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Welcome to today's webinar, protecting us national security. By increasing vaccination globally immediate steps for covert 19 pandemic response and implications for the future, our moderator Anita Cicero will now begin.

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Hello and welcome all thank you so much for joining us today for the Capitol Hill steering committee on pandemic preparedness and health security. My name is Anita Cicero and I am Deputy Director of the Johns Hopkins Center for Health Security.

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This Capitol Hill steering committee is a bipartisan effort that we formed with the support of 11 congressional leaders from both the House and the Senate, as well as former administration officials who are all committed to making the country in the world more prepared for the greatest health security threats.

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We are very thrilled today to announce that representative Lori tray hand has joined us to serve as an honor rehouse co chair, and she's here to provide opening remarks for today's session.

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This steering committee is managed by our Johns Hopkins Center for Health Security and we're grateful for the support of the open philanthropy project, during the webinar today we're going to be talking about protecting national security by increasing the global delivery of vaccines and other medical countermeasures.

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Despite the very clear success of operation work speed, and despite the US government's leadership and donating more vaccine doses overseas than any other country, large portions of the world remain unvaccinated who projects that low and middle income countries face a shortage of 3 billion vaccine doses just this year.

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The emergence of the Omer cron variant reminds us of the need to scale up vaccine development manufacturing, distribution and delivery for low and middle income countries.

This is necessary, of course to save lives and reduce transmission of the virus.

Doing so will also reduce the opportunities that SARS could be to have to for future viral mutations that may evade immunity provided by the current vaccines delays and global vaccine coverage leave the world vulnerable to the emergence of new variants which will continue to threaten us national security, as well as disrupt lives travel and trade and economic recovery.

It could also lead to further social unrest and instability around the world.

So today we're going to discuss what steps should be taken now with leadership from the US government other countries and multilateral mechanisms to increase vaccination globally.

We know that increasing global vaccination, as well as the availability of therapies will save lives now and in the future, but how best we do that is complicated.

It requires not only vaccine doses but of course the uninterrupted supplies that it takes to both manufacturer and deliver those doses. It also involves manufacturing logistics cold chain capabilities and potentially the creation of more manufacturing sites that are that are geographically distributed around the world.

So even as we work to address right now this glaring gap and global vaccine for coven, it's a good time as we do in all of these webinars to also take a step back rethink and strategically position our future.

International vaccine development efforts, so that during future pandemics we're better prepared to speed the development manufacturer distribution and administration of vaccines and therapies.
So we'll get to our speakers today we are joined by Representative Lori Trey hand from Massachusetts. Dr Hillary Marston from the White House coven 19 response team.

Dr. Richard hatchet, who is CEO of stubby dr Prashant Yadav senior fellow at the Center for Global Development. And also, Dr. Steve Morrison who is Senior Vice President and Director of the Global Health Policy Center at CES is our speakers are going

Our speakers are going to provide their recommendations for what Congress and the administration can be doing now and in the future to best protect us national security interests that are threatened by uncontrolled global spread of dangerous variants.

So, I will now introduce our first speaker representative Trey Han, Congresswoman Trey hand proudly serves Massachusetts, third district. She is co chair of the bipartisan pandemic preparedness caucus which is a coalition of members looking to advance results driven bipartisan policy solutions to challenges presented by covert 19 and also future public health emergencies. She's also a member of the House Committee on Energy and Commerce, so happy to have you here representative Trey hand I'll turn

Well thank you for inviting me to be part of this important discussion and good afternoon everyone.

You know when this pandemic started two years ago. Most Americans believed we'd hit the pause button for a couple of weeks maybe a month while we got the virus under control and then returned to normal.

But the fact of the matter is that this virus demonstrated just how unprepared, we were as a nation for a global pandemic emergency workers like nurses, doctors, MS and police officers and public health workers before us to really MacGyver it at work

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every day while they work to save lives, summit to reuse the same disposable masks for days in a row until the strap broke or the front frayed too much and others, cut holes, literally in a trash bag to where instead of a gown.

But surgery after surgery case after case we've managed to improve our ability to respond to this virus hospitals have better systems in place to deal with positive patients schools have stronger protocols to keep our kids and our educators safe and in the classroom.

And with the creation and distribution of the vaccine. We've begun down the road to establishing our new normal a world with CO the 19, but one where we can be protected from it.

If we all do our part. And that's exactly why legislation like the American rescue plan was so important. Not only did it get much needed relief to families and small businesses who are struggling to make ends meet, but it also played a pivotal role in getting shots into arms.

Earlier this week, the house released the America competes Act.

The bill has a wide range of provisions from increasing our chip supply and manufacturing capabilities which we need to build medical devices to also strengthening our Strategic National Stockpile and investing in the next generation of cutting edge technology critically, the bill finally provides FDA the authority to recall drugs that cause serious harm.

I also plan to introduce an amendment which will require the Strategic National Stockpile to carry a reserve of high quality masks that work for kids as well.

Finally, while we vaccinated nearly every American who wants to be vaccinated we still have a long way to go on supplying vaccines to other countries whose vaccination rates remain well behind ours.
Historically, America has always been a leader in promoting global health. In fact, increasing the world vaccine supply is not only the moral thing to do.

It's also imperative for protecting our national security and helping the world returned to normal.

So I remain committed to working with the Biden administration to vaccinate as many people as possible both at home and abroad.

There's no question we still have a way to go as we continue recovering working to recover from this pandemic and conversations like this one are key to ensuring that we're taking the appropriate actions to get us there as quickly and safely as possible,

so thank you for letting me come aboard.

Thank you so much Congresswoman and I'm glad that you mentioned the need for masks for the public because our next month’s webinar will be about the importance of getting next generation masks for public use, but I was going to ask you before I know you have to leave that. How do you balance, investing in pandemic preparedness domestically which has, you know, traditionally been chronically underfunded, as opposed to investing in helping other countries.

Thank you.

Look, I think, the coven 19 pandemic has been devastating for the United States, and for the world, with over 359 million cases and 5 million deaths worldwide I mean globally we are witnessing the first widescale increase in extreme poverty and more than 20 years the loss of decades of development progress increases in gender based violence rising food insecurity and increased unemployment particularly among our young people and women.

And even as we gain confidence in United States domestic COPPA 19 vaccination coverage, none of us are safe until all of us are safe. So the risk of emergent dangerous variants were covert 19 transmission remains high poses a risk to all of us because
this virus knows no borders. We saw this first you know certainly with the Delta variant as it rapidly swept across the world and nation stalling our economic recovery and causing 10s of thousands of avoidable deaths.

And now the world faces yet another variant with omicron. We can hammer this cycle by prioritizing getting shots in arms around the world as soon as possible, especially in low and lower middle income countries which do not have the resources to vaccinate their populations, eating the world and combating epidemics is not new. In fact, it is the American way.

Previously, the United States has been a leader in efforts to combat other diseases including HIV AIDS epidemic. So I was encouraged by many of my colleagues in the House and the Senate calling for no less than $17 billion and FY 22 appropriations Omnibus

for global vaccination testing and treatment of covid-19, you know, focusing exclusively on domestic testing vaccines and boosters would be insufficient in protecting the country from the virus and frankly it's just wrong.

So I'm proud to join my colleagues and calling for substantial funding in this in an appropriations package and upcoming version of build back better or any other mechanism that needs the vaccination and testing needs of the world to finally put an end to this pandemic.

Thank you just quick follow up question on that. I know it's you don't have the crystal ball but how do you think it's possible to get that $17 billion appropriation and avoid 22 yeah look that the administration is certainly paying close attention to advocacy and Congress we've heard President Biden talk extensively about the need for the United States to lead the way and helping other nations get vaccinated as well and so look negotiations are ongoing right now about what exactly will be included

in the omnibus But I'm confident that we're going to see a substantial plus up in in funding for global vaccination and treatment of this virus. Yet at the same time, I believe that we're also going to see some of the pandemic preparedness caucuses priorities
included as well to make sure that we're better equipped for future surges and public health emergencies, but the bottom line is that securing the adequate funding to address covert and its effects at home and abroad must remain at the forefront front of policy decisions moving forward and we simply can't afford to get caught flat footed again the same way we were in 2020 and I and I think all my colleagues understand that.

And then it will be reflected in the, in the, in the legislation that we advance in the in the coming weeks.

Okay, great. Well thank you so much for your comments and, and also for your, your support of the steering committee and leadership on these issues. That's pretty much take you to.

Take you to. We will now turn to our, our panel, our first panelist who I am pleased to introduce is dr Hillary Marston Hillary is a senior policy advisor for global response on the White House Kobe team.

She oversees in that group overseas vaccine donations to low and middle income countries.

Hillary was previously served as director for medical bio preparedness and response at the US National Security Council, leading policy considerations related to medical countermeasure development and pandemic preparedness strategy.

Prior to that, Hillary was a medical officer and Policy Advisor for pandemic preparedness and the Office of the Director at Ayad within NIH. In that role she coordinated Niaz response to outbreaks including Zika, a bola and covert 19.

She trained in internal medicine and global health equity. So Hillary I think you have the perfect background for your current role. Thank you so much for joining us today I'll turn it over to you now.

Oh, thank you so much. Thanks for the invitation, and thanks for having this forum and apologies I seem to be frozen on my screen at least but anyway.

Hopefully you can still hear me Can you hear you. Yes, okay. So, ground Hillary Kristen senior policy advisor for global coven responsible White House Kobe team, and as mentioned, I do oversee the global vaccine donation work for the team.

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So, our program. I'm going to give you a little bit of an overview of our program and our priorities at this moment.

Before we dive into the comments from the other speakers. So the program that we have developed really began in earnest in the spring of 2021 about eight months ago when the President committed to lead the fight against the global pandemic, and to become the arsenal of vaccines for the world. And since that day, he's followed through on that commitment committee to donate 1.2 billion doses of safe, effective vaccines to the world, and we are executing on that mission.

So yesterday we hit a major milestone, we delivered, we shift our 400 dose. We've now shipped 408 million doses, as of today to 112 countries around the world.

That's four times more than any other country. We were the first country to make that scale of commitment. We were the first country to purchase solely for donation.

And it wasn't a small purchase you know a show. It was a billion doses so really stepping up at scale there, and we were the first to step out of the queue in deliveries because we had been had been hearing from multiple corners that lower and lower middle income countries were having trouble accessing vaccines because of the queue of delivery so we made an innovative deal with the African vaccine acquisition trust to allow them to take our spot in the queue accessing majority of vaccines far earlier than they would have been able to under their contract and will continue to do more, continue to look for more ways to improve that access to vaccines, in lower and lower middle income countries.

So, coming back to the Pfizer program in particular I want to highlight a couple of features that program.

So, when we committed to purchase 1 billion doses, and donate it through the Codex facility, we did that, both to have a dedicated stream that was solely for donation, but also because we wanted to have a contract with a predictable supply of doses, over

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the course of 2022 and 2021. So beginning in August of 2021, we had a set amount that we were able to donate to the hundred poorest countries in the world and the eight members of the African Union that are not in the MC 92.

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We have that schedule that allows the countries to then support their own National Vaccine plans, so they're able to plan ahead know exactly how many doses that they will be getting of this safe and effective vaccine plan campaigns around it, plan when

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they're going to add additional additional priority populations. So it allows them, the surety of supply but they need to actually look down the line, and build a program scale it up.

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The other important feature of the program is that these are doses that are coming fresh from the factory, so that gives the countries some time to plan ahead get the doses into their own cold storage, which UNICEF has been critical in helping them build

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up by the way, and plan their, their programs accordingly.

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So, I also wanted to speak a little bit about our efforts in the vaccine manufacturing space. So we had been working to expand vaccine manufacturing around the world and on the domestic side around the world.

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We partnered with our, our friends in the plot initiative to expand the manufacturing of j&j and corporate tax both vaccines, and I am at the bio eat facility in India.

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In addition, we invested in South Africa, in JJ, so that's going to make 500 million doses of single dose vaccine, in Africa for Africa. And we're working on expanding Mr name that vaccine manufacturing domestically, and we recently put out an RFID via

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HHS, that's looking to expand to make 1 billion doses of Mr. Na domestically, by the end of 2022, and will continue to look for additional opportunities to expand the manufacturing footprint, so we're optimistic on supply.

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In addition, we know that increasingly, the challenge is less supply, at the moment, and more getting justice and arms. So back in November, administrator power made an important announcement, saying that we were going to focus on that shots and arms

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work through the global backs initiative. That's drawing together the best of us at CDC, our other agencies, and they're really looking to tailor their programs to the needs in a specific country.

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So we're hopeful with that, that we will be able to drive vaccination rates up in countries will come with the supply through the programs that we I've already mentioned, and get the vaccination rates up in these areas.

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So look forward to the discussion, then look forward to the q&a, and thanks again.

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Thank you so much and we will hold questions till the end so thanks for your comments. Our next panelist is Dr. Richard hatch it, Richard is the CEO of the Coalition for epidemic preparedness and innovations as we all know SMP, and the supports the development of vaccines against epidemic diseases such as a bullet and NEPA. They also support the development of technology platforms to allow for the rapid development of vaccines against emerging diseases and threats like coven 19 Sepi helped establish and now

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co leads the Kovacs pillar of the access to coven 19 tools or or act accelerator, Richard was previously the acting director at BARDA HHS and served as the director of medical preparedness policy on the homeland and National Security Council's under President Bush and Obama respectively.

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He received his medical degree from Vanderbilt and completed clinical training and internal medicine and medical oncology at Cornell, and Duke. So great to have you here Richard I'll turn it over to you.

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And I will struggle to get off of me thank you and either thanks thanks for the invitation and please.

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Convey my thanks to representative trading, as well for her leadership on these issues.

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Um, let me let me start just before I before I start my remarks just by saying the title of today's session, protecting us national security. By increasing vaccination globally immediate steps for covered 19 pandemic response and implications for the

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Actually, in the title captures two potential dichotomies as as members of Congress, and members of the Senate, think about how to allocate resources given the current crisis and given the challenges that we face in the future and I just want to highlight

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those because I think they are false dichotomies, that, that, you know, kind of map to traditional heuristics that we use and thinking about policy challenges international versus domestic preparedness versus response.

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I, in my mind, it should not be a conflict between, you know electing National Agency and focusing on self sufficiency and choosing to pursue multi-lateralism as sort of a political philosophy these things are integrated there there are, there is very

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clearly a domestic response. There's also an international need. It's also not a trade off. We shouldn't be this as a trade off between allocating resources to saving lives today, and to preparing for the future we have to be able to do both of these

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things simultaneously because infectious diseases, I think, is we have no seeing hopefully, you know, definitively represent a fundamental risk for our societies in the 21st century, I have taken to saying recently pointing out to people, covert is actually

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I hope most of you will remember it's the second pandemic of the 21st century but it's also this, at least the seventh global infectious disease crisis of the last few decades.

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And we will continue to face these kinds of threats. going forward in less. As we address the challenges that we face today. We also lay the foundations for future preparedness going forward.

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I was actually asked in preparing for this session, to talk to two elements that relate to set these priorities we have recently laid out a five year plan.

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We're calling it 72 point O not incredibly imaginatively, but it really draws on our experiences, developing vaccines against emerging infectious diseases and responding to the covert pandemic to think about what we as a world need to do going forward,
and how we need to work together and the kinds of international architectures that we need to create to prepare the entire world. I was asked to speak about what do we need to do to reach the hundred day goal that we have articulated for compressing vaccine development timelines and how do we prepare vaccine development for future threats to speak to those themes very, very briefly, let me just start by telling a story about the beginning of the covert pandemic.

All of you may not be familiar with this, but the vaccine research center at the National Institute for Allergy and Infectious Diseases had been working on MERS vaccines MERS is a related coronavirus, and they had borrowed some, some tricks of the trade, if you will, that had been learned through the efforts to develop vaccines against HIV and respiratory syncytial virus, and they had applied those tumors to understand how to make vaccines and they had been working with Madonna, to make those vaccines on an MRI on a construct which allowed for very rapid development. When coven emerged when the sequences were released it, and it was obvious that we were dealing with the coronavirus, they took what they had learned from those previous efforts and vaccine development the previous work emerged and literally within 48 hours, designed what became the Madonna vaccine, which has been shown to be 95%, effective, in effect, we were lucky that the pandemic that we are facing was a coronavirus because, with the exception of Corona viruses, we were not prepared to use the new rapid response platforms with having solved the problems of vaccine development, or any of the other potential threats that we face.

Because, with the exception of Corona viruses, we were not prepared to use the new rapid response platforms with having solved the problems of vaccine development, or any of the other potential threats that we face.

We were able to deliver vaccines within less than a year, but clearly that was insufficient. The we delivered vaccines in 11 months, but the number of people who have died globally in 2021, after vaccines became available was at least twice the number of the people who had died in 2020 so we need to be able to move much more rapidly to develop vaccines in the future. The question is how can we do that, and how do we achieve it.
I want to just highlight the. And I want to probably mess up the title, prepare for and respond to existing viruses and emerging new threats and pandemics at the health committee as his just released.

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The prevent pandemics act much better acronym, and then title that act contains a number of critical activities including focusing on different viral families, not just coronavirus is not just flu, but all of the other viral families to present drugs

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to us. It focuses on creating regulatory approaches to managing platform technologies and to accelerating vaccine development by identifying advanced platform technologies but modernizing clinical trials, it, it contains a lot of the ideas that we had

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set the want to also work on through our CP two point O program. I think in terms of preparing the world for just to wrap up in terms of preparing the world for responses to future threats.

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We also need to make sure that the benefits that can be realized through science, science are globally available and accessible, and one of the most important ways that we were going to do that is by extending manufacturing capacity beyond the current

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centers in the US, Europe India and China, so that all regions of the world, have access to these technologies and can move very rapidly. In the event that we face future threads.

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Thank you.

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Thank you so much, Richard.

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Our next panelist is dr per shot a dove PR Sean is a senior fellow at the Center for Global Development and an affiliate professor of technology and Operations Management at NCI his work focuses on improving healthcare supply chains and designing better

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supply chains for products and social benefits.

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Over the past 15 years he's worked closely with multiple country governments and global organizations and improving supply chains for medicines and health products for Shawn's advisory roles have included strategy leader supply chain, at the Bill and

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Gates Foundation, chair of the market dynamics advisory group of the Global Fund co chair of procurement and supply chain management at the rollback malaria partnership, and also Commissioner on the Lancet Commission on essential medicines per shot, the

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floor is yours.

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Thank you, Anita and I would like to express my thanks to Congresswoman program and also to my fellow speakers here. I look forward to learning a lot from the comments that many of them are making of this panel discussion.

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I want to start by saying something that Dr Marston talked about which is, it is remarkable that we have expanded manufacturing capacity for Cobra vaccines in less than 18 months from zero to about 11 billion doses.

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It's also remarkable that 400 million doses have been donated by the United States and also the efforts to expand manufacturing capacity in Africa and India, in partnership with the quad, but that should not be viewed as done and needed no more.

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That is just the starting point in our efforts to expand manufacturing capacity of the right type and when I said I type I'm talking about highly flexible manufacturing capacity using modular equipment, which can be used not only for covert vaccines but

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for future pathogens and other vaccines, as and when the need arises in the future.

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So, have the right type, and also in the right places, Dr captured from sappj just mentioned.

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That is a concentration over vaccine manufacturing currently occurs we desperately need to diversify that, and the work that the development Finance Corporation has done, and the work in South Africa is a pointer that with the right kind of resourcing

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and technical team capacity, it is feasible to think about such production and alternative locations then then correctly so that's one clear thing we can do more on the second part has to do with second generation vaccines which many of which step is

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in other agencies are investing in. We can't lose sight of the fact that second generation vaccines, as and when they're developed will also require manufacturing capacity and the type of manufacturing capacity for the second generation vaccines, maybe

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be different. We need to start thinking about that expansion plan proactively now, alongside with second dimension vaccines the work that savvy and many others are doing a new delivery technologies, whether it is new kinds of secondary or primary packaging

containers new metal bags or delivery technologies that are needle free injections, and so on. So, so those again will require us to have sufficient capacity so that when they come out they are not restricted to small jurisdictions in the world.

The third thing I want to highlight is when we think about vaccination program, we tend to think yes the supply problems are, are more or less over. I would counter that by saying no, we need more supply, but if you don't focus on what happens between

separate between having x manufacturer supply to the time of getting a shot in the arms.

We know it has been particularly challenging to manage distribution and the hot infrastructure such as the freezers and storage and transport and distribution and efforts are underway some with resourcing and technical support from the US government,

but in addition to hard infrastructure, there is a need for soft infrastructure, and by that time flies staff capacity for administering vaccines for safety monitoring, creating strong public awareness advocacy campaigns.

Those are aspects we also need to include in our full repertoire of things that we need to, to provide for vaccine deployment.

We also require syringes and other ancillary supplies, which are sometimes specific to the type of vaccine in use, and despite care for planning and large scale efforts by the US.

Sometimes this has been a challenging component, doing this at the scale that we want requires a much more expanded set of partners, then we may currently have.

And it certainly requires more resources. If we say that we will only work with partners to fit within our procurement legal framework as currently designed, or we we get bogged down by things such as procurement transaction costs, or who fits in the

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architecture where then I think we will not be using the full gamut of delivery partners in countries that perhaps are feasible. The last thing I want to say is that give an imperfect uptake of vaccines, and the emergence of new variants, we will continue

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to see a need for therapies, especially therapeutics that can be used early in the disease course to reduce the risk of disease progression to prevent transmission and they will have to be widely distributed globally, to meet the global demand.

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We also know that not all, but many such therapies can be manufactured at a much larger scale globally.

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It is somewhat easier I'm underscoring somewhat not saying it is easy, somewhat easier than then biologics and vaccines. And as a result, we also need to focus efforts on both the expanded manufacturing of therapeutics but alongside with that new models

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for distributing the therapeutics as widely as possible, and make that to be a core component and not an afterthought, of our programming for pandemic operations.

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Thank you.

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Thank you so much for Shawn, a lot to discuss their.

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Thank you for your comments. Our next panelist our final panelist is Dr. Stephen Morrison Steve is Senior Vice President at CSIS and director of the Global Health Policy Center there.

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Since the spring of 2018 he has directed the CSIS Commission on strengthening America's Health Security, which is co chaired by former Congresswoman Susan Brooks and former CDC director Julie Gerberding.

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The Commission includes six members of Congress, Senators Maria and young, as well as representatives coal Hudson Underwood and Berra, along with 16 other prominent and diverse opinion leaders from public health diplomacy industry philanthropy and international

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security and defense.

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And just a short while ago that commission released its latest white paper which is titled 2022 is the year of decision. I recommend reading this excellent report in speaking to today's topics I believe Steve is going to be drawing on that new analysis.

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and set of recommendations among other streams of work. Steve great to have you I'll turn the turn of the floor to you now.

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Thank you so much Anita and thanks to your colleagues on trail lap and Margaret Miller and. It's such an honor to be here with Congresswoman Trey hand with Hillary, Richard and Prashant.

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I'm going to speak to three topics, I'll. The first is a few words, quick words about Sepi a second is my concerns about this post on a post, I'm a cron Trent murky transition that we've entered are about to enter, and third to highlight some of the key

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points out of the recent white paper.

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So on sappy were selfies at a pretty critical moment right now approaching it's replenishment in the second phase of its work, it's updated its vision and mandate.

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It is a remarkable institution that does things that no other institution does.

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It's a long term, r&d, making us ready for the future that's unique it's not redundant. And it's a major contributor to the global equity agenda. We need as many partners as we can find that are there to advance globally the r&d and equity agendas.

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It's also contributing to managing the evolving response including expansion of manufacturing capacity, but next stage and vaccine development is going to be quite complicated and fast moving.

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We've heard something about this we're going to need vaccines with longer lasting immunity we may need trans coronavirus vaccines, we may need variant specific vaccines and Sepi will be important in that process.

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We've Richards here with us today. I think it's fair to say he's really shown exceptional leadership. He's worked, we've worked closely with his team here in Washington, visited with them in Oslo and elsewhere, and it's critically important that the US
be an active partner be seen as a determined and committed and investor over the long term a thought partner alliance of expertise and Congress has an exceptional opportunity right now.

In the midst of the FY 22 budget to ensure that type of investment and relationship, happens.

My second point is that I'm a bit worried right now about this murky transition underway to a post on a cron era it's both a set of opportunities, and a set of risks.

We know that I'm a cron has brought extraordinary speed intensity ability to evade immunity to escape immunity, it's less very violent, and it's moving to where 50 to 60% of the world will be infected in a short period of time, and creating a massive wall of immunity from infection and vaccines. We're entering a period, beyond that of low transmission for at least some period of time. We know the antivirals are appearing we know hospitalization and death rates are lowering.

People are arguing This is a new normal we should see this as a silver lining.

As an opportunity of getting out of the emergency phase and moving towards managing the virus. So this is an opportunity but I think there are risks here that are relevant to what we're talking about today.

One of the risks is to declare victory prematurely. We are a very tired and exhausted population, understandably, and and eager to move on. And we don't want the wrong conclusion to be to be drawn that this is just a coffin we're done.

This, these changes can also be seized upon those who are committed to oppose vaccines and therapies and masking and mandates, we don't want to see that happen.

We don't want to take our eye off of the ball which is low and middle income countries, and the continued inequities and huge gaps in it with respect to vaccines therapies tests and other inputs.

We know that antivirals have arrived as a new tool, but they will have to be scaled at an accelerated level, and that there will be very significant equity issues, and they will have to be paired with tests and there's a lot of uncertainty.
We know also that China is very vulnerable in this period. It has very low immune immune protection from infection, and it and its population while vaccinated at over 80% with two doses. Those vaccines are very ineffective and the possibility exists as we head into the Olympics and beyond.

Obama Kron to a very vulnerable population which could then overwhelm parts of its health system and trigger cries for okay how do we get out of this zero coded approach of massive lockdowns massive tests, and the like.

And there's not going to be quick tools in terms of Mr. Na or anti-virals that will be effective in that context, it's going to be a challenge I think to us diplomacy in this period, in terms of our white paper, 22,022 is a year of decision, put out by our commission.

We acknowledge and praise the administration, the bind integration for its first year and go into considerable detail on those accomplishments we heard from Hillary some of the remarkable accomplishments and commitments and there's no question, US has much more is going to be needed by the US and by others to scale the response and to have a sustained approach.

In this this quarter the president, President Biden's committed to hold a second summit, and that's a major opportunity it seems to me for driving forward a focus on what more needs to happen in this period, Congress can play a major role and thinking about what more can be can be achieved here in US leadership, we're proposing a few thick key items we're proposing that there be a coherent and ambitious initiative that has clear targets over multiple years, a strategy and a multi year budget, we're estimating in the range of 18 to 20 billion per year over the next five years we're saying that for the international effort. We need a designated leadership with considerable gravitas and a unit to support that based at the Department of State we're calling for a presidential envoy.

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We're saying that vaccines have to be the backbone, and that we should be working of course with Kovacs with regional bodies the AU and others, focusing on delivery capacity but also focusing on the, the incredible problem of hesitancy and refusal among populations to accept vaccines, were saying that therapies and tests need to be a priority. They need to be elevated we need to acknowledge the equity challenges, and the institutional challenges there were saying we should be taking a strategic approach to the development of new technologies the a p3, the American pandemic preparedness plan is a very good start, but it's not funded, very much.

The EU us cooperation is a very good step and can be expanded, we need to put a focus on Sepi and a focus on BARDA in the long term and getting the technologies of vaccines diagnostics and testing that we're going to need in this next generation final few points. We're calling for a long term investment in a pandemic in a financing intermediation fund a long term multilateral funding mechanism to build capacity preparedness in partner countries, and a Global Leadership Council we're proposing that DOD play a much more significant effort in bringing its special assets in support of our international strategy, led by this ability, but led by civilians.

And last point is we're proposing that we need to test day talk with China, particularly around travel public infrastructure information sharing supply chains.

We are in a very intense and deep confrontation with China we know why we know the roots of that we're not arguing against that we're arguing that we have mutual national interest in these areas that we need to we need to examine how we can build some level of cooperation to advance US national interest and the crisis that China may be entering. With the advent of I'm a cron maybe one of those moments.

Thank you.

Thank you so much, Steve, really appreciate the comments from you and all of our panelists.
I will start with a few questions we're going to go into the q&a portion and then I'll after my questions I'll turn it over to Margaret Miller who is can highlight additional questions that were receiving from our large audience today.

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And two questions I'll throw out at once but one is sort of directed to Hillary and the other two per shot first Hillary there are a lot of comments and questions about not just the doses themselves but everything that is related to that and supplies

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the needle syringes, but also training that is required in low and middle income countries the vaccine storage how the distribution networks work but in addition to that, how is there any way to help with inflammation media campaigns to ensure that uptake

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is sufficient to drive down community transmission in low and middle income countries so I know that's those are a lot of questions rolled into one but that would be a question for you.

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And, and then Prashant just to quickly put this one out there to.

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You talked about the need for additional manufacturing capacity manufacturing sites around the world now or in the future.

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How outside of the India one and South African one do you think that these different sort of pop up manufacturing sites can be sustainable in the long run, and how and how do we make them sustainable should we care if they're sustainable, so I'll turn

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it over first to Hillary and then push on can take a crack at that one.

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Yeah. So I appreciate you putting all of those kind of into one bucket of questions because together they highlight just how complex this challenge really is right the coverage rates, paint a really bleak picture, but the solutions to get those rates

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up are complex, local, and need to be tailored.

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With regard to the ancillary supplies the cold storage etc. I would say that Kovacs has actually been doing a really fantastic job in this area. So, UNICEF is doing what UNICEF does really shines at, which is, in part, securing supplies.

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So securing syringes to carrying the cold chain of equipment that's been needed.

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We were really pleased at the very earliest days of the administration to to use some of the Congressional funding that was offered by our colleagues, the hill to really come in and support Kovacs in a big way with the first $2 billion.

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Right off the bat. We became the largest donor to Kovacs and that is rebounding to the ability to supply some of those critical needs.

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In addition, with regard to the questions about staff about training, about missing combating misinformation all of that it’s so important.

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That is really the focus of the global facts initiative, and we have provided support to the tune of $1.7 billion in 100 countries around the world.

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Those funds are starting to roll out in those countries, and use of those funds is directed by us the ID by state by CDC PEPFAR in partnership with our country colleagues and with UNICEF country as well.

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understanding what the specific needs are, in that context in order to get shots into arms. So I don't think it's going to be a one size fits all solution I think we need to have the flexible funding, which we are putting into our in country partners

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hands and trying to drive those vaccination rates up. Thanks.

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Great, thanks so much. Go ahead for Sean.

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Yeah, thanks. Anita.

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Before I answer your question on how to keep capacity sustainable and warm and running. I would like to add one thing to what Dr. Martin just said, which is, I think to deploy vaccines vaccines hard infrastructure and golden for spine, soft infrastructure

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as I call it, at such a large scale requires us to think about multi lane highways and not single lane highway is what I mean by that is we need to think about a much more expanded set of partners.

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The ones who may be able to do a very good performance.

That doesn't surprise me need a larger scale so who said what else we can find who can deploy the fridges who can transport the vaccines who can do the information campaigns, we need to bring them into the system of deploying vaccine so that's one additional point I would like to add on keeping manufacturing capacity sustainable so one is we have to accept not all of it can be sustainable. We have to accept a slight premium we may have to pay for resilience in the system.

And we shouldn't aspire to say that every single site that comes up, we'll meet the same cost as you would get from very large manufacturing sites in India or other places in the world. They may be at a slightly higher cost of production but we have to accept that costs of production, in the interest of diversification. The second is my earlier point about flexibility, if the manufacturing sites are designed to be highly flexible across platforms and across products, which the science and engineering today, indeed, allows us to do, to some degree, then we can keep them sustainable when the demand for covert vaccines comes to a more stable or lower level, they can start making other vaccines, vaccines, whether it is for routine immunization or it is for special pathogens, or this for other even other biological products, and that's the nature of capacity investment we ought to be focusing on not just for fulfilling the immediate demand for covert vaccines, but with a slightly longer planning horizon and choosing the right technology platforms for that Becky.

Thank you so much. Okay, Margaret, I'll turn it over to you. Great, thanks so much will lead into my question for Dr hatchet Well, what work is being done to develop new vaccine technology platforms are there advances being made a needle free and or cross variant protecting vaccines. Well, thank you, thank you, Margaret.
So, those developing new platforms for actually delivering vaccines like the needle free approaches that you mentioned the patch approaches that work has been ongoing for some time, obviously not not starting to novo with covert vaccines but but there

is a very important question and we have been supportive of efforts to develop new second generation vaccines and within the second generation vaccines we included both vaccines that would be more durable and the protection that they provided potentially

be variant proof as Steve mentioned but also, that would be easier to deliver and potentially delivered through non needle based approaches me kozol vaccines nasal spray vaccines.

Some of our initial investments in in a nasal vaccine actually, it didn't work out very well that program has been terminated. But we, you know, are continuing to work in that space we also want vaccines that are cheaper to produce which makes it easier
to distribute globally. And that have less stringent coaching requirements and we've got a number of programs that are investing, particularly in the Mr.

Na technology which is so promising because of its rapid response capabilities to continue to improve and iterate on that technology to reduce the cold chain requirements to ease the production and to expand.

Mr on a base fixing beyond just the codec seems to other relevant infectious diseases, coming back, I think for Sean’s point about, you know, perhaps having to expect and anticipate and be willing to pay a premium for that expanded manufacturing capacity

as he says if that if that capacity is flexible and Mr. Na is an imminently flexible platform and we can expand its applications to other areas, even beyond infectious disease in the case of them already to cancer when we're to logic Jonas, you begin

a foundation for a maintaining a warm base in a sustainable fashion so we are constantly thinking about all of these issues near term, as well as long term in in thinking about them through the lens of access and sustainability, and we obviously would

like our partners in the g7 and other major research funders to join us in that effort over. Thanks and I'll just ask a follow up there. From from one of the participants How important is it to have the next second generation vaccines, lower transmission
and, you know, rates as well as an endpoint for for national security issues.

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Well, I think the the challenge that we face with with covert as we have seen first with Delta. Then with a McLaren is that this is a virus that is still in the process of adapting to the human population, it's, it's shown a great deal of plasticity in

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the mutations that it can accommodate those have been have evolved in a direction to evade some of our countermeasures already and we can't really predict with confidence.

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The future evolution of the virus. So even though our experience with oma cron either because of prior vaccination prior exposure or fundamental attributes of the mutated various appears to be less severe than previous iterations of the virus there's

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guarantee that pie or row or sigma or tall, or epsilon whenever it comes, you know will will continue to be mouth so I do think we need to in attempting to develop second generation vaccines and thinking about it from an international perspective, we

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obviously want vaccines that provide durable protection at least against severe disease and death, even as the virus continues to evolve the optimal vaccines would also prevent transmission as you're saying and that's why this intense interest in the

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mucosal vaccines and eliciting because of immunity.

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The fundamental problem is that every person that the virus infects online in almost every individual mutations will occur. And the question is if you have high rates of transmission high rates of disease occurring in the background.

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Even if people are protected against severe disease that's giving the virus, the opportunity to continue to mutate and the best way to prevent that would be to reduce the number of people getting ill and that means transmission blocking vaccines and those

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may be some ways up and does we need to continue our investments in research and development, even while we're worrying about the operational and logistical aspects of delivering the vaccines that we have wonder if I could jump in.

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At this point to and ask Steve, a mindful we have a lot of congressional staff on the phone, Congress has been writing checks for quite some time.

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To combat this pandemic. We have the American pandemic preparedness plan. That is an estimated 65 billion over a number of years, that has not yet funded and.

And I just wanted to ask about the figure that you put out in the in the new white paper of needing 18 to 20 billion over the next five years for these kinds of international outreach efforts.

Specifically, and so, you know, sort of, how do you make that case from a national security perspective that this. It requires that investment deserves that kind of investment.

Thank you. I mean, that number is, is drawn from the awareness that in the last period in the last year we've, we've we've had access to about $19 billion of emergency funding for use and the response and and we know that the demand side is not going to slack and suddenly, looking ahead and various advocacy groups have have thrown out variety of numbers and that's in the zone. I do agree that the security argument has got to lead, and it has to do with.

to slack and suddenly, looking ahead and various advocacy groups have have thrown out variety of numbers and that's in the zone. I do agree that the security argument has got to lead, and it has to do with.

We cannot. we will no return to a more stable and predictable environment here, in which lives, move to some new normal, in which we manage this, if the, if there's uncontrolled transmission and inequitable situation of lack of access for large portions of the world's population that is fundamentally destabilizing, and it will continue to push forward instability, new variants, and a variety of other cascading impacts that will contribute to inflation country, slow down the recovery process and the reopening.

I think that the awareness the consciousness of the security dimension of what we're talking about, has has, has risen significantly as we've watched delta and I'm a cron reverse the progress and pose the sudden new challenges.

This is a particularly pernicious virus. That is, is going to require a scaled engagement over multiple years I do think that we need to enshrine that logic of security in our national security strategy, we need to enshrine it so that it is very clearly
stated and embraced in US national security strategy I want to just finally add you know we really are at risk of falling prey to, as we have in the past to a cycle of emergency crisis response, followed by a period of negligence and complacency.

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We have many antecedents to that. And, and we need to be very conscious of that and locking in commitments over multiple years now. And in order to have those we need the security rationale, we need a strategy, we need budgets and we need a leadership

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structure and the American people, recent polling data shows the American people, as divided as we are as polarized and politicized around the response, the American people are moving towards acceptance of the idea of heightened us engagement and leadership

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in the international sphere. I believe American Americans of all persuasions almost all can be brought around to the argument that we're talking about here today.

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Thank you.

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Thank you so much, Steve, thank you yet. I'm Dr version I'm going to finish with one last question to you.

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And this is just a little bit broad and late touch on before but we'll get we can wrap up with this. How is the US working with other countries to coordinate all these efforts.

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How can we be efficient and effective to make sure that we meet the goals of President Biden.

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So I'm very glad that you asked that that has been a specific focus of ours, on a couple of friends so one is encouraging countries to work via Kovacs to support Kovacs.

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We, we started that from the earliest days of the administration and have worked.

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I think very effectively to get some of our partners to step up and we hope that they'll continue to do that. We then took that to the vaccine donation space where we committed to donate to donate 1.2 billion doses of vaccines and pressed others to do

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the same to the global covert summit and our follow up work after that, we built on them by actually explaining how to do it. So we had done some pretty painstaking work with, with Kovacs with other international partners to set up the legal frameworks

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the operational frameworks to actually get these doses moving. There is absolutely no reason why our international partners should have to do the same.

So we have done country consultations multiple times with different partners trying to walk them through each of the different aspects of how these work lessons that we've learned the hard way, so that they don't have to tackle those in the same way.

And they can get their doses flowing faster. I don't know that we can draw a direct line from point A to point B, but I do think it has been helpful in getting some of their doses.

Thanks.

I think that's all the time we have today but I just want to thank our panelists especially for making time out of your busy schedules to be part of this.