

**NASA Virtual Town Hall**  
**Ask the Administrator: Return to On-Site Work**

Speakers:

**JIM BRIDENSTINE**, Administrator  
**JIM MORHARD**, Deputy Administrator  
**STEVE JURCZYK**, Associate Administrator  
**CATHY MANGUM**, Deputy Associate Administrator  
**J.D. POLK, M.D.**, Chief Health Medical Officer

Moderated by **BETTINA INCLÁN**,  
Associate Administrator for Communications

10:30 a.m. EDT  
Wednesday, May 6, 2020

**BETTINA INCLÁN:** Good afternoon. Welcome to this latest NASA Town Hall with Administrator Jim Bridenstine. I'm Bettina Inclán with NASA's Office of Communications. Thank you so much for joining us. The NASA Administrator and agency leadership will be providing the workforce update on the agency's response to coronavirus, also known as COVID-19, and discussing our back on-site plans.

We're going to be answering questions submitted from the workforce, from you all, that were sent to us in the website, [nasa.gov/townhall](https://nasa.gov/townhall). We'll be taking those questions in order as they were raised by the workforce, with the ones with the most by folks being answered first. We hope to go through as many questions as possible.

We're excited about this form of discussion, and joining us today, as I mentioned, is NASA Administrator Jim Bridenstine; also Deputy Administrator Jim Morhard, Associate Administrator Steve Jurczyk, Deputy Associate Administrator Cathy Mangum, and Chief Health and Medical Officer Dr. J.D. Polk.

So, with that, they're going to each say some short opening remarks. Then we'll open it up to questions, and let's get this started. Mr. Administrator?

**ADMINISTRATOR JIM BRIDENSTINE:** Thank you, Bettina. I just want to thank everybody for joining us, and as many people have seen, the White House has put out its Guidelines for Opening up America Again. And, of course, following suit, NASA is putting together its implementation plans for how we open up NASA again, and of course, we've developed those guidelines, thank you to so many people that have helped us put those together. And, of course, we've gotten a lot of feedback from center directors on those guidelines.

They have been finalized. They have been sent out to the center directors, but I want to make sure everybody at NASA understands what our number one, highest priority is. And that is keeping you safe. We need to make sure that as we slowly but surely get back to work, not just as a nation, but as an agency, that we are putting your safety, the safety of our people at this agency as the highest priority. And I can tell you that the leadership at NASA Headquarters and, of course, the leadership at the centers all agree that that needs to be the number one priority.

So we're going to have a discussion today about what those guidelines are and how they're going to be implemented, but thank you for joining us. And I'll turn it over to Jim Morhard for some more comments.

**JIM MORHARD:** Thank you, Jim, and thank you all for being with us today. You know, when Jim asked me to begin this plan, we tried to give the center directors a solid framework that really allowed them to make the best plans based on their and their leadership teams' knowledge of the people and the facilities at each location. That includes working with the management of our contractors so they understand our plans and work with us in a consistent manner as we go through this.

We've made it clear really, as Jim said, that there's got to be a balance between mission priorities and the health and safety of you and your family. The latter continues to take priority. To make sure you can do what's best, we've tried to lay out guidelines and considerations that anticipate really an evolving situation and allow for dynamic plans that tolerate changing conditions. And as these conditions become safer, there will be a phased and gradual return to work. But we know we've got to be at a condition level where you really do feel safe. The work goes on, and it's America's dreams stay alive because of you.

During some of these really challenging times, we've appreciated the incredible response to NASA at work and your teamwork and the commitment to your missions and to those dreams I just referred to. Make no mistake, NASA is about helping others, and we continue to do so. We ask for your patience as all of us continue to try to figure out the path forward, and we'll do our best today to answer your questions regarding what this return-to-site plan will look like, but also get your input to finalize this guidance.

Now, with that, let me turn it over to Steve Jurczyk.

**BETTINA INCLÁN:** Give me one second, Steve. I know that we're having some audio issues. We're trying to correct them. We'll try to fix them before we get to the Q&A. So bear with us. With that, we will turn it over to Steve Jurczyk. The team can hear the audio, but we're trying to fix it. So, Steve, thank you, and thanks, everyone, for your patience.

**STEVE JURCZYK:** Okay. Thank you, Jim, and thank you, Bettina. As part of the guidance, we've updated our COVID-19 response framework to provide some clarifications and additional guidance for moving back through the stages and, like Jim just said, to develop and implement centers' specific return to on-site work plans.

First, we clarify the difference between mission-essential functions and mission-critical activities. Mission-essential functions are described in our Continuity of Operations Plan, or COOP. During emergency, NASA's primary mission-essential functions—and I would call them MEFs—must be continued with minimum interruption and are focused on protecting life and property as well as ensuring the leadership can manage and control the agency.

So these include our communications base, communications infrastructure with the Deep Space Network, the Space Network and Near Earth Network, our missions in operations, and most importantly, ISS, protect our astronauts and the \$100 billion-plus investment we've made in ISS, and to support the Federal Government in any emergency response as requested.

Mission-critical work is work that must be performed to minimize impact, disruption to missions and project operations or minimize impact to schedules and cannot be performed remotely or virtually. So mission-critical work is work that is defined by the agency leadership, and a primary example of that would be the Mars 2020 or Mars Perseverance mission. We made a decision fairly early in our COVID-19 response to continue to deem Mars Perseverance mission critical and continue to work at Jet Propulsion Laboratory and at Kennedy Space Center and some other locations to maintain the ability to meet the launch window in July. If we don't make that launch window, it's a 26 month slip to the launch with significant impact.

Next, we added gating criteria for moving from stage to stage through the framework. The criteria are based on White House guidance, as Jim Bridenstine mentioned, as well as guidance from the Office of Personnel Management and CDC guidelines. There are several questions that you've asked that were voted up regarding the criteria. So we're providing more information as we answer those questions.

Last, as Jim Bridenstine mentioned, we will slowly and carefully increase mission-critical on-site activities within a stage. For example, we will restart a limited number of mission-critical activities in Stage 4 before moving into Stage 3. When in Stage 3, we'll restart a relatively small number of mission-critical activities and increase the number as we approach Stage 2. So we will be carefully transitioning between stages over time by restarting slowly within each stage and monitoring local conditions to determine the next steps. So I would also like to thank the NASA workforce for their dedication to the mission and their patience as we work through the COVID-19 pandemic.

With that, I'll turn it over to Cathy Mangum to make some opening remarks.

**CATHY MANGUM:** Thank you, Steve, and I'm going to ride the theme of thanking our amazing employees. You've heard everyone before me talk about the impossible work that we do every day and how we apply that to the COVID situation.

If you hadn't heard, we've actually run a NASA@Work program. We got over 250 ideas from our employees on how we as an agency can help. And in addition to that, we had centers that started their own initiatives. Some that work got highlighted at the White House. It was a

ventilator that JPL had produced, and it got tested and actually received FDA approval last week. Armstrong had some oxygen hoods. They worked with the local community. The hospitals needed help, and they stepped up to do that too. One other activity we've been doing is allowing our supercomputer at Ames to help solve some problems. We've got four different efforts happening there too.

So we are a community that likes to help. We are problem solvers, as Jim Morhard mentioned. We just want to take a moment to personally thank everybody who's working through this situation and helping the nation work through it.

And for those of you who are working hard every day trying to make this work, I've been amazed at your perseverance, on learning how to use new tools like Teams. How do we do virtual town hall meetings? How do I meet with my employees one-on-one when they're not in the office sitting next to me? So it's a big thank-you to everyone. We recognize and appreciate it. It's recognized by other agencies that yet again NASA is leading in how we're dealing with this situation.

So I would say stay safe, and we'll get some more details on the return-to-site plan, and I'd like to turn it over to Dr. Polk who is going to talk a little bit about personal responsibility, testing, and PPE. Thanks.

**DR. J.D. POLK:** Thanks, Cathy. I appreciate it. The Administrator and Deputy Administrator mentioned, your health is our foremost priority, and the NASA workforce, both contractors, civil servants health and your families. But not only your physical healthy, but your mental health as well. We've had a lot of discussions about how you're simultaneously taking care of small children or elderly parents in addition to trying to accomplish your NASA work for many of you, and the administration is very empathetic to that. And we've tried to take as many of those issues into account that we can when creating this guidance.

As Cathy mentioned, there's also some personal responsibility that you'll have, things that we definitely reiterate, like not coming to work sick. Most of us, myself included, felt like "I got to go to that meeting. I've got to be there for that important meeting. I don't want to let the workforce down. I don't want to let my boss down." I need you to reframe that and think of it differently. Your personal responsibility is sometimes staying home, especially if you have symptoms and/or are sick, to make sure that you're not infecting others. We've shown that we can work from afar, and we need to take that into account. So don't be afraid to pull yourself out and say, "I'm having symptoms. I don't think it's good for me to go to work today." But also, we'll do our best on providing PPE for those that need it and their work requires it, but also make sure that you're bringing your face mask and other things with you, the face covering the CDC recommends, especially if you're out in public or taking public transit, all of those things.

But I want to assure you that the administration has talked about a whole host of these issues, especially your personal issues and the accountability and responsibility that you have to your families and have taken those into account with this guidance. Thanks, Bettina.

**BETTINA INCLÁN:** Thank you, Dr. Polk, and thank you to all of the NASA leaders for joining us today and answering the workforce question.

We're going to get to our first question. As I mentioned, these are from [nasa.gov/townhall](https://nasa.gov/townhall). "How is NASA taking into consideration the possibility of a second wave? Is there a plan for employees to telework full-time until a vaccine is created and administered?"

**JIM MORHARD:** I'll be happy to take that question. As much as we're asking our leadership to plan for going from Stage 4 to Stage 3, and Stage 3 to Stage 2, we're also asking them to plan for the reemergence of the virus or even a new virus that we haven't seen yet. It will entail reimplementing some of the restrictions we've already seen, but we do it in a layered manner. And it will include adequate triggers and a flexibility that it creates a modified Stage 2 or Stage 3 or Stage 4.

For example, if a case arises in a building, do we close the whole center they're in or do we address the building they were in and the outcome of a well-planned tracing process? So we are trying to look also at other variables such as a reemergence of a virus.

**BETTINA INCLÁN:** Thank you. Our next question, "Federal guidelines say reopening should occur only after a downward trajectory of cases for 14 days. Some States, for example, Florida, are still increasing or holding steady, yet local governments are reopening the State. Will NASA go along with local governments or follow the Federal guidelines for reopening?"

**DR. J.D. POLK:** I guess I can start with that one, and then I'm sure Jurczyk or the Administrator can add to it as well.

You know, with the case counts, the difficulty is as we increase our testing, you're going to have an increase in cases, but it's not because the virus is more endemic or it's spreading. It may be because the testing is getting better, and we're getting more testing out there and saturating into the community. And that's a good thing. We want that testing out there to identify cases and to be able to trace it, as Administrator Morhard mentioned as well.

But we'll look at all the data in the community, and that's why it's important that the centers will be working with the public health officials in the surrounding area and maybe other data like hospital admissions, for example, if hospital admissions are going up. If we see other things that are signs and it's not just noise in the system, potentially, but it might be an emergence or reemergence of the virus, then we'll take those into account.

But be careful in looking at just a number reported in the press because that may be only the numerator and not the denominator, and we need to look at both of those numbers and take

all of that data into account to see how safe that is. And the centers will be doing that. They'll be working with folks in the public health community and watching all of that data.

As Deputy Administrator Morhard mentioned, it's not like there's a rush through the gate of employees. We're going to do this in a very cautious stepwise fashion.

**ADMINISTRATOR JIM BRIDENSTINE:** I think Dr. Polk hit the nail on the head. I would also add that as the NASA Administrator, my guidance is, as a Federal agency, we will follow the Federal guidance unless the local guidance is in fact more stringent. We will follow the most conservative path to make sure that we are as safe as possible for our employees. So whatever guidance, of course, is the most stringent is the one that we will follow.

Certainly, if the Federal guidance says we need 14 days of a downward trend and then we do something else, then we're not doing our job as a Federal agency.

**BETTINA INCLÁN:** Thank you. Next question, "What will NASA do for people who share an office with multiple people who are not 6 feet apart?"

**ADMINISTRATOR JIM BRIDENSTINE:** That's probably for Jurczyk.

**STEVE JURCZYK:** Yeah. First of all, we are going to continue to use telework to a large extent. People are being very, very productive teleworking. By the time and attendance system, we know that 90 percent of our employees are reporting that they are teleworking. So the fact that we have a pretty strong teleworking policy in place allowed us to move into the situation we're in now and keep a large majority of the work moving forward.

Having said that, we will have to look at—the centers will have to look at the work environments across the center, building by building, and make a determination on what mitigations are necessary to be put in place to keep all their employees safe and healthy. So we'll have to look at—we're primarily looking at restarting manufacturing, integration, and testing activities because those are not in office environments. They're in the laboratory environments, but as things progress and we look at bringing folks back in the office environments, we'll have to look at what things we need to do to make sure that we're protecting the workforce.

**DR. J.D. POLK:** One other thing that Steve and I had talked about that is in the guidance is doing a rolling admission. If you have six people in an office that are fairly close together, maybe you bring in three one week and three the next week so that they're not all there at the same time, and so that lowers the risk in case somebody tests positive, but that also increases the social distance. Those are different things we've taken into account that the centers can place into their plans.

**BETTINA INCLÁN:** Thank you. Next question, "Even without an underlying condition, if an employee is not comfortable returning to the work site and has ability to accomplish all work

remotely, will the employees be allowed to continue in the telework status until such time they feel comfortable returning to the work site?"

**ADMINISTRATOR JIM BRIDENSTINE:** I think it's important to note that if you can do all of your work via telework, we would expect you to do all of your work via telework. That's the optimum situation.

The returning-to-work implementation is going to be based on work that absolutely has to be done on sites.

I would also say that when you do telework, make sure that you are working with your supervisor. If for some reason you don't feel comfortable going to work, which I certainly understand, as an agency, we need to understand that broadly, and it's not just because you're worried about your health. But it could be a family member. You might have a family member, as Dr. Polk mentioned, that might be at high risk, and you don't want to risk getting yourself infected because you could bring it home to somebody who is at a higher risk. So we understand all of those things. We want people to telework as much as practicable, and if you can do all of your work via telework, we encourage that. We just want to make sure that you're also working with your supervisor so that we can see that the work is, in fact, getting completed.

**BETTINA INCLÁN:** Wonderful. Our next question says, "What would prompt a center closure and return to telework again? Is a single case at a center enough?"

**STEVE JURCZYK:** I'll start the answer to this one, Bettina. So we would not close the center for a single case of someone who had returned to on-site work. We would identify the buildings the person had been in and close those buildings, like Jim Morhard mentioned, temporarily so that they can be cleaned and cleared for re-occupancy.

We would do contact tracing to identify every person they had come into contact with and make notifications and take appropriate actions with respect to the personnel.

Also, keep in mind that we are taking precautions to avoid the spread of infection, including social distancing, personal protective equipment, or PPE, and enhanced cleaning. We are also limiting the number of mission-critical on-site activities and slowly bringing people back on center, also limiting the number of personnel working in any one facility on any specific activity to further reduce the risk.

**BETTINA INCLÁN:** Okay. If there's not anything else, we'll go to see what our next question is, "Considering there's no vaccine, this virus is more stable and more contagious than the flu and based on what occurred in the 1918 pandemic, when you're opening too soon, you increase the death toll by more than 300 percent. Why is NASA even considering opening now?"

**JIM MORHARD:** That's a great question, and I want to make sure it's clear. We're not rushing to open. We are rushing to plan, and those plans include going from the stage you're in now down to the next one and then the next and until you're at Stage 1. It's also a plan for the reemergence of a virus like I talked about before or a new one. There are just too many variables to try and time when these events are going to occur, but I will say those plans must be done in a way that builds and maintains your trust. You've got to be comfortable, and to attain that level of comfort, we have to establish and implement the proper precautions now to make sure the work environment is safe when you do get back and remains safe in the new ways we'll work in the future.

**ADMINISTRATOR JIM BRIDENSTINE:** Jim, that's exactly right. There is a number of questions that have come up regarding vaccinating. What are your thoughts on the vaccine? Some people say it's a year away. Other people say if you've got a vaccine, it might not be entirely effective. So, Dr. Polk, is it realistic that we would have mandatory telework until a vaccine is ready?

**DR. J.D. POLK:** Thanks, Jim. It's like you just mentioned. I would be hesitant to hang our hopes solely on a vaccine. This virus is still unpredictable. It may—what we call “wild hybridize,” or change over time, in which case it may—similar to the flu in which we get a vaccine every year, it may take multiple vaccines before you get an antibody. And we've also seen that some patients are getting reinfected with COVID, even though they had the virus earlier.

Right now, it would be too early to hang any hopes on the vaccine plan alone, and so I think the PPE, the cautions, the social distancing, the telework, all of those things play into a risk strategy where we can get back to work and at least do that work that we can safely execute without hanging our hopes solely on the vaccine. And if the vaccine comes to fruition, great. We'll look at how we implement that and what the best strategies are to disseminate that to the population, including workforce.

But I think you're right. I think the biggest thing is I don't think we can plan right now for something that may occur a year from now, may not be horribly effective. There's a lot of unknowns for the vaccine right now.

**BETTINA INCLÁN:** Thank you, Dr. Polk and everybody else. "So as we return to work, will NASA provide any PPE?" I'm not sure, Dr. Polk or Mr. Bridenstine, if you want to answer some of this.

**ADMINISTRATOR JIM BRIDENSTINE:** The short answer is yes. I'll let Dr. Polk talk specifics.

**DR. J.D. POLK:** Yeah. The short answer is yes, as Jim mentioned, and the procurement office is doing a large bulk buy for all centers right now. As folks can imagine, it's supply and demand right now as to when we get that bulk buy in place, but the plan is certainly if you are in a workspace where you cannot social distance by 6 feet or you have a heightened risk or the activity you're doing has a heightened risk or mission-critical capability to it, that we would provide that PPE.

But also, there's a personal responsibility, as we mentioned before, to have your face coverings and masks when you're in public, when you're going back and forth between buildings, when you're passing people in the hallway, when you're on mass transit, those things. So it's a yes. Yes, the agency is going to provide PPE, but that won't relieve you of your personal responsibility as well to protect yourself when you're in public areas.

**BETTINA INCLÁN:** Thank you. If we could just take one second, I just need to do something on my computer, and we're going to hopefully fix an audio issue. So if we can give a 5-second break for a moment.

[Audio break.]

**BETTINA INCLÁN:** [In progress]—that question. If not, we'll go to the next one.

[No audible response.]

**BETTINA INCLÁN:** Okay. "The lessons learned by the pandemic, including stopping the move towards open and semi-open office environments and working universe as soon as possible, surely we've learned that walls are important office environments."

**ADMINISTRATOR JIM BRIDENSTINE:** Yeah, I think that's a good question, and certainly, I think Dr. Polk will probably have a good answer. How many walls do we need, Dr. Polk?

**DR. J.D. POLK:** Well, yeah, I can let Steve talk about the physical plan to some degree, but I think more than walls, like we talked about before, it's really important that folks not come to work sick. I can't build enough walls to prevent if someone comes to work sick and is coughing throughout the building, et cetera. Steve can talk to the fact that we've talked with center directors to look at the physical plan and look at mitigations that we might take into account, to look at the ability to keep social distancing where possible. But I got to reiterate the personal responsibility of the biggest way to prevent the virus is not to bring it into the building in the first place.

**BETTINA INCLÁN:** Yeah. I don't know if Jurczyk or Morhard have anything to comment on that.

**STEVE JURCZYK:** Yeah, I can add a little bit. So, just can't agree with Dr. Polk more about personal responsibility and if you're not feeling well to stay home and to seek medical attention, as appropriate.

So, yes, we have been and will continue to use lessons learned from the COVID-19 pandemic to evaluate work environments in the near term, to begin restarting on-site work. We will make sure that we'll maintain social distancing, use PPE, et cetera, enhanced cleaning, and we have a safe work environment as we begin to slowly start mission-critical activities on-site at the centers.

We will also be evaluating our overall approach to work environments across the agency based on lessons learned from the pandemic, and we'll make changes as appropriate to better protect the health and safety of the workforce, knowing we have this challenge in front of us. It's not just the challenge that we're going to pay attention to today, next week, next month, but it's a challenge that we're going to have to pay attention for the months and years to come with respect to COVID-19.

There will be limitations with respect to what we can do, with respect to evaluating change in the work environment, with respect to what is practical to change and what is feasible to change from a time and budget standpoint, but we will be doing that. And, again, I can't reiterate enough that all of this is done with the highest priority to protect the health and safety of our workforce.

**JIM MORHARD:** I might add to that, Steve, and I agree with everything that's been said. This will also—we're going to make sure that these conversations are also happening with the management of our contractors, since there's so many on each center on the sites of each center. So I just want to make sure that we're covering all our bases with what's been said.

**BETTINA INCLÁN:** Thank you. So our next question, "What flexibilities can NASA provide for our employees to telework if childcare centers, schools, and summer camps remain closed?" A question that for many of you knows is close to my heart as a mother of two small children. So who would like to answer this? I know we've been talking a lot about this at our leadership team.

**CATHY MANGUM:** I'll take that one, Bettina. Yeah, I was going to comment. Even this morning, just to relate to the workforce, Bettina and Nestor who are on our morning COVID meetings, both had kids crawling all over them. So we recognize that. I have a grandson who is often here with me, and he doesn't understand why I just sit in front of the computer all day and can't play with him.

So for the foreseeable future, we have the dependent care admin leave that we've been having folks use. Whether you're using that for kids or schooling or elder care – that will go on for the foreseeable future. So we have that tool. It is one of our flexibilities.

The other thing I can say is work with your supervisor. I know folks have shifted to kind of shift work, where maybe one parent works during the day and one parent works in the evening. So there's some flexibility you can have on when you work your core hours, and again, I'm proud of NASA because I know a lot of other government agencies don't have those flexibilities. So please talk to your supervisor on what works best for you.

The other thing I'll say is we also recognize it's not easy. It's exhausting, and be mindful of yourself that you're not super human to work all day and school the kids and make the dinner and think that it's easier because you're not driving to work. So please be mindful of that. I know Dr. Polk has talked a lot about this too and the HR community about making sure your

wellness is important and your sanity too as you kind of try to balance all of the conflicts and challenges you have right now. So that's it.

**ADMINISTRATOR JIM BRIDENSTINE:** I would add we're looking—as the leaders of this agency, we're looking for maximum flexibility not just from people working every day, but also from supervisors to understand what you're dealing with.

I'm at my home right now, like I know Bettina is, and I've got three kids that are sequestered in a different room. I've got a mother-in-law in a wheelchair in a different room and a wife in a different room. We're running out of rooms in my house because we're doing a town hall right now, and I know there is no doubt people all across this agency are dealing with the same thing. So we understand, and we're asking all supervisors, all leaders throughout the agency to work very hard to make accommodations so that we can continue to move forward and be successful.

**STEVE JURCZYK:** Yeah. And, Jim, I'll just add, for supervisors, you have help. Please reach out to human capital. If you're working with an employee and you're not sure what flexibilities are available or how to accommodate them best, reach out to the human capital folks, and they absolutely will help you work through the situation. You're not alone. Supervisors, you're not alone in this. So you please reach out, reach out for help. And like Jim and Cathy said, please look out for your health, you and your family. And talk to your supervisor, and let them know if you need some accommodation, you need some advice and counseling. Supervisors, you have help out there. So thank you.

**BETTINA INCLÁN:** And thank you. Thank you for everything. This next question, "Will NASA require a temperature test and other similar precautions to ensure employees are not sick when returning to work?"

**DR. J.D. POLK:** That's a great question, Bettina. The short answer is yes. It's all in how it's executed, and we're giving centers the options to do a risk-based approach. That could be a temperature check at home before you leave for work to see if you're feverish at home or have a fever, but it could be a temperature check at the gates or at the entrance. Or it could be a hybrid where there's a temperature check in a mission-critical area like Mission Control, Launch Control, or a clean room.

But, also, I want to reiterate and make sure folks know that not all people who have a fever have COVID. That's the first thing that they should understand, and not all folks without a fever are without COVID. We've seen a lot of patients admitted to the hospital—one study showed the large majority in New York that were admitted had no fever at all.

But without any other vital sign we can really use to delineate or figure out if someone has the virus, we are going to use temperature checks in some fashion initially until something better comes along or until better data comes along. So expect again that you might have to do that. It might be doing it at home, so making sure you've got a working thermometer at home and

making sure that you have money or cab fare or whatever you need to get back home if you are commuting if you suddenly get turned away at a gate because you have a fever. All of those are things that I think you need to take into account on a personal accountability standpoint and just be ready for those if those occur.

**BETTINA INCLÁN:** Great. Next is "Phase 1 of work return is gated by a 14-day period of declining rate of case rates. How will you evaluate this? Will you be looking at certain counties? Will you take into account locations where employees live? Will you look at the daily rates of new cases? A 3- or 7-day average of new cases? Different data, question mark? Clearly, there's lost of questions."

**DR. J.D. POLK:** Yeah. I think we've talked about this one before. It's a "Yes, and." We'll be looking at that data, but we certainly understand there will be noise in the system as the testing increases. And you can get a fictitious bump in case counts just because we're doing more testing. That doesn't mean that the disease prevalence is higher necessarily. We will keep an eye on that. We'll look at hospital admission rates. We'll look at the data coming out throughout the surrounding counties that are around a center. And I think the communication with public health authorities and the centers are going to be very important. But we'll be looking at all of that data.

**BETTINA INCLÁN:** Great. "Have the HVAC or the air-conditioning systems at NASA centers been evaluated to be sure they cannot spread COVID-19?" is our next question.

**DR. J.D. POLK:** That's a great question. We have what's called "Clean Team Task Force," which is made up of the industrial hygienic folks from multiple centers who have been looking at recommendations for cleaning each room, what can be used, whether it's UV light, whether it's a sprayer, whether it's chemical, what's safe to use, what's not going to harm the equipment, but also looking at the HVAC system and see what's the ideal setting for the HVAC system in regards to temperature and humidity as far as filtration, how long they should run, and should we run them overnight instead of letting them stay stagnant, all of those things. So the Clean Team Task Force is putting together those recommendations now for the centers.

**BETTINA INCLÁN:** Does NASA plan to provide antibody testing for its workforce or assist in determining individuals who are at low risk of potentially spreading the disease to others?

**DR. J.D. POLK:** I'm tempted to say I'm going to let Jurczyk answer this one because the interesting thing is how much medical jargon is entered into the lexicon of the entire ninth floor as we've dealt with this thing.

The antibodies are a couple things. One, the studies show that just because you've gotten COVID doesn't necessarily mean that you are immune. So that calls into question how will the antibodies be used. And then there's also the fact that antibody tests right now have not been horribly sensitive. And we're looking for better antibody tests to come out to increase that sensitivity.

More than likely where antibody testing will come into play in the future will be when and if a vaccine is released to see if you—after a vaccine, if you developed the antibodies to show that that vaccine has been effective. When we give a vaccine, we want you to produce enough antibodies. Sometimes some vaccines require one or two shots, and hepatitis B is a good example, where it actually takes a couple of immunizations before people develop a high enough antibody titer.

So it remains to be seen right now where we'll use antibody testing, whether we'll bring that in-house, how effective it will be, and whether it will change the outcomes. But we're prepared to do that if it, indeed, looks like it will be beneficial, especially if there's a vaccine program that gets initiated in the future.

**BETTINA INCLÁN:** Great. "Given the uncertain future of the ongoing pandemic, will nonessential employees be given the opportunity to full-time telework until a vaccine has been deployed or until the virus has been completely eliminated, regardless of their personal risk level?" And I think we've talked about this a little bit.

**ADMINISTRATOR JIM BRIDENSTINE:** Yeah. I think when we talk about nonessential employees, we're moving from a phase where we had mission-essential functions, which are go forward under Stage 4, and then we've got mission-critical functions, which when we loosen up Stage 4 and we start to move into Stage 3, we go into mission-critical, which as Steve Jurczyk said earlier, it's about what is the impact to mission operations, what is the impact to schedule, and how do we limit the impact within Stage 3?

So I would say that we do intend, over time, based on conditions and making sure that people are taking all the proper precautions to be healthy, how do we move from Stage 4 to a more Stage 3-like situation, and then eventually move from there?

So I know the question was on mission-essential functions. The mission-essential functions have been moving forward. Non-mission essential—the whole purpose of this plan is to start moving us to where we get to mission critical, and then we get to all of the other missions that we know are important but not necessarily critical.

But I would also say remember we're not doing anything fast. As of right now, we're not bringing everybody back to work. We want to make sure that we're doing things slowly, methodically, and keeping everybody safe as we do it, and so—and doing it based on the conditions where the workers are, not based on the conditions in Washington, D.C., but based on the conditions where the workers are.

That's why we leave it to the center directors, and we're going to be getting all of the data that Dr. Polk just talked about. Safety is the highest priority, and again, if people don't feel comfortable, for whatever reason, whether it's for yourself or maybe for family members at home, talk to your supervisor. We will find other things for you to do.

**STEVE JURCZYK:** Yeah. Jim, if I could just add, we have had a couple examples where people felt uncomfortable doing work on-site. They weren't necessarily getting the response that they thought was appropriate from supervisors, so they raised that up to the safety office at the center, who then raised it to the safety office at headquarters, and then we got on the phone immediately. And we determined that the employees had absolutely valid concerns, and we shut down those activities immediately. So I just want to let people know that you all have your supervisory chain, but you also have your safety offices at the centers. You can raise it to Terry Wilcutt, the Safety Chief of the agency, and then leadership can get together and take action.

We've also reviewed some restart mission-critical activities under Stage 3 and Stage 4 in some places, and employees have raised their hand and said, "I don't think this plan is adequate to restart this activity." So we have not restarted the activity. In most cases, we've been able to address those concerns over days or the course of a week, and then with that delay, restart that mission-critical activity at the center. So I just want to make sure that you know you have multiple avenues to raise your hand if you think we're doing something that you feel is unsafe or you're uncomfortable with, and we absolutely will not move forward with something and look at putting additional mitigations in place before we restart an activity. And if we can't convince ourselves that it is safe to restart, we will not move forward.

**BETTINA INCLÁN:** Thank you. We have time for a few more questions before we turn it over to some closing remarks, but this next question says, "Over the years, cleaning at NASA centers has been a little less important, cost-cutting measures when the budgets are cut. Will NASA reevaluate these contracts and bring back better cleaning practices now?"

**ADMINISTRATOR JIM BRIDENSTINE:** I would say certainly. I think our cleaning practices now, given the coronavirus virus, are as strong as they've ever been, other than facilities that are shut down. So there is no doubt that cleanliness is going to be of the utmost importance, not just for NASA, but for every Federal agency as we move forward.

Dr. Polk, if you'd like to amplify?

**DR. J.D. POLK:** Yes. I think that's exactly why we've got the Clean Team Task Force looking at many of these issues and to figure out what are the best modalities to use. We've been looking at what's being used in the hotel industry, what's being used in the airline industry, what's being used at other government agencies, to benchmark off of those, and so the idea being that we will try to make sure that we not only increase the general hygiene of centers and cleaning, but also that we use the right solution depending on what that center is doing. We don't want to, for example, use a chemical in a clean room that might damage hardware. We don't want to use UV light constantly that might damage an individual if it's around them constantly. So they're looking at all of those things, and we'll have some recommendations shortly. But absolutely.

**ADMINISTRATOR JIM BRIDENSTINE:** And I would also say this is something that every person at the agency can help with. There isn't a person out there that works for NASA that can't do

something more to ensure cleanliness throughout the facilities. A lot of people know I was a Navy pilot by trade, and in the Navy, they called us "swabbies" because we swabbed the decks all the time. And when we say swab the decks, we're cleaning the entire ship every day, and in many cases, we're cleaning the entire ship multiple times per day. Ships are terrible when it comes to sicknesses, and if one person gets sick, everybody gets sick. So there is no doubt that cleanliness matters, and every person at the agency can help with that.

**BETTINA INCLÁN:** We're going to try to get to a few more. "Does the return-to-work policy extend to NASA contractors as well as to civil servants, especially when some NASA contractors have taken vastly different stances on the pandemic?"

**ADMINISTRATOR JIM BRIDENSTINE:** That's probably a Cathy question.

**CATHY MANGUM:** Yeah. So the guidelines apply to our total workforce, but again, those decisions are made by the contracting company, right? We've had a great relationship with that group of folks. Monica Manning has been reaching out to them as we went into the response and as we're now coming out. So close coordination, making sure we're in alignment, but the bottom line is contractor employees need to respond to their contractor management approach on how they're going to return to the site work.

**STEVE JURCZYK:** Yeah. That's right, Cathy. And I can just add center management has been communicating regularly with contractor management for our on-site contractors and making sure they understand the guidelines and the constraints under which we are conducting on-site activities. And we'll continue to do that as we update the guidelines and each center develops their return to on-site work plan.

Cathy is absolutely right. Once there's a good understanding by the contractor management of the center's plan, then it's up to the contractor management to communicate directly with their employees who work on-site to ensure they're following that, so absolutely.

We've also—with our all-site contractors, we've given them our expectations for how they're going to protect their workforce like we're protecting ours for all work that's done at their locations, and I believe they are doing that per my discussions with contract leadership.

We also have projects where the activities are at the contractor's site, but we have a fairly good-size contingent of NASA civil servants and support contractors who go to that contractor's site to conduct work. And so we are also working very closely with the contractors at their locations where there's a fairly sizable contingent of our civil servant and support contractor workforce.

**BETTINA INCLÁN:** Thanks. This will be our last question for today. "What has changed with regards to the coronavirus situation to prompt reopening discussions aside from impatience?" is the question they asked.

**ADMINISTRATOR JIM BRIDENSTINE:** I certainly don't think an impatience is what's causing this. I will tell you it's not. I mean, I think where we are now is we have a better understanding of the coronavirus. Of course, there's a lot more left to learn. But there was a time when we didn't know if we were going to be able to flatten the curve or at what point the curve would flatten. And a lot of the models that people were showing were, well, disastrous, and of course, where we are now is we've seen the curve not only flatten, but we've seen it start to actually bend the other way, which is very, very positive. We want to continue that. We want to make sure that that continues.

The question is, as we go back to work, what are the things that we're going to do to make sure that we're still heading down the backside of the curve? And that's going to be up to us as an agency. We, as leaders of this agency, are putting the health and safety of the workforce number one, and as we go through this process, we're going to go slowly. We're going to go methodically. We're certainly not going to do anything that puts anybody in danger, and we're going to have all the mitigating guidelines in place as we move forward.

It is also true that NASA does have mission-essential functions that need to get done. The International Space Station has humans on board, and it has to continue to be in space. It's a \$100 billion investment by the American taxpayer. So we will continue moving forward on these functions that are mission-essential, but we will do it absolutely with health and safety as the highest priority.

So I don't think that anybody is impatient. I think the question is, How do we go back to work now that we know that the coronavirus pandemic is better understood now than it was previously?

**BETTINA INCLÁN:** With that, we're just going to—Mr. Administrator, if you want to have any closing remarks as we conclude today's town hall?

**ADMINISTRATOR JIM BRIDENSTINE:** Yeah. Well, I just want to thank everybody for tuning in. The Guidelines for Opening up America are available at [whitehouse.gov](https://www.whitehouse.gov), and of course, our implementation guidelines have been approved and sent to the center directors.

I want to emphasize the point again, and we're going to keep saying it. Your safety is our number one, highest priority. If people don't feel comfortable going to work either for themselves or for their loved ones at home, we want to do everything we can to accommodate those challenging circumstances,. And of course, when we do start going back to work, as we start opening up different missions, opening up different areas on the centers, we want to make sure that we are, in fact, following the local guidelines, looking at what's happening on the ground where our people are, and then making sure that all of the safety measures are taken, whether it's personal protective equipment or social distancing or, as Dr. Polk was talking about earlier, taking temperatures. We're going to do the things that are necessary to keep our people safe even as we slowly, methodically start getting back to work.

So I just want to thank everybody for joining us, and, Bettina, I'll let you close out.

**BETTINA INCLÁN:** Thank you so much, Administrator. I just want to thank everyone for joining us and their patience. You can go to [nasapeople.nasa.gov](https://nasapeople.nasa.gov), but there's more information, great resources, including information about PPE and additional stuff that we talked throughout this call during this town hall. So, again, thank you for your patience, and please visit [nasapeople.nasa.gov](https://nasapeople.nasa.gov) for more details. Have a great day.

[End of recorded session.]