This transcript is on part of a joint interview conducted on April 17 2019. The interview was originally conducted in Dutch.

Interviewer (Emma den Brok) in plain text,   
**Interviewee in bold**

[I introduce my research topic]

Can you tell me what your role was? We understand you were a manager of an ETC in Sierra Leone.

**Yes, that’s right. I was there for the Red Cross. I was the manager of an ETC in Kenema. I don’t know if you are familiar with the history of the epidemic, but Kenema was one of the hotspots of th epidemic. Ebola entered Sierra Leone from Guinea. There was a treatment centre in Guéckédou on the border with Sierra Leone, but the population there is very mobile and crosses the border on a daily basis to trade, to visit familie, et cetera. So quite quickly there was an overflow of the epidemic to Sierra Leone. Kenema had a fairly big hospital, already before the epidemic, Kenema General Hospital, which went on to play a crucial role. But it didn’t have the capacity to deal with the influx of patients. And the experience in Kenema was mainly in treating Lassa fever, there is a unit there which is specifically working on Lassa fever which was being supported by a university in the United Sates. It has a lab to test on Lassa fever, but not on Ebola. The organisation of the hospital is typical to the African structure where you go in and you directly walk to the department where you think you belong. So if you’re there for a birth you just walk into the maternity ward. So there is no screening at the door. In that way Ebola was spread through the entire hospital, and the people that worked there had no experience with Ebola. So large numbers of health care workers from that specific hospital have died of Ebola. Which of course adds to the stigmatisation and fear. Eventually the Red Cross built an ETC close by. It was the first ETC in Sierra Leone, after that MSF opened a second one in .. I cannot think of the name, I will come back to it. But about an hour’s drive into the mainland.**

**So that was the beginning of the epidemic and the ETC in Kenema. I ended up there, it opened in October and I came there in November. First I worked as a coordinator for a month, which meant I managed the intakes and releases. So checking every day the bed-capacity and how many patients we could take in. And afterwards I managed the centrum for the remainder of my mission.**

**The ETC of MSF was in Bo!**

I would like to ask you, you started working in the ETC in November, and it had been opened in October.

**Yes.**

So you were involved after it was already operational, is that right?

**It was operational but with limited capacity. We had engaged about 200 local staff members, and usually about 40 to 60 international staff. Of course everyone had to b trained, so when I arrived at the centre it had capacity for 20 patients and when it was shut down it had been increased to 60, which had been the intention for that centre.**

An important assumption in my research is that when a response becomes active in a region, for example by placing an ETC, you obtain more information on the situation in that area, in terms of the severity of the epidemic and also for example on how people. Can you reflect on that, what is your experience with that?

**That’s a very difficult question, particularly for this specific outbreak, because for the first six months were where running after the epidemic.**

With the first six months you mean the beginning of 2014, or..

**From halfway through 2014 to the end of 2014. When you see that the centre in Kenema, to stay with that, was opened in October, when I came there in November we were actually seeing very few cases from the district of Kenema. Because it was already over there. So most of the patients that we received already came from other districts at that point, and were referred to us. And in those other districts, people were trying to find organisations who would be willing to open a centre there.**

**So that was the biggest problem of the whole response there, that the international community just responded too slowly and it took way to long to set a response in place and bring the outbreak under control. And that’s something what happened for the entire epidemic. In December we had an outbreak in another district, Kono, which was about a 4 hour drive away from Kenema, and by the time we had built a centre there the outbreak was over again. Because we simply isolated the patients in the centres that were already opened.**

So they were transported from the other districts to the centres that already existed?

**Yes, that is correct. With all the ethical and logistical difficulties that come with it. Because the roads in Sierra Leone, I can assure you that if you are ill and you are in the back of a car, it’s not the most pleasant form of transport. We often saw 8 to 10 patients in the back of a Toyota Landcruiser, and some patients would have positive lab results, other patients hadn’t had their blood tested, so they had not actually been confirmed as Ebola patients. Children with their parents, where one of the parents would die during the transport. You couldn’t imagine doing that sort of stuff in Europe, that’s simply impossible and unacceptable.**

Do you think that the fact that those ETCs were only operational after the epidemic had peaked, was that really caused by how slow the coordination was, or was it unavoidably, it takes time before such a centrum has been built?

**I don’t think it was because of the coordination or the time it took to build a centre. It was simply looking for organisations who were available to do the work. And in the international community there simply wasn’t anyone with the ambition to become engaged in the outbreak. I worked for the Red Cross, and I still do so regularly, and it was the first time that the Red Cross had engaged with an Ebola outbreak. Before that it was purely MSF and no-one else who handled patient care during Ebola outbreaks.**

So it was purely that no one was willing to run a centre?

**Yes, eventually there were organisations that were willing. But if you look at governmental organisations, military organisations, they work with completely different security systems than an organisation like MSF. And the conditions that have to be in place to have a military team on the ground working in terms of infection-prevention and security, how the centre has to be built, etc., those things are very different. It takes much longer to train a military battalion than it takes MSF to train 30 international staff and send those to train locals. The fear of losing international staff I think, was the big factor.**

Yes, Maybe a few questions about the information you had available while you were in Kenema working in the ETC. You said you didn’t see many patients there.

**No, we saw many patients, but not from the district.**

Yes, in that way, sorry.

**I got calls every day, if I could, I could admit 30 to 40 patients every day, but of course we didn’t have that capacity. There was a gigantic shortage of beds, capacity. But not so much for patients from our own district. At that point the outbreak was already starting in the capital Freetown, and everyone was terrified that the situation there would become uncontrollable. Which of course kind of happened. And then you saw that the ETCs which were built in and around Freetown, they were very high tech, but saw very few patients.**

And when a patient is brought in, you collect patient data, and contact tracing is started?

**Yes**

Is that information you would use to make an estimate on how the epidemic would evolve, in the region or if the patient came from another region, in that location?

**For the patients from another region that information had been collected there. Most patients were taken to isolation centres. Which were usually the yard of a school, or a gym or something like that. Where there would be very little to no healthcare. But patients would be isolated and that data would be collected. And sometimes, if possible, lab testing would be initialized. And in principle, if there was available capacity in the ETCs, first the confirmed cases would be sent through, and if there was then any remaining capacity the probable causes. But that information would be collected in the district itself and the contact tracing would start there. There wasn’t a lot of connection with our ETC for that. But if someone was released, if the patient had recovered, we did more.**

**For our own district that information would be collected and passed on to the contact tracing team. But contact tracing in the Kenema district was done by district health authorities, they had their own team. So the Red Cross didn’t have a role in that, except for the collection of data, and if family members came to visit we would also do something.**

And of course you had the information from the patients themselves, and what was being collected from contact tracing. Were you receiving any other information in order to stay informed within the ETC, on a regional but perhaps also a national level?

**We had meetings of the district, the coordination-meetings on the level of the district and the city. There also was the national coordination of which we received the reports, and someone from the Red Cross, who was working in Freetown, would go to them.**

And to what extent did uncertainty in information play a role? What came forward in earlier interviews is that contact tracing would take place, but that this would go through a whole chain of people, which took a lot of time but also mistakes would be made with information transferral. Is that something that also happened at an ETC?

**I think that especially in the beginning mistakes were made. I think that’s almost to be expected in an emergency of that scale.**

I also meant maybe more in the information that you received, and on the basis of which you would decide which patients you would take, from which regions? How sure were you that that information was correct, or did you feel there was a lot of uncertainty surrounding this?

**To be honest, the only decision we had to make was, in which zone of the ETC a patient would be placed. As I said, most came with several people in an ambulance, which meant they all would be considered as “having had contact with Ebola”. Purely by being in the same vehicle that would be enough. So then we would do the anamneses ourselves, and on the basis of that anamneses there was a decision-tree which determined in which zone of the ETC the patient had to be admitted, and what the next steps were. When I look specifically at your research question, where the ETCs were placed, and when, and which capacity they would have, we had very little to say about that. Of course, the information we provided on where the patients came from, that played a role in those decisions. But those decisions weren’t being made by us, that was on the national level.**

Yes. So in that sense you provided information for that but you were not involved in that.

So for example, for the hospital in Kenema, you don’t have a idea of why the decision was made – except that you said it was a hotspot of course, with people crossing the border, but you do not have a very clear picture of the process leading up to that decision?

**Why a centre was built in Kenema?**

Yes.

**Because a hundred patients were lying on the floor, dying. Several books have been written about the situation specifically in Kenema, I can sent you the link, but it was very tragic. I think the number of dead healthcare workers was about fifty? Or even more. When you know the normal staffing numbers in hospitals in Africa, well then there aren’t that many left. The conditions were just dire and the only solution for that hospital was to remove anything that looked like Ebola. So yes, the reason why the ETC in Kenema was 20 to 30 km outside of the city, not that very accessible for the population. It was because everyone had been so frightened by Ebola because of what happened in that hospital.**

If you could share the book, that sounds very interesting.

**Yes, I will do that.**

I had some questions, but as you said, you weren’t involved in those decisions, but I will make an attempt.

**Sure**

So I make several assumptions in the model I am making. First of all, the model is of course a simplification of reality. You can never include all factors. So what is not considered, but what is a big part, is the whole social aspect of community engagement.

**Which I think is the most important factor. Because to convince a community that they need such a centre in their city, village, that alone is extremely difficult.**

Which is also hard to represent in a simulation model. So my simulation model will consist of an epidemiological model, which will describe the spread of the disease over several regions, and on the basis of those numbers, decisions will be made by an algorithm, if you will.

And within that, there’s several uncertain factors. I will describe these to you, and maybe you can reflect on them.

So a form of uncertainty which plays a role in such a decision is the number of people within a district in need of care. The other is the transmission rate, the speed at which an epidemic is spreading. The third is the number and direction in which people travel, and how that influences geographical spread. And the last, there is some predictability in terms of the effect an ETC will have on the transmission rates and the mortality rates. Like you said, if those patients are being transported in large numbers, if there was someone who didn’t have Ebola they will likely get it on the journey. In your opinion, are these realistic factors to include in terms of uncertainty?

**Essentially the number of possible patients and the transmission rate are the same thing. The rate of transmission determines how many patients you can expect. There’s certainly models for that, I cannot remember the reproductive rate associated with Ebola, but I thought it was… well, I really don’t remember anymore, but you can find it for sure.**

Would you say that there was uncertainty about that during the response, or not? On how high that transmission rate would be? I have read reports by the WHO in which the transmission rate would be estimated, to what extent do you maybe know if that varied a lot per district and if that changed in the course of the epidemic?

**Huh, I can’t say much to that. That’s more a question for an epidemiologist I think.**

**Travelling is certainly a factor. Especially in a setting like that, because people are dependent on travel for their income. It’s all agriculture, they all go to the market, so in that sense it’s certainly a factor for the spread of the disease.**

I have asked you a lot, and all the questions I wanted to ask you.

**I think Emma, what you certainly need to consider in your model is as I already said, the community engagement, and indeed as you say that’s very difficult to include in a model. But that’s simply *the* factor. You can make models with all the possible parameters, but if a community says: no. Then it’s really difficult.**

Indeed.

**That’s on all levels. Not just the civilian but also the political landscape. Because the decentralisation of politics is much more pronounced than it is here. You can image that the governor of Kenema and I had several discussions about why the centre in Kenema needed to remain open to admit patients from other districts.**  **While his district was free of Ebola, so to him we were importing Ebola from other districts, which meant it was a risk for the people in his districts. That whole aspect is much more difficult to deal with than some mathematical model or a scientific model based on the number of patients.**