Faster, Smarter, Safer:
Progress and Pitfalls in Outbreak Preparedness
Event Transcript

September 26, 2018

Event Overview

On September 26, on the sidelines of the 73rd UN General Assembly, PATH, Panorama, and the United Nations Foundation hosted an event to celebrate the global community's success in stemming recent outbreaks while highlighting what still needs to be done to ensure the world is prepared for a major outbreak.

Almost 100 individuals attended **Faster, Smarter, Safer: Progress and Pitfalls in Outbreak Preparedness**, where leaders from the public and private sectors spoke about how leadership, innovation, and partnerships can converge to stop a threat in its tracks.

Event Participants *– in alphabetical order by last name*

- Alex M. Azar II, Secretary of Health and Human Services, United States
- Her Excellency Dr. Awa Marie Coll Seck, Minister of State, Republic of Senegal
- Steve Davis, President and CEO, PATH
- Sheri Fink, The New York Times
- Gabrielle Fitzgerald, CEO, Panorama
- Dr. Julie Gerberding, Executive Vice President & Chief Patient Officer, Merck
- Dr. Oly Ilunga Kalenga, Minister of Public Health, Democratic Republic of the Congo
- Dr. Matshidiso Moeti, Regional Director for Africa, World Health Organization
- Dr. Joshua Obasanya, Director, Prevention and Programs Coordination, Nigeria Centre for Disease Control
- Mr. Elhadj As Sy, Secretary General, International Federation of Red Cross and Red Crescent Societies and Co-Chair, Global Preparedness Monitoring Board
- Dr. Sylvain Yuma, Secretary General for Health, Democratic Republic of the Congo

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UN General Assembly Side Event
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Opening Remarks

Steve Davis: Good morning and thank you all for joining us on another beautiful New York morning. My name is Steve Davis and I'm the president and CEO of PATH. We are delighted on behalf of our partners, Panorama and the United Nations Foundation, to be hosting this breakfast discussion today: Faster, Smarter, Safer; Progress and Pitfalls in Outbreak Preparedness.

In this crazy week while we're all running around the city, trying to figure out what meeting we're supposed to be at and what time, we thought that it would be useful to take a minute to step back and talk about progress. As we talk about the Sustainable Development Goals the variety of pieces that we're all collectively working on, we think it's important to step back and talk about the continuing threat of deadly outbreaks on global health, development, and security.

Certainly there is some good news. Since the West Africa situation, we've seen outbreaks getting further under control. It's evidenced in some ways by the Ebola outbreak earlier this year in the DRC, the Lassa Fever outbreak in Nigeria, and the Nipah outbreak in India earlier this year. And of course, more than 70 countries have now done the joint external evaluation to assess their gaps, and we're seeing more dynamic country cross-sectoral engagements in the Global Health Security Agenda.

But in fact, huge and significant gaps continue to remain in outbreak preparedness. There are continuing threats, like Ebola as we've seen just in the last few days, and we get hampered in regions of armed conflict and tourist borders. The need for greater domestic and international investment is needed for national action plans, stronger surveillance systems, and research and development for new counter measures.

I worry that we get caught amid the calm between the storms in this work, that when the things get bad, it's on everybody's on the agenda, but then the support quickly disappears, and we are back to business as usual. We have to keep focus.

We need more advocacy and accountability to sustain and build the political will of global, national, and local leaders in order to build stronger health systems, to close the gaps in preparedness with transparent independent monitoring.

We need more innovation. And, as we've been doing at PATH, we need to work with partners around the world on better tools, better drugs, vaccines, and better surveillance systems to support faster responses and better preparation.

So today, we have an incredible group of speakers from around the world to discuss these issues. To kick off the conversation, and to underscore the importance of leadership and financing to strengthen global security, we're honored to have a very special guest. Alex Azar was sworn in as President Trump's Secretary of Health and Human Services in January 2018. The Department of Health and Human Services is the largest Cabinet department in the Federal Government by spending, with a budget of $1.2 trillion in 2018. It is charged with enhancing and protecting the health and wellbeing of Americans.

The Department encompasses not just healthcare programs, such as Medicare and Medicaid, but also scientific institutions, such as the CDC, NIH, and FDA, human services programs, like the Administration for Children and Families, and preparedness and response work to protect Americans from natural disasters, infections, diseases, and other threats. Secretary Azar has also spent his career working in senior healthcare leadership roles, in both the public and private sectors.

I'm going to quickly just move on and have Secretary Azar tell us a little bit more about what he's thinking. Thank you, Secretary.

Secretary Azar: Thank you very much, Steve, and thank you all for joining us here this morning. In particular, I'd like to thank PATH for hosting this event today to address this immensely important topic.

The potential for outbreaks of infectious disease has to be a priority for all of us, whether inside or outside of the government. As Steve mentioned, it's very important we don't let our guard down in periods between outbreaks. That's probably when we're most vulnerable. We have to keep the pressure, always be prepared, always advance our work against infectious diseases. Infectious diseases do not respect boundaries between countries. They can rapidly spread, creating destabilizing international health emergencies.

As just one example, let me remind us about the Ebola outbreak that we're currently monitoring in the eastern regions of the Democratic Republic of Congo. International mobility is such that DRC officials, with help from the U.S. Government and other governments in the World Health Organization, are screening more than 100,000 people per day. That's an outbreak that has so far been contained to one country.

The progress the DRC has made in its own ability to respond to these epidemics is a great tribute to their commitment, but also the work done by so many partners to ensure that all countries around the world can prevent, detect, respond to, mitigate, and control disease outbreaks.

The U.S. Government is committed to building on success like that, working in multi-sectoral partnerships with other countries, international organizations, and non-governmental stakeholders, including the private sector. The Global Health Security Agenda was a major step forward in these efforts. A global paradigm shift in thinking about public health is just one small example of the Agenda's impact: It brought a new level of awareness to the threat of zoonotic diseases, which can be transmitted from animals to humans. 75% of emerging diseases are zoonotic and 80% of agents with potential bio-terrorist use are zoonotic pathogens.

Protecting human health from these threats must therefore involve sectors not as closely associated with human health, including veterinary expertise. The U.S. Government strongly supports the GHSA as one mechanism for focusing the world on these threats. And we believe our government work on this subject has been a true success.

A sustained and focused commitment to global health security is vital to saving lives, spending dollars wisely, and minimizing political and economic instability around the world. The investments we make in prevention, detection, and mitigation now are far less expensive than response costs we could face later. A key piece of global health security work is identifying areas for improvement and strengthening these systems wherever possible. We have effective tools at our disposal to do this, including the joint external evaluation process, simulation exercises, and after-event performance reviews, all done in a transparent way.

We strongly support other countries engaging in these exercises, but no one can do it alone. Other countries rely on partnerships to help them identify and address their strengths and weaknesses. It's not just individual governments that opt to turn to innovative counterparts outside of government. International organizations should do so as well. Quite frankly, WHO needs to expand its Rolodex. We all know just how much ingenuity and expertise resides outside the walls of government.

As part of the next phase of GHSA, we will work to increase accountability among member countries, but also to pair up countries with outside organizations, stakeholders, and yes, even the private sector, to build preparedness. Just because an organization has stockholders or profits does not mean they aren't interested in helping to solve the health problems our world faces. Indeed, the incentives they have for innovation can make them a vital part of our efforts to confront infectious disease.

In the work I've done at HHS, I can attest that we would not have many of the tools we have to respond to infectious threats today, from Anthrax to Ebola, without the rapid innovation driven by private sector initiatives and public/private partnerships. We know we will never be 100% safe from infectious disease outbreaks. This challenge is so immense and so quickly evolving that we must be as open as possible to all those who look to contribute, including private innovators.

Everyone inside and outside government wants their countries to be safe from the terrifying threat of an infectious disease outbreak. The U.S. Government recognizes that. Our policies recognize it, and we're eager to work with all of you to make meaningful cooperation with the private sector a reality everywhere that we can.

Thank you very much, and I wish you all a very successful conference and week ahead.

From the Front Lines: Update on the Ebola Outbreak in DRC

Steve Davis: Thank you, Secretary, and thank you for making your thoughts known on this busy week. So with that, we are going to shift the ground a little bit, while the video presentation is getting ready, to the reality of what's happening in a live outbreak situation. We've talked and everybody's referenced what's going on with Ebola in the DRC, which is in fact the third Ebola outbreak in the past 18 months, and the 10th one in this country.

PATH is not a frontline response agency; that's not our role. We work on innovations and support the government on innovation behind the scenes, but we've been very involved in the DRC, helping set up the emergency operation center, having digital health expertise, working on surveillance and real-time tools, to make sure that we can get to where we need to go. So we've become very intimately involved in understanding how this is unfolding and how we can help support the response.

We have been working closely with Minister of Health, Oly Ilunga, on this situation. And actually, we'll ask the Minister to now speak to us via video.

Min. Ilunga: Good afternoon. DRC has a long history with Ebola and outbreaks in general. Over the years, there has been tremendous progress in our ability to respond to these outbreaks. We are currently responding to our 10th Ebola outbreak. So far, 120 cases have been reported, and 100 people have died, which is three times greater than the previous outbreak in the Equateur Province.

I see four factors that can explain this difference. The outbreak occurred in a densely populated area. The population in that region is extremely mobile as

they are traders. There are good road conditions which facilitated the transport of people to several cities. And the security situation in that region is also tense. In view of these challenges, we had to significantly step up our response and use all the new tools at our disposal. These new tools include the experimental vaccine that helped us break the transmission chain more quickly,

More than 11,000 people at risk of infection have already been vaccinated, we have the ability to treat people in Ebola treatment centers and the use of data and digital tools to better track and map where cases are occurring. The DRC government remains deeply committed to continuing to improve our ability to respond to outbreaks, and hence today our role in the Global Health Security Agenda. We are glad we can continue to rely on the support of our partners and the international community, not just to stop this outbreak, but to ensure that we are working together as a global community to collectively get better at preventing outbreaks in the future.

Steve Davis: Thank you. I have to say, as someone who spent a lifetime working a lot of multi-sector projects and problems, it always comes down to leadership. We've been honored to have so many great leaders working on this, but I spent quite a bit of time with His Excellency, the Health Minister in DRC, and he's a very strong leader. We're very lucky to have him.

We have other leaders in the room, and now I'd like to invite two very important people working on this problem, to discuss more broadly how we prepare and respond in Africa to various outbreaks. I'd like to call to the stage Dr. Matshidiso Moeti, the Regional Director of Africa, WHO Afro, and Dr. Sylvain Yuma, the Secretary General for Health in the DRC, who's is representing today Minister Ilunga.

Dr. Moeti, we just heard from the Minister who talked about the situation in the DRC, and obviously WHO has been very involved the response, as well as in the last Ebola outbreak. Can you talk a little bit more about WHO's role in mobilization and give us an update on where we are today?

Dr. Moeti: Yes, thank you very much and good morning everyone. Thank you to PATH and your partners for convening this event, and I apologize in advance for the fact that I have to run out soon. I'll stay for about 45 minutes and see what the others have to say. But I think it's very important to reiterate the praise for the leadership of the Congo Government in this situation, and specifically of Minister Ilunga. He has proven invaluable not just in this outbreak, but in previous outbreaks as well. I have never seen another Minister who is on the ground, in the field so frequently as this man from the Congo has been. So he really is demonstrating the quality of leadership that's needed to get on top of this outbreak.

He sent his director general to the field, to be the initial incident manager as we were setting up and mobilizing other people to go. Again, the Minister was left while a key figure of the management team of Ilunga got out there and was able

to see for himself, and be very practically involved in establishing the capacity to respond to the situation.

I think my colleague from the Ministry will provide details of what is happening in the situation in the Congo. But up to now, we've had a total of 151 cases, 118 confirmed and 101 deaths. So that is a very serious situation. It has spread geographically, as my colleagues report, over several hundred miles. And that was due to two factors: One is population mobility, as the Minister had said [inaudible] You can see people moving around. This is very different from the situation in Equateur Province – it is much more remote, hard to reach.

So here the big challenge is the population movement and the insecurity. This instability is a huge factor. A couple of days ago, we had to ask our colleagues to stop going out to certain areas because it was simply too unsafe. And we had to invest working with the government a lot more in [inaudible] leaders of various groups, in order to make everyone understand that they are collectively... it may be that they have the conflicts, they have issues, but everybody who is in that area, including the armed competent groups, are at risk.

So this is the communication that is being classified with groups. Likely as of yesterday, we understood [inaudible] had been breached and therefore we are expecting operations to stop again today. But this is a constant situation that requires monitoring and engagement with the communities.

In addition to that, we've noted that because of the context of this situation, there's been a distinct effort needed to gain the trust of families and communities to have their cooperation. Again, this illustrates the importance of the type of expertise that needs to get into these situations from the beginning. It's no longer enough to tell an epidemiologist than somebody who can count disease, that's it's very important to engage right from the beginning. This is how we're trying increasingly to work in WHO, meaning that we need these multi-disciplinary teams to be on the ground, right from the very beginning when an alert is recognized.

Here, more than in many other situations it is very necessary to have not only experts from outside, but local experts who can gain the trust of the communities and carry a message in a way that's effective.

You asked how WHO is working on this and who we're working with. I asked my colleagues to send me a list of the partners who are involved and frankly, I think it would take too much time to read this list to you. But we are working, of course, under the leadership of the government, with a range of entities, very much with the United Nations, and with OCHA who is playing a leading role in working with WHO and the government to coordinate the response.

We have, as well, a range of partners from different sectors. These partners range from the UN to The African Union and the African CDC. We have partner

governments, the U.S. Government, the U.S. CDC, the European Union, the Norwegians, the UK. We have non-governmental partners that are playing a very important role: the Red Cross is here as well as MSF and ALIMA, with experts under the GOARN network, a global network of responders with expertise, in addition.

We organize this operation through coordination committees or platforms, both in Kinshasa and in the field, in Beni, and in Mangina who organize the work that's been done by the different teams. I won't go into the details because I think my colleagues will expound on how this is actually working on the ground.

I did want to follow up on a comment that you made about the contrast between the mobilization and the investment when an event occurs of this nature, specifically the lack of continuity and weakness in sustaining this investment so as to improve the capacity of the countries and their preparedness.

I think it's a tremendous effort that the governments have made to invest in the joint external evaluation program, but that does make a difference to that sector. Believe me, it took a while to persuade the African governments to allow external entities into assess what they were doing. Initially, there was some resistance. People thought that the self-assessment that had been in place and the IHR mechanism was sufficient, and it was only when it was positioned as peer-review as opposed to external review that they accepted.

We are very pleased that so many countries have come on board. I believe we have 35 countries or so in the region. I'm not quite certain, but there are certainly more countries than in any other region.

However, the gaps have been identified. Countries are working to develop their plans, and we are hitting a resource gap. We have a Global Health Security Agenda which is a wonderful platform and alliance that is moving this agenda forward.

We recognize that our national governments need to invest with domestic resources in various aspects to fill in the gaps, and we have worked with the African Union and carried out advocacy at the level of the heads of state until they adopted a resolution on building capacity on the international health regulations at the last summit of the African Union.

As we work at the country level, through our representatives and through the UN, our mission is carried out in order to continue this advocacy and try to mobilize domestic resources.

I do believe it's very important to also have the international community respond with potentially financial support for these countries' dependent gap.

We have such momentum going now. As more and more time passes, I am concerned that we are going to see a slowing down of this momentum, and frankly, a loss of interest as people focus on the day-to-day on-going crisis. I believe the opportunity is now, that the international community needs to invest, and we will continue to work with the national governments so that they do their part in investing in these gap-filling plans, which have been or are being developed by their Ministers of Health.

I'd also just like to say that we've seen the engagement of other sectors as well. Again, this is an opportunity not to miss in consolidating that interest in the development of the plans of other sectors, to engage with the health sector in ensuring that we include the capacities of preparedness of these member states.

Just to conclude, I'd like to thank all of you, because I see in the room representatives of all the organizations that are helping not only in the DRC, but in other countries, in the very frightening cholera outbreak, for example, that has broken out in Harare in Zimbabwe, reflecting the lack of investment in basic water implantation infrastructure over a couple of decades once the economy of their country collapsed.

I believe this month's agency, multi-sectoral, including the private sector partnership needs to be centralized and expanded, and I'd like to assure that WHO is engaging increasingly with the private sector. We are working in the area of research on vaccines with foundations and private sector entities. We are working in the region, in the African regions, developed with the African development, on an initiative to engage the private sector, on universal health coverage, including on research and find out how to advise the government and organize ways in inter-government level to leverage the capacities of the private sector in various groups.

Thank you again for having me.

Steve Davis: Well thank you doctor. So great to have that overview, and your insights and support, and we look forward to continuing to work together on many of these situations. I had mentioned, just both in reference to the Secretary's comments and Dr. Moeti's comments, that actually Dr. Tedros and PATH will be entering an agreement this week on creating a partnership on digital strategy, supporting how to engage more private sector digital innovation in the work that WHO is helping support in governments around the world, and we'll be happy to focus on the outbreak piece of that. More to come on that.

Dr. Yuma, thank you so much for being here in the middle of all these situations in the DRC, and this is the tenth Ebola outbreak, and I'd love you to speak a little bit on, A, maybe if there's any update you want to give us, but B, what's the role of some of these new things that have come along? The vaccines, the new digital tools, the surveillance mechanisms. Can you talk about how they're helping or not helping the response in the DRC? Thank you.

Dr. Yuma: Hello to all. I would like to make some remarks, in the name of His Excellency the Minister of Health, Mr. Oly Ilungaw, who delegated me to represent the country in this high level of platform. To thank, first and foremost, PATH for hosting the conference. To the government of the United States as well, thank you for welcoming us in this beautiful country. Thank you to the other partners that are assisting in helping the DRC with this disease called Ebola. Thank you to Miss Moeti for her assistance, and also to the OMS for the assistance throughout the whole time.

This tenth outbreak that we are dealing with today, this tenth outbreak that we are facing, it remains a very specific outbreak particularly because of its context.

I think the Minister's speech gave you a little bit of a context with this epidemic. I would like to add that, with this context, the fact that it's happening in a village that has always known a bad situation in terms of war. They have always experienced every day killings and death. This is a community that is now going back into itself. It's reluctant to all types of different contact.

In some sense, they feel neglected, in some sense they feel abandoned, not only by the exterior community but also the local government, because the war has continued and the death is continuing.

So, you can imagine in this context we see a multitude of partners cloying on the field saying because there is a disease that's killing people here. But then at the same time, every day there's a killing that happens on the same level, sometimes even worse.

Then right away, we have a problem of resistance that we're dealing with today. The current outbreak that we're having in this epidemic could have been done four weeks ago, because the epicenter was Mangina, or 90 cases and 65 deaths.

The epidemic was left over there because for one time, we had extra supplemental tools in the fight. The vaccination ended up playing an important role in the fight and allowed us to break a chain of contamination. There's also the taking charge of the molecule today that contributes to the treatment of the ill, that allowed us to save some lives that were positive for the disease. This is the advantage of the new tools that were added in the response.

But the problem that is allowing the epidemic to continue is the fact that there was resistance In a family that had experienced the community death and refused contact with a whole system, with all the partners. A woman of 48 years died and she was buried in non-secure situation. All the people who were in contact around were in a new home with different cases here and there.

With this epidemic, we have these new tools being the vaccination and the therapy as well. These gave us the opportunity to strengthen even more in terms of organization. We have committees and commissions that are working

against, in this fight. For once, we now have a table with specific goals for everything committee, every commission. Now, with our EOC with the centers for emergency, we have the ability to talk and visualize what's going on in the field. This is allowing us to exchange information and to give different direction in terms of coordination to also do collective work in the field.

This is a very summarized version of what's going on in the field. Every epidemic allows the country to have supplemental cases. I can assure you that the EOC today is a model structure for the fight against Ebola. This model can be capitalized for use in other epidemics. There is a case of a situation of cholera that's been experienced in DRC, and we didn't have too much difficulty in terms of structuring the response. That's what I have to say at this stage, thank you.

Steve Davis: Thank you. That was very helpful, and we all need to remember that it's really what happens on the ground in real time that we all have to be working with at a daily basis.

I've got to grab one more minute. I know that we're running short of time, but I do think with the audience in front of us, the people thinking about how to prioritize their agendas across multiple sectors, public, private, and social sector leaders in the room.

If each of you would just take one minute or less and tell us what we need to be doing collectively to help accelerate this agenda. Give us one big call to action, and that would be helpful I think for all of us to take away today. Dr. Moeti.

Dr. Moeti: Thank you. That's a tough one. There's a lot to do. I think one of the unique situations around Ebola, and perhaps other problems, is the partnership to translate research into services on the ground in countries.

I do believe it's taken on a new dynamic, and the fact that we were able to deploy the vaccine that had been tried out in Guinea, in the previous outbreak and quite on a limited basis. One thing we need is for the private sector to work with government; to work with researchers, with technical agencies to take the research investment that goes on, onboard in a way that enables sufficiently rapid while adequately regulated development and deployment of a tool, and have it on the ground in a place like Mangina, and continue it for other problems abroad.

I think to carry this out and to develop this component for that, and to have the governments engage as well as partners, donors, private sector in this, is a very important piece of work.

Steve Davis: It's a great answer, actually really brilliant, and I'm looking around the room at different people that we all feel like we could maybe support that agenda, and I think that that's a great articulation.

Dr. Yuma, again, just a quick response. What do we need to do to help you, and how can this group and room support your work?

Dr. Yuma: I think if we look at the investments that have been done in the fight against Ebola in these recent years, we are around 100 million dollars. I think the thing that concerns us the most is how can we construct and invest in a strong health system, so that when the necessity comes, action plans should be inscribed into the situation itself. One that takes into account all the systems, the local system and the central system. What we're waiting for from all the partners that are here, even the ones that are not here. It has a company that the countries, what they already see.

It's true that we can't avoid new cases because the environment of the country makes it so there will always be a virus somewhere. But how we construct a capacity to prevent, detect early, and respond effectively? I think that's what we are expecting, is the support of everyone. I'm sure that we have many actions here, whether it's surveillance, whether it's taking charge, whether it's control.

Steve Davis: Thank you. That was both, very effective ways to articulate what we need to do collectively. Let me actually thank Dr. Moeti and Dr. Yuma for their participation. Thank you.

Again, thank you, and on behalf of all of us, thanks for your leadership, and please, our best wishes to Minister Ilunga and the people of DRC, to the end of this outbreak.

I'm now pleased to hand over the program to Sheri Fink, who many of you know as a leading reporter on a number of important issues, including the Ebola crisis in West Africa, for which she won a 2015 Pulitzer Prize from the New York Times. Sheri, thank you very much.

Panel Discussion: Progress and Pitfalls in Outbreak Preparedness

Sheri Fink: Thanks. It's wonderful to join you today, and I think that we in the media have an important role. I think one of the themes that seems to be coming out today is that we learned globally a lot after the Ebola outbreak, and then to some extent, attention has gone away from some of the commitment, some of the lessons that were learned by many different panels and investigations and they certainly coalesced around a certain number of actions and priorities, and then, of course, what's important is to make sure that that doesn't fall off the agenda.

That's on us in the media as well as all of you, who I know are committed to this work. For our next panel, I'd like to call the panelists to the stage. We have Awa Marie Coll Seck, the Minister of State to the president of Senegal, and the

former Minister of Health and Social Welfare for the Republic of Senegal. Please come to the stage.

We also have here Julie Louise Gerberding, Dr. Gerberding, who is the Executive Vice President and Chief Patient Officer at Merck, and of course a former CDC director in the U.S.

Joshua Obasanya, the director of the Prevention and Programs Coordination for the Nigeria Center for Disease Control. Elhadj As Sy, Secretary General of the IFRC, as well as co-chair of the new Global Preparedness Monitoring Forum. I think we have an excellent panel today.

I'll just ask our panelists to try to keep your remarks to one or two minutes, and I'll start by just kicking it off with a question to each one of you, and then at the end hopefully we'll get a chance for people in the audience to ask questions as well.

I'm going to start with Dr. Gerberding. Of course, we're all very aware of investigational vaccine that is being used now in the Ebola outbreak in DRC and had been used earlier this year for the same purpose.

I think it would be really helpful if you could explain two sides of things. One is, what allowed Merck to be able to develop this and deploy it, and then, on the other side of that, of course we want more. We want more vaccines. There are even bigger gaps with diagnostics and other types of technologies that are needed. What needs to happen so that there can be more successes like this?

Dr. Gerberding: Thank you. I'm going to start by thanking the organizers of this, it's very important that we come together and really share our progress and our pitfalls in this whole domain, and I'm sure all of us are really touched by the comments from the DRC, and are mindful of the fact that as we sit here, those people are on the frontline and still putting their lives on the line to try and save other people's lives.

Merck, which is known as MSD outside of the United States and Canada, stepped up in the context of the Ebola vaccine because we recognized that the inventors had a product that we would know to manufacture and had a sell line that was uniquely adapted to being able to do it.

When we saw the scope of the problem and recognized that we had the capability to take that invention and move it through the pipeline very quickly using some existing capabilities and facilities and know-how, it was our responsibility to step up, and I'm very proud to say that that's exactly what happened in unprecedented speed.

There's never been a vaccine that has come into fruition this fast. I think what has happened is proof of concept. We've proven that you can invent something

for an unpredictable problem that has inherent uncertainties, in terms of who, what, when, where, why, and how.

We've proven that you can not only invent but you can deploy, assess, and stockpile a product that can quickly be redeployed if necessary. I think we've proven the power of partnerships, because none of this would have happened without enormous public and private sector partners, and I came here representing the private sector today amongst my public health colleagues, but just to say that this wasn't just a Merck effort, this included GSK and their vaccine, Johnson & Johnson and their vaccine.

The private sector helped with things like diagnostics, supply chain logistics, data, and so on, so forth. I really want to emphasize the importance of private sector engagement, and that's one of the reasons why CEPI, the new organization that's been designed to try to replicate this experience, is so critical to global health. Thank you.

Sheri Fink: Thanks. We'll go next to Minister Coll Seck. Back in 2014, 2015, Senegal was able to have just one case of Ebola, and could you talk to us about what you think allowed the country to prevent a bigger epidemic, and maybe where you see what happened to allow other countries to have that same capability?

Min. Coll Seck: Thank you. I would like to thank the organizers, but also really reaffirm our solidarity with DRC, because we know that this is a very difficult time, and they need everybody around them.

The question you raised can have a short version and a very long version, but I will take the short one. Just to say that, when the epidemic started in West Africa, it was the first time we had that. Everything we knew was that a disease named Ebola exists somewhere in central Africa, but nobody was aware of how it is going.

When it happened in Guinea, and doubly to really declare that we had something in West Africa, it was in March. We started at this time to prepare the country. For me, a very important point is early preparedness. We cannot wait for something to happen to start to work. This has helped us a lot.

The second point is leadership. Leadership, because in a lot of countries, you can't have first it denied. We don't have anything, or you can have also a possibility of having leaders say that it is not a big story, we can wait, et cetera.

This is something we didn't have. We had a lot of support, particularly from the heads of states, and we were able to also have financial support before the partners came on board, because it was clear that we need money to do the work we wanted to do.

Strong leadership can help us. Coordination is another point, because everybody can come to help you or your own local people, partners, who can have different types of activities and everybody is going in all directions. Coordination is very important, but what we coordinate can be at the level of the Minister of Health, but mostly also a multi-sectorial approach.

Communication. You need to say the truth to the population. As soon as you start to hide things or say things which after is seen as a mistake, you have a problem. Clear communication, but also use different languages. In our countries, it is very important.

We had also, I can't give a lot of details because we took a lot of time on communication, but let's go to another very important point of community engagement and empowerment at all level of the community, to the people in the fields, to the leaders in the community. Religious leaders, traditional healers, all the leaders at community level who are involved.

It is very important to avoid discrimination, because you say we had one case. The case was coming from another country, a country really where we have a lot of people from this country living, in Senegal, and this started to be a problem of these people and not a problem of Senegal.

Lastly, the issue of partnership. Partnership with the private sector, partnership with a lot of partners we had and came on board, and I would like, as I am in the U.S., to also to thank the U.S. government, the CDC, because we had a lot of support from them, but also from a lot of other countries I am not naming today, because there were a lot.

This is important because we saw that we are not alone. Lastly, it is very important to look at also when we say partnership, partnership with other countries. We had issues, because we had the big problem with the frontiers, but we created a corridor where every people are able to come from countries to the Sierra Leone Library or Guinea to help them with logistics, with medication, with everything and I think that is what's also a really important point. Partnership, look at it broadly, because this is the pace also of the work we have done. I will stop there.

Sheri Fink: Thank you for that concise and very well summarized message. Dr. Obasanya, a similar question for you. Nigeria was able to keep the numbers of Ebola cases in 2014 to quite a small number in comparison to the much larger outbreaks in neighboring countries and more recently Lassa fever, the outbreak this year, was managed quickly and with fewer deaths than could have happened. So what are the major factors of your success and what kinds of improvements has Nigeria made based on that experience in fighting these epidemics?

Dr. Obasanya: First I'd like to thank the organizers for inviting me here and to say that though the outbreak in Nigeria was contained successfully and the global community

recognized the Nigerians rapid response to the outbreak, for us we acknowledge that we moved rapidly to put in place a mobilized rapid response teams and also to man reverse contact tracing platform. All of this that we did was actually ad hoc. So it was similar to what happened in Senegal, that we were not prepared. Most of the systems for these activities were not in place. A lot of the systems were not in place.

Taking lessons from the Ebola outbreak, we moved quickly ahead with preparedness and response activities. And actually I wouldn't say it was a blessing that we had the outbreak. Initially we thought the outbreak, Ebola was out there and it was not in Nigeria. But we quickly realized that that was a big mistake. And the outbreak brought to the fore the work of the NCDC, our important team.

Taking lessons from the outbreak, what have we done? We have moved in rapidly to establish a national reference laboratory with a network of public health laboratories that are capable of detecting rapidly outbreaks and at the NCDC, we have also established Incident Coordination Centers. And the Incident Coordination Centers working and are able to pull together data from different digital surveillance systems and the ICC, Incident Coordination Center, continues to monitor the information coming from this and also to coordinate our response.

Also at the NCDC, we are similarly supporting the states to establish their emergency operation centers. And these centers are network with the ICC. So there is no doubt that a good coordination mechanism is a critical success factor in any emergency. So we have also put in place, to be better prepared, we have put in place various SOPs, contingency plans, and we are working with our partners to identify the roles that every stakeholder and partner could play in times of emergencies.

So I'll stop here by saying that we will need stronger partnerships, strong laboratory infrastructure and a well-defined coordination mechanism. We are better prepared.

Sheri Fink: Thank you. Mr. As Sy. IFRC obviously has such a global reach with its humanitarian work and focus amidst that work on health. What is your assessment in terms of the globally is the world getting better at preventing and responding to pandemics? Where do you see we are today compared with three or four years ago?

Mr. As Sy: Thank you very much. My colleagues have already highlighted the importance of the issues as well as the many challenges we are still facing. Well, we're trying. I think we're trying harder than we used to. We're trying to do better. Is it enough? Probably not. There is still, I think, a lot to do. There is so much unfinished business that we need to continue, and for me that is really critical.

If we go back to West Africa, four years ago, Kenema, Kailahun, Macenta, Gueckedou. These were household names. This is where the outbreak was. Everybody thought that either the weakness of the health system of the lack of the health system all together, we all knew a portion of the fragilities that were there. And I'm not sure if we have another shock like we had in Macenta, Gueckedou, Kailahun, and Kenema, then it's not going to be any better. So my biggest worry is, you know really, what's in there after we responded, I would think, successfully, that has taken that community and those places at another level so that they don't find themselves in the same situation of vulnerabilities next time around.

We heard it from our colleague from the Congo as well. That is not a normal situation. This is a situation where we have to know the conflict and all the fragilities that we're talking about and we're seeing the same patterns. Like people in Kenema and Gueckedou, totally overwhelmed. Suddenly we came with all our arsenal in responding to Ebola so the same misunderstanding is also being caused because of the many dysfunctionalities that are already there that we really not have addressed. So since then we have to recognize that a number of things have not been done from which we are drawing a number of lessons. You know we've seen the extra effort that the private sector is doing. The leadership in our governments which is good now to see, even though in many places, frankly where the outbreak and the risk are greatest, there is no government.

We also see academia and many other groups advocate coming to the partnerships and then trying to respond better. We know that what we are facing is so important that it cannot be left to any one sector alone. Leadership of government is key and I really appreciate the leadership we've seen here today. But true national response is more than a government response and we have to make sure that all the other sectors, including the communities in those hardest to reach places, are involved.

A true global response is more than a UN response, too. We want UN, we want WHO, and rightly so, but we need also everybody around this table to make it a true global response. And you know that I'm here because I'm co-chairing the Global Pandemic Monitoring Board, but I can say that preparedness is too important to be left to one board alone.

So it is one board that is trying to stimulate and convene and facilitate and instantly devise response and coordination and all, but I think if now we started saying, "Wow, there is a Global Pandemic Monitoring Board" and stop there, we miss totally the point. Now is the time, I think, to recognize achievements we've made. To recognize progress, absolutely, but to be very humble and realize that what we are facing here is bigger than any of us alone, and now is the time to further strengthen our partnership and recommit ourselves more to do better, faster, and smarter. Thank you.

Sheri Fink: Thanks. Good rallying cry there. For the second round, I want to focus us a bit more on some of the gaps that you've identified, and we'll start again with Dr. Obasanya. It is important, of course, to have those strong systems to detect outbreaks and we also need to have the tools to stop them. You talked about the importance of the private sector and its role. We certainly heard the same from Secretary Azar. What does it take? What does this world need to do? What do various partners need to do to engage the private sector in a better way to fill some of these gaps that we all know exist in these various tools, whether that's therapeutics or diagnostics.

So could you help us identify some incentives and maybe along the way, what are the barriers that have been preventing more progress in this area?

Dr. Obasanya: I don't think the private sector partners that we've been working with in this context see this as a market opportunity. They see it as a responsibility and a commitment to the global community that matters to everyone. And in that spirit, I think the model of consortium or alliance is a really appropriate model because it allows everyone to contribute what they can, but at the same time, doesn't expect any one player to carry the economic or the human resource responsibility for the entire solution.

I do think it's important, however, to learn lessons from the experience that we've had with Ebola and I'll just focus on the vaccine as an example of that because there's a bit of a naivete that if we just got all the partners together and we decided what needed to be done, then the box is checked and everything will happen according to plan.

And we have learned so much in the course of just dealing with one complex outbreak and one countermeasure, in this case an experimental vaccine. We have learned that the product is necessary but it is not sufficient, and the complexities of doing clinical research and proving that something works, the complexities of moving things across country borders, the complexities of storage and inventory, the complexities of the regulatory environment, of informed consent, of cultural competency and literacy in a relevant way in the communities that you're operating.

I could go on and on, but for all of those reasons, the private sector obviously can't do these things alone, but we do want to be able to step up and you might be surprised what else we can contribute. Because we do know how to influence people's decisions. We do know how to market health products to people. We have a lot of other capabilities that could be helpful in this regard, but we have to have an open door. And I think the tendency is to think of private sector engagement as a commodity provider rather than a committed stakeholder with a set of capabilities and capacities that can complement those that other sectors bring to the table.

Sheri Fink: Thank you. Minister Coll Seck, Senegal recently had experience with this new joint external evaluation process and one of the goals of that was to identify

gaps that need to be addressed to better prepare for outbreaks. I'm curious: how did you find the process? Were the findings useful? Has the country been able to act on them and what advice have you had for other countries in this process.

Min Coll Seck: It was important to have this evaluation and particularly an external evaluation. Because when you are in a country, particularly Senegal, when everybody was telling us, "Oh, you have done very well," Et cetera, it was a situation where we would have been able just to say we are the best and we just continue like that. But we realized that we have a lot of gaps. A lot of things we need to improve. And it was good to have and agree with external evaluation. And what we realized, and I am here with one of my advisors, and I told him, "It is so tough. Why people are saying all this?" Because it's very important.

But when we did the evaluation, we realized that it was too informal. It was not really putting the sectors at the highest level if they just send people like this. It was also just at the level of the Ministry of Health, and we realized that this needs to go up because when we look at One Health, One Health is different ministry. One ministry cannot be the only one taking the lead. It needs to go to the level of prime minister.

This was an improvement because now we are in this idea of having, following One Health and it is important to have this done. It was an evaluation and we realized that it was true and we are now doing better for that. The other one is the health system. When you look at Liberia, you're just going out of a war. It's normal. They don't have a lot of doctors or nurses, and for us, it was very important. In Senegal, you have enough doctors, you have enough nurses, you realize that it was not only that but it was also important to have the human resources with different types of strengths and not only what we had, but also look at the system itself.

It's not only the hospital. It's also the community. From the community to the hospital. And this is very important. You have a health system but often people look more at hospital and things like that. Now this is another gap we are trying to fill. We look at labs. We realize that in Senegal, you have a lot of labs, but they are not working together. And this was also how to strengthen it. This is another gap.

We realized also that at the moment when we had the Ebola, everybody was focusing on Ebola. And if we are not careful, the other program will completely be upside down. It is why we have created Live Nigeria and we look at you for that. And we created this emergency center for our response. And now we have a very strong center supported by CDC. We have really learned from what we have done.

It's just to say that we need to look at this global health security agenda and look at it at a different level. And we are now part of a global family. Ebola is not a story of Africa. Ebola has come to the US. Ebola has created some trouble here

also. It can be everywhere. We need to work together and have more solidarity between us. It is what we learned and we are working on that, expecting that everybody will have the same vision that it is not normal that people die every time like this. We need to look at solutions to be better prepared and better prepared is to evaluate what we are doing. Which is why the evaluation for us, particularly external evaluation, has helped out a lot. Thank you.

Sheri Fink: Thank you. Dr. Obasanya I'll ask you a similar question for Nigeria and then maybe you can also branch out to what can the, what can international partners do to support countries through their evaluation process and, of course most importantly, the steps after that?

Dr. Obasanya: Let me start by saying that the JEE tool is an excellent one, bringing together all the partners, local, international, private, and public. But then the process needs transparency. You must be ready to open your cupboards, your kitchen, your bathroom. Everything in a very transparent manner, otherwise it doesn't work. So in Nigeria, we decided to open up everything and to be very transparent and honest. When you look at our JEE score, it's low, but we're happy with that because we told ourselves you need to come to the reality of where you are. To be honest.

The JEE help us to identify some critical areas for intervention. Over the last two years we have been working to improve our systems, but with the JEE report, we are able to actually put our finger in the right pile. So now we have started meeting an agenda of strengthening areas of weaknesses. Like registered surveillance systems, we have established an Incident Coordination Center and so on and so forth.

But specifically, we are developing a national action plan on health security. This plan is almost finished now. We plan to launch this in November this year and by the time we are launching this, we expect that the government of Nigeria will play a critical role, take leadership position, and take ownership of this plan. And again, apart from the government of Nigeria, we also have said that because we have the participation of local and international agencies, the private sector, even the military participated, we expect that joint ownership is very critical to the process.

Sheri Fink: And is there anything that the international partners can do to support countries?

Dr. Obasanya: Yes. One thing that this plan has done is to bring to the table all the problems that we have. So you are overwhelmed with those problems. So starting from bio safety to bio security to strong risk communication systems. So there is not, so what we will need to do is to actually prioritize because that's critical to prioritize. And at this point, invite every stakeholder to the table to start asking question. What can I do? What is my role? Where is my area of interest?

This is very, very critical because your system will have to be able to prevent, detect, and respond appropriately. You need to address almost all of these critical areas of weaknesses. So I think it's not finished. There will be a lot of prioritization that needs to be done in order to be able to move forward in a way that we'll be confident that it will be able to be able to protect the health of Nigeria.

Sheri Fink: Thank you. Mr. As Sy, you talked about the Global Preparedness Monitoring Board, which you're co-chairing with the former WHO Director-General Gro Harlem Brundtland. Could you tell us more? I know you said it's not the solution to everything, but of course there's been years going into the creation of this board. A lot of hopes are hinging on it in terms of its ability in particular to foster some sort of accountability, because there were all of these reports and all of these commitments that were made in the past few years. So what will the board be able to do in terms of trying to foster that accountability? Trying to centralize some sort of note of oversight of this whole sector? And maybe tell us the strengths and where the gaps are or what could be done to make it an even more effective tool, in your opinion.

Mr. As Sy: First off, we believe that the Global Preparedness Monitoring Board is extremely important and there is a lot of hope in it and that's why we're investing ourselves and our time to do it. We truly believe in that, but it might be too early to talk about strengths and weaknesses. We're just starting. You all are rational. I want just to talk about process right now in establishing what the plan would be. Planning a similar report that would take into account all these questions that you're raising, but it’s too early get into already what the strengths and the weaknesses of the board.

Let me highlight some of the issues that are related to your question but also will point out to you what the board can do. So while we focus on the big outbreaks, we should not lose sight of everything else that is happening at the same time. As Red Cross is doing dignified burials in Sierre Leone, Liberia and Guinea. And you all know that Ebola killed 11 to 12000 people. In all of that time, the teams were called to bury 52,000 people. So that put things in perspective to give us an idea what was now going on and all at the same time.

We are also focusing now on the big, massive, localized ones. Ebola comes often, we had already this morning about other incidents with other diseases. Fine, but let's also not lose sight of maybe the big global one that can threaten us all and that could be something simple, like a new strain of influenza. And I cannot help to think about that when we're getting now to the hundredth anniversary of the Spanish flu. Now if we ask ourselves, are we really ready for such a big global airborne one? I think you all, in your own perceptive and rights, have your own answer to that question.

Sheri Fink: I think these are important points, but I would love, and I think a lot of us would love to hear more specifically about the the board is. Sort of what came out of

your meeting and what you sort of plan in terms of accountability around the sector.

Mr. As Sy: I think I was trying to give you more content of what the board is dealing with other than just in the meeting and that's why I wanted to link the two together. Now the meeting happens, so that the issues indeed that we discuss, to say that it's important that the board reflect more on all of those. That it is important that the board not only look at accountability and naming and shaming, but also incentivizing action. It is important that the board look at what kind of partnerships can be built.

So in that regard, we are dealing also issues like data, data collection, research, the collection of samples, who own them, how they're sharing them. We look at international health regulations and how that is being really adopted and not only talked about by countries. We look at also progress made around the JEE. And all this giving us some kind of content of what the board will be dealing with.

So it is the first meeting we had and those are the content of issues we're discussing and it will give us already a certain direction of what the report will be focusing on. The scope of it as well as the working process and relations and timing of the report and how can it be linked to other global processes so that, again holding everybody accountable but also incentivizing action.

Sheri Fink: Thank you very much. So we have about five minutes left and I'd like to just allow one or two questions from the audience. Over there please.

Audience Question: Hi, good morning. My name's Kate Dodson, I'm Vice President for Global Health at the UN foundation and the proud organizing partners of this event, so thank you so much for joining and sharing your reflections. I wanted to ask a question about financing preparedness, not necessarily outbreak response. But from the country level perspective, if you think about the kind of systems capacities that you've had to build up over the past few years that you've both acknowledged in the Senegal and Nigeria experience, have you been able to increase domestic resources to be able to meet those needs? Are you, what role for international partners in helping to provide that financing, and when you've gone through the JEE process and identified some of the gaps, how are you looking to close those with new financing?

Min Coll Seck: The health system is never perfect and we can improve every time. We need partners to support us, but for me, my fight is to have local government, local partners to play their role first before opening the door to other partners. This is for me more and more a priority. We cannot continue to just ask for support everywhere. And you can have a country deciding not to give support suddenly. And after you have a big problem.

This has changed our mind. We need to have ourselves, our own financial support for the work we are doing. Now we need the international community and the partners to support them to fill the gaps. And to look at what are our proprieties and not coming to just give us something, which is not our priority. But because often countries are poor, they accept to take the money because it is money on the table, but it is not a priority.

This is important when we are discussing, but at the end of the day, countries need to take the responsibility on their future, but they need to be open also to other actors, international, other countries, other partners to support them, but again, supporting their own priority. It's what we are calling always countries need to be on the driving seat. But you need to put your own money to be in the driving seat.

Sheri Fink: Thank you. Dr. Obasanya, do you want to answer the same question?

Dr. Obasanya: Yes, I'll say something on this. In Nigeria, we have the National Health Act, and through the National Health Act, a certain portion of funds will be made available for strengthening preparedness. That's number one. Number two, there's [inaudible] which is registered as the original disease surveillance system enhancement, which is a World Bank facility that the Nigerian government is assessing. So that provided funding opportunity to fund the national action plan on health security.

So we are working together, using the One Health approach, and specifically to the international community we'll be looking, seeking support to strengthen laboratory capacities. In the last one year we were been able to get a lot of support from some of the organizations inside the insurance side of this room to build capacity, to make rapid diagnosis. We have also a lot of support from some of the partners in this room to strengthen the surveillance system, building off EOCs at a national and at a sub-national level. So that is not completed, but the technical capacity to do all of this, we are set that we might be able to get that from here.

And also, for me, I think what is important is the alignment between all levels of governance levels, quite simply. And the alignment of the role of Africa CDC with the role of the regional CDCs and the national conference centers. So to get all of this right and we're able to have nice resources, then we are stronger for it.

Sheri Fink: Thanks those are great. Okay, so this is our last chance. It's gonna be a lightening round. You have one sentence, more or less, to answer this question. What is your top priority for action that will make the world more prepared for deadly outbreaks? If you could pick one thing and express it in one sentence. Top priority for action. Let's go this section.

Mr. As Sy: For me and our organization, to pay attention to the emergency situations. . . We need to do work in Afghanistan, Pakistan, and northern Those emergency situations and the health challenges and finding out what's critical, we need to pay that better attention.

Dr. Obasanya: Prevention and resistance capacities. Building prevention and resistance is a shared responsibility. So we have experience that. We have the tools, actually. We have the tools. And with the tools, we also have the experience that when we are working together, we're stronger. We have shown that to work in Nigeria, that has worked for some, though it started late, in Liberia, Sierra Leone, and Guinea. It's about building stronger partnerships and working together to ensure that we will build the resilience that we need to help each other.

Dr. Gerberding: I'm going just add to the previous two people by saying that I hope we would urgently and fully fund CEPI to get the counter measures we need available in the case of the next outbreak. Further along scientifically and further along from the infrastructure and the support necessary to deploy them effectively where they're needed.

Min Coll Seck: Okay. I agree with what you have said, all. But I will say something broader. I would like One Health be a reality, and not just a word.

Sheri Fink: Wow, Thank you so much. A lot of wisdom and a lot of a real call for action. And I'd like to turn it over to Gabrielle Fitzgerald to close the session.

Closing Remarks

Gabrielle: Great. I'd like to thank all the panelists for a really wonderful discussion. I want to wrap up very briefly, but I want to put our conversation this morning in a bit of historical context. As it's been referenced, we're in the 100th anniversary of the 1918 influenza outbreak. But more recently if we look back just four years ago to where we were at the UN General Assembly this week in 2014, the world was just beginning to mobilize a serious response to the West Africa Ebola outbreak. And then Secretary General Ban Ki Moon said that "none of us is insulated from the threat of Ebola, and all of us must be part of the response."

As has been referenced this morning, once the outbreak wound down, there was a plethora, some said an outbreak, of panels and commissions and reports looking at what had happened with Ebola and what could be done better next time. And I was involved in many of those efforts as a way to ensure that we did not end up in that situation again. And as Sheri mentioned, the multiple reports basically came to the same set of conclusions of what needed to be done. We needed to build national health systems' capacity, we needed to strengthen WHO, we needed leadership across the UN and other stakeholders like the

private sector. We needed to improve financing, accelerating the R&D of new technologies, shared knowledge, and systemized travel and trade protocols during outbreaks.

So today we focused on the progress and the pitfalls toward outbreak preparedness and we saw the scorecard on where we are to date. So on the progress side, we've heard about significant improvements in WHO, the exciting development of Merck's experimental vaccine already being put to use in the DRC. The significant increase and utility of the JEE process and really great feedback from Senegal and Nigeria on the importance of that. But we've touched on and then also not touched on some of the significant pitfalls that remain.

So, very limited progress on developing new diagnostics and therapeutics. Very fragmented surveillance system. Very limited funding to implement the recommendations of the JEE. And the lack of progress on synchronizing policies on trade and travel in time of outbreaks. And to date, there's been very limited monitoring and accountability of those recommendations. But we hope that under Elhadi As Sy's leadership of the global pandemic monitoring board, that is about to change.

So, this intermittent progress seems to indicate a loss of focus on the emerging pandemic threats. So what do we need to do looking ahead? We need strong and sustained leadership in every country to accelerate outbreak detection, prevention, and response. We need increased domestic and international financing to support these efforts. And we need transparent, independent monitoring of progress coupled with advocacy and accountability at both the global and national levels to close gaps.

So where will we be a year from now? In UNGA 2019 there will be a focus on universal health coverage. And we know we will not be able to achieve UHC unless we can stop outbreaks before they spread. As Steve mentioned at the beginning, outbreak preparedness is often described as going through cycles of panic and neglect in terms of public and policy maker attention. But many of us in this room continue to focus on outbreak preparedness, regardless of where are in that cycle. And I hope that we can challenge ourselves to not accept that the cycle of panic and neglect is okay. And we should move forward to a time where we have continuous focus on preparedness for the next outbreak on the horizon. And looking back again to where we were four years ago, Ban Ki Moon said "inaction is not an option." And I hope we'll all still take those words to heart and continue to move forward and make progress and encourage others to do the same.

So I'd like to thank all of you for joining us for the great speakers, the panelists, Sheri’s moderation, and thank you for being here today.