

Global Health Issues

Virtual Press Conference

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Speaker key:

MH	Dr Margaret Harris
TAG	Dr Tedros Adhanom Ghebreyesus
DH	Prof Didier Houssin
AM	Dr Abdi Mahamud
PB	Dr Philippe Barboza
MR	Dr Mike Ryan
MK	Dr Maria Van Kerkhove
BA	Dr Bruce Aylward
MS	Dr Mariângela Simão
SB	Dr Sylvie Briand
AH	Dr Ana Maria Henao-Restrepo
HB	Helen Branswell
SN	Sarah Newey
IA	Isabela Abalen
SA	Simon Ateba
LD	Lizzy Davies

00:00:44

MH Hello, everybody. This is Margaret Harris in WHO Headquarters, Geneva, welcoming you today, October 19, 2022, to our World Health Organization global press briefing on health emergencies and other current health issues. As usual, we will start with opening remarks from our Director-General, Dr Tedros Adhanom Ghebreyesus, and I will then open the floor to questions.

Our panel of technical experts will join Dr Tedros, both in the room and online, to answer your questions. And in the room with Dr Tedros we have Dr Michael Ryan, Executive Director, World Health Emergencies, Dr Mariângela Simão, our Assistant Director-General for Access to Medicines and Health Products,

Dr Sylvie Briand, Director, Global Infectious Hazard Preparedness, Dr Rosamund Lewis, our Technical Lead on monkeypox, and Dr Abdi Mahamud, Incident Manager for COVID-19.

00:01:42

We have full simultaneous translation services and I thank again our interpreters for their outstanding work but, without further ado, I will now hand over to Dr Tedros. Dr Tedros, you have the floor.

TAG Thank you. Thank you, Margaret. Good morning, good afternoon, and good evening. Last night I returned from the World Health Summit in Berlin, Germany, which this year WHO co-hosted for the first time. I was very encouraged to see the level of commitment from leaders from government, civil society, academia and the private sector for addressing the most pressing global health challenges.

There was strong support for the international accord on pandemic prevention, preparedness and response which countries are now negotiating, and yesterday governments and philanthropic donors collectively committed US\$2.6 billion to work towards ending polio.

Now, to the Ebola outbreak in Uganda. In total, there have now been 60 confirmed and 20 probable cases, with 44 deaths, and 25 people have recovered. We remain concerned that there may be more chains of transmission and more contacts than we know about in the affected communities.

The Ministry of Health is investigating the most recent eight cases as initial reports indicate they were not among known contacts. In addition, two confirmed cases from the Mubende district sought care in the capital, Kampala, increasing the risks of transmission in that city.

I'm pleased to see that the government has recognised that risk. WHO and our partners are continuing to support the Government of Uganda to contain the outbreak and prevent it from spreading in more regions and countries.

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Now, to cholera. Around the world, 29 countries have reported outbreaks this year, including 13 countries that did not have outbreaks last year. Cholera is highly dangerous and can kill within a day, but it can be prevented with two doses of safe and effective oral vaccines.

Since 2013, WHO, UNICEF, Médecins sans Frontières and the International Federation of the Red Cross and Red Crescent societies have jointly managed a global stockpile of cholera vaccines to help control epidemics. However, the current wave of outbreaks is putting unprecedented pressure on the stockpile.

As a result, the four agencies have decided to suspend the two-dose strategy in favour of a one-dose strategy, so that more people receive some protection from limited stocks. The one-dose strategy has proven effective in previous outbreaks, although evidence on how long protection lasts is limited.

However, this is clearly less than ideal and rationing must only be a temporary solution. In the long-term we need a plan to scale up vaccine production as part of a holistic strategy to prevent and stop cholera outbreaks. In addition,

the best way to prevent cholera outbreaks is to ensure people have access to safe water and sanitation.

00:05:45

Now, to COVID-19. Last week, the Emergency Committee on COVID-19 met to discuss the global situation and the way forward. The committee's view is that COVID-19 remains a public health emergency of international concern, and I agree.

The committee emphasised the need to strengthen surveillance and expand access to tests, treatments and vaccines for those most at-risk, and for all countries to update their national preparedness and response plans. While the global situation has obviously improved since the pandemic began, the virus continues to change and there remain many risks and uncertainties. This pandemic has surprised us before and very well could again.

On monkeypox, the Emergency Committee will meet tomorrow to discuss the outbreak and make recommendations. The number of reported cases globally has now dropped for eight weeks in a row but, as with COVID-19, risks and uncertainties remain, and some countries are still seeing increasing transmission. I look forward to the Emergency Committee's recommendations.

Finally, I'm running out of diplomatic language for the deliberate targeting of civilians in Tigray, Ethiopia. Earlier this week, the UN Secretary-General Antonio Guterres said that, I quote, the situation in Ethiopia is spiralling out of control. The social fabric is being ripped apart and civilians are paying a horrific price. Hostilities in Tigray must end now, including the immediate withdrawal and disengagement of Eritrean armed forces from Ethiopia. End of quote.

00:07:56

The United Nations Human Rights Office has received reports of civilian casualties and destruction of civilian objects due to airstrikes and artillery strikes. Indiscriminate attacks or attacks that deliberately target civilians or civilian objects amount to war crimes.

There is no other situation globally in which six million people have been kept under siege for almost two years. Banking, fuel, food, electricity and health care are being used as weapons of war. Media also is not allowed and every destruction of the civilians is done in darkness. Even people who have money are starving because they can't access their bank for two years.

Children are dying every day from malnutrition. There are no services for tuberculosis, HIV, diabetes, hypertension and more. Those diseases, which are treatable elsewhere, are now a death sentence in Tigray.

Yes, I'm from Tigray, and yes, this affects me personally. I don't pretend it doesn't. Most of my relatives are in the most affected areas, more than 90% of them, but my job is to draw the world's attention to crises that threaten the health of people wherever they are.

This is a health crisis for six million people and the world is not paying enough attention. I urge the international community and the media to give this crisis the attention it deserves. There is a very narrow window now to prevent

genocide. I repeat. There is a very narrow window now to prevent genocide in Tigray. Margaret, back to you.

00:10:20

MH Thank you very much, Dr Tedros. Now, before I open the floor to questions we'll also have some remarks from Professor Didier Houssin, who is the Chair of the International Health Regulations Emergency Committee on COVID-19 and he'll expand on those recommendations that they just made to the Director-General. Over to you, Professor Houssin.

DH Thank you. Thank you very much, madam, and thank you, Dr Tedros, for having mentioned the work of the Emergency Committee members for COVID-19. First, I want to thank the members of this committee for their continuing work during these three years.

I just would like to say a few words about the core of the discussions which occurred during this session. The new virus, clearly, is continuing to circulate but for the first time in nearly three years, because the number of deaths is less than some months ago and because immunity of the human population has improved, members of the committee have discussed for the first time the question of termination of the public health emergency of international concern but to conclude, as Dr Tedros just said it, that unanimously, that it is too early to terminate the public health emergency of international concern.

There are still too many deaths. There is still too much uncertainty regarding the variants, the pathogenic effect, the immune escape effect and there is still too much fear that termination of the PHEIC might aggravate existing inequalities in access to vaccine or therapeutics and might demobilise all the efforts engaged to prepare for a future pandemic.

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So, the committee concluded collectively that the recommendation to terminate the PHEIC, perhaps in the future, requires preliminary steps. First, a winter test in the Northern Hemisphere and, second, analysing and preventing the negative consequences which might result from the termination of a PHEIC, for example on the legal point of view regarding vaccines and therapeutics.

This is why the committee has suggested the three priorities regarding temporary recommendation. That is integrated and reinforced surveillance, vaccination of high risk groups and continuing efforts for pandemic preparedness. I think you for your attention.

MH Thank you very much, Prof Houssin. I will now open the floor to questions, and the first question goes to Helen Branswell, from STAT. Helen, please unmute yourself and ask your question.

HB Thanks very much. I was hoping we could get some more detail, please, about the Ebola outbreak in Uganda. In particular, in the cases in Kampala there was a woman who gave birth. Were the health workers who attended that birth aware that she was probably infected with Ebola at the time of the birth and were they able to take adequate precautions? Thank you.

MH Thank you, Helen. We'll start with Dr Mahamud and I suspect that Dr Ryan may have something to add.

00:13:55

AM Thanks, Helen. As the DG said, we have a number of recent cases that we're investigating, doing a detailed case investigation to understand how they are linked and the confirmation. As you may know, we had an initial case in Kampala. The health system had been on alert and they had been prepared, we're fully aware about it but the history of this case and the delivery was quite...

A lot of information is coming up with the use of the PPE by the qualified but, as you know, the health care workers are quite large, so we are trying to understand more about the other health care workers. So far, five of them have been identified and the government is looking into more details, who are the people who may have come in contact on that.

We'll share as soon as we get more details but just to point out the risk that's out there in Kampala, where a patient may be coming from Mubende, a neighbouring district, without informing or coming with different names and also present with different systems. So, we're aware, as the DG said. We are looking into the detailed case investigation report and will share with you in due course.

MH Thank you. Dr Ryan does not have anything to add so we'll go to the next question, which is from Sarah Newey, from The Telegraph. Sarah, please unmute yourself and ask your question.

SN Hi, there. Thanks for answering my question. First off, just on cholera vaccines, is this the first time guidance to do the one-dose approach has been issued? And, secondly, just on some of the variants going round the world, XBB and BQ.1.1 seem to be causing some concern at the moment. What do we know about them and are reports that we'll see a swarm of variants this winter rather than individual ones becoming dominant fair? Thank you.

00:15:48

MH Thank you. That seems to be two questions. The first is on cholera. The second you were referring to COVID-19 variants?

SN Yes.

MH So, the first one we've got Philippe Barboza online and for the second we'll answer that separately. Philippe, are you online? He's coming.

PB Yes, sorry. I got a very short cut on the connection. Can you repeat the question, please?

MH Sarah, can you repeat your question about cholera and Dr Philippe Barboza will answer that one?

SN Just a quick one. Has the guidance ever been issued to do the one-dose approach previously?

PB Thank you for your question. The one-dose strategy has been proved to be efficient in previous outbreaks. It has been implemented in a different setting and it has been assessed. It is clear that a one-dose strategy is

effective to control an outbreak. The limitation of the one-dose strategy versus a second-dose strategy is the duration of the immunity it provides and it also varies according to age group. So, this is why WHO is recommending to have a two-dose strategy whenever it's possible to sustain longer-term immunity for at least three years in the vaccinated population. Over.

00:17:28

MH Dr Ryan will now answer the second question or the cholera?

MR No, just continue on the first one, but I do think, and your question is well-asked, I do think it reflects the scale of the crisis, that we're now in a situation where the ideal use of the vaccine is in a two-dose regime that gives people long-term protection.

But the world is facing so many cholera events in so many places that the ICG is now forced to go back to a one-dose strategy which, in itself, can be life-saving but we're not sure about the length of protection. So, that means we're adapting our strategies, not based on the vaccines themselves but on the actual amount of vaccine available.

Cholera vaccine, yellow fever vaccine, meningitis vaccine, Ebola vaccine, are all maintained in global stockpiles between partner agencies and made available free around the world on the basis of epidemiologic need. They're wonderful examples of how we can actually share equitably with the world but because those stockpiles are of limited amounts, because it costs a lot of money to sustain them, and because these vaccines are not the ones that hundreds of millions of dollars are made on, it's difficult to maintain production, it's difficult to keep companies in production of these vaccines. They're not highly profitable.

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And it's a clear example when we talk about equity for the world. Now, we're waking up to cholera as a problem because it's affecting country after country, after country. The cholera pandemic never ended. This started in the 1960s. Didier Houssin was talking about declaring the end of the PHEIC. The cholera pandemic has been going for 50 years, 50 years, and we have the means to stop it, two-dose OCV vaccine, safe water, safe sanitation.

And, again, the issue is we can't end the pandemic because we're not prepared collectively to put in place the basic human rights of water and sanitation and basic immunisation in those areas at risk. And it's a sad day for us to have to backwards to go to a one-dose strategy which is life-saving, it's an emergency measure.

It's an emergency measure, we shouldn't have to do it and it is purely based on the availability, globally, of vaccine and we again would like to commend the manufacturer who stays in the manufacturing business, and that is a true partnership with the private sector but it really shows how fragile global health security is when we're relying on individual manufacturers to continue to produce these vaccines. Thank you.

MH Thank you, Dr Ryan. For the second part of your question that should be Dr Maria Van Kerkhove but you may need to repeat your question, Sarah.

MK I'm here.

MH Maria, did you hear Sarah's question?

MK I think I have it.

00:20:17

MH Cool. Over to you.

MK I did hear it. Can you hear me okay? Thanks. I'll address the second question related to SARS-CoV-2 variants that are in circulation worldwide. The question was specifically about XBB subvariant and BQ.1.1, but I do want to start out by saying that at the present time there are more than 300 sublineages of Omicron that WHO and partners are tracking worldwide. Not one of these subvariants is dominant.

I can say that most of the sequences that are available and that are shared with platforms like GISAID are the BA.5 subvariant and its sublineages but this XBB is a recombinant of two BA.2 sublineages and, in particular BA.2.10.1 and BA.2.75. Now, we have approximately 827 sequences available to assess from 26 countries as of a couple of days ago and we do know that this recombinant has a significant growth advantage. All of the subvariants of Omicron are showing increased transmissibility and properties of immune escape.

With this XBB recombinant we have one study that is based on a pseudovirus, so not a live virus, that is analysing antibody escape and it's showing significant immune evasion. And this is of concern for us because we need to ensure that the vaccines that are in use worldwide remain effective at preventing severe disease and death. So, the more this virus circulates, the more opportunities it has to change.

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The other subvariant that you mentioned, BQ.1.1, is a subvariant of BA.5. Now, this one, we have approximately 747 sequences available from 29 countries. Both of the subvariants that you mentioned, we don't see a change in severity but it's very early and we have very limited data to actually assess this.

What we need to do is put this in the broader picture. The Emergency Committee discussed this week and continue to recommend improved surveillance, as WHO has worldwide. We need to be able to track this virus. There are millions of cases being reported each week but our surveillance has declined, testing has declined, sequencing has declined and that, in turn, has limited our ability as an organisation, with our expert networks around the world, to assess these.

The Technical Advisory Group for Virus Evolution will continue to discuss these subvariants and, in particular, XBB recombinant that you mentioned, as well as many other sublineages that are circulating. But your question about will we see a large number of subvariants circulating in the coming months, that's happening now.

So, we need to be prepared for this. Countries need to be in a position to conduct surveillance to deal with increases in cases and perhaps deal with

increases in hospitalisations. We don't see a change in severity yet and our vaccines remain effective, but we have to remain vigilant.

00:23:21

MH Thank you very much, Dr Maria Van Kerkhove. The next question will go to Brazil, to Isabela Abalen, from ESTADÃO de São Paulo. Isabela, please unmute yourself and ask your question. Isabela, we're not hearing you. Are you not online?

IA Hello?

MH There you are. Isabela, please go ahead. We can hear you, yes.

IA Great. Thank you. My question is I'd like to hear about the initiatives that the WHO is planning in order to improve vaccine distribution through agencies like Gavi and if you think that there is a challenge in a concentration of pharma laboratories.

MH I got the question. The question is what is WHO planning to improve vaccine distribution? We've got a number of people online to answer that one. Perhaps, Dr Bruce Aylward. Dr Aylward, are you online?

BA Hi, Margaret. I'm online but I couldn't hear the question clearly.

MH Repeat the question and we'll all listen. Is it about the distribution of the COVID vaccines or all vaccines?

MS Should I respond in Portuguese now? Thank you, Isabela. We're going to start with the first part and I hope that my friend, Bruce, can complement. The first part of your question, what initiatives the WHO is carrying out in order to ensure that structures like Gavi are maintained and that there is a proper response to the pandemic, this is a very relevant question.

00:26:00

The positive experience we had with the COVAX facility, in terms of concentrating the purchase of vaccines and vaccine-related imports and to concentrate this on a global structure which enabled countries that would not be able to buy them individually could do so.

And this is done with this kind of pooled procurement, as we put it in English, which is a like a joint purchase that is done in global terms through Gavi and UNICEF but in the case of the Americas, with a rotative fund of PAHO. So, there is a major effort in strengthening these structures which can help provide vaccines to countries that would otherwise have access in the case of a pandemic.

As to the second part of your question, the diversification of production, which is an extremely important problem which we went through in this pandemic and we're also seeing this now regarding cholera and monkeypox, in terms of having very few manufacturers concentrating vaccine production. And the WHO, not only the Member States, approved a resolution for strengthening local production but WHO has also launched an initiative, a hub for mRNA vaccine production. This is located in South Africa and Brazil is part of this, together with another 15 countries.

But there is also a global initiative for improving the ability and skills of health professionals that work on the frontline in biomanufacturing of immunobiologics, be they vaccines or, for instance, monoclonal antibodies. This is an initiative that was launched by Dr Tedros. There is a hub for this initiative in the Republic of Korea and the WHO works with several other countries in the same initiative.

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There is a need that is perceived, not only by the public but also the private sector of strengthening and improving the quality of health workers. I'm going to stop here and maybe my friend, Bruce, can complement it.

MH Oh, sorry. Over to you, Dr Aylward.

BA Thank you very much, Margaret, and apologies, Isabela, that we didn't capture your question correctly the first time. I'd like to break the response just into two pieces because it's an extremely important issue you raise right now, what we're doing to consolidate and enhance vaccination coverage, both as we get out of this pandemic but also securing the future.

Now, we're moving right now into a phase, as Maria and others have alluded to, of the pandemic where many countries now are adapting their approach and what we're trying to do through the ACT-Accelerator and the COVAX piece, if I speak first about the issue of COVID, is really three big things to enhance coverage as we go forward.

One thing, we're continuing an R&D approach because we have not got optimised products yet that give really durable protection for long periods, easy to administer, easy to manage. So, we've got to continue improving our products for the longer-term. That'll help with demand, it'll help populations get the products they need.

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The second key thing that we're doing, Isabela, is that we're working with our institutions like Gavi, that are part of the partnership, UNICEF, WHO obviously, etc., to look at putting in place longer-term, what we call institutional arrangements, to make sure vulnerable, low-income countries can access the vaccines that they need. We're also looking at expanding manufacturing, the hubs, the mRNA hub programme that was alluded to, again to ensure for the longer-term now countries have access.

And the third thing that we're doing is really helping focus our attention with countries to what we call our 100-100-70 approach, providing political, technical, financing and planning support to achieve again what we call 100-100-70, 100% coverage of health care workers, 100% coverage of vulnerable populations, older populations, on the march to 70% coverage in the countries.

So, we're really taking a three-pronged approach through this what we're almost calling transition phase, as the world transitions into long-term COVID control, to help ensure that countries protect the populations they have to, have the best possible products, and have a secure supply for the long-term through both international alliances like Gavi and expanded manufacturing.

As we do that, Isabela, a crucial piece is we have got to do it in way that's integrated with and supports work on routine immunisation. Routine immunisation underpins primary health care globally and, as we saw just about a couple of months ago, the Director-General alerted the world to the alarm he had that we've seen the greatest decline in immunisation coverage rates, routine coverage rates during the pandemic, that we've seen in a generation.

00:31:57

So, on top of the COVID emergency, we have a routine immunisation emergency. We've got to protect people against the measles, against polio, against all those other important diseases. So, we have to do that in parallel. Sorry, for the bit of a long-winded response but the issue you raised is so crucial. This anchors our primary health care agenda globally. It's crucial that this and the COVID piece is moved forward and we've got a big agenda of work with, as you heard, clear priorities across both.

MH Thank you very much, Dr Aylward and Dr Simão. The next question goes to Simon Ateba, from Today News Africa. Simon, please unmute yourself and ask your question.

SA Thank you, Margaret, for taking my question. This is Simon Ateba with Today News Africa in Washington. On the shortage of cholera vaccine, I was going to ask how did we get here? But it seems Dr Mike Ryan has already answered it. It's the same story of greed. However, how much money is needed to boost production to have enough vaccine globally?

Also, I was wondering if you could comment on the announcement by President Putin a few hours ago that martial law will be introduced in four regions across eastern Ukraine? How does that affect your work [?] with the population there? Are you even in eastern Ukraine right now?

MH Thank you. Dr Ryan will answer that question.

00:33:34

MR I can't give you an exact answer of what it would cost to boost production, Simon, but if cholera was spreading in industrialised and wealthy countries right now the production costs would be covered. Cholera vaccine is not a difficult vaccine to produce. It is actually very cost-effective to produce. It is an oral formulation that's very, very safe and scaling up production would be relatively straightforward.

Getting more manufacturers into production would be really helpful. In fact, we have manufacturers, as Mariangela said, leaving the field of vaccine manufacturing and, in fact, this is the work that's being done now on COVID to broaden the base of manufacturing worldwide. I'll pass to Philippe. He may have estimates on how much it would cost to increase production.

With regards to Ukraine, WHO is working in eastern and southern Ukraine. There is a very large health operation in the field with literally hundreds of health partners working with us and through the government. And the issues for any health operation in any part of Ukraine or in areas occupied in Ukraine is access to help.

Tedros has spoken about that with regard to Tigray. The most important thing we can do in any crisis is to get access to people so we can provide for their basic needs. I would say no matter what law is in place, access to people who need access to health care is a fundamental human right and should not be affected by the imposition of laws that are security laws.

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Sometimes that is forgotten and sometimes people's basic rights to health care access aren't compatible with some martial law arrangements but it's extremely important that civilians, their human rights and access to health care are preserved, whatever legal processes are in place.

MH Thank you very much, Dr Ryan. Dr Barboza, do you want to supplement? Go ahead, please.

PB Yes. The thing which is important to understand is to start a new production of vaccine it's a question of money, but not just that. It's to find a manufacturer that has a capacity that will build up on the production. For these figures of how much it will cost to invest in a manufacturer to develop a new plant, I don't have the answer.

What I can tell you is the Global Task Force on Cholera Control has estimated last year that for the period 2022-2025 the number of vaccines that could be needed is 250 million. This is just an estimation and that was made, again, last year. So, of course, with the evolving epidemiological context and the increasing number of countries, including some that were not previously listed as endemic, these figures could change.

But this is at least to give you a figure about the number of vaccines that could be required to appropriately respond to cholera, to outbreak, but not just to outbreak, also to be able to implement a preventive vaccination campaign to prevent outbreak from occurring. Over.

00:37:12

MH Thank you very much. Dr Sylvie Briand will add some points too.

SB For cholera, I think it's important also to understand that we know that on Earth we have hotspots for cholera because cholera is due to *Vibrio cholerae*, which is a bacteria that is multiplying in algae, and so there are some environment components as well for cholera.

With climate change and the warming of certain water places and deltas in the world, we see that bacteria can multiply much faster and this is why also we have much bigger outbreaks in certain places in the world. And I think this is why it's so important first to look at cholera as a global issue because with climate change we know that other places can become endemic places for cholera.

And, secondly, it's very important to understand that if we can prevent outbreak in places where cholera is in the environment we will have much better control on the risk. So, preventive vaccination of cholera is of utmost importance and those that are currently available, usually they are used to prevent outbreak in those places.

Now, because we have outbreaks everywhere, we have also to use those doses for outbreak response but everyone knows that prevention is better than cure. So, I think the world needs to invest not only on the vaccines but also on all the measures that can give to those populations safe water and sanitation because this is where, also, we can reduce the risk.

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MH Thank you very much Drs Briand, Barboza and Ryan. That was a really important question. I want to apologise to those looking at the social media feed. I understand that the French translation has been coming in and I do apologise for that. We're now running short of time but we've got time for one more question and that goes to Lizzy Davies, of the Guardian, UK. Lizzy, please unmute yourself and ask your question.

LD Hi there, everyone. I had two questions but I don't know if you've got time. Just a very quick one on cholera. Is this decision being taken with immediate effect and how confident are you it will be reversed by next year or next year? On the Ebola outbreak in Uganda, the global stockpile for Ebola vaccines was set up in 2021 and, I quote, to ensure outbreak response. There is now a new outbreak of a pre-existing strain, the Sudan strain, but there appears to be a serious shortage of vaccines to fight that particular strain. So, who dropped the ball?

MH Thanks very much, Lizzy. We'll start with the first question. I think Philippe Barboza would be able to answer that one.

PB Yes. This is an immediate decision. The countries that were still expecting to have the second dose that was approved previously this year have been informed of the temporary suspension. The question about when will it be possible to resume the second-dose strategy, I think it's really important to insist that it's a temporary decision, a suspension. It will depend on many factors.

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It's not just a question of doses. We know, more or less, how many vaccines will be available in the coming months. It's an average between 2.5-3.0 million vaccines that are produced every year but that will also be very much impacted by the dynamic of the outbreak and the fact that new countries could be affected by outbreak. So, it's impossible at this point of time to answer precisely when we will be able to resume and to make some predictions whether the situation will improve in the coming months or longer.

The thing which is clear is ICG will revise this as much as information is coming in, both taking into consideration the vaccine production and ability, as well as the number of requests that are currently ongoing. So, this is why it's important that beyond vaccine, and that has been mentioned a number of times, vaccine is a very efficient strategy for preventing outbreak but it's only one of the strategies.

And the thing that is very important to take into consideration is the very high case fatality rate, so mortality, that we are observing in a number of places and the ultimate priority is also to reduce and to put as much possible effort in reducing this mortality. It's not acceptable in the 21st century that people are

still dying in numbers of cholera when compared to many other diseases it is a very easy to treat disease.

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The thing which really matters is the timeliness of accessibility to health care. So, this is very important to consider that and, as was just said by Sylvie, the point on improving accessibility to basic water and sanitation and improving surveillance, there are many other things that need to be continued in parallel. So, the battle against cholera is not lost. We just need more support from everybody to contain the outbreak over the time. So, over to you.

MH Thank you very much. Dr Ryan will answer the second question. Very important to clarify this issue.

MR Yes. And possibly Ana Maria will just come in with some details after. Currently, the vaccine that was developed in West Africa and tested through the [unclear] trial and then further rolled out in Congo, is a vaccine specifically designed against the strain of Ebola Zaire and it has proven highly effective.

And, again, thanking the partners, both of the public and private sector who worked so hard with WHO to bring that vaccine to the world, get that vaccine registered globally and working with our colleagues in Gavi to stockpile that vaccine.

That vaccine has been used now in a number of outbreaks of Ebola Zaire since the major outbreaks in Congo and, again, those outbreaks have come under control in a very, very short period of time because the vaccine is available, and there is plenty of that vaccine available. The gap is that this is an Ebola virus, the Sudan strain of the Ebola virus, and these vaccines that were developed for West Africa and for Congo are not effective against that strain.

00:44:31

That doesn't mean that no work has been done. Companies, and public and private sector have been working very, very hard over the last few years. We currently have three candidate vaccines at least. There are others, but there are two vaccine candidates that are immediately potentially available.

We're working with Oxford Group in the UK, with SII in India, with the Sabin Vaccine Institute, with BARDA, with CEPI and others to be able to bring those vaccines to the field as soon as possible. And there are other vaccine candidates further upstream, an IAVI vaccine, others.

Ultimately, I presume our aim would be in the long-term, if we can, to introduce long-term protective vaccines that would be multivalent that could protect against multiple strains. These are outbreak response vaccines at the moment. So, the issue here is the fact that we have candidate vaccines available and that we can hopefully get scaled-up production of those vaccines, take those vaccines to the field and test them. It will be a very, very important innovation in the coming weeks and months.

I don't know if I fully got your question but it's not that the current stockpile is not available, it's just that that stockpiled vaccine is not effective against this particular strain. But we have solutions and, again, those solutions are coming

through the system right now with thanks to the partners in the UK, in the US and in India who are working so diligently with us to bring those solutions to the benefit of the people affected in Uganda right now. Ana Maria, if you're on, you might want to provide more details on the vaccine work.

00:46:11

AH Yes. I just want to add to what Dr Ryan said, that we have candidate vaccines. It means that we have some pre-clinical data that suggests they may be effective. We have safety data and immunogenicity data that suggests that they may be efficacious but we are running the trial with the Government of Uganda and Makerere University precisely to document whether or not, when they are given to people who are exposed to the Sudan Ebola virus, they are protected. That's first.

Second, as Dr Ryan says, we are working with partners, including CEPI and Gavi to do two things. First, to ensure that we support the developers to have enough doses to conduct the trials and assess them. And, second, in parallel and at the same time, to be sure that if they are successful in terms of efficacy, that we have enough doses to roll them out as fundamental investigational vaccines, like we did with DRC just before the newer [?] vaccine got published and after we have the clinical efficacy data.

Finally, with support with Gavi and other partners, we are looking at ways to ensure that any efficacious vaccines will be available in sufficient amounts. So, this is not a question of supply and whether or not we have a stockpile, this is a question of a commitment from the Government of Uganda with the researchers in Uganda to try and find another efficacious vaccine against another species of Ebola virus that causes death among their communities. Thank you.

00:47:46

MR Margaret, if I could just add. Again, this work, maybe one of the benefits we've seen over the last number of years with the work on the international coordinating mechanisms for cholera vaccine, for yellow fever, for meningitis, with the work on COVAX, the way in which the agencies now work together so efficiently, the work that we've been doing with Gavi and CEPI over the last number of weeks has been incredible.

The work being done by the scientific institutions in the countries, the capacity in Uganda of their principal investigators and their scientists and Makerere University, at the Ministry of Health, under the Minister of Health. So, what we're seeing is a much more rapid capacity to bring science to bear in these situations, much more cohesion between the different agencies who can bring their comparative advantage.

And, lastly, I would thank the governments of the United Kingdom and of the United States because without them working with academic institutions, without working with their own institutions, for example HHS working with NIH and others, we wouldn't have these products and we wouldn't have the facilitation that we have for these products to come to the field. The same with the UK government and the Oxford Group.

So, it takes a real partnership of government and the academic, the public and the private sector working together across countries with the multilateral agencies, and I would hope in this particular case we will get the opportunity to demonstrate yet another vaccine that may be useful in the fight against Ebola disease.

00:49:19

MH Thank you very much. It's clear. It's not a matter of dropping the ball, that was your question, it's a matter of picking up that ball as a team and really running with it. We have come to the end and I will now hand over to Dr Tedros for his final remarks.

TAG Thank you. Thank you, Margaret, and thank you to all members of the press for joining us today, and see you next time.

MH And I'd like to thank Dr Houssin, also, for his intervention.