were all done instead of doing sequentially, they were all done concurrently. And why don't we typically do that? We don't typically do that because the probability of success for a vaccine out of phase one to the point where it's launched is somewhere less than 30%. So it would be unusual for a pharmaceutical company to put all their resources upfront, to develop a vaccine for phases one through three altogether, if they didn't have a very high probability of success—however a pandemic is very different. So, no corners were cut. Phases one, two and three were all done, they were just done nearly simultaneously. And when you think about the fact that we have the genome for SARS-CoV-2, roughly at the end of January when the Chinese released the genome to the world, the first shots for Pfizer and BioNTech were in early April. So phase one in humans began in early April, that is unprecedented.

And then the phase three trials started on July 27. That's remarkable as well. But if you think about the traditional paradigm where you might have 30,000 to 60,000 subjects within a study program, we had 45,000 subjects within a study program in a very short period of time. So, we also did not cut corners in terms of the numbers of subjects that were enrolled in this study. And what I always tell people is it would do either the government, health and human services, it wouldn't do the company, it wouldn't do the scientists, it wouldn't do the academicians. All the people that are involved in this work, it wouldn't do us any good to release a vaccine that wasn't proven to be safe or efficacious. Because it would further damage our reputation going forward and, potentially, the reputation for all the medications that we have already provided. The other thing is that the FDA requested 60 days' worth of safety information, which was what came through in mid-November last year.

They needed 60 days' worth of safety information, which is the time period in which you're likely to see a serious adverse event related to a vaccine. So that 60 days of safety information is very important and should hopefully confer a degree of confidence in the vaccines and where we are today. Not only knowing that there were 45,000 subjects, which fits squarely in that 30,000 to 60,000 traditional subject paradigm. That should help, I think, but also to know that no corners were cut in any of the research program to date for the COVID-19. And also, that trials are continuing. I think it's been in the public domain that we have just released our 12- to 15-year-old adolescent data. We started a trial looking at 6 months to 11-year-olds and we also started a specific trial looking at pregnancy. So these trials will continue, even now during an emergency use authorization.

**Keeyes:** I mean, you laid it out plainly for us there Meg, the fact that, number one, the mRNA research is not new, right? It's several decades old. We've been able to learn from coronaviruses that have proceeded us, right? Because of emergency protocols, concurrent phase one through three trials have been going on. You've been able to have really very robust clinical trials, which are ongoing. And you're going to talk to us later on about representativeness with that, I imagine. So it's really just a matter of people understanding the logistics of a vaccine development and also framing that with
history. And just having very open conversations about that, which I think the work of Walgreens, particularly through its task force, Alethia, I think you can speak to this so very well, in terms of addressing those barriers. Either questions that people have, or historical related concerns that folk might glean.

What's Walgreens doing to address ongoing hesitancy, right? And we're calling it hesitancy, but there's also an element of just overall distrust in institutions. That's also another important way to frame it. And then what are some best practices that Walgreens has developed or observed that work with bringing people along to a space where they can trust the science that Meg has just described?

**Jackson:** Sure. So you really hit on a good point, which is those open conversations. I think if the pandemic has taught us anything, it is that COVID vaccine hesitancy is not just one thing, it's many things. And this is because personal health and how patients overcome hesitancy, needs to really be addressed by their personal experiences and situations. So we have taken a multifaceted approach that includes, one, our pharmacist. So utilizing our skilled workforce, who are familiar faces and trusted health resources embedded in communities, and approximately 45% of our pharmacists identify as non-white, often reflecting the communities that they serve and they're highly assessable. So using them to, one, have those open conversations to be able to provide information on the efficacy of the vaccine, but also building trust because they are trusted within the community and are able to provide some personalized information.

And then we've also looked at content on our website and social media. So we're producing content daily, even hourly sometimes, to ensure that our customers and patients have the latest information at their fingertips. So if you go on our website, we're putting out videos and bringing credible third-party experts to contribute to the content, as well as those, again, trusted community voices. So we have had Anita Jenkins, the CEO of Howard University Hospital, on talking to us. We utilize the Chicago Urban League, Karen Freeman-Wilson, the executive director. So that people are having a medical conversation because we do it in concert with our chief medical officer or our head of pharmacy operations, but are also having a communal conversation, which is really important and at the heart of this, especially from that historic perspective.

And then partnerships, they are so critical. So collaborating with civic organizations, faith-based organizations. People go to their churches for healing spiritually, but quite honestly during COVID—it's been physical healing as well. We are doing some of our best vaccine work in partnership with local faith-based organizations. So really, again, utilizing those trusted voices as well. And then influencers also. We launched a campaign a couple of weeks ago with John Legend, who is also incredibly committed to vaccine equity as well. So working with voices. So it quite honestly is a multifaceted approach because of what reaches one person may not reach the other. So putting a lot out there and hoping that that helps to move the needle.

**Keeys:** On a personal note, it certainly for me has helped to move the needle, and I'm someone who
works in the health care space. But it still makes a difference for me to have access to conversations and platforms like this one, and similar to the ones that you all do at Walgreens Co. and such like that. And to the point where I did go and get the vaccine, and actually Meg, you'd be proud. I mean, not that it truly matters, but I do have a Pfizer vaccine and I feel fine, I stay hydrated. I certainly do feel that I've made the right decision for myself based on the information that I had available to me and I continue to have conversations, right?

But I certainly do recognize that not everyone is in that space, right? And we continue to see spaces, Michael, where the vaccine rates remain low. Or they're rising, it's just moving at a different deliberate pace. So I'm wondering you coming out of the Washington D.C. metro area, being at Howard hospital—what innovative efforts has the hospital and the institution taken to increase vaccine access and to address low vaccine rates, whether it be attributed to some of the pillars that Alethia mentioned, education, barriers to care, access? What has Howard been working on?

**Crawford:** I think Alethia highlighted some really critical points. I think the education piece is critically important. It's very much like a marketing campaign, you're seeding the environment and the conditions to ensure that folks have the information they need to make informed decisions. So we've hosted a number of webinars, town halls, ask-the-doctor sessions. We've hosted Dr. Fauci with the Urban League, Blacks [Coalition] Against COVID, to have a discussion with Dr. Fauci in a very plain and informative way to address folks questions about the vaccine. So not just one vaccine, but all of the vaccines. And then to discuss some of the disparities and systemic challenges that communities of color have experienced with the health care system historically and how that relates to how people are viewing COVID-19 testing as well as vaccines. So we've done a lot of free education prior to events.

We've also continued to educate patients and work with thought leaders and influencers, to vaccinate folks on the ground when they enter a vaccine site, or when they're in the hospital or when they're also in an ambulatory environment—our doctors one-to-one, our nurses one-to-one are having conversations with patients. And not only patients, but the family. And I think that we're really focusing on this family construct because different elements, different individuals within the family are more influential than others. So messaging to the family as opposed to individuals, we found some success in that. And then in partnerships and I'll talk about three specific partnerships that we've undertaken recently. And one was with an elected official in an area within Washington, D.C., has governed within eight boards. We worked with a council member from ward six, and this area is in Northeast, near the D.C. armory.

And at the time, the area possessed one of the lowest vaccine rates in the city. So we partnered with the council member and a pastor of a church, Mount Moriah Baptist Church, to establish a mobile vaccine clinic embedded within the community. We leveraged the council member's staff and their ground game and infrastructure, to do a lot of door knocking to arrange transportation. And we deployed our conditions to that site. We created this preregistration list and an alternative list for those
individuals that might show up and we vaccinated folks accordingly. So prior to the event, we used Pastor Dalton, who’s the pastor of that church, the council member and his staff, as well as some community based organizations, to really educate folks prior to their vaccination date. And we vaccinated those individuals, roughly about 180 individuals. The number seems small, but for that particular zip code, it was a significant amount of people that were vaccinated on that day.

Secondly, we partnered with Ms. Cora Masters Barry in ward eight, she hosted a mass vaccination event where the objective was to vaccinate a thousand individuals. So we partnered with the CBO’s other hospital providers within the District of Columbia, as well as some of our payer partners, to really establish a robust ground game, to be able to have people sign up and to be vaccinated. So that that event was about being vaccinated, but also hosted a number of wraparound services. As we all are well aware, there is now chronic unemployment that is occurring. Food insecurity has been amplified. So food was being distributed, social services, services around housing to ensure folks were not only being vaccinated, but some of their other needs were being satisfied as well. And then the most recent event, we partnered with the Chinese community church, to help create access within the Asian and Pacific Islander community.

And that was in the church environment, and we undertook the same approach in terms of this pre-education—knocking on doors, multiple touches to ensure that folks showed up to minimize that no-show rate and then we vaccinated those individuals accordingly. So those are just several of the events that we’ve undertaken within the community, to ensure that we are working with those areas that possess low vaccination rates. And then the last one I will just mention is with our payer partners, we have established a concierge service for some of their members in medically underserved communities, where they’re scheduling folks directly into our scheduling template. And those folks are being incorporated into our daily workflow of our vaccination clinic Monday through Friday.

And we’ve been able to create some access, they’ve been able to manage the transportation to minimize that social determinant of health, to ensure that folks have the transportation, have the access to be vaccinated accordingly. So I think that those partnerships are critically important, and thinking beyond your traditional strategies to be able to create environments where folks trust and readily have access to receive their vaccine and education, I think is critically important.

Keeys: I mean, everything that you spoke of there Michael, really speaks to some of the things that both Meg and Alethia have mentioned already, which is creating spaces of trust. And to your point about going beyond traditional outreach, and that has literally been the embodiment of innovation, right? As a ward six resident, I very much appreciate the work that you all have done, but I also must speak to the work that you’re doing with the Asian American and Pacific Islander communities, especially right now. Because as our national consciousness is raising around the inequitable distribution of care historically for marginalized and minoritized communities, a lot of times we don't pay attention to the Asian communities because of this creation of the model minority myth, right?
But with all this anti-Asian rhetoric just rising up and really just choking the life out of our neighbors and those who are of Asian descent, we really need to be very mindful of that work. So I appreciate you raising that as well. And I want to make sure that we come back and talk a bit more about some of the intentionality that you've mentioned. Meg, I want to come back to some of the things that you were talking about earlier, with respect to representation in clinical trials and throughout all the phases. Can you speak to any differences, if any, in clinical efficacy of the Pfizer vaccine based on race and ethnicity, and then also based on other really very significant status and identifiers—chronic health or age, gender, but especially race and ethnicity and chronic conditions.

Dr. Frazer: Thank you. And that's an excellent question. So let me start by saying, in our landmark trial, which would have been the phase three trial, we selected investigative sites that would have been in diverse communities in the United States and globally, that were disproportionately affected by COVID-19. And that was to help ensure that individuals and communities that have been most impacted had the opportunity to participate. So that's the backdrop for what I'm going to say. So in our phase three study, approximately 42% overall and 30% of U.S. participants came from diverse backgrounds. So I think that's a very significant percentage. In the United States it was a little bit different, but in the United States roughly almost 10% were Black Americans, 28% were Latinx. We had 38% representation of the obese population, and obesity is perhaps one of the most significant risk factors for a bad outcome with COVID-19.

And at least between 20 and 25% had another underlying comorbidity. And by that I mean, heart disease, cancer perhaps, lung disease, those types of chronic illnesses were well-represented. When you take a look at the breakdown of vaccine efficacy in all of those of different groups, there was no variation from a vaccine efficacy perspective. The vaccine held strong in all of those different areas—whether it was a comorbid medical condition or whether it was a race or ethnicity situation or whether it was based on male, female, sex. In all cases, the vaccine efficacy held up. And I think that's very important information.

Keeyes: I completely agree with you, having that information readily available and being able to say that with confidence, certainly does make a difference for families, for individuals, and really also in terms of the message, right? Being able to lead with that message. And Alethia, you mentioned to us in your opening, some of the work that Walgreens has been doing around outreach into the community and being able to rely on the science and on the facts, similar to what Meg has just highlighted for us. I'm wondering if you can tell us a bit about those off-site vaccine clinics, the outreach that has worked and that you all have intentionally crafted into your strategies for outreach. And then similar to the question that I asked Meg, amongst communities with high rates of chronic diseases or with a high prevalence of other issues that are not related to clinical outcomes, so social determinants of health, what do you see working? And how have the off-site clinics been able to work with that?
Jackson: Sure. And thank you for that question. And also, I think building on what you mentioned about the Asian population as well. I want to pull that in a bit. So as we've been looking at our off-site clinics, it really is about meeting communities where they are. So our clinics are often in some of the most vulnerable areas and some of the most hesitant populations. So individuals who come to our clinics, this may be the first interaction they've had with a health care system in quite some time. And what we've done is in addition to looking at where our footprint is and looking at working with our partners, we often will also talk to the local departments of health and say, "Where are you seeing the greatest need?" And that helps drive some of our location of our off-site clinics.

And those have been in Black communities, Hispanic communities, but also Asian American communities. So thank you for lifting that up and the data shows that the vaccination rates are low there, there is hesitancy, and there are a number of other barriers. So going into all of those communities with our off-site clinics. So we have done those in partnerships with, as I mentioned, local churches, community centers, elected officials in underserved areas. And we often have done those even simultaneously across various cities, and so in early March we were in Atlanta, we ran a Mason's lodge in Baltimore and we were able to administer over 9,000 vaccines. But what that looks like is someone reaching out to individuals saying, "We're having a clinic, would you like to be signed up?" It's an opportunity for a conversation, it's an opportunity for them. Often people come together with another family member or they're going somewhere, that is familiar to them because it's local in the community.

So it starts to pull down a number of layers of barriers that we see, and makes it more comfortable and helps to build some of that trust around coming to get the vaccine. So it's been a really good way of administering. We're often there two days. So we register people and then sometimes someone has heard about it that first day and then come the next day. Maybe that's someone who would not have done that if it were not locally based in, again, one of those trust areas, and we've done it in partnership as well with various organizations. So you've heard about it from another organization in addition to Walgreens, another trusted partner. And we've done the same in Atlanta and excuse me, El Paso, Houston and a host of others. Houston was in an area that is called the International Triangle.

So it actually did bring various racial and ethnic backgrounds to receive the vaccine in the local site that we were working with. And we're also testing out mobile clinics. So we're going to be having some mobile trailers that are able to be moved throughout communities. So again, utilizing many tools and doing it in concert with partners, partnership is so incredibly key to this. This weekend, we'll be partnering with Congresswoman Joyce Beatty, chair of the Congressional Black Caucus, on a clinic in Columbus and with a host of other partners. So really putting all the effort in the engines, driving towards this to reach these populations. And then you asked about different comorbidities, and reaching those communities, that's something that we saw even during the flu season and why we were so encouraging people that, "Hey, this is a twindemic actually, because if you already have any
respiratory issues and then you have the flu and then you have COVID.” So really trying to reach and touch those populations as well.

**Keey:** Alethia, do you see any special considerations in rural environments?

**Jackson:** Definitely. And it's interesting because some of the same tactics—and we're learning, and this is what we've always said—and we'll go through different phases of this as we are reaching different populations, but some of the tactics can actually be expanded on and utilized. So if you look at a rural community, again, how do we bring that closer to you? So whether that is, and that may still be church, that's someplace that people go, but it may be employer onsite as well if there's a local plant there that employees most of the people in that area, that's a great opportunity to work with that employer to get people vaccinated. Or maybe it's a local farm bureau. So again, I think a lot of the tactics can be adjusted for rural communities and other hard to reach communities, and we are definitely looking at doing that.

**Keey:** Well, there are no shortage of your stores around. I must say it takes me a while to get to a space where I don't see a Walgreens in the middle of the block. So you all are definitely literally showing up. And I appreciate you harping on the point of partnerships. And I think, Michael, this especially plays into some of the things that you all are doing over at Howard University. For you all, what's been the specific role of partnerships in terms of playing up the vaccination rates, education and information efforts, trust-building, all of that?

**Crawford:** And I'll build on two threads and two things that have just been discussed, the clinical trial piece that Meg touched on and then some of the work that Alethia and Walgreens has been undertaken during the pandemic. Howard is obviously a trusted voice within communities of color. We have historically worked very closely with underrepresented communities. So we have an infrastructure and established relationships in this environment. And one of the areas where we really amplified this engagement is we developed a community advisory board that is representative of communities of color. And those individuals are broadly dispersed throughout the DMV, to help inform what partnerships actually make sense. What communities should be spoken to in a language that resonates, what are some of these barriers and challenges impacting their network, their constituencies, their residents. So we leverage this community advisory board to help inform some of the strategies that we would undertake from a testing and a vaccine administration perspective.

But it really also manifests itself when we participated in the Novavax phase three clinical trials. So as Meg talked about, there's a lot of innovation and thinking through what clinical trial infrastructure and deployment look like, and we really leverage that community advisory board to help us come up with some strategies and tactics, to be able to entice folks to participate in a clinical trial. And what questions should they be asking? What information should they be thinking through? And then what should you expect if you receive placebo? And then what does crossover and unblinded mean? So we leveraged that infrastructure to really have those discussions from a clinical trial perspective and
then the community advisory board helped inform some partnerships.

But one of the partnerships that we establish last March is with the Washington National Cathedral and they created an onsite vaccination event. Dr. Fauci was present, NIH, CDC, HHS and others, to vaccinate clergy on camera, to really demonstrate that it was safe and effective to receive the vaccine. And it was a non denominational event. So I think that was very powerful, because you had faith leaders across denominations talking about the importance of being vaccinated. We also have been partnering, we've been thinking about different partnerships. And we’ve talked about different ethnic groups. One of the areas where we are currently in discussions is with the Indian Health Service. That is also a population that been disproportionately impacted by COVID-19. And there is a significant presence around these urban centers, and access for vaccine within this community and populations sometimes has been challenging.

So we're looking at how we partner with Indian Health Service, so we create more access for vaccines, not for a one day event, but for continuity in terms of how they can access their vaccines. Another population that is often under looked in the District of Columbia is embassy staff and their families. So those folks have been left out in the process in terms of being able to access vaccines. So we've been having conversations with them. And then we've also been looking at how do we deepen that engagement with our medically underserved communities in ward seven, in ward eight, to figure out how we leverage some of the current initiatives on the ground. Maybe that's a payer initiative around chronic disease management—and targeting diabetics, cancer patients, sickle cell disease patients and others, to really have some targeted outreach to these individuals and populations.

And then also looking at our younger demographic, which we all know is very challenging at this point, and some of our influencers and thought leaders that have worked in our older demographics, do not necessarily resonate with our younger demographics. So in our area we're looking at different young artists that can help develop a social media campaign to engage our young individuals. We're also looking at sports and entertainment figures that can help engage some of these young figures. And then also thinking through, "Can we create a young ambassadors program?" And that might be engagement with some of the local youth organizations, to look at ambassadors that can engage with their particular peers to encourage them to receive the vaccine. So we're trying to build on some existing partnerships that we have and then looking at new opportunities to engage some of these cohorts and segments of the population that haven't necessarily been vaccinated at this point.
Keeyes: I really like that. One of the audience members literally brought that point up about younger adults, the 18 to 29 movable middle. And it sounds like some of the things that you all are doing are working to really address that. Not so much the "No, I won't get vaccinated," but the ones who are potentially on the fence. And I think Alethia mentioned use of influencers as well. So that certainly seems to have its own fruits. What about, Michael, any work that you all are doing with the homebound or those who are caregivers or anything like that, are you all looking into any of that?

Crawford: We are. We're working with a number of community of color providers, that operate either low income housing buildings or individuals that operate assisted living or senior buildings, to establish vaccine clinics on site. So we've been working with some partners to identify those buildings that still have a number of homebound individuals that have not been vaccinated. So going mobile, I know you Alethia mentioned going mobile. One of the areas that we're thinking about is deploying a mobile unit to those buildings. If they do not have ample space to accommodate an onsite vaccine clinic, to be able to vaccinate those individuals unit by unit. And then we're also having a relationship with D.C. housing authority, where we're looking at public housing and low-income housing, deploying a mobile unit or establishing a site on premise to be able to provide access to the vaccines.

But we're trying at this point to move beyond just administering vaccines. We're trying to administer vaccines, but we also are trying to have people connected to care. So that was one of the challenges that we have seen throughout the pandemic, is that there is a substantial amount of the population that is not connected to their primary care provider. So when the pandemic accelerated, folks had nowhere to go in terms of asking questions, whether they should be tested, whether they were a candidate for the vaccine. So we're also looking at how can we connect folks to care. It doesn't necessarily have to be Howard, we just want them to be connected to care so that they can have an engaging relationship with a health care provider that moves beyond the pandemic.

Keeyes: Really glad to hear that. So I'm hoping that amongst the panel here and certainly amongst the audience, that you all have been well and your families have been well during this long wintering season, right? But there are many of us who have had friends or family who have had COVID, some have succumbed to long-term sickness and others have passed on, have transitioned and died from COVID related complications, right? So we are really mindful of them. We hold their spirits in our head and our hearts. I wanted to talk to you Meg, then about those who have been touched directly by COVID and have survived—when it comes to the vaccine, should they get the vaccine? And those who are either in active recovery or those who have recovered over some time. And if so, how long after having had a COVID-19, should that person wait to receive vaccine?

Dr. Frazer: There are recommendations on the CDC website about that. And their general guidance is that you can receive the COVID vaccine, any of the vaccines, as soon as you're out of quarantine for your COVID-19. With the caveat however—and this was early when vaccine supplies were scarce—that you could wait 90 days and then receive your COVID vaccine after having COVID,
again, while vaccine supplies were scarce. But they're not scarce now necessarily, or these soon won't be. So the recommendation from the CDC is as soon as you're out of your quarantine, you may have your vaccine. And I think that's very important information to keep in mind. That initial 90 days came about from early work that was done with COVID that took a look at the presence of antibodies in individuals' systems after they had COVID.

So that's where the 90 days come into play. It could be that you're naturally immune for a longer period of time, but we don't know that yet. So that's the current recommendation. And yes, we do suggest that people be vaccinated, even though they've had COVID. I had COVID, a number of my children had COVID and we've all since been vaccinated because I firmly believe that's very important.

Keeyes: Thank you for that, Meg. There's so much to learn from anecdotes, and also so much to learn from what the jargon-y information offers us, and there's a lot to learn from best practices. So I'm wondering as you're going about your work and Alethia is going about hers and Michael his—Alethia, I'm wondering if you can let us know a bit about any lessons that you've gleaned in your work with moving the equity conversation forward, with moving the health disparity conversation forward, particularly in communities of color around COVID.

Jackson: Sure. So there've been a lot of learnings this year, and as we like to say, all of the work that we're doing and while it's focused on COVID and the vaccine at this moment, it really is to be pulled through as we continue to work on health equity as a whole, and really taking those lessons and moving forward. So a couple of lessons—personal touch, trusted people in people's lives and community are crucial. So we've highlighted some of the partnerships, we've also highlighted utilizing our pharmacy workforce and our health care workforce to continue to serve. We think partnerships, those are not going away and definitely some of the new and innovative ways of doing partnerships. So while we've worked with some traditional organizations, we've also done some different partnerships—whether that's working with the NBA as we're currently doing around the vaccine, whether that's working with additional online organizations or influencers and those don't just, again, have to be around vaccines.

 Honestly, it could be around medication adherence, chronic disease state management and others. So continuing to touch people where they are in order to drive adherence, in order to drive wellness, in order to address some of the health equities even with respect to access. Continuing to use the influencers and some of the high touch, you've done a great job I think, because of pandemic has driven everyone to really doing high touch interactions but continuing to do those for the people who are most vulnerable. Prior to the pandemic, we launched some health equity work, and it was an advanced care initiative where our pharmacy teams really ramped up our engagement with patients who had chronic conditions and it was an intervention, so to speak. And the goal was to drive adherence to medication regimens, which were critical to improving health.
And we tested its effectiveness with diet patients who were living with diabetes in a particular neighborhood in Chicago and the result of it was a 77% improvement in two weeks on their refills. And that was a result of high touch outreach efforts. But what we know is that that is critical to keeping them healthy, being adherent with that. So we take those lessons learned and say, "How do we move forward? And how do we incorporate this into the care we're driving every day?" So again, lots of lessons learned on high touch outreach, on unusual partnerships, some unusual, some unusual or just different, in order to reach different categories of patients. And then continuing to drive the voices of trusted health care workers and trusted community partners.

Keeyes: I love, love, love the phrase high touch, especially because we are, as a nation, moving into such high-tech related medicine and such like that. And sometimes it really is just the personal—coming close, knocking on doors, spending time, listening, being of service at the moment, which it's timely. And that tends to be one of our most stretched of resources, time is. But that high touch, low tech innovation, particularly during the emergency situations is certainly working. So kudos to all three of you for the work that you all are doing and your teams are doing and the leadership roles that you're playing.

In the last three minutes that we have, I'd like to just hear from each of you, what are just some closing words, final words, takeaways that you would want for the audience to know. Either summarizing what you've already said or offering additional information. And Michael, I'll start with you.

Crawford: A couple of things that I want folks to take away and it's in four areas. Access is still a problem, it's still a challenge. Not only in terms of receiving testing as well as vaccines, but in terms of receiving high quality care. So there needs to be significant thought and intentionality around creating more opportunities for access to receive high quality care. Engagement, as Alethia talked about, I think engagement and what that looks like moving forward needs to be contemplated. I think that there are some lessons learned during the pandemic that we can leverage moving forward, but we also need to think about how we leverage technology, how we look at the virtual health experience, right? How we look at remote monitoring, how we create more engagement and connectivity.

And I think health literacy is a big part of that. So I think there needs to be a doubling down on health and system literacy. And then this piece around empowerment, I think that folks need to feel empowered to make informed health care decisions. I think we've made some strides in that area, but I think that there needs to be significant investment. And then under the auspice of health equity. I think that we need to think about infrastructure, in how we develop more resilient communities in the urban and rural environment. There's a big infrastructure bill up on the Hill that you all are well aware of. How do we look at infrastructure as a means to create more resiliency and capacity in medically underserved communities and I think that's part of that empowerment piece. So I want to leave you with, we need to continue to think about access, we need to continue to think about engagement and
we need to figure out how we empower folks, particularly communities of color, to make informed health care decisions and improve health care quality overall.

Keeyes: Thank you, Michael. Meg, over to you.

Dr. Frazer: Yes. And again, I want to offer my thanks for being able to be a part of this panel with such wonderful colleagues. As both a Pfizer medical representative as well as a physician, there are a couple of points that I would like to finish with. One of the things that the CDC asked us to consider is to move from the words “vaccine hesitancy to confidence,” to move from the negative to the positive, so that we can help people feel more confident with vaccines. We know that COVID-19 has disproportionately affected communities of color. And I think that we need to recognize that COVID-19 is not a trivial disease and does not appear to be going away. One of the most important things we can do is vaccinate. And the reason why I say that is we are all very familiar with the viral variance. Viruses do vary, they do mutate and that is one of the issues.

The fastest way we can get this virus to stop mutating, is by all of us being vaccinated, because viruses mutate by moving from person to person. So that would be the final comment that I would think about that we know we may be in this for the long run. And what we want to do as best we can is protect not only ourselves, but protect our communities. Because vaccine is the one element of medicine where you're not just protecting yourself, it's also altruistic and you're trying to help others as well.

Keeyes: Thank you, Meg. Alethia, closing words.

Jackson: Sure. I'm going to make two points, one being access and I do think that is critically important. We've been talking for years about trying to provide additional or broader access to even pharmacist services. Pharmacists, they're local, they're embedded in community and that's one of the things we've seen during the pandemic, right? Community-based care and that people were pretty much locked into their community. To the extent that you could localize care, was really going to be one of your best chances for reaching people. So continuing to look at how we are utilizing our entire health care workforce, including pharmacists. And I would also say, and to piggyback on the infrastructure piece, health care infrastructure. So what the pandemic also showed us is some of what we've known for a while, is that we are lacking in health care infrastructure and there are holes in our care delivery teams, and just not enough health care providers.
So with us looking at, “How do we build upon our health care infrastructure? How do we keep some of the expansions in place that we have implemented during the pandemic in order to make sure we don’t regress while in the times that we are outside of a pandemic?” Because then it takes us a longer time to shore up. But also you’d probably have more people who haven’t been treated and haven't been cared for, and then who are vulnerable because we didn’t have enough of that infrastructure around our health care workforce. So really looking back to have that be a key part of any infrastructure package that we’re considering.

**Keeys:** Well. I mean, I couldn't be more grateful for the sage words that each of you has offered us today and also just your overall service and your humility. And also just how firm you are in making sure that we are vaccine confident, we're asking the critical questions, we're engaging each other, meeting each other where we are, and engaging in high touch efforts and moving the efficacy needle forward so that we can have an increased infrastructure. So again, my deep thanks to Dr. Meg Frazier, senior medical director of vaccines at Pfizer, to Michael Crawford, thank you so very much for joining us. The associate dean for strategy outreach and innovation at Howard University College of Medicine. And Alethia Jackson, vice president of federal government affairs over at Walgreen company. And I'm Mia Keeys, I'm with the American Medical Association Center for Health Equity.

**Unger:** This episode was originally a panel session as part of the 2021 National Minority Quality Forum’s Annual Leadership Summit on Health Disparities and Health Braintrust. That was Mia Keeys, joined by Dr. Meg Frazer and Michael Crawford on vaccine equity among Black Americans.

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