

Restoring US Leadership for Global Health

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- Hi, my name is John Stubbs and I'm a member of Global Access in Action, an affiliate of the Berkman Klein Center for Internet and Society here at Harvard University. I'd like to thank Harvard and especially Reuben and Lance for providing the platform for our event today and also the Petrie-Flom Center for Health Law and Policy at Harvard Law School for supporting this. If you're not familiar with Carmel and her team at Petrie-Flom, please check them out. I would also like to thank our faculty directors Terry Fisher and Ruth Okediji who fearlessly lead this project in addition to all their other responsibilities at HLS, and also Ashveena Gajeelee for all of her hard work in helping make this event possible. GAIa is an interesting project housed at Berkman Klein for a center focused on the internet and society. Some of you may ask why. Well, I think the last year is a clear demonstration of at least one reason. Health is a foundational issue that affects everything else. Every part of the world has been affected by the pandemic. The second reason is that because of that and often the life or death nature of health, this sector is at the cutting edge of policy and legal questions that attempt to address the twin goals of innovation and access. How do we create the appropriate incentives for new technologies? How do we make sure that everyone who needs these new innovations receives them? These are lessons not only for healthcare products like pharmaceuticals but also for communications technologies clean technology solutions, efforts to adapt to climate change, address food security and a host of other shared global challenges. COVID-19 focused the conversation. In record speed, we develop new and effective vaccines. The speed of innovation also laid bare constraints on our supply chains and our distribution channels. While the technology exists now, demand dramatically outstripped supply. And if supply existed, there are still clear gaps to cross to distribute vaccines to those in need around the world. While the US drops mass mandates and approaches 70% adult vaccination rates and readies itself for a Roaring Twenties summer and fall many parts of the rest of the world right now are living in a nightmare. There are strained health systems, limited access to vaccines and treatments and broken institutions incapable of handling crisis. Today, more than 4,000 people are dying from COVID in India. What can we, the well-resourced United States do about it? The US spends more on R and D than any other country. The US spends more than any other country on healthcare. The US creates more new medicines and medical technologies than any other country. The US spends more on foreign development assistance than any other country. The US cannot avoid its leadership position especially in global health. And now, with an ambitious new administration, the US is once again considering its role in the world and how it can most effectively improve health outcomes, health security and address unmet medical need. It is my great honor to welcome today's guests Beth Cameron from the NSC and Louis Pace from HHS. We'll begin with Beth Cameron, who will provide remarks and answer some questions. And then Ms. Pace will speak and also answer questions. Given our limited time today, I thank you to those of you who already submitted questions in advance as you registered as that will help us get through more of them. I'll introduce them both now in reverse order. Loyce Pace is director of Global Affairs at the US Department of Health and Human Services. In her role, Loyce oversees HHS engagement with foreign governments and international institutions as well as global policy making bodies, such as the G7, G20, UNGA and the World Health Assembly, which is happening next week. Previously, she served as president and

executive director of the Global Health Council and was also a member of the Biden Harris transition COVID-19 Advisory Board. At GHC, she advocated for increased federal investments in global health in the face of budget cuts to the US CDC, US AID, and WHO. Prior to her role at GHC, Ms. Pace spent over a decade working with community-based organizations and grassroots leaders in countries across Asia and Africa on campaigns calling for person-centered access to health. Loyce, thank you for joining us. But first, we will hear remarks from Beth Cameron. Beth currently serves as special assistant to the President and senior director for Global Health Security and Biodefense on the White House National Security Council Staff. Prior to her recent appointment, Beth was the vice president for Global Biological Policy and programs at NTI. This is Beth's second tour of duty at the NSC. She previously held this position in the Obama administration where she was instrumental in developing and launching the Global Health Security Agenda to address national security threats surrounding biosecurity, biosafety, biodefense, emerging infectious disease threats, biological select agents and toxins, dual use research and bio-terrorism, she's an unparalleled expert in her field. Beth, thank you for joining us and Beth, please go ahead.

- Hold on one second. Sorry about this. I'm having a couple of computer challenges this morning. Good morning, everyone. Thank you so much, John. Thank you to the center for inviting me today. And this is the second time I've had the pleasure of being involved with the Berkman Klein Center. And I'm just really grateful to be here today and to be able to share some remarks with you and also to really answer your questions and also hear from my excellent and longtime friend and colleague Loyce Pace. So it's a pleasure to speak with you on this topic which is really near and dear to my heart. And as John mentioned, I've spent my career really working to advance the United States clear leadership role in global health security, have seen this country experience a number of outbreaks and epidemics. And now of course the COVID-19 pandemic which has cost millions of lives, trillions of dollars and I think really importantly, has created huge setbacks to those global health and sustainable development goals from which it's going to take years and maybe decades to recover. And from this, we're gonna continue to need really strong United States leadership. The US has really been at the forefront now of fighting and we are looking forward to playing a lead role multilaterally in ending the COVID-19 pandemic which is a goal that the President reiterated yesterday in his speech, where he talks about donating US vaccines but also working with partners and allies around the world towards the ambitious goal of ending the pandemic. And I'll talk a little bit more about that in a couple of minutes. My role on the National Security Council Staff is really to ensure that we're successful in ending this pandemic globally, but also really to monitor for emerging biological threats. And that's really our no-fail mission, is while we're dealing with COVID-19, while we're working to end this pandemic and to provide assistance and work with partners around the world to prevent, detect and respond to this outbreak, our no fail mission is really monitoring for emerging infectious disease outbreaks that we know are continuing to happen. And in fact, we've seen two Ebola outbreaks happen during this pandemic and we'll continue to see these outbreaks and we'll hope that we catch them early and we'll plan for catching them early so that we can respond quickly. But ultimately there are a number of things that we know we've hit in terms of roadblocks in our ability as a world to prevent, detect and respond to COVID-19. And many of these gaps are gaps that experts who are tuning in and who are on this forum already, including Loyce, have been speaking about and working on for years and in some cases, decades. I'm just gonna speak about a couple of those roadblocks for a

minute and then I'll give you a little bit of a thumbnail sketch of some of the work that we're trying to do to overcome those roadblocks. And most importantly, to make sure that they are not as great of a roadblock in the future for future emerging biological threats. So first we see that global health security financing our ability to create a medical countermeasures including vaccines and related materials building regional and global manufacturing capability for medical countermeasures and personal protective equipment, the availability of accurate, transparent data for decision makers and the work of our international institutions including the World Health Organization and the United Nations. These are all critical pieces of the global health and the global health security architecture that have gaps and where we really see that right now, in 2021, while we're still dealing with COVID, we need to really capitalize on the political will that we have to make change in all of these institutions. So first on financing, our team across the US government with leadership from coordinator Gayle Smith at the State Department, working with Loyce and her amazing team at HHS, our colleagues at US AID and my team at the National Security Council Staff, as well as the Vice President's team, we are really working hard on the goal of establishing a long-term, sustainable, global health security financing mechanism. This is something that's a priority for the administration. It's outlined in the President's First National Security Memorandum, National Security Memorandum One. And we are working with agencies, non-governmental organizations, the private sector and countries around the world to try to get this done in 2021 with the goal of catalyzing national funding and financing for health security, but also bringing in technical assistance in an organized way so we can measure progress over time. We're already seeing progress on this, for example, in the G7 Foreign Ministers Track and the recent Equitable Access and Collaboration Statement. We've seen mention of these issues as well as others and we really wanna see progress on this at the upcoming G20 Global Health Summit the G7 Leaders Summit in June. We've been working with Norway, Argentina, Japan, South Africa and our UN ambassador Linda Thomas-Greenfield recently called attention to these issues in New York, Vice President Kamala Harris did too on April 26th and really put out a call to action for a series of meetings to take place this year, culminating into a discussion that we hope will come back around the time of the UN General Assembly and the G20 Summit in the fall so that we can actually establish security financing for the future. Second, I just wanna touch on vaccines and related materials and supplies, a huge critical technology gap that we've had for a long time, the ability to make medical countermeasures quickly. And we are working with our Office of Science and technology Policy with the UK and with others around the world towards this goal that has been put out there of really shrinking the time further, even down further from what we've been able to do with COVID to 100 days which is an audacious and ambitious goal. On vaccines that we have currently, yesterday the President reaffirmed his commitment to leading an international and coordinated effort announcing that the US will donate 80 million US vaccines to help countries battling the pandemic by the end of 2021. This equates to all of our manufactured AstraZeneca vaccine doses as soon as they're reviewed by the FDA as well as at least another 20 million doses of vaccines that are authorized for use in the United States. He also announced that we'll continue to donate from our excess supply as that supply is delivered to us. This announcement is really the next step in our efforts to ramp up our work globally on COVID-19 and also on ultimately an effort that we hope will shrink the lifespan of this pandemic and result in a much increased vaccination rate around the world. In the weeks ahead, he also announced that we'll coordinate, the Biden and Harris administration, will coordinate a multilateral effort to end the pandemic. And we really look forward to progress on that at the G7 summit in June. We wanna see concrete deliverable commitments to make available more vaccines,

but also importantly, to spur production and manufacturing for vaccines and raw materials to get shots into arms around the world working with on-the-ground partners and also to provide health security assistance to save lives and stop the spread, not only of COVID, but future biological threats. He reaffirmed that we'll continue to work with Covax very closely and with other partners to ensure these vaccines are delivered in a way that's equitable and follows the science and public health data. And that the United States will not use its vaccines to secure favors from other countries, that we will work collaboratively and multilaterally with partners around the world. So our overarching aim here is to get as many vaccines to as many people as quickly as possible. And rightly John mentioned some of the challenges that we're facing including expanding manufacturing and distribution, including the scarcity, the extreme scarcity of raw materials. We're working closely with our Development Finance Corporation which has launched a global vaccine initiative to target investments in multiple regions of the world. This includes but is not limited to our Quad vaccine partnership, which aims to supply at least 1 billion doses of COVID-19 vaccines by the end of 2022, including J and J vaccine. But we need a lot more effort in investment in ramping up manufacturing of raw materials and supplies. And there are some S and T challenges here that we really need to overcome. And we're working with scientific partners in our government and around the world on that challenge. I'd like to close by just mentioning two last roadblocks. The first is data and disease forecasting. So a strong disease surveillance and forecasting system is critical so that we can be alerted to threats that can emerge at any time. And I alluded to this as really the no-fail mission of the office that I oversee. But in addition to that, when the alarm is sounded we really need actions that take place without hesitation from leaders around the world. And we need to see transparently driven by experts and free-from-interference investigations of outbreaks of unknown origin. We need to see manufacturing ramp up for critical supplies like PPE and we need to see the R and D sector kick into action. We also need a data system at home. That's really linked in with the world. And the United States is now creating a new national center, for epidemic forecasting and outbreak analytics with funding from the American Rescue Plan, that's going to be part, a critical part, of our robust disease warning system of the future. And we'll dock in with disease surveillance and sharing around the world. Last but not least is oversight and accountability for all of this work. We really wanna see increased accountability and transparency across governments, not only from the health sector which is obviously critically important and the World Health Organization which is a critical component to our public health emergencies prevention, detection and response system, but also from political leaders. We know from COVID-19, and from basically every emerging outbreak that I've been involved with throughout my career, that if you don't have leaders involved if you don't have support from them and if you don't have a system for them to make decisions expeditiously as quickly as possible that we will inevitably be behind in our response and we'll be playing catch up for the entire outbreak or in this case, pandemic. In the first days of his administration, President Biden proposed the creation of a UN facilitator for High Consequence Biological Threats. I'm also really intrigued by the recommendation from the panel that's co-chaired by former President Sirleaf and former Prime Minister Clark, the IPPPR panel that released its recommendations last week to create a Global Health Threats Council which would bring together high level leaders from around the world to basically be part of that alarm system, to trigger urgent action when an emerging infectious disease threat arises. We're also very interested in working closely with Loyce and her team, and I'll leave this piece largely to her on WHO strengthening and reform. So we've been partnering closely on an ambitious agenda for WHO strengthening and reform, and obviously working

closely with the WHO on all of these issues. They're a critical ally to advancing health and health security. And re-engaging with the WHO is one of the first things that President Biden did on his first day in office. So just to wrap up, the United States must continue to be strongly engaged in the global arena, working with partners around the world on a bold and ambitious agenda for responding, preventing and detecting future health emergencies. But that means now in 2021 this year, we need to work rapidly on a number of things, including launching and establishing a sustainable health security financing mechanism, taking action to build capacity for manufacturing of PPE, vaccines, therapeutics and diagnostics, establishing a fit for purpose, biosurveillance and epidemic forecasting system, establishing additional independent accountability and oversight for our world's health security, coming to some decisions about specific triggers for action following the next emerging biological threat. And that includes working with the international health regulations we have to improve them and finally preparing ourselves and the world for the next biological threat. Thanks again for having me. I'm really grateful for your time. I look forward to your questions and I really look forward to hearing what Loyce has to say as well. Thanks so much.

- Thank you, Beth. Really appreciate that. Loyce, I think we should just go ahead and listen to remarks from you and then we can go through some of the questions together, Loyce, take it away.

- That sounds great to me, thanks John. And many thanks to my colleague, Dr. Beth Cameron, for her remarks and for her partnership in this fight, we are truly all in this together. I too am grateful to the center for the invitation that you offered me to speak today and just recognizing the work that we all do every day, frankly, especially this past year and change to stay ahead of this pandemic, but just more broadly in global health. And so my remarks will touch on the work that my part of the US government is doing or tracking in this space, but not just around COVID really looking to sort of what we do beyond the pandemic as well because I think it's important not to lose sight of the broader global health agenda, but just to start with where we are, as Beth said, we're very much tracking our relationship with and deliberations at WHO and in particular, the World Health Assembly that John reminded us all is happening next week. If you can believe it, that will be virtual again. And yet the dialogue, hopefully, will be just as robust as if we were all together in person. But obviously a lot of eyes have been on WHO and its member states with regards to how we collectively move past this point, we're in, move beyond this crisis and really learn from it and put some changes and some systems in place that can protect us and serve us even better in the long run. Around the World Health Assembly, I think most people are aware of dialogue around how we strengthen WHO as an institution in terms of how it responds to outbreaks and public health emergencies and as Beth mentioned, in addition to the independent panel report, there are a couple of other committees that have put forth recommendations that's informing these dialogues and decisions or discussions across the UHG, as well as with our kind of parts in the government. And so we're hopeful that what will come out of World Health Assembly is a better understanding of what we could do to reform the systems. And again, these systems that are meant to serve us worldwide, not just at WHO but broadly. And I think that we can look to tools or instruments like the International Health Regulations and other opportunities to change the way we do business and so that we can respond appropriately and accordingly moving forward. But it's not just about those regulations. It's not just about the policies themselves. It's very much about the financing and the importance of providing resources that can meet the need. And so that is also needing to be part of these conversations we need talking about

these resources or funding, particularly for WHO but I think you can give them broadly as Beth mentioned. And so those are both things that we're tracking as well going into World Health Assembly and I'm sure coming out of that, we'll have a lot more to say. But beyond WHO there's also this, the ACT Accelerator and the work across several pillars or streams of work with regards to how we responded worldwide to COVID-19. I think that that has been an important endeavor and a lesson learned for many of us we've been involved in that work as well because it arguably needed to be set up because there wasn't an equivalent mechanism or platform for the world's global health institutions to come together and yet now we have a year of data to understand how that has worked for us. Of course, probably the most popular pillar has been the Covax facility and the mechanisms by which the world and particularly low and middle countries have been set to receive vaccines but beyond that Covax pillar, there's also been important streams of work related to diagnostics and therapeutics that of course as you can imagine the Department of Health has been heavily engaged in and really wanting to focus on as well because in the absence of the vaccines or perhaps alongside vaccines or so then the important work of ensuring that these same countries have access to tests to treatment and other innovations that will allow them to stay ahead of this crisis. And so again, we can talk a bit more about that but I think it's fair to say that particular initiative has evolved and has needed to evolve over the past year. And there's an open question of how we all move forward with that sort of arrangement and structure. I think that one of the lessons learned is that the power of coming together again across global health institutions and even actors beyond those institutions truly focus on those needs and ensure that we're meeting the needs for a robust response holistically across the public health spectrum, if you will. I wanna be sure though, not to just focus on kind of the international response or global efforts. It's greatly important also that we think about the implications of any global efforts for people on the ground, for a national response and so I wanna pull forth the initiatives that we perhaps have spoken less about. And I think it's really appropriate that Beth is on this call, but we also have, still have the global health security agenda and those goals and those objectives for 2024, one could make the case that a number of countries responded so well to COVID-19 even in the wake of limited resources because you have these types of initiatives already underway. And so I think it's fair to say that US still stands ready to support those particular initiatives like the Global Health Security Agenda and the countries who are members to those activities and discussions, because more than the engaging at the G7 I think we need to have that very real and robust country-based response to match. Similarly, more of a WHO, it's been very important to have say an Africa CDC which really emerged from this crisis as a leader. And it, once again, it wasn't without that longer-term investment. These initiatives, these leaders didn't come out of nowhere. They came out of us having some force for that and truly investing in building or fostering the existing capacity of these stakeholders and some of these institutions so that they could be responsive in the wake of an emergency. So I think we spent a lot of time here speaking to lessons learned and failures, which is really important but there are also some important success story that we should celebrate as well. And a lot of that we're finding at a regional and even national level. That's important to us as well as an administration because the US has poured so much into work on the ground, if you look at our own investments if you look at an example our PEPFAR program and we saw this with the Ebola as well but there's a real opportunity for us to continue to build on not only our global leadership, but our local investments in programs in a way that feels meaningful to those countries and their citizens. And arguably that also can bring in not just governmental stakeholders, but importantly civil society, industry, and other individuals or institutions that

tend to be outside the tent. Really has always taken all of us to solve these problems, but especially now, as John was saying earlier, we've learned a lot this past year in the wake of a pandemic, and we know that it's going to continue to take all of us to move forward. So more on the lessons of COVID as I see it again zooming out a little bit there's some key things that I think we've seen emerge that we want to continue to build on not only from pandemic preparedness and response but for public health and global health overall. I think an obvious example is around the supply chain and how we ensure we centralize that to some degree so that we're not caught in a situation where there's so many chokes in the chain. And we need to ensure that people do have access and readily available to important innovations and even standard supplies and care. And so as Beth has mentioned, I'm hopeful about an initiative such as the Quad partnership but there are also longstanding or ongoing interesting relationship we have, for example, on the African continent, their manufacturing agenda or ambitions. There's these long standing conversations about how we can ramp up paucity in other regions and there's a great opportunity to revisit some of those conversations and initiatives and sort of reinvest accordingly, so that there is some level of readiness. Again, should this ever happen again. I think another theme that's emerged for a lot of us is around workforce as well, recognizing as we always have, hopefully, how important about how important workforce is for these frontline health workers and particularly a community-based health workforce really requires even greater attention and investment than we have, I think we've seen, obviously their value, that how much they've been strained or constrained under the weight of the pandemic especially as they try to sort of both align across a number of other health priorities. So what does it look like for us to think about how we would not just recruit and train health workers, which is important, remunerate them, protect them in light of these emergencies and protracted crises? I think a lot of us were concerned about how they are themselves rebuilt or renewed or replenished in the wake of COVID-19. We absolutely need to ensure that there is the strong community on the front lines that can serve each of us across a range of health priorities and needs. Another key theme or lesson I'm pulling out of COVID as I think many of you are is around disparities or access. And so we've always known that this has been a reality in health and in other areas of development. And yet here we are with the data staring at us yet again. So how do we continue to monitor this problem? Yes, but also respond to it and even get ahead of it so that the populations, marginalized groups or those who are more vulnerable and most vulnerable aren't suffering the outcomes of that neglect. And I think that there are some simply opportunities there to think about how we cross that finish line, frankly once and for all, when it comes to disparities. And until we can reach that finish line at least close that gap that much more and ensure that there's greater equity in the work that we do and the services we deliver and in the outcomes that we realize. Again, I think that comes down to how we work across various partners in this regard to understand how we can build on that existing work and information. And I think that we as a government stand ready to hear those ideas of how we can build on what's worked and learn from what hasn't to really leverage some of these things for the greater good in the long run. I think I'll end by speaking a little bit to what could be missed opportunities. on the other side of all this, because I do have to, at least I must think of another side to all of that work and it's not to say our work in COVID is not essential because it absolutely is. And yet we know that we have been losing ground across a number of other important health priorities as well. I don't know if people remember how close we have been on polio, for example, and we need to absolutely make sure that we're not losing ground on some of these other fundamental health priorities as we continue to fight the pandemic worldwide. Again, I don't think this

needs to be an either or proposition. I think if we're doing it right, we're identifying opportunities to leverage one for the other, well let's remember the spectrum of needs that we have across the work that we do. Similarly, malaria, I think we're on the cusp of doing or have been on the cusp of great things in this space. And yet slowly losing ground in that area and in the way that is concerning for many of us but there are so many similarities in terms of the work that could be done, whether we're thinking of innovations or even testing and treatments, what does it look like for us to even accelerate that work given all that we've learned in the past 15 months or year and a half. I could go on, but I won't, I will just say that again, it's really good to be having this conversation about how we all collectively re-emerge and there is a lot of leadership that I've seen certainly across the number of months that we've been at this and I'm quite hopeful about what we can continue to do together acknowledging sort of the new pieces of information with players in the space in a way that will allow us to each move forward with that. I will turn things back over to John and open things up for questions. Thanks very much for having me.

- Thank you, Loyce. Thank you, both. That gives us a lot to think about. I also think it helps provide some context for how we can provide input data and additional support for all of your efforts as you move forward. I also just wanted to acknowledge all of the participants that we have online who can't see each other. I know that this asymmetrical format is less than ideal and hopefully next year we'll be able to host all of you together in person in Cambridge, as we did in previous years. It's a tremendous group of global health leaders, in particular, I'd like to mention in the audience, Quentin Palfrey, who's currently the general counsel of the Commerce Department who previously led this project GAIa and has spent his career thinking about a lot of these issues and also contributing creatively to them. We have a lot of great questions that have come in. Thank you again, for those of you who've supplied some in advance and have done so during the remarks. The first question is from Lori Silver she's the general counsel of Partners In Health. This is an amazing organization based in Boston. I've had the honor and privilege of helping to support Partners In Health through some work in New Orleans. And this group brings together world-class healthcare to the poorest settings in the world from Haiti to Lesotho. They do a lot of amazing things and are really on the ground kind of frontline workers. So Lori's question is, and I'll just toss this out to both of you and you can both answer or one of you jump in. She asks, "We know that the US leadership is critical to ramping up global production of COVID-19 vaccines and technologies to meet global need. And that contributions to Covax and vaccination donations alone are insufficient. Most importantly, high level cooperation is required. And the specific question is, do you support the appointment of a global COVID-19 vaccines czar to enable cooperation, managed tech transfer, scale manufacturing, coordinate supply chains of raw materials and other critical steps?"

- I'll be happy to take that one. So first, Lori, thanks for the question and great to be on with you. So I'm taking that as a question about US leadership just the way that it was originally framed but I'll answer it both ways and Loyce, you might wanna jump in, especially on the second piece too. So yesterday fortuitous to this, yesterday the President announced that as part of our effort to increase our provision of vaccines to the world, that he was placing Jeff Zients who was our current COVID response coordinator here in charge of that effort. And so we're not explicitly calling that a czar and Jeff, Mr. Zients, has a lot of other responsibilities including the domestic COVID response that are critical but he will be playing the

key leadership role for the President in our effort to ramp up vaccinations globally including the supply and manufacturing pieces. And it's really important because he's already playing that role here as we're looking at our own vaccination effort. And so this just brings our whole supply team and the COVID response team to bear on the global effort which I think is critically important. But it's also critically important, and here I'll pivot and hand it over to you Loyce too, critically important that this effort plugs in to what's happening globally with the ACT Accelerator with the Coalition for Epidemic Preparedness Innovations with Covax, CEPI, with the whole ACT program. And it's obvious, I think why, but as we start looking at a situation where we have a lot of vaccines that need to get delivered around the world and made, scarcity of critical supplies and scarcity of manufacturing capacity, and in some cases manufacturing capacity that's not being well utilized because of the scarcity of materials, there really starts to be a picture where we need to quote Richard Hatchett, the head of CEPI as supply control tower, some way in which there's visibility in a way that protects companies and makes them feel like they can participate but also allows visibility into these key manufacturing decisions and supplies around the world. And so that's something that I think is a really interesting idea, it's an important idea. And it's one that we intend to participate in working with CEPI and ACT. But Loyce, please jump in on that. Your team is really leading the effort with the ACT Accelerator. And I definitely wanna hear from you what you think about that and how we might play an even bigger role.

- No, I think that's right. I mean, the US, as grateful as we are to the president for the announcement that Beth outlined in Jeff's leadership, I think we're all aware that we can't nor should we go it alone. And none of this should vest on any one country to, no matter how ready and willing that that government is to assist that the problem is too big. And no one group of individuals or person has all of these solutions or that capacity. So that's why it is so important that we plug into these existing mechanisms or infrastructure and even consider, how those evolve themselves. It's not, again, we have the ACT Accelerator as an opportunity, as an example of how this all comes together. And yet I think even those partners and parties also say, "I have thought about ways that they might be able to evolve too" and how better different types of czars or whoever's leading various efforts can plugin to theirs but that's why we really do want to come together with others around the world at local and regional levels and not just have bilateral regions, which this will I think, be so difficult to keep track of given the range of questions and needs out there, not just around vaccines, but treatments, diagnostics, and the like. So hopefully that answers Lori's question but I appreciate it as well.

- Great, our next question is from Julia Barnes-Weise, she's the executive director of the Global Health Innovation Alliance Accelerator. This is a program that began at Duke University to research the alliances formed to address the Ebola outbreak of 2014 and highlight the need of collaborative investment in R and D for future alliances. And she asks, "What do you see as the role of the US in achieving equitable access to medical products?"

- I guess I'll try to jump in here, there's a big role, obviously. I think that some of that, those signals, you've seen already from this administration but I'll back up and really point to the principles that the President has put forth. And the principle of equity is really core to what he said is part of his agenda. And then when you look to the Department of Health and Human Services, our leadership as well, really is looking

at and thinking about equity in an important way, I think moving forward. There's a great opportunity too that I don't think we've talked enough about in the global health space to link these conversations or goals across our domestic agenda and what we wanna do globally. I think implicitly, we are striving for equity worldwide, and those of us who've worked in this space for decades arguably have had that in the back of our minds but explicitly as another matter entirely, I might say, you have organizations like some of them are here, Partners in Health for example, who I know have been more forthright about that being a goal but as a community, there's an opportunity for us to step into that more readily. So, what does that look like? And what can that look like moving forward? I think even if you look at the fundamentals of what we provide in terms of healthcare and services, that's, I think an important starting point. And so we can talk about access to products but ultimately this can and should be about what remains beyond this moment where we absolutely want to close some of these gaps. And I think that's why you have the US taking the steps that we have to try and close those gaps. But what remains, what can we sustain in terms of an equity agenda? Is it really pushing for a primary healthcare, is it pushing for a more sustainable health workforce, is it pushing for some other critical and sort of fundamental baseline element or pillar to public health. I think that's ultimately what we're striving for and ensuring that truly no one is left behind. And so that does mean, again, counting and tracking, who's not at the table and why. And expanding services or opportunities so that we can sort of capture all of those types of individuals. But I think that's the vision or how I interpret the vision of this administration, people who are sort of speaking to this as a priority but Beth might have more to offer as well from her standpoint.

- No, I think you said it really well Loyce and I think this is an issue that comes up a lot, obviously at the World Health Assembly. And so you're really at the forefront of our conversations about it. I think also just in the narrow but critical context of the COVID-19 pandemic, the President has supported the COVID TRIPS waiver the administration, our Trade Representative Ambassador Tai has supported it. And the reason for that is really we do believe strongly as administration in intellectual property protections but in service of ending the pandemic, this waiver, we're in an extraordinary circumstance here. And I think this is a critical moment for the world and for thinking about how we view these issues in the context of a global pandemic that affects countries essentially equally. So I'll just say that and I think that decision really stands for itself but also I think that it does portend the conversation in the future at the WTO as we move to tax-based negotiations and as USTR our takes on that work but also for future pandemics and future health emergencies how these issues are handled and also how companies conduct technology transfer and work on those issues with countries around the world. And just getting back to what I said in my remarks, the issue that in a pandemic countries are responsible nationally and regions are more or less able to produce the supplies, vaccines tests and personal protective equipment that they need. And so we really need a system that works for everyone and that's definitely something that we support and wanna lead on this year.

- Well, I just wanna acknowledge 'cause that, I think Beth, you just answered a question from Zane Rizvi with Public Citizen. Public Citizen based where I am in DC, this is the activist organization that was created in 1971 by Ralph Nader. And as you know, very influential, more than 500,000 members across the country. The question was essentially will the US government share taxpayer-funded vaccine technology with the World Health Organization? And I think you touched on the current state of play with

the World Trade Organization and the USDR's support for COVID vaccine waiver. I've got a follow up question to that from Ian Coburn from the Questrom School of Business at BU his question is what impact will the COVID-19 patent waiver have on the global life sciences industry's response to the next pandemic?

- Yeah, that's a really, really good question. I think the short answer is that it's probably too early to tell, and I think ultimately there's a lot of work that will have to happen in the WTO context. I'll just say that what I hope will happen is that we will have a conversation about what those extraordinary circumstances look like and what should happen in the future. I am not an expert in intellectual property so I won't opine on all of the different pieces of compulsory licensing in that document which I've gotten to know better than I thought that I would, as an expert coming into the administration and not having worked on those issues as much in the in the past, but I will say that I think that we need to bring those conversations, companies, manufacturing gaps that we have around the world closer together. I have also seen an interest from companies that I've dealt with and that others in my administration are obviously working hand-in-glove with to solve these problems. So I think there is a lot of interest from companies in solving these issues, but I think there's also a lot of frustration from countries that haven't been able to access vaccines right now, and we need to bring those policy conversations closer together, and we need to bring those technical conversations closer together. It's one of the things that I think bodes really well about the long-term viability for the ACT Accelerator if we can get it right and I'll pass it to Loyce to see if she has more to say on that front.

- Yeah, I'd be curious about sort of the premise underneath the question too, because I also envision a world in which there's probably a larger universe of stakeholders even if just thinking about industry, industry defined today can be very different in the next even several years, considering some of the opportunities I think companies themselves see now for regional partnerships and expansion. And so I'd be curious to think of that question in terms of who is around the table today and how they envision answering that in the next, say, four years from now or eight years from now, and then who actually is missing and who might come to this table in the medium term who might change the scope or shape of that kind of conversation. So I guess that's the thing I would add there. I just really would like to think of the diversity of industry or the opportunity that we have to any of the companies themselves, I think, have to think of how they evolve and how that can be beneficial for them, certainly, it's something to expect but for the people and the citizens, they're looking to serve with their products.

- And our next question, I think speaks to some of the other participants around that table not just on the R and D side, but also on the manufacturing and distribution side, it's from Greg Alton. Greg was formerly the chief patient officer at Gilead Sciences is now on the board of Novavax. At Gilead, Greg created a pioneering access program that licensed HIV technologies to generic manufacturers along with tech transfer packages to scale up treatment for developing country patients. And I know that that's something that the administration has looked at as well. And many of the other programs that you've spoken to have looked at as well. And there are some real challenges with simply licensing technology and how do you ensure that even if you're granting a waiver on a patent and allowing a manufacturer, in say India, to produce a vaccine or a treatment that that can actually happen. There are a whole range of other

challenges then associated with that. So and Greg's question is bluntly is the US government prepared to invest in global manufacturing, supply capacity and demand creation?

- Sorry, Loyce, did you wanna take that one first?

- I'll let you start, I'll listen to what you might say, go ahead.

- Yeah, no, the answer is yes. The answer is yes and we are investing. I pointed to just one example which is our Development Finance Corporation which is actively investing in India and watch this space. They are working in a number of other areas around the world actively with other partners. And it's definitely something that we think we need to see more of. And then I mentioned also just one critical gap that my team reminds me of frequently. And I'm sure Loyce's team reminds her frequently which is we need some of these critical components that go into vaccine manufacturing that are very specialized right now to very specific vaccines and which relate more or less to different styles of the vaccines that we have out there for COVID-19 and also which fit into other drugs and vaccines that are being manufactured, which are critical for other diseases and conditions that people have. And so we really do need a concerted effort that is looking at making components. And also there was a number of questions in the chat about regulatory approval. And I don't wanna gloss over those, those are hugely important issues here that as manufacturing capacity is ramped up, as technology transfer happens, regulatory approval and safety and efficacy is absolutely vital. And the goal here is safe and effective vaccines for people not falsified or substandard vaccines for people. And so this is building the regulatory capacity at the same time is critical and there's a relationship here with how component parts for vaccines, things that are in critical shortage. For example, filters, for example, bioreactor bags, things that we're running out of around the world, these things are specific to specific vaccines and specific configurations for vaccine manufacturing. And they're specific because the quality control process for each of those things is different. And so the quality, the regulatory control, the safety and efficacy of the vaccine and how these components are made are interlinked. And so what that means is we need to hack this consumables problem with regulatory officials from around the world at the table. And that's something I'm really interested in and you have a lot of experts on the line. So if anyone has ideas about how we can do that or experts that wanna be part of that conversation, please let Loyce and I know.

- Thank you and thank you for very adeptly also scooping up some of the questions in the chat with that response, that's incredibly helpful. I think we probably have time for one last one. This was from Paul Davis with Right to Health Action. This is an organization that launched the week of the first lockdown and is a grassroots movement of more than a hundred thousand activists for people who've lost loved ones to COVID-19. His question is asking to speak to any actions that are needed to stop the rapid acceleration of zoonosis, meaning prevent not detect.

- Hi Paul, thanks for this question. Yes, we're going to do a lot as a health community to sort of figure out how to improve the work that we do so that we're better at it. And we need to be looking at, or looking to our counterparts in other sectors to understand linkages between say helping the environment. I think we know some of this, I don't know if we act on all of what we know but another important pillar of this

administration is around climate, for example. And so I think, it's not lost on me that that is also alongside of the pillar on COVID, the pillar on equity. So what do we do to connect dots across those respective priorities? Think from those conversations are happening at a global level and at a regional level as well. And these are conversations that we are tracking now and able to engage differently because of COVID-19 and also because of I think the mandate that we've been given by the President to address these issues more holistically. So I think, hopefully, that's some comfort that we are tracking the problem differently and not just sticking to our stove pipes, but rather, really being mindful about these connections in a way that will lift all boats and help us understand the problem and solve these problems more comprehensively across various sectors, working hand in hand with people in other areas to address this issue that hits all of us. So, hopefully, that kind of responds to your question as we end the hour.

- Thank you, Loyce, thank you Beth. Very much appreciate your time. I know you're incredibly busy as you made clear in your remarks and your answers to these questions. We wish you the best of luck as you move forward, and we'll be in touch with the participants over the next week or two. I think given the nature of this format, we're gonna try to get some of these participants together to have a follow on discussion using a lot of what you've given us as food for thought and kind of a framework for starting. So look forward to continuing the dialogue and good luck with your endeavors, thank you.

- Thank you so much, John.

- Thanks everyone.

- Thanks everybody.

- Take care.

- This was great.