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Speakers

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Launch of the Report: Crisis Communications and Vaccine Uptake in Fragile African Settings

THE CHALLENGES at this juncture are complex. Panelists Tom Frieden, Chinwe Lucia Ochu, and Youssef Cherif discussed effective methodologies for communicating COVID-19 risk to drive distribution and uptake of vaccines in fragile state settings—whether due to instability, post war conditions, or internal strife.

ROBERT Y. SHAPIRO[1]: Welcome everyone to the launch of the report, *Crisis Communication and Vaccine Uptake in Fragile African Settings*. I would like to thank the partners for today's event: the Center for Pandemic Research at the Institute for Social and Economic Research and Policy (ISERP) at Columbia University, Frontline Nurses from the Center for the Study of Social Difference, Columbia School of Nursing, the Program in Vaccine Education at the Vagelos College of Physicians and Surgeons, the Columbia Global Centers in Nairobi and Tunis, Columbia Climate School and The Earth Institute, and The Academy of Political Science. My name is Bob Shapiro. I am president of The Academy of Political Science, a member of the executive committee of the Center for Pandemic Research at ISERP, and professor of political science and international and public affairs at Columbia.

I would like to introduce our speakers today. Wilmot James will be a speaker and co-moderator with me for today's session. He is Senior Research Scholar at ISERP and Associate Director of the Program in Vaccine Education at the Vagelos College of Physicians and Surgeons, Columbia University. Dr. Tom Frieden is a physician

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trained in internal medicine, infectious diseases, public health, and epidemiology. He is the former director of the U.S. Centers for Disease Control and Prevention and former commissioner of the New York City Health Department. Dr. Frieden is currently President and CEO of Resolve to Save Lives, an initiative of the global health organization Vital Strategies. Dr. Chinwe Lucia Ochu is a medical doctor with over 24 years of experience as a clinician. Dr. Ochu currently works within Nigeria Centre for Disease Control as Director of Prevention Programmes & Knowledge Management and as the Head of Research. And last but not least, Youssef Cherif is the director of Columbia Global Centers | Tunis. He is a political analyst who specializes in North African affairs. He is a member of Carnegie's Civic Research Network, and contributes to a number of think tanks.

Without further ado, I introduce Dr. Tom Frieden, President of Resolve to Save Lives, and author of the report's preface.

TOM FRIEDEN[2]: Thank you very much, Bob, and thanks to Dr. James and the team from ISERP and the Academy for bringing us together. The COVID pandemic has illustrated the crucially important role of effective communication in a public health emergency. Effective communication has to be driven by data—a combination of good data from different fields in public health, social science, and other disciplines—as well as sensitive communication practices. The fundamental concept is to be first, be right, be credible, be empathetic, and to give people practical, proven things to do. We have to reach every corner of every community, leaving no one behind, and especially focus on those areas where people may be suspicious of the government or of mainstream media. It is even more essential when the behavior of individuals and communities can have a direct impact on the health of others.

Taking time to listen is a crucial part of effective communication. For communication to be effective, it has to be two-way. We need to not merely hear the words, we need to listen to the thoughts, the emotions, and the perspectives. We need to acknowledge what people are saying and respond with empathy—not just canned talking points.

Communication is most effective when we convey messages that are practical and concrete. What we have long known is that if you do not give people useful things to do, they may do things that are less than useful—particularly if they are quite concerned about the situation. Consistent messaging is important, not just from the government, but also when amplified by community influencers, faith leaders, and other trusted voices. It is essential for messaging to be received and acted on, and in turn, that is essential for translating science into action. We need to reduce the complexity to increase the accessibility of information, without in any way dumbing it down—just being good communicators.

Trust is essential to effective communication. Focusing on scientific evidence with transparency and clarity builds that trust. Trust is the one thing that you cannot surge in during an emergency. You have to build it over time. Societal and public health leaders need to tell people what we know and how we know it, when we know it. We also need to be open about what we do not know and what we are doing to find it out. This means communicating that there are still many unknowns, that evidence may change as we learn more, and what we recommend may change as we learn more. That is the way to combat misinformation, which as we know, can spread even more rapidly than the virus itself.

[2] **TOM FRIEDEN** is a physician trained in internal medicine, infectious diseases, public health, and epidemiology. He is former director of the U.S. Centers for Disease Control and Prevention and former commissioner of the New York City Health Department. Dr. Frieden is currently President and CEO of Resolve to Save Lives, an initiative of the global health organization Vital Strategies. He is also Senior Fellow for Global Health at the Council on Foreign Relations.

We see inaccurate, misleading information about the COVID virus, treatments, and vaccines proliferating, often via social media. We need to counter that misinformation by presenting clear facts, amplifying messages, and also by telling stories. Information spreads when it is told in a story. Being trusted and credible, being truthful and complete with impactful stories and consistency, as well as listening, acknowledging, and presenting facts—all of this is crucially important, but very challenging in today's media and social media environment. But it is the best weapon we have against false and potentially dangerous misinformation.

At Resolve to Save Lives we have worked with a coalition of groups to create the Partnership for Evidence-Based Response to COVID (PERC). PERC began over a year ago in order to inform policy and communications by bringing together epidemiologic and other information about the trajectory of the outbreak and various data sources from population surveys. Surveys have been done in 20 African Union member states, and they have helped understand the acceptability, impact, and effectiveness of public health and social measures to control COVID. One overarching response has been that many people feel they lack the information they need to make informed decisions. Effective risk communication systems can fill these gaps and improve people's knowledge, and give them the confidence they need to take appropriate action.

The crisis communications report from Columbia focuses on important information and perspectives on the African situation and context. The principles and lessons learned are really important. They are applicable globally, not just in Africa. This includes that public health and social measures can be difficult to implement—even though they are critical for pandemic control—especially among the most vulnerable populations. The more disruptive the measures are to day-to-day life, the more important it is to engage with communities. We need to engage people to implement effective solutions that balance epidemiologic control against the cultural, economic, and social context and risk. As we move to vaccination, engaging communities is even more important. The pandemic is far from over, and it will not be over until we get vaccines to the entire world. We have a two-track pandemic: some high-income countries putting the pandemic behind them, and the rest of the world still very much struggling with an uncontrolled pandemic.

Low- and middle-income countries, especially in Africa, are at high risk—with the third wave already underway in Africa and the much more infectious Delta variant just beginning to get a hold. We will sadly need to continue public health and social measures, particularly where the pandemic is still uncontrolled, and vaccines remain in short supply.

Vaccine reluctance is very real and has many causes. This can be addressed with targeted and effective communication. We need to increase vaccine acceptance and prepare for vaccine availability, even before it is widely available—something very difficult to do. We can prime the pump to increase the demand for when vaccine supply increases. This can be done in many different ways, including one-to-one outreach by close personal contacts, family, friends, coworkers, doctors, and others.

Refining and strengthening risk communication strategies now will reduce the time it takes to get through this next phase of the pandemic, lay a stronger groundwork to address future health emergencies, and help ensure that we can keep the world as safe and well-prepared as possible. Vaccination is just one of many challenges we have faced in effectively responding to COVID. We need to balance availability with the messaging. This is enormously challenging, but enormously important. Thank you so much for doing this crucially important report.

SHAPIRO: I want to thank Tom for getting us off to an excellent start. I want to turn the floor over now to Wilmot James who will offer his reflections on the report.

WILMOT JAMES[3]: Thank you very much, Tom, for your introductory comments and overview of where we are. We are delighted to release today the report, *Crisis Communications and Vaccine Uptake in Fragile African Settings*. This report is based on a larger symposium we held on 31 March 2021, and we are extremely delighted to make it available publicly.

The context in which we are releasing the report is as follows. The World Health Organization (WHO) reported that, as of mid-June, wealthy countries have delivered 60 vaccines per 100 people, whereas the rate in low-income countries is one vaccine per 100 people. Just think about that number—60 to 100, and one to 100. African vaccination figures continue to lag.

The Africa CDC reported that 2.37 percent of all populations living in Africa's 54 countries and two disputed territories received one vaccine dose, and 9.76 percent received two doses. Apart from the island of the Seychelles, only Morocco's vaccination rates are in the double digits, with 16 percent of its people fully vaccinated, followed by Equatorial Guinea, Tunisia, and Zimbabwe. In terms of sheer numbers, Egypt has delivered the most vaccinations. It topped 3.3 million, but this is in a country with a population of 100 million, and two doses are required.

COVAX is a great idea. It is a remarkable innovation, but support from the countries of the North has been disappointing. The G7 countries announced that they would be donating 807 million doses to countries in need, primarily through COVAX, but provided no details as to that process or timeline. Observers who counted on an ambitious vision were left disappointed. The former U.K. Prime Minister Gordon Brown called the G7 summit an "unforgivable moral failure" over the poor progress made in vaccine plans. Dr. Tedros Adhanom Ghebreyesus, Director-General of the WHO, noted that not making vaccines available until next year will be "too late for those who are dying today."

There are three key consequences. First, the longer it takes, the more hesitant the suspicious populations become. Secondly, countries now have to rely on public health social measures much more than before, but we cannot go back to economically-damaging lockdowns. Third, the opportunities for new variants to emerge and create havoc in the epidemic environment is increased with the low vaccination rates.

The implication of these points calls for smart, tailored interventions and targeted risk communication in support of public health social measures. What we require is a campaign, or series of campaigns, with the following components. We have to accelerate supply and delivery of vaccines, but there are some hard barriers. We have to plug the information gap when it comes to vaccine safety. On this front, Africa is better off when it comes to attitudes towards vaccines given the recent history with vaccinations on the continent and an infectious disease burden. But there is regional variation, and we have to plug that information gap. Resolve to Save Lives has conducted a number of surveys that are really instructive about why it is that individuals do not want to be vaccinated, and I will cite some figures for you.

In the case of South Africa, the top three reasons for vaccine hesitancy are: Firstly, 27 percent of South Africans do not believe that a virus exists. Second, 25 percent say they are not getting vaccinated because they do not know enough about it to make a decision. Third, 18 percent believe they are confident that other treatments will be coming soon. That is the case in South Africa.

Contrast this to Tunisia, where the biggest percentage, 30 percent, believe that they simply do not have enough information to make a decision. It is just an information gap. Twenty percent believe that they are not at risk, and 15 percent say that they do not trust the health authorities. In the case of Tunisia, there is more trust in the military than in the health authorities.

[3] **WILMOT JAMES** is Senior Research Scholar at the Institute for Social and Economic Research and Policy (ISERP), College of Arts and Sciences, and Associate Director of Program in Vaccine Education at the Vagelos College of Physicians and Surgeons, Columbia University.

The key takeaway is that the most important reason people are refusing to take vaccines is not having enough information to make a decision. Therefore, risk communication is clearly important in providing that level of information. That is an opportunity.

The Resolve to Save Lives survey also identified who the five most trusted institutions or individuals are in a given society. I will give you an example. In the case of Ethiopia, the most-trusted source of information is the Department of Health. The second most-trusted sources are health centers or hospitals. The third would be religious institutions, the fourth would be the media, and the fifth would be national public health institutes.

I want to contrast that with Tunisia again. The most-trusted source of information in Tunisia is the army. The second would be community health workers, third would be religious institutions, fourth would be the police, and fifth would be politicians. That tells you a lot.

This has implications for communicating risk in African settings. First of all, countries must up their game. Secondly, a much smarter use must be made of the individuals and institutions, the most-trusted risk communicators, identified by the Resolve to Save Lives surveys. Thirdly, there is a need to micro-target audiences, rather than having a blunt national instrument. We now have much more information on who those audiences and constituencies are. And lastly, we have to get the message right—requiring transparency, disclosure, and the truth. People need to know what is going on.

This is a challenge in politically-stable countries with organized governments. What about countries at war? There are 15 African countries presently engaged in some kind of war. What about post-conflict countries trying to rebuild, like Libya? What about countries experiencing high levels of internal strife? What about areas of the continent where governments have no presence at all, and where there are large refugee camps and no-go areas? There are many success stories in Africa. We know that Africa is a vast continent, and therefore any kind of solution that we would offer cannot rely on a one-size-fits-all architecture.

Here are some general statements about risk communication and community engagement that you can glean from the report when you read it. First, when it comes to risk communication, consistent messaging is absolutely important. Nothing is worse than inconsistent and contradictory messaging. There also has to be consistent community engagement in order to build trust. As Tom Frieden pointed out, you cannot invent trust today. It is something that is built over time between citizens and the institutions that serve them. That cumulative relationship of trust is something that requires a longer view and a long-term investment. Community engagement is also important to help people and their families. A community consists of individuals, of families, of networks, and we need to know how that is put together. We need to know how that works.

Secondly, health promotion campaigns are critical for informing communities about how they must access health services. There is more information today about the secondary effects of COVID for a country's disease burden. Risk communication works if you have a simultaneous strategy for lowering the barriers people face when trying to access health services. There are many barriers—logistical barriers, geographical barriers, social barriers, and economic barriers.

Thirdly, the report emphasizes the importance of partnerships and collaborations with existing formal and informal social networks. This includes tangible support to women's groups, which have played a leadership role in Africa and elsewhere. It includes tangible support to community groups. It also includes tangible support to civil society groups, which play an outsized role in supporting frontline pandemic response in the developing world.

In sum, the priorities for us are: upscale the supply of vaccines; upscale delivery and immunizations; run smart campaigns using smart messaging; emphasize the continued and vital importance of non-pharmaceutical interventions, without going into hard lockdowns; and use the

important and improved data sources that have become increasingly available. And with that, I would like to hand it back to Dr. Shapiro.

SHAPIRO: Thank you for that excellent and compelling discussion. I also want to alert everyone that Dr. Frieden has to leave early for another engagement. With no further ado, I would like to introduce Dr. Ochu, who will talk about this from the context of Africa. Thank you.

CHINWE LUCIA OCHU[4]: Thank you very much, Robert, and thanks to Dr. James for laying that very good foundation. It is a great privilege to be able to share Nigeria's experience in the report being launched today. Nigeria, like other African countries, has had very poor access to vaccines—less than 2 percent of the entire population has received two doses of the AstraZeneca vaccine. The whole of the African continent has been able to roll out just 32 million vaccines, with only 12 million people having received two doses of the vaccine. This is still less than 1 percent of the total number of vaccines that have been given out globally.

Nigeria and the rest of the African countries have had very poor coverage of COVID-19 vaccines. Complicating this is also vaccine hesitancy. A major factor that drives hesitancy in our context, which has been pointed out, is COVID fatigue. We have heard that people are getting tired of hearing about COVID. Also, there is the issue of infodemics—widespread false information about the virus and about the vaccine.

Africa has had a very different trajectory of the pandemic than was initially expected. The fact that results recorded many cases of COVID-19, but not many cases of death, has led to people having a very low perception of risk for the disease. It is important to note that this might not be the actual case. The serosurveys we conducted covered four states in the country, and we were able to identify a very high seroprevalence of COVID-19. So a lot still needs to be done. And like Tom Frieden said, we need data to be able to know the extent of the virus in the country and to guide our vaccination efforts.

Another problem has been distrust of government and government institutions, also as a result of infodemics, or the false information that is moving around. Inadequate community engagement and insecurity in some quarters—some parts of the country have problems with insurgency—has hindered access to those fragile communities. So, this has informed our strategy as a country. We have emphasized and prioritized innovative strategies to address COVID-19 vaccine hesitancy and to improve acceptance and coverage. We have also discovered, and it is important to note, that these strategies must build trust in our public health interventions. For this to happen, the processes must be transparent. There must be deep-rooted public health and community partnerships that will foster community ownership and ensure sustainability of our public health interventions.

We have tried to effectively manage infodemics in the country. In Nigeria, we implemented a robust infodemic management system that is contained in our risk communication and community engagement strategy. This system is based on dynamic listening and rumor management. We try to detect, collate, investigate, analyze, and make decisions on the trending issues that we get from the media. There is an app that regularly scopes social media and other traditional media channels to identify and categorize trending information as misinformation, disinformation, or risky behaviors. We then seek to develop crafted risk communication messages to address those trends.

[4] **CHINWE LUCIA OCHU** is a medical doctor with over 24 years' experience as a clinician. Dr. Ochu currently works with Nigeria Centre for Disease Control (NCDC) as the Director of Prevention Programmes & Knowledge Management and as the Head of Research.

Also, we strengthened community partnerships. We identify and engage opinion leaders and trusted voices, such as religious leaders, leaders of faith-based organizations, traditional leaders, and especially the healthcare workers. Like the survey and report from Resolve to Save Lives show, healthcare workers are one of the key trusted voices that people tend to believe more than the other categories. We have leveraged these trusted voices in championing our risk communication messages and efforts. It is very important for us as a global community to engage communities and to strengthen community structures and partnerships to be able to drive acceptance of our public health interventions.

In Nigeria, fortunately, we have had a very successful polio eradication campaign. We have leveraged existing structures—using community-based organizations and all the polio eradication structures—in promoting vaccine acceptance and vaccine coverage for COVID-19. We have also identified the need to engage end-users and fragile populations in development and implementation of our public health interventions. This is the only way they can take ownership and be able to sustain these interventions.

We have partnered with the military and civilian task forces to improve our access to fragile communities. Some parts of the country are difficult to penetrate and to access without partnering with the military. Thus, the importance of collaboration with relevant stakeholders has been highlighted in our response to COVID-19.

So, these are very important strategies that we have used and that we keep using in Nigeria. Community-level participation in public health intervention development and implementation has been key in the way we responded to this pandemic. I am happy that we have been able to capture all of this in the report that is being launched today. Hopefully this will inform the global strategy on improving vaccine acceptance and coverage—not just in the high-income countries, but in both high- and low-income countries. So, thank you very much. I will hand it back over to Robert to continue with the discussion.

SHAPIRO: Thank you for that enlightening discussion about what has been happening on the ground there. Now to Youssef Cherif, director of Columbia Global Centers | Tunis.

YOUSSEF CHERIF[5]: Thank you very much. It is a pleasure to be with you for the launch of the report. My focus will be mainly on North Africa. I will focus mostly on the political aspects related to COVID-19 and vaccine dissemination.

In March we mentioned the issues related to vaccine distribution and vaccine communication. I had mentioned political instability and political struggles. My topic today will be around that issue. I will start by saying that since the pandemic began early last year, all governments in the Middle East and North Africa (MENA) region issued statements about the danger of COVID-19. We saw the governments in Tunisia, or Algeria, or Morocco quickly take actions to face COVID-19. But when you look carefully, you will see that it was not their ultimate priority.

I often compare this to how these same governments reacted 10, 20, or 30 years ago to issues of terrorism and extremism, which became their ultimate priority. By then, all these states were quite authoritarian, and we have seen these states upgrading their authoritarianism in the name of fighting terrorism and extremism. But with COVID, they saw it as an issue, but not as the most important or most pressing issue. I will give you examples across the spectrum. Again, I will be talking about North Africa, and more specifically about the Maghreb.

[5] **YOUSSEF CHERIF** is the director of the Columbia Global Centers | Tunis. He is a political analyst who specializes in North African affairs. He is a member of Carnegie's Civic Research Network and he contributes to a number of think-tanks.

In Libya, the war that the country has been going through since 2011 continued until early 2021. Now the situation is a bit better, but different armies were fighting until just a few months ago. The main focus of Libyan politicians and soldiers was on fighting each other, rather than fighting COVID-19. Today, the war has basically ended, or at least there is a stalemate. When we look at how Libyan politicians act, they are not always wearing masks and so on.

In Tunisia, there has been a political crisis since 2011. But the political crisis was exacerbated in the summer of 2020. At that time, the country left the first wave of COVID-19 rather unscathed. The government did quite well in managing the first wave. But then the different political parties started bickering. Today the country is in big political turmoil that was exacerbated in summer 2020.

In Algeria and Morocco, the authorities cracked down on opponents more and more in the summer and fall of 2020, rather than working together with civil society on vaccine distribution and communication. In Mauritania, there is an anti-corruption campaign that kept moving forward during all of 2020 and 2021.

This is all to say that, again, the priority of these governments was elsewhere. The political tensions that I just mentioned exhausted the energy of the leaderships of all five states of the Maghreb region. Their attention was away from COVID-19 and away from looking to get vaccine jabs to their populations. And the result is what we see today—a limited vaccination campaign by summer 2021.

As Professor James mentioned, that is apart from Morocco, which is faring quite well in comparison to the other North African states. In Morocco, roughly 20 percent of the population has been vaccinated. Most of them got two shots. Many more got one shot, but also had COVID in the past. So at least 20 percent of the population is rather protected. They got AstraZeneca, Sinovac, and Sputnik vaccines. BioNTech is not very active in Morocco. Morocco started their vaccination campaign quite early in late January.

In Tunisia, however, the vaccination campaign only started in mid-March—less than three months ago. In Tunisia today, less than 4 percent of the population is fully vaccinated. And important to our discussion today, less than 25 percent of the population in Tunisia registered to get the vaccine because of the reasons Professor James mentioned—such as not being aware about the vaccines and not trusting the government.

I think Algeria is the biggest issue today when it comes to COVID and vaccines in North Africa. Algeria has a population of 44 million people, but less than 3 percent of its population is vaccinated. By the latest account, they are only partly vaccinated, not fully vaccinated. That is a ticking time bomb for the upcoming years. Algeria actually started their vaccination campaign early. But for different reasons, that was not the main priority, so they did not get enough vaccines on time.

Libya was last to start the vaccination campaign in mid-April, once the war calmed down. Only less than 3 percent of the population is vaccinated and again, only partly vaccinated. There is very little information about what is happening in Libya because of the dysfunction that the war brought to the country. So that is also a big problem. But the Libyan population is quite small with less than 7 million people, and therefore it is still manageable as a situation.

Mauritania has vaccinated less than 1 percent of its population. It started quite late in March vaccinating the population. Apart from Morocco, the other North African countries are doing quite badly, and that is creating a lot of issues.

In Tunisia, for instance, tourism was supposed to restart this summer. But because only a few people are vaccinated, the summer season is dead. That has a lot of repercussions on the economic situation of the country. Perhaps more dangerous than the economic impact is the deepening mistrust between the populations and their authorities, and between the populations and their

states in general. More and more people in these North African countries do not trust the state at all, and they feel that their states did not provide vaccines on time. I talked to a few people in Tunisia and Algeria who told me that for them, these are state crimes. The states did not take care of their health. So again, this is deepening the mistrust between citizens and the governments, and that may lead to more social instability in the future. Thank you.

SHAPIRO: Thank you very much. We have had very interesting discussions from all the panelists. Wilmot, do you want to follow up with any questions for the panelists?

JAMES: Thank you very much for that wonderful series of reviews. One of the questions that I would like us to discuss has to do with how one combines public health social measures with vaccine roll out. It is obvious that a low vaccination rate creates opportunities for new variants. The new Delta variant is quite pathogenic in terms of transmissibility and its health consequences. Low vaccination rates, which is the case across the board in Africa, even in South Africa, creates massive risk as the pandemic unfolds.

Vaccination must be accompanied by strict public health social measures—masking, social distancing, and other measures that we know work. So, the question is, how is that going in the countries that we are talking about? In the case of Nigeria, we know Nigeria is politically complicated. Thirty-six states have to be brought together. Northern Nigeria and other areas are at risk given the security situation. Chinwe?

OCHU: Thank you again, Dr. James. It is a very interesting question. I will say that it has not been easy like you rightly noted. Nigeria is a peculiar country, and it will surprise you to know that up to this phase of the response, we still have states that do not believe in COVID-19. There is a good proportion of persons that do not believe that COVID-19 is real.

Now that we have started rolling out the vaccines, only a small percentage of the population has received the vaccines. The low number of doses we are getting also makes it more complicated. As a public health institute, our messaging has been consistent. We must continue to combine the non-pharmaceutical interventions alongside the vaccine roll out because we are still a long way from achieving herd immunity in the country. So we keep repeating that.

We still utilize all our communication channels. We depend so much on the religious leaders, faith-based organization leaders, traditional leaders, and those that have contacts with the people at the community-level to drive home the importance of this. This has not been very easy. We still have a lot of people not adhering to these guidelines. Recently, the Presidential Steering Committee released a revised guideline more or less reinforcing the regulations around COVID-19. It has been very well-publicized. We are doing our best to keep countering rumors and false information with facts and data.

We are also leveraging the news of what is going on in the countries around us. We are warning the people that we are not yet out of the crisis, and that we have to maintain what we have been doing. So that is where we are in the country. We have not changed our messaging. Our public health advisory still reads that people should continue to adhere to the non-pharmaceutical interventions. Even if you have been vaccinated, keep wearing your facemask, keep maintaining physical distance, and so on. But adherence has not been that wonderful.

SHAPIRO: Thank you. Wilmot, I would like to go to a couple of related questions from the audience. One was for you, Wilmot, about the report. What does the report say about the role of religion, tradition, and culture as impediments or opportunities concerning the strength of COVID-19 messaging?

JAMES: That is a great question. I would like to reframe the question slightly. It is not about tradition, or culture, or religion as much as it is about points of view that would be misleading in terms of what individuals should do to protect their own health. It is about misinformation, disinformation, and conspiracy theories that are sometimes a product of tradition, sometimes a product of religious views, and so on. The key thing is to frame it as information, messages, or points of view that are contrary to what is required to take care of one's own health, without suggesting that it is somehow necessarily associated with a tradition or religion.

The evidence is pretty clear, and I would like to refer you to a wonderful report published by the Wellcome Trust, "Effective Ways to Increase Vaccination Rates: What the Evidence Tells Us." It tells us that it is not a good strategy to try and rebut misinformation or disinformation with the facts. Such an approach deepens the problem by reinforcing misinformation, disinformation, and conspiracy theories. It is much better to do two things. First is to simply affirm and amplify extant, positive views on vaccination. In most countries, the majority of the population is quite positive towards vaccination, especially parents when it comes to child immunization. It is a minority of people who are not positive. It is a minority of people who disbelieve it. So, what you want to do in your messaging is amplify the positive side. Second is that you need to build attitudes towards vaccination as a community norm. It is something that communities do. It is something that your peers do. The wait-and-see attitude is common across the globe. Very few take the lead, but once they take the lead, others follow.

So, affirm the positive side of vaccination by citing the number of people who have been vaccinated, and use that in public messaging. This requires a vaccine surveillance system that can generate that data. Secondly, affirm the fact that this is a community norm. The more people take the vaccine, the more they affirm the community norm. That would be my response to that very important question.

SHAPIRO: Thank you. Dr. Ochu, this question is related. The questioner is aware of leaders of certain faith-based organizations and some political figures in Nigeria discrediting the COVID-19 vaccines. How is the Nigeria Centre for Disease Control circumventing this obstacle?

OCHU: That is a great question. And I do not think it is unique to Nigeria. This has been a problem in many countries around the world. What we have adopted as our strategy is to engage these people more. We have identified them as key stakeholders and trusted voices, because they have large followership, and their followers tend to believe them. We try to empower them with information and with trainings. We have organized formal trainings for religious leaders and traditional leaders—to bring them in and make them part of our intervention. So, they are part of the process. That has worked. Yes, there are a few that have been adamant, but this has not deterred us.

I think what has also helped Nigeria is the incident management structure we have that utilizes an integrated system in public health responses. We have structures, from the national level down to the community level, that have supported our activities around other disease outbreaks, like Lassa fever, the Ebola crisis, and polio.

The Emergency Operation Centers have been a platform for involving relevant stakeholders in the decision-making process. We have continued to utilize this form of engagement to make sure we turn those who would have been opposers into champions of public health interventions. That happens by being transparent and by providing them data and valid information. We bring them into that process of developing the public health interventions and crafting our risk communication messages.

In the churches, for instance, we have a lot of pastors and religious leaders who help us enforce compliance with COVID-19 prevention measures. This is also the case in mosques, and all the other religions. There are just a few that are still adamant. The interesting thing is that information still gets to members of the congregation, and we keep trying to engage them. I do not think there is any magic bullet that solves the problem, apart from more intensive community engagement—engaging them and getting them involved in your decision-making processes. With time, they will understand that no, this is not a hoax, and there is no conspiracy. These are facts. That has been our experience in Nigeria.

SHAPIRO: Thank you. The next audience question offers you a chance to fill in any gaps in the discussion. What are the major social and political factors driving vaccine hesitancy in Africa? How will these be addressed? Has anything been missed that you would like to talk about further?

CHERIF: I think the political reasons are mostly related to the lack of awareness by politicians of the danger of COVID itself. Therefore, when citizens see that their political leaders are not getting vaccinated, or are not hidden at home in fear of COVID, they do not trust it either. That pushes more distrust among the population. Also, at least in Tunisia, we have seen in the last few months a lot of political rallies organized by the main political parties. A lot of citizens see that and think: Why would I worry if these guys, who in theory know better, are not worried? That is the political level.

When it comes to the social and economic level, I think the answer is not very sophisticated. People are struggling economically, and they will suffer if they do not work and do not continue their normal life. People will think: I did not get COVID today and I will not get it tomorrow, but today I need to eat and I need to work. Therefore, people simply say that either COVID does not exist or it is not that dangerous, and then they will also refuse to get the vaccine. Usually these are the same people who do not get the flu vaccines and so on—the anti-vaxxers. At the end of the day, these political, social, and economic reasons make a lot of people hesitant towards the virus, but also towards the vaccine.

SHAPIRO: Thank you. Would anyone else like to speak further to this question?

JAMES: I want to say that the anti-vaxxer movement is an organized one. As such, it obviously impacts people's attitudes. But it is a small minority. Youssef pointed this out—the key thing here is national political leadership. It is very clear from the survey results. If leaders lead in this area and take the right stance in the highest levels of government, the difference is huge. But leaders have to be trusted, and the trust levels around leaders are very uneven.

SHAPIRO: Okay. Thank you. We have another very good question. What have non-European powers, especially China, been doing? Any comments on that?

CHERIF: I do have a short comment here because I have been following this topic, especially for China and Russia. When you look at vaccine distribution, at least in North Africa, the Europeans did distribute more vaccines to North Africa, and they distribute more aid to solve the economic situations that were triggered by the COVID crisis. But China distributed some vaccine jabs, and Russia distributed even less. At least from what I can see, a lot of people believe that China offered more aid to Tunisia or to Morocco than the European Union. But again, the key here is how they were able to communicate, and the way they dispersed aid. At least it is working.

SHAPIRO: Very interesting. I have a question related to the vaccine issue. It goes beyond the report on Africa, but it is relevant there. In the United States, there has been a little confusion about the quality of the vaccines. Some serious issues arose with regard to the Johnson & Johnson vaccine, to the point that it has been discussed as representing a setback for the Biden administration with respect to its distribution of the vaccine. How have Africans thought about the different vaccines and the quality of them? Has that in any way affected their reluctance with regard to the vaccination? There was also discussion about the quality of the Chinese vaccine, the Russian vaccine, and so forth. Has this added a further dimension and complication to the issue regarding vaccination in Africa?

OCHU: Yes, thank you, Robert. People can access information online and know what is happening in other countries. This has led to the fear that the speed with which these vaccines were developed could mean they might have compromised quality. A good number of persons may not want to receive the vaccines because of that. Unfortunately, Nigeria has only had access to the AstraZeneca vaccine. We are looking for vaccines for our people. AstraZeneca is the one we have been able to access. Fortunately, they have a fairly good safety profile, and we have not had many issues with adverse reactions. We have also developed a system for tracking these adverse reactions. The National Agency for Food & Drug Administration & Control (NAFDAC) has come up with an electronic app for reporting these adverse reactions.

People will be scared to take a vaccine if they think it has not taken the usual duration to develop an effective and safe vaccine. We are still relying on existing scientific evidence, and on being transparent and honest about what we know and what we do not know. We do not try to deceive people by telling them that we know what the impact of this will be in the next 20 or 30 years. No, we do not have that information now.

But being transparent means that people are more likely to trust you. They are more likely to look at the evidence that is available and make the decision for themselves. We have also not made it compulsory, that you must be vaccinated. But we try to provide compelling evidence to make you decide to get vaccinated. That seems to be the key towards controlling the outbreaks of the pandemic.

SHAPIRO: To follow up, we have another question from the audience that bears on the extent to which scientific and expert voices and opinions are heard. And the context here is that leaders need to be trusted. In North Central Africa, where there is little trust in politicians and the military is in control in certain countries, how do these governments overcome the mistrust? Is enough space allowed for the trusted scientific and expert voices to be heard? So there is a political aspect and a scientific aspect.

OCHU: In Nigeria it has helped that we have strong political support for COVID-19 interventions. We have strategic political leadership at the Presidential Steering Committee, headed by the office of the presidency through the Secretary of the Government of the Federation. Initially, that committee was a presidential task force that depended on scientific evidence for their decisions. So there has been a lot of support for science in driving our response. At the Nigeria Centre for Disease Control we have an epidemic intelligence unit that looks at data and provides support.

Also at the national level, we were able to convene a coalition of scientists, policymakers, and research institutes. We call it the Nigeria COVID-19 Research Coalition, and this coalition was formed very early in the outbreak in April 2020. It is made up of over 50 institutions— research teams collaborating with high-level policymakers, as well as people from industry and the private sector. Bringing together scientists and policymakers means that evidence generated

through research can be readily translated into policy and practice. I must say that for this pandemic, we have seen a lot of evidence-driven policies and practices. Most of our guidelines have been based on evidence.

There is also a new trend that I think all African countries should emulate. NAFDAC has brought together herbalists, indigenous medicine practitioners, to work in collaboration with academic scientists to test products and see if we can come up with indigenous solutions.

A lot of attention has been given to science. I will say that we have done very well in that regard. However, funding is still not optimal in the country for science research and development. It is still an area that is heavily underfunded, and that is where we are hoping for improvement.

SHAPIRO: Thank you. I have two more questions. I was intrigued by this, Dr. Ochu, when you mentioned social media in your discussion. We have a question from one of the audience members that says: In the case of Nigeria, where there has been federal restrictions on some social media, is the Nigeria Centre for Disease Control able to address the infodemic and convey messages en masse to Nigeria's population of youth, who are attached to social media?

OCHU: I will not delve into that political question. Maybe the politicians can address that. For us as a body, we have tried to make maximum use of what is available to us. Fortunately, we have had very robust communication channels before these restrictions. What we are doing is strengthening the existing channels and using them to pass the same information. We are also exploring other non-traditional means that will be effective in getting information out.

SHAPIRO: There is the issue of what problems migration can cause regarding spreading the pandemic further. The question asks: For migrants who are entering or leaving these countries, is there any thought about people at some point having to prove whether or not they have been vaccinated? Is that a problem for the foreseeable future?

OCHU: Yes, migration has been a key factor for cross-country transmission of the virus. Most strategies have also focused on strengthening detection at that level and on preventing importation of the virus into the country. In Nigeria, for instance, we still insist on presenting a negative result before being admitted into the country. And even with that, the migrant is expected to self-isolate for seven days, and then get tested on the seventh day before being allowed into the society. So, these are all key measures to lower the risk of importing the virus.

We have not yet started requiring vaccination because we understand that many nations still do not have access to the vaccine. In Nigeria, we have not covered even 5 percent of our population—we have just 2 percent vaccinated. But when vaccines become accessible, then it becomes morally justifiable to ask someone to show their vaccination record before coming in. Thankfully there have been a lot of collective efforts. I must commend the efforts of Africa CDC, the WHO, and all the other organizations that are trying to make vaccines available and accessible to low- and middle-income countries. When we get to a particular stage, I believe that it could become a criterion for admitting someone into the country.

CHERIF: In places like Tunisia or Morocco, there are no specific campaigns to vaccinate the tens of thousands of migrants, informal dwellers, or asylum seekers. Many do not have the necessary documents to get registered. Even though, in theory, they can be vaccinated, the mechanisms to get the vaccines are not within reach. Therefore, in the long term, there needs to be a strategy by these governments to vaccinate migrants. But, of course, the main argument that the

authorities will use is that since they are not even able to vaccinate their own population, they cannot open it up to non-citizens.

I want to come back to a point in the Q&A about whether people should be convinced to get vaccinated or whether it should be enforced. I think we are back to the story of the chicken and the egg, or democracy versus authoritarianism. The easy answer is that there needs to be more enforcement of the push towards vaccination. That may help get more and more people vaccinated, but that is the easy answer. The more complicated answer is that, usually, that is what authoritarian regimes do, not for the good, but rather to be even more authoritarian. So, we have seen that some authoritarian countries are imposing more and more restrictions in the name of fighting COVID or in the name of pushing people to get vaccinated. Recently in one Asian country, the president said that you either get vaccinated or you go to jail. These kinds of arguments will only strengthen authoritarian regimes, and not necessarily get more people vaccinated. I think the key here is not to be more violent towards the population, but rather to open more space in civil society, to disseminate more information about COVID and vaccination, and for the states to use civil society for this endeavor. That will be much more useful than enforcing and "using the stick" to get people vaccinated.

SHAPIRO: Yes, it was in the Philippines, where there was a heavy-handed announcement about vaccine requirement. One last question. We have talked about government action. To what extent is local government poised to play a greater role or lesser role in dealing with these issues? Is there an important distinction to be made there? In the United States, that has come into play because of the different states and localities. Should the distinction be made between local and national governments?

OCHU: In Nigeria we have three levels of healthcare—the tertiary, the secondary, and the primary healthcare. What the COVID-19 pandemic has made more obvious to all is that we need to strengthen healthcare at the primary level, because that is where the closest care to the people is. That is where case identification is done and where case detection starts. We have an integrated disease surveillance and response system that is driven from the primary healthcare level, up to the state, and then to the national government. For us to attain universal health coverage in the country, there must be a deliberate effort to strengthen primary healthcare. That is a level of care that also enjoys more trust because you can relate to the contextual issues of the environment. Prior to this time, there had been little emphasis on primary healthcare centers.

It is important that the government of every nation utilize this opportunity. There has been lots of inflow of resources. In Nigeria, we have been able to use that to build our public health system. We now have public health laboratories in all the states of the Federation. We have also prioritized disease surveillance at the primary healthcare level. We have a data collection tool, the Surveillance Outbreak Response Management and Analysis System, that we have deployed to all 774 local governments in the country, because we understand that detection and case identification must happen at that level. We are making conscious efforts to strengthen sub-national structures and to get them to be more responsible in driving the response than the national level. It will take some time, but we have noted at a lot of gains.

SHAPIRO: Thank you. We are at the end of our allotted time. On behalf of Wilmot James, myself, and our partnering organizations, I want to thank the audience for joining us today. And I especially want to thank our panelists, Tom Frieden, Chinwe Ochu, and Youssef Cherif. Thank you very much.