



World Health Organization

Ebola briefing: WHO response and challenges to control the Ebola outbreak

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Speaker Key

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| JH | John Heilprin |
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| NI | Nina Larson |
| UM | Unidentified Male Speaker |

BA Folks, I'm terribly sorry to keep you waiting. For those of you who, I think some of you know, I'm always so concerned about getting on time for the briefings with the Palais here. I always bring my motorcycle on days that I know that we have a briefing because I know I can beat the traffic and I can come straight in and park. And today for the first time in five years I was stopped at the gate and they said you can't bring a motor in without a sticker. So I'm terribly sorry for being late, but I had even taken provision this morning to make sure I wouldn't have kept you waiting, so apologies for that. I think we're going to try and find a glass of water so that I'm not completely parched. Great, all right.

TJ Well, good afternoon everyone. I love having press briefings with Bruce; he always makes an introduction. Thank you very much for being with us today. As we have announced, we will tell you a little bit about, where do we stand with regards to the Ebola outbreak. As you know, today is the day that marks two months since our target of 70-70-60, as we call it, has been announced, and Bruce was several times due to report back on the progress and this is certainly what we will be doing today. So I'll give the floor back to Bruce and then we will go for the questions after Bruce gives his opening remarks. Thank you.

BA So good afternoon, again, everybody and welcome. We've put together a few comments that I'm going to read through because that way I'll make sure we cover the bigger points that will help orient you to where we stand right now. And then I'm happy to take questions as time permits. I think most of you know me, Bruce Aylward. I'm the Assistant Director General at WHO who's been in charge of the response, our part of the response for a couple of months.

So just as background to today's discussion, as all of you know, on the 18th September the Secretary General of the UN launched the United Nations Mission for the Ebola Emergency Response, what's now known as UNMER, to scale up the response to this outbreak, with really a focus on ending the disease as you know in the most affected countries at that time, Guinea, Liberia and Sierra Leone. I think most of you are aware the mission has been expanded since then to also assist Mali with the outbreak that they're facing right now. The UN mission started its operation on the 1st October as you know and I thought before we go into the details about where we are today, I'll just take you back a little bit to late September/early October and remind everybody of where we were at that time.

You will remember we were in a very different situation than we are today. At that time the disease was escalating in many places, exponential growth we were seeing in terms of the new cases. There was a real dearth of treatment beds for those cases as well as burial teams and this was what was contributing to that rapid growth that we were seeing at that time. And quite simply again, as many of you know, the sick in these places simply had nowhere to turn for appropriate and safe care. And this was again having bigger implications for the countries as you're aware because the countries were in some cases being increasingly isolated as borders were closed, as restrictions were placed on travel unfortunately and other measures were taken, very concerning measures because of fear that this virus could spread further. And the big question really 60 days ago you will remember was given that increasing gap that we were seeing between the rapid rise of the disease and the ability, the capacity to treat that, the concern was could that gap ever be closed and could we, so to speak, catch up with this virus and get the world positioned in a way that it could actually stop transmission.

So some very aggressive targets were set at that time to try really to concentrate the UN and international effort in support of the national efforts and, as most of you are aware, the famous target of 70-70-60 was coined at that time with the initial target being to ensure by the 1st December 70% of people with Ebola who died of the disease could be buried with a safe and dignified manner that would minimise the risk of spread, and also that 70% of people with the disease could be treated in a manner that would isolate them and prevent further spread of the disease as well. So yesterday completed 60 days, so today I'm here to give you an update and I think as you're aware, Tony Banbury has just addressed the press in Sierra Leone along with David Nabarro, so a lot of what we'll say will build on that obviously.

I did think it would be helpful to mention that during the period, as you know, I promised to the Palais press here that when I was in town I would try and brief you on what was happening, how the outbreak was unfolding and the response. I think I've done that twice and that's because I've seen you even less than I've seen my family over the last two months. I've spent much of that time in these countries. I've been to all three of them, most of them multiple times. I've been in most of the worst affected districts, prefectures and counties as well, so I have a bit of, a much better sense of what's actually happening on the ground and that informs obviously our update today.

I think the big picture, as we'll talk about as we walk through, is that we're in a very, very different place than we were 60 days ago with that escalating disease, the yawning and increasing gap between response capacity and disease. You know, a couple of big picture comments, the response, and I often get asked by journalists, has it been what we'd expect, has it been impressive? And it's been impressive indeed. You've seen yourselves that many people, organisations and others who have stepped up to provide unprecedented support. I've been particularly impressed by the many NGOs and others who have stepped forward to run Ebola treatment centres, to learn how to do that, to learn how to help countries safely bury their dead. This has been truly impressive, some real heroic work out there. In addition, of course, not just by the international community but really by the communities themselves because they deal obviously with the bulk of this disease.

We've also seen that many communities are changing the way that they live. We talk often about the beds and burials that have helped slow down the outbreak but there's a third B and that's behaviour, it's been the behaviour changes in places like Liberia that have been as important. A lot of this is driven by very, very strong national government leadership. For those of you who have not been out to these countries, to spend a bit of time in the emergency operations centre in Monrovia or to what's called the NERC in Sierra Leone and then the control centre in Guinea, you get a sense of just how strong the government leadership is.

Now, in terms of the numbers and the 70-70 targets, the good news, and there is good news, is in all three countries it's clear now that more than 70% of the Ebola deaths that we know about are buried safely. This is because in the past 60 days the number of safe burial teams has more than doubled from probably less than 100 or thereabouts to nearly 200 or just over. I think we're squeaking in at 202 today across the three countries. The obvious question then is that capacity, great, it's sufficient for the burials and the Ebola deaths that we know about but what about those that we don't? And working from the number of burials that these teams can do, working from the information we have about possible unreported burials, it's very clear that there is now enough capacity across these three countries, with the exception of a couple of districts here and there that are low incidence areas, but they certainly have the capacity to manage the full burden of disease and achieve certainly the 70% target and probably substantively higher for burials.

In terms of the percentage of cases that we believe are being treated in an Ebola treatment centre or community care centre, we now believe that two of the three countries, Liberia and Guinea, are currently treating more than 70% of the reported cases. And in Sierra Leone they are probably achieving that in most of the country with the exception being in the western part where they're currently dealing with real escalating disease. It's one of the particular hotspots of greatest concern. But there is the expectation that they should also be able to meet that 70% target in the coming weeks as planned and additional bed capacity that's being rolled out comes on line.

Now, the reason for the step up in treatment that we've seen over the last two months is because in the last 60 days across the three countries there's basically been a doubling in the number of Ebola treatment beds that are available across these countries. The greatest increase has been in Sierra Leone where it's gone from about 267, if I remember the exact number, beds in late September to more than 650 today. And Liberia has gone from about 480 at that time to certainly well over 850 and we believe now getting close to 1,000. The reason, by the way, there is some uncertainty around some of those numbers is that new beds

are opening every single day in these places and some of them can be open very quickly with these new, what we call, community care centres. So more and more are coming on line. In Guinea the overall capacity however has remained relatively stable; it's about 200 beds there.

Now, these investments in the safe burials and the step up in both safe burials and in the proportion of cases that are now being isolated is reflected in the epidemiology. As you've seen, there has been a real slowdown in the speed of new cases, fortunately, in most areas. If we look right across West Africa we are no longer seeing exponential growth of this and in some areas we're seeing declining disease. We had seen some steep declines in Liberia, as most people are aware, in eastern parts of Sierra Leone and also in parts of Guinea, in important areas such as the capital, Conakry, and in Gueckedou where we were first notified of this so many months ago. That said, there is still increasing disease again in a couple of hotspots that are particularly concerning and every one of these countries have hotspots, the biggest area right now of escalating disease that's of greatest concern is what's happening in Sierra Leone where amount of new disease is still outstripping bed capacity for the moment, although that should catch up quickly. Also a concern that in Guinea, while there may be enough beds, these are highly concentrated in two areas of the country and we now have twice as many prefectures affected nearly as two months ago. And we know as well that people don't like to move, so that geographic mismatch is still a concern.

But I think the big message from the information, the combination of epidemiologic data and response data that I've just talked to you about is that the big question of two months ago was can you close that yawning gap between the amount of disease and the response capacity? I believe that's been answered definitively with the international and the national and the community level. The will is there and investments are there. Very definitely you can catch up with Ebola even on this scale and that is a very, very important message and it's a very, very new piece of information.

As concerning, however, is that just because you can catch up with the disease doesn't mean that you will in all areas and we're seeing, as I mentioned in a couple of places, that we still have the new cases increasing faster than the response capacity or at least the response capacity has caught up with it yet. Western Sierra Leone is the most evident place today. But the other important message is that that is not going to be enough to get to zero. Just because you can catch up with the virus and begin isolating all of those cases doesn't mean you're automatically going to get to zero. That requires additional measures that have to be brought into place as we go forward.

A lot of people get the credit for what's happened over the last 60 days. I'm not one of them. That credit goes to those NGOs that came forward, those communities that came forward, the people in these places who had to change their behaviours, the way they took care of very, very sick people in their families and the leaders of these countries. I think people like Tony Banbury get a lot of credit for really helping to drive the UN response and David Nabarro, just an extraordinary man who's done a super job with great and strong leadership over the last 60 days and has been part of what's helped get so much of this aligned in the way that we can see the kind of changes we have today.

We've learned a couple of important things along the way that I wanted to highlight today and we can come back to them if you like in questions. The first though is that safe burials alone are not enough to slow down the epidemic, take the heat out of it so that you can catch up with it. Really only in Liberia, in parts of Sierra Leone, parts of Guinea where we've had

safe burials plus the treatment and isolation capacity have we been able to catch up with the virus enough to slow it down. So you really need both of these pieces to work and where you see only one or the other it won't slow this epidemic down.

The other big thing that I think we've learned and it was clear and probably self-evident to many of you is that people, when they're sick, they don't want to move long distances. Just because you have enough Ebola treatment capacity in one area of your country doesn't mean people who are sick in the other area want to go there. And this leads obviously to some people not reporting cases, not coming forward with the disease. And so the planned build out of capacity that's still planned and isn't completed yet is absolutely essential.

One of the other things that we've learned, and here the data really are just starting to get more clear, is that getting people into treatment and early into treatment definitely does make a difference. When we look at those cases that we can follow more closely who have never been hospitalised, we're seeing very high mortality rates still; 90% or above, 80% for sure. For those people that are actually getting into treatment centres across the board, we're seeing survival rates that are about twice as high; we're seeing about 40% of the people into these places actually surviving. It does make a difference. It's incredibly important as we complete the build out and we move into the next phases of this response.

The last two big things I think that we've learned is, and I want to be absolutely clear on this, is that while there's been progress towards 70-70, real progress and meaningful progress, this is not good enough to stop Ebola. And probably the single biggest alarming thing that I hear as I work in these countries and speak to people outside is that great, now that we're on track, because the disease is slowing down with this 70% achievement, to stopping Ebola. You're not on track by getting 70-70-60; you have reached a way, an important milestone along the way. You've managed to slow down the outbreak and we're seeing now in some areas what we call, bend the curve, of the outbreak which of course is very, very important. But that is not going to get you to zero. You eventually have to get 100% safe burials, you eventually have to get 100% of people into treatment facilities and you also have got to complement that with the strategies around case finding and contact tracing. Now that the case numbers have come down enough, that is going to be the big emphasis in those low incidence areas to get this thing finished.

A few comments on what's going to be needed as we go forward. First, in terms of the financing, I think you've seen in the OCHA tracking figures, that of the \$1.55 billion needed in the immediate response period out through at least the first quarter of next year, about \$920 million of that has been funded. The gaps in financing result in real gaps in operations; it means there are things that we cannot do that we would do, it means the countries cannot do some things they planned to do and it means that we have to make choices which aren't optimal when it comes to trying to get to zero.

The second big thing that we must do and what concerns me a lot is people, there has been discussion about in some areas there are empty ETU beds. That's great but the completed plan for the Ebola Treatment Units is absolutely essential. In each area we may have to right-size these as to whatever the evolving epidemiology is but that geographic planned build out is absolutely essential if we are going to ensure that people will go to these facilities, use them and actually the rates needed to get the disease stopped.

The third thing I mentioned in my earlier comments was as we now, or as the countries – I'm not doing it – slow down the rate of these new cases it's going to be essential that they complement that huge effort on burying the dead and building the treatment beds with now what I call the contact tracing, the case finding to make sure you can actually find the remaining chains of transmission and stop it. And to do that going forward we're going to, it's a little bit of a hard thing to explain but as the disease is falling like this, the actual number of people you're going to need and the geography that you're going to need to cover to get to zero is actually going to increase. Because you can use concentrated Ebola treatment units, you know, in some big areas, in capital cities and invest that way to achieve a lot of what's been achieved so far, but now you're going to have to have surveillance teams in every single district, every single county, every single prefecture to be able to find any remaining viruses, to be able to find the contacts of those cases and then be able to systematically really turn the tables on this virus and hunt the virus rather than being hunted by it.

In fact, when I was in Liberia I met with the Head of State a couple of weeks ago and one of the things that we talked about was, there was almost a sense that the people of Liberia at one point were feeling completely helpless in front of this virus, as if it could hunt them down anywhere, pop up anywhere and cause the damage, the awful damage it was. When the reality is this disease can only spread along chains of contacts, as you know, and the challenge, now that the disease numbers have fallen, was to shift from that sense of being hunted by this virus to actually hunting the virus, you know, chain of transmission by chain of transmission and shutting it down. And that is going to require some additional adjustments to how we operate going forward. The big thing is we're going to have to get teams out to every country district as I said, with the transportation capacity, with the communications capacity, with the connectivity to be able to share the data.

I'm just going to wrap up now but before doing so, I did want to highlight that there have been, again, and I just cannot overstate how impressed I have been as I've gone out there in the various districts, counties and prefectures and just seen the heroes that have stepped forward to be able to manage this outbreak and respond to it. Most of these are people from the countries themselves, I think as you're aware, but then there have been a lot of other heroes from the international side who have come in to help them do their work. As we go forward we're going to need more of that and we're going to need more help ensuring that international support can get in and out of these countries a lot more easily so that they can actually provide the support needed for this case finding, contact tracing because it's a technically difficult piece of work to get right.

One good thing though as we go forward, I guess most of you will have a sense of this; a lot of the people that will come in on this case finding, contact tracing work, they will not be dealing directly with the virus. The people who had to deal with the burials and the dead bodies, the people that were dealing with the infected people in the treatment units, they were dealing with higher risk situations, people with a lot of virus. As we go forward, we're really looking for the virus in places, many of which will not even have the disease, and these people, their job won't be to manage those people; it will be to detect them and then make sure that they are followed up. So the risk for many of the responders in this phase that are doing those functions will actually be lower.

So as we go forward, right now the key thing is to complete the investment. We've got to get to 100% safe burials, 100% isolation and then 100% of cases being found, contacts being

traced. That's how you stop Ebola. And we will not be able to stop this until that investment is complete. At this point probably the biggest risk is that this drops out of the media, this drops out of the international concern, it drops off the pages of newspapers, which has been so important to mobilising the support these countries need to stop it. We have got to stay really, really vigilant, really, really engaged and drive this right to zero. Over the last week at events of the 70-70 target, some people have used the word, optimism, and Ebola in the same sentence. And as I commented in an interview the other day, that is completely inappropriate. There is no room for optimism as long as you are dealing with an Ebola virus. It's not about low numbers when we get to Ebola, like we're seeing today in some areas; it's about zero. We have got to get to zero.

So I will stop there and take questions, Tarik, if that might be helpful.

TJ Thank you very much, Bruce. Just before we start the questions, just to let you know that we will have an audio file available a little bit after this press briefing, so you can use that audio file. And Chris, our colleague who is behind the camera, will also prepare some video footage for those who need that. And now we will open the floor for questions I had. Let's take first Simeon and then Tom and then we can maybe start with two and then go two by two. Thank you.

SB Bruce, Simeon Bennett from Bloomberg. As recently as Friday the numbers on burials and isolation were somewhat different. I think in Liberia it was around 23%, in Guinea 40% and yet now you're reporting that on both measures we're above 70% across the board. So can you just, it's just a bit confusing as to why those numbers have suddenly jumped. And then secondly, you know, you talked about how it's necessary to complete the build out of treatment centres and so on but I just wonder whether there's something of a mismatch between resources and needs. So I see that China has just opened a 100 bed treatment centre in Monrovia but last time I checked the MSF ELWA3 treatment centre only had 23 patients in it with a capacity of 240. So are we opening treatment centres where we don't need them and yet contact tracers don't have fuel for their cars? Is the aid going to the right places? Thanks.

TJ Thank you, Simeon. Tom?

TM Tom Miles from Reuters. I want to ask a bit about Sierra Leone and where things went wrong there, why it hasn't managed to do what Liberia has done. I mean, we've heard about Sierra Leone possibly not prioritising safe burials early enough and about their failure to triage patients properly and about, frankly, rather dodgy-looking numbers where they're only reporting cases that were officially confirmed in clinics and ignoring a vast sort of hinterland of people presumably dying at home. And if you look at the case fatality rate and the numbers in Sierra Leone, presumably there are still thousands of deaths still to report. So, you know, what went wrong and are you convinced now that it has the two main elements in place that by the end of the year, for example, we'll see them having turned the curve in the way Liberia has? What's the prognosis? Thanks very much.

TJ Thank you, Tom. Should we take those two first?

BA Yes, please. On the first question that Simeon asked about the Friday numbers, and I guess I should start with an apology on that because we had actually never calculated what, where did we think we were in terms of the 70-70 target quite frankly before. What was in

the sit reps was information that came off the case investigation forms, and I'm going to have to explain a little bit of this to you. What happens, as you know, is the teams, the countries, they hear about a case, they send a team out to do an investigation, the team does an investigation, one of the investigation questions says, is the case hospitalised, yes/no? And of course the cases in the village, they're taken to the hospital but then they go no, it's not hospitalised. But in fact those cases end up hospitalised. And what happened was the number that was taken straight off those line lists which were what was in those reports was basically reflecting simply what they were finding at the time that they were doing the investigation. And the vast majority of cases are investigated outside facilities, quite frankly. So what I have to apologise for is I didn't realise that that number would be taken as the case isolation rate which we actually hadn't thought to calculate until we got to 1st December.

Now, why is the number different, is the other question. So what we've done over the last 72 hours is taken every source of information available on where the actual beds are, what the occupancy rate in those beds are, how it compares with the reported number of cases in a given geography and then assumed different rates of under-reporting as well as different rates of people actually being moved to treatment centres. And as we run through a whole number of different scenarios, our sense is quite robust to say that in Liberia, which probably has the highest rate of case isolation right now, it's well over 70%, Guinea is also over that, Sierra Leone, below. And Sierra Leone is below because of what's happening right now in the western part of the country where we had that build, where we have that escalating outbreak right now. And I'm going to come back to that, Tom, in a sec.

But first the second question you asked about, are the resources being deployed in the right places? I mean here we're talking geographically and in terms of which line of action as well. It's not perfect yet, without a doubt, but I think it is getting better and better without a doubt as well. The key thing in terms of these ETUs and it's so important to get those rights because they're such a critical part of the strategy, and it's also not something that is very mobile, there's a big build out, for those of you who haven't seen, these are big facilities; you can't just pick one up and move them around. So what we have not got right actually, more than the number of beds, is actually the geographic locations of them. We have highly concentrated in Guinea. If I give you a couple of figures, they had nine prefectures that were infected back at the beginning of October, I think they're at 16 right now but their ETUs are heavily concentrated in two areas – two of them in the forestry area and then another one and a second which is really a tree-house centre are around the capital. But they have a much bigger geographic area so you have to move people long distances etc. Clearly that has got to get adjusted as we go forward and the planning is there but not fast enough.

In Sierra Leone it's actually quite different. The geographic planned distribution is right on the mark and the virus is telling you that. The problem is you would have wished it came online a month earlier if possible. But again, the reality is it takes time both to build these things, to find the partners, train them, open them safely and scale them. So the big thing right now is really getting the geographic build out complete, maybe that's the best way to say it, in Liberia and Sierra Leone as planned and then in Guinea we're going to have to expand it, and the government is thinking about that already. But then in each of those places we have to right-size it to the amount of disease.

Now, some people have said why don't you keep something like ELWA3 open with 250 beds, rather than have five facilities? And again, I think as everybody knows now, the bigger your facility, the higher risk that it might actually run dangerous. You know, you want to run these

things as small as possible. And historically our Ebola treatments units, they are usually 25-50 beds. So the key now is to try and get them right-sized rather than closed. The other thing we've seen is how quickly this disease can turn around and expand again. Remember, this is a behaviour driven disease so a couple of really bad burials, a couple of really bad events, a couple of really bad infections in hospital settings and your numbers can explode very, very quickly. So right now my concern would be right-sizing and making sure it's scalable but not closing facilities because how quickly this thing can scale is still such a concern.

Now Tom, in Sierra Leone, I would never have used the phrase, where things went wrong, actually with respect to Sierra Leone. I've been in and out of the country three or four times now. I've been to places like Kenema, Port Loko, Freetown and the others and what I'm most impressed about in Sierra Leone is how much is being done right. There is, without a doubt, a... you know, we wish there had been additional capacity earlier but the country has been working real hard to put that additional capacity in place. The planned build in terms of ETUs is absolutely correct. The challenge is timing. When I think about the prognosis actually, and here I have to be very careful because I'm not going to rank the countries, but I think the prognosis for Sierra Leone is actually very good. The reason I say that is, having been in the country and knowing the disease a little bit, knowing what's happening there is they have got a good, strong plan for building out additional ETUs over the coming couple of weeks, bringing in many more what we call CCCs or Community Care Centres that can be put up very quickly. They're also looking at advice that they can be giving to the communities if there isn't isolation capacity, to be able to make sure the patients are more safely treated at home before they're brought to a facility. So they're doing all the right things.

The other thing that impresses me very much in Sierra Leone, I remember when I flew into Port Loko, this was probably two or three weeks ago, two weeks ago because it was right when the outbreak was actually taking off there, was the nature of the emergency operation centre. They had what they call an EOC, actually I think they're calling it a DERC, a District Emergency or Ebola Response Centre, an emergency response centre, but when you go into this centre it's a re-purposed building, an old school building or something which has been re-purposed and inside you have the Sierra Leonean army, you have the UK military, the UK police, you have the World Health Organization, you have CDC and you have also UNICEF there but running a very, very tight integrated program with some real discipline. On the walls you have all these whiteboards that show when there's a phone call about a burial that needs to be done here, who's going to follow it down, who's going to do it, dah-dah-dah. So it's got the kind of rigour in a program which is exactly what you need to get this thing down and drive it to zero. They have an excellent centre there, they have an excellent one in Freetown managing the Freetown program and then they have a national one and they have multiple other ones around the country, about a total of eight. But that capacity at the district level is strong and getting stronger in Sierra Leone. And that's the reason I actually think the prognosis is quite good.

In fact when I was there two months ago I remember meeting with the CEO of the, or the Executive Director of their response and saying you are going to have a terrible month, very, very terrible month; your numbers are going to go up, they're going to exceed Liberia's and it's going to be very difficult. And they said we know that and this is why we are doing X, Y and Z and why we're trying to prepare the country that way. So yes, I think it's not so much where things went wrong, it's where the virus, you know, got a leg up and took advantage of it. Ideally the build out would have been faster but remember, they were planning this build out and working on it well before the cases caught up with them.

TJ Thank you very much, Bruce. Lisa and then Jamiel.

LI Hi Bruce. Based on what has been happening and how long it's taken to reach 70-70-70, whatever, what is your expectation in terms...? [Inaudible asides]. I was never good at math. Well anyway, what do you anticipate, how long is it going to take to go to zero, two months, six months, a year? Then I'd like to ask you, isn't there a danger perhaps in reporting good news that maybe a certain sense of complacency might set in; would that be a dangerous situation? And then I'm wondering whether the rest of the world is indeed becoming a little bit complacent about Ebola. The hysteria seems to have left the United States. I don't know why really. But is there a danger of the rest of the world still being vulnerable to getting Ebola?

TJ Thank you, Lisa. Jamiel?

JA Yes, two questions. On the curve that you mentioned, can you give the latest numbers and for example if you could compare how many cases you are registering per week or this week compared to perhaps a month ago, just for us to know exactly what is the bent on the curve? And since you are here, taking advantage that you're here, a question on basically the way, whether WHO is also paying for doctors of countries, perhaps Cubans or others that are being sent to these places, how much is WHO actually paying the Cuban government per doctor or in general, the package, let's say, whether it's WHO or it's the fund or, basically who is paying? Thank you.

TJ Thank you.

BA [Inaudible] so closely. How many cases do you think there were in the first week of October and how many cases this week? You're making me do all the work. Do you guys actually read this data that we go to so much trouble putting out there? Okay first, Lisa, on the question of 70-70-60 and how long it's taken to get there, I think you didn't quite finish that question because I cut you off but I think the question was how much longer to get to the 100-100-100 that you're going to need to stop this thing? And remember that there's two parts to that equation. You know, when you're trying to figure out are you getting to that 100% it's how many cases do you have to isolate? And remember, if you hit 70% those numbers of new cases per week start to reduce and drop.

So the number of cases you're having to isolate, you know, to get to 100% it gets easier actually because the hard work is slowing down that rate of increase and then catching up. And then the other piece of it of course is the capacities that you need. And what we're seeing right now is because across the board there you're at, it looks like you're at 70-70, the disease has already started to slow down in some areas; you've seen in Liberia, in parts of Sierra Leone, in Gueckedou, in Conakry. And remember, go back 60 days, if we go back 60 days it was like we weren't going to see that anywhere. And in fact when we put together the 30-60-90 goals for UNMER, the hope had been by 90 days to start seeing impact where the curve was actually bending, so to speak. And what we're seeing is that is happening early in some areas, so as it bends and as the capacities build, we may actually get to the 100% isolation capacity faster than we got to that first piece because we're starting to bring down the number of cases that we actually have to isolate as well.

So, you know, you asked the question of how long is it going to take to do this, two months, four months; I'm just going to get out that crystal ball that I keep in my bag here and we'll have a look. And the reason that you have to look into a crystal ball when it comes to Ebola is because you're dealing with behaviours, you're dealing with human behaviours and they change. And of all the things that are difficult to predict in this epidemic and this outbreak, the most difficult is human behaviour. In Liberia when I was there just a couple of weeks back, you were already seeing people climbing into taxis again, you were already seeing a little bit of loosening of that hand-washing behaviour, you were seeing some places where they didn't have the chlorine bucket outside the hotel. So you're already seeing some of what you were mentioning, Lisa, that complacency slipping in.

Now, those things may not affect transmission in a big way in some settings but it just gives you a sense that there is a risk as the disease goes down that that rigour that's needed to get to zero won't come through. And with Ebola, like I said, it's all about getting to zero and as long as you're not at zero, as long as you don't have every single case coming off a contact list, meaning you know exactly where that disease is and where it's going, there is a real risk of failure and many places at risk could be bigger at failing than succeeding. You have got to get that piece of it right and we're definitely not there. So the risk is still very, very high.

You mentioned that the hysteria has left the US. Well, that's a great thing. You nearly tempted me to say something else. That's, you know, that's a great thing because hysteria doesn't ever help in a crisis, you know, and panic never helps in a crisis. Deep, deep concern, alarm, these things do help. I was in DC just last week and I have to say that deep concern and that alarm about the risk still of failing, not getting enough capacity in place fast enough, that was certainly there in the leadership of the response on the US side. The question is, like you say, is the general public still following that? And again, that's the reason we're here talking to you. If we need to be here more often to have these conversations to make sure that information is getting out there, make sure I know and I will be here.

Now on the, where we are vis-a-vis the first week of October; in the first week of October we had about 1,000 cases. The first week, the last week of November we had 1,100 cases more or less, right in that ball park. Remember, what that means is overall what was increasing like this has slowed right down like that. Now, the reason it's gone from 1,000 to 1,100 per week right now is because in Liberia there's been a steep drop, in Guinea it's still even and in Sierra Leone it's going up. This is not a disease where in any one place the disease is going to plateau. The overall numbers reflect some places going up and some places going down. Now, you're back there going what the hell is talking about? So ask the question and I'll clarify it.

LI Yes, we were just wondering what is this about this 1,000?

BA Yes, how many in a week, in the last week, right? So not per day, not over 21 days, not in total, he said how many were happening per week back in the last week of September/first week of October, and that was just about 1,000 cases, somewhere between 900 and 1,000 cases happened that week. And this week, this most recent past week we had about 1,100 reported cases which means that the disease is not increasing like this, like it was back in September; the rate of the disease has slowed down in most, well not most areas, in key areas. That was the question you asked.

Now, you also asked the question of how much we are paying the Cubans. I'm actually not paying the Cubans so I actually don't know. There is a MOU between WHO and the

government of Cuba on that that covers the cost etc, while their salary is paid by the government itself. So we cover costs basically.

JA [Inaudible].

BA I wouldn't know. Tarik can follow up on that for you.

TJ My understanding is that the Cubans are paid per diem as other experts are being paid and this depends on the geographical location.

BA Which would be a standard WHO rate. We pay it per diem. If I hire you, I pay you a salary, I pay you a per diem cost of living and with these guys the salary is paid by them and we pay the per diem.

TJ Okay, let's go now to Shin [?] and Gunilla. Shin please.

SH Shin from the National Television of China. A quick question on the international response; obviously the success so far must have not been possible without the scaled up international response. What would you like to say to the response you've gotten so far and what kind of reaction you want to see in the days ahead to grind it down to zero. Secondly, how would you comment on the role of countries like China in the fight against Ebola? Thank you.

TJ Thank you, Shin. Gunilla?

GvH Yes, hi, Gunilla von Hall, Swedish journalist, Svenska Dagbladet. You talk about the need for surveillance teams in order to get the disease under control. How many of these teams do you have, how many more do you need, how are you going to get them? And I also want to ask you, you will not give a timeframe when you can actually get the disease under control but are you going to put some new targets now when you have had this 70-70-60? Is WHO putting new targets? Thank you.

BA I'm trying to write everything down here, sorry folks. Okay, first, what would we say to the responders? I mean, one has to say thank you. \$1 billion, I mentioned, being put into the response with the OCHA tracking system that we talked about, we have got foreign medical teams covering almost all now of the actual ETUs that are either built or planned in the system, and again this is a very different place than we were some months ago. So it's thank you. What do we need going forward? A fully funded response to be able to put all the pieces in place, and we don't have that yet. And also fully staffed; we do need additional internationals to be able to assist at the county and district levels as we build out some standing capacity to be able to run a much stronger and differentiated district or county or prefecture level response.

By the way, you made the comment about China. I have to say I have been impressed. On the flight, one of my flights down I think it was to, where was I going that day? I think it was to Freetown, I was flying down and colleagues that I'd actually worked with on the vaccine side with Chinese CDC, a whole bunch of them were on the flight going down to staff the areas there as well, and these are the exact kind of investments that are needed but more of them to be able to help at that district, county and prefecture level.

And Gunilla, to your question, maybe first to frame this as well if I wasn't clear enough earlier, you remember the first part of this outbreak, what we were trying to do was really slow down this epidemic, this outbreak, take the heat out of it and really then it was about, you know, build the beds and bury the deceased. But there were sort of three Bs, you know, there was the beds, the builds and then some degree of behaviour change as well. To get to zero though you have got to find every case, and Tony Lake put this famously well one time when he said remember, this all began with one case. You've got to find every single case, find their contacts to be able to stop transmission.

Now, when we talk about contact tracing as well, I want to just explain to people for a second what we're talking about. If I'm a case of Ebola, you know, the only way I can give it to Tarik here is if I hug him or sleep with him or vomit on him or something like that; that's the only way he's going to get the disease. And I've actually said that to people at much higher levels than Tarik before I realised what I was saying, by the way. But as a result, you know, that's a really important piece of information because everybody seems to think they're helpless in front of this virus. This is one of the stupidest viruses that you want to be dealing with. This is a virus with a very short incubation period. This is virus... everyone starts to type and I think God, I'm going to regret that. But this is a virus with a very short incubation period. It causes a very serious disease. It only is transmittable when you are seriously sick with that disease as well. And as a result you can see where this virus is going. If you know that I've had these contacts when I got sick and you know if you follow those contacts, the virus has got to be there. It can't be somewhere else and suddenly pop up. So if you can bring rigour to this case finding, contact tracing you can drive this thing to zero. You have to hunt the virus. This is about real field epidemiology.

So in terms of the surveillance teams, how many do we have? I should have counted that before I came because I don't actually have that. But if I look at, you know, district by district, there are sort of 45 counties, districts and prefectures where we have got to be fully operational for this strategy to work. Now, all of them have some degree of surveillance but if I take for example WHO and our presence, we're present in the majority of those districts, actually in about 80-90% of them depending on the week as we rotate people through. But we only have a skeleton crew there, so we can respond to cases but we can't help strengthen the surveillance in each area. So our big emphasis over the next three, over the next month, two months is going to be getting minimum teams, at least five to six people on the ground in every single district, county and prefecture, and some of these are really tough areas, to help strengthen the surveillance and do the contact tracing.

Now, I'm talking about WHO, but you know, you really have to be clear, this is such a multi-agency and government led response. When you go into these districts and counties that I talked about, the facility you go to is a government facility. The people running it are government people or county people from there. We're there helping with some information about how you actually do contact tracing or surveillance better etc but this is really an impressively, a country-led response.

In terms of new targets, the target which was laid out by UNMER when it was set up was to get to 70-70 by 60 and 100-100 by 90 – there you go, Lisa, try and remember that one – so that in every area you had enough burial and more importantly treatment capacity to really bend the curve and then that contact tracing and case finding would work. As we go forward, we will have to adjust our indicators and have indicators around what percent of cases are coming off contact lists because that's when you know you're in control of the virus and the

virus isn't in control of you. It's when every one of your cases are coming off your contact lists because then you are hunting the virus. And that's what's happening for example in Mali. In Mali they've got, you know, they have a number of cases but they've got excellent contact tracing in place now and they are following the people who may be harbouring the virus because, very similar to what happened in Senegal or Nigeria.

GvH Sorry, just a clarification there; this means how many surveillance teams do you need in the next two months?

BA You need 45. Well, that's at the district, county or prefecture level.

GvH How many people do you need? How many people do you need for surveillance in the next two months?

BA You know, Gunilla, I actually have that number somewhere.

GvH You say that surveillance is important so we just would like to know, how many people would you need actually to get out there and do this work?

BA On the WHO side our plan is to get out there... What was our target number? It's about, across the different place, it's just over 400 people of which we have about 250 on the ground right now. Yes, so in terms of, to do the full case finding, contact tracing, we've been revising the numbers and that's why I wanted to figure out if we're still at the same number. The target, when we work out how many people, there are so many contacts right across these countries, there's about 20,000 people that would need to be engaged in this. Now the majority of those are going to be nationals obviously but you're going to need enough international expertise in there in every single district to train, supervise etc. Contact tracing is hard to do. Monitoring a contact, you know, checking your temperature – relatively straightforward. Tracing the contacts, knowing who is a real contact of case, that's really tough. It can take hours for one case to figure out who really is a contact. That's the really, really tough part of this.

TJ Thank you very much. There was one question...

LI I'm sorry. You said that you needed 400 people and now you're talking about 20,000 people?

BA No, Lisa...

LI Did I fall asleep?

BA I'm sorry. WHO, I said from our side we're committed to getting over 400 people into these districts and counties, minimum teams of at least five to seven people in each district to help on the training etc but across the board we will need about 20,000 local monitors, contact tracers. Sorry, is that clear? I apologise. I've known some of you guys so long I take a little liberty here. Apologies.

UM 20,000 extra?

BA Well many of them, to Gunilla's point, many of them are already in place but the emphasis so far has really been getting the burial team piece right, getting the ETUs right because there were so many cases, it was almost impossible to do effective contact tracing. So there was already some 5-6,000 contact tracers on the ground. But this is going to have to be scaled up much more now with a much greater rigour to make sure that that kind of system works right across the whole infected area.

TJ Okay, we have time for just a couple of more questions. There's a gentleman over there who was trying for some time and then John and then we will see if we have time for...

PK Peter Kenny from the Wall Street Journal. I would just like to ask you can you give us an update on the state of development of a vaccine or vaccines.

TJ Thank you. John?

JH John Heilprin, Associated Press. One question is you seemed to imply last week that WHO had better data that you hadn't yet reported and if that's the case, it would be interesting to know where that's coming from and how credible it is. Is it fair to say that, because you say WHO is dependent on information from countries' reports and according to the last reports from last week you're still only getting data from about half of the patients, at least in terms of those that are isolated. The second thing is in Guinea your own figures show a mounting number of cases and deaths in the past three months. You can read through the figures and there's also at least 25 villages in areas that still are refusing to allow health teams in to test for possible suspect cases and do contact tracing. So when you say things are stabilising, is that based on infection rates since the epidemic is no longer doubling every month or so, in that sense it's stabilised and we aren't seeing the kind of explosive growth we did earlier? Is that what your conclusion is based on? Thank you.

BA Okay, let me deal with that one first. In terms of... I'm sorry John, your first point, because I just jotted down what you were saying about Guinea but you'd asked something else previously?

JH It has to do with the better, you seemed to imply last week that you had better data that hadn't yet been reported. If that's the case, where is it coming from and how credible is it?

BA Yes. No, first of all the data, it's not that we have better data this week, it's that we had not sat down and calculated what were the presented cases, isolated and the percent of cases having safe burial based on the capacities that have been established and the utilisation rates from each area. And when we put those data together, and we only put them together for the 60 day mark frankly, when we put all of that together we come to the very firm conclusions that I shared with you – 70% safe burials at least across the three countries for the known cases and then at least two of the countries achieving it on the treatment side.

There were earlier numbers reported but actually it was for a different purpose and as I mentioned, that was of the cases that were being investigated, basically where they're being investigated in a hospital or outside a hospital and that was being reported as, you know, the percent isolated which wasn't really a proper reflection. So we've had this data because we track what is the build up on the capacities, what are the utilisation rates, what are the patterns in the areas; we track that all along but frankly, we sat down to look at where we really are on this only in the lead up to be able to report out today where we are. And part of

that is because those numbers change. They move all the time, they're not particularly stable. But they are robust enough to say with certainty that we're there.

Now, in terms of the missed cases, I don't think we're missing 50% of cases or two times as many cases. I think there are certain areas where the disease is growing very quickly, where the case reporting gets substantially behind very definitely. In the western area of Sierra Leone we may be missing half the cases right now. So I think in certain areas that may be happening. And the point I was making, John, was even if we were missing half the cases or half the deaths actually for the burials, there would be the capacity there to bury them. If you're missing half the cases on the treatment side, it would be much, much tighter in terms of having sufficient capacity to isolate them all. It becomes really area specific. Most areas, yes, you would have the capacity. Western Sierra Leone, no, we don't. But we know that. I mean the virus is telling us that, the outbreak there is telling us that.

You also asked about the question of... Going forward by the way, John, you asked about, you mentioned the issue of better data. You've got to have better data to drive this thing to zero. Right now you can have uncertainties about actual case numbers, you can have uncertainties about the number of contacts but as those numbers come down, you have to be able to find every case, you've got to know where every virus is, you have to know of the contacts for them; you need that kind of discipline to get to zero. So a few of you asked what else would we need – better data definitely. And again, the countries are working on those systems and trying to improve those systems.

In Guinea, yes, there has been a slight increase, about 25% increase over time and sorry if I was to suggest any differently. What concerns me even more, John, though is the increased geography of the virus compared to where it was two months ago where we now have 16 prefectures, if I remember correctly, in the last – actually, I think I've got the number here – in the last, nearly twice as many prefectures, it's just under that, reporting compared to when we started back on the 1st October. Yes, there were about nine prefectures. In fact if we look at the week just prior, right around 1st October and today, there are 17 prefectures that are reporting confirmed, probable or suspect cases in Guinea. So that geographic increase is a real concern.

When we talk about stabilising disease, again with Ebola we've got to be really careful. The overall numbers might look like they're stabilising but that's usually, as you look behind those numbers there's more to it than that. In some areas like Guinea we've got geographic expansion which is a real concern. The capacities may be there to catch up with the virus but are they being fully utilised in the way necessary? Guinea is still a real, real concern and that's the reason the virus has gone up to Mali twice. Sierra Leone, we've seen going down in one part of the country but going up in another part of the country, so not stabilising. It really has to catch up with that. So progress is real across the board but it's very uneven and it's hard today to predict what are going to be the consequences of that. Again, because it's Ebola, those consequences are going to be bad unless you catch up with it as quick as possible.

Sorry, on the vaccines, it's funny, my life has been spent in vaccines but every time I get a vaccines question on Ebola I give it to Marie-Paule Kieny, my counterpart at WHO who actually manages this part of the response and the development work there. I think as you've seen in the initial trial data that's come out just last week in the New England Journal of Medicine, positive information in terms of ability of these vaccines to generate antibodies, especially when used at the higher doses, and what looks like it may be protected efficacy.

They also look like they are safe, these things are all good but clearly we've now got to go to larger scale trials and use in the countries to get a sense of, a better sense of safety, efficacy and then especially what that clinical efficacy is, does it really protect against disease? So what we can say about the vaccines is so far good news.

One thing I would like to remind everybody though, as the enthusiasm around vaccines may increase, is that the vaccines are really, really important but we still have to do everything else that we've talked about today. The vaccines will help us do it more safely. You still have got to be able to manage these cases properly, you still have got to be able to do contact tracing and case finding to get this thing to zero. A vaccine will hopefully help us do it safer and faster; that's the goal. And there's a big risk that people think oh, that's going to solve the problem. It's not. It's the hard work that we've talked about which is critical to getting this done and we're not there by a long shot.

TJ Thank you, Bruce. We will take the last two questions and I have to apologise to everyone whose questions we are not able to take because we will have to leave. There are a number of commitments that Bruce has to attend. So Gabriela and Nina.

GS Yes, thank you, Gabriela Sotomayor from Mexican News Agency. You just mentioned that you need more international workers, so how many do you need? And also in Freetown, Tony Banbury said there is still a huge risk that Ebola could spread to other parts of the world. Could you comment on that? Thank you very much.

TJ Thank you, Gabriela. And Nina?

NL Yes, Nina Larson, AFP. You mentioned the funding gap so far and that you're having to make choices. Could you explain what kind of choices, where things aren't getting done because of the lack in funding? And did you, I may have missed it but what percentage are we at today with Sierra Leone and the treatment centres? And also the 100-100; I think I heard you say it was 90, so that should be at the end of December, is that right?

BA Let's start with the last one first. Yes, that target was laid out way back when the 30-60-90 targets were set up so, and it was by 1st January that would actually hit 100% isolation and 100% safe burial. I think as you can anticipate from many of the questions asked, some of the biggest challenges to getting there now, now that that capacity is either there in some areas or should be there by the end of December, what's going to be really important is that capacity gets utilised. And this is where that engagement with the community, the confidence of the communities to actually seek treatment, to actually ensure the safe burial of their loved ones is going to be absolutely critical. Because at the beginning this was all about getting enough capacity out there; very, very soon it's going to be about making sure it's utilised because you all hear the anecdotes all the time in the reports, all the time about people that don't want to go to a treatment centre, don't want to have safe burials, and that requires really building much more trust and understanding in these areas. UNICEF and a number of other NGOs are doing a fantastic job trying to scale up the number of community mobilisers and influencers to be able to do that because very, very soon that will be the problem more than just getting that capacity.

In terms of the funding needs, you know, the big challenge here really has been how long out into the future we can do things. So for example, if we're hiring people we're offering contracts for a month or for two months instead of six months. That's going to be needed to

really get this thing done. There you go, there's the date you're looking for. No, but we're planning for a full on six month effort to try and get this thing to zero. And also remember if you work backwards, you want 42 days at least without a virus before you have some certainty, so you've got to plan for a very intensive surveillance case finding, contact tracing right out through the middle of 2015. And hopefully if you... Again, the big question is human behaviours; can you build that trust, can you get people to actually change their behaviours? And these are behaviours, remember, about how you care for your dead, how you care for your sick; these are the most important things to many societies that have built up over thousands of years. They don't change overnight with some mass media. These are very, very difficult behaviours or, not difficult behaviours, difficult things to address.

So in terms of the funding needs, right now the main gap is our ability to extend out in time and that compromises the kind of people you can hire, how long you can hire them for and the kind of security you can give them etc. Also Nina, as you go out to many of the districts and counties in particular, what you might find is they have one ambulance instead of two ambulances, they're using a dial-up modem instead of a VSat. So a lot of things have been done on the cheap, so to speak, and you pay a price for that and the people trying to run the response pay a price for that. They've got a 15 watt generator, whatever, that blows every day instead of a proper generator to run their facilities. You just see that sort of threadbare nature of the response as you get out into the districts, just not robust enough, especially for what these people are doing.

In terms of, Gabriela you asked about... Sorry? Yes, the international workers that would be needed. Gosh, that's a tough question because we're actually rolling so many of them over all the time and the only numbers that I track really carefully are WHO's numbers whereas I mentioned, you know, we're looking at any one time to have between 350-400 people, internationals actually on the ground of about which we have half that number. But the reality, Gabriela, the reason part of that is hard to say is what we try to do to the degree possible is really build the national capacity. The more you can use nationals in these roles, the better. So for example in Guinea, just last week WHO and the Ministry recruited 70, I think they were medical graduates who were unemployed, and actually trained them in the contact tracing, case finding and deploy them out to the districts. So it's a bit of a balance between how many of them have to be internationals versus nationals and if possible, the more you could train nationals, that would be our preference so that you're building some capacity for when this thing is over and the internationals leave. But we will definitely, I'm speaking just for WHO through our system, we will need to be deploying, we will need to have a standing presence of somewhere between 350 and 400 people on the ground of which we're just over, we're about 60% of that capacity right now. I can't speak right off the top of my head for the entire system; I'll have to go back and look at that for you.

In terms of the risk of spread, I think you said Tony said there's a huge risk of international spread; you know, there are a couple of things that are going to drive the international spread – the intensity of transmission in a country and, you know, in many areas that's falling but then also the geography of it. And as you've seen in Guinea with the spread up towards the Malian border, there's been real consequences and real spread from there. While the numbers have slowed down in some of these countries, remember that we're still dealing, as I said this week, with 1,000 new cases a week and two months ago it was 1,000 cases. So there is still the real, you know, there's enough intensity of transmission to have international spread. That's a real concern. But the countries, to their credits, are doing a lot of work on the exit screening to try and minimise the risk that anybody infected leaves. Now, I just see Gabriela

sigh immediately because we know that there are breaks in that, but given the amount of disease in the country, some of it is working as well without a doubt. It's slowing down the rate of international spread.

So the risk is still very real. We still get reports every single day of suspect Ebola cases in different parts of the world that have to be investigated and that's going to continue. It's just very hard to put any kind of number on it. But, you know, the corollary of that is should countries that are Ebola-free be doing something? Absolutely. Preparedness is still not where it needs to be in the world. Every country has got to have the ability to detect suspect cases, to rapidly isolate them, to be able to take a laboratory specimen, to properly treat them as needed. All of those pieces plus the surveillance have got to be in place and it's not there the way, as robust as it should be everywhere.

TJ Well thank you very much, Bruce, and we will conclude with this: As we said, the audio file will be available soon as well as a video package, and before you all come down to see Bruce, please understand that we have to go for other commitments. Thank you.