



World Health Organization

WHO Virtual Press Conference following a panel of medical ethicists to explore experimental treatment in the ongoing Ebola outbreak in West Africa

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Speaker Key

GH	Gregory Härtl
MK	Marie-Paule Kieny
CC	CCTV Reporter
UM	Unidentified Male Speaker
GV	Gunilla von Hall
CW	Claudia Witte
GS	Gabriela Sotomayor
SB	Simeon Bennett
HB	Helen Branswell
KK	Kai Kupferschmidt
MC	Maria Cheng
YI	Yutaka Ishiguro
BO	Boris
TM	Tulip Mazumdar
BM	Betsy McKay
CL	Clive Cookson
MA	Mark Carlson
MS	Masaki Kondo
SA	Sarah
IS	Isabel Saco
KL	Klammer

GH Welcome to this WHO Press Briefing, both in person and virtual. We have quite few journalists online. So, before we start just to mention that the audio file and the transcript will be posted on the WHO website – www.who.int – and a video package will also be transmitted later. So, to talk about the conclusions of the ethics panel I hand over to Dr Marie-Paule Kieny, Assistant Director-General here at WHO. Thank you.

MK Good afternoon and good morning for some of you who might not be in this room. As you know, West Africa is in the midst of the most severe outbreak of Ebola virus disease ever

seen. We know that this virus which was identified more than 40 years ago and we see now we have difficulty to bring it under control. Identifying all cases, tracing all contacts, making sure that the people caring for those who are infected, that they use protective gear at all times has always stopped this virus in the past and we have had a number of Ebola outbreaks in Africa over the past decades. But this outbreak seems to be different. There are many more cases and greater spread to four countries to date.

And there is another important difference. In the past ten years research efforts into Ebola treatments and vaccines means that, for the first time, we have a range of potential treatments and vaccines. They could be potent assets supporting our efforts to control Ebola virus disease. However, while several of these treatments have been proven to be very effective in non-human primates, and I mean mostly rhesus macaques, none have undergone the tests in humans necessary for licensing as proven, safe and effective treatments. That does not mean that they are not safe. It simply means we do not have the evidence from human studies to say that it is certain that they are safe and efficacious.

So, we find ourselves facing a dilemma. If these treatments can save lives, as the animal studies suggest, should we not use them to save lives as far too many lives are being lost right now? On the other hand, they have not been tested in humans, so what if they cause harm that we could not foresee from animal testing? Recent use of such treatment donated by one manufacturer to treat several people infected with Ebola has brought these issues to the fore.

As ever, when you have difficult questions to make, it's time to turn to the experts. Yesterday, WHO convened a panel made up of ethicists, researchers, regulators and patient safety advocates from Africa and all other regions of the world to consider five questions about use of unproven intervention to treat people with Ebola virus disease. Their statement has been provided to you but I will give you a short summary.

There was unanimous agreement among the experts that the special circumstances of this Ebola outbreak it is ethical to offer unregistered interventions as potential treatments or prevention. There are caveats, though. The panel said ethical criteria must always guide the provision of such intervention. These include transparency about all aspects of care, informed consent, freedom of choice, confidentiality, respect for person and preservation of dignity and with the involvement of the community.

The panel also emphasised that, because we know so little about safety and efficacy in humans, whenever these treatments are provided for what we call compassionate use, which means as defined as access to an unapproved outside of a clinical trial, then there is a moral obligation to collect and share all data generated. In fact, one of the panellists pointed out that this is an opportunity to right a wrong of history; that is only relatively recently, in the last decade, that researchers have begun investigating interventions for Ebola. Now is the time to catch up and use good science to find good answers.

We may want to what is the way forward from here. Concretely, as I said, there are some potential therapies and vaccines which look promising but which have not yet been tested or, if they have, not thoroughly, in clinical trials. Some of these, as you know, have already been used or others are currently considered for compassionate use. Given the advice of the experts during yesterday's consultation, we will convene them in Geneva again, together with

other experts, to advise WHO on how to set the ethical criteria to prioritise their use. I will take questions now.

GH Okay. Thank you very much. Are there questions from the room? You first, please state from where you are.

CC I'm the reporter for CCTV, reporting for China Central Television.

UM Could you take the mic, please?

GH Thank you very much.

CC I'm the journalist of CCTV, China Central Television. I've got one big question. Even though the Western African countries are far away from China we, in China, are also very concerned about this matter because it is very serious. According to the doctor, your study and knowledge, do you think that traditional Chinese medicine is also helpful to curb or prevent Ebola, is my question?

MK Well, I think the honest answer is that I don't know. As you know, traditional medicine, Chinese medicine, has been at the basis of development of new medicines for malaria. So, it may well be that some traditional medicine may have some usefulness for Ebola. The question is, at this moment we don't know. And even though the experts have agreed that it is ethical to propose new unregistered treatment and prevention, they have also, of course, set some boundaries and this applies to the components that we think... that we have good reason to think that they might, at this moment, be efficacious.

GH Okay. Next, Gunilla and then Claudia. Gunilla von Hall.

GV Yes, Gunilla von Hall, Swedish journalist, Svenska Dagbladet. You say that there is now the time to catch up but how big of a difference do you think this will really make in order to stop the outbreak? And the second question I'd like to ask is that you talk also about giving consent. How is this going to be practically possible in countries where these people are ill and, you know, how are you going to be able to get that? And if it's not really realistic, why put it in the document? Thank you.

MK Well, first it needs to be understood that in terms of informed consent there are several ways of going there. If a person is conscious and can be asked they should be asked... explain to them that this drug has an unproven efficacy and an unproven safety and whether they would want to have it. If a patient is not conscious then the consent could be obtained from the family, from the communities, if it's not the case. And you could imagine also, certainly, that in place in communities where these unproven medicines are meant to be used that there could be meetings of community leaders in order to explain to them and get their assent of their use in the patients from that community.

Now, how will it make a difference? I think that we are fortunate that a number of these new products, vaccines and medicines also, have in their development shown enough potential for efficacy into non-human primates, into monkeys, so that it really gives hope that they would be efficacious in humans. So, this is why, on the contrary, with a previous outbreak, and even

though we don't have anything proven, we are in a much better position than we were a few years ago.

GV Yes, but I just meant there are so few doses available, so what difference can it make?

MK Well, the drug that you refer to which has been used now currently they are virtually no more material use but there are other treatment modalities which haven't been used yet but are considered very seriously as potential other alternatives to treat Ebola.

GH Claudia, German television.

CW Claudia Witte, German television. It's a kind of follow-up to that question. I mean, where did these experts converge on the question of prioritising? I mean, there's two kinds of priorities; one is to countries because it has been all over the news today that Liberia has received these ZMapp doses, the few that there are, and the other is, on an individual basis, how do you treat pregnant women, children, elderly people with a precondition? What are the points, the challenges to consider here?

MK Well, these are the points that will need to be addressed in a second conference. We did not have enough time to do it yesterday. So, what the experts really looked at whether or not it was ethical and then under which conditions. The criteria for prioritisation is something that we'll be working on at the meeting that we plan to convene at the end of the month.

CW But what are the points?

MK Well, there was a lot of discussion knowing, for example, whether healthcare workers would have priorities based on principle of reciprocity because they put their life in danger and so there was some support to this but, on the other hand, there were also voices within the expert group who said, well, wait a minute, actually, the community and the people who are in these communities and who are sick also should have priority. And when you look at the families, for example, of patients they also – if you look at the principle of reciprocity – they are also putting their life in danger. So, all these questions are currently on the table and will need to be addressed later.

CW Yes, but this question with Liberia, for example. I mean, you could say it's unjust. Why does Liberia get these ZMapp doses when Sierra Leone or Guinea will have [overtalking]?

MK It's always of a question then of opportunity. The government of Liberia has made a call to the company. They had only these three doses treatment available. The patients who were supposed to receive them were already identified and they did, I think, what many people would have done is that they shipped it as quickly as possible.

GH Gabriela Sotomayor and then we'll go to Simeon. Stephanie, could you pass the microphone over, please, to Gabriela? Thank you.

GS Thank you very much. Gabriela Sotomayor, Mexican News Agency. Could you clarify which medicines are okay to use? I mean, which ones? How many? Because maybe

some laboratories could take advantage of these and, I don't know, shell and other kind of things. So, could you clarify that? Thank you.

MK Well, you know, I'm not here to make any commercial for any company. Of course, as you know, drugs are developed by companies, in general. What I can say is that the products which seem... again, we need to refine the analysis and to come with a report on that which will be the result of a meeting that we will hold at the end of the month. There are three types of products that we are looking at. One are blood-derived or immunoglobulin like ZMapp. And in this category you can think about convalescent serum and we are trying to see how we can help the blood centres in these countries to collect serum and purify serum from convalescent patients and potentially use it. There's also a possibility of developing horse serum like it is used right now for post-exposure treatment of rabies. So, this is something that we try to move forward. Then the famous ZMapp. ZMapp is not available now but there is a lot of efforts to produce more doses and we hope that there will be more by the end of the year. So, this is one class, blood or blood-derived.

The other one would be antivirals and, there, there are few and I wouldn't say there are ten but there are more than three which have shown convincing efficacy in primates, in monkeys, and we are also helping the discussion of experts with potentially reaching out to these companies to see under which conditions they could be made available. And, finally, there are two vaccines or potential vaccines which seem to be moving towards first-in-man evaluation in the coming weeks and we are also following very closely on these developments.

GH Okay, thank you. Do we have a second microphone here, or not?

UM Yes.

GH To Simeon Bennett, please. Thank you.

SB Simeon Bennett from Bloomberg News. Marie-Paule, can you clarify whether WHO is advocating the use of these products in a clinical trial setting or in compassionate use or both? And, if you're advocating a clinical trial then, I mean, those things take a long time to set up, so who's working on that? What's the timeframe for when that might actually happen? And then, secondly, you've touched on this already but the use of serum from survivors, concentrated antibodies, immunoglobulins and so. In the absence of plentiful supplies of therapeutics, that seems to be something that could be done almost immediately. How soon do you think that could happen?

MK First, on whether clinical trials or compassionate use. I think it was clear and the ethicists – this is the advice that ethicists gave to WHO – is that it is not either, or. That, certainly, one of the priorities is to push these products which look promising into clinical trials as quickly as possible in order to scientifically assess their safety and also to see whether the response that we see in humans seems to mirror that that is seen in macaques, in monkeys. So, how can this happen? Well, it can be relatively quick we are told and we are in discussion with the experts and the groups who are looking at vaccine clinical trials. We understand that for both vaccines that I mentioned, that there are two candidates, the clinical trials could start end of September. So, we could have enough information, very preliminary,

but maybe enough information of their safety in humans by the end of the year. So, there is a way to fast-track clinical trials.

Now, your question about convalescent serum, of course, this needs to be done in consultation with the local authorities, with the communities because there are, indeed, ethical aspects to it. So, in the drawing of blood from these survivors and there needs also, as I'm sure you understand, there needs also to be absolute certainty that this is not infectious or procedures to inactivate. And, currently, we are trying to help the experts who are working with these communities to work on this as quickly as possible.

GH Thank you very much. We're going to go online now. Remember those online, if you want to ask a question, get in the queue by dialling 01 on your keypad. The first question is from Helen Branswell. Go ahead, please.

HB Hi. Thanks very much for taking my questions. I have two quick ones if I could please? When you talked about having a future meeting to address some of the deeper questions, are you suggesting that WHO is going to broker access to the supplies of what are left of the experimental drugs or is it going to be a first come, first served like it was with ZMapp? And my second question is was there any discussion about whether this could endanger the healthcare workers and aid workers on the ground if people come to believe that there are drugs but they're not getting them?

MK First, the meeting that we will have at the end of the month would have to go into greater discussion about the products which are there on the table and which could potentially be used or developed further in order to become registered drugs and vaccines and this will be with scientists, with clinical trialists, with ethicists and we hope that some consensus could come out of this meeting. Now, in terms of brokering, we do not get involved in a discussion about who should get what drug at what moment. What we have been doing is when we have a request, for example, of who is developing such and such technology if we have the coordinates in our book we will certainly give the coordinates to the persons who are asking and then the discussion can occur between somebody who has a drug or a vaccine and another one who would like to obtain it. So, we can serve as broker, if you wish, in this sense but only by facilitating contacts and not making any choices, of course. The other question... sorry, I forgot this one. Helen, you had another one.

HB Yes, it was whether there was any discussion of whether this would potentially endanger healthcare workers and relief workers on the ground. Given that the supplies of these things are so scarce you could face the situation where people believe that there are drugs and they can't get them and I'm just wondering if there's any concern about safety.

MK Well, there are concerns, of course, about safety, first because people will not understand why they don't have it, so communication is of utmost importance. And this is why I think that the media are so important because, you know, the way you depict the situation has an impact on people. So, this is very important. The other danger, potentially, is that people don't understand what is this new medicine which is given. For example, you could imagine that if and when an experimental – because these are experimental at this point – vaccine is brought to a field, suddenly it is believed that it is a treatment and therefore it is administered to a very sick patient where it had no chance of doing anything and potentially could even have adverse events. So, it will be of utmost importance to have the right

communication and we need your help and also to engage the community and the healthcare workers on explaining what these are and what are the limits in terms of their scope, as well as in terms of availability.

GH Thank you very much, Helen. Next question also online from Kai Kupferschmidt, Science magazine. Go ahead.

KK Hi. Thanks for taking my question and also two quick questions, if I may. First of all, I'm a little bit confused. If you say, basically, the WHO today has given a green light to using some of these experimental vaccines, saying it's ethical. At the same time you're saying the exact prioritisation and how to use that will come in the future. So, I'm just kind of wondering, you know, isn't there a danger that now that you've kind of said yes, this will just play out, you know, with WHO's involvement, if you're actually only meeting at the end of the month? And the other thing I was wondering about is can you give us any indication... you know, in terms of the different drugs you have, is there one particular one, you know, either VsV vaccines or Tekmira's TKM-Ebola, where you think they are, you know, potentially helpful enough and also there's enough stock of them to really make a difference?

MK Well, first the advice we got from the experts is not that, you know, anything is permitted and that you can use anything which is, you know, there's a rumour that it may do something and then go and just try to pretend that you are treating patients. This is not, at all, the message. The message was when there are products which seem to indicate in proper animal models that there is enough evidence that they are likely to be effective then these should be used. Now, one of the reasons about criteria, that the experts have given more advice about the criteria, is that these medicines are different. So, there may be different criteria according to what it is that these medicines are supposed to do. So, yourself, you said, you know differences and you compared a vaccine with the siRNA; these are two different products. So, you could envisage, of course, that when you talk about a vaccine and when you talk about a drug or about an immunotherapy then the criteria for the first to be treated would be different and this would request more thorough analyst and also a briefing of the ethicists by the people who know more about the characteristics of these products.

GH Okay. Thank you. One more question online, then we come back to the room. Maria Cheng from AP. Go ahead, please.

MC Oh, hi. Thanks for taking my question. I was just wondering, Dr Kieny, you said in your opening remarks that using these untested drugs was ethical in this specific situation because of this outbreak, I guess referring to the size and the spread of it. Does that mean that if we were seeing a smaller outbreak, just a few dozen people, for example, would that be unethical? Are we sort of pushing the boundaries here because we are in this extraordinary situation?

MK Well, the difference here is that because of the size it seems that the usual method that we are using, which is of infection prevention and control, also some tracing of contact, looking at the contact, quarantining the contact, is not working as well as what it did in a smaller outbreak and this is due to the size. In addition, as you know, the health systems of the three countries which are the most affected are very weak and although there is a lot of experts from other countries who are currently deployed in the field, the magnitude and the spread of the outbreak makes it that we don't have enough people to use and to rely only, if I

may say, on what has traditionally worked if we want to stop the outbreak as quickly as possible. So, this is why, in these particular circumstances, the ethicists have felt that it was ethical to propose these treatments and these vaccines, although they have not been registered yet.

GH Okay, we'll come back to the room. First here, then there, then there. Go ahead, please.

YI Ishiguro of Yomiuri Shimbun. My question is very basic. The point of view that experimental drug use is ethical is the point of view of experts or it is the point of view of WHO as a whole?

MK The WHO, as a secretariat, has no opinion. We are advised by the experts which are convened by the Director-General in order to help us on technical matters and ethical aspects. And so we have convened this group. The Director-General, herself, has participated in the meeting and has listened to the advice and has made their advice her advice.

GH Thank you. Isabel Saco, did you have a question? No. Okay, then, over there please? Microphone? Where's the microphone? Can you give us your name please, your affiliation?

BO Boris in Lucerne, a local freelancer. Three very quick questions. First, in that meeting, were there differences of approach between the different categories of stakeholder, that is patient representatives, government representatives, scientific experts? Second question, what is so special about this specific case as compared to ordinary clinical trials? Were there no toxicity tests even with animals in that case? And third question, why call that meeting a meeting on ethics and not on liability or consensus or whatever you like?

MK You said three questions?

BO That's it.

MK That's it? Okay.

BO Thank you.

MK The different approaches. Yes, of course, although there was consensus and unanimity on the recommendation, certain of the experts or the ethicists came with a different personal angle and this is what also makes the richness of a discussion to come to a consensus. Some of the experts were of the strong opinion, as I said, that community and patients should be considered as first priority as well as the care workers. Some others thought...

BO I'm not asking about the personal view but the category view; that is patients, experts, government and the like.

MK There were no representatives of governments and people were attending on their personal capacity. This being said, what is the personal stake of the different participants is not something that I will expand on. They can be interrogated or interviewed themselves, so that you can see whether they have a different view from what is the consensus view but, for us, this is the view of the panel as a whole. In terms of this case, toxicity and animals, Ebola is not the only disease where the use of drugs on a compassionate use are discussed. You

know, this is the case for cancer, for example, and there is a quite famous case where a drug was given to a child for a cancer treatment where this drug had actually very severe side-effects and nothing could have proven this before. So, every drug is a different drug unless and until you have proven it safe you cannot be sure that it will be safe. And, in addition, as you know, there are also different categories of people. In Africa, we also have a high prevalence of people infected with HIV. Would there be a difference in HIV-infected people in terms of safety? What about pregnant women? What about children? All this we have currently no information about safety in these different populations.

GH Okay, thank you very much. Next online to Tulip Mazumdar of BBC. Go ahead, please.

TM Hi, there. Thanks for taking my question. I've just heard you mention December a couple of times. I'm just trying to sort of figure out a timeline of what actually happens from now. Are you saying that you are hoping or you think it's likely that there'll be a stockpile of these drugs by December? You've mentioned December a couple of times. And also, you've sort of covered it just with your last answer, is there a precedent for this? You've mentioned the cancer drugs but kind of on this scale for a specific event have these sort of experimental drugs been used or talked about in this way before and, if so, when?

MK I would say that there is so much effort from so many people and this is both the industry, the scientists, governments, agencies, clinicians to try to move this ahead as quickly as possible that every time we have set a date or something we have seen recently that we have gained some time over the timing which was initially planned. So, you know, this is really something which is in flux right now. But we must also recognise that the fact that there is currently no registered drug for Ebola is a market failure. It's a market failure because this is typically a disease of poor people in poor countries where there is no market.

So, as you know, the drugs and vaccines are developed, in part, at least in the last part of the development, by industry. So, you can have academics which develop the early steps but then when you go to talk about clinical trials, about production large scale, this is industry who is doing it. And if it hadn't been for the investment of a few governments into the development of these drugs and vaccines, we would be nowhere in that. So, because of this market failure, we are now in a situation where many of those that we think are promising have been developed to a certain stage and not to the clinical part which is the most expensive.

And this is why there are no stockpiles and we are not there yet. So, the best we can do right now – and many, many people are very heavily involved in that – is accelerate the last steps of the development and scale-up the production of these drugs as quickly as possible. So, will it be December? It may be November, it may be January but what I mean is that in terms of volumes of what we know, and I don't pretend that I know everything, of what we know, there are none of these promising drugs which are available in unlimited supplies right now.

GH Thank you very much. Betsy McKay, Wall Street Journal.

BM Thank you very much. I had two questions also. One is do you think the medication, ZMapp, actually worked in the two American patients who received it and was it also given, in the end, to the Spanish priest? Secondly, I wanted to asked if this idea of using, you know, unapproved medicines had been discussed earlier in the outbreak, given how many people

have had the disease and how many have died, you know, all the things you mentioned which are the size of the outbreak and the difficulty of controlling it by regular means? And if it hasn't been discussed until now, why not?

GH Thank you, Betsy.

MK Thanks a lot. Well, whether ZMapp works, this is difficult to state with any definitive opinion right now because the number of people who have been treated is quite low. So, we know of the two first individuals, a man and a woman. I haven't seen their medical records but what I have seen reported is that the administration of this drug has had a dramatic and very rapid effect on their state. So, based on this, it is highly probable that this has been due to the administration of a drug. Now, is this a definite cure? We don't know. This drug was meant to be administered several times because this is an antibody which neutralises the virus and then the virus can potentially start growing again so you need to give more and it was planned to give three times. So, we'll have to see if this is a definite cure or not. It has come in the press, I wasn't aware of that differently, that the third patient, the Spanish priest, actually died from the disease. So, again, you know, this man, we don't know whether he was too ill, whether he got the drug or not. But the reason why the ethicists and everybody is convinced that it is a priority to continue clinical trials is that if we don't do proper evaluation, if we don't collect all the information, we will never know whether it works or not; so, important for that.

Now, about use of these drugs for compassionate use. I think that the call to use them this way has come recently, a few weeks ago. This is not to say that before that time there hasn't been a lot of effort to scale-up. This has been something that has been undertaken from the very first days when the Ebola outbreak has started in March as well as prepare for clinical trials which is also work which has started a few months ago.

GH Thank you. We'll take one more question from online and then back to the room. Clive Cookson, please, from the Financial Times.

CL Thanks very much. In answer to Tulip you had talked about the need to get to expensive scale-up for these drugs but no one has asked you and I'm going to ask you, who's going to pay for all this work? Who is going to pay for all the R&D, the scale-up?

MK Well, frankly, the party which has financed most of this research is the US Government. There has been also investment from others, for example, the Canadian Government has been very active also and companies; companies big and small who have invested and screened; they may have other drugs under development and they have screened these drugs also against Ebola. But there has not been enough investment into development of these drugs, like there is not enough investment in development of drugs against Leishmaniasis and a few other diseases of poor people in poor countries.

GH Okay. Thank you. Now, we have about five more minutes. We'll see how many questions we can fit in. We'll go to two in the room. First, the cameraman, please. Blue shirt with your hand up. AP, thank you.

MA Mark Carlson, from Associated Press Television. Has the drug, ZMapp, been distributed fairly?

MK You know, I cannot comment on that, really. I don't know exactly how many treatments were available. We have conflicting numbers. I think something like ten. We heard that three treatments have gone now to Liberia. I don't think that there could be any fair distribution of something which is available in such a small quantity.

GH Go ahead, please. State your name.

MS Hi. My name is Masaki, Jiji Press, Japan. My question is about what if all the experimental drugs prove to fail and then leave massive side-effects, let's say? Do you think the pharmaceutical companies have a risk to get sued in the future because I just recall the case in Nigeria and Pfizer? So, I'm just wondering if the pharmaceutical companies are going to have the risk of being sued in the future. Thank you.

MK This is certainly a worry for them, who will be responsible and this is the case for the pharmaceutical company but also for anybody who has provided the drug, you know, for those who have financed the development, for those who have shipped the drug on the side, those who have administered it. But I see a lot of goodwill, currently, by many stakeholders to want to do their utmost best to help the patients in this terrible outbreak.

GH Okay. We'll take another question online and then over to Isabel Saco. Online it says, Sarah from Nature. Hello?

SA Hi. Can you hear me?

GH Yes, go ahead please.

SA Hi. Thanks for taking my question. I wanted to ask about the difference between some of those blood-based treatments and the vaccines that are under development that might be more useful to be given prophylactically. Is that something that the WHO will address at some point, whether these vaccines for people who have not yet been infected, whether there's a different ethical standard that needs to be applied there and, if so, who should be getting those primarily, healthcare workers, or at what point they could start giving them to populations who are at risk?

MK There is, indeed, a lot of discussion also about the compassionate, if I may say, use of vaccines, preventive vaccines, in this outbreak. And the situation is a little bit different because you would provide these to people who are in good health and who are at risk. So, this concerns healthcare workers but it also concerns all the people who are working in the laboratories, the people involved in burials. We know that this is also a place where infection occurs. And so there are specific, also, constraints, in view of the fact that these people have other means to protect themselves and notably through appropriate use of infection and prevention control.

So, what we are doing – and this is an important part of our work not involved with only covering, of course, new therapeutic drugs – WHO is, with many partners, trying to help strengthen infection prevention and control in the sites, in treatment centres to avoid that close to 10% of death, actually, among healthcare workers. So, in addition to that, of course there is discussion about use of these vaccines. There is a general understanding that there

should be at least a few people that would have received the vaccine before it is used but the details will be worked out very soon. I also understand that the clinical trials of these vaccines are likely to start in the very few weeks ahead of us, so I hope that by the time they might be used directly, without having finalised their testing, that we will have some information on safety, acute safety in humans.

GH Thank you very much. Last question from the room I think, probably. Isabel Saco, Spanish News Agency, EFE.

IS Thank you. It seems that it's like WHO giving a lot of hope but you said that there are a very limited number of doses and you are saying that treatment for Liberia, this is like nothing regarding the scope of this outbreak. So, don't you feel that you are giving the wrong message in the sense that people could get a treatment and this is not true? And if you can say if you have had any contact with all the laboratories participating and developing these medicines and vaccines and if you know for how many people there is some hope of being treated.

MK So, it is very important to not give false hope to anybody that Ebola can be treated now. This is absolutely not the case. What we rely on now is proper implementation of infection prevention and control; control tracing, quarantining of people who have the disease, quarantining of contacts to make sure that they would be under proper treatment if they, indeed, develop the disease, limitation of movements of people in and out of the zones which are the most infected. These are the measures, right now, which are likely to make a difference and we hope will be able to stop this outbreak. This is what we advocate for.

Now, in terms of new medicines there are, indeed, products which are moving and are quite close to being used in people and are moving forwards towards authorisation for use by regulatory agencies. In this context, there has been a lot of request about whether these drugs can be used and of requests to WHO of whether we have any advice to give on these. So, the reason why we have convened this meeting and the reason why we are coming public with this statement that it is ethical to use these drugs is to also help the people who are willing to fast-track these developments that this is ethical to do so and even a moral imperative to fast-track and also to help, also, the government who may be approached because their population or people on their population would like to have access to the treatment, so that they would be willing to authorise importation and use of these products in their countries.

GH Okay. Thank you very much. If it's short we can take one more question from online. So, Mr Klammer [?], you're up and hopefully it will be short. Go ahead, please.

KL Excuse me, my question has already been answered.

GH Okay.

MK That was quick.

GH That was quick. So, we thank everyone for having come to this press conference, both in person here and virtually online, and we're sorry that we couldn't take all your questions but we know there is a multitude of them. Thank you very much. The audio transcript and the

written transcript will be published shortly on the WHO website's Media Centre and there will also be a video available later. Thank you very much. Thank you all. Goodbye.