Interview conducted on April 18 2019.   
Interviewer (Emma den Brok) in plain text,   
**Interviewee in bold**

My research in general is about studying the role of uncertainty during epidemics response. And in particular I'm looking at the placement of ETCs. There is currently already a lot of academic work on optimal placement of treatment facilities during epidemics but most of them assume you have complete and perfect information. Which, during a response, is not a very realistic assumption. So, what I am investigating is whether, if you have uncertainty about your parameters, say the number of infected people, transmission rates, how people are travelling, what the effect of your response is. If you take all those factors into account, are there still policies that perform well in a variety of different scenarios. So is there a way to deal with that uncertainty. And a second aspect is to study the relation between uncertainty and making decisions in the response. To make that clear, what I'm looking at, once you place an ETU in a certain location you become more aware of the situation in that region. And there might be a way to strategically exploit that fact. That's something I'm also studying. Is that clear to you, what the research is about?

**Yes, it's clear. Sure.**

Alright. So, my understanding is that during the Ebola crisis in West Africa you were an information manager for UNMEER?

**Yes, I was the chief of information management, so I lead the section.**

Alright. Can you tell me a bit more about what your day to day activities were?

**Okay, well that varied very, very widely throughout the duration of the response. At the beginning it was basically to set up shop with the information management according to the priorities that the UN secretary had created for this particular response. So, the first thing you have to take into consideration is that UNMEER, as far as an institution, was created under the department of political affairs in the UN. Basically, the UN decided that the WHO had failed, right. It's not going to be said exactly, explicitly like that, during the process. But that's the whole background there.**

**And so UNMEER was created, OCHA was not willing to step up. OCHA also had a restraint on zero growth. So OCHA would normally have the tools for information management and coordination. They would be the ones that would lead that. But they just didn't have a way to lead such a massive response. So, you have in that context, OCHA requested - I worked for OCHA, I guess I had a period from 2006... I worked for about 10 years inside OCHA. And had OCHA training. Headquarters knew me pretty well so they requested me to go to UNMEER to help staff that role and help create the information management strategy for UNMEER.**

**That background's necessary because my task ended up including in large part the effort to insert an OCHA information management role into a secretary DPA led structure. So that's a very challenging kind of thing because they don't have information management officers. The chiefs of staffs immediate tasking was to create standard operating procedures according to the UN secretariat. Which is basically, he wanted me to be a document manager. So, document management is very different of course from information management, which is designed to be open and transparent and connected to all the other responders. So UNMEER did not - most of the staff inside of UNMEER was not aware of or even interested in developing that kind of capacity. So, a lot of my initial work was around trying to create staffing, because I was the only information management officer in the organisation. This was a period... I was there a little under four months I guess... and during that period the first 2 months were almost all staffing issues related to trying to set up. So, we ended up having 45 information management officers. Most of them were UN volunteers, but they were pretty good. They were - the only ones willing to work in an Ebola affected area were the ones in places were Ebola had broken out before, for example Uganda and DRC principally. And some of them did actually have Ebola response experience, which was good. But yeah, the main thing I was doing there was trying to set up shop, set up processes, create information management groups, create coordination between each of three countries I supervised, because there were three countries we were working in, so I had to visit the heads of UNMEER in each of these areas to create the roles for information management in that structure. And UNMEER, the roles it was eventually having was monitoring more than anything, key performance indicators firstly. So KPIs were a top priority. And as well, the other thing I had worked on quite a bit to get public, which was actually a battle with WHO. Which also took more than a month, was getting Ebola case date published on HDX. So when that actually happened, when we got the humanitarian data exchange authorised to receive the case data, and I had someone from OCHA in Geneva in WHO working with me on that, we had updates twice a week to HDX. And it became a very popular site at that time as well. There were NYT articles publicizing that information.**

**What other day to day things I had - So I had to receive anyone that wanted to come from information to talk about information management from the field. I had to learn about all the different initiatives that existed already or that were emerging. There were a lot of private sector efforts as well, by IBM, by Volken Holdings (?) and others. To create new information management structures. And initiatives, and data collection processes, and many of them wanted to support UNMEER, in its tasks, but of course you had to direct them to be doing something useful. That was another thing I was very frequently working on. What else can I tell you... as far as mapping. Another tool we were able to implement, and the World Bank helped support us, with the global facility for disaster risk reduction, was the GeoNode. Having a GeoNode instance were all the carthografic layers were uploaded. That included the health centres, which would be interesting. You know that, right. So, we were able to get information in the public sphere on were the health centres were, as well as other logistics centres and hubs.**

Yes, sure. Just to quickly track back to something you mentioned earlier, that at first the organisation was primarily interested in key performance indicators. What would those be?

**Huh - I can't remember. They were lists of 25... they had to with delivery of assistance, delivery of suits, delivery of vials, a lot of logistics stuff, because UNMEER was very focussed on logistics. Half of its staff almost was WFP. They had my boss, the director of entry, of operation support was the ex-number 2 at WFP. So, he was very much pushing product, as he calls it, into the field**.

So those KPIs were mainly about meeting targets for equipment and such?

**Meeting, planning targets, exactly. Having everyone supplied basically.**

I was wondering, because you were also talking about getting that data from the locations of the treatment centres open and on HDX and such, so I imagine you were getting information from the UNMEER HQs in each of the countries. Were you also talking to organisations on the ground, who were running these treatment centres?

**Yes and no. It wasn't systematic. So - I did speak to a number of organizations that were working in the health centres themselves. But generally speaking, I was too macro. I was working more with the heads of UNMEER in each of these instances. And we'd visit on some case by case basis... we'd go to the treatment centers as well. But it was pretty high up as far as these kinds of positions go. So, I wasn't involved in direct data collection. I was the only information management officer at the beginning for three countries, so.**

Yes.

And I don't know if this is something you can comment on, but do you know - was UNMEER coordinating where ETCs should be placed. Was that something they were lookingat?

**They had some discussions on that yes, on many occasions they would have discussions. But UNMEER did not itself place the centres. So there were a number of other organisations, MSF was of course the most important one but there were a number of NGOs that were doing this. UNMEERs role was designed to be support. During the whole process of course you saw a lot of concentration of the centres and it was evident that there was a lack of coordination during the planning process. When some of these centres were planned to be launched, and this goes to the coordination role of UNMEER more than the information management. And you could just see that they didn't engage early enough with many of the actors in order to have good placement of the centres. I mean where they did place centres, where they had the logistics hubs, right. So UNMEER did position those and they were relative to where the centres were.**

**But that was sort of derived, that wasn't because they were telling them where to put the centres.**

Do you, can comment on when these decisions - obviously these decisions weren't made by UNMEER but more in general in the response. How decisions were made, based on what information decisions were made to place ETUs somewhere.

**Well, like I said UNMEER did not make these decisions, where they were placed so... My understanding was that for many of those, the planning process actually predated UNMEER. You could see - when UNMEER started up there were already many treatment centres in existence. So we're talking July. When UNMEER started setting up shop, it was a lot of people just like me, we were the only ones. We were just... it was a very big, billion-dollar operation, there were a lot of things it did but it was not on the ground. It was there very late in the game, relatively speaking, to affect the planning process. It was a later element, I think.**

Yes. And in terms of the information you working with and receiving, passing on, that would be epidemiological data, coordination data, who's doing what where, would that be correct?

**Yeah. As I said there was the cartographic data, there was the Ebola case data, there were the KPIs, and there was basic who what where as well. But that was it. Those were the main datasets. And on a country level sometimes, after I had left my position there, after things had been set up, UNMEER also started to do some other things in the field. Around for example surveys on performance. But I wasn't involved in that so I don't have a lot of information on how that worked.**

Alright. I'd like to - In my research building a simulation model - which obviously is going to be a simplification of reality. And in order to represent uncertainty in information available, I've made some assumptions on what factors might be uncertain. And I was wondering if I could get your thoughts on those.

**Sure.**

So in the context of making a decision to place an ETU, so just let me know to what ability you're able to comment on them. The first would be the number of people in a district or a region in need of medical aid. That there might be uncertainty or a range on that number.

**Number of people - well one of the questions was, in the beginning they just didn't know where the cases were starting. So I don't know that - in the case of Monrovia, I know some things about the way the treatment centres were placed there. There was a lot of criticism because they were so clustered in Monrovia and there weren't enough further out. But yeah, it's the classic chicken and egg problem: they didn't know where to put them because they didn't know where the cases were. And they didn't have the tools to identify where the cases were. In the beginning that was the... so they just put them near the capital because logistically it was much more possible to do that. I mean, it's just not, it's very difficult to set up operations outside... during a few months everything was collapsing. You had the lack of cell phone coverage, you had the lack of data, internet, everything. The country was falling apart. So an NGO wouldn't open up a shop if they were to know there was a lot of Ebola cases in certain places, they wouldn't go there at first.**

Right. Another factor would be the transmission rate, so closely related to the number of cases but how fast the disease is developing in certain areas.

**Okay, now that they have the data consolidated there has been a lot more analysis of it, but at the beginning they had models, even in August, that were saying there was going to be a million deaths, right. I know the people who made the calculations - so they had no idea. They were just trying to open as many clinics as they could because they were thinking, they even had this model called the community treatment centre or something, in Sierra Leone, I don't know if you've seen that. But they were CCCs, they were called I think, and they were just trying to open things everywhere. It was frantic. So the alternative when they don't know what to do is to just open more and more and more everywhere. That was the model they had.**

Another factor would be where to and how much people travel, so geographic spread of the disease. Which I guess, closely relates to your earlier comment that they didn't know where the cases were.

**I mean, there were so much - you picked the good sample for uncertainty, because people had no idea. And honestly, I never saw people, at least at UNMEER, doing real modelling of where the disease was going to spread. I assume WHO Geneva was doing this, but my colleague was there and he never saw them doing any of that. They were mainly cleaning data that came from the countries. They spent a lot of time, whenever, they published twice a week, but they were spending a lot of time trying to clean the data that came from the field. That was the big, big problem they had. But then the modelling, I didn't see a lot. At least they never shared the maps. I know some of the modellers, there were two at the time.**

**The models didn't seem that sophisticated to me at the time. I was sort of surprised there with the epidemiologists and the number of scientists, that work on this kind of stuff, that the UN was using those little teams on that, it seemed pretty amateur. But anyway.**

And as a final factor, on a much lower scale, is the effect of placing a treatment centre in a region. So those could be transmission rates being lowered, or there has also been some speculation the ETUs actually increased transmission in an area.

**Oh yeah, sure it did. Of course. There were some that were poorly managed, again in Monrovia, there was, in fact the WHO was criticised, I remember the news came out and it was a big scandal because they were transporting the patients poorly, and they were increasing their risk of getting sick. The reason they had this problem was because they tried to scale up too fast. The staff didn't have enough training. So you have to build in a lot of training in this process. Lots of people want to come in and help, but if you deploy people before they're ready and they have all the protocols, there's just so many procedures they had to follow. You had to have adequate training in place. So if this had ever scaled up as fast as they had predicted, it would have been a total fiasco. They would have never been able to get enough teams in to respond. It never would have happened.**

Right. And then, relating to the part where I'm investigating the interaction between these uncertainties and becoming active in a region, could you maybe reflect on whether you think if these factors, so that would be the number of people in need of aid, transmission rates, travelling movements, effect of the ETU, to what extend knowledge you gain more knowledge about these once you become active in the region by placing an ETU.

**Oh gosh I don't know. That's too hard a question. But one thing you're not asking though, in the list, is the testing times. The biggest question for locating patients was the testing times. This was a bottle neck. If they took too long and they had to send samples away, then the people’s risk for contagion would be increased, right. So, they had to decrease the time it took to take a test. That was a huge bottleneck. You have to have that as well in your model, I think because the longer the people wait there, and the people would often be falsely diagnosed. They'd have a false positive. And if they were sent in to the centre, it was a big question. Were they at higher risk, are they going to put the community at risk if we don't put them in the centre, and in they are in the centre then they'll probably get the disease.**

Yeah, I am taking into account information delays, of which that is a part of, but I think it's also something which is perhaps part of the effect of an ETU on transmission rates, an on infections in a region. But it's a very good point, so thank you for mentioning that.

I think I'm through the list of questions I want to ask you, is there anything that we haven't discussed that you feel is relevant or that you would add.

**No, nothing specific no.**

Okay, great, I will pause the recording at this point.