

Global Health Issues

Virtual Press Conference

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Speaker key:

TJ	Tarik Jasarevic
TAG	Dr Tedros Adhanom Ghebreyesus
MG	Martin Griffiths
NH	Nimo Hassan
RK	Rosamund Adoo-Kissi-Debrah
MK	Dr Maria Van Kerkhove
AH	Dr Ana Maria Henao-Restrepo
AM	Dr Abdi Mahamud
SF	Dr Ibrahima Socé Fall
KO	Dr Kate O'Brien
MN	Dr Maria Neira
EP	Erin Prater
CP	Carmen Paun
JC	Jamil Chade
HB	Helen Branswell
AB	Ashvin Barshinge

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TJ Hello to... [Non-English]. Health Products. We have also Dr Abdi Mahamud, who is Acting Director of Alert and Response Coordination Department. Dr Maria Van Kerkhove is Technical Lead on COVID-19, Dr Rosamund Lewis is Technical Lead on Monkeypox, and with us is also Dr Maria Neira. She's a Director of our Department for Environment, Climate Change and Health.

We also have a couple of WHO experts online. With us is Dr Philippe Barboza, who is Technical Lead for Cholera, we also have Dr Ana Maria Henao, who is Co-Lead of Research and Development Blueprint, and with us is also Dr Bruce Aylward, Senior Advisor to the Director-General.

So, with this and with a reminder that if you have questions, not only on this issue of COP27 but on any other global health issue, please raise your hand immediately, so we can put you in the queue. As always, this press conference has simultaneous translation/interpretation into six UN languages, plus Portuguese and Hindi, and you can use those languages to ask your questions. With this, I will turn to Dr Tedros for his opening remarks.

00:03:45

TAG Thank you. Thank you, Tarik, and welcome. Good morning, good afternoon, and good evening. This week marks two years since the siege of Tigray began. The Afar and Amhara regions are also affected by the conflict but WHO and our partners have access to those regions and have been able to deliver humanitarian aid.

However, the humanitarian situation in Tigray remains catastrophic. As I have said before, the siege of six million people by Ethiopian and Eritrean forces is the worst humanitarian crisis in the world. Since the beginning of the siege, food, medicine and other basic services have been weaponised.

It has now been more than two months since the last humanitarian aid reached Tigray but, even before that, the aid reaching Tigray was a trickle, nowhere near enough to meet the needs. Large numbers of displaced people are now arriving in, or moving towards, the regional capital, Mekelle.

Most UN agencies and NGOs have now left towns in the region's northeast because of security concerns. Some health partners have shut down because they cannot access the funds, fuel and other supplies they need to serve the community.

WHO continues to call for unfettered humanitarian access for the millions of people who are in dire need and we continue to call on the international community to give the crisis in Tigray the right attention. The only solution to this situation remains peace, and we hope that the talks now taking place in South Africa will lead to a peaceful and enduring resolution.

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Now, to the Ebola outbreak in Uganda. There have now been 130 confirmed cases of Ebola disease, 21 probable cases, 43 confirmed deaths and 21 probable deaths. Mubende remains the most affected district, however cases have recently increased in two neighbouring districts, and 17 cases have been confirmed in the capital, Kampala.

Although these cases are linked to known clusters, the very fact that there are cases in a densely populated city underscores the very real risk of further transmission and the very urgent need for increased readiness in districts and surrounding countries.

WHO continues to work closely with the Government of Uganda and partners to respond to the outbreak, and we continue to urge a strengthened global response and increased donor investment. To support the response, WHO yesterday released an additional US\$5.7 million from our Contingency Fund for Emergencies, in addition to the \$5.0 million we released previously.

Finally, next week, Egypt will host the 2022 United Nations Climate Change Conference, or COP27, where countries will assess progress towards the agreed target of limiting global warming to 1.5 degrees Celsius above pre-industrial levels. Meeting that target will have massive benefits for human health. Failing to meet it comes with massive risks.

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Climate change is already impacting health in many ways, through more frequent and extreme weather events, more disease outbreaks, and more mental health issues. In the Greater Horn of Africa, a combination of drought and floods have left 47 million people facing acute hunger and 18 million people have been displaced.

In the Sahel region, in West and Central Africa, the temperature is rising 1.5 times faster than the global average and a combination of flooding, drought and conflict are supercharging a food crisis. Many countries in the Sahel are currently affected by flooding, including Nigeria, where 600 people have died and 1.4 million have been displaced.

In Pakistan, unprecedented floods have devastated large parts of the country. The impact will be felt for years to come. Over 33 million people have been affected and almost 1,500 health centres damaged. Around the world, climate change is fuelling outbreaks of cholera and dengue, and increasing the risks of new pathogens emerging with epidemic and pandemic potential.

Climate change exacerbates disease and malnutrition, which have a compounding effect. Sick people are more likely to be malnourished and malnourished people are more likely to get sick and die. The climate crisis is a health crisis.

WHO is calling on governments to lead a just, equitable and fast phase-out of fossil fuels and transition to a clean energy future. It's now my pleasure to welcome my friend Martin Griffiths, the United Nations Under-Secretary-General for Humanitarian Affairs and Emergency Relief Coordinator. Martin, welcome and thank you for joining us, and you have the floor.

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MG Thanks very much indeed, Dr Tedros. It's a great honour to be with you today on this extremely important subject of climate change and food insecurity. Thank you for having me. The world is indeed in the grip of a hunger crisis among its many other crises. War, the pandemic and vast inequality are all partly to blame.

The emergency line is flat red everywhere and like you, Dr Tedros, I see the consequences of all this nearly everywhere we visit. In the Horn of Africa, as I know Nimo will tell us more, an unprecedented drought has pushed 22 million people to the edge of famine and like you, Tedros, I hope we hear good news from South Africa for the people of Tigray very soon.

I've visited with communities in Somalia and Kenya whose very way of life is at risk. Pastoralism is threatened existentially by the continuing droughts, which kill off livestock. Three million livestock dead in Somalia alone in the recent months. I was also in Pakistan, Dr Tedros you mentioned that, where a monstrous monsoon, what Secretary-General Guterres called a monsoon on

steroids, wiped out four-fifths of the country's livestock. The consequences for people whose livelihoods depend on that, as in the Horn of Africa, are hard to imagine.

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Extreme heat is destroying crops from South America to China and undercutting again people's livelihoods and access to food. Hotter, more acidic oceans are annihilating marine life, a major source of protein for billions of people.

And as crops fail and food in today's geopolitics becomes too expensive, millions of people have been driven from their homes and deeper and deeper into poverty. We only have to note the changes in the prices of wheat over these last three or four days as a result of the turbulence in that Black Sea grain export operation.

This is a world at 1.2 degrees Celsius but we're on track to double that. Unless we act now, we're heading for a future full of drought, disease and climate disaster. Across the whole world now, up to 220 million people face high levels of acute food insecurity, barely able to eat a meal a day, and more than 45 million... The numbers are staggering. These people, 45, are on the brink of starvation.

Our system, the humanitarian system, is strained. We have an annual cost at the moment of about \$50 billion for global humanitarian response plans. We've received now, in November of the year \$90 [?] billion and that doesn't even begin to cope with the escalating impacts of the climate emergency. That's why, when world leaders meet in Egypt in a few days, as you've said Tedros, they must deliver on their promises, and we remember the promise made in 2009 of the leaders of the G20 to commit 100 billion a year in climate money.

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And if you go to Somalia, for example, or even across most of Africa, you look in vain for any of the money having come through for the people of Somalia, in the Horn of Africa, the Sahel and elsewhere. That money is not just missing. We don't know where it is and how it is decided upon and how it's spent. We need to come out of COP27 with clarity and accountability for that.

My Secretary-General, António Guterres, has called for a windfall tax on the profits of oil and gas companies this year. Oxfam, I think, has estimated that is it 11 or 18 days of the profits of the fossil fuel majors could pay for the costs of humanitarian catastrophes around the world.

So, we need to end fossil fuel subsidies. We need debt relief for nations in dire need. We need that climate money to be applied as grants, not as loans, to those countries in need now, so that we can not only bring people back to life but bring them resilience and alternative livelihoods.

The COP is going to be a major test for all of us to see if those commitments made so boldly in years gone past finally may land for the people who are staring the climate future in the face. Tedros, I want to thank you for inviting me to this important conference. Let us hope that next week in Sharm El Sheikh we will see real progress. Thank you.

TAG Thank you. Thank you so much, Martin. It's now my pleasure to welcome Nimo Hassan, the Director of the Somali NGO Consortium, where she works with communities to mitigate the impact of food insecurity. Nimo, welcome, thank you for joining us, and you have the floor.

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NH Good evening and good afternoon. Thank you very much, Dr Tedros, for giving me the opportunity to join you in this very important exchange. I'd like to start by telling you a story of how climate-induced shocks are actually impacting at the community level.

Tears tumbled 11-year-old Dahir's hunger-hollowed cheeks. I just want to survive this, he said quietly, seated beside the family's makeshift tent on the dusty plain outside the city of Baidoa. His weary mother, Fatuma, told him not to cry. Your tears will not bring your brother back. Everything will be fine, she said.

Fatuma's second son, ten-year-old Salah, died of starvation two weeks ago shortly after the family reached Baidoa from their village, which is three days' walk. His body is buried in the rocky earth a few metres from their new home, the grave already covered in litter and increasingly hard to spot as new arrivals set up camp around them.

I cannot grieve for my son. There is no time. I need to find work and food to keep the others alive, Fatuma said, cradling her youngest daughter, nine-month-old Bilan, and turn to look at her six-year-old Maryam, as she gave a rasping cough. This is a snapshot of many stories like this in Somalia currently, where mothers are burying their children due to preventable hunger crises as their little bodies are unable fight against diseases such as cholera and measles.

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Somalia, as a case in point, a country recovering from decades of conflict that continues to face cyclical climate-induced shocks, from droughts to flooding, to desert locust invasions compounded by the global pandemic, making the country and the community vulnerable to poverty and food insecurity.

Today, it has been four failed rains. The forecast for the fifth rain is looking grim with 70.8 million people on the brink of famine in the coming weeks. Climate-induced drought has decimated their livelihoods. Of course, the war in Ukraine has exacerbated the situation, with prices of food skyrocketing, affecting the purchasing power of many, especially the poor and low-income earners, driving them to destitution.

There need to be more strategic partnerships developed between the international community and civil society. Strategic partnerships mean thinking beyond funding and thinking with the longer term in mind. This means investing in a more meaningful inclusion in the decision-making process, mutual design from the very onset on common approaches and programmes.

This is an investment of time utilising local expertise and resources, as well as willingness to adapt international mechanisms to strengthen existing national approaches. Civil society plays a role in pushing for new laws, programmes,

policies or strategies on national issues including climate change. Donors and donor governments have an opportunity when investing in local actors. Why? They work short-term in humanitarian frontline response but they also work on long-term development in programmes and in peacebuilding.

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Civil society has invested in the future of countries like Somalia for the long haul and they will be stronger with international support that opens up space and opportunities for them to work in their own terms. Finally, climate justice, commitment, collaboration are necessary as the issues we are facing in Somalia and elsewhere in parts are the result of long-term failure in investment, peace, climate resilience and development. Together, we are more powerful and efficient. Thank you for having me. Back to you.

TAG Thank you. Thank you, Nimo. Mahadsanid and thank you for everything you are doing with communities in Somalia. It's this kind of grass-roots work that really makes a difference on the ground. So, mahadsanid again. Our third and final guest is Rosamund Adoo-Kissi-Debrah, the Founder and Director of the Ella Roberta Foundation, and an activist for action against air pollution. Rosamund, welcome, thank you for joining us, and you have the floor.

RK Thank you for having me. One of the biggest contributors to climate change is air pollution. It has a devastating effect on the public's health and I believe that we all have a human right to breathe clean air, and saving lives must be a priority. Governments everywhere must put health first. 99% of the global population breathe toxic air every day and it's responsible for about one in five premature deaths worldwide, and that is an astonishing between seven and nine million deaths every year.

Released from diesel and petrol vehicles, coal-fired power stations, wildfires, wood, kerosene, cooking stoves, waste incineration and much, much, much, much more, air pollution is deadly and damages every organ in the human body. It causes heart and lung disease, cancer, asthma and it affects things such as dementia, depression, premature deaths and obviously miscarriage.

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Children are the most vulnerable, with air pollution stunting the development of their lungs. The poorest and most marginalised groups also bear the brunt of the air pollution, but it doesn't have to be this way. Cleaning up the air will save lives and it will also reduce health care costs to increase productivity, and it will save trillions of dollars from governments.

My daughter, Ella, could not be saved. She was six when she started coughing and three years later and after 28 hospital admissions, being in the ICU five times, she finally passed away. Ella still remains the only person in the world to have air pollution listed as a cause of death and nearly, almost a decade, I am still urging governments and world leaders to tackle this global health crisis.

One of the three things to save lives will be that all countries must adopt the new WHO air quality guidelines for health. They must adopt them now and this must be part of the debate at COP27. These guidelines are achievable and

they will save lives. Up to 80% of lives could be saved. Number two, we must invest in solutions, active travel, public transport. Stop burning fossil fuels and replace coal and gas-fired power plants with clean, renewable energy alternatives such as solar and wind power. We've also found these are also cheaper.

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Number three, world leaders much raise public awareness of the dangers of air pollution on health. Communities do not know about the impact of air pollution on health. Government-backed health campaigns and communication about air quality levels need to be happening now. The CBI estimated that bringing UK quality within the WHO guidelines would deliver an annual economic boost of 1.6 billion per year.

Lastly, we know, due to COVID, that all governments can work together, that's how they delivered the vaccine, and we definitely believe, seven to nine million people every year is definitely worth saving. I urge everybody going to COP, may they please not forget about public health.

One child every minute somewhere in the world dies because of air pollution. This must be at forefront of the conversation. When we achieve the WHO guidelines for air quality, we will save millions of lives, trillions of dollars and future generations. Thank you very much for having me and hopefully everyone will be having a good COP. Thank you.

TAG Thank you. Thank you, Rosamund, and thank you for your tireless advocacy for clean air. Like you, WHO is committed to drawing attention to the impacts of climate change on health.

In addition to our normative work, one of the ways we're doing that is through the annual Health for All Film Festival, which is now in its fourth year. Submissions are now open until the end of January. Alongside the usual categories of universal health coverage, health emergencies and better health and well-being, we have two special categories this year, sexual and reproductive health, and climate change and health.

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The Health for All Film Festival will also be part of the Health Pavilion at COP27 and will be included in a side event on efficient communication about climate change and health. We're delighted that the American actress, Sharon Stone, has once again agreed to serve as a juror, and we look forward to putting together another high-level jury of experts in health and film. Information about how to submit films is available on the WHO website. Tarik, back to you.

TJ Thank you, Dr Tedros, and many thanks to our guests for sharing their thoughts and personal stories. We all hope that COP will bring a success and to remind you on that, that tomorrow we will have a special press conference dedicated to COP27 at two o'clock, as per media advisory that you have received.

I understand that UN Under-Secretary-General Mr Griffiths may not be with us for question and answer but we thank him for his participation. With this, we

will open the floor for questions, and the first one goes to Erin Prater, from Fortune. Erin, please unmute yourself and go ahead.

00:28:05

EP Hi. Good morning. Thank you so much for taking my question. Just curious, regarding the designation of Greek letters to new variants, my apologies, to new variants of concern. What would it take for the WHO to designate a new Greek letter to a variant of concern? Thank you.

TJ Thank you, Erin. Dr Van Kerkhove.

MK Thanks very much for the question. We have a system in place to track, assess and monitor variants that are in circulation and to detect new variants that will emerge, which we expect to emerge going forward. Our Technical Advisory Group for Virus Evolution has a system in place to identify these or characterise these as variants of interest or variants of concern.

Within that, and that's a process that's in place looking at different characteristics of the virus, transmission, severity, immune escape and the use of our countermeasures, do diagnostics still work, therapeutics, vaccines. The Greek lettering system was a system that we, WHO, put in place to help discuss these publicly because the numbers are quite confusing and our ability to use that naming system we've put in place when these variants or subvariants that are now in circulation are significantly different in terms of their characteristics.

When we say significantly different, what we're trying to do is formulate a risk assessment to look specifically at different transmission characteristics and within transmission we're looking at the mutations within the variants themselves or the subvariants that are circulating, looking at properties of immune escape, looking at severity measures in terms of what is observed amongst people who are infected with these variants, as well as studies that are conducted in labs under experimental conditions. And so there are numbers of factors that are taken into consideration with that.

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Right now, we're in a situation where we have more than 300 subvariants of Omicron that are in circulation and these subvariants are quite similar to each other. It is confusing in terms of the subvariant names, we recognise that, but the names that are in use are the scientific names by the different groups who analyse these from a technical point of view.

Of the subvariants that we have circulating, about 95% of the subvariants that are shared with platforms like GISAID are of BA.5 and within that we have that subvariant of BQ.1, about 20% of those are BQ.1. And this recombinant that you've heard a lot about, this XBB, which is a recombinant of two BA.2 sublineages, accounts for about 1% of the sequences that are circulating worldwide.

Now, there's variations in countries of the different subvariants that are in circulation and we've been saying it's a bit of an alphabet soup at the moment. The bottom line for us, as an organisation, is that we need to be in a situation where we can track these. Surveillance for SARS-CoV-2 has declined drastically around the world, which means testing has declined, sequencing

has declined and without the ability to understand what is circulating, to share these viruses, to share the knowledge about these viruses, we're not in a situation to assess them as rapidly and robustly as we would like.

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But, the Greek lettering system is about the difference within the variants that are emerging. TAG-VE just issued a statement last week looking at BQ.1 and XBB and, in the characterisation of transmission and of severity of immune escape, they're not substantially different from the other subvariants that are circulating, so we still classify these as Omicron.

And when I say substantially different, we will be working with our TAG-VE on a quantifiable risk assessment going forward to be able to provide more information about that is done because this is becoming more and more complicated.

So, it's a long-winded answer because it's very complicated for us to be able to assess these but we need to be able to reiterate how important it is for us to track this virus because it doesn't have a predictable pattern yet and we don't know if the next variants will be more or less severe. We just need to remain vigilant on this while we deal with all of the other crises that we are dealing with worldwide.

TJ Thank you, Dr Van Kerkhove. We go to the next question. Carmen Paun, from Politico. Carmen, please go ahead.

CP Hi. Can you hear me?

TJ Yes.

CP Thank you so much for giving me the floor. I have a question on Ebola vaccines. We know that the ones for the Zaire strain don't work for the Sudan strain but I was wondering if Dr Henao can talk a little bit about why the vaccines for the Sudan strain aren't more developed at this point.

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Why weren't there more tested? We've known about this strain and we've known that Uganda has experienced outbreaks in the past. Is it that you really need an outbreak to test these vaccines or is there any other reason why the vaccines are not so advanced as, obviously, the ones for the Zaire strain are? Thank you.

TJ Thank you very much, Carmen. I think we have Dr Henao online, so if we could connect to Dr Ana Maria. Ana Maria?

AH Good afternoon, Tarik. Thank you for the question. There are three parts to this. WHO and the R&D Blueprint has identified that Sudan ebolavirus is an important priority virus for action.

Two, there are projects going on supported by different governments to advance the development of at least six candidate vaccines for Sudan ebolavirus. This is what permits us today to have the conversation on the possibility of introducing these vaccines in a clinical trial in Uganda and the leadership of the Government of Uganda.

We need to remember that we have three of these vaccines now, two of them have already Phase 1 and Phase 1A clinical and safety data, plus separate clinical data. So, there were efforts supported by the governments of the United States and the United Kingdom and by BARDA and the Sabin Vaccine Institute, together with efforts by the University of Oxford to advance these vaccines. So, work was being done.

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Finally, we heard about the VSV vaccine doses that were developed by Merck and now have been moving forward in collaboration with IAVI. So, there was work done but there are challenges to the evaluation of vaccines for diseases like the Sudan ebolavirus that needs to be recognised.

The first one is we don't have a correlated protective definition, so we don't have yet defined what titer of antibody titers would be protective. That will facilitate the evaluation outside the outbreaks. And, second, that the outbreaks are not very common. So, it is not that we need the outbreak to advance the development of the vaccine, it is that to obtain the clinical efficacy, outbreaks provide, unfortunately, a unique opportunity.

Finally, WHO is working with partners, with CEPI, with Gavi and many other partners to ensure that for the future and also for this outbreak there are sufficient supplies of doses, of unlicensed doses of the candidate vaccines, first for the trial, second for continuing with a response to the outbreak if one or more of them shows evidence that they are effective and finally, moving forward, to ensure that there is equitable access to these vaccines in the future. Thank you.

TJ Thank you, Dr Henao. We will now go to Jamil Chade, who writes for a number of Brazilian media. Jamil, please unmute yourself.

JC Thank you, Tarik. Can you hear me well?

TJ Very well.

00:36:16

JC Fantastic. Dr Tedros, as you well know, Brazil has a new elected president. My question to you, what is your message to President Lula in terms of health and climate change?

And also, as you have said so many times that we have to learn the lessons of the past and we have to learn the lessons of COVID, what can Brazil learn from the disastrous, basically, policies that were taken during COVID? What happened that basically generated 700,000 deaths in a country with the capacity to deal with health issues? Thank you so much.

TJ Thank you. Thank you, Jamil. The question is on climate change but also on COVID to Dr Tedros.

TAG Thank you. Thank you very much. First of all, any message I have to the president-elect, my preference would be to talk to him directly when I get a chance. Then, to the lessons learned from COVID, I think the whole world should learn a lesson from COVID and that's what we're doing. So, many recommendations now coming, minimum 300 good recommendations and

based on that we have already started many initiatives, by the way, being implemented and others in the pipeline.

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So, we will help each and every country, including Brazil, to really learn from our lessons and prepare for the next one in a better way to prevent pandemics. That's the most preferred but, if not, to detect early and manage as soon as possible. Thank you very much.

TJ Thank you, Dr Tedros. Let's go to Helen Branswell, from STAT. Helen.

HB Thank you very much for taking my question, Tarik. It's about the Ebola outbreak in Sudan. The group Global.health has developed a line list of cases and used data from it to analyse the state of the outbreak and they've issued a report this morning suggesting that, as they see it, the outbreak appears to be coming under control in all regions in Uganda.

That is, of course, based on known cases and so if there are unknown cases, that would change the analysis. Does WHO agree with that position? Do you think that this outbreak is coming under control?

TJ Thank you, Helen. We will ask Dr Abdirahman Mahamud to try to answer this question.

AM Thank you, Helen, for always tough questions. From our side, we've been working very closely with the government so that this outbreak can come, as soon as possible, to an end and that's our wish. You have seen from the government leadership, the minister, the prime minister, and the president, that's the whole attempt. But, we know very well, Ebola, we have to put all the measures in place so that we can do it.

In terms of scenario planning, we have three scenarios. One is the best-case scenario. We're already passed that stage. The second scenario is a sustained transmission where the outbreak is limited to certain but can also spread. And the last one is worst-case scenario. So, the government is to attempt every measure possible so that this outbreak can be contained.

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Talking about the analysis done by our group, we worked very closely with the monkeypox and we appreciate a lot of institutions coming and doing that analysis. But, more specifically, it's very hard right now to make a conclusion based on the limited data available.

As you may know, we had a bit cluster in Kasana, where one superspreading cluster, one case has led to 31 secondary cases. So, the interpretation based on that will be very hard to make at this stage. We know very well the government is doing everything possible to contain this but the end of it is the community and the community support on that, so that we don't see cases spreading a lot of in the community.

Like this case, he spent throughout his time infecting close family, friends and also other relatives. So, I think we remain cautiously optimistic that the government has the capacity. They have responded previously and we are seeing less and less cases. But, as our DG said, Ebola in a complex urban city like Kampala is not easy and we have to do everything possible to follow every

chain of transmission and work closely with the government and partners.
Thank you.

00:41:25

TJ Thank you. And maybe Dr Fall would like to add something.

SF Thank you, Tarik. Just to complement Abdi. First of all, I would like to acknowledge the leadership of the Ugandan government in scaling up the response and based on the indicators we can see improvement in contact tracing and clinical management. But, as you know, Ebola is very unpredictable and it's too early to talk about control.

We need to make sure that where we have gaps we fill those gaps because, at this stage, it's very important to see intervention gaps, gaps in quality of intervention because, seriously, IPC is still initial and we need to improve IPC in health facilities but also it is a community and this requires a lot of community engagement.

And, as highlighted by Abdi, if you look at some indicator like the average from onset of symptoms in the community to isolation is around five days. We need to make sure that this is reduced. And one other important point is to make sure that we are not missing any probable cases and all actions that need to be taken around the probable cases are taken.

This will help to control all transmission changes. So, positive improvement, positive development but we need to make sure that we continue until we know that all the transmissions are identified and stopped. Thank you.

TJ Thank you. We have time for one more question before we will need to conclude. So, let's go to Ashvin Barshinge, from Times India. Ashvin, please unmute yourself.

00:43:15

AB Thank you for considering my question. Observer Times welcomes the United Nations Climate Change Conference, COP27. While climate change adverse impacts can be reduced via immunisation, Observer Times question is, is it necessary to re-engineer vaccines each year to target the strains considered likely to be most prevalent in the upcoming years? Thank you.

TJ Thank you. If I understand well, the question was do we need to re-engineer vaccines every year? Is it on COVID-19 or on some other vaccine?

AB I'm generalising for all the diseases which are, right now, becoming as a pandemic.

TJ Ashvin, if we understood well, you are asking about... Can you repeat one more time the question, please?

AB Yes, sure. While climate change adverse impacts can be reduced via immunisation, Observer Times question is, is it necessary each year to target those diseases considered likely to be most prevalent in the upcoming years? Thank you.

TJ The line was really not the best, Ashvin, and I'm not sure if we got it. We have with us Kate O'Brien, who is the Director for Immunisation, Vaccines and Biologicals. The question on the possible need in the future to have new

vaccines for diseases that we are facing. And, Ashvin, if this doesn't answer your question, please reach out by email afterwards to media@who.int and we will try to help. Dr O'Brien.

00:45:30

KO I think the question, actually, it was difficult to hear but let me make a couple of comments that I think are linked to the question. It's really about linking climate change, the impact that climate change is having on infectious diseases that are vaccine-preventable and what does that mean for the products that we have. Are we going to have to keep adjusting the products year in, year out, especially as our world changes with the climate catastrophe and the climate impacts?

And I think we would really start from recognising that for many vaccine-preventable diseases the pace of change of the organisms that we vaccinate against is actually not very fast and the need for adjusting of the vaccines is very limited. For most of the vaccines that we have, they are targeting diseases and targeting infections that have very little modification over time. The biggest issue is making sure that everybody who needs those vaccines is actually vaccinated.

But, there are some diseases that are really influenced by climate change and will change the geographies in which we vaccinate. Yellow fever is one example of those, especially as we see changes in where animals are, where insects are, some of whom are transmitting infections.

We do expect that there will be shifts in where we see diseases and how far they go into populations and, of course, we've seen the significant relationship between human behaviour and human encroaching on natural habitats and the interaction between humans and animals.

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Then, the third thing is around those predominantly viruses that do have a lot of change over time and, of course, influenza is the really classic example of that where, on an annual basis, biannual basis, there is a need to be monitoring and adapting the vaccines to the strains that are circulating in different parts of the world.

And so we do expect that the optimisation of vaccines will be a continuing need, that we'll need more data on surveillance, and this has been emphasised time and time again in these press conferences, that the ability of any of health agencies in countries and certain ours to monitor and track and anticipate and reduce risks is really, really dependent on having the kind of surveillance that would allow us to anticipate what's coming around the corner and to have the kind of information, especially genetic information, about the pathogens that would allow for adjustments to vaccines should those be needed.

But, we have great confidence in the vaccines that we have. The vast majority of vaccines are not vaccines that need adaptation from one year to the next or even over longer periods of time because of the nature of the infections that they're targeting. What's really important is that we continue to have research and development that creates optimised products, better and better products

that can exert their protective influence in a greater range of pathogens and can do so with greater impact.

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Then, of course, none of the vaccines have impact unless they actually are given to people. So, at the moment that is one of the biggest issues. We have it in COVID, we have it in measles vaccines, we have it in yellow fever, in cholera, that the disease outbreaks that we're seeing and the lack of protection of people, in spite of having these fantastic, safe, effective products, is really attributable to not everybody who can benefit from the vaccines has access to them and is being vaccinated.

So, those are the critical issues we're facing even as we also have to address the impacts of climate change on the distribution of the infections and the nature of the vaccines that we have. Thanks.

TJ Thank you, Dr O'Brien. Maybe Dr Henao would like to add something from the research and development perspective.

AH Just to add that in addition to the work that we do, and Kate just described for diseases for which we have vaccines, under the WHO R&D Blueprint for Epidemics we are also prioritising diseases that can cause outbreaks, epidemics and pandemics.

And when we do these prioritisations we do three things. First, we try to understand what are the critical knowledge gaps. Two, we discuss how to move forward the development of vaccines, therapeutics, diagnostics to address those gaps. And, third, we work towards the possibility of implementing clinical trials and research during outbreaks.

We do all that to ensure that for all diseases for which we don't have vaccines, like it is the case, for example, now of the Ebola virus in Uganda. We work towards to making them available to everybody.

00:51:19

So, it is continuous, as Kate mentioned, from having vaccines that we are deploying already, that are part of the vaccination programme, to preparing for diseases that can cause outbreaks and for which we need to work together with other scientific community to identify which candidate vaccines could induce protection and are safe, and what is the best to the communities at risk as soon as possible. Thank you.

TJ Thank you, Dr Henao. And, finally, Dr Maria Neira, Director of Environment, Climate Change and Health.

MN Just very quickly but to say that the best vaccine that we have at the moment against climate change will be exactly stopping the causes of this global warming. It will be looking at the mitigation. What is causing climate change essentially is the combustion of fossil fuels, which are contributing to both climate change and air pollution and, as you heard before, this is responsible for more than seven million premature deaths every year.

So, the best vaccination will be to look at the causes, mitigate it, then stop it, implement the Paris Treaty, and this is what we will be trying to do at the COP27 when the health argument will be very strongly represented, making

sure that everybody understands that if we don't tackle the causes of climate change we will have as well, or we are having already a global health crisis. Thank you.

00:52:45

TJ Thank you all. I hope this answers the question we got from Times India and, again, to remind you that more about COP27 at tomorrow's press conference at two o'clock. With this, I would like to call on our special guests today to have some final remarks. Maybe we start with Rosamund Kissi-Debrah. Rosamund, would you like to add something at the end of this briefing?

RK Yes. Hello again and thank you for having me. I think I would just like reiterate again about the impact on everyone's health from air pollution and specifically about the 79 million people that die every year. And as we head to COP, a very, very important event, according to the World Bank the health damages linked to PM2.5 amount to \$8.1 trillion in 2019 and that is actually 6.1% of the global GDP.

But, I urge everyone to clean up the air. It will save millions and millions of lives and it will help with rebuilding economies after COVID. And we need to put the most vulnerable, who are children, at the heart of all the discussions. So, thank you again for having me and have a good COP everybody and remember cleaning up the air will save lives and it is our basic human right to be able to breathe clean air. So, thank you for having me again.

TJ Thank you, Rosamund, for this important message and for sharing your personal story as well. Let's go to Nimo Hassan to hear from her, some last remarks.

NH Thank you very much, also, for having me. Thank you for this great and timely event that brings together the various different aspects and the impact of climate change, not only our planet, of course, but also on the lives of poor communities who are losing their livelihoods, who are losing their health, who are losing their children.

00:55:01

So, I also urge the donor governments and I urge everybody to... I agree with you Rosamund. Put the communities at heart. If we're thinking of the communities and the poor people who are impacted with these climate shocks on a daily basis, then I think we can come to an agreement that is more fair, that is more just and ensuring that we are supporting these livelihoods and these people in the Horn of Africa that endure the most impactful experience from the climate change.

So, I urge everyone to have the conversation and having children who are very vulnerable who are already dying in places in Somalia, to be able to live a better life in the future. So, thank you. Thank you for having me again.

TJ Thank you. Thank you, Nimo, and thanks again, Rosamund, for your participation. With this, I will hand over to Dr Tedros for his final remarks. Dr Tedros.

TAG Thank you. Thank you, Tarik. Thank you to Martin, Nimo and Rosamund for joining us today, and thank you for your leadership in your respective areas. We're very glad to have you today but, not only that, to continue to partner with you. So, thank you so much. And to our press who joined just today, thank you so much for joining us and see you need time, next week. Thank you. Bye-bye.

00:56:40