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WEBINAR

PREPARING FOR THE NEXT PANDEMIC:
A CONVERSATION WITH AFRICA CDC DIRECTOR JOHN NKENGASONG

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PARTICIPANTS:

Opening Remarks:

BRAHIMA S. COULIBALY
Vice President and Director, Global Economy and Development
The Brookings Institution

Moderator:

ALOYSIUS UCHE ORDU
Director and Senior Fellow, Africa Growth Initiative
The Brookings Institution

Featured Speaker:

JOHN NKENGASONG
Director
Africa Centres for Disease Control and Prevention

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P R O C E E D I N G S

MR. COULIBALY: I was just informed that I was muted for the past couple of minutes. Again, this shows how we are at the mercy of technology. My apologies.

I was saying, good morning and good afternoon, everyone. I am Brahim Coulibaly, vice president of the Global Economy and Development program at Brookings. It is great to be with you. Thank you for joining us for this important conversation with Dr. John Nkengasong, director of the Africa Centers for Disease Control.

As the COVID virus began to spread, many experts predicted devastating outcomes for the region, with some predicting up to 40 million cases by last summer. Some of these dire predictions were understandable. The healthcare system and infrastructure are largely fragile in many countries and access to quality healthcare is limited despite some countries' recent progress.

The most popular prescriptions contain the threat of the virus, such as social distancing, are challenging to implement in Africa where a large share of the population live in crowded slums. With the confinement measures, many millions of workers' livelihood were in jeopardy because they have limited access to broadband connectivity, telework, or other opportunities to maintain basic incomes. Even the most basic recommendation to wash hands regularly assumed that everybody had access to clean water which is not the case for a large share of the African population. Thankfully, these direst predictions have not materialized, at least not yet. And as of yesterday, the continent had recorded 3.5 million cases of COVID-19 and almost 90,000 deaths with the cases largely concentrated in a few countries.

So while immensely tragic, these numbers are lower compared to other regions. But even so, even one death from COVID is one too many. In looking ahead there remain significant challenges, especially as new and more infectious variants spread around the world. And the region continues to lag on access to the COVID vaccines. In this regard, the need for global solidarity to ensure universal access to the vaccine cannot be overemphasized. Given the global nature of the pandemic, I think until and unless everyone is safe, no one will be safe.

A key to Africa's response has been the efforts of national governments and regional institutions, notably the African Unions, the Center for Disease Control, first established in 2017 in the

aftermath of the 2014-2016 Ebola outbreak. And despite its relatively young age, the African CDC has worked tirelessly to improve testing, implement best practices across Africa, among other actions.

The success of the CDC was largely through the leadership of its director, Dr. John Nkengasong, whom we have the pleasure to host today to discuss those successes, but also the challenges that lie ahead. Africa could not have hoped for a better person than John to lead the region's CDC at this critical moment. John is an accomplished health professional and a scholar. In addition to numerous awards and degrees, most recently he has served as one of the WHO's director general of Special Envoys on COVID-19 Preparedness and Response. He is an adjunct professor at Emory University's School of Public Health in Atlanta. He serves on several international advisory boards, including the Coalition for Epidemic Preparedness Initiative and the International AIDS Vaccine Initiative among others.

John has authored an excellent essay in this year's Foresight Africa. That is the Africa Growth Initiative's annual publication on the top priorities for the continent in 2021, laying out his vision for the CDC and describing how African governments can prepare better for the next epidemic. I will encourage you to read it if you have not already, along with supplemental contributions from global experts on vaccine rollouts and the role of the national public health institutes.

John, thank you for your leadership, and it is my distinct pleasure to welcome you.

I will now turn it over to our AGI director, Dr. Aloysius Ordu. So over to you, Ordu.

MR. ORDU: Thank you for your kind words.

Thank you very much, Co for those warm remarks. I greatly appreciate that indeed.

Good morning, everyone, and good afternoon to our audience here in the United States, in Africa, and around the world. Welcome to conversations with Brookings's Africa Growth Initiative. This is part of a series of conversations we intend to have going forward on the key issues of tremendous consequence for Africa.

As VP Co just mentioned, on the 27th of January, we launched the AGI's flagship report, Foresight Africa 2021. You can download that report, if you haven't already done so, on our website at Brookings Global. The report presents the top priorities for Africa, at least the way we see them in the year ahead. You will find a brilliant piece that was just referred to in the report authored by my good

friend John Nkengasong, our guest today.

Now, here are some housekeeping matters. Viewers can submit questions throughout this session via email to events@brookings.edu or via Twitter @BrookingsGlobal, or by using #pandemicprep. From wherever you are right now, please join me by clapping to welcome our special guest, Dr. John Nkengasong.

So John, I'm particularly delighted to kick off this series with you, one of Africa's favorite sons. You obviously bring a wealth of experience and impressive qualifications as Co just mentioned. I bid you welcome to Brookings AGI.

MR. NKENGASONG: Thank you. Thank you, Aloysius for your kind invitation and for your very warm words. I look forward to having a very good conversation with you this afternoon, or this morning your time.

MR. ORDU: Great. Thank you. Thank you very much. And welcome.

Let's begin, John, with Africa's response to the pandemic. You recently published your annual report which I have here, the 2020. For our listeners, this impressive report can be found in the Africa CDC's website.

John, I commend you and your team indeed for the hard work on the achievements. Could you share with us today two of the key achievements that you are most proud of?

MR. NKENGASONG: Thank you again, Aloysius.

I think, let me first of all start by making (inaudible). First is that in two days, that is the 14th of February, it will be exactly one year when the continent of Africa reported the first cases of COVID-19. That was in Egypt. And that is important because seven days later, the leadership of the African Union headed by Chairperson Moussa Faki convened an extraordinary emergency meeting of all ministers of health in Addis Ababa to endorse a strategy, what we called the Joint Continental Strategy for COVID Response.

I'll start with that to segue into one of the answers to your two main achievements is that I have been impressed by the extraordinary leadership of our continental, political leadership that has rallied around the African Union and also the African Union Commission. The African Union led by His Excellency Cyril Ramaphosa, who led the whole COVID response on the continent (inaudible)

commission led by Chairperson Moussa Faki.

It is important as one of our key achievements to see leadership in play, to address the challenges of our time. And I start with February 14th because people always say, well, a continent, maybe what is happening on the continent is by chance. No, it's because of anticipated leadership where the leaders took this seriously. They saw the threat and took it seriously. And when the ministers of health left Addis Ababa on the 22nd, there was clarity of action and clarity of the danger that it poses.

(Inaudible) that ministers who were traveling outside of the continent rerouted their stays and cut it short to come to Addis Ababa for that meeting. For example, the minister of health of Nigeria was in Europe and had to reroute to Addis Ababa for that meeting. And so those early measures were very important in blunting the spread of the pandemic.

So when (inaudible) countries started having many cases started spreading and this time coming in from Europe, countries (inaudible) were to do exactly. I think that is important.

The second thing that you asked for, which I'll tell you is that beyond leadership is the cooperation and coordination across the continent. I've never seen any efforts in this manner or the African countries coordinating the efforts through the African CDC in the manner as I just described. And that is important. The (inaudible) coordination, cooperation, collaboration, and communication. Every Tuesday at 4:00 PM East African Time, we all come together as experts, public health experts on the continent to discuss the pandemic and chart a way forward and adjust our strategy.

So I think if you ask me what are the two main things that I've learned over this pandemic is, one, high level political leadership, and second, effective coordination across the continent.

MR. ORDU: Thank you very much, John. Those are very fascinating indeed. We hear you say basically that at a time when the world is fractured, I mean, there are all kinds of challenges to globalization, it is heartening to hear that on the African continent, political leadership is acting in consult, in collaboration, which is fantastic. And we also hear of the three Cs you mentioned -- cooperation, coordination, and communication, which are some of the things coming out of the continent in the year we just experienced.

Let's turn now to the fact that COVID-19 did cause extraordinary economic and health damage the world over. As Co mentioned in his introductory remarks, the naysayers up and down the

world expected the African continent to be completely devastated by this virus for the reasons of public health inadequacies and infrastructure deficiencies, et cetera. That didn't happen. Could you tell our listeners how and why Africa weathered the storm better than people suspected?

MR. NKENGASONG: Thank you, Aloysius. As I said, when we met on the 22nd of February and ministers left there was clarity of action and unity of proposed of what to do and to take the risk. And the risk was the severe lockdowns that were implemented very early on. I'll give you an example. In South African, before the lockdown the numbers were doubling every two days. Okay. So in other words, South Africa would have been at that time at the same level where the U.K. was if those severe measures were not applied. I saw that across the board. Countries like Zambia, Zimbabwe imposed state of emergencies with two cases or no cases. Zimbabwe went into a state of emergency without a case. So those were severe measures that had serious consequences on the economy but you have to blunt the spread of the virus. I think that is one.

Second was that there was absolutely no opposing forces between politics and public health. Okay. Public health was allowed to guide the response. I, as the head of Africa CDC, have had the good fortune of briefing the head of states of the continent 13 times. Okay, 13 times, where they all gather as the Bureau of the Head of States led by President Cyril Ramaphosa to discuss the pandemic, find common strategies, and adjust them going forward. And in none of those states and briefings was there any opposing views. I mean, they listened to public health advice. They saw the data. We reviewed it together and we agreed on a common path moving forward.

For example, the establishment of the common platform across the continent to procure diagnostics and commodities. Okay? At that time, when we waited for more than two months and the continent finally recognized that the WHO discussions in Geneva were going to give us 2.3 million tests for a continent of 1.2 billion, we went into action. We established in partnership with the private sector the African Medical Supplies Platform, AMSP.Africa. You can Google and see that. And through that platform we were able to obtain diagnostics. Why? Because President Mariposa, we went to him as the chair of Africa and said, look, you must pick up your phone and call President Xi of China and say, "Look, we need you to not donate diagnostics but give us a quota of the diagnostics so that we can put it in the platform for our members to acquire."

So that was a tremendous effort. And other commodities. Right? Then we moved forward to establishing the COVID Response Fund where members said we need to act in solidarity. Let's have a common port to monitor, to support Africa's CDC to respond to the pandemic which was in the spirit of the whole of Africa approach.

Then we launched the Partnership to Accelerate COVID Testing which at that time in May, only 300,000 tests had been conducted on the continent. The PACT Initiative, the Partnership to Accelerate COVID Testing, we scaled that up very quickly. We set ourselves a target of 20 million, okay, within two or three months and we achieved and exceeded that target because of the different partnerships that came together. So all of these efforts were very important in making sure that the continent engaged in a spirited fight against COVID-19, which is a tough fight I must say given the way our health systems were.

MR. ORDU: So clarity of action, adherence to the lockdown at the national level, science-based public health messaging guided the continent, and at the time when common cause and solidarity is what we hear you say. Thank you for those remarks.

John, when you and I met in Addis Ababa, I believe it was in Ethiopia in 2017, I vividly recall your vision of a new public health order for the African continent. You can't imagine how that resonated with me at that time.

MR. NKENGASONG: And you probably had order for the continent. When you and I spoke, when we met, I spoke about a new public health order. I said there were four things that African must do and do it urgently. Remember, in 2017 there was no COVID. And I said, one, we have to strengthen our public health agencies. That is Africa's CDC has to be seen in the lens of not just a health agency but that disease is an economic threat, a health threat, and a security threat. And I even pushed that forward and I said it has to be seen like a national security threat, which is a difference between just a health security threat and a national security threat.

Second, we argued at that time that without local manufacturing of diagnostics, vaccines, and treatment, the continent was extremely vulnerable.

Thirdly, we said that human resources capital for a response to the pandemic was very, very important because we need 6,000 epidemiologists on the continent. We only have about 1,900.

Now, domestic financing of our own security (inaudible).

If we step back now and I look at that discussion, I mean, it's almost prophetic. First of all, we are all in this dialogue, common dialogue of equitable access to vaccines. That conversation I must say has really created tension in what are called the north-south tension. Okay? And all because African doesn't produce vaccines. I wish that at that time we had accelerated. You don't produce, you don't become a vaccine manufacturer in four years or so but at least that discuss that we're having now would have not occurred, okay, if we produced our own vaccines and diagnostics that I just mentioned. It is unacceptable that a continent of 1.2 billion, aspiring to be 2.4 billion in 30 years, will not produce its own vaccines for its own health security or diagnostics. I think that is completely unacceptable.

Second is domestic financing. We have to be able to begin to finance our own health threats first of all before we look outside of the continent. Without that we'll continue to be very, very vulnerable. And of course, what I said, strengthening our own -- look at what Nigeria's CDC has done. Okay? Niger's CDC is almost as old as Africa's CDC. Look at the central role that the Africa CDC is playing by providing good counsel to heads of states and guiding them.

Before the summit, the head of states all came together twice and they said Africa's CDC, tell us if we should meet and have a summit face to face. And that was in December. I presented evidence and data. They looked at it and there were 12 of them in the Bureau that split 50/50. Half of them said, "We want to have it face to face." Half of them said, "Let's wait and see how the pandemic played out." On the 20th of January, they met again and they said, "Look, tell us again where we are with this pandemic because I told them that the holiday season was coming and there is likely to be an explosion." So they listened. They came back again on the 20th of January and said, show us the data. We played the data. They took a decision. It was 11 to 1. I mean, 11 heads of states said, "We've seen this data. We cannot meet face to face unless we have a meeting (inaudible)." That is the importance of trading in your own national public health agency for a continental narrative. I think it completely changes the dynamics and the narrative in terms of the trust capital that leadership has for its own health security. I mean, imagine if your heads of states have come to Addis Ababa and then some of them get infected and it becomes a national security threat for the continent. So that is why I think that diseases are not just a health security threat but a national security threat if poor advice is provided to the leadership.

MR. ORDU: Excellent. Excellent, John.

Let's stick with the financing which you mentioned. We all recall back in 2001, right, African heads of states met in Abuja and signed the Abuja declaration to spend 15% of their annual budget on health. How has that worked out and where do we stand now on that commitment?

MR. NKENGASONG: I must say progress has been made. I'll speak to that but there is a lot to be done. In 2017, when I just came here, 2017 or 2018, President (inaudible) a meeting of what they called the Africa Leadership for Health Financing. I think that it went very well. (Inaudible) was there. The U.N. Secretary General Chairperson Faki, several heads of states. And I think that is going on which is a good thing. To achieve that goal of 15%, it starts with an awareness, a strong awareness. It continues with a strong commitment. It moved from a political will to a political commitment.

What COVID-19 has done to the continent is clear. I mean, at that time in 2001, there was an expression of interest and wish but now to see that it's irrelevant. I mean, we must do this commitment. Whether we actually get to 15% or not, but that movement has to start and has to start now because we cannot (inaudible) the health security of our continent outside of the continent and we cannot allow external politics, the elections that happened in political capitals of western countries begin to determine our health security. In other words, elections in country X pan out differently than we begin to stumble as to whether they will support us to prevent diseases control them.

So that was an important declaration that they did in Abuja. And I think one of our goals is to continue to work with the leadership of the African Union, the heads of states to make sure that that commitment is fulfilled. So there is a (inaudible) that the African Union has established and actually that rates countries. And I don't know exactly which countries made that commitment or not but I must say there is a lot of work to be done to get to the 15%.

MR. ORDU: Indeed. Especially if there is one thing COVID has done is that every country has spent more than -- far, far more than 15% of their budget on this. So anyway, we'll watch this space and see how the tracking goes now that COVID has revealed some of these weaknesses.

On the same issue of financing, John, some experts I read recently have argued that increasing pro-health taxes, right, taxes on tobacco, taxes on alcohol, the so-called sin taxes, right, that these sort of taxes could raise bucketloads of money for financing the health sector across Africa. What's

your view on that?

MR. NKENGASONG: Let me approach it from this perspective that we need innovative mechanisms for financing health and (inaudible) at least it could just be one. And using other approaches, including the very direct contribution of African citizens towards their own institutions, like Africa CDC should be envisaged.

When I meet with the youth, the (inaudible) say to her, she said, what can we do, Dr. John? I said, look, you command this continent. Okay? I say, the median age of our continent is 20 years old so you command the continent. So what if you go back to the youth and you say, well, I want to reach out, set up technology, use the apps that we have, set up technology and reach out to 200 million youth in three years and let them give you only a dollar, just a dollar. You'll be able to raise 300 million and will be able to form -- at least use that in responding to disease outbreaks that will protect your future because the future belongs to the youth of the continent. Africa is the youngest continent on earth.

So, I mean, so this is just one avenue. So if you look at what you just described, you bring in accountability but also ownership of these programs by our youth and the continent and others, I think we have to think creatively. We cannot leave these in the hands of government. Clearly, it will not happen.

What about partnerships with airlines? Okay, so if you, Aloysius fly Kenya Airlines and you are ready to give 25 cents -- allow 25 cents be charged onto your ticket, like what the Europeans did with United, will be generating a lot of money. I mean, people do travel enough. If I can buy a ticket for \$200, I can allow 25 cents to be added. That will go to the health security. But we really need to frame it right. I'm sure accountability. I'm sure impact. That if I do that, you know, if I allow you to charge me 25 cents on a ticket, my economy class ticket, I will actually see the benefits going forward.

I think there are several innovative things that we should do in the spirit of a new public health order to finance these items that I listed.

MR. ORDU: No, this is very, very good to hear because clearly, innovative financing is the way to go. In fact, the airline ticket you mentioned, one can also think of hotel nights, right, for people who spend nights in African hotels. The idea of an incremental 25 cents, you know, by the time your calculator is going on from across the continent, we can actually raise funds. So let's --

MR. NKENGASONG: As you said, people -- if I can just come in. When I look at my change box at home from traveling days, a lot of currencies that in the end your foreign currencies that you don't know what to do with, the coins, you just have to clean them or you toss it away. So give it to us. Give it to us.

MR. ORDU: I like that innovation.

John, let's now turn to vaccines because the newspapers, the TV are replete with the issue of vaccines. First of all, the COVAX, the COVAX facility was supposed to be a global effort primarily for low-income and middle-income countries in Africa and elsewhere. Instead, we read about vaccine hoarding by rich countries at the expense of the poor. What's going on here? And what's being done about it from where you sit?

MR. NKENGASONG: So from where I sit, this is my read on the situation. First of all, COVID is an innovation that speaks or that amplifies and signifies global solidarity and global cooperation. They respond to protectionism or nationalism. I think that is a very much welcome initiative, which I call on all our friends of Africa, our traditional partners to support continuity support.

So we also have to transmit public statements, a nice public statement into action. I think when this pandemic started there was a lot of -- all the right things were said. And timely access to vaccines, equitable access. Unfortunately, that definition somehow got lost in translation. Equitable access to vaccines and equity became an issue of, well, what I mean is that I'll get my vaccines first. I'll keep you there. We can now go to the table and discuss how you will get your own vaccines there. I think that definition has changed and we have to recalibrate that. I said in December that if we did not recalibrate that then we are moving towards a moral catastrophe and I meant it at that time in December. I mean, we cannot -- and we have seen this played out in Africa.

I was a young HIV/AIDS public health expert in 1996 when AIDS drugs were available. We saw the rates decreasing drastically in the west. But in Africa, it would take us 10 years between 1996 and 2006, before we saw our deaths decreasing. And between 1996 and 2006, 12 million Africans died needlessly. Ask the public health expert. When I look at that, I look at that with horror. And if we didn't learn moral lessons from there, then I think that we are preparing ourselves for a similar moral catastrophe which the next generation will ask the questions. Let it be known now, Aloysius, the history

of this pandemic will be waiting.

And there will be three parties to the history of this pandemic. One will be those who make the history. You have a choice of making it be on the right side of history and making it in the right way or the wrong way. Those who will read the history will be the next generation. And of course, those who actually write the history. And my hope and belief is that those who write the history will write the history taking into account what we are observing now. The same scenario we are going through now happened in 2009 during the H1N1 pandemic. And vaccines were (inaudible). And they only became available to the developing world when the pandemic was over in the developed world.

I think we really have to be courageous. Sit around the table and say what we mean and mean what we say. Otherwise, we will continue to be in this vicious cycle of creating a moral catastrophe for our world.

MR. ORDU: Very remarkable, the idea of -- I hadn't thought of it that way in terms of looking back. Those who make the history, those who read the history, and of course, those who actually write the history. This is a very interesting take on the matter.

Still on vaccines, John, according to -- I read recently in Our World in Data, right, of the COVID-19 vaccine, those already administered as of last month, the 31st of January, 31% went to the U.S., 13% went to the EU. And here's the interesting thing. Less than 0.2% went to Africa. What does that tell you about the state of global collaboration?

MR. NKENGASONG: It tells you that we have a lot of work to be done in the state of global collaboration. I think -- let me share my thoughts in this way.

One, global collaboration is strong. I think we have to admit that. We, the world have seen collaboration in identifying a new virus, analyzing the sequences, share the sequences, and within one year developing a vaccine. That is unprecedented.

MR. ORDU: Right. Right.

MR. NKENGASONG: However, what we are seeing, there are weaknesses of global collaboration. How fragile it is. Global collaboration becomes very fragile when we are faced at the same time simultaneously with a common enemy. If this pandemic was localized, say in Africa or Latin America, we would have seen global collaboration in full display. But what we are seeing here speaks to

the sociology and anthropology of a common trap. You have a common enemy and people fall and work into a survival mode. I think we should remember that.

I must be honest by saying it is the responsibility of the leadership of every country to first of all, protect their citizens. That is one.

Having said that, we also recognize that you cannot be naive to just fall inward. You have to recognize that a threat anywhere in the world with a disease that spread as fast as this will be a threat everywhere, no matter how much you fought and protect yourself with vaccinating your people. We are now seeing how this virus is evolving and mutating, so assuming that you all vaccinate in the United States and so new mutants arrive from areas of the world that have not been vaccinated, I mean, all your vaccination efforts are doomed; right? So I think that maybe we should put that in the right perspective that we are not safe until we are all safe anywhere in the world.

So I think Africa is doing its best. I mean, we have a food initiative of President Mariposa, the African Vaccine Physician Taskforce. We have secured over 300 million doses of vaccines. We are working very hard to distribute those vaccines across the continent. COVAX is promising us that they will deliver about 27% of those vaccines to Africa. We have set a target to vaccinate 60% of our continent in order to achieve herd immunity. We are very busy now looking at vaccination processes. How do we set up vaccination centers? Build in the right partnerships that can allow us to go to war with what we have. I mean, you go to war with what you have, not what you need. And we will go to war with what we have. What we have is our health systems. What we have is our people. But we count on the resilience of our people, of Africans, who have fought these viruses over and over and over. The HIV, the malaras, the Ebolas that we'll be able to deliver these vaccines in a timely fashion. We believe that if the vaccines are available, we should be able to vaccinate about 35% of our population before December. That is the way we will begin to break the backbone of the pandemic and avoid headlines and journals like the Lancet or New England that subsequently would say "COVID in Africa moving from a pandemic to an endemic disease." We don't want to see that headline in the Lancet or New England Journal.

MR. ORDU: Yeah, great.

Let's turn now, John, to the role of technology. The role of technology in healthcare systems. If there is one thing we've all learned it's that COVID-19 has turbocharged technological

innovations globally -- the way we work, the way we shop, the way we travel, the way we socialize. Can you share with us any emerging technological innovations in the healthcare sector in Africa today?

MR. NKENGASONG: I think there are several of them that are emerging in Africa. The first at least to apply it (inaudible) is the ability to increase genomic sequencing and sharing that information within Africa. If you recall, and you are very good at memorizing that conversation in 2017, we talked about the Regional Integrated Surveillance and Laboratory Network (RISLNET). So you'll be pleased to know that on top of that we have now, in the middle of this pandemic, launched a pathogen genomic initiative. Okay, we will build a pathogen genomic institute that we created before COVID which was underpinned by the ability to network more effectively and use technology to drive that. And now a whole genomic sequence has emerged as part of that innovation. So innovation here should not just be the ability to create technology but it should also be an ability to use technology in a more productive and impactful way.

We are now in the process of setting ourselves a target of sequencing about 50,000 new genomes at Africa CDC in the next couple of months so that we understand the lay of the land with respect to the emerging variants for this. I mean, that is in itself very, very novelty. Innovation also has to speak in terms of the ability to create systems and institutions. I think that is very important, not just technology. Because if we do not do that, innovate in our systems and institutions, then both technology and innovation goes into the valley of death where you have these tools that they can't do you any good at impacting outcomes of diseases in Africa. I think that is one.

The second thing that you see across the continent now is local manufacturing of diagnostics. I can now name you five countries that -- or six countries that begin to produce COVID-related diagnostics which were not there, okay, before. Let me share the statistics, unfortunate statistics with you.

Each year the continent conducts about 100 million HIV tests. There is no single country in Africa that produces a simple rapid test for HIV. And we have been doing that for 40 years. However, COVID brought the (inaudible) reality to us and now Senegal, Nigeria, South Africa, Kenya, Morocco, and Ethiopia is now producing or beginning to produce diagnostics against COVID-19. That is huge. I mean, it's a transformation. Now I call (inaudible) in Senegal and say, hey, Amadou, I need antigen tests for

COVID-19 and they will ship me antigen tests. I think we are making progress thanks to -- unfortunately driven by this sad pandemic.

MR. ORDU: All right. So it goes to the old adage that necessity is the mother of invention. So it's great to hear that a number of innovations on the technological fronts.

John, let's now turn in the time we have to all the challenges. Right? So the notion of antibiotics, antibiotic resistance has been -- this is called, as you know, in fact, you once described it that way to me, the silent killer. Okay? Some estimates show that many more African lives are lost through antibiotic resistance compared to other diseases. What is the Africa CDC's agenda for tackling this silent killer?

MR. NKENGASONG: Thank you, Aloysius.

First of all, when I said earlier that I dread to see a headline in the Nature, Science, New England or the Lancet Disease, COVID-19 in Africa from pandemic to (inaudible). That will be a catastrophic headline the day you see that you can throw your hands up and we go home because Africa is faced with pandemics. Okay, we have the rising -- (inaudible) in Africa is the rising, noncommunicable diseases which are also single silent killers. Compounded up is also the issues of antimicrobial assistance. From the O'Neill Report, we know that if nothing is done with antimicrobial resistance in Africa in the next couple of years, or the next 30 years, about four million Africans might be dying every year because of the complications from antimicrobial resistance.

Remember, we still have a second pandemic which has been swept underneath the carpet now which is the HIV pandemic. HIV kills more than 500,000 Africans a year. Combine that with tuberculosis which kills a similar number, and malaria, it gives you about 1.2 million deaths a year in Africa because of non-COVID-related.

My fear is that COVID is going to aggravate those conditions because we are not paying appropriate attention to those. People are not using hospitals so you get more COVID-related deaths than COVID infections which today we are approaching 100,000 deaths from COVID infections over the last one year.

So back to the issue of antimicrobial resistance. We at Africa CDC are taking a more holistic approach. We have now developed a framework at One Health to approach antimicrobial

resistance harnessing all the assets that exist within the African Union. That is, the agriculture, animals, and human herd and say let's work together. So a framework exists on how to work together.

A common position for antimicrobial resistance at a policy level has been adopted and produced by Africa CDC at a continental level. So we have that. And of course, a series of capacity development together with partners to address that. But it would take all of us and a whole of society approach to begin to address the issue of antimicrobial resistance which speaks to accountability and also speaks to our own behavior -- use of antibiotics there.

MR. ORDU: That's great.

Before we turn to the audience questions, let me just on one last issue which is, I believe, of tremendous consequence. This is the issue you and I have talked about on numerous occasions, the issue of autonomy for the Africa CDC. The ability of any CDC, anywhere in the world, to operate with autonomy is important. You know, why? For an institutional effectiveness. It's important for organizational efficiency. Here in the United States we saw how the erosion of the autonomy of the Atlanta-based CDC, where you worked for many, many, many decades; right? In the past four years it has compromised the integrity of the CDC's response to this global pandemic.

What is the situation now regarding the autonomy of Africa's CDC?

MR. NKENGASONG: Thank you, Aloysius. That is a very good question.

I just wrote a World View piece that will be published in Nature Medicine in the coming weeks, and one of the -- the centrality of that is speaking to the autonomy of the need to have a new global health security architecture that speaks to the global level, the WHO being strengthened and empowered. And that also says that where WHO was created in 1947 and the world's population was like 2.5 billion people and now we're at about close to eight billion, and it also speaks to the need to have regional structures, like Africa's CDC. That will also be strengthened and empowered because having a public health agency that is not empowered doesn't get anywhere. So I think that is clear.

So that segues to the concept of its own autonomy. Africa's CDC is four years old. I mean, we celebrated our fourth anniversary just on the 31st of January and we continue to make progress. One of the highlights of the recent summit, that is the head of this summit that just occurred over the weekend was that head of states were all cleared with a call for Africa CDC's autonomy to be

accelerated. President Ramaphosa took the podium and was very sharp on that. President Kagame spoke on that. The closing remarks of the meeting and an audio and visual that is separating from President Kagame who is the current chair, outlined the major things that the continent will focus on. But one was the need to get Africa CDC's autonomy and empower its leadership. It came straight from the lips of President Kagame. So there's that strong political commitment and we are now, and I believe that Chairperson Moussa Faki spoke very clearly the need for Africa CDC's to restrengthen and empower immediately. So I think there is a lot of momentum in the right direction there. I'm very encouraged by the leadership that Chairperson Faki is exercising in that space. I'm very encouraged by the commitment that the head of states are now taking, realizing the valuable role that (inaudible) CDC, which I usually characterize as the greatest political innovation out of their great wisdom and vision has played during this pandemic.

MR. ORDU: That's fantastic. I think our audience is very delighted to hear that. Where there is a will there is a way, right? So this is all very reassuring.

Let's turn now to some of the questions we got from our audience in the time we have available. There's a question here from Rumbi Musakaruka from the AfDB, fragility assistant asks, will the Africa CDC support development of homegrown African vaccines for COVID and other diseases? Is this work already underway? I think you touched upon that a little bit earlier on.

MR. NKENGASONG: Yes. I think a succinct answer would be just yes, and I'll stop there because that's what we should be doing.

MR. ORDU: No, that's great. Thanks, John.

There is also a question from Scott Collins, Austin Innovation Group CEO. The question was, I've seen innovation go a long way in making what is considered impossible become reality. Based on what you see as the likely response to the next pandemic or even the ongoing mutations to COVID-19, what are the weak links in the planned response that innovators of technology and businesses can work to solve?

MR. NKENGASONG: I think that's a very good question. I think we have to, first of all, as I said earlier, step back and recognize the great innovation that went into understanding this virus within one year and doing the kind of things that have been done. Now we see the light at the end of the

tunnel because of the COVID vaccines. But I always caution that we should recognize that our only failure in this fight against COVID-19 will be the failure for us to admit some of our own failures. I think that is very, very clear that there will be failures and as we fight this virus -- I'm a virologist for 32 years. I worked in HIV for 29 years. Failures, failures, failures were coming but each time we fail we will grow. And the only way that we address our failures is if we meet them (inaudible) to innovate. Okay. We have to innovate.

A good example is the variant. For one thing, if I compare the struggle to get a vaccine against COVID-19 and a vaccine against HIV, I mean, I go to bed at peace. I know that this virus, no matter how much it mutates, we can beat the virus if we innovate ourselves. We now know how to develop a vaccine against it. We know the weaknesses, the envelope of this virus is (inaudible). Even if it changes, we can also change and adapt it and whatever. It may just require that we use maybe a (inaudible) vaccine that targets many pieces there. So I think that innovation is key in our fight against this virus.

I wanted to think of a formidable -- let me caricature a virus you go to bed being terribly afraid of, a virus that changes and hides its own antigens like HIV. COVID (inaudible) you can't even design it, that spreads very quickly, okay, spreads very quickly like COVID-19 but also has a fatality like SARS. Okay, the SARS virus (inaudible). Okay. So we just have to make sure that innovation (inaudible) keeps growing, we keep sharing.

MR. ORDU: Right. This is excellent.

John, if you and I had to have this conversation fast-forward to January 1, 2030, what do you believe in retrospect would be different in Africa regarding disease prevention and control?

MR. NKENGASONG: So let me, Aloysius, paint a future of 2030 in Africa. I would like to sit in 2030 and see Africa with a strong network of public health institutions that are working together seamlessly. I would like to sit in 2030 and point to at least three or four vaccine manufacturers in Africa that are backed up by research (inaudible), okay, because you don't just develop vaccines overnight. You have to be in constant R&D. So you have research (inaudible) across the continent that feed into that vaccine development and diagnostic space. I would also like to see along that same line several clinical trial sites that are ready all the time to take products from vaccine manufacturing and put it into

clinical trials and get the results. In 2030, I would like to see a proportion or the percentage of member states contributing to their own health security increase in a very deliberate fashion. To the extent that they say that in public, well, we invested X dollars because we recognize that one dollar investment into our health returns \$4 or \$5. And that is a fact. A reality. And lastly, I would like to see a very competent public health workforce for the continent.

In this pandemic, Aloysius, very briefly, I would like to describe this scenario as we draw to an end. In May, I had to go to the Peace and Security Council and make a case and work with a member state to lend us a military plane because at that time no planes were flying across the continent. But member states were requesting us to support them. In Mali, Burkina Faso, Niger, and Cameroon. Took that military plane to DRC. Took 28 responders that we were using in North Kivu. Loaded them in that military plane and dropped them (inaudible). Dropped seven in Cameroon, seven in Burkina Faso, seven in Niger. We flew overnight across the continent that no airline was flying a military plane. We wanted to see the scenario change in 2020 where each country has frontline responders and we have to train them as if we are at war. We are at war with this pandemic, with these viruses. No war in Africa has created almost 100,000 deaths in one year. Okay? None. And here we are with COVID, a pandemic that has killed close to 100,000 people in Africa. My greatest fear is that we begin to normalize these deaths and say, well, after all, there are about two million deaths across the world and only 100 million in Africa. They're our loved ones. They're our brothers. They're our sisters, our uncles, our aunts, our mothers. And I think we have to put that in context in 2030 when we develop an army of responders that will stand up and fight these pandemics if they occur. And they will occur.

MR. ORDU: John, clearly we could go on and on, knowing that you are one of Africa's favorite sons.

A couple of things to take away. The Africa CDC has really under your leadership come of age, responding very, very well to what is clearly the world's most consequential -- consequential pandemic in our lifetimes. The continent is not out of the woods yet is what we're hearing. Indeed, the second wave is raging now as we speak, where the commitment, the strength of ownership, and the solidarity of the African leadership is really important. On vaccinations, I hear you say the world is not safe until Africa is safe.

So John, thank you very, very much for choosing to spend your time with us today.

Please come back and share with us as the situation evolves.

I would also like to use this opportunity to thank all my colleagues at Brookings and AGI who made this event possible today. And of course, to our Vice President Brahim Coulibaly, who gave the opening remarks earlier.

John, I thank you very much.

MR. NKENGASONG: Thank you. Thank you.

MR. ORDU: And to the audience all around the world, thank you very, very much.

Thanks, John.

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