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ASSURING HEALTH SECURITY FOR ALL

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ALOYSIUS UCHE ORDU: Good morning and a warm welcome to our listeners here in the United States, around the world and in Africa. I'm Aloysius Uche Ordu, director of the Africa Growth Initiative at Brookings. On January 30th this year, we launched our flagship report for South Africa, 2023 here in Washington, DC. The report is our annual publication, which looks ahead to the year in terms of the key issues and trends to watch out for in Africa. Since then, we have launched the report in Botswana, in Kenya and Tanzania, and in South Africa. We've also hosted a number of events on thematic areas covered in the report. Today, though, our discussion will focus on the health chapter, public health chapter of the report titled Assuring Health Security for All. At a time when countries are ending various COVID measures, there are still many questions unanswered. What lessons have we learned from Africa's response to the pandemic? What are the opportunities and indeed the challenges facing countries as they formulate policies for resilient health outcomes? How ready away for the next pandemic. To shed some light on these burning questions. I'm delighted to welcome our esteemed panelists here this morning. We have Professor Michelle Williams, dean of the faculty, Harvard T.H. Chan School of Public Health. We have Dr. Chikwe Ihekweazu, Assistant Director General W.H.O., Hub for Pandemic and Epidemic Intelligence. We have Dr. Olusoji Adeyi president, Brazilian Health Systems, and we also have Dr. Belinda Archibong. Belinda is a David Rubenstein fellow with us at Brookings. I'm particularly delighted that these panelists authored essays in the 2023 and 2022 editions of our report. Now, here's what we're going to do. Viewers may wish to submit questions to our panelist by email and events@brookings.edu, or you can reach us via Twitter by using hashtag foresight health. Our panelists will start by making 3 minutes opening remarks each on some of the lessons and Africa's response to the pandemic. Thirdly, I will then pose some questions to individual panelists. And finally, I would take some audience questions. So again, audience can reach us by email in Brookings events@brookings.edu or Twitter using the hashtag Foresight Health. Let's get started then, Michelle. Starting with you. In 20. In 2019, the Institute of Health Metrics and Evaluation ranked the United States as number one in terms of pandemic preparedness. When COVID hit, the US was caught flat footed. Over 1 million Americans died. Some experts believe that the next pandemic is not a matter of if, but when. So why do you think why did things go so badly wrong in the United States and what measures should be taken to stop the next pandemic?

MICHELLE WILLIAMS: Thank you. First, let me let me thank you Aloysius for that introduction. And also thank you for inviting me to participate and contribute an essay for the Foresight Africa Initiative. You know, you start with a very provocative and important question for us to look at and be humbled by. I would say that a number of things went wrong, but I'm going to put it all under the heading of the undervaluation. The under appreciation of the importance of investing in a public health workforce and a public health infrastructure to support health and wellness prior to the encountering of shocks like a pandemic. I think we all know that the United States spends more money on health care, emphasis on health care than any other nation in the world. But we consistently rank at the very lowest at the very bottom, despite the enormous investment in health care. We still rank at the bottom of all of the major health metrics, and we know that even before the pandemic, life expectancy in the United States was tipping downward. Now, what accounts for that? What accounts for such miserable health metrics? Statistics in the face of how much we invest in health care? I think what accounts for that has been made very clear as a function of this pandemic in that we do not have universal health coverage despite all of the money spent in 2021. Even after a year of living with this pandemic, we had 26 million people who were uninsured. What does that mean? That means that they are not engaged in the primary prevention, primary health care infrastructure to support and enable their health and wellness during peacetime or in times when a pandemic shock occurs. The other thing that we should recognize is of all the money that we spend in the U.S. on health care, only 4.4% of that expenditure in 2021, again, a year after we're in the pandemic, only 4.4% was invested in public health systems and support. So I would say in a nutshell, without going too deep into the details, that what went wrong is the gross imbalance in investing in public health, infrastructure and workforce. And I can talk about that later, but also the gross understanding and under evaluation evaluation of public health systems. For too long, the U.S. has thought about public health as a charity activity and have not talked about public health as a strategic pillar of investment for the sake of global health security, for the sake of economic security, and for the sake of maintaining a civil society nationally and worldwide. And the pandemic made that very clear, that our undervaluation, our underinvestment in domestic public health and global public health infrastructure and the workforce has left us vulnerable not only to pandemic shocks, but shocks that we're experiencing right now as a consequence of climate change. And I'll stop there.

ALOYSIUS UCHE ORDU: Thank you very much. Chikwe, you have 3 minutes.

CHIKWE IHEKWEAZU: Thank you. Let me pick up from where Michelle actually stopped, because as much of that might have been accentuated in the U.S. for all sorts of reasons. You know, it was more or less the case in every country around the world, just maybe a different dynamics, a different circumstances. And let me pick of one particular issue that was a challenge for all of us. You know, in almost every country you saw, our leaders appear on TV every night beginning and lately and later every week trying to explain what was

going on. And beside them stood someone in the U.S. It was often Anthony Fauci. There were other similar people in different countries, and they provided or tried to provide the data and evidence base for the decisions those leaders were trying to make and trying to communicate to their countries, to their citizens, firstly, on what was going on and secondly on what we should do about what was going on. Now, what became apparent to everyone and this problem was east west, not outreach poor, that we were completely unprepared for the. To to to access, to analyze, to use data, to inform about decision making. And there are several reasons for that. Some of them are structural through our systems of government and federal states. And generally, the difference in responsibilities around the collection of data. Some of it was because about hospital systems, our health care systems. Some of it was because data streams were just not compatible and accessible. You know, very few countries could tell you on a daily basis how many travelers were leaving that country to where and from all from where they were arriving. And so there were lots of missed opportunities historically. And in in collecting, accessing, analyzing the data points we needed for an agile and timely decision making process. Historically, in public health, you know, we we were very often confronted with longer term challenges. You know, with HIV, we could plan a data collection approach, you know, consult, slowly implement and maybe have data two or three weeks or months down the line. But we were confronted with an emerging pandemic that required speed, agility and systems that actually exist in many other sectors. But we were just not prepared for that level of detail in the health sector. So we stood there very often, embarrassed next to our political leaders because we couldn't provide them what they needed to make the decisions right now. We still can't guarantee that our politicians would have made the right decisions, right because of whatever they elected to make decisions. We have to give them that imperative and every society elected leader they deserve. But it is our responsibility to give them the best possible opportunity to make the best possible decisions. And I think we collectively were challenged. And that is one of the key challenges that we are trying to address collectively at the moment.

ALOYSIUS UCHE ORDU: Quite sobering indeed. Belinda, 3 minutes, please.

BELINDA ARCHIBONG: Thank you very much, Aloysius. And thank you again for everyone. Apologies for the few minutes joining. So let me set my time at 3 minutes, because I know we said we would be we would try and be pithy with the remarks. So a lot of my research assignment, you know, I do a lot of work in development and environmental economics, trying to understand the effects of epidemics on human capital development, particularly in African countries and especially in Nigeria. And some of the things that we've learned from this past pandemic. I'm just going to kind of reiterate some of the previous comments as well, where three things one, the importance of health financing. And I think we will discuss this more domestically and thinking about the role of international health financing, particularly for African countries to the importance of domestic governance and response when it comes to emergencies. And thank you to Dr. Chikwe and his team. I think we talked about this a little bit earlier for the very, very excellent response of the Nigerian CDC in Nigeria, for example. And three, the importance of trust from the population in governance and health governance systems. Right. So when it came to things like, you know, the take up of vaccination, this these issues of, you know, why are people not as willing to take COVID vaccination not just in African countries, but also North America and Europe, these things came to kind of fool, you know, in full relief in terms of of of trying to understand how do you again, respond to an emergency like an epidemic or a pandemic in an efficient way. We vaccination given, you know, historic kind of mistrust in vaccines among many populations. So I'm going to you know, since I have a minute and a half left, I'm going to just highlight one thing and then maybe we'll discuss the others later on the health financing. So so African countries are in this unique position where if you compare the share of donor or external spending in health spending in African countries is much higher than in the rest of the world. Right? So so in Africa, it's about 20% of health spending comes from external sources. The average for the rest of the world is 0.5%. So we're in this position where when we look at, you know, again, domestic spending on health, it's quite low related to the rest of the world. We had this Abuja, what was it, the Abuja Declaration of 2001, where all the African countries had said we were going to commit 15% of health spending, government spending to help? That did not happen. That has not happened. We'll see. You know, I had some shots in front of me, but I can't show you. But we can talk about it. But but if you look at this since 2011, I just mentioned in a notice to us, you've actually seen a decline in the share of health spending from government sources, you know, in African countries. So when you add these two factors, the fact that you have this like large share of external or health spending from external sources in African countries and you have much lower government spending on health, you are in this very precarious situation when it comes to not just emergencies, but when it comes to things like primary health care, because you can have the epidemics. You know, I've been studying meningitis epidemics for years before the pandemic. You can have these epidemics happen. And, you know, a actually, I'm sure it has been in frontline of many of these when you have already very low investment in primary health care, this all serves to worsen the existing situation. Right? Because you then have a population that is already, you know, maybe less healthy than we would like them to be if there was an adequate or optimal amount of government spending devoted to health. So so I'm going to highlight that here and then I'll stop here and looking forward to hearing more from these discussions as well.

ALOYSIUS UCHE ORDU: Thank you. Thank you very, very much. Soji, 3 minutes, please. Thank you.

OLUSOJI ADEYI: Thank you very much, Aloysius, for bringing us together. Greetings to my fellow panelists. In the next 3 minutes, I would like to highlight four elements of lessons learned and lessons that we're still learning. And opportunities to do better as we go forward. I think the fact. Lesson is that in circumstances such as that of COVID 19, it is very important to have clarity on just what it is that you are optimizing for. Because when you look back at the landscape, many times it. Audrey It wasn't clear what various, you know, policymakers and politicians were optimizing for. And I think we said that. Executive ineptitude was not limited to the United States. It was especially profound in the United States and the UK, for example, but was not limited to those two places. So clarity of purpose is important. A second one, especially for the African continent or perhaps for the global south as a whole, is that in situations such as a pandemic, the consequences of extreme power imbalances between different parts of the world can be very dire. They can come out in the form of overreliance on other parts of the world. For the purchase of. Medical technologies, whether they're diagnostics or vaccines or therapeutics, still needs to come out in terms of who has voiced. I'll give you two examples in terms of who has books. In AP, the body that was set up to broker an efficient global mechanism to enable the low and middle income countries have access. One of the big problems was that. That was very poor representation and little voice in real terms of those from the Global South. And when this was noted at the WTO, special envoy at the time was used, who used to be the Swedish prime minister, claim that, you know, that's just the world we live in. You really do understand what this was about. I'm not sharing with you any secrets. This is in the public domain. Now if the decision makers had consisted exclusively of people, of individuals from Nepal, Zambia and Nicaragua, I'm sure the former prime minister of Sweden would not have understood why it would be inappropriate for those three people to be making decisions of life and death over the people of Europe. A second example of the consequences is this hubris that we have seen and an aversion to evidence. It is abundantly clear that the COVAX mechanism failed in achieving equity equitable access to vaccines in due time. But just a few months ago, the CEO of GAVI declared that COVAX. Was the blueprint. Well achieving an equitable access of vaccines to poor people and developing countries in an emergency. That is a profound insult to the intelligence of people in the global South. On the positive side, we realized the importance of institutions. And I would like to single out the Africa Centers for Disease Control in this, because despite all that went wrong on the continent. Goodness. Just imagine what would have been what would have been the case if there had been no. Africa, CDC. And in addition to that, we still, our people at the county level running a country center for Disease Control. Our Country, National Institute of Health and a particular head deserves credit for that because he was running into one in Nigeria at the time. So the first point and then I will rest, is that a clear lesson that has come out of all of this when we put it all together? Is that? It is weakness for Africa to be so dependent entirely on the kindness of strangers. Because in times of great stress, you find that you are on your own or you are at the back of the queue. And this is something that the continent really needs to act upon. Now on for the future. Thank you. I'm back to you.

ALOYSIUS UCHE ORDU: Thank you. Thank you all very, very much. Michelle let's turn back to you. Now, in foresight this year, you coauthored a brilliant piece titled Empowering Frontline Workers to Develop and Deliver Healthcare Solutions. You cited two staggering statistics. One that countries need to educate 6 million more nurses to offset shortages. Second, that the world will need about 13 million nurses by 2030. What is the Harvard T.H. Chan School of Public Health doing to address this, and what should Africa's policymakers do to meet these challenges?

MICHELLE WILLIAMS: Thank you for that question. And I want to I want to answer that question directly about the frontline health care workforce. But I also want to underscore a point about the importance of investing early, not only when there is a pandemic, but investing early in supporting and enabling and partnering with African institutions and African scholars for research and research excellence. So, you know, November 2000, 2021 Omicron. Was quietly spreading. And it wasn't until doctors saw cancer. Khalili Moyo, who is one of the chief leading scientists at the Botswana Harvard AIDS Institute, sequenced and discovered this highly virulent and impactful variant. Now, I just said the Botswana Harvard Aid Institute, an institute that was formed 40 years before to address the AIDS crisis. But by sustaining and continuing to invest in the research institution and capacity building and true partnership in research and science and an organization on the continent was able to provide in very real time important scientific insights that had meaningful impact on global health on the continent, but across the world. So one of the key points that I didn't make in the specific essay on the workforce for frontline workers, I want to underscore here the importance and the value of making sure that we continue to invest in collaborative and I mean truly collaborative ways for supporting R&D and research development on the continent, across the continent, and that it is a strategic and important investment that is the right thing to do. But everybody benefits. Now, my interest in making sure that we don't forget the important contributions that our frontline workforce contribute in times of crisis and in times when we're not in crisis was borne out of how we watched the Ebola 2014 2016 crisis really hit hard. A

very already strained medical clinical workforce on the front line in West Africa. And as this murmurs of this pandemic kept coming forward, I worried that, again, we would have a strained health care workforce, frontline workforce, nurses, community health workers and midwives again be put in harm's way and not appropriately supported and enable to do the work that they do. And so I worked with the Africa CDC, friends from the World Bank and three schools at Harvard, the Kennedy School of Government, the Graduate School of Education, led by my school, the School of Public Health, to create a program that would empower, enable and support frontline workers, protect particularly chief nursing Africa's chief nursing officers across the continent, to be at the front of the line, to be engaged in training on public health, infrastructure management and development, population health management, financial and financial support and crisis communications. These are important skills that nursing leaders need to have while they're at the table to lead. I think it's important for us to learn from this pandemic and once before at epidemic threats. Before that, nursing leaders, midwives and community health workers need to be at the table to design and then to help implement and monitor public health interventions that come from the science, the scientific enterprise that I started my response with.

ALOYSIUS UCHE ORDU: So, Soji, turning to you. First of all, congratulations. Congratulations on your new book titled Global Health in Practice Invest in Amidst Pandemics, Denial of Evidence, A New Dependency. In that book you wrote that the Affordable Medicines Facility for Malaria illustrates the good, the bad and despicable of global health, architecture and practice. Yes, but what do you mean by this?

OLUSOJI ADEYI: Thank you, Aloysius. The Affordable Medicines Facility for Malaria was a public private partnership designed to help ensure that people in low and middle malaria endemic countries could get affordable access to highly effective antimalarials. The origin was a study done by the United States Institute of Medicine. It was called the Institute of Medicine at that time, part of the National Academies, and it was headed by the late Nobel Laureate Kenneth. Excuse me. In short, it was a response to the fact that Bitcoin was failing at the time and the new drugs. AZT is way too expensive for the average or poor person to buy. Indeed, in the malaria endemic countries. So the idea was subsidized the drugs at the factory gates. Get out of the way and let the countries take care of the procurements through the public and private sectors. Because in many of the countries, the private sector was where the the people got the antimalarials. What was great about this? We built a coalition. And that coalition succeeded in taking that idea from a research or academic exercise to an implementable program. What was also great about it was that, to their credit, several entities stepped up to finance it. The Global Fund Unit eight, The Government of the United Kingdom and the Bill and Melinda Gates Foundation, as well as Canada, were the principal financiers of that global angel subsidy. Also, what was great about it was that several pharmaceutical companies cooperated with us in that exercise. Novartis excuse me, Sanofi Aventis, unlike Cipla, for example, this one not only was. And to give up on street. So we did a pilot of a huge pilot, and mostly it's countries in Africa. And it was spectacularly successful. The results were published in The Lancet in the last quarter of 2012. Nothing like it had ever been done in global health. The evolution cost at least $10 million was very intense. Now, what was despicable about it? What was bad about it? Because I think about what was good about it. What was bad about it was that it took so many years. To go from the idea to putting it in practice because that was part of the development process, not what was despicable about it. And here I hope our listeners are paying attention. We had an extraordinary opportunity to really save lives. On a huge scale. Here, we had an opportunity to further improve the country so that their own private sector supply chains would take charge. But guess what? USAID and the United States. PM I. Fought against the MSM every step of the way, undermined it every step of the way. Whatever I'm seeing here is in the public domain. Their own independent evaluation said the US PMI was undermining the MSM. And instead of the global fund then expanding its. The USAID and US PMI through the U.S. delegation to the Global Fund, would lead the Global Fund board into essentially abolishing the IMF, despite the fact that managers, malaria program managers from Africa explicitly wanted it to continue. And this is the problem when you have a situation whereby. External financing is so prominent. The countries unwittingly subjugate themselves to the whims and caprices of wealthy but unscrupulous entities. Because on that occasion the and UCM were very unscrupulous. They denied the evidence. So when you have this combination. Big money coming from USAID and the US PMI on the one hand, and you combine it with the intellectual honesty of USAID and US PMI at that time, it's a very toxic combination and it was a tremendous disservice to the African continent. And this illustrates the problem of dependency. Now it gets worse. USA idea USA BMI opposed the MFM and killed it because the success of the IMF that would undermine the business model of USAID, which is essentially an agency for international contractors. It is not an agency for international development. So that was the motivation. The dam, the consequence is the dam, the health effects. And if it meant that it will kill the life saving enterprise to preserve that hegemony, so be it. And the worst of all is that USAID is not preparing to what is $70 billion supply chain contracts through the same contractors when we have demonstrated more than a decade ago that those contractors are not needed. The country can take care of the supplies themselves through their own private sector. So it's an enormous waste of taxpayers money that USAID is doing. And frankly, as an American citizen who pays taxes. It makes me sick. Back to you.

ALOYSIUS UCHE ORDU: Thank you very much. Before we proceed, I'll just check with the panel. Any reactions to what Soji just outlined, some of the elements coming out of his new book about Ukraine? Any thoughts? Any and the you. And.

CHIKWE IHEKWEAZU: You know, I address some of the issues, but I, I wouldn't kind of address the specific circumstances of what Soji illustrated. He has much better insights into that space. But I think I, I really I think that we focus on the beginning of what he said, you know, to be able to counteract some of this influence. We have to build domestic capabilities and capacities, not only in those areas that are currently attractive around manufacturing and building, but in intellectual capacity. And if we don't invest in that bit, I think we will never be in a position to make the arguments that Soji is so eloquently making in order to shift the conversation, because this is an intellectual discussion. Yes, there is money, resource and politics behind it, but we need people that can counteract these arguments with counterfactual evidence and provide alternative mechanisms to develop our continent. And if we don't do that, that we will continue complaining about the inequities of the present without building the future that we seek and desire so much.

ALOYSIUS UCHE ORDU: Any other thoughts from Belinda? Any thoughts?

BELINDA ARCHIBONG: Yeah. You know, I will highlight again to the beginning of what Soji was mentioning with the importance of having control over your own financing and how this dependance on external financing in the health sector in African countries really then shapes a lot of our health decision making in ways that maybe we do not, you know, find optimal for the different countries in Africa. So so for example, if you look at, you know, the the work that we've done, we were looking at, again, the effects of epidemics on economic development outcomes and human capital development outcomes, like, you know, child health outcomes, etc.. And what we found was that you you see this, you know, a mass, you know, like accumulation of health funding directly to African countries, especially during epidemics. Right. During emergencies. So, so so one of the things that we had studied was, was looking at the World Bank World Bank project and World Bank health aid. You know, the World Bank typically does not invest, for example, in health projects in Africa. It's only about 12% of their projects. If you look at at least the details of 2017 or so. And so if that's the case, it's already a small amount of the projects that are going to health in African countries. And also they're then, you know, really responding to to epidemics, to emergencies. They're not directing it towards primary health care. Right. They're not trying to think about the issues with health infrastructure quality or, you know, helps, you know, supply of qualified health person or skilled health personnel like doctors we have in Niger. I think it's what, ten doctors per 100,000 population. And I was talking to Lucius earlier about the Japan and as we call it in Nigeria, where you're seeing this increased exodus of skilled personnel, our doctors are leaving to go to other countries. So so when you consider this this kind of state of affairs, then you know what Dr. Soji mentioned earlier about the importance of really, you know, securing health financing domestically and how that helps us to shape our own destinies in terms of the investments in health, health supply, health infrastructure that are really, really crucial. Right. In improving health outcomes for our citizens in African countries. It just kind of brings that into stark relief.

ALOYSIUS UCHE ORDU: It's a name back to you Chikwe in your essay for Foresight 2023 title Building Africa's Capacity for Pandemic and Epidemic Intelligence. You wrote that several African countries at very different phases in building their data collection, analysis and epidemic intelligence capabilities. However these processes are proceeding, you say, in an uncoordinated manner. In your new role. I didn't reach you. What are you guys doing to address this problem?

CHIKWE IHEKWEAZU: Sorry about that. The challenges we articulated in the article I articulated, which I alluded to earlier around analytical capacity in a way can be also, you know, the the same thing can be described in many other sectors, right? When when there's a deficit where there's a reaction, generally the initial reaction is to do something about that deficit by solving the problem or trying to if you have 54 countries trying to solve the same problem, you end up with different solutions and maybe ultimately end up with a state of confusion that might even be worse than where you started off from. So generally, our response to developmental challenges in public health and in many other spaces has been to to develop capacity. Now, our primary premise at the moment at the World Health Organization around this issue is that we must invest in collaboration as well as capacity development. And, you know, and when I say collaboration, we can't expect it to happen as a as a byproduct, an incidental byproduct of building. Right. You have to think together in order to solve this. And to think together to build together, you have to be intentional about it. So what we're doing is making sure that as countries that many countries are at the moment trying to set up new Centers for Disease Control or national public health agencies, I guess it is outdated by request. W.H.O. is supporting several countries around the same lines, but we're all trying to build similar things without actually thinking, talking, liaising and collaborating. So the most important investment of our time at the moment, in addition to the human resources, technology and expertise, is to

make sure that people are actually working together and investing a lot of time, resources and energy in bringing people together so that they're not only led from W.H.O., but learned from each other. As we build this new capacity that we need across the continent.

ALOYSIUS UCHE ORDU: And Belinda, you you alluded to some facts earlier on which also captured in the World Bank's World Development Report 2022 and world development indicators about Africa's health expenditure per capita, which has decreased since 2011 and this decline. When you look at domestic public, you look at domestic private, you look at external sources of health expenditure, they're all in on the decline. Can you help us explain this trend decline and what policymakers need to do to assure health security for all on our continent?

BELINDA ARCHIBONG: No, thank you. It's a good question. So and I will also let's I think Dr. Chikwe, and Dr. Soji jump in on this as well, because I know you have a lot more experience working on the government policy sites than I coming from academia. So I'll tell you what I think from my research on this. So two things. One, from what I have talked about when I've talked to policymakers, especially at least I'm Nigerians, I speak from the point of view of Nigeria where they talk about health spending. They often talk about this as well. It's social spending, right? So health spending is often not viewed as something that's a priority in the same way that maybe, you know, you have defense spending or big infrastructure spending is viewed. And so if you look at from in Nigeria, from 1981 to 2018, for example, there has been a slight uptick right in in the share of government spending devoted to health. But then, of course, as you mentioned, Louise shows that in Nigeria, many other countries since 2011, and you see this decline. So one, I think, again, you know, when you have fiscal pressure within countries, if you view that, if you if you if you view your health spending as something that is kind of a, you know, a nice thing to have rather than an essential thing to have, then what gets cut in the budget first, it's health. So that's one. Two, if you are on, you know, a very commodity dependent country, like a country like Nigeria, where a lot of our fiscal spending comes from oil revenue, then you are kind of subject to the whims of the commodity cycle. And also a third thing is that to the extent that you view, you know, your health spending as something that is an extra thing that's nice to have are then an essential. Then you can use it for, you know, electoral purposes. Let's let's put it that way. And so this is something that we see from from the research, these three factors. One, the fact that health spending is viewed as something external that is nice to have or that is essential to the kind of fiscal pressures that states face as a result, they cut health spending first is like health and education and the social spending categories. And three, then, you know, instead of viewing health spending as essential, many countries then see it as something that you can use during, you know, again, periods of electoral cycles where you want to do some political spending. So that said, how can we how can we deal with this? How can we address this? And this is something that we had mentioned. So Dr. Chikwe and I were a big paper with The Lancet, and we talked about this for Nigeria. So one of the things that we had suggested there was think about having a dedicated fund. A Nigeria has done well by law. We have tried to do this as of 2014. That is a dedicated fund for health. Right. That says that regardless of the commodity cycle of commodity prices, of oil prices, because of changes in our fiscal situation. There would be some percentage of government spending regularly devoted to health and it would be fixed. You know, the 15% was something that we were aiming for throughout Africa, but it will be a fixed share of government budget that goes to health. That's one, too. This is something that has been discussed in the U.S. as well, this importance of universal health care. Right. So national health insurance schemes, Nigeria has has done this. I don't think there's been as much uptake in the general population. Unfortunately, there's a lot of information asymmetry. People don't know how to access these. They don't know if you know what what you know, what if it exists. So I think there needs to be more push from the kind of government side on like this thing exists. You know, it's good to pay into. Especially given that, you know, in African countries people are spending, what, 40% of of government of health spending comes from out of pocket expenditure. In Nigeria, it's as high as 77% comes from out of pocket. 2017 compares to the rest of the world, that's 18%. So Africa has a much higher Nigeria because country in Africa, even higher share of out of pocket expenditure that people are paying towards health. And you also see the substitution between government spending on health and out-of-pocket spending on health is what we've seen in the research. Right. So so there is a huge need on the part of the population. And when the government is not stepping in with this kind of national health insurance schemes, with a dedicated budget going to health and improving health infrastructure. So that includes from the health personnel providing, you know, and having access to health personnel, particularly in rural areas away from the urban areas in the countries. This is something that, you know, we know is very important. There was a very nice paper from from Edward Okeke recently that showed like if you if you have a doctor in Nigeria, you drop into rural areas, you see these steep declines in mortality, which is fantastic. So we know that, we know this. We don't need research to tell us, but we know that this is important, right? Having schools open up and so having funding for that, funding for health infrastructure, national health insurance schemes, that people are not being such a high share of their their own household budgets and devoting such a high share to help, you know, when government steps in with, again, more spending on health, all of it. All of these are things that we know will be able to address this. This one variability. I say if you go back to the eighties, you see

this kind of variability in the share of government spending on health and also then the decline since 2011 that we've seen as well, you know, dedicated budget, national health insurance scheme and just having like a fixed fund that says we will we will always have, you know, let's say 15% of government spending going to health.

ALOYSIUS UCHE ORDU: You know, about 77% of out-of-pocket spending on health in Nigeria sounds absolutely staggering. I just wondered. Soji, Michelle Chikwe, I mean, these are not numbers we are familiar with in other countries. Any any further inputs from you guys? This is stunning.

MICHELLE WILLIAMS: If I may, I love Belinda's response because it really highlights a couple of things. One is the the way we think about expenditure on health. You know, it's false. It's a false premise when we think about expenditure on health and we're only looking through the health care lens. You know, building roads is an expenditure on health distal to the health outcomes that we might care about. But important schools, you know, maternal education is one of the quickest, easiest ways to bring down infant mortality and increase life expectancy. Okay. That's an expenditure on health. We have to get away from silo ized thinking about health. Health is in every single policy. Government, national, regional and global have to think about. Health is in every single one of them. The other thing I would say is when we don't spend on on public health and primary health care, we end up having all of those expenditures, including 77%, you know, on health care when it's too late, when we're trying to rescue health as opposed to preserving, preserving, protecting and promoting health. So there has to be a mindset shift in how we think about what is health expenditure? Who's responsible for making the politics policy decisions to support population level health at the national and global scale? And then we have to think about it's not just the amount of money that you're spending. U.S. spends four $4 trillion a year on health, and yet we rank the worse because we haven't had the kind of balanced investments in the upstream places of housing security, food security, chronic disease surveillance and prevention. And all of those things require an all of government approach in coming up with a rational, thoughtful budget that protects and preserves health as opposed to having all that expenditure towards the end when we're trying to rescue health wellness at too late and too high a price.

ALOYSIUS UCHE ORDU: Any [inauidble].

OLUSOJI ADEYI: Yes, Thank you. Let let me build on the the contributions by fellow panelists. Belinda and Michelle. Thank you very much. If we look at the situation just before in the two decades, just before the COVID pandemic hit, and here I'm referring to data available in the shows Health Expenditures database, excuse me, and their associated reports. You find that there is actually a choice that governments make at every income level? There are variations in the extent to which governments prioritize expenditure on health. So when a country is lower in a low income or middle income, for example, as a choice dimension, they're quite often in discussions on global health. We unwittingly assume the government doesn't have agency or we infantilize them. That is not the case. They're making choices that could. Excuse me. If you look at the data from the year 2000 to the year 2019, so 20 years to just before the COVID pandemic, it's a very interesting pattern there for low and middle income countries. So for low income countries, for example. Find out the share of external financing. Increased from 16% in the year 2000 to 29% in the year 2019. So it's practically doubled. The in those same years. The share of government financing declined from 28% to 21%. Okay. And that shop tells its own story. Now what is going on there is the perverse incentive. And it works like this. In many countries, not everywhere. Many countries. You ask government officials, Why are you not putting your own money and more of your money into health? And they tell you, Look, we are not stupid, but we know that if we don't put in our own money or if we don't put in more of our own money, those Europeans are not Americans who love us more than we know ourselves. We convened replenishments meetings. Complete with Bono, Angelina Jolie, Southern politicians and academics from the East Coast of the United States, from billionaires jumping up and down and they raise money and they replenish GAVI and replenish the Global Fund. And the bid will go on. So. If you are a minister and your your your your perspective is short term. The Minister of Finance and your perspective is short term. You then tell your minister of health, look, you've got your sugar mummies, the sugar daddies out there, and these are the ministries that will have the same benefactor. So I'm going to allocate money to them. It's a very right do nothing to do with those kind of incentives. And if you are a median politician in a high income country. It's good press. If you announce that you're putting in a few million dollars and then you can be on the front page of Time magazine with a picture of you, it's brown babies whom you are saving. Now, I don't have anything against you. The brown babies. Okay? But the point is, the the the the the incentives on both sides are totally perverse. And those are things that need to be addressed. But you.

ALOYSIUS UCHE ORDU: Thank you. Thank you very much. Just for the benefit of our viewers, I'd like to bring them in in the minute, have viewers who wish to submit questions to our panelists. Please do so by emailing events@brookings.edu or via Twitter by using hashtag foresight health. Now, Michelle, there is a question here from one of our viewers and Miranda Wilson, the program manager up here at home. And

Miranda asks, Given the growing number of older adults in Africa and the disproportionate impact of COVID 19 on older people. What policies and policy makers are pursuing to ensure that all the people's needs are met in Africa's healthcare system.

MICHELLE WILLIAMS: That's a that's a really important question, and it fits so beautifully with the theme of this conversation about lessons learned. I will say that one of the major lessons learned was just how inadequate our health systems are for serving the population writ large. We saw that COVID brought us all to our knees. We also saw, you know, in the U.S., we lost 1.1 million to date people to COVID. And, you know, it's not just the pathogen itself that leveled so much carnage on the population. It was the lack of investment and commitment to having strong health systems that preserve support and maintain health. So we saw people who were elderly, too. The question to the question, but also people who had co-morbid conditions that could have been prevented and if not prevented, better maintained, if we had a strong, longer primary health care system that supported the prevention or primary secondary prevention of managing chronic illnesses like diabetes. Asthma, respiratory diseases and hypertension. So I would say the key policy, if we broaden the aperture of this question and we think really strategically about the lessons learned and what we can do better. The key thing here is to be sure that we are strategically and consistently investing in a primary health care system that is robust and pluripotent in taking care of the elderly, the very young, and also those who have chronic diseases that can either be prevented and or managed properly. So that would be my contribution to that very important question.

ALOYSIUS UCHE ORDU: Thank you very much, Michelle. There's another question here from the audience online, from Dr. Wendy Groves at Kingston University, lecturer in People Science. Chikwe, I'd like to address this to you. What active measures can African policymakers implement to promote greater collaboration with key stakeholders such as traditional leaders and traditional healers, etc., to ensure the well-being of our citizens?

OLUSOJI ADEYI: Thanks, Aloysius. A little bit outside of my comfort zone. But I will give it a shot. I think, you know, I reflect a little bit, actually, at the beginning of the pandemic where we were all struggling. Right. And we were inundated by different opportunities for cures and remedies. And, you know, whatever you could find was thrown at us. And I think this is the same in different settings. And so some actually got a lot of political pressure to be surprised, given that we didn't really have any countermeasures through the conventional sources. And it highlighted to me a deficit in a process of evaluating opportunities that come. So you can't just say this doesn't work. We have to you have to actually offer people the opportunity of a process through which whatever opportunities can be assessed and whether that's your facilities, the research organizations or to to validate whatever is being presented. Secondly, is your regulatory bodies to decide on what level of validity or what options in measuring efficacy necessary for different tools. So I think there's a complex set of needs that each country and sometimes collections of countries need to organize to think through how these opportunities can be integrated into a health care delivery system so that the many opportunities that the moment that we are not even able to give an opinion on because there's no process through which an opinion can be given. And the pandemic kind of highlighted that deficit. Some of it is being addressed at the moment, but I still think we have a lot of work to do across the world, across the continent.

ALOYSIUS UCHE ORDU: Thank you, Chikwe. Soji, there's a question here that I would like to address to you is from Matthew Boyce. Matthew's at the Center for Global Health Science and Security is a senior research associate. He asks, how should countries in Africa transition from a reliance on international assistance to health for more domestic financing? On our continent. It appears Matthew has been listening to you earlier remarks on the subject.

OLUSOJI ADEYI: Thank you and good morning. Good afternoon to Dr. Matthew, wherever you are. Very briefly. Peer to peer response. What do the countries stop doing and how should they do it? What could they stop doing? They should stop abdicating. In response, the leaders who stop abdicating responsibility to their own, their responsibility to their own people. Because right now the locus of accountability. Let me modify that. The strategic locus of accountability does not lie in the capital cities or African countries for the most part. It lies in New York and Washington and yes, Seattle, London, Brussels, Tokyo. You can name your favorite capital city in the global north. Second, for citizens to hold their own African leaders accountable. I think that's crucial. So what are two things that you stopped doing one, two years ago or about two years ago, W.H.O. endorsed the wide use of b r t as malaria vaccine. Now malaria has been ravaging the world for millennia and of course, still a major problem on the African continent. So why would have expected that? Responsible African leaders will say this time around? They are going to finance this by themselves. No such thing happened. It was Gary. I said, although I'm going to put about $156 million or so into that enterprise. Now, think about that for a moment. That is a gross abdication of responsibility on the part of most African leaders who did not step up. And it's also a usurpation of power on the part of government. Second example, maybe against about two years ago, some over 30 former African leaders. Publicly, we

were in angst because of a report that the UK was going to cut its funding for neglected tropical diseases. Now watch as the poor neglected tropical diseases out to reveal one of the former African leaders. This is why their people. Well instead of owning up to it. It was a lot easier for them to just back from Apollonia master where they can come and save us. That is the kind of mental slavery that people need to get out of. Permission to speak frankly, know how to do it. Well, the wall of that grade to this target of UHC by the year 2030. So that's about that one year for planning. So African countries then with the exception of those institutions of war, for example. Sure aim to transition out of external financing for physical services and technologies by December 2030. No more. Been in bed. Grasp dittos. To finance basic maternal health services routine childhood vaccines, insecticide treated bed nets, for example. They should be paying for those by themselves. Because a government that cannot do that really has no basis claiming to be irresponsible government. Second, they should insist that they're done with the current approach to technical assistance. No more tion of foreign aid to technical assistance coming from the country that is financing its. So just because Sweden or the US is paying for quote unquote tea does not mean that it providers of Sochi as you come from Sweden and the US. Instead, Rachel insists, You really want to assist us on that front. Set up a drawdown fund. We would love that you ask for what we need. We would evaluate the bids and we will publish the findings of the evaluation so that we truly are the masters of our own destiny. Unless the providers of aid believe that Africans are simply incapable of knowing what is good for them. Which is the implicit assumption of the current model. And third is that the funds that will have been used for those countries specific services in maintenance allow basic human education in states that have bednets. Which, by the way, was 75% of developed urban development assistance will help as estimated by the OECD just before the pandemic struck. Those funds can be used for regional public goods and global public goods. Use them to support the Africa CDC, use them to support research and development on the continent. Use them to support education in stem on the continent, and use them to support viable picture of Africa based manufacturing so that the next time. A pandemic strikes of the kind that we just saw. Africa will no longer have to beg in the northern capitals for help. Now, this is not going to be easy because it's requiring African leaders and politicians to take responsibility to stop abdicating responsibility. So you don't hear a lot of opposition to this, even from the global South. But it's something that needs to be done if we are to get out of the current trajectory. Back to you.

ALOYSIUS UCHE ORDU: Thank you very much. There's also another question here. And Belinda. I would like to point this to you. This is Dr. Angela Khashan of American University. She's a professor of international development. And Angela asks, how are health issues being addressed in the informal settlements where populations are dense and homes lack infrastructure for water and sanitation?

BELINDA ARCHIBONG: It's a it's a very good question. So, again, I will speak from the point of view of Nigeria, which I am more familiar with. So one of the things that if you look at the distribution, I'll talk about health personnel in Nigeria that you'll notice is that we have something called the I think the community health extension workers choose. So these tend to be, you know, people coming from the local communities in the rural areas, especially, who they get some kind of basic training and basic health care. But they are not skilled health professionals in the same way that doctors or nurse midwives are. So that's one of the things that, for example, Nigeria has done to have a lot of these you know, they choose, as their acronym is called distributed to many rural areas. Now, is this a solution that is efficient and optimal? I do not think so. All right. So so the research that we know about, you know, what is the effects of these skills of of skilled health personnel says, you know, it's much better to have a doctor or even a nurse midwife as a skilled personnel person in in these rural areas than to have one of these community health extension workers. Of course, if you have nobody, you know, potentially having one of the community health extension workers is better than having nothing. So so there is a very much you know, people are and again, from the point of view of Nigeria, people are kind of taking their lives into their own hands. I mentioned that there are very, very high share of out of pocket expenditure that people are spending on health in Nigeria. And this is something that if you are in one of these rural areas, if you are again, not just dealing going back to to Michelle's very excellent point. Right. This is not just about, you know, being having access to primary health care. This is about do you have the roads, good roads? And are transportation costs low enough for you to even access a clinic when you need one? These clinics, again, tend to be less less available in rural areas, unfortunately, than in urban in more urban areas in places like Nigeria. So so all of these things then compound to worsen. Often the health situations of people that are living in more remote areas in Nigeria. And, you know, I think can extrapolate to other African countries as well. And so this is something that where we are saying, you know, this is why why you need health, you know, government health investment and domestic health financing that is really trying to focus on expanding access to skilled health personnel, especially in these rural areas. So I will say, you know, one of the programs that Nigeria has that has tried to address this is the National Youth Service Corps program, what we call the NYSE. So Nigeria has this. A few other African countries have this. So this is where when you have postsecondary graduates, they take them and you are you sent you spend one year of service, you randomly assigned to an area outside of your home region in the country. And you know what, again, the research has found is that when you have skilled

health personnel, you have nurses, you have students trained as doctors, graduates are trained as doctors, then assigned to more rural areas through these types of programs. Again, it improves health situations for for local populations significantly. So so so this is yeah, it's a it's a very, very dire circumstances. You know, I come from Lagos, we all come from Lagos in Nigeria. I live in Lagos. And this is something that, you know, unless you can access health clinics pretty easily, there's a high density of government and private private clinics, but much worse the circumstances when you need the urban areas.

ALOYSIUS UCHE ORDU: But thank you very much for that, Michelle. Let me turn to you, because in her response, Belinda alluded to the question. I mentioned the informal settlements that here in the United States, the rural folks, the rural folks are not having the same access as those of us in urban areas. You know, what was to be done here, in your view?

MICHELLE WILLIAMS: You know, it's funny because sometimes when you look at the within country disparities in health, within the U.S., it's as big as country to country disparities. And I think it's first, there's got to be a clarity of understanding of how and why these disparities exist. And I think we have to be really honest and we have to really commit ourselves to understanding the history of the history that allows for this disparities to exist today. That it is not necessarily that black people of African ancestry or people of Hispanic ancestry are weaker in any way needing more services in any way than anyone else, the white population or the wealthy population. What we see when we look at these health statistics are that historical disparities in opportunities for. Gainful employment for education, for adequate housing. For access to water and sanitation, basic basic services that everybody should be have access to, undergird the health disparities that we see, particularly in urban rural settings. The other thing that we have to reckon that we have to reckon with is that there are, as we speak, a political agenda that is depriving people of access to primary health care. We have people dying in the U.S. of cervical cancer. For easily preventable cancer in states in the U.S., southern parts of the U.S., because we have governments that are denying the access to primary health care by not expanding our version of universal health coverage, the Affordable Care Act. And so in states like North Carolina and Georgia and Mississippi, women black. Poor Hispanic rural women are dying of an easily preventable cancer of cervical cancer and breast cancer. So, you know, health is really at the intersection of the historical indifference to certain populations, as well as the lack of clear clarity of purpose, as we heard Professor Soji say, in ensuring that the basic elements of health and wellness health as a human right be available to all people. And really the urban rural divide that we see. Also, we have to be attentive to the fact that the underinvestment in the basic public health system has persisted in these areas for too long. And when we have a talent shortage, just as we see talent shortage in the global space, talent is exported from these communities into communities that are already replete, although not sufficiently so, with the workforce that is needed. We have to be very intentional. We have to connect the dots. We have to understand the economic motives, the political motives, and the lack of governance, even when the motives are pure. That puts us in a place that drives health inequality.

ALOYSIUS UCHE ORDU: Thank you. Thank you very much for that. Chikwe. In your viewpoint for us a year ago, titled Investing in National Public Health Institutes for Future Pandemics Lessons from Nigeria. In it. You indicate that this particular viewpoint, by the way, is the most downloaded from that particular edition. So I want to congratulate you for for that brilliant piece in that so that you made the point that there are. Three at least. Big lessons, right in the Indian in Nigeria, CDC, where you're a director general. And I'm just wondering how those lessons have informed what you now do at the W.H.O..

CHIKWE IHEKWEAZU: I think that oceans and, you know, the I think the piece in itself sometimes is also a reflection of the timing and the platform through which it was shared. And and to think about reflecting on that piece and the work at NCC of the institution, um, I think that the three things I'd like to reflect on as is firstly institutions matters so much on our continent right now. Um, and we're not doing enough intentionally to build institutions. If you think about the development of many of the countries that we look up to, and a lot of it has been around the development of the fundamental institutions that have driven everything else around them, the ecosystems around that. And, you know, we need to do more of that and intentionally focus on building them to grow. And building institutions basically means one of the biggest components of that is building people that will work in them, you know, to grow through them and grow with them and and stay in them for them to grow. And that brings me to my third point and the one I'm most worried about and the one Belinda kind of alluded to casually, but it's at the heart of what I think is the biggest risk that we face as a country. If you think at the moment about people leaving, there's a general concept that people are leaving, you know, what we call the Japan syndrome. But if you think about the impact on public of the public sector institutions, because already salaries in the public sector institutions cannot keep people, there's no doctor that can survive on his salary working at NCDC at the moment, and I'm only using that example because the one I know the best and the one I feel most comfortable using. So if you can survive on a public sector salary as a physician working on National Public Health Agency, how do you stay? How do you grow and how do you develop that institution? So the consequence, that way of the relative success that we had

in NCDC is that everyone there has become attractive to all the other institutions that you referred to. And so we are not only we're paying two prizes at the moment. One is the initial. Positioning, aware of already being disadvantaged. But a second consequence of losing that rare talent that we had to the people, to the institutions that are already well positioned. And so this, I think, is is if I look forward into the future, is the biggest one of the biggest risks that we face, that we are losing the talent that we hope we build the future country that we all desire. So if we are not do something if we don't do something about this. Because it's happening very slowly and it don't have a big bang effect. You don't see the destruction is causing in your in our faces. But across the health sector and the country at the moment, there's a crisis of human resource. And within public health, that crisis is even worse because it's a historically disadvantaged profession to be compared to some of the more lucrative clinical professions.

ALOYSIUS UCHE ORDU: Wow. Well, technology is one word. We haven't used much in this conversation here today. And the renderer will help us address that very quickly, because in your foresight essay, 2023, you coauthored a viewpoint titled Using Information and Communication Technology to Improve Mental Health in Africa. And in it you share findings from an experimental intervention on mental wellbeing. Could you briefly tell us more about intervention, your findings and why Africa's policy makers should pay attention to issues of mental health?

BELINDA ARCHIBONG: Yes, absolutely. Thank you for the question. So so this is something where, you know, across the world, I think mental health is completely understudied and under invested in. This is true whether you're in Nigeria or in the U.S., I think it's particularly true if you're in African countries. We don't have a tradition of of focusing on mental health. A lot of times people will say, oh, you know, go to your pastor or go to, you know, wherever it's actually spiritual. And that's you know, there's no issue that you're dealing with, actually. And but what we've now realizing, you know, at least in the economics profession. And I know people who study economics is that actually mental health is very, very crucial for for health generally. It is a part of health generally. And also then for all the things that we know, you know, are important for people to live good lives. So for your ability to work and earn an income, for your ability to go to school and an education that allows you to earn an income, a higher income in the future. Mental health is at the center of all of these things. So so one of the things that we we started talking about it more, especially during the pandemic. We saw I believe I think it was a W.H.O. report. I don't remember the exact numbers, but there was an increase, I believe. And so you can maybe you can maybe correct me on this, Michelle. You know, people that are following the statistics in mental reports of mental disorders during the pandemic, right, when people were in lockdown with people who were in isolation, you were cut off from your family, from your friends. And so one of the things that we noticed a lot of not a lot, but some governments started doing and some private sector companies that are doing well is giving people these free data. So I think it's, you know, was I can give you some gigabytes of data. The Ghanaian government cuts their communication service tax during the pandemic with the idea that, oh, okay, Well, if we're trying to figure out what are the things that can address mental health, probably allowing people to stay in touch with people they care about more easily is a crucial part of allowing them to improve their mental well-being. And so one of the things that we did, interventions that we did in Ghana, was to say, okay, if we just give people free phone mobile phone credits, right, that allows them to call and allows them give them some data that they can they can go on the Internet, they can remain in touch with work, work and employers and all of that, does that actually improve their mental wellbeing? And we found, as you know, really large economic effects in terms of reductions in reports of mental distress, improvements in mental well-being from this very, very low cost intervention. Right. It's cost like $7 per person we're giving for a month. So very, very low costs, huge impacts, especially among poor, you know, very poor consumers in Ghana. And we said, okay, this is something that is low cost is, you know, cost efficient, can be scaled up in almost every single country. And it starts to, you know, get us to think more about how we can leverage information and communication technology to improve health and especially mental health outcomes in the future. So so, you know, people are now getting used to telehealth. For example, Jigar was mentioning this, you know, collaborations across countries. I think this is a key aspect of collaboration and maybe something that can address both both of this, these things that we mentioned before with the Japan trend and also, you know, you have you have a lot of skilled doctors that are leaving and people don't generally don't want to leave their homes. Right. People generally they have the salary, they have the waits have been maintained that their households, they want to stay. Right. They want to stay at home. And so maybe if you have, you know, more of these kind of telehealth systems where maybe a Nigerian doctor can work remotely in, you know, the United States or and go can contribute to knowledge there can earn a higher income through that. Maybe international agreements allow these types of exchanges to happen without having people have to like leave their countries. This this all of this could have really, really I think I'm an optimist generally, but I think, you know, really positive potential impacts on improving health and improve improving, you know, health, mental health, well-being for for African citizens as well.

ALOYSIUS UCHE ORDU: Thank you very much for that as we try and wrap up, Michelle. I was just wondering, because I know the issue of their mental health is very close to your mind. Whether you had any quick comment to what Belinda just said, because it's a big deal here in the United States.

MICHELLE WILLIAMS: It is a big deal. But I also want to make one important point, and I want to underscore what Belinda said. I too am a strategic optimist when it comes to this space, because I think the experiment that Belinda shared with us is just the tip of the arrow of what we can do if we harness harness that the fruits that can come from being smart about using digital technology. I think we have to find ways to leapfrog the old, you know, five decades of working up towards the health force. There is not a single country on this planet that has adequate workforce for dealing with the mental health crises we're facing. And so the key is going to be to harness the technology that we have access to in making it possible to provide mental health care in all corners of the earth. The other thing that it will help do is allow people to stay connected and to communicate and to begin to destigmatize mental health issues, because we have to get over this issue that mental health is different from physical health. You can't have physical health. You can't have a healthy economy if you don't have a population that's fit for engagement.

ALOYSIUS UCHE ORDU: Thank you. Thank you for allowing me. As we wrap up very, very quickly, one point from each of you, the question is. What is your message to Africa's new generation of global health practitioners and professionals? What's your message to them? So we start you Soji.

CHIKWE IHEKWEAZU: Thank you very much. My summary message is the following. The future of health in Africa is in your hands. Do not accept the world as it is. Do not run on somebody else's script. On why it is not possible. To change the past. It is incumbent on you. To face the president. And take responsibility for shaping the future. And always bearing in mind what Cassius said to Brutus. The fault. My dad, Brutus. It's not in the stars. What's in ourselves? That's where underlings come to you.

ALOYSIUS UCHE ORDU: Well said. This is the 400th anniversary of DeBarge, so it is great to be refreshed by a quote from Shakespeare's Julius Caesar. Thank you for that Soji. Chikwe, any advice for public health professionals? That's.

CHIKWE IHEKWEAZU: Sorry, I have to brush up on my knowledge of the classics, but I think I have a very simple point. They build to an extent. Words are the same. You know that we are the people we've been waiting for. No one else will do this for us. What to do this we've got to do. The grind is not enough to shout about inequity and injustices of the past. We have to build the future and that building doesn't fall from the sky. You have to do the grind. You have to get educated to a very high level in the areas that you want to become and your right to sit on the table and not by shouting, but by investing in the skills, expertise, Knowledge had never been more access to knowledge in my short lifetime than it did at the moment. So we live in different spaces that were very restricted ten, 20 years ago, and we have to become competitive by gaining the knowledge to then shape the ideas, shape the discussions and shape the future. Back to you.

ALOYSIUS UCHE ORDU: Very quickly, Belinda, briefly and then Michelle, before we sign off.

BELINDA ARCHIBONG: So, you know, I think just to build off the previous comments, I will first I want to say thank you to the African Health Professionals. I think, you know, we talk a lot about the constraints that people are facing, the obstacles people are facing, but especially when you study, you know, where we come from in terms of we won't go into colonialism too much. But, you know, from where we started out, we started out with nothing in terms of the health infrastructure that was imposed in many African countries. And then the kind of severe challenges that people have been dealing with from primary health care to infectious disease control, etc.. I think I'm not biased because I'm Nigeria, but I think Niger and Nigeria health professionals are some of the best in the world. Nigerian doctors are possibly the best in the world, just given the sheer constraints and challenges they face. And, you know, given how little infrastructure that they have to address and face those challenges. So I think, you know, really, you know, being very appreciative of the work that people have done and also, you know, encouraging people to say, okay, we keep talking about this exchange as you know, what is the U.S. bringing to that to African countries in terms of health, knowledge and all of that? But I think that we need to have that opposite discussion in terms of these these health professionals are bringing so much knowledge. Right. There's all of this wealth of knowledge that that Nigerian health professionals, African health professionals have, for example, about epidemics that then the whole world was asking, oh, you guys have been dealing with not just epidemics, but just infectious disease control, all of these things that they've been dealing with for years. And so there's a lot of very, very valuable knowledge that our public health professionals can share with the rest of the world and should be sharing and should be collaborating. Going back to check his comments earlier with the rest of the world as well.

ALOYSIUS UCHE ORDU: And those are valid points that, Michelle, you sit at the epicenter of all this training, in training public health professionals around the world. Any last minute message for the new generation of global health professionals in Africa?

MICHELLE WILLIAMS: Yeah, I want to build on what my fellow esteemed panelists have said. The solutions to some of the biggest global health challenges climate change, the next pandemic, global inequity is not necessarily going to come from the global north. It is going to come from the place where there is a high density of incredible talent, an incredible appetite for entrepreneurship, and really our people who are driving the creation of really meaningful public, private and academic partnerships. So keep pushing for that mind set shift that the solutions are going to come from the continent and they will be contributing to universal global health improvement and security. And that's a fact.

ALOYSIUS UCHE ORDU: On that very, very optimistic note from all of you. I would like to really, really from the African great initiative at Brookings Institution. Thank you all for taking the time to join us today. Michelle Williams of Harvard, Dr. Chikwe Ihekweazu from W.H.O. and Olusoji Ayedi and Belinda Archibong, Thank you all and have a wonderful day.

BELINDA ARCHIBONG: Thank you very much, Alicia. Thank you, everyone.

CHIKWE IHEKWEAZU: Thank you.