



NASA COVID-19 Vaccine Town Hall

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Transcript with Frequently Asked Questions

Participants:

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Jane Welcome to NASA's town hall on the COVID-19 vaccine. I'm Chief Human Capital Officer Jane Datta, and with us today for this important conversation are Associate Administrator Steve Jurczyk, Deputy Associate Administrator Melanie Saunders, Chief Health and Medical Officer Dr. J.D. Polk, and Deputy Chief Health and Medical Officer Dr. Vince Michaud.

More than 180 questions were submitted for this conversation, and we'll get to as many as we can. But before we start with the questions, I'd like to turn it over to Steve Jurczyk and J.D. for some opening remarks. Let's start with you, Steve.

Steve Thank you, Jane. First, I'd like to take some time to just thank the NASA workforce for their continued hard work and dedication to keeping the NASA mission moving forward under very challenging circumstances.

I can't tell you how much I've been impressed with the resiliency and perseverance of the NASA workforce and our partners, and given a global pandemic, as well as social rest and other challenges that we've had as a nation and an agency. So, I just want to express my heartfelt appreciation for your talent, hard work, and dedication.

NASA's leadership understands there is a wide range of opinions and feelings about the COVID-19 vaccine, and vaccines in general, but our responsibility is to keep our employees as safe as possible while executing the mission. And I think we've said that all along. We will continue to make decisions based on applicable federal and state guidelines, the best available science, and the mission needs of the agency, as well as continue to take a look at data. What is the data telling us about the risk due to COVID-19?

If you do not feel comfortable returning or continuing to work on site, civil servants, talk to your supervisor about your concerns and options to address your concerns, and contractors, reach out to your contract manager to discuss options that may be available to you.

As we have said all along, if you do not feel comfortable returning or continuing to work on site, civil servants, talk to your supervisor about your concerns and options to address your concerns, and contractors, reach out to your contract manager to discuss options that may be available to you. Everybody's situation is unique, and everybody has a different risks and risk factors. So, we definitely want you to work to address your concerns with your supervisor and your contract manager.

At this time, each NASA center is working with their respective state and local officials to determine how many vaccinations will be allocated to each center. This includes NASA Headquarters. Priority will be given to employees performing mission-essential and approved on-site mission-critical work. This does include both civil servants and contractors conducting mission-essential and mission-critical work. So, with that, I'll throw it back to you, Jane.

Jane Thanks so, much, Steve, for those great opening remarks. J.D., some thoughts from you?

J.D. Yeah, Jane, you know, there are a lot of misconceptions and misinformation out there on the vaccine. Hopefully, the questions – great questions coming up from the folks – hopefully, we'll allay some fears and alleviate some of the concerns with our discussion today.

Obviously, the rollout for the vaccines has a few hiccups as you go through all the different states and counties, and we'll discuss some of that as well. I'll save the bulk of my remarks here for our discussion, but hopefully we'll alleviate a lot of fears and concerns.

But, let me ask Vince also to chime in on an opening remark here.

Vince Hey, thanks, J.D. I would only like to say that the subject of vaccinations and vaccines is very vast, and we have a limited amount of time today. So, we're going to focus on the NASA-specific information and we're not going to try and duplicate what the [CDC](#) has already published.

Also, we know that there's a lot of individual circumstances that we really would like to encourage you to talk to your primary private medical provider to get those answers about personal circumstances. So, this is going to be a more general discussion. Thanks J.D.

Jane Thank you, J.D. and Vince. Really appreciate it. And I think that you all will hear the same themes flowing through the answers to some of the questions that are coming up now. So, let's start with the first question.

Will the centers distribute vaccines to employees?

And to start it out, Melanie, would you like to give your thoughts on this?

Melanie Sure. Thanks, Jane. The answer to that question is, in general, the vast majority of NASA employees, we expect them to receive the vaccine through their community and through private sources. This is based on what we know now.

So, far, we have been asked by the Office of Management and Budget to submit a list of just our mission-critical employees – even a subset of those. And we submitted that list. And what we're expecting right now is to get quantities of vaccines that would cover just that small subset of NASA employees. And so, right now, our expectation, based on what we know now, is you should be planning to get the vaccine through your community.

The vast majority of NASA employees should plan to receive the vaccine through their community.

I, myself, will be planning to get the vaccine through my community because I don't fit into that category – mostly because I can telework. So, if you're teleworking, in general, you should be planning on getting it through your community. And, for most other, even for many other people who are going on site to work, unless you fit into that very small subset, we're probably not going to have the doses for you.

Again, those things can change. We have a new administration coming in and so, everything could change. But so far, our plan is to just vaccinate a very small subset of people. And when we do that, you'll be notified. You won't have to guess whether you're one of those people. You've already probably been notified.

Jane Thanks, Melanie. Next question. We received many questions that reflect the wide range of feelings about mandating vaccines.

Will the vaccine be required to return on center?

Let's start with you, J.D.

J.D. Yeah. Lots of discussions and concerns about that, Jane. First, let me remind folks that these two vaccines were approved under emergency use authorization with the FDA, and the FDA typically does not recommend mandating something that's under emergency use authorization, at least for the federal government.

That's not to say that individual states or private companies might not have a mandate, and we have mandates in certain areas – healthcare, for example. I can't work in the emergency department without my flu vaccine or hepatitis B. College students – many universities require meningitis before someone goes to college, et cetera.

So, I imagine that we will see it in the private sector and in other places that currently we don't have a vaccine mandate. At NASA, obviously as Melanie mentioned earlier, there's always that caveat of 'things could change.' We have a new administration. If we get a highly infectious variant that comes around, circumstances could change. But currently, right now we're not working towards a mandate for the vaccine.

The one thing that I think really needs to be pounded home is we're not going to use the vaccine or any other device or any other modality to discriminate against anyone. And So, that really needs to be pounded home. Vince, any other thoughts on that one?

Vince Well, I would look at it sort of from a different angle. NASA will strongly encourage folks to get their vaccination because it's in all our best interests. There is only one cure for a virus or a pandemic, and that's vaccinations. So, the faster more of us get vaccinated the sooner we get out of the situation with the pandemic. And maybe back to something more normal.

There is only one cure for a virus or a pandemic, and that's vaccinations.

I will remind people that if we don't get enough people vaccinated through the summertime, when you have a lull in a virus, we could get a resurgence of the virus back next fall. So, ideally, we'll get a majority of the population in the country vaccinated through the summertime. And then we won't see this again come the fall time period. So, it's in all our best interests to go get the vaccine as soon as we can.

J.D. The one thing we probably should also talk about, Jane, is that, although NASA may not mandate it, it may be required to get the vaccine in certain circumstances – for example, travel. Certain countries may not allow you entrance. The UK, for example, may require

you to have the vaccine to enter into the country. There's been a lot of discussion about vaccine passports and we haven't seen the final on that or how they're going to implement that. But some countries may require that you be vaccinated for entrance into their country.

We may have private companies that require a vaccination if you're going to go visit that contractor or that company – even some states. New York, for example, has been mulling whether they would mandate it in certain circumstances. So, even though the agency may not mandate it, there may be some areas where it's going to be needed in order to travel or do something else.

Vince and I are going to really push hard and market this and strongly encourage it, not only for your health and to protect the NASA mission, but for your family's health and a myriad of different reasons. But also, so we don't see that virus pop up again in the fall, like Vince mentioned.

Jane Thanks to both of you. This is obviously a complicated issue and it's also evolving. So, appreciate all of those details.

With an eye to the workforce, if the center provides or facilitates vaccinations, will contractors be on equal footing with civil servants?

Melanie, your thoughts on this one?

Melanie The answer to that is absolutely 'yes' – where NASA is providing the vaccination. We took into account integrated mission-critical teams – civil servants, and contractors. Originally, we were asked to only provide lists of the estimate, the civil service numbers. We went back to OMB and said, that makes no sense.

If we're going to try and protect intact teams, a mission control team or something like that, it makes no, no sense at all, to vaccinate just the civil servants. The vast majority of our workforce is contractors. So, we ensured that we could cover both of those. But again, for the vast majority of people, if you telework, or even if you're going on site to the center, you should probably be planning to get the vaccination through your community.

Most all of us on this call are all doing that. Vince and J.D. got it because they're healthcare providers and they've gotten in through those channels. I expect to go to my community. But yes, if NASA is vaccinating one of the small subsets of that mission-critical workforce, if you're a contractor or a civil servant, you're going to be vaccinated. But most people should plan on going to their community.

Jane Thanks so much, Melanie. So, a question for Steve.

Will employees be allowed to remain teleworking if they are not comfortable returning to the center, for personal or medical reasons?

Your thoughts there?

Steve Our approach to this has not changed from the very beginning when we said, if you're working on mission-essential or mission-critical work and you're required to be on site, if you do not feel comfortable coming back on site, given your personal circumstances and situation, talk with your supervisor and work to see if continuing to telework is an option.

Same thing moving forward. First, we're going to continue to use our COVID decision-making [framework](#), just like we have from day one. All centers right now are in stage three,

I believe. In the last couple of weeks, both Johnson Space Center and Michoud Assembly Facility – because of the data, the number of cases and hospitalizations, et cetera – have moved from Stage 2 back to Stage 3. So, now all centers and locations are at Stage 3.

We'll continue to use that the data and our framework to determine the mission-essential and mission-critical activities on site and the number of people on site and manage the risk. As people get vaccinated, we're not driving our decision making based on the number of people being vaccinated. However, as people get vaccinated, we believe the number of infections will come down. The number of hospitalizations will come down, and then, again, we'll use that data and the decision-making framework to decide when it's appropriate at each location for each center to move from stage three to stage two, and maybe eventually to back to one.

When the vaccine does what we're expecting it to do and lowers infections and lowers of the risks, that's really where we'll [re]look at data. We'll use the decision-making framework. But just to reiterate, if you have any concerns right, with coming on site or any risk associated with COVID – travel – please talk to your supervisor and work to accommodate your specific situation.

And again, we're all locations are in stage three, so, unless you're missing essential that subset of mission critical work, you continue to, as long as we're in this, um, in the state, you'll continue to be allowed to telework.

Jane Thank you, Steve. Yeah, I mean, it's great news that the framework that we put in place is still relevant – even as we go through this next phase with the vaccines. Speaking of the vaccines, here's another question specific to them.

There there's no evidence showing that vaccination will prevent spreading the virus once infected. Can you please speak to that?

J.D. and Vince?

J.D. Thanks Jane. That's actually a misconception. Absolutely the virus does decrease with vaccination. In fact, that's the whole purpose of vaccination. Um, but there is a caveat to that. When you first get the first shot, Uh, you don't produce enough antibodies to fight off the virus yet. Uh, and So, you can be a carrier and you could also get COVID in those first couple of weeks. after you get the second vaccine, about two weeks after that, you get what are called IgG antibodies, which are the long-lasting antibodies, and that's when you can fight off the virus.

And if you're fighting off the virus, uh, then your cells do not get infected with it. Uh, and you don't produce a replicate a lot of that virus. You're not shedding it out there. So, absolutely vaccines do, uh, decrease the transmission of the virus, uh, because it takes you out of the equation. You are no longer a source of that infection, spreading it to others. Vince, any other thoughts there?

Vince Uh, just one minor clarification I might add. We throw out numbers or percentage of protection, and what that means is, maybe not what you think it is, when we say that a vaccine is 95% protective or 65% protective. Or, the flu vaccine is 60% protective. That means that, in people that have been vaccinated, that percentage of people have 100% coverage.

It doesn't mean the other percentage are not covered as well. They just have less than a hundred percent. So, the percentage make me that you see in the public might be a little bit misleading. There is a lot of protection, especially with these vaccines that are highly protective at 95%. So, 95% of the population has a hundred percent protection.

And then the rest of the folks – the other 5% – have protection as well. So, I wanted to mention, in the way of encouragement, that it is very protective.

Jane Super. I think we're going to know a lot more about vaccines at the end of this experience than we ever thought we would. So, with that in mind, another question sort of related to this.

Many people are still skeptical about the vaccines due to a variety of reasons like the new RNA technology, shorter period of clinical trials to ascertain the long-term effects of the vaccines. What can you tell us about the vaccine development process?

J.D. and Vince?

J.D. We've had a lot of discussions and discussions with the CDC and HHS. It's actually been really enlightening on this one. First, RNA technology – it's not brand new this year. A lot of folks have a misconception that we just came out with that this year or in 2020. We've actually been looking at messenger RNA for the last two decades for things like the Zika virus, SARS, and also for cancer treatments for cancers that are caused by viruses. So, that technology is not brand new, but this was the first time we've deployed it on a large-scale on a vaccine.

There were several things that actually worked in our favor. For example, at the end of January in 2020, [Moderna](#) had the entire sequence mapped out for this virus. That would not have happened five years ago, or 10 years ago. The ability to do RNA and DNA sequencing and know a genetic code of something has accelerated the ability for us to get vaccines out.

And the other misconception, I think, is that, folks think that we somehow cut corners. They actually did the clinical trials – the Phase One, Phase Two and Phase Three – with the usual number of patients that we typically see. But what was cut out was the administrative aspects – the red tape. The companies normally wait and take longer to do these trials because they're waiting for supplementation or finances or money in order to make sure that they can have a payoff for return on investment of that vaccine. And they were guaranteed that upfront with the government. So, that helped accelerate this a great deal. Vince, I'm sure there's a lot of stuff that I'm skipping over. So, any other thoughts?

Vince No. I know you and I have spent a lot of time talking about how it is we could get a vaccine so fast compared to previous vaccines in history. You've covered a lot of the reasons, but you know, you gotta think about the financial aspect for the companies, right?

They are not going to go and start producing a lot of vaccine before it gets approved. And the government, our government went ahead and sponsored six different vaccines upfront and paid for everything, including manufacturing the vaccine before it was ever approved. So, besides that fact, we have the same amount of people that have been in the research part of the process, the vaccine is going to be just as safe as any vaccine ever produced, we have it available to us much faster because it was already produced before it's ever approved. And again, a company would never do that on their own.

So, the fact that the government sponsored them upfront, and we have a few more that are still in that process, allowed us to get the vaccine out and available to everybody in “warp speed,” or record time.

J.D. And, Jane, the other thing I think that bears repeating is that this vaccine is different in that in previous vaccines we have given you the virus. We've given you either a killed virus, or an inactivated virus or bacteria, or a portion of it. The polio vaccine was a live-virus

vaccine. A lot of those things where we were actually giving you a portion of the infectious disease. And this one, we're not. The messenger RNA vaccine is actually merely giving a set of instructions that the cells use to produce the peptides and protein for this virus so that your body can recognize it. And then it extinguishes after several weeks. It stops producing that instruction set. And so what we're seeing, at least in the initial data – granted we have much more data to gather over the next year – there's something like a 30, some odd, maybe 40 now, serious reactions with anaphylaxis.

And the majority of those were people that had known allergies and known sensitivity and had auto injectors and things of that nature. And I gotta remind you, that's out of 9.8 million vaccines now, So, that, that is an exquisitely small number. I think we're going to find that at the end of this year, this was probably one of the safest vaccines we've ever deployed on the mass scale.

Vince You know, J.D., you bring up a really good point about the reactions. The way this vaccine is produced is it's synthesized in the lab, as compared to previous vaccines that, in a lot of cases, are grown – sometimes in eggs or other manners. So, that provides us with a very clean vaccine. It doesn't have a lot of extra stuff in there. And, in the past, the vaccination reactions we've seen a lot of times have been related to some of the other stuff that ends up in the vaccine.

So, these are very clean vaccines, in that you just get the messenger RNA that we're trying to get to everybody. And that cuts down all those reactions as well.

Jane Well, this is such great insight – the economics, the administration of it, and then the actual science behind it. So, thank you so much for sharing all of that. I'm going to pivot now and go back to Steve.

Will masks be required still, and will there be a way to report those who are not complying?

Steve I'll answer the second part first. We've always had mechanisms for people being able to report employees that are not complying with mask wearing or other policies that we have to protect the workforce. First, report it to your supervisor, or up the chain to make sure you're getting an adequate response.

So, if you see somebody not complying with mask wearing or any safety policy that we have, please report it to your supervisor. There's also a secondary path – another path you can take – and that's through the safety reporting mechanisms and safety organization at your center, including all the way up to the head of the Office of Safety and Mission Assurance for the agency at NASA Headquarters.

If you see somebody on centers who is not complying with mask wearing, or any safety policy, please report it.

It's just like our independent technical authority approach. We have, obviously, the supervisory reporting path, as well as an independent reporting path through safety. So, I feel confident that you'll be able to get any concerns that you have with employees complying with policies addressed.

On the mask wearing, again, we're going to look at the data. Hopefully, the vaccine will lower the infection rate and make us more safe. However, again, we're going to continue to look at the data to decide if masks are or no longer required, or any other policy that we have in place to protect our employees.

We're also going to continue to monitor federal and state guidance, making sure that we're taking that into account. And we'll communicate when we think it's safe to remove some of the policies that we've put in place, like mask wearing, to protect the workforce.

Jane Thanks, Steve. Yup. We're following the framework and we'll update it as we need to. So, thank you very much for that. Now I'm going to go back to our medical team.

Will we get updates on what percent of the center workforce has been vaccinated, so that we can feel comfortable?

J.D. That's a great question. Obviously, if people are vaccinated by NASA, we'll have a record of that. But for the most part, Jane, this will be a voluntary thing. The vast majority of the population at NASA is going to be vaccinated in the public, and we're not going to demand somebody's vaccination card. We will encourage folks to bring their vaccination card and have it scanned into their medical record in the EMR for a couple of reasons:

The biggest reason is, you get this card – and most of you have probably seen – it's a standardized CDC card that says that you've had your vaccine. I don't know about you, but I lose things all the time. I can't find my auto insurance card half the time, every time they send it.

And so, you may need that proof of vaccination for travel, whether it's personal travel or government travel, and if you lose that card, it's always great to have another copy of it in your medical record that the clinic could print out for you.

Now, you know, certainly, we try to give any metrics or data, in our executive decision lens, but again, it's voluntary. Employees would voluntarily give that data to the clinic and it would be kept only at the clinic. So, we wouldn't get an individual person's data. We might get an aggregate site picture of how many people have volunteered their data at the clinic, but it would maintain HIPAA privacy and privacy act. But no mandates, to go back to that word, that somebody bring in their card.

Jane Great. Well we'll to have you there, another question for the medical team.

When will the science data be available to the public on the long-term impacts of the COVID vaccine? I understand there are many healthcare workers who are declining the vaccine until the science data is available.

J.D. You gotta remember, a lot of the folks that went through the Phase 3 trials – those trials were completed in October of 2020. So, we won't have “long-term data” until next October [2021] for the one-year mark – to see, were those antibodies, for example, long lasting? Or, do they also work against new variants that may pop up? I think that the big question that's out there is not whether the vaccine is safe or works. The public information that we've seen on [Pfizer](#) and Moderna, and in the New England Journal of Medicine, shows that it's very efficacious. And so far, the data has shown this is very safe in its deployment.

The one question that's lagging out there is, “How long will those antibodies last, and will they be antibodies against all the different mutations that occur?” What that could mean in the future is we might need a booster shot, which they could potentially incorporate in the flu vaccine.

For example, most of us now get what's called a quadrivalent vaccine, which has four strains of the flu virus in it. We colloquially call it just the *flu vaccine*, as though it's a single thing. But you're actually getting vaccinated against four strains. Could they add the

coronavirus vaccine to that and make it a five-strain flu vaccine? They might. We'll have to wait and see what that data looks like at the one-year mark. Vince, am I missing anything there?

Vince No. It's really important to see what the response is from that first group of research subjects. Those folks that were in the Phase Three trials, those thousands of people that got the initial vaccination, because antibody response can be a little bit misleading.

Gotta be careful when they show numbers or percentage of antibodies in the public or in the press. It's really the response of the individual that is the important thing. And as we've seen with many vaccinations in the past, the antibody response can sort of wane over a period of time, numbers wise. But they still have protection and the population is still protected.

So, we'll be really looking at that first group of research subjects that were vaccinated last year, like J.D. said to see how they respond over time. And that'll also drive, you know, do we need boosters or not?

Jane All right. Well, you know, thinking about the fact that we are encouraging everyone to go to their local health authorities, this next question pertains to that.

Are NASA employees considered “defense” or “government operations” employees for the purpose of local vaccination categories?

J.D. and Vince - your thoughts there?

J.D. Our tiers are based on mission-critical, like Melanie mentioned. And, so, when you look at the states or counties, where they talk about 1B and 1C with essential workers or critical workers, that's where we start to come into play. Now, a lot of that also depends on supply and demand of the vaccine into those states or counties.

That's probably one of the areas that might be very frustrating for employees is that there's not just 50 different ways of doing things across the states, but as the states push it down to the counties for dissemination, there's actually hundreds of different ways of doing things.

One county might be in [Tier] 1B, the county next to it might be in 1C. One state might include one group in 1B, and another state doesn't include that group in 1B and has it in 1C. That's probably very frustrating for an engineering organization that's used to standardization and Six Sigma.

Melanie and I have needed a scorecard to figure out how all this is going, but that means that it will not be uniform in its distribution. Johnson Space Center, for example, started vaccinations on Wednesday for critical personnel, [through] a public-private partnership with Kroger.

Whereas Marshall has not received the vaccine, and so, may not receive it until February. So, you know, that's going to be frustrating for employees. Why is Johnson getting the critical workers vaccinated, but Marshall hasn't started yet? It's gonna really depend on the different states and even down to the counties.

And, just to remind, you know, county public health was not horribly well-funded before this pandemic. And, you might get one or two people in a small county who are the entire public health department. And they also have to do all the case tracing, and they also have to do all the calls for the positives.

So, those folks, trying to disseminate thousands of vaccines in their county, it's a huge task and I have great empathy for those folks trying to execute it. Now, we may see some changes and the new administration. We may see some changes at the state level, where they want to augment with pods or national guard, or et cetera.

But I think eventually you're going to see more and more availability throughout the states and community. And I think we've reiterated it several times – I'm going to pound it home – don't wait for NASA to get that vaccine. Don't think, "I'll wait until I see it at the clinic."

If it's available to you in your local community, go there. Most of the public health and counties have their own websites. Now, I realize many of those crashed this last week when they said, "we're gonna offer it to 65 and above," and everybody over 65 went to the website and it promptly went down.

And so, you know, check your county public health, look for what tier they're in. They should tell you in those tiers, whether their counting 75 and over, 65 and over, those with medical diseases that put you at risk, and you get on there and get scheduled when you're able to, and do not wait for the agency.

We will do our best to get the vaccine for our critical folks. We don't know if we'll get more than that. Certainly, if we do, if we asked for 200 doses at a center and they give us a box of 500, hey, we're going to go vaccinate our Tier One and then go to our Tier Two and we will not let any vaccine expire. We'll find people that are willing to accept that vaccine in their arm, but we won't let that dose expire.

But please, please make sure you check with your county and state, and definitely be cognizant of when it is available and get it publicly if you can. Don't wait on us, because I don't know. I can't guarantee when that's going to come at each center.

Melanie So, I just want to mention, as another source of information, my normal pharmacy. I called to refill a different prescription and they give the vaccine status – where they are, who's eligible, who can call for an appointment – on a recording before you can ever talk to a pharmacist. So, there are other ways. That may not be the best source of where the vaccine might be available locally for me, but I think a lot of pharmacies are providing their status. If the public site, the public health site is down, there could be some other resources too.

J.D. That's a great point, Melanie, and, you know, CVS and Walgreens, some of the big box stores for pharmacies right now, are concentrating on vaccinating the nursing home population.

They have contracts with the government to do that. But after that, you know, they're going to be getting vaccine at their drug stores and they will still follow the ACIP guidelines on the tiers, on who's the highest priority. But we expect that log jam, you know, we're kind of in a Maslow hierarchy of needs right now. You're doing the top critical folks first, but you know, we're getting down that triangle or that pyramid very quickly to where more doses are going to be available soon.

Steve Jane, I wanted to amplify something that J.D. said, and that is that things could change. We have a new administration coming in next week.

Right now, we have a very decentralized approach for distributing and providing the vaccine to folks, and that could change. Also, states, it seems like states are looking at more mass distribution centers where they can start to give a lot more doses on a daily basis.

So, like by both J.D. and Mel said, keep checking your local, county and city, your state information, your pharmacy information, because I think things are going to evolve and, hopefully, in a way where we'll overcome some of these challenges with not just distribution, but actually getting people vaccinated.

And so, just be aware of that. It may be an evolving situation and so consult those sources of information that both J.D. and Mel pointed people to.

Jane Yep. Yes, that's such great advice. And I can say that I was out there talking to the pharmacy at our local grocery store and taking a look online at the county health authority's website. So, what you've said, it reads exactly with my experience and I do expect that we'll get more and more as time elapses. So, hopefully it will be easier for people to get to the information and get the vaccine, um, quickly. So, Melanie, for this next question, I wanted to go back to you.

How will the availability of the vaccine impact the stage a center is in?

Melanie So, as Steve mentioned earlier, we expect that the vaccine will result in fewer cases, but it's really the case count. You know, this is a risk-based decision and we look at every community and every location where a center is located. So, as the community gets into a healthier posture with fewer cases, more ICU bed capability, all of the things we're looking at right now to switch different centers between different stages.

Everybody, the center leadership will be looking at that – we work closely with them to determine and it's largely up to their recommendation – the agency COVID response team, then evaluates to make sure they've taken all the proper factors into account. And we agree with their risk assessment.

But, generally as things improve in the community, which the vaccine will play a part of that certainly, we will look at the overall risk posture and see if we agree with their recommendation to expand the amount of work that occurs on site and how many people are going to work face-to-face, in general. So, it just depends on the risk at the location in the community.

Vince If I can sort of tag on, I think this also touches on the question of whether you'll still have to wear a mask or not on center. Because there's still going to be risk out in the population for a long time, we expect to continue our mitigation strategies for a long time, as well. So, I think people can expect to be wearing masks and social distancing on site, even months into the vaccination process. I think that's a thing we can all expect.

Jane Yeah, thanks for that excellent reminder. Okay. Right back to our medical team.

Will there be any cost associated with the vaccine for civil servants or contractors?

J.D. No, actually. The federal government has mandated that the vaccine will be free to all Americans. Now, when you register at a site – let's say you go, Jane, you go onto your county website and you're registering – it will ask you for insurance information. It may ask you for your group number, which I think, for blue cross blue shield is either 104 or 105. You'll see it on your card – they'll say group number. And they'll ask you for your member number, or what's called your R number. That is so that they can bill the insurance company, but there is no out-of-pocket expense to any American, even if you don't have insurance.

And so, that will be covered. Certainly, NASA is not going to charge any of our workers, but the vaccine is free to everyone. And that is to encourage, people to take the vaccine. But they may ask you for your insurance number and so make sure you take your health insurance card with you if you go and get it at a wellness center or a pharmacy, or somewhere else, so that they can make a copy of that.

The federal government has mandated that the vaccine will be free to all Americans.

Jane Super. That's great that the fact that the vaccines are free, that's really wonderful news. So, speaking again of the vaccine –

Is the vaccine effective after the first dose or only after both?

J.D. Vince and I have both riff on this one a little bit. When you get your first dose, that's when your body first starts to produce antibodies and recognize it. That second dose is where you get supercharged, where your body says *all right, this isn't a one-time thing*. You know, *I'm seeing this invader a second time*, and you start to produce the large amount of antibodies and what we call those [IgG antibodies](#) to the longer lasting antibodies. And so, you do get some protection after the first dose. But where you really get the bulk of your protections are after that second dose.

But that brings up an important point on side effects of the vaccine. When Vince and I both got our vaccination, I think we both had a sore arm for a day or two. But, to be honest, I was more sore lifting weights at my age than I was from that vaccine.

But when we get the second dose, I'm actually hoping I get a little bit more of a side effect. I'm hoping I get a little low-grade temperature and maybe some aches and pains and muscle aches. And the reason for that is, we call that colloquially in the medical community the antibody hangover. That means that your body's recognized that foreign invader and you're producing an antibody response and fighting that off.

And that that's a good sign. If I actually don't have any symptoms at all after that second dose, I'm probably going to be a little bit more worried that maybe I'm not producing an antibody response like I should. So, I think that's the one thing to anticipate is that you might have slightly more symptoms after the second dose, but easily treated with Tylenol or Advil.

And, you know, that's actually a good thing. Don't get nervous if you've got a little tiny, low-grade temperature of 99 or some body aches. That's your body mounting an immune response and that's a good sign.

Vince I guess I just would touch on something we said before, but, just because you got your first shot, you're not instantly immune and you're not out of the woods as far as being a carrier goes. That whole machinery that J.D. talked about takes a while to sort of crank up and get going. So, any response or protection really doesn't really get to you until about two weeks after that first shot, and then it increases. And after the first shot, we expect a response rate or protection rate around 60%. And then that second shot will push you up to that 90% mark with these current vaccines.

But again, all those mechanisms take time. So, you're not even if you get 95% response that's two or three weeks after the second dose. The main point is to think that, you know, you're not immune all of a sudden and you can't drop your mask, you know, because you got that first shot. You're not protective and you're not going to protect other folks. You can still be a carrier. And we saw in the news, I think this week, maybe a couple of congressmen who got COVID right after getting their shot. So, that's a sort of stark

reminder that you get protection from the vaccine, but it does take a little while. And in that period of time, you're not only at risk yourself, but you could be a carrier and infect others, which is why we continue those mitigation strategies.

Steve I actually had a follow-up for J.D. and/or Vince. We talked about this the other day, J.D.

How critical is it that you get that second shot exactly at three weeks?

J.D. That's a great question. And you know, the UK has talked about putting that second shot off to try and get more people vaccinated. There's been a lot of discussion in the press on that. Pfizer and Moderna both came back to the FDA and said, hey, you know, our Phase Three trials were predicated on this timing. And so, our data on ability to produce antibodies is based on this window. And it's not a horribly narrow window, you know. It could be, for the Pfizer vaccine, you usually get the second dose 21 days later, but it can be anywhere between the 17 to 24-day mark. Moderna is 28 days later and again, probably close to the window of 25 to 33 days.

But, you know, once you get outside that error bar of when they did their studies and what they know their data shows, they can't tell you with any reliable information what that protection is. And so, that's why they're holding as best as possible to those windows of 21 days for Pfizer and 28 days from Moderna – because that's where we have the best evidence.

Jane Super. These are great questions and really appreciate everyone who submitted them.

Must I carry paperwork to prove that I have been vaccinated and does this violate HIPAA laws?

J.D. and Vince, your thoughts there?

J.D. You know, again, we talked about the vaccine passport – somebody might ask for proof that you've had the vaccine for travel or some other thing. That does not violate HIPAA. They're not keeping a copy of your medical record. They may want just proof of the vaccination to see that you're safe to get on an international aircraft.

But we will have promotional things. The CDC has that on their website now to promote those things – wristbands, button badges – not unlike the CFC, you know. I gave to the CFC today and my favorite charity is puppies, or something of that nature, where we're actually promoting the vaccine to try to encourage folks to get it. But that won't be a mandate either.

Those are voluntary things. But you know, we may have some materials out there, you know, kind of like the *I voted today* sticker, you know, things of that nature where we're promoting the vaccine with social cues, if you will, to let folks know that we got vaccinated. But certainly not a requirement. Vince, any other thoughts?

Vince Well, I would only say that it's not, if we do promotional items like that to encourage people to get vaccinated, we won't limit them just to the vaccines that we give out. If you provide us with your information for your medical record, then we'll also give you that button or sticker or bracelet, whatever it is that we come up with. So, it's not going to be limited just to those vaccinations given in-house.

Jane Great. So, more to come on that. Um, and thanks for weighing in everybody.

Melanie, can you address the many questions we've received about acquiring the vaccine in bulk for the agency?

Melanie Sure. So, far we have not been given that opportunity. I can assure you, we would have taken advantage of it and said, *yes, please*. But we just haven't been given that opportunity. So, what the government asked us to submit was a very small subset of our employees, which was that most mission-critical employees. And we did submit that. But if we things change – it's a very dynamic situation, new administration – if we get the opportunity, I would think we would take advantage of it. But so far, the government has been planning for the vast majority of government employees to receive the vaccine through their community. And they have deployed almost all of it through the public health authorities and states and counties. So, that's the way the whole thing's set up right now.

J.D. And Jane, I think the one thing that folks need to realize is that NASA does not get its vaccine direct from a federal authority. We, we actually get ours through the states. Um, the federal government is only directly giving quantities and vaccine to five agencies: The Department of Defense, the State Department, the Indian Health Service, the Federal Bureau of Prisons, and the Veterans Administration.

So, only those five entities are getting vaccine directly from the federal government. The rest of the agencies – FBI, NASA, Department of Energy, you know, insert agency here – are having to get those through the state. And so, we're working with the state vaccine authorities and hoping that we'll get some distribution for our critical personnel.

Jane Super. Well, we've covered a lot of ground, but we are nearing the end of the hour. So, I'd like to turn it back to the team for any closing remarks I'd like to hear from all of you, but let's start with Steve – some final thoughts.

Steve So, first I'd like to thank Melanie, J.D. and Vince, and you, Jane, and the whole team – our leadership from last year, starting in March till today and on into the future – for dealing with a very challenging global pandemic and also really focusing on keeping our workforce healthy and safe while keeping the mission moving forward.

So, I just can't express my gratitude enough to the leadership team, the folks on this call, and the entire leadership team across the agency. So, that's the first thing I want to do. Second thing is, it's something we've talked about before in previous town halls, and that is personal responsibility.

We're expecting people, not only when they're at work, to comply with our mitigations to keep themselves and their coworkers safe, but also when they're in the community and off site, to protect themselves, their coworkers, their families, and to protect the mission.

I think our administrator said during one of our last town halls, by protecting yourself and your coworkers, you're protecting the mission and our ability to keep the NASA mission moving forward. So, we really need people to take that on – that personal responsibility of looking out for themselves and their coworkers and their families and complying with the mitigations that we have in place.

Then, as we said, as the data tells us, we can move through the stages through the framework and remove some of those mitigations. We will do that, but the data will tell us to do that.

And again, just thanks to everybody for all the hard and hard work and dedication to do the agency. I cannot be prouder of the entire agency and our partners.

Jane So, thank you so much. Thank you, Steve. And may I say the thanks go equally to you for all the leadership that you have demonstrated through this entire thing. So, thank you. Melanie, some closing thoughts from you.

Melanie I just wanted to let everybody know we have an agency COVID response team – all the people pictured here today who participated are part of that, plus some additional experts, like legal, comms, procurement, et cetera. We meet twice a week and we will increase that frequency if necessary. We did have a higher frequency for a good part of the year of last year. Cathy Mangum was working my job while I was the acting CFO.

They had daily meetings for a long time, and we will adjust our meeting tempo as necessary. But we meet up twice a week to discuss the new trends, new what's going on. We are in regular communication with the centers. We get pretty much daily and weekly updates with the centers of what their case trends are, any issues they are having.

J.D. and I tie into a couple of different OMB calls that they've been having, and I assume we'll continue to have, about what they need from agencies, things that all government agencies should be aware of. And so, we have a tremendous number of people working really hard to make sure we're staying on top of this.

And you know, I just want to say, we are super lucky to have J.D. and Vince because they are plugged in. J.D. had a conversation with Dr. Fauci just last weekend – just as a sign of how much access to data these guys have.

I had some of the same questions about the vaccine that people brought up in the call initially, because I was a little worried about the speed of it. I feel totally fine now. I'm planning to get it at the first opportunity, which won't be through NASA by the way. It'll probably be at my local pharmacy. But I feel a lot more comfortable about that because I learned a lot more about them. How long we'd been working on those technologies, where the corners were cut were on the red type tape side and the financial things. And then, just the fact that technology has put us in a faster vaccine development cycle than we've ever been in before.

So, I feel really good about that. I just want to reassure folks that we are steadily working on this. We'll keep our eye on the ball. So, thanks for all the great questions today. And, if we needed another town hall down the road, we'll have one. Thanks.

Jane Thanks. Thank you, Melanie. J.D. and Vince – final thoughts from you.

J.D. I want to let Vince go first, and I'll wrap up at the end and give you the last word.

Vince I'd like to start by just reemphasize what Steve mentioned. We really appreciate all the NASA employees supporting the mission through their mitigation strategies and keeping those up. I just want to say that they work. We've been very successful in keeping the spread on center to an extremely low number. So, thank you very much. Your work has really paid off.

Secondly, I'd like to say that we have a very dedicated medical team that is doing a lot of the work at the centers. They handle all the contact tracing and all the questions at the centers on medical issues. And I want to give a personal thanks to all those medical people that have been working so hard. They are the support behind us that allow us to protect everybody. So, thanks to you guys for your hard work.

J.D. And Jane, I'll just echo everyone else's sentiment. It's a fine line to be able to execute the phenomenal missions that we execute in this agency and simultaneously protect our workforce during a worldwide pandemic. And we've been able to pull off some

extraordinary missions and are still pulling off extraordinary missions. But there's a lot of work that goes on behind the scenes.

For the Mars 2020 landing, a lot of work going on at JPL and a lot of work going on at Goddard, and everywhere else, to protect the workforce and keep those protections in the control rooms and simultaneously execute the mission. Just a big *thank you* to all the employees that are doing all of that work and trying to keep the mission of this agency moving forward while simultaneously managing the risk of the pandemic.

And we're working hard on our side – whether it's talking to Dr. Fauci or talking to the CDC or the White House. Melanie and I, I think, we have at least exchanged emails about a hundred times a day. Folks probably have no idea the volume that is coming in on this pandemic work, and that we're working and having phone calls at 10 and 11 o'clock at night.

And Steve has that on his plate, and the missions and everything else. And so, I got to tell you, you know, I'm in awe of some of the work that goes on, but I told Jim Bridenstine yesterday that, looking at our case tracing numbers and looking at our infections, we have had some deaths in our community, but compared to the outside communities, they have been relatively low compared to the outside.

I honestly believe some folks celebrated Christmas with their families this year that wouldn't have had it not been for the leadership this agency has shown in this area. And so, I really want to thank Steve and Jim and Melanie and Cathy Mangum, as well, for that leadership, because it's really set the tone.

The protection of the employees is paramount because without our people, there is no mission. And that refrain is spoken many times by our leadership.

Jane Wow. words from the heart. Thank you to all of you for participating in the town hall today. I also want to extend my thanks to everyone who submitted these great questions.

For more information, visit the nasapeople.nasa.gov/coronavirus website. This is the website that we have been using all along for posting information and where we have stages of the framework, where we are now.

So, please go and check there. We will continue to update you as the situation evolves. As you've gathered from today's responses to questions, we are really responding with what we know now, but more information will be coming out in subsequent months. And so, we will definitely keep you updated as the situation evolves.

Thank you so much for tuning into this important discussion and stay safe and stay healthy. Thank you.